



City of Arvada

City Council Agenda

MARCH 1, 2021
CITY COUNCIL CHAMBERS
Regular Business

Councilmembers:

Marc Williams, Mayor
Dot Miller, Mayor Pro-Tem
Bob Fifer, At large
Nancy Ford, District 1
David Jones, District 4
John Marriott, District 3
Lauren Simpson, District 2

Staff Members Usually Present:

Mark Deven, City Manager
Lorie Gillis, Deputy City Manager
Rachel Morris, City Attorney
Don Wick, Director of Public Works
Sharon Israel, Director of Utilities
Ryan Stachelski, Dir. of Community & Economic Development
Bryan Archer, Director of Finance
Rob Smetana, Manager of City Planning & Development
Ben Irwin, Chief Communications Manager
Kristen Rush, City Clerk

Info: 720-898-7550

EXECUTIVE SESSION 5:00 P.M.

Legal Advice, Pursuant to CRS 24-6-402(4)(b) Related to Approval of Mill and Overlay Contracts

CITY COUNCIL MEETING – CITY COUNCIL CHAMBERS 6:00 PM

1. Call to Order - 6:00 PM
2. Moment of Reflection and Pledge of Allegiance - Councilmember Fifer
3. Roll Call of Councilmembers
4. Approval of Minutes
 - A. January 25 and February 1, 2021 City Council Meetings
5. Recognitions and Communications
 - A. Recognition of Judge Michael S. Matassa - presented by Mayor Williams
6. Presentations - None
7. Public Comment on Issues not Scheduled on Agenda - Three Minute Limit
8. New Business
 - A. Consent Agenda

1. R21-031 A Resolution Declaring the Termination of Development Agreement Between the Arvada Urban Renewal Authority, the City of Arvada and Sullivan One Limited Liability Company
 2. R21-032 A Resolution Accepting Donations of Rifle-Rated Ballistic Armor Equipment for Officers of the Arvada Police Department
 3. R21-033 A Resolution Authorizing the City of Arvada to Purchase Chemicals for the Water Treatment Plant Operations in an Amount Not to Exceed \$873,573.00 Annually
 4. R21-034 A Resolution Authorizing an Agreement by and between the City of Arvada and Carollo Engineers, Inc. in an Amount Not to Exceed \$129,930.00 for the Ralston WTP Solids Handling Study Project No. 21-WA-50
 5. R21-035 A Resolution Authorizing First Amendment to an Agreement Between the City of Arvada and Schultz Industries Incorporated to Increase the Contract Amount from \$200,000.00 to \$250,000.00 for Landscape Maintenance in the Second Year
 6. R21-036 A Resolution Authorizing a Renewal Construction Contract Agreement by and between the City of Arvada and Triple M Construction LLC for the 2021 Concrete Replacement Project in an Amount Not to Exceed \$4,434,156.20 Formerly Project No. 19-ST-10 Then 20-ST-10 Now Project 21-ST-10
 7. R21-037 A Resolution Accepting an Annexation Petition Concerning Lazy Susan, Generally Located at 16790 and 16770 W. 63rd Place, Finding Said Petition Substantially Compliant with C.R.S. 31-12-107(1), and Setting a Public Hearing for April 5, 2021, 6:15 P.M. for City Council to Determine Whether the Area Meets the Requirements of C.R.S. 31-12-104 and 105, and Is Considered Eligible for Annexation
 8. R21-038 A Resolution Authorizing an Agreement By and Between the City of Arvada and Asphalt Specialties Co., Inc. for Construction of CSB-21-ST-01 Pavement Resurfacing Program in an Amount Not to Exceed \$3,085,470.53
 9. R21-039 A Resolution Adopting a Revised Administrative Fee Schedule for the Arvada Police Department
 10. R21-040 A Resolution Authorizing the Issuance of a Purchase Order in the Amount of \$227,405 to Transwest Truck Trailer RV for the Purchase of Asphalt Patch Truck
 11. R21-041 A Resolution Authorizing a Construction Contract Agreement By and Between the City of Arvada and Hamon Infrastructure, Inc. for Construction of 18-ST-40 Ralston Road - Yukon Street to Garrison Street in an Amount Not to Exceed \$12,360,000.00
 12. R21-042 A Resolution Authorizing the Issuance of a Blanket Purchase Order in the Amount of \$600,000.00 to Hill Petroleum Company for the Purchase of Fuel Used in City Vehicles and Equipment
- B. Resolutions - None
- C. Ordinances (First Reading)
1. CB21-007 An Ordinance Authorizing the Second Amendment to the 2021 Operating and Capital Budget in the Amount of \$1,650,000.00 and Authorizing an Intergovernmental Agreement Between the City of Arvada and the State of Colorado Acting By and Through the Department of Transportation, Pertaining to the Signal Replacements at West 64th Avenue & Simms Street and West 80th Avenue & Vance Drive, Project No. 20-TC-01 (CDOT Project No. SHO M040-037 (24218)) (Public Hearing to be set for March 15, 2021 at 6:15 p.m.)
 2. CB21-008 An Ordinance Authorizing the Third Amendment to the 2021 Operating and Capital Budget in the Amount of \$450,000.00 and Authorizing an Intergovernmental Agreement Between the City of Arvada and the State of Colorado Acting By and Through the Department of Transportation, Pertaining to the Signal Replacements at West 58th Avenue & Kipling Parkway, Project No. 20-TC-02 (CDOT Project No. SHO M040-034 (22278)) (Public Hearing to be set for March 15, 2021 at 6:15 p.m.)

9. Other - None
10. Public Hearings - 6:15 PM
 - A. CB21-006 An Ordinance Amending Article V, International Residential Code, Section 18-181, Climatic and Geographical Design Criteria of Chapter 18, Buildings and Building Regulations, of the Arvada City Code (Ordinance No. 4753)
 - B. Conditional Use Application for Clear Creek Commons, Approximately Located at the Southeast Corner of West 52nd Avenue and Marshall Street
11. Public Comment - Five Minute Limit
12. Reports from City Council
 - A. Council Committee Reports
13. Reports from City Manager
 - A. Review of Future Workshops and Presentations
14. Reports from City Attorney
15. Adjournment



SUMMARY OF MINUTES OF THE MEETING OF THE ARVADA CITY COUNCIL HELD JANUARY 25, 2021

1. Call to Order - 6:00 p.m.

In accordance with physical distancing guidelines, this Arvada City Council meeting was held in the City Council Chambers and remotely using webinar technology. Mayor Williams, Mayor Pro Tem Miller, Councilmember Fifer, Councilmember Jones, Councilmember Marriott and Councilmember Simpson were present in the council chambers. Councilmember Ford attended remotely via Zoom. Members of the public were given notice with instructions on how to participate with public comment.

2. Moment of Reflection and Pledge of Allegiance

3. Roll Call of Councilmembers

Those Present: Mayor Marc Williams, Mayor Pro Tem Dot Miller, Councilmember Bob Fifer, Councilmember Nancy Ford, Councilmember David Jones, Councilmember John Marriott, Councilmember Lauren Simpson

Also present were: Mark Deven, City Manager; Lorie Gillis, Deputy City Manager; Rachel Morris, City Attorney; Bryan Archer, Director of Finance; Ryan Stachelski, Director of Community and Economic Development; Ben Irwin, Communications Manager and Kristen Rush, City Clerk.

4. Approval of Minutes of the January 11, 2021, City Council Meeting

The minutes stand approved.

5. Recognitions and Communications - None

6. Presentations - None

7. Public Comment

- A. Tom D'Agostino, Arvada resident, addressed council regarding waste hauling.
- B. Nancy Young, Arvada resident, addressed council regarding new zoning and transportation issues.
- C. Linda Shires, Arvada resident, addressed council regarding waste hauling.

8. New Business

A. Consent Agenda

1. R21-013

A Resolution Authorizing an Agreement Between the City of Arvada and HPM, Inc. for On-Call Development Infrastructure Warranty Repairs Services

2. R21-014 A Resolution Authorizing an Agreement Between the City of Arvada and C & L Water Solutions, Inc. for On-Call Development Infrastructure Warranty Repairs Services
3. R21-015 A Resolution Authorizing an Agreement Between the City of Arvada and Diamond Contracting Corp. for On-Call Development Infrastructure Warranty Repairs Services
4. R21-016 A Resolution Authorizing an Agreement Between the City of Arvada and EDGE Contracting, Inc. for On-Call Development Infrastructure Warranty Repairs Services
5. R21-017 A Resolution Authorizing an Agreement Between the City of Arvada and R & D Pipeline Construction, Incorporated for On-Call Development Infrastructure Warranty Repairs Services
6. R21-018 A Resolution Authorizing an Agreement Between the City of Arvada and Brannan Construction Company for On-Call Development Infrastructure Warranty Repairs Services
7. R21-019 A Resolution Authorizing Change Order No. 2 and Change Order No. 3 to an Agreement By and Between the City of Arvada and Muller Engineering Company, Inc. in the Amount of \$1,231,117.00 for Professional Services Relating to Engineering Design Services for West 72nd Avenue Between Kipling Street and Simms Street, Project No. 18-ST-30
8. R21-020 A Resolution Authorizing a Small Cell Facilities Master License Agreement By and Between the City of Arvada and SQF, LLC
9. R21-021 A Resolution Authorizing an Agreement Between the City of Arvada and Faris Machinery Company for Services Relating to the Purchase of Two (2) CCTV Inspection Vans for Wastewater in an Amount Not to Exceed \$386,794.00
10. R21-022 A Resolution Authorizing the Issuance of a Purchase Order in the Amount of \$400,000.00 to SaltWorx LLC for the Purchase of Salt Material in 2021
11. R21-023 A Resolution Authorizing the Issuance of a Purchase Order in the Amount of \$400,000.00 to Central Salt, LLC for the Purchase of Salt Material in 2021
12. R21-024 A Resolution Authorizing the Issuance of a Purchase Order in the Amount of \$200,000.00 to GMCO Corporation for the Purchase of Liquid De-Icer Material in 2021

Councilmember Marriott moved that R21-013, A Resolution Authorizing an Agreement Between the City of Arvada and HPM, Inc. for On-Call Development Infrastructure Warranty Repairs Services; R21-014, A Resolution Authorizing an Agreement Between the City of Arvada and C & L Water Solutions, Inc. for On-Call Development Infrastructure Warranty Repairs Services; R21-015, A Resolution Authorizing an Agreement Between the City of Arvada and Diamond Contracting Corp. for On-Call Development Infrastructure Warranty Repairs Services; R21-016, A Resolution Authorizing an Agreement Between the City of Arvada and EDGE Contracting, Inc. for On-Call Development Infrastructure Warranty Repairs Services; R21-017, A Resolution Authorizing an Agreement Between the City of Arvada and R & D Pipeline Construction, Incorporated for On-Call Development Infrastructure Warranty Repairs Services; R21-018, A Resolution Authorizing an Agreement Between the City of Arvada and Brannan Construction

Company for On-Call Development Infrastructure Warranty Repairs Services; R21-019, A Resolution Authorizing Change Order No. 2 and Change Order No. 3 to an Agreement By and Between the City of Arvada and Muller Engineering Company, Inc. in the Amount of \$1,231,117.00 for Professional Services Relating to Engineering Design Services for West 72nd Avenue Between Kipling Street and Simms Street, Project No. 18-ST-30; R21-020, A Resolution Authorizing a Small Cell Facilities Master License Agreement By and Between the City of Arvada and SQF, LLC; R21-021, A Resolution Authorizing an Agreement Between the City of Arvada and Faris Machinery Company for Services Relating to the Purchase of Two (2) CCTV Inspection Vans for Wastewater in an Amount Not to Exceed \$386,794.00; R21-022, A Resolution Authorizing the Issuance of a Purchase Order in the Amount of \$400,000.00 to SaltWorx LLC for the Purchase of Salt Material in 2021; R21-023, A Resolution Authorizing the Issuance of a Purchase Order in the Amount of \$400,000.00 to Central Salt, LLC for the Purchase of Salt Material in 2021; R21-024, A Resolution Authorizing the Issuance of a Purchase Order in the Amount of \$200,000.00 to GMCO Corporation for the Purchase of Liquid De-Icer Material in 2021, be approved.

The following votes were cast on the Motion

Those voting yes: Williams, Miller, Fifer, Ford, Jones, Marriott, Simpson

The Motion was Approved

B. Resolutions

1. R21-025 A Resolution Regarding the Triennial Determination for the Continuation of The Rocky Flats Stewardship Council (February 2021-2024)

Mark Deven, City Manager, reviewed this resolution with council.

Councilmember Fifer moved that R21-025, A Resolution Regarding the Triennial Determination for the Continuation of The Rocky Flats Stewardship Council (February 2021-2024), be approved.

The following votes were cast on the Motion

Those voting yes: Williams, Miller, Fifer, Ford, Jones, Marriott, Simpson

The Motion was Approved

2. R21-026 A Resolution Authorizing an Agreement By and Between the City of Arvada and PeaceJam Foundation for the Use of Property Known as the Allen House and Located at 11200 West 64th Avenue

Mark Deven, City Manager, reviewed this resolution with council.

Mayor Pro Tem Miller moved that R21-026, A Resolution Authorizing an Agreement By and Between the City of Arvada and PeaceJam Foundation for the Use of Property Known as the Allen House and Located at 11200 West 64th Avenue, be approved.

The following votes were cast on the Motion

Those voting yes: Williams, Miller, Fifer, Ford, Jones, Marriott, Simpson

The Motion was Approved

3. R21-027 A Resolution Authorizing an Agreement By and Between the City of Arvada and the Arvada Chamber of Commerce for the Lease of the Building at 7305 Grandview Avenue in Arvada

Mark Deven, City Manager, reviewed this resolution with council.

Councilmember Simpson moved that R21-027, A Resolution Authorizing an Agreement By and Between the City of Arvada and the Arvada Chamber of Commerce for the Lease of the Building at 7305 Grandview Avenue in Arvada, be approved.

The following votes were cast on the Motion

Those voting yes: Williams, Miller, Fifer, Ford, Jones, Marriott, Simpson

The Motion was Approved

4. R21-028 A Resolution Authorizing a Ninth Extension of the Effective Date of the City Manager's Declaration of Emergency Relating to the Novel Coronavirus (COVID-19) and the Associated Public Health Crisis

Rachel Morris, City Attorney, reviewed this resolution with council.

Councilmember Marriott moved that R21-028, A Resolution Authorizing a Ninth Extension of the Effective Date of the City Manager's Declaration of Emergency Relating to the Novel Coronavirus (COVID-19) and the Associated Public Health Crisis, be approved.

The following votes were cast on the Motion

Those voting yes: Williams, Miller, Fifer, Ford, Jones, Marriott, Simpson

The Motion was Approved

C. Ordinances (First Reading) - None

9. Public Hearings - 6:15 p.m.

- A. CB21-001 An Ordinance Repealing and Reenacting Article II, Contractors, Etc., of Chapter 78, Public Improvements, of the Arvada City Code (Ordinance No. 4749)

1. R21-029 A Resolution Adopting the Amended Fee Schedule for Rights-of-Way Work Permits and Services Pursuant to Chapter 78, Public Improvements, of the Arvada City Code

Mayor Williams opened the public hearing on CB21-001 and R21-029.

Mark Deven, City Manager, reviewed this ordinance and resolution with council.

No one wishing to speak for or against, the public hearing was closed.

Councilmember Marriott moved that CB21-001, An Ordinance Repealing and Reenacting Article II, Contractors, Etc., of Chapter 78, Public Improvements, of the Arvada City Code, be approved on final reading, numbered 4749 and ordered published by title only.

The following votes were cast on the Motion

Those voting yes: Williams, Miller, Fifer, Ford, Jones, Marriott, Simpson

The Motion was Approved

Mayor Pro Tem Miller moved that R21-029, A Resolution Adopting the Amended Fee Schedule for Rights-of-Way Work Permits and Services Pursuant to Chapter 78, Public Improvements, of the Arvada City Code, be approved.

The following votes were cast on the Motion

Those voting yes: Williams, Miller, Fifer, Ford, Jones, Marriott, Simpson

The Motion was Approved

- B. CB21-002 An Ordinance Authorizing the First Amendment to the 2021 Operating and Capital Budget in the Amount of \$950,000.00 and Authorizing the First Amendment to the Intergovernmental Agreement By and Between the State of Colorado Acting By and Through the Department of Transportation and the City of Arvada Pertaining to the Signal Replacements at West 58th Avenue & Independence Street and West 86th Parkway & Kipling Street, Project No. 18-TC-03 (CDOT Project No. SHE M040-033 (SA22275)) (Ordinance No. 4750)

Mayor Williams opened the public hearing on CB21-002.

Mark Deven, City Manager, reviewed this ordinance and resolution with council.

No one wishing to speak for or against, the public hearing was closed.

Councilmember Ford moved that CB21-002, An Ordinance Authorizing the First Amendment to the 2021 Operating and Capital Budget in the Amount of \$950,000.00 and Authorizing the First Amendment to the Intergovernmental Agreement By and Between the State of Colorado Acting By and Through the Department of Transportation and the City of Arvada Pertaining to the Signal Replacements at West 58th Avenue & Independence Street and West 86th Parkway & Kipling Street, Project No. 18-TC-03 (CDOT Project No. SHE M040-033 (SA22275)), be approved on final reading, numbered 4750 and published by title only.

The following votes were cast on the Motion

Those voting yes: Williams, Miller, Fifer, Ford, Jones, Marriott, Simpson

The Motion was Approved

- C. CB21-003 An Ordinance Authorizing an Additional Appropriation for Fiscal Year 2020 (Ordinance No. 4751)

Mayor Williams opened the public hearing on CB21-003.

Bryan Archer, Finance Director, reviewed this ordinance and resolution with council.

No one wishing to speak for or against, the public hearing was closed.

Councilmember Jones moved that CB21-003, An Ordinance Authorizing an Additional Appropriation for Fiscal Year 2020, be approved on final reading, numbered 4751 and ordered published by title only.

The following votes were cast on the Motion

Those voting yes: Williams, Miller, Fifer, Ford, Jones, Marriott, Simpson

The Motion was Approved

- D. CB21-005 An Ordinance Amending and Adding Certain Sections of Chapter 70, Personnel Rules, of the Arvada City Code (Ordinance No. 4752)

Mayor Williams opened the public hearing on CB21-005.

Gabriella Bommer, Acting Director of Human Resources, reviewed this ordinance and resolution with council.

No one wishing to speak for or against, the public hearing was closed.

Councilmember Marriott moved that CB21-005, An Ordinance Amending and Adding Certain Sections of Chapter 70, Personnel Rules, of the Arvada City Code, be approved on final reading, numbered 4752 and ordered published by title only.

The following votes were cast on the Motion

Those voting yes: Williams, Miller, Fifer, Ford, Jones, Marriott, Simpson

The Motion was Approved

- E. Conditional Use Permit for Olde Town Residences, Generally Located at 7267 W 56th Avenue
(Item continued from December 7, 2020)

Mayor Williams opened the public hearing on the Conditional Use Permit for Olde Town Residences.

Rob Smetana, Planning Manager, reviewed this item with council and stated that the posting logs and mailing affidavit have been received and are in order. Mayor Williams made them a part of the official record, along with the staff report.

Sworn Testimony: Bill Mosher, Representing applicant
 Tina Lashbrook, Representing applicant
 Steve Byers, Arvada resident, against the issue
 Nancy Young, Arvada resident, against the issue
 Shelley Cook, Arvada resident, for the issue
 Mindy Mohr, Arvada resident, for the issue

Councilmember Marriott moved that the Conditional Use Permit for Olde Town Residences, Generally Located at 7267 W 56th Avenue, be approved. This motion is based on the findings of fact adopted by Planning Commission.

The following votes were cast on the Motion

Those voting yes: Williams, Miller, Fifer, Jones, Marriott

Those voting no: Ford, Simpson

The Motion was Approved

10. Public Comment - Five Minute Limit - None
11. City Council Reports
 - A. Mayor Williams noted the passing of Richard Bartlett, former mayor who served from 1965 to 1969.
 - B. Mayor Pro Tem Miller thanked everyone for wearing their masks.
12. City Manager Reports - None
13. City Attorney Reports - None
14. Adjournment at 9:00 p.m.

Marc Williams, Mayor

SEAL:

Kristen R. Rush, City Clerk



SUMMARY OF MINUTES OF THE MEETING OF THE ARVADA CITY COUNCIL HELD FEBRUARY 1, 2021

1. Call to Order - 6:00 p.m.

In accordance with physical distancing guidelines, this Arvada City Council meeting was held remotely using webinar technology. Mayor Williams, Mayor Pro Tem Miller, Councilmember Fifer, Councilmember Ford, Councilmember Jones, Councilmember Marriott and Councilmember Simpson attended remotely via Zoom. Members of the public were given notice with instructions on how to participate with public comment.

2. Moment of Reflection and Pledge of Allegiance

3. Roll Call of Councilmembers

Those Present: Mayor Marc Williams, Mayor Pro Tem Dot Miller, Councilmember Bob Fifer, Councilmember Nancy Ford, Councilmember David Jones, Councilmember John Marriott, Councilmember Lauren Simpson

Also present were: Mark Deven, City Manager; Lorie Gillis, Deputy City Manager; Rachel Morris, City Attorney; Bryan Archer, Director of Finance; Ryan Stachelski, Director of Community and Economic Development; Ben Irwin, Communications Manager and Kristen Rush, City Clerk.

4. Approval of Minutes - None

5. Recognitions and Communications - None

6. Presentations - None

7. Public Comment

- A. Daniel Mondragon, Arvada resident, addressed council regarding inclusiveness in Arvada.
- B. Keegan Conley, Representing the Sustainability Committee, gave council an update on the committee.

8. New Business

- A. Consent Agenda – None
- B. Resolutions

1. R21-030

A Resolution Authorizing an Intergovernmental Agreement Between the City of Arvada and the State of Colorado Acting by and through the Front Range Waste Diversion Enterprise within the Department of Public Health and Environment for a Grant Package for the Cash Grant of \$500,000 to Support Arvada's Purchase of Recycling Carts

Mark Deven, City Manager, reviewed this resolution with council.

Councilmember Ford moved that R21-025, A Resolution Authorizing an Intergovernmental Agreement Between the City of Arvada and the State of Colorado Acting by and through the Front Range Waste Diversion Enterprise within the Department of Public Health and Environment for a Grant Package for the Cash Grant of \$500,000 to Support Arvada's Purchase of Recycling Carts, be approved.

The following votes were cast on the Motion

Those voting yes: Williams, Miller, Fifer, Ford, Jones, Marriott, Simpson

The Motion was Approved

C. Ordinances (First Reading)

1. CB21-006 An Ordinance Amending Article V, International Residential Code, Section 18-181, Climatic and Geographical Design Criteria of Chapter 18, Buildings and Building Regulations, of the Arvada City Code (Public Hearing to be set for March 1, 2021 at 6:15 p.m.)

Mayor Pro Tem Miller moved that CB21-006, An Ordinance Amending Article V, International Residential Code, Section 18-181, Climatic and Geographical Design Criteria of Chapter 18, Buildings and Building Regulations, of the Arvada City Code (Public Hearing to be set for March 1, 2021 at 6:15 p.m.), be approved on first reading, ordered published in full and a Public Hearing set for March 1, 2021 at 6:15 p.m.

The following votes were cast on the Motion

Those voting yes: Williams, Miller, Fifer, Ford, Jones, Marriott, Simpson

The Motion was Approved

9. Public Hearings - 6:15 p.m.- None

10. Workshop

A. Waste Hauling Update

Lorie Gillis, Deputy City Manager, and Rachael Kuroiwa, Manager of Communications – Infrastructure, reviewed this item with council and said that the City team is continuing efforts to implement Council direction for organized waste hauling. Efforts over the past two weeks have included a robust update to the Arvada Sustainability Advisory Committee, securing additional communication capacity, completing drafts of City of Arvada and Republic Services co-branded communication pieces, meeting with representatives from Republic (Waste Hauler) and Schaeffer (cart provider), notable contact from residents, along with several internal planning/logistics meetings. In order to keep Council updated on the ongoing work, and to address Council questions and feedback, the City team presented current information regarding Communications, Default Cart Size and Minimum Service Fee.

Council members asked several questions and offered comments regarding the information that was presented.

Next Steps: The Arvada team will provide regular updates to the City Council regarding organized waste hauling to receive feedback in the course implementing this new initiative. Feedback from this Workshop will be factored into decisions and actions associated with the continued implementation of organized waste hauling. Additional workshops will be scheduled in the next few months.

11. Public Comment - Five Minute Limit - None
12. City Council Reports - None
13. City Manager Reports - None
14. City Attorney Reports - None
15. Adjournment at 7:50 p.m.

Marc Williams, Mayor

SEAL:

Kristen R. Rush, City Clerk



REPORT TO CITY COUNCIL

AGENDA ITEM
5.A.

TO: THE HONORABLE CITY COUNCIL

DATE: March 1, 2021

SUBJECT: Recognition of Judge Michael S. Matassa - presented by Mayor Williams

Report in Brief

The City Council would like recognize, honor and give thanks to Judge Michael S. Matassa for his exceptional service as interim presiding judge for Arvada Municipal Courts throughout a very challenging 2020. Judge Matassa has been a loyal relief judge for many years, and he accepted the responsibility of becoming interim presiding judge with the highest levels of professionalism and integrity. City Council would like to thank Judge Matassa with an official proclamation in his honor.

Prepared by:

Janet Newman, Administrative Specialist

Reviewed by:

Gail Walker, Legal Specialist-Contracts 1/14/2021

Approved by:

Linda Haley, Director of Human Resources 1/14/2021

Rachel Morris, City Attorney 1/20/2021

Lorie Gillis, Deputy City Manager 1/20/2021

Mark Deven, City Manager 1/21/2021

Enclosure, exhibits & attachments required to support the report

Certificate of Recognition



presented to

Judge Michael S. Matassa

WHEREAS, Judge Michael S. Matassa has had a distinguished 35 year career on the Arvada Municipal Bench, both as a relief judge and most recently the interim Presiding Judge who has served the interests of justice by fairly and impartially deciding matters brought before him through strict adherence to the Colorado Code of Judicial Conduct; and

WHEREAS, Judge Matassa has played a critical role in the establishment of the Judge Mentor Program, an alternative sentencing option for juvenile defendants and their parents to meet individually with a Judge for positive adult mentoring outside of the family to provide a safe space for pro-social conversations that promote positive behavioral changes; and

WHEREAS, in January 2020, Judge Matassa was asked by the City Council to become the interim Presiding Judge, and he accepted the responsibility with the highest levels of professionalism and integrity while guiding the Court through the pandemic; and

WHEREAS, under Judge Matassa's leadership the Arvada Municipal Court implemented virtual arraignments and trials in order to resume effective operation of the Court and was the first City unit within Arvada City Hall to reopen in-person services.

NOW, THEREFORE, the Arvada City Council, on behalf of the entire City of Arvada team, would like to recognize, honor and give thanks to Judge Michael Matassa for his exceptional service as interim presiding judge for Arvada Municipal Court throughout a very challenging 2020. We appreciate your continued, dedicated service to our community and the Arvada Municipal Court.

Presented this 1st day of March, 2021

Marc Williams, Mayor

Dot Miller, Mayor Pro Tem

Bob Fifer, Councilmember

Nancy Ford, Councilmember

David Jones, Councilmember

John Marriott, Councilmember

Lauren Simpson, Councilmember



REPORT TO CITY COUNCIL

AGENDA ITEM 8.A.

TO: THE HONORABLE CITY COUNCIL

DATE: March 1, 2021

SUBJECT: Consent Agenda

Report in Brief

8.A.1. R21-031 A Resolution Declaring the Termination of Development Agreement Between the Arvada Urban Renewal Authority, the City of Arvada and Sullivan One Limited Liability Company

8.A.2. R21-032 A Resolution Accepting Donations of Rifle-Rated Ballistic Armor Equipment for Officers of the Arvada Police Department

8.A.3. R21-033 A Resolution Authorizing the City of Arvada to Purchase Chemicals for the Water Treatment Plant Operations in an Amount Not to Exceed \$873,573.00 Annually

8.A.4. R21-034 A Resolution Authorizing an Agreement by and between the City of Arvada and Carollo Engineers, Inc. in an Amount Not to Exceed \$129,930.00 for the Ralston WTP Solids Handling Study Project No. 21-WA-50

8.A.5. R21-035 A Resolution Authorizing First Amendment to an Agreement Between the City of Arvada and Schultz Industries Incorporated to Increase the Contract Amount from \$200,000.00 to \$250,000.00 for Landscape Maintenance in the Second Year

8.A.6. R21-036 A Resolution Authorizing a Renewal Construction Contract Agreement by and between the City of Arvada and Triple M Construction LLC for the 2021 Concrete Replacement Project in an Amount Not to Exceed \$4,434,156.20 Formerly Project No. 19-ST-10 Then 20-ST-10 Now Project 21-ST-10

8.A.7. R21-037 A Resolution Accepting an Annexation Petition Concerning Lazy Susan, Generally Located at 16790 and 16770 W. 63rd Place, Finding Said Petition Substantially Compliant with C.R.S. 31-12-107(1), and Setting a Public Hearing for April 5, 2021, 6:15 P.M. for City Council to Determine Whether the Area Meets the Requirements of C.R.S. 31-12-104 and 105, and Is Considered Eligible for Annexation

8.A.8. R21-038 A Resolution Authorizing an Agreement By and Between the City of Arvada and Asphalt Specialties Co., Inc. for Construction of CSB-21-ST-01 Pavement Resurfacing Program in an Amount Not to Exceed \$3,085,470.53

8.A.9. R21-039 A Resolution Adopting a Revised Administrative Fee Schedule for the Arvada Police Department

8.A.10. R21-040 A Resolution Authorizing the Issuance of a Purchase Order in the Amount of \$227,405 to Transwest Truck Trailer RV for the Purchase of Asphalt Patch Truck

8.A.11. R21-041 A Resolution Authorizing a Construction Contract Agreement By and Between the City of Arvada and Hamon Infrastructure, Inc. for Construction of 18-ST-40 Ralston Road - Yukon Street to Garrison Street in an Amount Not to Exceed \$12,360,000.00

8.A.12. R21-042 A Resolution Authorizing the Issuance of a Blanket Purchase Order in the Amount of \$600,000.00 to Hill Petroleum Company for the Purchase of Fuel Used in City Vehicles and Equipment

Suggested Motion: Moved by: _____

I move that the Consent Item(s), Number(s) R_____ be (Removed from the Consent Agenda and Heard Upon Item _____) (Referred to a Workshop) (Postponed Indefinitely).

YES _____ NO _____ ABSENT _____

That All/Remaining Consent Items be (Approved) (Rejected).

YES _____ NO _____ ABSENT _____

Prepared by:
Janet Newman, Administrative Specialist

Reviewed by:

Approved by:

Enclosure, exhibits & attachments required to support the report



REPORT TO CITY COUNCIL RESOLUTION

AGENDA ITEM
8.A.1.

TO: THE HONORABLE CITY COUNCIL

DATE: March 1, 2021

SUBJECT: R21-031 A Resolution Declaring the Termination of Development Agreement Between the Arvada Urban Renewal Authority, the City of Arvada and Sullivan One Limited Liability Company

Report in Brief

The Sullivan Subdivision Filing No.1 Development Agreement was executed in 1996 and included the property where the Harkins Theater currently sits and the property at the northeast corner of W. 56th Avenue and Vance Street where Trammell Crow intends to build its Olde Town Residences project. All obligations of the original development plan have been satisfied or are requirements in the City Code, such as maintenance of landscaping. As a result the development agreement is no longer needed and can be terminated.

The Arvada team recommends City Council approve R21-031, A Resolution Declaring the Termination of Development Agreement Between the Arvada Urban Renewal Authority, the City of Arvada and Sullivan One Limited Liability Company.

Financial Impact

There is no financial impact associated with the recommended action.

Background

The Sullivan Subdivision Filing No.1 Development Agreement was executed in 1996 to help facilitate the development of the land and adjacent property where the Landmark Theater was built. The development agreement outlined obligations to install various public improvements, including but not limited to: sewer, water, and curb gutter and sidewalk along 55th Avenue. All obligations of the original development plan have been satisfied, or are requirements in the City Code, such as maintenance of landscaping. In order to facilitate redevelopment of the Olde Town Residence site, the development agreement must be terminated and extinguished as an encumbrance on the property.

Discussion

In 1996 a final development plan was approved for Sullivan Subdivision Filing No. 1. A Development Agreement was executed between the Arvada Urban Renewal Authority, the City and the property owner outlining the terms of development for the project. The property at the northeast corner of W. 56th Avenue and Vance Street was covered by this agreement. AURA is working with Trammell Crow to redevelop the site as the Olde Town Residences. All maintenance obligations within the development agreement are required as part of City Code and not needed for enforcement within this agreement. All other obligations for the project have been satisfied and the agreement is no longer necessary. AURA has requested that the agreement be terminated and extinguished to facilitate the redevelopment of the property.

Public Contact

Posting of the City Council agenda.

Commission Recommendation

NA

Strategic Alignment

This action aligns with the City Council Priority Area of Community and Economic Development. The termination of this development agreement allows the Olde Town Residence project to continue to move forward in alignment with the City Council Priority Area of Community and Economic Development and related strategic results.

Alternative Courses of Action

NA

Recommendation for Action

The Arvada team recommends that Council approve R21-031, A Resolution Declaring the Termination of Development Agreement Between the Arvada Urban Renewal Authority, the City of Arvada and Sullivan One Limited Liability Company.

Suggested Motion:

I move that R21-031, A Resolution Declaring the Termination of Development Agreement Between the Arvada Urban Renewal Authority, the City of Arvada and Sullivan One Limited Liability Company, be (approved) (rejected).

Prepared by:

Josie Suk, Development Systems and Administrative Manager

Reviewed by:

Approved by:

Cheryl Drake, Senior Planner	1/4/2021
Robert Smetana, Manager of City Planning and Development	1/4/2021
Ryan Stachelski, Director of Community and Economic Development	1/4/2021
Gail Walker, Legal Specialist-Contracts	1/4/2021
Emily Grogg, Senior Assistant City Attorney	1/5/2021
Rachel Morris, City Attorney	2/17/2021
Lorie Gillis, Deputy City Manager	2/17/2021
Mark Deven, City Manager	2/17/2021

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R21-031

A RESOLUTION DECLARING THE TERMINATION OF DEVELOPMENT AGREEMENT
BETWEEN THE ARVADA URBAN RENEWAL AUTHORITY, THE CITY OF ARVADA
AND SULLIVAN ONE LIMITED LIABILITY COMPANY

WHEREAS, the Arvada Urban Renewal Authority, Colorado (AURA), the City of Arvada, Colorado ("Arvada") has recorded in the real estate records of Jefferson County, Colorado the following document which constitutes encumbrances against the real estate:

(A) Development Agreement between AURA, Arvada, and Sullivan One Limited Liability Company dated April 29, 1996, and recorded May 2, 1996 Reception No. F0226949, in Jefferson County, Colorado ("Development Agreement").

WHEREAS, the Arvada Urban Renewal Authority ("AURA") is the current owner of the Property; and

WHEREAS, Arvada has agreed with AURA to execute and record an agreement terminating the Sullivan One Limited Liability Company Development Agreement;

WHEREAS, approval of the proposed release must be authorized by a resolution of this City Council.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO:

Section 1. The Termination of Development Agreement, Reception No. F0226949, is hereby approved.

Section 2. The Mayor and City Clerk are authorized and directed to sign the Termination prepared for such purposes as authorized herein on behalf of the City and to affix the City seal thereto.

APPROVED AND ADOPTED this 1st day of March, 2021.

Marc Williams, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:

Rachel A. Morris, City Attorney

By: _____

TERMINATION OF DEVELOPMENT AGREEMENT
Reception No. F0226949

(Sullivan Subdivision, Filing No. 1)

This Termination of Development Agreement ("Termination") is made this ____ day of _____, 20__, by the City of Arvada, Colorado, a Colorado municipal corporation ("Arvada"), whose address is 8101 Ralston Road, Arvada, Colorado 80002.

RECITALS

- A. The Development Agreement pertains to a parcel of land located in the northeast quarter of Section 14 and the southeast quarter of Section 11, Township 3 South, Range 69 West of the Sixth Meridian, City of Arvada, County of Jefferson, State of Colorado ("Property").
- B. The Property is encumbered by the following recorded document:
 - i. Development Agreement between Arvada, AURA ("Owner"), and Sullivan One Limited Liability Company ("Developer") dated April 29, 1996, and recorded on May 2, 1996, Reception No. F0226949, in Jefferson County, Colorado ("Development Agreement").
- C. The Development Agreement enumerates the Owner and Developer's obligations in development of the Property. The obligations related to the development of the Property have been met and the remaining ongoing maintenance obligations are codified in the Arvada City Code.
- D. As part of the redevelopment of part of the Property, the Development Agreement must be terminated and extinguished as an encumbrance on the title to the Property.
- E. Arvada desires to terminate the Development Agreement in accordance with the terms and provisions set forth below.

NOW THEREFORE, Arvada hereby declares as follows:

- 1. The Development Agreement is hereby terminated, cancelled and extinguished in its entirety.
- 2. The Property is released and discharged from any and all obligations, liabilities, covenants, restrictions, agreements, and easements now existing or hereafter arising under the Development Agreement except for ongoing maintenance obligations that are codified in the Arvada City Code.
- 3. Arvada does hereby remise, release, relinquish, terminate, cancel and set over unto AURA, its successors and assigns, forever, any and all right, title, interest, claim, and

demand which Arvada has, or may have in and to the Property by virtue of the Development Agreement.

4. This Termination shall be construed in accordance with the laws and of the State of Colorado.

DATED this _____ day of _____, 20__.

CITY OF ARVADA, a Colorado home
rule municipal corporation

Marc Williams, Mayor
8101 Ralston Road
Arvada, Colorado 80002

STATE OF COLORADO)
) ss.
COUNTY OF JEFFERSON)

The foregoing instrument was acknowledged before me this _____ day of _____,
20__, by _____

WITNESS my hand and official seal

(SEAL)

Notary Public

My commission expires: _____

APPROVED AS TO FORM:

Rachel A. Morris, City Attorney

By: _____

**SULLIVAN SUBDIVISION, FILING NO. 1
SUBDIVIDER'S/DEVELOPMENT AGREEMENT**

THIS SUBDIVIDER'S/DEVELOPMENT AGREEMENT ("Agreement") is entered into and made between Sullivan One Limited Liability Company whose address is 1001 Lincoln Street, Denver, Colorado, 80203, hereinafter referred to as "Developer," The Arvada Urban Renewal Authority, a body corporate and politic of the State of Colorado, whose address is 7307 Grandview, Arvada, Colorado, 80002, hereinafter referred to as "AURA" or "Owner", and the City of Arvada, Colorado, a Colorado Municipal Corporation, whose address is 8101 Ralston Road, Arvada, Colorado, 80001-8101, hereinafter referred to as the "City." This Agreement shall be effective following its execution by the Developer and the Owner, and immediately upon approval by the City Council of the City of Arvada as evidenced by the signature of the City's Mayor or Mayor Pro Tem on the date indicated below.

RECITALS AND REPRESENTATIONS:

WHEREAS, the Owner represents that it is the sole owner of the following described property located in the City of Arvada, County of Jefferson, State of Colorado:

A parcel of land located in the northeast quarter of Section 14 and the southeast quarter of Section 11, Township 3 South, Range 69 West of the Sixth Meridian, City of Arvada, County of Jefferson, State of Colorado, more particularly described as follows:

Parcel A:

Commencing at the north quarter corner of said Section 14; thence along the north/south centerline of said Section 14 S00°22'39"E, 113.92 feet; thence leaving said centerline N65°39'50"E, 32.83 feet to the easterly right-of-way line of Olde Wadsworth Boulevard and a point on the north line of a parcel described in Book 2900, Page 888 and the true point of beginning; thence along the northerly line of said parcel N65°39'50"E, 492.30 feet; thence continuing along said parcel N82°46'33"E, 156.07 feet to the westerly right-of-way line of Vance Street; thence departing said property line and along the westerly right-of-way line of Vance Street S00°23'45"E, 847.56 feet to the northerly right-of-way line of West 55th Avenue; thence leaving said westerly line of Vance Street and along the northerly right-of-way line of said West 55th Avenue S89°50'01"W, 605.11 feet to the easterly right-of-way line of Olde Wadsworth Boulevard; thence along said easterly right-of-way line of Olde Wadsworth Boulevard the following five (5) consecutive courses: 1) thence N00°22'39"W, 94.00 feet; 2) thence N89°49'59"E, 5.00 feet; 3) thence N00°22'39"W, 144.00 feet; 4) thence S89°51'51"W, 5.00 feet; 5) thence N00°22'39"W, 388.81 feet to the true point of beginning. Said parcel contains 10.48 acres more or less.

Parcel B:

A parcel of land being a part of Lot 1 and Lot 9, Block C, Valley Addition (Book 2 at Page 9), situated in the southeast one-quarter of Section 11, Township 3 South, Range

69 West of the Sixth Principal Meridian, City of Arvada, County of Jefferson, State of Colorado, being more particularly described as follows:

Commencing at the south quarter corner of said Section 11: thence along the south line of the southeast quarter of said Section 11, north 89°44'04"E, 684.89 feet to the easterly right-of-way line of Vance Street; thence along said easterly right-of-way line, N00°23'45"W, 42.28 feet to the true point of beginning; thence continuing along said easterly right-of-way line north 00°23'45"W, 205.00 feet; thence leaving said easterly right-of-way line north 89°40'16"E, 268.80 feet; thence S00°23'45"E, 131.00 feet; thence S73°19'31"W, 165.22 feet; thence S75°39'20"W, 113.55 feet to the easterly right-of-way line of said Vance Street and the true point of beginning. Said parcel contains 1.05 acres more or less. 2

the total area for both parcels is 11.53 acres more or less.

hereinafter referred to as "Sullivan Subdivision" or "Property". Each lot shown on the plat of the Sullivan Subdivision is hereinafter referred to as a "Lot".

WHEREAS, the Owner and Developer are planning the development of Sullivan Subdivision, and the Owner and Developer's development and construction plans include the installation of sanitary sewer facilities, water line facilities, storm sewer facilities, and ~~streets~~ sidewalks as shown on City Job No. 2934.

WHEREAS, the Developer has submitted to the City proposed final development plans/final plat which include a final plan for development, final landscape plan, final building elevations, and other supporting documentation for the development of Sullivan Subdivision. These development plans, as approved by the City, are public records on file and available for review at the City of Arvada, Planning Department, 8101 Ralston Road, Arvada, Colorado. These plans, as approved by the City, are incorporated into this Agreement for all purposes including illustration and interpretation of the terms and conditions of this Agreement.

WHEREAS, the Developer intends to improve and lease property known as the Tiller Property currently owned by the City and as further described in Exhibit A to this Agreement, to provide parking for tenants to locate within the Sullivan Subdivision and to provide public parking for Olde Towne Arvada.

NOW, THEREFORE, in consideration of the mutual promises, covenants, and agreements of the parties, the approval by the City of Arvada of the final plat of Sullivan Subdivision, the dedication of certain land to the City for street purposes, and other good and valuable considerations, the sufficiency and adequacy of which are hereby acknowledged by the parties, the parties hereto agree as follows:

1. PLAT AND IMPROVEMENT PLANS. The Developer upon final approval of the final plat of Sullivan Subdivision shall immediately deliver the original of the approved final plat

to the City Clerk of the City of Arvada, along with \$10.00 per final plat sheet; further, that as a part of the platting procedure the Developer has filed with the City Engineer eleven (11) copies of plans for the construction of streets, water lines, sanitary sewer mains, storm drains and storm drainage and irrigation structures in Sullivan Subdivision, as required by the City. No approval of the public improvements construction plan is conferred by this Agreement and approval shall be independently made by the City Engineer following City staff review and comment, and following the City Engineer's determination that the plans meet the applicable City engineering specifications, commonly accepted engineering practices and all applicable codes, ordinances, and state, federal and local laws. The Developer also shall file with the City an original or sepia reproducible copy of the as-built construction plans of said public improvements upon the completion of the improvements. Said as-built plans shall be delivered to the City prior to commencement of the one-year warranty for said public improvements.

2. RECORDATION OF PLAT. The Developer shall pay all costs associated with recordation of this Agreement, the Waiver of Vested Rights, and the Sullivan Subdivision final plat with the Clerk and Recorder of Jefferson County, Colorado.

3. INSTALLATION OF REQUIRED PARKING SPACES. The Owner/Developer shall install, stripe, and sign all parking spaces in conformance with Article 5 of the City of Arvada Zoning Ordinance and as illustrated on the final site development plan for all Lots within Sullivan Subdivision and on the Tiller Property, prior to the issuance of a Certificate of Occupancy for the structure on Lot 1, Block 1 of Sullivan Subdivision. Prior to the issuance of a Certificate of Occupancy for any structure within Lot 3, Block 1, of Sullivan Subdivision, the Owner/Developer shall install, stripe and sign sufficient parking spaces to conformance with Article 5 of the City of Arvada Zoning Ordinance and as illustrated on the final site development plan for the affected lot, regardless of whether or not the parking spaces fall within the boundary of the Lot in question.

4. ARCHITECTURAL COMPATIBILITY WITHIN SULLIVAN SUBDIVISION. The Owner/Developer must illustrate architectural compatibility of all proposed structures to those previously approved within Sullivan Subdivision at the time of submission of each final site development plan within Sullivan Subdivision. The illustration of architectural compatibility will be a prerequisite for the approval of all final site development plans.

5. BUILDING ELEVATIONS AND SCREENING OF MECHANICAL EQUIPMENT. The Owner/Developer shall construct all structures in accordance with the approved final building elevations. The Owner/Developer shall screen all roof top or wall mounted mechanical equipment in accordance with the requirements in Article 5 of the City's Zoning Ordinance prior to the issuance of a Certificate of Occupancy for a structure within Sullivan Subdivision.

6. TRASH ENCLOSURES. At the time of submittal of a final site development plan for each Lot within Sullivan Subdivision, the plans must illustrate details for the trash enclosure which illustrate that the enclosure will be constructed of materials and colors which are architecturally compatible with the principal permitted structure on the Lot. Each trash

enclosure shall be constructed in conformance with the approved final site development plan for the Lot prior to the issuance of a Certificate of Occupancy for the principal permitted structure on that Lot.

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7. SIGNAGE. The Owner/Developer agrees that all signage within Sullivan Subdivision shall conform to the requirements in Article 9 of the City's Zoning Ordinance as applicable at the time of application for a sign permit and the comprehensive sign program approved as a part of the final development plan. No signage illustrated on the final approved building elevations is deemed approved by the City as a part of the approval for the final development plan for Sullivan Subdivision.

8. PUBLIC IMPROVEMENTS. The Developer shall, at its own expense, design, furnish, construct, and install the public improvements illustrated on City Job No. 2934 including, sanitary sewer facilities, water line facilities, storm sewer facilities and sidewalks in accordance with the plans and specifications approved by the City of Arvada, Colorado including sidewalks adjacent to Olde Wadsworth Boulevard, West 55th Avenue, and Vance Street adjacent to Sullivan Subdivision as required by paragraphs 17, 18, and 19 respectively of this Agreement.

9. UNIT DRAINAGE FEE. The City acknowledges that the Unit Drainage Fee for the Sullivan Subdivision has been paid for that part of Sullivan Subdivision known as Lots 1, 2 and 3, Block 1. The Developer agrees to pay the unit drainage fee pursuant to City Code for Lot 1, Block 2 in the amount of \$4,881.96 prior to approval of the final development plan. The Unit Drainage Fee for the Tiller Property, if any, shall be the responsibility of the City.

10. PUBLIC UTILITY FEES. The Owner/Developer shall pay all installation charges for lighting, electric and gas required by Public Service Company in this development, including all lighting facilities to be placed on the Tiller Property.

11. SUBDIVISION MONUMENTATION. In accordance with the applicable Colorado Revised Statutes, as amended, and in accordance with Section 5.3 of the Arvada Subdivision Regulations, the Developer shall establish all subdivision monumentation and have the monumentation approved by the Engineering Department prior to issuance of any Certificate of Occupancy for any structure within Sullivan Subdivision.

12. CONTRACTOR LICENSING. Before proceeding with any of the work contemplated herein, the Owner and Developer shall ensure that all contractors and/or subcontractors employed by the Owner or Developer shall be licensed by the City before the contractor and/or subcontractor may commence work on any improvements within or adjacent to Sullivan Subdivision.

13. DELAYS. The parties have executed this contract such that completion of the improvements shall be subject to strikes, accidents, acts of God, weather conditions which justify a delay in construction in light of standard practices in the building profession, inability to secure labor, fire regulations or restrictions imposed by any government or governmental agency, or

other delay resulting from events which are beyond the control of the delaying party and which are agreed to by the parties as justifying delay.

14. STREET MAINTENANCE. The Owner/Developer shall take all steps necessary to limit and prevent the accumulation of, and to remove accumulated mud, sediment, dirt, trash, and other debris that is tracked, blown, or otherwise carried onto public property or off-site onto private property during development. Such obligation shall continue until all construction and improvements within all Lots are completed. If the Owner/Developer fails to remedy any conditions caused or generated by the development within Sullivan Subdivision as contemplated by this paragraph within twenty-four hours of oral or written notice by the City, the City may enter the Sullivan Subdivision, streets and public ways to remedy such conditions and the Owner/Developer agrees to pay to the City any costs incurred by the City in remedying such conditions. Payment of such costs shall be made prior to the City's issuance of additional building permits or a Certificate of Occupancy within Sullivan Subdivision. Nothing herein shall obligate the City to remedy such conditions or shall limit the City in its selection of the method or manner of remedy, including but not limited to contracting with an individual or company to remedy such conditions. 5

15. PUBLIC IMPROVEMENT DEDICATION. All improvements constructed by the Owner or Developer in public rights-of-way, easements, streets or alleys shall become the property of the City immediately upon acceptance of said improvements by the City. The Owner and Developer each warrants the improvements constructed by it for one year from the date of acceptance by the City. The City may request, and the Owner and Developer shall provide at the Owner and Developer's cost, documentary evidence satisfactory to the City that any public rights-of-way, easements, or other property dedicated, conveyed, acquired, devised, or granted to the City is free and clear of encumbrances which, in the sole opinion of the City, defeat, limit, or impede the City's ability to use the public property as intended.

16. PAYMENT OF FEES AND CHARGES. The Owner/Developer shall comply with all the ordinances, rules and regulations of the City, and shall pay all fees and other charges in a timely manner as required by the City, including but not limited to building permits, inspection fees, tap fees, drainage fees imposed by the City by ordinance, rule, resolution, motion, or by the terms and conditions of this Agreement.

17. DEDICATION OF RIGHT-OF-WAY AND CONSTRUCTION OF OLDE WADSWORTH BOULEVARD SIDEWALK. The Owner shall dedicate a five (5') foot wide strip of land along the west boundary of the Sullivan Subdivision property that borders Olde Wadsworth Boulevard; said five foot wide strip measures 388.81 feet in length at the north end of the subdivision and 94.00 feet at the south end of the subdivision and is accurately depicted on the final plat for Sullivan Subdivision and shall be satisfied by recording of the final plat. This dedicated land shall be for the purpose of public right-of-way. The Developer shall design and construct, at its sole expense, the sidewalk adjacent to the eastern one-half of Olde Wadsworth Boulevard adjacent to the development as depicted on the approved construction drawings and shall construct said improvements in the manner described by City's ordinances

prior to the issuance of a Certificate of Occupancy for any lot within Sullivan Subdivision.

18. DEDICATION OF RIGHT-OF-WAY AND CONSTRUCTION OF WEST 55TH AVENUE SIDEWALK. The Owner shall dedicate a ten (10') foot wide strip of land along the south boundary of the Sullivan Subdivision property that borders West 55th Avenue; said ten foot wide strip measures 605.11 feet in length. This dedication is accurately depicted on the final plat for Sullivan Subdivision and shall be satisfied by the recordation of the final plat. This dedicated land shall be for the purpose of public right-of-way. The Developer shall design and construct, at its sole expense, the sidewalk adjacent to the northern one-half of West 55th Avenue adjacent to the development as depicted on the approved construction drawings and shall construct said improvements in the manner described by City's ordinances prior to the issuance of a Certificate of Occupancy for any lot within Sullivan Subdivision. 6

19. CONSTRUCTION OF VANCE STREET SIDEWALKS. The Developer shall design and construct, at its sole expense, the sidewalk adjacent to the western one-half and the sidewalk adjacent to the eastern one-half of Vance Street adjacent to the development as depicted on the approved construction drawings and shall construct said improvements in the manner described by City's ordinances prior to the issuance of a Certificate of Occupancy for any lot within Sullivan Subdivision. The City will reimburse the Developer for the construction of the two sets of steps in the sidewalk paralleling Vance Street south of the entrance into the Tiller Property. The Developer agrees to submit construction costs to the City for approval by the City Engineer for this installation prior to commencing construction. The reimbursement due to the Developer by the City will be based upon the approved construction costs.

20. DEVELOPMENT OF THE TILLER PROPERTY. The Developer and the City agree to develop the Tiller Property in conjunction with the development of Lots 1, 2 and 3, Block 1, and Lot 1, Block 2 of Sullivan Subdivision in conformance with the approved final site development plan for the Lots 1, 2 and 3 of Sullivan Subdivision. Development of the Tiller Property in conformance with said final site development plan will be a prerequisite of the issuance of a Certificate of Occupancy for any structure within Sullivan Subdivision. The Developer and the City agree to assume responsibility for their portion of the improvements of the Tiller Property as defined on the final development plan and the Tiller Lease. The City agrees not to withhold the issuance of a Certificate of Occupancy for any structure within Sullivan Subdivision on the basis that the work required to be completed by the City is not complete at the time a Certificate of Occupancy is requested.

21. PARTICIPATION IN THE COST OF SIGNALIZATION - WEST 55TH AVENUE AND OLDE WADSWORTH BOULEVARD. The Developer agrees to participate in the cost of the future signalization of the intersection of West 55th Avenue and Olde Wadsworth Boulevard by contributing to the City the amount of \$2,700.00. This contribution must be made prior to approval of the final development plan for Lots 1 and 2, Block 1, Sullivan Subdivision. The funds will be held by the City in an escrow account until the installation of the signal is warranted, at which time the signal will be installed by the City. If the signal is not installed within ten years from the date of payment the \$2,700.00 shall be

refunded to the Developer. Neither the Developer nor Sullivan Subdivision shall be liable for or assessed any additional amounts towards such signalization.

22. REIMBURSEMENT FOR CONSTRUCTION OF 18" SANITARY SEWER LINE. The City agrees to reimburse the Developer for the installation of the 18" sanitary sewer line from manhole 15G5 to manhole 15F4 which replaces the existing 12" and 18" sanitary lines which traverse the site. The Developer agrees to submit construction costs to the City for approval by the City Engineer for this installation prior to commencing construction. The reimbursement due to the Developer by the City will be based upon the approved construction costs. 7

23. POSTING OF FIRE LANE SIGNS. The Owner/Developer shall install fire lane signs as required by the Arvada Fire Protection District prior to the issuance of a Certificate of Occupancy for any structure within Sullivan Subdivision.

24. INSTALLATION OF FIRE HYDRANTS AND WATER LINES. The Owner/Developer shall install all required water lines and fire hydrants required by City Job No. 2934 prior to any above grade construction within Sullivan Subdivision.

25. INSTALLATION OF LANDSCAPING. The Owner/Developer shall install, at its sole expense, the landscaping as illustrated on the approved final landscape plan for any use within Sullivan Subdivision and on the Tiller Property prior to issuance of a Certificate of Occupancy for any structure within Sullivan Subdivision. The City, at its sole discretion, prior to the Owner/Developer's completion of the required landscaping, may issue a Certificate of Occupancy upon receipt of the deposit of funds in escrow in an amount of 150% of the estimated cost of providing landscaping in accordance with the approved final landscape plan. Such estimate shall be made by a landscape contractor acceptable to the City. The City, at its sole discretion and upon the City's rejection of an estimate provided by the Owner/Developer, may obtain an estimate of the costs of landscaping and such estimate shall be binding upon the Owner/Developer in determining the amount of funds to be escrowed for purposes of this paragraph. The City shall release its interest in the escrowed funds only upon completion of all landscaping obligations by the Owner/Developer. In the event that the Owner/Developer defaults upon its obligations as specified in this paragraph following the escrow of funds, the City may apply all funds toward the completion of the Owner/Developer's landscaping obligations upon completion of such obligations. For the purpose of applying such funds toward the completion of the Owner/Developer's landscaping obligations "completion" shall mean and include the cost of labor, materials, and contract management. The City shall refund all or part of the escrowed funds not applied to completion of landscaping required by the final landscape plan. The method and manner in which the City elects to undertake and complete the landscaping obligations of a defaulting Owner/Developer shall be within the sole discretion of the City; provided, however, that nothing herein shall obligate the City to install or complete the landscaping improvements and nothing herein shall prevent, prohibit, or limit the remedies available to the City to enforce the Owner/Developer's obligations under this paragraph.

26. LANDSCAPING MAINTENANCE. The Owner/Developer or their heirs, successors, assigns, or transferees, shall maintain into perpetuity all landscaping installed within Sullivan Subdivision pursuant to the final landscape plan, as well as all other landscaping actually installed, regardless of whether the landscaping conforms to the requirements of the final landscape development plan. The Owner/Developer or their heirs, successors, assigns, or transferees, shall maintain all landscaping installed within The Tiller Property pursuant to the final landscape plan, as well as all other landscaping actually installed, regardless of whether the landscaping conforms to the requirements of the final landscape development plan in accordance with, subject to the terms and conditions of, and only during the term of the lease of said property. 8

27. RECORDATION AND APPROVAL OF THE FINAL COVENANTS AND PROVISION OF CROSS ACCESS AND PARKING. The Owner/Developer agrees that the final covenants for the Sullivan Subdivision will be recorded in Jefferson County and a recorded copy of the covenants will be submitted to the City for approval by the City Attorney prior to the issuance of the first Certificate of Occupancy within Sullivan Subdivision. The Owner/Developer agrees that the covenants shall state that adequate parking and cross access will be provided at all times for all Lots within Sullivan Subdivision. The Owner/Developer agrees that no change to said covenants relative to the provision of adequate parking and cross access, over, across or through all Lots, will be made without the review and approval of the City.

28. HARD SURFACES. The Developer shall comply with "Interpretation of Hard Surface Areas," Arvada City Code, Sections 30-46 through 30-83.

29. WAIVER. A waiver by any party to this Agreement of the breach of any term or provision of this Agreement shall not operate or be construed as a waiver of any subsequent breach by either party.

30. BINDING EFFECT. The parties hereto agree that this Subdivider's/Development Agreement, by its terms, shall be binding upon the successors, heirs, legal representatives, and assigns thereof and shall constitute covenants running with the described property. In the event that all or part of Sullivan Subdivision is sold, transferred, or otherwise conveyed to additional or multiple parties, the transferor of each Lot shall be released from all obligations arising under this Agreement that are based upon facts or circumstances arising after the effective date of such conveyance and each successor owner shall be responsible for the Owner's/Developer's obligations set forth in this Agreement thereafter arising as such obligations apply to such Owner's Lot.

31. NO THIRD PARTY BENEFICIARIES. It is expressly understood and agreed that enforcement of the terms and conditions of this Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to the City, the Developer, and Owner, and to the extent of an assignment of the Tiller Lease, Cinamerica Theatres L.P., and nothing contained in this Agreement shall give or allow any such claim or right of action by any other third person

on such Agreement. It is the express intention of the City, the Owner, and the Developer that any person other than the City, Owner, or Developer, receiving services or benefits under this Agreement shall be deemed to be an incidental beneficiary only.

32. GOVERNING LAW AND ENFORCEMENT. This Agreement shall be governed by the laws of the State of Colorado. The parties agree and acknowledge that this Agreement may be enforced at law or in equity. In addition to any other available remedies, it is understood and agreed that subject to the terms of paragraph 20, the City may withhold any permits or certificates, including but not limited to building permits and certificates of occupancy, for any Lot within Sullivan Subdivision while there is any uncured breach of this Agreement which directly affects such Lot.

33. PARAGRAPH CAPTIONS. The captions of the paragraphs are set forth only for the convenience and reference of the parties and are not intended in any way to define, limit or describe the scope or intent of this Agreement.

34. CONSENT TO ENCUMBRANCES. The Developer hereby consents to any encumbrance of the property by the Owner as a consequence of execution of any plat, grant of easement, or dedication of right-of-way required or provided for under the terms of this Agreement.

35. AMENDMENTS. This Agreement may be amended only by an instrument in writing signed by the parties.

36. ASSIGNMENT AND RELEASE. Except in connection with sale of a Lot, and except as otherwise provided in this Agreement or the Tiller Lease entered into between the City and Sullivan One Limited Liability Company, all or part of the obligations or responsibilities set forth in this Agreement shall not be assigned by the Owner or Developer without the express written consent of the City of Arvada. Upon sale by AURA to Developer (or entities designated by the Developer) of all ownership interest in any Lot described herein, and upon completion of all improvements to be constructed by AURA as such improvements may affect a lot (and acceptance of such improvements for maintenance by the City, if and as applicable) AURA shall be released from all obligations and responsibilities in this Agreement and the successor owner shall be deemed to have assumed all unperformed obligations hereunder with respect to the property transferred. Similarly, upon any Owner's conveyance of fee simple title to a lot owned by it to a third party, such owner shall be released from all obligations arising under this Agreement based upon facts or circumstances arising after the effective date of such conveyance. Release of Owner shall be conditioned upon delivery to the City of evidence satisfactory to the City of such sale. Nothing herein shall be construed to release Developer of any of its obligations under this Agreement. The City Manager of the City shall be authorized to execute the release which shall be recorded with the Clerk and Recorder of Jefferson County, Colorado.

37. SEVERABILITY. Invalidity of any of the provisions of this Agreement or any paragraph, sentence, clause, phrase, or word herein or the application thereof in any given

circumstance shall not affect the validity of any other provision of this Agreement.

38. RECORDATION OF AGREEMENT. This Agreement shall be recorded by the City with the Clerk and Recorder's Office of the appropriate county. 10

39. INCORPORATION OF EXHIBITS. Unless otherwise stated in this Agreement, exhibits referenced in this Agreement shall be incorporated into this Agreement for all purposes. Reference to "City Job Numbers" in this Agreement is a reference to construction plans and documentation which is retained as a public record on file and available for public inspection and review upon request at the City of Arvada, Engineering Department, 8101 Ralston Road, Arvada, Colorado. Such construction plans and documentation filed with the City and bearing the City Job Number noted within this Agreement is hereby incorporated into this Agreement for all purposes and specifically for the purpose of illustrating and defining the obligations and requirements described herein.

40. REVIEW OF REFERENCED DOCUMENTS. The Owner and Developer hereby understand and acknowledge that the public documents referenced in this Agreement, including but not limited to the Arvada City Code, Zoning Ordinance, Subdivision Regulations, and Engineering Specifications, were prior to the execution of this Agreement and are presently available for review and inspection at the City of Arvada, Engineering Department, 8101 Ralston Road, Arvada, Colorado, from 8:00 a.m. through 5:00 p.m., Monday through Friday.

41. NOTICES. Any notice required or permitted by this Agreement shall be in writing and shall be deemed to have been sufficiently given for all purposes if sent by certified mail or registered mail, postage and fees prepaid, addressed to the party to whom such notice is to be given at the address set forth on the signature page below, or at such other address as has been previously furnished in writing, to the other party or parties. Such notice shall be deemed to have been given when deposited in the United States mail.

42. MAINTENANCE OF CLEAR AREA AROUND LOT 1 STRUCTURE. The Owner and Developer agree that a sixty foot (60') wide strip of land shall be maintained around the entire structure to be located on Lot 1 as required by Section 506 (a) of the 1991 Uniform Building Code to allow for the building area increases as provided for in that Building Code Section. This 60' wide strip of land shall be treated as yards or public ways as defined in the 1991 Uniform Building Code. Specifically no buildings or structures shall be built in the designated 60' area unless, after review by the City's Chief Building Official, it is found to be allowed by the edition of the building code that is in effect at such time as a request is made.

DATED THIS 29th DAY OF April, 1996.

CITY OF ARVADA, a Colorado municipal corporation

[Signature]

Robert G. Frie, Mayor
8101 Ralston Road
P.O. Box 8101
Arvada, Colorado 80001



Deputy Kristen R. Helfer
City Clerk

APPROVED AS TO FORM:

[Signature]
City Attorney

DEVELOPER

Sullivan One Limited Liability Company
1001 Lincoln Street
Denver, Colorado 80203

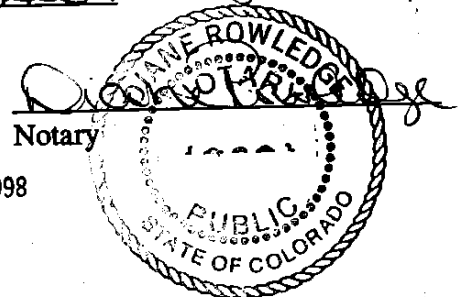
[Signature]
By: James M. Sullivan, Manager

STATE OF Colorado

City COUNTY OF Denver

)
) ss.
)

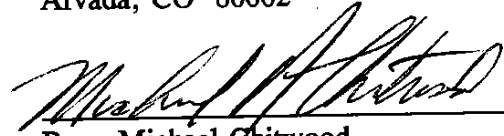
Acknowledged before me this 25th day of April, 1996, by James M. Sullivan
in his capacity as Manager of Sullivan One LLC.



My Commission Expires: MY COMMISSION EXPIRES AUGUST 31, 1998

OWNER OR AURA
Arvada Urban Renewal Authority
7307 Grandview
Arvada, CO 80002

12



By: Michael Chitwood
Title: Executive Director, AURA

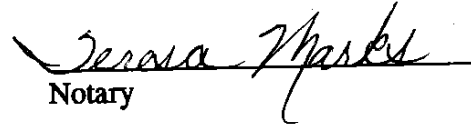
STATE OF COLORADO

)
) ss.

COUNTY OF JEFFERSON

)

Acknowledged before me this 29th day of April 1996, by Michael R. Chitwood
in his capacity as Executive Director of AURA



Notary

My Commission Expires: 1-17-97



EXHIBIT A
Legal Description
Tiller Property

13

Lots 1, 2 and 12, Block A, Valley Addition, EXCEPT the south 7 feet of Lot 2 and EXCEPT the south 100 feet of the east 141.3 feet of Lot 12, and EXCEPT that portion described in deed recorded September 10, 1976, Jefferson County records, in Book 2900, Page 888.

[Handwritten signature]



REPORT TO CITY COUNCIL RESOLUTION

**AGENDA ITEM
8.A.2.**

TO: THE HONORABLE CITY COUNCIL

DATE: March 1, 2021

SUBJECT: R21-032 A Resolution Accepting Donations of Rifle-Rated Ballistic Armor Equipment for Officers of the Arvada Police Department

Report in Brief

Arvada City Charter Section 13.6 provides that the City Council may accept donations of property on behalf of the City. Shield 616, a 501(c)(3) non-profit charitable organization, supports law enforcement and fire protection agencies across the country with donations of ballistic armor protective equipment. Shield 616 donated 26 pieces of rifle-rated ballistic armor to the Arvada Police Department in December 2020.

The Arvada team recommends that the City Council approve R21-032, A Resolution Accepting Donations of Rifle-Rated Ballistic Armor Equipment for Officers of the Arvada Police Department.

Financial Impact

The donation requires no expenditure of funds and has no financial impact.

Background

APD officers face potential threats from armed suspects on a daily basis. Uniformed APD officers are required to wear soft body armor while on duty. While soft body armor affords an officer protection against handgun ammunition, it will not stop rifle rounds. Rifle-rated body armor is available, although it is heavy and impractical for an officer to wear as part of a regular uniform and therefore is not usually purchased for use by uniformed officers.

Shield 616 provides donations of rifle-rated ballistic armor to police and fire departments so that police officers and firefighters may perform their duties with extra ballistic protection when needed. Shield 616 provides the armor at no charge to the agency. To date, the organization has provided armor to approximately 5000 police officers and first responders in 22 states.

Discussion

Shield 616 donated 26 pieces of rifle armor to the APD in December 2020. Shield 616 allows its donors to request that their armor donation goes to a specific officer, though most are donated to agencies to be distributed to officers as appropriate. One APD donation was directed to a specific officer, while the remainder were deployed across various sector assignments and shifts to increase the likelihood that APD officers will have additional armor protection available in the event of an incident involving a suspect armed with a rifle.

Public Contact

Posting of the City Council agenda.

Commission Recommendation

N/A.

Strategic Alignment

Accepting this donation aligns with the City Council Priority Area of Safe Community and related Principles and Strategic Results within the 2020-2025 City Council Strategic Plan. The Shield 616 armor provides APD officers additional specialized protection as they go about their duties. They are thus better prepared to protect the community.

Alternative Courses of Action

N/A.

Recommendation for Action

The Arvada team recommends that the City Council approve R21-032, A Resolution Accepting Donations of Rifle-Rated Ballistic Armor Equipment for Officers of the Arvada Police Department.

Suggested Motion:

I move that R21-032, A Resolution Accepting Donations of Rifle-Rated Ballistic Armor Equipment for Officers of the Arvada Police Department, be (approved) (rejected).

Prepared by:

Aaron Jacks, Assistant City Attorney

Reviewed by:

Alyssa Gleinn, Legal Specialist-Prosecution 2/2/2021

Approved by:

Aaron Jacks, Assistant City Attorney 2/2/2021

Link Strate, Chief of Police 2/2/2021

Rachel Morris, City Attorney 2/16/2021

Lorie Gillis, Deputy City Manager 2/17/2021

Mark Deven, City Manager 2/17/2021

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R21-032

A RESOLUTION ACCEPTING DONATIONS OF RIFLE-RATED BALLISTIC ARMOR
EQUIPMENT FOR OFFICERS OF THE ARVADA POLICE DEPARTMENT

WHEREAS, the Arvada Police Department investigates crime and apprehends criminals; and

WHEREAS, Arvada police officers face threats including violent criminals that may be armed with rifles that can penetrate standard body armor; and

WHEREAS, Shield 616, a 501(c)(3) charitable organization which supports law enforcement and fire protection agencies across the country with donations of protective equipment, donated 26 pieces of rifle-rated ballistic armor to the Arvada Police Department in December 2020; and

WHEREAS, Section 13.6 of the Arvada City Charter provides that the City Council may receive such donations on behalf of the City.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO:

Section 1. The City Council hereby accepts Shield 616's generous donation on behalf of the City.

Section 2. This resolution shall be effective upon its approval by the City Council.

APPROVED AND ADOPTED this 1st day of March, 2021.

Marc Williams, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:

Rachel A. Morris, City Attorney

By: _____



REPORT TO CITY COUNCIL RESOLUTION

AGENDA ITEM
8.A.3.

TO: THE HONORABLE CITY COUNCIL

DATE: March 1, 2021

SUBJECT: R21-033 A Resolution Authorizing the City of Arvada to Purchase Chemicals for the Water Treatment Plant Operations in an Amount Not to Exceed \$873,573.00 Annually

Report in Brief

City Council is requested to authorize the issuance of purchase orders in the aggregate amount of \$873,573.00 for three (3) chemicals needed in the purification and disinfection of water at the City's water treatment plants. The vendor selection is based on RFB-17-Water Treatment Chemicals renewal option, Sole Source Justification, and Cooperative Agreement with the City of Fort Collins RFP #8399. Pricing for 2021 has been adjusted.

The issuance of the purchase orders for water treatment chemicals associated with the recommended action would be to the following suppliers; DPC Industries, Chemtrade, and Calgon Carbon Corporation in the aggregate amount of \$873,573.00.

The Arvada team recommends that the City Council approve R21-033, A Resolution Authorizing the City of Arvada to Purchase Chemicals for the Water Treatment Plant Operations in an Amount Not to Exceed \$873,573.00 Annually.

Financial Impact

Purchase of chemicals for Water Treatment Plant operations not to exceed \$873,573.00 annually is budgeted for in the Water Fund, account number 41.735010.53003 "Program Expense/Port Out Admin Fee".

Background

A formal request for Bid, RFB-17-Water Treatment Chemicals, was issued November 15, 2017, with the option for four (4) consecutive annual renewals under "Terms of Contract" and included Sodium Hypochlorite with the lowest bids being selected. The current vendor has provided price increase justification and is qualified for renewal.

Aluminum Sulfate was selected based on a Cooperative Agreement with the City of Fort Collins RFP #8399. Calgon Carbon Corporation is a current Sole Source item. The approved Sole Source request is attached and on file with the Water Treatment Division.

The 2021 are slightly higher for two (2) chemicals than the 2020 levels due to chemical market price increases. Aluminum Sulfate remained the same price.

The requested Purchase Orders are as follows with 2021 price adjustments:

Chemical*	Company	Unit Cost	Total Cost
Sodium Hypochlorite (12.5%)	DPC Industries	\$1.41/Gallon	\$314,752
Aluminum Sulfate (48.5%)	Chemtrade	\$382.00/Dry Ton	\$357,170
Granular Activated Carbon	Calgon Carbon Corporation	\$1.68/Pound	\$201,651

Total Cost For All Chemicals

\$873,573

*All Chemicals meet NSF and AWWA Standards/Certifications for Drinking Water.

Discussion

The purchase of water treatment chemicals and from the current reliable vendors allows the Water Treatment Division to ensure continued production of high quality drinking water that meets/exceeds all State and Federal Drinking Water Standards.

The vendors used for 2020 have justified their increase due to increased shipping, raw materials and imported materials over cost the past year. The current vendors have been stable, reliable, have had no issues over the past year and offer the chemical at a fair market value.

Sufficient funds for the Water Treatment Chemicals are available in the Utilities Water Treatment Operations Budget.

Public Contact

Posting of the City Council agenda.

Commission Recommendation

N/A

Strategic Alignment

The approval of the Water Treatment Chemical Purchase Orders will ensure continued production of safe high quality drinking water for the Citizens of Arvada aligns with the following Principle within the Infrastructure Priority Area of the City Council Strategic Plan:

Provides the community with a safe, reliable, high-quality water supply, drainage system, and wastewater disposal services for full city build-out, as defined by the Comprehensive Plan. This includes maintaining utility rates at lowest practical levels with accurate billing that supports replacement of aging infrastructure in order to maintain robust utility systems.

Alternative Courses of Action

N/A

Recommendation for Action

The Arvada team recommends that the City Council approve R21-033, A Resolution Authorizing the City of Arvada to Purchase Chemicals for the Water Treatment Plant Operations in an Amount Not to Exceed \$873,573.00 Annually.

Suggested Motion:

I move that R21-033, A Resolution Authorizing the City of Arvada to Purchase Chemicals for the Water Treatment Plant Operations in an Amount Not to Exceed \$873,573.00 Annually, be (approved) (rejected).

Prepared by:

Brad Wyant, Water Treatment Manager

Reviewed by:

Hannah Gregory, Legal Administrative Assistant 2/17/2021
Erika Pierce, Litigation Paralegal 2/17/2021

Approved by:

Sharon Israel, Director of Utilities 2/16/2021
Bryan Archer, Director of Finance 2/16/2021
Lori Graham, Senior Assistant City Attorney 2/18/2021
Rachel Morris, City Attorney 2/18/2021
Lorie Gillis, Deputy City Manager 2/18/2021
Mark Deven, City Manager 2/18/2021

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R21-033

A RESOLUTION AUTHORIZING THE CITY OF ARVADA TO PURCHASE CHEMICALS
FOR THE WATER TREATMENT PLANT OPERATIONS IN AN AMOUNT NOT TO
EXCEED \$873,573.00 ANNUALLY

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO:

Section 1. The City of Arvada is authorized to purchase chemicals for the year 2021, based on Request for Bid renewal option and sole source justification that was issued by the Utilities Department, Bid Number RFB-17-Water Treatment Chemicals, from DPC Industries in the amount not to exceed \$314,752.

Section 2. The City of Arvada is authorized to purchase chemicals for the year 2021, based on a Cooperative Agreement with the City of Fort Collins RFP #8399, from Chemtrade, in an amount not to exceed \$357,170.

Section 3. The City of Arvada is authorized to purchase chemicals for the year 2021 from Calgon Carbon Corporation based on sole source requirements, in an amount not to exceed \$201,651.

Section 4. The City Manager is hereby authorized to issue purchase orders to the preceding companies as may be required in an annual aggregate amount not to exceed \$873,573.00.

Section 5. This resolution shall be effective upon its approval by the City Council.

APPROVED AND ADOPTED this 1st day of March, 2021.

Marc Williams, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:
Rachel A. Morris, City Attorney

By: _____

**CITY of ARVADA
Purchasing Department
8101 Ralston Road
Arvada, CO 80002**



REQUEST FOR BID

BID #: RFB-17- Water Treatment Chemicals

Title: RFB-17- Water Treatment Chemicals

RFB Issued: 11/16/2017

Due By: 11/30/2017 3:00 p.m. local time

Delivery Date: TBD

Delivery address: Electronic Submission. Must be submitted online at BidNetDirect.com by the above date and time. Late responses will not be considered for award.

For additional information, contact: Nancy Allen, Purchasing Manager at nallen@Arvada.org
Contact with the requesting department may result in vendor disqualification.

Documents included in this BID:

Cover Page	page 1
General Terms and Conditions	page 2
Special Terms and Conditions	page 4
Insurance Requirements	page 6
Submittal Forms	page 7
Submittal checklist and references	page 8
Attachments/Exhibits	

GENERAL TERMS AND CONDITIONS

1. PAYMENTS TO CONSTITUTE CURRENT EXPENDITURES. Financial obligations of the City of Arvada, if any, after the current fiscal year are contingent on funds for that purpose being appropriated, budgeted and otherwise made available by the City Council for the City of Arvada. The City of Arvada's obligations under the Agreement shall be from year to year only and shall not constitute a multiple-fiscal year direct or indirect debt or other financial obligation of the City of Arvada within the meaning of Article X, Section 20 of the Colorado Constitution.

2. TAXES. The City of Arvada is not subject to taxation. Contractor shall not invoice Arvada for any state, federal or local taxes whatsoever. Upon written notification by the City of Arvada, Contractor shall reimburse the City of Arvada in a timely manner for any taxes erroneously paid by the City of Arvada. The Colorado Department of Revenue, Certification of Exemption for Colorado State Sales/Use Tax account number for the City of Arvada is 98-01789-0000. An exemption certificate will be provided, where applicable, upon request.

3. NO INDEMNIFICATION BY ARVADA. The City of Arvada is prohibited by Article XI, Section 1, Colorado Constitution, from indemnifying anyone. Therefore, notwithstanding any provision in the response to solicitation or proposed contract, lease, escrow agreement or any other type of agreement to the contrary, the City of Arvada does not indemnify Contractor or anyone else under this Agreement.

4. INDEMNIFICATION OF CITY.

A. Contractor: Notwithstanding any provision in the response to solicitation or proposed contract, lease, escrow agreement or any other type of agreement to the contrary, Contractor agrees to investigate, defend, indemnify and hold harmless Arvada, its elected officials, officers, employees, agents, insurers, and representatives from and against any claims, costs, losses, expenses, demands, actions, or causes of action, including reasonable attorney fees and other costs and expenses of litigation, which may be asserted against or incurred by Arvada or for which Arvada may be liable, arising from the negligence, willful misconduct, or other fault of Contractor or its employees, agents, or subcontractors in performance of the Agreement. Nothing herein is intended to constitute a covenant, promise, or agreement to indemnify and hold harmless Arvada from any liability or damages directly caused by or attributable to Arvada's own negligence. Nothing herein intended to be nor may be construed as a waiver of the immunities, protections, or limitations on damages provided to Arvada by the Colorado Governmental Immunity Act, C.R.S. §§ 24-10-101 *et seq.*, as it may from time to time be amended.

(or)

B. Architect, Engineer, Surveyor Services for Public Works Construction: Contractor agrees to hold harmless and indemnify Arvada, its officers and employees, from and against any liability or any claims, suits, or actions arising out of, made, or asserted for any damage to persons or property resulting from errors, omissions or fault of Contractor in connection with the performance by Contractor of obligations under this solicitation and any subsequent Agreement with Arvada. Nothing herein is intended to constitute a covenant, promise, or agreement to indemnify and hold harmless Arvada from any liability or damages directly caused by or attributable to Arvada's own negligence. Nothing herein is intended to be nor construed as a waiver of the immunities, protections, or limitations on damages provided to Arvada by the Colorado Governmental Immunity Act, C.R.S. §§24-10-101 *et seq.*, as it may from time to time be amended.

5. NO OPINION OF COUNSEL LETTERS. Pursuant to Section 8.1 of the Arvada City Charter, the City Attorney provides advice to the City Council and City Officials in matters relating to their official powers and duties, and will perform such other duties as City Council may prescribe by ordinance or resolution. The City Attorney will not issue opinion of counsel letters, memoranda or statements to third parties, including, but not limited to that any contract or lease is binding on the public entity, enforceable, etc.

6. OPEN RECORD REQUESTS. Notwithstanding any provision in the response to solicitation or proposed contract, lease, escrow agreement or any other type of agreement to the contrary, the City of Arvada is obligated to comply with the Colorado Open Records Act (C.R.S. §§24-72-101 *et seq.*), which may require the City of Arvada to disclose all or a portion of communications relating to the Agreement, or terms of same, or of any transaction under the Agreement, and other related matters. Contractor has been advised to familiarize itself with the Colorado Open Records Act. Therefore, any confidentiality provisions in the contract, lease, escrow agreement or any other type of agreement are subject to the provisions of the Act.

7. OWNERSHIP OF WORK PRODUCT. The originals of all plans, reports, studies, data, or other materials or information relating to the Work that are produced by Contractor shall be delivered to and become the property of Arvada. Contractor may retain copies of any originals; however, no plans, reports, studies, data, or other materials or information relating to the Work shall be released to any person or entity without the prior written consent of Arvada. Nothing in this clause is intended to affect Contractor's right to use generic know-how learned in the course of providing services under the Agreement for the future benefit of the City of Arvada or others.

8. ASSIGNMENT. Contractor shall not assign the Agreement without the prior written consent of the City of Arvada, which will not be unreasonably withheld, conditioned, or delayed. Contractor may assign the Agreement to any successor to the business of the party by merger, consolidation, or sale of assets. No assignment shall be permitted that enlarges any duty, responsibility or obligation of the City of Arvada, or that limits, curtails, or diminishes any right or privilege of the City of Arvada without the City of Arvada's express written consent.

9. NO THIRD PARTY BENEFICIARIES. It is expressly understood and agreed that enforcement of the terms and conditions of the Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to Arvada and Contractor and nothing contained in the Agreement shall give or allow any such claim or right of action to any other third party on the Agreement. It is the express intention of Arvada and Contractor that any person other than Arvada or Contractor receiving services or benefits under the Agreement shall be deemed to be an incidental beneficiary only.

10. INDEPENDENT CONTRACTOR. Contractor and Arvada hereby represent that Contractor is an independent contractor for all purposes hereunder. As such, Contractor is not covered by any worker's compensation insurance or any other insurance maintained by Arvada except as would apply to members of the general public. Contractor shall not create any indebtedness on behalf of Arvada.

11. SUBCONTRACTING. Contractor shall not subcontract any of its responsibilities without Arvada's prior written approval, which will not be unreasonably withheld, conditioned, or delayed. Contractor shall be responsible for any failure by any subcontractor or subcontractor personnel to perform in accordance with the Agreement or to comply with any duties or obligations imposed on Contractor under the Agreement to the same extent as if such failure to perform or comply was committed by Contractor or Contractor's personnel. Contractor shall be Arvada's sole point of contact regarding the services, including with respect to payment.

12. ILLEGAL ALIENS; PUBLIC CONTRACTS FOR SERVICES. To the extent that obligations and responsibilities may be established by C.R.S. §§8-17.5-101 *et seq.*, (as amended) (the "Act"), with respect to certain public entities and those contracting therewith as to the procurement of services:

- A. Successful Vendor ("Contractor") shall not knowingly employ or contract with an illegal alien to perform work under the Agreement or enter into a contract with a subcontractor that fails to certify to Contractor that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under the Agreement. Contractor confirms the employment eligibility of all employees who are newly hired for employment to perform work under this public contract for services through participation in either the E-Verify Program or Department Program (the "Program").
- B. Contractor is prohibited from using Program procedures to undertake pre-employment screening of job applicants while the Agreement is being performed.
- C. If Contractor obtains actual knowledge that a subcontractor performing work under the Agreement knowingly employs or contracts with an illegal alien, Contractor shall be required to:
 - (i). Notify the subcontractor and the City of Arvada within three (3) days that Contractor has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and
 - (ii). Terminate the subcontract with the subcontractor if within three (3) days of receiving the above notice the subcontractor does not stop employing or contracting with the illegal alien; except that Contractor shall not terminate the subcontract if during such three days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien.
- D. Contractor shall comply with any reasonable request by the Colorado Department of Labor and Employment made in the course of an investigation that the department is undertaking pursuant to the authority established in the Act.
- E. Any provision of the Agreement to the contrary notwithstanding, if Contractor violates any provision of this Section, the City of Arvada may terminate the Agreement, without breach or default by the City of Arvada, and Contractor shall be liable for actual and consequential damages to the City of Arvada arising out of such violation.
- F. Contractor represents that, prior to executing the Agreement, Contractor has certified that at the time of the certification, Contractor does not knowingly employ or contract with an illegal alien who will perform work under this public contract for services and Contractor will participate in either the E-Verify Program or Department Program in order to confirm the employment eligibility of all employees who are newly hired for employment to perform work under this public contract for services. By execution of this Agreement, Contractor shall be deemed to have renewed such certification.
- G. Contractor acknowledges its responsibility to comply with the certification requirement pursuant to C.R.S. §8-17.5-102(2)(b)(I) (as amended).

13. NO WAIVER OF GOVERNMENTAL IMMUNITY. Nothing contained in this or any of the exhibits attached thereto shall be construed as a waiver of any of the immunities, limitations, privileges, rights, procedures, or requirements contained in the Colorado Governmental Immunity Act, C.R.S. §§24-10-101 *et seq.*

14. RIGHT TO TERMINATE. The City of Arvada shall have the right to terminate, without cause, the Agreement. Any such termination shall not be considered a breach of the Agreement or any extension thereof. In the event of termination by the City of Arvada for convenience, Contractor will be paid for requested work performed up until the time of termination by the City of Arvada, not to exceed the total amount of the contract price agreed upon by the parties.

15. COMPLIANCE WITH ALL LAWS. All of the services performed under this Agreement by Contractor shall comply with all applicable laws, rules, regulations and codes of the United States and State of Colorado, and with the charter, ordinances, rules and regulations of the City of Arvada.

16. WAIVER OF BREACH. A waiver by any party to the Agreement or the breach of any term or provision of the Agreement shall not operate or be construed as a waiver of any subsequent breach by either party.

17. GOVERNING LAW AND VENUE. Notwithstanding any provision in the response to solicitation or proposed contract, lease, escrow agreement or any other type of agreement to the contrary, the Agreement shall be governed by the laws of the State of Colorado. Venue for any action arising under the Agreement or for the enforcement of the Agreement shall be in the appropriate court for Jefferson County, Colorado.

18. FORCE MAJEURE. Any delays in or failure of performance by any party of his or its obligations under the Agreement shall be excused if such delays or failure are a result of acts of God, fires, floods, strikes, labor disputes, accidents, regulations or orders of civil or military authorities, shortages of labor or materials, or other causes, similar or dissimilar, which are beyond the control of such party.

19. BINDING ARBITRATION PROHIBITED. The City of Arvada does not agree to binding arbitration by any extra-judicial body or person. Any provision to the contrary in response to the solicitation, or incorporated by reference, shall be null and void.

20. PARAGRAPH CAPTIONS. The paragraph captions in this solicitation or in the Agreement are set forth only for the convenience and reference of the parties and are not intended in any way to define, limit or describe the scope or intent of the Agreement.

21. BINDING AUTHORITY. Contractor represents and affirms that the signature page hereof accurately states the full legal name of Contractor (whether as a corporation, partnership, limited liability company, sole proprietorship, or other), contains all requisite signature(s) on behalf of Contractor, has been properly acknowledged by attestation, notary acknowledgment, or both, and in all other respects is effective to bind Contractor, in accordance with all applicable statutes, regulations, resolutions, rules, bylaws, agreements, or similar sources of authority or limitation.

SPECIAL TERMS AND CONDITIONS

1. METHOD OF AWARD - IN THE BEST INTEREST OF THE CITY.

Award of this contract will be based on either an item by item basis, a group basis, or an aggregate basis; whichever method is most beneficial to the City. The method of award shall be primarily determined on the basis of pricing and efficiency of delivery.

The City may award solicitations to a vendor(s) through the issuance of documents that include a Purchase Order, notice of award or a City contract. The General Terms and Conditions, the Special Conditions, any Technical Specifications, Insurance and Legal Requirements, the vendor's Offer, and the contractual documents are collectively an integral part of the contract between the City of Arvada and the successful vendor. Accordingly, these documents shall constitute a binding contract without further action by either party. Not with-standing the foregoing, the City reserves the right to require the execution of a formal written agreement, approved as to form by the Arvada City Attorney's Office.

2. TERM OF CONTRACT.

This contract shall commence on the date of the purchase order or contract execution and shall remain in effect until such time as the commodities, equipment and/or services acquired in conjunction with this Bid have been accepted by the City's authorized representative. Any required warranty period which exceeds this term shall remain in full force for the duration of the warranty period. Any subsequent contract shall commence on the date to be determined in the final negotiated agreement. Such negotiations may also include the option for contract renewals for a specified number of additional annual terms, following the initial one (1) year period, up to four (4), as well as whether the method for renewal will be automatic or by written notice to that effect.

3. PRICING SHALL BE FIXED AND FIRM.

The prices offered by the vendor shall remain fixed and firm for at least 90 ninety days. No changes in the Bid shall be allowed after the date and time of the Bid deadline due to error by the vendor. Although this Bid specifies a number of items to be purchased by the City, the City may, within ninety (90) days after the terms and conditions of this contract have been fulfilled through the delivery and acceptance of the items, purchase additional quantities of the same model or brand of item from the successful vendor.

4. ADJUSTMENT OF QUANTITIES BY CITY.

The City has the right to adjust/reduce the quantities ordered in conjunction with this Bid based on budgetary restrictions.

5. MODIFICATION OR WITHDRAWAL OF OFFERS BY VENDOR.

Modifications to Offers- Changes to the Offer after the submission deadline shall be allowed only when the vendor can show convincing evidence that an unintentional factual mistake was made. Modification requests must be made in writing. Any modification submitted to the City must have the vendor's name, address, Solicitation Number and title included.

Withdrawal of Offers- Offers may not be withdrawn after the deadline for the Solicitation for a period of ninety (90)calendar days. If an Offer is withdrawn by the vendor during this ninety (90) day period, the City may, at its option, suspend the vendor

and may not accept any Offer from the vendor for a six (6) month period following the withdrawal.

6. REJECTION OF OFFERS BY CITY.

- A. The City may reject an offer, in whole or in part, for reasons including, but not be limited to:
 - 1) The vendor misstates or conceals any material fact in its Proposal;
 - 2) The vendor's Offer does not strictly conform to the law or requirements of the Solicitation;
 - 3) The Offer expressly requires or implies a conditional award that conflicts with the method of award stipulated in the Special Conditions;
 - 4) The Offer does not include documents which are required for submission with the Offer; or
 - 5) The Offer has not been executed by the vendor through an authorized signature.
- B. The City may, at its sole and absolute discretion:
 - 1) Reject all or parts of Offers submitted by prospective vendors;
 - 2) Re-advertise this Solicitation;
 - 3) Postpone or cancel the Solicitation;
 - 4) An Offer may not be accepted from, nor any contract be awarded to, any person or firm which
 - a) is in arrears to the City for any debt or Contract, or is a defaulter as surety for any obligation to the City.
 - b) has failed to perform faithfully any previous contract with the City, State or Federal governmental for a minimum period of one (1) year after this previous Contract was terminated for cause.
 - c) has pending litigation against the City on the date and time that the Solicitation is due.

7. CONTENTS OF OFFER. Vendors are required to submit offers with the following conditions:

- 1) Vendors shall make all investigations necessary to inform themselves of the facilities affected by the delivery of products and services required by the Solicitation.
- 2) Any official interpretation of the Solicitation may only be issued by an authorized agent of the City. The City shall not be responsible for other interpretations offered by employees not authorized.
- 3) The City shall issue Addenda if substantial changes are required which may impact the content and submission of Offers. A copy of such addenda will be publicly posted with the original RFP posting.
- 4) The apparent silence or omissions within this Solicitation regarding a detailed description of the materials or services shall be interpreted to mean that only the best commercial practices are to prevail and that only materials and workmanship of first quality are to be provided.

8. CLARIFICATION AND MODIFICATIONS. The contract resulting from this solicitation will be subject to the Solicitation materials, City Ordinance, State and Federal Statutes. When conflicts occur, the highest authority shall prevail. Vendors are required to indicate any variances to the terms, conditions, requirements and specifications of this Solicitation; no matter how slight. If variations are not stated in the vendor's Offer, it shall be agreed that the vendor's Offer fully complies with all conditions identified in this Solicitation.

9. ELIGIBILITY OF VENDORS: MUST BE ENGAGED IN SUPPLYING PRODUCTS OR SERVICES RENDERED.

Offers will only be considered from firms which have been engaged in the business of manufacturing or distributing the goods and/or performing services described in this Solicitation. Vendors must be able to produce evidence that they have an established satisfactory record of performance for at least two (2) years and have sufficient finances and structure to ensure that they can satisfactorily execute the Contract requirements, as determined by authorities of the City. The City reserves the right, before awarding the contract, to require a vendor to submit evidence of its qualifications including, but not limited to, financial, technical and other qualifications, as well as past performance with the City, for consideration in making the award in the best interest of the City.

10. DELIVERY.

Quoted prices and deliveries are to be FOB Destination freight prepaid and shall require inside delivery unless otherwise specified in this Solicitation. Title and risk of loss shall pass to the City upon inspection and acceptance by the City at its designated point of delivery; unless otherwise specified in this solicitation.

11. ELECTRONIC PAYMENT METHODS (2) - CITY OF ARVADA P-CARD AND SINGLE USE ACCOUNT.

Vendors are encouraged to consider the following methods of payment.

- A. P-Card - The City utilizes (VISA) to transact smaller dollar payments for routinely purchased goods and services.
- B. Single Use Account: The City incorporates the use of Single User Accounts as an option to seamlessly process payment of larger dollar purchase orders and contracts to vendors/contractors/providers. A secure, one-time payment transaction account processes to pay invoices via the vendor's merchant bank. Invoice payments have an enhanced speed-of-pay cycle that can significantly benefit cash flow.

12. COOPERATIVE PURCHASING.

The City of Arvada encourages and participates in cooperative purchasing endeavors undertaken by or on behalf of other governmental agencies, including the Multiple Assembly of Procurement Officials.

We hereby request that any member of MAPO be permitted to avail itself of this contract and purchase, as specified by the contract resulting from this RFQ, at the contract prices established therein. Each governmental entity would establish its own contract, issue its own orders, be invoiced directly, make its own payments and issue its own exemption certificates as required. It is understood and agreed that the City of Arvada is not a legally binding party to any contractual agreement made between another governmental entity and the successful vendor as a result of this solicitation. The City shall not be liable for any costs or damages incurred by any other entity.

13. PREPARATION AND SUBMISSION.

Offers will be prepared as follow:

- 1) A blank shall be construed as "No Bid/not offered". Where there is a discrepancy between the unit price and the extension of prices, the unit price shall prevail.
- 2) Vendors will not knowingly participate in solicitations where there exists a conflict of interest with their firm and a member of City staff or their immediate family.
- 3) The only authorized version of this Bid is posted on WWW.BIDNETDIRECT.COM. Registration is available to receive email notification of new solicitations, addenda and communications.

14. PERFORMANCE MEASUREMENTS FOR SERVICES MORE THAN \$15,000.

The City has incorporated Performance Management into its organizational culture. When vendors submit offers to the City in response to solicitations for Services (not associated with the primary purchase of goods, supplies, or software), they shall identify the methods and goals by which they will monitor and report their performance providing those services to the City.

At a minimum, vendor performance shall be documented as to (a) completing the agreed upon scope of work, (b) completing within the contracted price, and (c) within the contracted timeline.

SERVICES means: the furnishing of labor, time, effort, maintenance, etc., by a vendor/contractor/consultant, with an initial contract amount of more than \$15,000.

INSURANCE REQUIREMENTS

The following listed insurance requirements shall be carried by the selected vendor for the entirety of the contract. Applicable requirements for this solicitation are identified by completed check boxes.

1. ☒ **Commercial General Liability**, written on an occurrence form, for limits not less than \$1,000,000 for bodily injury and property damage for each occurrence and not less than \$2,000,000 aggregate. Coverage shall include premises and operations liability, blanket contractual, broad form property damage, products and completed operations and personal injury endorsements.
2. ☐ **Workers' Compensation and Employers Liability** as required by statute. Employers Liability coverage is to be carried for a minimum limit of \$.
3. ☐ **Automobile Liability** for limits not less than \$ combined single limit for bodily injury and property damage for each occurrence. Coverage shall include owned, non-owned and hired automobiles.
4. ☐ **Umbrella Liability** of \$, following form to the Commercial General Liability.
5. ☐ **Pollution Legal Liability Insurance** for limits not less than \$1,000,000 per occurrence (or claims made) and not less than \$1,000,000 aggregate for bodily Injury, personal Injury and property Damage.
6. ☐ **Privacy/Network/Cyber Liability Insurance** for limits not less than \$1,000,000 for any firm providing product or services associated with IT, software, communication, or network.

Additional Insurance Requirements:

- Contractor will be required to, at its own expense, keep in full force and effect during the term of the Agreement, and during the term of any extension or amendment of the Agreement, insurance reasonably sufficient to insure against the liability assumed by Contractor pursuant to the provisions of the solicitation sent by the City of Arvada or as determined by the City of Arvada Risk Manager.
- All coverage must be written with carriers holding a minimum A.M. Best rating of A-VII, and authorized to do business in Colorado. Coverage shall be primary, and any insurance held by the City of Arvada is excess and non-contributory.
- Issuance of a Purchase Order/Contract is contingent upon the receipt of the insurance documents. Work shall not commence before this requirement is met. If the vendor fails to submit the required insurance documents within fifteen (15) calendar days after notice to submit such policies is given to the vendor by a City representative, the vendor may be in default of the Award.
- The City, through its Risk Manager, reserves the right to require additional insurance coverage and other requirements.

REQUIRED VENDOR SUBMITTAL FORM

SUBMITTED BY:

Company Name: Agfinity, Inc.

Contact Names: Sales/Customer Service Jerry Throckmorton

Address: P.O. Box 98, Henderson, CO 80640

Phone: (303) 659-3643 Email(s): jthrockmorton@agfinityinc.com

The undersigned hereby affirms that:

- He/she is a duly authorized agent of the vendor;
- He/she has read all Terms and Conditions and technical specifications made available in conjunction with this solicitation and fully accepts and acknowledges this offer is consistent with the specifications and terms and conditions, unless specific variations have been clearly and expressly listed in the offer.
- The Offer is in all respects fair, without outside collusion or otherwise illegal action.

By: <u>Julie A Kerr</u>	<u>Nov. 27, 2017</u>	<u>84-0294550</u>
Signature of Authorized Agent	Date	FEIN
<u>Julie Kerr</u>	<u>Agronomy Business Mgr.</u>	<u>jkerr@agfinityinc.com</u>
Typed/Printed Name of Agent	Title of Agent	Agent email

PAYMENT TERMS: If the vendor does not accept a percentage discount, the City standard is net thirty (30) days after the date that the City receives an accurate invoice and has accepted the product or service. Payment is the date of the check mailing or date of the credit card transaction.

Discount: % Days, Net: 30 Days, Accept Visa without additional fee? yes

VARIATIONS: The vendor shall identify all variations and exceptions to this RFB. If variations are not stated in the vendor's Offer, it shall be agreed that the vendor's Offer fully complies with all conditions identified in this Solicitation. Submittal of a Vendor Contract is considered excessive in Variations and may be cause for determining that the Bid/Offer is non-responsive and ineligible for award. For each variation listed, reference the applicable section of the solicitation document as per the example below. If no variations are listed here, it is understood that the vendor's Offer fully complies with all terms and conditions. Attach additional Variation sheets in the same format as below after starting the first three on this page.

Page #: Item # or Section:

Variance

Page #: Item # or Section:

Variance

Page #: Item # or Section:

Variance

SUBMITTAL CHECKLIST:

Proposals shall be submitted in the order listed below with each section clearly identified.

- ☐ Submit ON-LINE.
- ☐ Submit completed City Submittal Forms including this sheet and any other attachments requested.
- ☐ Submit Price sheet(s) for products & services. Use the City provided form if one is attached.
- ☐ Submit implementation timeline and warranties, if applicable.
- ☐ Submit Performance Measures per Special Conditions when bidding on an applicable SERVICE.
- ☐ Attach Firm's Licensing, if applicable.
- ☐ Insurance – Checking this box accepts that the insurance requirements listed by the City are acceptable unless listed as a variation on the Submittal Form.
- ☐ CONFIDENTIAL information, if any, MUST be stamped as such on each page and submitted separately.
- ☐ Please initial to acknowledge Addenda, if any, have been considered in your proposal:
#1 _____ #2 _____

REFERENCES:

- ☐ Check here if Firm's standard reference sheet is attached, otherwise, use the space below.

Name: Denver Water Board Contact Person: Brandon Maulis

Address: 1600 West 12thAve., Denver, CO 80204-3412

Telephone No: 303-628-6485 Email: Brandon.Maulis@denverwater.org

Describe type of work/service performed or items supplied: Ammonia Hydroxide for water treatment

Name: City of Englewood Contact Person: Patrick Garr

Address: 1000 Englewood Parkway, Englewood, CO 80110

Telephone No: 303-762-2300 Email: PGarr@expensereduction.com

Describe type of work/service performed or items supplied: Ammonia Hydroxide for water treatment,

Turf fertilizer application for parks

Name: City of Aurora Contact Person: Bryn Fillinger

Address: 15151 E. Alameda Pkwy, Aurora, CO 80012

Telephone No: 303-739-7501 Email: N/A

Describe type of work/service performed or items supplied: Fertilizer, Herbicides and pesticides for parks and

green space

PRICING RESPONSE: Bidder to complete this section and return with completed PROPOSAL PAGES **only if submitting a bid.**

Due to fluctuating costs for Water Treatment Chemicals within a year, based on the market values, include a not to exceed percentage increase amount per year, price adjustment frequency and customer notification procedures.

	Product Description (Specification/ Min. Requirement)	QTY	UOM	Price Per Unit	Extended Price	Possible Fuel Surcharge	Not to exceed percentage increase/ year	Price adjustment frequency and customer notification procedures.
1.	Lime – Standard Hydrated – Meeting requirements of AWWA Standard B202-13 and Certified to NSF standard 60 for Drinking Water.	170	Tons	No Bid				
2.	Hydrofluorosilicic Acid 23% - Meeting requirements of AWWA Standard B703-11 and Certified to NSF standard 60 for Drinking Water.	72	Tons	No Bid				
3.	Sodium Fluorosilicate (50lb/bag) - Meeting requirements of AWWA Standard B702-11 and Certified to NSF standard 60 for Drinking Water.	10,000	Pounds	No Bid				
4.	Sodium Hydroxide (Caustic Soda) 32-33% - Meeting requirements of AWWA Standard B501-13 and Certified to NSF standard 60 for Drinking Water.	45,000	Gallons	No Bid				
5.	Sodium Hypochlorite (Bleach) 12.5% - Meeting requirements of AWWA Standard B300-10 and Certified to NSF standard 60 for Drinking Water.	220,000	Gallons	No Bid				
6.								
				Total:				No Bid

Bid Specifications for Hydrated Lime

The City of Arvada is interested in purchasing hydrated lime (bulk) for the purpose of pH control of drinking water for the City of Arvada Water Treatment Division. The hydrated lime will be delivered to the Ralston Water Treatment Plant in tanker truck (with pneumatic delivery capabilities) and off loaded into storage silos. Delivery times are 8am to 4pm, Monday thru Friday. Hydrated lime shall be suitable for drinking water applications. For typical WTP operation, it is estimated that the City of Arvada hydrated lime requirement will be 170 ton/year.

The hydrated lime shall be a refined hydrate that has small medium particle size, good flow properties, high surface area, free of sand, and high total & available Ca(OH)_2 , free of lumps or other foreign matter which might interfere with operation of the chemical feed facilities.

Hydrated lime shall meet the following industrial standards:

Meets the AWWA standard B202-13

Certified to NSF standard 60

Certified to ASTM standards:

- C977-95
- C1097-95
- C207-91 (type N only)
- C911-99

The delivered hydrated lime shall meet the following chemical and physical requirements:

PROPERTIES	RANGE
Ca(OH)_2 – Total	98.0%
Ca(OH)_2 - Available	96.8%
CO_2	0.5%
Free Moisture	0.7%
CaSO_4	0.1%
Sulfur - Equivalent	240 ppm
Crystalline Silica	<0.1%
Al_2O_3	0.2%
Fe_2O_3	0.06%
MgO	0.4%
P_2O_5	100 ppm
MnO	25 ppm
Specific Gravity	2.34
Dry Brightness, G.E.	92.0
Median Particle Size - Sedigraph	2 micron
pH 12.4	
-100 Mesh (150 μm)	100.0%
-200 Mesh (75 μm)	99.0%
-325 Mesh (45 μm)	94.0%
Apparent Dry Bulk Density - LOOSE	22 lbs./ft ³
Apparent Dry Bulk Density - Packed	35 lbs/ft ³



DPC INDUSTRIES, INC.

P.O. Box 509
23500 I-76 Frontage Road
Hudson, Colorado 80642-0509
(303) 536-4000

12/16/20

Brad Wyant
Water Treatment Manager
Utilities/Water Treatment
City of Arvada
8101 Ralston Road
Arvada, CO 80001

DPC is proud to announce the third of four yearly price renewals for the City of Arvada.
Pricing is as follows:

- 12.5% sodium hypochlorite, 4,500-gallon quantities \$1.41 per gallon
- 32% sodium hydroxide, 45,000 lb. quantities \$1.33 per gallon
- As with our MAPO customers, pricing will be adjusted quarterly based on the markets.

Thank you for all the support you have given to DPC over the years and thank you for being the best part of DPC.

Tony Galeon

Territory Manager

A large, stylized handwritten signature in black ink, which appears to read 'Tony Galeon', is written over the printed name and title.



City of Arvada

REQUEST FOR SOLE SOURCE

Date: 12/19/2017

To: Jim Sullivan

Department/Division Name: Utilities/Water Treatment

Documenting Staff: Brad Wyant - Water Treatment Manager

Subject: Sole Source Request for the Purchase Of: Granular Activated Carbon Media

Proposed Supplier: Calgon Carbon Corporation

Cost Estimate: \$188,987

Commentary: Sole Source purchases are those that are clearly and legitimately limited to a single supplier or service provider that:

- possesses the unique and singularly available capacity to meet the requirements of the goods or services to be purchased
- offers operational compatibility with existing equipment and/or related parts
- provides a required unique feature or service

Assessment Criteria:

- objective review of the required product/service was performed
- no conflict of interest exists
- the good/service can not be obtained through a competitive solicitation
- there exists a compelling need for the good/service

Please refer to the attached sole source justification details (page 2 of this form).

Department Head: (Note: Check appropriate box before signing)

Approved ☐ Declined ☐ (\$5,000.01 through \$15,000 or less)

OR

Recommended ☒ (\$15,000.01 or more)

Jim M. Sullivan / 12-19-17
Signature of Department Head Date

Request for Sole Source Approval (\$15,000.01 or more)

City Manager: Approved ☒ Declined ☐

[Signature] / 12-19-17
Signature of City Manager Date

SOLE SOURCE JUSTIFICATION

1. Explanation/detail of Item or service: The Granular activated carbon (GAC) used for the top layer of filter media at the Arvada Water Treatment Plant, is Filtrasorb 820, a domestic, high density bituminous coal activated carbon, which was chosen during the original conversion process. This type GAC was determined to be the best choice for maximum bed life under Arvada Water source water conditions. Calgon is one of only two domestic bituminous manufacturers in the US. and the only company that owns/operates an NSF certified GAC reactivation facility to provide the City with the current Customer Municipal Reactivation (CMR)/F820 Virgin Carbon Blend Exchange. The CMR/F820 Blend, and services, is a specific blend unique to Calgon Carbon. This blend and its characteristics has been proven to be the best performance option, environmentally friendly and cost effective option for the City of Arvada to treat the Arvada Reservoir water for Taste and Odor issues, Total Organic Carbons, Disinfection Byproducts and Emerging Contaminants

2. Application of the proposed purchase to the organization: Replacement of spent GAC Filter Media for top 30 inch layer of Arvada Water Treatment Plant Filters to aid in removal of Taste/Odor compounds and other regulated contaminant.

3. This is a sole source purchase because:

- ☒ sole provider of a licensed or patented good or service
- ☒ sole provider of items that are compatible with existing equipment, inventory, systems, programs or services
- ☒ sole provider of goods and services for which the City has established a standard
- ☒ sole provider of factory-authorized warranty, maintenance, or support services serving the geographic area in which the City is located
- ☐ other - Explain in detail, including the reasons why other competing goods, services or providers can not be considered.

4. Effective Sole Source Term:

- ☐ one time purchase of goods or service
- ☐ one year/twelve months for initial purchase
- ☐ number of annual years renewal periods ending date
- ☒ effective so long as the provider/supplier retains sole source designation in the market place for this specific product/service (City Staff to verify annually)

5. What steps were taken to verify the above sole source designation (item #3)?

- ☐ other brands/manufacturers were examined (please indicate the method of research, including names and contact information, and explain why these were not suitable).
- ☐ other vendors were contacted (please indicate the method of research, including names and contact information, and explain why these were not suitable).

☒ Manufacturer or manufacturer's representative was contacted and sole source was verified. Rep's name - Mark Peet, date of contact - November 29, 2017

☒ Other – explain what other process was used to verify the sole source determination from #3.

Filtrisorb 820 is unique carbon manufactured and supplied by Calgon Carbon. This GAC has proven to be highly effective for the Arvada Water Treatment Plant in removal of Taste and Odor compounds, as well as other contaminants, and has the proper characteristics for filtration purposes (density, porosity, size, etc.). Calgon Carbon offers the service to reactivate and store the spent carbon from the Arvada WTP filters. Replacing spent GAC with the City's own reactivated GAC and Virgin blend mix, ensures the product is exactly the same and does not contain any unknown contaminants.



Brad WYANT <bwyant@arvada.org>

Calgon Carbon CMR Exchange Quotation MMP11271765

Mark Peet <mpeet@calgoncarbon.com>

Wed, Nov 29, 2017 at 2:09 PM

To: Brad WYANT <bwyant@arvada.org>

Hey Brad,

Allow me to touch on a few of the topics about Calgon Carbon Filtrasorb 820 and the CMR process.

1. The carbon currently in the filters is a blend of Calgon Filtrasorb 820 virgin carbon and the reactivated Filtrasorb 820 previously removed from the filters.

Filtrasorb 820 is a domestic, high density bituminous coal activated carbon, which was chosen during the original conversion process. This type GAC was determined to be the best choice for maximum bed life under Arvada Water source water conditions. Calgon is one of only two domestic bituminous manufacturers in the US.

2. Custom Municipal Reactivation (CMR) is the most environmentally friendly, cost effective method of activated carbon exchanges and strict NSF certifications must be followed to achieve this process.

Calgon Carbon is the only supplier who is a domestic activated carbon manufacturer and owns NSF certified reactivation facilities to provide CMR material to drinking water facilities.

When spent carbon is reactivated, there is a small percentage of loss in yield due to the thermal and screening processes, so 10%-20% of virgin carbon must be blended in to bring the volume back to specification and it is crucial to use the same type high quality virgin material that was originally used.

3. Calgon CMR facilities are dedicated to potable / municipal carbon reactivation, which assures no commingling with spent or reactivated carbon from non-potable customers. This is part of the Calgon dedication to strict NSF certification, as well as metals testing on reactivated material to make sure NSF certifications are continually achieved.

4. Calgon's Gila Bend, AZ CMR facility, being a new, state of the art facility constructed primarily to service long term CMR contracts in the Phoenix area, offers the highest quality reactivated carbon in the industry and we are confident Bossier City would be pleased with the qualified material.

5. All this, along with the great results you are seeing with the CMR material already utilized in your filters, solidifies the CMR process is an asset for the City of Arvada in the long term goal of cost effective, quality drinking water supply.

On the carbon testing, let me check with our testing group at corporate, because I thought you were on a schedule to receive sample bottles every 6 months.

I hope this information helps and please feel free to contact me if anything else is needed.

Thanks,

Mark W. Peet

Calgon Carbon Corporation

Senior Technical Sales Rep

Cell: 337-302-0399

Fax: 337-588-4699

[Quoted text hidden]

[Quoted text hidden]



December 16, 2020

Quote: 00005271

City of Arvada
17946 W 64TH PARKWAY ARVADA
CO 80007-9999 US

Dear Mr. Wyant:

Thank you for your interest in Calgon Carbon Corporation to complete your upcoming GAC Exchange. We are pleased to offer our services to assist you in this endeavor.

The price for performing the CMR-GAC Exchange is below. This price is subject to Calgon Carbon Corporation's standard terms and conditions, a copy of which is attached.

Product/Packaging: CMR ARVADACO F/S - 2000 LB SS

Quantity: 120,000 LBS

Total Price: \$201,651

INCOTerm: 11 - Ship Pt Prepaid Delivered

Calgon Carbon Corporation is proposing to perform the GAC Exchange using Bulk Slurry techniques.

Scope: Calgon Carbon to remove spent GAC from Filters 2 and 4 and haul it to our reactivation facility.

Once the material is reactivated, blended with up to 20% virgin Filtrasorb 820, and tested, Calgon Carbon will return to re-install it into the filters.

Should additional makeup be required beyond 20% to meet quality parameters, additional charges may apply.

Should the City of Arvada prefer a 100% virgin Filtrasorb 820 exchange, the price for this would be **\$248,784**

Please note for freight:

Includes 4 hrs detention - excess detention is 95.65 USD per hour.

Layover charge if needed is 244.25 USD

As a reminder for bulk slurry service, the following conditions should be met:

Compressed air (100 cfm min.), water (60 psig and 150 gpm min.), drainage, 110V, 20 A power, lighting, and restrooms readily available.; Spent media must be free flowing and of a nature (e.g. not gummy or attrited) that does not blind water separation nozzles or screens.; Customer is to open all man ways for inspections, vacuum service and dry fills. Failure to allow Calgon Carbon to internally inspect the vessel for damage to under-drains that might result in a carbon release and for a spent carbon heel in the vessel that may cause premature contaminate break-through will make these failures solely the responsibility of the customer. If repairs to a vessel are required, labor and charges for additional materials and equipment will be invoiced as cost over-runs. Additional cost over-runs will be invoiced for wait time, poor equipment access, difficult to remove or install media, excessive trailer drain times, or other variances from the standard scope of supply.

This quote does not include any applicable taxes. Standard lead time is 10 business days after receipt of a purchase order.

Quote is valid until April 30, 2021

Shipment must take place within 90 days after receipt of a purchase order.

Pricing beyond the terms stated above is subject to change.

Subject to Calgon Carbon Corporation Terms and Conditions.

If you would like to proceed with this offer, please email or fax a purchase order or credit card information to my attention and to CustomerRelations@CalgonCarbon.com. Be sure to include your site address, requested date for service, and reference the above quotation number on your purchase order. Please contact me with any additional questions

Sincerely,

Calgon Carbon Corporation

Benjamin Goecke
Senior Technical Sales Representative

Proposal Validity and Scope

Quote is valid until 4/30/21. Sales/Use Taxes ARE NOT included. Payment terms are Net30 from date of invoice. Unless otherwise noted in Calgon Carbon's Sales Proposal or Customer's Purchase Order, the services to be provided by Calgon Carbon and the requirements of the customer are defined in the following sections. Additional service costs will be invoiced for wait time, poor equipment access, difficult to remove or install media, excessive trailer drain times, or other variances from the standard scope of supply.

Standard Scope of Supply

Our quoted service price includes removal of the spent media from the customer vessel, placement of spent media in either bulk bags or disposal container, inspection of vessel interior performed by viewing from outside man-way opening, and re-bedding with replacement media. Service is performed during normal operating hours of Monday to Friday. Weekend and holiday work can be performed at special rates. Bulk exchange pricing assumes adequate access to the vessel, customer supplies air and water for the exchanges, and vessel is equipped with media discharge and media fill lines terminated with male Camlock-type fittings. Two (2) hours are allotted for water to drain from trailers. Vacuum vessel change-out pricing assumes vertical cylindrical vessels with top entry that can be filled pneumatically by pulling a vacuum on the vessel or by drop loading from super sacks directly over the top man-way. To avoid additional invoiced costs, conditions defined in the Site Criteria, Additional Criteria for Vacuum Service, and Spent Media Disposal sections below must also be met.

Site Criteria

1. Compressed air (100 cfm min.), water (60 psig and 150 gpm min.), drainage, 110V, 20 A power, lighting, and restrooms readily available.
2. Suitable access and staging areas for materials and service equipment within 100 feet of equipment to be serviced.
3. Spent media must be free flowing and of a nature (e.g. not gummy or attrited) that does not blind water separation nozzles or screens.
4. Customer is to open all man ways for inspections, vacuum service and dry fills. Failure to allow Calgon Carbon to internally inspect the vessel for damage to under-drains that might result in a carbon release and for a spent carbon heel in the vessel that may cause premature contaminate break-through will make these failures solely the responsibility of the customer.

5. At sites where spent media is classified as a RCRA hazardous waste, customer is responsible for the disposal of contaminated PPE, equipment (e.g., filters) and decontamination rinse water.

6. Inclement weather provisions:

- For extreme weather conditions (temp < 30 F or > 90 F; wind > 15 mph; heavy rain or snow, etc.), work may be postponed for safety reasons. However, in emergency situations, exceptional provisions (e.g. portable heaters, tarps, etc.) may be used to complete the work. Costs of such provisions are the responsibility of the customer.

- Impassable roadways at a site will be considered a safety hazard and will result in delay or cancellation charges.

Spent Media Disposal

If Calgon Carbon is to reactivate (or dispose) the spent media, acceptance (site removal) of spent media requires the generator to fully complete Calgon Carbon's Adsorbate Profile Document (APD) and submit a spent media sample as described in the APD. Sample generation is best accomplished by using a Carbon Acceptance canister which can be arranged through our Customer Service department. The spent media sample will be analyzed to ensure compliance with Calgon Carbon's spent media acceptance criteria. Please note that this analysis is not designed to provide information for completion of the APD, such as RCRA hazardous determination. Calgon Carbon can provide the additional service of TCLP testing for a fee of \$1,600 including all four testing parts, or the following fees for individual tests:

Volatiles -- 330 USD Semi-Volatiles -- 500 USD Metals -- 250 USD Pesticides/Herbicides -- 520 USD

To protect both our customers and Calgon Carbon from liability, spent media will not be removed from the job site without an approved profile. Federal and State regulations are very strict concerning storage and transportation of non-profiled material. Since the spent media review and approval process requires varying amounts of time (generally two to three weeks), customers are required to get acceptance prior to media exchange. If the spent media does not have acceptance at the time of service, the spent media will be removed at a later date and additional charges may result.

Cost Over-Runs

Pricing is based on indicated quantities of media. If removed or replaced quantity is greater, the invoice will reflect actual quantity and additional costs for transportation, field service crew and material. If repairs to a vessel are required, labor and charges for additional materials and equipment will be invoiced as cost over-runs. Additional cost over-runs will be invoiced for wait time, poor equipment access, difficult to remove or install media, excessive trailer drain times, or other variances from the standard scope of supply. If media is solidified and customer requests Calgon Carbon to remove media, Calgon Carbon will not assume responsibility for any damage to vessel interior.

SPENT CARBON HANDLING: The Fees listed above include handling of all spent carbon generated in the treatment application provided: 1) the spent carbon satisfies all spent carbon acceptance criteria established by Calgon Carbon; 2) the spent carbon is classified

non-hazardous as defined under the Federal Resource Conservation and Recovery Act (RCRA). If it is subsequently determined that the spent carbon generated is a Hazardous Waste as defined by RCRA, then the return of the spent carbon will be subject to a RCRA Spent Carbon Reactivation Fee in the amount of TWENTY-FIVE CENTS (\$.25) for each pound of spent carbon returned on a dry weight basis. The Fee will be determined at the time an order is placed for exchange of Activated Carbon or at the time a return of spent carbon is scheduled if purchase of replacement Activated Carbon is not required.

Transportation of Hazardous Media

If spent media is classified as hazardous, transportation of spent media is by a hazardous carrier. Customer to supply and prepare all required manifests. Wet, dripping, or loading super sacks of hazardous waste will not be acceptable for removal from site. We suggest that these items be placed under roof or tarp so that extra freight charges for rejected loads might be avoided. Please remember that as many as thirty (30) days may be needed to arrange hazardous transportation.

Questions

Further information may be obtained from your sales person, at our website www.calgoncarbon.com, or by calling 1-800-4-CARBON.

Terms and Conditions for the Sale of Carbon and Media

1) DEFINITIONS:

- (a) Seller: Calgon Carbon Corporation or its applicable subsidiary or affiliate
- (b) Buyer: The buyer named in the Documentation
- (c) Documentation: The proposal, confirmation, acknowledgement or other contract, as applicable, for the sale of the Products to which these Terms and Conditions are attached
- (d) Goods:: Any carbon cloth, carbon, resin, diatomaceous earth, and/or perlites sold pursuant to the terms of the Documentation
- (e) Products: The Goods and services, collectively, described in the Documentation
- (f) Agreement: The Documentation, these Terms and Conditions and any attachments referenced in the Documentation

2) GENERAL: Seller hereby offers for sale to Buyer the Products on the express condition that Buyer agrees to accept and be bound by the terms and conditions set forth herein. To the extent of a conflict between these Terms and Conditions and the express terms set forth in the Documentation, the terms set forth in the Documentation shall control. Any provisions contained in any document issued by Buyer are expressly rejected and if the terms and conditions set forth herein differ from the terms in any document issued by Buyer, this document shall be construed as a counter offer and shall not be effective as an acceptance of Buyer's document. In ordering and delivery of the Products, the parties may employ their standard forms; provided, however, that nothing in those forms shall be construed to modify or amend the terms of this Agreement. In the event of a conflict between this Agreement and either party's standard forms, this Agreement shall govern.

3) Price and Payment: The price shall be as stated in the Documentation. Unless otherwise stated in the Documentation: (a) The price is exclusive of any taxes, tariff, and duties of any kind which either party may be required to pay with respect to the sale of goods described in the Documentation, and Buyer shall be responsible for the payment of all taxes, tariffs and duties related hereto, except for income taxes imposed on Seller; (b) Sales tax will be added to the price based upon the Product destination unless tax exemption or direct pay documentation is provided; (c) Products will be billed for at the time of delivery; and (d) Payment terms shall be net thirty (30) days, or net forty-five (45) days if paid by Electronic Funds Transfer (EFT). A late payment fee of 1.25% per month, or the highest lawful rate, whichever is less, will apply to all amounts past due, and will be prorated per day. Retainage may only be applied on the final invoice. Buyer agrees that Seller, at its discretion, may accelerate and make due and payable all remaining payments if Buyer shall fail to perform any of its obligations hereunder or under the Documentation, including without limitation Buyer's failure to pay any amount when due, subject to any applicable cure periods provided for herein.

4) PRICING CONDITIONS:

(a) Unless otherwise indicated within the Documentation, all pricing quoted in connection with the Documentation is valid for purchase for a sixty (60) day period beginning with the date of the Documentation.

(b) If this Agreement shall continue into the next calendar year, the fees payable pursuant hereto will be adjusted on January 1st of such calendar year as outlined in the Documentation; provided that if the Documentation is silent, the mechanism set forth in Section 4(c) below will apply.

(c) If the Documentation is silent regarding the mechanism for adjustment of fees, the fees will be adjusted on January 1st of such calendar year by the annual percentage change in the combined average of two Producer Price Indices, as published by the United States Department of Labor: (i) Producer Price Index of other Petroleum and Coal Products Manufacturing, and (ii) Producer Price Index of Basic Organic Chemicals. The percent adjustment shall be calculated by taking the percent difference for each index during the twelve month period from January 1st through December 31st of the last completed calendar year as compared to the twelve month period from January 1st through December 31st of the calendar year immediately preceding the last completed calendar year. These two percentages will then be averaged for calculating the final percent increase to which all Goods will be subject. If the calculation would result in a negative adjustment, no changes shall be made for such year.

5) SALE AND DELIVERY: Sale terms and pricing, unless otherwise specified in the Documentation, are F.O.B. Seller's point of shipment (Incoterms® 2020). If freight is to be prepaid by Seller and added to the amount due, Seller shall add up to a thirty-five percent (35%) surcharge to the freight charges. Seller will have the right, at its election, to make partial shipments of the Products and to invoice each shipment separately. Seller reserves the right to stop delivery of any Product in transit and to withhold shipments in whole or in part if Buyer fails to make any payment to Seller when due or otherwise fails to perform its obligations hereunder or under any other outstanding payment obligations of Buyer to Seller, whether related to the Documentation or otherwise.

6) TITLE AND RISK OF LOSS: Notwithstanding the trade terms indicated above and subject to Seller's right to stop delivery of any Goods in transit pursuant to Section 5 above, title to and risk of loss of the Goods will pass to Buyer upon delivery of the Goods by Seller to the carrier at Seller's point of shipment. Notwithstanding the foregoing or the provisions of the Uniform Commercial Code or Incoterms® 2020,

if Buyer is located outside of the United States of America, title to the Goods, and all accessions to or products of the Goods, shall remain with Seller until the later of (a) payment in full of the purchase price and of other amounts owing by Buyer and (b) delivery to Buyer.

7) AVAILABILITY: Shipment dates (and delivery and installation dates, if included in the scope of work) are not guaranteed, and Seller will not be liable for any loss or damage resulting from any delay in delivery or failure to deliver which is due to any cause beyond Seller's reasonable control. In the event of a delay due to any cause beyond Seller's reasonable control, Seller reserves the right to reschedule the shipment within a reasonable period of time, and Buyer will not be entitled to refuse delivery or otherwise be relieved of any obligations as the result of such delay. If any delivery is delayed for more than thirty (30) days beyond the originally scheduled delivery date and such delay is caused by Buyer, Buyer will be subject to storage charges from the scheduled shipment date of two percent (2%) of the sale price per month; and such storage charge shall be due monthly on the first day of each month. Storage by Seller shall be at Buyer's risk and expense.

8) SERVICES:

(a) All orders which include services (including installation, supervision, startup, training, testing, etc.) as stated in the Documentation will require the completion of the Pre-Visit Checklist and Service Request Form prior to scheduling the visit. If there are delays, cancellations, or failures by Buyer to meet service personnel at designated times, then fees will be assessed to the customer at Seller's then-applicable per hour rate for each hour of delay for each person. For domestic or international travel, additional fees will apply.

(b) Buyer shall make the premises, where services are to be performed (the "Premises"), available to Seller at all reasonable times as Seller may request, such that Seller shall be able to perform the services in a timely manner. Buyer shall bear all risk and liability associated with its inability to make the Premises available to Seller to perform the services. Prior to the commencement of services, Buyer shall ensure that the Premises are in good repair and in safe condition, and shall notify Seller of any dangerous, unsafe or hazardous conditions associated with the Premises, such that Seller can take the appropriate safeguards. Prior to the commencement of any work, Buyer shall notify Seller of any special workplace requirements, safety standards, operating procedures or other conditions imposed on persons performing work at the Premises.

(c) Any spent activated carbon covered by this Agreement will be subjected to reactivation acceptance testing by Seller as described in Seller's Guidelines for Return for Reactivation of Granular Activated Carbon, which Seller may update from time to time in its sole discretion. Buyer will provide any information required by Seller relative to evaluating carbon acceptance.

Seller reserves the right to reject any and all activated carbon if, in its judgment, it is unsuitable for reactivation. Further, Seller will periodically retest the spent activated carbon to assure it remains acceptable for reactivation and that it does not contain constituents that were not in the carbon acceptance sample and/or Adsorbate Profile Document. Seller reserves the right to apply a surcharge for reactivation of spent carbon with quality that creates excessive corrosion, slagging, exothermic reactions, or other operational problems including lower furnace operating rates. If the spent activated carbon becomes unacceptable for reactivation, disposal of the carbon will be the responsibility of Buyer. Seller reserves the right to reactivate the spent carbon at any of its reactivation facilities where carbon acceptance exists.

9) PERMITS, LICENSES AND FEES: Buyer shall be responsible, at its sole expense, for all environmental permits, applications, regulatory approvals, and other permits or licenses that may be required for installation and/or operation of the Products.

10) Termination: Seller may cancel this Agreement if any of the following occurs: (a) Buyer becomes insolvent; (b) Buyer ceases to conduct its operations in the normal course of business; (c) Buyer is unable to meet its obligations as they mature, or admit in writing such inability or fails to provide adequate assurances of its ability to perform its obligations hereunder; (d) Buyer files a voluntary petition in bankruptcy; (e) Buyer suffers the filing of an involuntary petition in bankruptcy and the same is not dismissed within thirty (30) days after filing; (f) a receiver, custodian or trustee is appointed for Buyer or for a substantial part of its property; (g) Buyer fails to make payment on the terms and within the time specified in this Agreement, or breaches any other obligations under this Agreement; or (h) Buyer executes an assignment for the benefit of its creditors. In the event of such cancellation, Seller shall have all rights and remedies set forth in the Uniform Commercial Code of any applicable jurisdiction and all other remedies available at law or in equity. Sections 2, 10, 11, 12, 14, 15, 16, 18, 19 and 20 shall survive termination or expiration of this Agreement.

11) LIMITED WARRANTIES:

(a) Unless otherwise specifically provided for in the Documentation, Seller warrants that all Products provided under this Agreement shall, at the time of delivery, conform to Seller's then-applicable specifications for such Products. Seller shall correct (by replacement of Goods or reperformance of services) any failure to conform to the foregoing warranty of which it is notified in writing within ninety (90) days from delivery. Any Goods removed in connection with such replacement may be reactivated or disposed of at Seller's sole discretion.

(b) **THE OBLIGATIONS CREATED BY THIS WARRANTY TO REPAIR OR REPLACE DEFECTIVE GOODS OR TO PROVIDE CORRECTIVE SERVICES SHALL BE THE SOLE REMEDY OF BUYER IN THE**

EVENT OF DEFECTIVE GOODS OR SERVICES. THERE ARE NO WARRANTIES MADE WITH REGARD TO THE PRODUCTS OTHER THAN THOSE CONTAINED IN THIS SECTION. ALL OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, ARE HEREBY DISCLAIMED, INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND ALL WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

(c) The sale of any Products pursuant to this Agreement does not include any license, express or implied, to practice any intellectual property owned or licensed by any third party. Buyer agrees not to use the Products for any patented use not set forth expressly in this Agreement, absent a separate license from the holder of such patent. Additionally, Buyer agrees not to resell or sublicense the use of Products for any use not expressly granted hereunder. Any warranty obligations do not apply to any specific use of the Products, application of the Products, modification of the Products, or combination of the Products with any product manufactured by any third party. Seller, except as noted herein, does not and will not warrant, indemnify, or in any other way share responsibility for Buyer's use, application, modification, or combination of the Products.

12) LIMITATION OF LIABILITY: Notwithstanding any provision to the contrary herein, except with respect to a breach of the confidentiality obligations set forth in Section 15 hereof, the parties hereto agree that in no event shall either party be liable to the other party for any indirect, special, consequential, incidental or punitive damages, or lost profits, as a result of a breach of any provision of this Agreement or for any other claim of any kind arising out of or relating to this Agreement, whether in contract, in tort or otherwise. Notwithstanding any provision to the contrary herein, for all losses, damages, liabilities or expenses (including attorney's fees and costs), whether for indemnity or negligence, including errors, omissions or other acts, or willful misconduct, or based in contract, warranty (including any costs and fees for repairing, replacing or re-performing services or curing a breach hereof), or for any other cause of action (individually, a "Claim"; collectively, "Claims"), Seller's liability, including the liability of its insurers, employees, agents, directors, and officers and all other persons for whom Seller is legally responsible, shall not, to the maximum extent permitted by law, exceed in the cumulative aggregate with respect to all Claims arising out of or related to this Agreement, the lesser of (a) the total amount of compensation paid to Seller hereunder, and (b) One Million Dollars (\$1,000,000). All Claims of whatsoever nature shall be deemed waived unless made in writing within ninety (90) days of the occurrence giving rise to the Claim. Moreover, any failure of

Buyer to notify Seller of unsatisfactory operation or any improper or unauthorized installation, maintenance, use, repair, or adjustment shall relieve Seller of any further responsibilities hereunder.

13) FORCE MAJEURE: Notwithstanding any provision to the contrary herein, Seller shall have no liability to Buyer or its affiliates, and shall have the right to suspend performance (including, without limitation, shipments) hereunder, in the event of war, riot, terrorism, accident, explosion, sabotage, flood, acts of God, fire, court order, strike, labor disturbance, work stoppage, national defense requirements, act of governmental authority, pandemic, epidemic, extraordinary failure of equipment or apparatus, inability to obtain electricity or other type of energy, raw material, labor, equipment or transportation, or other causes beyond Seller's reasonable control. It is understood and agreed that settlement of strikes, lockouts and other labor disputes shall be entirely within the discretion of Seller and that nothing in this Agreement shall require the settlement of strikes, lockouts and labor disputes when such course is inadvisable in the sole discretion of Seller.

14) EXPORT CONTROLS: Buyer acknowledges that the Products and related technology are subject to U.S. export control and economic sanctions laws and regulations, which may include the International Traffic in Arms Regulations (ITAR), the Export Administration Regulations (EAR) and regulations promulgated by the U.S. Department of the Treasury Office of Foreign Assets Control (OFAC). Buyer further acknowledges that the re-export of the Products and/or related technology to a third country or retransfer to an unapproved end user may require a license or other authorization from the Government of the United States. Such licenses or other authorizations may impose further restrictions on the re-export or retransfer of the Products and/or related technology. U.S. law also restricts the re-export or retransfer of U.S.-origin goods, technology, or services to countries or persons subject to U.S. sanctions or embargoes. Buyer represents and warrants that it is in compliance with and agrees to comply with all such applicable export control and economic sanctions laws and regulations. It is the sole responsibility of Buyer to apply for and obtain any necessary licenses or other authorizations prior to any re-export or retransfer of the Products and/or related technology. Seller makes no warranty that any such licenses or other authorizations will be granted, and shall have no liability for Buyer's inability to obtain such licenses or other authorization or for any violation by Buyer of any applicable export control and/or economic sanctions laws and regulations. Buyer will indemnify Seller and hold it harmless from any liability resulting from Buyer's violation of this provision or applicable export laws or regulations. Notwithstanding any other provision in this Agreement, Seller shall have the right to terminate this Agreement immediately upon the determination by Seller, in Seller's sole discretion, that Buyer has breached, intends to breach, or insists upon breaching any of the provisions in the above clauses.

15) CONFIDENTIALITY: Other than in the performance of the terms of this Agreement, neither Buyer nor its agents, employees, or subcontractors shall use or disclose to any person or entity any confidential information of Seller (whether written, oral, electronic or other form) that is obtained or otherwise prepared or discovered in connection with this Agreement. Buyer agrees that all pricing, discounts, design drawings and technical information that Seller provides to Buyer are the confidential and proprietary information of Seller, whether or not otherwise identified as such. The obligations under this section continue perpetually and survive the termination or expiration of any underlying agreement between the parties. The provisions of this section relating to use and disclosure shall not apply to any information that: (a) is or becomes generally available to the public other than as a result of a disclosure by Buyer under this Agreement; (b) becomes available to Buyer from a source other than Seller without breach of any obligation of confidentiality; (c) was independently developed by Buyer without violation of Seller's rights and without reference to the confidential information, as evidenced by written records, maintained in the ordinary course of business by Buyer; (d) is used or disclosed with the prior written approval of Seller; (e) is information previously known to Buyer as evidenced by written records maintained by Buyer in the ordinary course of business, and not otherwise subject to any confidentiality restrictions; or (f) Buyer becomes legally compelled (by oral questions, interrogatories, requests for information or documents, subpoenas, investigative demands or similar process) to disclose. The burden of proof that the information resides within one of the exceptions set forth above shall be on Buyer. If Buyer becomes legally compelled (by oral questions, interrogatories, requests for information or documents, subpoenas, investigative demands or similar process) to disclose any of the confidential information, Buyer shall provide Seller with prompt written notice so that Seller may seek a protective order or other appropriate remedy or waive compliance with the provisions of this Agreement. If such protective order or other remedy is not obtained, or if Seller waives compliance with the provisions of this Agreement, Buyer shall furnish only that portion of the confidential information which Buyer is legally required to disclose and shall exercise its reasonable efforts to obtain reliable assurance that confidential treatment shall be accorded the confidential information. Buyer shall not undertake any qualitative or quantitative analysis, reverse engineering or replication of any of Seller's products, samples or prototypes without Seller's specific written authorization.

16) SECURITY INTEREST: Buyer hereby grants Seller a security interest in the Goods to secure the payment of the purchase price, and shall not sell, lease, transfer or encumber the Goods and will keep the Goods free from any and all liens and security interests until Seller has been paid in full. Buyer shall execute any and all documents reasonably requested by Seller to protect such security interests.

17) MANAGEMENT OF CHANGE: Seller is constantly striving to improve its products and capabilities and to provide the best product to its customers. Seller may from time to time develop product improvements or alterations with respect to the Products hereunder (the "Product Improvements"), and Seller may implement such Product Improvements without notice to Buyer so long as the performance of the Products will not be materially diminished, as determined in Seller's sole discretion, and so long as Seller has not separately agreed in writing to provide such notification to Buyer. In the event that Seller has agreed in writing to provide notice of Product Improvements to Buyer (the "Notice"), then Seller shall provide such Notice in accordance with the terms set forth in the separate writing.

18) APPLICABLE LAW AND JURISDICTION: This Agreement shall be governed by, construed and enforced in accordance with the laws of the Commonwealth of Pennsylvania, without regard to its conflict of law principles. The UN Convention on Contracts for the International Sale of Goods shall not apply to the transaction(s) represented hereby. The parties consent and submit to the exclusive jurisdiction and service of process of any state or federal court located in Allegheny County, Pennsylvania.

19) MISCELLANEOUS:

(a) Neither party may assign this Agreement, including without limitation any of its rights or obligations hereunder, without the express written consent of the other party hereto; provided that Seller may, without Buyer's consent, assign this Agreement, including without limitation any of its rights or obligations hereunder, to any of its parents, subsidiaries or affiliates or to any third party which merges with Seller or acquires all or substantially all of its business and assets or a substantial part of its assets or business relating to the Products. Seller may use subcontractors to fulfill its obligations pursuant to this Agreement.

(b) In the event of any legal proceeding between Seller and Buyer relating to this Agreement, neither party may claim the right to a trial by jury, and both parties waive any right they may have under applicable law or otherwise to a trial by jury.

(c) In the event that any one or more provisions (or portions thereof) contained herein shall be held by a court of competent jurisdiction to be invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions (or portions thereof) contained herein shall remain in full force and effect, unless the revision materially changes the bargain.

(d) Seller's failure to enforce, or Seller's waiver of a breach of, any provision contained in this Agreement shall not constitute a waiver of any other breach or of such provision.

(e) Seller reserves the right to correct clerical, arithmetical, or stenographic errors or omissions in this Agreement, invoices or other documents.

(f) Any notice or communication required or permitted hereunder shall be in writing and shall be deemed received when personally delivered or three (3) business days after being sent by certified mail, postage prepaid, to a party at the address specified in this Agreement, or at such other address as either party may from time to time designate in writing to the other.

(g) Buyer agrees that it will not use Seller's name(s), logo(s) or mark(s) in any public communication or press release, or for any other marketing or promotional purpose, without Seller's prior written consent.

(h) Terms used in this Agreement which are not defined herein and which are defined by the Uniform Commercial Code of the Commonwealth of Pennsylvania shall have the meanings contained therein.

20) ENTIRE AGREEMENT: With respect to the subject matter hereof, this Agreement constitutes the complete and exclusive statement of the contract between Seller and Buyer. No waiver, consent, modification, amendment or change of the terms contained in this Agreement shall be binding unless made in writing and signed by Seller and Buyer. Seller's failure to object to terms contained in any subsequent communication from Buyer (whether in a purchase order or other communication) will not be a waiver or modification of the terms set forth herein.



Financial Services
Purchasing Division
215 N. Mason St. 2nd Floor
PO Box 580
Fort Collins, CO 80522
970.221.6775
970.221.6707
fcgov.com/purchasing

**REQUEST FOR PROPOSAL
8399 LIQUID ALUMINUM SULFATE**

The City of Fort Collins is requesting proposals from qualified firms to provide liquid aluminum sulfate to the Water Treatment Facility.

As part of the City's commitment to Sustainable Purchasing, proposals submission via email is preferred. Proposals shall be submitted in a single Microsoft Word or PDF file under 20MB and e-mailed to: purchasing@fcgov.com. If electing to submit hard copy proposals instead, three (3) copies, will be received at the City of Fort Collins' Purchasing Division, 215 North Mason St., 2nd floor, Fort Collins, Colorado 80524. Proposals must be received before 3:00 p.m. (our clock), October 26, 2016 and referenced as Proposal No. 8399. If delivered, they are to be sent to 215 North Mason Street, 2nd Floor, Fort Collins, Colorado 80524. If mailed, the address is P.O. Box 580, Fort Collins, 80522-0580. Please note, additional time is required for bids mailed to the PO Box to be received at the Purchasing Office.

The City encourages all Disadvantaged Business Enterprises (DBEs) to submit proposals in response to all requests for proposals. No individual or business will be discriminated against on the grounds of race, color, sex, or national origin. It is the City's policy to create a level playing field on which DBEs can compete fairly and to ensure nondiscrimination in the award and administration of all contracts.

Questions concerning the project should be directed to Pat Johnson, CPPB, Senior Buyer at pjohnson@fcgov.com in written format. Please format your e-mail to include: RFP 8399 Liquid Aluminum Sulfate in the subject line. The deadline for question submittal is October 18, 2016 at 4:00 pm.

A copy of the RFP may be obtained at www.rockymountainbidsystem.com.

The City of Fort Collins is subject to public information laws, which permit access to most records and documents. Proprietary information in your response must be clearly identified and will be protected to the extent legally permissible. Proposals may not be marked 'Proprietary' in their entirety. All provisions of any contract resulting from this request for proposal will be public information.

New Vendors:

The City requires new vendors receiving awards from the City to fill out and submit an IRS form W-9 and to register for Direct Deposit (Electronic) payment. If needed, the W-9 form and the Vendor Direct Deposit Authorization Form can be found on the City's Purchasing website at www.fcgov.com/purchasing under Vendor Reference Documents.

Sales Prohibited/Conflict of Interest: No officer, employee, or member of City Council, shall have a financial interest in the sale to the City of any real or personal property, equipment, material, supplies or services where such officer or employee exercises directly or indirectly any decision-making authority concerning such sale or any supervisory authority over the services to be rendered. This rule also applies to subcontracts with the City. Soliciting or accepting any gift,

gratuity favor, entertainment, kickback or any items of monetary value from any person who has or is seeking to do business with the City of Fort Collins is prohibited.

Collusive or sham proposals: Any proposal deemed to be collusive or a sham proposal will be rejected and reported to authorities as such. Your authorized signature of this proposal assures that such proposal is genuine and is not a collusive or sham proposal.

The City of Fort Collins reserves the right to reject any and all proposals and to waive any irregularities or informalities.

Utilization of Award by Other Agencies: The City of Fort Collins reserves the right to allow other state and local governmental agencies, political subdivisions, and/or school districts to utilize the resulting award under all terms and conditions specified and upon agreement by all parties. Usage by any other entity shall not have a negative impact on the City of Fort Collins in the current term or in any future terms.

Sustainability: Consulting firms/teams participating in the proposal are to provide an overview of the organization's philosophy and approach to Sustainability. In no more than two (2) pages please describe how your organization strives to be sustainable in the use of materials, equipment, vehicles, fuel, recycling, office practices, etc. The City of Fort Collins incorporates the Triple Bottom Line into our decision process by including economic (or financial), environmental, and social factors in our evaluation.

The selected Service Provider shall be expected to sign the City's standard Agreement without revision prior to commencing Services (see sample attached to this Proposal).

Sincerely,

Gerry S. Paul
Purchasing Director

I. BACKGROUND AND OBJECTIVE

A. Background

The City of Fort Collins is a full-service municipal organization operating under a home rule, Council-Manager form of government. Various national organizations and magazines recognize Fort Collins as one of the best places to live in the nation. Sixty miles north of Denver, Fort Collins is home to Colorado State University (CSU), with 32,000 students, several large high-tech employers, and leading businesses in the brewing industry. The community includes 43 natural areas, a variety of cultural amenities, and is renowned for its bike-friendly, small-town feel. It has access to outdoor activities and local cultural amenities.

Fort Collins Utilities is an integral part of the Fort Collins community. As a municipally owned, multi-service utility employing over 400 individuals, we provide electric, water, wastewater and stormwater services to our customers. Utilities serves more than 70,500 (both single-family and multi-family) electric meters, and 35,000 water meters. More information about Fort Collins Utilities can be found at fcgov.com/utilities.

B. Objective

The City of Fort Collins Water Treatment Facility, located at 4316 Laporte Avenue, Fort Collins, CO uses Liquid Aluminum Sulfate (Alum) as a coagulant in the water treatment process. The City of Fort Collins wishes to purchase Alum to use in this process. The City is looking to contract with a firm(s) that supplies a high quality chemical from a reputable source with a reliable ordering and delivery system.

II. SCOPE OF PROPOSAL

A. Scope Of Work

1. Liquid Aluminum Sulfate Requirements

- a. Alum must meet the most current American Water Works Association (AWWA) Standard and NSF60 for Liquid Aluminum Sulfate. Several items listed in the Standard are listed here:
 - i. Alum is to be of such clarity as to permit the reading for flow-measuring devices without difficulty.
 - ii. The Alum shall contain water-soluble aluminum of not less than 4.23 percent as Al or 8.0 percent as Al_2O_3 .
 - iii. The total water-soluble iron (expressed as Fe_2O_3) content of Alum shall be no more than 0.75 percent on a basis of 8.0 Al_2O_3 .
 - iv. Other potential impurities are the regulated metals: arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver.
- b. Alum must meet the most current National Sanitation Foundation (NSF) Standard 60.
- c. Alum must be commercial grade.

2. Estimates of Quantities/Amounts

Estimated annual volume for bidding purposes is 1550 tons. The estimate is based on actual procurements over the past twelve (12) month period and/or projection for

the next twelve (12) month period. These quantities/amounts are given solely as a basis for the computation of the amount of award or for evaluation purposes only; and are not to be considered a commitment for delivery. The successful proposer(s) shall be obligated to honor all individual releases of orders for the commodities/services noted on the award, through the firm price period.

3. Current Standards

All work and/or materials must meet current standards in force by recognized technical and professional societies, trade and materials supply associations, institutes and organizations, bureaus and testing laboratories, and national, federal, state, county, and local laws, codes and ordinances. All work shall be performed in accordance with ANSI Z133.1 A300 and applicable OSHA and AWWA Standards.

In addition, the Fort Collins Water Treatment Facility Standard Operating Procedure and EMS Guide for Contractors and Vendors are to be adhered to. Lack of compliance with these two documents is grounds for cancellation of the purchase order/agreement.

4. Delivery Instructions

In addition to the FCWTF SOP, Contractor must:

- a. Notify the Treatment Plant at least seventy-two (72) hours prior to delivery. No changes to the delivery schedule will be allowed within 72 hours of the scheduled shipment and no shipment will be accepted on holidays or weekends, unless requested by City. The delivery shall be made between the hours of 8:00 a.m. and 3:00 p.m.
- b. Assume full responsibility for all transportation, transportation scheduling, packing, handling, insurance and other services associated with delivery of all products under this Contract.
- c. Be responsible for complying with any applicable federal, state, and municipal laws, codes and regulations in connection with the execution of the services.
- d. Provide and maintain chemical containers.
- e. The Contractor shall file all claims and bears all responsibility for the products from the point of origin to the City's destination.
- f. Provide certified drivers familiar with the related hazards, safety measures, and spill cleanup procedures.

5. Freight

Prices quoted shall include freight, FOB Fort Collins Water Treatment Facility at 4316 Laporte Avenue, Fort Collins. Bid price is to include any & all hazmat charges, delivery charges, regulatory compliance charges, fuel/surcharge fees, deposits, and transportation charges, etc. The City will not pay demurrage or other charges unless the City requests the Contractor leave the container past the delivery date.

6. Fees, Licenses & Permits

The successful contractor shall be responsible for obtaining any necessary licenses, fees or permits without additional expense to the City. All equipment shall be properly licensed and insured, carry the appropriate permits and be placarded as required by law.

7. Protection Of Property

All existing structures, utilities, services, roads, trees, shrubbery, etc. located on City property shall be protected against damage or interrupted services at all times by the Contractor during the term of the awarded contract. The Contractor shall be held responsible for repairing or replacing any and all property which is damaged by reason of the Contractor's operation on the property to the satisfaction of the City.

8. Work Hours

No shipment will be accepted on holidays or weekends, unless requested by the City. The delivery shall be made between the hours of 8:00 a.m. and 3:00 p.m.

B. Security Clearance and Criminal Background

All employees provided by the Contractor for assignment to any City of Fort Collins facility must have a clean criminal background.

Awarded firm will be required to facilitate, prior to acceptance of employment, background screening of all employees at Contractor's expense. In the event that a background check raises questions about the trustworthiness, fitness for provision of services under this Agreement, competence or suitability of any individual working with members of the general public, such individual shall not be employed in connection with the services or activities required.

Violation of this specification will be grounds to terminate services with the chemical provider.

The City reserves the right, at its discretion, to preclude any manager, supervisor or employee from providing services under this contract.

C. Interviews

In addition to submitting a written proposal, firms may be interviewed by the City of Fort Collins and asked to do an oral presentation about their company, their product and processes.

D. Use of Subcontractors/Partners

There may be areas for use of subcontractors or partners from the award of this RFP. Contractors will be responsible for identifying the subcontractors it intends to engage under this contract as part of the proposal.

Please keep in mind that the City will contract solely with your company, therefore subcontractors/partners remain your sole responsibility.

E. Schedule

The City has established the target schedule shown below for the RFP. The City reserves the right to amend the target schedule at any time.

RFP issuance	October 10, 2016
Questions due	October 18, 2016
Proposal due date	October 26, 2016
Agreement start date	January 1, 2017

F. Formatting Proposal

Limit the total length of your proposal to a maximum of twenty five (25) 8 ½ x 11" pages (excluding cover pages, table of contents, dividers, 11" x 17" fee spreadsheet (if used), sustainability response and proposal acknowledgement form). Font shall be a minimum of 10 Arial and margins are limited to no less than .75 for sides and top/bottom. Fee spreadsheet must be a minimum of 10 Arial in printed format.

G. Award

City will award contract to the Contractor with the per the Review and Assessment section below. The awarded firm will have submitted a responsive and responsible proposal, and will need to have provided a representative product sample that has been tested in the Pilot Plant for a period of one year, and/or has been approved by the Water Treatment Plant Superintendent as meeting all of the requirements stated in the FCWTF Standard Operating Procedure Purchasing Liquid Aluminum Sulfate (SOP) and other requirements as stated in this document.

It is understood that if a new firm is selected to receive the award, that firm may have to delay supplying material to the City for the period of at least one year in order to have their product tested by the City. During such period, the City will purchase from the next highest evaluated responsible, responsive proposer.

The City of Fort Collins reserves the right to split the bid award in whatever percentages are most advantageous to the City.

H. Contract

A Blanket Purchase Order will be established at the beginning of each new year and will act as the Contract between the City and the Contractor. Delivery releases will be made against that Purchase Order throughout the year. The price is expected to be held for a period of one (1) year from the due date of the bid.

After the initial year, the association between the City and Contractor may be extended via a new blanket purchase orders for one year periods not to exceed four (4) additional one year periods. Price change in subsequent years is subject to negotiation and mutual agreement of both parties.

Failure to comply with all of the requirements outlined in the document "Fort Collins Water Treatment Facility Standard Operating Procedure Purchasing Liquid Aluminum Sulfate" (SOP) may result in the immediate cancellation of the Blanket Purchase Order.

I. Insurance

At time of award, Contractor shall provide valid certificates of insurance as required. See insurance exhibit for requirements.

III. PROPOSAL SUBMITTAL

For this section, contractors are required to provide detailed written responses to the following items in the order outlined below. The responses shall be considered technical offers of what contractors propose to provide and shall be incorporated in the contract award as deemed appropriate by Utilities. A proposal that does not include all of the information required may be deemed incomplete and may be declared non-responsive and subject to rejection.

Responses must include all of the items in the order listed below. It is suggested that the Contractors include each of the City's questions with their response immediately following the question.

The City of Fort Collins shall not reimburse any firm for costs incurred in the preparation and presentation of their proposal.

A. Executive Summary

The Executive Summary should highlight the content of the proposal and features of the program offered, including a general description of the program and any unique aspects or benefits provided by your firm.

Any exceptions to the agreement shall be made in the executive summary as well.

B. Company Information

1. Describe the Company's business and background
2. Primary contact information for the company including contact name and title, mailing address, phone number, and email address.
3. Number of years in the business
4. Details about ownership
5. An overview of services offered and qualifications
6. Size of the firm
7. Location(s) of offices
8. Complete Exhibit A, Proposal Acknowledgement.
9. Describe the company's structure, including an organizational chart, which illustrates leadership and roles.

C. Scope of Proposal

1. Provide a detailed narrative of the services proposed if awarded the contract per the scope above. Include details of how to place orders, delivery of material, unloading, documentation etc.
2. Identify what portion of work, if any, may be subcontracted.
3. In no more than two (2) pages please describe how your organization will adhere to the requirements set forth in the attached SOP and EMS Guide.
4. The Contractor shall submit information on how the chemical will be transported. If applicable, include information regarding the subcontractor to be used for transporting the chemical, such as the name of firm to be used, their history with your firm and previous experience transporting chemicals.

5. The Contractor shall submit information on where the chemical is sourced and if they anticipate that source will change during the contract term. Include information on the quality of the chemical for use in potable water treatment including the AWWA and NSF Certifications.
6. Describe in detail how your firm provides the following:
 - Quality Assurance methods
 - Quality Guidelines
 - Performance Standards

D. Firm Capability & Assigned Personnel

The Contractor should provide the following information:

1. A list of qualifications for your firm and qualifications and experience of your firm in supplying and delivering the material to the City, as described above.
2. The Contractor is to provide the names, locations, and phone numbers of five current clients who receive liquid aluminum sulfate from your firm. Include the owner's name, title of project, beginning price, ending price, contact name, email and phone number, sub-contractors on the team and a brief description of the work.
3. The Contractor is to provide a list of intended delivery agents (motor carrier) and a letter from the U.S. Department of Transportation, Federal Highway Administration, stating the Motor Carrier Safety Rating for the company as part of the bidding process. Each listed motor carrier's rating must be Satisfactory or above to be considered in the bidding process.

E. Availability & Safety

1. Is your firm able to respond as requested?
2. Provide a copy of an inspection report/checklist/worksheet used when preventative maintenance services are performed.
3. Provide your firm's OSHA reportable accident rate and current workman's compensation Experience Modification Rate (EMR) for the last 3 years.
4. Address your company's safety program and any additional information that would be useful in demonstrating your approach to a safe work site. Unsafe conditions to the public, owner, engineer, and contractor are not an option.
5. Provide a list of all projects in the last 3 years that have received an OSHA citation either to the GC or sub-contractor on the jobsite and provide a narrative of the citations. Limit your response to projects that have occurred in the Rocky Mountain region.
6. Describe the methods and timeline of communication your firm will use with the City's Project Manager and other parties.

F. Sustainability/TBL Methodology

In no more than two (2) pages please describe how your organization strives to be Sustainable in the use of materials, equipment, vehicles, fuel, recycling, office practices, etc.. Address how your firm incorporates Triple Bottom Line (TBL) into the workplace, see below in Section IV: Review and Assessment for additional information.

G. Cost

In your response to this proposal, please provide the following:

1. What is the price per ton of Liquid Aluminum Sulfate, per most current AWWA Standard and NSF60 Standard for Liquid Aluminum Sulfate, delivered price to Fort Collins Water Treatment Facility. (NOTE: Bid price is to include any & all hazmat charges, delivery charges, regulatory compliance charges, permits, transportation charges, etc.)
2. Is your firm able to hold the price for at least one (1) year?
3. What unit of measure is used for invoicing?

H. Additional Information

Provide any information that distinguishes Contractor from its competition and any additional information applicable to this RFP that might be valuable in assessing Contractor's proposal.

Explain any concerns Contractor may have in maintaining objectivity in recommending the best solution for Utilities. All potential conflicts of interest must be disclosed.

IV. REVIEW AND ASSESSMENT

Professional firms will be evaluated on the following criteria. These criteria will be the basis for review and assessment of the written proposals and optional interview session. At the discretion of the City, interviews of the top rated firms may be conducted.

The rating scale shall be from 1 to 5, with 1 being a poor rating, 3 being an average rating, and 5 being an outstanding rating.

Firms will be evaluated on the following criteria: price, compliance with specifications and the City's SOP, delivery lead times and exceptions taken.

WEIGHTING FACTOR	QUALIFICATION	STANDARD
2.0	Scope of Proposal	Does the proposal address all elements of the RFP? Does the firm, its products and subcontractors (if applicable) meet all of the certifications and requirements? Are there any exceptions to the specifications, SOP, or EMS Guide? Are quality assurance controls adequate?
2.0	Firm Capability & Assigned Personnel	Do the persons who will be working on the project have the necessary skills and qualifications? Are sufficient people of the requisite skills and qualifications assigned to the project? Does the firm have the resources, financial strength, capacity and support capabilities required to successfully complete the project on-time and in-budget? Does the firm have a consistent positive track record of delivering chemicals on-time in conformance with the specifications?
1.0	Availability & Safety	Are other qualified personnel available to assist in meeting the service requirements? Are OSHA Illness/Injury Rate, OSHA Lost Work Day Incidence Rate and Workman's Comp Experience Modification

		Rate Insurance multiplier consistent with industry standard.
1.0	Sustainability/TBL Methodology	Does the firm demonstrate a commitment to Sustainability and incorporate Triple Bottom Line methodology in both their Scope of Work for the project, and their day-to-day business operating processes and procedures?
2.0	Cost	Does the proposal included detailed cost break-down for each cost element as applicable and are the line-item costs competitive? Do the proposed costs compare favorably with the Project Manager's estimate?

Definitions

Sustainable Purchasing is a process for selecting products or services that have a lesser or reduced negative effect on human health and the environment when compared with competing products or services that serve the same purpose. This process is also known as "Environmentally Preferable Purchasing" (EPP), or "Green Purchasing".

The Triple Bottom Line (TBL) is an accounting framework that incorporates three dimensions of performance: economic, or financial; environmental, and social. The generally accepted definition of Andrew Savitz for TBL is that it "captures the essence of sustainability by measuring the impact of an organization's activities on the world...including both its profitability and shareholders values and its social, human, and environmental capital."

REFERENCE EVALUATION (TOP RATED FIRM)

The Project Manager will check references using the following criteria. The evaluation rankings will be labeled Satisfactory/Unsatisfactory.

QUALIFICATION	STANDARD
Overall Performance	Would you hire this Professional again? Did they show the skills required by this project?
Timetable	Was the original Scope of Work completed within the specified time? Were interim deadlines met in a timely manner?
Completeness	Was the Professional responsive to client needs; did the Professional anticipate problems? Were problems solved quickly and effectively?
Budget	Was the original Scope of Work completed within the project budget?
Job Knowledge	a) If a study, did it meet the Scope of Work? b) If Professional administered a construction contract, was the project functional upon completion and did it operate properly? Were problems corrected quickly and effectively?

**EXHIBIT A
PROPOSAL ACKNOWLEDGEMENT**

Contractor hereby acknowledges receipt of the City of Fort Collins Utilities' Request for Proposal and acknowledges that it has read and agrees to be fully bound by all of the terms, conditions and other provisions set forth in the RFP. Additionally, the Contractor hereby makes the following representations to Utilities:

- a. All of the statements and representations made in this proposal are true to the best of the Contractor's knowledge and belief.
- b. The Contractor has obtained all necessary authorizations and approvals that will enable the Contractor to commit to the terms provided in this proposal.
- c. This proposal is a firm and binding offer, for a period of 180 days from the date hereof.
- d. I further agree that the method of award is acceptable to my company.
- e. I also agree to complete the proposed Agreements with the City of Fort Collins within 30 days of notice of award.
- f. If an Agreement is not completed and signed within 30 days, City reserves the right to cancel and award to the next highest rated firm.
- g. I acknowledge receipt of ____ addenda.

Contractor Firm Name: _____

Physical Address: _____

Remit to Address: _____

Phone: _____

Authorized Agent of Firm Name: _____

Signature of Authorized Agent: _____

Primary Contact for Project: _____

Title: _____ Email Address: _____

Phone: _____ Cell Phone: _____

EXHIBIT B
INSURANCE REQUIREMENTS

1. The Service Provider will provide, from insurance companies acceptable to the City, the insurance coverage designated hereinafter and pay all costs. Before commencing work under this bid, the Service Provider shall furnish the City with certificates of insurance showing the type, amount, class of operations covered, effective dates and date of expiration of policies, and containing substantially the following statement:

"The insurance evidenced by this Certificate will not be cancelled or materially altered, except after ten (10) days written notice has been received by the City of Fort Collins."

In case of the breach of any provision of the Insurance Requirements, the City, at its option, may take out and maintain, at the expense of the Service Provider, such insurance as the City may deem proper and may deduct the cost of such insurance from any monies which may be due or become due the Service Provider under this Agreement. The City, its officers, agents and employees shall be named as additional insureds on the Service Provider's general liability and automobile liability insurance policies for any claims arising out of work performed under this Agreement.

2. Insurance coverages shall be as follows:

- A. Workers' Compensation & Employer's Liability. The Service Provider shall maintain during the life of this Agreement for all of the Service Provider's employees engaged in work performed under this Agreement:

1. Workers' Compensation insurance with statutory limits as required by Colorado law.
2. Employer's Liability insurance with limits of \$100,000 per accident, \$500,000 disease aggregate, and \$100,000 disease each employee.

- B. Commercial General & Vehicle Liability. The Service Provider shall maintain during the life of this Agreement such commercial general liability and automobile liability insurance as will provide coverage for damage claims of personal injury, including accidental death, as well as for claims for property damage, which may arise directly or indirectly from the performance of work under this Agreement. Coverage for property damage shall be on a "broad form" basis. The amount of insurance for each coverage, Commercial General and Vehicle, shall not be less than \$1,000,000 combined single limits for bodily injury and property damage.

In the event any work is performed by a subcontractor, the Service Provider shall be responsible for any liability directly or indirectly arising out of the work performed under this Agreement by a subcontractor, which liability is not covered by the subcontractor's insurance.



90 East Halsey Road
Parsippany, NJ 07054
Phone: 1-800-631-8050

December 1, 2020

City of Fort Collins, CO

Subject: 2021 Renewal Pricing on Cooperative Agreement RFP #8399 for Liquid Aluminum Sulfate

Dear Ms. Marisa Donegon,

Chemtrade Chemicals US LLC appreciates the City of Fort Collins' business and would like to extend our agreement for another year at the current price of \$382 per dry short ton.

<u>Product Description</u>	<u>Package Configuration</u>	<u>Price /dry ton</u>
<i>Liquid Aluminum Sulfate</i>	<i>Full Truckloads</i>	<i>\$382</i>

The above price is firm for the period January 1, 2021 through December 31, 2021.

All other terms and conditions shall remain the same.

Upon acceptance of this renewal, please sign below and email to my attention at mschroeher@chemtradelogistics.com.

Best regards,

Michele Schroeder
Business Manager
Chemtrade
973-515-1841

Cc: Shawn Hire, Bids

Accepted:
City of Fort Collins, CO

By: Gerry Paul

Title: Purchasing Director

Signature: 

Date: 12/3/2020



PURCHASE ORDER

PO Number

9181224

Page

1 of 2

This number must appear on all
Invoices, packing slips and labels.

Date: 02/16/2018

Vendor: 535458
CHEMTRADE CHEMICALS US LLC
DEPT #771807
PO BOX 77000
DETROIT MI 48277-1807

Ship To: WATER TREATMENT PLANT #2
CITY OF FORT COLLINS
4316 W LAPORTE AVE
FORT COLLINS CO 80521

Req #: 00059326

Delivery Date: 02/16/2018

Buyer: MARISA DONEGON

Note: 8399 Aluminum Sulfate

Line	Description	Quantity Ordered	UOM	Unit Price	Extended Price
1	2018 BLANKET PURCHASE ORDER FOR LIQUID ALUMINUM SULFATE	1 LOT	LS		250,000.00
	BID Number: RFP 8399 Liquid Aluminum Sulfate				232201.558080

Price is \$. per liquid ton. **For conversion purposes, this price equates to \$. per dry ton** FOB City of Fort Collins
Water Treatment Plant, 4316 LaPorte Avenue, Fort Collins, CO. Price held firm from // - //.

This Purchase Order is for the procurement of goods and/or services, as needed during the current calendar
year. Dollar amounts specified are estimates and not a promise to purchase any minimum amount of such goods
and/or services.

VENDOR WILL FOLLOW:

FCWTF SOP FOR THE PURCHASE OF LIQUID ALUMINUM SULFATE
FCWTF SOP FOR THE DELIVERY OF CHEMICALS

?

City of Fort Collins Director of Purchasing
This order is not valid over \$5000 unless signed by Gerry Paul

City of Fort Collins Purchasing, PO BOX 580, Fort Collins, CO 80522-0580
Phone: 970-221-6775

Pay terms net 30 days

Invoice Address:

City of Fort Collins
Accounting Department
PO Box 580
Fort Collins, CO 80522-0580
invoices @fcgov.com

1. COMMERCIAL DETAILS.

Tax exemptions. By statute the City of Fort Collins is exempt from state and local taxes. Our Exemption Number is 98-04502. Federal Excise Tax Exemption Certificate of Registry 84-6000587 is registered with the Collector of Internal Revenue, Denver, Colorado (Ref. Colorado Revised Statutes 1973, Chapter 39-26, 114 (4)).

Goods Rejected. GOODS REJECTED due to failure to meet specifications, either when shipped or due to defects of damage in transit, may be returned to you for credit and are not to be replaced except upon receipt of written instructions from the City of Fort Collins.

Inspection. GOODS are subject to the City of Fort Collins inspection on arrival.

Final Acceptance. Receipt of the merchandise, services or equipment in response to this order can result in authorized payment on the part of the City of Fort Collins. However, it is to be understood that FINAL ACCEPTANCE is dependent upon completion of all applicable required inspection procedures.

Freight Terms. Shipments must be F.O.B., City of Fort Collins, 700 Wood St., Fort Collins, CO 80522, unless otherwise specified on this order. If permission is given to prepay freight and charge separately, the original freight bill must accompany invoice. Additional charges for packing will not be accepted.

Shipment Distance. Where manufacturers have distributing points in various parts of the country, shipment is expected from the nearest distribution point to destination, and excess freight will be deducted from Invoice when shipments are made from greater distance.

Permits. Seller shall procure at sellers sole cost all necessary permits, certificates and licenses required by all applicable laws, regulations, ordinances and rules of the state, municipality, territory or political subdivision where the work is performed, or required by any other duly constituted public authority having jurisdiction over the work of vendor. Seller further agrees to hold the City of Fort Collins harmless from and against all liability and loss incurred by them by reason of an asserted or established violation of any such laws, regulations, ordinances, rules and requirements.

Authorization. All parties to this contract agree that the representatives are, in fact, bona fide and possess full and complete authority to bind said parties.

LIMITATION OF TERMS. This Purchase Order expressly limits acceptance to the terms and conditions stated herein set forth and any supplementary or additional terms and conditions annexed hereto or incorporated herein by reference. Any additional or different terms and conditions proposed by seller are objected to and hereby rejected.

2. DELIVERY.

PLEASE ADVISE PURCHASING AGENT immediately if you cannot make complete shipment to arrive on your promised delivery date as noted. Time is of the essence. Delivery and performance must be effected within the time stated on the purchase order and the documents attached hereto. No acts of the Purchaser including, without limitation, acceptance of partial late deliveries, shall operate as a waiver of this provision. In the event of any delay, the Purchaser shall have, in addition to other legal and equitable remedies, the option of placing this order elsewhere and holding the Seller liable for damages. However, the Seller shall not be liable for damages as a result of delays due to causes not reasonably foreseeable which are beyond its reasonable control and without its fault of negligence, such acts of God, acts of civil or military authorities, governmental priorities, fires, strikes, flood, epidemics, wars or riots provided that notice of the conditions causing such delay is given to the Purchaser within five (5) days of the time when the Seller first received knowledge thereof. In the event of any such delay, the date of delivery shall be extended for the period equal to the time actually lost by reason of the delay.

3. WARRANTY.

The Seller warrants that all goods, articles, materials and work covered by this order will conform with applicable drawings, specifications, samples and/or other descriptions given, will be fit for the purposes intended, and performed with the highest degree of care and competence in accordance with accepted standards for work of a similar nature. The Seller agrees to hold the purchaser harmless from any loss, damage or expense which the Purchaser may suffer or incur on account of the Seller's breach of warranty. The Seller shall replace, repair or make good, without cost to the purchaser, any defects or faults arising within one (1) year or within such longer period of time as may be prescribed by law or by the terms of any applicable warranty provided by the Seller after the date of acceptance of the goods furnished hereunder (acceptance not to be unreasonably delayed), resulting from imperfect or defective work done or materials furnished by the Seller. Acceptance or use of goods by the Purchaser shall not constitute a waiver of any claim under this warranty. Except as otherwise provided in this purchase order, the Seller's liability hereunder shall extend to all damages proximately caused by the breach of any of the foregoing warranties or guarantees, but such liability shall in no event include loss of profits or loss of use. NO IMPLIED WARRANTY OR MERCHANTABILITY OR OF FITNESS FOR PURPOSE SHALL APPLY.

4. CHANGES IN LEGAL TERMS.

The Purchaser may make changes to legal terms by written change order.

5. CHANGES IN COMMERCIAL TERMS.

The Purchaser may make any changes to the terms, other than legal terms, including additions to or deletions from the quantities originally ordered in the specifications or drawings, by verbal or written change order. If any such change affects the amount due or the time of performance hereunder, an equitable adjustment shall be made.

6. TERMINATIONS.

The Purchaser may at any time by written change order, terminate this agreement as to any or all portions of the goods then not shipped, subject to any equitable adjustment between the parties as to any work or materials then in progress provided that the Purchaser shall not be liable for any claims for anticipated profits on the uncompleted portion of the goods and/or work, for incidental or consequential damages, and that no such adjustment be made in favor of the Seller with respect to any goods which are the Seller's standard stock. No such termination shall relieve the Purchaser or the Seller of any of their obligations as to any goods delivered hereunder.

7. CLAIMS FOR ADJUSTMENT.

Any claim for adjustment must be asserted within thirty (30) days from the date the change or termination is ordered.

8. COMPLIANCE WITH LAW.

The Seller warrants that all goods sold hereunder shall have been produced, sold, delivered and furnished in strict compliance with all applicable laws and regulations to which the goods are subject. The Seller shall execute and deliver such documents as may be required to effect or evidence compliance. All laws and regulations required to be incorporated in agreements of this character are hereby incorporated herein by this reference. The Seller agrees to indemnify and hold the Purchaser harmless from all costs and damages suffered by the Purchaser as a result of the Seller's failure to comply with such law.

9. ASSIGNMENT.

Neither party shall assign, transfer, or convey this order, or any monies due or to become due hereunder without the prior written consent of the other party.

10. TITLE.

The Seller warrants full, clear and unrestricted title to the Purchaser for all equipment, materials, and items furnished in performance of this agreement, free and clear of any and all liens, restrictions, reservations, security interest encumbrances and claims of others.

11. NONWAIVER.

Failure of the Purchaser to insist upon strict performance of the terms and conditions hereof, failure or delay to exercise any rights or remedies provided herein or by law, failure to promptly notify the Seller in the event of a breach, the acceptance or payment for goods hereunder or approval of the design, shall not release the Seller of any of the warranties or obligations of this purchase order and shall not be deemed a waiver of any right of the purchaser to insist upon strict performance hereof or any of its rights or remedies as to any such goods, regardless of when shipped, received or accepted, as to any prior or subsequent default hereunder, nor shall any purported oral modification or rescission of this purchase order by the Purchaser operate as a waiver of any of the terms hereof.

12. ASSIGNMENT OF ANTITRUST CLAIMS.

Seller and the Purchaser recognize that in actual economic practice, overcharges resulting from antitrust violations are in fact borne by the Purchaser. Therefore, for good cause and as consideration for executing this purchase order, the Seller hereby assigns to the Purchaser any and all claims it may now have or hereafter acquire under federal or state antitrust laws for such overcharges relating to the particular goods or services purchased or acquired by the Purchaser pursuant to this purchase order.

13. PURCHASERS PERFORMANCE OF SELLERS OBLIGATIONS.

Whenever the Seller directs the Seller to correct nonconforming or defective goods by a date to be agreed upon by the Purchaser and the Seller, and the Seller thereafter indicates its inability or unwillingness to comply, the Purchaser may cause the work to be performed by the most expeditious means available to it, and the Seller shall pay all costs associated with such work.

The Seller shall release the Purchaser and its contractors of any lien from all liability and claims of any nature resulting from the performance of such work.

This release shall apply even in the event of fault or negligence of the party released and shall extend to the directors, officers and employees of such party.

The Seller's contractual obligations, including warranty, shall not be deemed to be reduced, in any way, because such work is performed or caused to be performed by the Purchaser.

14. PATENTS.

Whenever the Seller is required to use any design, device, material or process covered by letter, patent, trademark or copyright, the Seller shall indemnify and save harmless the Purchaser from any and all claims for infringement by reason of the use of such patented design, device, material or process in connection with the contract, and shall indemnify the Purchaser for any cost, expense or damage which it may be obliged to pay by reason of such infringement at any time during the prosecution or after the completion of the work. In case said equipment, or any part thereof or the intended use of the goods, is in such suit held to constitute infringement and the use of said equipment or part is enjoined, the Seller shall, at its own expense and at its option, either procure for the Purchaser the right to continue using said equipment or parts, replace the same with substantially equal but noninfringing equipment, or modify it so it becomes noninfringing.

15. INSOLVENCY.

If the Seller shall become insolvent or bankrupt, make an assignment for the benefit of creditors, appoint a receiver or trustee for any of the Seller's property or business, this order may forthwith be canceled by the Purchaser without liability.

16. GOVERNING LAW.

The definitions of terms used or the interpretation of the agreement and the rights of all parties hereunder shall be construed under and governed by the laws of the State of Colorado, USA.

The following Additional Conditions apply only in cases where the Seller is to perform work hereunder, including the services of Sellers Representative(s), on the premises of others:

17. SELLERS RESPONSIBILITY.

If the Seller shall carry on said work at Seller's own risk until the same is fully completed and accepted, and shall, in case of any accident, destruction or injury to the work and/or materials before Seller's final completion and acceptance, complete the work at Seller's own expense and to the satisfaction of the Purchaser. When materials and equipment are furnished by others for installation or erection by the Seller, the Seller shall receive, unload, store and handle same at the site and become responsible therefor as though such materials and/or equipment were being furnished by the Seller under the order.

18. INSURANCE.

The Seller shall, at his own expense, provide for the payment of workers compensation, including occupational disease benefits, to its employees employed on or in connection with the work covered by this purchase order, and/or to their dependents in accordance with the laws of the state in which the work is to be done. The Seller shall also carry comprehensive general liability including, but not limited to, contractual and automobile public liability insurance with bodily injury and death limits of at least \$300,000 for any one person, \$500,000 for any one accident and property damage limit per accident of \$100,000. The Seller shall likewise require his contractors, if any, to provide for such compensation and insurance. Before any of the Seller's or his contractors employees shall do any work upon the premises of others, the Seller shall furnish the Purchaser with a certificate that such compensation and insurance have been provided. Such certificates shall specify the date when such compensation and insurance have been provided. Such certificates shall specify the date when such compensation and insurance expires. The Seller agrees that such compensation and insurance shall be maintained until after the entire work is completed and accepted.

19. PROTECTION AGAINST ACCIDENTS AND DAMAGES.

The Seller hereby assumes the entire responsibility and liability for any and all damage, loss or injury of any kind or nature whatsoever to persons or property caused by or resulting from the execution of the work provided for in this purchase order or in connection herewith. The Seller will indemnify and hold harmless the Purchaser and any or all of the Purchaser's officers, agents and employees from and against any and all claims, losses, damages, charges or expenses, whether direct or indirect, and whether to persons or property to which the Purchaser may be put or subject by reason of any act, action, neglect, omission or default on the part of the Seller, any of his contractors, or any of the Seller's or contractors officers, agents or employees. In case any suit or other proceedings shall be brought against the Purchaser, or its officers, agents or employees at any time on account or by reason of any act, action, neglect, omission or default of the Seller or any of his contractors or any of its or their officers, agents or employees as aforesaid, the Seller hereby agrees to assume the defense thereof and to defend the same at the Seller's own expense, to pay any and all costs, charges, attorneys fees and other expenses, any and all judgments that may be incurred by or obtained against the Purchaser or any of its or their officers, agents or employees in such suits or other proceedings, and in case judgment or other lien be placed upon or obtained against the property of the Purchaser, or said parties in or as a result of such suits or other proceedings, the Seller will at once cause the same to be dissolved and discharged by giving bond or otherwise. The Seller and his contractors shall take all safety precautions, furnish and install all guards necessary for the prevention of accidents, comply with all laws and regulations with regard to safety including, but without limitation, the Occupational Safety and Health Act of 1970 and all rules and regulations issued pursuant thereto.

Revised 03/2010

Total

\$250,000.00



CHEMTRADE

90 East Halsey Road
Parsippany, NJ 07054
Phone: 973-515-0900
Fax: 973-515-4461

February 7, 2018

Ms. Marissa Donegon
Buyer
City of Fort Collins
215 North Mason Street
Fort Collins, CO 80521

SUBJECT: RENEWAL FOR LIQUID ALUMINUM SULFATE

Dear Ms. Donegon,

Chemtrade Chemicals US LLC is pleased to offer you an extension for the Liquid Aluminum Sulfate contract. At this time, we would like to request the following price increase:

LIQUID ALUMINUM SULFATE

Tank Truck (FULL)

\$324.00/Dry Ton

F.O.B destination.

The above price is firm for the period January 1, 2018 through December 31, 2018.

All other terms and conditions of the original bid will remain the same.

If this renewal is acceptable, please sign below fax back to 973-515-4461 or send us your necessary paperwork.

Thank you for the business you have favored us with in the past. We look forward to continuing to supply your valued requirements.

Best regards,

Elizabeth Ryno
Marketing Specialist

ACCEPTED: CITY OF FORT COLLINS, CO

BY: _____
TITLE: Purchasing Director
Date: February 16, 2018



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
02/13/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Marsh USA, Inc. 9830 Colonnade Blvd, Suite 400 San Antonio, TX 78230	CONTACT NAME: PHONE (A/C, No, Ext): FAX (A/C, No): E-MAIL ADDRESS:
CN102200184-STND-GAWUL-17-18	INSURER(S) AFFORDING COVERAGE INSURER A : Allianz Global Risks US Insurance Company INSURER B : Liberty Mutual Insurance Company INSURER C : N/A INSURER D : INSURER E : INSURER F :
INSURED Chemtrade Holdco US Inc 90 E Halsey Road Parsippany, NJ 07054	NAIC # 23043 N/A

COVERAGES **CERTIFICATE NUMBER:** HOU-003201834-05 **REVISION NUMBER:** 4

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADOL SUBR INSD WYD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	COMMERCIAL GENERAL LIABILITY CLAIMS-MADE ☒ OCCUR SIR - \$100,000 GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY ☐ PRO-JECT ☐ LOC OTHER:		CGL2008945	05/01/2017	05/01/2018	EACH OCCURRENCE \$ 5,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 5,000,000 PRODUCTS - COMPOP AGG \$ 5,000,000 OTHER: \$
B	AUTOMOBILE LIABILITY X ANY AUTO OWNED AUTOS ONLY ☐ SCHEDULED AUTOS HIRED AUTOS ONLY ☐ NON-OWNED AUTOS ONLY		AS1-B71-072790-067 (AOS) AS1-B71-072790-077 (CA)	05/01/2017 05/01/2017	05/01/2018 05/01/2018	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ OTHER: \$
	UMBRELLA LIAB ☐ OCCUR EXCESS LIAB ☐ CLAIMS-MADE DED ☐ RETENTION \$					EACH OCCURRENCE \$ AGGREGATE \$ OTHER: \$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N N/A	WA2-B70-072790-087 WC2-B71-072790-017	05/01/2017 05/01/2017	05/01/2018 05/01/2018	X PER STATUTE ☐ OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
The City, its officers, agents and employees included as additional insured (except Workers Compensation) where required by written contract.

CERTIFICATE HOLDER City of Fort Collins 215 North Mason Street Fort Collins, CO 80521	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE of Marsh USA Inc. Manashi Mukherjee
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CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
05/07/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Marsh USA, Inc. 9830 Colonnade Blvd, Suite 400 San Antonio, TX 78230	CONTACT NAME: PHONE (A/C, No, Ext): FAX (A/C, No): E-MAIL: ADDRESS:
INSURED Chemtrade Holdco US Inc 90 E Halsey Road Parsippany, NJ 07054	INSURER(S) AFFORDING COVERAGE INSURER A: Allianz Global Risks US Insurance Company INSURER B: Liberty Mutual Insurance Company INSURER C: N/A INSURER D: INSURER E: INSURER F:
CA102200184-STND-GAWUL-18-19	NAIC # 23043 N/A

COVERAGES

CERTIFICATE NUMBER:

HOU-003201884-05

REVISION NUMBER: 5

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDITIONAL INSURED	SUBROGATION	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	☒ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☒ OCCUR ☒ SIR - \$100,000 GEN'L AGGREGATE LIMIT APPLIES PER: ☒ POLICY ☐ PROJECT ☐ LOC ☐ OTHER:			USL00049318	05/01/2018	05/01/2019	EACH OCCURRENCE \$ 5,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 5,000,000 PRODUCTS - COMP/PROP AGG \$ 5,000,000
B	☒ AUTOMOBILE LIABILITY ☒ ANY AUTO ☐ OWNED AUTOS ONLY ☐ SCHEDULED AUTOS ☐ HIRED AUTOS ONLY ☐ NON-OWNED AUTOS ONLY			AS1-871-072790-068 AS1-871-072790-078	05/01/2018 05/01/2018	05/01/2019 05/01/2019	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
	☐ UMBRELLA LIAB ☐ OCCUR ☐ EXCESS LIAB ☐ CLAIMS-MADE ☐ DED ☐ RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$
B	☒ WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N	N/A	WA2-870-072790-068 WC2-871-072790-018	05/01/2018 05/01/2018	05/01/2019 05/01/2019	☒ PER STATUTE ☐ OTHER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
The City, its officers, agents and employees included as additional insured (except Workers Compensation) where required by written contract.

CERTIFICATE HOLDER

City of Fort Collins
215 North Mason Street
Fort Collins, CO 80521

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE
of Marsh USA Inc.

Manashi Mukherjee

Manashi Mukherjee

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**EXHIBIT A
PROPOSAL ACKNOWLEDGEMENT**

Contractor hereby acknowledges receipt of the City of Fort Collins Utilities' Request for Proposal and acknowledges that it has read and agrees to be fully bound by all of the terms, conditions and other provisions set forth in the RFP. Additionally, the Contractor hereby makes the following representations to Utilities:

- a. All of the statements and representations made in this proposal are true to the best of the Contractor's knowledge and belief.
- b. The Contractor has obtained all necessary authorizations and approvals that will enable the Contractor to commit to the terms provided in this proposal.
- c. This proposal is a firm and binding offer, for a period of 180 days from the date hereof.
- d. I further agree that the method of award is acceptable to my company.
- e. I also agree to complete the proposed Agreements with the City of Fort Collins within 30 days of notice of award.
- f. If an Agreement is not completed and signed within 30 days, City reserves the right to cancel and award to the next highest rated firm.
- g. I acknowledge receipt of 1 addenda.

Contractor Firm Name: CHEMTRADE CHEMICALS US LLC

Physical Address: 90 EAST HALSEY ROAD, PARSIPPANY, NJ 07054

Remit to Address: DEPT# 771807, P.O. BOX 77000, DETROIT, MI 48277-1807

Phone: (800) 441-2659

Authorized Agent of Firm Name: ELIZABETH RYNO

Signature of Authorized Agent: *Elizabeth Ryno*

Primary Contact for Project: ELIZABETH RYNO

Title: MARKETING SPECIALIST Email Address: bids@chemtradelogistics.com

Phone: (973) 515-1858 Cell Phone: N/A



Financial Services
Purchasing Division
215 N. Mason St. 2nd Floor
PO Box 580
Fort Collins, CO 80522
970.221.6775
970.221.6707- fax
fcgov.com/purchasing

December 15, 2016

Chemtrade Chemicals US LLC
Attn: Beth Ryno bryno@chemtradelogistics.com
90 East Halsey Road
Parsippany, NJ 07054

RE: 8399 Liquid Aluminum Sulfate

Dear Beth:

The City of Fort Collins Purchasing and Contracts Division has considered proposals in response to its Request for Proposals #8399. The City accepts your Proposal for material and services to be provided in accordance with your submittal for the above named Project.

If the award is acceptable to your firm, please sign this letter in the space provided and return to the City of Fort Collins, Purchasing Division, P. O. Box 580, Fort Collins, CO 80522, within the next fifteen days.

If this award is not agreeable with your firm, we ask that you send us a written notice stating the reason.

Please contact Pat Johnson at (970) 221-6816 if you have any questions regarding this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Gerry Paul".

Gerry Paul
Purchasing Director

A handwritten signature in black ink, appearing to read "Elizabeth Ryno".

Signature ELIZABETH RYNO, MARKETING SPECIALIST

DECEMBER 16, 2016

Date

(Please indicate your desire to accept this notice of award by signing this letter and returning it to Purchasing Division within the next fifteen days.)

GSP:jg



Financial Services
Purchasing Division
215 N. Mason St. 2nd Floor
PO Box 580
Fort Collins, CO 80522
970.221.6775
970.221.6707
fcgov.com/purchasing

ADDENDUM NO. 1

SPECIFICATIONS AND CONTRACT DOCUMENTS

Description of RFP 8399: Liquid Aluminum Sulfate

OPENING DATE: 3:00 PM (Our Clock) October 26, 2016

To all prospective bidders under the specifications and contract documents described above, the following changes/additions are hereby made and detailed in the following sections of this addendum:

1. Additional Information

- The following is an addition to II. Scope of Proposal, A. #3 Standards.

Federal Hazardous Materials Regulation 49 CFR Parts 100-185 apply to purchases and delivery of this product.

2. Exhibits to the Addendum

Exhibit 1 – Questions & Answers

Exhibit 2 –Standard Operating Procedure(SOP) and Environmental Management System (EMS) Guide

Please contact Pat Johnson, CPPB, Senior Buyer at (970) 221-6816 with any questions regarding this addendum.

RECEIPT OF THIS ADDENDUM MUST BE ACKNOWLEDGED BY A WRITTEN STATEMENT ENCLOSED WITH THE BID/QUOTE STATING THAT THIS ADDENDUM HAS BEEN RECEIVED.

EXHIBIT 1 – QUESTIONS & ANSWERS

- Q1. Can you please clarify if the volume of 1550 tons for the liquid aluminum sulfate is in wet tons or dry tons? Do you prefer the pricing in wet or dry tons?

A1. The 1550 tons is wet tons. The pricing should be for liquid tons.

- Q2. I am assuming that this is for bulk shipments (45,000 Lbs.) since the volume is 1550 tons. It also states that the contractor must provide and maintain chemical container(s). Please confirm whether this is for bulk shipments or totes or drums?

A2. The liquid alum is delivered to us in bulk shipments via truck and tanker. The alum is then pumped from the tanker into our tanks. The maintenance of the chemical container relates to the condition of the delivery tanker.

- Q3. Can you forward the current supplier and pricing for the Aluminum Sulfate out to bid?

A3. The current supplier is Chemtrade and the price is \$344/dry ton.

- Q4. What is the typical delivery volume?

A4. Typical delivery quantities are about 48,000 lbs. in a single bulk tanker.

- Q5. Under C-Scope of Proposal, number 3; Where can I find "the requirements" set forth in the attached SOP and EMS Guide"? I do not see anything in the bid documents marked SOP or EMS

A5. The SOP and EMS Guide are included as Exhibit 2 of this addendum.

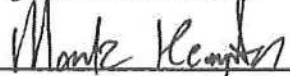
Verification	Revision	Approval	Review	Status
Initials	GDS	MKK	GDS	Active
Date	01/05/2016	01/05/2016	01/05/2016	

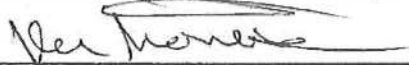


**Fort Collins Water Treatment Facility
Standard Operating Procedure
Purchasing Liquid Aluminum Sulfate**

Author: Rita DeCoursey
Section: Administration
Subject: FCWTF SOP for Alum Purchases
Revision: Gregg D. Stonecipher
Revision Date: January 5, 2016

Approvals (Signatures and Dates):


Mark Kempton, Water Production Manager


Ken Morrison, Plant Superintendent

PURPOSE

Establish guidelines for purchasing Liquid Aluminum Sulfate (Alum) for the Fort Collins Water Treatment Facility (FCWTF).

The mission of the Fort Collins Water Treatment Facility (FCWTF) is to "provide the community with a continuous ample supply of treated water that is pleasing, wholesome, free from known health risks, and affordable." Not only does the FCWTF take its role very seriously in providing water of quality and quantity, it takes its fiduciary responsibility very seriously. Consequently, the FCWTF purchases products by determining best value for the City. Best value is calculated by combining the following four components: (1) the chemical has been tested in the Pilot Plant; (2) the chemical can meet or exceed all FCWTF standards, the AWWA standards, the NSF standards, and any other regulatory agency standards; (3) the supplier can meet all the FCWTF requirements; and (4) the cost is factored in once it has been determined that a supplier can meet items (1), (2), and (3) above.

HEALTH AND SAFETY ISSUES

For detailed information, please refer to the MSDS

1. Alum is primarily an irritant. Other hazard classes include toxic, corrosive, and a sensitizer.
2. NFPA Hazard Rating includes:
 - Health=0
 - Flammability=1
 - Reactivity=0
3. Personal Protective Equipment:
 - Impervious gloves and goggles. If there is prolonged or repeated contact, completely impervious clothing should also be used.
4. Leaks and Spills:
 - Dilute small spills or leaks with plenty of water.
 - Wash down any spilled material into the containment vault and follow Operations procedures.

***Fort Collins Water Treatment Facility
Standard Operating Procedure
Purchasing Liquid Aluminum Sulfate***

- Notify supervisor.
- Follow spill SOP for T5/T6 Lift Station Drain

INFORMATION FOR THE FORT COLLINS WATER TREATMENT FACILITY (FCWTF)

1. Alum is budgeted in account 502-232201-558080.
2. Alum is used as the primary coagulant.
3. Liquid Aluminum Sulfate is used because FCWTF has not approved dry alum for usage nor does it have the facilities to mix on-site.
4. FCWTF has storage capacity for 100,000 gallons of Alum: four 25,000 gallon FRP tanks.
5. Delivery of Alum is to be made within 24 hours after placing an order. During peak usage, FCWTF has used over 5,500 gallons of Alum in a 24-hour period.
6. FCWTF will reject delivery of any chemical containers which appear to be leaking or have been damaged so that the structural integrity is questionable. Any shipments that do not have an associated Certified Analysis faxed prior to delivery will not be accepted.
7. FCWTF requires that all manufacturers of Alum have their product tested in the FCWTF Pilot Plant for a period of one year. Any manufacturer failing to meet the one year study is not considered a potential supplier.
8. FCWTF will reject any shipments that do not meet its standard in quality or delivery safety. The Supplier will pay the freight for any rejected shipments.

Liquid Aluminum Sulfate Requirements

1. Alum must meet the most current American Water Works Association (AWWA) Standard for Liquid Aluminum Sulfate. Several items listed in the Standard are listed below:
 - A. Alum is to be of such clarity as to permit the reading for flow-measuring devices without difficulty.
 - B. The Alum shall contain water-soluble aluminum of not less than 4.23 percent as Al or 8.0 percent as Al_2O_3 .
 - C. The total water-soluble iron (expressed as Fe_2O_3) content of Alum shall be no more than 0.75 percent on a basis of 8.0 Al_2O_3 .
 - D. Other potential impurities are the regulated metals: arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver.
2. Alum must meet the most current National Sanitation Foundation (NSF) Standard 60.
3. Alum must be commercial grade.

SUPPLIER

1. Supplier must guarantee Alum meets or exceeds the most current AWWA Standard for Liquid Aluminum Sulfate.
2. Supplier must guarantee Alum meets or exceeds the most current NSF Standard 60.
3. Supplier must provide Commercial Grade Liquid Alum.



***Fort Collins Water Treatment Facility
Standard Operating Procedure
Purchasing Liquid Aluminum Sulfate***

4. Alum which has been "reclaimed" will not be accepted, regardless of meeting AWWA and NSF Standards.
5. Supplier must be able to supply Alum in bulk quantities according to the Purchasers Options and Alternatives section of the most current AWWA Standard for Liquid Aluminum Sulfate.
6. Supplier must provide a Certified Analysis of impurities with each shipment in accordance with the most current AWWA Standard for Liquid Aluminum Sulfate. This analysis can be faxed prior to delivery or presented by the delivery driver. Failure to provide this analysis can be a basis for rejection of the shipment.
7. Supplier will guarantee the safety of the delivery vehicle and delivery containers.
 - A. Containers must meet industry standard for hauling ALUM, including rubber-lined steel or stainless steel or any other suitable material that will not be attacked by the acidity of the liquid.
 - B. Supplier must ensure that the container is in suitable condition for hauling alum and that it does not contain any substances that might affect the use or usefulness of the alum in treating municipal water supplies.
 - C. Containers leaving the Suppliers property should not be leaking fluids, have bulging in any portion of the container, and have connectors that are free from damage.
 - D. Delivery vehicles are to be in good working order, not leaking liquids, good tire quality, etc.
8. Supplier must inspect the delivery container prior to loading of the chemical to ensure no contaminating material or residue exists in the container.
9. Supplier is required to have a method to ensure that tampering has not occurred from the point of origin to FCWTF unloading point. This is typically done by a color-coded "tie" which must be cut to open the hatch or cam lock. Other methods may be used; however, the method must be approved in advance by the FCWTF.
10. Each year in January, the supplier will mail to FCWTF a new copy of the MSDS sheet and/or the web site location of the most current version.
11. Each year in January, the supplier will mail to FCWTF a copy of the NSF Certification and AWWA conformance letter.
12. Each year in January, the supplier will mail to FCWTF a signed *FCWTF EMS Guide for Contractors and Vendors Packet*.
13. Supplier will be responsible for shipping costs if the shipment is rejected and returned for not meeting the standards expressed in this SOP.

DELIVERY

1. All chemical suppliers must fax to the FCWTF (970-221-6736) the following information **prior** to delivery:
 - a) the name of the driver making the delivery
 - b) the numbers of the tractor and trailer transporting the chemical
2. **Delivery trucks must park in the designated area on the north side of LaPorte Avenue outside of the entrance gate. Use a cellular phone to call the facility at (970)221-6690 or walk to the entrance kiosk and press the red call button. Please do not block the facility entrance on LaPorte Avenue. All deliveries are checked by FCWTF personnel prior to entry.**



***Fort Collins Water Treatment Facility
Standard Operating Procedure
Purchasing Liquid Aluminum Sulfate***

3. The receptionist or person answering the telephone must contact the Duty operator. The Duty operator will verify the delivery from the schedule board. The operator or designee will meet the truck **outside** the gate.
4. FCWTF personnel will verify that the faxed information matches up with the driver and the delivery vehicle arriving at the FCWTF. If the driver's ID or the tractor and trailer numbers do not match, the truck will not be allowed to enter the facility. The Plant Superintendent will be contacted and the delivery may be rejected.
5. The security verification, the supplier's quality assurance analysis, and the City's lab analysis will be given to the Plant Superintendent in order to identify the load in the event of any problems. Samples are stored on site for six months. Reference Chemical Sample Handling Procedure SOP for chemical chain of custody.
6. Delivery drivers are responsible for off-loading the Alum. FCWTF personnel are not allowed to connect or disconnect any supply hoses. FCWTF personnel will give instructions to the delivery driver on chemical off-loading in accordance with FCWTF SOP for Alum Delivery.
7. Delivery drivers will be required to take samples and deliver to on-site Operators or Chemist. FCWTF personnel will give delivery drivers instructions on how samples are to be taken. FCWTF personnel will supply delivery drivers with the containers for the samples.
8. The delivery driver must wait for the results of the process laboratory test before unloading the truck.
9. Delivery drivers are required to provide a certified weight ticket for both the empty and loaded weights of the tractor and trailer unit. All weight tickets should have the tractor and trailer numbers written on them, as well as the name of the facility, FCWTF.
10. Delivery drivers will be responsible for chocking trucks during delivery. Chocks will be provided by FCWTF.
11. Delivery drivers should meet with the operator to become familiar with the location of phones, alarms, and emergency showers, and SCBAs or other supplied air systems that are nearest to the off load location.

PURCHASING

1. All contracts and purchases will be made in accordance with the City of Fort Collins Purchasing Department (FCPD) Purchasing Procedures. A copy can be obtained through the Purchasing Department. The Purchasing Department will ensure adherence to the FCPD Purchasing Procedures.
2. FCWTF requires that all suppliers submit the names, locations, and phone numbers of three current clients as part of any bidding process.
3. FCWTF requires that all suppliers submit a list of intended delivery agents (motor carrier) and a letter from the U.S. Department of Transportation, Federal Highway Administration, stating the Motor Carrier Safety Rating for the company as part of any bidding process. Each listed motor carrier's rating must be Satisfactory or above to be considered in the bidding process.
4. FCPD representatives are responsible for ensuring that the items noted in this SOP could be met by the supplier before any contract is awarded.
5. The FCWTF and FCPD will establish, at the beginning of each New Year, a Blanket Purchase Order.



Fort Collins Water Treatment Facility
Standard Operating Procedure
Purchasing Liquid Aluminum Sulfate

6. FCWTF Plant Supervisor or his designee will place delivery orders on that Purchase Order throughout the year. FCWTF must be able to place orders using telephone, fax, or electronic mail.
7. When placing an order, a delivery date will be specified.
8. This SOP can act as the sole-source justification if only one supplier can meet the criteria specified above.

Revision History

Date	Initials	Revisions
01/05/2016	GDS	▪ Updated reviser and signatories. ▪ Added document control verification table in header. ▪ Added Revision history table. ▪ Changed reference to, "Water Treatment Quality Coordinator," to, "Plant Superintendent." ▪ Changed wording in item 9 under, "supplier," from, "should be approved," to, "must be approved in advance." ▪ Changed, "Laboratory Technician," to, "Chemist."





Water Production Division
4316 W. Laporte Ave.
Fort Collins, CO 80521
970.221.6690
970.221.6736 - fax
fcgov.com

Verification	Revision	Approval	Review	Status
Initials	GDS	MKK	GDS	
Date	08/10/2016	08/11/2016	08/10/2016	Active

Dear Contractor or Vendor,

The City of Fort Collins has adopted an environmental policy that focuses on its environmental responsibility and reflects the community's strong desire to protect the environment. This policy specifies the need to comply with legal requirements and includes a commitment to continually improve environmental performance. With the implementation of this policy, a number of policies and procedures have been adopted at the Fort Collins Fort Collins Water Treatment Facility (FCWTF). The purpose of this *EMS Guide for Contractors and Vendors* is to familiarize you with these policies and procedures and to address how you will be affected.

An Environmental Management System (EMS), with ISO 14001:2004 certification, has been implemented at FCWTF to achieve the City's goal of high environmental performance. In addition to addressing in-house activities, the EMS requires that any party doing work within the FCWTF fence line adhere to the relevant portions of the EMS. To fulfill this requirement, a list of procedures has been developed for all FCWTF contractors or vendors to follow while working on site. This guide provides an introduction to the EMS, communicates the environmental policy, and describes how you can help FCWTF achieve its environmental goals.

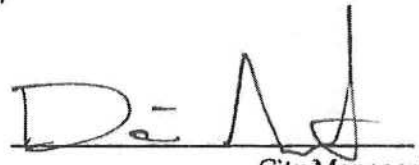
If you have any concerns or questions regarding the information contained in this guide, please feel free to contact FCWTF any time at (970) 221-6690.

3.1 Environmental Policy

The City of Fort Collins is committed to conducting its operations in a manner that is environmentally responsible and reflective of the community's strong commitment to the environment. The City will provide community leadership by reducing its environmental impact while benefiting citizens, the economy, and society. In order to meet or exceed these objectives, the City of Fort Collins will:

1. Comply with all applicable environmental laws, regulations, and other requirements, and implement cost-effective programs and procedures to assure compliance;
2. Educate and train city employees to increase awareness of environmental requirements and improve environmental performance;
3. Identify and implement methods to reduce or eliminate the generation of solid and hazardous waste;
4. Actively identify and implement effective ways to prevent pollution and conserve natural resources and energy;
5. Establish measurable environmental objectives and targets and update as necessary to reflect the changing needs, missions, and goals of city operations;
6. Commit to continual improvement of environmental management through self-assessments, corrective action, and innovation; and make environmental management an integral part of our standard business practices; and
7. Recognize that every manager, supervisor, and employee is responsible for implementing this policy; and management support is essential to empowering each employee to proactively perform work in an environmentally responsible manner.

This environmental policy will be communicated to employees and contractors and will be available to the public via the City's website.

A handwritten signature in black ink, appearing to read "DeAnna".
City Manager/Date 10/5/09

Fort Collins Water Treatment Facility Significant Aspects

An EMS requires that a facility identify those activities, products, and services that have the potential to impact the environment. These “environmental aspects” are then rated based on a defined set of criteria to determine their significance. From this list, three of the most significant aspects have been identified. Controls are put in place to minimize environmental impacts associated with these activities and objectives and targets are put into place to improve environmental performance associated with these activities.

The **significant aspects** chosen for FCWTF:

- Reduce electrical use.
- Reduce vehicle fuel use.
- Improve landscape management methods
- Reduce solid waste stream to landfill

Basic measures in responsible environmental management are required, and we encourage all of our contractor partners to help us improve our environmental impacts in all aspects of our activities. Such basic measure include, limiting of unnecessary idling of vehicle engines, striving to be efficient in your use of resources, recycling and reusing where possible, and storage of regulated materials, such as fuel and oil, in compliance with regulatory requirements and our Environmental Management System (EMS). Also, please be advised that our facility is subject to implementation of a Spill Control, Containment, and Countermeasure (SPCC) plan, which requires special handling of petroleum products and other oils being stored on site.

We welcome any ideas or suggestions that you have to help our partnership be more environmentally friendly. We value your role as our partner in environmental stewardship.

Emergency Evacuation Procedures

The Fort Collins Water Treatment Facility uses chlorine gas. Six tons of chlorine gas are stored on site. In the event of a chlorine leak, an alarm will sound, requiring evacuation of the facility. All personnel on site are required to follow the procedures in the flow chart below, provided in English and Spanish, to facilitate safe evacuation and ensure that all personnel are accounted for.

Verification	Revision	Approval	Review	Status
Initials	GDH	All Supervisors	All Supervisors	Active
Date	06/01/2016	06/01/2016	06/01/2016	

Chlorine Leak Alarm Evacuation Procedures

Alarm Sounds

1-Evacuate Immediately

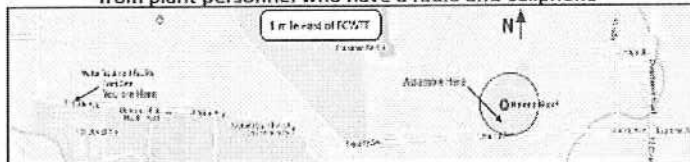
in a calm and orderly manner to:
National Guard Armory

3324 LaPorte Ave

- Bring mobile phone and radio, if available
- Bring high-visibility vest, if immediately available
- Gates will be locked open
- Do NOT stop to fob out
- Assemble at the Armory- Do NOT leave

2-Assemble

In the Armory Parking Lot and appoint a **contact person** from plant personnel who have a radio **and** cellphone



- **Contact person** wears a high-visibility vest
- All others remove high-visibility vests
- **Contact person** takes roll call
- When muster sheet is available, ensure all personnel have been accounted for

3-Wait for Instructions

Contact person is the only person to request incident status
Incident Commander will send someone to give you the all-clear

- Do NOT leave
- Do NOT call the plant
- Keep radio traffic clear for incident command

Contact Person Responsibilities:

- Must be FCWTF personnel with cellphone **and** radio
- Wear a high-visibility vest
- Instruct others wearing high-visibility vests to remove them
- Check fcgov email via smartphone for muster sheet & contractor roster
- Obtain front desk log book
- Obtain contractor gate log sheet from contractor superintendent
- Take roll call
- Confirm all personnel are accounted for
- Do not allow anyone to leave
- Monitor radio traffic, but **keep radio channel clear**
- Do NOT call the plant in the first 30 minutes
- Only request status after 30 minutes and/or radio traffic is quiet for more than 10 minutes
- If radio contact is necessary, request, "Evacuation Officer," or, "Incident Command."

Verification	Revision	Approval	Review	Status
Initials	GDS	All Supervisors	All Supervisors	Active
Date	06/01/2016	06/01/2016	06/01/2016	

Procedimientos de Evacuación en caso de Alarma por Escape de Cloro

Sonidos de Alarma

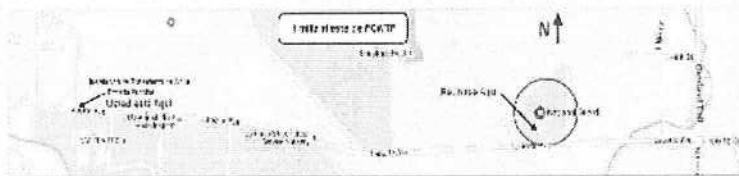
1-Evacúe Inmediatamente

de manera calmada y ordenada a:
Armería de la Guardia Nacional
3324 LaPorte Ave

- Traiga chaleco de alta visibilidad, si lo tiene a la mano
- Nos aseguraremos que las puertas queden abiertas
- NO se detenga a registrar su salida
- Reúnase en la Armería - NO se vaya

2-Reunión

En el estacionamiento de la Armería y designe a una persona contacto del personal de la planta quien tenga un radio y un teléfono celular



- **La persona contacto** trae puesto un chaleco de alta visibilidad
- Los demás se quitan los chalecos de alta visibilidad
- **La persona contacto** pasa lista
- Cuando haya una lista de asamblea disponible, asegúrese que se haya encontrado a todo el personal

3-Espere instrucciones

La persona contacto es la única persona va a solicitar estatus del incidente
El comandante de incidente enviará a alguien para avisar el fin de la alerta

- NO se vaya
- NO llame a la planta
- No use el radio, permita que esté disponible para los organizadores

Responsabilidades de la Persona de Contacto:

- Debe ser personal de FCWTF con teléfono celular y radio
- Llevar puesto un chaleco de alta visibilidad
- Indicarle a otras personas con chalecos de alta visibilidad que se los quiten
- Revisar fcgov email por *smartphone* para obtener la lista del personal y de los contratistas
- Obtener el registro de la recepción
- Obtener el registro de la entrada de contratistas del contratistas supervisor
- Pase lista
- Confirme que se sabe donde está todo el personal
- No permita que nadie se vaya
- Monitoree el tráfico del radio, pero no lo use, para que así esté disponible
- NO llame a la planta por los primeros 30 minutos
- Sólo solicite estatus después de 30 minutos y/o si el radio no ha sonado en más de 10 minutos
- Si es necesario comunicarse por radio, solicite, "Oficial de evacuación," o, "Alto mando del incidente."

Environmental Management Procedures

The following information is supplied to contractors and vendors who perform work on site for the Fort Collins Water Treatment Facility (FCWTF). The information presented below has been developed as part of the facility's Environmental Management System (EMS). The intent of this information is to make contractors and vendors aware of the EMS and to ensure conformance to applicable EMS procedures and work instructions.

This facility provides drinking water to the public and all contractor and vendor activities can impact drinking water quality. It is imperative that the following guidelines are followed without exception.

General Environmental Management

- Minimize idling of vehicles during any work operations.
- Control fugitive dust emissions during any work operations and activities.
- Do not excavate without the prior approval of appropriate FCWTF staff.
- Follow all applicable Fort Collins Water Treatment Facility safety procedures.

Waste Recycling and Disposal

- Label, store, and dispose of any waste materials according to local, state, and federal regulations. **NO UNLABELED CONTAINERS ARE PERMITTED ON SITE.**
- Notify appropriate FCWTF staff if there are any hazardous wastes on site. Recycle or dispose of all wastes in an appropriate manner according to all local, state, and federal regulations.
- Notify appropriate FCWTF staff when a regulated material is being used on site (asbestos, PCBs, oil, etc.).
- Provide Material Safety Data Sheets (MSDS) for all materials upon request.

Water Discharges

- Do not discharge ANY material, including water, to storm water drains, sanitary sewer, or onsite holding ponds without approval of appropriate FCWTF staff. Notify appropriate FCWTF staff if a state-permitted discharge will occur.
- Keep roadways and outside areas clean and free of debris.

Material Storage / Spills

- Obtain approval for outside storage of materials from appropriate FCWTF staff.
- Equip storage areas with adequate secondary containment of all regulated materials.
- Label and store all materials according to Hazard Communication standard [29CFR1910.1200].
- Oils, petroleum fuels, and other materials regulated by 40CFR112 to be stored or transferred on site must be incorporated into our SPCC plan. Please notify us of your intention to bring such materials on-site, even temporarily, so that we can evaluate the applicability of 40CFR112. Storage of such materials must provide secondary containment and monthly inspection reports will need to be filed with FCWTF staff.
- Close all chemical containers except when in use.
- Have appropriate spill kits available.
- **REPORT ALL SPILLS OR RELEASES OF MATERIALS, OF ANY SIZE IMMEDIATELY to FCWTF staff (970) 221-6690 and the Special Projects Manager. Contractors will follow up by submitting a completed Spill Reporting Form.**

CONTACTS

General Contact Number:	(970) 221-6690
Water Production Manager:	(970) 221-6692
Technical Services Supervisor (Special Projects Manager)	(970) 416-2524 office, (970) 217-3514 mobile

Verification	Revision	Approval	Review	Status
Initials	GDS	EMS Team	GDS	
Date	11/17/2015	12/03/2015	11/17/2015	Final

Water Production Division
4316 W. Laporte Ave.
Fort Collins, CO 80521

970.221.6690
970.221.6736 - fax
fcgov.com

Fort Collins Water Treatment Facility

EMS Guide for Contractors and Vendors Checklist

This form must be completed, signed, and returned to the City of Fort Collins Fort Collins Water Treatment Facility (FCWTF).

NOTE: Please review the enclosed materials prior to completing this form.

Contractor/Company Name: _____ Date: _____

Contact Phone Number: _____ E-mail address: _____

- ✓ Read and understand the signed Environmental Policy for the City of Fort Collins
- ✓ Read and understand the Significant Aspects for FCWTF
- ✓ Read and understand the Emergency Response Policy for Visitors
- ✓ Read and understand the Environmental Management Procedures
- ✓ If you will be storing fuel, oil, petroleum products, or any other material covered by 40CFR112, read and understand the SPCC plan. Agree to comply with requirements to train all staff on the SPCC, cooperate with FCWTF staff in incorporating all fuel and oil storage and transfer operations into our site SPCC plan, and implement applicable sections of the plan (Appendix I).

Environmental Agreement

My company will abide by all environmental regulations and policies when performing work at the FCWTF. My company will ensure that the requirements of the EMS are adequately communicated to all personnel that may visit FCWTF.

For questions or additional information contact the City of Fort Collins Fort Collins Water Treatment Facility at (970) 221-6690.

Signature: _____ Date: _____

Rev. No.	Effective Date	Responsible Person	Description of Revision
001	11/18/2015	GDS	Updated document control box format Revised language regarding SPCC
002	08/10/2016	GDS	Updated environmental objectives Updated chlorine leak evacuation flow chart



Brad WYANT <bwyant@arvada.org>

Fort Collins Documents

Nancy Allen <nallen@arvada.org>
To: Brad WYANT <bwyant@arvada.org>

Mon, Jan 14, 2019 at 1:45 PM

Fort Collins cooperative confirmation that Kimberly required.

----- Forwarded message -----

From: **Nancy Allen** <nallen@arvada.org>
Date: Mon, Jan 14, 2019 at 10:56 AM
Subject: Fwd: Fort Collins Documents
To: Kimberly Burnham <kburnham@arvada.org>, Katey Gath <kgath@arvada.org>, Carolina Rodriguez <crodriguez@arvada.org>

Kimberly, here is the confirmation you requested.

----- Forwarded message -----

From: **Marisa Donegon** <mdonegon@fcgov.com>
Date: Mon, Jan 14, 2019 at 10:50 AM
Subject: RE: Fort Collins Documents
To: Nancy Allen <nallen@arvada.org>

Hi Nancy,

That is correct – the RFP was “contracted” with a PO. A Notice of Award was also issued.

Let me know if you need anything else.

Thanks,

Marisa Donegon

Buyer

970-416-4377

From: Nancy Allen <nallen@arvada.org>
Sent: Friday, January 11, 2019 10:31 AM
To: Marisa Donegon <mdonegon@fcgov.com>; Kimberly Burnham <kburnham@arvada.org>; Carolina Rodriguez <crodriguez@arvada.org>
Subject: Re: Fort Collins Documents



REPORT TO CITY COUNCIL RESOLUTION

AGENDA ITEM
8.A.4.

TO: THE HONORABLE CITY COUNCIL

DATE: March 1, 2021

SUBJECT: R21-034 A Resolution Authorizing an Agreement by and between the City of Arvada and Carollo Engineers, Inc. in an Amount Not to Exceed \$129,930.00 for the Ralston WTP Solids Handling Study Project No. 21-WA-50

Report in Brief

Attached for Council consideration is a Resolution Authorizing an Agreement by and between the City of Arvada and Carollo Engineers, Inc. in an Amount Not to Exceed \$129,930.00 for the Ralston WTP Solids Handling Study Project No. 21-WA-50.

The goal of this project is to analyze and characterize current solids production and develop alternatives for solids handling at the Ralston Water Treatment Plant (RWTP). A preliminary engineering report will be prepared for the recommended improvements. The existing system is undersized and leaking, causing operational challenges. Additionally, planned improvements to the existing filters could result in increased flows to the solids handling system.

The Arvada team recommends that City Council approve R21-034, A Resolution Authorizing an Agreement by and between the City of Arvada and Carollo Engineers, Inc. in an Amount Not to Exceed \$129,930.00 for the Ralston WTP Solids Handling Study Project No. 21-WA-50.

Financial Impact

This is a one-time request and there is adequate funding for this agreement in the following account: Water Financial Project Account CIP Number 97590.

Background

The City of Arvada requires a comprehensive solution to solids (residuals) handling at the Ralston Water Treatment Plant (RWTP). This project was identified in the recently completed Water Treatment Facilities Master Plan as a required near-term improvement project as the ponds are currently undersized and leaking, causing operational challenges. Additionally, other planned improvements to the existing filters (filter expansion, backwash practices, etc.) could result in increased flows to the solids handling system.

The scope of this project includes analysis of the current solids production rate from backwashing filters, characterization of solids produced, and development of alternatives for solids handling. The backwash system, including backwash waste valves, backwash system pumping and piping, settling basin system piping, and recycle pumping and piping, will be included in the analysis. The study will include recommendations to improve process efficiencies and to make the system more reliable and cost effective while maintaining the 36 million gallons per day (MGD) rated capacity. The study will also consider the impact of adding filter-to-waste (if feasible) and recommend methods to maintain filter operations at production rates up to 40 MGD with one filter out of service. The project will evaluate possible improvements such as engineered lagoons, drying beds, and mechanical dewatering as potential solutions to the short term and long term needs of the RWTP.

For the selected alternative, this scope of services includes preparation of a preliminary design (15%) for the recommended

improvements. Based on the outcome of Phase I, the City team intends to negotiate Phase II, the detailed design and permitting phase of the project.

Discussion

A total of seven proposals for this project were received on November 19, 2020. The proposals were reviewed with respect to project approach, qualifications of the proposed project manager and team, similar project references, project schedule, cost, performance measures and overall quality of the proposal. Carollo Engineers, Inc. was selected based on the highest scores from the evaluator panel. Carollo has successfully completed similar solids handling projects for other utilities in the Denver Metropolitan Area with positive references. Funding for this project is available in the UT Water Treatment Operations (41) CIP No. 97590.

Public Contact

Posting of the City Council agenda.

Commission Recommendation

N/A

Strategic Alignment

This project aligns with the following Principle within the Infrastructure Priority Area of the City Council Strategic Plan:

Provide the community with safe, reliable, high-quality water and maintain water treatment systems for full city build-out, as defined by the Comprehensive Plan. This includes maintaining utility rates at lowest practical levels with accurate billing that supports replacement of aging infrastructure in order to maintain robust utility systems.

Alternative Courses of Action

N/A

Recommendation for Action

The Arvada team recommends that City Council approve R21-034, A Resolution Authorizing an Agreement by and between the City of Arvada and Carollo Engineers, Inc. in an Amount Not to Exceed \$129,930.00 for the Ralston WTP Solids Handling Study Project No. 21-WA-50.

Suggested Motion:

I move that R21-034, A Resolution Authorizing an Agreement by and between the City of Arvada and Carollo Engineers, Inc. in an Amount Not to Exceed \$129,930.00 for the Ralston WTP Solids Handling Study Project No. 21-WA-50, be (approved) (rejected).

Prepared by:

Jacqueline Rhoades, Civil Engineer III

Reviewed by:

Karen Custer, Administrative Assistant

2/10/2021

Hannah Gregory, Legal Administrative Assistant

2/17/2021

SUBJECT: R21-034 A Resolution Authorizing an Agreement by and between the City of Arvada and Carollo Engineers, Inc. in an Amount Not to Exceed \$129,930.00 for the Ralston WTP Solids Handling Study Project No. 21-WA-50

PAGE: 3
ITEM: 8.A.4.

Approved by:

Jacqueline Rhoades, Civil Engineer III	2/10/2021
Don Wick, Director of Public Works	2/10/2021
Bryan Archer, Director of Finance	2/10/2021
Erika Pierce, Litigation Paralegal	2/17/2021
Lori Graham, Senior Assistant City Attorney	2/18/2021
Rachel Morris, City Attorney	2/18/2021
Lorie Gillis, Deputy City Manager	2/18/2021
Mark Deven, City Manager	2/18/2021

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R21-034

A RESOLUTION AUTHORIZING AN AGREEMENT BY AND BETWEEN THE CITY OF ARVADA AND CAROLLO ENGINEERS, INC. IN AN AMOUNT NOT TO EXCEED \$129,930.00 FOR THE RALSTON WTP SOLIDS HANDLING STUDY PROJECT NO. 21-WA-50

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO:

Section 1. The Mayor or Mayor Pro Tem is authorized to sign and the City Clerk to attest, in form approved by the City Attorney, an Agreement, which is in substantially the same form as that attached hereto, by and between the City of Arvada and Carollo Engineers, Inc. for the Ralston WTP Solids Handling Study Project No. 21-WA-50 in an amount not to exceed \$129,930.00.

Section 2. This resolution shall be effective upon its approval by the City Council.

APPROVED AND ADOPTED this 1st day of March, 2021.

Marc Williams, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:
Rachel A. Morris, City Attorney

By: _____

**AN AGREEMENT BETWEEN THE CITY OF ARVADA AND
CAROLLO ENGINEERS INC IN THE AMOUNT NOT TO
EXCEED \$129,930 FOR SERVICES RELATING TO THE
RALSTON WTP SOLIDS HANDLING STUDY
PROJECT NO. 21-WA-50**

- 1. PARTIES.** The parties to this Agreement are the City of Arvada, a Colorado home rule municipal corporation, whose mailing address is 8101 Ralston Road, Arvada, CO 80002 (“Arvada”) and Carollo Engineering Inc., whose mailing address is 390 Interlocken Crescent, Suite 800, Broomfield, Colorado (“Vendor”).
- 2. RECITALS AND PURPOSE.**
 - 2.1. Arvada requires a qualified firm to provide a comprehensive solution to solids (residuals) handling at the Ralston Water Treatment Plant (RWTP).
 - 2.2. On or about October 23, 2020, Arvada issued a Request for Proposal, RFP-20-Ralston WTP Solids Handling Study Prelim Design (“RFP”), seeking proposals from qualified entities to provide professional services as described in Sec. 2.1 (“the Work”).
 - 2.3. Vendor has extensive experience in providing, a long history of dewatering experience at facilities nationwide. On or about November 19, 2020, Vendor submitted its Response to Arvada’s Request for Proposal (“Response”).
 - 2.4. Arvada has determined that Vendor has the requisite background, skill, expertise, and insurance to provide the requested goods, professional services and other related services, under the terms and conditions more fully set forth below.
 - 2.5. Arvada and Vendor acknowledge and agree that Arvada may, at its own discretion, use other City approved consultants to perform similar professional services, and that this Agreement in no way limits Arvada from hiring other advisors or constitutes a contract for exclusive services from Vendor.
- 3. CONTRACT DOCUMENTS AND EXHIBITS.** The Contract Documents shall consist of this Agreement together with the following:
 - Exhibit 1: Arvada’s RFP-20-Ralston WTP Solids Handling Study Prelim Design;
 - and
 - Exhibit 2: Vendor’s Response.

All exhibits referred to in this Agreement are attached hereto and are, by reference, incorporated herein for all purposes. In the event any matter, term, provision, or condition that is the subject of this Agreement requires clarification or is in dispute, or is the subject of a difference of opinion, the purpose and intent of the Agreement shall be first ascertained

by reference to the Contract Documents in their entirety. In the event of any dispute or differences between the respective documents that constitute the Contract Documents, then Vendor shall secure the written instructions from Arvada before proceeding with the performance of the services affected by such conflicts, omissions, or discrepancies.

4. **PAYMENTS TO CONSTITUTE CURRENT EXPENDITURES.** Financial obligations of Arvada, if any, after the current years are contingent on funds for that purpose being appropriated, budgeted, and otherwise made available by the City Council for the City of Arvada. Arvada's obligations under the Agreement shall be from year to year only and shall not constitute a multiple-fiscal year direct or indirect debt or other financial obligation of Arvada within the meaning of Article X, Section 20 of the Colorado Constitution.
5. **SCOPE OF SERVICES.** Vendor shall perform the Work as described in the Contract Documents or as amended by the mutual consent of the parties in writing. Should the parties agree in writing to a change in the scope of services, then the parties will timely execute any applicable Change Order, which will address necessary start and end dates, any applicable deliverables and associated due dates, reporting requirements, documentation requirements, and any other matters that the parties deem necessary.
6. **TERM.**
 - 6.1. This Agreement will become effective and binding on all parties upon Arvada's execution of the Agreement, which will occur within a reasonable time following Arvada's receipt of the executed Agreement from Vendor.
 - 6.2. The term of the Agreement shall be for **one** year from Arvada's execution of the Agreement as described in Sec. 6.1, unless otherwise agreed to in writing by the parties, subject to availability of funds, or Arvada's termination for convenience under Sec. 8.0.
 - 6.3. This Agreement may be renewed by Arvada for **two** consecutive one-year terms, and the renewals shall be automatic unless Arvada gives Vendor 30 days written notice to terminate the Agreement.
 - 6.4. While Arvada has listed its major requirements for its solicitation in the RFP, Arvada may, during the term of this Agreement, wish to purchase other related goods and/or services identified and offered by Vendor, based upon the pricing/fee contained in Contract Documents. Arvada reserves the right to award these ancillary items to Vendor or another top rated bidder based upon the negotiated scope of work and fee structure. This option, if exercised, in no way obligates Arvada to pursue additional services with Vendor.
7. **COMPENSATION.** Arvada shall pay Vendor for the Work requested by Arvada and rendered by Vendor under this Agreement. The total amount for the Work shall not exceed **\$129,930.00**. Vendor agrees to submit monthly invoices for actual services completed to

Arvada, and payment from Arvada will be due NET 30 days.

- 8. RIGHT TO TERMINATE.** Arvada shall have the right to terminate, without cause, this Agreement. Any such termination shall not be considered a breach of this Agreement or any extension thereof. In the event Arvada terminates this Agreement without cause, Arvada shall pay for all authorized services rendered by Vendor up through the date of termination by Arvada, not to exceed the total amount of the contract price as outlined in this Agreement and any applicable Change Order(s).

9. CHANGE ORDER PROCESS.

9.1. If Arvada wishes to add services, Arvada may so request in writing. Email will suffice as a writing for this purpose. If Vendor is not able to accommodate Arvada, it will promptly notify Arvada.

9.2. When both parties have agreed on the contents of a Change Order, both parties shall so indicate by signing the Change Order.

9.3. Once a Change Order has been agreed to in writing, signed by the parties, the Change Order shall be deemed a part of this Agreement. Any such Change Orders shall be subject and subordinate to the terms of this Agreement and incorporated herein, unless otherwise agreed to in writing signed by the parties.

- 10. STAFF DIRECTION.** Arvada designates Jacqueline Rhoades as Arvada's Project Manager. Ms. Rhoades will be Arvada's responsible staff member to provide direction to Vendor during the course of the Work. Arvada reserves the right to change the Project Manager(s) at its own discretion and will promptly notify Vendor of any such change in writing.

- 11. QUALITY OF WORK.** The Work performed by Vendor shall be done in accordance with generally accepted professional practices and to the level of competency presently maintained by other practicing professional consultants in the same type of work in the Denver metropolitan community.

- 12. TERMS AND CONDITIONS IN SOLICITATION.** Vendor affirms that it has read and is familiar with the Contract Documents, including but not limited to the General Terms and Conditions, Special Terms and Conditions, Insurance Requirements, and other RFP requirements, and agrees to be bound by those terms and conditions.

- 13. PERFORMANCE MEASURES.** The Performance Measures for this Agreement shall be those proposed by Vendor in its Response/Proposal to Arvada's solicitation and accepted by Arvada, which are included in the Contract Documents that are exhibits to this Agreement.

- 14. ADDITIONAL DOCUMENTS OR ACTION.** The parties agree to execute any additional documents and to take any additional action that is necessary to carry out this Agreement.

- 15. BINDING EFFECT.** This Agreement shall inure to the benefit of, and be binding upon, the parties, their respective legal representatives, successors, heirs, and assigns; provided, however, that nothing in this paragraph shall be construed to permit the assignment of this Agreement except as otherwise expressly authorized herein.
- 16. PARAGRAPH CAPTIONS.** The paragraph captions in this Agreement are set forth only for the convenience and reference of the parties and are not intended in any way to define, limit, or describe the scope or intent of this Agreement.
- 17. INTEGRATION, AMENDMENT, AND SEVERABILITY.** This Agreement represents the entire agreement between the parties, and there are no oral or collateral agreements or understandings. This Agreement may be amended only by an instrument in writing signed by the parties. If any other provision of this Agreement is held invalid or unenforceable, no other provision shall be affected by such holding, and all of the remaining provisions of this Agreement shall continue in full force and effect if the essential terms and conditions of this Agreement for both parties remain valid, legal, and enforceable.
- 18. NOTICES.** Any notice or notification required or permitted by the Agreement shall be in writing and shall be deemed to have been sufficiently given for all purposes if sent by certified mail or registered mail, postage and fees prepaid, addressed to the party to whom such notice is to be given at the address set forth on the signature page below, or at such other address as has been previously furnished in writing, to the other party or parties. Such notice or notification shall be deemed to have been given when deposited in the United States mail.
- 19. BINDING AUTHORITY.** Vendor represents and affirms that the signature page hereof accurately states the full legal name of Vendor (whether as a corporation, partnership, limited liability company, sole proprietorship, or other), contains all requisite signature(s) on behalf of Vendor, has been properly acknowledged by attestation, notary acknowledgment, or both, and in all other respects is effective to bind Vendor, in accordance with all applicable statutes, regulations, resolutions, rules, bylaws, agreements, or similar sources of authority or limitation. This Agreement may be executed in counterpart(s), each of which shall be deemed to be an original, and all of which, taken together, shall constitute one instrument.

DATED this _____ day of _____, 2021.

CITY OF ARVADA, a Colorado home rule
municipal corporation

Marc Williams, Mayor
8101 Ralston Road
Arvada, CO 80002

ATTEST:

City Clerk

APPROVED AS TO FORM:

For: Rachel A. Morris, City Attorney

By: _____

CAROLLO ENGINEERS INC.

Vincent Hart, Executive Vice President
390 Interlocken Crescent, Suite 800
Broomfield, CO. 80021
Email: vhart@carollo.com

Exhibit 1

Arvada's RFP-20-Ralston WTP Solids Handling Study
Prelim Design



REQUEST FOR PROPOSAL

Proposal #: RFP-20-Ralston WTP Solids Handling Study Prelim Design

Title: RFP-20-Ralston WTP Solids Handling Study Prelim Design

RFP Issued: 10/23/2020

Pre-proposal Meeting: 10/30/2020 10:00am Ralston Water Treatment Plant 18975 W 66th Ave.
(6750 Dunraven St.), Arvada, CO 80007

Question Deadline: 11/02/2020 3:00 p.m. local time
Questions and responses will be posted on BidnetDirect.com

Proposals Due By: 11/19/2020 3:00 p.m. local time

Electronic Submissions must be submitted online at
BidNetDirect.com.

Limit the # of separate submission documents, preferably to 1,
and the company name must start the uploaded file name as
these will be moved to a shared Team Drive for evaluation.
Late responses will not be considered for award.

Projected Start Date: January 2021

Submit questions on Bidnetdirect.com – one question per line please.

Direct contact with the requesting department may result in vendor disqualification.

Arvada Vision: We dream big and deliver.

Mission: We are dedicated to delivering superior services to enhance the lives of everyone in our community.

Values:

Innovation – We excel in creativity, flexibility and the use of best practices while valuing diverse backgrounds, ideas and perspectives.

Passion – We are a high performing, inclusive team inspiring each other to pursue excellence.

Opportunity – We value our diversity, embrace possibilities, face challenges, persevere and take action to deliver quality results.

Documents included in this Request:

Cover Page	page 1
General Terms and Conditions	page 2-4
Special Terms and Conditions	page 5-6
Insurance Requirements	page 7
Administrative instructions and Evaluation Criteria	page 8-9
Scope of Work	page 9
Submittal Forms, submittal checklist	page 10-11
Attachments A: schematic of the solids system	
Performance Measures for services	

GENERAL TERMS AND CONDITIONS

1. **NO MULTI-YEAR FISCAL OBLIGATION.** Financial obligations of Arvada payable after the current fiscal year are contingent on funds for that purpose being appropriated, budgeted, and otherwise made available by the City Council for Arvada. Arvada's obligations under the Agreement shall be from year to year only and shall not constitute a multiple-fiscal year direct or indirect debt or other financial obligation of Arvada within the meaning of Article X, Section 20 of the Colorado Constitution (TABOR).
2. **TAXES.** Arvada shall not be liable for the payment of any excise, sales, or use taxes. Arvada is exempt from federal excise taxes under I.R.C. Chapter 32 (26 U.S.C., Subtitle D, Ch. 32) and from State and local government sales and use taxes under §§39-26-704(1), *et seq.*, C.R.S. (Colorado Sales Tax Exemption Identification Number 98-01789). Contractor shall not invoice Arvada for any state, federal or local taxes. Upon written notification by Arvada, Contractor shall reimburse Arvada in a timely manner for any taxes erroneously paid by Arvada.
3. **NO INDEMNIFICATION BY ARVADA.** Arvada is prohibited under Article XI, Section 1 of the Colorado Constitution from indemnifying anyone. Despite any provision in any contract document to the contrary, Arvada does not indemnify Contractor or anyone else under the Agreement.
4. **INDEMNIFICATION OF ARVADA.** Contractor shall indemnify, defend, and hold harmless Arvada, its employees, agents and assignees (the "Indemnified Parties"), against any and all costs, expenses, claims, damages, liabilities, court awards, and other amounts (including attorneys' fees and related costs) arising from or related to any act or omission by Contractor, or its employees, agents, Subcontractors, or assignees in connection with the Agreement.
 - 4.1. **Confidential Information Indemnification.** Disclosure or use of Arvada Confidential Information by Contractor may be cause for legal action by third parties against Contractor, Arvada, or their respective agents. Contractor shall indemnify, defend, and hold harmless the Indemnified Parties, against any and all claims, damages, liabilities, losses, costs, expenses (including attorneys' fees and costs) incurred by Arvada in relation to any act or omission by Contractor, or its employees, agents, assigns, or subcontractors.
 - 4.2. **Intellectual Property Indemnification.** Contractor shall indemnify, save, and hold harmless the Indemnified Parties, against any and all costs, expenses, claims, damages, liabilities, and other amounts (including attorneys' fees and costs) incurred by the Indemnified Parties in relation to any claim that any Deliverable, Good or Service, software, or Work provided by Contractor under the Agreement (collectively, "IP Deliverables"), or the use thereof, infringes a patent, copyright, trademark, trade secret, or any other intellectual property right. Contractor's obligations shall not extend to the combination of any IP Deliverables provided by Contractor with any other product, system, or method, unless the other product, system, or method is (a) provided by Contractor or Contractor's subsidiaries or affiliates; (b) specified by Contractor to work with the IP Deliverables; (c) reasonably required in order to use the IP Deliverables in its intended manner and the infringement could not have been avoided by substituting another reasonably available product, system, or method capable of performing the same function; or (d) is reasonably expected to be used in combination with the IP Deliverables.
5. **GOVERNMENTAL IMMUNITY.** Liability for claims for injuries to persons or property arising from the negligence of Arvada, its departments, boards, commissions, committees, bureaus, offices, employees and officials shall be governed by the provisions of the Colorado Governmental Immunity Act, §§24-10-101, *et seq.*, C.R.S. (CGIA). No term or condition of the Agreement shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protections, or other provisions contained in the CGIA.
6. **OPEN RECORD REQUESTS.** Arvada is obligated to comply with the Colorado Open Records Act (C.R.S. §§24-72-200.1 *et seq.*)(CORA), which may require Arvada to disclose all or a portion of communications relating to the Agreement, any transaction under the Agreement, and other related matters. Contractor has been advised to familiarize itself with CORA. Any confidentiality provisions in any contract documents are subject to the provisions of CORA.

7. **PROTECTION OF PERSONAL IDENTIFYING INFORMATION.** In the event the Agreement includes or requires Arvada to disclose to Contractor any Personal Identifying Information as defined in C.R.S. § 24-73-101, Contractor shall comply with the applicable requirements of C.R.S. §§ 24-73-101, et seq., relating to third-party service providers.
8. **NO THIRD PARTY BENEFICIARIES.** The Agreement does not and is not intended to confer any rights or remedies upon any person or entity other than Arvada and Contractor. Enforcement of the Agreement and all related rights and obligations are reserved solely to Arvada and Contractor. Any services or benefits which third parties receive as a result of the Agreement are incidental and do not create any rights for such third parties.
9. **ASSIGNMENT.** Contractor's rights and obligations under the Agreement are personal and may not be transferred or assigned without the prior, written consent of Arvada. Any attempt at assignment or transfer without such consent shall be void. Any assignment or transfer of Contractor's rights and obligations approved by Arvada shall be subject to the provisions of the Agreement. Any provision of an assignment that enlarges any duty, responsibility, or obligation of Arvada, or that limits, curtails, or diminishes any right or privilege of Arvada, without Arvada's express written consent, shall be void.
10. **BINDING EFFECT.** This Agreement shall inure to the benefit of, and be binding upon, the parties, their respective legal representatives, successors, heirs, and assigns.
11. **SURVIVAL.** Any provision of the Agreement that imposes an obligation on a party after the Agreement's termination or expiration shall survive the termination or expiration and shall be enforceable by the other party.
12. **SUBCONTRACTS.** Contractor shall not subcontract any of its responsibilities without Arvada's prior written approval, which will not be unreasonably withheld. Contractor shall submit to Arvada a copy of each such subcontract upon Arvada's request. All subcontracts Contractor enters into in connection with the Agreement shall comply with all applicable federal, state, and local laws and regulations, shall provide that they are governed by the laws of the State of Colorado, and shall be subject to all provisions of the Agreement. Contractor agrees it is fully responsible for subcontractors performing services under the Agreement. Contractor shall be Arvada's sole point of contact regarding the services, including with respect to payment.
13. **INDEPENDENT CONTRACTOR.** Contractor shall perform its duties under the Agreement as an independent contractor and not as an employee. Neither Contractor nor any agent or employee of Contractor shall be deemed to be an agent or employee of Arvada. Contractor shall not have authorization, express or implied, to bind Arvada to any agreement, liability, or understanding, except as expressly set forth herein. **Contractor and its employees and agents are not entitled to unemployment insurance or workers compensation benefits through Arvada and Arvada shall not pay for or otherwise provide such coverage for Contractor or any of its agents or employees. Contractor shall pay when due all applicable employment taxes and income taxes and local head taxes incurred pursuant to the Agreement. Contractor shall: (i) provide and keep in force workers' compensation and unemployment compensation insurance in the amounts required by law; (ii) provide proof thereof when requested by Arvada; and (iii) be solely responsible for its acts and those of its employees and agents.**
14. **LICENSES, PERMITS, AND OTHER AUTHORIZATIONS.** Contractor shall secure, prior to the effective date, and maintain at all times during the term of the Agreement, at its sole expense, all licenses, certifications, permits, and other authorizations required to perform its obligations under the Agreement, and shall ensure that all employees, agents and subcontractors secure and maintain at all times during the term of their employment, agency or subcontract, all license, certifications, permits and other authorizations required to perform their obligations in relation to the Agreement.
15. **STANDARD AND MANNER OF PERFORMANCE.** Contractor shall perform its obligations under the Agreement in accordance with the highest standards of care, skill, and diligence in Contractor's industry, trade, or profession.
16. **TIME OF THE ESSENCE.** Contractor acknowledges and agrees that time is of the essence for this Agreement and that it is an essential term of this Agreement that Contractor maintain a rate of progress in the Services that will result in completion of the Services in accordance with this Agreement. To that end, Contractor agrees to proceed with all due diligence to complete the Services in a timely manner in accordance with this Agreement, and further agrees that

failure to complete any of the Services during the Term of this Agreement, or as may be more specifically set forth in an attachment, exhibit, or modification, shall be deemed a breach.

17. **WAIVER OF BREACH.** A waiver by any party to the Agreement of a breach of any Agreement term shall not operate or be construed as a waiver of any subsequent breach by either party.
18. **RIGHT TO TERMINATE.** Arvada shall have the right to terminate, without cause, the Agreement. Any such termination shall not be considered a breach of the Agreement or any extension. In the event Arvada terminates for convenience, Arvada will pay Contractor for requested work performed up until the time of termination, not to exceed the total amount of the contract price agreed upon by Arvada and Contractor.
19. **EXTERNAL TERMS AND CONDITIONS.** Notwithstanding anything to the contrary, Arvada shall not be subject to any provision included in any terms, conditions, or agreements appearing on Contractor's or a subcontractor's website or any provision incorporated into any click-through or online agreements related to the Work unless that provision is specifically referenced in the Agreement.
20. **PROHIBITED TERMS.** Any term included in the Agreement that requires Arvada to indemnify or hold Contractor harmless; requires Arvada to agree to binding arbitration; limits Contractor's liability for damages resulting from death, bodily injury, or damage to tangible property; or that conflicts with this provision in any way shall be void ab initio. Any term included in the Agreement that limits Contractor's liability that is not void under this section shall apply only in excess of any insurance to be maintained under the Agreement, and no insurance policy shall be interpreted as being subject to any limitations of liability of the Agreement.
21. **COMPLIANCE WITH ALL LAWS.** Contractor shall comply with all applicable federal, Colorado and Arvada laws, rules, regulations, policies and procedures in effect or hereafter established, including, without limitation, laws applicable to discrimination and unfair employment practices.
22. **BINDING ARBITRATION PROHIBITED.** Arvada does not agree to binding arbitration by any extra-judicial body or person. Any provision to the contrary shall be null and void.
23. **GOVERNING LAW AND VENUE.** Colorado law, rules, and regulations shall be applied in the interpretation, execution, and enforcement of the Agreement. Any provision included or incorporated herein by reference which conflicts with said laws, rules, and regulations shall be null and void. All suits or actions related to the Agreement shall be filed and proceedings held in the State of Colorado and exclusive venue shall be in Jefferson County.
24. **OWNERSHIP OF WORK PRODUCT.** The originals of all plans, reports, studies, data, or other materials or information relating to the Work that are produced by Contractor shall be delivered to and become the property of Arvada. Contractor may retain copies of any originals; however, no plans, reports, studies, data, or other materials or information relating to the Work shall be released to any person or entity without the prior written consent of Arvada. Nothing in this clause is intended to affect Contractor's right to use generic know-how learned in the course of providing services under the Agreement for the future benefit of Arvada or others.
25. **SOFTWARE PIRACY PROHIBITION.** Arvada or other public funds payable under the Agreement shall not be used for the acquisition, operation, or maintenance of computer software in violation of federal copyright laws or applicable licensing restrictions. Contractor hereby certifies and warrants that, during the term of the Agreement and any extensions, Contractor has and shall maintain in place appropriate systems and controls to prevent such improper use of public funds. If Arvada determines that Contractor is in violation of this provision, Arvada may exercise any remedy available at law or in equity or under the Agreement, including, without limitation, immediate termination of the Agreement and any remedy consistent with federal copyright laws or applicable licensing restrictions.
26. **PUBLIC CONTRACTS FOR SERVICES. §§8-17.5-101, et seq., C.R.S.**
 - 26.1. Contractor certifies, warrants, and agrees that it does not knowingly employ or contract with an illegal alien who will perform work under the Agreement and will confirm the employment eligibility of all employees who are newly hired for employment in the United States to perform work under the Agreement, through participation in the E-Verify Program or the Colorado verification program established pursuant to §8-17.5-102(5)(c), C.R.S.
 - 26.2. Contractor shall not knowingly employ or contract with an illegal alien to perform work under the Agreement or enter into a contract with a subcontractor that fails to certify to Contractor that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under the Agreement.

- 26.3. Contractor shall not use E-Verify Program or the program procedures of the Colorado Department of Labor and Employment (CDLE) ("Department Program") to undertake pre-employment screening of job applicants while the Agreement is being performed.
- 26.4. If Contractor obtains actual knowledge that a subcontractor performing work under the Agreement knowingly employs or contracts with an illegal alien, Contractor shall:
- 26.4.1. notify the subcontractor and Arvada within 3 days,
- 26.4.2. terminate the subcontract if a subcontractor does not stop employing or contracting with the illegal alien within 3 days of receiving the notice, and
- 26.4.3. comply with reasonable requests made in the course of an investigation the CDLE takes pursuant to §8-17.5-102(5), C.R.S.
- 26.5. If Contractor participates in the Department Program, Contractor shall:
- 26.5.1. deliver to Arvada a written, notarized affirmation that Contractor has examined the legal work status of such employee, and
- 26.5.2. comply with all of the other requirements of the Department Program.
- 26.6. If Contractor fails to comply with any requirement of this provision or §§8-17.5-101, *et seq.*, C.R.S., Arvada may terminate the Agreement for breach and Contractor shall be liable for damages.
27. **PUBLIC CONTRACTS WITH NATURAL PERSONS, §§24-76.5-101, *et seq.*, C.R.S.** Contractor, if a natural person eighteen (18) years of age or older, hereby swears and affirms under penalty of perjury that Contractor **(i)** is a citizen or otherwise lawfully present in the United States pursuant to federal law, **(ii)** shall comply with the provisions of §§24-76.5-101, *et seq.*, C.R.S., and **(iii)** has produced one form of identification required by §24-76.5-103, C.R.S. prior to the effective date of the Agreement.

SPECIAL TERMS AND CONDITIONS

1. PRICES FIXED AND FIRM FOR THE TERM OF THE CONTRACT:

Prices proposed by the vendor shall remain fixed and firm during the term of the contract; however, the vendor may offer incentive discounts from the fixed price. This contract shall commence upon the date specified in the Contract or Purchase Order and shall remain in effect until such time as all items/services purchased in conjunction with this solicitation have been delivered and accepted by the City's authorized representative. It shall be understood and agreed that any warranty period which exceeds this term shall remain in full force for the duration of the warranty period.

2. OPTION TO RENEW FOR SUBSEQUENT YEARS

The prices or discounts quoted in this Solicitation shall prevail for one year from the effective date of the contract, at which time the City shall have the option to renew the contract for 4 additional one year periods; provided that the vendor provided satisfactory performance during the contract period. Continuation of the contract beyond the initial period is a City prerogative and not a right of the vendor. Unless otherwise notified in writing, the option period shall become automatic at the end of the original period.

During the option period, the City will consider an adjustment to the pricing structure. For consideration, the vendor must document that it was subject to a price adjustment by the product manufacturer or a direct wholesale supplier. Any price adjustments shall not exceed the amount being passed on.

3. CONTENTS OF OFFER. Vendors are required to submit offers with the following conditions:

- 1) Vendors shall make all investigations necessary to inform themselves of the facilities affected by the delivery of products and services required by the Solicitation.
- 2) Any official interpretation of the Solicitation may only be issued by an authorized agent of the City. The City shall not be responsible for other interpretations offered by employees not authorized.
- 3) The City shall issue Addenda if substantial changes are required which may impact the content and submission of Offers. A copy of such addenda will be publicly posted with the original RFP posting.
- 4) The apparent silence or omissions within this Solicitation regarding a detailed description of the materials or services shall be interpreted to mean that only the best commercial practices are to prevail and that only materials and workmanship of first quality are to be provided.

4. CLARIFICATION AND MODIFICATIONS. The contract resulting from this solicitation will be subject to the Solicitation materials, City Ordinance, State and Federal Statutes. When conflicts occur, the highest authority shall prevail. Vendors are required to indicate any variances to the terms, conditions, requirements and specifications of this Solicitation; no matter how slight. If variations are not stated in the vendor's Offer, it shall be agreed that the vendor's Offer fully complies with all conditions identified in this Solicitation.

5. ELIGIBILITY OF VENDORS: MUST BE ENGAGED IN SUPPLYING PRODUCTS OR SERVICES RENDERED.

Offers will only be considered from firms which have been engaged in the business of manufacturing or distributing the goods and/or performing services described in this Solicitation. Vendors must be able to produce evidence that they have an established satisfactory record of performance for at least two (2) years and have sufficient finances and structure to ensure that they can satisfactorily execute

the Contract requirements, as determined by authorities of the City. The City reserves the right, before awarding the contract, to require a vendor to submit evidence of its qualifications including, but not limited to, financial, technical and other qualifications, as well as past performance with the City, for consideration in making the award in the best interest of the City.

6. CONFIDENTIAL DOCUMENTS

Vendors may designate specific pages or sections within their submission as trade secret or confidential commercial information or as otherwise protected by law ("Confidential Information"). Documents and data that are considered Confidential Information shall be clearly marked as such and separated from the rest of the solicitation submission documents. Comingling is not acceptable. The City does not favor blanket assertions of Confidential Information. Please note that blanket assertions that merely classify and/or broadly claim information is confidential are insufficient as a matter of law. See, *International Brotherhood of Electrical Workers Local 68 v. Denver Metropolitan Major League Baseball Stadium District*, 880 P.2d 160 (Colo.App. 1994). Any information that will be included in any resulting contract cannot be considered Confidential. Under no circumstances may submission pricing information be considered Confidential. In the event a formal contract is entered into with the City and a portion of the Proposal/Response carries a designation indicating the Vendor believes it is Confidential Information, then the City agrees that it will use its best efforts to forward any request for the disclosure of the Confidential Information to the Vendor. By its submission of the Proposal/Response, Vendor agrees to promptly respond to the request for disclosure with any objections and reasons therefor in accordance with the Colorado Open Records Act C.R.S. §§24-72-101 *et seq.* and any other applicable law. Further, Vendor agrees to assume the obligation to defend, hold harmless, and indemnify the City in any legal proceeding that arises from non-disclosure of documents or data pursuant to the Vendor's objection.

7. COOPERATIVE PURCHASING

The City of Arvada encourages and participates in cooperative purchasing endeavors undertaken by or on behalf of other governmental agencies including the Multiple Assembly of Procurement Officials (MAPO) and the Cooperative Educational Purchasing Council (CEPC).

We hereby request that any member of MAPO/CEPC be permitted to avail itself of this contract and purchase, as specified by the contract resulting from this RFP, at the contract prices established therein. Each governmental entity would establish its own contract, issue its own orders, be invoiced directly, make its own payments and issue its own exemption certificates as required. It is understood and agreed that the City of Arvada is not a legally binding party to any contractual agreement made between another governmental entity and the successful vendor as a result of this solicitation. The City shall not be liable for any costs or damages incurred by any other entity.

8. MODIFICATIONS TO EXISTING CONTRACT

Terms and conditions may be added, modified, and deleted upon mutual agreement between authorized agents of the City and the vendor provided that such terms and conditions remain within the scope and original intent of the Solicitation. Said terms and conditions may include, but are not limited to, additions or deletions of service levels and/or commodities, and increases or decreases in the time limits for an existing contract. Any and all modifications must be signed by authorized agents of the City and the vendor prior to the enactment of such modifications.

9. DELIVERY

Quoted prices and deliveries are to be FOB Destination freight prepaid and shall require inside delivery unless otherwise specified in the Special Conditions of this Solicitation. Title and risk of loss shall pass to the City upon inspection and acceptance by the City at its designated point of delivery; unless otherwise specified in the Special Conditions.

10. CONDITION OF MATERIALS AND PACKAGING

All materials and products supplied by the vendor in conjunction with this solicitation shall be new (unless otherwise specified in the Special Conditions), warranted, free from defects, and consistent with industry standards.

The Solicitation price shall include commercial packaging. The materials and products shall be delivered to the City in excellent condition for inspection by City representatives. If the product(s) is damaged or a number of items or components are missing during shipment, the vendor shall either replace the damaged items (if shipped by the vendor) or be responsible for filing, processing and collecting all damage claims (if shipped by a contractor of the shipper). In the event that any of the materials and products supplied to the City by the vendor are found to be defective or do not conform to the specifications, the City reserves the right to return the product to the vendor at no cost to the City; either as an exchange for suitable merchandise or for full credit.

INSURANCE REQUIREMENTS

The following listed insurance requirements shall be carried by the selected vendor for the entirety of the contract. Applicable requirements for this solicitation are identified by completed check boxes.

1. ☒ **Commercial General Liability**, written on an occurrence form, for limits not less than \$1,000,000 for bodily injury and property damage for each occurrence and not less than \$2,000,000 aggregate. Coverage shall include premises and operations liability, blanket contractual, broad form property damage, products and completed operations and personal injury endorsements.
2. ☒ **Workers' Compensation and Employers Liability** as required by statute. Employers Liability coverage is to be carried for a minimum limit of \$1,000,000 each accident/disease and \$1,000,000 aggregate.
3. ☒ **Automobile Liability** for limits not less than \$1,000,000 combined single limit for bodily injury and property damage for each occurrence. Coverage shall include owned, non-owned and hired automobiles.
4. ☐ **Umbrella Liability** of \$, following form to the Commercial General Liability.
5. ☐ **Builders Risk or Course of Construction** Purchased by contractor to cover physical damage to property in construction or rehab. Contractors will ensure that City and subcontractors will be covered as additional insureds, excluding their own machinery, tools and equipment.
6. ☐ **Professional Liability** Professional Liability insurance in an amount of not less than One Million Dollars and No cents (\$1,000,000.00) per occurrence, covering the professional work contemplated under this proposal. The coverage shall have an extended reporting period of three (3) years following the date of substantial completion of the work for reporting of claims.
7. ☐ **Pollution Legal Liability Insurance** for limits not less than \$1,000,000 per occurrence (or claims made) and not less than \$1,000,000 aggregate for bodily Injury, personal Injury and property Damage.
8. ☐ **Privacy/Network/Cyber Liability Insurance** for limits not less than \$1,000,000 for any firm providing product or services associated with IT, software, communication, or network.

Additional Insurance Requirements:

- Contractor will be required to, at its own expense, keep in full force and effect during the term of the Agreement, and during the term of any extension or amendment of the Agreement, insurance reasonably sufficient to insure against the liability assumed by Contractor pursuant to the provisions of the solicitation sent by the City of Arvada or as determined by the City of Arvada Risk Manager.
- Issuance of a Purchase Order/Contract is contingent upon the receipt of the insurance documents. Work shall not commence before this requirement is met. If the vendor fails to submit the required insurance documents within fifteen (15) calendar days after notice to submit such policies is given to the vendor by a City representative, the vendor may be in default of the Award.
- Except for Workers Compensation, Employer's Liability insurance, Automobile Liability and Professional Liability insurance, the City of Arvada must be endorsed as an additional insured on a Certificate of Insurance.
- All coverage must be written with carriers holding a minimum A.M. Best rating of A-:VII, and authorized to do business in Colorado. Coverage shall be primary, and any insurance held by the City of Arvada is excess and non-contributory.
- The City, through its Risk Manager, reserves the right to require additional insurance coverage and other requirements.

ADMINISTRATIVE INFORMATION

1. PURPOSE - TO OBTAIN PROPOSALS:

The purpose of this Solicitation is to provide qualified vendors with sufficient information regarding the City's needs in order to adequately prepare and submit a Proposal.

Proposals must be received by the date and time established in this solicitation. Once the deadline has passed, the Proposals will not be accepted and will be returned to the vendor.

Proposals are proprietary working documents offered by prospective vendors and, as such, are not subject to public inspections until an official award is made.

2. PREPARATION AND SUBMISSION

Offers will be prepared as follow:

- 1) A blank shall be construed as "No Bid/not offered". Where there is a discrepancy between the unit price and the extension of prices, the unit price shall prevail.
- 2) Vendors will not knowingly participate in solicitations where there exists a conflict of interest with their firm and a member of City staff or their immediate family.
- 3) Solicitations and addenda are available at WWW.BIDNETDIRECT.COM. Registration is available to receive email notification of new solicitations, addenda and communications.
- 4) Vendors who qualify their Offers by requiring alternate contractual terms and conditions as a stipulation for contract award, must include such alternate terms and conditions in its Offer. The City reserves the right to declare the vendor's Offer as non-responsive if any of these alternate terms and conditions are in conflict with the City's terms and conditions, or its best interest. Once Offers have been opened, the City shall not consider any subsequent submissions of alternate terms and conditions.

3. MODIFICATION OR WITHDRAWAL OF OFFERS

Modifications to Offers- Changes to the Offer after the submission deadline shall be allowed only when the vendor can show convincing evidence that an unintentional factual mistake was made. Modification requests must be made in writing. Any modification submitted to the City must have the vendor's name, address, Solicitation Number and title included.

Withdrawal of Offers- Offers may not be withdrawn after the deadline for the Solicitation for a period of ninety (90) calendar days. If an Offer is withdrawn by the vendor during this ninety (90) day period, the City may, at its option, suspend the vendor and may not accept any Offer from the vendor for a six (6) month period following the withdrawal.

REJECTION OF OFFERS

- A. The City may reject an offer, in whole or in part, for reasons including, but not be limited to:
 - 1) The vendor misstates or conceals any material fact in its Proposal;
 - 2) The vendor's Offer does not strictly conform to the law or requirements of the Solicitation;
 - 3) The Offer expressly requires or implies a conditional award that conflicts with the method of award stipulated in the Special Conditions;
 - 4) The Offer does not include documents which are required for submission with the Offer; or
 - 5) The Offer has not been executed by the vendor through an authorized signature.
- B. The City may, at its sole and absolute discretion:
 - 1) Reject all or parts of Offers submitted by prospective vendors;
 - 2) Re-advertise this Solicitation;
 - 3) Postpone or cancel the Solicitation;
 - 4) An Offer may not be accepted from, nor any contract be awarded to, any person or firm which
 - a) is in arrears to the City for any debt or Contract, or is a defaulter as surety for any obligation to the City.
 - b) has failed to perform faithfully any previous contract with the City, State or Federal governmental for a minimum period of one (1) year after this previous Contract was terminated for cause.
 - c) has pending litigation against the City on the date and time that the Solicitation is due.

BEST VALUE AGENCY

The City of Arvada is a best value agency. The intent of this solicitation is to award to the lowest responsive, responsible proposer that meets or exceeds the specifications and requirements incorporated in these solicitation documents. It is solely incumbent on the staff of the City of Arvada to conduct due diligence to determine best value prior to award.

METHOD OF AWARD - BEST EVALUATIVE SCORE BASED ON WRITTEN PROPOSAL:

It is the intent of the City to award a contract to the vendor(s) who receives the highest score from the City's RFP Evaluation Committee.

The Committee will score written Proposals by reviewing documentation submitted by the vendors. Evaluation will be based on the following criteria:

- Project Approach (Max. 30 points)
- Qualifications of the Project Manager and Project Team. (Max. 20 points)
- Applicability, relevance, and success of reference projects (Max. 20 points)
- Project Schedule (Max. 10 points)
- Cost (Max. 10 points)
- Performance Measures included in the proposal if a service over \$15,000. (Max. 5 points)
- Overall quality of proposal presented. (Max. 5 points)

Exceptions to specifications or terms and conditions may result in submission being deemed non-responsive.

PRESENTATIONS:

A second phase MAY be incorporated, in which the Committee will invite a limited number of vendors who received high scores during phase one, to provide an oral presentation. The evaluative score from the oral presentations will determine the top rated vendor(s).

SCOPE OF WORK

OBJECTIVE

The goal of this project is to analyze and characterize current solids production and develop alternatives for solids handling at the Ralston Water Treatment Plant (RWTP). A preliminary engineering report shall be prepared for the recommended improvements.

BACKGROUND

The City of Arvada is soliciting proposals from qualified engineering and environmental consultants to provide a comprehensive solution to solids (residuals) handling at the RWTP. The City currently utilizes a total of four ponds: two ponds separate filter backwash (with recycle) and two sludge ponds that process solids from the sedimentation basins. The ponds are undersized and leaking, causing operational challenges. Additionally, planned improvements to the existing filters (filter expansion, backwash practices, and evaluation of filter to waste) could result in increased flows to the solids handling system. **EXHIBIT A** is a schematic of the solids system to give additional insight into the project background.

SCOPE OF WORK

The scope of services includes analysis of the current solids production rate from backwashing filters, characterization of solids produced, and development of alternatives for solids handling. The backwash system, including backwash waste valves, backwash system pumping and piping, settling basin system piping, and recycle pumping and piping, are to be included in the solids handling analysis. The study should include recommendations to improve process efficiencies and to make the system more reliable and cost effective while maintaining the 36 MGD rated capacity. As a future improvement consideration, the study will consider the impact of adding filter-to-waste (if feasible) and recommend methods to maintain filter operations at production rates up to 40 MGD with one filter out of service.

For the selected alternative, **Phase I** of the scope of service includes preparation of a preliminary design (15%) for the recommended method of dewatering and solids handling at the plant and the associated backwash and recycle pumping/valve and piping improvements. The consultant will provide recommendations to improve dewatering that allow for greater flexibility in operation and to deal with the increased water volume that would be anticipated with future improvements. The consultant will evaluate possible improvements such as engineered lagoons, drying beds, and mechanical dewatering as potential solutions to the short term and long

term needs of the RWTP. Based on the outcome of Phase I, the City intends to negotiate the Phase II scope of work.

Life Cycle Costs (including capital, operations and maintenance, and solids disposal), site constraints, and constructability will be analyzed as part of the consultant's assessment. The consultant will evaluate the existing backwash and recycle pumping configurations for opportunities to optimize the systems and reduce the amount of water wasted. The consultant will additionally explore the permitting and regulatory implications of their recommended alternatives.

Project Tasks are outlined in more detail below. This is not an all-inclusive list. During the proposal phase, each qualified firm is encouraged to identify, define, and address specific issues related to the analysis and preliminary design.

Phase I - Study and Preliminary Design

Task 1 - Project Management and Quality Control

Task 1.1 – Project Initiation Meeting

The selected Consultant will hold a project initiation meeting to set project vision, expectations, communications, roles/responsibilities, schedule, and scope for the project team.

Task 1.2 – Project Coordination

The consultant shall lead bi-weekly progress meetings with the City's Project Manager highlighting project progress, including issue identification and resolution. Workshops with the project team will be scheduled at key project milestones to present study findings and gather consensus with the team. Workshop minutes, including a list of action items, shall be emailed to the team within three business days of each workshop. The consultant's Project Manager will assist the City Project Manager as needed with project meetings and/or provide supporting materials for the meetings. At project completion, the findings will be presented at an executive meeting.

Task 1.2 – Project Reporting

The consultant shall submit monthly invoices and progress reports for approval by the City Project Manager.

Task 1 deliverables include: (1) meeting agendas and notes; and (2) monthly invoices and progress reports.

Task 2 - Background Data Review and Condition Assessment

In this task, the consultant shall work with the City to define the solids handling objectives and establish project goals which will ultimately guide the development of alternatives and selection of the recommended alternative. The consultant shall review the City's recently completed Treatment Facility Master Plan (Corona, 2020), existing drawings and operational data to identify data gaps and prepare an information request outlining additional data needed to meet the City's objectives.

The consultant shall conduct an analysis of the current solids production rate and characterization of solids produced. The filter backwash process, including the potential addition of filter to waste shall also be assessed so that solids handling recommendations align with future filter improvement plans. At a minimum the existing system condition will be assessed. If additional analysis or testing is recommended, please propose these as optional subtasks.

Task 3 deliverables include: (1) data request log; (2) site visit summary notes; and (3) technical memorandum summarizing the existing system condition analysis.

Task 3 - Alternatives Analysis

The alternative analysis will investigate at least three (3) solids dewatering and handling processes best suited for the RWTP. The analysis shall include:

1. Schematics for each alternative (layout and sizing for each process investigated)
2. Life-cycle costs (including capital, operations and maintenance and ultimate disposal)
3. Site constraints
4. Current and future regulations
5. Ease of operation and maintenance
6. Summary cost / benefit analysis

Task 3 deliverables include: (1) alternatives analysis workshop; and (2) technical memorandum.

Task 4 - Preliminary Design

The Consultant shall prepare a detailed Preliminary Engineering Report (PER) that includes, at a minimum:

- Statement of the project goals
- Summary of the existing solids handling process and future filter improvement plans
- Alternatives analysis results
 - o Technologies assessed and the pros and cons of each
 - o Conceptual cost analysis
 - o Recommended process for design
- For the recommended alternative
 - o Design calculations
 - o Design criteria with appended notes, sketches and modeling outputs
 - o Preliminary design drawings
 - o Detailed economic analysis of the proposed improvements including an estimate of construction costs and additional O&M requirements
 - o List of required drawings and specifications and regulatory/permitting submittals
 - o Project implementation schedule

Task 4 deliverables include: (1) preliminary design workshop; and (2) draft and final PER.

Phase II - Detailed Design and Permitting (Optional Task)

In this task, the Consultant shall prepare final construction drawings, bidding documents, project special provisions, and final cost estimate. The City shall negotiate and issue a separate notice to proceed for the detailed design phase after acceptance of the PER. The City will provide standard front end documents. The design shall include design documents including 30% conceptual plans, 60% review set, 90% review set and 100% construction plans and specifications for all solids handling improvements. The City of Arvada will review and provide comments for each submittal. 100% plans shall be signed and sealed by a Professional Engineer (PE) registered in Colorado. The cost estimate shall be updated and an Engineer's Estimate of Probable Cost prepared.

Task 5 deliverables include: (1) 30, 60, 90 and 100 percent design packages; and (2) engineer's estimate of probable cost.

RESPONSE FORMAT

The following items are to be included in your proposal. The entire proposal document may be no longer than fifteen (15) pages, excluding front and back cover pages, personnel resumes, subcontractor resumes, required City forms, and table of contents page. 11x17 pages are allowed and count as two pages. To facilitate timely review by the City, each Proposal shall be divided into the following major sections:

1. Cover Letter

Describe your firm's areas of expertise and other information that helps to characterize the firm. Acknowledge any exceptions to this RFP (please note that significant exceptions may make your proposal unresponsive). Provide the name, title, address, e-mail, and telephone number of the primary contact.

2. Company Information

Provide the following information:

- Company Name, Address, Phone Number, and Names of Principals.
- Identify the year in which your company was established and began providing consulting services.
- Describe any pending plans to sell or merge your company.
- Provide a comprehensive listing of all the services you provide.

3. Related Experience

Describe your company's qualifications to perform the scope of work by addressing each of the items listed below:

- Firm's Related Experience: State the firm's particular abilities, experience, and qualifications related to this project.
- Results of Previous Projects: Provide information from at least three (3) projects of similar scope. Include at a minimum the:
 - o Owner name,
 - o Contact name,
 - o Phone number,
 - o Email address,
 - o Brief description of project,
 - o Status of project,
 - o Results of the project.

The City reserves the right to contact the references provided in your proposal as well as other references without prior notification to you.

- Project Manager's Experience: Identify the project manager who would be responsible for this project. List the Project Manager's relevant experience and similar work, including references.
- Qualifications of Assigned Personnel: Provide the names and resumes of the key personnel that will be performing the proposed services. Explain how the key personnel were related to the projects cited as relevant past performance.
- Qualifications of Subcontractors: List the subcontractors you expect to use, the services to be provided by the subcontractors and the amount of time that each is expected to spend on the project. Also, include the names and resumes of the key subcontractor personnel who will be working on the project. The City will contract solely with your company; therefore, subcontractors/partners remain your sole responsibility.

4. Understanding and Approach

a) Project Understanding

Provide a statement of project understanding which shall cover but not be limited to:

Understanding of the need of the project.

- Project challenges, pitfalls, and issues.
- Level of commitment the Consultant believes is necessary for this project.
- Description of the firm's ability to develop creative solutions utilizing previous projects that had similar challenges, pitfalls, and issues as examples.

b) Project Approach

Present proposed solutions that indicate that the firm has performed adequate planning to accomplish the tasks defined in the Scope of Work. Innovations, efficiencies, and detailed examples are encouraged.

- Discuss the Project Management Approach including budget and cost control methods and the firm's Quality Assurance/Quality Control program, including staff proposed to provide quality reviews.

5. Proposed Work Schedule

Summarize the proposed schedule with completion of the final report by December 2021.

6. Price Area

Submit a rate sheet for the project team and a proposed cost estimate for the Scope of Work including labor hours and other direct costs.

REQUIRED VENDOR SUBMITTAL FORM

SUBMITTED BY:

Company Name: _____

Contact Names: Sales/Customer Service _____

Address: _____

Phone: (_____) _____ Email(s): _____

The undersigned hereby affirms that:

- He/she is a duly authorized agent of the vendor;
- He/she has read all Terms and Conditions and technical specifications made available in conjunction with this solicitation and fully accepts and acknowledges this offer is consistent with the specifications and terms and conditions, unless specific variations have been clearly and expressly listed in the offer.
- The Offer is in all respects fair, without outside collusion or otherwise illegal action.

By: _____
Signature of Authorized Agent Date FEIN

Typed/Printed Name of Agent Title of Agent Agent email

Typed/Printed Name of Witness Title of Witness Witness email

PAYMENT TERMS: If the vendor does not accept a percentage discount, the City standard is net thirty (30) days after the date that the City receives an accurate invoice and has accepted the product or service. Payment is the date of the check mailing or date of the credit card transaction.

Discount: ____% ____ Days, Net: 30 Days, Accept Visa without additional fee? _____

VARIATIONS: The vendor shall identify all variations and exceptions to any RFP documents. Submittal of a Vendor Contract is considered excessive in Variations and may be cause for determining that the Bid/Offer is non-responsive and ineligible for award. For each variation listed, reference the applicable section of the solicitation document as per the example below. If no variations are listed here, it is understood that the vendor's Offer fully complies with all terms and conditions. Attach additional Variation sheets in the same format as below after starting the first three on this page.

Page #: _____ Item # or Section: _____

Variance _____

Page #: _____ Item # or Section: _____

Variance _____

Page #: _____ Item # or Section: _____

Variance _____

SUBMITTAL INSTRUCTIONS:

Proposals shall be submitted in the order listed below with each section clearly identified.

- Submit ON-LINE at BidnetDirect.com
- Proposal as outlined in the Response Format described above
- Completed City Submittal Forms including this sheet and all other attachments specifically requested
- Performance Measures Form
- Insurance – Checking this box accepts that the insurance requirements listed by the City are acceptable unless listed in the variations on the previous page.
- CONFIDENTIAL information, if any, MUST be stamped as such on each page and submitted separately.
- Please initial to acknowledge Addenda, if any, have been considered in your proposal:
#1 _____ #2 _____ #3 _____

REFERENCES:

- Check here if Firm's standard reference sheet is attached, otherwise, use the space below.

Name: _____ Contact Person: _____

Address: _____

Telephone No: _____ Email: _____

Describe type of work/service performed or items supplied: _____

Name: _____ Contact Person: _____

Address: _____

Telephone No: _____ Email: _____

Describe type of work/service performed or items supplied: _____

Name: _____ Contact Person: _____

Address: _____

Telephone No: _____ Email: _____

Describe type of work/service performed or items supplied: _____

PERFORMANCE MEASURES FORM INSTRUCTIONS:

The City has incorporated Performance Management into its organizational culture. When vendors submit offers to the City in response to solicitations for **Services** (not associated with the primary purchase of goods, supplies, or software), they shall identify the methods and goals by which they will monitor and report their performance providing those services to the City. Vendor's performance shall be documented as to (a) Price/Cost, (b) Punctuality/Responsiveness (c) Quality/Reliability, and (d) Sustainability/or Innovation.

1. Vendor will define 1-2 measures for (a) Price/Cost, (b) Punctuality/Responsiveness (c) Quality/Reliability, and (d) Sustainability/or Innovation, that follow S.M.A.R.T goals: Specific, Measurable, Achievable, Relevant, and Timely, per category.

2. The awarded vendor will self-score their defined metrics within a score card emailed from purchasing 2 months prior to contract renewal. The department will review the vendor's self-scored measures.

SERVICES means: the furnishing of labor, time, effort, maintenance, etc., by a vendor/contractor/consultant, with an initial contract amount of more than \$15,000.

(a) Price/Cost

Example Measure: Consultant will submit detailed invoices substantiating amounts requested.

1. _____
2. _____

(b) Punctuality/Responsiveness

Example Measure: Reporting of project status will occur monthly with the City and consultant's Project Manager.

1. _____
2. _____

(c) Quality/Reliability

Example Measure: Revisions are drafted within two weeks, and no more than 3 revisions prior to final draft.

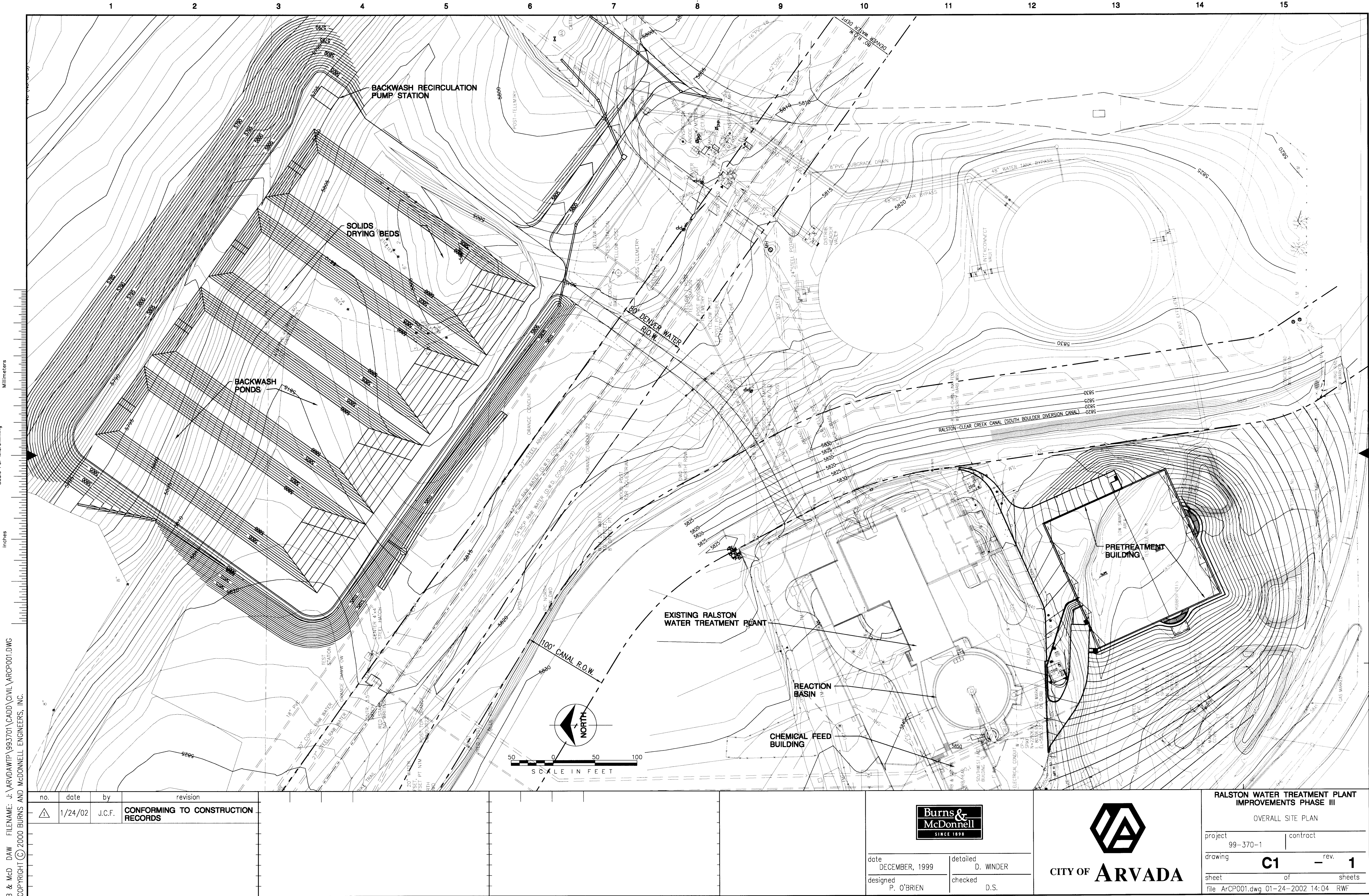
1. _____
2. _____

(d) Sustainability and/or Innovation

Example Measure: Digital reports delivered to the City 95% of the time will to reduce the use of paper.

1. _____
2. _____

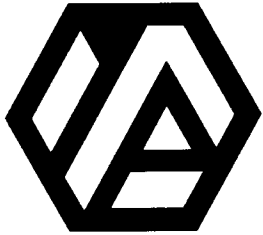
Performance measures will be queried for every year of the contract. Performance measures reporting will partially inform re-contracting with or renewing a contract with a vendor.



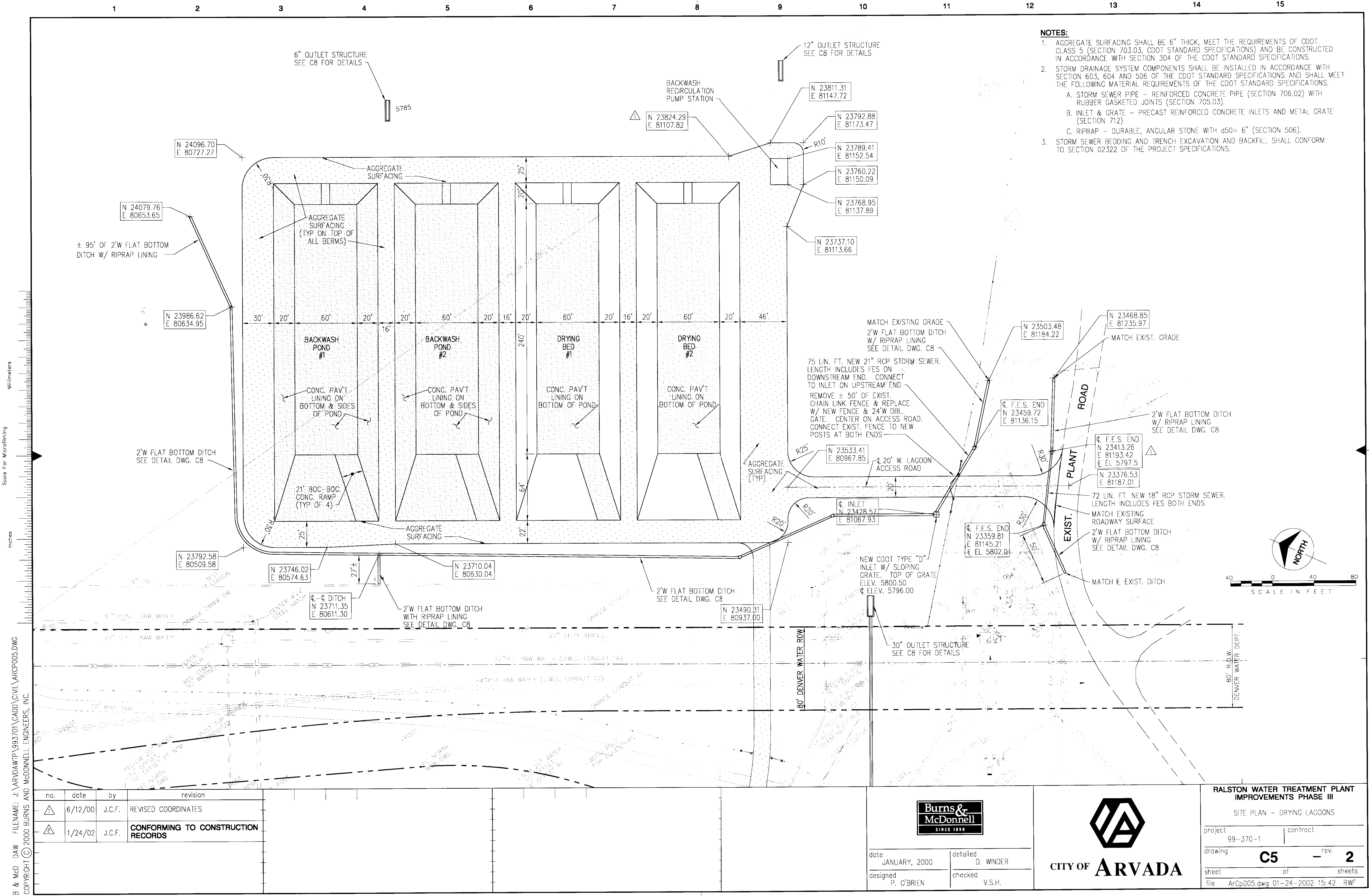
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no.	date	by	revision
1	1/24/02	J.C.F.	CONFORMING TO CONSTRUCTION RECORDS

	
date DECEMBER, 1999	detailed D. WINDER
designed P. O'BRIEN	checked D.S.


CITY OF ARVADA

RALSTON WATER TREATMENT PLANT IMPROVEMENTS PHASE III	
OVERALL SITE PLAN	
project 99-370-1	contract
drawing C1	rev. 1
sheet	of sheets
file: ARCP001.dwg 01-24-2002 14:04 RWF	



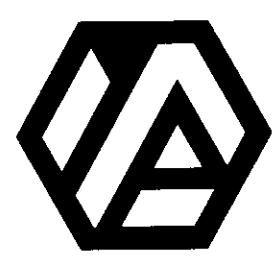
- NOTES:**
1. AGGREGATE SURFACING SHALL BE 6" THICK, MEET THE REQUIREMENTS OF CDOT CLASS 5 (SECTION 703.03, CDOT STANDARD SPECIFICATIONS) AND BE CONSTRUCTED IN ACCORDANCE WITH SECTION 304 OF THE CDOT STANDARD SPECIFICATIONS.
 2. STORM DRAINAGE SYSTEM COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 603, 604 AND 506 OF THE CDOT STANDARD SPECIFICATIONS AND SHALL MEET THE FOLLOWING MATERIAL REQUIREMENTS OF THE CDOT STANDARD SPECIFICATIONS.
 - A. STORM SEWER PIPE - REINFORCED CONCRETE PIPE (SECTION 706.02) WITH RUBBER GASKETED JOINTS (SECTION 705.03).
 - B. INLET & GRATE - PRECAST REINFORCED CONCRETE INLETS AND METAL GRATE (SECTION 712)
 - C. RIPRAP - DURABLE, ANGULAR STONE WITH d50= 6" (SECTION 506).
 3. STORM SEWER BEDDING AND TRENCH EXCAVATION AND BACKFILL SHALL CONFORM TO SECTION 02322 OF THE PROJECT SPECIFICATIONS.

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no.	date	by	revision
1	6/12/00	J.C.F.	REVISED COORDINATES
2	1/24/02	J.C.F.	CONFORMING TO CONSTRUCTION RECORDS



date JANUARY, 2000
designed P. O'BRIEN
detailed D. WINDER
checked V.S.H.

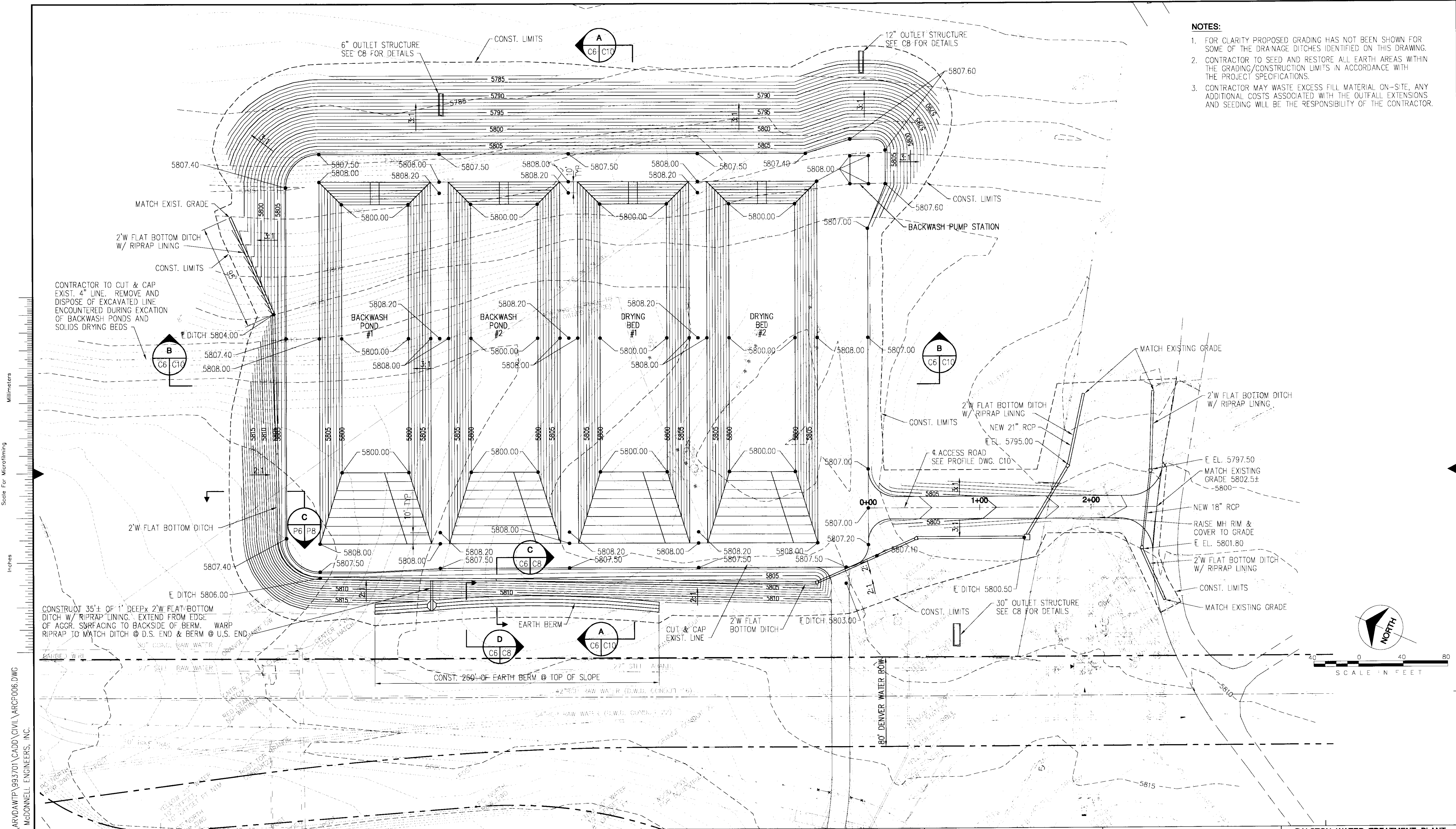


CITY OF ARVADA

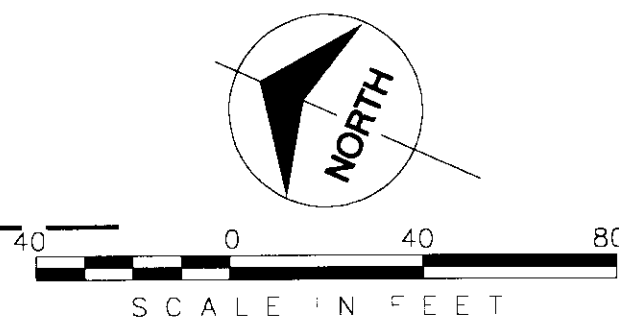
RALSTON WATER TREATMENT PLANT IMPROVEMENTS PHASE III
SITE PLAN - DRYING LAGOONS

project	99-370-1	contract	
drawing	C5	rev.	2
sheet	of sheets		
file	ArCp005.dwg 01-24-2002 15:42 RWF		

- NOTES:
1. FOR CLARITY PROPOSED GRADING HAS NOT BEEN SHOWN FOR SOME OF THE DRAINAGE DITCHES IDENTIFIED ON THIS DRAWING.
 2. CONTRACTOR TO SEED AND RESTORE ALL EARTH AREAS WITHIN THE GRADING/CONSTRUCTION LIMITS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
 3. CONTRACTOR MAY WASTE EXCESS FILL MATERIAL ON-SITE, ANY ADDITIONAL COSTS ASSOCIATED WITH THE OUTFALL EXTENSIONS AND SEEDING WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.



Millimeters
Scale For Microfilming
Inches

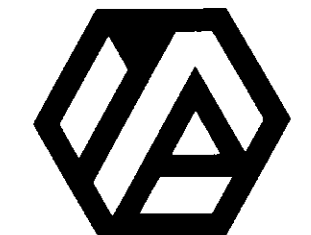


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1	1/24/02	J.C.F.	CONFORMING TO CONSTRUCTION RECORDS



date JANUARY, 2000
designed D. WELKER
detailed D. WINDER
checked D.S.



CITY OF ARVADA

RALSTON WATER TREATMENT PLANT IMPROVEMENTS PHASE III	
GRADING PLAN - DRYING LAGOONS	
project 99-370-1	contract
drawing C6	rev. 1
sheet of sheets	
file: ArCp006.dwg 01-24-2002 15:46 RWF	

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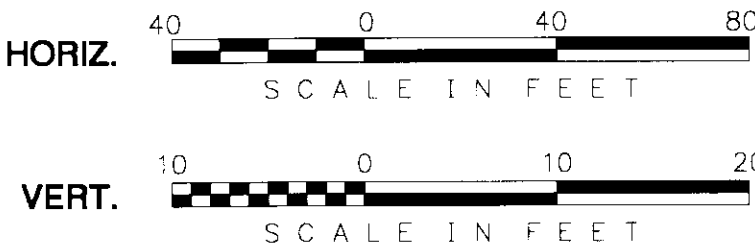
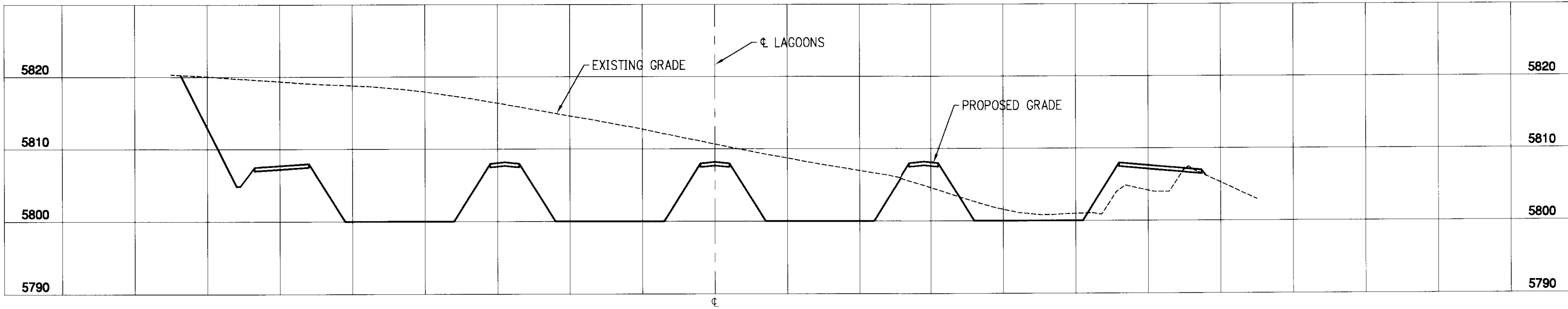
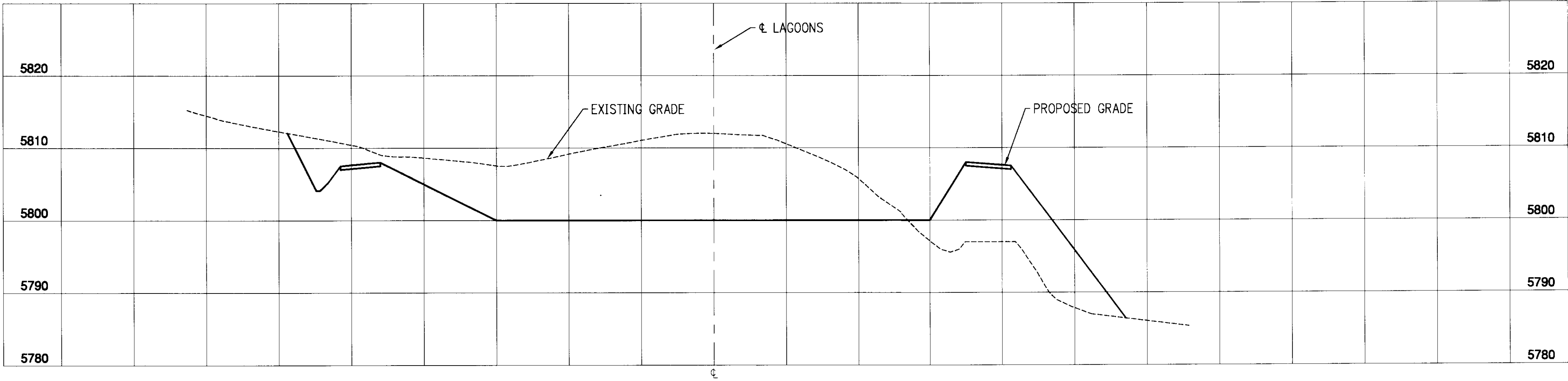
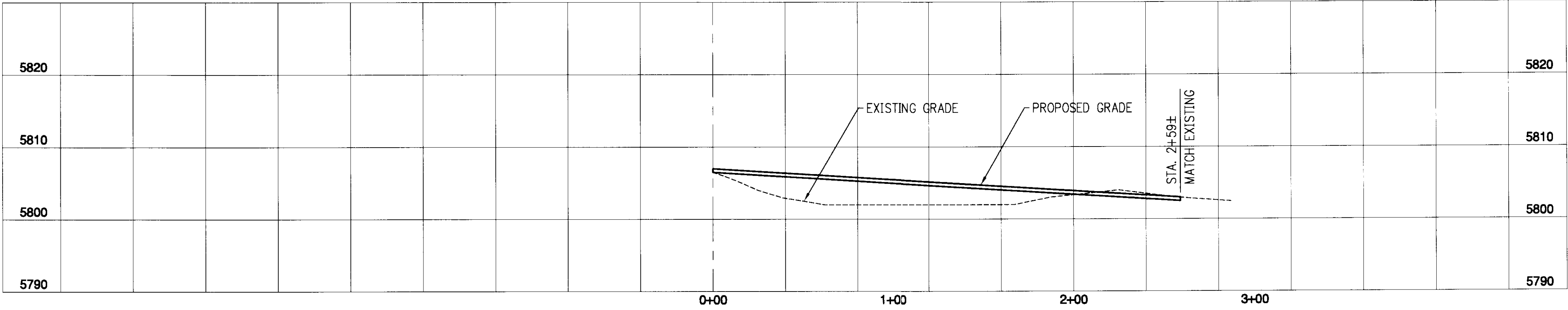
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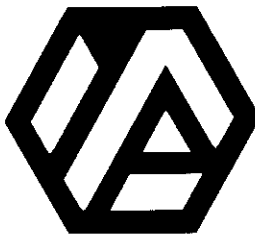
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no.	date	by	revision
	1/24/02	J.C.F.	CONFORMING TO CONTSTRUCTION RECORDS



date JANUARY, 2000
designed D. WELKER

detailed D. WINDER
checked D.S.



CITY OF ARVADA

RALSTON WATER TREATMENT PLANT
IMPROVEMENTS PHASE III

CROSS SECTIONS
DRYING LAGOONS

project 99-370-1 contract

drawing C10 rev.

sheet of sheets

file Arcd010.dwg 01-24-2002 15:49 RWF

PROCESS DESIGN CRITERIA SUMMARY

RAPID MIX FACILITIES PROCESS DESIGN PARAMETERS

1. GENERAL PROCESS DESIGN
TYPE: MECHANICAL PADDLE (VERTICAL)
2. BASIN CONFIGURATION AND DIMENSIONS
 - A. EXISTING FIRST STAGE MIXERS
 - 36-INCH IN-LINE MECHANICAL MIXER
 - TYPE: AXIAL TURBINE
 - MOTOR SIZE: 15 HP
 - FLASH MIXER FOR 16-INCH LINE
 - TANK SIZE: 10 FOOT DIAMETER BY 10'-6" SWD
 - TANK VOLUME: 6,150 GALLONS
 - DETENTION TIME (@ 14.4 MGD LINE CAPACITY): 37 SECONDS
 - TYPE: AXIAL TURBINE
 - MOTOR SIZE: 10 HP
 - B. SECOND STAGE MECHANICAL MIXER
 - SHAPE: SQUARE
 - LENGTH, WIDTH, DEPTH (SWD): 5'-6" LONG X 5'-6" WIDE X 9'-5" SWD
 - DESIGN FLOW: 10 MGD
 - MIXING INTENSITY CONTROL: VARIABLE FREQUENCY DRIVE
 - CHEMICAL ADDITION: PRIMARY COAGULANT
 - NUMBER OF BASINS: 4
 - C. THIRD STAGE MECHANICAL MIXER
 - SHAPE: SQUARE
 - LENGTH, WIDTH, DEPTH (SWD): 11'-6" LONG X 11'-6" WIDE X 17'-9" SWD
 - DESIGN FLOW: 10 MGD
 - MIXING INTENSITY CONTROL: VARIABLE FREQUENCY DRIVE
 - CHEMICAL ADDITION: COAGULANT AID
 - NUMBER OF BASINS: 4
3. DETENTION TIME
 - A. SECOND STAGE MIXING BASIN
APPROXIMATELY 18.4 SECONDS AT 10 MGD DESIGN RATE.
 - B. THIRD STAGE MIXING BASIN
APPROXIMATELY 2.5 MINUTES AT 10 MGD DESIGN RATE.
4. DESIGN WATER TEMPERATURE
33 TO 60 DEGREES FAHRENHEIT.
5. MIXING INTENSITY ("G" VALUE)
 - A. SECOND STAGE MIXER
600 - 1,000 SEC-1
 - B. THIRD STAGE MIXER
150 - 400 SEC-1

FLOCCULATION FACILITIES PROCESS DESIGN PARAMETERS

1. GENERAL PROCESS DESIGN
 - TYPE: HORIZONTAL PADDLE FLOCCULATORS
 - NUMBER OF BASINS (TRAINS): 4
 - NUMBER OF STAGES PER BASIN: 4
 - TOTAL VOLUME EACH BASIN: 238,614 GAL.
2. BASIN CONFIGURATION AND DIMENSIONS
 - SHAPE: RECTANGULAR
 - LENGTH, WIDTH, WATER DEPTH (EACH ZONE): 18 FEET LONG X 25 FEET WIDE X 17.72 FEET DEEP
 - SIDEWATER DEPTH (SWD): 17.72 FEET
 - FLOOR SLOPE: 1/8-INCH PER FOOT
3. DETENTION TIME
 - FLOCCULATION BASINS: 34.4 MINUTES/TRAIN AT 10 MGD DESIGN RATE.
4. DESIGN WATER TEMPERATURE
33–60 DEGREES FAHRENHEIT. DESIGN WATER TEMPERATURE USED FOR CALCULATIONS IS THE TEMPERATURE MOST LIKELY TO BE ENCOUNTERED UNDER MAXIMUM FLOWS.
5. ENERGY INPUT ("G" VALUE)
 - ZONE 1: 60/SEC MAXIMUM {VARIABLE SPEED}
 - ZONE 2: 45/SEC MAXIMUM {VARIABLE SPEED}
 - ZONE 3: 30/SEC MAXIMUM {VARIABLE SPEED}
 - ZONE 4: 30/SEC MAXIMUM {VARIABLE SPEED}
 - WALL OPENING BETWEEN ZONES: SIZE BELOW "G" OF PREVIOUS ZONE

SEDIMENTATION FACILITIES PROCESS DESIGN PARAMETERS

1. GENERAL PROCESS DESIGN
 - NUMBER OF BASINS: 4
2. BASIN CONFIGURATION AND DIMENSIONS
 - SHAPE: RECTANGULAR
 - NUMBER: FOUR BASINS, ONE FOR EACH TREATMENT TRAIN
 - LENGTH, WIDTH, DEPTH: 56 FEET LONG,
X 25 FEET WIDE X 19.5 FEET DEEP, EACH BASIN
 - SIDEWATER DEPTH: 17.5 FEET
 - FLOOR SLOPE: 1/8-INCH PER FOOT
3. DETENTION TIME
 - AT 10 MGD FOR EACH BASIN: 26.4 MINUTES
4. SURFACE OVERFLOW RATES
 - VARIES FROM 0.34 GALLONS PER MINUTE/SQUARE FOOT OF TOTAL BASIN AREA
DEPENDING ON THE PLATE SETTLER MANUFACTURER SELECTED.
 - 0.34 GALLONS PER MINUTE/SQUARE FOOT OF EFFECTIVE PLATE AREA.
 - PLATE EFFICIENCY: 80 PERCENT.
5. BASIN FLOW-THROUGH VELOCITY
 - 0.0354 FT/SEC @ 10 MGD
6. WEIR OVERFLOW RATE
 - THE WEIR OVERFLOW RATE IS 2088 GPD/FOOT OUTLET LAUNDER AT THE DESIGN FLOW OF 10 MGD.
7. SOLIDS REMOVAL WILL BE VIA AN ELECTRIC-OPERATED VACUUM OR A CABLE DRIVE. SOLIDS
REMOVAL SYSTEM. FOUR UNITS, EACH 24'-FEET IN WIDTH, ONE FOR EACH TREATMENT TRAIN.
THE DRIVE UNITS WILL BE VARIABLE SPEED ELECTRIC DC MOTOR, FRACTIONAL HORSEPOWER,
WITH STAINLESS STEEL DRIVE CABLE, OR PNEUMATICALLY DRIVEN, DEPENDING ON SELECTED
MANUFACTURER. AN AIR HEADER/SPARGER WILL BE INCLUDED TO ASSIST IN CLEANING THE
PLATE SETTLERS ABOVE.

PRE-OXIDANT CHEMICAL FEED SYSTEM

1. CHEMICAL: DRY POTASSIUM PERMANGANATE
2. TYPE OF SYSTEM: CONTINUOUS, VARYING SOLUTION STRENGTH
3. MAXIMUM DOSAGE: 1.3 mg/l
4. MAXIMUM SOLUTION STRENGTH: 3% (30,000 mg/l)
5. SOLUTION PUMPS: 2 (1 BACKUP)
6. DELIVERY POINTS: RAW WATER LINES
7. PUMP CAPACITY: 2 GPM (EACH)

COAGULANT CHEMICAL FEED SYSTEM

1. CHEMICAL: LIQUID ALUMINUM SULFATE OR FERRIC CHLORIDE
2. SOLUTION STRENGTH:
 - ALUM: 49%
 - FERRIC: 30% - 45% (40% TYPICAL)
3. MAXIMUM DOSAGE:
 - ALUM: 40 mg/l
 - FERRIC: 30 mg/l
4. STORAGE VOLUME: 36,000 GALLONS
5. NUMBER OF STORAGE TANKS: 3 (12,000 GALLONS EACH)
6. FEED PUMPS: 7 (2 EXISTING)
7. DELIVERY POINTS
 - FIRST STAGE RAPID MIX (16" AND 36" RAW WATER LINES)
 - REACTION BASIN
 - SECOND STAGE RAPID MIX BASIN 2A
 - SECOND STAGE RAPID MIX BASIN 2B
 - SECOND STAGE RAPID MIX BASIN 2C
 - SECOND STAGE RAPID MIX BASIN 2D
8. PUMP CAPACITIES
 - FIRST STAGE RAPID MIX (REACTION BASIN: 2 (EXISTING) @ 115 GPH (EACH)
 - SECOND STAGE RAPID MIX: 5 (1 BACKUP) @ 34 GPH (EACH)

COAGULANT AID CHEMICAL FEED SYSTEM

1. CHEMICAL: DRY OR LIQUID POLYMER
2. TYPE OF SYSTEM: BATCH, MULTIPLE FEED POINT
3. SOLUTION STRENGTH:
 - PRIMARY DILUTION: 0.5 - 1.0%
 - SECONDARY DILUTION: 0.05 - 0.25%
4. MAXIMUM DOSAGE: 0.5 mg/l
5. FEED PUMPS: 5 (1 BACKUP)
6. DELIVERY POINTS
 - THIRD STAGE RAPID MIX BASIN 3A:
 - THIRD STAGE RAPID MIX BASIN 3B:
 - THIRD STAGE RAPID MIX BASIN 3C:
 - THIRD STAGE RAPID MIX BASIN 3D:
7. PUMP CAPACITIES
 - 5 @ 60 GPH (EACH)

DISINFECTION

1. CHEMICAL: LIQUID SODIUM HYPOCHLORITE
2. SOLUTION STRENGTH: 10% - 15% (10% TYPICAL)
3. MAXIMUM DOSAGE: 5 mg/L
4. STORAGE VOLUME: 36,000 GALLONS
5. NUMBER OF STORAGE TANKS: 2 (18,000 GALLONS EACH)
6. FEED PUMPS AND CAPACITY:
PRECHLORINATION: 2 @ 96 GPH EACH
POSTCHLORINATION: 2 @ 96 GPH EACH
FILTER BACKWASH: 2 @ 88 GPH EACH

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	1/24/02	J.C.F.	CONFORMING TO CONSTRUCTION RECORDS

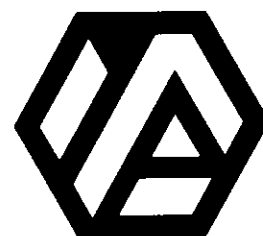


date
OCTOBER 5 1999

designed
D. BRICKMAN

detailed D. WINDER

checked V.S.H.



RALSTON WATER TREATMENT PLANT IMPROVEMENTS PHASE III

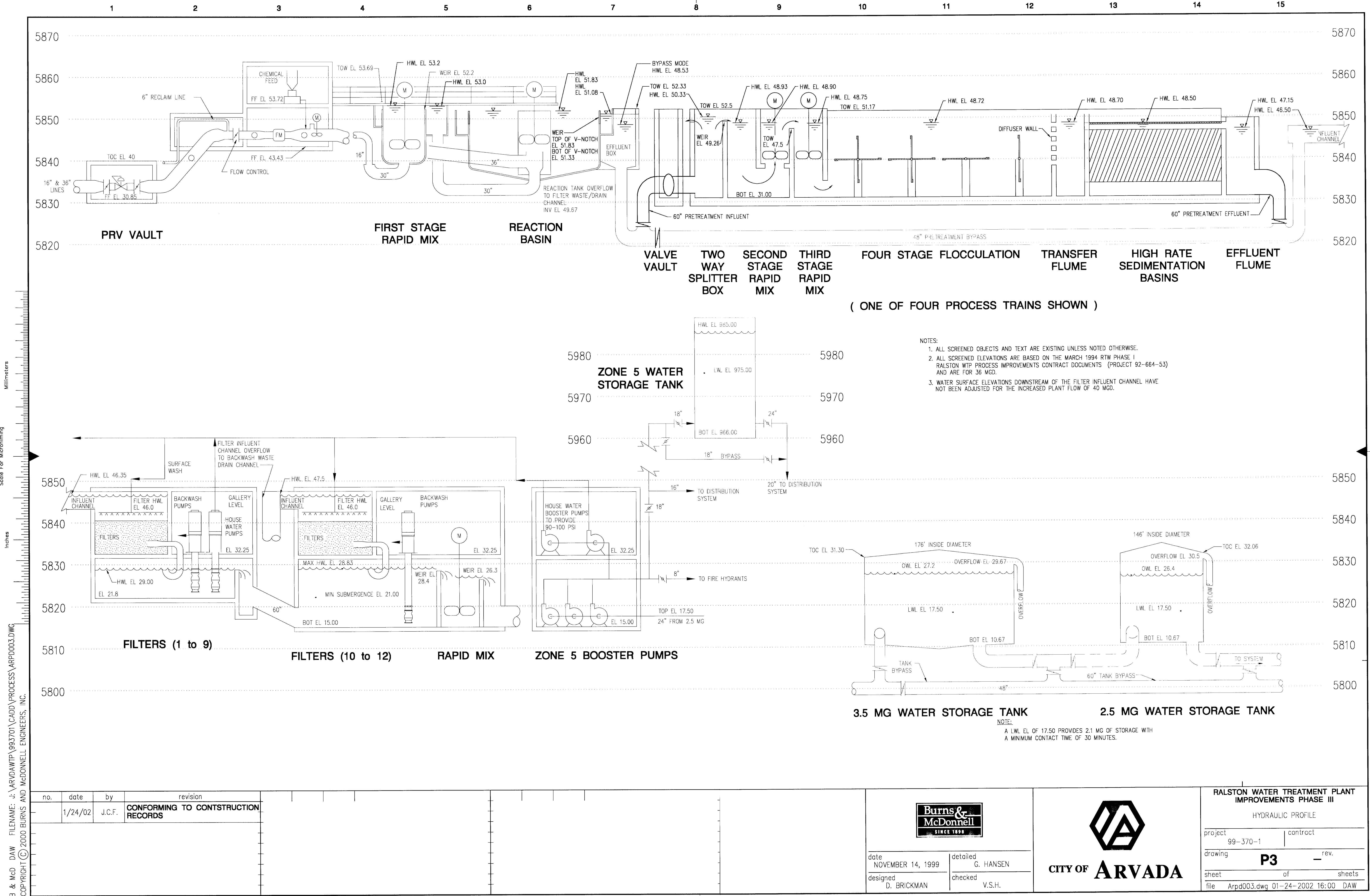
PROCESS DESIGN CRITERIA SUMMARY

project	contract
99-370-1	

drawing P2 rev

sheet of sheets

file Arpd002.dwg 01-24-2002 16:00 DAW



- NOTES:
1. ALL SCREENED OBJECTS AND TEXT ARE EXISTING UNLESS NOTED OTHERWISE.
 2. ALL SCREENED ELEVATIONS ARE BASED ON THE MARCH 1994 RTW PHASE I RALSTON WTP PROCESS IMPROVEMENTS CONTRACT DOCUMENTS (PROJECT 92-664-53) AND ARE FOR 36 MGD.
 3. WATER SURFACE ELEVATIONS DOWNSTREAM OF THE FILTER INFLUENT CHANNEL HAVE NOT BEEN ADJUSTED FOR THE INCREASED PLANT FLOW OF 40 MGD.

3.5 MG WATER STORAGE TANK

2.5 MG WATER STORAGE TANK

NOTE:
A L.W.L. OF 17.50 PROVIDES 2.1 MG OF STORAGE WITH
A MINIMUM CONTACT TIME OF 30 MINUTES.

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Burns & McDonnell SINCE 1999	
date NOVEMBER 14, 1999	detailed G. HANSEN
designed D. BRICKMAN	checked V.S.H.

CITY OF ARVADA

RALSTON WATER TREATMENT PLANT IMPROVEMENTS PHASE III	
HYDRAULIC PROFILE	
project 99-370-1	contract
drawing P3	rev.
sheet	of sheets
file Arpd003.dwg	01-24-2002 16:00 DAW

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Millimeters

Scale For Microfilming

Inches

24 JAN 2002 16:06

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B & McD JK

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- 1 SEE DWG. P22 FOR CONTINUATION.
- 2 INSTALL 12" 90° BEND W/ THRUST BLOCKING. IE 5802.00, N 23537.33, E80953.58
- 3 CONNECT TO EXIST. 8" DI PIPE IE 5798.5±. INSTALL 8"x12" TEE W/ THRUST BLOCKING, IE 5798.5±.
- 4 12" PLUG VALVE W/ VALVE BOX 3' NW OF TEE, 8" PLUG VALVE 3' EAST OF TEE, N 23416.26, E81117.16
- 5 24" PVC PIPE; 6" DIA. HOLES @ 10' O.C. (SIDE WALLS) & 1" DIA. HOLES @ 10' O.C. (TOP & BOTTOM)
- 6 8" PVC PIPE; 2" DIA. HOLES @ 10' O.C. (SIDE WALLS) & 1/2" DIA. HOLES @ 10' O.C. (TOP & BOTTOM)
- 7 6" SCH 80 PVC DRAIN LINE 1/2" PERFORATIONS. IE 5798.00 (TYP)
- 8 6" SCH 80 PVC DRAIN LINE 1/2" PERFORATIONS. IE 5797.78 (TYP)
- 9 6" SCH 80 PVC DRAIN LINE 1/2" PERFORATIONS. IE 5797.69 (TYP)
- 10 6" SCH 80 PVC DRAIN LINE 1/2" PERFORATIONS. IE 5797.47 (TYP)
- 11 6" SCH 80 PVC DRAIN LINE 1/2" PERFORATIONS. IE 5797.38 (TYP)
- 12 6" SCH 80 PVC DRAIN LINE 1/2" PERFORATIONS. IE 5797.16 (TYP)
- 13 6" SCH 80 PVC DRAIN LINE 1/2" PERFORATIONS. IE 5797.07 (TYP)
- 14 6" SCH 80 PVC DRAIN LINE 1/2" PERFORATIONS. IE 5796.85 (TYP)

NOTE: 6 THROUGH 13 ARE MIRRORED FOR BACKWASH POND #2.

THE FOLLOWING VALVES HAVE NOT BEEN INCLUDED IN THE VALVE SCHEDULE IN SECTION 02515. CONTRACTOR SHALL BE RESPONSIBLE FOR INCORPORATING THESE VALVES INTO THE PROJECT. THE VALVE SCHEDULE INFORMATION BELOW FOLLOWS THE VALVE SCHEDULE HEADER COLUMNS SHOWN IN SECTION 02515.

- PV-28 MJxMJ 24" PLUG VALVE KEY HORIZ. 10PSI 30PSI WORMGEAR W/ AWWA NUT & OPERATOR EXTENSION
- PV-29 MJxMJ 24" PLUG VALVE KEY HORIZ. 10PSI 30PSI WORMGEAR W/ AWWA NUT & OPERATOR EXTENSION
- PV-30 MJxMJ 8" PLUG VALVE KEY HORIZ. 10PSI 30PSI AWWA NUT & OPERATOR EXTENSION
- PV-31 MJxMJ 8" PLUG VALVE KEY HORIZ. 10PSI 30PSI AWWA NUT & OPERATOR EXTENSION
- PV-32 MJxMJ 12" PLUG VALVE KEY HORIZ. 10PSI 30PSI AWWA NUT & OPERATOR EXTENSION
- PV-33 MJxMJ 8" PLUG VALVE KEY HORIZ. 10PSI 30PSI AWWA NUT & OPERATOR EXTENSION
- PV-34 MJxMJ 12" PLUG VALVE KEY HORIZ. 10PSI 30PSI AWWA NUT & OPERATOR EXTENSION
- PV-35 MJxMJ 8" PLUG VALVE KEY HORIZ. 10PSI 30PSI AWWA NUT & OPERATOR EXTENSION

GENERAL NOTES:

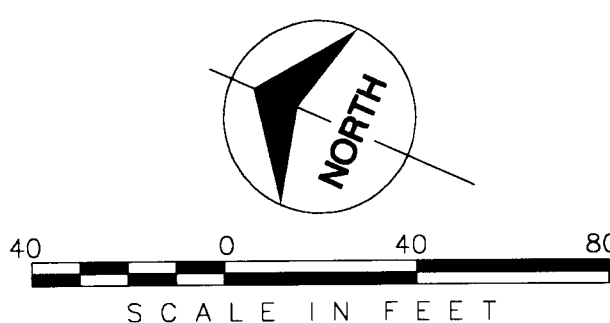
- NEW PIPING, THIS CONTRACT, IS INDICATED BY "BOLD" OR HEAVY LINES. SEE DWG P6 FOR YARD PIPING SCHEDULE.
- CONTRACTOR SHALL LOCATE AND VERIFY THE LOCATIONS OF ALL EXISTING PIPING PRIOR TO START UP OF CONSTRUCTION.
- CONTRACTOR SHALL SUPPORT AND PROTECT ALL EXISTING UTILITIES AS REQUIRED FROM ANY DAMAGE THAT MAY OCCUR DURING CONSTRUCTION.
- ALL KNOWN SEWERS, WATER MAINS, GAS MAINS, TELEPHONE CONDUITS, ELECTRIC CABLES, AND OTHER UNDERGROUND STRUCTURES ARE SHOWN ON THE DRAWINGS ONLY TO THE EXTENT SUCH INFORMATION HAS BEEN MADE AVAILABLE TO OR DISCOVERED BY THE ENGINEER. IT IS EXPECTED THAT THERE MAY BE DISCREPANCIES AND OMISSIONS IN THE LOCATION AND QUANTITIES OF UTILITIES AND STRUCTURES SHOWN. THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR BUT IS NOT GUARANTEED TO BE EITHER CORRECT OR COMPLETE AND ALL RESPONSIBILITY FOR THE ACCURACY AND COMPLETENESS THEREOF IS EXPRESSLY DISCLAIMED. THE CONTRACTOR SHALL MAKE SUCH INVESTIGATION AS HE THINKS NECESSARY TO VERIFY ITS CORRECTNESS AND COMPLETENESS. THE CONTRACTOR SHALL, AHEAD OF EXCAVATION, AND PRIOR TO ORDERING OF ANY PRODUCTS FOR THE PROJECT, LOCATE ALL UNDERGROUND UTILITIES AND STRUCTURES SO THAT THEY WILL NOT BE ACCIDENTALLY CUT BY HIS CONSTRUCTION OPERATION. CONTRACTOR SHALL CONTACT UTILITY NOTIFICATION CENTER AT 48 HOURS PRIOR TO ANY DIGGING.
- WHERE EXCAVATION IS REQUIRED UNDER PAVED AREAS, THE PAVEMENT SHALL BE CUT IN SUCH A MANNER AS TO EFFECT A SMOOTH, STRAIGHT CUT EDGE AND, AS A VERTICAL FACE ONE FOOT MINIMUM BEYOND THE TRENCH WALL.
- THE CONTRACTOR SHALL CONFINE HIS CONSTRUCTION OPERATIONS WITHIN THE OWNER'S EXISTING EASEMENTS AND RIGHTS-OF-WAY LIMITS INDICATED AND THE CONSTRUCTION LIMITS INDICATED ON THE DRAWINGS, AND SHALL USE DUE CARE IN PLACING CONSTRUCTION TOOLS, EQUIPMENT, EXCAVATED MATERIALS, AND MATERIALS AND SUPPLIES, SO AS TO CAUSE THE LEAST POSSIBLE DAMAGE TO PROPERTY AND INTERFERENCE WITH OTHER CONSTRUCTION ACTIVITIES.
- OPERATION OF VALVES OR OTHER APPURTENANCES ON EXISTING UTILITIES, WHEN REQUIRED, SHALL BE BY OR UNDER THE DIRECT SUPERVISION OF THE OWNING UTILITY.
- THERE SHALL BE AN 8-INCH MINIMUM CLEARANCE BETWEEN UTILITY LINES. IF THERE IS LESS THAN 8-INCHES OF CLEARANCE, A 1/2-INCH NEOPRENE RUBBER PAD MUST BE INSTALLED BETWEEN THE TWO LINES AS APPROVED BY THE ENGINEER.
- RESTRAIN ALL 8" & 12" PIPING AT THE BACKWASH PONDS & SOLIDS DRYING BEDS.
- CONTRACTOR SHALL COMPLETE THE CONNECTION TO LOCATION NO. 61 DURING THE LOW DEMAND PERIOD AS DEFINED IN SECTION 01110. ALL WORK ASSOCIATED WITH THE CONNECTION SHALL BE COORDINATED WITH THE WATER TREATMENT PLANT OPERATORS AND THE ENGINEER.
- LOCATION NO.'S 85 & 86 WILL REQUIRE TAPPING CONNECTION TO BE COMPLETED WHILE THE EXISTING 18-INCH PVC LINE IS IN SERVICE.

24" BACKWASH WATERLINE RESTRAINING SCHEDULE

- TEE 30' EACH DIRECTION
- 90° BEND 30' EACH DIRECTION

12" BACKWASH RECYCLE FORCEMAIN RESTRAINING SCHEDULE

- TEE 50' EACH DIRECTION
- 90° BEND 50' EACH DIRECTION



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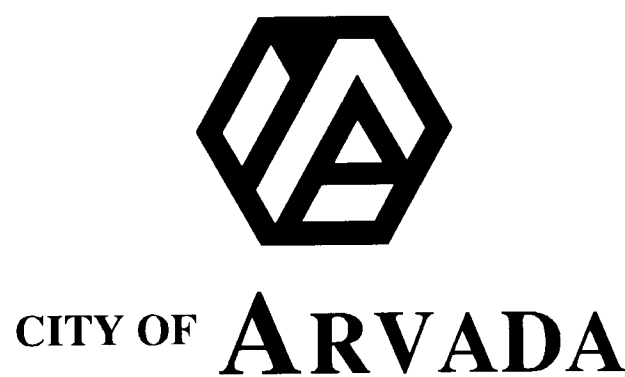


date
JANUARY 10, 2000

designed
P. O'BRIEN

detailed
D. WINDER

checked
V.S.H.



RALSTON WATER TREATMENT PLANT IMPROVEMENTS PHASE III

YARD PIPING II

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99-370-1

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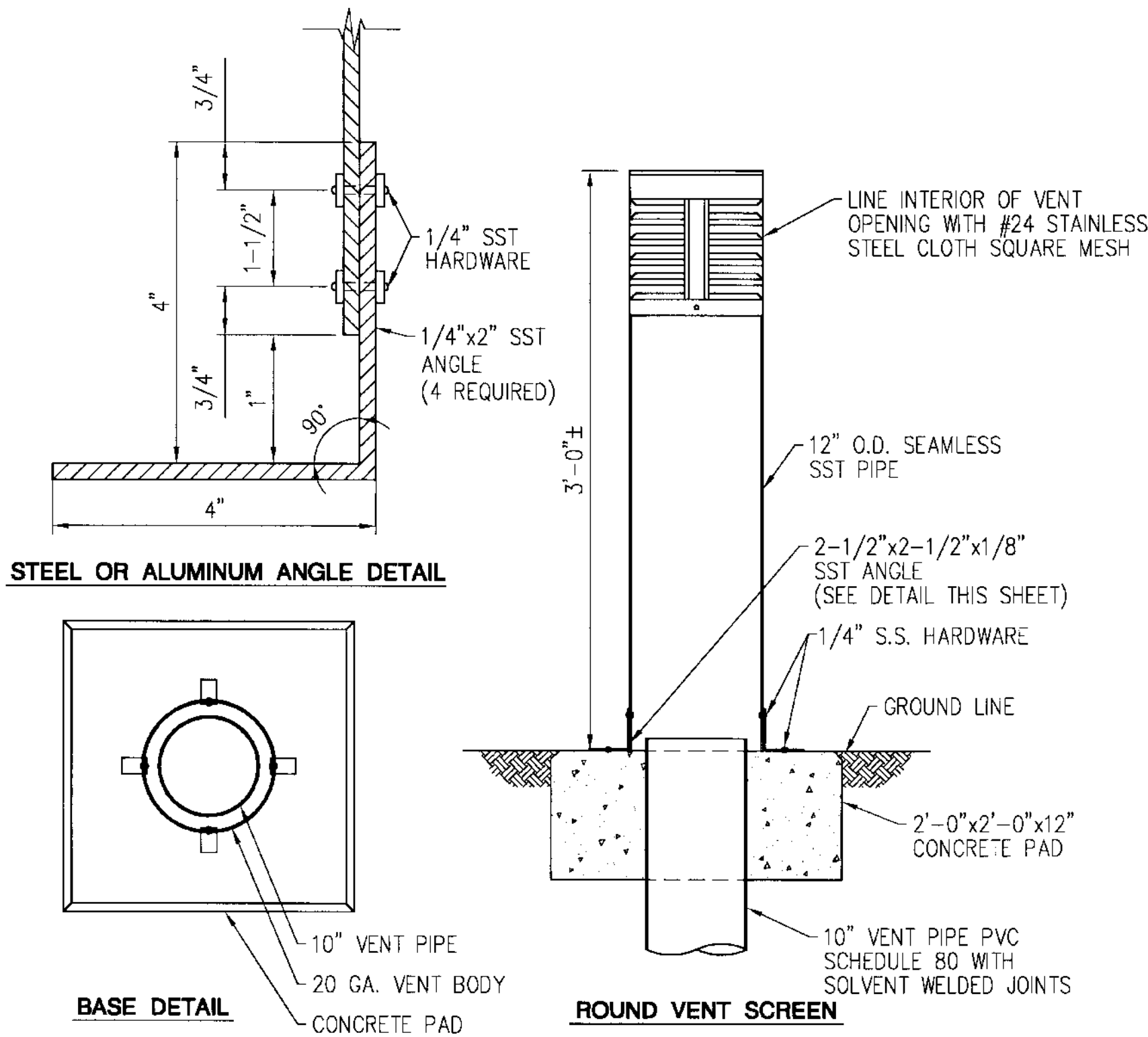
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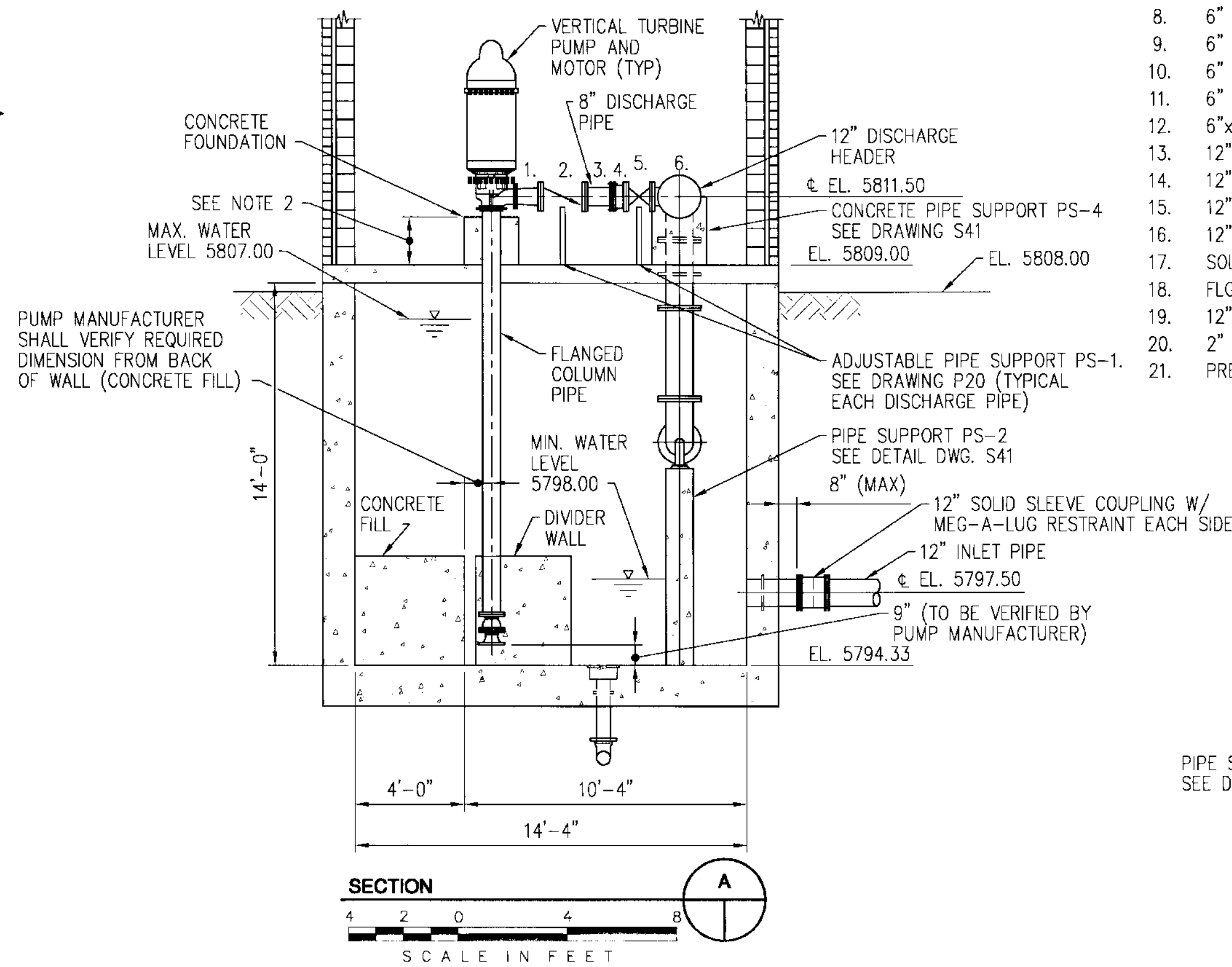
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Inches

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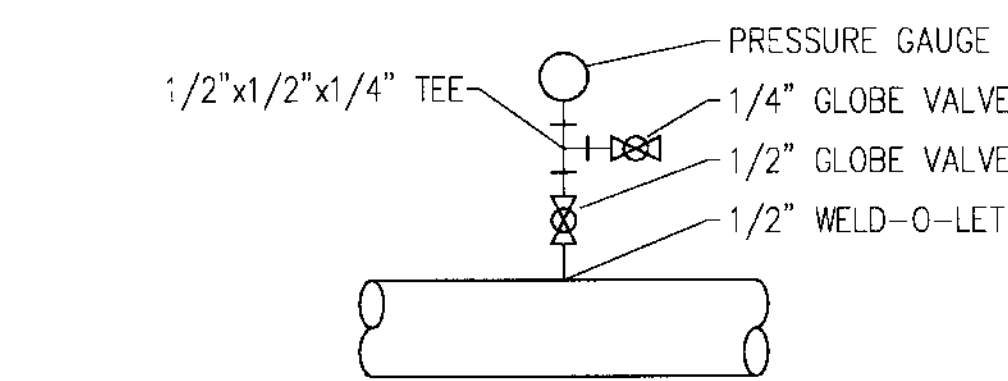
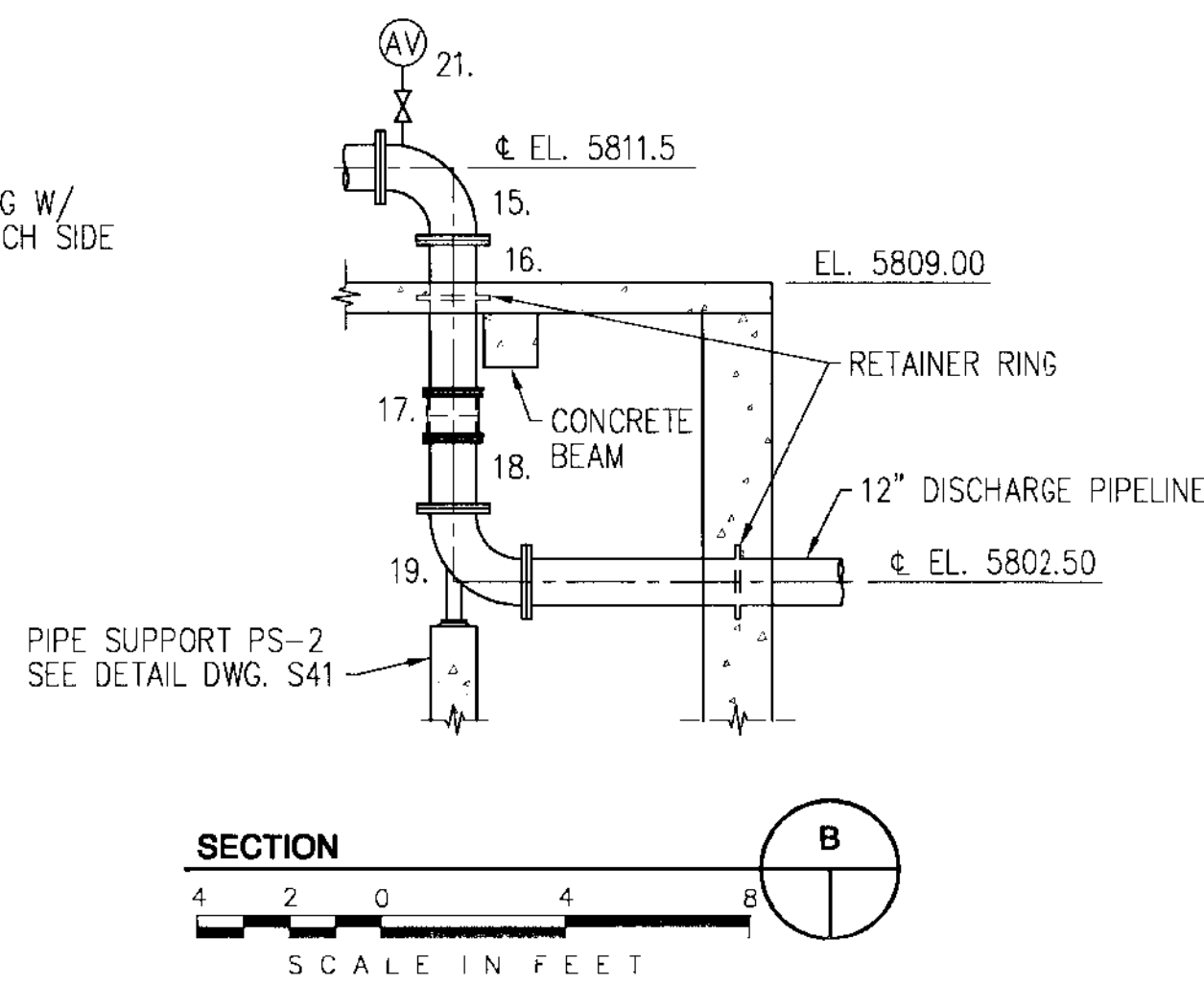


10" VENT ASSEMBLY
NOT TO SCALE



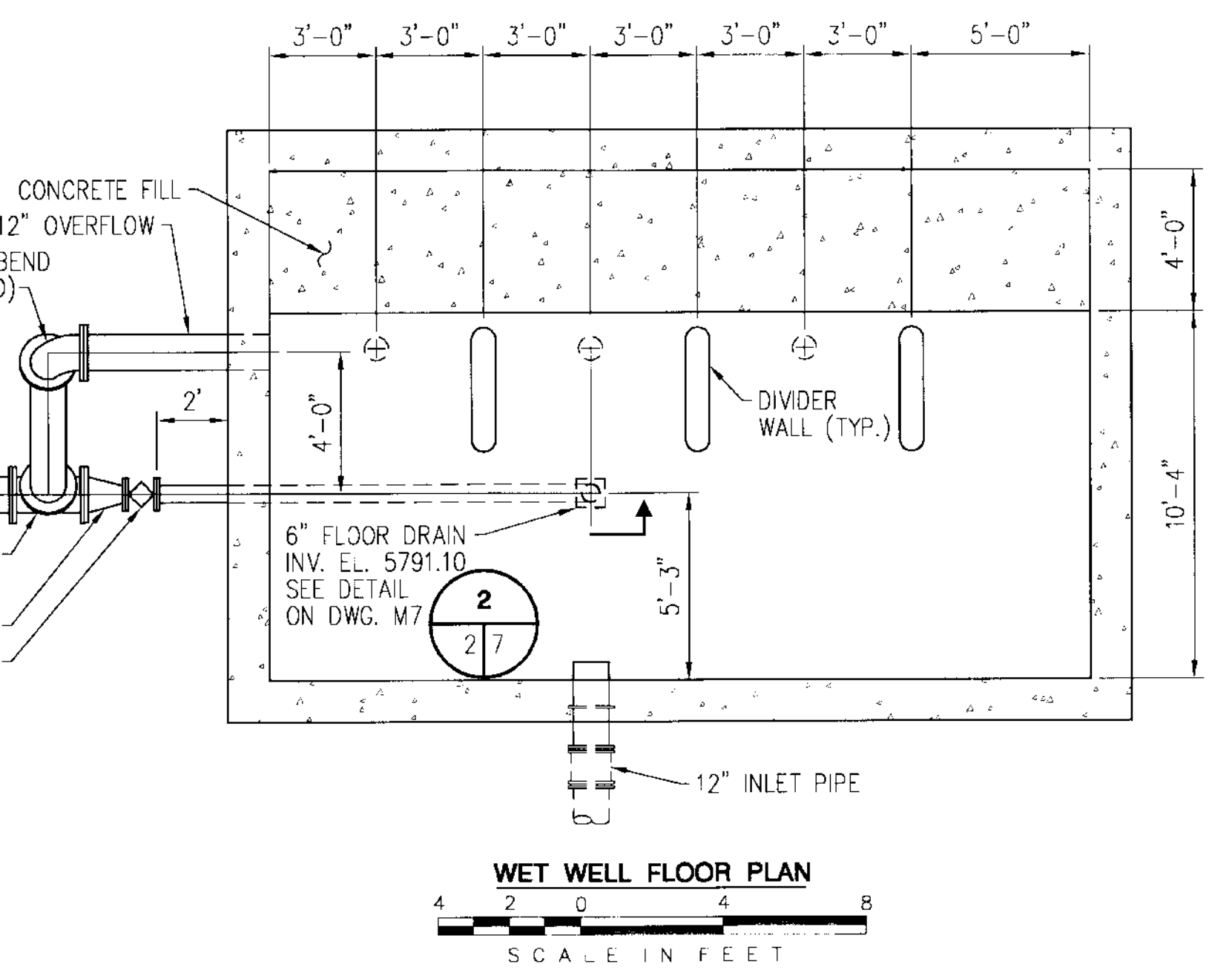
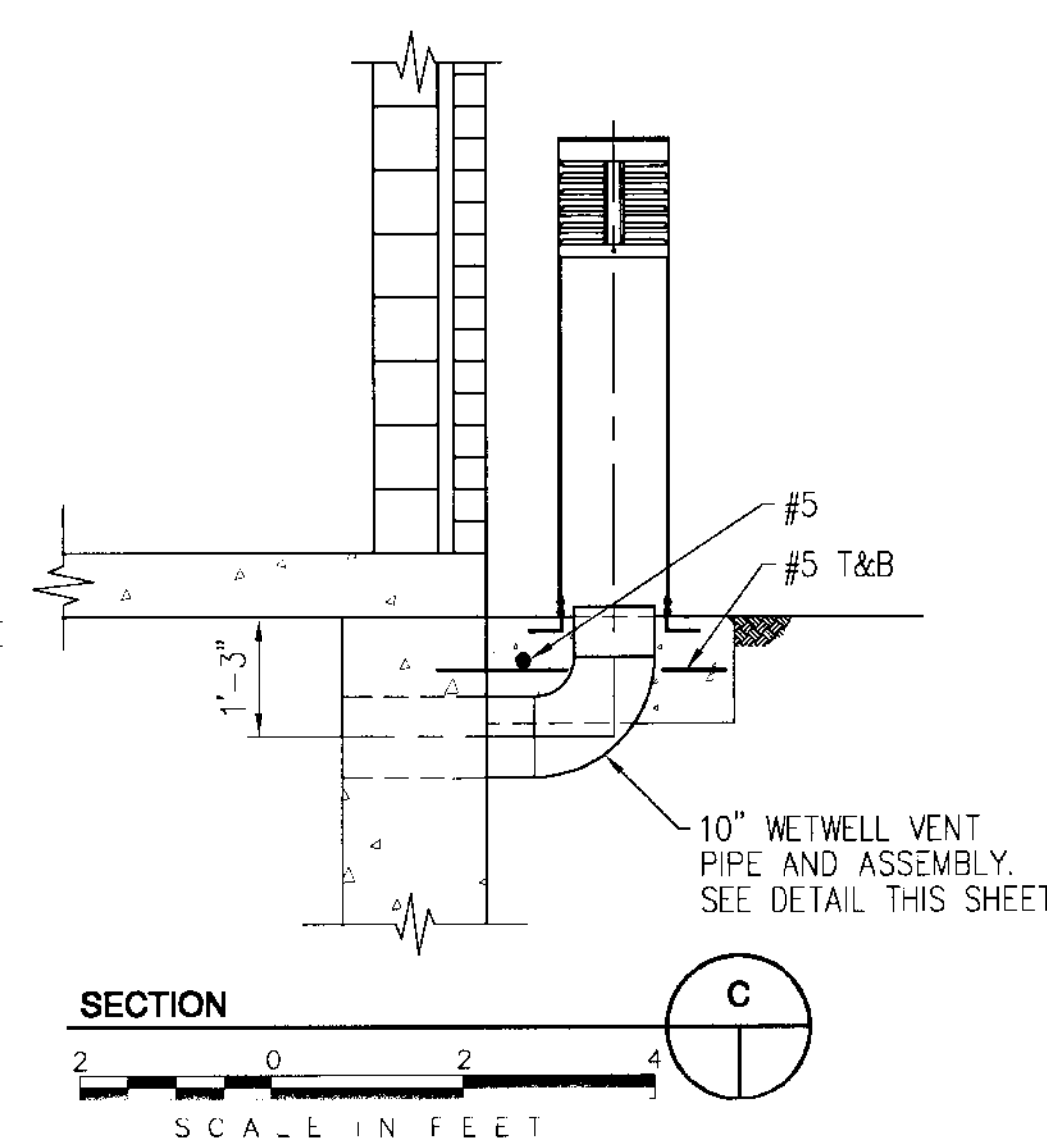
PIPING MATERIALS LIST

NO.	DESCRIPTION
1.	6"x8" FLG. CONCENTRIC REDUCER W/ PRESSURE GAUGE
2.	8" SWING FLEX CHECK VALVE (CV-9 & 10)
3.	8" FLG. x P.E.
4.	8" FLANGE COUPLING ADAPTER W/ 2 ANCHOR STUDS
5.	8" GATE VALVE (GV-2 & 3)
6.	8"x12"x12" FLG. TEE
7.	6" SPOOL PIECE W/ PRESSURE GAUGE
8.	6" SWING FLEX CHECK VALVE (CV-11)
9.	6" FLG. x P.E.
10.	6" FLANGE COUPLING ADAPTER W/ 2 ANCHOR STUDS
11.	6" GATE VALVE (GV-4)
12.	6"x12"x12" FLG. TEE
13.	12" BLIND FLANGE
14.	12" SPOOL PIECE
15.	12" LONG RADIUS FLG. 90° BEND
16.	12" FLG. x P.E. PIPE W/ RETAINER RING
17.	SOLID SLEEVE COUPLING W/ MEG-A-LUG RESTRAINT EACH SIDE
18.	FLG. x P.E. PIPE
19.	12" LONG RADIUS FLG. 90° BEND
20.	2" COMBINATION AIR/VACUUM VALVE W/ 2" OUTLET GATE VALVE
21.	PRESSURE TRANSMITTER PIT 700



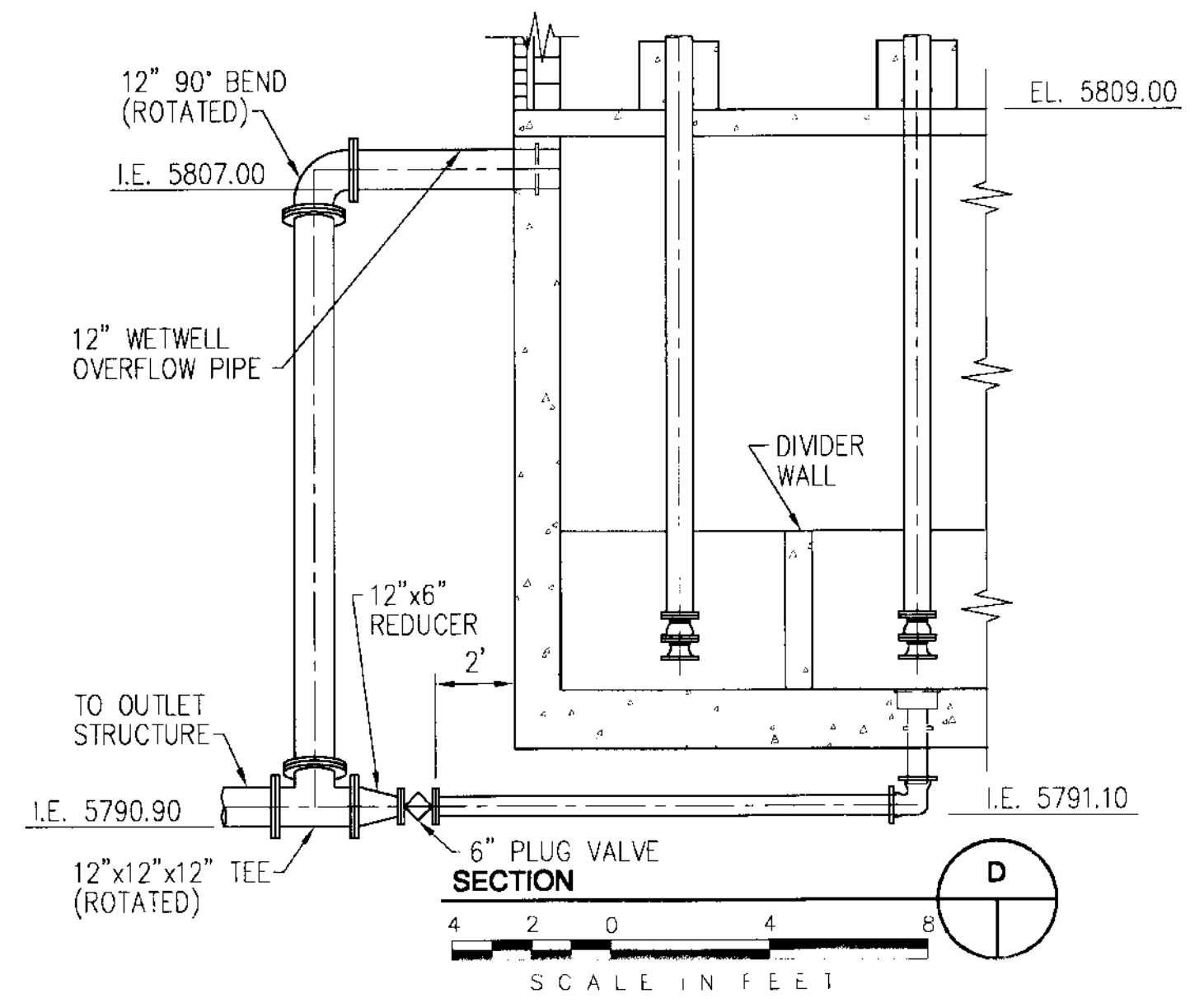
NOTES:

- PRESSURE GAUGES SHALL BE GLYCERINE FILLED, SELF-SUPPORTING, DIAL TYPE, BOTTOM CONNECTED, 4-1/2 INCH SIZE WITH WHITE DIAL, ADJUSTABLE POINTER, NYLON AND/OR STAINLESS STEEL MOVEMENTS, A GAUGE SEAL (FOR SOLIDS) AND A BRONZE BOURDON TUBE. PRESSURE GAUGE SHALL HAVE A 0-160 PSIG RANGE. ACCURACY SHALL BE 1/2 OF 1 PERCENT OF SCALE RANGE. FITTINGS SHALL BE SCHEDULE 160 BRASS. MANUFACTURER SHALL BE ASHCROFT OR APPROVED EQUAL.
- ALL PIPING, FITTINGS, VALVE AND PRESSURE GAUGE SHALL BE SUITABLE FOR SERVICE INDICATED (150 PS).



GENERAL NOTES:

- STRUCTURAL WALL/BEAMS AND FLOOR ARE NOT SHOWN FOR CLARITY.
- THICKNESS/WIDTH AND OPENING SIZE REQUIREMENT FOR PUMP FOUNDATION SHALL BE DETERMINED BY CONTRACTOR/EQUIPMENT MANUFACTURER FOR COMPLETE REMOVAL OF PUMP.
- PUMP CLEARANCE DIMENSIONS FROM PUMP INTAKE SUCTION BELL AND WETWELL/WALLS SHALL BE VERIFIED BY PUMP MANUFACTURER. ADJUST COLUMN LENGTHS AS NECESSARY TO MEET REQUIREMENTS.
- CONCRETE AND STEEL SUPPORT PADS REQUIRED UNDER DISCHARGE PIPING NOT SHOWN FOR CLARITY. SEE SECTION A.
- ALL PIPING, VALVES, AIR/VACUUM ASSEMBLIES AND ALL OTHER APPURTENANCES FOR THE PUMPS SHALL BE DESIGNED FOR THE MAXIMUM TEST PRESSURE INDICATED IN THE CONTRACT DOCUMENTS. COORDINATE ALL FLANGE DRILLING PATTERNS AND SIZES BETWEEN SEPARATE EQUIPMENT SUPPLIERS TO INSURE THAT FLANGE PATTERNS MATCH.
- PAINT ALL PIPING (INCLUDING PIPING AND APPURTENANCES IN WETWELL), VALVES, PUMPS AND APPURTENANCES IN ACCORDANCE WITH SPECIFICATION SECTION 09900.
- ALL PIPING SHALL BE DIP AND RESTRAINED.



no.	date	by	revision
1	1/24/02	J.C.F.	CONFORMING TO CONSTRUCTION RECORDS



date
JANUARY 28, 2000
designed
P. FISCHER
detailed
D. WINDER
checked
V.S.H.



CITY OF ARVADA

**RALSTON WATER TREATMENT PLANT
IMPROVEMENTS PHASE III**

BACKWASH PUMP STATION
PLAN, SECTIONS AND DETAILS

project
99-370-1
contract
drawing
P22
rev.
1
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of
sheets
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Exhibit 2

Vendor's Response

Prepared for the
CITY OF ARVADA

Ralston WTP Solids Handling Study PRELIMINARY DESIGN

RFP 20

Carollo's innovative planning tools and ground-tested design strategies will enhance operational flexibility for solids drying success at the Ralston WTP.

PROPOSAL | November 2020

November 19, 2020

Nancy Allen
City of Arvada
8101 Ralston Road
Arvada, Colorado 80002

Primary Contact:
Vincent Hart, PE
Project Manager, EVP
303.404.6324 | vhart@carollo.com

Subject: Ralston WTP Solids Handling Prelim Design | RFP 20

Dear Ms. Allen and Members of the Selection Committee:

In 2009, we took notice. We noticed that many Front Range utilities had solids drying beds and all of them struggled with their operation which resulted in high cost of disposal and operational "headaches." We made it our focus to gather local information for a data-driven understanding of the key aspects of passive drying in Colorado with the help of many utilities. Carollo is prepared to listen, collaborate with you, and develop the right approach based on these fundamentals:

We know solids. Our Solids Dewatering Team has literally written the book on WTP solids options (WRF 4086) for both passive and mechanical dewatering. Our team has a rich history of successful "hands-on" dewatering experience at facilities nationwide including recent experience at Aurora's 80-mgd Wemlinger Water Purification Facility (WPF) which accelerated solids dewatering rates from 20 percent solids in 6 months to 73 percent solids in 2 months. Plant staff has projected that these improvements saved Aurora \$160,000 a year (2015). Aurora's confidence in the process and results led them to select Carollo to implement similar solutions at the 80-mgd Griswold WPF.

Innovation. We're not content to simply update past analyses or rely on our previous work. Our team took a hard look at ways of addressing your competing needs for dewatering and backwash/filter-to-waste (FTW) improvements even though the FTW implementation may be down the road. The result? Practical ideas tailored to your facility that look at the big picture, like the potential for using the existing backwash line also as a FTW line like we did at Aurora's Griswold WPF, or the potential to implement rinse-to-waste (RTW) which potentially eliminates the need for FTW (and the capital costs) while improving water efficiency. In addition, examination of the coagulation approach to balance charge neutralization and TOC removal may yield potential to reduce the quantity of solids generated in the plant.

Approach. We have developed a detailed project approach that gathers the right information, seeks and applies input from your operations staff, provides a detailed understanding of the existing systems, develops the right alternatives and challenges them through our QA/QC process, and focuses on all aspects and impacts to plant operations. We pride ourselves on our ability to see the big picture while paying attention to the details.

As a firm focused only on water, our team understands the importance of this project for you, and the specialized expertise in solids handling that it requires. Our team will dedicate our time and resources to help you develop and implement the right solutions for your plant. We look forward to the opportunity to collaborate with you on this project.

Sincerely,
CAROLLO ENGINEERS, INC.



Vincent Hart, PE
Project Manager

Carollo respectfully requests the City's consideration of the following modifications to the General Terms and Conditions:

- *Section 4: In the first paragraph, please replace "arising from or related to any act or omission" with "to the extent caused by any negligent act or omission." This brings this obligation into compliance with CRS 13-50.5-102 (8)(a) (see highlighted provision in the Appendix).*
- *Section 15: In the second line, please remove the word, "highest." This is an elevation of the standard of care and as such, is not insurable under any professional liability insurance policy.*



Table of Contents

COMPANY INFORMATION.....2

RELATED EXPERIENCE.....3

UNDERSTANDING AND APPROACH.....6

PROPOSED WORK SCHEDULE.....14

PRICE AREA

APPENDIX

Resumes

Required Vendor Submittal Form

Performance Measures Form

CRS 13-50.5-102 (8)(a) (as referenced in cover letter)

Company Information

At Carollo, water is all we do—and we do it like no one else.

COMPANY NAME

Carollo Engineers, Inc.

LOCAL OFFICES

390 Interlocken Crescent, Suite 800
Broomfield, CO 80021
303.635.1220

10822 West Toller Drive, Suite 200
Littleton, CO 80127
303.980.8260

HEADQUARTERS

2795 Mitchell Drive
Walnut Creek, CA 94598
925.932.1710

FIRM INFORMATION

WATER
OUR FOCUS
OUR BUSINESS
OUR PASSION

Carollo is a privately-held environmental engineering firm, established in 1933, specializing in the planning, design, and construction of water and wastewater facilities. With nearly 1,200 employees

in 48 offices throughout the United States, Carollo has successfully completed more than 25,000 projects for public sector clients. Throughout our 87-year history, we have had a singular commitment to the water industry. Over the decades, this focus has opened the door to the very best talent in the industry, allowing Carollo to deliver innovative water solutions and unparalleled service to our clients. While we are a national firm, we pride ourselves in our commitment to our clients on a local level. Carollo does not have any plans to sell or merge with another firm.

Carollo's Services

Business Solutions
Climate Change and Resiliency
Construction Management
Design-Build
Energy Technologies
Infrastructure
Private Sector
Program Management
Programming Services
Research and Development
Stormwater Management
Sustainable Solutions
Wastewater Treatment
Water Resources
Water Reuse
Water Treatment

Please visit our website
for further information
regarding our services.



CAROLLO PRINCIPALS

B. Narayanan, PhD, PE | President/Chief Executive Officer

Lou Carella, PE | Executive Vice President

Jim Hagstrom, PE | Executive Vice President

Russ Wachter, PE | Executive Vice President

Ash Wason, PE | Executive Vice President

Vincent Hart, PE | Executive Vice President

Michael Barnes | General Counsel

Related Experience

Our strong local reputation in solids handling reflects our dedication and expertise in maximizing existing infrastructure with innovative solutions that are cost-effective and reliable for the long-term.

A TEAM WITH THE RIGHT EXPERTISE

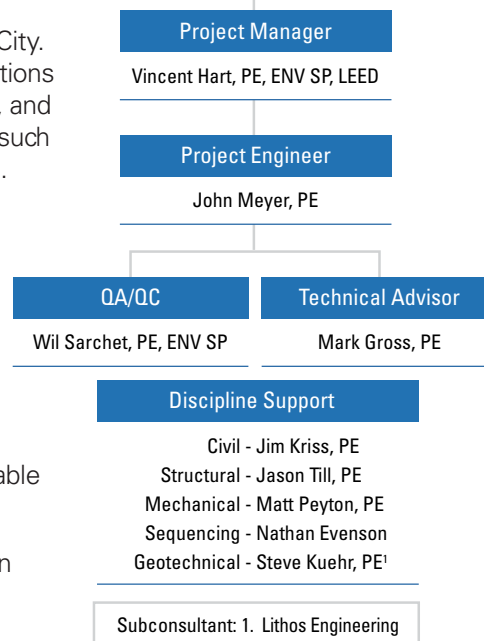
Our team for this project was carefully selected to provide high value to the City. You need a team who understands your challenges and how to develop solutions that are specific to the Ralston WTP. We understand the challenges you face, and ultimately want you to have a facility that is not limited by certain processes such as solids handling, rather a facility that operates holistically for years to come.

Our team brings the following to Arvada:

Innovation – Our experience on multiple solids handling projects across the Front Range has enabled us access to a wide range of plant data which has led to new and innovative solutions for passive drying.

Passion – The word “passion” is who we are as a team and broader firm. We continue to remain dedicated to helping utilities along the Front Range understand why their drying processes are failing and give them implementable and cost-effective solutions.

Opportunity – Our team has already started developing ideas for the Ralston WTP. We can help you leverage your existing infrastructure and save money. Many times engineers will jump to mechanical dewatering without trying to engineer the existing passive system. A mechanical dewatering system will require a full-time operator and will at best produce 25 percent solids. A well designed passive system requires little operator attention and will produce solids concentrations as high as 70 percent.



Your Project Manager, Vinnie Hart



Vinnie has 26 years of experience and is a well-known project manager throughout Colorado and nationally, and has served as Carollo's project manager or technical advisor on all of our local solids handling projects. He is an expert in conventional treatment, engineered lagoons, sand drying beds, belt presses, centrifuges, filter presses, rotary drums, and gravity thickeners. Some of his recent solids handling project experience includes:

Project manager for Aurora's Wemlinger WPF Improvements project and Griswold WPF Solids Study and Improvements project, CO.

Project manager for Colorado Springs Utilities' (CSU) Bailey WTP, CO.

Technical advisor and start-up lead for Austin's 50-mgd Handcox WTP, TX (centrifuges).

Technical advisor for Greeley's Boyd Lake WTP Process Improvements Design and the Bellvue and Boyd Lake WTPs Solids Study, CO.

Technical advisor for the City of Houston's Northeast WTP (80 mgd and 320 mgd), TX (belt presses for 80 mgd and centrifuges/centrifuge thickening for 320 mgd).

VINNIE'S REFERENCES

Ralph Haight

City of Aurora
303.739.7981
rchaight@auroragov.org
.....

Dan Dilts

Colorado Springs Utilities
719.640.0807
ddilts@csu.org

KEY PERSONNEL QUALIFICATIONS

NAME/ROLE	QUALIFICATIONS AND EXPERIENCE
John Meyer, PE Project Engineer	Brings broad background in analyzing solids handling data, and has developed two Blue Plan-it® models to evaluate and refine various solids handling alternatives and operational plans. Project engineer for Aurora's Griswold Solids Study and Preliminary Design (Griswold currently under final design), CO. Project engineer for Greeley's Boyd Lake and Bellvue WTPs Solids Study, CO.
Wil Sarchet, PE, ENV SP QA/QC	12 years of experience in WTP evaluation, design, construction, and commissioning. Brings in-depth understanding of how to analyze solids handling data for implementable solutions. Process lead for Aurora's Griswold and Greeley's Solids Study and Preliminary Design, CO. Project design and field engineer for Austin's 50-mgd Handcox WTP, TX (centrifuges).
Mark Gross, PE Technical Advisor	Carollo's national expert in residuals treatment with more than 28 years of experience. Direct experience designing new and trouble-shooting mechanical dewatering systems, and an understanding of the TENORM process. Technical advisor for both of Aurora's Wemlinger WPF Improvements project and Griswold WPF Solids Study and Preliminary Design, and CSU's Bailey WTP, CO.
Jim Kriss, PE Civil	26 years of experience dedicated to civil and infrastructure design. Brings critical understanding of permitting and regulations. Civil lead for both of Aurora's Wemlinger WPF Improvements project and Griswold WPF Solids Study and Preliminary Design, CO.
Jason Till, PE Structural	10 year career dedicated to structural design for water treatment facilities. Has the right background and applied knowledge in structural engineering as it relates to solids handling, such as how to design water-tight structures and how to accommodate heavy equipment vibration from rotating equipment. Structural lead for Greeley's Boyd Lake WTP Process Improvements Design, CO.
Steve Kuehr, PE Geotechnical	Front Range expert in geotechnical engineering services with more than 40 years of experience. Well-regarded with clients throughout the Front Range for his dedication and knowledge of subsurface conditions and how that impacts the overall project. Geotechnical lead for both of Aurora's Wemlinger WPF Improvements project and Griswold WPF Solids Study and Preliminary Design, CO. Steve's innovative approach to monitoring determined the hydraulic interconnections between the Wemlinger lagoons and lack of interconnection with Quincy Reservoir.

THIS TEAM HAS PROVIDED PROVEN AND TIME-TESTED SOLUTIONS FOR LOCAL CLIENTS' SOLIDS HANDLING CHALLENGES. WE WILL TAKE WHAT WE HAVE LEARNED AND BUILD ON IT TO PROVIDE ARVADA A CLEAR AND IMPLEMENTABLE PATH FORWARD FOR YOUR SOLIDS HANDLING FACILITIES AT RALSTON THAT YOU KNOW WILL WORK.

SUBCONSULTANT

Lithos Engineering focuses on geological engineering and design services through innovative, collaborative, client focused consulting uniquely tailored to suit the needs of their clients and projects. Steve Kuehr, who recently joined Lithos, has supported more than 95 percent of Carollo's Front Range design projects, and continues to prove himself as reliable and trustworthy for quality results.



RECENT PROJECTS

WEMLINGER AND GRISWOLD WPF | SOLIDS STUDIES AND DESIGNS

City of Aurora, Colorado

CONTACT

Ralph Haight
303.739.7981
rchaight@auroragov.org

PROJECT STATUS

Wemlinger: Complete
Griswold: In progress

TEAM INVOLVEMENT

Hart, Meyer, Sarchet,
Gross, Evenson, Kuehr,
Kriss

Carollo was selected for Aurora's Wemlinger WPF Improvements project which included reuse of existing infrastructure. Nearly an exact replica to Ralston's lagoons, the Wemlinger dewatering ponds were nearly 30 years old and had achieved only 20 percent solids after six months of drying time. Four new concrete sand drying basins and a Backwash Return Pump Station were constructed to return high quality water to the front of the WPF (typical treated backwash return turbidities are 0.3 NTU or less).



Carollo was also selected to complete a solids study and design for Aurora's Griswold WPF to address constraints in the plant operation from the existing backwash and solids handling processes and the duration of its filter backwash process. Using real-world data from Wemlinger, our Blue Plan-it® model simulated drying cycles and bed configurations to right-size the improvements. Carollo provided a phased implementation plan to maximize existing infrastructure, provided cost-efficient solutions, and matched CDPHE regulatory and water quality requirements. Services included collecting detailed data, analyzing the current operation, conducting flow and solids mass balance analyses, evaluating the existing lagoons and backwash/FTW processes, and determining alternatives for both the backwash/FTW and solids handling processes including mechanical dewatering.

SOUTHERN DELIVERY SYSTEM WTP (BAILEY WTP)

Colorado Springs Utilities, Colorado

CONTACT

Dan Dilts
719.640.0807
ddilts@csu.org

PROJECT STATUS

Complete: 2016

TEAM INVOLVEMENT

Hart, Sarchet, Gross,
Evenson, Kuehr, Kriss,
Peyton

Carollo was selected by Colorado Springs Utilities to design the 50-mgd Bailey WTP. The design included an enhanced conventional treatment plant design, including coagulation, flocculation, sedimentation, ozone, and high rate biologically active filtration. With enhanced coagulation, the process generates as much as 2.6 million pounds of dry solids on a yearly basis. The design included four engineered solids lagoons with a drying area of 269,000 ft² and two backwash recovery lagoons with a drying area of 135,000 ft² (concrete lined - no sand). The design also included a detailed SCADA procedure which shows each backwash step and associated valve position confirmation on the screen. This allows for easy trouble-shooting and modifications to the backwash protocol. In addition, the SCADA system calculated solids loading of the solids lagoons so operators would know when to cycle lagoons at the correct basin solids loading rate, which is critical to good dewatering.



HANDCOX WATER TREATMENT PLANT

City of Austin, Texas

CONTACT

Bill Stauber
512.972.0101
william.stauber@
austintexas.gov

PROJECT STATUS

Complete: 2014

TEAM INVOLVEMENT

Hart, Sarchet, Gross

The City of Austin selected Carollo to perform preliminary design, final design, and construction management services of their 50-mgd Handcox WTP. Preliminary design included an evaluation of solids characteristics, solids production, residuals handling and dewatering alternatives, and long-term residuals disposal and management alternatives. Centrifuges were selected as the best value alternative to the City due to the small footprint of the site, City familiarity with the equipment, and low net present value (NPV) cost. Final design included the design of backwash recovery basins, gravity thickening, solids equalization basins, and centrifuge building for solids dewatering. The filter design incorporated programming for "Filter Backwash Anticipation" mode, which allowed for ripening of new filters at an initial lower rate. In combination with RTW, this allowed the City to minimize or eliminate filter-to-waste flows to the washwater recovery system.



Each of these projects demonstrates our integrated treatment and solids management strategies and assessment of passive and mechanical dewatering options.

Project Understanding and Approach

PROJECT UNDERSTANDING

Managing treatment residuals in an efficient and cost-effective manner is critical to any water treatment facility, yet it can be one of the most operationally challenging processes at a plant. While lagoons or drying bed systems have historically been the norm for Arvada and plants throughout Colorado, evolving technologies, space limitations, and regulatory drivers are prompting many utilities to consider alternative approaches or optimize their existing system.

Familiar Design Challenges

For the Ralston WTP, these issues are exacerbated by the existing bed/ponds and the challenges shown in the figure below.

Another pitfall that many designs have, and a challenge that you are dealing with (as shown on the cover) is the slope of the bottom of the basins. Your existing beds/ponds are not sloped. This causes two different sets of issues as shown below. We have found that a modest slope of 0.3 percent provides better distribution of solids across the length of the basin and minimizes localized high solids loading (more discussion on the importance of this later).

Challenges with your existing solids handling system prevent effective dewatering.



- 1 Water migration between basins prevents dewatering.
- 2 Tumbleweed accumulation on decant structure.
- 3 No slope on basin bottoms prevents effective decanting.
- 4 Two basins used for backwashing and two basins for solids (ineffective use of area).
- 5 No hydraulic separation of decant and normal operation (potential for flooding a pond that is drying).
- 6 No ability to measure water level in the lagoons (difficult to operate).
- 7 Gates are used in overflow mode (uncontrolled discharge).
- 8 No way to track solids loading of lagoons (basins get overloaded).
- 9 Can't get into basins to remove solids (long arm trackhoe required).
- 10 Drain from flocculation/sedimentation goes to backwash ponds (high solids when draining).
- 11 Uncontrolled flow through sand (sand clogging).
- 12 Discharge occurs in the middle of lagoon (short circuiting).

THE AURORA WEMLINGER WPF'S ORIGINAL LAGOONS (SIMILAR TO ARVADA'S) WERE HYDRAULICALLY CONNECTED—MAKING EFFECTIVE DEWATERING IMPOSSIBLE.

In addition, the slope of the basins allows for complete decanting of all of the “free water” off of the top of the solids from the outlet structure which should be at the low end of the basin. It is the elimination of “free water” that is one of the critical keys to effective passive drying system design. One of the creative ways of addressing the potential of solids carryover during an aggressive decanting process was providing utilities with the ability to recycle the decant water back to the operating basin for further treatment, instead of recycling back to the front of the WTP.

The final significant challenge that we see with the existing bed/pond system that you have is the effective use of the current land area for drying. Currently, two ponds are used for backwash waste washwater and two beds are used for sedimentation basin solids. Using one bed for backwash waste washwater lightly loads this area, further reducing the effectiveness of the drying process.

Carollo's Commitment

In 2009, we made a commitment to ourselves that we would focus on all of these challenges, address the identified data gaps by gathering solids drying information for different utilities, and pay attention to the details of our designs to develop successful dewatering designs. We will bring this same passion and commitment to your project. This project will result in a predesign and phased implementation plan for the selected strategy—whether that is rehabilitation or replacement of the existing beds, or a new mechanical dewatering and disposal system. Integrating potential future changes into the backwashing process is also key to achieving a system where backwashing and solids handling don't create operational challenges inside the plant.



Your Pond



CSU Lagoon

The flat bottom at the existing lagoons does not allow for draining of free water from the lagoons. Colorado Springs' Bailey WTP has a 0.3 percent slope, allowing complete decanting of the lagoon and drastically improving the drying process.

PROJECT APPROACH

Our team will support Arvada staff in achieving a successful outcome to this project by addressing the following key elements:

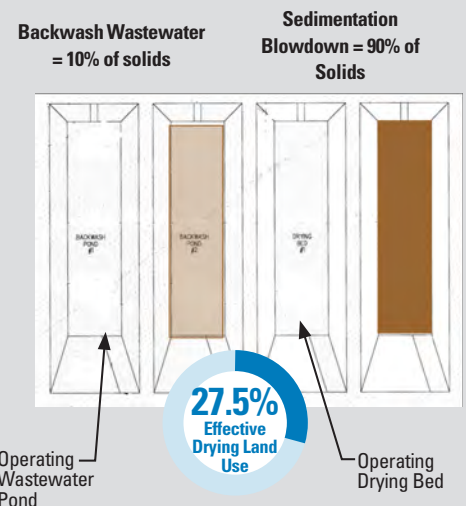
Developing the lowest-cost solution that meets operational and disposal needs and requirements.

Maximizing use of current infrastructure.

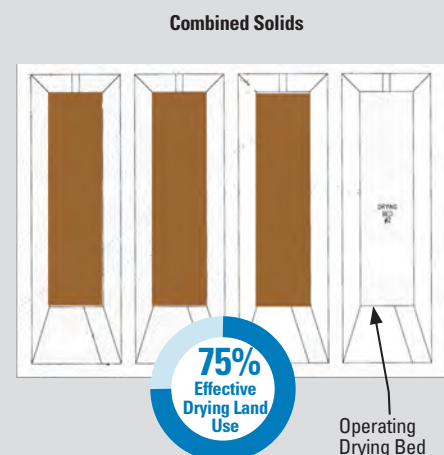
Keeping solids handling operations simple and robust, while meeting regulatory and water quality requirements.

From our experience, we understand that every project and every plant presents a different set of complexities and challenges, even though the basic engineering elements may be similar. We embrace the fact that what was the right decision at other Colorado utilities may not be the right approach at the Ralston WTP. We will tailor our analysis of dewatering options to find what's best for the Ralston facility and goals, and integrate best practices into the design.

Today, the Ralston WTP can have two basins filling at one time—which only leaves one basin for drying and removal of backwash solids and one basin for drying and removal of sedimentation solids.



Combining the backwash waste and sedimentation solids at Ralston would nearly triple the effective drying area and add operational flexibility.



By only using the drying beds/ponds for solids, the area can be used more effectively improving drying by 2.7 times.

CAROLLO'S APPROACH TO YOUR PROJECT CONSISTS OF THE FOLLOWING KEY ELEMENTS:



Planning (page 8)



Operational Enhancements (page 12)



Design Details (page 11)



Project Workflow (page 13)



Planning

A key for this project is setting project goals early and up-front. Although we need to discuss as a group, we would propose the following goals as a starting point:

Maximize the use of existing infrastructure.

Establish water quality goals for recycle water (turbidity, iron, manganese, and TOC).

Provide operations staff tools to assist with the management of solids.

Minimize the operational and maintenance efforts and maximize the solids concentration prior to disposal.

Recognize and meet all existing and future regulations.

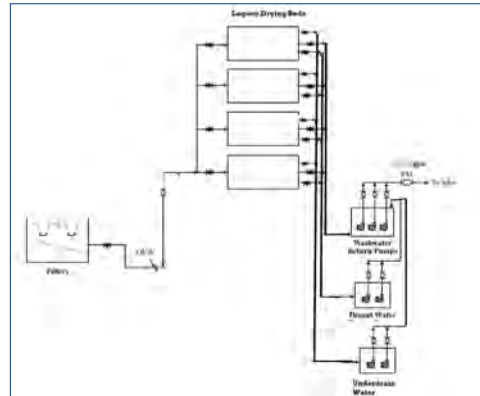
Regulations

From a regulatory perspective, we need to pay attention to CDPHE Design Criteria for Potable Water Systems, the CDPHE Section 9 Regulations, and the proposed TENORM regulations. The design criteria requirements are understood, and the Section 9 rules are simple as long as CDPHE continues to classify these types of facilities as Type A waste impoundments. It is the TENORM regulations that are going to have the biggest impacts on WTPs. The proposed rules are much less stringent than the original proposed guidance document and the rules appear to be headed in a direction that provides utilities a streamlined process (it took some utilities 8 months to get approval to dispose of solids in the past) that will be much easier work with.

THE PROPOSED CDPHE REGULATORY TENORM LEVELS ARE SCIENCE-BASED AND LESS STRINGENT THAN THE ORIGINAL GUIDANCE DOCUMENT.

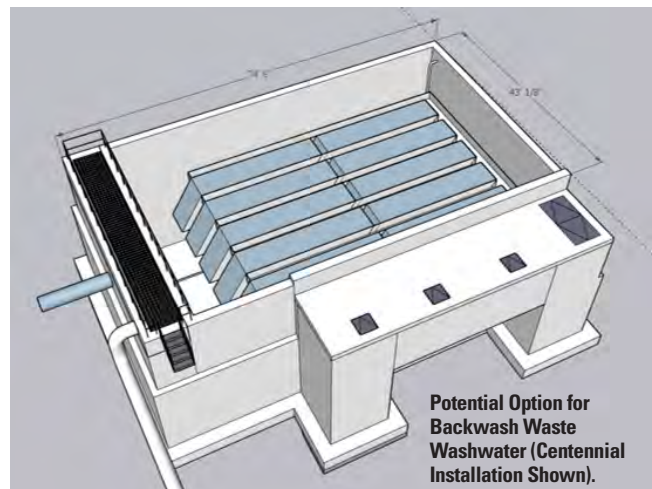
Leveraging Your Existing Infrastructure

Early project activities will assess solids production rates and compare mechanical dewatering technologies to passive drying beds. Based on our discussions with your staff, we understand that the ability to simply building more ponds/beds is space-limited and would lead to separate facilities, making operations even more challenging. Our approach is to get the most out of the infrastructure and space that you have.



Separating pump stations and their associated functions prevents accidental flooding of a basin that is drying.

Our ideas for maximizing your existing infrastructure include, **1)** Decoupling backwash waste washwater settling from solids drying, **2)** stopping the migration of water between basins, **3)** determining easy ways to slope the bottom of the basins (potentially with sand), **4)** operating water levels above the gates to control flow from the outlet instead of the inlet, **5)** moving the inlet to the beds/ponds to the far end of the basins instead of the middle (also minimizing wind effects on effluent turbidity), **6)** separating recycle pump station functions from decanting or underdrain flows to prevent accidental flooding of ponds/bed undergoing drying, and **7)** keeping the largest area possible in drying mode.



Potential Option for Backwash Waste Washwater (Centennial Installation Shown).

Utilizing the existing basins solely for sedimentation basin solids leverages drying area. Backwash waste washwater can be treated in a separate system such as the floating decant plate system similar to the Centennial WSD installation, which has been operating successfully since 2001.

EFFLUENT GATE LEVEL CONTROLS NORMAL BASIN OPERATION AND DRIVES DECANT SUCCESS

Water levels above the gate allow flow control by the outlet and not the inlet flows—this improves effluent water quality by preventing overflow surges.

Effluent flow control from the recycle or decant pump station and water level above the gate reduces velocity and reduces turbidity carryover.

Operations staff should have the option to recycle decant flows back to the operating lagoon to reduce water quality impacts. This is critical for removing all of the free draining water from a drying bed.



Gates on the outlet structure should be used to prevent solids migration and not for flow control (operating water levels should be above the gate).

Understanding Solids Characteristics and Local Climate

Carollo's experience at functioning facilities with similar raw water quality gives us the opportunity to leverage items such as:

- Settleability and thickening requirements of the backwash waste washwater solids.

- Allowable solids loading rate (lbs/ft²).

- Impacts of a bridging polymer.

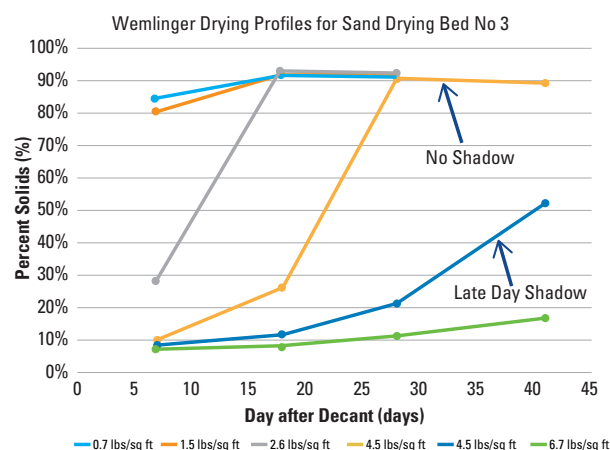
- Seasonal impacts of the drying process.

- Benefits of enhanced settling of the waste washwater on the overall treatment plant operation.

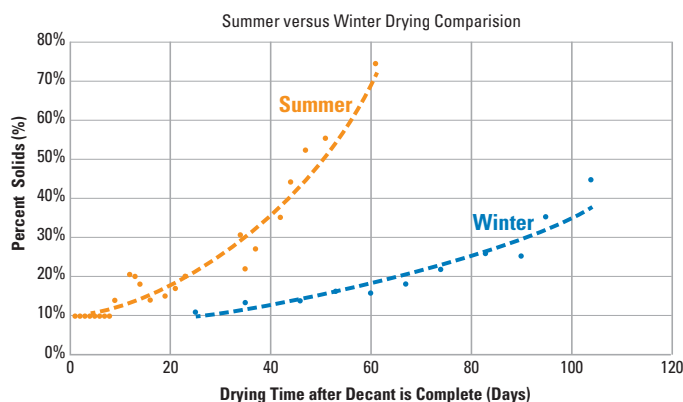
We will utilize all of this data to enhance our understanding of the Ralston options and to support collaborative decision-making with you.

Based on the differences between summer drying, winter drying, and the dynamics of seasonal water demands on utilities, we developed a dynamic model (Blue Plan-it®) for passive drying alternatives (and a separate model for mechanical dewatering). This model allows for a range of data inputs, leverages real world drying curves, and displays a simple output to help with the decision-making process.

Having helped develop a solids dewatering alternatives evaluation process and tools in Water Research Foundation (WaterRF) Project 4086, our team knows how to apply this knowledge and tailor it to specific facilities. Through implementing dewatering upgrades and conducting start-up at numerous facilities, our team understands the practical side of dewatering that we'll build into the decision process.



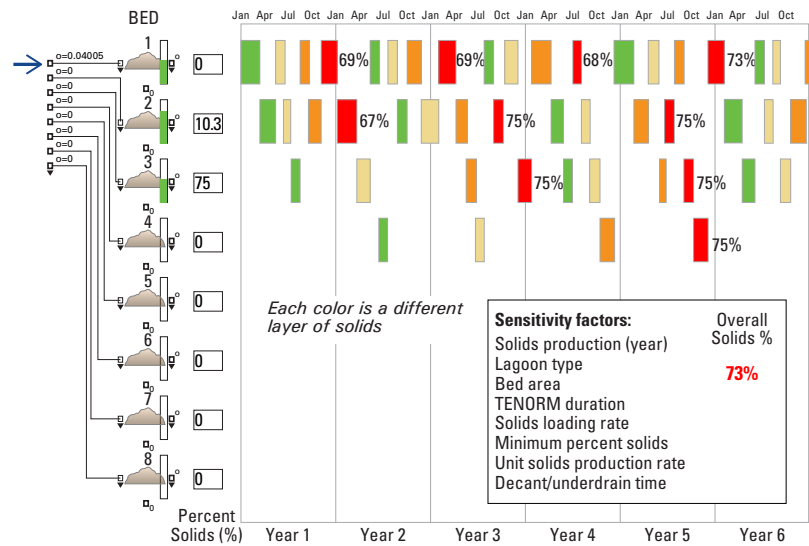
Real-world data shows the significance solids loading and maximizing sun exposure has on the ability to dry solids.



Actual drying data allows us to predict the drying characteristics for both summer and winter conditions. This allows us to right-size any Front Range passive lagoon option.

“Carollo introduced us to Blue Plan-It® when we were discussing solids handling for our 320-mgd WTP expansion project. The Blue Plan-It® model combined easy-to-understand visual graphics with a computational engine running real-time in the background. This allowed the City to quickly understand all of Carollo’s assumptions and instantly showed us the impacts of changing a variety of inputs and operational constraints. The result was an incredibly powerful tool that helped us better understand cause and effect relationships throughout the WTP, which resulted in one of the most productive meetings that we had on the project.”

– Drew Molly, PE, Assistant Director
City of Houston



Carollo has developed a Blue Plan-it® model that simulates passive drying options based on real world data. This model allows vetting a large number of configurations and operational strategies quickly and provides the ability to do a sensitivity analysis, giving operator’s the ability to change conditions and see the impact.

Project Management Approach

We will manage the project by comparing the actual work done, to the projected schedule and the budget expended. This easy to understand s-curve provides a picture of the project and identifies problems when course corrections can be made. In addition to the project management procedures in place, we also have conducted similar analysis for many utilities and we know the level of effort that these studies require.

Quality Assurance/Quality Control Program

Usually people think of QA/QC as something that gets done right before the report is handed to the client. Although these documents need to be reviewed (and will be), a more important review preceeds this. Making sure we have included all the correct mechanical and passive dewatering alternatives at the very beginning of the analysis is a key component that makes sure we get the process right. During the process of developing the list of alternatives, we will bring Wil Sarchet into the discussion and give him an opportunity to challenge the list of alternatives and the preliminary approach to the project. This back-and-forth process is a key QA/QC process that allows us to incorporate all alternatives and provide QA/QC input early when team members and Arvada are open to different ideas.

OUR TEAM’S APPROACH TO PROJECT MANAGEMENT INCLUDES THE FOLLOWING:

Develop a detailed work plan to be the driving force in project development and constant coordination with Arvada staff.

Implement interactive use of SketchUp and Blue Plan-it® in workshops to illustrate real-time changes and support timely decisions. We have found that the Blue Plan-it® solids drying and mechanical dewatering models provide the operation’s staff to ask a number of “what-if” questions that we can answer in real time.

Conduct walks at the Ralston WTP with operators/engineers to determine the best qualities of the existing system, identify areas for improvement that have yet to be identified (build on your understanding and observations), and tour other local facilities to convey ideas and concepts between your staff and our team.

Make sure that we keep the big picture in mind. Keeping in mind the approach to the coagulation scheme, future raw water quality, and potential changes to backwash process and implementation of FTW (or RTW) are all important considerations that should not be forgotten.



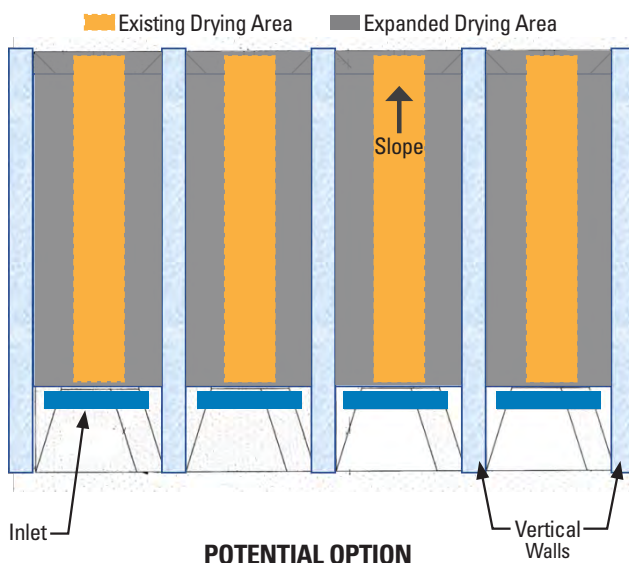
Paying Attention to the Details

Our primary job as your advisor is to listen to you, understand and identify the Ralston-specific conditions, and then apply our experience to find the best solution for the plant and its operators. At the project outset, our project team will take deliberate measures in a workshop setting with you to review the existing plant concepts, and confirm the process criteria and operational components. This attention to detail will result in confidence in the ultimately constructed project. Examples of attention to detail specific to this project that might normally get overlooked include:

Getting rid of sloped walls, building vertical walls, and leveraging the existing area.

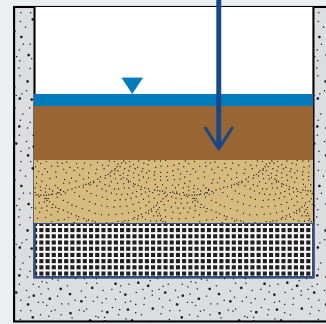
Using the existing backwash line as a dual-purpose line for FTW, similar to what we did for the Aurora Griswold WPF.

Using wedgewire screen on the outlet structure to minimize solids migration and protect from tumbleweeds in the outlet box.



By installing vertical walls and re-configuring the basins, the drying area can be increased from 14,400 ft² to 24,400 ft² for each basin (70 percent increase) while fitting in the exact same footprint.

Particle penetration – 0.2 to 0.5 inches
(this sand is removed during solids removal)



**Slow sand
filtration rate**

Dewatering Flow Through Sand Only Approach

Max loading rate = 0.0045 gpm/ft²

Total annual volume through sand = 350,000 gallons

By controlling the flow through the sand and minimizing the volume, we reduce the particle penetration in the sand and eliminate the sand maintenance challenges that have historically plagued sand drying beds.

Controlling the flow through the sand (if sand is used) to minimize particle penetration and fouling of the sand.

Providing the ability to send decant or underdrain flows to the operating lagoons instead of directly recycling.

Sequencing construction to allow continued operations without impact (for example building a separate backwash waste washwater facility first before making improvements to the existing beds/ponds) and keeping at least two beds/ponds in service at all times.

Depending on the option we implement, we will likely need a CDPHE Section 9 closure plan for the existing beds/ponds. This is a process that our team has been through in the past and understands how to execute.

Most mechanical dewatering manufacturers have the capability to test solids. We will send samples to centrifuge and belt press manufacturers to provide anticipated solids concentration values. If they know that the testing will result in performance guarantees, these results have historical matched full-scale design (San Juan Chama WTP, Albuquerque, NM). We will also leverage recent thickening testing that we have done for Front Range utilities that utilize low turbidity waters/aluminum sulfate.



Don't Forget About the Operators

Historically, the operators have to make lagoons work without any tools to assist with operations. Rather than simply saying, “don’t overload the basins,” we provide operators with solids tracking tools in SCADA. We know that overloading basins not only prevents effective solids drying but it also results in anaerobic conditions that re-release iron, manganese, and TOC. This re-release results in increased coagulant demand. For example, anaerobic solids at the Rueter-Hess WTP (Parker) resulted in a recycle stream with a coagulant demand of 60 mg/L of ferric chloride. Our team will provide ideas and tools that will assist with operations and optimization and include the following:

Solids calculations in SCADA that track the solids to the operating basin and manage the loading process.

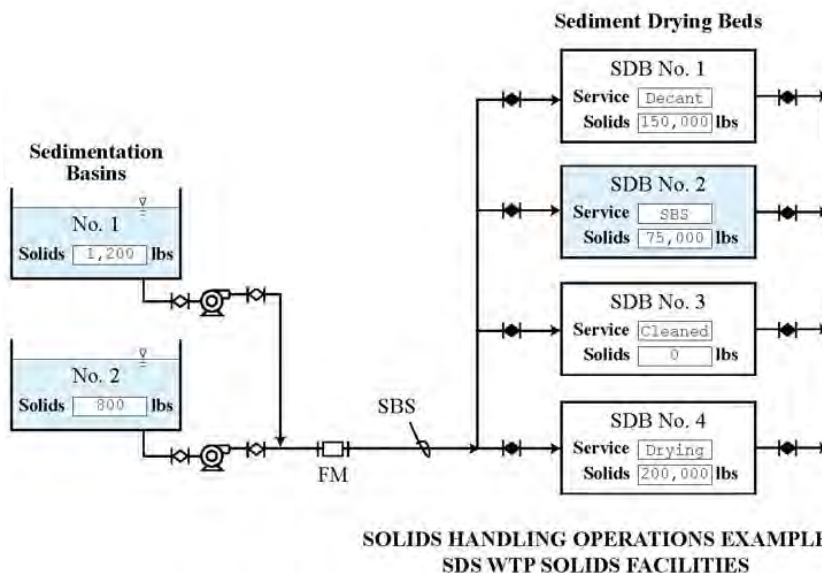
Potential for optimization like RTW which eliminates the need for future FTW implementation. In addition to reducing capital requirements, RTW also reduces the amount of backwash waste washwater by 17 percent when compared to FTW.

Potential for optimizing solid generation by the use of a low molecular weight cationic polymer (polyDADMAC) which would be used in combination with aluminum sulfate to achieve both the goals of particle charge neutralization and required organics removal. In addition, utilities such as Aurora, Central Utah, and Dallas Water Utilities have found even greater optimization benefits if the aluminum sulfate is added first, followed by the cationic polymer with 3-4 minutes of separation.



Once solids are dry, they will not resolubilize and another layer of solids can be added on top. This allows operations staff more flexibility to dispose of solids less frequently and better manage solids inventories.

We previously talked about allowing the water level to operate above the gates on the outlet structure but this is only beneficial if the recycle pump station operates at the correct flowrate. Utilizing plant flowrate and unit filter run volume (filter run times), we can predict the backwash return rate and allow this calculation to set the backwash recycle pump station flowrate (along with level trim). Historically, we have found that changing backwash recycle rates is more detrimental to a robust flocculation/sedimentation/filtration process than the quality of the recycle water.



Tracking solids production and drying bed loading through SCADA helps operations staff manage the solids loading rate (Bailey WTP).

Based on experience at Denver Water and subsequently Aurora, specifying a sand with a wide grain size distribution and proper loading of solids allows for the use of a front-end loader or a Bobcat. This eliminates the expense of removing solids from the edge of the basin with a trackhoe.

Our team has direct experience with mechanical dewatering (both at Albuquerque, NM- screw presses and Austin, TX - centrifuges) and understands the operational and maintenance requirements. Most utilities that have mechanical dewatering have a full-time person dedicated to the operation of the mechanical dewatering facility. For the Aurora Griswold WPF solids study, we examined centrifuges, belt filter presses, plate filters, and screw presses.

Task 1.1, 1.2 & 1.3

Project Initiation Meeting

- Set dates
- Set vision
- Submit project management plan
- Establish expectations

Bi-Weekly Progress Meetings

- Project progress update
- Issue identification and resolution
- Progress reports

Key Factors of Success:

- Timely scheduling
- Securing the right people in the room
- Understanding Arvada staff experience

Task 2

Background Data Review and Condition Assessment

- Data requests
- Original plant drawings
- 2020 Treatment Facility Master Plan
- Plant upgrade and expansion drawings
- Instrumentation specifications (BW flowmeter, filter instruments)
- Water quality data from ponds/beds (TOC, Mn, Fe, and Turbidity)
- Solids generation data (alum and polymer doses, RW turbidity, and TOC removal)
- UFRV data (Filter run time, filter run volume, and headloss data)
- Backwash volume
- Demand data and projections (winter, summer, number of operating plants)
- Overall recovery data (plant flowrates, backwash recovery data)
- Pump curves and pump curve test data (backwash recovery, and backwash pumps)
- Mechanical dewatering simulation testing
- Solids disposal information (solids disposal bids, solids concentration, solids removed, TENORM data)

Action/Decision Log for Tracking Data and Documenting Operator Input

Flow Balance

- UFRVs
- Historical flows
- UFBVs (current and optimized)
- FTW or RTW (future)

Existing Flow Data Analysis

Bracket RW Flows

Determine In-Plant Flow Ranges

Existing backwash and FTW or RTW time and flow analysis

Backwash waste washwater flow analysis (to lagoons)

Existing washwater recovery flow and time analysis

Key Factors of Success:

- Good estimates for future flows
- Understanding of the existing backwash and future FTW or RTW cycles
- Understanding of washwater recovery pump station

Solids Mass Balance

- Coagulant
- Polymer (both coagulant aid and floc aid)
- TOC Removal
- Existing plant flows
- Turbidity
- Future chemicals (Or different coagulants or polymers)
- Potential WQ events
- Plant flows (future)

Existing Solids Data Analysis

Examine Potential Solids Generated

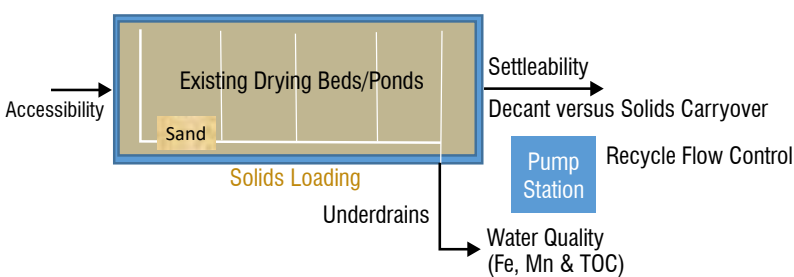
Determine Solids Ranges

Key Factors of Success:

- Estimation of future water quality and plant flows

Task 3

Alternatives Analysis (existing ponds/beds)



Key Factors of Success:

- Separating basin functions to prevent accidental flooding (operating versus decant modes)
- Ability to completely decant the basin
- Operating through the sand at a controlled flow rate (respect the sand)
- Maximizing percentage of basins that are drying and drying area
- Backwash recovery return based on predicted flowrate (based on plant flowrate and UFRV) not basin level (consistent return rate)
- Preventing water migration between basins
- Calculating solids production and managing solids loading rate
- Leveraging existing infrastructure
- Leveraging front range drying curves from “real” data
- Considering future backwash protocol including potential for FTW or RTW
- Consider recycling decant back to operating basin to minimize water quality impacts or utilizing wedgewire screen on the outlet (also helps with tumbleweed)
- Treating backwash waste washwater in a separate (much smaller) facility to maximizing drying area for sedimentation basin solids (allows for easier construction sequencing as well)

Alternatives Analysis (other alternatives)

Alternatives Evaluated:

- Concrete basins (no sand)
- Concrete basins with sand drying
- Separate WWR and sand drying beds (shallow sand drying beds)
- Separate WWR and mechanical dewatering with thickener
- Hybrid approach (phased or combination of technologies)
- Mechanical dewatering alternatives (centrifuges, belt presses, screw presses, and plate filters)

The alternatives analysis will include:

- Schematics for each alternative (layout and sizing for each process investigated)
- Life-cycle costs (including capital, operations and maintenance, and ultimate disposal)
- Site constraints
- Current and future regulations
- Ease of operation and maintenance
- Summary of cost/benefit analysis

Key Factors of Success:

- Allowable drying rate (lbs/sq ft)
- Approach to TENORM process
- Approach to washwater recycle, decant, and underdrain flow (adjustable gates, controlled flowrate)
- Correct sand specifications (non-rutting, permeability, water quality)
- Considerations for winter solids drying
- Understanding site limiting constraints (available space)

Other Considerations:

- Polymer addition
- Solids Layering (for managing disposal process)
- SCADA controls and monitoring and managing solids loading as well as predicting waste washwater

Task 4

Preliminary Design



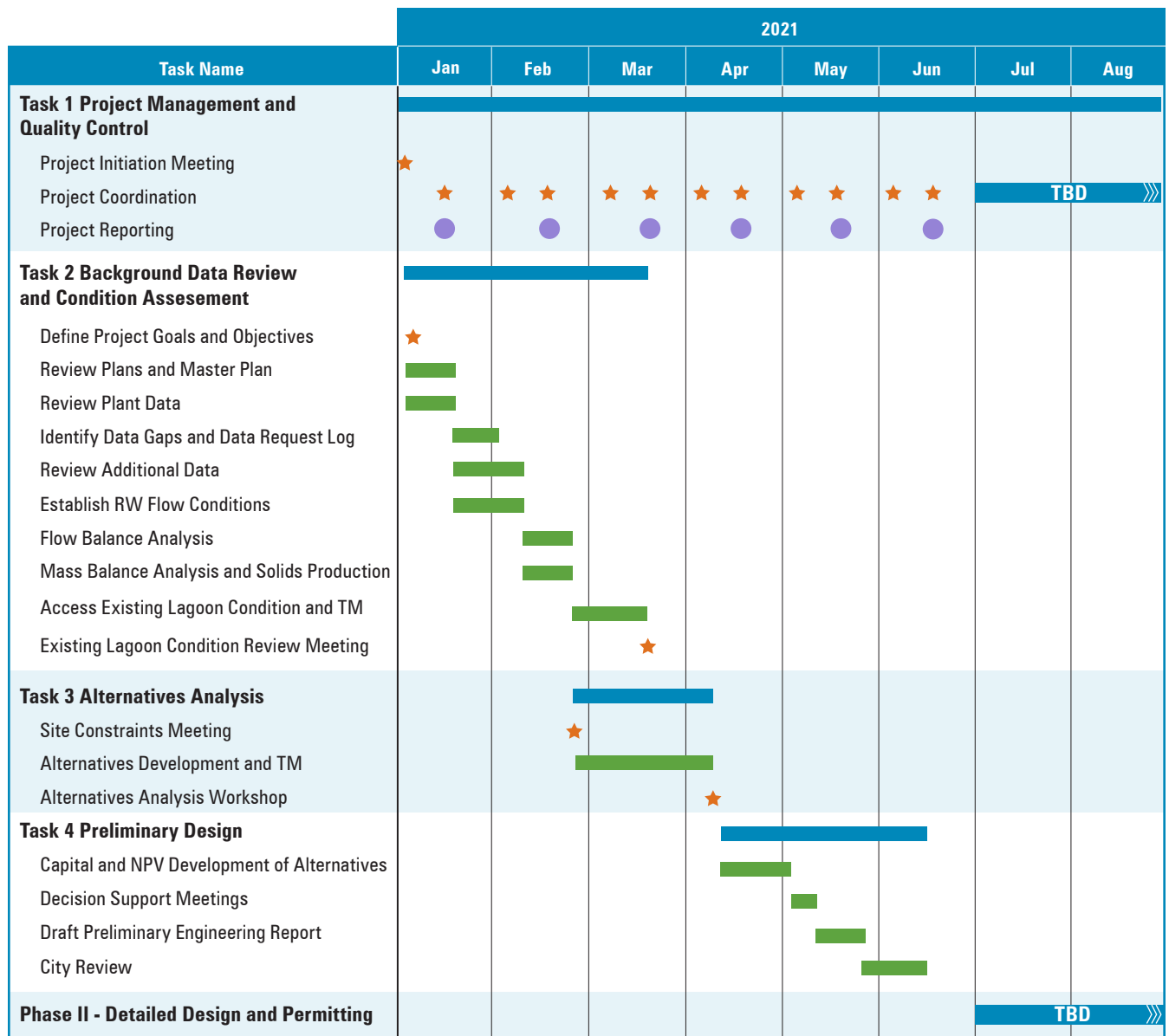
- Project goals
- Existing and future liquid and solids flow streams
- Alternatives analysis
 - Passive alternatives (concrete and sand drying)
 - Mechanical dewatering alternatives
 - Pros and Cons of each alternative
 - Conceptual cost estimates (Class V)
 - Including NPV Analysis
 - Recommendations
- Recommended alternative
 - Design calculations
 - Blue Plan-it® modeling output
 - Preliminary design drawings
- Economic analysis
 - Construction estimate (Class V)
 - O&M estimates
- Drawing and spec list
- Permitting requirements
- Implementation schedule

Key Factors of Success:

- Well defined project goals
- Projection of current and future liquid and solids balance (including monthly water quality and flows)
- Knowledge of front range drying conditions for passive alternatives
- Model with flexibility to allow operations staff to easily adjust assumptions to see the impacts
- Understanding of mechanical dewatering options and costs (like a full-time operator dedicated to the dewatering operation)

Proposed Work Schedule

The City has provided plenty of time to complete the study (December 2021). The schedule provided below is similar to the schedule for other solids studies that our team has completed.



Price Area

CAROLLO ENGINEERS, INC.
FEE SCHEDULE
City of Arvada | Ralston WTP Solids Handling Study Prelim Design

As of January 1, 2021

	<u>Hourly Rate</u>
Engineers/Scientists	
Assistant Professional I	\$134.00
Assistant Professional II	155.00
Professional	175.00
Project Professional	200.00
Lead Project Professional	227.00
Senior Professional	252.00
Technicians	
Technicians	149.00
Senior Technicians	165.00
Support Staff	
Document Processing / Clerical	108.00
Project Equipment Communication Expense (PECE) Per DL Hour	13.00
Other Direct Expenses	
Travel and Subsistence	at cost
Mileage at IRS Reimbursement Rate Effective January 1, 2020	\$.575 per mile*
Subconsultant	cost + 10%
Other Direct Cost	at cost
Expert Witness	Rate x 2.0

This fee schedule is subject to annual revisions due to labor adjustments.

*Mileage rate noted is the 2020 IRS rate, this will be updated in December when the 2021 IRS rate is posted.

City of Arvada, Colorado															
RFP-20-Ralston WTP Solids Handling Study Prelim Design November 19, 2020															
Cost Estimate															
PECE Charge = \$13 per labor hour															
	Team Member	Senior Professional	Lead Project Professional	Project Professional	Professional	Assistant Professional II	Assistant Professional I	Senior Technician	Technician	Document Processing/ Clerical	Carollo Hours	Carollo Labor Cost	Sub Consultants	Carollo ODCs	Total Engineering Cost
	2021 Fee Schedule	\$ 252	\$ 227	\$ 200	\$ 175	\$ 155	\$ 134	\$ 165	\$ 149	\$ 108					
Task	Description	\$ 252	\$ 227	\$ 200	\$ 175	\$ 155	\$ 134	\$ 165	\$ 149	\$ 108					
1	Project Management and Quality Control														
1.1	Project Initiation Meeting	4	0	4	0	0	0	0	0	0	8	\$ 1,808	\$ -	\$ 104	\$ 1,912
1.2	Project Coordination	28	0	14	0	0	0	0	0	0	42	\$ 9,856	\$ -	\$ 546	\$ 10,402
1.3	Project Reporting	16	0	0	0	0	0	0	0	0	16	\$ 4,032	\$ -	\$ 208	\$ 4,240
	Subtotal Task 1 Hours	48	0	18	0	0	0	0	0	0	66				
	Subtotal Task 1 Costs	\$ 12,096	\$ -	\$ 3,600	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	66	\$ 15,696	\$ -	\$ 858	\$ 16,554
2	Background Data Review and Condition Assessment														
2.1	Data Gathering	4	0	6	16	0	0	0	0	0	26	\$ 5,008	\$ -	\$ 338	\$ 5,346
2.2	Solids Projections, Goals, and Condition Assessment (include regs)	2	0	16	0	24	0	0	0	4	46	\$ 7,856	\$ -	\$ 598	\$ 8,454
2.3	Technical Memo Review Meeting (optional see below)	0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -	\$ -
	Subtotal Task 2 Hours	6	0	22	16	24	0	0	0	4	72				
	Subtotal Task 2 Costs	\$ 1,512	\$ -	\$ 4,400	\$ 2,800	\$ 3,720	\$ -	\$ -	\$ -	\$ 432	72	\$ 12,864	\$ -	\$ 936	\$ 13,800
3	Alternatives Analysis														
3.1	Alternatives Development and Site Constraints Analysis	24	8	36	16	90	60	0	0	8	242	\$ 40,718	\$ -	\$ 3,426	\$ 44,144
3.2	Alternatives Analysis Workshop	4	0	4	0	16	0	0	0	0	24	\$ 4,288	\$ -	\$ 312	\$ 4,600
	Subtotal Task 3 Hours	28	8	40	16	106	60	0	0	8	266				
	Subtotal Task 3 Costs	\$ 7,056	\$ 1,816	\$ 8,000	\$ 2,800	\$ 16,430	\$ 8,040	\$ -	\$ -	\$ 864	266	\$ 45,006	\$ -	\$ 3,738	\$ 48,744
4	Preliminary Design														
4.1	Capital and NPV Development of Selected Alternative	8	4	24	8	60	40	0	0	0	144	\$ 23,784	\$ -	\$ 1,932	\$ 25,716
4.2	Decision Support Meeting	8	0	8	0	16	0	0	0	0	32	\$ 6,096	\$ -	\$ 416	\$ 6,512
4.3	Preliminary Engineering Report and Workshop	8	2	12	4	40	8	0	0	16	90	\$ 14,570	\$ -	\$ 1,450	\$ 16,020
	Subtotal Task 4 Hours	24	6	44	12	116	48	0	0	16	266				
	Subtotal Task 4 Costs	\$ 6,048	\$ 1,362	\$ 8,800	\$ 2,100	\$ 17,980	\$ 6,432	\$ -	\$ -	\$ 1,728	266	\$ 44,450	\$ -	\$ 3,798	\$ 48,248
	Total Base Project Hours	106	14	124	44	246	108	0	0	28	670				
	Total Base Direct Labor Dollars	\$ 26,712	\$ 3,178	\$ 24,800	\$ 7,700	\$ 38,130	\$ 14,472	\$ -	\$ -	\$ 3,024	670	\$118,016	\$0	\$9,330	\$127,346
Optional Task (2.3)	Technical Memo Review Meeting (optional)	4	0	4	0	4	0	0	0	0	12	\$ 2,428	\$ -	\$ 156	\$ 2,584



Vincent S. Hart, P.E., ENV SP, LEED

Vinnie Hart, an executive vice president with Carollo, has 26 years of experience in planning, design, and expansion of water supply, water treatment, and water distribution facilities. He has been involved with multiple bench and pilot studies involving design and expansion of water treatment facilities, including ultraviolet (UV) disinfection, and has written various publications and given presentations on the subject. Mr. Hart has served as water supply engineer for design and operation of pilot plant facilities and water treatment plant expansion projects. His areas of expertise include pilot plant design and operation, water treatment plant design and operation, membrane filtration facilities, and UV disinfection for drinking water.

Education

MS Environmental Engineering, Virginia Polytechnic Institute, and State University, 1994

BS Environmental Engineering, Syracuse University, New York, 1992

Licenses

Professional Engineer, Colorado, Missouri, Minnesota, Kansas, New Jersey, North Carolina, Tennessee

Certifications

LEED Accredited Professional, Green Building Certification Institute, 04/18/2009

Envision Sustainability Professional, Institute for Sustainable Infrastructure, 12/2/18

Professional Affiliations

American Water Works Association

Water Environment Federation

American Society of Civil Engineers

National Association of Corrosion Engineers

Relevant Experience

→ Project manager for the City of Aurora, Colorado, 80-mgd Griswold Water Purification Facility (WPF) Solids Study and Predesign. The existing wastewater recovery lagoons at the Griswold WPF are near capacity and have challenges adequately drying solids before disposal. Additionally, the existing backwash supply, filter-to-waste, and backwash recycle systems limit the plant's treatment capacity. This study evaluated filter backwash and solids handling alternatives to address these issues, including rehabilitation of the existing lagoons, new passive lagoons and sand drying bed alternatives, and mechanical dewatering alternatives.

→ Technical advisor for the City of Greeley, Colorado, Boyd and Bellevue Solids Study. The study involved examining the solids handling systems for the 40-mgd Boyd WTP and the 35-mgd Bellevue WTP.

→ Project manager for the City of Aurora, Colorado, 80-mgd Wemlinger Water Purification Facility (WPF) Improvements. The \$24.9-million project included construction of four new sand drying beds and a reclaim wastewater pump station to return clarified water back to the Wemlinger WPF inlet, among other improvements. The project achieved 75 percent solids in 61 days of drying.

→ Project manager for the Solids Dewatering Alternatives Analysis and Preliminary Design for the City of Aurora, Colorado, Wemlinger WPF. This included evaluation of both direct filtration and future conventional treatment schemes. Options examined included concrete lined lagoons, sand drying beds, and separation of waste wastewater recovery and drying beds.

→ Project manager for the Parker Water and Sanitation District, Colorado, 10-mgd Rueter-Hess Water Treatment Plant (RHWTP) Optimization Study and Fatal Flaw Evaluation. Project components included optimization of the existing treatment process, which includes preoxidation with either permanganate or chlorine dioxide, enhanced coagulation with Actiflo™ Turbo, DOC removal with Actiflo™ Carb, filtration with ceramic microfiltration (MF) membranes, and disinfection with sodium hypochlorite. The project also included and analysis of the existing solids handling system and provided design criteria for new drying beds. The existing drying beds were overloaded, had too much detention time and poor distribution of solids. Recommendations were made to help improve performance.

→ Design manager for the Colorado Springs Utilities, Colorado, Southern Delivery Water Treatment Plant and Pump Station (2012-2013). This 50-mgd WTP includes four concrete-lined solids drying beds and two concrete lined backwash recovery basins. The concrete lined solids drying beds were constructed with shallow side slopes to maximize sun exposure and the backwash recovery basins were constructed to take advantage of the prevailing winds for drying. The plant has been operational since 2016 and due to layering in the basins has not yet disposed of solids.

→ Technical advisor for the Dallas Water Utilities, Texas, Bachman Water Treatment Plant Water Quality Improvements. The project changed the treatment process (160 mgd) to enhanced coagulation and biofiltration and involved \$64 million in

Vincent S. Hart, P.E., ENV SP, LEED

improvements, including sediment basin modifications, clearwell improvements, solids handling facility upgrades, and new chemical systems.

→ Project engineer for the Village of Park Forest, Illinois, New 5-mgd Lime Softening Water Treatment Plant design. Responsible for designing solids contact clarifier, carbon dioxide, and lime feed and solids handling systems. The project also included designing lime residuals storage and a filter press for dewatering that included an acid cleaning system.

Project manager/engineer for City of Olathe, Kansas, WTP2 Improvements Projects (two separate projects). The first project included the design of a backwash recovery basin and pump station. The second project included an additional (4th) earthen lagoon for solids handling. Changes to the plant process allowed the utility to generate 33% less solids. In addition, Mr. Hart assisted with monofill calculations and permitting.

→ Technical advisor for the City of Oklahoma City, Oklahoma, 150-mgd Draper Water Treatment Plant. This study examined the impacts of enhanced coagulation on the existing earthen dewatering lagoons. The project included evaluation of onsite mechanical dewatering and the use of geotubes for short-term dewatering.

→ Project engineer on the City of Fort Smith, Arkansas, 23.5-mgd Lee Creek Water Treatment Plant Improvements. The project included the design of two backwash recovery lagoons with plastic liners. The project also included NPDES permitting for the decant from the lagoons.

→ Project engineer for design of the City of Lander, Wyoming, 8-mgd water treatment plant project. Designed two earthen lagoons for the plant which was being converted from a direct filtration plant to a conventional plant. The lagoons handled both solids from the settling process as well as backwash waste washwater.

→ Project engineer for City of Manhattan, Kansas, WTP Master Plan and Design Projects, which entailed process changes

that allowed the City to reduce the solids generated by 20%. The project also included an evaluation of their existing earthen lagoons.

→ Project engineer for the Board of Public Utilities, Kansas City, Kansas, Quindaro WTP Study. This project was a study to evaluate the changes of switching to enhanced coagulation, specifically solids generation and dewatering. The study included dewatering testing of both belt press and filter press simulations to understand the dewatering potential of the solids.

→ Project manager for City of Thornton, Colorado, Wes Brown WTP, Alternate coagulant study. This study looked at the impacts of using an alternate coagulant to reduce and minimize membrane fouling potential. As a part of this analysis, the impacts of switching coagulants on dewatering was examined. The City currently has 3 earthen lagoons that handle both backwash waste washwater and solids from the existing sedimentation processes.

→ Technical advisor and QA/QC reviewer for the City of Concord, North Carolina Coddle Creek Water Treatment Plant Sludge Handling Facility. The project required fast-paced planning and design to complete bid documents in four months. The project included gravity thickener, centrifuge dewatering, and sludge pumping systems for a 12-mgd water treatment plant.

→ Project engineer for a filter-to-waste study at the 50-mgd Knoxville Utilities Board, Tennessee, Water Treatment Plant. The project involved evaluating water quality and determining if filter-to-water was necessary. The State of Tennessee granted an extension with future testing required. After further testing, the State granted a variance for the Knoxville Utilities Board and rewrote the filter-to-waste rule based on the results of this study.

→ Project engineer for a water plant renovation for the City of Rock Island, Illinois, Water Plant Improvements, which included design of a pulsating clarifier, along with associated chemical feed systems for solids thickening, and a residuals pump station and force main.



John A. Meyer, P.E.

John Meyer has 4 years of experience in water treatment plant evaluation and design. His experience includes conventional treatment, pellet softening, ozone, drinking water disinfection, chemical storage and feed, corrosion control, and residuals handling.

Education

MS Civil Engineering,
University of Colorado,
Boulder, 2016

BS Environmental
Engineering, University of
Colorado, Boulder, 2014

Licenses

Professional Engineer,
Colorado

Professional Affiliations

American Water Works
Association

Engineers Without
Borders-USA, Rocky
Mountain Professional
Chapter

Relevant Experience

→ Project engineer for the City of Aurora, Colorado, Griswold Water Purification Facility Solids Study and Preliminary Design. Developed hydraulic models of the facility's backwash, filter-to-waste, and washwater recycle systems. Performed bench scale tests to characterize residual sludge and the condition of the existing lagoon sand. Responsibilities also included analyzing solids dewatering alternatives including engineered lagoons, sand drying beds, and mechanical dewatering systems. Developed two Blue Plan-it® models to evaluate the various solids handling alternatives. The first was a dynamic model which simulated solids drying in a lagoon or sand drying bed to evaluate how lagoon size and loading rate impacted long term operations and cost. The second model was used to evaluate how different solids handling alternatives would be impacted by operational changes, energy consumption, drying time, and disposal cost.

→ Project engineer for the City of Greeley, Colorado, Boyd Lake WTP and Bellvue WTP Solids Study. Evaluated the existing solids handling systems for the City's two water treatment plants. Developed conceptual designs for several alternatives at each facility to improve those systems in order to produce better recycled water quality and enhance solids dewatering. Provided cost estimates for the preferred alternatives and made recommendations to the City on which technologies would be best suited to meet their unique needs.

→ Project engineer for the City Aurora, Colorado, 80-mgd Wemlinger WPF CT Chamber Design. The project consisted of a 2.5 mg buried concrete disinfection chamber with a serpentine channel and a baffling factor of 0.80 outside of the treated water reservoir at the Wemlinger WPF. The design included chlorine and ammonia dosing and flash mixing to produce

chloramines at both the beginning and the end of the CT Chamber, sodium hydroxide dosing to adjust pH, chlorine, ammonia, pH monitoring, and turbidity monitoring, and a supplemental chlorine boosting location part way through the CT chamber.

Additional design elements included flow metering, pumped CT-to-waste to enable quick draining of the CT chamber, and the ability to bypass the treated water reservoir to two different pressure zones in order to allow the treated water reservoir to be maintained without taking the water treatment plant offline. The preliminary design work through the 30 percent deliverable for this project was completed using Sketchup modeling to develop an initial layout of the CT Chamber and the associated pipe galleries.

→ Project engineer for the City of Aurora, Colorado, Wemlinger Water Purification Facility Disinfection Evaluation and Alternatives Analysis. Evaluated computational fluid dynamics data and historical water quality data to create several alternatives for improving disinfection contact time at the facility. Developed cost estimates for each of the proposed alternatives and created a preliminary design and 3D model of the preferred CT Chamber alternative.

→ Project engineer for the City of Greeley, Colorado, Boyd Lake WTP Improvements project. Served as the primary design process design engineer for a new chemical storage and feed facility to house caustic soda, hydrogen peroxide, and sodium hypochlorite equipment. Also provides design support for the conversion of an existing sedimentation basin into an intermediate ozone facility, and the addition of a liquid oxygen system for hypolimnetic lake aeration of the facility's source water body.

→ Project engineer for the City of Aurora, Colorado, Wemlinger Treated Water

Awards

Distinguished Senior in Environmental Engineering, University of Colorado, College of Engineering and Applied Science, 2014

Best Student Paper Award, "Assessing Population Weighted Risk Reduction Implications for Centralized vs. Distribution System-Based DBP Control Strategies." AWWA Water Quality Technology Conference, 2016. Indianapolis, Indiana.

John A. Meyer, P.E.

Reservoir Rehabilitation. The project involves replacing roof access hatches; adding vents; demolishing piping and appurtenances inside and connecting to the existing 10-MG concrete treated water reservoir; installing multiple sections of piping, including tie-ins to existing piping; adding a valve to the reservoir drain pipe; and miscellaneous treated water reservoir concrete penetrations and repairs associated with piping and demolition. The bid price for the project was \$2.5 million, and the fast-track project needed to be constructed during the winter/spring of 2017. The project was staged to prevent shutdown of the Wemlinger Water Purification Facility during construction of the disinfection contact basin.

→ Project engineer for the City of Aurora, Colorado, First Creek Lift Station Capital Improvements. Developed hydraulic models to analyze several alternative solutions for enhancing lift station capacity.

→ Project engineer for Colorado Springs Utilities, Colorado, Edward W. Bailey Water Treatment Plant Water Quality Testing. Performed bench scale experiments to help optimize coagulation and flocculation processes upon plant start-up. Investigated water quality monitoring issues related to manganese.

→ Project engineer for the City of Thornton, Colorado, Wes Brown Water Treatment Plant Alternative Coagulants and Ammonia Injection Relocation Study. Responsibilities included analyzing data from bench and pilot scale experiments with different coagulants to determine the most viable approaches for increasing membrane production rates. Assisted in developing process train modifications, which could be implemented at full scale to enhance treatment capacity while achieving established water quality goals.

→ Project engineer for the City of Thornton, Colorado, Water Treatment Plant Replacement Owner's Advisor. The City elected to replace the 20-mgd Water Treatment Plant with a new 20-mgd plant through a design-build (DB) contract. Assisted in the development of a conceptual

design for a new treatment plant to replace the existing Thornton Water Treatment Plant. Evaluated historical data to establish treatment process design criteria and goals.

→ Project engineer for the South Adams County Water and Sanitation District, Colorado, Pellet Softening Disinfection Improvements. The project consisted of the design of a full-scale pellet softening system at the Klein WTF for the removal of calcium hardness. This included a series a pellet reactors, a stabilization basin of pH adjustment, anthracite over sand filters for turbidity removal, a new chemical storage building, and all of the associated facilities required to implement the system. Also included in this project is the design of a temporary sodium hypochlorite feed system which allowed the District to continue operating the facility during construction after the existing chlorine system was demolished. Preliminary design work for the layout of the facility was completed using Sketchup modeling.

→ Project engineer for the South Adams County Water and Sanitation District, Colorado, Pellet Softening Study. This project consisted of a month-long pilot skid operation to evaluate the feasibility of pellet softening as a viable hardness removal strategy at the Klein Water Treatment Facility. During this study, various testing was conducted to determine the impact of adjusting pH, reactor loading rate, source water wells, and seed bed characteristics to determine the optimal operating parameters required to achieve the District's hardness removal goals. The results of this pilot study were used to develop alternative treatment schemes, site layouts, and cost estimates for various full-scale pellet softening systems which would potentially be implemented at the site.

Project engineer for the Willmar Municipal Utilities, Minnesota, Master Plan and Preliminary Design Report for Conversion to Biofiltration. Researched and evaluated several alternative treatment plant and point-of-use technologies to reduce salty discharges from domestic water softeners to the wastewater treatment system.



William (Wil) Sarchet, P.E.

Wil Sarchet has 12 years of experience in water treatment plant evaluation, design, construction, and commissioning. His experience includes conventional treatment, lime softening, and advanced technologies such as ozone, biological filtration, and pellet softening. Wil's experience as an engineer on-site during construction gives him a constructor's perspective that enhances his design skills.

Education

MS Environmental Engineering, University of Texas at Austin, 2008

BS Civil Engineering, Texas A&M University, 2006

Licenses

Professional Engineer, Colorado, Texas

Certifications

Envision Sustainability Professional, Institute for Sustainable Infrastructure

Professional Affiliations

American Water Works Association

Water Environment Association of Texas, Central Texas Chapter (Scholarship Committee, 2010-2015; Young Professionals Committee, 2010-2012; Treasurer, 2012-2014; Vice President, 2014-2015)

Relevant Experience

→ Project engineer for the City of Aurora, Colorado, 80-mgd Griswold Water Purification Facility (WPF) Solids Study and Predesign. The existing washwater recovery lagoons at the Griswold WPF are near capacity and have challenges adequately drying solids before disposal. Additionally, the existing backwash supply, filter-to-waste, and backwash recycle systems limit the plant's treatment capacity. This study evaluated filter backwash and solids handling alternatives to address these issues, including rehabilitation of the existing lagoons, new passive lagoons and sand drying bed alternatives, and mechanical dewatering alternatives.

→ Project engineer for the City of Aurora, Colorado, 80-mgd Griswold Water Purification Facility (WPF) PLC Conversion and Improvements. The project consists of replacing all of the plant's PLC control system with new PLCs, including all PLC and HMI programming and configuration. Mr. Sarchet was responsible for creating all new process and instrumentation diagrams (P&IDs) and control narratives for the redesigned control system, and development of new instrumentation and equipment to improve facility operation.

→ Design engineer for the City Aurora, Colorado, 80-mgd Wemlinger Water Purification Facility CT Chamber Design. The project consisted of a 2.5-mg buried concrete disinfection chamber with a serpentine channel and a baffling factor of 0.80 outside of the treated water reservoir at the Wemlinger WPF. The chamber is designed to operate at variable water surface levels. The low level will minimize volume and associated disinfection byproducts at low flows, as well as maximize the allowable filter headloss. Higher water levels allow for maximum depth during high flows to maximize disinfection credit. The

design included chlorine and ammonia dosing and flash mixing to produce chloramines at both the beginning and the end of the CT Chamber, sodium hydroxide dosing to adjust pH, chlorine, ammonia, pH monitoring, and turbidity monitoring, and a supplemental chlorine boosting location part way through the CT chamber. Additional design elements include, pumped CT-to-waste to enable quick draining of the CT chamber and the ability to bypass the treated water reservoir to two different pressure zones in order to allow the treated water reservoir to be maintained without taking the water treatment plant offline.

→ Process engineer for the City of Aurora, Colorado, 80-mgd Wemlinger Water Purification Facility Disinfection Evaluation and Alternatives Analysis. The project included computational fluid dynamics analysis of existing disinfection conditions and development of alternatives for chlorine and chlorine dioxide contact time. Alternatives were developed utilizing a portion of the existing treated water reservoir for disinfection contact, as well as utilizing a separate disinfection contact chamber outside of the treated water reservoir that would provide contact time. A preliminary design of the recommended approach was developed, including a 3D model of the recommended disinfection contact chamber, which utilized multiple weir levels and ammonia addition locations to minimize disinfection byproduct formation during low-flow conditions.

→ Project manager for the Parker Water and Sanitation District (PWSD), Colorado, 10-mgd Rueter-Hess Water Purification Facility (RHWPF) Sodium Hypochlorite Expansion Study and Design. The project consisted of expansion of the existing sodium hypochlorite storage and feed facility and addition of a transfer pump for chemical transfer between tanks and for

William (Wil) Sarchet, P.E.

delivering chemical to totes for use at off-site facilities. The use of PVC liners in the chemical tanks was investigated to improve tank life.

→ Project engineer for the City of Greeley, Colorado, 40-mgd Boyd Lake Water Treatment Plant and 35-mgd Bellvue Water Treatment Plant Solids Study. The project consisted of analysis of the existing backwash system, filter-to-waste system, backwash recycle system, and solids handling system for each facility. An existing condition analysis and improvement analysis was performed, evaluating alternatives for rehabilitating the existing lagoons and thickener based on capacity requirements, City goals, regulations, and life cycle costs. Additional alternatives were developed that leverage and build on the existing infrastructure.

→ Project manager for preliminary design for the Central Arkansas Water, Arkansas, Ozark Point Water Treatment Plant Rehabilitation Improvements. The project involved improvements to the existing rapid mix and flow splitting structure, pretreatment facility, biological filters, and clearwells, as well as new filter washwater handling and solids handling facilities. Pretreatment improvements included an evaluation of several technologies (gravity sedimentation, sedimentation with inclined plate settlers, and ballasted flocculation with Actiflo™) with similar footprints to the existing flocculation and sedimentation basins. Originally a 24-mgd facility, all alternatives had provisions for future expansion to 36 mgd. Design of these new facilities had to consider maintaining plant capacity through construction to meet water supply demands.

→ Project manager for the City of Thornton, Colorado, 50-mgd Wes Brown Water Treatment Plant Maintenance Project Design and Engineering Services During Construction. The project consisted of replacement of the existing coagulant induction mixing system with a new pump diffusion flash mix system for improved coagulant mixing and membrane CIP neutralization improvements to allow for neutralization of maintenance and recovery

cleans in the reject tanks as opposed to in the membrane tanks, increasing the effectiveness of the cleans and reducing fouling potential.

→ Design engineer for preliminary and final design phases for the City of Austin, Texas, Handcox Water Treatment Plant (WTP 4). The project includes intake facilities on Lake Travis, raw water conveyance and pumping, lime softening, filtration, residuals handling, chemical feed, and ancillary facilities. WTP 4 will have an initial capacity of 50 mgd with provisions for expansion to an ultimate capacity of 300 mgd. Design responsibilities included pretreatment facilities, which consist of two 150-foot-diameter upflow solids contact clarifiers and raw water flow control pipe gallery. Mr. Sarchet was also responsible for design of the carbon dioxide storage and feed system, liquid ammonium sulfate storage and feed system, sludge thickener, sludge thickener pump station, and sludge holding tanks.

→ Project engineer for the South Adams County Water and Sanitation District, Colorado, Pellet Softening Pilot Evaluation for Hardness Reduction at the Klein Water Treatment Facility. Pellet softening is a compact and efficient modification of traditional softening, which consists of adding lime or caustic soda which reacts with calcium present in the source water to form calcium carbonate. Sand grains or calcium carbonate pellets are added to act as a seed on which the calcium carbonate precipitates inside an upflow reactor. The resulting pellet is free draining resulting in solids that are 100 percent calcium carbonate, requiring no additional solids handling and less material that requires ultimate disposal. Responsibilities included assembly of the pilot unit, development of a piloting protocol, pilot operation, and development of the piloting report. The pilot was able to confirm that pellet softening would be able to meet the District's finished water hardness goals, reducing source water calcium hardness from greater than 400 mg/L as CaCO_3 down to 50 mg/L as CaCO_3 .



Mark J. Gross, P.E.

Mark Gross, a vice president with Carollo, has 28 years of experience including the design and construction of municipal water treatment facilities and infrastructure. In addition, Mark is one of Carollo's national experts in the field of water treatment plant residuals management. His credentials in water treatment residuals management include author and co-authorship of residuals related articles, including Chapter 18 on Process Residuals in the 5th Edition of ASCE/American Water Works Association (AWWA) Water Treatment Plant Design Handbook. Mark is past chair of the Water Treatment Plant Residuals Research Management Committee, and he maintains an active membership role in AWWA committees.

Education

MS Environmental Engineering, University of Arizona, 1993

BS Chemical Engineering, University of Arizona, 1992

Licenses

Environmental Engineer, Arizona

Professional Engineer, New Mexico, Nevada

Water Distribution System Operator, Grade 4, Arizona

Water Treatment Plant Operator, Grade 4, Arizona

Wastewater Collection System Operator, Grade 3, Arizona

Wastewater Treatment Plant Operator, Grade 3, Arizona

Professional Affiliations

American Water Works Association

AZ Water Association

- Water Treatment Committee Member
- Annual Conference Task Force Committee, Past Chair
- Membership Services Committee Chair

American Water Works Association

- WTP Residuals Research Mgmt Committee, Past Chair
- Committee Member

Water Environment Federation

Relevant Experience

→ Residuals technical advisor for the City of Aurora, Colorado, 80-mgd Griswold Water Purification Facility (WPF) Solids Study and Predesign. The existing washwater recovery lagoons at the Griswold WPF are near capacity and have challenges adequately drying solids before disposal. Additionally, the existing backwash supply, filter-to-waste, and backwash recycle systems limit the plant's treatment capacity. This study evaluated filter backwash and solids handling alternatives to address these issues, including rehabilitation of the existing lagoons, new passive lagoons and sand drying bed alternatives, and mechanical dewatering alternatives.

→ Process engineer for solids dewatering for the City of Aurora, Colorado, Wemlinger Water Purification Facility Solids Dewatering Alternatives Analysis Study and Design. This project includes development and evaluation of alternative layouts and operational schemes to improve residuals dewatering and provide future capacity. Design includes sand drying beds and return water pump station. A column study was performed to select the optimal and most cost-effective sand media.

→ Principal-in-charge for the Albuquerque Bernalillo Water Utility Authority, New Mexico, San Juan Chama Water Treatment Plant (SJCWTP) Chemical Solids Handling Improvements Study. This project involves evaluation of alternative approaches to increase/optimize the capacity of the existing four solids drying beds at the plant, as well as supplementing the chemical solids facility capacity. This evaluation addresses supplemental capacity to allow sustained operation of the SJCWTP at a

finished water production rate of 92 mgd and the ultimate finished water flow rate of 120 mgd, as determined by the selected influent solids concentrations. Given the variability and amount of solids that can come from the Rio Grande, the Authority considered a high turbidity limit when fully operating the plant based on factors, such as treatability costs, cost of additional solids handling facilities, and other factors.

→ Residuals technical advisor for the Chino Desalting Authority, California, 2.75-mgd Chino II Desalter Concentrate Treatment System. Project components included a pelletized lime softening process, sedimentation, media filtration, and secondary reverse osmosis to increase the recovery of the Chino II Desalter from 82 percent to 94 percent. 26 tons of calcium carbonate pellets are produced daily and sold to an area limestone quarry.

→ Project engineer for the City of Phoenix, Arizona, Val Vista Water Treatment Plant Solids Handling Facility Construction. This \$35M, 26-month-long CMAR project included the construction of new facilities for the treatment of "used" water and residuals generated from the treatment processes. The project includes the construction of new gravity thickeners, backwash clarifiers, and centrifuges for dewatering water treatment plant residuals, and a truck loading facility for off-site disposal of the cake.

→ Owner-requested subconsultant to the design/construction management engineer for the City of Phoenix, Arizona, Deer Valley Water Treatment Plant Solids Handling Facility Construction. Treatment processes include thickened sludge equalization and

Mark J. Gross, P.E.

storage, backwash clarifiers, centrifuges, and a cake loading facility.

→ Project manager for the City of Phoenix, Arizona, Union Hills Water Treatment Plant Solids Handling Improvements. This project involved design and construction services for installing a new gravity thickener, upgrading the existing Pretreatment Facilities, and installing a new Dewatering Building equipped with new centrifuges and a shaftless screw conveyor system. The project also included a pre-selection process for the centrifuges to provide a competitive pricing environment for major equipment acquisition.

→ Project engineer for the City of Phoenix, Arizona, Union Hills Water Treatment Plant 160-mgd Improvements Design. This \$37M, four-phased project includes the rebuild of 32 existing filters, installation of 4 new filters equipped with air scour backwash, pretreatment facilities with sludge collection, treatment chemical storage and feed equipment, and solids handling facilities. The solids handling facilities include a new centrifuge dewatering building and trunk loading system, and off-site injection of residuals at a tree farm.

→ Technical advisor for the City of Sacramento Department of Utilities, California, Water Treatment Plants Rehabilitation Design and Construction. This project objective was to provide improvements needed to rehabilitate the Sacramento River Water Treatment Plant (SRWTP) to 160-mgd and provide improvements for the 200-mgd E.A. Fairbairn Water Treatment Plant (EAFWTP). Key process components included new solids handling systems, including mechanical dewatering to augment the existing lagoon system. Key components at EAFWTP included new solids handling systems including mechanical dewatering to augment the existing lagoon system. The construction cost for the project was \$135M.

→ Project engineer for the City of Boulder, Colorado, Betasso Water Treatment Plant Settling and Residuals Improvements. This \$6-million project included the evaluation of potential capital improvements for existing plant process components. Plant process components evaluated included the refurbishment of existing sand drying beds and lagoons for improvements to residuals storage and dewatering capabilities, settling basin improvements through modified baffling, reduced chemical coagulant dosages through improved flash/rapid mixing, and miscellaneous plant improvements.

→ Residuals technical advisor for the City of Austin, Texas, WTP #4, which included lime softening and new solids handling facilities with mechanical dewatering.

→ Residuals technical advisor for the Manatee County, Florida, Lake Manatee WTP Solids Dewatering Analysis study. The purpose of this study was to develop alternatives to address overloaded solar drying beds at the plant, including mechanical dewatering options.

→ Residuals technical advisor for the San Gabriel Water Company Fontana, California, WTP solids handling upgrades study and design. The study analyzed alternatives to upgrades solids handling at the plant to address overloaded drying beds, and the design includes a mechanical dewatering facility with a new gravity thickener and centrifuge dewatering.

→ Residuals technical advisor for the Irvine Ranch Irrigation District, California, 28-mgd Baker Water Treatment Plant Design and Construction. Project components include a new water treatment plant, solids handling pump station, gravity thickeners, and solids conveyance.



James J. Kriss, P.E.

Jim Kriss has 27 years of experience in infrastructure and environmental engineering and has served as both project manager and project engineer on a wide variety of projects. Project delivery for various designs has included traditional design bid build and alternate deliveries including both design build and CM at risk. Mr. Kriss' design and construction experience includes mechanical pumping and piping systems, raw and potable pipelines, sanitary and storm sewer pipelines, sanitary forcemains, hydraulic design and modeling, general civil site development, disinfection and dechlorination systems, geomembrane liner systems for primary and secondary containment, and solid waste permitting and design.

Education

BS Geological Engineering, Colorado School of Mines, 1992

MS Engineering Systems, Colorado School of Mines, 1998

Licenses

Professional Engineer, Colorado, Kansas

Professional Affiliations

American Society of Civil Engineers

National American Society for Trenchless Technology

Relevant Experience

→ Project engineer for the City of Aurora, Colorado, Wemlinger Water Purification Facility (WPF) Improvements. Designed civil/site development for these filter backwash solids handling improvements. New concrete lined basins sand drying basins were designed to replace the existing sand drying lagoons. Filter backwash water is conveyed by gravity from the WPF across a major arterial roadway to the new basins. Yard piping was configured to all four new basins to operate in series or in parallel. Clarified washwater is conveyed through gravity pipelines to a new submersible pump station wet well, and is then pumped to the front of the WPF for treatment as potable water. Civil/site design involved grading, drainage, and paving design, yard piping, tunneled crossing of Quincy Avenue, AutoTurn analysis of vehicle tracking for retaining wall design, storm drainage hydrologic evaluations, storm drain design, earthwork calculations, erosion control design, SWMP report, and permitting.

→ Project manager for the Town of Avon, Colorado, I-70 Regional Transportation Operations Facility. The project for this bus storage and administration facility was a Construction Management at Risk (CMAR) delivery with FCI constructors under contract during final design. The Owner, Engineer, and Contractor developed a highly collaborative relationship throughout project execution, which contributed to the project's success. The bus storage facility was designed consistent with mountain vernacular architecture, and included a 20,500 sf bus storage floor, 2,600 sf bus lube room, 1,900 sf bus wash and equipment room, 2,700 sf main level operations offices and mechanical

and electrical rooms, and 5,900 sf second level administrative office space. Site improvements included paving, grading, and utility improvements along with relocation of existing modular buildings for use on other areas of the site. The project was permitted through the Town Planning and Zoning building development review public hearing process, along with the building department for code review.

→ Project engineer for the East Cherry Creek Valley Water and Sanitation District, Colorado, Northern Water Supply project. Responsible for all civil/site design of the District's Northern Water Supply Project reverse osmosis water treatment plant. The project included paving, grading, and drainage design and associated calculations, 12- to 48 inch yard piping design for site utilities and process pipelines, concentrate storage ponds and associated permitting, water quality pond and discharge structures, and execution of a separate construction contract for site surcharging. Permitting of the pond was completed through the Solid Waste Division of the Colorado Department of Public Health and Environment (CDPHE) based on updated draft Section 9 regulations. A Construction Quality Assurance Plan (CQAP) was prepared and approved by the state and made a condition of contract documents for construction. Construction of the pond was inspected and documented in accordance with the CQAP, and a Construction Quality Assurance Report (CQAR) was submitted to the state for approval of the pond for commissioning. In addition to the construction quality assurance documents, an Engineering Design and Operations Plan (EDOP) was prepared to document purpose and operation requirements of the facility,

James J. Kriss, P.E.

including permit requirements and sampling and analysis plan.

→ Project engineer for the City of Westminster, Colorado, Big Dry Creek Wastewater Treatment Plant. Responsible for all civil/site design of the city's Big Dry Creek Wastewater Treatment Plant Expansion. Executed final design of all site paving, grading, and drainage improvements. Also supported construction field staff to evaluate and address design modifications based on changed field conditions. Close coordination with other design disciplines was maintained to avoid process and utility conflicts during construction.

→ Project manager for the City of Aurora, Colorado, Fitzsimons-Peoria Stormwater Outfall project. The design entailed removal and replacement of aging, undersized stormwater infrastructure installed in the 1950's and included approximately 15,000-feet of 48-inch to 96-inch stormwater pipeline replacements along with associated storm drain inlets. The alignments are through a highly urbanized area of Aurora along six lane arterial roadways managed by the City and CDOT. Hydraulic modeling was updated from prior studies and correlated to the final design recommendations for pipeline and inlet sizing. Permitting efforts included environmental habitat assessments for a Nationwide 404, Urban Drainage Flood Control District for discharge to Sand Creek, the City, CDOT, and RTD for roadway work and crossing permits, and the design included detailed traffic control plans. The project was delivered as a Construction Manager/ General Contractor (CMGC) contract. The design team assisted the City in preparing CMGC procurement documents for advertising and made recommendations for selection. Once authorized, the CMGC Contractor, BT Construction, joined the design team, and final design was implemented with their material and constructability expertise, with project cost control as a primary factor.

→ Project manager for the City of Aurora, Colorado, Gun Club Raw Water Expansion. The project involved design and construction of raw water system improvements to

expand the City's existing raw water deliveries to Heritage Eagle Bend golf course. The existing raw water pumps were undersized for the expanded service, and replaced with higher capacity pumps, including soft starters, pump control valves, and surge anticipator valves for transient control. A new 1.6-mile, 12-inch raw water transmission pipeline was designed to tie into the existing raw water pipeline for conveyance to Heritage Eagle Bend. The new pipeline alignment is routed through both urban and open space areas and includes environmentally sensitive areas in the floodplain, wetlands construction, and two horizontal directional drill sections. In addition, a very complex flow split and flow control system was designed to deliver raw water to the two end users at varying flow rates.

→ Project manager for the Denver Water, Colorado, Conduit No. 31 Relocation. The project involved design services for relocation of Denver Water's Conduit No. 31 in the Platte Street district of downtown Denver. The existing 30-inch transmission main was located in a parking lot that was purchased for vertical development by the Nichols Partnership. Design plans and specifications were prepared in accordance with Denver Water standards for relocation of the line out of the parking lot and into Platte Street with high utility congestion. Significant coordination was required between Denver Water, Nichols Partnership, and the vertical Construction Manager at Risk Contractor.

→ Project manager and technical design manager for the City of Aurora, Colorado, Second Creek Interceptor Segment 1E Design. The pipeline is saving Aurora \$15 million that would have otherwise been invested in a temporary increase to their lift station. The project includes 5,000 linear feet of 30-inch pipe, trenchless technologies, and a flow meter flume structure. Project stakeholders included the City of Aurora and Metro Wastewater Reclamation District, and required permitting through CDPHE, City of Aurora, and City and County of Denver.



Jason C. Till, P.E.

Jason Till has 10 years of experience designing a variety of structural engineering projects, from schematic design through construction completion.

Education

BS Structural Engineering, Pennsylvania State University, 2010

MS Structural Engineering, University of Colorado Denver, 2019

Training, C2 Stairways and Ladders R2, ClickSafety.com, Inc.

Training, C2 Fall Protection, ClickSafety.com, Inc.

Training, Confined Spaces: Dangerous Places, J.J. Keller

Licenses

Civil Engineer, California
Professional Engineer, Colorado

Relevant Experience

→ Lead structural engineer for the City of Fort Collins, Colorado, On-Call Agreement Projects at Drake WRF, including the Dewatering and Strain Press Design, Carbon Addition, Hypochlorite Disinfection, Cogeneration Design, UV Design, and Sidestream-P Treatment Design.

Responsible for designing structural foundations, equipment anchorage and retrofit of steel joists in Blower building for new HVAC equipment systems during Carollo's five-year continuing services contract.

→ Structural staff engineer for the City of Aurora, Colorado, Wemlinger Water Purification Improvements Engineering Services During Construction. Project included construction of four new sand drying beds and a reclaim washwater pump station to return clarified water back to the Wemlinger WPF inlet as well as other improvements. Provided structural services during the design phase and inspections during the construction phase of this project.

→ Lead structural engineer for the City of Aurora, Colorado, Wemlinger Water Treatment Plant CT Chamber Project. Responsibilities included structural design and analysis for a buried cast-in-place concrete chlorine contact chamber. Facility included two pipe galleries and an above grade precast concrete storage and electrical structure.

→ Project manager for the City of Aurora, Colorado, Wemlinger Treated Water Reservoir Structural Assessment. Evaluated structural condition of existing treated water reservoir and provided written assessment and recommendations for ongoing maintenance.

→ Lead structural engineer for City of Aurora, Colorado, Fitzsimons-Peoria Stormwater Outfall Project. Designed storm water vaults and retaining walls for new

outfall system. Provided engineering services during construction.

→ Lead structural engineer for Mount Werner District, Colorado, Facility Master Plan. Evaluated existing treatment facilities and provided recommendations for maintenance and repair.

→ Structural staff engineer for the City of Longmont, Colorado, Ammonia Treatment and Biosolids Dewatering Improvements project. This \$30-million progressive design-build project includes expansion of secondary treatment capacity and incorporation of side stream treatment to meet more stringent daily effluent ammonia limits. The project also includes design and construction of a new centrifuge dewatering facility with centrate handling and storage. Provided structural design for aeration basin modifications, a new secondary clarifier, and a dewatering building. Also provided engineering services during construction.

→ Structural staff engineer for the Colorado Springs Utilities SDS Raw Water Pump Stations Design-Build Project Engineering Services During Construction, Colorado. The project included the design of side-stream ozone, a pump mix rapid mixing system, vertical mixer flocculation, parallel plate sedimentation, and engineered biofiltration. The ozone system utilizes injection equipment to dissolve up to 650 pounds per day of ozone into a small side-stream flow of settled water that is then flash mixed into the overall process stream. Responsibilities included submittal review for structural elements.

→ Structural staff engineer for the Metro Wastewater Reclamation District, Colorado, PAR 1225 South Headworks and Grease Processing Facility Improvements project. The work involved extensive modifications to the existing screening, grit removal, and grease processing facilities for the 100-mgd South plant.

→ Structural staff engineer for the City of Loveland, Colorado, Biological Nutrient

Jason C. Till, P.E.

Removal (BNR) Project. The project includes modifications to influent screening and secondary treatment for compliance with total nitrogen and total phosphorus limits set by Colorado's Regulation 85, and an increase in plant treatment and hydraulic capacity from 10 mgd to 12 mgd. Design elements include screening and associated washer/ compactors, a step-feed Johannesburg biological process including a new RAS anoxic zone, and aeration, mixing, pumping, and secondary clarifier improvements. The project will be constructed by a Construction Manager at Risk (CMAR) Contractor.

→ Structural staff engineer for the Metro Wastewater Reclamation District, Colorado, \$135-million PAR 1085 South Secondary Improvements. Project includes converting the South Secondary Complex from HiPOS to a biological nutrient removal air activated sludge process in order to meeting new discharge permit limits, while increasing overall capacity to 100 mgd. Improvements include a new primary effluent pumping station, aeration and centrate and return activated sludge re aeration basins (CaRRB), blower building, piping galleries, aeration air, electrical/mechanical building, centrate pumping facilities, and support systems, HVAC, electrical, power supply, instrumentation, control systems, yard piping, and site improvements. In addition, modifications to the existing HiPOS basin in the South Secondary Complex will be designed to accommodate the new mixed liquor distribution system, Stage 5 basins, future Stage 4 basins, and return activated sludge, waste activated sludge, and surface waste pumping systems. Improvements to the existing secondary clarifiers, Return activated sludge withdrawal boxes, major yard piping and utilities, and electrical and instrumentation support systems will also be completed. In addition, demolition of the existing primary effluent pump station, return activated sludge/waste activated sludge pump station, and cryogenic plant will be completed.

→ Structural staff engineer for the City of Longmont, Colorado, Gravity Thickening and Digester Gas Modifications. Project

included preliminary and final design documents for replacement of two thickened sludge pump stations and siting of a new waste gas burner. Provided structural review and inspection during the construction phase of this project.

→ Structural staff engineer for the City of Edmond, Oklahoma, Coffee Creek Expansion Project. Provided structural analyses and designs for the new wastewater treatment plant structures.

→ Structural staff engineer for the City of Winnemucca, Nevada, Wastewater Treatment and Effluent Disposal Facilities project. Project includes the decommission of the existing facilities, implements a water reuse and disposal area approximately 3.6 miles northwest of the existing Treatment Facility, and constructs a new treatment facility including 5 miles of effluent force main from the existing facility to the new facility.

→ Structural staff engineer for the Carpinteria Sanitary District, California, Aerated Sludge Holding Tank Replacement.

→ Structural staff engineer for the Colorado Springs Utilities, Colorado, Las Vegas Wastewater Treatment Facility Biological Nutrient Removal project. Designed modifications to existing aerations basins to create new zones for MLE and A2O process configurations, improvements to the IMLR pumping system, instrumentation improvements and pump station, provided engineering services during construction.

→ Structural staff engineer for the City of Belton, Missouri, Wastewater Treatment Facility Improvements Final Design and Construction Services. Provided structural designs design and services during construction.

→ Structural staff engineer for the Hydropillar Tank Repairs Design project for the City of Westminster, Colorado. Project included structural repair and coating for a 2 million gallon elevated water tank.



Matthew E. Peyton, P.E.

Matt Peyton is a civil engineer with 12 years of experience in process mechanical/civil design, pipeline design, and construction services for small to large water projects. He has a well-versed knowledge of civil/mechanical engineering techniques and construction practices for treatment infrastructure.

Education

BS Civil Engineering, New Mexico State University, 2007

Licenses

Professional Engineer, Colorado

Professional Affiliations

New Mexico Society of Professional Engineers

Water Environment Federation

American Water Works Association

Relevant Experience

→ Project manager for the City of Aurora, Colorado, Griswold Water Purification Facility Raw Water Vault Improvements. The project involved design of a new raw water control structure to replace the existing bypass vault and raw feed facility. Responsible for management of day-to-day design, sleeve valve selection, mechanical piping layout, chemical feed system design, and project sequencing.

→ Project engineer for the City of Aurora, Colorado, High Point Lift Station/Gateway Lift Station Capacity Sharing Evaluation. Carollo provided an analysis of flow capacity of each pump station in order to provide recommendations for facility upgrades to the Gateway Lift Station. Responsible for analysis of each existing pump station, modeling of the existing lift station, development of multiple options for expanding the capacity of the lift station, and prioritization of lift station rehabilitation items.

→ Project engineer for the City of Aurora, Colorado, Wemlinger Treated Water Reservoir Rehabilitation. The project involves replacing roof access hatches; adding vents; demolishing piping and appurtenances inside, and connecting to the existing 10-MG concrete treated water reservoir; installing multiple sections of piping, including tie-ins to existing piping; adding a valve to the reservoir drain pipe; and miscellaneous treated water reservoir concrete penetrations and repairs associated with piping and demolition. The bid price for the project was \$2.5 million; this was a fast-track project that needed to be constructed during the winter/spring of 2017. The project was staged to prevent shutdown of the Wemlinger Water Purification Facility during construction of the disinfection contact basin.

→ Project engineer for the City of Clovis, New Mexico, Wastewater Treatment Plant

Improvements Construction Services.

Assisted with construction management services of plant upgrades that included retrofit of new screening, bioreactor aeration, blower replacement, digester aeration, and solids handling. Responsible for shop drawing/request for information review and coordination, change order development, pay application review, and coordination with client. During construction, also developed detailed design drawings for the 350-gpm waste activated sludge pump station and a screw conveyor system from the belt filter presses to disposal vehicles.

→ Project engineer for the Centennial Water and Sanitation District, Colorado, new Zone 4C Pump Station preliminary design, which included assessment of alternative layouts and equipment options. Responsibilities included preliminary design, detailed design, and ESDC for all mechanical systems. This included pump selection, station layout, and detailed piping design.

→ Project engineer for the Colorado Springs Utilities, Colorado, Southern Delivery System (SDS) \$124-million Edward W. Bailey Water Treatment Plant Design-Build. Recognized as the largest water project in decades in Colorado, SDS includes a new 50-mgd capacity "greenfield" plant, finished water pump station, and transmission mains. The 82,000-square-foot advanced Water Treatment Plant uses traditional processes of flocculation, sedimentation, and ozone/biological filtration to treat water piped from the Pueblo Reservoir to meet Colorado Springs' growing potable water needs. By the time of the plant's operation in April 2016, the plant design included treatment of 5 mgd at startup, with 50 mgd of capacity and a build-out of 130 mgd, and access to pipes below various stages of treatment for maintenance and repairs.

Matthew E. Peyton, P.E.

→ Project engineer for preliminary engineering services for replacement of seven existing primary clarifiers for the Albuquerque Bernalillo County Water Utility Authority, New Mexico. This included four new 155-foot primary clarifiers and rehabilitation of one existing 150-foot primary clarifier, two combined sludge and scum pump stations and renovations to an existing combined pump station, and a new 64-mgd effluent pump station for the Southside Water Reclamation Plant. Work included process design, site and building layout, evaluation of various clarification mechanisms and sludge pumping alternatives, and effluent pump station design.

→ Project engineer for the \$14 million Clifton Water District, Colorado, MF/UF Project. This design-build project converted an existing sand filter basin structure to add 12 mgd of ultrafiltration membrane treatment facility. The facility began producing water 14 months after the Carollo Design Build Group's 40 percent design was accepted by the owner. Mr. Peyton performed the design of 24-inch replacement header and the selection of a new surge anticipation valve.

→ Process mechanical design lead for the Great Lakes Water Authority, Michigan, Springwells Drinking Water Pump Station Upgrade. The project included a major renovation and upgrade to the Authority's 640 mgd low-light raw water and high-lift drinking water pump station. The project involved preparation of a computerized surge model and performance of hydraulic transient analysis; refurbishment and replacement of large bottom-suction split-case and vertical end-suction pumping machinery, synchronous electric motors and drives; water-operated and electric motorized pump control valves; retrofit and refurbishment of Broome style tractor gates, roller gates and stop logs; architectural restoration; large gate valves, butterfly valves piping systems and supports; and new instrumentation, controls and application engineering.

→ Process mechanical design lead for Dallas Water Utilities, Texas, Jim Miller Drinking Water Pumping Station. The project entailed significant renovation and upgrades to the Jim Miller Drinking Water Pump Station. The project involves the preparation of a computerized surge model and performance of hydraulic transient analysis; the refurbishment and replacement of large bottom-suction split-case pumping machinery, and their PWM two speed electric motor drivers; the retrofit and replacement of controlled opening/closing slanted disc check valves and isolation valves; restoration of concrete ground storage tanks and water control gates; architectural restoration; design of piping systems and supports; new instrumentation, controls and application engineering.

→ Project engineer for the New York City Department of Environmental Protection, New York, Cat/Del Ultraviolet Light Disinfection Facility Construction. At 2,020 mgd, the \$1.5 billion facility is the largest UV disinfection facility in the world. The project included installation of fifty-six 48-inch UV reactors, flow control and measurement utilizing sixteen 84-inch energy dissipating valves and four 120-inch venture flow meters, standby generators, electrical distribution, and various support facilities. Responsible for design and shop drawing review of 48 custom fabricated stainless steel access manways. The fabrication drawings and specifications detailed custom flanges, welds, and branch outlet reinforcement.



Nathan Evenson

Nathan Evenson has over 15 years of experience as an inspector and resident project representative. His focus has been on Special Inspections and Construction Management in the Water and Waste Water Industry.

Education

BA Environmental Studies, University of Colorado, Boulder, 2000

Licenses

General Contractor Class A License – City of Aurora, CO

CMAA - CMIT (Construction Manager In Training)

ICC Structural Masonry Special Inspector

ICC Reinforced Concrete Special Inspector

NACE - Level I Inspector

ACI Certified Field Technician I

Relevant Experience

→ Construction manager/project manager for the \$11.5-million City of Aurora, Colorado, Griswold Water Purification Facility Raw Water Structure Improvements – Phase 2 project. The project includes the construction of a new Raw Water Structure to improve flexibility to operations. Duties include management and review of submittals and RFIs and project budget, management of record drawings, and inspections for all construction related activities including concrete, electrical and HVAC.

→ Construction manager/project manager for the \$25-million City of Aurora, Colorado, Wemlinger Water Purification Facility CT Chamber Design. The project includes the construction of a new underground concrete water disinfection contact chamber with associated connections to existing water treatment facility. Duties include management and review of submittals and RFIs and project budget, management of record drawings, and inspections for all construction related activities including concrete, electrical and HVAC. Perform monthly schedule reviews and provided necessary comments in order to have a more accurate schedule available to Owner to schedule other capital improvement projects.

→ Resident project representative for the \$21-million City of Aurora, Colorado, Wemlinger Water Purification Facility Improvements. The project included construction of four concrete backwash recovery basins, backwash pump station, splitter box, installation of two generators, associated Switchgear building and miscellaneous improvements to the Chemical system including the polymer and chlorine solution systems and a new Sodium Hydroxide injection system. Duties included management and review of submittals and RFIs, budget and schedule reviews, management of record drawings,

and inspections for all construction related activities including concrete, masonry, electrical and HVAC.

→ Resident project representative for the \$2.5-million City of Aurora, Colorado, Wemlinger Treated Water Reservoir Rehabilitation project. The project included interior modifications to existing raw water reservoir including removal of interior piping and also exterior improvements to the reservoir including installing large bore piping (36-72") at depths of up to 30' below grade and the installation of CDPHE approved access hatches for finished water reservoir. Duties included management and review of submittals and RFIs, budget and schedule reviews, management of record drawings and inspections for all construction related activities. Assisted with the coordination and planning for design changes that were necessary due to challenging unforeseen conditions that were discovered upon excavation of existing lines.

→ Project manager for the City of Aurora, Colorado, Griswold Raw Water Vault ESDC Phase I work. Carollo provided engineering services for the existing Raw Water Vault and tie in with existing water lines to allow for work to be completed on the new Raw Water Vault to be constructed at a later time. Responsibilities included management and review of submittals and RFIs, and management of record drawings. Assisted on the review and pricing of change orders for project. Currently Project Manager for Phase II work and evaluating costs and funding for the City of Aurora for the project to commence in the near future.

→ Project manager for the City of Aurora, Colorado, Sand Creek WRF UV ESDC. Provided construction services for the replacement of an aging Trojan UV3000 system with a Calgon Carbon's C3500D system. The new UV disinfection equipment is capable of providing the same or greater levels of disinfection with less equipment, and was retrofitted into existing channels

Awards

Water Partnering Pioneer Award – COA award June 2008

Other Accomplishments

Co-author and presenter of "Sand is the Solution - Improving WTP Residuals Drying Solids by 3 fold in the Same Footprint" at the 2016 RMSAWWA/RMWEA Joint Annual Conference

-Co-author and presenter of "iPads: Improving the efficiency of Construction Management" at the 2013 CMAA's annual conference in Las Vegas Nevada

Nathan Evenson

without major structural improvements at the facility. Responsibilities included management and review of submittals and RFIs, management of record drawings, and inspections of construction work in progress including concrete and field testing of the Calgon Carbon's C35000 UV system.

→ Project/special inspector for the City of Aurora, Colorado, Reservoir Water Purification Facility. Responsible for general inspections of a \$200-million water treatment plant with 19 major structures, including buildings and dams. Duties included inspections of earthwork, concrete, pre-cast concrete, piping, electrical, fire suppression systems, masonry, drainage, and mechanical/HVAC systems, budget review, and schedule analysis. Other responsibilities also include the management of the on-site field lab and materials testers to ensure compliance with ASTM and ACI standards. Received Pioneer Award for Outstanding Performance from the City of Aurora.

→ Resident project representative for the \$7.7-million Centennial Water and Sanitation District, Colorado, Zone 4C Pump Station. The project included the new construction of a pump station to house four axial split centrifugal pumps to provide a new energy efficient pumping capacity of 16 mgd to the Centennial Water and Sanitation District's water system. Other aspects of project included install of a backup generator and associated switchgear and approximately 300 linear feet of 36" ductile pipe to tie in with existing water utility system. Duties included management and review of submittals and RFIs, management of record drawings, and inspections for all construction related activities including concrete, masonry, electrical and HVAC. Performed monthly schedule reviews and provided necessary comments in order to have a more accurate schedule available to Owner to schedule other capital improvement projects.

→ Resident project representative on the City of Boulder, Colorado 75th St WWTF Nitrogen Upgrade Project ESDC and CM. Responsibilities included duties included management and review of submittals and

RFIs and inspections for all construction related activities.

→ Project/special inspector for the \$135-million Metro Wastewater Reclamation District, Colorado, PAR 1085 - South Secondary Improvements. This project includes construction of a 214-mgd primary effluent pump station, activated sludge aeration basins, blower building, mixed liquor recycle pump stations, return activated sludge/waste activated sludge pump stations, chemical feed systems, power feed system, and modification of the existing secondary clarifiers. Responsibilities include inspections of earthwork, concrete, pre-cast concrete, piping, electrical, fire suppression systems, masonry, drainage, and mechanical/HVAC systems, budget review, and schedule analysis. Helped to develop and implement the use iPads for inspection purposes increasing the efficiency of inspections.

→ Resident project representative for the \$6-million Metro Wastewater Reclamation District, Colorado, PAR 1118 Compost Building Demolition and Site Preparation. This project included the demolition and removal of existing site buildings and relocation of existing utilities in preparation for constructing the South Secondary Improvements project. Responsibilities included inspections of earthwork, concrete, piping, and electrical. Project budget and schedule reviews were also performed throughout the project.

→ Special inspector for Mayes Testing Engineers, Everett, Washington. Conducted on-site reinforced concrete inspections and monitored concrete placement for commercial properties and residential homes. Assisted project managers and provided valuable input on the inspection process and contractor performance. Performed laboratory tests ranging from proctor analysis to strength analysis. Extensive work was performed at 2200 Westlake, a major condominium project in Seattle, including day-to-day special inspections of reinforced and post-tensioned concrete and extensive lab work.

STEVEN C KUEHR, PE

SENIOR CONSULTANT



Years of Experience: 40

Education

MS, Civil Engineering, Purdue University, 1985

BS, Civil Engineering, Purdue University, 1980

Professional Registration

Professional Engineer:

CO (0024369) & CA

Professional Societies

American Water Works Association

American Society of Civil Engineers

Colorado Association of Geotechnical Engineers

Rocky Mountain Water and Environment Association

Colorado Stone, Sand and Gravel Association

Mr. Kuehr is a Senior Consultant at Lithos Engineering. Mr. Kuehr specializes in geotechnical and tunnel engineering as it relates to water supply, sewerage, water resources, aggregate mining, roadway and bridge projects. He has technical expertise in tunnel engineering, foundation engineering, slope stability, expansive soils, ground modification, retaining walls, landslide evaluation and repair, embankment dam design and groundwater collection trenches and cutoffs constructed by the slurry trench method. He has 40 years of progressive engineering experience. He has performed and managed geotechnical engineering investigations for storm drain outfall projects, treatment plants, interceptor sewers, water transmission pipelines, water storage reservoirs, intake structures and pump stations.

RELEVANT PROJECTS

Griswold WPF Raw Water Structure – Phase 2, Aurora, Colorado

Principal-in-Charge and Project Manager for the new raw water vault at the Griswold Water Purification Facility. The subsurface conditions consist of eolian deposits and claystone/siltstone bedrock. Due to the presence of swelling claystone, a minimum 5 feet deep overexcavation with select fill backfill was recommended for the lower portions of the vault. There was a 72-inch raw water line adjacent to the vault. Provided geotechnical consultation including specification language and instrumentation recommendations regarding this issue. Reviewed Contractor's submittals for shoring and instrumentation.

Wemlinger WPF Sediment Drying Beds, Aurora, CO

Served as Principal-in-Charge and Project Manager. This project involved replacing the existing sediment drying beds with new, engineered sediment drying beds. The new concrete lagoons were constructed within the same footprint of the existing earthen lagoons. Provided recommendations for a permanent dewatering system which will operate as the water levels in nearby Quincy Reservoir approach the high-water level. Also provided foundation design recommendations for various structures and considerations for a tunneled waterline crossing beneath Quincy Avenue.

Colorado Springs Utilities SDS Water Treatment Plant, Colorado Springs, CO

Principal-In-Charge for Colorado Springs Utilities (CSU) Southern Delivery System's (SDS) 50 mgd water treatment plant and finished water pump station. The surface geology in the project area consists primarily of eolian soils extending to depths as



much of 60-ft below existing ground surface. The eolian soils are hydro-collapsible and exhibit a collapse potential up to 6.3 percent. Design, construction and operation measures were necessary to mitigate the potential for water to collect below grade or to pond above grade. To mitigate the collapsible soils, the design-build team implemented Deep Dynamic Compaction techniques for ground improvement.

East Cherry Creek Valley Water & Sanitation District (ECCVWSD) Northern Water Supply Project, Reverse Osmosis Treatment Plant and Booster Pump Stations, Adams, Denver and Arapahoe Counties, CO

The ECCV Northern Supply Project includes a Reverse Osmosis Treatment Plant, High Service Pump Station, and North and South Booster Pump Stations and a 35-mile transmission line. The treatment plant, which includes a water storage tank, is located in the Beebe Draw geographic area which contains thick and soft clayey soils; a condition that is unusual for the Denver area. Consolidation testing and settlement analyses indicated that approximately six inches of settlement could occur beneath the heavily loaded storage tank. Designed a temporary site surcharge to preload the tank area; this will preconsolidate the site such that settlement under the plant will be minimal. The surcharge consisted of compacted soil constructed to a height of 20-ft and included settlement monitoring platforms. Settlement monitoring indicates that settlement is occurring. The surcharge will be removed when settlement is complete so that the tank can be constructed.

Bellvue Water Treatment Plant Residuals Handling Facility, Bellvue, CO

the Firm performed subsurface geotechnical investigations and provided design recommendations for this project, which involved rehabilitation of existing sedimentation basins, construction of a thickening tank, a new pump station, and a new flow-equalization basin. Site conditions consisted of saturated fine- and coarse-grained alluvium overlying siltstone and sandstone bedrock. Mr. Kuehr served as Project Manager for this project.

Public Wholesale Water Supply Project Water Treatment Plant and Pipeline, Ellis and Russell Counties, KS

Performed geotechnical investigations and provided design recommendations for construction of a new water treatment facility in Russell County, Kansas. The proposed facility consisted of tanks and structures for administration, treatment, and pump housing, and residuals handling ponds. Mr. Kuehr evaluated the potential for collapse or dissolution within soils with high calcium carbonate content. He also provided recommendations for the residuals handling pond liners and for the on-site proposed pavements. Evaluated subsurface conditions and identified potential high groundwater and soft soils along the proposed pipeline alignment. Mr. Kuehr provided recommendations for trenchless and open cut crossings of streams and local drainages, paved county roads, highways, and existing active railroad. He also performed in-situ resistivity testing during site investigation to provide the corrosion engineer with design parameters.

87th Avenue and Wadsworth Boulevard Lift Station, Westminster, CO

Provided geotechnical engineering recommendations for a lift station, overflow storage tank and for several trenchless roadway crossings. The lift station required a deep excavation in a congested urban environment. Recommendations included over-excavation and replacement of expansive bedrock. Trenchless engineering recommendations were provided for the roadway crossings.

REQUIRED VENDOR SUBMITTAL FORM

SUBMITTED BY:

Company Name: Carollo Engineers, Inc.

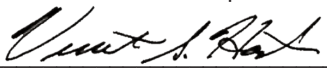
Contact Names: Sales/Customer Service Vincent Hart, PE

Address: 390 Interlocken Crescent, Suite 800, Broomfield, Colorado 80021

Phone: (303) 404.6324 Email(s): vhart@carollo.com

The undersigned hereby affirms that:

- He/she is a duly authorized agent of the vendor;
- He/she has read all Terms and Conditions and technical specifications made available in conjunction with this solicitation and fully accepts and acknowledges this offer is consistent with the specifications and terms and conditions, unless specific variations have been clearly and expressly listed in the offer.
- The Offer is in all respects fair, without outside collusion or otherwise illegal action.

By: <u></u>	<u>11/19/2020</u>	<u>86-0899222</u>
Signature of Authorized Agent	Date	FEIN
<u>Vincent Hart, PE</u>	<u>Executive Vice President</u>	<u>vhart@carollo.com</u>
Typed/Printed Name of Agent	Title of Agent	Agent email
<u>John Rehring, PE</u>	<u>Vice President</u>	<u>jrehring@carollo.com</u>
Typed/Printed Name of Witness	Title of Witness	Witness email

PAYMENT TERMS: If the vendor does not accept a percentage discount, the City standard is net thirty (30) days after the date that the City receives an accurate invoice and has accepted the product or service. Payment is the date of the check mailing or date of the credit card transaction.

Discount: N/A % N/A Days, Net: 30 Days, Accept Visa without additional fee? N/A

VARIATIONS: The vendor shall identify all variations and exceptions to any RFP documents. Submittal of a Vendor Contract is considered excessive in Variations and may be cause for determining that the Bid/Offer is non-responsive and ineligible for award. For each variation listed, reference the applicable section of the solicitation document as per the example below. If no variations are listed here, it is understood that the vendor's Offer fully complies with all terms and conditions. Attach additional Variation sheets in the same format as below after starting the first three on this page.

Page #: 2 Item # or Section: 4

Variance In the first paragraph, please replace "arising from or related to any act or omission" with "to the extent caused by any negligent act or omission." This brings this obligation into compliance with CRS 13-50.5-102 (8)(a) (see highlighted provision in the Appendix).

Page #: 3 Item # or Section: 15

Variance In the second line, please remove the word, "highest." This is an elevation of the standard of care and as such, is not insurable under any professional liability insurance policy.

Page #: _____ Item # or Section: _____

Variance _____

SUBMITTAL INSTRUCTIONS:

Proposals shall be submitted in the order listed below with each section clearly identified.

- Submit ON-LINE at BidnetDirect.com
- Proposal as outlined in the Response Format described above
- Completed City Submittal Forms including this sheet and all other attachments specifically requested
- Performance Measures Form
- Insurance ✓ Checking this box accepts that the insurance requirements listed by the City are acceptable unless listed in the variations on the previous page. Carollo confirms that we can comply with the City's insurance requirements.
- CONFIDENTIAL information, if any, MUST be stamped as such on each page and submitted separately.
- Please initial to acknowledge Addenda, if any, have been considered in your proposal:
#1 VSH #2 _____ #3 _____

REFERENCES:

- Check here if Firm's standard reference sheet is attached, otherwise, use the space below.

Name: City of Aurora, Colorado Contact Person: Ralph Haight

Address: 18301 East Quincy Avenue, Aurora, Colorado 80015

Telephone No: 303.739.7981 Email: rchaight@auroragov.org

Describe type of work/service performed or items supplied: Water, wastewater, reuse, and infrastructure engineering planning, design, and construction services.

Name: Colorado Springs Utilities, Colorado Contact Person: Dan Dilts

Address: 1521 Hancock Expressway, Colorado Springs, Colorado 80903

Telephone No: 719.640.0807 Email: ddilts@csu.org

Describe type of work/service performed or items supplied: Water and reuse engineering planning, design, and construction services.

Name: City of Austin, Texas Contact Person: Bill Stauber

Address: 301 West 2nd Street, Austin, Texas 78701

Telephone No: 512.972.0101 Email: william.stauber@austintexas.gov

Describe type of work/service performed or items supplied: Water, wastewater, reuse, and infrastructure engineering planning, design, and construction services.

PERFORMANCE MEASURES FORM INSTRUCTIONS:

The City has incorporated Performance Management into its organizational culture. When vendors submit offers to the City in response to solicitations for ***Services*** (not associated with the primary purchase of goods, supplies, or software), they shall identify the methods and goals by which they will monitor and report their performance providing those services to the City. Vendor's performance shall be documented as to (a) Price/Cost, (b) Punctuality/Responsiveness (c) Quality/Reliability, and (d) Sustainability/or Innovation.

1. Vendor will define 1-2 measures for (a) Price/Cost, (b) Punctuality/Responsiveness (c) Quality/Reliability, and (d) Sustainability/or Innovation, that follow S.M.A.R.T goals: Specific, Measurable, Achievable, Relevant, and Timely, per category.
2. The awarded vendor will self-score their defined metrics within a score card emailed from purchasing 2 months prior to contract renewal. The department will review the vendor's self-scored measures.

SERVICES means: the furnishing of labor, time, effort, maintenance, etc., by a vendor/contractor/consultant, with an initial contract amount of more than \$15,000.

(a) Price/Cost

Example Measure: Consultant will submit detailed invoices substantiating amounts requested.

1. Carollo will collaborate with the City to develop the lowest-cost solution that meets operational and disposal needs and requirements.
2. Carollo will provide detailed invoices that are clear and straight-forward.

(b) Punctuality/Responsiveness

Example Measure: Reporting of project status will occur monthly with the City and consultant's Project Manager.

1. Carollo commits to project coordination meetings with the City at a minimum of 2 times/month.
2. Carollo will complete the study portion of this work by or before July 2021.

(c) Quality/Reliability

Example Measure: Revisions are drafted within two weeks, and no more than 3 revisions prior to final draft.

1. Project reporting activities will happen at least once a month.
2. Carollo's project manager, Vinnie Hart, will be dedicated to this project as necessary to deliver a product that exceeds your expectations.

(d) Sustainability and/or Innovation

Example Measure: Digital reports delivered to the City 95% of the time will to reduce the use of paper.

1. Carollo will utilize Sketchup and Blue Plan-it® in workshops to illustrate real-time changes which will support timely decisions.
2. Carollo will work with the City to determine the right solution that is not only cost-effective but utilizes as much of your existing infrastructure as possible.

Performance measures will be queried for every year of the contract. Performance measures reporting will partially inform re-contracting with or renewing a contract with a vendor.

West's Colorado Revised Statutes Annotated
Title 13. Courts and Court Procedure
Joint Rights and Obligations
Article 50.5. Uniform Contribution Among Tortfeasors (Refs & Annos)

C.R.S.A. § 13-50.5-102

§ 13-50.5-102. Right to contribution--contract or agreement
provision to indemnify or hold harmless void against public policy

Effective: September 1, 2015

[Currentness](#)

(1) Except as otherwise provided in this article, where two or more persons become jointly or severally liable in tort for the same injury to person or property or for the same wrongful death, there is a right of contribution among them even though judgment has not been recovered against all or any of them.

(2) The right of contribution exists only in favor of a tortfeasor who has paid more than his pro rata share of the common liability, and his total recovery is limited to the amount paid by him in excess of his pro rata share. No tortfeasor is compelled to make contribution beyond his own pro rata share of the entire liability.

(3) There is no right of contribution in favor of any tortfeasor who has intentionally, willfully, or wantonly caused or contributed to the injury or wrongful death.

(4) A tortfeasor who enters into a settlement with a claimant is not entitled to recover contribution from another tortfeasor whose liability for the injury or wrongful death is not extinguished by the settlement nor in respect to any amount paid in a settlement which is in excess of what was reasonable.

(5) A liability insurer, who by payment has discharged in full or in part the liability of a tortfeasor and has thereby discharged in full its obligation as insurer, is subrogated to the tortfeasor's right of contribution to the extent of the amount it has paid in excess of the tortfeasor's pro rata share of the common liability. This provision does not limit or impair any right of subrogation arising from any other relationship.

(6) This article does not impair any right of indemnity under existing law. Where one tortfeasor is entitled to indemnity from another, the right of the indemnity obligee is for indemnity and not contribution, and the indemnity obligor is not entitled to contribution from the obligee for any portion of his indemnity obligation.

(7) This article shall not apply to breaches of trust or of other fiduciary obligation.

(8)(a) Any public contract or agreement for architectural, engineering, or surveying services; design; construction; alteration; repair; or maintenance of any building, structure, highway, bridge, viaduct, water, sewer, or gas distribution system, or other works dealing with construction, or any moving, demolition, or excavation connected with such construction that contains a covenant, promise, agreement, or combination thereof to defend, indemnify, or hold harmless any public entity is enforceable

only to the extent and for an amount represented by the degree or percentage of negligence or fault attributable to the indemnity obligor or the indemnity obligor's agents, representatives, subcontractors, or suppliers. Any such covenant, promise, agreement, or combination thereof requiring an indemnity obligor to defend, indemnify, or hold harmless any public entity from that public entity's own negligence is void as against public policy and wholly unenforceable.

(b) This subsection (8) shall not apply to construction bonds, contracts of insurance, or insurance policies that provide for the defense, indemnification, or holding harmless of public entities or contract clauses regarding insurance. This subsection (8) is intended only to affect the contractual relationship between the parties relating to the defense, indemnification, or holding harmless of public entities, and nothing in this subsection (8) shall affect any other rights or remedies of public entities or contracting parties.

(c) If the indemnity obligor is a person or entity providing architectural, engineering, surveying, or other design services, then the extent of an indemnity obligor's obligation to defend, indemnify, or hold harmless an indemnity obligee may be determined only after the indemnity obligor's liability or fault has been determined by adjudication, alternative dispute resolution, or otherwise resolved by mutual agreement between the indemnity obligor and obligee.

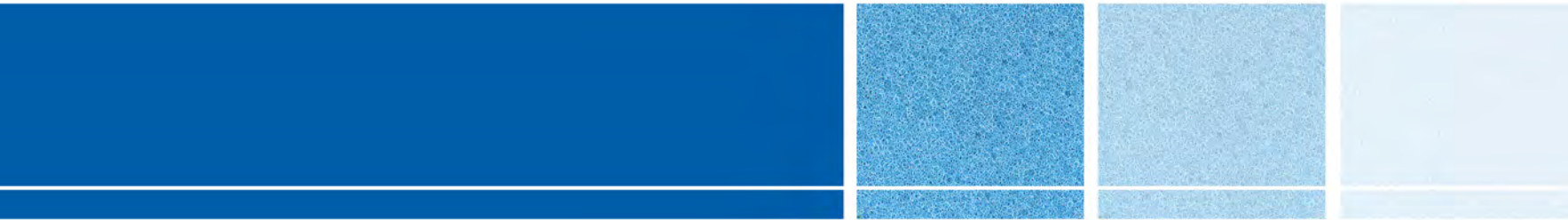
Credits

Added by Laws 1977, H.B.1332, § 1, eff. July 1, 1977. Amended by Laws 1987, H.B.1355, § 18, eff. July 10, 1987; Laws 1988, H.B.1125, § 2, eff. May 17, 1988; [Laws 1989, S.B.28, § 1, eff. March 15, 1989](#); [Laws 2015, Ch. 93, § 1, eff. Sept. 1, 2015](#).

[Notes of Decisions \(69\)](#)

C. R. S. A. § 13-50.5-102, CO ST § 13-50.5-102

Current through the First Regular Session of the 70th General Assembly (2015).





REPORT TO CITY COUNCIL RESOLUTION

AGENDA ITEM
8.A.5.

TO: THE HONORABLE CITY COUNCIL

DATE: March 1, 2021

SUBJECT: R21-035 A Resolution Authorizing First Amendment to an Agreement Between the City of Arvada and Schultz Industries Incorporated to Increase the Contract Amount from \$200,000.00 to \$250,000.00 for Landscape Maintenance in the Second Year

Report in Brief

The Arvada Parks team is requesting that the contract amount be increased to allow more flexibility in the contracting of maintenance services. The current level covers basic scheduled maintenance and a very limited amount of “as needed” services. Due to staffing challenges raised by COVID, the Arvada Parks team needs the ability to contract out additional tasks when necessary.

The Arvada team recommends that the City Council approve R21-035, A Resolution Authorizing First Amendment to an Agreement Between the City of Arvada and Schultz Industries Incorporated to Increase the Contract Amount from \$200,000.00 to \$250,000.00 for Landscape Maintenance in the Second Year.

Financial Impact

There is no direct cost associated with raising the limit. Arvada Parks is not requesting increased funding. Any additional service requests will be funded from existing parks budget line items, and other department budgets that request services under the Landscape Maintenance Contract.

Background

The Landscape Maintenance Contract covers basic landscape services at 54 locations throughout Arvada, from April 1st through October 31st. In addition to these scheduled services, the contract is also utilized to assist with:

- large festival cleanup
- abandoned property clean up
- newly developed property maintenance
- as needed property maintenance requested by both Parks and other departments within the City
- limited winter maintenance of medians and Right of Ways

Discussion

The Arvada Parks team relies heavily on a seasonal labor force that experiences high turnover rates and frequently unfilled positions. Being able to contract out services with Schultz Industries allows the Arvada Parks team added flexibility in matching the maintenance tasks that need to be performed with the best available resource.

Approving this request will allow the Arvada Parks team the flexibility to redirect resources between the seasonal labor budget and the contract services budget to more efficiently maintain the City’s properties, as needed. The current limit of \$200,000

does not provide enough “additional service” opportunities to allow the Parks team to quickly react to workforce shortages, equipment failures, and, unforeseen property needs.

Public Contact

Posting of the City Council agenda.

Commission Recommendation

N/A

Strategic Alignment

Approval of this resolution aligns with the Vibrant Community and Neighborhoods Priority Area within the City Council Strategic Plan and the principle to provide maintenance services to the community and visitors, so they can play and enjoy activities in a safe, well-maintained parks and trails system.

Alternative Courses of Action

1. Approve Resolution R21-035, A Resolution Authorizing First Amendment to an Agreement Between the City of Arvada and Schultz Industries Incorporated to Increase the Contract Amount from \$200,000.00 to \$250,000.00 for Landscape Maintenance in the Second Year.
2. Do not approve Resolution R21-035 and maintain the status quo in terms of providing park maintenance services.

Recommendation for Action

The Arvada team recommends Alternative No. 1.

Suggested Motion:

I move that R21-035, A Resolution Authorizing First Amendment to an Agreement Between the City of Arvada and Schultz Industries Incorporated to Increase the Contract Amount from \$200,000.00 to \$250,000.00 for Landscape Maintenance in the Second Year, be (approved) (rejected).

Prepared by:
Rosa Kougl, Executive Assistant

Reviewed by:

Approved by:

Gordon Reusink, Director of Vibrant Community and Neighborhoods	2/4/2021
Bryan Archer, Director of Finance	2/4/2021
Gail Walker, Legal Specialist-Contracts	2/4/2021
Kylie Justus, Assistant City Attorney	2/4/2021

SUBJECT: R21-035 A Resolution Authorizing First Amendment to an Agreement Between the City of Arvada and Schultz Industries Incorporated to Increase the Contract Amount from \$200,000.00 to \$250,000.00 for Landscape Maintenance in the Second Year

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Rachel Morris, City Attorney

2/16/2021

Lorie Gillis, Deputy City Manager

2/17/2021

Mark Deven, City Manager

2/17/2021

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R21-035

A RESOLUTION AUTHORIZING FIRST AMENDMENT TO AN AGREEMENT BETWEEN
THE CITY OF ARVADA AND SCHULTZ INDUSTRIES INCORPORATED TO INCREASE
THE CONTRACT AMOUNT FROM \$200,000.00 TO \$250,000.00 FOR LANDSCAPE
MAINTENANCE IN THE SECOND YEAR

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO:

Section 1. The Mayor or Mayor Pro Tem is authorized to sign and the City Clerk to attest, in form approved by the City Attorney, an Agreement, which is in substantially the same form as that attached hereto, by and between the City of Arvada and Schultz Industries Incorporated to increase the contract amount from \$200,000.00 to \$250,000.00 for landscape maintenance in the second year.

Section 2. This resolution shall be effective upon its approval by the City Council.

APPROVED AND ADOPTED this 1st day of March, 2021.

Marc Williams, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:
Rachel A. Morris, City Attorney

By: _____

**FIRST AMENDMENT TO AN AGREEMENT BETWEEN THE CITY OF ARVADA
AND SCHULTZ INDUSTRIES INCORPORATED TO INCREASE THE CONTRACT
AMOUNT FROM \$200,000.00 TO \$250,000.00 FOR LANDSCAPE MAINTENANCE IN
THE SECOND YEAR**

1.0 PARTIES. The Parties to this First Amendment are the City of Arvada, a Colorado home rule municipal corporation, whose mailing address is 8101 Ralston Road, Arvada, Colorado 80002 (Arvada), and Schultz Industries Incorporated, whose principal place of business is located at 13451 West 43rd Drive, Golden, Colorado 80403 (Contractor), collectively referred to as (Parties).

2.0 PURPOSE AND RECITALS.

2.1 On March 2, 2020, the Parties entered into a contract where Contractor agreed to provide landscape maintenance services to include turfgrass mowing and trimming, native grass mowing and trimming, edging, weed control, and trash/litter control at a variety of locations across Arvada on a scheduled basis and as an on-call service when needed, and in exchange, Arvada agreed to pay Contractor for those services in an amount not to exceed \$200,000.00 in the first year (the Agreement).

2.2 The Parties wish to amend the Agreement for the second year (2021-2022), to increase the amount to be paid by Arvada from not exceeding \$200,000.00 to not exceeding \$250,000.00 per annum.

3.0 TERMS AND CONDITIONS

3.1 Section 7. of the Agreement is hereby amended to state as follows:

“**7. COMPENSATION.** Arvada shall pay Contractor for the Work requested by Arvada and rendered by Contractor under this Agreement. The total amount for the Work shall not exceed **\$250,000.00**. Contractor agrees to submit monthly invoices for actual services completed to Arvada, and payment from Arvada will be due NET 30 days, unless otherwise stated and agreed to by the parties in the Contract Documents.”

4.0 DOCUMENTS OTHERWISE UNCHANGED. Except as specifically provided in this First Amendment, the Agreement remains unchanged and in full force and effect in accordance with its terms.

5.0 SEVERABILITY. If any other provision of this First Amendment is held invalid or unenforceable, no other provision shall be affected by such holding, and all of the remaining provisions of this First Amendment shall continue in full force and effect.

6.0 BINDING AUTHORITY. Contractor represents and affirms that the signature page hereof accurately states the full legal name of Contractor (whether as a corporation, partnership, limited liability company, sole proprietorship, or other), contains all requisite signature(s) on behalf of Contractor, has been properly acknowledged by attestation, notary acknowledgment, or both, and in all other respects is effective to bind Contractor, in accordance with all applicable statutes, regulations, resolutions, rules, bylaws, agreements, or similar sources of authority or limitation. The Agreement may be executed in counterpart(s), each of which shall be deemed to be an original, and all of which, taken together, shall constitute one instrument.

DATED this ____ day of _____, 2021.

CITY OF ARVADA, a Colorado home
rule municipal corporation

Marc Williams, Mayor
8101 Ralston Road
Arvada, CO 80002

ATTEST:

City Clerk

APPROVED AS TO FORM:

Rachel A. Morris, City Attorney

By: _____

SCHULTZ INDUSTRIES INCORPORATED

Joshua Schultz, General Manager
13451 West 43rd Drive
Golden, Colorado 80403

ATTEST:

Jenny Redick, Department Administrator
jennyh@schultzindustries.net



REPORT TO CITY COUNCIL RESOLUTION

AGENDA ITEM
8.A.6.

TO: THE HONORABLE CITY COUNCIL

DATE: March 1, 2021

SUBJECT: R21-036 A Resolution Authorizing a Renewal Construction Contract Agreement by and between the City of Arvada and Triple M Construction LLC for the 2021 Concrete Replacement Project in an Amount Not to Exceed \$4,434,156.20 Formerly Project No. 19-ST-10 Then 20-ST-10 Now Project 21-ST-10

Report in Brief

Council action is requested on the attached resolution authorizing an agreement with Triple M Construction LLC in an amount not to exceed \$4,434,156.20. This annual project involves the removal and replacement of concrete sidewalk, crossspan, curb and gutter, and ADA ramps around the City as shown on the attached location maps.

The Arvada team recommends that the City Council approve R21-036 A Resolution Authorizing a Renewal Construction Contract Agreement by and between the City of Arvada and Triple M Construction LLC for the 2021 Concrete Replacement Project in an Amount Not to Exceed \$4,434,156.20 Formerly Project No. 19-ST-10 Then 20-ST-10 Now Project 21-ST-10.

Financial Impact

Financial Impact: \$4,434,156.20

This is a one-time request for project construction cost.

Fund: 2021 Streets Maintenance Fund, Account No. 04-705013-55005

Background

This contract renewal will provide funding to replace the necessary concrete for street segments planned to be paved in 2023. The Streets Maintenance Division planned this replacement to be performed in 2021 for the 2023 Asphalt Project. Concrete work is performed two years prior to installing asphalt so that the concrete work is out of warranty. Having the concrete out of warranty avoids having to cut into the new asphalt to repair the concrete.

The City Council previously approved the original contact with Triple M contract in 2019, and a renewal in 2020. The 2021 renewal is the final renewal year for this contract.

Discussion

Triple M Construction LLC has successfully completed the 2019 and 2020 Concrete Replacement projects for the City. The 2021 renewal is the final year for this contract with Triple M.

The 2021 Concrete Replacement program will focus on six neighborhood areas as outlined on a map included as an attachment to this agenda packet and generally described as summarized below:

- Residential streets east and west of Hoyt Way, north of W. 80th Avenue and south of the intersection of Garrison Street and W. 84th Avenue;
- Residential streets east and west of Carr Street, north of W. 76th Avenue and south of W. 80th Avenue as well as the entire segment of Carr Street between W. 74th Avenue and W. 80th Avenue;

SUBJECT: R21-036 A Resolution Authorizing a Renewal Construction Contract Agreement by and between the City of Arvada and Triple M Construction LLC for the 2021 Concrete Replacement Project in an Amount Not to Exceed \$4,434,156.20 Formerly Project No. 19-ST-10 Then 20-ST-10 Now Project 21-ST-10

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- Residential streets east of Wadsworth Boulevard, west of Pierce Street, north of W. 76th Avenue and south of W. 80th Avenue;
- Residential streets east of Pierce Street, west of Ingalls Street, north of W. 68th Avenue and south of W. 72nd Avenue;
- Residential streets east of Wadsworth Boulevard, west of Tennyson Street, north of W. 64th Avenue, south of W. 66th Avenue as well as the entire segment of W. 66th Avenue from Arvada High School to Sheridan Boulevard; and
- The entire segment of Grandview Avenue from Independence Street to Lamar Street.

This work is expected to be complete by November 29, 2021. Sufficient funds for this project are available in the Streets Maintenance Fund Account No. 04-705012-55005 (\$4,434,156.20).

Public Contact

Posting of the City Council agenda.

Commission Recommendation

N/A

Strategic Alignment

This is an annual street maintenance project to improve quality of infrastructure throughout the City of Arvada. The proposed action aligns with the following Principle within the Infrastructure Priority Area of the City Council Strategic Plan:

Maintains existing roads and transportation network in tandem with snow and ice control services to ensure swift and safe transportation modes for the community.

Alternative Courses of Action

N/A

Recommendation for Action

The Arvada team recommends that the City Council approve R21-036 A Resolution Authorizing a Renewal Construction Contract Agreement by and between the City of Arvada and Triple M Construction LLC for the 2021 Concrete Replacement Project in an Amount Not to Exceed \$4,434,156.20 Formerly Project No. 19-ST-10 Then 20-ST-10 Now Project 21-ST-10.

Suggested Motion:

I move that R21-036 A Resolution Authorizing a Renewal Construction Contract Agreement by and between the City of Arvada and Triple M Construction LLC for the 2021 Concrete Replacement Project in an Amount Not to Exceed \$4,434,156.20 Formerly Project No. 19-ST-10 Then 20-ST-10 Now Project 21-ST-10, be (approved) (rejected).

Prepared by:
Christine Biddle, Administrative Specialist

Reviewed by:
Karen Custer, Administrative Assistant

2/9/2021

SUBJECT: R21-036 A Resolution Authorizing a Renewal Construction Contract Agreement by and between the City of Arvada and Triple M Construction LLC for the 2021 Concrete Replacement Project in an Amount Not to Exceed \$4,434,156.20 Formerly Project No. 19-ST-10 Then 20-ST-10 Now Project 21-ST-10

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Hannah Gregory, Legal Administrative Assistant 2/16/2021

Approved by:

Dan Pumphrey, Streets Manager	2/8/2021
Don Wick, Director of Public Works	2/9/2021
Bryan Archer, Director of Finance	2/9/2021
Erika Pierce, Litigation Paralegal	2/16/2021
Julie Richards, Senior Assistant City Attorney	2/17/2021
Emily Grogg, Senior Assistant City Attorney	2/17/2021
Rachel Morris, City Attorney	2/17/2021
Lorie Gillis, Deputy City Manager	2/18/2021
Mark Deven, City Manager	2/18/2021

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R21-036

A RESOLUTION AUTHORIZING A RENEWAL CONSTRUCTION CONTRACT AGREEMENT BY AND BETWEEN THE CITY OF ARVADA AND TRIPLE M CONSTRUCTION LLC FOR THE 2021 CONCRETE REPLACEMENT PROJECT IN AN AMOUNT NOT TO EXCEED \$4,434,156.20 FORMERLY PROJECT NO. 19-ST-10 THEN 20-ST-10 NOW PROJECT 21-ST-10

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO:

Section 1. The Mayor or Mayor Pro Tem is authorized to sign and the City Clerk to attest, in form approved by the City Attorney, an Agreement, which is in substantially the same form as that attached hereto, by and between the City of Arvada and Triple M Construction LLC for the 2021 Concrete Replacement Project in an amount not to exceed \$4,434,156.20.

Section 2. This resolution shall be effective upon its approval by the City Council.

APPROVED AND ADOPTED this 1st day of March, 2021.

Marc Williams, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:
Rachel A. Morris, City Attorney

By: _____

**AN AGREEMENT BY AND BETWEEN THE CITY OF ARVADA AND
TRIPLE M CONSTRUCTION, LLC FOR 2019 CONCRETE REPLACEMENT
IN AN AMOUNT NOT TO EXCEED \$3,855,788.00**

This Agreement made this 20th day of Day of, March, 2019, by and between the City of Arvada, a home rule municipal corporation ("Arvada" and/or "City") and Triple M Construction, LLC ("Contractor").

WITNESSETH: That for and in consideration of the covenants, promises, and payments hereinafter mentioned:

1. Contractor will commence and complete the concrete replacement described in the Contract Documents relating to CSB-19-ST-10, issued January 18, 2019, ("the Work").
2. Contractor will furnish all material, supplies, tools, equipment, labor, and other services necessary for the completion of the Work.
3. Contractor will commence the work required by the Contract Documents within ten (10) calendar days after the date of Notice to Proceed.
4. Contractor will complete the work required by the Contract Documents by **November 29, 2019** unless the period for completion is extended otherwise by the Contract Documents.
5. Contractor agrees to perform all of the work described in the Contract Documents for an amount not to exceed **\$3,855,788.00** for the Work.
6. The term "Contract Documents" means and includes the following:
 - A. Arvada's Request for 2019 Concrete Replacement, CSB-19-ST-10 ("CSB");
 - B. CSB Exhibits (if any);
 - C. CSB Addenda (if any);
 - D. Contractor's Response to CSB-19-ST-10, Advertisement for Bid, Bid Proposal, Bid Schedule, Bid Bond;
 - E. Notice of Award;
 - F. Performance and Payment Bond;
 - G. Notice to Proceed;
 - H. Change Orders (if any);
 - I. City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements;
 - J. Project special provisions prepared or issued by City of Arvada (or its Consultant if applicable);
 - K. Detail drawings and Bid Documents prepared or issued by City of Arvada (or its Consultant if applicable);
 - L. Specification Illustrations and attachments; and
 - M. All supplementary requirements regarding wage rates, E.E.O., affirmative action and all other Federal-State requirements as outlined in the specifications.

7. **INVOICES AND COMPENSATION.** Contractor will follow Bid schedule and partial payments will be made accordingly NET fifteen (15) but no later than NET thirty (30).

8. GENERAL TERMS AND CONDITIONS, SPECIAL TERMS AND CONDITIONS, INSURANCE REQUIREMENTS, PROJECT SPECIAL PROVISIONS, AND OTHER CSB REQUIREMENTS. Contractor affirms that it has read and is familiar with the Contract Documents, including but not limited to the General Terms and Conditions, Special Terms and Conditions, Insurance Requirements, Project Special Provisions, and other CSB requirements, and agrees to be bound by those terms and conditions.

9. PREFERENCES IN EMPLOYMENT OF COLORADO LABOR. To the extent that obligations and responsibilities may be established by C.R.S. § 8-17-101 *et seq.*, as amended, with respect to certain public entities and those contracting therewith as to the procurement of services:

- a. Colorado labor shall be employed to perform eighty percent (80%) of the work.
- b. Any waiver of this requirement must comply with C.R.S. § 8-17-101 *et seq.*, as amended.

10. PERFORMANCE MEASURES. The Performance Measures for this Agreement shall be those outlined by Arvada in Section 22 of Special Terms and Conditions for Bidders in the CSB, which is included in the Contract Documents that are exhibits to this Agreement.

11. ADDITIONAL DOCUMENTS OR ACTION. The parties agree to execute any additional documents and to take any additional action that is necessary to carry out this Agreement.

12. BINDING EFFECT. This Agreement shall inure to the benefit of, and be binding upon, the parties, their respective legal representatives, successors, heirs, and assigns; provided, however, that nothing in this paragraph shall be construed to permit the assignment of this Agreement except as otherwise expressly authorized herein.

13. PARAGRAPH CAPTIONS. The paragraph captions in this Agreement are set forth only for the convenience and reference of the parties and are not intended in any way to define, limit, or describe the scope or intent of this Agreement.

14. INTEGRATION, AMENDMENT, AND SEVERABILITY. This Agreement represents the entire agreement between the parties, and there are no oral or collateral agreements or understandings. This Agreement may be amended only by an instrument in writing signed by the parties. If any other provision of this Agreement is held invalid or unenforceable, no other provision shall be affected by such holding, and all of the remaining provisions of this Agreement shall continue in full force and effect if the essential terms and conditions of this Agreement for both parties remain valid, legal, and enforceable.

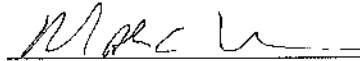
15. NOTICES. Any notice or notification required or permitted by the Agreement shall be in writing and shall be deemed to have been sufficiently given for all purposes if sent by certified mail or registered mail, postage and fees prepaid, addressed to the party to whom such notice is to be given at the address set forth on the signature page below, or at such other address as has been previously furnished in writing, to the other party or parties. Such notice or notification shall be deemed to have been given when deposited in the United States mail.

16. BINDING AUTHORITY. Contractor represents and affirms that the signature page hereof accurately states the full legal name of Contractor (whether as a corporation, partnership, limited liability company, sole proprietorship, or other), contains all requisite signature(s) on behalf of Contractor, has been properly acknowledged by attestation, notary acknowledgment, or both, and in all

other respects is effective to bind Contractor, in accordance with all applicable statutes, regulations, resolutions, rules, bylaws, agreements, or similar sources of authority or limitation. This Agreement may be executed in counterpart(s), each of which shall be deemed to be an original, and all of which, taken together, shall constitute one instrument.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Contract Agreement in three copies, each of which shall be deemed an original on the date first above written.

CITY OF ARVADA, COLORADO



Marc Williams, Mayor
8101 Ralston Road
Arvada, CO 80002

ATTEST/WITNESS:

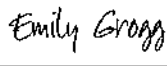


City Clerk



APPROVED AS TO FORM:

For Christopher K. Daly, City Attorney

By: 

TRIPLE M CONSTRUCTION, LLC



Name: Mabel Moreno

Title: President

ATTEST/WITNESS:



By: Martin Moreno

CITY OF
ARVADA

COMPETITIVE SEALED BID

BID #: CSB-19-ST-10

Title: 2019 Concrete Replacement

CSB Issued: 01/18/2019

Pre-bid Meeting: N/A

Bids Due By: 02/05/2019 10:00am local time

Questions Deadline: 01/29/2019 12:00pm local time
Questions and responses will be posted on BidnetDirect.com

Delivery address: City of Arvada Engineering Division
8101 Ralston Rd, Arvada, CO 80002
Late responses will not be considered for award.

For additional information, contact: Shane Hoerig, (720) 898-7640

Documents included in this BID:

Cover Page	page 1
Advertisement for Bidders	page 2
General Terms and Conditions	page 3
Special Terms and Conditions for Bidders	page 6
Insurance Requirements	page 9
Project Special Provisions	page 10
Submittal Forms to be Completed and Returned	
• Bid Bond	
• Bid Proposal	
• Bid Schedule	
• Performance and Payment Bond	

Submittal Checklist and References to be Completed and Returned
Preview of Documents if Awarded

ARVADA'S VISION MISSION AND VALUES

VISION: We dream big and deliver.

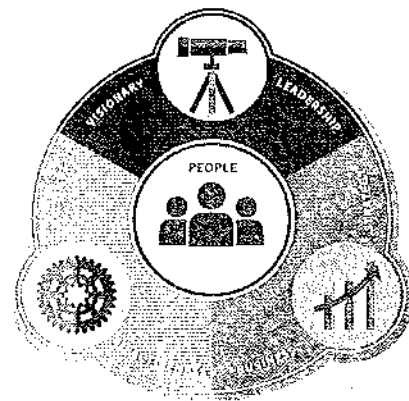
MISSION: We are dedicated to delivering superior services to enhance the lives of everyone in our community.

VALUES:

Innovation – We excel in creativity, flexibility and the use of best practices while valuing diverse backgrounds, ideas and perspectives.

Passion – We are a high performing, inclusive team inspiring each other to pursue excellence.

Opportunity – We value our diversity, embrace possibilities, face challenges, persevere and take action to deliver quality results.



ADVERTISEMENT FOR BIDS

Sealed bids for the construction of City of Arvada, Project No. 19-ST-10, Project Title 2019 Concrete Replacement will be received at the office of the City Engineer until 10:00 a.m. on February 5th, 2019 and then publicly opened and read aloud.

The BID DOCUMENTS, consisting of Advertisement for Bids, Information for Bidders, General Terms and Conditions, Special Terms and Conditions, Insurance Requirements, Project Special Provisions, Addendum when issued, Bid Bond, Bid Proposal, Bid Schedule, Performance and Payment Bond, Submittal Checklist and References, Sample documents, and the Project Drawings may be examined at the following locations:

- City of Arvada Engineering Division - 8101 Ralston Road, Arvada, Colorado 80002
- www.bidnetdirect.com

No cost bid documents may be obtained at www.bidnetdirect.com on or after January 18th, 2019. Bid documents may also be obtained at the office of the City Engineer upon payment of \$30.00 per set, which is non-refundable.

ESTIMATED QUANTITIES OF THE MAJOR ITEMS OF WORK ARE:

43713 LF Remove and Replace 5'-3" width combination curb gutter and sidewalk
7768 LF Remove and Replace 6'-6" width combination curb gutter and sidewalk
8270 LF Remove and Replace 30" width vertical curb & gutter
8026 SY Remove and Replace 6" thickness sidewalk
1990 SY Remove and Replace 8" thickness crossspan
400 EA Remove concrete and install ADA Handicap Ramp

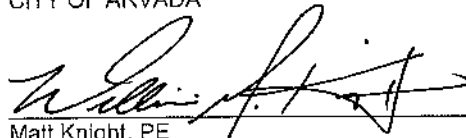
Miscellaneous items such as asphalt removal and patching, stormwater BMP's, traffic control, etc.

Bidders, subcontractors and suppliers must be familiar with the current City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements, dated January 12, 2016, which will be combined with the Bid Documents to form the Contract Documents for the Project. A copy of the Standards may be obtained from the office of the City Engineer upon a non-refundable payment of \$50.00. Holders will be notified when supplemental revisions and additions are available as they are adopted. The Standards are also available at no cost on the City's web site at www.arvada.org. Holders are responsible for keeping current their City of Arvada Engineering Code of Standards and Specifications.

The Project Engineer for this work is Shane Hoerig and can be reached at the following e-mail address: shoerig@arvada.org

Date: 01/18/19

CITY OF ARVADA



Matt Knight, PE
City Engineer
8101 Ralston Road
Arvada, Colorado 80002

Publication Dates: January 18th, 2019

GENERAL TERMS AND CONDITIONS

1. PAYMENTS TO CONSTITUTE CURRENT EXPENDITURES. Financial obligations of the City of Arvada, if any, after the current fiscal year are contingent on funds for that purpose being appropriated, budgeted and otherwise made available by the City Council for the City of Arvada. The City of Arvada's obligations under the Agreement shall be from year to year only and shall not constitute a multiple-fiscal year direct or indirect debt or other financial obligation of the City of Arvada within the meaning of Article X, Section 20 of the Colorado Constitution.

2. TAXES. The City of Arvada is not subject to taxation. Contractor shall not invoice Arvada for any state, federal or local taxes whatsoever. Upon written notification by the City of Arvada, Contractor shall reimburse the City of Arvada in a timely manner for any taxes erroneously paid by the City of Arvada. The Colorado Department of Revenue, Certification of Exemption for Colorado State Sales/Use Tax account number for the City of Arvada is 98-01789-0000. An exemption certificate will be provided, where applicable, upon request.

3. NO INDEMNIFICATION BY ARVADA. The City of Arvada is prohibited by Article XI, Section 1, Colorado Constitution, from indemnifying anyone. Therefore, notwithstanding any provision in the response to solicitation or proposed contract, lease, escrow agreement or any other type of agreement to the contrary, the City of Arvada does not indemnify Contractor or anyone else under this Agreement.

4. INDEMNIFICATION OF CITY.

A. Contractor: Notwithstanding any provision in the response to solicitation or proposed contract, lease, escrow agreement or any other type of agreement to the contrary, Contractor agrees to investigate, defend, indemnify and hold harmless Arvada, its elected officials, officers, employees, agents, insurers, and representatives from and against any claims, costs, losses, expenses, demands, actions, or causes of action, including reasonable attorney fees and other costs and expenses of litigation, which may be asserted against or incurred by Arvada or for which Arvada may be liable, arising from the negligence, willful misconduct, or other fault of Contractor or its employees, agents, or subcontractors in performance of the Agreement. Nothing herein is intended to constitute a covenant, promise, or agreement to indemnify and hold harmless Arvada from any liability or damages directly caused by or attributable to Arvada's own negligence. Nothing herein intended to be nor may be construed as a waiver of the immunities, protections, or limitations on damages provided to Arvada by the Colorado Governmental Immunity Act, C.R.S. §§ 24-10-101 *et seq.*, as it may from time to time be amended.

(or)

B. Architect, Engineer, Surveyor Services for Public Works Construction: Contractor agrees to hold harmless and indemnify Arvada, its officers and employees, from and against any liability or any claims, suits, or actions arising out of, made, or asserted for any damage to persons or property resulting from errors, omissions or fault of Contractor in connection with the performance by Contractor of obligations under this solicitation and any subsequent Agreement with Arvada. Nothing herein is intended to constitute a covenant, promise, or agreement to indemnify and hold harmless Arvada from any liability or damages directly caused by or attributable to Arvada's own negligence. Nothing herein is intended to be nor construed as a waiver of the immunities, protections, or limitations on damages provided to Arvada by the Colorado Governmental Immunity Act, C.R.S. §§24-10-101 *et seq.*, as it may from time to time be amended.

5. NO OPINION OF COUNSEL LETTERS. Pursuant to Section 8.1 of the Arvada City Charter, the City Attorney provides advice to the City Council and City Officials in matters relating to their official powers and duties, and will perform such other duties as City Council may prescribe by ordinance or resolution. The City Attorney will not issue opinion of counsel letters, memoranda or statements to third parties, including, but not limited to that any contract or lease is binding on the public entity, enforceable, etc.

6. CONFIDENTIAL DOCUMENTS. Contractors may designate specific pages or sections within their submission as trade secret or confidential commercial information or as otherwise protected by law ("Confidential Information"). Documents and data that are considered Confidential Information shall be clearly marked as such and separated from the rest of the solicitation submission documents. Comingling is not acceptable. The City does not favor blanket assertions of Confidential Information. Please note that blanket assertions that merely classify and/or broadly claim information is confidential are insufficient as a matter of law. See, *International Brotherhood of Electrical Workers Local 68 v. Denver Metropolitan Major League Baseball Stadium District*, 880 P.2d 160 (Colo. App. 1994). Any information that will be included in any resulting contract cannot be considered Confidential. Under no circumstances may submission pricing information be considered Confidential. In the event a formal contract is entered into with the City and a portion of the Proposal/Response carries a designation indicating the Contractor believes it is Confidential Information, then the City agrees that it will use its best efforts to forward any request for the disclosure of the Confidential Information to the Contractor. By its submission of the Proposal/Response, Contractor agrees to promptly respond to the request for disclosure with any objections and reasons therefor in accordance with the Colorado Open Records Act C.R.S. §§24-72-101 *et seq.* and any other applicable law. Further, Contractor agrees to assume the obligation to defend, hold harmless, and indemnify the City in any legal proceeding that arises from non-disclosure of documents or data pursuant to the Contractor's objection.

7. OWNERSHIP OF WORK PRODUCT. The originals of all plans, reports, studies, data, or other materials or information relating to the Work that are produced by Contractor shall be delivered to and become the property of Arvada. Contractor may retain copies of any originals; however, no plans, reports, studies, data, or other materials or information relating to the Work shall be released to any person or entity without the prior written consent of Arvada. Nothing in this clause is intended to affect Contractor's right to use generic know-how learned in the course of providing services under the Agreement for the future benefit of the City of Arvada or others.

8. ASSIGNMENT. Contractor shall not assign the Agreement without the prior written consent of the City of Arvada, which will not be unreasonably withheld, conditioned, or delayed. Contractor may assign the Agreement to any successor to the business of the party by merger, consolidation, or sale of assets. No assignment shall be permitted that enlarges any duty, responsibility or obligation of the City of Arvada, or that limits, curtails, or diminishes any right or privilege of the City of Arvada without the City of Arvada's express written consent.

9. NO THIRD PARTY BENEFICIARIES. It is expressly understood and agreed that enforcement of the terms and conditions of the Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to Arvada and Contractor and nothing contained in the Agreement shall give or allow any such claim or right of action to any other third party on the Agreement. It is the express intention of Arvada and Contractor that any person other than Arvada or Contractor receiving services or benefits under the Agreement shall be deemed to be an incidental beneficiary only.

10. INDEPENDENT CONTRACTOR. Contractor and Arvada hereby represent that Contractor is an independent contractor for all purposes hereunder. As such, Contractor is not covered by any worker's compensation insurance or any other insurance maintained by Arvada except as would apply to members of the general public. Contractor shall not create any indebtedness on behalf of Arvada.

11. SUBCONTRACTING. Contractor shall not award work to subcontractor(s) in excess of fifty percent of the total contract price without Arvada's prior written approval. Contractor shall be responsible for any failure by any subcontractor or subcontractor personnel to perform in accordance with the Agreement or to comply with any duties or obligations imposed on Contractor under the Agreement to the same extent as if such failure to perform or comply was committed by Contractor or Contractor's personnel. Contractor shall be Arvada's sole point of contact regarding the services, including with respect to payment.

12. ILLEGAL ALIENS; PUBLIC CONTRACTS FOR SERVICES. To the extent that obligations and responsibilities may be established by C.R.S. §§8-17.5-101 *et seq.*, (as amended) (the "Act"), with respect to certain public entities and those contracting therewith as to the procurement of services:

- A. Successful Vendor ("Contractor") shall not knowingly employ or contract with an illegal alien to perform work under the Agreement or enter into a contract with a subcontractor that fails to certify to Contractor that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under the Agreement. Contractor confirms the employment eligibility of all employees who are newly hired for employment to perform work under this public contract for services through participation in either the E-Verify Program or Department Program (the "Program").
- B. Contractor is prohibited from using Program procedures to undertake pre-employment screening of job applicants while the Agreement is being performed.
- C. If Contractor obtains actual knowledge that a subcontractor performing work under the Agreement knowingly employs or contracts with an illegal alien, Contractor shall be required to:
 - (i). Notify the subcontractor and the City of Arvada within three (3) days that Contractor has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and
 - (ii). Terminate the subcontract with the subcontractor if within three (3) days of receiving the above notice the subcontractor does not stop employing or contracting with the illegal alien; except that Contractor shall not terminate the subcontract if during such three days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien.
- D. Contractor shall comply with any reasonable request by the Colorado Department of Labor and Employment made in the course of an investigation that the department is undertaking pursuant to the authority established in the Act.
- E. Any provision of the Agreement to the contrary notwithstanding, if Contractor violates any provision of this Section, the City of Arvada may terminate the Agreement, without breach or default by the City of Arvada, and Contractor shall be liable for actual and consequential damages to the City of Arvada arising out of such violation.
- F. Contractor represents that, prior to executing the Agreement, Contractor has certified that at the time of the certification, Contractor does not knowingly employ or contract with an illegal alien who will perform work under this public contract for services and Contractor will participate in either the E-Verify Program or Department Program in order to confirm the employment eligibility of all employees who are newly hired for employment to perform work under this public contract for services. By execution of this Agreement, Contractor shall be deemed to have renewed such certification.
- G. Contractor acknowledges its responsibility to comply with the certification requirement pursuant to C.R.S. §8-17.5-102(2)(b)(I) (as amended).

13. NO WAIVER OF GOVERNMENTAL IMMUNITY. Nothing contained in this or any of the exhibits attached thereto shall be construed as a waiver of any of the immunities, limitations, privileges, rights, procedures, or requirements contained in the Colorado Governmental Immunity Act, C.R.S. §§24-10-101 *et seq.*

14. RIGHT TO TERMINATE. The City of Arvada shall have the right to terminate, without cause, the Agreement. Any such termination shall not be considered a breach of the Agreement or any extension thereof. In the event of termination by the City of Arvada for convenience, Contractor will be paid for requested work performed up until the time of termination by the City of Arvada, not to exceed the total amount of the contract price agreed upon by the parties.

15. COMPLIANCE WITH ALL LAWS. All of the services performed under this Agreement by Contractor shall comply with all applicable laws, rules, regulations and codes of the United States and State of Colorado, and with the charter, ordinances, rules and regulations of the City of Arvada.

16. WAIVER OF BREACH. A waiver by any party to the Agreement or the breach of any term or provision of the Agreement shall not operate or be construed as a waiver of any subsequent breach by either party.

17. GOVERNING LAW AND VENUE. Notwithstanding any provision in the response to solicitation or proposed contract, lease, escrow agreement or any other type of agreement to the contrary, the Agreement shall be governed by the laws of the State of Colorado. Venue for any action arising under the Agreement or for the enforcement of the Agreement shall be in the appropriate court for Jefferson County, Colorado.

18. FORCE MAJEURE. Any delays in or failure of performance by any party of his or its obligations under the Agreement shall be excused if such delays or failure are a result of acts of God, fires, floods, strikes, labor disputes, accidents, regulations or orders of civil or military authorities, shortages of labor or materials, or other causes, similar or dissimilar, which are beyond the control of such party.

19. BINDING ARBITRATION PROHIBITED. The City of Arvada does not agree to binding arbitration by any extra-judicial body or person. Any provision to the contrary in response to the solicitation, or incorporated by reference, shall be null and void.

20. PARAGRAPH CAPTIONS. The paragraph captions in this solicitation or in the Agreement are set forth only for the convenience and reference of the parties and are not intended in any way to define, limit or describe the scope or intent of the Agreement.

21. BINDING AUTHORITY. Contractor represents and affirms that the signature page hereof accurately states the full legal name of Contractor (whether as a corporation, partnership, limited liability company, sole proprietorship, or other), contains all requisite signature(s) on behalf of Contractor, has been properly acknowledged by attestation, notary acknowledgment, or both, and in all other respects is effective to bind Contractor, in accordance with all applicable statutes, regulations, resolutions, rules, bylaws, agreements, or similar sources of authority or limitation.

22. PREFERENCES IN EMPLOYMENT OF COLORADO LABOR. To the extent that obligations and responsibilities may be established by C.R.S. § 8-17-101 *et seq.*, as amended, with respect to certain public entities and those contracting therewith as to the procurement of services:

- a. Colorado labor shall be employed to perform eighty percent (80%) of the work.
- b. Any waiver of this requirement must comply with C.R.S. § 8-17-101 *et seq.*, as amended.

23. RETAINAGE REQUIREMENTS. Contractor agrees to submit monthly invoices together with any retainage requirements as prescribed by Colorado state statutes (see e.g., C.R.S. §§24-91-101 *et seq.*). Payment from Arvada will traditionally be paid NET (15) days but no later than NET thirty (30) days. Invoices will accurately reflect actual work completed by Contractor.

SPECIAL TERMS AND CONDITIONS FOR BIDDERS

1. RECEIPT AND OPENING OF BIDS. Bids will be received by the City of Arvada, Colorado (herein called the City) at the time and place stated in the Advertisement for Bids and then publicly opened and read aloud.

Each Bid Proposal must be submitted in a sealed envelope, addressed to the City of Arvada, Colorado, 8101 Ralston Road, Arvada, CO 80002. The envelope containing the Bid Proposal should bear on the outside the name of the bidder, his address, the name of the project and project number for which the Bid Proposal is submitted. Bidder shall assume full responsibility for timely delivery of bid to the office of the City Engineer. The City reserves the right, where its best interest will be served, to accept or reject any conditional or qualified Bid.

2. QUANTITY AND NATURE OF THE WORK. Bidders must satisfy themselves of the accuracy of the estimated quantities in the Bid Schedule by examination of the site and a review of the drawings and specifications including Addendum. After Bids have been submitted the Bidder shall not assert that there was a misunderstanding concerning the quantities of work or of the nature of the work to be done.

3. CONTENTS OF BID. Contractors are required to submit Bids with the following conditions:

- 1) Contractors shall make all investigations necessary to inform themselves of the sites affected and the work required by the Solicitation.
- 2) Any official interpretation of the Solicitation may only be issued by an authorized agent of the City. The City shall not be responsible for other interpretations offered by employees not authorized.
- 3) The City shall issue Addenda if substantial changes are required which may impact the content and submission of Bids. A copy of such addenda will be publicly posted with the original CSB posting.
- 4) The apparent silence or omissions within this Solicitation regarding a detailed description of the materials or services shall be interpreted to mean that only the best commercial practices are to prevail and that only materials and workmanship of first quality are to be provided.

4. BID SECURITY. Each Bid must be accompanied by a Bid Bond, on the form attached to these contract documents, payable to the City for five (5) percent of the total amount of the Bid. As soon as the bid Prices have been compared, the City will return the bonds of all except the three lowest responsible Bidders. When the Contract Agreement is executed, the bonds of the two remaining unsuccessful Bidders will be returned. The Bid Bond of the successful Bidder will be retained until the Payment and Performance Bond has been executed and approved after which it will be returned. A certified check may be used in lieu of a Bid Bond.

5. POWER OF ATTORNEY. Attorneys-in fact who sign Bid Bonds or Payment and Performance Bonds must file with each bond a certified and effective dated copy of their power of attorney.

6. QUALIFICATION OF BIDDER. The City may make such investigation as it deems necessary to determine the ability of the Bidder to perform the work. The City reserves the right to reject any Bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the City that such Bidder is properly qualified to carry out the obligation of the Contract Agreement and to complete the work contemplated therein. The City reserves the right, before awarding the contract, to require a Contractor to submit evidence of its qualifications including, but not limited to, financial, technical and other qualifications, as well as past performance with the City, for consideration in making the award in the best interest of the City.

7. AWARD OF CONTRACT. Bids shall be awarded to the lowest-priced responsible and most responsive bidder whose bid meets the requirements and criteria set forth in the CSB within the limits of funds available and that best serves the City's interest. The City, within seven (7) calendar days of receipt of acceptable Contract Security and triplicate copies of the Contract Agreement, signed by the Bidder to whom the Contract was awarded, shall sign the Contract Agreement and return to the Bidder an executed copy of the Contract Agreement. Should the City not execute the Contract Agreement within such period, the Bidder may, by written notice, withdraw his signed Contract Agreement. Such notice of withdrawal shall be effective upon receipt of the written notice by the City.

8. NOTICE OF AWARD AND FAILURE TO ENTER INTO CONTRACT. The party to whom the Contract is to be awarded will be required to execute the Contract Agreement in triplicate, obtain Certificates of Insurance and a Performance and Payment Bond, as Contract security, within five (5) calendar days from the date the Notice of Award is delivered to the Bidder. The Notice of Award shall be accompanied by the Contract Agreement and the necessary Performance and Payment Bond forms. In case of failure of the bidder to execute the Contract Agreement and provide satisfactory Insurance and Contract Security, the City may at his option, consider the Bidder in default, in which case the Bid Bond accompanying the Proposal shall become the property of the City.

9. CONTRACT DOCUMENTS. The Contract Documents consisting of the Bid Documents, which include the Advertisement for Bids, Information for Bidders, General Terms and Conditions, Special Terms and Conditions, Insurance Requirements, Project Special Provisions, Addendum, Bid Bond, Bid Proposal, Bid Schedule, Vendor Submittal Form, Construction Drawings, Supplemental Specifications and the City of Arvada "Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements", dated January 12, 2016, which include the Measurement and Payment specifications, and the attached Notice of Award form, Contract Agreement form, Performance and Payment Bond form, Notice to Proceed form, and Change Order form, when combined, contain the provisions required for the construction of the Project. Information obtained from an agent or employee of the City or any other person shall not affect the risks or obligations assumed by the Contractor or relieve him from fulfilling any of the conditions of the contract.

10. TERM OF CONTRACT. This contract shall commence on the date of the purchase order or contract execution and shall remain in effect until such time as the commodities, equipment and/or services acquired in conjunction with this Bid have been accepted by the City's authorized representative. Any required warranty period which exceeds this term shall remain in full force for the duration of the warranty period.

11. PRICING SHALL BE FIXED AND FIRM. The prices offered by the Contractor shall remain fixed and firm for at least 90 ninety days. No changes in the Bid shall be allowed after the date and time of the Bid deadline due to error by the Contractor.

12. CONTRACT SECURITY. A Performance and Payment Bond, on the form attached to these contract documents, in the amount of 100% of the Contract price, with a corporate surety approved by the City, will be required for the faithful performance of the Contract.

13. NOTICE TO PROCEED. The Notice to Proceed shall be issued within seven (7) calendar days of the execution of the Contract Agreement by the City. Should there be reason why the Notice to Proceed cannot be issued within such period, the time may be extended by mutual agreement between the City and the Contractor. In the event the Notice to Proceed has not been issued within the seven day period or within the period mutually agreed upon the Contractor may terminate the Contract Agreement without further liability on the part of either party.

14. MODIFICATION OR WITHDRAWAL OF BIDS BY CONTRACTOR.

Modifications to Bids- Changes to the Bid after the submission deadline shall be allowed only when the Contractor can show convincing evidence that an unintentional factual mistake was made. Modification requests must be made in writing. Any modification submitted to the City must have the Contractor's name, address, Solicitation Number and title included.

Withdrawal of Bids- If a Bid is withdrawn by Contractor after the Bid Opening, the City may, at its option, suspend the Contractor for a six (6) month period following the withdrawal. Withdrawal of the Bid after the Bid Opening will result in the Contractor forfeiting the provided Bid Bond.

15. REJECTION OF OFFERS BY CITY.

- A. The City may reject a Bid, in whole or in part, for reasons including, but not be limited to:
 - 1) The Contractor misstates or conceals any material fact in its Proposal;
 - 2) The Contractor's Bid does not strictly conform to the law or requirements of the Solicitation;
 - 3) The Bid expressly requires or implies a conditional award that conflicts with the method of award stipulated in the Special Conditions;
 - 4) The Bid does not include documents which are required for submission with the Bid; or
 - 5) The Bid has not been executed by the Contractor through an authorized signature.
- B. The City may, at its sole and absolute discretion:
 - 1) Reject all or parts of Bids submitted by prospective Contractors;
 - 2) Re-advertise this Solicitation;
 - 3) Postpone or cancel the Solicitation;
 - 4) A Bid may not be accepted from, nor any contract be awarded to, any person or firm which
 - a) is in arrears to the City for any debt or Contract, or is a defaulter as surety for any obligation to the City.
 - b) has failed to perform faithfully any previous contract with the City, State or Federal governmental for a minimum period of one (1) year after this previous Contract was terminated for cause.
 - c) has pending litigation against the City on the date and time that the Solicitation is due.

16. CLARIFICATION AND MODIFICATIONS. The contract resulting from this solicitation will be subject to the Solicitation materials, City Ordinance, State and Federal Statutes. When conflicts occur, the highest authority shall prevail. Contractors are required to indicate any variances to the terms, conditions, requirements and specifications of this Solicitation; no matter how slight. If variations are not stated in the Contractor's Bid, it shall be agreed that the Contractor's Bid fully complies with all conditions identified in this Solicitation.

17. ELIGIBILITY OF CONTRACTORS: MUST BE ENGAGED IN SUPPLYING PRODUCTS OR SERVICES RENDERED.

Bids will only be considered from firms which have been engaged in the business of manufacturing or distributing the goods and/or performing services described in this Solicitation. Contractors must be able to produce evidence that they have an established satisfactory record of performance for at least two (2) years and have sufficient finances and structure to ensure that they can satisfactorily execute the Contract requirements, as determined by authorities of the City. The City reserves the right, before awarding the contract, to require a Contractor to submit evidence of its qualifications including, but not limited to, financial, technical and other qualifications, as well as past performance with the City, for consideration in making the award in the best interest of the City.

18. ELECTRONIC PAYMENT METHODS - CITY OF ARVADA SINGLE USE ACCOUNT.

Contractors are encouraged to consider the following method of payment.

Single Use Account: The City incorporates the use of Single User Accounts as an option to seamlessly process payment of larger dollar purchase orders and contracts to vendors/contractors/providers. A secure, one-time payment transaction account processes to pay invoices via the Contractor's merchant bank. Invoice payments have an enhanced speed-of-pay cycle that can significantly benefit cash flow.

19. COOPERATIVE PURCHASING.

The City of Arvada encourages and participates in cooperative purchasing endeavors undertaken by or on behalf of other governmental agencies, including the Multiple Assembly of Procurement Officials.

We hereby request that any member of MAPO be permitted to avail itself of this contract and purchase, as specified by the contract resulting from this CSB, at the contract prices established therein. Each governmental entity would establish its own contract, issue its own orders, be invoiced directly, make its own payments and issue its own exemption certificates as required. It is understood and agreed that the City of Arvada is not a legally binding party to any contractual agreement made between another governmental entity and the successful Contractor as a result of this solicitation. The City shall not be liable for any costs or damages incurred by any other entity.

20. CONDITIONS OF WORK AND OBLIGATION OF BIDDER. Each Bidder is responsible for independently inspecting the site and for reading and being thoroughly familiar with the Contract Documents and for providing the names of major suppliers and sub-contractors in the space provided on the Bid Proposal form. The failure or omission of any Bidder to do any of the foregoing shall in no way relieve the Bidder from any obligation in respect to his Bid Proposal.

21. CONTRACTOR LICENSE. The Contractor to whom the contract is awarded and any subcontractors employed by the Contractor must have or acquire the appropriate Contractor's license issued by the City of Arvada Engineering Division, including submittal of license bond, necessary insurance certificate, and license fee before initiating any work. The Contractor and any subcontractors will also be required to obtain a no charge Public Improvements Permit from the City of Arvada Engineering Division prior to initiating any and all work on this project.

22. PERFORMANCE MEASUREMENTS FOR SERVICES MORE THAN \$15,000.

The City has incorporated Performance Management into its organizational culture. The City will monitor and report on the following performance measures. These measures will determine, in part, renewals and eligibility for future awards. Measures include: (a) safety as defined by observation and OSHA reportable injuries, (b) quality of contracted work, (c) work completed within required schedule, (d) administration and coordination of estimates, RFIs, ASIs, change orders, pay requests and close out documents, (e) fair and justifiable change orders, (f) responsiveness and follow through on requests.

SERVICES means: the furnishing of labor, time, effort, maintenance, etc., by a vendor/contractor/consultant, with an initial contract amount of more than \$15,000.

23. PREPARATION AND SUBMISSION.

Bids will be prepared as follow:

- 1) A blank shall be construed as "No Bid/not offered". Where there is a discrepancy between the unit price and the extension of prices, the unit price shall prevail.
- 2) Contractors will not knowingly participate in solicitations where there exists a conflict of interest with their firm and a member of City staff or their immediate family.
- 3) The only authorized version of this Bid is posted on WWW.BIDNETDIRECT.COM. Registration is available to receive email notification of new solicitations, addenda, and communications.

INSURANCE REQUIREMENTS

The following listed insurance requirements shall be carried by the selected Contractor for the entirety of the contract. Applicable requirements for this solicitation are identified by completed check boxes.

1. ☒ **Commercial General Liability**, written on an occurrence form, for limits not less than \$1,000,000.00 for bodily injury and property damage for each occurrence and not less than \$2,000,000.00 aggregate. Coverage shall include premises and operations liability, blanket contractual, broad form property damage, products and completed operations and personal injury endorsements.
2. ☒ **Workers' Compensation and Employers Liability** as required by statute. Employers Liability coverage is to be carried for a minimum limit of \$100,000.00 per accident.
3. ☒ **Automobile Liability** for limits not less than \$1,000,000.00 combined single limit for bodily injury and property damage for each occurrence. Coverage shall include owned, non-owned and hired automobiles.
4. ☐ **Umbrella Liability** of \$5,000,000.00, following form to the Commercial General Liability.
5. ☐ **Pollution Legal Liability Insurance** for limits not less than \$1,000,000 per occurrence (or claims made) and not less than \$1,000,000 aggregate for bodily injury, personal injury and property Damage.

Additional Insurance Requirements:

- Contractor will be required to, at its own expense, keep in full force and effect during the term of the Agreement, and during the term of any extension or amendment of the Agreement, insurance reasonably sufficient to insure against the liability assumed by Contractor pursuant to the provisions of the solicitation sent by the City of Arvada or as determined by the City of Arvada Risk Manager.
- All coverage must be written with carriers holding a minimum A.M. Best rating of A-VII, and authorized to do business in Colorado. Coverage shall be primary, and any insurance held by the City of Arvada is excess and non-contributory.
- Issuance of a Purchase Order/Contract is contingent upon the receipt of the Insurance documents. Work shall not commence before this requirement is met. If the Contractor fails to submit the required insurance documents within fifteen (15) calendar days after notice to submit such policies is given to the Contractor by a City representative, the Contractor may be in default of the Award.
- The City, through its Risk Manager, reserves the right to require additional insurance coverage and other requirements.

PROJECT SPECIAL PROVISIONS

City of Arvada Project No. 19-ST-10, entitled 2019 Concrete Replacement

Conditions peculiar, but essential, to the successful performance and acceptance of the work on this project are itemized below. As such, they shall take precedence over the City of Arvada *Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements*.

SC-1 CONTRACT TIME AND LIQUIDATED DAMAGES: All work on this project, as specified on the attached list of streets and as shown on the attached map, including cleanup, is to be completed by **November 29, 2019** unless the contract time is adjusted by Change Order. A Notice to Proceed is anticipated to be issued on or about **March 18, 2019**. The bidder agrees to pay to the owner, as liquidated damages, the sum of \$3,900.00 for each consecutive calendar day that the work exceeds the allotted contract time.

SC-2 OPTION TO RENEW FOR SUBSEQUENT YEARS (WITH PRICE ADJUSTMENTS ALLOWED): The prices quoted in the Bid Schedule shall prevail for one year from the effective date of the contract, at which time the City shall have the option to renew the contract for an additional two (2) consecutive periods; provided, however, that the Bidder provided satisfactory performance during the previous contract period. Continuation of the contract beyond the initial period is a City prerogative and not a right of the Bidder and will be exercised only when such continuation is clearly in the best interest of the City.

During the option period, the City will consider an adjustment to the pricing structure if the successful Bidder can demonstrate, through documentation issued by material suppliers, that it was subject to a price adjustment. It shall be understood that such price adjustments shall not exceed the amount passed on to the successful Bidder by the supplier. Under these circumstances, the City may, in its best interest, negotiate a price adjustment with the successful Bidder.

The successful Bidder is obligated to notify the City of such adjustments, either price reductions or price increases, within (14) calendar days after receiving said notification from the supplier.

Pricing and specification changes, if any, shall be negotiated and agreed upon by both parties. The City reserves the right to reject any price adjustments submitted by the Bidder and/or to terminate the contract with the Bidder based on such price adjustments.

SC-3 MEASUREMENT AND PAYMENT: Measurement of the Work performed and Payment, at the unit or lump sum price quoted in the Bid Schedule, shall be made in accordance with requirements of the Measurement and Basis of Payment Section of the *Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements* book or as hereinafter stated in these Project Special Provisions.

SC-4 SERVICE INTERRUPTION: The Contractor shall notify all parties that will be affected, at least forty-eight (48) hours prior to the time he will replace concrete in front of a driveway or disconnect or interrupt known sewer or water service or immediately upon the interruption of a service not shown on the plans. All service so interrupted or damaged shall be immediately repaired and service restored. No services shall be left inoperative overnight.

SC-5 NON CONFORMITY OF MATERIAL OR FINISHED PRODUCT: Where materials installed or the finished product fails to meet the minimum requirements of these Contract Documents, the basis for determining final payment to the Contractor shall be determined in accordance with the current revised Section 105.03 of the Colorado Department of Transportation Standard Specifications for Road and Bridge Construction.

- SC-6 REPLACEMENT SCHEDULE AND QUANTITY ADJUSTMENT:** The "*City of Arvada 2019 Concrete Replacement and Approximate Quantities*" document included in these bid documents denotes the streets, other locations and approximate quantities of replacement work required at each location. A detailed work schedule shall be submitted at or before the preconstruction meeting for review and approval by the engineer before work begins. From the schedule provided, sections of concrete to be replaced or installed will be marked with paint or staked by the Engineer prior to replacement. Compensation will be based on the actual units of work performed as directed by the Engineer. The City reserves the right to add or delete quantities of items of work contained in the Bid Schedule and their corresponding locations without change in the unit prices bid in accordance with Section 2.16 of the *Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements*.

The Contractor, at his discretion, may work on streets adjacent to or within close proximity to an area he is currently working in, but in no case will he be allowed to leave one area to start in another area until all work, including suitable backfill behind forms and cleanup in the previous area has been completed to the satisfaction of the Engineer. Areas are as shown on the attached map. The Engineer reserves the right to coordinate performance of any part of the work under this contract as circumstances warrant relative to weather, other City projects, etc.

- SC-7 TRAFFIC CONTROL:** The Contractor shall furnish all the necessary barricading, coning, flagmen, incidentals, etc. to properly control traffic in accordance with the *Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements* ("City Engineering Code") and the latest edition of the FHWA Manual for Uniform Traffic Control Devices and Colorado Supplement ("MUTCD"). When working in the State of Colorado right of way traffic control methods must meet the requirements of the Colorado Department of Transportation. Hand painted signs are not permitted.

Contractor is responsible for installing and maintaining all traffic control devices to insure safety and accessibility to the public and workers throughout construction. "Public" shall include, but not be limited to, drivers, bicyclists, and pedestrians. If accessibility cannot be met, Contractor shall provide the proper road, sidewalk, bike lane closures, etc. and detour routes per the City's Engineering Code and MUTCD.

The Contractor shall furnish the City's Traffic Division with two copies of a traffic control plan for review and approval for all work sites, and shall not proceed with any work until approval of the site specific traffic control plan has been received. The plan must be submitted at least five business days in advance of the work at that location. If during construction the Traffic Division determines that the traffic control plan needs to be adjusted to better meet actual field conditions the contractor shall immediately make said adjustments at no additional cost to the City. The contractor is responsible for determining the probable requirements for each site with the City's Traffic Division prior to the bid opening. The Contractor is directed to Section 50 of the *Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements* for more specific information on traffic control. The Contractor shall notify the Traffic Division (720-898-7740) a minimum of one business day in advance of all closures including temporary lane closures on public roads, private accesses, and business accesses.

Barricading, traffic control devices, and protective materials shall remain in place until the new concrete reaches 80% of its designed compressive strength and adjacent pavement has been restored before the work is opened to traffic.

Crossspan replacement shall be phased to insure local traffic and emergency vehicle access at all times. Access width shall be a minimum of 16 feet. Contractor must leave enough pavement for one-way traffic. "One Lane Road Ahead" signs must be used on all streets where crossspans have been partially removed. One lit device must be placed every 10 feet around the crossspan replacement area.

Traffic Control Supervisor – The Contractor shall designate an individual, other than the superintendent, to be the Traffic Control Supervisor. The Traffic Control Supervisor shall be certified as a worksite traffic supervisor by either the American Traffic Safety Services Association (ATSSA) or the Colorado Contractors Association (CCA). The responsibilities and duties of the Traffic Control Supervisor shall be

as stated in Section 630.11 of the Colorado Department of Transportation Standard Specifications for Road and Bridge Construction, 2017 edition.

Lane Closure Restrictions

Lane closures in the various street classifications are as follows:

- Arterial Street: Lane closures 8:30 am to 3:30 pm
Construction activities 8:30am to 3:30 pm
Must maintain one lane in each direction at all times
- Collector Street: Lane closures 8:30 am to 3:30 pm
Construction activities 7:00am to 7:00 pm
Must maintain one lane with adequate flagging at all times
- Local Street: Lane closures 7:00 am to 7:00 pm
Construction activities 7:00am to 7:00 pm
May be closed to through traffic unless otherwise noted during working hours

Collector and Arterial Street classifications are as follows. All other streets in the project are classified as Local Streets.

Arterial Streets – **Ralston Rd. – Miller St. to W 58th Pl.**

Collector Streets -- **W 55th Ave. – Wadsworth Byp. to Marshall St., W 60th Ave. – Lamar St. to Sheridan Blvd., Quail St. – W 64th Ave. to Allendale Dr.**

Traffic restrictions on weekends and outside of normal working hours shall be determined by the Traffic Division on a case by case basis.

If the Contractor violates the above working time limitations, the Engineer may give written notice to stop work on the project at the beginning of the next work day and work cannot resume until the Contractor provides a written explanation for the violation and assurance to the Engineer that there will not be a recurrence of the violation. If subsequent working time violations do occur, the Engineer will notify the contractor in writing that there will be a price reduction for each incident of violation in accordance with the schedule describe further below. The price reduction will not be imposed when changed contract conditions are encountered during the normal working time or the violation was a result of circumstances beyond the control of the Contractor or subcontractor. Delays in material delivery are not considered circumstances beyond the control of the Contractor. The price reduction will not constitute a penalty, but will be considered a failure to perform traffic control in accordance to the contract specifications.

An incident is any violation up to 30 minutes in duration. Each 30 minutes or increment thereof will be considered an incident. A price reduction will be assessed for each successive or cumulative 30 minute period of violation as determined by the Engineer. The price reduction will increase at a progressive rate. A 15 minute grace period may be granted at the beginning of the second incident before a price reduction is applied. The incident charges are cumulative throughout the project.

PRICE REDUCTION SCHEDULE

<u>Incident</u>	<u>Incident Rate</u>	<u>Total Price Reduction</u>
1 st	Notice to Stop Work	\$0
2 nd	\$150	\$150
3 rd	\$300	\$450
4 th	\$600	\$1,050
5 th	\$600	\$1,650
etc	etc	etc

Payment for Traffic Control shall be in accordance with Section 3.46 of the *City of Arvada Standard Specifications for the Design and Construction of Public Improvements* and shall constitute full compensation for furnishing signs, traffic control plans, working lighted barricades, flagging, arrow boards, etc., Traffic Control Supervisor, traffic control management and all labor, equipment and materials necessary to complete the work.

SC-8 NOTIFICATION OF ADJACENT PROPERTY OWNERS AND MANAGERS: Property owners and managers affected by and in the immediate vicinity of the work shall be notified by the contractor a minimum of 48 hours in advance of the work to be performed by distribution of City furnished "door hangers". Work shall not proceed prior to notification. In isolated cases the City will assist the Contractor in clearing parked vehicles in the work area when the vehicle owner fails to respond to the proper notification and signage. No separate payment will be made for notification, and it shall be considered a subsidiary obligation of the contract.

SC-9 REMOVE AND REPLACE 5'-3" WIDTH AND 6'-6" WIDTH COMBINATION CURB, GUTTER AND SIDEWALK, AND/OR 18" and 30" WIDTH VERTICAL CURB AND GUTTER: This work shall consist of removing and replacing said items at locations directed by the Engineer by full depth sawing existing asphaltic concrete surfaces 18 inches from and parallel to existing concrete lip lines, full depth sawing the concrete to be removed at right angles to the flow line, removing and disposing of asphalt and concrete, replacing concrete with new 6-inch depth (8" in ADA ramp transitions and in gutters adjacent to crossspans) concrete with standard geometrics. Replacing asphalt will be completed according to roadway classification by tacking and placing hot bituminous pavement, 9" minimum for arterial roadways (7" Grading S and 2" SX compacted depths), 7" minimum for collector roadways (5" Grading S and 2" SX compacted depths), 6" minimum for local roadways (4" Grading S and 2" SX compacted depths) in accordance with the City's Standard Specifications and restoring all damaged areas behind the new sidewalk to pre-construction conditions. All asphalt patch back shall be completed within three days of when concrete reaches 80% of its designed compressive strength. Unsuitable subgrade conditions shall be corrected at the Engineer's direction by use of stabilization material. If dimensional lumber is used for forms (1x6, 2x6 etc.) additional excavation depth below forms will be required in order to obtain the required 6" or 8" replacement concrete thickness. Replacement concrete finish is to be "light broom".

Payment for Remove and Replace 5'-3" width or 6'-6" width Combination Curb, Gutter and Sidewalk, and or 18" and 30" Vertical Curb and Gutter including transitions from ADA ramps (refer to drawings ST-9, 11, 12, 13, 14, 15, 16, 19, 22 and 23) shall be by the linear foot removed and replaced and shall be full compensation for furnishing all labor, equipment, materials and incidentals required to remove and replace combination curb, gutter and sidewalk or vertical curb and gutter, including but not limited to such items as full depth saw cutting, asphalt and concrete removal and disposal, subgrade preparation, compaction, fiber mesh reinforcement, transitions to ADA ramps, extra gutter thickness adjacent to crossspans, roadway classification based minimum thickness asphalt patching where required, and restoring all damaged areas behind back of sidewalk. Where 18" width vertical curb and gutter is being replaced along existing concrete median cover a 1/2" expansion joint material with joint sealant shall be installed and included in item bid price.

No additional payment for 8" thick gutters adjacent to crossspans shall be made. It shall be measured and paid as remove and replace 5'-3" width or 6'-6" width combination curb, gutter and sidewalk or remove and replace 18" and 30" width vertical curb and gutter depending on what is installed as shown in drawings ST-9, 11, 12, and 13.

SC-10 REMOVE AND REPLACE CONCRETE CROSSSPAN: This work shall consist of removing and replacing of existing concrete crossspans at locations directed by the Engineer. Asphaltic concrete shall be full depth saw cut at 18 inches from and parallel to existing crossspan edges and radii lip lines unless otherwise directed. Concrete shall be full depth saw cut at right angles to the flow line at locations directed by the

Engineer prior to removal. All asphalt patch back shall be completed within three days of when concrete reaches 80% of its designed compressive strength. Unsuitable subgrade conditions shall be corrected at Engineer direction by use of stabilization material. Existing crosspans shall be replaced with eight (8) inch depth concrete sections.

If dimensional lumber is used for forms (1x8, 2x8 etc.) additional excavation depth below forms will be required in order to obtain the required 8" replacement concrete thickness. Replacement concrete finish is to be "light broom".

Payment for Remove and Replace Crossspan (refer to drawing ST-9) shall be by the square yard removed and replaced and shall include field measured areas of all crossspan surfaces up to the projection of gutter lip line through radii and shall constitute full compensation for removing and replacing the existing crossspan with new eight (8) inch thick sections, including full depth sawing of existing concrete, excavation and disposal of existing concrete, subgrade compaction, grading, fiber mesh reinforcement, 4 ea. 24" length epoxy coated standard No. 4 rebar dowels at all cold joints, roadway classification based minimum thickness asphalt patching where required, restoring all damaged areas beyond the limits of the crosspan to pre-construction conditions, etc. Welded wire fabric is not allowed.

No additional payment for 8" thick gutters adjacent to a crosspans shall be made. It shall be measured and paid as typical 5'-3" or 6'-6" width combination curb, gutter and sidewalk removal and replacement or 18" and 30" width vertical curb and gutter removal and replacement based on what is installed adjacent to the crosspan as shown in drawing ST-9, 11, 12, and 13. Payment for fillet areas adjacent to the crosspan shall be made in accordance with the attached "Fillet Area Calculations Using Known Arc Length" chart.

SC-11 DRIVEWAY CURB CUTS: No new driveway curb cuts shall be installed. Existing driveways with curb cuts will be replaced to match existing or otherwise directed by the Engineer. Payment for any driveway curb cuts installed beyond the scope of this project shall be negotiated between the Contractor and private property owner. Maximum length of driveway curb cuts shall be 35 feet. Driveway curb cuts and wings shall be paid as remove and replace 5'-3" width or 6'-6" width curb gutter and sidewalk as though the driveway curb cut did not exist. It is possible on rare occasions that a portion of the private driveway behind the replacement sidewalk may have to be replaced to accommodate a new grade at the back of sidewalk. If so, the Engineer will mark the driveway area for removal and replacement. Driveway replacement shall be at 6 inch thickness. Payment for driveway area will be as "Removal and Replacement of 6" thickness sidewalk". Driveway curb cut flares shall not extend beyond the property line extension. Design flare length is 5 feet. Replacement concrete finish is to be "light broom".

SC-12 REMOVE AND REPLACE 4"- 6" THICKNESS CONCRETE SIDEWALK WITH 6" THICKNESS: This work shall consist of removing and disposing of existing 4"- 6" thick detached concrete sidewalk sections and replacing the removed sections with six inch (6") thickness sections at locations directed by the Engineer. Concrete shall be full depth saw cut at right angles to the flow line at locations directed by the Engineer prior to removal. Restoration of all surfaces adjacent to the sidewalk to pre-construction conditions (or better) shall be included in the contractor's unit price. Unsuitable subgrade conditions shall be corrected at the Engineer's direction by use of stabilization material. Replacement concrete finish is to be "light broom".

Payment for "Remove and Replace 4"- 6" thickness Concrete Sidewalk with 6" thickness" shall be by the square yard and shall include field measured areas of all detached sidewalk surfaces and shall constitute full compensation for removing and replacing the existing 4"-6" thickness sidewalk with new six (6) inch thick sections, including full depth sawing, excavation and disposal of existing concrete, subgrade compaction, grading, fiber mesh reinforcement, restoring all damaged areas behind the sidewalk to pre-construction conditions, etc.

SC-13 REMOVE CURB JUMP: This work shall consist of removing and disposing of existing concrete curb jumps at locations directed by the Engineer. Curb Jumps are typically defined as homeowner poured concrete strips in curb flow lines where a private driveway meets the flow line of an existing combination curb, gutter, and sidewalk section and generally runs along the frontage length of the driveway. There

may be small pipes installed as a part of the curb jump to provide for flow line drainage. Curb jumps shall be removed by use of suitable equipment, i.e., jack hammer or other equipment, which will accomplish adequate removal. Every effort shall be made to prevent damage to the gutter pan and gutter face under the curb jump.

Payment for each "Remove Curb Jump" shall be full payment for furnishing all labor, equipment, materials and incidentals necessary to remove curb jumps, including concrete removal and disposal, pipe removal and disposal, sweeping, and restoring all areas where curb ramps were removed in the existing gutter pan to substantially pre-construction conditions. Each is defined as one per access or driveway location, any confusion on measurement of quantity will be directed to the engineer for question prior to removal.

No additional payment will be made for removing curb jumps that may be attached to curb and gutters that have been identified for removal and replacement.

- SC-14 STABILIZATION MATERIAL:** Where subgrade stabilization material is required, and as directed by the Engineer, 3 inch lifts of crushed washed 1-1/2 inch rock with a maximum 10% passing the No. 4 sieve shall be furnished, placed, and compacted into the native soil using a jumping jack or similar means to help stabilize the subgrade in areas as directed by the Engineer. A maximum of 1 foot of existing subgrade material below the existing concrete shall be removed and disposed of. CDOT Class 6 base course shall then be placed and compacted using a jumping jack or similar means in the remaining over-excavated area above the crushed rock in order to achieve the proper depth for the replacement concrete. Base course material shall be placed within optimum moisture limits for the material.

Payment for tons of stabilization material (either crushed 1-1/2 inch rock or CDOT Class 6 base course) from weight tickets will constitute full compensation for furnishing all labor, equipment, materials and incidentals required for subgrade stabilization (either rock or base course), including over excavation and material disposal.

- SC-15 CONCRETE:** All concrete shall be Colorado Department of Transportation Class "D" as specified in Table 601-1 in *CDOT's Standard Specifications for Road and Bridge Construction*, fiber reinforced, and of such mix design to attain a minimum 4,500 psi, 28-day compressive strength. Entrained air content shall be 5-8%, with a water/cementitious material ratio of 0.45. Mix design from the material supplier shall be submitted to the Engineer for approval at least forty-eight (48) hours prior to incorporation into the work. Fiber reinforcement shall be added at the batch plant at the rate of 1.5 lbs/cy. Concrete shall be continuously agitated from the time water is added and then mixed for 2 1/2 minutes just prior to discharge. **Water shall not be added to any concrete truck after any portion of the load has been discharged.** The mix shall be discharged in place within 90 minutes after batching when delivered in truck mixers or agitating trucks and within 60 minutes after cement is batched when delivered in non agitating trucks, unless longer time is specifically authorized. The 90 minute time limit for mixer or agitating trucks may be increased to 120 minutes if no water is added after 90 minutes and the concrete temperature prior to placement is less than 90 degrees F.

New concrete surfaces shall be protected during initial set from weather, vandalism, pedestrians, and bicycle traffic; and shall be kept closed from vehicular traffic for a minimum period of seven (7) days or until such time concrete has reached 80% of its maximum design strength. The City will furnish subgrade compaction and concrete strength testing. Concrete cylinders will be prepared for every 50 CY of concrete placed. Compressive strength testing will be conducted at 3 day, 7 day and 28 day cure times. Air and slump tests will also be conducted with each cylinder series.

- SC-16 DRAWINGS:** The Contractor shall pay particular attention to the following drawings that pertain to this work, in addition to all the drawings and specifications in the *City of Arvada Engineering Code and Specifications for the Design and Construction of Public Improvements*:

ST-9 Concrete Replacement Section and Detail Crossspan

SC

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- ST-11 Vertical Curb, Gutter and Sidewalk Sections and Curb Cut Sections
- ST-12 Mountable and Vertical Curb and Gutter Sections
- ST-13 Concrete Replacement Details
- ST-14 Radius Details, ADA Ramps (CR1)
- ST-15 Radius Details ADA Ramps (CR2)
- ST-16 Radius Detail/ADA Ramps for Arterial Streets (CR3)
- ST-19 Mid-Block Crosswalk Intersection ADA Ramp Detail (MR 1)
- ST-22 Replacement Detail Radius with ADA Ramp for 5'-3" Mountable Curb, Gutter & Sidewalk
- ST-23 Replacement Detail Radius with ADA Ramp for 6'-6" Mountable Curb, Gutter & Sidewalk
- ST-25 Curb Cut Design Detached Sidewalk
- ST-26 Curb Cut Design Combination Curb, Gutter and Sidewalk New Construction
- ST-34 Sidewalk Chase

All other drawings in the City of Arvada *Engineering Code and Specifications for the Design and Construction of Public Improvements* remain in effect for all work on this project.

SC-17 ADA/HANDICAP RAMPS: Handicap ramps are to be constructed in accordance with Federal regulations at all radius replacements and at other locations as directed by the Engineer. Ramps are to provide the handicapped direction by use of detectable warnings with a truncated dome surface using the products specified below (or Engineer approved equal). Generally, ramps are to provide elevation change at 12:1 maximum grade in direction parallel with centerline of walk and to provide a minimum width of 36-inch with a 2 percent maximum cross slope. Landings are to be 6-foot minimum length in a direction parallel to centerline of walk with a grade not to exceed 2 percent in any direction where feasible. Ramps are to be constructed so that outer edges of the cross walks are aligned with landings. A curb head is to be provided through ramp bottoms and approach transitions but not extend past the top of the transitions. The truncated domes used shall provide a color contrast, red, and be installed into the new concrete per the manufacturer's recommendations. Site conditions may dictate that standard handicap ramps cannot be easily constructed in conformance to the standard drawings. Thus, the contractor will need to work closely with and understand direction from the Engineer on how to accommodate the uniqueness of each site.

Payment for each ADA/Handicap ramp shall be full payment for furnishing, all labor, equipment, materials, and incidentals necessary to install an ADA/Handicap ramp in accordance with the pay limits shown of the attached City of Arvada drawings, including such items as, concrete removal and disposal, full depth sawing concrete and asphalt 18" from and parallel to existing concrete lip lines and as directed, removal and disposal of asphalt, subgrade preparation, compaction, fiber mesh reinforcement, installation of 8" concrete section, curb head, installation of detectable warning materials, 6" minimum thickness asphalt patching, restoring all damaged areas behind the new ramp to at least pre-construction condition, etc.

Acceptable detectable warning materials are as follows:

"Cast in Place" by Armor-Tile, Inc.
"CASTinTact" by N-Direct Distribution, Inc
Cast Iron DWP with Red color as manufactured by East Jordan Iron Works
Precast Concrete Detectable Warning Paving Slabs as manufactured by StoneBilt Concepts
"Cast in Place" wet set Detectable Warning Panel as manufactured by Armorcast Products Company

All detectable warning panels shall be bolted together as necessary using manufacturer supplied or recommended nuts and bolts prior to placement in fresh concrete. Alternative truncated dome detectable warning materials will be considered by the Engineer and must be approved by the Engineer prior to being incorporated into any work on this project.

For this project the terms "ADA Ramp" and "handicap ramp" are interchangeable.

SC-18 COMPACTION: Prior to placing concrete the Contractor shall compact all subgrade areas and/or stabilization material in accordance with the City's Standard Specifications. The entire subgrade surface, which would include stabilization material, shall be smooth, tight, compacted, and within +/- 4% of optimum moisture. Moisture control is the responsibility of the contractor. In lieu of an actual density and moisture test the Engineer may use a "heel" test as a method to verify that sufficient compaction and moisture control has been achieved. The "heel" test occurs by placing the body weight on the heel of a boot on the surface receiving the concrete. If the surface deforms then the compaction test fails. Compaction shall be by mechanical means such as a plate compactor, jumping jack, or vibratory compactor. The City reserves the right to require the contractor to use additional compacting tools and or methods to achieve the proper compaction and moisture. Loose subgrade or stabilization material three inches or less in depth may be compacted with a plate compactor, assuming that it will pass the "heel" compaction test. On depths greater than three inches a plate compactor cannot be used except for a final compaction to achieve a smooth surface. Maximum depth of stabilization material lifts is six inches. Unsuitable subgrade conditions shall be corrected at the Engineer's direction. Use and payment of stabilization material is outlined in SC-14. Compaction of subgrade shall not constitute a separate pay item, but shall be considered subsidiary to the contract.

SC-19 FLEXIBLE FORMS: Flexible forms will not be allowed unless in specific areas approved by the Engineer prior to construction specific to that application and site.

SC-20 RESTORATION BEHIND AND ADJACENT TO REPLACEMENT AREAS: All damaged surfaces behind and adjacent to replacement work shall be restored to at least pre-construction conditions. Restoration in landscape areas shall include backfill with suitable topsoil free of rocks, clay chunks, and dirt clumps and must also be completed within five working days of when the concrete was poured. Repair of irrigation lines and/or sprinkler heads is required to be completed within three days the issue was made aware to contractor. Restoration shall be considered a subsidiary obligation of the contract.

If not adequately restored within working days mentioned above, the City reserves the right to issue a Stop Work Order in other areas of the project until the restoration matter is corrected to the satisfaction of the Engineer and the contractor assures the Engineer in writing that there will not be a reoccurrence of this violation.

SC-21 PROJECT STATUS MEETINGS/CONSTRUCTION SCHEDULE: At the request of the Engineer, formal project status meetings will be held as necessary for scheduling, communication and problem solving throughout the duration of this project. The Contractor shall insure that his Project Manager or Superintendent is present at these meetings. Each Wednesday the Contractor shall furnish the Engineer with a weekly schedule of work operations for the following week (Monday through Friday) throughout the duration of the project.

SC-22 UTILITY ADJUSTMENTS - MANHOLE, RANGE POINT, VALVE BOX, SIDEWALK CHASE: Utility adjustments shall consist of minor incidental raising or resetting of existing manholes, valve boxes, range points, sidewalk chase, etc. encountered as part of the concrete replacement in order to match final grade. This work will consist of removing a 3' x 3' or 4' x 4' square of concrete (or asphalt within 18" of concrete lip line as necessary) centered on the utility sides perpendicular and parallel to the street centerline; removing asphalt and/or concrete, removing ring and cover or stem or top section, resetting City furnished rings and covers or stems and top sections at elevations to receive adjusting rings by others during street resurfacing. Grade shall be maintained by use of a string across the excavation perpendicular and parallel to street centerline. Should an existing manhole ring, cover, valve box or valve box lid or chase not be usable the City will furnish the said materials to the Contractor. Manhole, valve box adjustments, sidewalk chases, etc. are designated as "Utility Adjustments" on the Bid Schedule.

Payment for each utility adjusted will constitute full compensation for furnishing all equipment, labor and incidentals required to properly adjust the utilities. Payment for the required removal and replacement of concrete and asphalt shall be at the applicable concrete and asphalt measurement and payment criteria.

- SC-23 INLET GRATE ADJUSTMENT:** Inlet adjustments shall consist of removing and relocating an existing inlet grate to match the flow line of the replacement concrete. City will furnish new inlet grates where the existing grate is damaged or otherwise not able to be salvaged. Work to include partial removal of inlet walls as necessary, installation of epoxy coated #4 bar reinforcing steel into existing structure to support new or relocated grate and repouring of walls and resetting of inlet grate at adjusted location.

Payment to be full compensation for all materials and labor required to relocate inlet grate to the appropriate location in the replacement concrete.

- SC-24 MINOR CONTRACT REVISIONS:** Miscellaneous modifications in the work, ordered by the Engineer in the form of a written or verbal field order, will be considered a Minor Contract Revision. Payment for accepted work performed under this pay item "Minor Contract Revision" will be made in accordance with Sections 2.16 and 2.17 of the Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements. An authorized representative of the contractor shall acknowledge receipt of written field orders by promptly signing all written field orders delivered to the job site. Verbal field orders given by the Engineer will be recorded in writing in the municipal inspector's daily report that is to be signed by the contractor's authorized representative.

- SC-25 OSHA REGULATIONS:** It shall be contractor's responsibility to comply with all OSHA regulations for all work completed under this project.

- SC-26 CONTRACTOR LICENSING:** The Contractor and all subcontractors will be required to obtain and maintain an appropriate Municipal Contractor's license(s) from the City of Arvada Engineering Division prior to beginning any work. All costs associated with obtaining the necessary licenses such as license fee, license bond, etc. are the responsibility of the contractor. The usual contractor licenses required are *Flatwork Concrete* for the removal and replacement of concrete and *Street Patching* for the asphalt patching back against the curb. License fee is \$125.00 for each license.

Once the Municipal Contractor's license has been obtained the contractor and all approved subcontractors will also be required to obtain a no cost Public Improvements Permit from the City of Arvada Engineering Division for all work performed on this particular project.

Contractor shall also be required to obtain the proper licensing from the Colorado Department of Transportation when working in the CDOT ROW during the course of the work required on this project.

- SC-27 CITY HOLIDAYS, OVERTIME AND WORK HOURS:** The contractor, when performing work on City holidays, Saturday, Sunday, or in excess of 10 hours a day on a weekday shall reimburse the City for the Municipal Inspector's time at the following rates:

\$90 per hour – 2 hours minimum

Payment shall be made payable to the City of Arvada within 10 days of the invoice from the City. No work is allowed on Sundays unless specifically preauthorized in writing by the City Manager after a written request is received by the Contractor. Normal work hours are 7:00 am to 7:00 pm unless specifically preauthorized in writing by the City Manager.

- SC-28 NONSTANDARD GEOMETRY:** All replacement concrete shall be in accordance with the City's Standard details. If existing sections do not meet current City standards for geometry then direction will be given to the Contractor as to whether the replacement concrete shall meet current City standards for geometry or be replaced to match existing conditions. No additional compensation beyond the standard bid items will

be paid to the Contractor for installing non standard geometric concrete as directed by the Engineer to match existing conditions. Compensation will be according to the "closest fit" bid item.

SC-29 VEGETATION REMOVAL: Where vegetation removal will be necessary for concrete replacement the affected homeowner will be notified by the City and given the opportunity to remove the vegetation. Should the homeowner not complete the work the Contractor shall remove the necessary vegetation in order to complete the work. Branches shall be trimmed in a neat manner using an appropriate pruner or saw. Branches shall not be torn or broken off. This work shall be considered a subsidiary obligation of the contract and no separate measurement or payment will be made.

SC-30 BEST MANAGEMENT PRACTICES (BMPs) FOR STORMWATER MANAGEMENT:

This section provides a set of criteria and technical guidance for erosion and sediment control and material management at concrete replacement and asphalt projects. Erosion control measures limit erosion of soil from disturbed areas including stockpiled material at the construction site. Sediment control measures prevent the transport of sediment off-site to downstream properties and stormwater conveyances. Materials management is the practice of containing and controlling all materials used in order to eliminate potential pollutants from leaving the site. Due to the fast paced nature of concrete and asphalt projects, the site's erosion and sediment controls and material management BMPs must be inspected and maintained by the owner/operator daily.

Measurement: No separate measurement will be made for maintaining the BMP's in accordance with these standards and also for controlling mud and dust sufficiently to eliminate affected property owners and citizens from calling the City and registering a complaint pertaining thereto.

Payment: Prorated payment of the contract amount bid for stormwater management will be made monthly. The percentage paid shall be equal to the percentage of the total contract dollar amount completed that month. Payment shall be full compensation for all materials, equipment, labor, etc., required to install and adequately maintain stormwater BMP's during the performance of work.

Site Development Permit (SDP):

In accordance with the City of Arvada's permit criteria, concrete and asphalt operations including the installation and repair of all concrete and asphalt public right of ways must acquire a City Site Development Permit and implement and maintain erosion control, sediment entrapment and material management BMPs.

Initial documentation required:

1. Completed SDP application
2. Application fee (waived for City funded projects)
3. Escrow/LOC (waived for City funded projects)
4. Site map
5. Potential pollutant list
6. BMP specification details

SDP – Required Documentation:

A site map including construction boundaries, all locations of BMPs, stockpiles, staging areas, portable restrooms, concrete containment, construction material storage and waste material storage must be provided to the City's Stormwater Division prior to beginning work. This site map must be updated daily to reflect the site's condition.

Potential pollutants must be listed and BMPs prescribed for each individual pollutant. If on-site fueling or maintenance will be conducted, a spill plan must be provided to the Stormwater Division prior to beginning work and a copy must be retained by fueling/maintenance personnel during operations.

A copy of these requirements including BMP specifications and details must remain on site and be referred to by any personnel installing, maintaining, repairing, repositioning or inspecting BMPs.

A daily log of BMP inspections, installation, repair and maintenance must be kept on site. This log must contain the date, name, location of BMP, and nature of work. It must also include that the site map was revised.

SDP -- Enforcement Policy:

If it is determined by the City Inspector that BMPs are not inspected, installed and maintained daily, payment to the contractor may be withheld. If BMPs are not installed or maintained for a period of three consecutive days, a separate company will be contracted to do the work whereas costs incurred will be 100% reimbursed to the City with an inclusion of an additional 50% for administrative fees.

Site Development Permit BMP requirements for Concrete and Asphalt operations:

- ✓ All paved surfaces, gutters and sidewalks affected by work must be cleaned at the end of each day.
- ✓ All inlets within and downstream of the work areas will be protected.
- ✓ Curb check dams will be installed at all locations downstream of work areas where stormwater flows may potentially come in contact with dirt and exit the work area.
- ✓ An area must be designated for construction material waste. All waste materials must be placed into waste containers and covered immediately.
- ✓ Portable Toilets must be provided on site and an area designated for their placement.
- ✓ A portable concrete washout basin must be provided on site.
- ✓ Staging areas must be designated and employ appropriate BMPs.
- ✓ Stockpiles must, at all times have a perimeter BMP installed at the downstream side and all material dragged from a stockpile during operations must be swept back into the pile at the end of each day.
- ✓ If replacing a storm sewer inlet, pipes within the Inlet must be temporarily plugged during the inlet construction.
- ✓ All erosion and sediment control practices shall be maintained and repaired by the owner/operator during the construction phase as needed to assure continued performance of their intended function. All BMPs must be inspected, maintained and replaced daily if necessary.
- ✓ After all work has been completed, including asphalt and re vegetation, clean out and remove all temporary construction BMPs.

BID BOND

We, the undersigned _____ as Principal,
and _____ as Surety, are hereby held and firmly bound unto the City of
Arvada, Colorado, in the penal sum of _____ for the
payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

THE CONDITION of this obligation is such that whereas the Principal has submitted to the City of Arvada, Colorado the
accompanying Bid Proposal, and hereby made a part hereof to enter into a Contract Agreement for the
construction of City of Arvada Project No. 19-ST-10, 2019 Concrete Replacement.

WHEREAS, the City, as a condition for receiving said Bid Proposal, requires the Principal to deposit with the City a Bid
Proposal Guaranty, equivalent to not less than Five (5) Percent of the amount of said Bid Proposal.

NOW THEREFORE,

- (A) If said Bid Proposal shall be rejected; or in the alternate,
- (B) If said Bid Proposal shall be accepted and the Principal shall execute and deliver a Contract Agreement
(properly completed in accordance with said Bid Proposal) and shall furnish a Performance and
Payment Bond upon the forms prescribed by the City for the faithful performance of said Contract; and for
the payment of all persons performing labor or furnishing materials in connection therewith; and shall in all
other respects perform the agreement created by the acceptance of said Bid Proposal;

Then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and
agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this
obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no
way impaired or affected by any extension of the time within which the City may accept such Bid and said Surety does
hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, this _____ day of
_____, 2019, and such of them as are corporations have caused their corporate seals to be
hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

PRINCIPAL

SURETY

Name: _____

Address: _____

By: _____

By: _____

Title: _____

Title: _____

Attorney-in-Fact:

(SEAL)

(SEAL)

NOTE: Surety Companies executing bonds must be authorized to transact business in the State of Colorado and be
acceptable to the City.

BID PROPOSAL

TO: City of Arvada, Colorado (hereinafter called "CITY").

FROM: _____ (hereinafter called "BIDDER"), organized and existing under the laws of the State of _____ doing business as (a corporation), (a partnership), (an individual).

The Bidder, in compliance with your Advertisement for Bids, hereby proposes to perform all Work in strict accordance with the Contract Documents, for the construction of City of Arvada Project No. 19-ST-10 entitled 2019 Concrete Replacement within the time set forth therein, and at the prices stated on the included Bid Schedule as totaled herein.

By submission of this Bid Proposal, each Bidder certifies, and in the case of a joint venture each party thereto certifies as to his/her own organization, that this Bid Proposal has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this Bid Proposal with any other Bidder or with any competitor.

Bidder acknowledges receipt of Addendum Nos. _____ Initials: _____

Bidder states that his:

Major Material Suppliers are:

Material They Will Supply

Major Subcontractors are:

Work They Will Perform

CONTRACT TIME AND LIQUIDATED DAMAGES: All work on this project, as specified on attached map and bid schedule, including cleanup shall be completed by November 29th, 2019. A Notice to Proceed is anticipated to be issued on or about March 18th, 2019. The bidder shall agree to pay the owner the sum of \$3,900.00 for each calendar day that the work exceeds the allotted contract time. Contract time may be adjusted by Change Order.

Total from included Bid Schedule:

TOTAL BID \$ _____

SUBMITTED BY:

Company Name: _____

Contact Names: _____

Address: _____

Phone: (_____) _____ Email(s): _____

The undersigned hereby affirms that:

- He/she is a duly authorized agent of the Contractor;
- He/she has read all Terms and Conditions and technical specifications made available in conjunction with this solicitation and fully accept and acknowledge this bid is consistent with the specifications and terms and conditions.
- The bid is in all respects fair, without outside collusion or otherwise illegal action.

By: _____
Signature of Authorized Agent Date FEIN_____
Typed/Printed Name of Agent_____
Title of Agent_____
Agent email

PAYMENT TERMS: The City standard is net thirty (30) days but every effort is made to meet net fifteen (15) days after the approved partial payment date when the contractor is satisfactorily performing the contract but pay. The final 5% of total payment will be paid once the contract is completed satisfactorily, advertisement for final settlement is complete, and the project is accepted by the City. Payment is the date of the check mailing or date of the credit card transaction.

BID SCHEDULE
2019 Concrete Replacement
Project No. 19-ST-10



Contractor: _____

Address, City, Zip: _____

Project Engineer: Shane Hoerig

Date: 1/18/2019

ITEM	SPEC*	CONTRACT ITEM	QTY	UNIT	Unit Price	Extension
1	SC-9	REMOVE AND REPLACE 5'-3" WIDTH CURB, GUTTER AND SIDEWALK	43713	LF	\$	\$
2	SC-9	REMOVE AND REPLACE 6'-6" WIDTH CURB, GUTTER AND SIDEWALK	7768	LF	\$	\$
3	SC-12	REMOVE AND REPLACE 4"-6" THICKNESS CONCRETE SIDEWALK WITH 6" THICKNESS	8026	SY	\$	\$
4	3.21	8" THICK CONCRETE PAVEMENT	350	SY	\$	\$
5	SC-9	REMOVE AND REPLACE 18" WIDTH VERTICAL CURB AND GUTTER	1800	LF	\$	\$
6	SC-9	REMOVE AND REPLACE 30" WIDTH VERTICAL CURB AND GUTTER	8270	LF	\$	\$
7	SC-10	REMOVE AND REPLACE CONCRETE CROSSSPAN	1990	SY	\$	\$
8	SC-17	ADA/HANDICAP RAMP	400	EA	\$	\$
9	SC-13	REMOVE CURB JUMP	22	EA	\$	\$
10	SC-14	STABILIZATION MATERIAL	5500	TON	\$	\$
11	SC-22	UTILITY ADJUSTMENTS	7	EA	\$	\$
12	SC-23	INLET GRATE ADJUSTMENT	8	EA	\$	\$
13	3.5	REMOVAL OF ASPHALT MAT (<8")	50	SY	\$	\$
14	3.28	SIDEWALK CHASE	2	EA	\$	\$
15	SC-7	TRAFFIC CONTROL	1	EA	\$	\$
16	3.49	MOBILIZATION	1	SY	\$	\$
17	SC-30	BEST MANAGEMENT PRACTICES (BMPS) FOR STORMWATER MANAGEMENT	1	LS	\$	\$
18	SC-24	MINOR CONTRACT REVISIONS	1	LS	\$ 150,000.00	\$ 150,000.00
TOTAL BID \$						

*City of Arvada Measurement and Basis of Payment number and/or Project Special Provision number

PERFORMANCE AND PAYMENT BOND

Bond No. _____

(Firm) _____

(Address) _____

(an Individual), (a Partnership), (a Corporation), hereinafter called Principal; and

(Firm) _____

(Address) _____

hereinafter called Surety, are held and firmly bound unto the City of Arvada, a Colorado municipal corporation, 8101 Ralston Road, Arvada, Colorado 80002, hereinafter called the City, in the penal sum of _____, Dollars, _____, in lawful money of the United States, for the payment of such sum will and truly to be made, we bind ourselves, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION are such that the Principal entered into a certain Contract with the City, dated the _____ day of _____, 2019, a copy of which is hereto attached and made a part hereof, for the performance of City of Arvada Project No.'s 19-ST-10, 2019 Concrete Replacement.

NOW THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions and agreements of said Contract during the original term thereof, and any extensions thereof which may be granted by the City, with or without Notice to the surety and during the life of the guaranty period, and if he shall satisfy all claims and demands incurred under such Contract, and shall fully indemnify and save harmless the City from all cost and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the City all outlay and expense which the City may incur in making good any default, and if he shall promptly make payment to all persons, firms, subcontractors and corporations furnishing materials for or performing labor in the prosecution of the work provided for in such Contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, repairs on machinery, equipment and tools, consumed, rented or used in connection with the construction of such work, and all insurance premiums on said work, and for all labor, performed in such work whether by subcontractor or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder or the specifications accompanying the same shall in anyway affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work or to the specifications.

PROVIDED, FURTHER, that no final settlement between City and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in three counterparts, each one of which shall be deemed an original, this the _____ day of _____, 2019.

IN PRESENCE OF:

PRINCIPAL _____

By _____

Address _____

(Corporate Seal)

OTHER PARTNERS

(Surety Seal)

SURETY _____

Attorney _____ in _____ Fact _____

Address _____

Note: If Contractor is Partnership, all partners should execute Bond.

Important: Surety Company must be authorized to transact business in the State of Colorado and be acceptable to the City.

REQUIRED CONTRACTOR SUBMITTAL FORM

SUBMITTAL CHECKLIST:

Proposals shall be submitted in the order listed below with each section clearly identified.

Submit completed City Submittal Forms including this sheet, Bid Bond, Bid Proposal, Bid Schedule, and any other attachments requested.

Submit Implementation timeline and warranties, if applicable.

Attach Contractor's Licensing, if applicable.

Insurance – Checking this box accepts that the insurance requirements listed by the City are acceptable.

Please initial to acknowledge Addenda, if any, have been considered in your proposal:

#1 _____ #2 _____

REFERENCES:

Check here if Contractor's standard reference sheet is attached, otherwise, use the space below.

Name: _____ Contact Person: _____

Address: _____

Telephone No: _____ Email: _____

Describe type of work/service performed or items supplied: _____

Name: _____ Contact Person: _____

Address: _____

Telephone No: _____ Email: _____

Describe type of work/service performed or items supplied: _____

Name: _____ Contact Person: _____

Address: _____

Telephone No: _____ Email: _____

Describe type of work/service performed or items supplied: _____

NOTICE OF AWARD

Date

Company
Address
City, State Zip

RE: Project No. [Project Title]

Dear Representative of _____:

The City of Arvada, Colorado (hereinafter called "City") has considered the Bid Proposals submitted for referenced work in response to its Advertisement for Bids dated _____ and Information for Bidders.

You are hereby notified that your Bid Proposal has been accepted, for items and prices stated in the Bid Schedule, in the amount of \$ _____.

You are required by the Information for Bidders to execute in triplicate, the Contract, the Insurance Certificates and a Performance and Payment Bond within seven (7) days from the date of this Notice to you.

The three originals of the Contract Agreement need to be signed, attested, and sealed with the corporate stamp and returned. Please do not date the contracts. They will be dated when the Mayor signs them. The Performance and Payment Bond needs to be filled out, returned in triplicate, and accompanied by the Power of Attorney from your surety company. Also, please make sure that the three copies of the insurance certificate are in the minimum amounts set forth in the Contract Documents and the City of Arvada is named as an additional insured for the specific Project Number and Title. An Additional Insured endorsement certificate should also be attached.

If you fail to execute said Contract and furnish the necessary Insurance Certificates and Bond within the time allotted from this date, the City will be entitled to consider all your rights arising out of the City's acceptance of your Bid Proposal as abandoned and as a forfeiture of your Bid Bond. The City will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this Notice of Award and enclosures to the Project Engineer.

CITY OF ARVADA, COLORADO

City Engineer

BIDDER

Company

Receipt of above Notice of Award accompanied with a Performance and Payment Bond form and three (3) copies of the Contract is hereby acknowledged.

This _____ day of _____, 20____.

By: _____

Name: _____

Title: _____

NOTICE TO PROCEED

Date

Company
Address
City, State Zip

RE: Project No. [Project Title]

Dear Representative of _____:

You are hereby notified to commence work on referenced Project, in accordance with the Contract dated _____
on or before _____, and you are to complete the Work, including cleanup within _____ calendar days thereafter.

The date of completion of all Work is therefore _____.

CITY OF ARVADA, COLORADO

City Engineer

BIDDER

Receipt of this Notice to Proceed is hereby acknowledged this _____ day of _____, 20____.

Company

By: _____

Title: _____

**AN AGREEMENT BY AND BETWEEN THE CITY OF ARVADA AND
FOR _____
IN AN AMOUNT NOT TO EXCEED \$_____.00**

This Agreement made this _____ day of _____ by and between the City of Arvada, a home rule municipal corporation ("Arvada" and/or "City") and _____, a _____ ("Contractor").

WITNESSETH: That for and in consideration of the covenants, promises, and payments hereinafter mentioned:

1. Contractor will commence and complete the _____ described in the Contract Documents relating to CSB-_____, issued _____, 20____, ("the Work").
2. Contractor will furnish all material, supplies, tools, equipment, labor, and other services necessary for the completion of the Work.
3. Contractor will commence the work required by the Contract Documents within ten (10) calendar days after the date of Notice to Proceed.
4. Contractor will complete the work required by the Contract Documents by _____ after the date of the Notice to Proceed unless the period for completion is extended otherwise by the Contract Documents.
5. Contractor agrees to perform all of the work described in the Contract Documents for an amount not to exceed \$_____.00 for the Work.
6. The term "Contract Documents" means and includes the following:
 - A. Arvada's Request for [Project Title], CSB-_____ ("CSB");
 - B. CSB Exhibits (if any);
 - C. CSB Addenda (if any);
 - D. Contractor's Response to CSB-_____, Advertisement for Bid, Bid Proposal, Bid Schedule, Bid Bond;
 - E. Notice of Award;
 - F. Performance and Payment Bond;
 - G. Notice to Proceed;
 - H. Change Orders (if any);
 - I. City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements;
 - J. Project special provisions prepared or issued by City of Arvada (or its Consultant if applicable);
 - K. Detail drawings and Bid Documents prepared or issued by City of Arvada (or its Consultant if applicable);
 - L. Specification Illustrations and attachments; and
 - M. All supplementary requirements regarding wage rates, E.E.O., affirmative action and all other Federal-State requirements as outlined in the specifications.
7. INVOICES AND COMPENSATION. Contractor will follow Bid schedule and partial payments will be made accordingly NET fifteen (15) but no later than NET thirty (30).

8. GENERAL TERMS AND CONDITIONS, SPECIAL TERMS AND CONDITIONS, INSURANCE REQUIREMENTS, PROJECT SPECIAL PROVISIONS, AND OTHER CSB REQUIREMENTS. Contractor affirms that it has read and is familiar with the Contract Documents, including but not limited to the General Terms and Conditions, Special Terms and Conditions, Insurance Requirements, Project Special Provisions, and other CSB requirements, and agrees to be bound by those terms and conditions.

9. PREFERENCES IN EMPLOYMENT OF COLORADO LABOR. To the extent that obligations and responsibilities may be established by C.R.S. § 8-17-101 *et seq.*, as amended, with respect to certain public entities and those contracting therewith as to the procurement of services:

- a. Colorado labor shall be employed to perform eighty percent (80%) of the work.
- b. Any waiver of this requirement must comply with C.R.S. § 8-17-101 *et seq.*, as amended.

10. PERFORMANCE MEASURES. The Performance Measures for this Agreement shall be those proposed by Contractor in its Proposal to Arvada's solicitation and accepted by Arvada, which are included in the Contract Documents that are exhibits to this Agreement.

11. ADDITIONAL DOCUMENTS OR ACTION. The parties agree to execute any additional documents and to take any additional action that is necessary to carry out this Agreement.

12. BINDING EFFECT. This Agreement shall inure to the benefit of, and be binding upon, the parties, their respective legal representatives, successors, heirs, and assigns; provided, however, that nothing in this paragraph shall be construed to permit the assignment of this Agreement except as otherwise expressly authorized herein.

13. PARAGRAPH CAPTIONS. The paragraph captions in this Agreement are set forth only for the convenience and reference of the parties and are not intended in any way to define, limit, or describe the scope or intent of this Agreement.

14. INTEGRATION, AMENDMENT, AND SEVERABILITY. This Agreement represents the entire agreement between the parties, and there are no oral or collateral agreements or understandings. This Agreement may be amended only by an instrument in writing signed by the parties. If any other provision of this Agreement is held invalid or unenforceable, no other provision shall be affected by such holding, and all of the remaining provisions of this Agreement shall continue in full force and effect if the essential terms and conditions of this Agreement for both parties remain valid, legal, and enforceable.

15. NOTICES. Any notice or notification required or permitted by the Agreement shall be in writing and shall be deemed to have been sufficiently given for all purposes if sent by certified mail or registered mail, postage and fees prepaid, addressed to the party to whom such notice is to be given at the address set forth on the signature page below, or at such other address as has been previously furnished in writing, to the other party or parties. Such notice or notification shall be deemed to have been given when deposited in the United States mail.

16. BINDING AUTHORITY. Contractor represents and affirms that the signature page hereof accurately states the full legal name of Contractor (whether as a corporation, partnership, limited liability company, sole proprietorship, or other), contains all requisite signature(s) on behalf of Contractor, has been properly acknowledged by attestation, notary acknowledgment, or both, and in all

other respects is effective to bind Contractor, in accordance with all applicable statutes, regulations, resolutions, rules, bylaws, agreements, or similar sources of authority or limitation. This Agreement may be executed in counterpart(s), each of which shall be deemed to be an original, and all of which, taken together, shall constitute one instrument.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Contract Agreement in three copies, each of which shall be deemed an original on the date first above written.

CITY OF ARVADA, COLORADO

8101 Ralston Road
Arvada, CO 80002

ATTEST/WITNESS:

City Clerk

APPROVED AS TO FORM:

For Christopher K. Daly, City Attorney

By: _____

CONTRACTOR

Name:
Title:

ATTEST/WITNESS:

By:
Title:

CHANGE ORDER

No. ____

TO:

Upon Contractor acceptance and City approval, the work and Contract Documents for City of Arvada, Project No. _____, entitled _____ will be adjusted to include the following:

<u>Item</u>	<u>Description</u>	<u>Qty.</u>	<u>Unit</u>	<u>Unit Cost</u>	<u>Add/Delete</u>
	<u>ADD</u>				
1.					
2.					
3.					
4.					

TOTAL ADD

\$ _____

Adjustments to Contract Price & Time**Contract
Dollars****Calendar
Days**Contract Totals through and including
Previous Change Orders

\$

Adjustments this Change Order
(Increase)

\$

Contract Totals to Date – Including
Change Order No. ____

\$

Contract Time Expires on:

APPROVED FOR CITY

8101 Ralston Road
Arvada, CO 80002

ATTEST:

City Clerk

ACCEPTED FOR CONTRACTOR

By: _____

Title: _____

Date: _____

APPROVED AS TO FORM:

For Christopher K. Daly, City Attorney

By: _____

ADDENDUM

NO. 1

January 30, 2019

City of Arvada Project No. 19-ST-10, 2019 Concrete Replacement

Project Engineer: Shane Hoerig

The Bid Documents, previously prepared and issued for the above Project, are hereby modified as hereinbelow described.

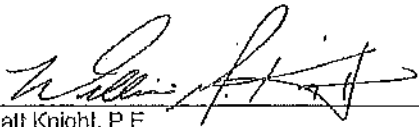
Bidders shall acknowledge receipt of this Addendum, by number, in the space provided on the Bid Proposal form.

BID SCHEDULE:

The bid schedule for this project has been revised as follows:

1. Pay Item #15, Traffic Control – Unit has been changed from EA (Each) to LS (Lump Sum).
2. Pay Item #16, Mobilization – Unit has been changed from SY (Square Yard) to LS (Lump Sum).

ALL BIDS SHALL BE SUBMITTED ON THE ATTACHED REVISED BID SCHEDULE LABELED "ADDENDUM #1."


Matt Knight, P.E.
City Engineer

BID TAB

City of Arvada Project: 2019 Concrete Replacement
 Project Manager: Shane Hoerig

Project No. 19-ST-10

Bid Opening: February 5, 2019 @ 1:00 p.m. (MST)

Item No.	Item Description	Bid Qty	Unit	Engineer's Estimate		Triple M Construction LLC Denver, CO	
				Unit Cost	Total	Unit Cost	Total
1	Remove and Replace 5'-3" Width Curb, Gutter and Sidewalk	43,713	LF	\$46.12	\$2,016,043.56	\$40.00	\$1,748,520.00
2	Remove and Replace 6'-6" Width Curb, Gutter and Sidewalk	7,768	LF	\$49.39	\$383,661.52	\$46.00	\$357,328.00
3	Remove and Replace 4'-6" Thickness Concrete Sidewalk With 6" Thickness	8,026	SY	\$63.57	\$510,212.82	\$60.00	\$481,560.00
4	8" Thick Concrete Pavement	350	SY	\$100.00	\$35,000.00	\$95.00	\$33,250.00
5	Remove and Replace 18" Width Vertical Curb and Gutter	1,800	LF	\$33.75	\$60,750.00	\$28.00	\$50,400.00
6	Remove and Replace 30" Width Vertical Curb and Gutter	8,270	LF	\$35.36	\$292,592.60	\$30.00	\$248,100.00
7	Remove and Replace Concrete Crossspan	1,990	SY	\$97.20	\$193,428.00	\$95.00	\$189,050.00
8	ADA/Handicap Ramp	400	EA	\$1,360.00	\$544,000.00	\$1,100.00	\$440,000.00
9	Remove Curb Jump	22	EA	\$52.00	\$1,144.00	\$50.00	\$1,100.00
10	Stabilization Material	5,500	TON	\$20.00	\$110,000.00	\$20.00	\$110,000.00
11	Utility Adjustments	7	EA	\$330.00	\$2,310.00	\$330.00	\$2,310.00
12	Inlet Grate Adjustment	8	EA	\$490.00	\$3,920.00	\$490.00	\$3,920.00
13	Removal of Asphalt Mat (<8")	50	SY	\$10.00	\$500.00	\$13.00	\$650.00
14	Sidewalk Chase	2	EA	\$150.00	\$300.00	\$300.00	\$600.00
15	Traffic Control	1	EA	\$150,000.00	\$150,000.00	\$15,000.00	\$15,000.00
16	Mobilization	1	SY	\$175,000.00	\$175,000.00	\$20,000.00	\$20,000.00
17	Best Management Practices (BMP's) for Stormwater Management	1	LS	\$7,500.00	\$7,500.00	\$4,000.00	\$4,000.00
18	Minor Contract Revisions	1	LS	\$150,000.00	\$150,000.00	\$150,000.00	\$150,000.00
BID TOTAL					\$4,636,362.50		\$3,855,788.00

BID TAB

City of Arvada Project: 2019 Concrete Replacement

Project Manager: Shane Hoerig

Project No. 19-ST-10

Bid Opening: February

Item No.	Item Description	Bid Qty	Unit	Denver Concrete Works, Inc. Denver, CO		Standard Concrete Inc. Denver, CO	
				Unit Cost	Total	Unit Cost	Total
1	Remove and Replace 5'-3" Width Curb, Gutter and Sidewalk	43,713	LF	\$44.62	\$1,950,474.06	\$37.36	\$1,633,117.68
2	Remove and Replace 6'-6" Width Curb, Gutter and Sidewalk	7,768	LF	\$47.85	\$371,698.80	\$45.68	\$354,919.92
3	Remove and Replace 4'-6" Thickness Concrete Sidewalk With 6" Thickness	8,026	SY	\$59.75	\$479,553.50	\$63.27	\$507,805.02
4	8" Thick Concrete Pavement	350	SY	\$75.00	\$26,250.00	\$67.10	\$23,485.00
5	Remove and Replace 18" Width Vertical Curb and Gutter	1,800	LF	\$31.50	\$56,700.00	\$26.00	\$46,800.00
6	Remove and Replace 30" Width Vertical Curb and Gutter	8,270	LF	\$33.75	\$279,112.50	\$27.75	\$229,492.50
7	Remove and Replace Concrete Crossspan	1,990	SY	\$75.00	\$149,250.00	\$94.00	\$187,060.00
8	ADA/Handicap Ramp	400	EA	\$1,250.00	\$500,000.00	\$2,000.00	\$800,000.00
9	Remove Curb Jump	22	EA	\$50.00	\$1,100.00	\$200.00	\$4,400.00
10	Stabilization Material	5,500	TON	\$18.50	\$101,750.00	\$73.00	\$401,500.00
11	Utility Adjustments	7	EA	\$320.00	\$2,240.00	\$1,000.00	\$7,000.00
12	Inlet Grate Adjustment	8	EA	\$450.00	\$3,600.00	\$1,200.00	\$9,600.00
13	Removal of Asphalt Mat (<8")	50	SY	\$8.00	\$400.00	\$27.00	\$1,350.00
14	Sidewalk Chase	2	EA	\$120.00	\$240.00	\$1,500.00	\$3,000.00
15	Traffic Control	1	EA	\$135,000.00	\$135,000.00	\$219,226.00	\$219,226.00
16	Mobilization	1	SY	\$150,000.00	\$150,000.00	\$230,187.00	\$230,187.00
17	Best Management Practices (BMP's) for Stormwater Management	1	LS	\$7,500.00	\$7,500.00	\$25,000.00	\$25,000.00
18	Minor Contract Revisions	1	LS	\$150,000.00	\$150,000.00	\$150,000.00	\$150,000.00
BID TOTAL					\$4,364,868.86		\$4,833,943.12

BID TAB

City of Avada Project: 2019 Concrete Replacement

Project No. 19-ST-10

Project Manager: Shane Hoerig

Bid Opening: Feb/14

Item No.	Item Description	Bid Qty	Unit	Silva Construction Inc. Brighton, CO		Norraa Concrete Construction Corp Brighton, CO	
				Unit Cost	Total	Unit Cost	Total
1	Remove and Replace 5'-3" Width Curb, Gutter and Sidewalk	43,713	LF	\$52.00	\$2,273,076.00	\$50.00	\$2,185,850.00
2	Remove and Replace 6'-6" Width Curb, Gutter and Sidewalk	7,788	LF	\$62.00	\$481,616.00	\$60.00	\$466,080.00
3	Remove and Replace 4'-6" Thickness Concrete Sidewalk With 6" Thickness	8,026	SY	\$74.00	\$593,924.00	\$76.00	\$609,976.00
4	8" Thick Concrete Pavement	350	SY	\$100.00	\$35,000.00	\$94.00	\$32,900.00
5	Remove and Replace 18" Width Vertical Curb and Gutter	1,800	LF	\$33.00	\$59,400.00	\$30.00	\$54,000.00
6	Remove and Replace 30" Width Vertical Curb and Gutter	8,270	LF	\$33.00	\$272,910.00	\$45.00	\$372,150.00
7	Remove and Replace Concrete Crossspan	1,390	SY	\$106.00	\$210,940.00	\$124.00	\$246,760.00
8	ADA/Handicap Ramp	400	EA	\$1,800.00	\$720,000.00	\$2,225.00	\$890,000.00
9	Remove Curb Jump	22	EA	\$50.00	\$1,100.00	\$100.00	\$2,200.00
10	Stabilization Material	5,500	TON	\$15.00	\$82,500.00	\$23.00	\$126,500.00
11	Utility Adjustments	7	EA	\$170.00	\$1,190.00	\$650.00	\$4,550.00
12	Inlet Grate Adjustment	8	EA	\$400.00	\$3,200.00	\$750.00	\$6,000.00
13	Removal of Asphalt Mat (<8")	50	SY	\$30.00	\$1,500.00	\$20.00	\$1,000.00
14	Sidewalk Chase	2	EA	\$1,500.00	\$3,000.00	\$1,500.00	\$3,000.00
15	Traffic Control	1	EA	\$60,000.00	\$60,000.00	\$120,850.00	\$120,850.00
16	Mobilization	1	SY	\$60,000.00	\$60,000.00	\$245,000.00	\$245,000.00
17	Best Management Practices (BMP's) for Stormwater Management	1	LS	\$10,000.00	\$10,000.00	\$10,865.00	\$10,865.00
18	Minor Contract Revisions	1	LS	\$150,000.00	\$150,000.00	\$150,000.00	\$150,000.00
BID TOTAL					\$5,019,356.00		\$5,527,481.00

BID TAB

City of Anvada Project: 2019 Concrete Replacement

Project No. 19-ST-10

Project Manager: Shane Hoerig

Bid Opening: Febua

Item No.	Item Description	Bid Qty	Unit	Thout Bros Concrete Contractors Inc. Denver, CO		Concrete Express, Inc. (dba CEI) Denver, CO	
				Unit Cost	Total	Unit Cost	Total
1	Remove and Replace 5'-3" Width Curb, Gutter and Sidewalk	43,713	LF	\$55.70	\$2,434,814.10	\$56.80	\$2,482,898.40
2	Remove and Replace 6'-6" Width Curb, Gutter and Sidewalk	7,768	LF	\$67.00	\$520,456.00	\$67.00	\$520,456.00
3	Remove and Replace 4'-6" Thickness Concrete Sidewalk With 6" Thickness	8,025	SY	\$83.00	\$666,158.00	\$79.00	\$634,054.00
4	8" Thick Concrete Pavement	350	SY	\$125.00	\$43,750.00	\$138.00	\$48,300.00
5	Remove and Replace 18" Width Vertical Curb and Gutter	1,800	LF	\$30.00	\$54,000.00	\$44.00	\$79,200.00
6	Remove and Replace 30" Width Vertical Curb and Gutter	8,270	LF	\$35.00	\$289,450.00	\$49.00	\$406,230.00
7	Remove and Replace Concrete Crossspan	1,990	SY	\$130.00	\$258,700.00	\$138.00	\$274,620.00
8	ADA/Handicap Ramp	400	EA	\$1,750.00	\$700,000.00	\$2,150.00	\$860,000.00
9	Remove Curb Jump	22	EA	\$150.00	\$3,300.00	\$175.00	\$3,850.00
10	Stabilization Material	5,500	TON	\$32.00	\$176,000.00	\$42.50	\$233,750.00
11	Utility Adjustments	7	EA	\$375.00	\$2,625.00	\$435.00	\$3,045.00
12	Inlet Grate Adjustment	8	EA	\$500.00	\$4,000.00	\$965.00	\$7,720.00
13	Removal of Asphalt Mat (<8")	50	SY	\$27.00	\$1,350.00	\$27.00	\$1,350.00
14	Sidewalk Chase	2	EA	\$1,400.00	\$2,800.00	\$1,600.00	\$3,200.00
15	Traffic Control	1	EA	\$137,500.00	\$137,500.00	\$85,000.00	\$85,000.00
16	Mobilization	1	SY	\$250,000.00	\$250,000.00	\$130,000.00	\$130,000.00
17	Best Management Practices (BMP's) for Stormwater Management	1	LS	\$100,000.00	\$100,000.00	\$36,000.00	\$36,000.00
18	Minor Contract Revisions	1	LS	\$150,000.00	\$150,000.00	\$150,000.00	\$150,000.00
BID TOTAL					\$5,794,903.10		\$5,958,673.40

BID TAB

City of Arvada Project: 2019 Concrete Replacement

Project Manager: Shane Hoening

Project No. 19-ST-10

Bid Opening: February

Item		Item Description		Keene Concrete, Inc. Keenesburg, CO	
No.			Bid Qty	Unit	Total
1		Remove and Replace 5'-3" Width Curb, Gutter and Sidewalk	43,713	LF	\$56.00 \$2,447,928.00
2		Remove and Replace 6'-6" Width Curb, Gutter and Sidewalk	7,768	LF	\$63.00 \$489,384.00
3		Remove and Replace 4"-6" Thickness Concrete Sidewalk With 6" Thickness	8,026	SY	\$62.00 \$497,612.00
4		8" Thick Concrete Pavement	350	SY	\$88.00 \$30,800.00
5		Remove and Replace 18" Width Vertical Curb and Gutter	1,800	LF	\$35.00 \$63,000.00
6		Remove and Replace 30" Width Vertical Curb and Gutter	8,270	LF	\$38.00 \$314,260.00
7		Remove and Replace Concrete Crossspan	1,990	SY	\$110.00 \$218,900.00
8		ADA/Handicap Ramp	400	EA	\$2,950.00 \$1,180,000.00
9		Remove Curb Jump	22	EA	\$250.00 \$5,500.00
10		Stabilization Material	5,500	TON	\$30.00 \$165,000.00
11		Utility Adjustments	7	EA	\$600.00 \$4,200.00
12		Inlet Grate Adjustment	8	EA	\$380.00 \$3,040.00
13		Removal of Asphalt Mat (<8")	50	SY	\$12.00 \$600.00
14		Sidewalk Chase	2	EA	\$4,500.00 \$9,000.00
15		Traffic Control	1	EA	\$163,950.00 \$163,950.00
16		Mobilization	1	SY	\$115,000.00 \$115,000.00
17		Best Management Practices (BMP's) for Stormwater Management	1	LS	\$120,000.00 \$120,000.00
18		Minor Contract Revisions	1	LS	\$150,000.00 \$150,000.00
BID TOTAL					\$5,978,174.00

BID PROPOSAL

TO: City of Arvada, Colorado (hereinafter called "CITY").

FROM: Triple M Construction, LLC (hereinafter called "BIDDER"), organized and existing under the laws of the State of Colorado doing business as (a corporation), (a partnership), (an individual).

The Bidder, in compliance with your Advertisement for Bids, hereby proposes to perform all Work in strict accordance with the Contract Documents, for the construction of City of Arvada Project No. 19-ST-10 entitled 2019 Concrete Replacement within the time set forth therein, and at the prices stated on the included Bid Schedule as totaled herein.

By submission of this Bid Proposal, each Bidder certifies, and in the case of a joint venture each party thereto certifies as to his/her own organization, that this Bid Proposal has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this Bid Proposal with any other Bidder or with any competitor.

Bidder acknowledges receipt of Addendum Nos. 1 Initials: MM

Bidder states that his:

Major Material Suppliers are:

Brannan Sand & Gravel
Malco
Colorado Landscape

Material They Will Supply

Concrete & Asphalt
Dumps & Core
Road Base

Major Subcontractors are:

Trojan

Work They Will Perform

Flaggers

CONTRACT TIME AND LIQUIDATED DAMAGES: All work on this project, as specified on attached map and bid schedule, including cleanup shall be completed by November 29th, 2019. A Notice to Proceed is anticipated to be issued on or about March 18th, 2019. The bidder shall agree to pay the owner the sum of \$3,900.00 for each calendar day that the work exceeds the allotted contract time. Contract time may be adjusted by Change Order.

Total from included Bid Schedule:

TOTAL BID \$ 3,855,788.00**SUBMITTED BY:**Company Name: Triple M Construction, LLCContact Names: Mabel MorenoAddress: 7200 Quivas St Denver CO 80221Phone: (720) 331-6342 Email(s): Triplemconstruction@aol.com

The undersigned hereby affirms that:

- He/she is a duly authorized agent of the Contractor;
- He/she has read all Terms and Conditions and technical specifications made available in conjunction with this solicitation and fully accept and acknowledge this bid is consistent with the specifications and terms and conditions.
- The bid is in all respects fair, without outside collusion or otherwise illegal action.

By: Mabel Moreno 2/4/19

Signature of Authorized Agent

Date

46-1017143

FEIN

Mabel Moreno

Typed/Printed Name of Agent

President

Title of Agent

Triplemconstruction@aol.com

Agent email

PAYMENT TERMS: The City standard is net thirty (30) days but every effort is made to meet net fifteen (15) days after the approved partial payment date when the contractor is satisfactorily performing the contract but pay. The final 5% of total payment will be paid once the contract is completed satisfactorily, advertisement for final settlement is complete, and the project is accepted by the City. Payment is the date of the check mailing or date of the credit card transaction.

BID BOND

We, the undersigned Triple M Construction as Principal, and Philadelphia Indemnity Insurance Company as Surety, are hereby held and firmly bound unto the City of Arvada, Colorado, in the penal sum of Five Percent of the total bid amount (5%) for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

THE CONDITION of this obligation is such that whereas the Principal has submitted to the City of Arvada, Colorado the accompanying Bid Proposal, and hereby made a part hereof to enter into a Contract Agreement for the construction of City of Arvada Project No. 19-ST-10, 2019 Concrete Replacement.

WHEREAS, the City, as a condition for receiving said Bid Proposal, requires the Principal to deposit with the City a Bid Proposal Guaranty, equivalent to not less than Five (5) Percent of the amount of said Bid Proposal.

NOW THEREFORE,

- (A) If said Bid Proposal shall be rejected; or in the alternate,
- (B) If said Bid Proposal shall be accepted and the Principal shall execute and deliver a Contract Agreement (properly completed in accordance with said Bid Proposal) and shall furnish a Performance and Payment Bond upon the forms prescribed by the City for the faithful performance of said Contract; and for the payment of all persons performing labor or furnishing materials in connection therewith; and shall in all other respects perform the agreement created by the acceptance of said Bid Proposal;

Then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by any extension of the time within which the City may accept such Bid and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, this 5th day of February, 2019, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

PRINCIPAL

Name: Triple M Construction

Address: 7200 Quivas St, Denver, CO 80221

By: Mabel Mereno

Mabel Mereno

Title: President

Attorney-In-Fact:

Christine Crowder

(SEAL) Christine Crowder

SURETY

Philadelphia Indemnity Insurance Company

One Bala Plaza, #100, Bala Cynwyd, PA 19004

By: Tim Mitchell

Tim Mitchell

Title: Attorney-In-Fact

(SEAL)

NOTE: Surety Companies executing bonds must be authorized to transact business in the State of Colorado and be acceptable to the City.

PHILADELPHIA INDEMNITY INSURANCE COMPANY

One Bala Plaza, Suite 100
Bala Cynwyd, PA 19004-0950

Power of Attorney

KNOW ALL PERSONS BY THESE PRESENTS: That PHILADELPHIA INDEMNITY INSURANCE COMPANY (the Company), a corporation organized and existing under the laws of the Commonwealth of Pennsylvania, does hereby constitute and appoint Tim Mitchell, Ann M. Rifacco and Scott E. Metzger of Commercial Risk Solutions, Inc. dba CRS Insurance Brokerage, its true and lawful Attorney-in-fact with full authority to execute on its behalf bonds, undertakings, recognizances and other contracts of indemnity and writings obligatory in the nature thereof, issued in the course of its business and to bind the Company thereby, in an amount not to exceed \$25,000,000.00.

This Power of Attorney is granted and is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of PHILADELPHIA INDEMNITY INSURANCE COMPANY on the 14th of November, 2016.

RESOLVED: That the Board of Directors hereby authorizes the President or any Vice President of the Company: (1) Appoint Attorney(s) in Fact and authorize the Attorney(s) in Fact to execute on behalf of the Company bonds and undertakings, contracts of indemnity and other writings obligatory in the nature thereof and to attach the seal of the Company thereto; and (2) to remove, at any time, any such Attorney-in-Fact and revoke the authority given. And, be it

FURTHER RESOLVED: That the signatures of such officers and the seal of the Company may be affixed to any such Power of Attorney or certificate relating thereto by facsimile, and any such Power of Attorney so executed and certified by facsimile signatures and facsimile seal shall be valid and binding upon the Company in the future with respect to any bond or undertaking to which it is attached.

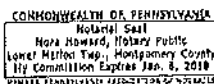
IN TESTIMONY WHEREOF, PHILADELPHIA INDEMNITY INSURANCE COMPANY HAS CAUSED THIS INSTRUMENT TO BE SIGNED AND ITS CORPORATE SEAL TO BE AFFIXED BY ITS AUTHORIZED OFFICE THIS 14TH DAY OF NOVEMBER, 2016.



(Seal)

Robert D. O'Leary Jr., President & CEO
Philadelphia Indemnity Insurance Company

On this 14th day of November, 2016, before me came the individual who executed the preceding instrument, to me personally known, and being by me duly sworn said that he is the therein described and authorized officer of the PHILADELPHIA INDEMNITY INSURANCE COMPANY; that the seal affixed to said instrument is the Corporate seal of said Company; that the said Corporate Seal and his signature were duly affixed.



Notary Public:

residing at:

Bala Cynwyd, PA

(Notary Seal)

My commission expires:

January 8, 2018

I, Edward Snyago, Corporate Secretary of PHILADELPHIA INDEMNITY INSURANCE COMPANY, do hereby certify that the foregoing resolution of the Board of Directors and this Power of Attorney issued pursuant thereto on this 14th day of November, 2016 are true and correct and are still in full force and effect. I do further certify that Robert D. O'Leary Jr., who executed the Power of Attorney as President, was on the date of execution of the attached Power of Attorney the duly elected President of PHILADELPHIA INDEMNITY INSURANCE COMPANY.

In Testimony Whereof I have subscribed my name and affixed the facsimile seal of each Company this 5th day of February, 20 19



Edward Snyago, Corporate Secretary
PHILADELPHIA INDEMNITY INSURANCE COMPANY

BID SCHEDULE - Addendum #1

2019 Concrete Replacement

Project No. 19-ST-10

Contractor: Triple M Construction, LLCAddress, City, Zip: 7200 Quivas St Denver CO 80221

Project Engineer: Shane Hoerig

ITEM	SPEC*	CONTRACT ITEM	QTY	UNIT	Unit Price	Extension
1	SC-9	REMOVE AND REPLACE 5'-3" WIDTH CURB, GUTTER AND SIDEWALK	43713	LF	\$ 40.00	\$ 1,748,520.00
2	SC-9	REMOVE AND REPLACE 6'-6" WIDTH CURB, GUTTER AND SIDEWALK	7768	LF	\$ 46.00	\$ 357,328.00
3	SC-12	REMOVE AND REPLACE 4'-6" THICKNESS CONCRETE SIDEWALK WITH 6" THICKNESS	8026	SY	\$ 60.00	\$ 481,560.00
4	3.21	8" THICK CONCRETE PAVEMENT	350	SY	\$ 96.00	\$ 33,250.00
5	SC-9	REMOVE AND REPLACE 18" WIDTH VERTICAL CURB AND GUTTER	1800	LF	\$ 28.00	\$ 50,400.00
6	SC-9	REMOVE AND REPLACE 30" WIDTH VERTICAL CURB AND GUTTER	8270	LF	\$ 30.00	\$ 248,100.00
7	SC-10	REMOVE AND REPLACE CONCRETE CROSSSPAN	1990	SY	\$ 95.00	\$ 189,050.00
8	SC-17	ADA/HANDICAP RAMP	400	EA	\$ 1,100.00	\$ 440,000.00
9	SC-13	REMOVE CURB JUMP	22	EA	\$ 50.00	\$ 1,100.00
10	SC-14	STABILIZATION MATERIAL	5500	TON	\$ 20.00	\$ 110,000.00
11	SC-22	UTILITY ADJUSTMENTS	7	EA	\$ 330.00	\$ 2,310.00
12	SC-23	INLET GRATE ADJUSTMENT	8	EA	\$ 490.00	\$ 3,920.00
13	3.5	REMOVAL OF ASPHALT MAT (<8")	50	SY	\$ 13.00	\$ 650.00
14	3.28	SIDEWALK CHASE	2	EA	\$ 300.00	\$ 600.00
15	SC-7	TRAFFIC CONTROL	1	LS	\$ 15,000.00	\$ 15,000.00
16	3.49	MOBILIZATION	1	LS	\$ 20,000.00	\$ 20,000.00
17	SC-30	BEST MANAGEMENT PRACTICES (BMPs) FOR STORMWATER MANAGEMENT	1	LS	\$ 4,000.00	\$ 4,000.00
18	SC-24	MINOR CONTRACT REVISIONS	1	LS	\$ 150,000.00	\$ 150,000.00
TOTAL BID						\$ 3,855,798.00

*City of Arvada Measurement and Basis of Payment number and/or Project Special Provision number

NOTICE OF AWARD

3/12/2019

Triple M Construction LLC
7200 Quivas St.
Denver, CO, 80221

RE: Project No. 19-ST-10, 2019 Concrete Replacement

Dear Representative of Triple M Construction LLC:

The City of Arvada, Colorado (hereinafter called "City") has considered the Bid Proposals submitted for referenced work in response to its Advertisement for Bids dated January 18th, 2019 and Information for Bidders.

You are hereby notified that your Bid Proposal has been accepted, for items and prices stated in the Bid Schedule, in the amount of \$3,855,788.00.

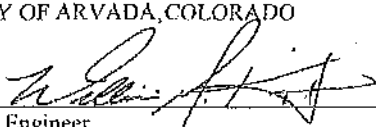
You are required by the Information for Bidders to execute the Contract, the Insurance Certificates and a Performance and Payment Bond within seven (7) days from the date of this Notice to you.

The Performance and Payment Bond needs to be filled out, returned (one original must be returned to the City), and accompanied by the Power of Attorney from your surety company. Also, please make sure that the insurance certificate is in the minimum amounts set forth in the Contract Documents and the City of Arvada is named as an additional insured for the specific Project Number and Title. An Additional Insured endorsement certificate should also be attached.

If you fail to execute said Contract and furnish the necessary Insurance Certificates and Bond within the time allotted from this date, the City will be entitled to consider all your rights arising out of the City's acceptance of your Bid Proposal as abandoned and as a forfeiture of your Bid Bond. The City will be entitled to such other rights as may be granted bylaw.

You are required to return an acknowledged copy of this Notice of Award and enclosures to the Project Engineer.

CITY OF ARVADA, COLORADO


City Engineer

BIDDER

TRIPLE M CONSTRUCTION LLC

Receipt of above Notice of Award accompanied with a Performance and Payment Bond form and three (3) copies of the Contract is hereby acknowledged.

This 18th day of March, 2019.

By: Mabel Moreno

Name: Mabel Moreno

Title: President

PERFORMANCE AND PAYMENT BONDBond No. PB02574600036(Firm) Triple M Construction LLC(Address) 7200 Quivas St, Denver, CO 80221

(an Individual), (a Partnership), (a Corporation), hereinafter called Principal; and

(Firm) Philadelphia Indemnity Insurance Company(Address) One Bala Plaza, Suite 100, Bala Cynwyd, PA 19004

hereinafter called Surety, are held and firmly bound unto the City of Arvada, a Colorado municipal corporation, 8101

Ralston Road, Arvada, Colorado 80002, hereinafter called the City, in the penal sum of \$3,855,788.00 **

lawful money of the United States, for the payment of such sum will and truly to be made, we bind ourselves, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION are such that the Principal entered into a certain Contract with the City, dated the 12th day of March, 2019, a copy of which is hereto attached and made a part hereof, for the performance of City of Arvada Project No.'s 19-ST-10, 2019 Concrete Replacement.

NOW THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions and agreements of said Contract during the original term thereof, and any extensions thereof which may be granted by the City, with or without Notice to the surety and during the life of the guaranty period, and if he shall satisfy all claims and demands incurred under such Contract, and shall fully indemnify and save harmless the City from all cost and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the City all outlay and expense which the City may incur in making good any default, and if he shall promptly make payment to all persons, firms, subcontractors and corporations furnishing materials for or performing labor in the prosecution of the work provided for in such Contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, repairs on machinery, equipment and tools, consumed, rented or used in connection with the construction of such work, and all insurance premiums on said work, and for all labor, performed in such work whether by subcontractor or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed hereunder or the specifications accompanying the same shall in anyway affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work or to the specifications.

PROVIDED, FURTHER, that no final settlement between City and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in three counterparts, each one of which shall be deemed an original, this the 14th day of March, 2019.

IN PRESENCE OF:

PRINCIPAL Triple M Construction LLCBy Mabel Moreno

Mabel Moreno, President

Address 7200 Quivas St, Denver, CO 80221

(Corporate Seal)

OTHER PARTNERS

(Surety Seal)

Christine Crowder
Christine Crowder

SURETY Philadelphia Indemnity Insurance Company

Attorney _____ in _____ Fact _____

Address 6600 E Hampden Ave, Denver, CO 80224

Note: If Contractor is Partnership, all partners should execute Bond.

Important: Surety Company must be authorized to transact business in the State of Colorado and be acceptable to the City.

** Three Million Eight Hundred Fifty Five Thousand Seven Hundred Eighty Eight Dollars and No Cents

PHILADELPHIA INDEMNITY INSURANCE COMPANY

One Bala Plaza, Suite 100
Bala Cynwyd, PA 19004-0950

Power of Attorney

KNOW ALL PERSONS BY THESE PRESENTS: That PHILADELPHIA INDEMNITY INSURANCE COMPANY (the Company), a corporation organized and existing under the laws of the Commonwealth of Pennsylvania, does hereby constitute and appoint Tim Mitchell, Ann M. Ritacco, Scott E. Metger and Christine Crowder of Commercial Risk Solutions, Inc. dba CRS Insurance Brokerage, its true and lawful Attorney-in-fact with full authority to execute on its behalf bonds, undertakings, recognizances and other contracts of indemnity and writings obligatory in the nature thereof, issued in the course of its business and to bind the Company thereby, in an amount not to exceed \$50,000,000.

This Power of Attorney is granted and is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of PHILADELPHIA INDEMNITY INSURANCE COMPANY on the 14th of November, 2016.

RESOLVED: That the Board of Directors hereby authorizes the President or any Vice President of the Company: (1) Appoint Attorney(s) in Fact and authorize the Attorney(s) in Fact to execute on behalf of the Company bonds and undertakings, contracts of indemnity and other writings obligatory in the nature thereof and to attach the seal of the Company thereto; and (2) to remove, at any time, any such Attorney-in-Fact and revoke the authority given. And, be it

FURTHER RESOLVED: That the signatures of such officers and the seal of the Company may be affixed to any such Power of Attorney or certificate relating thereto by facsimile, and any such Power of Attorney so executed and certified by facsimile signatures and facsimile seal shall be valid and binding upon the Company in the future with respect to any bond or undertaking to which it is attached.

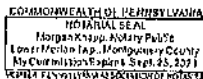
IN TESTIMONY WHEREOF, PHILADELPHIA INDEMNITY INSURANCE COMPANY HAS CAUSED THIS INSTRUMENT TO BE SIGNED AND ITS CORPORATE SEAL TO BE AFFIXED BY ITS AUTHORIZED OFFICE THIS 27th DAY OF OCTOBER, 2017.

(Seal)



Robert D. O'Leary Jr., President & CEO
Philadelphia Indemnity Insurance Company

On this 27th day of October, 2017, before me came the individual who executed the preceding instrument, to me personally known, and being by me duly sworn said that he is the therein described and authorized officer of the PHILADELPHIA INDEMNITY INSURANCE COMPANY; that the seal affixed to said instrument is the Corporate seal of said Company; that the said Corporate Seal and his signature were duly affixed.



(Notary Seal)

Notary Public:

residing at:

Bala Cynwyd, PA

My commission expires:

September 25, 2021

I, Edward Sayago, Corporate Secretary of PHILADELPHIA INDEMNITY INSURANCE COMPANY, do hereby certify that the foregoing resolution of the Board of Directors and the Power of Attorney issued pursuant thereto on the 27th day of October, 2017 are true and correct and are still in full force and effect. I do further certify that Robert D. O'Leary Jr., who executed the Power of Attorney as President, was on the date of execution of the attached Power of Attorney the duly elected President of PHILADELPHIA INDEMNITY INSURANCE COMPANY.

In Testimony Whereof I have subscribed my name and affixed the facsimile seal of each Company this 14th day of March, 2019.



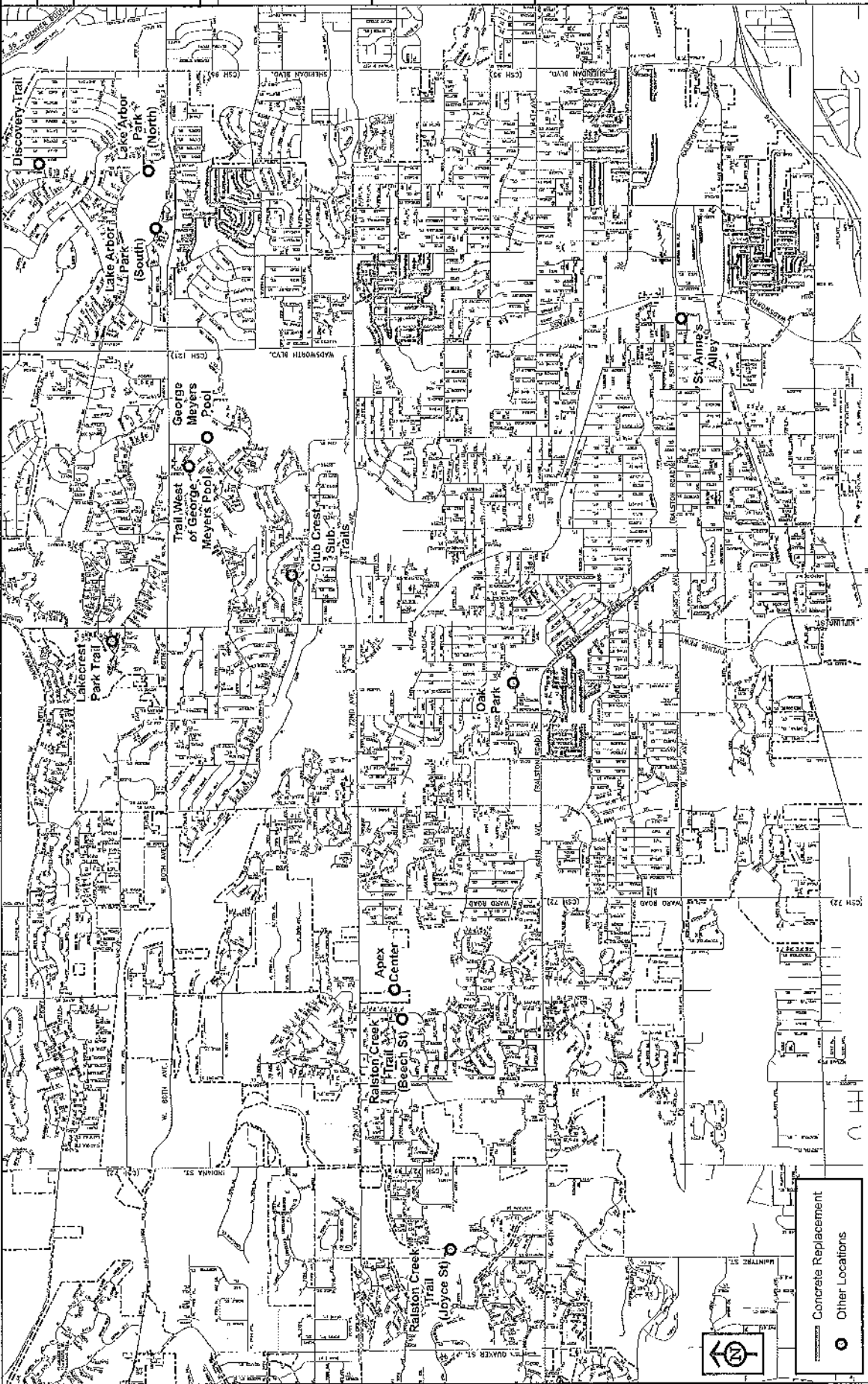
Edward Sayago, Corporate Secretary
PHILADELPHIA INDEMNITY INSURANCE COMPANY

PROJECT NO. 19-SF-10
2019 - CONCRETE REPLACEMENT



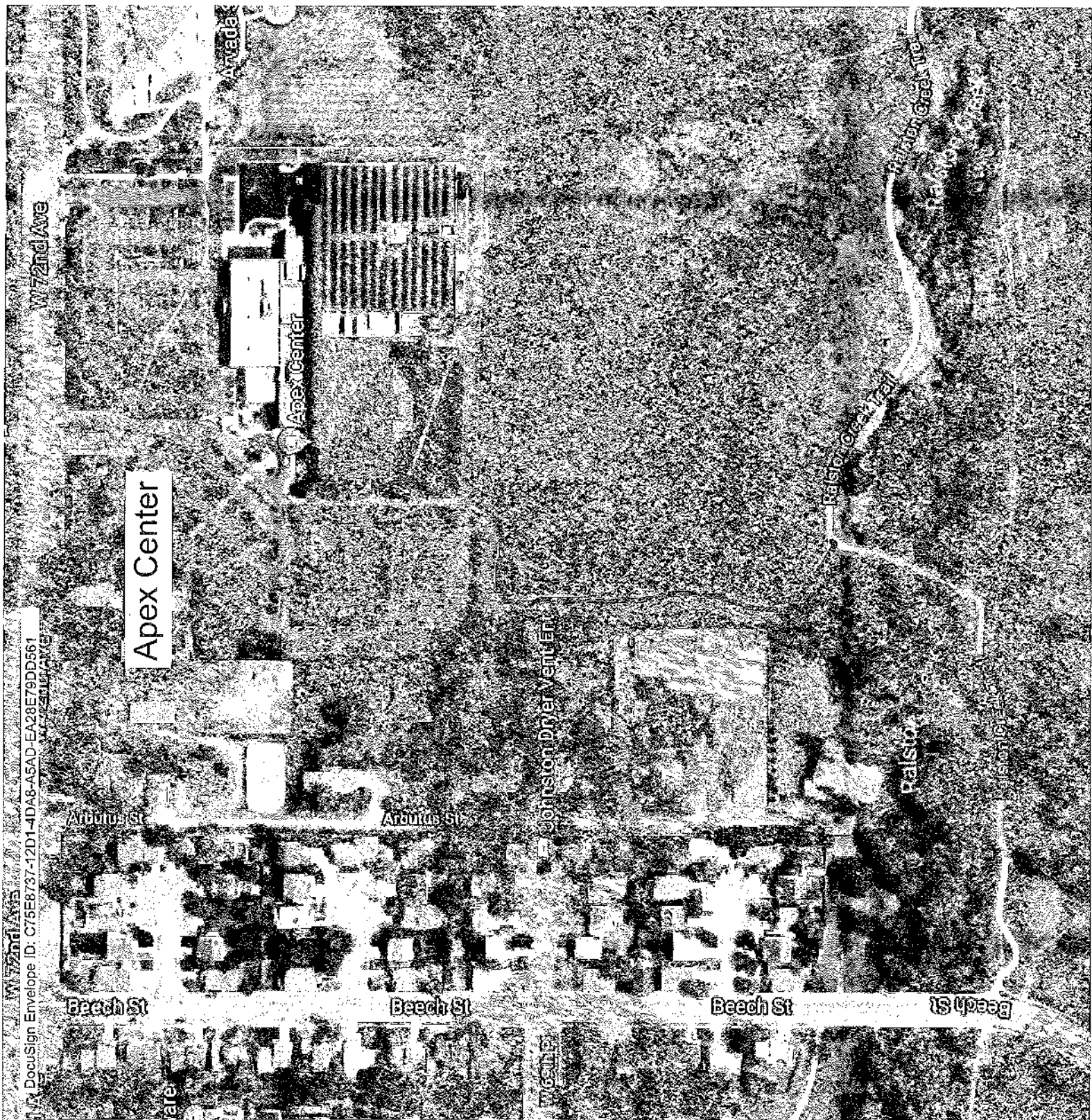
**Public Works Department
Engineering Division**
8101 Ralston Road
Arvada, Colorado 80002
Phone 720-698-7640

			1
			2
			3
			4
			5
10	11	12	13



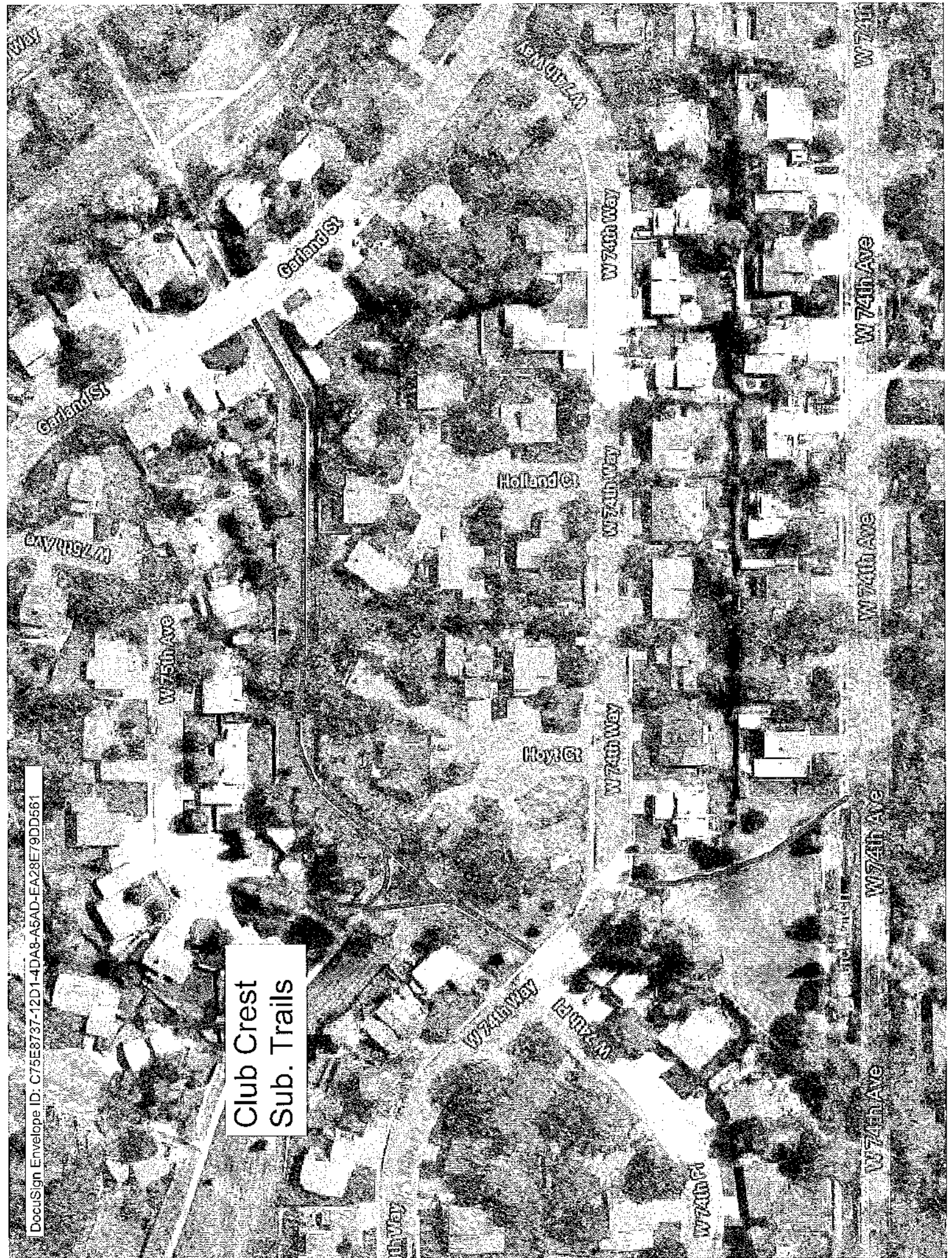
Concrete Replacement

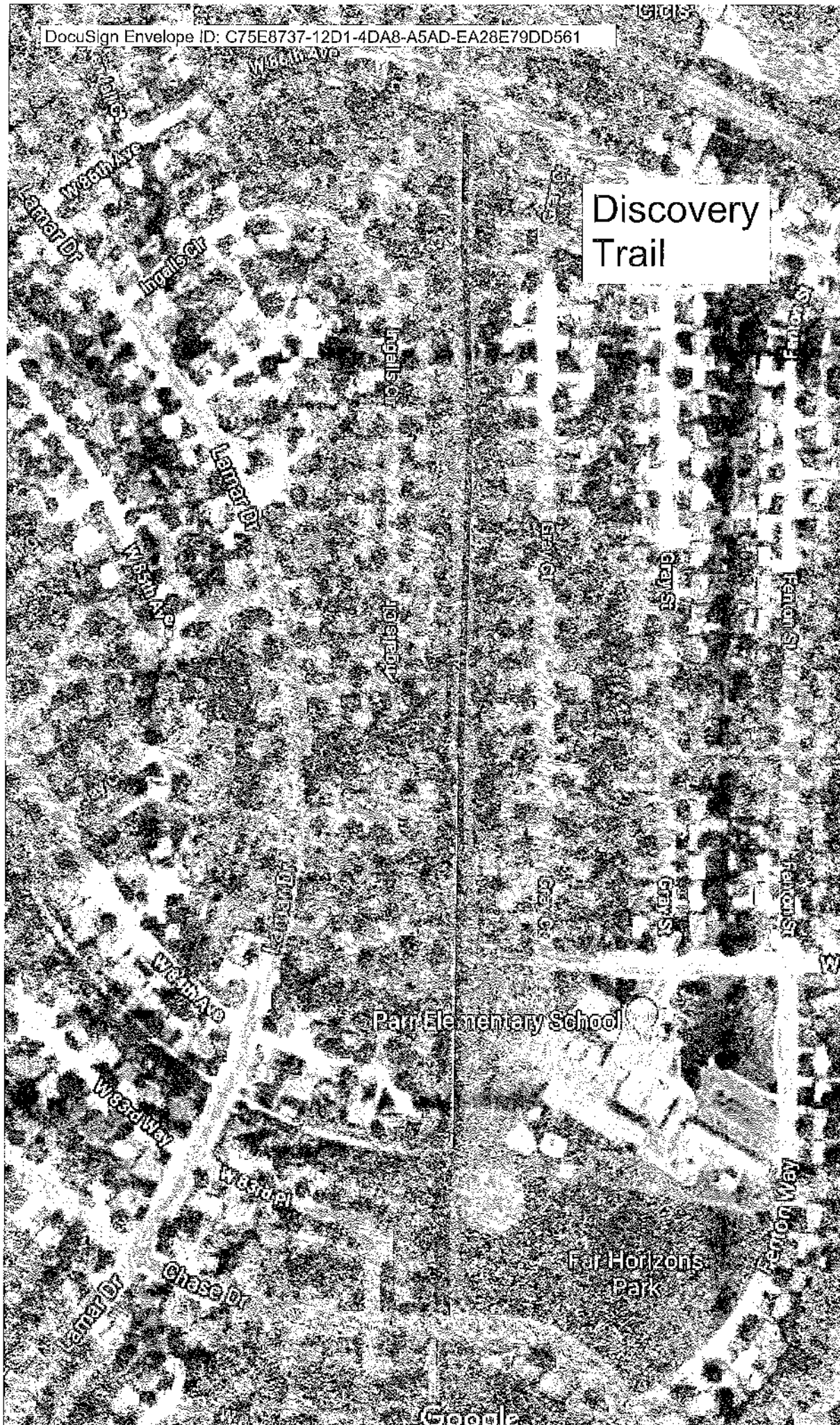
Other Locations

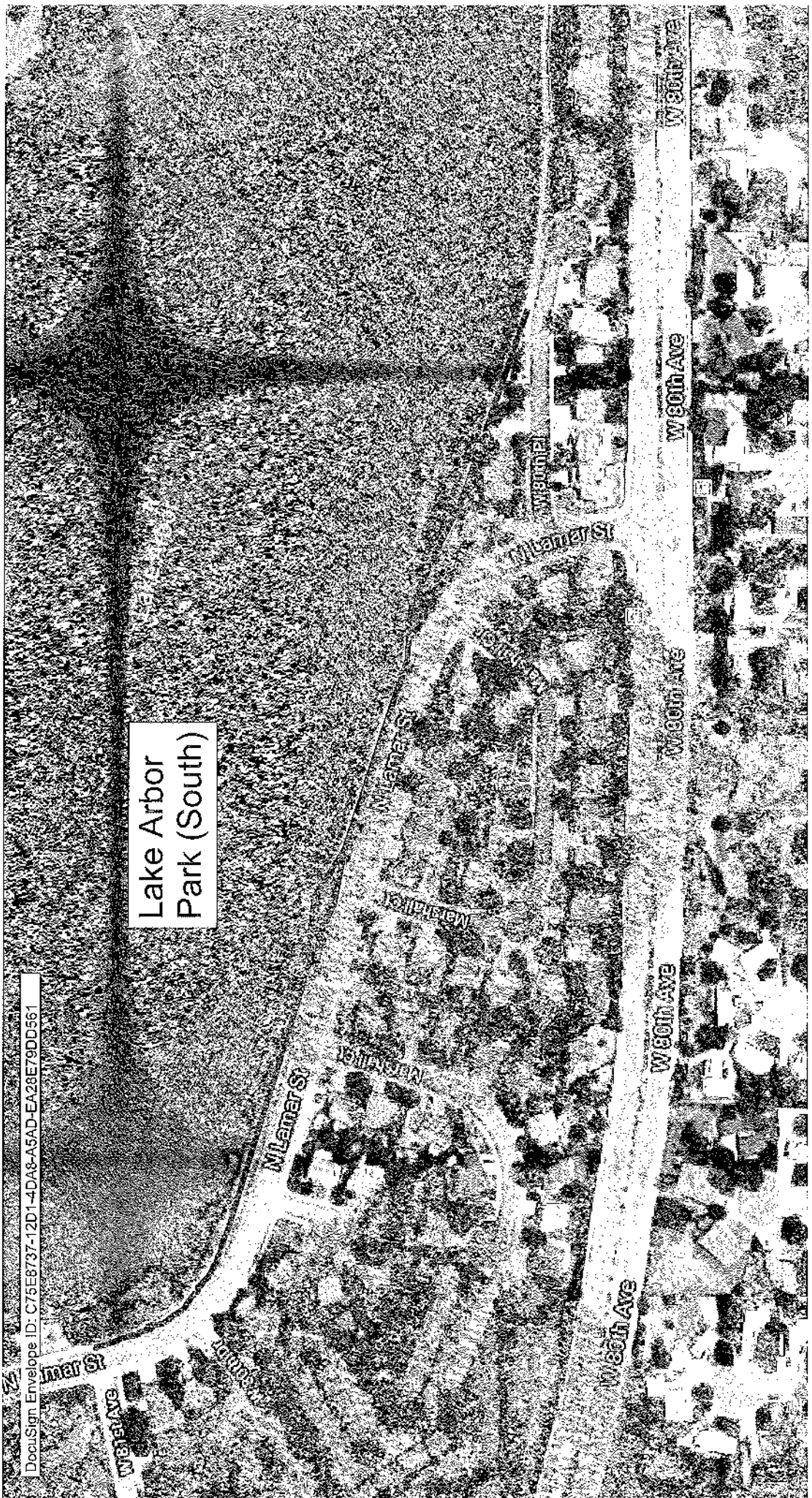


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Club Crest
Sub. Trails

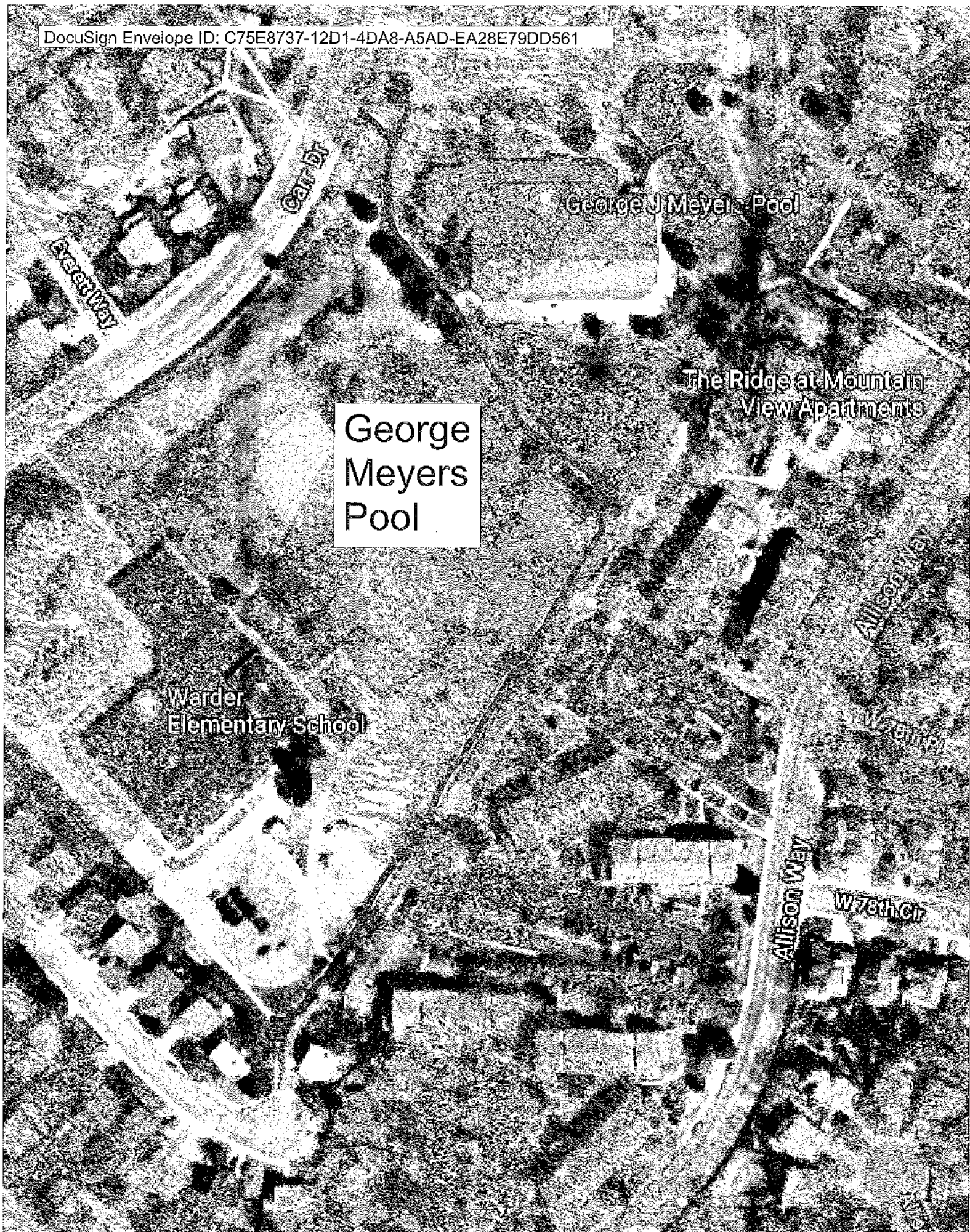






Lake Arbor
Park (South)

DocuSign Envelope ID: C75E8737-12D1-4DA8-A5AD-EA28E79DD561



George
Meyers
Pool

George J Meyers Pool

The Ridge at Mountain
View Apartments

Warder
Elementary School

Allison Way

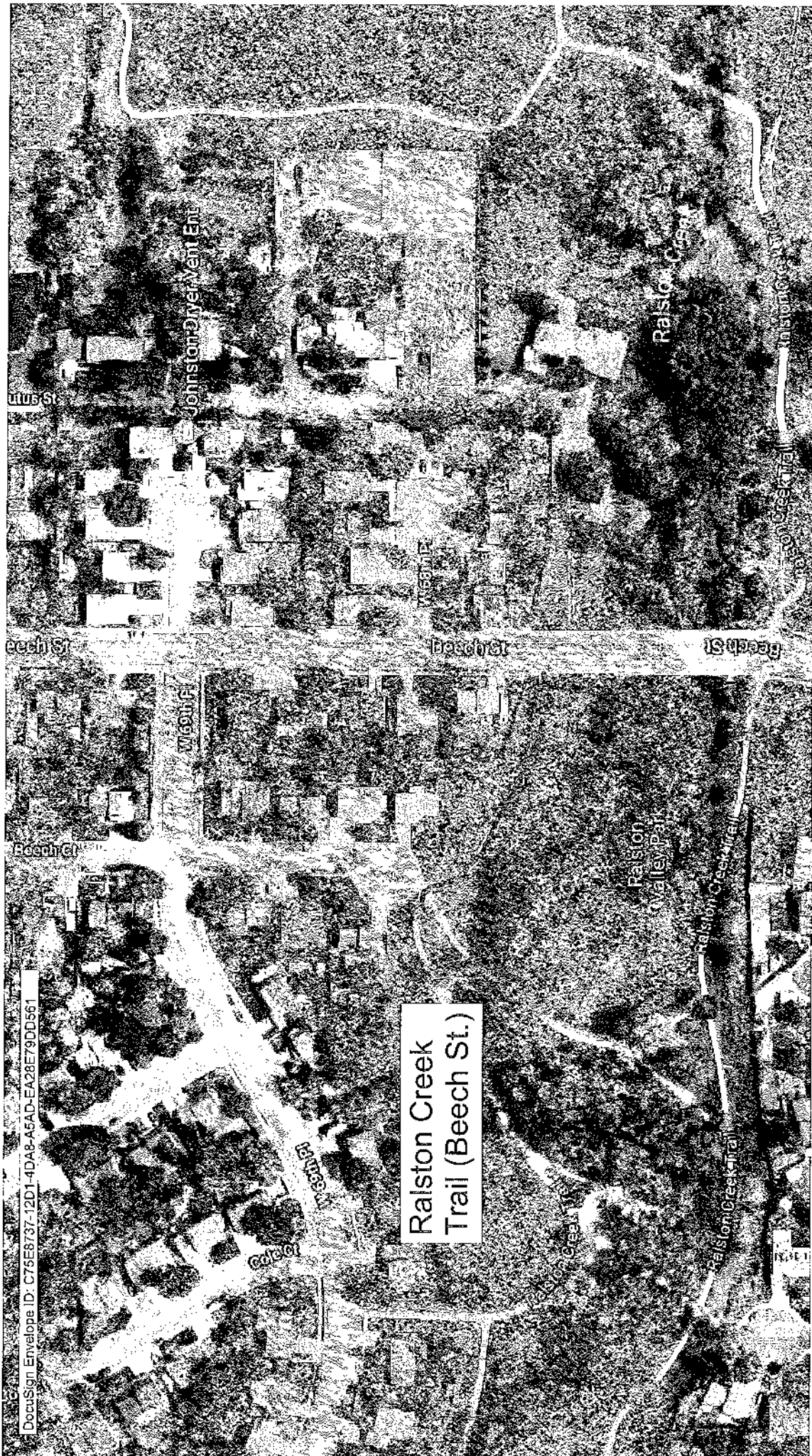
W 78th Cr

W 78th Cr

Allison Way

Green Way

Car Dr



DocuSign Envelope ID: C76E8737-12D1-4DA8-A5AD-EA28E79DD561

Ralston Creek
Trail (Beech St.)

SECOND RENEWAL AND AMENDMENT TO A CONSTRUCTION CONTRACT BY AND
BETWEEN THE CITY OF ARVADA, AND TRIPLE M CONSTRUCTION, LLC, FOR THE
2021 CONCRETE REPLACEMENT PROJECT NO. 21-ST-10 IN AN AMOUNT NOT TO
EXCEED \$4,434,156.20

1.0 PARTIES. The parties to this Second Renewal and Amendment to a Construction Contract by and between the City of Arvada and Triple M Construction, LLC are the City of Arvada, 8101 Ralston Road, Arvada, Colorado, 80002 ("Arvada") and Triple M Construction, LLC, 7200 Quivas St, Denver, CO, 80221 ("Triple M.").

2.0 RECITALS AND PURPOSE.

2.1 Arvada and Triple M entered into a Construction Contract by and between the City of Arvada and Triple M Construction, LLC for concrete replacement dated March 20, 2019 which is incorporated herein by reference ("Original Agreement").

2.2 On March 21, 2020, Arvada and Triple M executed the First Renewal and Amendment for the 2020 concrete replacement project for a total compensation amount of \$3,000,000. The First Renewal and Amendment is incorporated herein by reference ("First Renewal").

2.3 Arvada and Triple M wish to renew and amend the Original Agreement for a second and final renewal for concrete replacement work as provided herein, Exhibit 1. 2021 is the last renewal period allowed under the Original Agreement.

2.4 Special Condition SC-2 of the Original Agreement provides that the parties may renew the Original Agreement for up to two (2) consecutive one-year terms by mutual written agreement of the parties. The parties confirmed in writing, their mutual desire and intention to renew the Original Agreement.

3.0 TERMS AND CONDITIONS.

3.1 Except for the specific amendments and/or modifications expressly made to the Original Agreement by the First Renewal and this Second Renewal and Amendment all other terms, conditions, obligations, requirements, and provisions described in the Original Agreement shall remain in full force and effect. In the event of a conflict between the terms of this Second Renewal and Amendment Agreement and the terms of the Original Agreement or the First Renewal, the terms of this Second Renewal and Amendment Agreement shall control.

3.2 Triple M shall be required to provide Arvada with a new Performance and Payment Bond in the amount of \$4,434,156.20 on the City standard form to cover the performance of the work under this Second Renewal and Amendment Agreement.

3.3 Triple M shall be required to provide Arvada with an insurance certificate, in accordance with the amounts set forth in the Original Agreement, showing necessary insurance coverage and naming the City of Arvada as an additional insured for 2021 Concrete Replacement, Project No. 21-ST-10.

4.0 TERM OF AGREEMENT.

4.1 The term of this Second Renewal and Amendment Agreement shall be for one (1) year

from March 24, 2021 through March 24, 2022 however all work under this Second Renewal and Amendment Agreement as detailed in Exhibit 1 shall be completed in the time frame agreed upon by the Contractor and Arvada's Project Owner.

5.0 COMPENSATION.

5.1 Triple M shall be compensated for any work performed prior to termination of this Second Renewal and Amendment Agreement in accordance with the unit prices set forth in Exhibit 2, attached hereto and incorporated by reference herein.

5.2 Total amount of compensation to Triple M during the one year term of this Second Renewal and Amendment Agreement shall not exceed \$4,434,156.20.

DATED THIS _____ day of _____, 2021.

CITY OF ARVADA, a Colorado home rule municipal corporation

Marc Williams, Mayor

ATTEST:

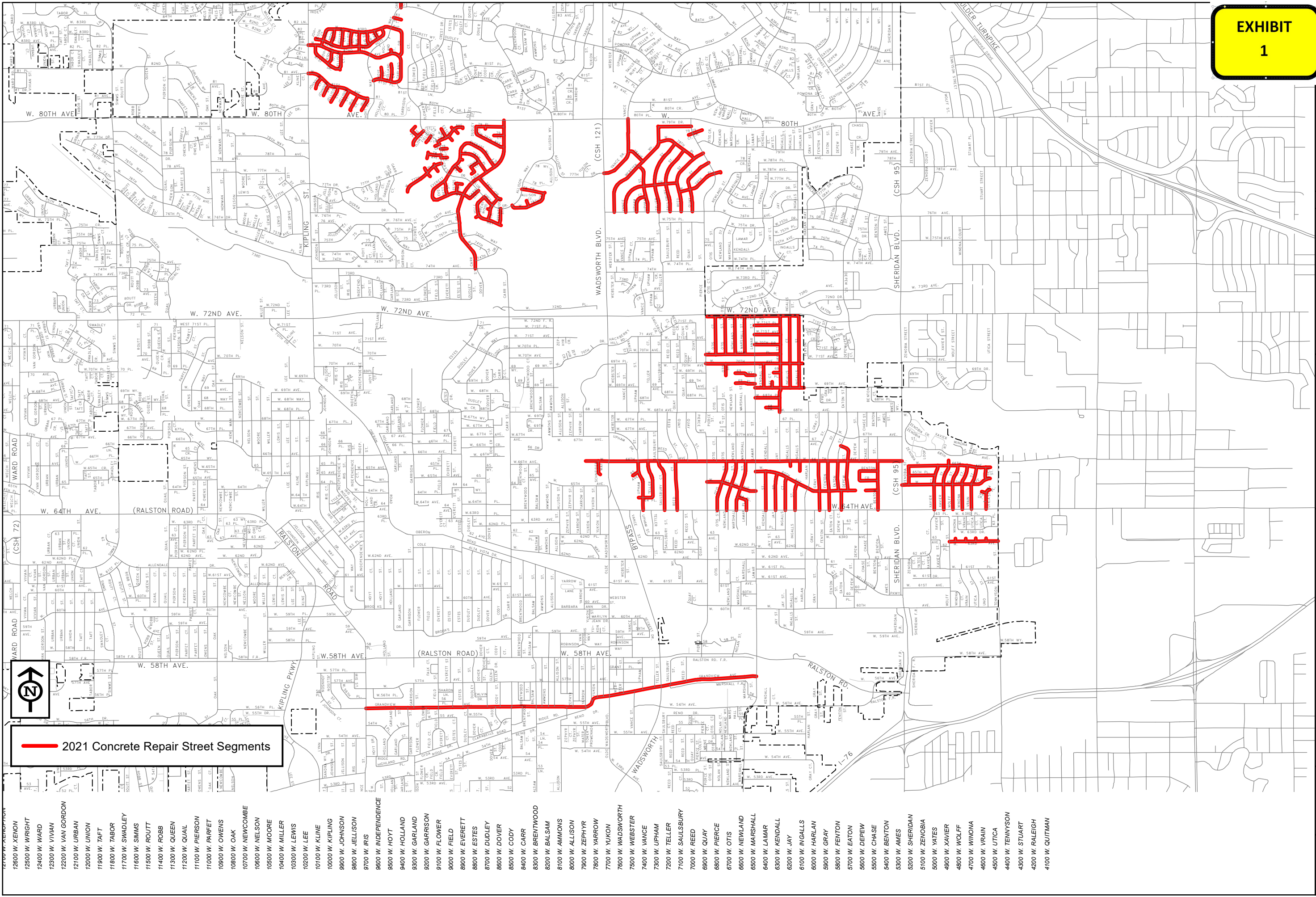
City Clerk

APPROVED AS TO FORM:
Rachel A. Morris, City Attorney

By: _____

TRIPLE M CONSTRUCTION, LLC

Mabel Moreno, President





Contractor: Triple M Construction, LLC
 Address, City, Zip: 7200 Quivas St

ITEM	SPEC*	CONTRACT ITEM	QTY	UNIT	Unit Price
1	SC-9	REMOVE AND REPLACE 5'-3" WIDTH CURB, GUTTER AND SIDEWALK		LF	\$ 50.00
2	SC-8	REMOVE AND REPLACE 6'-6" WIDTH CURB, GUTTER AND SIDEWALK		LF	\$ 55.10
3	SC-12	REMOVE AND REPLACE 4'-8" THICKNESS CONCRETE SIDEWALK WITH 6" THICKNESS		SY	\$ 70.42
4	3.21	8" THICK CONCRETE PAVEMENT		SY	\$ 111.52
5	SC-8	REMOVE AND REPLACE 18" WIDTH VERTICAL CURB AND GUTTER		LF	\$ 32.86
6	SC-9	REMOVE AND REPLACE 30" WIDTH VERTICAL CURB AND GUTTER		LF	\$ 35.20
7	SC-10	REMOVE AND REPLACE CONCRETE CROSSSPAN		SY	\$ 111.52
8	SC-17	ADA/HANDICAP RAMP		EA	\$ 1291.20
9	SC-13	REMOVE CURB JUMP		EA	\$ 58.68
10	SC-14	STABILIZATION MATERIAL		TON	\$ 23.46
11	SC-22	UTILITY ADJUSTMENTS		EA	\$ 350.40
12	SC-23	INLET GRATE ADJUSTMENT		EA	\$ 520.30
13	3.5	REMOVAL OF ASPHALT MAT (<8")		SY	\$ 15.26
14	3.28	SIDEWALK CHASE		EA	\$ 352.00
15	SC-7	TRAFFIC CONTROL		EA	\$ 20,000.00
16	3.49	MOBILIZATION		SY	\$ 22,417.80
17	SC-30	BEST MANAGEMENT PRACTICES (BMPs) FOR STORMWATER MANAGEMENT		LS	\$ 4,483.56
18	SC-24	MINOR CONTRACT REVISIONS		LS	\$ 150,000.00

Rebar EA \$8.00

Expansion Joint LF \$1.50

*City of Arvada Measurement and Basis of Payment number and/or Project Special Provision number



REPORT TO CITY COUNCIL RESOLUTION

AGENDA ITEM
8.A.7.

TO: THE HONORABLE CITY COUNCIL

DATE: March 1, 2021

SUBJECT: R21-037 A Resolution Accepting an Annexation Petition Concerning Lazy Susan, Generally Located at 16790 and 16770 W. 63rd Place, Finding Said Petition Substantially Compliant with C.R.S. 31-12-107(1), and Setting a Public Hearing for April 5, 2021, 6:15 P.M. for City Council to Determine Whether the Area Meets the Requirements of C.R.S. 31-12-104 and 105, and Is Considered Eligible for Annexation

Report in Brief

The annexation is generally located at 16790 and 16770 W. 63rd Place. Attached is the annexation petition totaling 1.15 acres. The purpose of the annexation is to provide City sanitary sewer service to two existing lots (Lot 18 and 19) within the McAtee Laubhan subdivision.

The Arvada team recommends approval of R21-037, A Resolution Accepting an Annexation Petition Concerning Lazy Susan, Generally Located at 16790 and 16770 W. 63rd Place, Finding Said Petition Substantially Compliant with C.R.S. 31-12-107(1), and Setting a Public Hearing for April 5, 2021, 6:15 P.M. for City Council to Determine Whether the Area Meets the Requirements of C.R.S. 31-12-104 and 105, and Is Considered Eligible for Annexation.

Financial Impact

There will be no financial impact to the City from this project.

Background

Susan Tindell of Lazy Susan, LLC. is requesting approval of an Annexation, Rezoning, and Comprehensive Plan Amendment application for two lots owned by the applicant. The property consists of Lots 18 and 19 of the McAtee Laubhan Subdivision which together are comprised of 1.15 acres. The properties are zoned Jefferson County R-1 (Residential) and the requested rezoning is RN-12.5 (Residential Neighborhood). To appropriately align with the Comprehensive Plan, an amendment from Low Density Residential to Suburban Residential is also being requested.

Discussion

A petition for Annexation is required to be submitted to City Council for consideration of annexation prior to the public hearing for the annexation application.

Should this petition be accepted, the application will proceed to the public hearing on April 5, at which time the proposed zoning will also be considered. Subsequently, the administrative Site Plan approval will need to be completed prior to issuance of a building permit.

Public Contact

The applicant hosted a neighborhood meeting on February 20, 2020. The applicant, and staff were in attendance. No neighbors attended the meeting.

SUBJECT: R21-037 A Resolution Accepting an Annexation Petition Concerning Lazy Susan, Generally Located at 16790 and 16770 W. 63rd Place, Finding Said Petition Substantially Compliant with C.R.S. 31-12-107(1), and Setting a Public Hearing for April 5, 2021, 6:15 P.M. for City Council to Determine Whether the Area Meets the Requirements of C.R.S. 31-12-104 and 105, and Is Considered Eligible for Annexation

PAGE: 2
ITEM: 8.A.7.

In addition to the neighborhood meeting, the public notice for the City Council meeting was posted.

Commission Recommendation

Review by the Planning Commission was not required for this item.

Strategic Alignment

The proposed action aligns with the Community and Economic Development Priority Area of the City Council Strategic Plan.

Alternative Courses of Action

N/A

Recommendation for Action

The Arvada Team recommends that the City Council approve R21-037, A Resolution Accepting an Annexation Petition Concerning Lazy Susan, Generally Located at 16790 and 16770 W. 63rd Place, Finding Said Petition Substantially Compliant with C.R.S. 31-12-107(1), and Setting a Public Hearing for April 5, 2021, 6:15 P.M. for City Council to Determine Whether the Area Meets the Requirements of C.R.S. 31-12-104 and 105, and Is Considered Eligible for Annexation.

Suggested Motion:

I move that R21-037, A Resolution Accepting an Annexation Petition Concerning Lazy Susan, Generally Located at 16790 and 16770 W. 63rd Place, Finding Said Petition Substantially Compliant with C.R.S. 31-12-107(1), and Setting a Public Hearing for April 5, 2021, 6:15 P.M. for City Council to Determine Whether the Area Meets the Requirements of C.R.S. 31-12-104 and 105, and Is Considered Eligible for Annexation, be (approved) (rejected).

Prepared by:

Sara Hutchinson, Administrative Specialist

Reviewed by:

Approved by:

Jeremiah Bebo, Planner II

2/8/2021

Josie Suk, Development Systems and Administrative Manager

2/9/2021

Robert Smetana, Manager of City Planning and Development

2/10/2021

Ryan Stachelski, Director of Community and Economic Development

2/12/2021

Gail Walker, Legal Specialist-Contracts

2/12/2021

Emily Grogg, Senior Assistant City Attorney

2/12/2021

Rachel Morris, City Attorney

2/17/2021

SUBJECT: R21-037 A Resolution Accepting an Annexation Petition Concerning Lazy Susan, Generally Located at 16790 and 16770 W. 63rd Place, Finding Said Petition Substantially Compliant with C.R.S. 31-12-107(1), and Setting a Public Hearing for April 5, 2021, 6:15 P.M. for City Council to Determine Whether the Area Meets the Requirements of C.R.S. 31-12-104 and 105, and Is Considered Eligible for Annexation

PAGE: 3
ITEM: 8.A.7.

Lorie Gillis, Deputy City Manager

2/18/2021

Mark Deven, City Manager

2/18/2021

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R21-037

A RESOLUTION ACCEPTING AN ANNEXATION PETITION CONCERNING LAZY SUSAN, GENERALLY LOCATED AT 16790 AND 16770 W. 63RD PLACE, FINDING SAID PETITION SUBSTANTIALLY COMPLIANT WITH C.R.S. 31-12-107(1), AND SETTING A PUBLIC HEARING FOR APRIL 5, 2021, 6:15 P.M. FOR CITY COUNCIL TO DETERMINE WHETHER THE AREA MEETS THE REQUIREMENTS OF C.R.S. 31-12-104 AND 105, AND IS CONSIDERED ELIGIBLE FOR ANNEXATION

WHEREAS, the owner of certain property located in Jefferson County, Colorado, filed a petition for annexation with the City Clerk of the City of Arvada, Colorado (the “City”), for annexation of property more particularly described below (the “subject property”), into the City limits;

WHEREAS, having received the petition for annexation, the City Council of the City of Arvada is required under the Municipal Annexation Act of 1965, as amended, to determine whether said petition is in substantial compliance with C.R.S. Sections 31-12-107(1), 31-12-105, 31-12-104, and if so, to follow the procedure set forth in C.R.S. Sections 31-12-108 through 111;

WHEREAS, the City Council of the City of Arvada, having examined the filings and the petition for annexation of the subject property, and being duly advised by the City planning team, finds as follows:

1. On its face, the annexation petition is in substantial compliance with C.R.S. §31-12-107(1), as the petition contains the following:
 - a. An allegation that it is desirable and necessary that the area be annexed to the City of Arvada;
 - b. An allegation that the requirements of §§31-12-104 and 31-12-105 C.R.S. exist or are met.
 - c. An allegation that the signer of the petition comprises the landowners of more than 50 percent of the territory included in the area and own more than fifty percent of the area proposed to be annexed, exclusive of streets and alleys and any land owned by the annexing municipality.
 - d. A request that the City of Arvada approve the annexation of the area proposed to be annexed.
 - e. The signature of such landowner.
 - f. The mailing address of such signer.

- g. The legal description of the land owned by such signer.
 - h. The date of signing of each signature.
 - i. The affidavit of the circulator of the petition stating that each signature therein is the signature of the person whose name it purports to be.
2. That the annexation petition was filed with an annexation map containing the following information, and is in substantial compliance with the Municipal Annexation Act:
- a. A written legal description of the boundaries of the area proposed to be annexed;
 - b. A map showing the boundary of the area proposed to be annexed;
 - c. Within the annexation boundary map, a showing of the location of each ownership tract in unplatted land and, if part or all of the area is platted, the boundaries and the plat numbers of plots or of lots and blocks;
 - d. Next to the boundary of the area proposed to be annexed is drawn the contiguous boundary of the City of Arvada, and that the dimensions of the contiguous boundary are shown on the map.
3. That no signature on the petition is dated more than 180 days prior to the date of filing of the Petition for Annexation with the City Clerk of the City of Arvada, State of Colorado.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO:

Section 1. That the City Council hereby makes and adopts the determinations and findings contained in the recitals set forth above, and finds that the annexation petition on its face is in substantial compliance with the requirements of C.R.S. §31-12-107(1).

Section 2. That the City Council hereby accepts the annexation petition for the following described unincorporated territory, situated in the County of Jefferson and State of Colorado, to wit:

LOTS 18 AND 19, MCATEE-LAUBHAN SUBDIVISION,
RECORDED IN BOOK 15 AT PAGE 60, JEFFERSON COUNTY
RECORDS, IN THE NE ¼ OF SECTION 11, T. 3 S., R. 70 W. OF
THE 6TH P.M., JEFFERSON COUNTY, COLORADO,

CONTAINING 57,860 SQUARE FEET OR 1.33 ACRES MORE OR LESS.

Section 3. That a public hearing shall be held on the 5th day of April, 2021 at 6:15 p.m. at the Arvada City Hall and/or virtually for the purpose of determining and finding whether the areas proposed to be annexed meet the applicable requirements of §§31-12-104 and 31-12-105 C.R.S. and are considered eligible for annexation.

Section 4. This resolution shall be effective five days after its approval by the City Council.

APPROVED AND ADOPTED this 1st day of March, 2021.

Marc Williams, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:
Rachel A. Morris, City Attorney

By: _____

Publication Dates: March 4, 2021
March 11, 2021
March 18, 2021
March 25, 2021

Petition for Annexation

NAME OF ANNEXATION: Lazy Susan DA2020-0103
APPROXIMATE LOCATION: 16770 W 63rd Pl Golden CO 80403

PETITION FOR ANNEXATION OF
UNINCORPORATED TERRITORY IN THE
COUNTY OF Jefferson,
STATE OF COLORADO, TO THE CITY OF
ARVADA, STATE OF COLORADO

TO THE MAYOR AND THE CITY COUNCIL OF THE CITY OF ARVADA,
COLORADO:

The undersigned in accordance with the Municipal Annexation Act of 1965, Chapter 31, Article 12, C.R.S. 1973, as amended, hereby petitions the City Council of the City of Arvada for annexation to the City of Arvada of the following described unincorporated territory located in the County of Jefferson, State of Colorado, to wit:

LEGAL DESCRIPTION: See Exhibit A

In support of the said Petition, your Petitioner alleges that:

1. It is desirable and necessary that the above-described territory be annexed to the City of Arvada.
2. No less than one-sixth of the perimeter of the area proposed to be annexed is contiguous with the City of Arvada.
3. A community of interest exists between the territory proposed to be annexed and the City of Arvada.
4. The territory proposed to be annexed is urban or will be urbanized in the future.
5. The territory proposed to be annexed is integrated or is capable of being integrated with the City of Arvada.
6. No land held in identical ownership, whether consisting of one tract or parcel of real estate or two or more contiguous tracts or parcels of real estate:
 - a. is divided into separate parts or parcels without the written consent of the landowner or landowners thereof.
 - b. comprising twenty acres or more which, together with the buildings

and improvements situated thereon, has an assessed value in excess of two-hundred thousand dollars for an ad valorem tax purpose for the year preceding the annexation is included within the territory proposed to be annexed, without the written consent of the landowner or landowners thereof.

7. No annexation proceedings have been commenced by another municipality for the annexation of part or all of the area proposed herein to be annexed to Arvada.
8. Annexation of the territory proposed to be annexed will not result in detachment of area from any school district and the attachment of the same to another school district.
9. Annexation of the area proposed to be annexed will not have the effect of extending the City of Arvada's municipal boundary more than three miles in any direction from any point of such municipal boundary in any one year.
10. No portion of a platted street or alley lies within the boundaries of the area proposed to be annexed, unless the entire width of said street or alley has been included within the boundaries of the area to be annexed.
11. The Signer(s) of the Petition comprise(s) the landowner(s) of one hundred percent of the territory included in the area proposed to be annexed, exclusive of streets and alleys and any land owned by the annexing municipality.
12. All other requirements of Section 31-12-104 and 31-12-105, C.R.S., exist or have been met.
13. The mailing address of the Signer, the legal description of the land owned by such signer, and the date of signing of such signature are all shown on this Petition.
14. Attached to this Petition is the Affidavit of Circulator of this Petition that the signature hereon is the signature of the person whose name it purports to be.

Your Petitioner further requests that the City of Arvada approve the annexation of the area proposed to be annexed.

Owner's Signature:

Address:

Date of signing:

Susan Tindell
16720 W 63rd Pl Golden
CO 80403
11-13-2020

AFFIDAVIT OF
CIRCULATOR

STATE OF COLORADO)

COUNTY OF Jefferson) ss.

Susan Tindell, being duly sworn, upon oath, deposes and states:

1. That the affiant circulated the Petition for Annexation for the purpose of obtaining the signature of the above Petitioner.
2. That each signature thereon is the signature of the person whose name it purports to be.

NOTARY CERTIFICATE
STATE OF COLORADO)

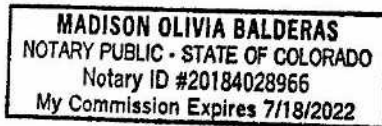
Susan Tindell
Circulator

COUNTY OF Jefferson) ss.

Subscribed and sworn to before me this 13th day of
November, 20 20

Witness my hand and official seal.

(SEAL)



Madison Balderas
Notary Public

My Commission Expires: 07/18/2020

EXHIBIT A

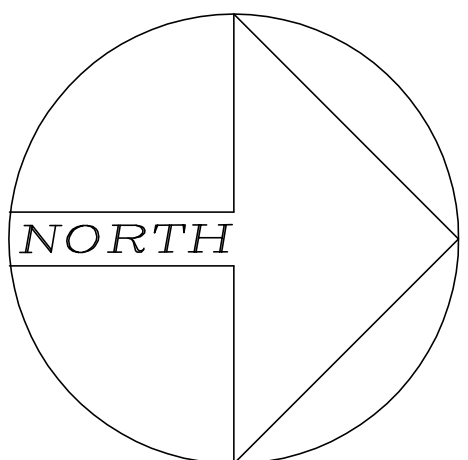
LAZY SUSAN ANNEXATION LEGAL DESCRIPTION:

LOTS 18 AND 19, MCATEE-LAUBHAN SUBDIVISION, RECORDED IN BOOK 15 AT PAGE 60, JEFFERSON COUNTY RECORDS, IN THE NE $\frac{1}{4}$ OF SECTION 11, T. 3 S., R. 70 W. OF THE 6TH P.M., JEFFERSON COUNTY, COLORADO,

CONTAINING 57,860 SQUARE FEET OR 1.33 ACRES MORE OR LESS.

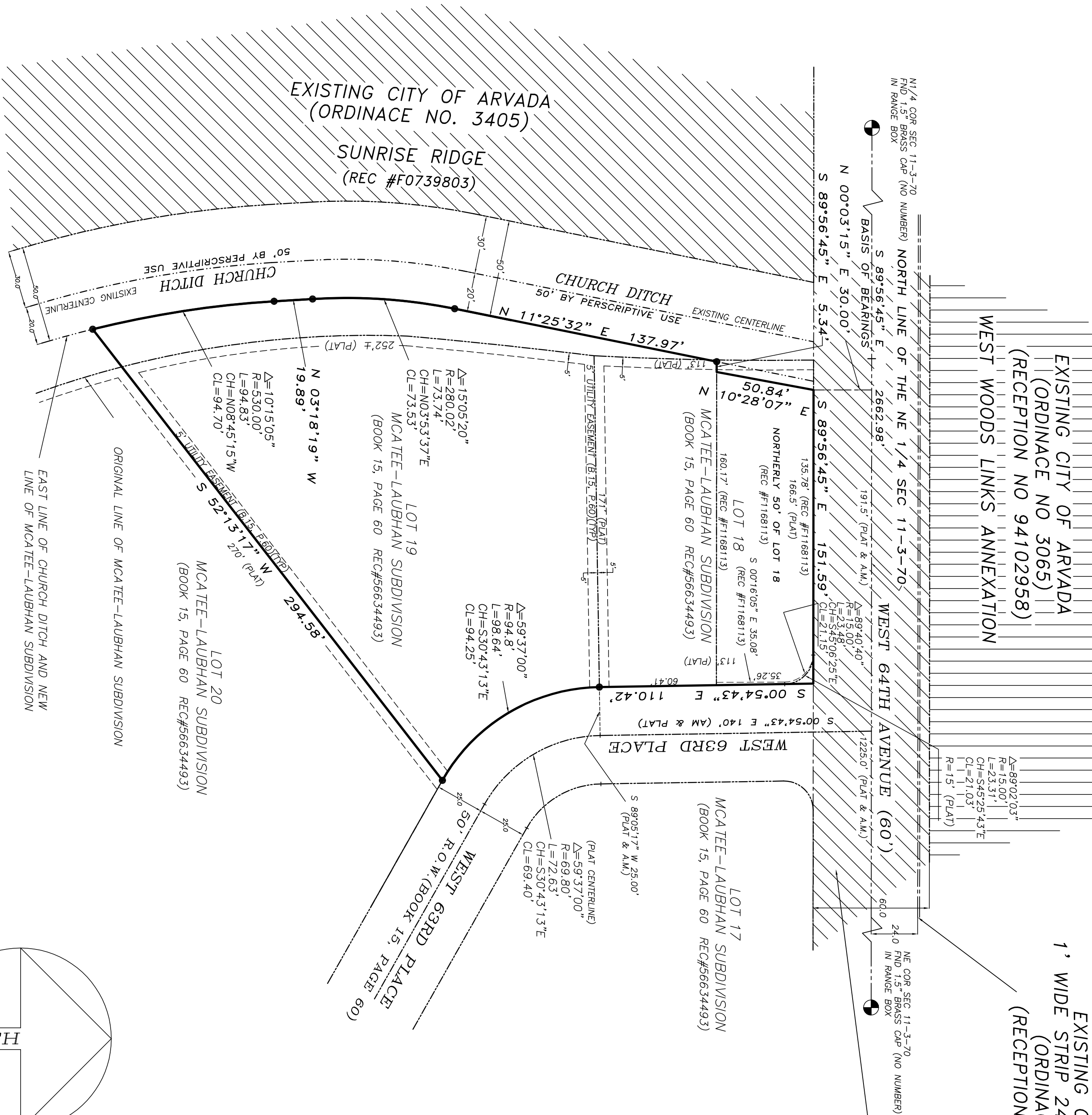
LAZY SUSAN ANNEXATION

BEING LOTS 18 & 19, MCATEE-LAUBHAN SUBDIVISION
LOCATED IN THE NE1/4 OF SEC 14, T3S, R70W OF THE 6TH P.M.
COUNTY OF JEFFERSON, STATE OF COLORADO.



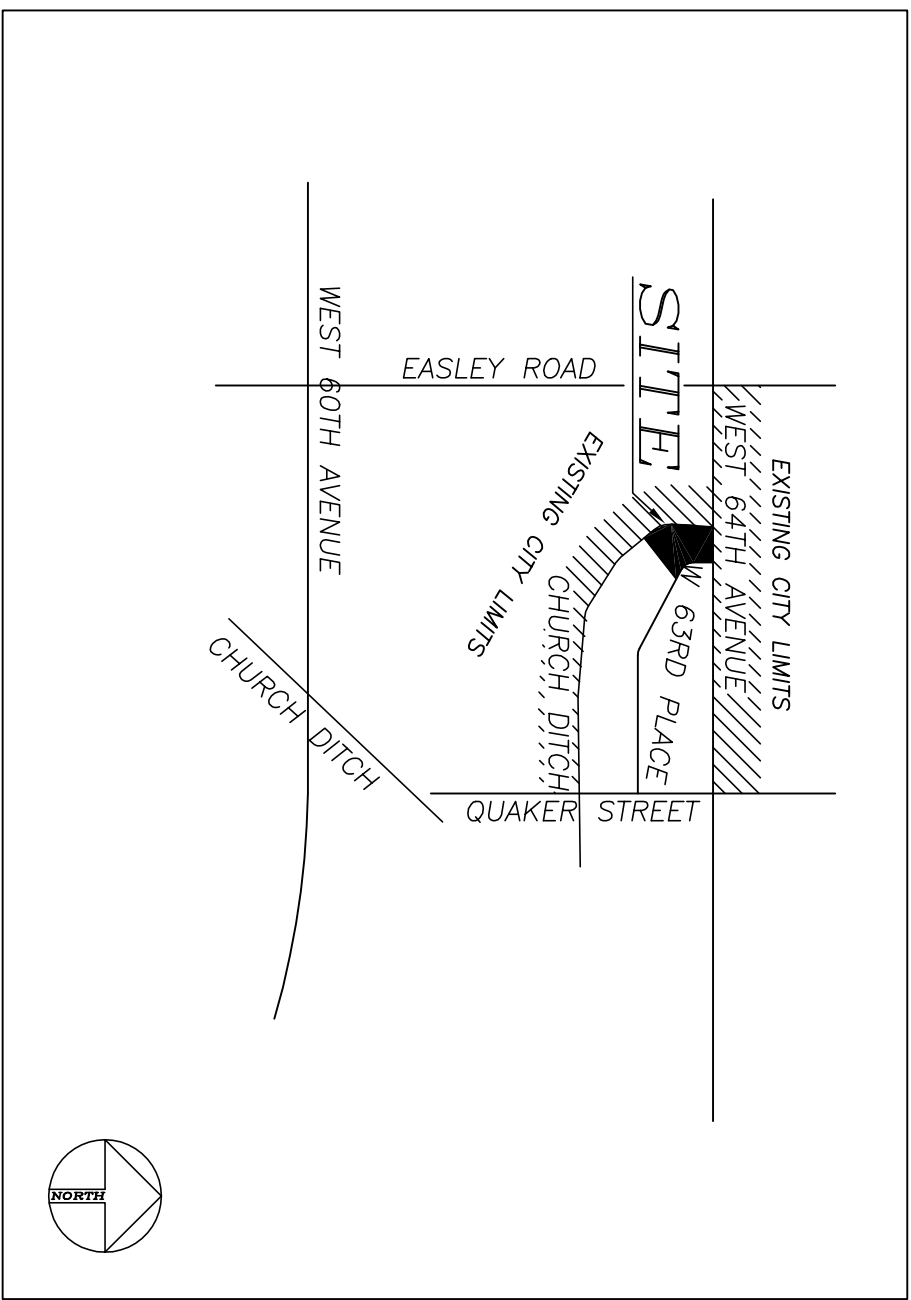
0 20 40 80 120 FT.

SCALE: 1"=40'



EXISTING CITY OF ARVADA
1' WIDE STRIP 24' N. OF SECTION LINE
(ORDINANCE NO 2371)
(RECEPTION NO 86143746)

EXISTING CITY OF ARVADA
(ORDINANCE NO'S 2808 & 2895)
(RECEPTION NO 91052406)



VICINITY MAP
NOT TO SCALE

LEGEND:

- INDICATES FND MONUMENT AS NOTED
- INDICATES SET #4 REBAR W/1" CAP, P.E. & L.S. #11619
- INDICATES EASEMENT LINE
- INDICATES PLAT LINES
- INDICATES ANNEXATION BOUNDARY LINES
- INDICATES DITCH CENTERLINE

CLERK AND RECORDER:

RECEPTION NUMBER

Accepted for filing in the office of the Clerk and Recorder of Jefferson County, at Golden Colorado on this _____ day of _____, 20____ at _____ O'clock.

JEFFERSON COUNTY CLERK AND RECORDER

BY:

DEPUTY CLERK

LEGAL DESCRIPTION:

LOTS 18 AND 19, MCATEE-LAUBHAN SUBDIVISION, RECORDED IN BOOK 15, PAGE 60, JEFFERSON COUNTY RECORDS. IN THE NE 1/4 OF SECTION 14, T. 3 S., R. 70 W. OF THE 6TH P.M., JEFFERSON COUNTY, COLORADO,
CONTAINING 57,860 SQUARE FEET OR 1.33 ACRES MORE OR LESS.

APPROVAL CERTIFICATE:

APPROVED FOR FILING BY THE CITY OF ARVADA THIS _____ DAY OF _____, 20____.

MAYOR _____ ATTEST: _____ CITY CLERK

ORDINANCE NUMBER _____

ANNEXATION AREA

TOTAL AREA ANNEXATION 57,860 SF 1.33 ACS.
TOTAL BOUNDARY ANNEXATION = 1037.82 FEET
TOTAL BOUNDARY CONTIGUOUS = 534.20' FEET
WITH CITY LIMITS

SIX CONTIGUOUS

NOTE

THIS IS NOT A MONUMENTED LAND SURVEY.

CONTIGUITY STATEMENT

THE ABOVE DESCRIBED LAND IS CONTIGUOUS TO THE CITY OF ARVADA AND MEETS THE REQUIREMENTS SET FORTH IN COLORADO REVISED STATUTES 1973, 31-12-104-(1)(g) THAT ONE-SIXTH (1/6) PART OF THE PERIMETER TO BE ANNEXED IS CONTIGUOUS WITH THE ANNEXING MUNICIPALITY.

SURVEYOR'S CERTIFICATE

I, EDGAR B. JENNINGS, A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THIS ANNEXATION MAP WAS PREPARED UNDER MY DIRECT SUPERVISION AND ACCURATELY DESCRIBES THE LAND TO BE ANNEXED BY THE CITY OF ARVADA. I FURTHER CERTIFY THAT SAID LAND IS GREATER THAN 1/6 CONTIGUOUS WITH THE PRESENT BOUNDARY OF THE CITY OF ARVADA.

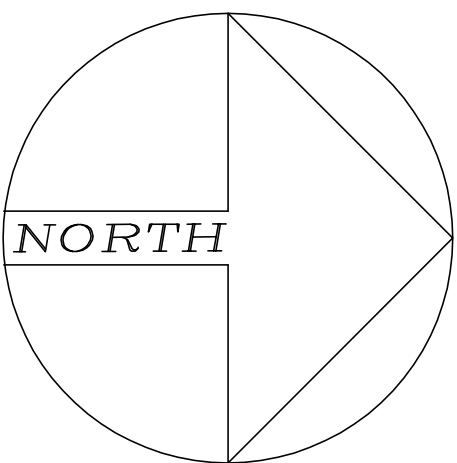
DATE _____ EDGAR B. JENNINGS

NOTE:

1. BASIS OF BEARINGS: BEARINGS ARE BASED ON THE NORTH LINE OF THE SAID NE1/4 OF SECTION 11 AS BEING S 89°56'45" E, ASSUMED AND MONUMENTED AS SHOWN HEREON.

0 20 40 80 120 FT.

SCALE: 1"=40'



PREPARED FOR:		Job #
LAZY SUSAN, LLC		2002-03A
LAZY SUSAN ANNEXATION		Sheet 1 of 1
PARTS OF LOT 18 & 19		
JEFFERSON COUNTY, COLORADO		
DESIGNED BY: EBJ	Scale: Hor. 1" = 40'	VERT. 1" = 20'
CHECKED BY: EBJ	Date: 4/13/20	IN 2002 066-0033

REVISED NOV 13, 2020



REPORT TO CITY COUNCIL RESOLUTION

AGENDA ITEM
8.A.8.

TO: THE HONORABLE CITY COUNCIL

DATE: March 1, 2021

SUBJECT: R21-038 A Resolution Authorizing an Agreement By and Between the City of Arvada and Asphalt Specialties Co., Inc. for Construction of CSB-21-ST-01 Pavement Resurfacing Program in an Amount Not to Exceed \$3,085,470.53

Report in Brief

Council action is requested on the attached resolution authorizing an agreement with Asphalt Specialties Company, Inc. in the amount of \$3,085,470.53. This annual project involves the use of multiple asphalt treatments, which include milling and overlaying, full reconstruction, and chip seal that will ultimately increase the overall quality of roadways in the City.

The Arvada team recommends that the City Council approve R21-038, A Resolution Authorizing an Agreement By and Between the City of Arvada and Asphalt Specialties Co., Inc. for Construction of CSB-21-ST-01 Pavement Resurfacing Program in an Amount Not to Exceed \$3,085,470.53.

Financial Impact

Financial Impact: \$3,085,470.53

This is a one-time request for project construction cost.

Fund: Streets Maintenance Fund, Account No. 04-705014-55009

Background

Council action is requested on the attached resolution authorizing a Construction Contract Agreement with Asphalt Specialties, Inc. in an amount not to exceed \$3,085,470.53. This annual project involves the use of multiple asphalt treatments, which include milling and overlaying, full reconstruction, and chip seal that will ultimately increase the overall quality of roadways in the City.

Bids were opened December 17, 2020. Five responses were received. Asphalt Specialties Inc. was selected because they offered the best value and most responsive bid substantiating they could meet service requirements.

1. Asphalt Specialties – \$3,085,470.53
2. Martin Marietta – \$3,114,812.71
3. Aggregate Industries - \$3,443,986.92
4. APC Construction - \$3,462,445.24
5. Elite Surface Infrastructure - \$3,634,066.90
6. Brannan Sand and Gravel - \$3,756,745.20

In association with the bid results, an agreement was finalized with Asphalt Specialties.

Discussion

Asphalt Specialties Inc. was selected because they offered the best value and most responsive bid, substantiating they could meet the City's service requirements. They have also completed asphalt work on many projects throughout the City as a subcontractor.

This year's program will include the following areas summarized below. Please note that these areas are also shown on a map and detailed list that is included in the agenda packet.

- Hackberry Hill neighborhood - 2" mill and overlay
- W. 68th Ave Oak to Oberon - 3" mill and overlay
- Miller Street Ralston to 66th Ave - 3" mill and overlay
- Ralston Road west 58th to Miller - 3 " mill and overlay
- W. 58th Ave Simms to Ward - 3" mill and overlay
- W. 58th Ave frontage road Simms to Union - 2" mill and overlay

This work is expected to be complete by November 1st, 2021.

Council action is requested on the attached resolution authorizing a construction contract agreement with Asphalt Specialties, Inc., in an amount not to exceed \$3,085,470.53. This annual project involves the use of multiple asphalt treatments, which include milling and overlaying, full reconstruction, and chip seal that will ultimately increase the overall quality of roadways in the City.

Public Contact

Posting of the City Council agenda.

Commission Recommendation

N/A

Strategic Alignment

The recommended action aligns with the Infrastructure Priority Area within the City Council Strategic Plan. Specifically, the recommended action is consistent with the following Principle:

Maintains existing roads and transportation network in tandem with snow and ice control services to ensure swift and safe transportation modes for the community.

This annual street maintenance project will improve the quality of infrastructure throughout the City of Arvada. It is a direct effort to move toward achieving the overall goal of the street maintenance plan - to keep City streets in good condition.

Alternative Courses of Action

N/A

Recommendation for Action

The Arvada team recommends that the City Council approve R21-038, A Resolution Authorizing an Agreement By and Between the City of Arvada and Asphalt Specialties Co., Inc. for Construction of CSB-21-ST-01 Pavement Resurfacing Program in an Amount Not to Exceed \$3,085,470.53.

Suggested Motion:

SUBJECT: R21-038 A Resolution Authorizing an Agreement By and Between the City of Arvada and Asphalt Specialties Co., Inc. for Construction of CSB-21-ST-01 Pavement Resurfacing Program in an Amount Not to Exceed \$3,085,470.53

PAGE: 3
ITEM: 8.A.8.

I move that R21-038 A Resolution Authorizing an Agreement By and Between the City of Arvada and Asphalt Specialties Co., Inc. for Construction of CSB-21-ST-01 Pavement Resurfacing Program in an Amount Not to Exceed \$3,085,470.53, be (approved) (rejected).

Prepared by:

Christine Biddle, Administrative Specialist

Reviewed by:

Karen Custer, Administrative Assistant

2/1/2021

Hannah Gregory, Legal Administrative Assistant

2/5/2021

Approved by:

Dan Pumphrey, Streets Manager 2/1/2021

Don Wick, Director of Public Works 2/2/2021

Bryan Archer, Director of Finance 2/2/2021

Erika Pierce, Litigation Paralegal 2/5/2021

Julie Richards, Senior Assistant City Attorney 2/17/2021

Brad Moloney, Deputy City Attorney 2/17/2021

Rachel Morris, City Attorney 2/18/2021

Lorie Gillis, Deputy City Manager 2/18/2021

Mark Deven, City Manager 2/18/2021

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R21-038

A RESOLUTION AUTHORIZING AN AGREEMENT BY AND BETWEEN THE CITY OF ARVADA AND ASPHALT SPECIALTIES CO., INC. FOR CONSTRUCTION OF CSB-21-ST-01 PAVEMENT RESURFACING PROGRAM IN AN AMOUNT NOT TO EXCEED \$3,085,470.53

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO:

Section 1. The Mayor or Mayor Pro Tem is authorized to sign and the City Clerk to attest, in form approved by the City Attorney, an Agreement, which is in substantially the same form as that attached hereto, by and between the City of Arvada and Asphalt Specialties Company, Inc. for Construction of CSB-21-ST-01 Pavement Resurfacing Program in an amount not to exceed \$3,085,470.53.

Section 2. The City Council hereby approves and authorizes the Department Director to execute change orders increasing the scope of services under this Agreement up to, but not to exceed, the amounts included in the department's Council-approved budget without any need to seek additional authority or approval of the City Council.

Section 3. This resolution shall be effective upon its approval by the City Council.

APPROVED AND ADOPTED this 1st day of March, 2021.

Marc Williams, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:
Rachel A. Morris, City Attorney

By: _____

**AN AGREEMENT BY AND BETWEEN THE CITY OF ARVADA AND
ASPHALT SPECIALTIES CO., INC. FOR CONSTRUCTION OF CSB-21-ST-01
PAVEMENT RESURFACING PROGRAM IN AN AMOUNT NOT TO EXCEED \$3,085,470.53**

This Agreement made this _____ day of _____, 2021, by and between the City of Arvada, a home rule municipal corporation (“Arvada” and/or “City”) and Asphalt Specialties Co., Inc., a Colorado Corporation (“Contractor”).

WITNESSETH: That for and in consideration of the covenants, promises, and payments hereinafter mentioned:

WITNESSETH:

WHEREAS, Arvada solicited proposals from interested construction professionals for the provision of construction services related to its Pavement Resurfacing Program as described in the Contract Documents (the “Project”); and

WHEREAS, based on Contractor’s submissions, Arvada has selected Contractor for the Project; and

WHEREAS, Arvada and Contractor desire to enter into this Agreement regarding the construction of the Project.

NOW, THEREFORE, for and in consideration of the covenants, promises, and payments hereinafter mentioned, the parties agree as follows:

ARTICLE 1. GENERAL DESCRIPTION OF SERVICES

- 1.1. **The Services.** The Contractor agrees to furnish or arrange for the construction services set forth in the Contract Documents and required for the completion of the Project within the timeframe provided in the Contract Documents. Contractor represents that it is thoroughly familiar with and understands the requirements of the Project’s scope and is experienced in the construction of projects of the type and scope contemplated by the Contract Documents. Contractor represents to Arvada that Contractor has all necessary education, skill, knowledge, expertise and experience required for construction of the Project, and will maintain at all times during the term of this Agreement such personnel on its staff to provide the services contemplated hereby within the time periods required hereby. In addition, Contractor represents that it or Arvada-approved subcontractors or subconsultants performing services under this Agreement have all applicable licenses required by the State of Colorado to perform such services and all required insurance coverage as required by this contract and by law.
- 1.2. **Cooperation.** The Contractor shall endeavor to develop, implement and maintain, a spirit of cooperation, collegiality, and open communication with Arvada, Arvada’s Consultants, and Arvada’s residents so that the goals and objectives of each are clearly understood, potential problems are resolved promptly, and upon completion, the Project is deemed a success by all interested parties.
- 1.3. **Extra Excavation Work.** Should the Contractor desire and/or choose to perform any additional excavation work required for utility adjustments and/or repairs on behalf of the utility owner in order to expedite construction and minimize delays and down time, the City shall in no way be responsible for costs associated with this additional work done for the utility owner.

- 1.4. **Preparation/Sufficiency of Site.** Before commencing the Work, the Contractor shall (i) visit and thoroughly inspect the Project Site and any structure(s) or other man-made features to be modified and become familiar with local conditions under which the Project will be constructed and operated; (ii) familiarize itself with the survey, including the location of all existing buildings, utilities, conditions, streets, equipment, components and other attributes having or likely to have an impact on the Project; (iii) familiarize itself with Arvada's engineering and design requirements, design objectives, and budget for the Project; (iv) familiarize itself with pertinent Project dates and programming needs, including the Project schedule; (v) review and analyze all Project geotechnical, environmental, and construction materials tests, investigations and recommendations, (vi) review all specifications; and (vi) gather any other information necessary for a thorough understanding of the Project. Claims by Contractor resulting from Contractor's failure to familiarize itself with the Site or pertinent documents shall be deemed waived.
- 1.5. **Contract Documents.** The Contract Documents are incorporated herein by reference. The term "Contract Documents" means and includes the following:
- A. Arvada's Request for Proposal, CSB-21-ST-01("CSB"), including all exhibits and/or addenda;
 - B. Contractor's Response to CSB-21-ST-01, Advertisement for Bid, Bid Proposal, Bid Schedule, Bid Bond;
 - C. Notice of Award;
 - D. Performance and Payment Bond;
 - E. Notice(s) to Proceed;
 - F. Change Orders (if any);
 - G. City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements;
 - H. Requests for Information and Responses (if any);
 - I. All supplementary requirements regarding wage rates, E.E.O., affirmative action and all other Federal-State requirements as outlined in the specifications.
- 1.6. **Interpretation of Contract Documents.** In the event of conflicts or discrepancies among the Contract Documents, the documents shall govern in the following order: (1) the Agreement; (2) Arvada's Request for Proposal; (3) City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements; (4) Contractor's Response to Arvada's Request for Proposals; (5) Change Orders; (6) Requests for Information and Response.

ARTICLE 2. ARVADA'S DUTIES, OBLIGATIONS AND RESONSIBILITIES

- 2.1. **Project Information.** Contractor acknowledges that Arvada has provided Contractor with information regarding Arvada's requirements for the Project as set forth in the Contract Documents, including Project Specifications and Budget.
- 2.2. **Arvada's Budget.** Arvada has established and will update an overall budget for the Project, including amounts allocated for construction, Arvada's other costs, and reasonable contingencies related to these costs as appropriate.
- 2.3. **Arvada's Representative.** Arvada will designate a representative authorized to act on Arvada's behalf with respect to the Project.
- 2.4. **Purpose of Arvada's Review.** Arvada's review, inspection, or approval of any Work, Testing Documents, Applications for Payment, or other submittals shall be solely for the purpose of

determining whether the same are generally consistent with Arvada's standards, policies and requirements. No review, inspection, or approval by Arvada of such Work or documents shall relieve Contractor of its responsibility for the performance of its obligations under the Agreement or the accuracy, adequacy, fitness, suitability, or coordination of its Construction Services. Approval by any governmental or other regulatory agency or other governing body of any Work, Testing Document, or the Construction Documents shall not relieve Contractor of responsibility for the performance of its obligations under this Agreement. Payment by Arvada pursuant to the Agreement shall not constitute waiver of any of Arvada's rights under the Agreement or at law, and Contractor expressly accepts the risk that defects in its performance, if any, may not be discovered until after payment, including final payment, is made by Arvada. Notwithstanding the foregoing, reasonable notice shall be given by Arvada to the Contractor if Arvada becomes aware of any fault or defect in the Project or non-conformance with the Contract Documents.

ARTICLE 3. CONSTRUCTION SERVICES REQUIREMENTS AND STANDARDS

- 3.1. **Quality of Construction Services.** Contractor shall be responsible for the quality, completeness, accuracy, and coordination of the Work. Contractor shall provide Construction Services that meet all industry standards, including all environmental and regulatory requirements. Contractor shall provide for all testing and inspections required by sound construction practices and by governmental authorities having jurisdiction over the Project.
- 3.2. **Arvada's Right to Carry Out the Work.** If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a seven day period after written notice from Arvada to commence and continue correction of such default or neglect with diligence and promptness, Arvada may after such seven-day period, without prejudice to other remedies Arvada may have, correct such deficiencies. In such case, an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for any consultant's additional services and expenses made necessary by such default, neglect or failure. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to Arvada within ten days of receipt of an invoice for such amounts from Arvada.
- 3.3. **Legal Standard.** Contractor shall furnish construction services in accordance with industry standards currently practiced by construction professionals on projects similar in size, complexity and cost to the Project.
- 3.4. **Construction Standards.** Contractor shall perform all services in accordance with requirements of governmental agencies having jurisdiction over the Project, City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements, and the requirements set forth in the Contract Documents. In addition, the Contractor's work shall comply with all applicable building codes, accessibility laws and regulations, environmental regulations, and other applicable legal requirements in effect at the time of the work. To the extent Arvada's standards exceed applicable legal requirements, such standards shall be met unless Contractor obtains a variance from Arvada in writing.
- 3.5. **Permits.** Contractor shall be responsible for obtaining all necessary permits and other governmental approvals necessary for the development of the Project and shall obtain the same at the times necessary to meet the Project schedule. Contractor's responsibility includes providing environmental services and permitting coordination as further described in the Contract Documents.
- 3.6. **Notice of Non-Compliance.** The Contractor shall carefully study and compare the Contract Documents with each other and with information furnished by Arvada, and shall at once report to

Arvada any errors, inconsistencies or omissions discovered as well as any foreseeable constructability issues arising from the project specifications and/or site conditions. If the Contractor performs any construction activity knowing or should have known it involves an error, inconsistent, omission or constructability issue in the Contract Documents without such notice to Arvada, the Contractor shall assume full responsibility for such performance and shall bear the full costs for correction, including reimbursement for any delay caused to the Project.

ARTICLE 4. CHANGES TO THE WORK

- 4.1. **Minor Contract Revisions.** Miscellaneous modifications in the Work, ordered by Arvada in the form of a Field Order, will be considered a Minor Contract Revision. Payment for accepted work performed under this pay item “Minor Contract Revision” will be made in accordance with General condition 2.17 of the Arvada Engineering Code of Standards and Specifications.
- 4.2. **Field Orders.** An authorized representative of the Contractor shall acknowledge receipt of Field Orders by promptly signing all written field orders delivered to the job site. Verbal field orders given by Arvada will be recorded in writing in the municipal inspector’s daily report that is to be signed by the Contractor’s authorized representative.
- 4.3. **Field Engineered Changes.** Arvada may modify the construction plans including changing the slope and alignment of flow lines and appurtenances or modifying other improvements as necessary to accommodate construction around existing utilities or other field conditions. No additional compensation shall be made for minor costs and inconveniences incurred while performing field engineering changes as directed by Arvada or its Consultant. No additional compensation shall be made for any down time encountered while Arvada determines what field engineered changes would be appropriate to accommodate construction around existing utilities or other field conditions. Reasonable time must be allowed for Arvada or its Consultant to design field engineered changes. Any additional costs for performing field engineered construction changes to accommodate existing utilities or other field conditions and for also allowing Arvada reasonable time to design field engineered changes as necessary to complete the work shall be considered a subsidiary obligation of the contract.
- 4.4. **Pre-Construction Meetings.** Contractor agrees to assist in the preparation for and to participate in any pre-construction meetings with Arvada.
- 4.5. **Arvada Change Orders.** Arvada may, by written order signed by Arvada, at any time, and without notice to any surety, and subject to all appropriate adjustments, make changes within the general scope of this Contract in any one or more of the following: (a) changes in scope of services; (b) completion date; (c) contract amount; (d) any applicable material modifications; and, (e) any other matters that the parties deem necessary.
- 4.6. **Contractor Requested Change Orders.** The Contractor may request a Change in the Work (“Requested Change Order”), including one or more of the following: (a) changes in scope of services; (b) completion date; (c) contract amount; (d) any applicable material modifications; and, (e) any other matters that the parties deem necessary.
- 4.7. **Change Order Contents.** Any Requested Change Order shall include (a) a detailed description of the requested change to the original contract; (b) itemized documentation of any subcontractor costs; (c) the total costs associated with the proposed change; (d) the impact on the project completion date, if any, associated with the proposed change; and (e) a statement of the contractual basis for the requested change.

- 4.8. **Basis for Change Order Requests.** The following may be considered a valid basis for requesting a Change Order: (a) Contract Document error or omission; (b) Arvada induced enhancement; (c) unforeseeable constructability issue; (d) unforeseeable geotechnical issue. The following will not be considered a valid basis for requesting a Change Order absent extraordinary circumstances: (a) utility relocation; (b) utility conflicts; (c) foreseeable geotechnical issue; (d) foreseeable constructability issue; (e) defective construction.
- 4.9. **Written Authorization Required.** The Contractor shall not proceed with any change in the Work without the appropriate written authorization.

ARTICLE 5. SUPERVISION AND CONSTRUCTION PROCEDURES

- 5.1. **Supervision.** The Contractor shall supervise and direct the Work using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the Work under this Contract, unless Contract Documents give other specific instructions concerning these matters.
- 5.2. **Acts and Omissions of Subcontractors and Agents.** The Contractor shall be responsible to Arvada for acts and omission of the Contractor's employees, Subcontractors, and their agents and employees, and other persons performing portions of the Work under a contract with the Contractor
- 5.3. **Inspection and Subsequent Work.** The Contractor shall be responsible for inspection or portions of Work already performed under this Contract to determine that such portions are in proper condition to receive subsequent Work.

ARTICLE 6. COMPENSATION.

- 6.1. **Completion of Services.** Contractor will furnish all material, supplies, tools, equipment, labor, and other services necessary for the completion of the Work within Arvada's timeframe and monetary limitations.
- 6.2. **Term.** The term of the Agreement shall be for 12 months from Arvada's execution of the Agreement, unless otherwise agreed to in writing by the parties, subject to availability of funds, or Arvada's termination for convenience under the Contract Documents.
- 6.3. **Renewal.** This Agreement may be renewed by Arvada for 2 consecutive one-year terms and the renewals shall be on the same terms as this Agreement and automatic unless Arvada gives Contractor 30 days' written notice to terminate the Agreement.
- 6.4. **Additional Services.** While Arvada has listed its major requirements for its solicitation in the Contract Documents, Arvada may, during the term of this Agreement, wish to purchase other related services identified and offered by Contractor, based upon the Bid Schedule amounts contained in Contract Documents. Arvada reserves the right to award these ancillary items to Contractor. This option, if exercised, in no way obligates Arvada to pursue additional services with Contractor.
- 6.5. **Payment for Services.** At least twenty (20) days before the date established for each monthly progress payment, the Contractor shall submit to Arvada an itemized Application for Payment for construction completed in accordance with the Bid Schedule. Such application shall be support by such data substantiating the Contractor's right to payment as Arvada may require, such as copies of invoices or requisitions from subcontractors and material suppliers and reflecting retainage. Arvada

shall pay NET 30 for services performed in accordance with the Bid Schedule and with this Agreement, but in no event shall the total Contract Amount exceed \$3,085,470.53 absent a properly executed Change Order. Measurement of the work performed and monthly payment shall be made in accordance with requirements of the Measurement and Payment Section in the Contract Documents unless otherwise specifically provided herein.

- 6.6. **Non-Conforming Materials or Construction.** Where materials installed or the finished product fails to meet minimum requirements of the Contract Documents, the basis of determining final payment to the Contractor shall be determined in accordance with the current revised Section 105.30 of the Colorado Department of Transportation Standard Specifications.
- 6.7. **Retainage Requirements.** Contractor agrees to submit monthly invoices together with any retainage requirements as prescribed by Colorado state statutes (*see e.g.*, C.R.S. § 24-91-101 et seq). Payment from Arvada will be paid NET 30 days. Invoices will accurately reflect actual work completed by Contractor and its subconsultants or subcontractors.
- 6.8. **No Multi-Year Fiscal Obligation.** Financial obligations of Arvada payable after the current fiscal year are contingent on funds for that purpose being appropriated, budgeted, and otherwise made available by the City Council for Arvada. Arvada's obligations under the Agreement shall be from year to year only and shall not constitute a multiple-fiscal year direct or indirect debt or other financial obligation of Arvada within the meaning of Article X, Section 20 of the Colorado Constitution (TABOR).

ARTICLE 7. MISCELLANEOUS.

- 7.1. **Governing Law and Venue.** This Agreement shall be governed by and construed in accordance with the laws of the State of Colorado without regard to its choice of law provisions and venue shall lie in the courts in Jefferson County, Colorado.
- 7.2. **Waiver.** No provision of this Agreement may be waived except by written agreement of the parties. A waiver of any provision on one occasion shall not be deemed a waiver of that provision on any subsequent occasion, unless specifically stated in writing. A waiver of any provision shall not affect or alter the remaining provisions of this Agreement.
- 7.3. **Strict Compliance.** No failure of Arvada to insist upon strict compliance by the Contractor with any provision of the Contract Documents shall operate to release, discharge, modify, change or affect any of the Contractor's obligations.
- 7.4. **Successors and Assigns.** Arvada and Contractor, respectively, bind themselves, their partners, successors, assigns and legal representatives to the other party to this Agreement and to the partners, successors and assigns of such other part with respect to all covenants of this Agreement. Contractor shall not assign (whether partially or wholly) this Agreement whether by operation of law or otherwise, without the written consent of Arvada. If Contractor makes an assignment in accordance with this provision, Contractor shall nevertheless remain legally responsible for all obligations arising under the Agreement, unless other agreed in writing by Arvada.
- 7.5. **Third Party Beneficiaries.** This Agreement shall inure solely to the benefit of the parties hereto and their successors and assigns, and, except as otherwise specifically provided in this Agreement, nothing contained in this Agreement is intended to or shall create a contractual relationship with, or any rights or cause of action in favor of, any third party against either Arvada or the Contractor.

- 7.6. **Additional Documents.** The parties agree to execute any additional documents and to take any additional action that is necessary to carry out this Agreement.
- 7.7. **Binding Effect.** This Agreement shall inure to the benefit of, and be binding upon, the parties, their respective legal representatives, successors, heirs, and assigns; provided, however, that nothing in this paragraph shall be construed to permit the assignment of this Agreement except as otherwise expressly authorized herein. All provisions of this Agreement which contain continuing obligations shall survive its expiration or termination.
- 7.8. **Paragraph Captions.** The paragraph captions in this Agreement are set forth only for the convenience and reference of the parties and are not intended in any way to define, limit, or describe the scope or intent of this Agreement.
- 7.9. **Integration, Amendment, and Severability.** This Agreement represents the entire agreement between the parties, and there are no oral or collateral agreements or understandings. This Agreement may be amended only by an instrument in writing signed by the parties. If any other provision of this Agreement is held invalid or unenforceable, no other provision shall be affected by such holding, and all of the remaining provisions of this Agreement shall continue in full force and effect if the essential terms and conditions of this Agreement for both parties remain valid, legal, and enforceable.
- 7.10. **Notices.** Any notice or notification required or permitted by the Agreement shall be in writing and shall be deemed to have been sufficiently given for all purposes if sent electronically, or by certified mail or registered mail, postage and fees prepaid, addressed to the party to whom such notice is to be given at the address set forth on the signature page below, or at such other address as has been previously furnished in writing, to the other party or parties. Such notice or notification shall be deemed to have been given when electronically sent or when deposited in the United States mail.
- 7.11. **Binding Authority.** Contractor represents and affirms that the signature page hereof accurately states the full legal name of Contractor (whether as a corporation, partnership, limited liability company, sole proprietorship, or other), contains all requisite signature(s) on behalf of Contractor, has been properly acknowledged by attestation, notary acknowledgment, or both, and in all other respects is effective to bind Contractor, in accordance with all applicable statutes, regulations, resolutions, rules, bylaws, agreements, or similar sources of authority or limitation. This Agreement may be executed in counterpart(s), each of which shall be deemed to be an original, and all of which, taken together, shall constitute one instrument.
- 7.12. **Preferences in Employment of Colorado Labor.** To the extent that obligations and responsibilities may be established by C.R.S. § 8-17-101 *et seq.*, as amended, with respect to certain public entities and those contracting therewith as to the procurement of services:
- a. Colorado labor shall be employed to perform eighty percent (80%) of the work.
 - b. Any waiver of this requirement must comply with C.R.S. § 8-17-101 *et seq.*, as amended.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement which shall be deemed an original on the date first above written.

CITY OF ARVADA, COLORADO

Marc Williams, Mayor
8101 Ralston Road
Arvada, CO 80002

ATTEST/WITNESS:

City Clerk

APPROVED AS TO FORM:

For Rachel A. Morris, City Attorney

By: _____

ASPHALT SPECIALTIES CO., INC.

Daniel W. Hunt, President
10100 Dallas St.
Henderson, CO. 80640
Email: Danh@asphaltspecialties.com

ATTEST:

Greg Simmons, Project Manager
Email: gregs@asphaltspecialties.com

Exhibit A

Arvada's CSB-21-ST-Pavement Resurfacing Program



COMPETITIVE SEALED BID

BID #: CSB - 21 - ST - 01 - Pavement Resurfacing Program

Title: Pavement Resurfacing Program

CSB Issued: 11/24/2020

Bids Due By: 12/17/2020 1:00 pm **local time**

Questions Deadline: 12/1/2020 1:00 pm local time
Submit Questions on BidnetDirect.com!

Delivery Date: 90 days after notice to proceed

Delivery address: **Electronic Submissions must be submitted online at BidNetDirect.com.**

Limit the # of separate submission documents to 1, and the company name must start the uploaded file name as these will be moved to a shared Team Drive for evaluation.
Late responses will not be considered for award.

For additional information, contact: Whitney Smith, wsmith@arvada.org

Documents included in this BID:

Cover Page	page 1
Advertisement for Bidders	page 2
General Terms and Conditions	page 3
Special Terms and Conditions for Bidders	page 6
Insurance Requirements	page 8
Project Special Provisions	page 9
Submittal Forms to be Completed and Returned	
• Bid Bond (<u>a PICTURE of the Bond</u> or upload to BidnetDirect)	page 23
• Bid Proposal	page 24
• Bid Schedule	page 25
Submittal Checklist and References to be Completed and Returned	page 28
Preview of Documents if Awarded	page 29

ARVADA'S VISION MISSION AND VALUES

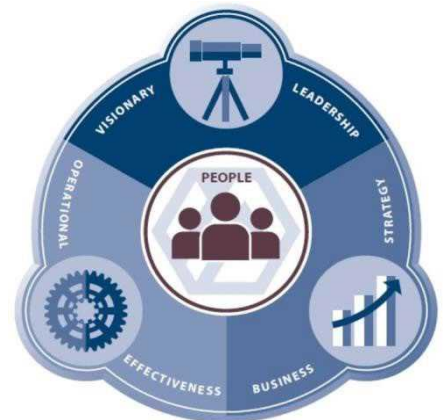
VISION: We dream big and deliver.

MISSION: We are dedicated to delivering superior services to enhance the lives of everyone in our community.

VALUES:

Innovation – We excel in creativity, flexibility and the use of best practices while valuing diverse backgrounds, ideas and perspectives. **Passion** – We are a high performing, inclusive team inspiring each other to pursue excellence.

Opportunity – We value our diversity, embrace possibilities, face challenges, persevere and take action to deliver quality results.



ADVERTISEMENT FOR BIDS

Submit bids electronically on Bidnetdirect.com for the construction of City of Arvada, Project No., Project Title: 21-ST-Pavement Resurfacing Program

The BID DOCUMENTS, consisting of Advertisement for Bids, General Terms and Conditions, Special Terms and Conditions, Insurance Requirements, Project Special Provisions, Addendum when issued, Bid Bond, Bid Proposal, Bid Schedule, Performance and Payment Bond, Submittal Checklist and References, Sample documents, and the Project Drawings may be examined at the following location: www.bidnetdirect.com

No cost bid documents may be obtained at www.bidnetdirect.com on or after _____

ESTIMATED QUANTITIES OF THE MAJOR ITEMS OF WORK ARE:

Miscellaneous items include citizen notification, traffic control, and other appurtenances.

Bidders, subcontractors and suppliers must be familiar with the current City of Arvada *Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements*, dated January 12, 2016, which will be combined with the Bid Documents to form the Contract Documents for the Project. A copy of the Standards may be obtained from the office of the City Engineer upon a non-refundable payment of \$50.00. Holders will be notified when supplemental revisions and additions are available as they are adopted. The Standards are also available at no cost on the City's web site at www.arvada.org. Holders are responsible for keeping current their City of Arvada Engineering Code of Standards and Specifications.

Date: _____

CITY OF ARVADA

PE City Engineer
8101 Ralston Road
Arvada, Colorado 80002

GENERAL TERMS AND CONDITIONS

1. PAYMENTS TO CONSTITUTE CURRENT EXPENDITURES. Financial obligations of the City of Arvada, if any, after the current fiscal year are contingent on funds for that purpose being appropriated, budgeted and otherwise made available by the City Council for the City of Arvada. The City of Arvada's obligations under the Agreement shall be from year to year only and shall not constitute a multiple-fiscal year direct or indirect debt or other financial obligation of the City of Arvada within the meaning of Article X, Section 20 of the Colorado Constitution.

2. TAXES. The City of Arvada is not subject to taxation. Contractor shall not invoice Arvada for any state, federal or local taxes whatsoever. Upon written notification by the City of Arvada, Contractor shall reimburse the City of Arvada in a timely manner for any taxes erroneously paid by the City of Arvada. The Colorado Department of Revenue, Certification of Exemption for Colorado State Sales/Use Tax account number for the City of Arvada is 98-01789-0000. An exemption certificate will be provided, where applicable, upon request.

3. NO INDEMNIFICATION BY ARVADA. The City of Arvada is prohibited by Article XI, Section 1, Colorado Constitution, from indemnifying anyone. Therefore, notwithstanding any provision in the response to solicitation or proposed contract, lease, escrow agreement or any other type of agreement to the contrary, the City of Arvada does not indemnify Contractor or anyone else under this Agreement.

4. INDEMNIFICATION OF CITY.

A. Contractor: Notwithstanding any provision in the response to solicitation or proposed contract, lease, escrow agreement or any other type of agreement to the contrary, Contractor agrees to investigate, defend, indemnify and hold harmless Arvada, its elected officials, officers, employees, agents, insurers, and representatives from and against any claims, costs, losses, expenses, demands, actions, or causes of action, including reasonable attorney fees and other costs and expenses of litigation, which may be asserted against or incurred by Arvada or for which Arvada may be liable, arising from the negligence, willful misconduct, or other fault of Contractor or its employees, agents, or subcontractors in performance of the Agreement. Nothing herein is intended to constitute a covenant, promise, or agreement to indemnify and hold harmless Arvada from any liability or damages directly caused by or attributable to Arvada's own negligence. Nothing herein intended to be nor may be construed as a waiver of the immunities, protections, or limitations on damages provided to Arvada by the Colorado Governmental Immunity Act, C.R.S. §§ 24-10-101 *et seq.*, as it may from time to time be amended.

(or)

B. Architect, Engineer, Surveyor Services for Public Works Construction: Contractor agrees to hold harmless and indemnify Arvada, its officers and employees, from and against any liability or any claims, suits, or actions arising out of, made, or asserted for any damage to persons or property resulting from errors, omissions or fault of Contractor in connection with the performance by Contractor of obligations under this solicitation and any subsequent Agreement with Arvada. Nothing herein is intended to constitute a covenant, promise, or agreement to indemnify and hold harmless Arvada from any liability or damages directly caused by or attributable to Arvada's own negligence. Nothing herein is intended to be nor construed as a waiver of the immunities, protections, or limitations on damages provided to Arvada by the Colorado Governmental Immunity Act, C.R.S. §§24-10-101 *et seq.*, as it may from time to time be amended.

5. NO OPINION OF COUNSEL LETTERS. Pursuant to Section 8.1 of the Arvada City Charter, the City Attorney provides advice to the City Council and City Officials in matters relating to their official powers and duties, and will perform such other duties as City Council may prescribe by ordinance or resolution. The City Attorney will not issue opinion of counsel letters, memoranda or statements to third parties, including, but not limited to that any contract or lease is binding on the public entity, enforceable, etc.

6. CONFIDENTIAL DOCUMENTS. Contractors may designate specific pages or sections within their submission as trade secret or confidential commercial information or as otherwise protected by law ("Confidential Information"). Documents and data that are considered Confidential Information shall be clearly marked as such and separated from the rest of the solicitation submission documents. Comingling is not acceptable. The City does not favor blanket assertions of Confidential Information. Please note that blanket assertions that merely classify and/or broadly claim information is confidential are insufficient as a matter of law. *See, International Brotherhood of Electrical Workers Local 68 v. Denver Metropolitan Major League Baseball Stadium District*, 880 P.2d 160 (Colo. App. 1994). Any information that will be included in any resulting contract cannot be considered Confidential. Under no circumstances may submission pricing information be considered Confidential. In the event a formal contract is entered into with the City and a portion of the Proposal/Response carries a designation indicating the Contractor believes it is Confidential Information, then the City agrees that it will use its best efforts to forward any request for the disclosure of the Confidential Information to the Contractor. By its submission of the Proposal/Response, Contractor agrees to promptly respond to the request for disclosure with any objections and reasons therefor in accordance with the Colorado Open Records Act C.R.S. §§24-72-101 *et seq.* and any other applicable law. Further, Contractor agrees to assume the obligation to defend, hold harmless, and indemnify the City in any legal proceeding that arises from non-disclosure of documents or data pursuant to the Contractor's objection.

7. OWNERSHIP OF WORK PRODUCT. The originals of all plans, reports, studies, data, or other materials or information relating to the Work that are produced by Contractor shall be delivered to and become the property of Arvada. Contractor may retain copies of any originals; however, no plans, reports, studies, data, or other materials or information relating to the Work shall be released to any person or entity without the prior written consent of Arvada. Nothing in this clause is intended to affect Contractor's right to use generic know-how learned in the course of providing services under the Agreement for the future benefit of the City of Arvada or others.

8. ASSIGNMENT. Contractor shall not assign the Agreement without the prior written consent of the City of Arvada, which will not be unreasonably withheld, conditioned, or delayed. Contractor may assign the Agreement to any successor to the business of the party by merger, consolidation, or sale of assets. No assignment shall be permitted that enlarges any duty, responsibility or obligation of the City of Arvada, or that limits, curtails, or diminishes any right or privilege of the City of Arvada without the City of Arvada's express written consent.

9. NO THIRD PARTY BENEFICIARIES. It is expressly understood and agreed that enforcement of the terms and conditions of the Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to Arvada and Contractor and nothing contained in the Agreement shall give or allow any such claim or right of action to any other third party on the Agreement. It is the express intention of Arvada and Contractor that any person other than Arvada or Contractor receiving services or benefits under the Agreement shall be deemed to be an incidental beneficiary only.

10. INDEPENDENT CONTRACTOR. Contractor and Arvada hereby represent that Contractor is an independent contractor for all purposes hereunder. As such, Contractor is not covered by any worker's compensation insurance or any other insurance maintained by Arvada except as would apply to members of the general public. Contractor shall not create any indebtedness on behalf of Arvada.

11. SUBCONTRACTING. Contractor shall not award work to subcontractor(s) in excess of fifty percent of the total contract price without Arvada's prior written approval. Contractor shall be responsible for any failure by any subcontractor or subcontractor personnel to perform in accordance with the Agreement or to comply with any duties or obligations imposed on Contractor under the Agreement to the same extent as if such failure to perform or comply was committed by Contractor or Contractor's personnel. Contractor shall be Arvada's sole point of contact regarding the services, including with respect to payment.

12. ILLEGAL ALIENS; PUBLIC CONTRACTS FOR SERVICES. To the extent that obligations and responsibilities may be established by C.R.S. §§8-17.5-101 *et seq.*, (as amended) (the "Act"), with respect to certain public entities and those contracting therewith as to the procurement of services:

- A. Successful Vendor ("Contractor") shall not knowingly employ or contract with an illegal alien to perform work under the Agreement or enter into a contract with a subcontractor that fails to certify to Contractor that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under the Agreement. Contractor confirms the employment eligibility of all employees who are newly hired for employment to perform work under this public contract for services through participation in either the E-Verify Program or Department Program (the "Program").
- B. Contractor is prohibited from using Program procedures to undertake pre-employment screening of job applicants while the Agreement is being performed.
- C. If Contractor obtains actual knowledge that a subcontractor performing work under the Agreement knowingly employs or contracts with an illegal alien, Contractor shall be required to:
 - (i). Notify the subcontractor and the City of Arvada within three (3) days that Contractor has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and
 - (ii). Terminate the subcontract with the subcontractor if within three (3) days of receiving the above notice the subcontractor does not stop employing or contracting with the illegal alien; except that Contractor shall not terminate the subcontract if during such three days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien.
- D. Contractor shall comply with any reasonable request by the Colorado Department of Labor and Employment made in the course of an investigation that the department is undertaking pursuant to the authority established in the Act.
- E. Any provision of the Agreement to the contrary notwithstanding, if Contractor violates any provision of this Section, the City of Arvada may terminate the Agreement, without breach or default by the City of Arvada, and Contractor shall be liable for actual and consequential damages to the City of Arvada arising out of such violation.
- F. Contractor represents that, prior to executing the Agreement, Contractor has certified that at the time of the certification, Contractor does not knowingly employ or contract with an illegal alien who will perform work under this public contract for services and Contractor will participate in either the E-Verify Program or Department Program in order to confirm the employment eligibility of all employees who are newly hired for employment to perform work under this public contract for services. By execution of this Agreement, Contractor shall be deemed to have renewed such certification.
- G. Contractor acknowledges its responsibility to comply with the certification requirement pursuant to C.R.S. §8-17.5-102(2)(b)(I) (as amended).

13. NO WAIVER OF GOVERNMENTAL IMMUNITY. Nothing contained in this or any of the exhibits attached thereto shall be construed as a waiver of any of the immunities, limitations, privileges, rights, procedures, or requirements contained in the Colorado Governmental Immunity Act, C.R.S. §§24-10-101 *et seq.*

14. RIGHT TO TERMINATE. The City of Arvada shall have the right to terminate, without cause, the Agreement. Any such termination shall not be considered a breach of the Agreement or any extension thereof. In the event of termination by the City of Arvada for convenience, Contractor will be paid for requested work performed up until the time of termination by the City of Arvada, not to exceed the total amount of the contract price agreed upon by the parties.

15. COMPLIANCE WITH ALL LAWS. All of the services performed under this Agreement by Contractor shall comply with all applicable laws, rules, regulations and codes of the United States and State of Colorado, and with the charter, ordinances, rules and regulations of the City of Arvada.

16. WAIVER OF BREACH. A waiver by any party to the Agreement or the breach of any term or provision of the Agreement shall not operate or be construed as a waiver of any subsequent breach by either party.

17. GOVERNING LAW AND VENUE. Notwithstanding any provision in the response to solicitation or proposed contract, lease, escrow agreement or any other type of agreement to the contrary, the Agreement shall be governed by the laws of the State of Colorado. Venue for any action arising under the Agreement or for the enforcement of the Agreement shall be in the appropriate court for Jefferson County, Colorado.

18. FORCE MAJEURE. Any delays in or failure of performance by any party of his or its obligations under the Agreement shall be excused if such delays or failure are a result of acts of God, fires, floods, strikes, labor disputes, accidents, regulations or orders of civil or military authorities, shortages of labor or materials, or other causes, similar or dissimilar, which are beyond the control of such party.

19. BINDING ARBITRATION PROHIBITED. The City of Arvada does not agree to binding arbitration by any extra-judicial body or person. Any provision to the contrary in response to the solicitation, or incorporated by reference, shall be null and void.

20. EQUAL EMPLOYMENT OPPORTUNITY. Contractor shall not refuse to hire, discharge, promote or demote, or discriminate in matters of compensation against any person otherwise qualified solely because of race, creed, sex, color, national origin or ancestry, religion, disability, age, sexual orientation, gender identity, veteran status, or any other basis prohibited by federal, state, or local law.

21. BINDING AUTHORITY. Contractor represents and affirms that the signature page hereof accurately states the full legal name of Contractor (whether as a corporation, partnership, limited liability company, sole proprietorship, or other), contains all requisite signature(s) on behalf of Contractor, has been properly acknowledged by attestation, notary acknowledgment, or both, and in all other respects is effective to bind Contractor, in accordance with all applicable statutes, regulations, resolutions, rules, bylaws, agreements, or similar sources of authority or limitation.

22. PREFERENCES IN EMPLOYMENT OF COLORADO LABOR. To the extent that obligations and responsibilities may be established by C.R.S. § 8-17-101 *et seq.*, as amended, with respect to certain public entities and those contracting therewith as to the procurement of services:

- a. Colorado labor shall be employed to perform eighty percent (80%) of the work.
- b. Any waiver of this requirement must comply with C.R.S. § 8-17-101 *et seq.*, as amended.

23. RETAINAGE REQUIREMENTS. Contractor agrees to submit monthly invoices together with any retainage requirements as prescribed by Colorado state statutes (see e.g., C.R.S. §§24-91-101 *et seq.*). Payment from Arvada will traditionally be paid NET (15) days but no later than NET thirty (30) days. Invoices will accurately reflect actual work completed by Contractor.

SPECIAL TERMS AND CONDITIONS FOR BIDDERS

1. RECEIPT AND OPENING OF BIDS. Bids submitted electronically on the BidnetDirect.com web site only become available to the City of Arvada after the Bid closes.

Bidder shall assume full responsibility for timely upload of bid to the Bidnetdirect web site. The City reserves the right, where its best interest will be served, to accept or reject any conditional or qualified Bid.

2. QUANTITY AND NATURE OF THE WORK. Bidders must satisfy themselves of the accuracy of the estimated quantities in the Bid Schedule by examination of the site and a review of the drawings and specifications including Addendum. After Bids have been submitted the Bidder shall not assert that there was a misunderstanding concerning the quantities of work or of the nature of the work to be done.

3. CONTENTS OF BID. Contractors are required to submit Bids with the following conditions:

- 1) Contractors shall make all investigations necessary to inform themselves of the sites affected and the work required by the Solicitation.
- 2) Any official interpretation of the Solicitation may only be issued by an authorized agent of the City. The City shall not be responsible for other interpretations offered by employees not authorized.
- 3) The City shall issue Addenda if substantial changes are required which may impact the content and submission of Bids. A copy of such addenda will be publicly posted with the original CSB posting.
- 4) The apparent silence or omissions within this Solicitation regarding a detailed description of the materials or services shall be interpreted to mean that only the best commercial practices are to prevail and that only materials and workmanship of first quality are to be provided.

4. BID SECURITY. Each Bid must be accompanied by a PHOTO of the Bid Bond, on the form attached to these contract documents, payable to the City for five (5) percent of the total amount of the Bid. As soon as the bid Prices have been compared, the City will notify an intent to award on the Bidnetdirect.com web site. The vendor who is named as the intent to award Contractor must submit the physical Bid Bond within 10 days or the intent to award may be revoked. The Bid Bond of the successful Bidder will be retained until the Payment and Performance Bond has been executed and approved after which it will be returned. A certified check may be used in lieu of a Bid Bond.

5. POWER OF ATTORNEY. Attorneys-in fact who sign Bid Bonds or Payment and Performance Bonds must file with each bond a certified and effective dated copy of their power of attorney.

6. QUALIFICATION OF BIDDER. The City may make such investigation as it deems necessary to determine the ability of the Bidder to perform the work. The City reserves the right to reject any Bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the City that such Bidder is properly qualified to carry out the obligation of the Contract Agreement and to complete the work contemplated therein. The City reserves the right, before awarding the contract, to require a Contractor to submit evidence of its qualifications including, but not limited to, financial, technical and other qualifications, as well as past performance with the City, for consideration in making the award in the best interest of the City.

7. AWARD OF CONTRACT. Bids shall be awarded to the lowest-priced responsible and most responsive bidder whose bid meets the requirements and criteria set forth in the CSB within the limits of funds available and that best serves the City's interest. The City, within seven (7) calendar days of receipt of acceptable Contract Security and triplicate copies of the Contract Agreement, signed by the Bidder to whom the Contract was awarded, shall sign the Contract Agreement and return to the Bidder an executed copy of the Contract Agreement. Should the City not execute the Contract Agreement within such period, the Bidder may, by written notice, withdraw his signed Contract Agreement. Such notice of withdrawal shall be effective upon receipt of the written notice by the City.

8. NOTICE OF AWARD AND FAILURE TO ENTER INTO CONTRACT. The party to whom the Contract is to be awarded will be required to execute the Contract Agreement in triplicate, obtain Certificates of Insurance and a Performance and Payment Bond, as Contract security, within five (5) calendar days from the date the Notice of Award is delivered to the Bidder. The Notice of Award shall be accompanied by the Contract Agreement and the necessary Performance and Payment Bond forms. In case of failure of the bidder to execute the Contract Agreement and provide satisfactory Insurance and Contract Security, the City may at his option, consider the Bidder in default, in which case the Bid Bond accompanying the Proposal shall become the property of the City.

9. CONTRACT DOCUMENTS. The Contract Documents consisting of the Bid Documents, which include the Advertisement for Bids, Information for Bidders, General Terms and Conditions, Special Terms and Conditions, Insurance Requirements, Project Special Provisions, Addendum, Bid Bond, Bid Proposal, Bid Schedule, Vendor Submittal Form, Construction Drawings, Supplemental Specifications and the City of Arvada "Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements", dated January 12, 2016, which include the Measurement and Payment specifications, and the attached Notice of Award form, Contract Agreement form, Performance and Payment Bond form, Notice to Proceed form, and Change Order form, when combined, contain the provisions required for the construction of the Project. Information obtained from an agent or employee of the City or any other person shall not affect the risks or obligations assumed by the Contractor or relieve him from fulfilling any of the conditions of the contract.

10. TERM OF CONTRACT. This contract shall commence on the date of the purchase order or contract execution and shall remain in effect until such time as the commodities, equipment and/or services acquired in conjunction with this Bid have been accepted by the City's authorized representative. Any required warranty period which exceeds this term shall remain in full force for the duration of the warranty period.

11. PRICING SHALL BE FIXED AND FIRM. The prices offered by the Contractor shall remain fixed and firm for at least 90 ninety days. No changes in the Bid shall be allowed after the date and time of the Bid deadline due to error by the Contractor.

12. CONTRACT SECURITY. A Performance and Payment Bond, on the form attached to these contract documents, in the amount of 100% of the Contract price, with a corporate surety approved by the City, will be required for the faithful performance of the Contract.

13. NOTICE TO PROCEED. The Notice to Proceed shall be issued within seven (7) calendar days of the execution of the Contract Agreement by the City. Should there be reason why the Notice to Proceed cannot be issued within such period, the time may be extended by mutual agreement between the City and the Contractor. In the event the Notice to Proceed has not been issued within the seven day period or within the period mutually agreed upon the Contractor may terminate the Contract Agreement without further liability on the part of either party.

14. MODIFICATION OR WITHDRAWAL OF BIDS BY CONTRACTOR.

Modifications to Bids- Changes to the Bid after the submission deadline shall be allowed only when the Contractor can show convincing evidence that an unintentional factual mistake was made. Modification requests must be made in writing. Any modification submitted to the City must have the Contractor's name, address, Solicitation Number and title included.

Withdrawal of Bids- If a Bid is withdrawn by Contractor after the Bid Opening, the City may, at its option, suspend the Contractor for a six (6) month period following the withdrawal. Withdrawal of the Bid after the Bid Opening will result in the

Contractor forfeiting the provided Bid Bond.

15. REJECTION OF OFFERS BY CITY.

- A. The City may reject a Bid, in whole or in part, for reasons including, but not be limited to:
 - 1) The Contractor misstates or conceals any material fact in its Proposal;
 - 2) The Contractor's Bid does not strictly conform to the law or requirements of the Solicitation;
 - 3) The Bid expressly requires or implies a conditional award that conflicts with the method of award stipulated in the Special Conditions;
 - 4) The Bid does not include documents which are required for submission with the Bid; or
 - 5) The Bid has not been executed by the Contractor through an authorized signature.
- B. The City may, at its sole and absolute discretion:
 - 1) Reject all or parts of Bids submitted by prospective Contractors;
 - 2) Re-advertise this Solicitation;
 - 3) Postpone or cancel the Solicitation;
 - 4) A Bid may not be accepted from, nor any contract be awarded to, any person or firm which
 - a) is in arrears to the City for any debt or Contract, or is a defaulter as surety for any obligation to the City.
 - b) has failed to perform faithfully any previous contract with the City, State or Federal governmental for a minimum period of one (1) year after this previous Contract was terminated for cause.
 - c) has pending litigation against the City on the date and time that the Solicitation is due.

16. CLARIFICATION AND MODIFICATIONS. The contract resulting from this solicitation will be subject to the Solicitation materials, City Ordinance, State and Federal Statutes. When conflicts occur, the highest authority shall prevail. Contractors are required to indicate any variances to the terms, conditions, requirements and specifications of this Solicitation; no matter how slight. If variations are not stated in the Contractor's Bid, it shall be agreed that the Contractor's Bid fully complies with all conditions identified in this Solicitation.

17. ELIGIBILITY OF CONTRACTORS: MUST BE ENGAGED IN SUPPLYING PRODUCTS OR SERVICES RENDERED.

Bids will only be considered from firms which have been engaged in the business of manufacturing or distributing the goods and/or performing services described in this Solicitation. Contractors must be able to produce evidence that they have an established satisfactory record of performance for at least two (2) years and have sufficient finances and structure to ensure that they can satisfactorily execute the Contract requirements, as determined by authorities of the City. The City reserves the right, before awarding the contract, to require a Contractor to submit evidence of its qualifications including, but not limited to, financial, technical and other qualifications, as well as past performance with the City, for consideration in making the award in the best interest of the City.

18. ELECTRONIC PAYMENT METHODS - CITY OF ARVADA SINGLE USE ACCOUNT.

Contractors are encouraged to consider the following method of payment.

Single Use Account: The City incorporates the use of Single User Accounts as an option to seamlessly process payment of larger dollar purchase orders and contracts to vendors/contractors/providers. A secure, one-time payment transaction account processes to pay invoices via the Contractor's merchant bank. Invoice payments have an enhanced speed-of-pay cycle that can significantly benefit cash flow.

19. CONDITIONS OF WORK AND OBLIGATION OF BIDDER. Each Bidder is responsible for independently inspecting the site and for reading and being thoroughly familiar with the Contract Documents and for providing the names of major suppliers and sub-contractors in the space provided on the Bid Proposal form. The failure or omission of any Bidder to do any of the foregoing shall in no way relieve the Bidder from any obligation in respect to his Bid Proposal.

20. CONTRACTOR LICENSE. The Contractor to whom the contract is awarded and any subcontractors employed by the Contractor must have or acquire the appropriate Contractor's license issued by the City of Arvada Engineering Division, including submittal of license bond, necessary insurance certificate, and license fee before initiating any work. The Contractor and any subcontractors will also be required to obtain a no charge Public Improvements Permit from the City of Arvada Engineering Division prior to initiating any and all work on this project.

21. PERFORMANCE MEASUREMENTS FOR SERVICES MORE THAN \$15,000.

The City has incorporated Performance Management into its organizational culture. The City will monitor and report on the following performance measures. These measures will determine, in part, renewals and eligibility for future awards. Measures include: (a) safety as defined by observation and OSHA reportable injuries, (b) quality of contracted work, (c) work completed within required schedule, (d) administration and coordination of estimates, RFIs, ASIs, change orders, pay requests and close out documents, (e) fair and justifiable change orders, (f) responsiveness and follow through on requests.

SERVICES means: the furnishing of labor, time, effort, maintenance, etc., by a vendor/contractor/consultant, with an initial contract amount of more than \$15,000.

23. PREPARATION AND SUBMISSION.

Bids will be prepared as follow:

- 1) A blank shall be construed as "No Bid/not offered". Where there is a discrepancy between the unit price and the

extension of prices, the unit price shall prevail.

2) Contractors will not knowingly participate in solicitations where there exists a conflict of interest with their firm and a member of City staff or their immediate family.

3) The only authorized version of this Bid is posted on WWW.BIDNETDIRECT.COM. Registration is available to receive email notification of new solicitations, addenda, and communications.

INSURANCE REQUIREMENTS

The following listed insurance requirements shall be carried by the selected Contractor for the entirety of the contract. Applicable requirements for this solicitation are identified by completed check boxes.

1. ☒ **Commercial General Liability**, written on an occurrence form, for limits not less than \$1,000,000.00 for bodily injury and property damage for each occurrence and not less than \$2,000,000.00 aggregate. Coverage shall include premises and operations liability, blanket contractual, broad form property damage, products and completed operations and personal injury endorsements.
2. ☒ **Workers' Compensation and Employers Liability** as required by statute. Employers Liability coverage is to be carried for a minimum limit of \$1,000,000.00 per accident.
3. ☒ **Automobile Liability** for limits not less than \$1,000,000.00 combined single limit for bodily injury and property damage for each occurrence. Coverage shall include owned, non-owned and hired automobiles.
4. ☒ **Umbrella Liability** of \$5,000,000.00, following form to the Commercial General Liability.
5. ☐ **Pollution Legal Liability Insurance** for limits not less than \$1,000,000 per occurrence (or claims made) and not less than

Additional Insurance Requirements:

- Contractor will be required to, at its own expense, keep in full force and effect during the term of the Agreement, and during the term of any extension or amendment of the Agreement, insurance reasonably sufficient to insure against the liability assumed by Contractor pursuant to the provisions of the solicitation sent by the City of Arvada or as determined by the City of Arvada Risk Manager.
- All coverage must be written with carriers holding a minimum A.M. Best rating of A-VII, and authorized to do business in Colorado. Coverage shall be primary, and any insurance held by the City of Arvada is excess and non-contributory.
- Issuance of a Purchase Order/Contract is contingent upon the receipt of the insurance documents. Work shall not commence before this requirement is met. If the Contractor fails to submit the required insurance documents within 15 calendar days after notice to submit such policies is given to the Contractor by a City representative, the Contractor may be in default of the Award.
- Except for Workers Compensation, Employer's Liability insurance, Automobile Liability and Professional Liability insurance, the City of Arvada must be endorsed as an additional insured on a Certificate of Insurance.
- The City, through its Risk Manager, reserves the right to require additional insurance coverage and other requirements.

21-ST-01 – 2021 Street Resurfacing
Special Conditions
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SPECIAL CONDITIONS

City of Arvada Project No. 21-ST-Pavement Resurfacing Program, 2021 Street Resurfacing

Conditions peculiar, but essential, to the successful performance and acceptance of the work on this project are itemized below. As such, they shall take precedence over the current Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements, hereinafter referred to as "City Standard Specifications."

GENERAL

SC-1 CONTRACT TIME AND LIQUIDATED DAMAGES

The work is to be completed, including cleanup, within 180 consecutive calendar days after the date specified in the Notice to Proceed, unless the contract time is adjusted by change order. A Notice to Proceed is anticipated to be issued on or about March 29th 2021. Unless otherwise approved by the Project Manager, once the contractor begins an area described herein the work shall proceed continuously until the area has been completed. Time limitations will be applied to each area as specified below. Area locations are depicted in Appendix A:

Area 1 - 56 days

Area 2 - 14 days.

Area 3 - 14 days

Area 4 - 28 days

Area 5 - 14 days

The bidder shall agree to pay to the owner, as liquidated damages the sum of \$3,900.00 for each consecutive calendar day that the work exceeds the allotted contract time for the work. Asphalt paving may not occur after October 31st.

SC-2 APPLICATION OF SPECIFICATIONS

Except as specifically noted in these Special Conditions, all work in this contract shall be in accordance with the City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements, ("City Standards"), and the most recent editions of CDOT "Standard Specifications for Road and Bridge Construction." In the case of conflict between City and other standards or specifications, the City Standards shall take precedence.

SC-3 MEASUREMENT AND PAYMENT

Measurement of the Work performed and payment, at the unit or lump sum price quoted in the Bid Schedule, shall be made in accordance with requirements of the Measurement and Basis of Payment Section of the City Standard Specifications, or as hereinafter stated in the Special Conditions.

SC-4 NON CONFORMITY OF MATERIAL OR FINISHED PRODUCT

Where materials installed or the finished products fail to meet the minimum requirements of these Contract Documents, the basis of determining final payment to the contractor shall be determined in accordance with the current revised Section 105.03 - Conformity to the Contract of the Colorado Department of Transportation Standard Specifications.

SC-5 SUMMARY OF APPROXIMATE QUANTITIES AND ADDITIONS/DELETIONS TO OR FROM THE CONTRACT

The items of work and estimated quantities for this project are listed in the Bid Schedule. Specific streets and the approximate square yards associated with each street are listed under Full Width Mill Patch and Overlay Asphalt of these special conditions. A Summary of Approximate Quantities for the major items of work is also provided for prospective bidders in the contract documents.

Additionally, items associated with Full Depth Asphalt Reconstruction, and Edge Milling are listed in an Alternate Bid Schedule Labeled Bid Alternate A. The quantities shown for items in Bid Alternate A do not represent actual quantities to be completed but are provided to allow for scope changes as determined by field observations once work begins.. There will be no contract unit price adjustment for altered quantities in Bid Alternate A.

The City reserves the right to add or delete quantities, sections and items of work contained in the Bid Schedule without change in the unit prices bid, subject to the requirements of Section 2.16 of the City Standard Specifications.

The Contractor is encouraged to make a field site visit prior to submitting their bid. In order to further assist the prospective bidder in clarifying any item(s) and in answering any questions he/she may have.

SC-6 WORK SCHEDULE

The list of streets to be resurfaced with this project is shown on the Bid-Schedule and Summary of Approximate Quantities included with these specifications.

Prior to issuance of the "Notice To Proceed", and at the Preconstruction Conference, the Contractor shall provide the Project Manager with a project schedule reflecting the list of streets and identifying critical events for each work location throughout the duration of the project. The Schedule shall be updated and submitted to the Project Manager for approval on a weekly basis. The contractor shall schedule their labor and equipment in such a manner that once work has begun on a street or area, work will progress continuously until that street or area is completed. The Project Manager may restrict the Contractor from beginning work at another site until this condition has been satisfied. No additional payment shall be made for mobilization to each work location, but shall be included in the lump sum bid item for Mobilization. The City also reserves the right to coordinate execution of any part of the work under this contract as circumstances warrant with respect to weather, or conflicts with other City projects, including but not limited to utility work, concrete replacement, other asphalt paving, etc.

SC-7 CITIZEN NOTIFICATION

Residents and businesses located in or near the milling and overlay locations shall be notified by the Contractor at least 24 hours in advance of the beginning of these operations. The Contractor shall notify residents and businesses by distributing informational "door hangers" provided either by the City, or by the Contractor with prior approval of the Project Manager. Door hangers or flyers shall be distributed at least 24 hours in advance of the work and at the time "No Parking" signs are set on the street where applicable prior to beginning any phase of the contract work.

It shall be the Contractor's responsibility to keep a written log of communication with business owners and their representatives should questions arise regarding proper advance notification. Prior to milling and overlay operations, the Contractor shall personally contact the management of local businesses on streets within the project to ensure that they are informed of the progress on the project. A log of names and conversations shall be kept and made available to the City. At no time shall complete access be blocked to a local business. At least one entrance/exit access shall be left open at all times during milling and overlay operations to these businesses.

Payment for Citizen Notification shall be paid as a percentage of the lump sum bid item for the contract amount earned. Payment for Citizen Notification shall include all labor, materials, equipment and incidentals required during each phase of the contract work. No additional compensation shall be made for additional notification due to weather delays, equipment breakdowns, etc.

SC-8 PROJECT STATUS MEETINGS

Meetings for discussion of project status, scheduling and problem solving will be held weekly or as necessary as determined by the project Manager at a location and time determined at the pre-construction conference. The Contractor shall ensure that his Project Manager or Field Superintendent is present at these meetings to discuss and have available weekly quantity updates on work that has been completed, upcoming work schedule for purposes of inspection and testing, citizen notification, and other issues as they may arise. Field meetings with the Contractor, Project Manager and Project Inspector will be held to discuss specific issues on an as-needed basis.

SC-9 CITY HOLIDAYS

The Contractor, when performing work on a City holiday, Saturday, Sunday, or in excess of ten (10) hours on a weekday, in accordance with the Code of the City of Arvada, agrees to reimburse the City for the inspector's time at the following rate:

First 2 hours, or fraction thereof: \$100.00
Each additional 2 hours or fraction thereof: \$100.00

Payment shall be made payable to the City of Arvada within ten days of the date of invoice from the City.

SC-10 WORK WITHIN CDOT, BNSF, or RTD RIGHT-OF-WAY AND CITY OF ARVADA PERMIT REQUIREMENTS

The Contractor will be required to prepare and apply for CDOT, BNSF, or RTD access permits where work will occur on or adjacent to their respective rights of way or where construction signage will be placed on their respective rights of way. The City of Arvada will be indicated as the permittee on the permit applications. The Contractor shall apply for CDOT, BNSF, or RTD access permits far enough in advance of the work so as not to delay the project.

The work proposed along 58th Ave. will require CDOT permits to complete the work.

CDOT, BNSF, or RTD permits will not be paid for separately but shall be included in the cost of Traffic Control.

The successful bidder who is awarded this project shall obtain or be currently licensed with the City of Arvada, Engineering Division with a Class MC-B Contractor license. A City of Arvada no-charge permit for this project shall be obtained prior to issuance of the Notice to Proceed.

SC-11 MINOR CONTRACT REVISIONS

Miscellaneous modifications in the work, ordered by the Project Manager in the form of a field order will be considered a Minor Contract Revision. Payment for work performed under this item will be made in accordance with Sections 2.16 - Changes in the Work and 2.17 - Changes in Contract Price of the City Standard Specifications.

SC-12 INSURANCE REQUIREMENTS

The Contractor shall at their own expense, maintain insurance in full force and effect, in accordance with the requirements of Section 2.33 - Insurance of the City Standard Specifications throughout the duration of the contract with the City.

SC-13 OSHA REQUIREMENTS

Observing the rules and regulations required by the Occupational Health and Safety

Administration (OSHA) shall be the responsibility of the contractor on this project.

SC-14 PROJECT WARRANTY PERIOD

The warranty period for this project shall be (2) two years in accordance with Section 2.40 - Guaranty and Warranty of the City Standard Specifications. The Performance and Payment Bond shall remain in full force and effect throughout the two (2) year guarantee and warranty period.

ROADWAY

SC-15 PLANT MIX PAVEMENTS - GENERAL REQUIREMENTS

All materials used in this project shall meet the minimum requirements of the current revised edition of the Colorado Department of Transportation (CDOT) Standard Specifications for Road and Bridge Construction, and Sections 11 - Hot Mix Asphalt Pavement and 15 - Streets of the City of Arvada Engineering Code of Standards and Specifications, or these Special Conditions where they vary from the City Standard Specifications.

A. Composition of Mixtures

The bituminous plant mix shall be composed of a mixture of aggregate, filler or additives, bituminous material, and recycled asphalt pavement (RAP) as allowed. **Up to 20% RAP is allowed in HMA mix designs for this project. No RAP will be allowed in SMA mix designs for this project.** All mixes shall be designed and produced with 1% hydrated lime as an anti-stripping agent.

B. Recycled Asphalt Pavement

Recycled Asphalt Pavement (RAP) material shall be of uniform quality and gradation with a maximum size no greater than the nominal aggregate size of the mix. **HMA mixes shall not contain more than 20 percent RAP.** All recycled asphalt shall be clean and free of deleterious material, and shall be subject to inspection at the plant source and in the field prior to placement.

The Contractor shall identify the source of each RAP stockpile proposed to be incorporated in the asphalt mixes. Contractor shall identify the project from which the material was removed, mix data from the original project including mixture type, aggregate classification, location and depth of the pavement structure. Extracted gradation information shall also be provided along with a description of the stockpile location and quantity. Additional material shall not be added to an approved RAP stockpile during the course of the work.

The Project Manager may reject a RAP stockpile for non-uniformity based on visual inspection. RAP stockpiles containing concrete chunks, grass, dirt, wood, metal, coal tar or other foreign or environmentally restricted materials shall not be used. Stockpiles are to be worked in such a manner that the materials removed are representative of a cross section of the pile. The Project Manager or their representative may reject RAP that in their opinion does not meet this specification.

C. Lime

Lime shall be added at the rate of 1% by dry weight of the aggregate and shall be included in the amount of material passing the No. 200 sieve. Hydrated lime for aggregate pretreatment shall conform to the requirements of ASTM C 207, Type N. In addition, the residue retained on a 200-mesh sieve shall not exceed 10% when determined in accordance with ASTM C 110. (Drying of the residue in an atmosphere free from carbon dioxide will not be required.)

D. Tack Coat

The emulsified asphalt for Tack Coat used on this project shall be CSS-1h and shall conform to ASTM D2397.

E. Asphalt Cement

The Contractor shall provide an acceptable 'Certification of Compliance' from the supplier for

each asphalt cement grade used on this project. The minimum optimum oil content in asphalt mix designs used on this project shall be as follows: **For Grading S (3/4" mix), a minimum oil content of 5.1% in the HMA is required, and for Grading SX (1/2" mix), a minimum oil content of 5.4% in the HMA is required.** Mix designs or asphalt loads delivered to the project which do not meet these minimum requirements shall be cause for rejection by the City of Arvada.

F. Superpave Mixture Design Method

The Superpave mix design method shall be used for this project. A proposed design job mix shall be submitted for each mixture required by the Contract. The design shall be determined using Colorado Procedure CP-L 5115 for the Superpave Method of Mixture Design. Mix designs shall meet the requirements of Subsection 11.3.4 in the City of Arvada Standard Specifications.

G. Mix Design Submittals

The Contractor shall submit two copies of all mix designs to the Project Manager for approval. Mix designs shall be performed in a materials laboratory under the direct supervision of a professional engineer licensed in the state of Colorado and currently practicing in this field. In addition, the Contractor shall submit as part of the mix design, documents to verify the following:

1. Source of materials
2. Gradation, specific gravity, source and description of individual aggregates and the final blend
3. Aggregate physical properties (CDOT Subsection 703.04)
4. Design Mix Formula
5. Superpave PG Binder properties
6. Mixing and compaction temperatures used
7. Mix properties determined at a minimum of four asphalt cement contents and graphs showing mix properties versus asphalt cement content
8. Mix properties at the minimum required optimum asphalt cement content
9. Lottman test data at the optimum asphalt cement content

The asphalt cement for each PG grade binder shall meet the requirements specified in the Properties of Superpave Performance Graded Binders Table in Subsection 11.2.3 - Asphalt Cement of the City of Arvada Standard Specifications.

The design mix for each PG grade shall establish a single percentage of bituminous material to be added to the aggregate, and a single temperature for the mixture at the plant discharge point. The City may test the Contractor's proposed design mix for each hot bituminous pavement PG Grade utilizing materials actually produced and stockpiled for use. The Contractor shall provide a sufficient quantity of each aggregate, mineral filler, recycled asphalt and lime additive for required laboratory tests if requested by the City. After each design mix is approved a new design mix shall be submitted to the Project Manager if there is a change in the sources of materials.

H. Allowable Mix Production Range

The proposed job-mix gradation for each mixture required by this Contract shall fall within the limits specified in the Gradation Range Table in Section 11.2.1 - Aggregate before the tolerances in the Table of Job Mix Formula Tolerances shown in Section 11.13.3 of the City of Arvada Standard Specifications are applied. The weight of lime shall be included in the total weight of the material passing the No. 200 sieve.

After each design mix is approved, all mixtures shall meet the tolerance ranges specified in the Table of Job Mix Formula Tolerances in Subsection 11.13.3 of the City of Arvada Standard Specifications. These tolerances shall be applied to each mix design to establish the allowable mix production ranges for mix production.

City of Arvada Engineering Code of Standards and Specifications shall be revised to include the design specifications for the composition of Stone Matrix Asphalt Mixes as described below.

**SMA Mixture Gradation
(AASHTO T 11 & T27)**

Sieve Size	$\frac{1}{2}$ "	$\frac{3}{4}$ "
(1")		100
($\frac{3}{4}$ ")	100	90-100
($\frac{1}{2}$ ")	90-100	50-88
($\frac{3}{8}$ ")	50-80	25-60
(#4)	20-35	20-28
(#8)	16-24	16-24
(#16)		
(#30)	12-18	12-18
(#50)		
(#100)		
(#200)	8-11	8-11

Mixture Properties for SMA

Properties	Test Method	Value
Lab Compaction (Gyrations) N Design	AASHTO T-312	75
Air Voids (Va) % at N Design	AASHTO T-312	3.0 - 4.0
Accelerated Moisture Susceptibility, tensile strength ratio, (Lottman)	AASHTO T-283 Method B	80 Min.
Dry Split Tensile Strength, psi	AASHTO T-283, Method B	30 Min.
Grade of Asphalt Binder	N/A	PG 76-28
Voids in Mineral Aggregate (VMA) % Minimum	AASHTO PP19	17
Drain Down at Production Temperature	AASHTO T-305	0.3 Max.

**Minimum Voids in Mineral Aggregate (VMA)
SMA Mixes**

Nominal Maximum Particle Size	Minimum VMA (%)		
	3.0% Va	3.5% Va	4.0% VA
SMA - ½"	17.0	17.0	17.0
SMA - ¾"	17.0	17.0	17.0

SMA Placement

The CONTRACTOR shall establish and document a roller pattern for the SMA being placed. The roller pattern shall include, but is not limited to the following:

- Number, size, and type of rollers
- Amplitude, frequency, and speed of rollers
- Temperature of mixture being compacted during each process (break down, intermediate and finish)
- Number of roller passes for each phase

The in-place density shall be determined during placement of the first 1,000 feet with a minimum of 95% of Theoretical Maximum Density (Rice). The allowable variance shall be ± 2%. Test results shall be reported to the nearest whole number.

SMA mixture shall be placed with the assistance of a MTV or MTD. The CONTRACTOR should minimize flushing and drain down during the transport and placement of SMA. If more than 50 square feet of flushed area is observed, the CONTRACTOR shall provide a remedy to address the flushing and/or drain down.

In place density may be determined by nuclear gauge measurements in accordance with ASTM D 2950 and AASHTO T 230, or based on cores in accordance with AASHTO T 166, Method B. When cores are used, the CONTRACTOR shall provide all labor and equipment for the coring and repair of the holes.

Nuclear gauge measurements shall be used when the material being placed is on a structure (bridge deck).

SC-16 WARM MIX ASPHALT

General Description:

Warm Mix Asphalt (WMA) may be used on this project. The producer shall submit a mix design for WMA production, or submit a statement that details production and testing items that require attention if the design is performed by standard HMA practice. The design shall be in accordance with the mix requirements as specified in these Special Conditions or City Standard Specifications. Some modifications to asphalt mixture plants may be necessary to accommodate the WMA technologies as noted in WMA Construction Section below. All provisions for the production and placement of conventional hot mix asphalt (HMA) mixtures as stipulated in these Special Conditions or City Standard Specifications are in force except as noted below.

WMA Mix Requirements:

Warm Mix Asphalt (WMA) may be produced by one or a combination of several technologies involving hot mix asphalt plant foaming processes and equipment, mineral additives, or chemicals that allow the reduction of mix production temperatures by as much as 100°F. Apply all mix design requirements for hot mix asphalt to the development of the WMA mix design. A Warm Mix

Asphalt (WMA) mixture design shall identify the technology to be used. The producer shall comply with the manufacturer's recommendations for incorporating additives and WMA technologies into the mix. Comply with the manufacturer's recommendations regarding receiving, storage, and delivery of additives. Maintain supplier recommendations on file at the asphalt mixing plant and make available for reference while producing WMA.

Warm Mix Asphalt (Additive): For WMA using additives, the design shall be performed using the additive. Each WMA design shall specify the production temperatures recommended by the WMA additive manufacturer to be used in production of Warm Mix Asphalt.

Warm Mix Asphalt (Foaming): For WMA using foamed asphalt technology, a design may be developed using conventional hot mix asphalt temperatures in accordance with CDOT CPL 5115.

WMA Construction Requirements:

Asphalt Mixing Plant: Modify the asphalt mixing plant as required by the manufacturer to introduce the WMA technology. Plant modifications may include additional plant instrumentation, the installation of asphalt binder foaming systems and/or WMA additive delivery systems, tuning the plant burner and adjusting the flights in order to operate at lower production temperatures and/or reduced tonnage.

Equipment: Use an equipment and WMA technology capable of producing an asphalt mixture that meet specification requirements and is workable at the minimum placement and compaction temperature desired, regardless of storage or haul distance considerations.

Placement: Place WMA only on dry, unfrozen surfaces and only when weather conditions allow for proper production, placement, handling and compacting. The minimum delivery, placement, and compaction temperatures should be reviewed to accommodate the WMA reduced temperature and achieve workability and density requirements. Documentation that demonstrates a proven history of the WMA technology's ability to be placed and compacted at the reduced temperatures may be required. A test strip or initial production verification requirement can be used to demonstrate placement and compaction at the reduced temperature. Minimum ambient paving temperature requirements may be lowered by 10°F to 20°F. Do not lower ambient paving temperatures to below freezing.

SC-17 MANHOLE, VALVE BOX, AND SURVEY RANGE BOX ADJUSTMENTS

The Contractor shall adjust valve boxes, survey range boxes and manholes to a tolerance of ¼ to ½ inch below final grade of roadway surface. - City of Arvada Utilities and Street Maintenance personnel will locate these utilities and supply materials for these adjustments, including rings and covers, stems and top sections. Contractor shall also adjust all telephone manholes with materials supplied by Centurylink. Contractor shall coordinate all work with City of Arvada Utilities and Streets Divisions, and Century Link personnel.

Contractor shall take special note of survey range boxes containing Section Corner monuments. Contractor shall coordinate with the City Project Inspector and City Survey Crews prior to work adjacent any Section corner. Contractor is responsible for protection of all survey monuments, range boxes, manholes, etc. throughout the construction of the project. Any damage to a range box, survey monument, manhole, etc., caused by the Contractor shall be repaired, restored or replaced, including restoration by a Colorado registered Land Surveyor, at the Contractor's sole cost.

SC-18 VALVE BOX, AND SURVEY RANGE BOX CLEANOUT

After paving operations are complete along each street, the Contractor shall clean out all valve boxes and survey range boxes by means of a vacuum method.

Payment for clean out of all valve boxes and survey range boxes shall be full compensation to furnish all labor, equipment, materials and incidentals required to complete the cleanouts.

SC-19 MATERIALS TESTING & QUALITY CONTROL

The City will provide materials testing services ("Project Tester") throughout the duration of this project. The Contractor is encouraged to take independent or additional tests at their discretion, but such tests shall be performed at no additional cost to the City. The Contractor will cooperate with the City to ensure that adequate materials samples are made available to the Project Tester and that such materials are accessible at all times.

The Contractor's attention is directed to Sections 11 - Hot Mix Asphalt and 15 - Streets of the City Standard Specifications and the appropriate subsections thereof regarding production tolerances, Inspection, materials testing, and frequency of testing. Specifications contained in these Sections and subsections of the City Standard Specifications will be strictly adhered to.

When the City determines that the material furnished, work performed, or the finished product is not in conformity with these contract documents and has resulted in inferior or unsatisfactory product, the finished product or materials shall be removed and replaced or otherwise corrected by, and at the expense of the Contractor, unless the Project Manager determines that the work can be accepted at a reduced price. Payment reduction, where allowed, shall be accomplished by adjusting pay quantities and following the procedures indicated in Section 11.14 - Payment Reduction of the City Standard Specifications and applying contract unit prices to the reduced quantities.

FULL DEPTH ASPHALT RECONSTRUCTION

No streets have been identified for reconstruction in 2021 at time of bid. However, unit costs associated with full depth asphalt reconstruction are included in Bid Alternate A using estimated quantities from previous years programs. Streets identified for Mill and Overlay for 2021 are subject to change to full depth asphalt reconstruction at the discretion of the Project Manager.

SC-20 STREET RECONSTRUCTION

This work consists of removal of the entire section of asphalt pavement and subgrade to a depth specified above, if needed preparation of subgrade per Section 5.5, and repaving to the minimum depth of asphalt specified for the roadway type for the entire street width and length as shown on the plans. At the end of each work day, no unpaved areas will be permitted to remain. The portion of the street under construction shall be repaved up to the elevation of the bottom of the proposed top lift (typically 2.0-inches less than the Reconstruct Depth, or 1.5-inch below concrete lip-line). The proposed top lift (2" HMA Paving Grading SX (75) PG64-22) shall be placed after the bottom lift has been completed for the entire street. Contractor shall provide temporary asphalt ramps to driveways until all paving work is complete.

Payment for street reconstruction work shall be paid for under separate items including, but not limited to, Removal of Asphalt Mat, Extra Depth Asphalt Mat Removal, Stabilization Material, 2" HMA Paving (Grading SX)(75)PG64-22, and 3" to 7" HMA Paving (Grading S)(75)PG64-22. No separate payment shall be made for completing the bottom lifts of pavement after each work day as specified and providing temporary asphalt driveway ramps but shall be included as part of the work.

SC-21 ASPHALT REMOVAL AND EXTRA DEPTH ASPHALT REMOVAL

This work shall consist of removal and disposal of the existing asphalt pavement mat by milling or otherwise removing the entire pavement width and depth up to 6 inch thickness, excluding curbs and gutters and medians. Asphalt mat removal shall result in removal of all existing asphalt material including large asphalt chunks to the satisfaction of the City.

Removal of asphalt mat may be accomplished by the use of an approved milling machine or grinder. All removed asphalt pavement shall be loaded directly onto trucks. All asphalt millings where milling equipment is used shall be removed the same day as the milling operation from adjacent gutters, sidewalks, yards, driveways, etc.

The Contractor shall exercise caution when removing the asphalt pavement around manholes, water valve boxes and other roadway appurtenances. Manholes, water valve boxes, and similar structures shall be cut around the structure using milling equipment, or the asphalt mat removed in such a way so as not to damage the structure and the accompanying ring and cover or lid. The Contractor shall also exercise care to prevent chipping, gouging and breakage of existing concrete gutter lip lines, driveways, and cross-pans. The Contractor will be responsible solely at their cost for repair and/or replacement of manholes, valve boxes, concrete, etc. damaged by their equipment during the asphalt mat removal operation.

Millings resulting from the use of milling equipment to remove the asphalt mat shall become the property of the Contractor. No additional payment will be made for haul and disposal of asphalt or asphalt millings, but shall be included in the pay item for Asphalt Mat Removal.

Asphalt mat removal will be measured and paid for at the unit price per square yard based on an average thickness of 6 inches. Removal of asphalt mat for existing asphalt that is greater than 6 inch depth shall be measured by the SY-IN of existing asphalt removed and paid for under the item, "Extra Depth Asphalt Mat Removal." Asphalt pavement existing above the concrete gutter pan lip will not be considered as additional asphalt mat removal thickness, but shall be included in the pay item for Asphalt Mat Removal.

SC-22 SUBGRADE PREPARATION

Subgrade preparation prior to placement of Hot Mix Asphalt Paving which includes compaction of subgrade and proof roll, if necessary shall not be measured or paid for separately but shall be considered a part of the contract work.

SC-23 STABILIZATION MATERIAL

This work shall consist of over-excavation, furnishing, placing and compacting 1-1/2" or 2" of crushed rock, CDOT Class 6 recycled concrete, or CDOT Aggregate Base Course (Class 6) where unsuitable, wet, soft or unstable subgrade areas are encountered and designated for stabilization at City direction. Rock used for stabilization shall be 100% crushed with 100% passing 2-inch and a maximum 15% passing No. 4 sieves respectively. The Project Manager shall determine the type of stabilization material and depth required based on the existing conditions.

Payment for tons of rock stabilization based on certified weight tickets received at the site shall be full compensation for furnishing all labor, equipment, materials and incidentals required to place and compact 1-1/2" or 2" inch rock or CDOT Class 6 recycled concrete material complete in place including over-excavation and disposal of unsuitable materials in accordance with the project specifications.

SC-24 HOT MIX ASPHALT (HMA) PAVING

This work shall consist of placement and compaction of Hot Mix Asphalt (HMA) paving to the specified thickness, binder grade and density as indicated on the Bid Schedule, and in accordance with the City Standard Specifications and these Special Conditions. Where the Special Conditions vary from the City Standard Specifications, the Special Conditions shall take precedence.

Tack coat material consisting of CSS-1h emulsified asphalt and an equal amount of clean water shall be applied at a rate of 0.10 gallons per square yard and allowed to break prior to completing

the wearing surface. Prior to application of the tack coat the street shall be swept clean with a pick-up type sweeper meeting current EPA air pollutant control requirements.

The Contractor shall sweep gutters, sidewalks and driveways free of any loose debris or asphalt millings prior to the paving operation, and before the end of each work day. Asphalt concrete or tack coat tracked, spilled, or raveled onto gutters and on sidewalks during the paving operation shall be swept up, cleaned, and otherwise removed immediately.

The Contractor shall use a PG 64-22 grade binder in the mix design for constructing both the bottom and top layers of HMA paving unless otherwise modified by written field order and approved by the Project Manager. The paving shall be placed and compacted such that the vertical difference between wearing surface and the gutter lip line shall not exceed ½ inch. Special care shall be taken to ensure longitudinal joints are clean and uniform. Longitudinal joints shall be constructed and placed per the City of Arvada Standard Specifications. The HMA wearing course at the specified thickness shall be completed in one operation on each phase of the project, and will not be placed until the bottom HMA layer is first placed and compacted over the entire surface area of the roadway.

The asphalt pavement section for the reconstruction streets shall be 2" HMA (Grading SX)(75)(PG64-22) over a minimum of 3" HMA(Grading S)(75)(PG64-22).

Hot Mix Asphalt (HMA) Paving will be measured and paid for by the actual tons compacted in place as verified by certified weight tickets at the project delivery location. The contract pay item for HMA paving shall include tack coat, placement and compaction of the HMA, sweeping of gutters, sidewalks and driveways, and all labor, equipment, materials, and incidentals necessary to complete the work to the satisfaction of the City.

FULL WIDTH MILL, PATCH AND OVERLAY ASPHALT

The chosen streets for 2021 Full Width Mill and Overlay Asphalt total approximately **154,226 Square Yards** and include:

Area 1:

Street	Extents	Classification	Treatment	SY Area
HACKBERRY HILL RD	WADSWORTH BLVD - 71ST AVE	Local Rd	2" HMA Paving	2,356
QUAY CIR	71ST AVE - CDS	Local Rd	2" HMA Paving	888
QUAY CT	68TH AVE - END	Local Rd	2" HMA Paving	5,500
QUAY ST	68TH PL - 71ST PL	Local Rd	2" HMA Paving	5,673
REED CIR	71ST AVE - CDS	Local Rd	2" HMA Paving	788
REED CT	70TH AVE - END	Local Rd	2" HMA Paving	2,585
REED ST	70TH AVE - 71ST AVE	Local Rd	2" HMA Paving	1,931
SAULSBURY CIR	71ST PL - CDS	Local Rd	2" HMA Paving	1,060

SAULSBURY ST	68TH PL - 71ST PL	Local Rd	2" HMA Paving	6,694
TELLER CT	68TH PL - 71ST AVE	Local Rd	2" HMA Paving	5,811
UPHAM ST	68TH AVE - 71ST AVE	Local Rd	2" HMA Paving	6,621
VANCE ST	68TH AVE - CDS	Local Rd	2" HMA Paving	5,030
W 68TH PL	UPHAM ST - PEIRCE ST	Local Rd	2" HMA Paving	4,283
W 69TH AVE	WADSWORTH BLVD (SH 121) - PIERCE ST	Local Rd	2" HMA Paving	5,686
W 69TH PL	WADSWORTH BLVD (SH 121) - PEIRCE STREET	Local Rd	2" HMA Paving	4,071
W 70TH AVE	CDS - PIERCE ST	Local Rd	2" HMA Paving	7,606
W 71ST AVE	HACKBERRY HILL RD - PIERCE ST	Local Rd	2" HMA Paving	6,338
W 71ST PL	SAULSBURY ST - QUAY ST	Local Rd	2" HMA Paving	3,469
WEBSTER ST	69TH AVE - 69TH PL	Local Rd	2" HMA Paving	1,912

Area 2:

Street	Extents	Classification	Treatment	SY Area
INDEPENDENCE ST	58TH AVE - 58TH PL	Arterial	2" SMA Paving	1,813
RALSTON RD	MILLER ST - Allendale	Arterial	2" SMA Paving	13,233

Area 3:

Street	Extents	Classification	Treatment	SY Area
RALSTON RD	Allendale - 58TH PL	Arterial	2" SMA Paving	14,227

Area 4:

Street	Extents	Classification	Treatment	SY Area
MILLER ST	RALSTON RD - 66TH AVE	Local Rd	3" HMA Paving	8,256
W 66TH AVE	OAK ST - OBERON RD	Collector	2" HMA Paving	20,362

Area 5:

Street	Extents	Classification	Treatment	SY Area
W 58TH AVE	WARD RD (SH 72) - SIMMS ST	Arterial	3" HMA Paving	17,414
W 58TH FRONTAGE RD	URBAN ST - 58TH AVE	Local Rd	2" HMA Paving	3,301

SC-25 ASPHALT MILLING

This work shall consist of milling, removal and disposal of asphalt pavement over the entire width of a planer pass and to the specified depth as shown on the plans or Bid Schedule, or as directed otherwise by the Project Manager.

Milling shall result in a surface acceptable to the Project Manager. Acceptability shall be based upon the following criteria:

- A. Free of surface ridges in excess of $\frac{1}{4}$ inch
- B. Planed surface parallel to lane lines
- C. Surface area free of excess surface fines
- D. All planed surfaces, especially wheel ruts, show scoring by planer teeth
- E. Specified cut depth attained at edges, roadway appurtenances, and along curb lines

Milling and removal of the specified milling depth shall be accomplished by the use of an approved milling machine or grinder. The approved machine shall be equipped with an adequate automatic control system to ensure proper control of the depth of milling and the profile of the final milled surface.

The minimum depth of cut at the lip line shall be 1-1/2 inch below the lip line. All removed asphalt pavement shall be loaded directly onto trucks by means of a self-loading conveyor which is an integral part of the planer. The planer must be capable of picking up all removed asphalt mat in a single operation. Windrows will not be allowed. All milled areas shall be swept clean with pick-up type street sweepers before the street is opened to traffic. All asphalt millings shall be swept or otherwise removed from the gutters, sidewalks, yards, driveways, medians, etc.

Failure to clean the roadway in an expeditious manner will result in a temporary suspension of milling operations until the sweeping operation maintains reasonable pace with the milling operation. Work will not resume until the Project Manager has approved the Contractor's revised written description of the method proposed by the Contractor to comply with the requirements of this specification.

The Contractor shall exercise caution when milling around manholes, water valve boxes, and other roadway appurtenances. Manholes, water valve boxes, and other similar structures shall either be adjusted to below the bottom of the cut prior to milling operations or cut around the structure using milling equipment. The maximum deviation between the top of the milled pavement and top of the manhole or water valve box shall be no more than $\frac{3}{4}$ inch in areas open to traffic. This will be achieved by placing a temporary taper around the structure. This temporary taper shall be removed prior to placement of new HMA.

A detail milling machine shall be utilized to remove asphalt adjacent to cross-panels, as directed by the Project Manager. Payment for detail milling will be made under 2-inch Depth Milling (Full Width) or Edge Milling (12-foot Width), and will not be paid for separately.

The Contractor shall exercise care to prevent chipping, gouging and breakage of existing concrete gutter lip lines, driveways, and cross-panels. The Contractor will be responsible solely at their cost for replacement of all concrete damaged as a result of carelessness during the milling operation.

Millings shall become the property of the Contractor.

Measurement and payment shall be by the square yard at the specified depth. Milling depths greater than those specified will be measured and paid for by the square yard-inch. Asphalt pavement existing above the lip will not be considered as additional depth milling at the lip but shall be included in the pay item for 2 Inch Depth Milling (Full Width). No separate measurement or payment will be made for traffic control, hauling and disposal of material, maintenance of milled surface prior to resurfacing etc., but shall be included in the work.

SC-26 4" HMA PATCHING and EXTRA DEPTH PATCHING

HMA patching will occur after milling occurs for each street location scheduled for patching and overlay. Exceptions to this requirement will occur if it is determined prior to milling that the existing pavement section is too thin for the heavy loads expected while using milling machines and other heavy construction equipment typically used in this type of construction. The Project Inspector will mark areas to be patched and the work done in accordance with these Special Conditions, or as directed otherwise by the Project Manager.

The contractor shall remove the failed pavement, base course, and subgrade soil to the depth required by the type of street. The patching and normal excavation depth and patching material thicknesses shall be as specified:

<u>Type of Street</u>	<u>Asphalt Depth (after milling)</u>
Residential (Local)	4-inches (5-inches, 30-feet from intersections or cross-pans)
Collector	5-inches
Arterial	7-inches

Areas requiring patching will be marked by the City at a minimum width of five (5) feet horizontally, and shall be sawcut to a minimum six (6) inch depth, or $\frac{3}{4}$ of the pavement thickness up to a maximum depth of nine (9") inches if the pavement thickness is greater than six (6") inches following milling of the top two (2") inches of existing pavement. The method of cutting the pavement shall be sawcut or a method otherwise approved by the City and shall result in a neat, straight line and vertical face on the existing pavement without deformation of the surface at the cut. Use of a wheel roller shall not be considered an acceptable cutting method. The subgrade shall be compacted by a roller, where feasible, prior to placing patching asphalt.

Vertical faces of the cut shall be adequately coated with CSS-1h tack material prior to patching. Asphalt lifts **shall not** exceed three (3) inches in depth. HMA patching shall be placed by use of a spreader box where dimensions allow for its use, and shall otherwise be placed to avoid segregation of the aggregate in the asphalt patching mix. Patches that are so placed and exhibit excessive segregation in accordance with Standard Specification 11.11 - Segregation and as determined by the Project Inspector or Project Manager shall be marked for immediate removal and replacement.

4" HMA Patching shall be either HMA (Grading S)(75)(PG64-22) and/or HMA(Grading SG)(75)(PG64-22). The use of either or both asphalt mixes shall be as directed by the Project Manager and based on the existing subgrade conditions. No extra payment shall be made for using one or both asphalt mixes, but shall be included in the unit cost of 4" HMA Patching.

4" HMA PATCHING: shall be measured and paid for by the square yard and shall include asphalt sawcutting, removal and disposal of asphalt mat, subgrade removal and disposal, compaction, proof roll where necessary, tack coat, patching with HMA (Grading S)(75)(PG64-22) and/or HMA (Grading SG)(75)(PG64-22), and all labor, equipment, materials, and incidentals necessary to complete the work. Asphalt cement shall not be paid for separately but shall be included in the work.

Where patching greater than four inches (4") in depth is required, the additional depth patching shall be measured and paid for by the square yard – inch under **EXTRA DEPTH PATCHING** and shall include asphalt sawcutting, removal and disposal of asphalt mat, subgrade removal and disposal, compaction, proof roll where necessary, tack coat, patching with HMA (Grading S)(75)(PG64-22) or (Grading SG)(75)(PG64-22), and all labor, equipment, materials, and incidentals necessary to complete the work. Asphalt cement shall not be paid for separately but shall be included in the work.

SC-27 HOT MIX ASPHALT (HMA) OVERLAY

This work shall consist of placing and compacting Hot Mix Asphalt (HMA) overlay to the required thickness and binder grade as listed in the Bid Schedule, and as specified in these Special Conditions or in the City Standard Specifications.

Where curb and gutter exist adjacent to the pavement, the paving shall be placed and compacted such that the vertical difference between the wearing surface and the gutter lip line does not exceed ½ inch. Special care shall be taken to ensure longitudinal joints are clean and uniform. Longitudinal joints shall be constructed and placed per the City of Arvada Standard Specifications. Overlay on milled and patched sections of the street shall be completed within twelve (12) days of the completion of the patching unless a time extension is granted by the City. If the Contractor does not complete the overlay within these time limitations, there may be a price reduction of \$1,000/day for each day this limitation is violated. The price reduction will not constitute a penalty, but will be considered a failure to perform resurfacing in accordance with the contract requirements.

Tack coat material consisting of CSS-1h emulsified asphalt and an equal amount of clean water shall be applied at a rate of 0.10 gallons per square yard and allowed to break prior to completing overlay or surface replacement on each street. Prior to application of the tack coat the street shall be swept clean with a pick-up type sweeper meeting current EPA air pollutant control requirements.

The Contractor shall sweep gutters and sidewalk immediately following overlay or patching operations, and prior to the end of each work day. The Contractor shall have the necessary equipment and materials readily available to immediately clean up any tack coat, diesel fuel or oil spills should such spills occur. Asphalt or tack coat tracked, spilled, or raveled into gutters and on sidewalks during overlay operations shall be swept up, cleaned, and removed immediately following the overlay work.

Hot Mix Asphalt (HMA) Overlay will be measured by the actual ton in place as verified by certified weight tickets at each location. The pay item for Hot Mix Asphalt (HMA) Overlay shall include soil sterilant, weed burning, tack coat, sweeping of gutters, sidewalks and asphalt paths, and all labor, equipment, materials, and incidentals necessary to complete the work to the satisfaction of the City. Asphalt cement shall not be paid for separately but shall be included in the work.

EDGE MILL AND OVERLAY ASPHALT

No streets have been identified for Edge Mill and Overlay in 2021 at time of bid. However, unit costs associated with Edge Mill and Overlay are included in Bid Alternate A. using estimated quantities from previous year's programs. Streets identified for Mill and Overlay for 2021 are subject to change to Edge Mill and Overlay at the discretion of the Project Manager.

SC-28 EDGE MILLING (12-FOOT WIDTH)

This special condition amends SC-28 – Asphalt Milling. Payment for Edge Milling shall be by the square yard with depths of milling ranging from a maximum of 1.5-inches at the curb-line or edge of pavement to 0-inches at 12-feet from the curb-line or edge of pavement. Actual depth will be set in the field by the Project Manager.

Butt joints shall be constructed where edge milled streets intersect adjacent streets without a cross-pan and are not scheduled for milling. The intersecting area of adjacent streets shall be full depth patched; extending 20 to 50-feet back from the ending point of the edge milling, as directed by the Project Manager. The top 1.5-inches of adjacent street milling shall be included in the cost of Edge Milling (SY). The remainder of the butt joint depth will be paid for through 4-inch Depth

HMA Patching (SY). Payment shall include all labor, materials, equipment, and incidentals necessary to complete the work.

SC-29 See SC-29 – 4" HMA PATCHING and EXTRA DEPTH PATCHING

SC-30 See SC-18 – HOT MIX ASPHALT (HMA) PAVING

SC-31 See SC-22 – HOT MIX ASPHALT (HMA) OVERLAY

TRAFFIC CONTROL

SC-32 TRAFFIC AND PARKING CONTROL

All traffic control shall be in accordance with the latest edition of the FHWA "Manual on Uniform Traffic Control Devices" (MUTCD) and Colorado Supplement, and the most current revision of the City of Arvada Engineering Code of Standards and Specifications.

The Contractor shall submit two copies of a "Traffic Control Plan" (TCP) for all work locations to the City's Traffic Division for review and approval at least two business days prior to beginning work on the project. The Contractor shall not proceed with any work until the City's Traffic Division has approved the site specific traffic control plans. If during construction the City determines that the traffic control plan needs to be adjusted to meet actual field conditions, the Contractor shall immediately make such adjustments and at no additional cost to the City.

The Contractor is responsible to determine the traffic control requirements for each work location with the Traffic Division prior to submitting their bid. The Contractor is directed to Section 50 - Traffic of the Arvada Engineering Code of Standards and Specifications for more specific information on traffic control. The Contractor shall notify the Traffic Division (720-898-7740) a minimum of two business days in advance of all closures including temporary lane closures on public roads, private and business access. Two-way traffic shall be maintained at all times.

Where parking is allowed on a street where work is scheduled, "No Parking" signs shall be placed by the contractor at least 24 hours minimum (48 hours on major collectors and arterials) in advance of any phase of work where parking is normally allowed. The Contractor will be required to remove all "No Parking" signs promptly upon completion at each location and phase of work. Hand painted signs or other signs which do not meet MUTCD requirements or City of Arvada standards and specifications will not be permitted.

Residential and commercial establishment written notification in advance of each phase of the work is the responsibility of the Contractor, and to ensure that vehicles are cleared from the site prior to each phase of the work. The City will assist the contractor in clearing parked vehicles by private towing contract in isolated cases where vehicles impede the work and vehicle owners fail to respond to "No Parking" signs, and where personal attempts are made by the Contractor to have vehicles moved from the work area.

Prior to milling and prior to overlay at each work location, the Contractor shall personally contact the management of all businesses or other establishments within and adjacent to the work area and inform the management of such business establishments of the schedule for each phase of the work. A log of names and conversations shall be kept and made available to the City. At no time shall complete access be blocked to businesses and other establishments except for brief periods of less than 30 minutes during the milling and overlay operations. At least one entrance/exit and emergency access shall be left open where possible during milling and overlay operations. Where there is only one access available to a business or other establishment, such access shall be blocked only during milling, sweeping and overlay operations, and for no more than approximately 20 minutes. This requirement will not be paid for separately but shall be included in the lump sum bid item for Citizen Notification.

The Contractor shall furnish standard traffic control including advance-warning signs at the beginning and end of each phase of the work as it progresses. Patching, milling and overlay operations shall proceed in such a manner so as to minimize traffic interruption and hazards.

In addition to providing advanced traffic control and traffic control during work operations, the Contractor shall furnish traffic control, including lane closures as may be necessary, to allow the City Project Inspector to safely mark out locations to be patched. Contractor shall coordinate this work with the Project Inspector.

Payment for "Traffic Control Devices" in one lump sum shall be paid in accordance with Section 3.46 of the City Standard Specifications and shall constitute full compensation for preparation and submittal of CDOT permits and permit fees, traffic control plans, furnishing, placement, maintenance and removal of traffic control signs, working lighted barricades, arrow boards, temporary pavement marking tape, traffic control for City Project Inspector and all labor, equipment, materials and miscellaneous items necessary to complete the work. Uniformed Traffic Control, Uniformed Traffic Control (Vehicle), Traffic Control Supervisor and Flagging shall be paid for separately.

SC-33 UNIFORMED TRAFFIC CONTROL AND UNIFORMED TRAFFIC CONTROL (VEHICLE)

Uniformed Traffic Control (UTC) and Uniformed Traffic Control Vehicle (UTCV) shall be used only at signalized intersections and when required by the Project Manager. UTC and UTCV shall be provided in accordance with the Colorado Department of Transportation Standard Specifications for Road and Bridge Construction Section 630 - Construction Zone Traffic Control except as revised for this project as follows:

Section 630 shall include the following:

This work includes furnishing a uniformed police agency officer to perform uniformed traffic control. The officer shall have completed "The Safe and Effective Use of Law Enforcement Personnel in Work Zones" Training Course. The Contractor shall provide copies of documentation certifying the officer's successful completion of this course.

This work includes furnishing a vehicle for the officer to use in performing uniformed traffic control.

Traffic Control Vehicles: When called for on the plans, and/or as authorized by the Project Manager, the Contractor shall furnish full-sized, late model, white sedans, or a police agency's patrol vehicle to be used by uniformed police agency officers in the performance of Uniformed Traffic Control duties. The Contractor shall be responsible for licensing, insuring, servicing, and fueling the vehicle.

For each Traffic Control Vehicle furnished by the Contractor, the Contractor shall furnish Class 1 SAE certified light bar and control panel for exclusive use by uniformed police agency officers while performing Uniformed Traffic Control.

The light bars shall be mounted on traffic control vehicles, and shall be maintained in good operating condition at all times. The Contractor shall obtain a permit from the police department, if required, for the use of the light bars. The Contractor shall keep the light bars covered at all times when the traffic control vehicle is being used by someone other than the authorized uniform police agency officer.

MEASUREMENT AND PAYMENT

Uniformed Traffic Control will be measured by the total number of hours that are required for uniformed traffic control officer including minimum shift hours required by the agency. The accepted number of hours of Uniformed Traffic Control will be paid for at the contract unit price per hour.

Uniformed Traffic Control (Vehicle) will be measured as the contract unit price per hour for the uniformed traffic control officer and traffic control vehicle. No separate payment shall be made for the Contractor furnishing a Traffic Control Vehicle with light bars and other equipment, licensing, insuring, servicing, and fueling a Traffic Control Vehicle but shall be included in the work.

Hours of Uniformed Traffic Control or Uniformed Traffic Control (Vehicle) that are not authorized or approved will not be paid for. Scheduling of traffic control will not be measured and paid for separately, but shall be included in the work.

SC-34 FLAGGING

Flagging shall be performed, measured and paid for in accordance with Section 630 - Construction Zone Traffic Control of the Colorado Department of Transportation Standard Specifications for Road and Bridge Construction.

SC-35 TRAFFIC CONTROL MANAGEMENT

Traffic Control Management shall be performed, measured and paid for in accordance with Section 630 - Construction Zone Traffic Control of the Colorado Department of Transportation Standard Specifications for Road and Bridge Construction.

SC-36 WORK HOURS AND STREET CLOSURE RESTRICTIONS

No work shall be done between the hours of 9:00 p.m. and 7:00 a.m., or at any time on a Sunday, except with the written permission of the City Manager, or in the case of an emergency.

Barricading, traffic control devices, and protective materials shall remain in place until the work is opened to traffic. Emergency vehicle access shall be maintained at all times. Such access shall be a minimum width of 16 feet.

Lane closures for the street classifications within this project are as follows:

Arterial Street:	Lane closures 8:30 am to 3:30 pm Construction activities 8:30am to 3:30 pm Must maintain one lane in each direction at all times
Collector Street:	Lane closures 8:30 am to 3:30 pm Construction activities 7:00am to 7:00 pm Must maintain one lane with adequate flagging at all times
Local Street:	Lane closures 7:00 am to 7:00 pm Construction activities 7:00am to 7:00 pm May be closed to through traffic unless otherwise noted during work hours.

Traffic restrictions on weekends will be determined on a case by case basis.

If the Contractor violates these working time limitations, the Project Manager may give written notice to stop work on the project at the beginning of the next work day. Work cannot resume until the Contractor provides a written explanation for the violation and assurance to the City that there will not be a recurrence of the violation. If subsequent working time violations do occur, the Project Manager will notify the Contractor in writing that there will be a price reduction for each incident of violation in accordance with the schedule described further below. The price reduction will not be imposed when changed contract conditions are encountered during the normal working time or the violation was a result of circumstances beyond the control of the Contractor or subcontractor. Delays in material delivery are not considered circumstances beyond the control of the Contractor. The price reduction will not constitute a penalty, but will be considered a failure to perform traffic control in accordance to the contract specifications.

An incident is any violation up to 30 minutes in duration. Each 30 minutes or increment thereof will be considered an incident. A price reduction will be assessed for each successive or cumulative 30 minute period of violation as determined by the Project Manager. The price reduction will increase at a progressive rate. A 15 minute grace period may be granted at the beginning of the second incident before a price reduction is applied. The incident charges are cumulative throughout the project. Adherence to this procedure and any violations as a result of non-compliance to this procedure will be strictly enforced by the City.

PRICE REDUCTION SCHEDULE

<u>Incident</u>	<u>Incident Rate</u>	<u>Total Price Reduction</u>
1st	Notice to Stop Work	\$0
2nd	\$250	\$250
3rd	\$500	\$750
4th	\$750	\$1,750
5th	\$1,000	\$2,750
etc.	etc.	etc.

SC-37 PORTABLE VARIABLE MESSAGE SIGN

Contractor shall furnish, operate, and maintain a minimum of one Portable Variable Message Sign at the each end of each work location. Additional intermediate message signs may be required to be placed and maintained as determined by the City's Traffic Division. Each message sign shall be placed and working at least three (3) days prior to the start of construction activity and maintained in satisfactory operating condition throughout the duration of this project.

Each sign shall be fully self-contained on a portable trailer capable of being licensed for normal highway travel, and shall include leveling and stabilization jacks. The sign panel shall display a minimum of three eight-character lines of text. The text of the messages shall not scroll or travel horizontally or vertically across the face of the sign. The sign panel shall be a dot-matrix type with either fluorescent yellow flip-disks legend or LED legend on a flat black background. Each sign shall have its own separate power source with an independent battery back-up source to provide continuous operation upon failure of the primary power source.

The mounting of the sign on the trailer shall be such that the bottom of the sign panel is a minimum of five feet above the roadway, visible from one-half mile under both day and night conditions, and legible from a minimum of 650 feet.

Portable Variable Message Signs shall be measured by each unit actually used and moved from work location to work location on the entire project and not counted separately for each move to a different work location. Payment for each unit shall include delivery to each location, maintenance, operation, storage, repairs, relocation to other sites, and all labor, equipment, materials, and incidentals.

SC-38 TEMPORARY PAVEMENT MARKING TAPE

This work consists of temporary pavement marking tape where placement is required as determined by the City Of Arvada Traffic Division. The material used shall consist of preformed plastic tape, conforming to ASTM D-4592, Type 1 (Removable). The Contractor shall coordinate with the Traffic Division for locations and placement during the course of resurfacing operations. Payment for "Temporary Pavement Marking Tape" will not be paid for separately, but shall be included in the lump sum contract item for "Traffic Control Devices", and shall constitute full compensation for furnishing, placement and removal of marking tape, traffic control, and all labor, equipment, and incidentals necessary to complete the work.

STORMWATER MANAGEMENT

SC-39 EROSION CONTROL

This work shall consist of all materials, installation, maintenance, and removal of erosion control measures using Best Management Practices (BMPs) located within the erosion control limits of each street reconstruction and parking lot location listed on the Street Schedule and Summary of Approximate Quantities throughout the duration of the contract. The Contractor shall comply with all provisions of the City of Arvada Site Development Permit for this project, which will be considered as a part of the contract documents.

BEST MANAGEMENT PRACTICES (BMPs) FOR STORMWATER MANAGEMENT:

This section provides a set of criteria and technical guidance for erosion and sediment control and material management at concrete replacement and asphalt projects. Erosion control measures limit erosion of soil from disturbed areas including stockpiled material at the construction site. Sediment control measures prevent the transport of sediment off-site to downstream properties and stormwater conveyances. Materials management is the practice of containing and controlling all materials used in order to eliminate potential pollutants from leaving the site. Due to the fast paced nature of concrete and asphalt projects, the site's erosion and sediment controls and material management BMPs must be inspected and maintained daily.

Site Development Permit (SDP):

In accordance with the City of Arvada's permit criteria, concrete and asphalt operations including the installation and repair of all concrete and asphalt public right of ways must acquire a City Site Development Permit and implement and maintain erosion control, sediment entrapment and material management BMPs.

Initial documentation required:

1. Completed SDP application
2. Application fee (waived for City funded projects)
3. Escrow/LOC (waived for City funded projects)
4. Site map
5. Potential pollutant list
6. BMP specification details

SDP - Required Documentation:

A site map including construction boundaries, all locations of BMPs, stockpiles, staging areas, portable restrooms, concrete containment, construction material storage and waste material storage must be provided to the City's Stormwater Division prior to beginning work. This site map must be updated daily to reflect the site's condition.

Potential pollutants must be listed and BMPs prescribed for each individual pollutant. If on-site fueling or maintenance will be conducted, a spill plan must be provided to the Stormwater Division prior to beginning work and a copy must be retained by fueling/maintenance personnel during operations.

A copy of these requirements including BMP specifications and applicable details indicated in this Section and drawings contained within the City Standard Specifications must remain on site and referred to by any personnel installing, maintaining, repairing, repositioning or inspecting BMPs.

A daily log of BMP inspections, installation, repair and maintenance must be kept on site. This log must contain the date, name, location of BMP, and nature of work. It must also include that the site map was revised.

SDP - Enforcement Policy:

If it is determined by the City inspector that BMPs are not inspected, installed and maintained daily, payment to the contractor may be withheld. If BMPs are not installed or maintained for a

period of three consecutive days, a separate company will be contracted to do the work, whereas costs incurred will be 100% reimbursed to the City with an inclusion of an additional 50% for administrative fees.

Site Development Permit BMP Requirements for Concrete and Asphalt Operations:

- ✓ All paved surfaces, gutters and sidewalks affected by work must be cleaned at the end of each day.
- ✓ All inlets within and downstream of the work areas shall be protected.
- ✓ Curb check dams will be installed at all locations downstream of work areas where stormwater flows may potentially come in contact with dirt and exit the work area.
- ✓ An area must be designated for construction material waste. All waste materials must be placed into waste containers and covered immediately.
- ✓ Portable Toilets must be provided on site and an area designated for their placement.
- ✓ A portable concrete washout basin (where applicable) must be provided on site.
- ✓ Staging areas must be designated and employ appropriate BMPs.
- ✓ Stockpiles must, at all times have a perimeter BMP installed at the downstream side and all material dragged from a stockpile during operations must be swept back into the pile at the end of each day.
- ✓ If replacing a storm sewer inlet, pipes within the inlet must be temporarily plugged during the inlet construction.
- ✓ All erosion and sediment control practices shall be maintained and repaired by the Contractor during construction as needed to assure continued performance of their intended function. All BMPs must be inspected, maintained and replaced daily if necessary.
- ✓ After all work has been completed, including asphalt and re-vegetation, cleanup and remove all temporary construction BMPs.

Site Development BMP Requirements for parking lot construction:

- ✓ All required perimeter construction fencing and sediment control logs shall be installed prior to any land disturbing activity (stockpiling, stripping, grading, etc.) All other required erosion control measures shall be installed at the appropriate time in the construction sequence as indicated in the approved project schedule, construction plans, and/or stormwater management plan.
- ✓ At all times during construction, the Contractor shall be responsible for preventing and controlling on-site erosion including keeping the property sufficiently watered so as to minimize wind -blown sediment. The Contractor shall also be responsible for installing and maintaining all erosion control facilities shown herein.

BEST MANAGEMENT PRACTICES (BMPs)

BMP - Stockpiles

BMP- Application - Straw Wattle or Rock Bag used for stockpile containment. If stockpiles are located within 100 feet of a waterway, including conveyances to them, additional sediment controls must be provided. A weighted down wattle or rock bag must be installed on the downstream side of all stockpiles.

BMP Installation - Install in an arced position on the downhill side of stockpiles. Place two feet from the toe of the stockpile to allow for ponding. Instruct persons accessing the stockpiles with

equipment to work around the BMP or temporarily relocate it. Damaged BMPs must be replaced immediately.

BMP Maintenance - Sediment entrapment BMPs (wattles or rock bags) must be cleaned and repositioned daily. Broken or crushed BMPs must be replaced immediately. Any materials spilled from the BMP when damage occurs must be removed from the site and disposed of.

BMP Detail - SW-10.

BMP – Perimeter Sediment Control

BMP Application – Sediment Control Logs are used as a sediment barrier to intercept sheet flow runoff from disturbed areas.

BMP Installation – Install around entire perimeter of disturbed area.

BMP Maintenance - Remove accumulated sediment before the depth is one-half the height of the sediment log and repair damage to the sediment log by replacing the damaged section.

BMP Detail – SW-11

BMP - Inlet Protection

BMP Application - An approved design for protecting inlets must be installed at all storm sewer inlets directly downstream of and within work area.

BMP Installation - Install around entire inlet or from curb to curb.

BMP Maintenance - Inlet protection must be repositioned or replaced at the end of every day. Sediment and debris accumulated at inlet protection must be removed and disposed of daily.

BMP Detail - SW-9, Colorado Department of Transportation M Standard M-208-1 Storm Drain Inlet Protection (Type II) Option A and B or “Dandy Bag,” or approved equal. In circumstances where vehicles will be traveling close to or on gutter pans, CDOT type inlet protection or “Dandy Bags” shall be used. No extra payment will be made for the use of CDOT type or Dandy Bag Inlet protection but shall be included in the lump sum cost of Erosion Control.

BMP - Inlet Pipe Protection

BMP Application - An approved design for protecting pipes during storm sewer inlet reconstruction must be installed within the inlet at all pipe connections.

BMP Installation - Install at piping within inlet.

BMP Maintenance - Inlet protection must be repositioned or replaced at the end of every day. Sediment and debris accumulated at inlet protection must be removed and disposed of daily. After inlet construction is completed all dirt, materials and pipe protection must be removed and disposed of and an approved inlet protection installed.

BMP Detail - SW-9.

BMP - Check Dams (Curb Sock)

BMP Application – Rock bag gutter check dams used for sediment entrapment downstream of work area.

BMP Installation - Rock bags must be installed within gutters, contacting the curb and set at a 45 degree angle.

BMP Maintenance - Rock bags must be repositioned or replaced if broken daily. Accumulated sediment must be removed and disposed of daily.

BMP Detail - SW-2.

BMP - Street Sweeping (Non-Structural BMP)

BMP Application - Street sweeping either by machine or manually for the removal of excess materials on the roadway, sidewalks or gutters.

BMP Maintenance - Street sweeping must be conducted at the end of each day. This includes the removal of materials in the gutters or accumulated at sediment entrapment BMPs.

BMP Detail - No detail.

BMP - Stabilized Staging Areas

BMP Application - Areas designated for equipment and material storage.

BMP Installation - Staging areas whether on private or public areas must remain organized and clean. The staging area may be used for equipment and construction material storage, sanitary waste receptacles and other waste receptacles. All fluids or hazardous materials stored at the staging area must be stored inside or covered on pallets.

BMP Maintenance - Organize and clean the staging area daily. Do not allow dumpsters to become over full or store waste piles on site. All waste piles must be contained.

BMP Detail - SW-7.

BMP – Vehicle Tracking Control

BMP Application - Vehicle tracking control provides stabilized construction site access to remove sediment (mud or dirt) from vehicles and reducing tracking onto the paved surface.

BMP Installation – Install at construction site access.

BMP Maintenance - Replace aggregate used for a stabilized entrance/exit as needed. If the area becomes clogged and ponds water, remove and dispose of excess sediment or replace material with a fresh layer of aggregate as necessary. Ensure rock and debris from the vehicle tracking area do not enter the public right-of-way. Remove sediment that is tracked onto the public right of way daily or more frequently as needed.

BMP Detail - SW-5.

BMP - Waste Management

BMP Application - All waste generated on site must be contained. At no time will construction debris or waste generated at the site be allowed to be stored on site, uncontained.

BMP Installation - Dumpsters and trash bins must be provided on site and placed in a designated area.

BMP Maintenance - Receptacles must be emptied frequently. Liquids may not be placed within the receptacles if there is a possibility they could leak.

BMP Detail - No detail.

BMP - Materials Management

BMP Application - Construction materials including stockpiles and equipment must be stored in a designated area.

BMP Installation - Perimeter BMPs must be installed at all stockpiles, at pipe storage areas, and where equipment is stored on impervious surfaces that may contribute grease, oil or dirt to the site.

BMP Maintenance - Materials must be kept organized and neatly stored. Perimeter BMPs must

be repositioned or replaced if damaged, daily.

BMP Detail - No detail.

BMP - Fueling/Maintenance Operations

BMP Application - If equipment undergoes fueling, maintenance or repair on site, BMPs must be used.

BMP Installation - A drip pan or container will be used during on site fueling, maintenance or repair operations. Absorbents must be available should a spill occur.

BMP Maintenance - Spills must be cleaned up immediately. Fluids leaking from any vehicle or equipment must be cleaned immediately and that vehicle or piece of equipment repaired or removed from the site.

BMP Detail - No detail.

BMP - Sanitary Waste Management (Portable Toilets)

BMP Application - Portable sanitary waste receptacles required on site for use by all personnel.

BMP Installation - Portable receptacles must be secured in place and not positioned on an impervious surface. Receptacles must be located at least 3' from all impervious areas, flow lines, ditches, creeks or storm sewer inlets.

BMP Maintenance - Receptacles must be checked daily and routinely maintained. In the event materials are spilled from a receptacle, immediate clean-up is required. If a contracted company must respond for the clean-up and the response time is unknown, absorbents must be applied to the spill by the onsite contractor immediately.

BMP Detail – No detail.

Measurement and Payment for Erosion Control shall be paid on a monthly basis as a percentage of the lump sum bid item for the contract amount earned. Payment for Erosion Control shall include all labor, materials, equipment and incidentals required for each phase of the work. No additional compensation will be made for the Erosion Control Supervisor (ECS), installation, maintenance or removal of BMP devices, additional devices required by the City's Stormwater Management Division, reuse of BMP devices during construction operations included in this contract, or sufficiently controlling mud and dust to reduce or eliminate complaints to the City of Arvada from affected property owners and citizens .

Appendix A: Planned Paving Area locations.

Appendix B: Paving Limits and Details

BID BOND

We, the undersigned _____ as Principal, and _____ as Surety, are hereby held and firmly bound unto the City of Arvada, Colorado, in the penal sum of _____ for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

THE CONDITION of this obligation is such that whereas the Principal has submitted to the City of Arvada, Colorado the accompanying Bid Proposal, and hereby made a part hereof to enter into a Contract Agreement for the construction of City of Arvada Project No. 21-ST-Pavement Resurfacing Program.

WHEREAS, the City, as a condition for receiving said Bid Proposal, requires the Principal to deposit with the City a Bid Proposal Guaranty, equivalent to not less than 5 Percent of the amount of said Bid Proposal.

NOW THEREFORE,

- (A) If said Bid Proposal shall be rejected; or in the alternate,
- (B) If said Bid Proposal shall be accepted and the Principal shall execute and deliver a Contract Agreement (properly completed in accordance with said Bid Proposal) and shall furnish a Performance and Payment Bond upon the forms prescribed by the City for the faithful performance of said Contract; and for the payment of all persons performing labor or furnishing materials in connection therewith; and shall in all other respects perform the agreement created by the acceptance of said Bid Proposal;

Then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by any extension of the time within which the City may accept such Bid and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, this _____ day of _____, 2020, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

PRINCIPAL

Name: _____

Address: _____

By: _____

Title: _____

SURETY

By: _____

Title: _____

Attorney-in-Fact:

(SEAL)

NOTE: Surety Companies executing bonds must be authorized to transact business in the State of Colorado and be acceptable to the City.

BID PROPOSAL

TO: City of Arvada, Colorado (hereinafter called "CITY").

FROM: _____ (hereinafter called "BIDDER"), organized and existing under the laws of the State of _____ doing business as (a corporation), (a partnership), (an individual).

The Bidder, in compliance with your Advertisement for Bids, hereby proposes to perform all Work in strict accordance with the Contract Documents, for the construction of City of Arvada Project No. **21-ST-01** entitled **2021 Pavement Resurfacing Program** within the time set forth therein, and at the prices stated on the included Bid Schedule as totaled herein.

By submission of this Bid Proposal, each Bidder certifies, and in the case of a joint venture each party thereto certifies as to his/her own organization, that this Bid Proposal has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this Bid Proposal with any other Bidder or with any competitor.

Bidder acknowledges receipt of **Addendum Nos.** Initials: _____

Bidder states that his:

Major Material Suppliers are:

Material They Will Supply

Major Subcontractors are:

Work They Will Perform

CONTRACT TIME AND LIQUIDATED DAMAGES: All work shall be completed, including clean-up, within **270** working days after the date to be specified in the Notice to Proceed. A Notice to Proceed is anticipated to be issued on or about January 4, 2021. The bidder shall agree to pay the owner the sum of \$2,000 for each calendar day that the work exceeds the allotted contract time. Contract time may be adjusted by Change Order.

Total from included Bid Schedule:

TOTAL BID \$ _____

SUBMITTED BY:

Company Name: _____

Contact Names: _____

Address: _____

Phone: (_____) _____ Email(s): _____

The undersigned hereby affirms that:

- He/she is a duly authorized agent of the Contractor;
- He/she has read all Terms and Conditions and technical specifications made available in conjunction with this solicitation and fully accept and acknowledge this bid is consistent with the specifications and terms and conditions.
- The bid is in all respects fair, without outside collusion or otherwise illegal action.

By: _____
Signature of Authorized Agent Date FEIN

Typed/Printed Name of Agent

Title of Agent

Agent email

PAYMENT TERMS: The City standard is net thirty (30) days but every effort is made to meet net fifteen (15) days after the approved partial payment date when the contractor is satisfactorily performing the contract but pay. The final 5% of total payment will be paid once the contract is completed satisfactorily, advertisement for final settlement is complete, and the project is accepted by the City. Payment is the date of the check mailing or date of the credit card transaction.

REQUIRED CONTRACTOR SUBMITTAL FORM

SUBMITTAL CHECKLIST:

Proposals shall be submitted in the order listed below with each section clearly identified.

- ☐ Submit completed City Submittal Forms including this sheet, Bid Bond, Bid Proposal, Bid Schedule, and any other attachments requested.
- ☐ Submit implementation timeline and warranties, if applicable.
- ☐ Attach Contractor's Licensing, if applicable.
- ☐ Insurance – Checking this box accepts that the insurance requirements listed by the City are acceptable.
- ☐ Please initial to acknowledge Addenda, if any, have been considered in your proposal: #1 _____ #2 _____

REFERENCES:

- ☐ Check here if Contractor's standard reference sheet is attached, otherwise, use the space below.

Name: _____ Contact Person: _____

Address: _____

Telephone No: _____ Email: _____

Describe type of work/service performed or items supplied: _____

Name: _____ Contact Person: _____

Address: _____

Telephone No: _____ Email: _____

Describe type of work/service performed or items supplied: _____

Name: _____ Contact Person: _____

Address: _____

Telephone No: _____ Email: _____

Describe type of work/service performed or items supplied: _____

PERFORMANCE AND PAYMENT BOND

Bond No. _____

(Firm) _____

(Address) _____

(an Individual), (a Partnership), (a Corporation), hereinafter called Principal; and

(Firm) _____

(Address) _____

hereinafter called Surety, are held and firmly bound unto the City of Arvada, a Colorado municipal corporation, 8101 Ralston Road, Arvada, Colorado 80002, hereinafter called the City, in the penal sum of _____, Dollars, _____, in lawful money of the United States, for the payment of such sum will and truly to be made, we bind ourselves, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION are such that the Principal entered into a certain Contract with the City, dated the _____ day of _____, 2020, a copy of which is hereto attached and made a part hereof, for the performance of City of Arvada Project No.'s 21-ST-Pavement Resurfacing Program.

NOW THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions and agreements of said Contract during the original term thereof, and any extensions thereof which may be granted by the City, with or without Notice to the surety and during the life of the guaranty period, and if he shall satisfy all claims and demands incurred under such Contract, and shall fully indemnify and save harmless the City from all cost and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the City all outlay and expense which the City may incur in making good any default, and if he shall promptly make payment to all persons, firms, subcontractors and corporations furnishing materials for or performing labor in the prosecution of the work provided for in such Contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, repairs on machinery, equipment and tools, consumed, rented or used in connection with the construction of such work, and all insurance premiums on said work, and for all labor, performed in such work whether by subcontractor or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder or the specifications accompanying the same shall in anyway affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work or to the specifications.

PROVIDED, FURTHER, that no final settlement between City and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in three counterparts, each one of which shall be deemed an original, this the _____ day of _____, 2020.

IN PRESENCE OF:

PRINCIPAL _____

By _____

Address _____

(Corporate Seal)

OTHER PARTNERS

(Surety Seal)

SURETY _____

Attorney _____ in _____ Fact _____

Address _____

Note: If Contractor is Partnership, all partners should execute Bond.

Important: Surety Company must be authorized to transact business in the State of Colorado and be acceptable to the

City.

NOTICE OF AWARD

Date

Company

Address

City, State Zip

RE: Project No. 20-SR-02, 2020 Trenchless Sewer Main Replacement

Dear Representative of_____:

The City of Arvada, Colorado (hereinafter called "City") has considered the Bid Proposals submitted for referenced work in response to its Advertisement for Bids dated_____and Information for Bidders.

You are hereby notified that your Bid Proposal has been accepted, for items and prices stated in the Bid Schedule, in the amount of \$_____.

You are required to execute the Contract, the Insurance Certificates and a Performance and Payment Bond within seven (7) days from the date of this Notice to you.

The Performance and Payment Bond needs to be filled out, returned (one original must be returned to the City), and accompanied by the Power of Attorney from your surety company. Also, please make sure that the insurance certificate is in the minimum amounts set forth in the Contract Documents and the City of Arvada is named as an additional insured for the specific Project Number and Title. An Additional Insured endorsement certificate should also be attached.

If you fail to execute said Contract and furnish the necessary Insurance Certificates and Bond within the time allotted from this date, the City will be entitled to consider all your rights arising out of the City's acceptance of your Bid Proposal as abandoned and as a forfeiture of your Bid Bond. The City will be entitled to such other rights as may be granted bylaw.

You are required to return an acknowledged copy of this Notice of Award and enclosures to the Project

Engineer. CITY OF ARVADA,COLORADO

City Engineer

BIDDER

Company

Receipt of above Notice of Award accompanied with a Performance and Payment Bond form and a copy of the Contract is hereby acknowledged.

This_____day of_____, 20_____.

By:_____

Name: _____

Title:_____

NOTICE TO PROCEED

Date

Company
Address
City, State Zip

RE: Project No. 20-SR-02, 2020 Trenchless Sewer Main Replacement

Dear Representative of _____:

You are hereby notified to commence work on referenced Project, in accordance with the Contract dated _____
on or before_____, and you are to complete the Work, including cleanup within _____calendar days thereafter.

The date of completion of all Work is therefore _____.

CITY OF ARVADA, COLORADO

City Engineer

BIDDER

Receipt of this Notice to Proceed is hereby acknowledged this _____day of____, 20____.

Company

By: _____

Title: _____

**AN AGREEMENT BY AND BETWEEN THE CITY
OF ARVADA AND

FOR _____
IN AN AMOUNT NOT TO EXCEED \$_____.00**

This Agreement made this _____ day of _____, 20____ by and between the City of Arvada, a home rule municipal corporation (“Arvada” and/or “City”) and _____, a _____ (“Contractor”).

WITNESSETH: That for and in consideration of the covenants, promises, and payments hereinafter mentioned:

1. Contractor will commence and complete the _____ described in the Contract Documents relating to CSB-_____, issued _____, 20 , (“the Work”).
2. Contractor will furnish all material, supplies, tools, equipment, labor, and other services necessary for the completion of the Work.
3. Contractor will commence the work required by the Contract Documents within ten (10) calendar days after the date of Notice to Proceed.
4. Contractor will complete the work required by the Contract Documents by _____ after the date of the Notice to Proceed unless the period for completion is extended otherwise by the Contract Documents.
5. Contractor agrees to perform all of the work described in the Contract Documents for an amount not to exceed \$ _____ .00 for the Work.
6. The term “Contract Documents” means and includes the following:
 - A. Arvada’s Request for [Project Title], CSB-_____ (“CSB”);
 - B. CSB Exhibits (if any);
 - C. CSB Addenda (if any);
 - D. Contractor’s Response to CSB-_____, Advertisement for Bid, Bid Proposal, Bid Schedule, Bid Bond, Certificate of Insurance;
 - E. Notice of Award;
 - F. Performance and Payment Bond;
 - G. Notice to Proceed;
 - H. Change Orders (if any);
 - I. City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements;
 - J. Project special provisions prepared or issued by City of Arvada (or its Consultant if applicable);
 - K. Detail drawings and Bid Documents prepared or issued by City of Arvada (or its Consultant if applicable);
 - L. Specification Illustrations and attachments; and
 - M. All supplementary requirements regarding wage rates, E.E.O., affirmative action and all other Federal-State requirements as outlined in the specifications.
7. INVOICES AND COMPENSATION. Contractor will follow Bid schedule and partial payments

will be made accordingly NET 15 but no later than NET 30.

8. GENERAL TERMS AND CONDITIONS, SPECIAL TERMS AND CONDITIONS, INSURANCE REQUIREMENTS, PROJECT SPECIAL PROVISIONS, AND OTHER CSB REQUIREMENTS. Contractor affirms that it has read and is familiar with the Contract Documents, including but not limited to the General Terms and Conditions, Special Terms and Conditions, Insurance Requirements, Project Special Provisions, and other CSB requirements, and agrees to be bound by those terms and conditions.

9. CHANGE ORDERS. Contractor shall perform the Work as described in the Contract Documents or as amended by the mutual consent of the parties in writing. Should the parties agree in writing to a change in the scope of services, then the parties will timely execute any applicable Change Order, which will address changes in scope of services, completion date, contract amount, any applicable material modifications, and any other matters that the parties deem necessary.

10. PREFERENCES IN EMPLOYMENT OF COLORADO LABOR. To the extent that obligations and responsibilities may be established by C.R.S. § 8-17-101 *et seq.*, as amended, with respect to certain public entities and those contracting therewith as to the procurement of services:

- a. Colorado labor shall be employed to perform eighty percent (80%) of the work.
- b. Any waiver of this requirement must comply with C.R.S. § 8-17-101 *et seq.*, as amended.

11. PERFORMANCE MEASURES. The Performance Measures for this Agreement shall be those outlined by Arvada in Section 22 of Special Terms and Conditions for Bidders in the CSB, which are included in the Contract Documents that are exhibits to this agreement.

12. ADDITIONAL DOCUMENTS OR ACTION. The parties agree to execute any additional documents and to take any additional action that is necessary to carry out this Agreement.

13. BINDING EFFECT. This Agreement shall inure to the benefit of, and be binding upon, the parties, their respective legal representatives, successors, heirs, and assigns; provided, however, that nothing in this paragraph shall be construed to permit the assignment of this Agreement except as otherwise expressly authorized herein.

14. PARAGRAPH CAPTIONS. The paragraph captions in this Agreement are set forth only for the convenience and reference of the parties and are not intended in any way to define, limit, or describe the scope or intent of this Agreement.

15. INTEGRATION, AMENDMENT, AND SEVERABILITY. This Agreement represents the entire agreement between the parties, and there are no oral or collateral agreements or understandings. This Agreement may be amended only by an instrument in writing signed by the parties. If any other provision of this Agreement is held invalid or unenforceable, no other provision shall be affected by such holding, and all of the remaining provisions of this Agreement shall continue in full force and effect if the essential terms and conditions of this Agreement for both parties remain valid, legal, and enforceable.

16. NOTICES. Any notice or notification required or permitted by the Agreement shall be in writing and shall be deemed to have been sufficiently given for all purposes if sent by certified mail or registered mail, postage and fees prepaid, addressed to the party to whom such notice is to be given at the address set forth on the signature page below, or at such other address as has been previously

furnished in writing, to the other party or parties. Such notice or notification shall be deemed to have been given when deposited in the United States mail.

17. BINDING AUTHORITY. Contractor represents and affirms that the signature page hereof accurately states the full legal name of Contractor (whether as a corporation, partnership, limited liability company, sole proprietorship, or other), contains all requisite signature(s) on behalf of Contractor, has been properly acknowledged by attestation, notary acknowledgment, or both, and in all other respects is effective to bind Contractor, in accordance with all applicable statutes, regulations, resolutions, rules, bylaws, agreements, or similar sources of authority or limitation. This Agreement may be executed in counterpart(s), each of which shall be deemed to be an original, and all of which, taken together, shall constitute one instrument.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement which shall be deemed an original on the date first above written.

CITY OF ARVADA, COLORADO

8101 Ralston Road
Arvada, CO 80002

ATTEST/WITNESS:

City Clerk

APPROVED AS TO FORM:

For Rachael Morris, City Attorney

By: _____

CONTRACTOR

Name:

Title:

CHANGE ORDER

No. _____

TO:

Upon Contractor acceptance and City approval, the work and Contract Documents for City of Arvada, Project No. _____, entitled _____ will be adjusted to include the following:

<u>Item</u>	<u>Description</u>	<u>Qty.</u>	<u>Unit</u>	<u>Unit Cost</u>	<u>Add/Delete</u>
-------------	--------------------	-------------	-------------	------------------	-------------------

ADD

- 1.
- 2.
- 3.
- 4.

TOTAL ADD

\$

Adjustments to Contract Price & Time

**Contract
Dollars**

**Calendar
Days**

Contract Totals through and including

\$

Previous Change Orders

Adjustments this Change Order

\$

(Increase)

Contract Totals to Date – Including

Change Order No. _____

\$

Contract Time Expires on:

APPROVED FOR CITY

ATTEST:

8101 Ralston Road
Arvada, CO 80002

City Clerk

ACCEPTED FOR CONTRACTOR

APPROVED AS TO FORM:

For Rachael Morris, City Attorney

By: _____ Title: _____

_____ Date: _____

By: _____

Exhibit B

Contractor's Response

EXHIBIT
B

Describe type of work/service performed or items supplied: **Asphalt Paving**

BID BOND

We, the undersigned **Asphalt Specialties Co., Inc.** as Principal,
and **Great American Insurance Company** as Surety, are hereby held and firmly bound unto the City of
Arvada, Colorado, in the penal sum of **Five Percent (5%) of the Total Amount Bid** for the
payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

THE CONDITION of this obligation is such that whereas the Principal has submitted to the City of Arvada, Colorado the
accompanying Bid Proposal, and hereby made a part hereof to enter into a Contract Agreement for the
construction of City of Arvada Project No. 21-ST-Pavement Resurfacing Program.

WHEREAS, the City, as a condition for receiving said Bid Proposal, requires the Principal to deposit with the City a Bid
Proposal Guaranty, equivalent to not less than 5 Percent of the amount of said Bid Proposal.

NOW THEREFORE,

- (A) If said Bid Proposal shall be rejected; or in the alternate,
- (B) If said Bid Proposal shall be accepted and the Principal shall execute and deliver a Contract Agreement
(properly completed in accordance with said Bid Proposal) and shall furnish a Performance and
Payment Bond upon the forms prescribed by the City for the faithful performance of said Contract; and
for the payment of all persons performing labor or furnishing materials in connection therewith; and shall
in all other respects perform the agreement created by the acceptance of said Bid Proposal;

Then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood
and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount
of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in
no way impaired or affected by any extension of the time within which the City may accept such Bid and said Surety
does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, this **2nd** day of
December, 2020, and such of them as are corporations have caused their corporate seals to be
hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

PRINCIPAL

Name: **Asphalt Specialties Co., Inc.**

Address: **10100 Dallas St.
Henderson, CO 80640**

By: 
Daniel W. Hunt

Title: **President**



SURETY

Great American Insurance Company

**301 E Fourth Street
Cincinnati, OH 45202**

By: 

Title: **Jessica Jean Rini, Attorney-in-Fact**

Attorney-in-Fact:

Jessica Jean Rini
(SEAL)

NOTE: Surety Companies executing bonds must be authorized to transact business in the State of Colorado and be
acceptable to the City.

GREAT AMERICAN INSURANCE COMPANY®

Administrative Office: 301 E 4TH STREET • CINCINNATI, OHIO 45202 • 513-369-5000 • FAX 513-723-2740

The number of persons authorized by
this power of attorney is not more than SIX

No. 0 21481

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the GREAT AMERICAN INSURANCE COMPANY, a corporation organized and existing under and by virtue of the laws of the State of Ohio, does hereby nominate, constitute and appoint the person or persons named below, each individually if more than one is named, its true and lawful attorney-in-fact, for it and in its name, place and stead to execute on behalf of the said Company, as surety, any and all bonds, undertakings and contracts of suretyship, or other written obligations in the nature thereof; provided that the liability of the said Company on any such bond, undertaking or contract of suretyship executed under this authority shall not exceed the limit stated below.

Name	Address	Limit of Power
DONALD E. APPLEBY	ALL OF	ALL
TODD D. BENGFOR	GREENWOOD VILLAGE, COLORADO	\$100,000,000
SARAH C. BROWN		

This Power of Attorney revokes all previous powers issued on behalf of the attorney(s)-in-fact named above.

IN WITNESS WHEREOF the GREAT AMERICAN INSURANCE COMPANY has caused these presents to be signed and attested by its appropriate officers and its corporate seal hereunto affixed this 28TH day of SEPTEMBER, 2020.

GREAT AMERICAN INSURANCE COMPANY



Atty L C. B.

Assistant Secretary

Mark V. Vicario

Divisional Senior Vice President

STATE OF OHIO, COUNTY OF HAMILTON - ss:

MARK VICARIO (877-377-2405)

On this 28TH day of SEPTEMBER, 2020, before me personally appeared MARK VICARIO, to me known, being duly sworn, deposes and says that he resides in Cincinnati, Ohio, that he is a Divisional Senior Vice President of the Bond Division of Great American Insurance Company, the Company described in and which executed the above instrument; that he knows the seal of the said Company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed by authority of his office under the By-Laws of said Company, and that he signed his name thereto by like authority.



SUSAN A KOHORST
Notary Public
State of Ohio
My Comm. Expires
May 18, 2025

Susan A Kohorst

This Power of Attorney is granted by authority of the following resolutions adopted by the Board of Directors of Great American Insurance Company by unanimous written consent dated June 9, 2008.

RESOLVED: That the Divisional President, the several Divisional Senior Vice Presidents, Divisional Vice Presidents and Divisional Assistant Vice Presidents, or any one of them, be and hereby is authorized, from time to time, to appoint one or more Attorneys-in-Fact to execute on behalf of the Company, as surety, any and all bonds, undertakings and contracts of suretyship, or other written obligations in the nature thereof; to prescribe their respective duties and the respective limits of their authority; and to revoke any such appointment at any time.

RESOLVED FURTHER: That the Company seal and the signature of any of the aforesaid officers and any Secretary or Assistant Secretary of the Company may be affixed by facsimile to any power of attorney or certificate of either given for the execution of any bond, undertaking, contract of suretyship, or other written obligation in the nature thereof, such signature and seal when so used being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed.

CERTIFICATION

I, STEPHEN C. BERAHA, Assistant Secretary of Great American Insurance Company, do hereby certify that the foregoing Power of Attorney and the Resolutions of the Board of Directors of June 9, 2008 have not been revoked and are now in full force and effect.

Signed and sealed this 2nd day of December, 2020



Atty L C. B.

Assistant Secretary

BID PROPOSAL

TO: City of Arvada, Colorado (hereinafter called "CITY").

FROM: **Asphalt Specialties Company, Inc.**
under the laws of the State of **Colorado**

(hereinafter called "BIDDER"), organized and existing
doing business as (a corporation), ~~(a partnership)~~, ~~(an individual)~~.

The Bidder, in compliance with your Advertisement for Bids, hereby proposes to perform all Work in strict accordance with the Contract Documents, for the construction of City of Arvada Project No. **21-ST-01** entitled **2021 Pavement Resurfacing Program** within the time set forth therein, and at the prices stated on the included Bid Schedule as totaled herein.

By submission of this Bid Proposal, each Bidder certifies, and in the case of a joint venture each party thereto certifies as to his/her own organization, that this Bid Proposal has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this Bid Proposal with any other Bidder or with any competitor.

Bidder acknowledges receipt of **Addendum Nos. 1 - 4** Initials: 

Bidder states that his:

Major Material Suppliers are:

Material They Will Supply

N/A

Major Subcontractors are:

Work They Will Perform

N/A

CONTRACT TIME AND LIQUIDATED DAMAGES: All work shall be completed, including clean-up, within **270** working days after the date to be specified in the Notice to Proceed. A Notice to Proceed is anticipated to be issued on or about January 4, 2021. The bidder shall agree to pay the owner the sum of \$2,000 for each calendar day that the work exceeds the allotted contract time. Contract time may be adjusted by Change Order.

Total from included Bid Schedule:

TOTAL BID \$

Three million, eighty five thousand, four hundred seventy dollars and fifty three cents. **3,085,470.53**

SUBMITTED BY:

Company Name: **Asphalt Specialties Company, Inc.**

Contact Names: **Greg Simmons**

Address: **10100 Dallas Street - Henderson, CO 80640**

Phone: (**303**) **289-8555**

Email(s): **Gregs@asphaltspecialties.com**

The undersigned hereby affirms that:

- He/she is a duly authorized agent of the Contractor;
- He/she has read all Terms and Conditions and technical specifications made available in conjunction with this solicitation and fully accept and acknowledge this bid is consistent with the specifications and terms and conditions.
- The bid is in all respects fair, without outside collusion or otherwise illegal action.

By: 

Signature of Authorized Agent

FEIN

12/17/2020

Date

**CORPORATE
SEAL
1992**

Daniel W. Hunt

Typed/Printed Name of Agent

President

Title of Agent

Danh@asphaltspecialties.com

Agent email

PAYMENT TERMS: The City standard is net thirty (30) days but every effort is made to meet net fifteen (15) days after the approved partial payment date when the contractor is satisfactorily performing the contract but pay. The final 5% of total payment will be paid once the contract is completed satisfactorily, advertisement for final settlement is complete, and the project is accepted by the City. Payment is the date of the check mailing or date of the credit card transaction.

Bid Schedule

City of Arvada Project: 2021 Street Resurfacing
Project No.: 20-ST-01

Contractor **Asphalt Specialties Company, Inc.**

All proposals shall be submitted on this form. The following quantities represented on this form are an estimate only and may be altered to meet actual City of Arvada requirements.

CONTRACTORS SHALL USE THIS FORM TO SUBMIT THEIR BID

Submit firm unit prices for the type of construction listed below. Ovehead shall not be priced and bid seperately, but shall be included in each bid item as required. All prices are for furnishing and installing the described items unless noted otherwise. Bidders must provide pricing for all bid schedules.

ONLY THOSE CELLS HIGHLIGHTED IN YELLOW SHALL BE FILLED IN. ALL OTHER CELLS SHALL NOT BE ALTERED.

Bid Schedule

No.	Item Description	Qty	Unit	Unit Cost	Total
1	2" Depth Milling (Full width)	81,603.0	SY	\$ 1.70	\$ 138,725.10
2	3" Depth Milling (Full Width	75,305.0	SY	\$ 2.25	\$ 169,436.25
3	4" HMA Patching	62,763.2	SY-IN	\$ 5.35	\$ 335,783.12
4	Extra Depth Patching	694.3	SY_IN	\$ 5.35	\$ 3,714.51
5	Top Course HMA Paving (Grading SX)(75)PG 64-22	17,776.8	TON	\$ 63.50	\$ 1,128,826.80
6	Top Course SMA (1/2 inch)	5,181.3	TON	\$ 97.50	\$ 505,176.75
7	Adjust Manhole	189.0	EA	\$ 45.00	\$ 8,505.00
8	Adjust Valve or Range Box	258.0	EA	\$ 25.00	\$ 6,450.00
9	Cleanout Valve or Range Box	258.0	EA	\$ 25.00	\$ 6,450.00
10	Portable Variable Message Sign	5.0	EA	\$ 6,500.00	\$ 32,500.00
11	Traffic Control Management	89.0	DAY	\$ 900.00	\$ 80,100.00
12	Flagging	5,296.0	HR	\$ 35.00	\$ 185,360.00
13	Uniformed Traffic Control	588.0	HR	\$ 95.00	\$ 55,860.00
14	Uniformed Traffic Control Vehicle	588.0	HR	\$ 16.00	\$ 9,408.00
15	Traffic Control Devices	1.0	LS	\$ 5,000.00	\$ 5,000.00
16	Erosion Control	1.0	LS	\$ 4,700.00	\$ 4,700.00
17	Citizen Notification	1.0	LS	\$ 4,000.00	\$ 4,000.00
18	Mobilization	1.0	LS	\$ 35,000.00	\$ 35,000.00
19	Minor Contracto Revisions	1.0	LS	\$ 200,000.00	\$ 200,000.00
				TOTAL	\$ 2,914,995.53

Bid Alternate A

No.	Item Description	Qty	Unit	Unit Cost	Total
1	Removal of Asphalt Mat	35,000.0	SY-IN	\$ 2.00	\$ 70,000.00
2	Intermediate Course HMA Paving (GradingS(75)pg 64-22	1,300.0	TON	\$ 61.50	\$ 79,950.00
3	Stabilization Material	235.0	TON	\$ 55.00	\$ 12,925.00
4	Edge Milling	2,000.0	SY	\$ 3.80	\$ 7,600.00
				Bid Alternate A Total	\$ 170,475.00

Bid Schedule Total + Bid Alternate A Total \$ 3,085,470.53



MUNICIPAL CONTRACTOR'S LICENSE CONTRACTOR RIGHT OF WAY AEC325

CONTRACTOR INFORMATION

ASPHALT SPECIALTIES CO., INC.
10100 DALLAS STREET
HENDERSON CO 80640

LICENSE INFORMATION

Expiration: 6/2/2021

License Grades: MC-B GENERAL STREET

Authorized Signers: LARRY OLSON RANDY FICKLIN DANIEL HUNT

Fee	Paid Amount	Paid Date
\$250.00	\$250.00	6/2/2020

Jacob Beedle, P.E.
Engineering Manager

Contractor's Responsibilities:

***Notes Regarding Permits:

License and Permit: All contractors and subcontractors working within City of Arvada R.O.W. shall be licensed and permitted by the City of Arvada.

Work without a permit: Anyone working within City of Arvada R.O.W. without a valid permit shall be assessed a surcharge equal to twice the value of the required permit or \$250.00, whichever is larger.

Inspections: Inspections must be scheduled through arvadapermits.org by 7am on the day of inspection.

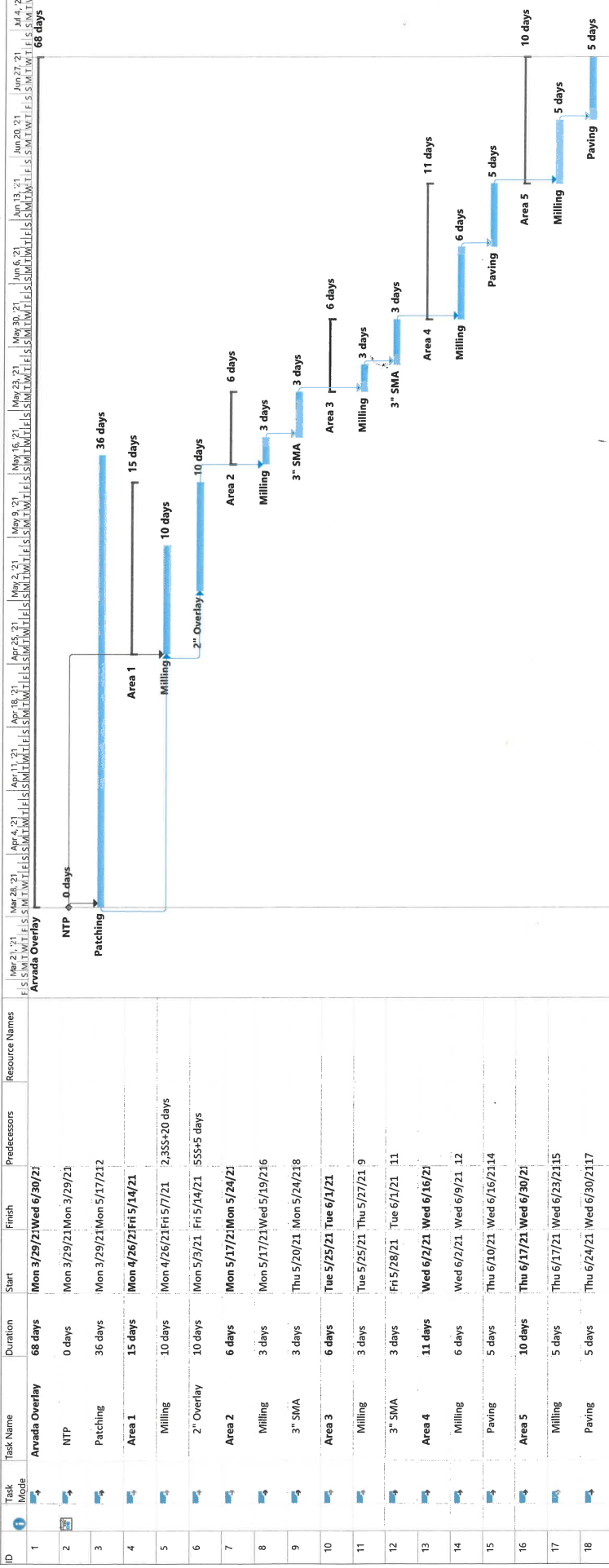
Trench Backfill: Trenches less than 50 feet in length shall be backfilled with a flowable fill material. Trenches longer than 50 feet shall be backfilled with a select material approved by the City of prior to placement of backfill.

Traffic Control: A copy of the permit and the approved traffic control plan shall be on the project site at all times that work is being performed.

New Streets: If the street, or last maintenance of the street, is less than 3 years old, the contractor must have approval through the Public Works Director to cut the street in accordance with Arvada Code 78-308. If the street, or last maintenance of the street is between 4 and 5 years old, the required restoration work must be completed within 7 days in accordance with Arvada Code 78-307. If the street, or last maintenance of the street is 6 years and older, the permittee may complete milling and overlay or may elect to pay a fee in lieu of performing that work. The fee will be \$6.60/LF of trench plus \$132.00.

Failure to Comply: Failure to comply may result in a Stop Work Order, suspension/revocation of permit, or of license

Submitted for bid purposes to demonstrate approximate durations only. Actual schedule will be based upon quantities of patching or full depth reconstruction required for each area.



ACORD™

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

6/29/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer any rights to the certificate holder in lieu of such endorsement(s).

PRODUCER		CONTACT NAME: Nick Brown	
Holmes Murphy -Colorado		PHONE (A/C, No, Ext): 720-458-5770	FAX (A/C, No):
7600 East Orchard Rd, Ste 230 S		E-MAIL ADDRESS: NBrown@holmesmurphy.com	
Greenwood Village, CO 80111		INSURER(S) AFFORDING COVERAGE	
		INSURER A : Zurich American Insurance Company	NAIC # 16535
		INSURER B : Great American Insurance Company	16691
		INSURER C : Illinois Union Insurance Company	27960
		INSURER D :	
		INSURER E :	
		INSURER F :	

INSURED
Asphalt Specialties Co., Inc.
10100 Dallas St.
Henderson, CO 80640

COVERAGES

CERTIFICATE NUMBER:

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	☒ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☒ OCCUR ☒ BI/PD Ded: 25,000 GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☒ PROJECT ☒ LOC OTHER:	X	X	GLO147328801	06/30/2020	06/30/2021	EACH OCCURRENCE \$2,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$100,000 MED EXP (Any one person) \$10,000 PERSONAL & ADV INJURY \$2,000,000 GENERAL AGGREGATE \$4,000,000 PRODUCTS - COMP/OP AGG \$4,000,000 \$
A	AUTOMOBILE LIABILITY ☒ ANY AUTO OWNED AUTOS ONLY ☒ HIRED AUTOS ONLY ☐ SCHEDULED AUTOS NON-OWNED AUTOS ONLY	X	X	BAP147329001	06/30/2020	06/30/2021	COMBINED SINGLE LIMIT (Ea accident) \$1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
B	☒ UMBRELLA LIAB ☒ EXCESS LIAB ☒ RETENTION \$10,000	X	X	TUU425707705	06/30/2020	06/30/2021	EACH OCCURRENCE \$5,000,000 AGGREGATE \$5,000,000 \$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? ☒ Y/N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	X	N/A	WC147328901	06/30/2020	06/30/2021	☒ PER STATUTE ☐ OTHER E.L. EACH ACCIDENT \$1,000,000 E.L. DISEASE - EA EMPLOYEE \$1,000,000 E.L. DISEASE - POLICY LIMIT \$1,000,000
C	Pollution Liab			CPMG27418351006	06/30/2020	06/30/2021	\$1,000,000/\$25,000 Ret

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

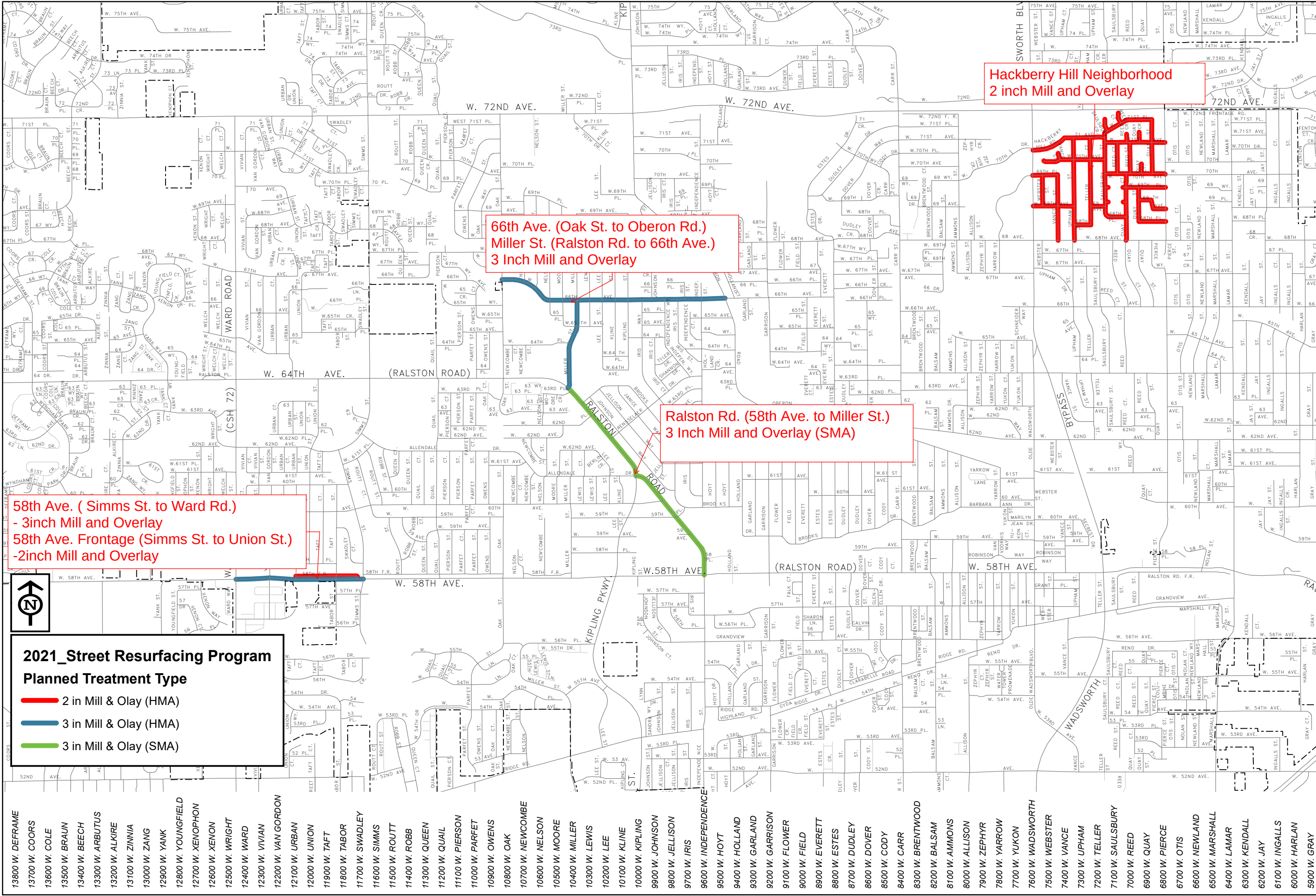
CANCELLATION

FOR INFORMATIONAL PURPOSES ONLY

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE





Hackberry Hill Neighborhood
2 inch Mill and Overlay

66th Ave. (Oak St. to Oberon Rd.)
Miller St. (Ralston Rd. to 66th Ave.)
3 Inch Mill and Overlay

Ralston Rd. (58th Ave. to Miller St.)
3 Inch Mill and Overlay (SMA)

58th Ave. (Simms St. to Ward Rd.)
- 3inch Mill and Overlay
58th Ave. Frontage (Simms St. to Union St.)
-2inch Mill and Overlay



2021_Street Resurfacing Program

Planned Treatment Type

- 2 in Mill & Olay (HMA)
- 3 in Mill & Olay (HMA)
- 3 in Mill & Olay (SMA)

13800 W. DEFRAME	13700 W. COORS	13600 W. COLE	13500 W. BRAUN	13400 W. BEECH	13300 W. ARBUTUS	13200 W. ALKIRE	13100 W. ZINNIA	13000 W. ZANG	12900 W. YANK	12800 W. YOUNGFIELD	12700 W. XENOPHON	12600 W. XENON	12500 W. WRIGHT	12400 W. WARD	12300 W. VIVIAN	12200 W. VAN GORDON	12100 W. URBAN	12000 W. UNION	11900 W. TAFT	11800 W. TABOR	11700 W. SWADLEY	11600 W. SIMMS	11500 W. ROUTT	11400 W. ROBB	11300 W. QUEEN	11200 W. QUAIL	11100 W. PIERSON	11000 W. PARFET	10900 W. OWENS	10800 W. OAK	10700 W. NEWCOMBE	10600 W. NELSON	10500 W. MOORE	10400 W. MILLER	10300 W. LEWIS	10200 W. LEE	10100 W. KLINE	10000 W. KIPLING	9900 W. JOHNSON	9800 W. JELLISON	9700 W. IRIS	9600 W. INDEPENDENCE	9500 W. HOYT	9400 W. HOLLAND	9300 W. GARLAND	9200 W. GARRISON	9100 W. FLOWER	9000 W. FIELD	8900 W. EVERETT	8800 W. ESTES	8700 W. DUDLEY	8600 W. DOVER	8500 W. CODY	8400 W. CARR	8300 W. BRENTWOOD	8200 W. BALSAM	8100 W. AMMONS	8000 W. ALLISON	7900 W. ZEPHYR	7800 W. YARROW	7700 W. YUKON	7600 W. WADSWORTH	7500 W. WEBSTER	7400 W. VANCE	7300 W. UPHAM	7200 W. TELLER	7100 W. SAULSBURY	7000 W. REED	6900 W. QUAY	6800 W. PIERCE	6700 W. OTIS	6600 W. NEWLAND	6500 W. MARSHALL	6400 W. LAMAR	6300 W. KENDALL	6200 W. JAY	6100 W. INGALLS	6000 W. HARLAN	5900 W. GRAY
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Public Works Department Streets Division				6161 Wadsworth Blvd. Arvada, Colorado 80002 Phone 720-898-7720			
PROJECT NO. 21-ST-01 2021 STREET RESURFACING PROGRAM				PROJECT MANAGER J. SMITH DRAWN BY J. SMITH DATE 11/10/20			
SHEET OF				1 1			
NO.				1 2 3 4			
REVISION							
DATE							
BY							

21-ST-01
2021 Street Resurfacing Project
Street List

Street	Extents	Classification	Treatment
HACKBERRY HILL RD	WADSWORTH BLVD - 71ST AVE	Local Rd	2" HMA Paving
QUAY CIR	71ST AVE - CDS	Local Rd	2" HMA Paving
QUAY CT	68TH AVE - END	Local Rd	2" HMA Paving
QUAY ST	68TH PL - 71ST PL	Local Rd	2" HMA Paving
REED CIR	71ST AVE - CDS	Local Rd	2" HMA Paving
REED CT	70TH AVE - END	Local Rd	2" HMA Paving
REED ST	70TH AVE - 71ST AVE	Local Rd	2" HMA Paving
SAULSBURY CIR	71ST PL - CDS	Local Rd	2" HMA Paving
SAULSBURY ST	68TH PL - 71ST PL	Local Rd	2" HMA Paving
TELLER CT	68TH PL - 71ST AVE	Local Rd	2" HMA Paving
UPHAM ST	68TH AVE - 71ST AVE	Local Rd	2" HMA Paving
VANCE ST	68TH AVE - CDS	Local Rd	2" HMA Paving
W 68TH PL	UPHAM ST - PEIRCE ST	Local Rd	2" HMA Paving
W 69TH AVE	WADSWORTH BLVD (SH 121) - PIERCE ST	Local Rd	2" HMA Paving
W 69TH PL	WADSWORTH BLVD (SH 121) - PEIRCE STREET	Local Rd	2" HMA Paving
W 70TH AVE	CDS - PIERCE ST	Local Rd	2" HMA Paving
W 71ST AVE	HACKBERRY HILL RD - PIERCE ST	Local Rd	2" HMA Paving
W 71ST PL	SAULSBURY ST - QUAY ST	Local Rd	2" HMA Paving
WEBSTER ST	69TH AVE - 69TH PL	Local Rd	2" HMA Paving
INDEPENDENCE ST	58TH AVE - 58TH PL	Arterial	2" SMA Paving
RALSTON RD	MILLER ST - Allendale	Arterial	2" SMA Paving
RALSTON RD	Allendale - 58TH PL	Arterial	2" SMA Paving
MILLER ST	RALSTON RD - 66TH AVE	Local Rd	3" HMA Paving
W 66TH AVE	OAK ST - OBERON RD	Collector	2" HMA Paving
W 58TH AVE	WARD RD (SH 72) - SIMMS ST	Arterial	3" HMA Paving
W 58TH FRONTAGE RD	URBAN ST - 58TH AVE	Local Rd	2" HMA Paving



REPORT TO CITY COUNCIL RESOLUTION

AGENDA ITEM
8.A.9.

TO: THE HONORABLE CITY COUNCIL

DATE: March 1, 2021

SUBJECT: R21-039 A Resolution Adopting a Revised Administrative Fee Schedule for the Arvada Police Department

Report in Brief

The Arvada Police Department (APD) charges reasonable fees for the search, retrieval, and copying of APD criminal justice records as permitted by CRS 24-72-306 and ACC 2-261(b). Such fees are set forth in the Arvada Police Department Administrative Fee Schedule ("Fee Schedule"). This resolution adopts a revised Fee Schedule which reflects the APD's reasonable costs in 2021 to search, retrieve, and copy criminal justice records. In accordance with ACC 2-261(b), the Chief of Police has promulgated the revised Fee Schedule and it has been approved by the City Manager.

The Arvada team recommends that the City Council approve R21-039, A Resolution Adopting a Revised Administrative Fee Schedule for the Arvada Police Department.

Financial Impact

Adoption of the revised APD Fee Schedule will have no direct financial impact on the City. APD will continue to collect such fees to offset its reasonable cost to search, retrieve, and copy criminal justice records.

Background

The APD Fee Schedule was last updated in 2010. The APD's costs to search, retrieve, and copy criminal justice records have increased incrementally since that time. The updated Fee Schedule reflects the APD's current reasonable costs to provide criminal justice records in response to requests from the community. Civilian Operations Manager Candace Harris has researched and determined appropriate fees based on cost increases over time and costs associated with the APD's implementation of technologies which improve our ability to timely respond to records requests.

Discussion

The revised APD Fee Schedule provides a reasonable increase to the base criminal justice records fee from \$5.00 to \$10.00. All other records fees set forth in the APD Fee Schedule remain unchanged. This revision reflects reasonable and actual costs associated with criminal justice records requests as required by applicable law. Other specialized records fees remain at current amounts. The increase will offset some APD costs to implement CopLogic, an automated report request service which will increase the APD's efficiency and provide more timely response to requests for police reports.

Public Contact

Posting of the City Council agenda.

Commission Recommendation

N/A.

Strategic Alignment

The revised APD Fee Schedule aligns with the Safe Community Priority Area of the City Council Strategic Plan by providing a fee structure that is current with the APD's cost to provide records services in 2021. Further, the revised fees will fund technology which will improve the APD's efficiency and service to the community.

Alternative Courses of Action

N/A.

Recommendation for Action

The Arvada team recommends that the City Council approve R21-039, A Resolution Adopting a Revised Administrative Fee Schedule for the Arvada Police Department.

Suggested Motion:

I move that R21-039, A Resolution Adopting a Revised Administrative Fee Schedule for the Arvada Police Department, be (approved) (rejected).

Prepared by:

Aaron Jacks, Assistant City Attorney

Reviewed by:

Alyssa Gleinn, Legal Specialist-Prosecution 2/18/2021

Approved by:

Aaron Jacks, Assistant City Attorney 2/18/2021

Link Strate, Chief of Police 2/18/2021

Rachel Morris, City Attorney 2/18/2021

Lorie Gillis, Deputy City Manager 2/18/2021

Mark Deven, City Manager 2/18/2021

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R21-039

A RESOLUTION ADOPTING A REVISED ADMINISTRATIVE FEE SCHEDULE FOR THE
ARVADA POLICE DEPARTMENT

WHEREAS, pursuant to C.R.S. § 24-72-306 the City may collect reasonable fees for costs associated with the search, retrieval, and photocopying of criminal justice records (“Police Records Fees”); and

WHEREAS, pursuant to Arvada City Code § 2-261(b), the City may establish such Police Records Fees as promulgated by the Chief of Police, approved by the City Manager, and adopted by City Council; and

WHEREAS, the Arvada Police Department last updated its Police Records Fees in 2010; and

WHEREAS, the City’s costs to search, retrieve, and photocopy criminal justice records have increased since 2010; and

WHEREAS, it is in the best interest of the City to adopt a revised Arvada Police Department Administrative Fee Schedule setting forth reasonably updated Police Records Fees to offset the City’s increased costs to search, retrieve, and photocopy criminal justice records.

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO:

Section 1. Pursuant to Arvada City Code § 2-261(b), the City Council of the City of Arvada hereby adopts the attached Arvada Police Department Administrative Fee Schedule establishing reasonable fees for the search, retrieval, and photocopying of criminal justice records.

Section 2. This resolution shall be effective upon its approval by the City Council.

APPROVED AND ADOPTED this 1st day of March, 2021.

Marc Williams, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:

Rachel A. Morris, City Attorney

By: _____

ARVADA POLICE DEPARTMENT

ADMINISTRATIVE FEE SCHEDULE

REPORT SEARCH AND RETRIEVAL FEE

Requests In Person, Mailed or Faxed

(Includes up to 10 pages. Additional pages and redactions at additional cost) \$10.00

Online Requests

(Includes up to 10 pages. Additional pages and redactions at additional cost) \$10.00

Additional Report Redaction requirements

\$.50/page

DUPLICATION FEES

Report Copy (Each additional page over 10 pages)

\$.25/page

Video Recording (\$20 deposit required) (Please allow 10 to 14 business days from time of request)

Materials & Equipment

\$10.00

Labor Cost (Assessed in 1/4 hour increments)

\$20.00/hour

Audio Recording (\$10 deposit required) (Please allow 10 to 14 business days from time of request)

Materials & Equipment

\$ 5.00

Labor Cost (Assessed in 1/4 hour increments)

\$20.00/hour

Photographs (Pre-pay. Please allow 5 to 7 business days from time of request)

Photo CD

\$25.00

Non-digital (film) photos (Pre-Pay)

\$1.00/Photo

Print Costs

3 x 5 Color (Mug)

\$ 2.50 each

Miscellaneous Copies

\$.25/page

COMPUTER SEARCH PROJECTS (\$10 deposit required) (Please allow 7 to 10 business days from time of request)

Basic Search

\$10.00

Extended Search (Labor cost assessed in ¼ hour increments)

\$20.00 /hour

Address Search: List of ***ALL CALLS*** to ***ONE ADDRESS***, up to 2 years ago

(Includes date, call type and case number if applicable – ***no details***)

Additional cost if: Address search is prior to 2 years ago (Back to May 21, 2002)

\$20/month for each month searched, in addition to operator's labor cost

LETTERS OF POLICE CLEARANCE (Records Check) (Please allow 5 to 7 days from time of request)

Must provide full name and date of birth of subject

\$12.00/name

-Lists physical arrests and summonses received only, ***except traffic violations (contact DMV)***

-Juvenile info releasable **ONLY** to juvenile or parent/legal guardian of juvenile

BONDING FEE

\$15.00/warrant

FINGERPRINTING (Must work or reside in the city)

\$7.00

REGISTERED SEX OFFENDER LIST

No Fee

Fees are non-refundable

ARVADA POLICE DEPARTMENT

ADMINISTRATIVE FEE SCHEDULE

SEX OFFENDER REGISTRATION

Initial Registration	\$60.00
Re-registration	\$30.00
Sexual Violent Predator	\$100.00

TOW FEE

Connolly's - Response and hook up	\$95.00
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VEHICLE IDENTIFICATION NUMBER (VIN) SERVICES

General VIN Inspection	\$15.00
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Fees are non-refundable



REPORT TO CITY COUNCIL RESOLUTION

AGENDA ITEM
8.A.10.

TO: THE HONORABLE CITY COUNCIL

DATE: March 1, 2021

SUBJECT: R21-040 A Resolution Authorizing the Issuance of a Purchase Order in the Amount of \$227,405 to Transwest Truck Trailer RV for the Purchase of Asphalt Patch Truck

Report in Brief

City Council action is requested for the approval of a purchase order to procure a second asphalt patch truck for the Streets Division. In 2020, the Streets Division and Utilities Department strategically collaborated regarding asphalt maintenance and repairs due to utility work performed in the City right-of-way. In order to effectively maintain current infrastructure and assist the Utilities Department with asphalt patching repairs, a second asphalt patch truck is necessary.

The Arvada team recommends that the City Council approve R21-040, A Resolution Authorizing the Issuance of a Purchase Order in the Amount of \$227,405 to Transwest Truck Trailer RV for the Purchase of Asphalt Patch Truck.

Financial Impact

Funding for the additional Asphalt Patch Truck was included in the budget approval process for the 2021 and 2022 budget cycle and which was approved by Council. The new asphalt patch truck will be purchased in the amount of \$227,405 with funds from the 2021 Streets Fund budget.

The procurement for the Asphalt Patch Truck will be made utilizing the City and County of Denver's Cooperative Contract with Transwest Truck Trailer RV.

Background

Historically, the Utilities Department contracted for asphalt patching and repair work. In 2020 the Streets and Utilities team strategically collaborated regarding asphalt maintenance and repairs due to utility work performed in the City right-of-way. The addition of a second asphalt patch truck will provide increased capacity to provide this internal customer service. It will also ensure the quality meets or exceeds the City of Arvada Engineering Standards and Specifications for asphalt patching.

Discussion

The asphalt patch truck will be a 2022 Freightliner Chassis with a Bergkamp hot mix asphalt patcher.

The Arvada team believes that strategic collaboration between the Utilities and Public Works departments within the Infrastructure Work System promotes efficiencies, increases the opportunity to provide superior customer service, and minimizes the impact on the community.

Public Contact

Posting of the City Council agenda.

Commission Recommendation

N/A

Strategic Alignment

The addition of the second asphalt patch truck aligns with the Infrastructure Priority Area within the City Council Strategic Plan by providing our community with well maintained right-of-ways. Timeliness, quality of work, and attention to the City of Arvada Standards and Specifications generally align with Principles and Strategic Results within the Infrastructure Priority Area.

The procurement of the asphalt patch truck also aligns with City Council Strategic Plan and Infrastructure Priority Area by obtaining an environmentally efficient fleet vehicle.

Alternative Courses of Action

N/A

Recommendation for Action

The Arvada team recommends that the City Council approve R21-040, A Resolution Authorizing the Issuance of a Purchase Order in the Amount of \$227,405 to Transwest Truck Trailer RV for the Purchase of Asphalt Patch Truck.

Suggested Motion:

I move that R21-040, A Resolution Authorizing the Issuance of a Purchase Order in the Amount of \$227,405 to Transwest Truck Trailer RV for the Purchase of Asphalt Patch Truck, be (approved) (rejected).

Prepared by:

Christine Biddle, Administrative Specialist

Reviewed by:

Karen Custer, Administrative Assistant 2/9/2021

Hannah Gregory, Legal Administrative Assistant 2/16/2021

Approved by:

Dan Pumphrey, Streets Manager	2/8/2021
Don Wick, Director of Public Works	2/10/2021
Bryan Archer, Director of Finance	2/10/2021
Erika Pierce, Litigation Paralegal	2/16/2021
Julie Richards, Senior Assistant City Attorney	2/17/2021
Rachel Morris, City Attorney	2/17/2021
Lorie Gillis, Deputy City Manager	2/17/2021
Mark Deven, City Manager	2/17/2021

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R21-040

A RESOLUTION AUTHORIZING THE ISSUANCE OF A PURCHASE ORDER IN THE AMOUNT OF \$227,405 TO TRANSWEST TRUCK TRAILER RV FOR THE PURCHASE OF ASPHALT PATCH TRUCK

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO:

Section 1. The city manager is hereby authorized to issue a purchase order in the amount of \$227,405 to Transwest Truck Trailer RV for the purchase of Asphalt Patch Truck.

Section 2. This resolution shall be effective upon its approval by the City Council.

APPROVED AND ADOPTED this 1st day of March, 2021.

Marc Williams, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:
Rachel A. Morris, City Attorney

By: _____

Prepared for:
 MIKE MOORE
 STATE OF CO AND POLITICAL SUB
 DIV
 4201 E ARKANSAS AVE
 DENVER, CO 80222
 Phone: 303-555-1212

Prepared by:
 Will Schafer
 TRANSWEST TRUCK TRAILER RV
 20770 E I76 FRONTAGE ROAD
 BRIGHTON, CO 80603
 Phone: (303)289-3161

QUOTATION

M2 106 CONVENTIONAL CHASSIS

SET BACK AXLE - TRUCK
 CUM L9 330 HP @ 2200 RPM; 2200 GOV RPM, 1000 LB-
 FT @ 1200 RPM
 ALLISON 3500 RDS AUTOMATIC TRANSMISSION WITH
 PTO PROVISION
 RS-23-160 23,000# R-SERIES SINGLE REAR AXLE
 23,000# FLAT LEAF SPRING REAR SUSPENSION WITH
 HELPER AND RADIUS ROD
 DETROIT DA-F-12.0-3 12,000# FF1 71.5 KPI/3.74 DROP
 SINGLE FRONT AXLE
 12,000# DUAL TAPERLEAF FRONT SUSPENSION
 106 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL
 CAB
 4875MM (192 INCH) WHEELBASE
 11/32X3-1/2X10-15/16 INCH STEEL FRAME
 (8.73MMX277.8MM/0.344X10.94 INCH) 120KSI
 1050MM (41 INCH) REAR FRAME OVERHANG

		PER UNIT	TOTAL
VEHICLE PRICE	TOTAL # OF UNITS (1)	\$ 227,156	\$ 227,156
EXTENDED WARRANTY		\$ 400	\$ 400
DEALER INSTALLED OPTIONS		\$ 0	\$ 0
CUSTOMER PRICE BEFORE TAX		\$ 227,556	\$ 227,556

TAXES AND FEES

FEDERAL EXCISE TAX (FET)	\$ (151)	\$ (151)
TAXES AND FEES	\$ 0	\$ 0
OTHER CHARGES	\$ 0	\$ 0

TRADE-IN

TRADE-IN ALLOWANCE	\$ (0)	\$ (0)
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BALANCE DUE	(LOCAL CURRENCY)	\$ 227,405	\$ 227,405
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COMMENTS:

Projected delivery on ___ / ___ / ___ provided the order is received before ___ / ___ / ___.

APPROVAL:

Please indicate your acceptance of this quotation by signing below:

Customer: X _____ Date: ___ / ___ / ___.

[illegible]

Master Purchase Order

DO NOT INVOICE TO THIS ADDRESS		 DENVER THE MILE HIGH CITY	Supplier Contract No.		SC-00003076
City & County of Denver			Date:	June 22, 2018	Revision No.
Purchasing Division			Payment Terms	Net 30	Ordinance (if applicable):
201 West Colfax Avenue, Dept. 304			Freight Terms	DESTINATION	
Denver, CO 80202			Ship Via	Best Way	
United States			Buyer:	Andrew Miskell	
Phone: 720-913-8100 Fax: 720-913-8101			Phone:	(720) 913-8159	

Workday Supplier ID: DENVR0000000776 Phone: (303) 289-3161

Email: WSchafer@TransWest.com

Trans-West Inc.
P.O. Box 335
Brighton, CO 80601

Ship To: Various locations within the City and County of Denver

Bill To: As Specified By Agency

Attn: Will Schafer
Colorado Secretary of State ID: 19881057973
U.S. Federal SAM Registry Verification Date: 06/19/2018

1. Goods/Services:

Trans-West, Inc., a corporation located in the State of Colorado, ("Vendor") shall provide the goods, and any services related thereto, identified and described on attached Exhibit A, to the City and County of Denver, a Colorado municipal corporation (the "City"), all in accordance with the terms and conditions of this Master Purchase Order.

2. Ordering:

The City shall purchase one or more of the goods/services by issuing a written purchase order(s) or similar appropriate written document ("Order"), each of which will be deemed incorporated into this Agreement for purposes of such Order only.

3. Pricing:

The pricing/rates for the goods/services is contained on Exhibit A and shall be held firm for the term of this Master Purchase Order.

4. Term, Extension, or Renewal:

The effective period of this agreement shall be from the date of City signature to and including 07/31/2021. It is also a specific provision of this agreement that the City and the vendor may mutually agree to renew and continue this agreement for additional periods at the same price structure, terms and conditions. However, no extension date may surpass 07/31/2026.

5. Non-Exclusive:

This Master Purchase Order is non-exclusive. City does not guarantee any minimum purchase other than as provided herein.

6. Inspection and Acceptance:

City may inspect all goods/services prior to acceptance. Payment does not constitute acceptance. Vendor shall bear the cost of any inspection/testing that reveal goods/services that are defective or do not meet specifications. City's failure to accept or reject goods/services shall not relieve Vendor from its responsibility for such goods/services that are defective or do not meet specifications nor impose liability on City for such goods/services. If any part of the goods/services are not acceptable to City, City may, in addition to any other rights it may have at law or in equity: (1) make a warranty claim; (2) repair and/or replace the goods or substitute other services at Vendor's expense; or (3) reject and return the goods at Vendor's cost and/or reject the services at Vendor's expense for full credit. Any rejected goods/services are not to be replaced without written authorization from City, and any such replacement shall be on the same terms and conditions contained in this Master Purchase Order. Vendor shall perform all services in accordance with the standard of care exercised by highly competent vendors who perform like or similar services.

7. Shipping, Taxes and Other Credits and Charges:

All pricing is F.O.B. destination unless otherwise specified. Shipments must be marked with Vendor's name, the Master Purchase Order number, and contain a delivery or packing slip. Vendor shall not impose any charges for boxing, crating, parcel post, insurance, handling, freight, express or other similar charges or fees. Vendor shall notify City in writing of any price decreases immediately, and City shall receive the benefit thereof on all unshipped items. Vendor shall comply with any additional delivery terms specified herein. Vendor shall be responsible for the cleanup and reporting of any contamination (environmental or otherwise) or spillage resulting from the delivery and/or unloading of goods within twenty-four (24) hours of the contamination or spillage or sooner if required by law. Vendor shall procure all permits and licenses; pay all charges, taxes and fees; and give all notices necessary and incidental to the fulfillment of this Master Purchase Order and all cost thereof have been included in the prices contained herein. City shall not be liable for the payment of taxes, late charges or penalties of any nature, except as required by D.R.M.C. § 20-107, et seq. The price of all goods/services shall reflect all applicable tax exemptions. City's Federal Registration No. is 84-6000580 and its State Registration No. is 98-02890. Vendor shall pay all sales and use taxes levied by City on any tangible personal property built into the goods/services. Vendor shall obtain a Certificate of Exemption from the State of Colorado Department of Revenue prior to the purchase of any materials to be built into the goods/services and provide a copy of the Certificate to City prior to final payment.

8. Risk of Loss:

Vendor shall bear the risk of loss, injury or destruction of goods prior to delivery to City. Loss, injury or destruction shall not release Vendor from any obligation hereunder.

Seller agrees to indemnify and hold harmless the City and County of Denver from any and all license, royalty and proprietary fees or costs, including legal costs, which may arise out of the City and County of Denver's purchase and use of goods supplied by the seller.

It is expressly agreed by seller that these covenants are irrevocable and perpetual.

6) COOPERATIVE PURCHASING:

The City and County of Denver encourages and participates in cooperative purchasing endeavors undertaken by or on behalf of other governmental jurisdictions, pursuant to Denver Revised Municipal Code Sec. 20-64.5. To the extent other governmental jurisdictions are legally able to participate in cooperative purchasing endeavors, the City and County of Denver supports such cooperative activities. Further, it is a specific requirement of this proposal or Request for Proposal that pricing offered herein to the City and County of Denver may be offered by the vendor to any other governmental jurisdiction purchasing the same products.

The vendor(s) must deal directly with any governmental agency concerning the placement of purchase orders, freight charges for destinations outside of the Denver Metro area, contractual disputes, invoicing, and payment. The City and County of Denver shall not be liable for any costs, damages incurred by any other entity.

7) BASE REQUIREMENTS:

a) PRODUCT RETURN PROTOCOL

- i) Agencies shall receive full credit for any parts/ components returned within 365 days of initial delivery.
- ii) Agencies shall receive a minimum of one-half (1/2) or greater credit for any parts/ components returned within 366-720 days of initial delivery.
- iii) Vendor shall contact each using agency within thirty days of agreement initiation to collaborate in relation to return parts/ components protocol(s).

b) PALLETS

- i) All pallets supplied shall be non-returnable (unless City agency requires it) and no deposit shall be applied.

c) PARTS CONSIGNMENT

- i) The vendor shall consider consignment requests on behalf of City agencies.
 - (1) The Purchasing Division will arbitrate consignment arrangements when necessary.

d) PARTS AND COMPONENT CONSIDERATIONS:

- i) Standard City Parts and Component Delivery Protocol:



DENVER
THE MILE HIGH CITY

General Services
Purchasing Division
201 W. Colfax Avenue, Dept. 304
Denver, CO 80202
P: 720.913.8100
F: 720.913.8101
www.denvergov.org/purchasing

Date: December 6, 2018

MEMORANDUM

To: Trans-West, Inc.

Attn: Will Schafer

Subject: City and County of Denver SC-00003076/MPO # 0750A0118

This memo is to note that RFP # 0750A was competitively bid by the City and County of Denver and has resulted in a supplier contract (SC-00003076).

If a requesting municipality has particular questions or for further information on the bid and award process, please contact Andrew Miskell at andrew.miskell@denvergov.org.

Respectfully,

Andrew Miskell
Senior Buyer, City and County of Denver

Award**Award Type** Award**Solicitation Information**

Solicitation Title	Strategic Long-Term Cab and Chassis Procurement with Service and Parts
Reference Number	0000181968
Solicitation Closing Date	03/21/2018

Awardee

Supplier Awarded	Transwest Truck Trailer RV	Awarded Value	Undisclosed
Address	20770 E I-76 Frontage Road Brighton, Colorado, 80603 United States	Award Date	07/02/2018 12:00 PM MDT
		Contract Number	SC-00003076



REPORT TO CITY COUNCIL RESOLUTION

AGENDA ITEM
8.A.11.

TO: THE HONORABLE CITY COUNCIL

DATE: March 1, 2021

SUBJECT: R21-041 A Resolution Authorizing a Construction Contract Agreement By and Between the City of Arvada and Hamon Infrastructure, Inc. for Construction of 18-ST-40 Ralston Road - Yukon Street to Garrison Street in an Amount Not to Exceed \$12,360,000.00

Report in Brief

City Council action is requested in the attached Resolution authorizing an agreement by and between the City of Arvada and Hamon Infrastructure, Inc. for construction of 18-ST-40 Ralston Road - Yukon Street to Garrison Street.

The contract includes the reconstruction of Ralston Road between Yukon Street to Garrison Street as a four-lane arterial roadway with a center median or two-way left turn and eight-foot detached or ten-foot attached sidewalk, relocation of utilities, associated storm drainage system, waterline, curb and gutter, traffic signal replacement, and streetscape elements.

The Arvada team recommends that the City Council approve R21-041 A Resolution Authorizing a Construction Contract Agreement By and Between the City of Arvada and Hamon Infrastructure, Inc. for Construction of 18-ST-40 Ralston Road - Yukon Street to Garrison Street in an Amount Not to Exceed \$12,360,000.00.

Financial Impact

Financial Impact: \$12,360,000.00

This is a one-time request for the construction of one of two bond projects.

Funding source: Funding is currently available through code section 98-101 funds. As bonds are issued in association with the voter approval of Ballot Measure 3F, the code section 98-101 capital account will be reimbursed.

Additionally, the Arvada Urban Renewal Authority (AURA) has agreed to contribute \$3,500,000 per City Resolution R20-080 on September 25, 2020 to assist with the design and construction of the streetscape. The Intergovernmental Agreement with AURA states that the City would receive \$1,750,000 prior to the advertisement of the contract, which the City received on December 22, 2020. The City will receive the remaining amount of \$1,750,000 on or before December 1, 2021.

The City's portion of the contract is \$9,258,398.00, which consists of the roadway, pavement, storm sewers and associated street improvements.

AURA's share of the contract is \$3,101,602.00, which includes the relocation of a 12" waterline in order to install medians and the landscape elements.

Oracle number CIP 91809 - Ralston Rd Const (Bond)

Background

The advertisement of the construction contract CSB-18-ST-40 was on December 30, 2020. Bids were accepted until January 28, 2021 and the City received and evaluated proposals from the following contractors:

1.	Hamon Infrastructure, Inc.	\$12,360,000.00	Denver, CO
2.	Edge Contracting, Inc.	\$13,360,995.50	Golden, CO
3.	Brannan Sand & Gravel Co.	\$14,079,260.56	Denver, CO
4.	Concrete Works of Colorado, Inc.	\$14,115,478.07	Lafayette, CO
5.	Flatiron Constructors, Inc.	\$14,789,252.31	Broomfield, CO
6.	American Civil Constructors, Inc.	\$15,041,491.00	Littleton, CO
	Engineer's Estimate	\$13,874,595.00	

As a part of our due diligence, the City checked references provided by each of the contractors. After careful consideration, the Arvada team selected Hamon to deliver a quality project. Hamon has worked on past City projects at Ralston Central Park and Wadsworth at Grandview Grade Separation.

Discussion

Based on the pricing, qualifications, and experience, Hamon was selected and a contract was negotiated in the amount of \$12,360,000.00. As required by the contract, Hamon agrees to furnish or arrange for the construction services set forth in the contract documents and required for the completion of the Ralston Road between Yukon and Garrison project. Hammon shall commence work on the project this Spring with completion scheduled within 730 calendar days from the date of the initial Notice to Proceed. The Ralston Road Yukon to Garrison Project is scheduled to be completed by the second quarter of 2023.

Consistent with the language in the 2018 ballot measure that authorized the bonds issued to finance this project, this work will improve Ralston Road between Yukon and Garrison Streets by constructing wider travel lanes and rebuilding the sidewalks to standard widths. The travel lanes will be widened to 11 feet and the sidewalks will be widened to 8-10 feet in order to improve vehicle and pedestrian safety. The project will add additional space for drivers needing to use the center lane for safe turning movements and add aesthetic improvements for medians and landscaping.

The section of Ralston Road between Yukon and Garrison was included in the 2018 ballot measure because two separate citizen capital improvement committees identified the need for improvements to this major east-west corridor for many years. It is important to note that other sections of the corridor have either already been improved or are scheduled for improvements. Ralston Road between Garrison and Independence was widened with related pedestrian improvements as part of the Ralston Creek North Urban Renewal Project. The section between Olde Wadsworth and Yukon is currently under construction and will be completed later this year. Completion of the Ralston Road segment between Yukon and Garrison will complete the entire 1.25 mile length of Ralston Road between Olde Wadsworth and Independence.

Public Contact

Posting of the City Council agenda.

Commission Recommendation

N/A

Strategic Alignment

This action aligns with the City Council Strategic Plan Priority Area of Infrastructure. The 2015-2016 Citizen Capital Improvement Plan Committee ranked Ralston Road as the number one transportation priority due to the corridor's narrow two-way left turn lane and travel lanes, a higher rate of side-swipe and intersection crashes compared to similar arterials, and the narrow width of sidewalks for pedestrians and bicyclists.

Alternative Courses of Action

N/A

Recommendation for Action

The Arvada team recommends that the City Council approve R21-041, A Resolution Authorizing a Construction Contract Agreement By and Between the City of Arvada and Hamon Infrastructure, Inc. for Construction of 18-ST-40 Ralston Road - Yukon Street to Garrison Street in an Amount Not to Exceed \$12,360,000.00.

Suggested Motion:

I move that R21-041, A Resolution Authorizing a Construction Contract Agreement By and Between the City of Arvada and Hamon Infrastructure, Inc. for Construction of 18-ST-40 Ralston Road - Yukon Street to Garrison Street in an Amount Not to Exceed \$12,360,000.00, be (approved) (rejected).

Prepared by:
Trang Tran, Civil Engineer I

Reviewed by:
Karen Custer, Administrative Assistant 2/9/2021
Hannah Gregory, Legal Administrative Assistant 2/10/2021

Approved by:

Jacqueline Rhoades, Civil Engineer III	2/9/2021
Don Wick, Director of Public Works	2/9/2021
Bryan Archer, Director of Finance	2/9/2021
Erika Pierce, Litigation Paralegal	2/10/2021
Julie Richards, Senior Assistant City Attorney	2/10/2021
Rachel Morris, City Attorney	2/16/2021
Lorie Gillis, Deputy City Manager	2/17/2021
Mark Deven, City Manager	2/17/2021

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R21-041

A RESOLUTION AUTHORIZING A CONSTRUCTION CONTRACT AGREEMENT BY AND BETWEEN THE CITY OF ARVADA AND HAMON INFRASTRUCTURE, INC. FOR CONSTRUCTION OF 18-ST-40 RALSTON ROAD – YUKON STREET TO GARRISON STREET IN AN AMOUNT NOT TO EXCEED \$12,360,000.00

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO:

Section 1. The Mayor or Mayor Pro Tem is authorized to sign and the City Clerk to attest, in form approved by the City Attorney, a Construction Contract Agreement, which is in substantially the same form as that attached hereto, by and between the City of Arvada and Hamon Infrastructure, Inc. in the amount of for construction of 18-ST-40 Ralston Road – Yukon Street to Garrison Street in an amount not to exceed \$12,360,000.00

Section 2. This resolution shall be effective upon its approval by the City Council.

APPROVED AND ADOPTED this 1st day of March, 2021.

Marc Williams, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:
Rachel A. Morris, City Attorney

By: _____

**AN AGREEMENT BY AND BETWEEN THE CITY OF ARVADA AND
HAMON INFRASTRUCTURE, INC. FOR CONSTRUCTION OF 18-ST-40
RALSTON ROAD – YUKON STREET TO GARRISON STREET
IN AN AMOUNT NOT TO EXCEED \$12,360,000.00**

This Agreement made this ____ day of March, 2021, by and between the City of Arvada, a home rule municipal corporation (“Arvada” and/or “City”) and Hamon Infrastructure, Inc., a Colorado Corporation (“Contractor”).

WITNESSETH: That for and in consideration of the covenants, promises, and payments hereinafter mentioned:

WITNESSETH:

WHEREAS, Arvada solicited proposals from interested construction professionals for the provision of construction services related to the expansion of Ralston Road from Yukon Street to Garrison Street as described in the Contract Documents (the “Project”); and

WHEREAS, based on Contractor’s submissions, Arvada has selected Contractor for the Project; and

WHEREAS, Arvada and Contractor desire to enter into this Agreement regarding the construction of the Project.

NOW, THEREFORE, for and in consideration of the covenants, promises, and payments hereinafter mentioned, the parties agree as follows:

ARTICLE 1. GENERAL DESCRIPTION OF SERVICES

- 1.1. **The Services.** The Contractor agrees to furnish or arrange for the construction services set forth in the Contract Documents and required for the completion of the Project within the timeframe provided in the Contract Documents. Contractor represents that it is thoroughly familiar with and understands the requirements of the Project scope and is experienced in the construction of projects of the type and scope contemplated by the Contract Documents. Contractor represents to Arvada that Contractor has all necessary education, skill, knowledge, expertise and experience required for construction of the Project, and will maintain at all times during the term of this Agreement such personnel on its staff to provide the services contemplated hereby within the time periods required hereby. In addition, Contractor represents that it or Arvada-approved subcontractors or subconsultants performing services under this Agreement have all applicable licenses required by the State of Colorado to perform such services and all required insurance coverage as required by this contract and by law.
- 1.2. **Project Schedule / Time of the Essence.** The Contractors shall commence the Work after March 15, 2021 but in no event after May 3, 2021 unless such time for beginning the Work is changed by Arvada in writing. The Contract Documents contain a Project Design that contemplates completion of the Work in three (3) phases. All work shall be completed within 730 calendar days from the date of the initial Notice to Proceed (“Project Schedule”). The Contractor shall at all times carry out its duties and responsibilities as expeditiously as possible and in accordance with the Project Schedule. Arvada will issue the Notices to Proceed with respect to each phase in accordance with the Project Schedule, with the Phase Two Notice Proceed being issued on or around the 244th calendar day after the Initial Notice to Proceed and with the Phase Three Notice to Proceed being issued on or around

the 488th calendar day after the Initial Notice to Proceed. Time is of the essence in the performance of this Agreement.

- 1.2.1.1. **Temporary Easements.** Arvada, through its Consultant, has obtained or will obtain temporary easements from property owners along the project site to enable the Contractor to complete the Work (“Temporary Easements”). The terms and conditions of those Temporary Easements are incorporated herein by reference. The Contractor shall coordinate with Arvada and its Consultant prior to entering another’s property to ensure that the Temporary Easements have been obtained and that Contractor will understand and comply with any and all terms and conditions of those Temporary Easements.
- 1.2.1.2. **Phase One Construction.** The Contractor shall complete the first phase of work as defined in the Contract Documents within 243 calendar days (“Phase One Contract Time”) from receipt of the Initial Notice to Proceed. While the Request for Proposal contains a model schedule, Contractor agrees that it shall revise, amend and supplement the schedule so as to complete Phase One of the Work within the Contract Time provided herein. The Contractor shall complete all of the Phase One Construction that is located within the bounds of the Temporary Easements within 365 calendar days from the date of the Initial Notice to Proceed. Any failure to complete the Phase One Construction located within the bounds of the Temporary Easements within this time period shall result in the assessment of \$2,000 liquidated damages for each calendar day delay.
- 1.2.1.3. **Phase Two Construction.** The Contractor shall complete the second phase of work as defined in the Contract Documents within 243 calendar days (“Phase One Contract Time”) from receipt of the Second Notice to Proceed. While the Request for Proposal contains a model schedule, Contractor agrees that it shall revise, amend and supplement the schedule so as to complete Phase Two of the Work within the Contract Time provided herein). The Contractor shall complete all of the Phase Two Construction that is located within the bounds of the Temporary Easements within 365 calendar days from the date of the Second Notice to Proceed. Any failure to complete the Phase Two Construction located within the bounds of the Temporary Easements within this time period shall result in the assessment of \$2,000 liquidated damages for each calendar day.
- 1.2.1.4. **Phase Three Construction.** The Contractor shall complete the third phase of work as defined in the Contract Documents within 242 calendar days (“Phase One Contract Time”) from receipt of the Third Notice to Proceed. While the Request for Proposal contains a model schedule, Contractor agrees that it shall revise, amend and supplement the schedule so as to complete Phase Three of the Work within the Contract Time provided herein).
- 1.2.1.5. **Work Overlapping Phases.** In the event that certain work will overlap from one phase to another, or through all three phases, Contractor may request authority from Arvada for such overlapping work. Any overlapping work that is approved in writing by Arvada will not subject Contractor to delay claims so long as the overlapping work does not cause the Contractor to exceed the overall project deadline. Overlapping work will only be allowed if it is located within City right of way or within the City’s permanent easements.

1.3. **Construction Staking.** Salient features to be shown on the Contractor's Progress Schedule are:

- 1.3.1. Signing and Mobilization
- 1.3.2. Clearing and Grubbing
- 1.3.3. Utilities
- 1.3.4. Fence
- 1.3.5. Earthwork
- 1.3.6. Curb, Gutter and Sidewalk/Trails
- 1.3.7. Pipes, Inlets and Manholes
- 1.3.8. Signalization
- 1.3.9. Hot Bituminous Pavement
- 1.3.10. Final Signing and Striping
- 1.3.11. Landscaping and Irrigation
- 1.3.12. Cleanup

1.4. **Cooperation.** The Contractor shall endeavor to develop, implement and maintain, a spirit of cooperation, collegiality, and open communication with Arvada, Arvada's Consultants, and Arvada's residents so that the goals and objectives of each are clearly understood, potential problems are resolved promptly, and upon completion, the Project is deemed a success by all interested parties.

1.5. **Cooperation and Coordination with Utilities.** Xcel Energy, Comcast, and CenturyLink will be relocating their overhead utilities underground from Garrison Street to Allison Street and along Allison Street during construction of the Project. The Contractor shall cooperate with the utility owners in their removal and relocation operations so that progress is expedited, duplication of work is minimized and service interruptions are avoided. It shall be the contractor's responsibility to make all arrangements with the utility owner(s) for utility relocations or adjustments if required to install the curbs and to coordinate the sequence of such work to eliminate possible conflict with construction progress. The contractor shall provide any advance notice required by the utility owner(s) and all applicable franchise agreements prior to commencing any work affecting said utility(ies). Work involving changes in, or interference with, utility service shall be done at such times and in such a manner that it will cause the least interference with the proper handling and delivery of the utility service to the receiving customers.

1.6. **Unidentified Utilities.** Attention is directed to the possible existence of underground facilities not known to the City and therefore not shown on the plans or in a location different from that which is indicated on the plans or in the special provisions. The contractor shall take reasonable steps to ascertain the exact location of all underground facilities prior to doing work that may damage such facilities or interfere with their service. If the contractor discovers underground facilities not indicated on the plans, he shall immediately give the Engineer and the utility owner written notification of the existence of such facilities and coordinate the rearrangement/relocation of the facility as necessary.

1.7. **Repair or Delay Due to Utility Relocations or Repair.** Approximate utility locations are shown on the plans. The contractor shall be responsible for prompt repair of any damage caused to utilities whether or not such utilities are shown or not shown on the plans. In no way will additional payment be made for time for the repair or relocation of utilities that are damaged during construction whether properly marked or unmarked in the field. Absent extraordinary circumstances, Contract Time will not be adjusted to account for delays due to utility repair or relocation. Should a delay in utility repair or relocation be significant enough that the contractor decides to demobilize from the project site; no additional payment shall be made for remobilization to the project site once the utility has been

repaired and/or relocated. Should the contractor desire to have any rearrangement made in any utility facility for his convenience in order to facilitate his construction operations, which rearrangement is in addition to, or different from the rearrangements indicated on the plans or in the special provisions, he shall make whatever arrangements are necessary with the owners of such utility for such rearrangement and bear all expenses in connection therewith.

- 1.8. **Extra Excavation Work.** Should the Contractor desire and/or choose to perform any additional excavation work required for utility adjustments and/or repairs on behalf of the utility owner in order to expedite construction and minimize delays and down time, the City shall in no way be responsible for costs associated with this additional work done for the utility owner.
- 1.9. **No Additional Payments for Utility Relocation/Repair Work.** No additional payment will be made for field verifying all utility locations whether shown or not shown on the plans, except as shown in the bid schedule and this is the maximum allowance or number of testholes, whichever is greater, coordination with utility companies, utility relocations or down time due to utility relocations or repairs, but shall be considered a subsidiary obligation of the contract.
- 1.10. **Preparation/Sufficiency of Site.** Before commencing the Work, the Contractor shall (i) visit and thoroughly inspect the Project Site and any structure(s) or other man-made features to be modified and become familiar with local conditions under which the Project will be constructed and operated; (ii) familiarize itself with the survey, including the location of all existing buildings, utilities, conditions, streets, equipment, components and other attributes having or likely to have an impact on the Project; (iii) familiarize itself with Arvada's engineering and design requirements, design objectives, and budget for the Project; (iv) familiarize itself with pertinent Project dates and programming needs, including the Project schedule; (v) review and analyze all Project geotechnical, environmental, and construction materials tests, investigations and recommendations, (vi) review all as-built and record drawings, plans and specifications; and (vi) gather any other information necessary for a thorough understanding of the Project. Claims by Contractor resulting from Contractor's failure to familiarize itself with the Site or pertinent documents shall be deemed waived.
- 1.11. **Contract Documents.** The Contract Documents are incorporated herein by reference. The term "Contract Documents" means and includes the following:
 - A. Arvada's Request for Proposal, CSB-18-ST-40 ("CSB"), including all exhibits and/or addenda;
 - B. Contractor's Response to CSB-18-ST-40, Advertisement for Bid, Bid Proposal, Bid Schedule, Bid Bond;
 - C. Notice of Award;
 - D. Performance and Payment Bond;
 - E. Notice(s) to Proceed;
 - F. Change Orders (if any);
 - G. City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements;
 - H. Terms and Conditions of the Temporary Easements;
 - I. Requests for Information and Responses (if any);
 - J. All supplementary requirements regarding wage rates, E.E.O., affirmative action and all other Federal-State requirements as outlined in the specifications.
- 1.12. **Interpretation of Contract Documents.** In the event of conflicts or discrepancies among the Contract Documents, the documents shall govern in the following order: (1) the Agreement; (2) Arvada's Request for Proposal; (3) City of Arvada Engineering Code of Standards and

Specifications for the Design and Construction of Public Improvements; (4) Contractor's Response to Arvada's Request for Proposals; (5) Change Orders; (6) Requests for Information and Response.

ARTICLE 2. ARVADA'S DUTIES, OBLIGATIONS AND RESONSIBILITIES

- 2.1. **Project Information.** Contractor acknowledges that Arvada has provided Contractor with information regarding Arvada's requirements for the Project as set forth in the Contract Documents, including Project Plans, Specifications and Budget.
- 2.2. **Arvada's Budget.** Arvada has established and will update an overall budget for the Project, including amounts allocated for construction, Arvada's other costs, and reasonable contingencies related to these costs as appropriate.
- 2.3. **Arvada's Representative.** Arvada will designate a representative authorized to act on Arvada's behalf with respect to the Project.
- 2.4. **Purpose of Arvada's Review.** Arvada's review, inspection, or approval of any Work, Design Documents, Applications for Payment, or other submittals shall be solely for the purpose of determining whether the same are generally consistent with Arvada's standards, policies and requirements. No review, inspection, or approval by Arvada of such Work or documents shall relieve Contractor of its responsibility for the performance of its obligations under the Agreement or the accuracy, adequacy, fitness, suitability, or coordination of its Construction Services. Approval by any governmental or other regulatory agency or other governing body of any Work, Design Document, or the Construction Documents shall not relieve Contractor of responsibility for the performance of its obligations under this Agreement. Payment by Arvada pursuant to the Agreement shall not constitute waiver of any of Arvada's rights under the Agreement or at law, and Contractor expressly accepts the risk that defects in its performance, if any, may not be discovered until after payment, including final payment, is made by Arvada. Notwithstanding the foregoing, reasonable notice shall be given by Arvada to the Contractor if Arvada becomes aware of any fault or defect in the Project or non-conformance with the Contract Documents.

ARTICLE 3. CONSTRUCTION SERVICES REQUIREMENTS AND STANDARDS

- 3.1. **Quality of Construction Services.** Contractor shall be responsible for the quality, completeness, accuracy, and coordination of the Work. Contractor shall provide Construction Services that meet all industry standards, including all environmental and regulatory requirements. Contractor shall provide for all testing and inspections required by sound construction practices and by governmental authorities having jurisdiction over the Project.
- 3.2. **Pre- and Post- Construction Photographs.** Contractor shall document via photograph each property before the commencement of any disturbance or construction, and Contractor shall document each property after construction is completed. Copies of the photographs shall be promptly provided to Arvada.
- 3.3. **Arvada's Right to Carry Out the Work.** If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a seven day period after written notice from Arvada to commence and continue correction of such default or neglect with diligence and promptness, Arvada may after such seven-day period, without prejudice to other remedies Arvada may have, correct such deficiencies. In such case, an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for any Consultant's additional services and expenses made necessary by such default, neglect or failure. Such action by Arvada and amounts charged to the Contractor are both subject to prior review and confirmation by the Consultant. If payments then or

thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to Arvada within ten days of receipt of an invoice for such amounts from Arvada.

- 3.4. **Legal Standard.** Consultant shall furnish construction services in accordance with design standards currently practiced by construction professionals on projects similar in size, complexity and cost to the Project.
- 3.5. **Construction Standards.** Contractor shall perform all services in accordance with requirements of governmental agencies having jurisdiction over the Project, City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements, and the requirements set forth in the Contract Documents. In addition, the Contractor's work shall comply with all applicable building codes, accessibility laws and regulations, environmental regulations, and other applicable legal requirements in effect at the time of the work. To the extent Arvada's standards exceed applicable legal requirements, such standards shall be met unless Contractor obtains a variance from Arvada in writing.
- 3.6. **Permits.** Contractor shall be responsible for obtaining all necessary permits and other governmental approvals necessary for the development of the Project and shall obtain the same at the times necessary to meet the Project schedule. Contractor's responsibility includes providing environmental services and permitting coordination as further described in the Contract Documents.
- 3.7. **Notice of Non-Compliance.** The Contractor shall carefully study and compare the Contract Documents with each other and with information furnished by Arvada, and shall at once report to Arvada any design errors, inconsistencies or omissions discovered as well as any foreseeable constructability issues arising from the design. If the Contractor performs any construction activity knowing or should have known it involves an error, inconsistent, omission or constructability issue in the Contract Documents without such notice to Arvada, the Contractor shall assume full responsibility for such performance and shall bear the full costs for correction, including reimbursement for any delay caused to the Project.

ARTICLE 4. CHANGES TO THE WORK

- 4.1. **Minor Contract Revisions.** Miscellaneous modifications in the Work, ordered by Arvada in the form of a Field Order, will be considered a Minor Contract Revision. Payment for accepted work performed under this pay item "Minor Contract Revision" will be made in accordance with General condition 2.17 of the Arvada Engineering Code of Standards and Specifications.
- 4.2. **Field Orders.** An authorized representative of the Contractor shall acknowledge receipt of Field Orders by promptly signing all written field orders delivered to the job site. Verbal field orders given by Arvada will be recorded in writing in the municipal inspector's daily report that is to be signed by the Contractor's authorized representative.
- 4.3. **Field Engineered Changes.** Arvada may modify the construction plans including changing the slope and alignment of flow lines and appurtenances or modifying other improvements as necessary to accommodate construction around existing utilities or other field conditions. No additional compensation shall be made for minor costs and inconveniences incurred while performing field engineering changes as directed by Arvada or its Consultant. No additional compensation shall be made for any down time encountered while Arvada determines what field engineered changes would be appropriate to accommodate construction around existing utilities or other field conditions. Reasonable time must be allowed for Arvada or its Consultant to design field engineered changes. Any additional costs for performing field engineered construction changes to accommodate existing utilities or other field conditions and for also allowing Arvada reasonable time to design field

engineered changes as necessary to complete the work shall be considered a subsidiary obligation of the contract.

- 4.4. **Pre-Construction Meetings.** Contractor agrees to assist in the preparation for and to participate in any pre-construction meetings with Arvada and its Consultant.
- 4.5. **Arvada Change Orders.** Arvada may, by written order signed by Arvada, at any time, and without notice to any surety, and subject to all appropriate adjustments, make changes within the general scope of this Contract in any one or more of the following: (a) changes in scope of services; (b) completion date; (c) contract amount; (d) any applicable material modifications; and, (e) any other matters that the parties deem necessary.
- 4.6. **Contractor Requested Change Orders.** The Contractor may request a Change in the Work ("Requested Change Order"), including one or more of the following: (a) changes in scope of services; (b) completion date; (c) contract amount; (d) any applicable material modifications; and, (e) any other matters that the parties deem necessary.
- 4.7. **Change Order Contents.** Any Requested Change Order shall include (a) a detailed description of the requested change to the original contract; (b) itemized documentation of any subcontractor costs; (c) the total costs associated with the proposed change; (d) the impact on the project completion date, if any, associated with the proposed change; and (e) a statement of the contractual basis for the requested change.
- 4.8. **Basis for Change Order Requests.** The following may be considered a valid basis for requesting a Change Order: (a) Contract Document error or omission; (b) Arvada induced enhancement; (c) unforeseeable constructability issue; (d) unforeseeable geotechnical issue. The following will not be considered a valid basis for requesting a Change Order absent extraordinary circumstances: (a) utility relocation; (b) utility conflicts; (c) foreseeable geotechnical issue; (d) foreseeable constructability issue; (e) defective construction.
- 4.9. **Written Authorization Required.** The Contractor shall not proceed with any change in the Work without the appropriate written authorization.

ARTICLE 5. SUPERVISION AND CONSTRUCTION PROCEDURES

- 5.1. **Supervision.** The Contractor shall supervise and direct the Work using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the Work under this Contract, unless Contract Documents give other specific instructions concerning these matters.
- 5.2. **Acts and Omissions of Subcontractors and Agents.** The Contractor shall be responsible to Arvada for acts and omission of the Contractor's employees, Subcontractors, and their agents and employees, and other persons performing portions of the Work under a contract with the Contractor
- 5.3. **Inspection and Subsequent Work.** The Contractor shall be responsible for inspection or portions of Work already performed under this Contract to determine that such portions are in proper condition to receive subsequent Work.

ARTICLE 6. COMPENSATION.

- 6.1. **Completion of Services.** Contractor will furnish all material, supplies, tools, equipment, labor, and other services necessary for the completion of the Work within Arvada's timeframe and monetary limitations. The prices contained in the Contractor's Response to CSB-18-ST-40 shall remain fixed and firm for the duration of this Agreement.
- 6.2. **Payment for Services.** At least twenty (20) days before the date established for each monthly progress payment, the Contractor shall submit to Arvada an itemized Application for Payment for construction completed in accordance with the Bid Schedule. Such application shall be supported by such data substantiating the Contractor's right to payment as Arvada may require, such as copies of invoices or requisitions from subcontractors and material supplies and reflecting retainage. Arvada shall pay NET 30 for services performed in accordance with the Bid Schedule and with this Agreement, but in no event shall the total Contract Amount exceed \$12,360,000.00 absent a properly executed Change Order. Measurement of the work performed and monthly payment shall be made in accordance with requirements of the Measurement and Payment Section in the Contract Documents unless otherwise specifically provided herein.
- 6.3. **Non-Conforming Materials or Construction.** Where materials installed or the finished product fails to meet minimum requirements of the Contract Documents, the basis of determining final payment to the Contractor shall be determined in accordance with the current revised Section 105.30 of the Colorado Department of Transportation Standard Specifications.
- 6.4. **Retainage Requirements.** Contractor agrees to submit monthly invoices together with any retainage requirements as prescribed by Colorado state statutes (*see e.g.*, C.R.S. § 24-91-101 et seq). Payment from Arvada will be paid NET 30 days. Invoices will accurately reflect actual work completed by Contractor and its subconsultants or subcontractors.

ARTICLE 7. MISCELLANEOUS.

- 7.1. **Governing Law and Venue.** This Agreement shall be governed by and construed in accordance with the laws of the State of Colorado without regard to its choice of law provisions and venue shall lie in the courts in Jefferson County, Colorado.
- 7.2. **Waiver.** No provision of this Agreement may be waived except by written agreement of the parties. A waiver of any provision on one occasion shall not be deemed a waiver of that provision on any subsequent occasion, unless specifically stated in writing. A waiver of any provision shall not affect or alter the remaining provisions of this Agreement.
- 7.3. **Strict Compliance.** No failure of Arvada to insist upon strict compliance by the Contractor with any provision of the Contract Documents shall operate to release, discharge, modify, change or affect any of the Contractor's obligations.
- 7.4. **Successors and Assigns.** Arvada and Contractor, respectively, bind themselves, their partners, successors, assigns and legal representatives to the other party to this Agreement and to the partners, successors and assigns of such other party with respect to all covenants of this Agreement. Contractor shall not assign (whether partially or wholly) this Agreement whether by operation of law or otherwise, without the written consent of Arvada. If Contractor makes an assignment in accordance with this provision, Contractor shall nevertheless remain legally responsible for all obligations arising under the Agreement, unless otherwise agreed in writing by Arvada.
- 7.5. **Third Party Beneficiaries.** This Agreement shall inure solely to the benefit of the parties hereto and their successors and assigns, and, except as otherwise specifically provided in this Agreement,

nothing contained in this Agreement is intended to or shall create a contractual relationship with, or any rights or cause of action in favor of, any third party against either Arvada or the Contractor.

- 7.6. **Additional Documents.** The parties agree to execute any additional documents and to take any additional action that is necessary to carry out this Agreement.
- 7.7. **Binding Effect.** This Agreement shall inure to the benefit of, and be binding upon, the parties, their respective legal representatives, successors, heirs, and assigns; provided, however, that nothing in this paragraph shall be construed to permit the assignment of this Agreement except as otherwise expressly authorized herein. All provisions of this Agreement which contain continuing obligations shall survive its expiration or termination.
- 7.8. **Paragraph Captions.** The paragraph captions in this Agreement are set forth only for the convenience and reference of the parties and are not intended in any way to define, limit, or describe the scope or intent of this Agreement.
- 7.9. **Integration, Amendment, and Severability.** This Agreement represents the entire agreement between the parties, and there are no oral or collateral agreements or understandings. This Agreement may be amended only by an instrument in writing signed by the parties. If any other provision of this Agreement is held invalid or unenforceable, no other provision shall be affected by such holding, and all of the remaining provisions of this Agreement shall continue in full force and effect if the essential terms and conditions of this Agreement for both parties remain valid, legal, and enforceable.
- 7.10. **Notices.** Any notice or notification required or permitted by the Agreement shall be in writing and shall be deemed to have been sufficiently given for all purposes if sent by certified mail or registered mail, postage and fees prepaid, addressed to the party to whom such notice is to be given at the address set forth on the signature page below, or at such other address as has been previously furnished in writing, to the other party or parties. Such notice or notification shall be deemed to have been given when deposited in the United States mail.
- 7.11. **Binding Authority.** Contractor represents and affirms that the signature page hereof accurately states the full legal name of Contractor (whether as a corporation, partnership, limited liability company, sole proprietorship, or other), contains all requisite signature(s) on behalf of Contractor, has been properly acknowledged by attestation, notary acknowledgment, or both, and in all other respects is effective to bind Contractor, in accordance with all applicable statutes, regulations, resolutions, rules, bylaws, agreements, or similar sources of authority or limitation. This Agreement may be executed in counterpart(s), each of which shall be deemed to be an original, and all of which, taken together, shall constitute one instrument.
- 7.12. **Preferences in Employment of Colorado Labor.** To the extent that obligations and responsibilities may be established by C.R.S. § 8-17-101 *et seq.*, as amended, with respect to certain public entities and those contracting therewith as to the procurement of services:
- a. Colorado labor shall be employed to perform eighty percent (80%) of the work.
 - b. Any waiver of this requirement must comply with C.R.S. § 8-17-101 *et seq.*, as amended.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement which shall be deemed an original on the date first above written.

CITY OF ARVADA, COLORADO

Marc Williams, Mayor
8101 Ralston Road
Arvada, CO 80002

ATTEST/WITNESS:

City Clerk

APPROVED AS TO FORM:

For Rachel A. Morris, City Attorney

By: _____

CONTRACTOR

Name: Michael D. Walters
Title: CFO, Harmon Infrastructure, Inc.
mwalters@hamoninfrastructure.com

Exhibit 1

Arvada's CSB-18-ST-40
Ralston Road – Yukon Street to Garrison Street



COMPETITIVE SEALED BID

BID #: CSB-18-ST-40

Title: Ralston Road – Yukon Street to Garrison Street

CSB Issued: 12/30/2020

Pre-bid Meeting: 1/13/2021, 11 am local time
<https://meet.google.com/qxh-vorw-cwt?hs=122&authuser=0>
 Phone Number: 1-317-763-2260 PIN: 563 133 119#

Questions Deadline: 1/18/2021, 12:00 pm local time
 Questions and responses will be posted on BidnetDirect.com

Bids Due By: 1/28/2021, 3:00 pm local time

Delivery Date: 730 calendar days after notice to proceed

Delivery address: **Electronic Submissions must be submitted online at BidNetDirect.com.**

Limit the # of separate submission documents, preferably to 1, and the company name must start the uploaded file name as these will be moved to a shared Team Drive for evaluation. Late responses will not be considered for award.

For additional information, contact: Nancy Allen, nallen@arvada.org

Documents included in this BID:

Cover Page	page 1
Advertisement for Bidders	page 2
General Terms and Conditions	page 3
Special Terms and Conditions for Bidders	page 6
Insurance Requirements	page 8
Submittal Forms to be Completed and Returned	
• Bid Bond	page 9
• Bid Proposal	page 10
• Bid Schedule	page 11
Submittal Checklist and References to be Completed and Returned	page 16
Preview of Documents if Awarded	page 18
Project Special Provisions	page 33

ARVADA'S VISION MISSION AND VALUES

VISION: We dream big and deliver.

MISSION: We are dedicated to delivering superior services to enhance the lives of everyone in our community.

VALUES:

Innovation – We excel in creativity, flexibility and the use of best practices while valuing diverse backgrounds, ideas and perspectives.

Passion – We are a high performing, inclusive team inspiring each other to pursue excellence.

Opportunity – We value our diversity, embrace possibilities, face challenges, persevere and take action to deliver quality results.



ADVERTISEMENT FOR BIDS

Submit bids electronically on **Bidnetdirect.com** for the construction of City of Arvada, Project No. 18-ST-40, Project Title: Ralston Road – Yukon Street to Garrison Street by **3:00 pm local time on January 28, 2021**.

The BID DOCUMENTS, consisting of Advertisement for Bids, General Terms and Conditions, Special Terms and Conditions, Insurance Requirements, Project Special Provisions, Addendum when issued, Bid Bond, Bid Proposal, Bid Schedule, Performance and Payment Bond, Submittal Checklist and References, Sample documents, and the Project Drawings may be examined at the following location:

- www.bidnetdirect.com

No cost bid documents may be obtained at www.bidnetdirect.com on or after December 30, 2020.

ESTIMATED QUANTITIES OF THE MAJOR ITEMS OF WORK ARE:

37,850 SY	REMOVAL OF ASPHALT MAT
5,450 SY	REMOVAL OF SIDEWALK
12,100 LF	REMOVAL OF CURB AND GUTTER
18,600 TON	HOT MIX ASPHALT
6,200 SY	CONCRETE SIDEWALK (6 INCH)
11,400 LF	6" VERTICAL CURB AND GUTTER
1,820 LF	STORM SEWERS HPPE
33 EA	STORM INLETS
11 EA	MANHOLE SLAB BASE
2,000 LF	12" PVC AND FUSIBLE PVC WATERLINE
25 EA	FIRE HYDRANT
4,400 LF	2" & 3" ELECTRICAL CONDUIT (BORED)
99 EA	LIGHT STANDARD AND LUMINAIRE
8,300 LF	IRRIGATION LATERAL
	STREETSCAPE ELEMENTS (MONUMENTS, DISTRICT
	MARKERS, TREE GRATES, BENCHES)
	TRAFFIC SIGNAL EQUIPMENT
	TRAFFIC CONTROL

Bidders, subcontractors and suppliers must be familiar with the current City of Arvada *Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements*, dated January 12, 2016, which will be combined with the Bid Documents to form the Contract Documents for the Project. A copy of the Standards may be obtained from the office of the City Engineer upon a non-refundable payment of \$50.00. Holders will be notified when supplemental revisions and additions are available as they are adopted. The Standards are also available at no cost on the City's web site at www.arvada.org. Holders are responsible for keeping current their City of Arvada Engineering Code of Standards and Specifications

Date: 12/29/2020

CITY OF ARVADA



Jacqueline Rhoades, P.E.
City Engineer
8101 Ralston Road
Arvada, CO 80002

GENERAL TERMS AND CONDITIONS

1. PAYMENTS TO CONSTITUTE CURRENT EXPENDITURES. Financial obligations of the City of Arvada, if any, after the current fiscal year are contingent on funds for that purpose being appropriated, budgeted and otherwise made available by the City Council for the City of Arvada. The City of Arvada's obligations under the Agreement shall be from year to year only and shall not constitute a multiple-fiscal year direct or indirect debt or other financial obligation of the City of Arvada within the meaning of Article X, Section 20 of the Colorado Constitution.

2. TAXES. The City of Arvada is not subject to taxation. Contractor shall not invoice Arvada for any state, federal or local taxes whatsoever. Upon written notification by the City of Arvada, Contractor shall reimburse the City of Arvada in a timely manner for any taxes erroneously paid by the City of Arvada. The Colorado Department of Revenue, Certification of Exemption for Colorado State Sales/Use Tax account number for the City of Arvada is 98-01789-0000. An exemption certificate will be provided, where applicable, upon request.

3. NO INDEMNIFICATION BY ARVADA. The City of Arvada is prohibited by Article XI, Section 1, Colorado Constitution, from indemnifying anyone. Therefore, notwithstanding any provision in the response to solicitation or proposed contract, lease, escrow agreement or any other type of agreement to the contrary, the City of Arvada does not indemnify Contractor or anyone else under this Agreement.

4. INDEMNIFICATION OF CITY.

A. Contractor: Notwithstanding any provision in the response to solicitation or proposed contract, lease, escrow agreement or any other type of agreement to the contrary, Contractor agrees to investigate, defend, indemnify and hold harmless Arvada, its elected officials, officers, employees, agents, insurers, and representatives from and against any claims, costs, losses, expenses, demands, actions, or causes of action, including reasonable attorney fees and other costs and expenses of litigation, which may be asserted against or incurred by Arvada or for which Arvada may be liable, arising from the negligence, willful misconduct, or other fault of Contractor or its employees, agents, or subcontractors in performance of the Agreement. Nothing herein is intended to constitute a covenant, promise, or agreement to indemnify and hold harmless Arvada from any liability or damages directly caused by or attributable to Arvada's own negligence. Nothing herein intended to be nor may be construed as a waiver of the immunities, protections, or limitations on damages provided to Arvada by the Colorado Governmental Immunity Act, C.R.S. §§ 24-10-101 *et seq.*, as it may from time to time be amended.

(or)

B. Architect, Engineer, Surveyor Services for Public Works Construction: Contractor agrees to hold harmless and indemnify Arvada, its officers and employees, from and against any liability or any claims, suits, or actions arising out of, made, or asserted for any damage to persons or property resulting from errors, omissions or fault of Contractor in connection with the performance by Contractor of obligations under this solicitation and any subsequent Agreement with Arvada. Nothing herein is intended to constitute a covenant, promise, or agreement to indemnify and hold harmless Arvada from any liability or damages directly caused by or attributable to Arvada's own negligence. Nothing herein is intended to be nor construed as a waiver of the immunities, protections, or limitations on damages provided to Arvada by the Colorado Governmental Immunity Act, C.R.S. §§24-10-101 *et seq.*, as it may from time to time be amended.

5. NO OPINION OF COUNSEL LETTERS. Pursuant to Section 8.1 of the Arvada City Charter, the City Attorney provides advice to the City Council and City Officials in matters relating to their official powers and duties, and will perform such other duties as City Council may prescribe by ordinance or resolution. The City Attorney will not issue opinion of counsel letters, memoranda or statements to third parties, including, but not limited to that any contract or lease is binding on the public entity, enforceable, etc.

6. CONFIDENTIAL DOCUMENTS. Contractors may designate specific pages or sections within their submission as trade secret or confidential commercial information or as otherwise protected by law ("Confidential Information"). Documents and data that are considered Confidential Information shall be clearly marked as such and separated from the rest of the solicitation submission documents. Comingling is not acceptable. The City does not favor blanket assertions of Confidential Information. Please note that blanket assertions that merely classify and/or broadly claim information is confidential are insufficient as a matter of law. See, *International Brotherhood of Electrical Workers Local 68 v. Denver Metropolitan Major League Baseball Stadium District*, 880 P.2d 160 (Colo. App. 1994). Any information that will be included in any resulting contract cannot be considered Confidential. Under no circumstances may submission pricing information be considered Confidential. In the event a formal contract is entered into with the City and a portion of the Proposal/Response carries a designation indicating the Contractor believes it is Confidential Information, then the City agrees that it will use its best efforts to forward any request for the disclosure of the Confidential Information to the Contractor. By its submission of the Proposal/Response, Contractor agrees to promptly respond to the request for disclosure with any objections and reasons therefor in accordance with the Colorado Open Records Act C.R.S. §§24-72-101 *et seq.* and any other applicable law. Further, Contractor agrees to assume the obligation to defend, hold harmless, and indemnify the City in any legal proceeding that arises from non-disclosure of documents or data pursuant to the Contractor's objection.

7. OWNERSHIP OF WORK PRODUCT. The originals of all plans, reports, studies, data, or other materials or information relating to the Work that are produced by Contractor shall be delivered to and become the property of Arvada. Contractor may retain copies of any originals; however, no plans, reports, studies, data, or other materials or information relating to the Work shall be released to any person or entity without the prior written consent of Arvada. Nothing in this clause is intended to affect Contractor's right to use generic know-how learned in the course of providing services under the Agreement for the future benefit of the City of Arvada or others.

8. ASSIGNMENT. Contractor shall not assign the Agreement without the prior written consent of the City of Arvada, which will not be unreasonably withheld, conditioned, or delayed. Contractor may assign the Agreement to any successor to the business of the party by merger, consolidation, or sale of assets. No assignment shall be permitted that enlarges any duty, responsibility or obligation of the City of Arvada, or that limits, curtails, or diminishes any right or privilege of the City of Arvada without the City of Arvada's express written consent.

9. NO THIRD PARTY BENEFICIARIES. It is expressly understood and agreed that enforcement of the terms and conditions of the Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to Arvada and Contractor and nothing contained in the Agreement shall give or allow any such claim or right of action to any other third party on the Agreement. It is the express intention of Arvada and Contractor that any person other than Arvada or Contractor receiving services or benefits under the Agreement shall be deemed to be an incidental beneficiary only.

10. INDEPENDENT CONTRACTOR. Contractor and Arvada hereby represent that Contractor is an independent contractor for all purposes hereunder. As such, Contractor is not covered by any worker's compensation insurance or any other insurance maintained by Arvada except as would apply to members of the general public. Contractor shall not create any indebtedness on behalf of Arvada.

11. SUBCONTRACTING. Contractor shall not award work to subcontractor(s) in excess of fifty percent of the total contract price without Arvada's prior written approval. Contractor shall be responsible for any failure by any subcontractor or subcontractor personnel to perform in accordance with the Agreement or to comply with any duties or obligations imposed on Contractor under the Agreement to the same extent as if such failure to perform or comply was committed by Contractor or Contractor's personnel. Contractor shall be Arvada's sole point of contact regarding the services, including with respect to payment.

12. ILLEGAL ALIENS; PUBLIC CONTRACTS FOR SERVICES. To the extent that obligations and responsibilities may be established by C.R.S. §§8-17.5-101 *et seq.*, (as amended) (the "Act"), with respect to certain public entities and those contracting therewith as to the procurement of services:

- A. Successful Vendor ("Contractor") shall not knowingly employ or contract with an illegal alien to perform work under the Agreement or enter into a contract with a subcontractor that fails to certify to Contractor that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under the Agreement. Contractor confirms the employment eligibility of all employees who are newly hired for employment to perform work under this public contract for services through participation in either the E-Verify Program or Department Program (the "Program").
- B. Contractor is prohibited from using Program procedures to undertake pre-employment screening of job applicants while the Agreement is being performed.
- C. If Contractor obtains actual knowledge that a subcontractor performing work under the Agreement knowingly employs or contracts with an illegal alien, Contractor shall be required to:
 - (i). Notify the subcontractor and the City of Arvada within three (3) days that Contractor has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and
 - (ii). Terminate the subcontract with the subcontractor if within three (3) days of receiving the above notice the subcontractor does not stop employing or contracting with the illegal alien; except that Contractor shall not terminate the subcontract if during such three days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien.
- D. Contractor shall comply with any reasonable request by the Colorado Department of Labor and Employment made in the course of an investigation that the department is undertaking pursuant to the authority established in the Act.
- E. Any provision of the Agreement to the contrary notwithstanding, if Contractor violates any provision of this Section, the City of Arvada may terminate the Agreement, without breach or default by the City of Arvada, and Contractor shall be liable for actual and consequential damages to the City of Arvada arising out of such violation.
- F. Contractor represents that, prior to executing the Agreement, Contractor has certified that at the time of the certification, Contractor does not knowingly employ or contract with an illegal alien who will perform work under this public contract for services and Contractor will participate in either the E-Verify Program or Department Program in order to confirm the employment eligibility of all employees who are newly hired for employment to perform work under this public contract for services. By execution of this Agreement, Contractor shall be deemed to have renewed such certification.
- G. Contractor acknowledges its responsibility to comply with the certification requirement pursuant to C.R.S. §8-17.5-102(2)(b)(I) (as amended).

13. NO WAIVER OF GOVERNMENTAL IMMUNITY. Nothing contained in this or any of the exhibits attached thereto shall be construed as a waiver of any of the immunities, limitations, privileges, rights, procedures, or requirements contained in the Colorado Governmental Immunity Act, C.R.S. §§24-10-101 *et seq.*

14. RIGHT TO TERMINATE. The City of Arvada shall have the right to terminate, without cause, the Agreement. Any such termination shall not be considered a breach of the Agreement or any extension thereof. In the event of termination by the City of Arvada for convenience, Contractor will be paid for requested work performed up until the time of termination by the City of Arvada, not to exceed the total amount of the contract price agreed upon by the parties.

15. COMPLIANCE WITH ALL LAWS. All of the services performed under this Agreement by Contractor shall comply with all applicable laws, rules, regulations and codes of the United States and State of Colorado, and with the charter, ordinances, rules and regulations of the City of Arvada.

16. WAIVER OF BREACH. A waiver by any party to the Agreement or the breach of any term or provision of the Agreement shall not operate or be construed as a waiver of any subsequent breach by either party.

17. GOVERNING LAW AND VENUE. Notwithstanding any provision in the response to solicitation or proposed contract, lease, escrow agreement or any other type of agreement to the contrary, the Agreement shall be governed by the laws of the State of Colorado. Venue for any action arising under the Agreement or for the enforcement of the Agreement shall be in the appropriate court for Jefferson County, Colorado.

18. FORCE MAJEURE. Any delays in or failure of performance by any party of his or its obligations under the Agreement shall be excused if such delays or failure are a result of acts of God, fires, floods, strikes, labor disputes, accidents, regulations or orders of civil or military authorities, shortages of labor or materials, or other causes, similar or dissimilar, which are beyond the control of such party.

19. BINDING ARBITRATION PROHIBITED. The City of Arvada does not agree to binding arbitration by any extra-judicial body or person. Any provision to the contrary in response to the solicitation, or incorporated by reference, shall be null and void.

20. EQUAL EMPLOYMENT OPPORTUNITY. Contractor shall not refuse to hire, discharge, promote or demote, or discriminate in matters of compensation against any person otherwise qualified solely because of race, creed, sex, color, national origin or ancestry, religion, disability, age, sexual orientation, gender identity, veteran status, or any other basis prohibited by federal, state, or local law.

21. BINDING AUTHORITY. Contractor represents and affirms that the signature page hereof accurately states the full legal name of Contractor (whether as a corporation, partnership, limited liability company, sole proprietorship, or other), contains all requisite signature(s) on behalf of Contractor, has been properly acknowledged by attestation, notary acknowledgment, or both, and in all other respects is effective to bind Contractor, in accordance with all applicable statutes, regulations, resolutions, rules, bylaws, agreements, or similar sources of authority or limitation.

22. PREFERENCES IN EMPLOYMENT OF COLORADO LABOR. To the extent that obligations and responsibilities may be established by C.R.S. § 8-17-101 *et seq.*, as amended, with respect to certain public entities and those contracting therewith as to the procurement of services:

- a. Colorado labor shall be employed to perform eighty percent (80%) of the work.
- b. Any waiver of this requirement must comply with C.R.S. § 8-17-101 *et seq.*, as amended.

23. RETAINAGE REQUIREMENTS. Contractor agrees to submit monthly invoices together with any retainage requirements as prescribed by Colorado state statutes (*see e.g.*, C.R.S. §§24-91-101 *et seq.*). Payment from Arvada will traditionally be paid NET (15) days but no later than NET thirty (30) days. Invoices will accurately reflect actual work completed by Contractor.

SPECIAL TERMS AND CONDITIONS FOR BIDDERS

1. RECEIPT AND OPENING OF BIDS. Bids submitted electronically on the BidnetDirect.com web site only become available to the City of Arvada after the Bid closes.

Bidder shall assume full responsibility for timely upload of bid to the Bidnetdirect web site. The City reserves the right, where its best interest will be served, to accept or reject any conditional or qualified Bid.

2. QUANTITY AND NATURE OF THE WORK. Bidders must satisfy themselves of the accuracy of the estimated quantities in the Bid Schedule by examination of the site and a review of the drawings and specifications including Addendum. After Bids have been submitted the Bidder shall not assert that there was a misunderstanding concerning the quantities of work or of the nature of the work to be done.

3. CONTENTS OF BID. Contractors are required to submit Bids with the following conditions:

- 1) Contractors shall make all investigations necessary to inform themselves of the sites affected and the work required by the Solicitation.
- 2) Any official interpretation of the Solicitation may only be issued by an authorized agent of the City. The City shall not be responsible for other interpretations offered by employees not authorized.
- 3) The City shall issue Addenda if substantial changes are required which may impact the content and submission of Bids. A copy of such addenda will be publicly posted with the original CSB posting.
- 4) The apparent silence or omissions within this Solicitation regarding a detailed description of the materials or services shall be interpreted to mean that only the best commercial practices are to prevail and that only materials and workmanship of first quality are to be provided.

4. BID SECURITY. Each Bid must be accompanied by a PHOTO of the Bid Bond, on the form attached to these contract documents, payable to the City for five (5) percent of the total amount of the Bid. As soon as the bid Prices have been compared, the City will notify an intent to award on the Bidnetdirect.com web site. The vendor who is named as the intent to award Contractor must submit the physical Bid Bond within 10 days or the intent to award may be revoked. The Bid Bond of the successful Bidder will be retained until the Payment and Performance Bond has been executed and approved after which it will be returned. A certified check may be used in lieu of a Bid Bond.

5. POWER OF ATTORNEY. Attorneys-in fact who sign Bid Bonds or Payment and Performance Bonds must file with each bond a certified and effective dated copy of their power of attorney.

6. QUALIFICATION OF BIDDER. The City may make such investigation as it deems necessary to determine the ability of the Bidder to perform the work. The City reserves the right to reject any Bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the City that such Bidder is properly qualified to carry out the obligation of the Contract Agreement and to complete the work contemplated therein. The City reserves the right, before awarding the contract, to require a Contractor to submit evidence of its qualifications including, but not limited to, financial, technical and other qualifications, as well as past performance with the City, for consideration in making the award in the best interest of the City.

7. AWARD OF CONTRACT. Bids shall be awarded to the lowest-priced responsible and most responsive bidder whose bid meets the requirements and criteria set forth in the CSB within the limits of funds available and that best serves the City's interest. The City, within seven (7) calendar days of receipt of acceptable Contract Security and triplicate copies of the Contract Agreement, signed by the Bidder to whom the Contract was awarded, shall sign the Contract Agreement and return to the Bidder an executed copy of the Contract Agreement. Should the City not execute the Contract Agreement within such period, the Bidder may, by written notice, withdraw his signed Contract Agreement. Such notice of withdrawal shall be effective upon receipt of the written notice by the City.

8. NOTICE OF AWARD AND FAILURE TO ENTER INTO CONTRACT. The party to whom the Contract is to be awarded will be required to execute the Contract Agreement in triplicate, obtain Certificates of Insurance and a Performance and Payment Bond, as Contract security, within five (5) calendar days from the date the Notice of Award is delivered to the Bidder. The Notice of Award shall be accompanied by the Contract Agreement and the necessary Performance and Payment Bond forms. In case of failure of the bidder to execute the Contract Agreement and provide satisfactory Insurance and Contract Security, the City may at his option, consider the Bidder in default, in which case the Bid Bond accompanying the Proposal shall become the property of the City.

9. CONTRACT DOCUMENTS. The Contract Documents consisting of the Bid Documents, which include the Advertisement for Bids, Information for Bidders, General Terms and Conditions, Special Terms and Conditions, Insurance Requirements, Project Special Provisions, Addendum, Bid Bond, Bid Proposal, Bid Schedule, Vendor Submittal Form, Construction Drawings, Supplemental Specifications and the City of Arvada "Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements", dated January 12, 2016, which include the Measurement and Payment specifications, and the attached Notice of Award form, Contract Agreement form, Performance and Payment Bond form, Notice to Proceed form, and Change Order form, when combined, contain the provisions required for the construction of the Project. Information obtained from an agent or employee of the City or any other person shall not affect the risks or obligations assumed by the Contractor or relieve him from fulfilling any of the conditions of the contract.

10. TERM OF CONTRACT. This contract shall commence on the date of the purchase order or contract execution and shall

remain in effect until such time as the commodities, equipment and/or services acquired in conjunction with this Bid have been accepted by the City's authorized representative. Any required warranty period which exceeds this term shall remain in full force for the duration of the warranty period.

11. PRICING SHALL BE FIXED AND FIRM. The prices offered by the Contractor shall remain fixed and firm for at least 90 ninety days. No changes in the Bid shall be allowed after the date and time of the Bid deadline due to error by the Contractor.

12. CONTRACT SECURITY. A Performance and Payment Bond, on the form attached to these contract documents, in the amount of 100% of the Contract price, with a corporate surety approved by the City, will be required for the faithful performance of the Contract.

14. MODIFICATION OR WITHDRAWAL OF BIDS BY CONTRACTOR.

Modifications to Bids- Changes to the Bid after the submission deadline shall be allowed only when the Contractor can show convincing evidence that an unintentional factual mistake was made. Modification requests must be made in writing. Any modification submitted to the City must have the Contractor's name, address, Solicitation Number and title included.

Withdrawal of Bids- If a Bid is withdrawn by Contractor after the Bid Opening, the City may, at its option, suspend the Contractor for a six (6) month period following the withdrawal. Withdrawal of the Bid after the Bid Opening will result in the Contractor forfeiting the provided Bid Bond.

15. REJECTION OF OFFERS BY CITY.

- A. The City may reject a Bid, in whole or in part, for reasons including, but not be limited to:
 - 1) The Contractor misstates or conceals any material fact in its Proposal;
 - 2) The Contractor's Bid does not strictly conform to the law or requirements of the Solicitation;
 - 3) The Bid expressly requires or implies a conditional award that conflicts with the method of award stipulated in the Special Conditions;
 - 4) The Bid does not include documents which are required for submission with the Bid; or
 - 5) The Bid has not been executed by the Contractor through an authorized signature.
- B. The City may, at its sole and absolute discretion:
 - 1) Reject all or parts of Bids submitted by prospective Contractors;
 - 2) Re-advertise this Solicitation;
 - 3) Postpone or cancel the Solicitation;
 - 4) A Bid may not be accepted from, nor any contract be awarded to, any person or firm which
 - a) is in arrears to the City for any debt or Contract, or is a defaulter as surety for any obligation to the City.
 - b) has failed to perform faithfully any previous contract with the City, State or Federal governmental for a minimum period of one (1) year after this previous Contract was terminated for cause.
 - c) has pending litigation against the City on the date and time that the Solicitation is due.

16. CLARIFICATION AND MODIFICATIONS. The contract resulting from this solicitation will be subject to the Solicitation materials, City Ordinance, State and Federal Statutes. When conflicts occur, the highest authority shall prevail. Contractors are required to indicate any variances to the terms, conditions, requirements and specifications of this Solicitation; no matter how slight. If variations are not stated in the Contractor's Bid, it shall be agreed that the Contractor's Bid fully complies with all conditions identified in this Solicitation.

17. ELIGIBILITY OF CONTRACTORS: MUST BE ENGAGED IN SUPPLYING PRODUCTS OR SERVICES RENDERED.

Bids will only be considered from firms which have been engaged in the business of manufacturing or distributing the goods and/or performing services described in this Solicitation. Contractors must be able to produce evidence that they have an established satisfactory record of performance for at least two (2) years and have sufficient finances and structure to ensure that they can satisfactorily execute the Contract requirements, as determined by authorities of the City. The City reserves the right, before awarding the contract, to require a Contractor to submit evidence of its qualifications including, but not limited to, financial, technical and other qualifications, as well as past performance with the City, for consideration in making the award in the best interest of the City.

18. ELECTRONIC PAYMENT METHODS - CITY OF ARVADA SINGLE USE ACCOUNT.

Contractors are encouraged to consider the following method of payment.

Single Use Account: The City incorporates the use of Single User Accounts as an option to seamlessly process payment of larger dollar purchase orders and contracts to vendors/contractors/providers. A secure, one-time payment transaction account processes to pay invoices via the Contractor's merchant bank. Invoice payments have an enhanced speed-of-pay cycle that can significantly benefit cash flow.

19. CONDITIONS OF WORK AND OBLIGATION OF BIDDER. Each Bidder is responsible for independently inspecting the site and for reading and being thoroughly familiar with the Contract Documents and for providing the names of major suppliers and sub-contractors in the space provided on the Bid Proposal form. The failure or omission of any Bidder to do any of the foregoing shall in no way relieve the Bidder from any obligation in respect to his Bid Proposal.

20. CONTRACTOR LICENSE. The Contractor to whom the contract is awarded and any subcontractors employed by the Contractor must have or acquire the appropriate Contractor's license issued by the City of Arvada Engineering Division,

including submittal of license bond, necessary insurance certificate, and license fee before initiating any work. The Contractor and any subcontractors will also be required to obtain a no charge Public Improvements Permit from the City of Arvada Engineering Division prior to initiating any and all work on this project.

21. PERFORMANCE MEASUREMENTS FOR SERVICES MORE THAN \$15,000.

The City has incorporated Performance Management into its organizational culture. The City will monitor and report on the following performance measures. These measures will determine, in part, renewals and eligibility for future awards. Measures include: (a) safety as defined by observation and OSHA reportable injuries, (b) quality of contracted work, (c) work completed within required schedule, (d) administration and coordination of estimates, RFIs, ASIs, change orders, pay requests and close out documents, (e) fair and justifiable change orders, (f) responsiveness and follow through on requests.

SERVICES means: the furnishing of labor, time, effort, maintenance, etc., by a vendor/contractor/consultant, with an initial contract amount of more than \$15,000.

23. PREPARATION AND SUBMISSION.

Bids will be prepared as follow:

- 1) A blank shall be construed as "No Bid/not offered". Where there is a discrepancy between the unit price and the extension of prices, the unit price shall prevail.
- 2) Contractors will not knowingly participate in solicitations where there exists a conflict of interest with their firm and a member of City staff or their immediate family.
- 3) The only authorized version of this Bid is posted on WWW.BIDNETDIRECT.COM. Registration is available to receive email notification of new solicitations, addenda, and communications.

INSURANCE REQUIREMENTS

The following listed insurance requirements shall be carried by the selected Contractor for the entirety of the contract. Applicable requirements for this solicitation are identified by completed check boxes.

1. ☒ **Commercial General Liability**, written on an occurrence form, for limits not less than \$1,000,000.00 for bodily injury and property damage for each occurrence and not less than \$2,000,000.00 aggregate. Coverage shall include premises and operations liability, blanket contractual, broad form property damage, products and completed operations and personal injury endorsements.
2. ☒ **Workers' Compensation and Employers Liability** as required by statute. Employers Liability coverage is to be carried for a minimum limit of \$1,000,000.00 per accident.
3. ☒ **Automobile Liability** for limits not less than \$1,000,000.00 combined single limit for bodily injury and property damage for each occurrence. Coverage shall include owned, non-owned and hired automobiles.
4. ☒ **Umbrella Liability** of \$5,000,000.00, following form to the Commercial General Liability.
5. ☐ **Pollution Legal Liability Insurance** for limits not less than \$1,000,000 per occurrence (or claims made) and not less than \$1,000,000 aggregate for bodily Injury, personal Injury and property Damage.

Additional Insurance Requirements:

- Contractor will be required to, at its own expense, keep in full force and effect during the term of the Agreement, and during the term of any extension or amendment of the Agreement, insurance reasonably sufficient to insure against the liability assumed by Contractor pursuant to the provisions of the solicitation sent by the City of Arvada or as determined by the City of Arvada Risk Manager.
- All coverage must be written with carriers holding a minimum A.M. Best rating of A:-VII, and authorized to do business in Colorado. Coverage shall be primary, and any insurance held by the City of Arvada is excess and non-contributory.
- Issuance of a Purchase Order/Contract is contingent upon the receipt of the insurance documents. Work shall not commence before this requirement is met. If the Contractor fails to submit the required insurance documents within 15 calendar days after notice to submit such policies is given to the Contractor by a City representative, the Contractor may be in default of the Award.
- Except for Workers Compensation, Employer's Liability insurance, Automobile Liability and Professional Liability insurance, the City of Arvada must be endorsed as an additional insured on a Certificate of Insurance.
- The City, through its Risk Manager, reserves the right to require additional insurance coverage and other requirements.

BID BOND

We, the undersigned _____ as Principal, and _____ as Surety, are hereby held and firmly bound unto the City of Arvada, Colorado, in the penal sum of _____ for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

THE CONDITION of this obligation is such that whereas the Principal has submitted to the City of Arvada, Colorado the accompanying Bid Proposal, and hereby made a part hereof to enter into a Contract Agreement for the construction of City of Arvada Project No. 18-ST-40, Ralston Road – Yukon Street to Garrison Street.

WHEREAS, the City, as a condition for receiving said Bid Proposal, requires the Principal to deposit with the City a Bid Proposal Guaranty, equivalent to not less than 5 Percent of the amount of said Bid Proposal.

NOW THEREFORE,

- (A) If said Bid Proposal shall be rejected; or in the alternate,
- (B) If said Bid Proposal shall be accepted and the Principal shall execute and deliver a Contract Agreement (properly completed in accordance with said Bid Proposal) and shall furnish a Performance and Payment Bond upon the forms prescribed by the City for the faithful performance of said Contract; and for the payment of all persons performing labor or furnishing materials in connection therewith; and shall in all other respects perform the agreement created by the acceptance of said Bid Proposal;

Then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by any extension of the time within which the City may accept such Bid and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, this _____ day of _____, 2021, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

PRINCIPAL

Name: _____

Address: _____

By: _____

Title: _____

SURETY

_____.

_____.

By: _____.

Title: _____.

Attorney-in-Fact:

(SEAL)

NOTE: Surety Companies executing bonds must be authorized to transact business in the State of Colorado and be acceptable to the City.

BID PROPOSAL

TO: City of Arvada, Colorado (hereinafter called "CITY").

FROM: _____ (hereinafter called "BIDDER"), organized and existing under the laws of the State of _____ doing business as (a corporation), (a partnership), (an individual).

The Bidder, in compliance with your Advertisement for Bids, hereby proposes to perform all Work in strict accordance with the Contract Documents, for the construction of City of Arvada Project No. **18-ST-40** entitled **Ralston Road – Yukon Street to Garrison Street** within the time set forth therein, and at the prices stated on the included Bid Schedule as totaled herein.

By submission of this Bid Proposal, each Bidder certifies, and in the case of a joint venture each party thereto certifies as to his/her own organization, that this Bid Proposal has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this Bid Proposal with any other Bidder or with any competitor.

Bidder acknowledges receipt of **Addendum Nos.** Initials: _____

Bidder states that his:

Major Material Suppliers are:

Material They Will Supply

Major Subcontractors are:

Work They Will Perform

Total from included Bid Schedule:

TOTAL BID \$ _____

SUBMITTED BY:

Company Name: _____

Contact Names: _____

Address: _____

Phone: (_____) _____ Email(s): _____

The undersigned hereby affirms that:

- He/she is a duly authorized agent of the Contractor;
- He/she has read all Terms and Conditions and technical specifications made available in conjunction with this solicitation and fully accept and acknowledge this bid is consistent with the specifications and terms and conditions.
- The bid is in all respects fair, without outside collusion or otherwise illegal action.

By: _____
Signature of Authorized Agent Date FEIN

Typed/Printed Name of Agent Title of Agent Agent email

PAYMENT TERMS: The City standard is net thirty (30) days but every effort is made to meet net fifteen (15) days after the approved partial payment date when the contractor is satisfactorily performing the contract but pay. The final 5% of total payment will be paid once the contract is completed satisfactorily, advertisement for final settlement is complete, and the project is accepted by the City. Payment is the date of the check mailing or date of the credit card transaction.

BID SCHEDULE

Ralston Road - Yukon Street to Garrison Street
Project No. 18-ST-40



Contractor: _____

Address, City, Zip: _____

Telephone: _____

Bid Prepared By: _____

No.	Spec*	Item	Unit	Unit Cost	Quantity	Extended Cost
1	COA 3.2	CLEARING AND GRUBBING	LS		1	
2	COA 3.5	REMOVAL OF TREE	EA		41	
3	COA 3.5	REMOVAL OF INLET	EA		17	
4	COA 3.5	REMOVAL OF MANHOLE	EA		4	
5	COA 3.5	REMOVAL OF FIRE HYDRANT	EA		14	
6	COA 3.5	REMOVAL OF VALVE	EA		17	
7	COA 3.5	REMOVAL OF PIPE (STORM SEWERS)	EA		34	
8	COA 3.5	REMOVAL OF FIBER OPTIC CABLE	LF		2,700	
9	COA 3.5	REMOVAL OF WALL	LF		1,297	
10	COA 3.5	REMOVAL OF CONCRETE MEDIAN COVER MATERIAL	SY		200	
11	COA 3.5	REMOVAL OF SIDEWALK	SY		5,452	
12	COA 3.5	REMOVAL OF CURB	LF		952	
13	COA 3.5	REMOVAL OF GUTTER	LF		404	
14	COA 3.5	REMOVAL OF CURB AND GUTTER	LF		12,063	
15	COA 3.5	REMOVAL OF CONCRETE CURB RAMP	SY		436	
16	COA 3.5	REMOVAL OF BRICK PAVERS	SY		650	
17	COA 3.5	REMOVAL OF CONCRETE PAVEMENT	SY		1,019	
18	COA 3.5	REMOVAL OF ASPHALT MAT	SY		37,839	
19	COA 3.5	REMOVAL OF PAVEMENT MARKING	SF		92	
20	COA 3.5	REMOVAL OF LIGHT STANDARD	EA		13	
21	COA 3.5	REMOVAL OF LIGHT STANDARD FOUNDATION	EA		14	
22	COA 3.5	REMOVAL OF LUMINAIRE	EA		13	
23	COA 3.5	REMOVAL OF SIGN	EA		30	
24	COA 3.5	REMOVAL OF GROUND SIGN	EA		7	
25	COA 3.5	REMOVAL OF SIGN PANEL	EA		9	
26	COA 3.5	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	LS		1	
27	COA 3.5	REMOVAL OF FENCE	LF		391	
28	COA 3.5	REMOVAL OF BENCH	EA		1	
29	COA 3.5	REPLACE 6" VCP SEWER WITH 6" PVC PIPE	LF		8	
30	COA 3.5	REMOVE 4 INCH CI ABANDONED MAIN	LF		198	
31	COA 3.55	REMOVE 4 INCH AC MAIN	LF		30	
32	COA 3.55	REMOVE 6 INCH AC MAIN	LF		15	
33	COA 3.5	REMOVE 6 INCH PVC MAIN	LF		15	
34	COA 3.5	REMOVE 8 INCH PVC MAIN	LF		165	
35	COA 3.5	REMOVE 12 INCH PVC MAIN	LF		119	
36	COA 3.5	ABANDON VALVE BOX	EA		12	
37	COA 3.33	UNCLASSIFIED EXCAVATION (COMPLETE IN PLACE)	CY		20,714	
38	CDOT 203	POTHOLING (ROADWAY)	EA		200	
39	CDOT 203	POTHOLING (STREETSCAPE)	EA		50	
40	CDOT 203	POTHOLING (WATER)	EA		50	
41	COA 3.20	SELECT BACKFILL	CY		1,450	
42	CDOT 206	STRUCTURE BACKFILL (FLOW-FILL)	CY		115	
43	COA 3.52	TOPSOIL	CY		627	
44	COA 5.7.2	STABILIZED STAGING AREA	EA		3	
45	COA 5.7.2	EROSION LOG (12 INCH)	LF		3,690	
46	COA 5.7.2	AGGREGATE BAG	LF		290	
47	COA 5.7.2	PRE-FABRICATED CONCRETE WASHOUT STRUCTURE (TYPE 1)	EA		12	
48	COA 5.7.2	STORM DRAIN INLET PROTECTION (ON GRADE)	LF		1,509	
49	COA 5.7.2	STORM DRAIN INLET PROTECTION (SUMP)	LF		78	
50	COA 5.7.2	STORM DRAIN INLET PROTECTION (AREA)	LF		174	

BID SCHEDULE

Ralston Road - Yukon Street to Garrison Street

Project No. 18-ST-40



Contractor: _____

Address, City, Zip: _____

Telephone: _____

Bid Prepared By: _____

No.	Spec*	Item	Unit	Unit Cost	Quantity	Extended Cost
51	COA 5.7.2	PRE-FABRICATED VEHICLE TRACKING PAD	EA		2	
52	COA 5.7	EROSION CONTROL MANAGEMENT (ECM)	DY		730	
53	COA 3.6	RESET BRICK PAVERS	SY		86	
54	COA 3.6	RESET VALVE BOX TO FINISHED GRADE	EA		60	
55	COA 3.6	RESET METER BOX TO FINISHED GRADE	EA		2	
56	COA 3.6	RESET GROUND SIGN	EA		51	
57	COA 3.6	RESET SIGN PANEL	EA		9	
58	COA 3.6	RESET FLASHING BEACON ASSEMBLY	EA		2	
59	COA 3.6	RESET SIGNAL HEAD	EA		2	
60	COA 3.6	RESET FIRE PREEMPTION UNIT AND TIMER	EA		7	
61	COA 3.6	ADJUST MANHOLE	EA		32	
62	COA 3.6	MODIFY MANHOLE	EA		13	
63	COA 3.6	MODIFY INLET	EA		2	
64	COA 3.6	MODIFY STRUCTURE (SPECIAL)	EA		15	
65	COA 3.15	CLEAN CULVERT	EA		30	
66	COA 3.6	RESET RTD SHELTER	EA		2	
67	COA 3.6	RESET BENCH	EA		2	
68	CDOT 629	RESET SURVEY MONUMENT	EA		4	
69	CDOT 629	RESET PROPERTY PIN	EA		95	
70	COA 5.2.2	TREE RETENTION AND PROTECTION	EA		25	
71	COA 3.53	SEEDING ON PRIVATE PROPERTY	AC		0.39	
72	COA 3.53	SOD ON CITY PROPERTY	SY		1,623	
73	COA 3.57	WOOD MULCH (WOLFF PARK)	SF		910	
74	COA 3.58	MULCH TYPE 1, 1-1/2" ANGULAR DECORATIVE ROCK	TON		268	
75	COA 3.50	TREE GRATE	EA		20	
76	COA 3.54	TREE (DECIDUOUS)	EA		57	
77	COA 3.54	TREE (ORNAMENTAL)	EA		8	
78	COA 3.54	DECIDUOUS SHRUB (5 GALLON)	EA		573	
79	COA 3.54	EVERGREEN SHRUB (1 GALLON)	EA		50	
80	COA 3.54	EVERGREEN SHRUB (5 GALLON)	EA		255	
81	COA 3.54	ORNAMENTAL GRASSES (1 GALLON)	EA		592	
82	COA 3.54	PERENNIALS (1 GALLON)	EA		287	
83	COA 3.52	AMENDED TOPSOIL SHRUB BEDS (18")	CY		944	
84	COA 3.52	AMENDED TOPSOIL SHRUB BEDS (24")	CY		178	
85	CDOT 240	WILDLIFE BIOLOGIST	HR		40	
86	CDOT 240	REMOVAL OF NESTS	HR		10	
87	CDOT 240	NETTING (MIGRATORY BIRDS)	SY		20	
88	CDOT 250	ENVIRONMENTAL HEALTH AND SAFETY	LS		1	
89	COA 3.37	AGGREGATE BASE COURSE (CLASS 6)	CY		11,260	
90	COA 3.37	HOT MIX ASPHALT (GRADING S)(100)(PG 64-22)	TON		13,497	
91	COA 3.37	HOT MIX ASPHALT (GRADING SX)(100)(PG 76-28)	TON		5,135	
92	COA 11.8	HOT MIX ASPHALT (PATCHING)	TON		388	
93	COA 3.38	EMULSIFIED ASPHALT (SLOW-SETTING)	GAL		3,380	
94	COA 3.21	CONCRETE PAVEMENT (6 INCH)	SY		223	
95	COA 3.21	CONCRETE BUS PAD (11 INCH)	SY		327	
96	COA 3.29	DRILLED CAISSON (18 INCH)	LF		20	
97	COA 3.29	DRILLED CAISSON (36 INCH)	LF		194	
98	COA 3.40	CONCRETE SLOPE AND DITCH PAVING (4 INCH)	CY		5	
99	COA 3.11	HIGH PERFORMANCE POLYPROPYLENE PIPE (HPPE) (COMPLETE IN PLACE) (6 INCH)	LF		83	
100	COA 3.11	HIGH PERFORMANCE POLYPROPYLENE PIPE (HPPE) (COMPLETE IN PLACE) (12 INCH)	LF		247	

BID SCHEDULE

Ralston Road - Yukon Street to Garrison Street
Project No. 18-ST-40



Contractor: _____

Address, City, Zip: _____

Telephone: _____

Bid Prepared By: _____

No.	Spec*	Item	Unit	Unit Cost	Quantity	Extended Cost
101	COA 3.11	HIGH PERFORMANCE POLYPROPYLENE PIPE (HPPE) (COMPLETE IN PLACE) (15 IN	LF		210	
102	COA 3.11	HIGH PERFORMANCE POLYPROPYLENE PIPE (HPPE) (COMPLETE IN PLACE) (18 IN	LF		1,276	
103	COA 3.22	INLET TYPE 13 (5 FOOT)	EA		1	
104	COA 3.22	INLET TYPE C (5 FOOT)	EA		1	
105	COA 3.22	INLET TYPE 16 (5 FOOT)	EA		16	
106	COA 3.22	INLET TYPE 16 (10 FOOT)	EA		1	
107	COA 3.22	INLET TYPE 16 (DOUBLE) (5 FOOT)	EA		2	
108	COA 3.22	INLET TYPE 16 (TRIPLE) (5 FOOT)	EA		5	
109	COA 3.22	INLET TYPE 16 (DOUBLE) (SPECIAL) (5 FOOT)	EA		3	
110	COA 3.22	INLET TYPE R L 5 (5 FOOT)	EA		2	
111	COA 3.22	INLET TYPE R L 10 (5 FOOT)	EA		1	
112	COA 3.22	INLET TYPE R L 10 (10 FOOT)	EA		1	
113	COA 25.2.6	MANHOLE SLAB BASE (5 FOOT)	EA		10	
114	COA 25.2.6	MANHOLE SLAB BASE (10 FOOT)	EA		1	
115	COA 25.2.6	MANHOLE BOX BASE (5 FOOT)	EA		5	
116	COA 3.11	4 INCH PVC PIPE	LF		45	
117	COA 3.11	6 INCH PVC PIPE	LF		86	
118	COA 3.11	8 INCH PVC PIPE	LF		502	
119	COA 3.11	12 INCH PVC PIPE	LF		1,576	
120	COA 3.11	12 INCH FUSIBLE C900 PVC PIPE	LF		416	
121	COA 3.7	PERMANENT PLUG	EA		1	
122	COA 3.13	CONNECT TO EXISTING	EA		21	
123	COA 3.14	CHLORINATION AND PRESSURE TEST	EA		2	
124	COA 3.28	INSTALL WATER METER (3/4 INCH)	EA		19	
125	COA 3.13	TAP MAIN & INSTALL CORP STOP (3/4 INCH)	EA		2	
126	COA 3.13	RECONNECT WATER SERVICE (3/4 INCH)	EA		18	
127	COA 3.28	INSTALL WATER METER (1 INCH)	EA		5	
128	COA 3.13	RECONNECT WATER SERVICE (1 INCH)	EA		5	
129	COA 3.28	INSTALL WATER METER (1.5 INCH)	EA		1	
130	COA 3.13	RECONNECT WATER SERVICE (1.5 INCH)	EA		1	
131	COA 115	FIRE SPRINKLER FLOW TEST	EA		1	
132	COA 3.32	FENCE (PLASTIC)	LF		15,000	
133	COA 3.21	CONCRETE SIDEWALK (6 INCH)	SY		6,211	
134	COA 3.21	CONCRETE SIDEWALK (SPECIAL)(TYPE 1)	SY		1,289	
135	COA 3.21	CONCRETE SIDEWALK (SPECIAL)(TYPE 2)	SY		722	
136	COA 3.21	CONCRETE CURB RAMP	SY		856	
137	COA 3.21	CONCRETE CURB RAMP (SPECIAL)	SY		501	
138	COA 3.21	DRIVEWAY (6 INCH CONCRETE)	SY		936	
139	COA 3.21	MOUNTABLE CURB AND SIDEWALK	SY		27	
140	COA 3.21	CURB AND GUTTER (SPECIAL)	LF		895	
141	COA 3.21	COA 6" VERTICAL CURB AND 1' GUTTER	LF		1,234	
142	COA 3.21	COA 6" VERTICAL CURB AND 2' GUTTER	LF		10,167	
143	COA 3.21	VALLEY GUTTER	SY		986	
144	COA 3.22	BI-LEVEL SIDEWALK	LS		1	
145	COA 3.22	WALL (TYPE 1)	LF		97	
146	COA 3.22	WALL (TYPE 2)	LF		25	
147	COA 3.21	CONCRETE SPLASH PAN (14 INCH)	LF		1,230	
148	COA 3.21	CONCRETE EDGING	LF		120	
149	CDOT 613	2 INCH ELECTRICAL CONDUIT (BORED)	LF		2,375	
150	CDOT 613	3 INCH ELECTRICAL CONDUIT (BORED)	LF		2,190	

BID SCHEDULE

Ralston Road - Yukon Street to Garrison Street
Project No. 18-ST-40



Contractor: _____

Address, City, Zip: _____

Telephone: _____

Bid Prepared By: _____

No.	Spec*	Item	Unit	Unit Cost	Quantity	Extended Cost
151	CDOT 613	1 INCH ELECTRICAL CONDUIT (PLASTIC)	LF		195	
152	CDOT 613	2 INCH ELECTRICAL CONDUIT (PLASTIC)	LF		13,630	
153	CDOT 613	3 INCH ELECTRICAL CONDUIT (PLASTIC)	LF		740	
154	CDOT 613	PULL BOX (TYPE M)	EA		1	
155	CDOT 613	PULL BOX (TYPE LG)	EA		16	
156	CDOT 613	PULL BOX (13"X20"X18")	EA		54	
157	CDOT 613	WIRING	LS		1	
158	CDOT 613	LUMINAIRE (LED)	EA		13	
159	CDOT 613	LIGHT STANDARD AND LUMINAIRE (PEDESTRIAN) (TYPE B)	EA		99	
160	CDOT 613	LIGHT STANDARD FOUNDATION	EA		86	
161	CDOT 613	LIGHT STANDARD FOUNDATION (SPECIAL)	EA		13	
162	CDOT 613	LIGHTING CONTROL CENTER	EA		4	
163	CDOT 613	SERVICE METER CABINET	EA		4	
164	COA 3.47	SIGN PANEL (CLASS I)	SF		313	
165	COA 3.48	STEEL SIGN POST (1.75 x 1.75 INCH TUBING)	LF		382	
166	COA 3.47	SIGNAL HEAD BACKPLATES	EA		34	
167	COA 3.47	PEDESTRIAN SIGNAL FACE (16) (COUNTDOWN)	EA		24	
168	COA 3.47	TRAFFIC SIGNAL FACE (12-12-12)	EA		39	
169	COA 3.47	TRAFFIC SIGNAL FACE (12-12-12-12)	EA		17	
170	COA 3.47	TRAFFIC SIGNAL FACE (12-12-12-12-12)	EA		1	
171	COA 3.47	TRAFFIC SIGNAL CONTROLLER	EA		4	
172	COA 3.47	PEDESTRIAN PUSH BUTTON POST ASSEMBLY	EA		9	
173	COA 3.47	PEDESTRIAN PUSH BUTTON STATION AND SIGN	EA		28	
174	COA 3.47	MICROWAVE VEHICLE RADAR DETECTOR	EA		22	
175	COA 3.47	TRAFFIC SIGNAL CONTROLLER (INSTALL ONLY)	EA		4	
176	COA 3.47	TRAFFIC SIGNAL-LIGHT POLE (1-20 FOOT MAST ARM)	EA		2	
177	COA 3.47	TRAFFIC SIGNAL-LIGHT POLE (1-30 FOOT MAST ARM)	EA		1	
178	COA 3.47	TRAFFIC SIGNAL-LIGHT POLE (1-35 FOOT MAST ARM)	EA		2	
179	COA 3.47	TRAFFIC SIGNAL-LIGHT POLE (1-40 FOOT MAST ARM)	EA		3	
180	COA 3.47	TRAFFIC SIGNAL-LIGHT POLE (1-45 FOOT MAST ARM)	EA		1	
181	COA 3.47	TRAFFIC SIGNAL-LIGHT POLE (1-50 FOOT MAST ARM)	EA		4	
182	COA 3.47	TRAFFIC SIGNAL PEDESTAL POLE STEEL	EA		5	
183	CDOT 630.09	TEMPORARY SIGNAL (PORTABLE)	EA		4	
184	COA 50.2.10	UNINTERRUPTED POWER SUPPLY	EA		4	
185	COA 3.47	CLOSED CIRCUIT TELEVISION CAMERA (TRAFFIC SURVEILLANCE)	EA		1	
186	CDOT 614	FIBER OPTIC CABLE (SINGLE MODE) (12 FIBER)	LF		1,000	
187	CDOT 614	TEST FIBER OPTIC CABLE	LS		1	
188	CDOT 614	TERMINATE FIBER OPTIC CABLE (12 STRAND)	EA		4	
189	CDOT 614	ETHERNET SWITCH	EA		4	
190	COA 3.28	4 INCH GATE VALVE & BOX	EA		1	
191	COA 3.28	6 INCH GATE VALVE & BOX	EA		2	
192	COA 3.28	8 INCH GATE VALVE & BOX	EA		11	
193	COA 3.28	12 INCH GATE VALVE & BOX	EA		9	
194	COA 3.8	FIRE HYDRANT (ASSEMBLY)	EA		25	
195	COA 3.22	STAIR	EA		7	
196	COA 3.37	TEMPORARY DRIVEWAY PAVING	SY		3,500	
197	COA 3.50	6' BENCH	EA		4	
198	COA 3.50	4' BENCH	EA		11	
199	COA 3.59	DISTRICT MARKER (INSPIRE, CELEBRATE)	EA		2	
200	COA 3.59	DISTRICT MARKER (REMEMBER)	EA		2	

BID SCHEDULE

Ralston Road - Yukon Street to Garrison Street

Project No. 18-ST-40



Contractor: _____

Address, City, Zip: _____

Telephone: _____

Bid Prepared By: _____

No.	Spec*	Item	Unit	Unit Cost	Quantity	Extended Cost
201	COA 3.60	DISTRICT MARKER FOUNDATION (INSPIRE, CELEBRATE)	CY		6	
202	COA 3.60	DISTRICT MARKER FOUNDATION (REMEMBER)	CY		1	
203	COA 3.61	NEIGHBORHOOD MONUMENT	EA		17	
204	COA 3.62	NEIGHBORHOOD MONUMENT FOUNDATION	CY		11	
205	COA 3.63	WOLFF PARK PLANTER WALL	LF		40	
206	CDOT 623	IRRIGATION POINT OF CONNECTION	EA		4	
207	CDOT 623	IRRIGATION TAP FEES	SF		21,129	
208	CDOT 623	IRRIGATION WITHIN BEDS AND CORNER PLANTERS	SF		20,505	
209	CDOT 623	IRRIGATION FOR TREE PITS	EA		20	
210	COA 3.11	IRRIGATION MAINLINE	LF		5,800	
211	COA 3.11	IRRIGATION SLEEVES FOR MAINLINE	LF		3,850	
212	COA 3.11	IRRIGATION SLEEVES FOR LATERALS - BEDS AND CORNER TREATMENTS	LF		4,600	
213	COA 3.11	IRRIGATION SLEEVES FOR LATERALS - TREE PITS	LF		1,550	
214	COA 3.11	IRRIGATION LATERAL FOR BEDS AND CORNER TREATMENTS	LF		6,600	
215	COA 3.11	IRRIGATION LATERAL FOR TREE PITS	LF		1,700	
216	CDOT 623	IRRIGATION MODIFICATION FOR ADJACENT OWNERS	LS		38	
217	CDOT 623	IRRIGATION MODIFICATION FOR RALSTON CENTRAL PARK	LS		1	
218	CDOT 623	IRRIGATION MODIFICATION FOR WOLFF PARK	LS		1	
219	COA 3.11	IRRIGATION PIPING BORE ALLOWANCE	LF		963	
220	CDOT 625	CONSTRUCTION SURVEYING	LS		1	
221	CDOT 106	MATERIALS TESTING SERVICES	LS		1	
222	COA 3.49	MOBILIZATION	LS		1	
223	COA 50.4.7	MODIFIED EPOXY PAVEMENT MARKING	GAL		64	
224	COA 3.45	PREFORMED THERMOPLASTIC PVMNT MRKNG (WORD-SYMBOL)	SF		316	
225	COA 3.45	PREFORMED THERMOPLASTIC PVMNT MRKNG (XWALK-STOPLINE)	SF		786	
226	CDOT 630	UNIFORMED TRAFFIC CONTROL	HR		200	
227	CDOT 630	TRAFFIC CONTROL	LS		1	
228	CDOT 626	PUBLIC INFORMATION SERVICES (TIER III)	LS		1	
229	COA 3.48 & CDOT 620	SANITARY FACILITY	EA		5	
230		F/A 01 MINOR CONTRACT REVISIONS TO INCLUDE RFIs (ROADWAY)	FA	\$350,000.00	1	\$350,000
231		F/A 02 EROSION CONTROL	FA	\$15,000.00	1	\$15,000
232		F/A 03 ENVIRONMENTAL HEALTH AND SAFETY MANAGEMENT	FA	\$75,000.00	1	\$75,000
233		F/A 04 IRRIGATION SYSTEM REPAIR	FA	\$25,000.00	1	\$25,000
234		F/A 05 UTILITY ADJUSTMENT	FA	\$75,000.00	1	\$75,000
235		F/A 06 HIGH EARLY STRENGTH CONCRETE (CLASS E)	FA	\$40,000.00	1	\$40,000
236		F/A 07 FURNISH AND INSTALL ELECTRICAL SERVICE	FA	\$20,000.00	1	\$20,000
237		F/A 08 MINOR CONTRACT REVISIONS TO INCLUDE RFIs (STREETSCAPE)	FA	\$100,000.00	1	\$100,000
238		F/A 09 MINOR CONTRACT REVISIONS TO INCLUDE RFIs (WATER)	FA	\$100,000.00	1	\$100,000

TOTAL BID \$ _____

*City of Arvada (COA) Engineering Code of Standards and Specifications and/or CDOT Standard Specifications

REQUIRED CONTRACTOR SUBMITTAL FORM

SUBMITTAL CHECKLIST:

Proposals shall be submitted in the order listed below with each section clearly identified.

Submit completed City Submittal Forms including this sheet, Bid Bond, Bid Proposal, Bid Schedule, and any other attachments requested.

Submit implementation timeline and warranties, if applicable.

Attach Contractor's Licensing, if applicable.

Insurance – Checking this box accepts that the insurance requirements listed by the City are acceptable.

Please initial to acknowledge Addenda, if any, have been considered in your proposal:

#1 _____ #2 _____

REFERENCES:

Check here if Contractor's standard reference sheet is attached, otherwise, use the space below.

Name: _____ Contact Person: _____

Address: _____

Telephone No: _____ Email: _____

Describe type of work/service performed or items supplied: _____

Name: _____ Contact Person: _____

Address: _____

Telephone No: _____ Email: _____

Describe type of work/service performed or items supplied: _____

Name: _____ Contact Person: _____

Address: _____

Telephone No: _____ Email: _____

Describe type of work/service performed or items supplied: _____

PERFORMANCE AND PAYMENT BOND

Bond No. _____

(Firm) _____

(Address) _____

(an Individual), (a Partnership), (a Corporation), hereinafter called Principal; and

(Firm) _____

(Address) _____

hereinafter called Surety, are held and firmly bound unto the City of Arvada, a Colorado municipal corporation, 8101 Ralston Road, Arvada, Colorado 80002, hereinafter called the City, in the penal sum of _____, Dollars, _____, in lawful money of the United States, for the payment of such sum will and truly to be made, we bind ourselves, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION are such that the Principal entered into a certain Contract with the City, dated the _____ day of _____, 20____, a copy of which is hereto attached and made a part hereof, for the performance of City of Arvada Project No.'s 18-ST-40, Ralston Road – Yukon Street to Garrison Street.

NOW THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions and agreements of said Contract during the original term thereof, and any extensions thereof which may be granted by the City, with or without Notice to the surety and during the life of the guaranty period, and if he shall satisfy all claims and demands incurred under such Contract, and shall fully indemnify and save harmless the City from all cost and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the City all outlay and expense which the City may incur in making good any default, and if he shall promptly make payment to all persons, firms, subcontractors and corporations furnishing materials for or performing labor in the prosecution of the work provided for in such Contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, repairs on machinery, equipment and tools, consumed, rented or used in connection with the construction of such work, and all insurance premiums on said work, and for all labor, performed in such work whether by subcontractor or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder or the specifications accompanying the same shall in anyway affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work or to the specifications.

PROVIDED, FURTHER, that no final settlement between City and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in three counterparts, each one of which shall be deemed an original, this the ____ day of _____, 20____.

IN PRESENCE OF:

PRINCIPAL _____

By _____

Address _____

(Corporate Seal)

OTHER PARTNERS

(Surety Seal)

SURETY _____

Attorney _____ in _____ Fact _____

Address _____

Note: If Contractor is Partnership, all partners should execute Bond.

Important: Surety Company must be authorized to transact business in the State of Colorado and be acceptable to the City.



NOTICE OF AWARD

Date

Company
Address
City, State Zip

RE: Project No. [Project Title]

Dear Representative of _____:

The City of Arvada, Colorado (hereinafter called "City") has considered the Bid Proposals submitted for referenced work in response to its Advertisement for Bids dated _____ and Information for Bidders.

You are hereby notified that your Bid Proposal has been accepted, for items and prices stated in the Bid Schedule, in the amount of \$_____.

You are required to execute the Contract, the Insurance Certificates and a Performance and Payment Bond within seven (7) days from the date of this Notice to you.

The Performance and Payment Bond needs to be filled out, returned (one original must be returned to the City), and accompanied by the Power of Attorney from your surety company. Also, please make sure that the insurance certificate is in the minimum amounts set forth in the Contract Documents and the City of Arvada is named as an additional insured for the specific Project Number and Title. An Additional Insured endorsement certificate should also be attached.

If you fail to execute said Contract and furnish the necessary Insurance Certificates and Bond within the time allotted from this date, the City will be entitled to consider all your rights arising out of the City's acceptance of your Bid Proposal as abandoned and as a forfeiture of your Bid Bond. The City will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this Notice of Award and enclosures to the Project Engineer.

CITY OF ARVADA, COLORADO

City Engineer

BIDDER

Company

Receipt of above Notice of Award accompanied with a Performance and Payment Bond form and a copy of the Contract is hereby acknowledged.

This _____ day of _____, 20____.

By: _____

Name: _____

Title: _____

NOTICE TO PROCEED NO. 1: PHASE I CONSTRUCTION



Date _____

Company _____
Address _____
City, State Zip _____

RE: Project No. [Project Title]

Dear Representative of _____:

You are hereby notified to commence work on referenced Project, in accordance with the Contract dated _____

on or before _____, and you are to complete the Work, including cleanup within _____ calendar days thereafter.

The date of completion of all Work is therefore _____.

CITY OF ARVADA, COLORADO

City Engineer

BIDDER

Receipt of this Notice to Proceed is hereby acknowledged this _____ day of _____, 20____.

Company _____

By: _____

Title: _____

NOTICE TO PROCEED NO. 2 – PHASE II CONSTRUCTION



Date

Company
Address
City, State Zip

RE: Project No. [Project Title]

Dear Representative of _____:

You are hereby notified to commence work on referenced Project, in accordance with the Contract dated _____

on or before _____, and you are to complete the Work, including cleanup within _____ calendar days thereafter.

The date of completion of all Work is therefore _____.

CITY OF ARVADA, COLORADO

City Engineer

BIDDER

Receipt of this Notice to Proceed is hereby acknowledged this _____ day of _____, 20____.

Company

By: _____

Title: _____

NOTICE TO PROCEED NO. 3 – PHASE III CONSTRUCTION



Date

Company
Address
City, State Zip

RE: Project No. [Project Title]

Dear Representative of _____:

You are hereby notified to commence work on referenced Project, in accordance with the Contract dated _____

on or before _____, and you are to complete the Work, including cleanup within _____ calendar days thereafter.

The date of completion of all Work is therefore _____.

CITY OF ARVADA, COLORADO

City Engineer

BIDDER

Receipt of this Notice to Proceed is hereby acknowledged this _____ day of _____, 20____.

Company

By: _____

Title: _____

CHANGE ORDER

No. ____

TO:

Upon Contractor acceptance and City approval, the work and Contract Documents for City of Arvada, Project No. _____, entitled _____ will be adjusted to include the following:

<u>Item</u>	<u>Description</u> <u>ADD</u>	<u>Qty.</u>	<u>Unit</u>	<u>Unit Cost</u>	<u>Add/Delete</u>
--------------------	--	--------------------	--------------------	-------------------------	--------------------------

- 1.
- 2.
- 3.
- 4.

TOTAL ADD

\$ _____

Adjustments to Contract Price & Time

Contract
Dollars

Calendar
Days

Contract Totals through and including

\$

Previous Change Orders

Adjustments this Change Order

\$

(Increase)

Contract Totals to Date – Including

Change Order No. ____

\$

Contract Time Expires on:

**AN AGREEMENT BY AND BETWEEN THE CITY OF ARVADA AND

FOR CONSTRUCTION OF 18-ST-40
RALSTON ROAD – YUKON STREET TO GARRISON STREET
IN AN AMOUNT NOT TO EXCEED \$_____.00**

This Agreement made this _____ day of _____, 2021, by and between the City of Arvada, a home rule municipal corporation (“Arvada” and/or “City”) and _____, a _____ (“Contractor”).

WITNESSETH: That for and in consideration of the covenants, promises, and payments hereinafter mentioned:

WITNESSETH:

WHEREAS, Arvada solicited proposals from interested construction professionals for the provision of construction services related to the expansion of Ralston Road from Yukon Street to Garrison Street as described in the Contract Documents (the “Project”); and

WHEREAS, based on Contractor’s submissions, Arvada has selected Contractor for the Project; and

WHEREAS, Arvada and Contractor desire to enter into this Agreement regarding the construction of the Project.

NOW, THEREFORE, for and in consideration of the covenants, promises, and payments hereinafter mentioned, the parties agree as follows:

ARTICLE 1. GENERAL DESCRIPTION OF SERVICES

- 1.1. **The Services.** The Contractor agrees to furnish or arrange for the construction services set forth in the Contract Documents and required for the completion of the Project within the timeframe provided in the Contract Documents. Consultant represents that it is thoroughly familiar with and understands the requirements of the Project scope and is experienced in the construction of projects of the type and scope contemplated by the Contract Documents. Contractor represents to Arvada that Contractor has all necessary education, skill, knowledge, expertise and experience required for construction of the Project, and will maintain at all times during the term of this Agreement such personnel on its staff to provide the services contemplated hereby within the time periods required hereby. In addition, Contractor represents that it or Arvada-approved subcontractors or subconsultants performing services under this Agreement have all applicable licenses required by the State of Colorado to perform such services and all required insurance coverage as required by this contract and by law.
- 1.2. **Project Schedule / Time of the Essence.** The Contractors shall commence the Work after March 15, 2021 but in no event after May 3, 2021 unless such time for beginning the Work is changed by Arvada in writing. The Contract Documents contain a Project Design that contemplates completion of the Work in three (3) phases. All work shall be completed within 730 calendar days from the date of the initial Notice to Proceed (“Project Schedule”). The Contractor shall at all times carry out its duties and responsibilities as expeditiously as possible and in accordance with the Project Schedule. Arvada will issue the Notices to Proceed with respect to each phase in accordance with the Project Schedule, with the Phase Two Notice Proceed being issued on or around the 244th calendar day after the Initial Notice to Proceed and with the Phase Three Notice to Proceed being issued on or

around the 488th calendar day after the Initial Notice to Proceed. Time is of the essence in the performance of this Agreement.

1.2.1.1. **Temporary Easements.** Arvada, through its Consultant, has obtained or will obtain temporary easements from property owners along the project site to enable the Contractor to complete the Work ("Temporary Easements"). The terms and conditions of those Temporary Easements are incorporated herein by reference. The Contractor shall coordinate with Arvada and its Consultant prior to entering another's property to ensure that the Temporary Easements have been obtained and that Contractor will understand and comply with any and all terms and conditions of those Temporary Easements.

1.2.1.2. **Phase One Construction.** The Contractor shall complete the first phase of work as defined in the Contract Documents within 243 calendar days ("Phase One Contract Time") from receipt of the Initial Notice to Proceed. While the Request for Proposal contains a model schedule, Contractor agrees that it shall revise, amend and supplement the schedule so as to complete Phase One of the Work within the Contract Time provided herein. The Contractor shall complete all of the Phase One Construction that is located within the bounds of the Temporary Easements within 365 calendar days from the date of the Initial Notice to Proceed. Any failure to complete the Phase One Construction located within the bounds of the Temporary Easements within this time period shall result in the assessment of \$2,000 liquidated damages for each calendar day delay in addition to the indemnification for any claims arising from such delay as provided in Section ____ of this Agreement.

1.2.1.3. **Phase Two Construction.** The Contractor shall complete the second phase of work as defined in the Contract Documents within 243 calendar days ("Phase One Contract Time") from receipt of the Second Notice to Proceed. While the Request for Proposal contains a model schedule, Contractor agrees that it shall revise, amend and supplement the schedule so as to complete Phase Two of the Work within the Contract Time provided herein). The Contractor shall complete all of the Phase Two Construction that is located within the bounds of the Temporary Easements within 365 calendar days from the date of the Second Notice to Proceed. Any failure to complete the Phase Two Construction located within the bounds of the Temporary Easements within this time period shall result in the assessment of \$2,000 liquidated damages for each calendar day delay in addition to the indemnification for any claims arising from such delay as provided in Section ____ of this Agreement.

1.2.1.4. **Phase Three Construction.** The Contractor shall complete the third phase of work as defined in the Contract Documents within 242 calendar days ("Phase One Contract Time") from receipt of the Third Notice to Proceed. While the Request for Proposal contains a model schedule, Contractor agrees that it shall revise, amend and supplement the schedule so as to complete Phase Three of the Work within the Contract Time provided herein).

1.3. **Construction Staking.** Salient features to be shown on the Contractor's Progress Schedule are:

- 1.3.1. Signing and Mobilization
- 1.3.2. Clearing and Grubbing
- 1.3.3. Utilities
- 1.3.4. Fence
- 1.3.5. Earthwork
- 1.3.6. Curb, Gutter and Sidewalk/Trails

- 1.3.7. Pipes, Inlets and Manholes
- 1.3.8. Signalization
- 1.3.9. Hot Bituminous Pavement
- 1.3.10. Final Signing and Striping
- 1.3.11. Landscaping and Irrigation
- 1.3.12. Cleanup

- 1.4. **Cooperation.** The Consultant shall endeavor to develop, implement and maintain, a spirit of cooperation, collegiality, and open communication with Arvada, Arvada's Consultants, and Arvada's residents so that the goals and objectives of each are clearly understood, potential problems are resolved promptly, and upon completion, the Project is deemed a success by all interested parties.
- 1.5. **Cooperation and Coordination with Utilities.** Xcel Energy, Comcast, and CenturyLink will be relocating their overhead utilities underground from Garrison Street to Allison Street and along Allison Street during construction of the Project. The Contractor shall cooperate with the utility owners in their removal and relocation operations so that progress is expedited, duplication of work is minimized and service interruptions are avoided. It shall be the contractor's responsibility to make all arrangements with the utility owner(s) for utility relocations or adjustments if required to install the curbs and to coordinate the sequence of such work to eliminate possible conflict with construction progress. The contractor shall provide any advance notice required by the utility owner(s) and all applicable franchise agreements prior to commencing any work affecting said utility(ies). Work involving changes in, or interference with, utility service shall be done at such times and in such a manner that it will cause the least interference with the proper handling and delivery of the utility service to the receiving customers.
- 1.6. **Unidentified Utilities.** Attention is directed to the possible existence of underground facilities not known to the City and therefore not shown on the plans or in a location different from that which is indicated on the plans or in the special provisions. The contractor shall take reasonable steps to ascertain the exact location of all underground facilities prior to doing work that may damage such facilities or interfere with their service. If the contractor discovers underground facilities not indicated on the plans, he shall immediately give the Engineer and the utility owner written notification of the existence of such facilities and coordinate the rearrangement/relocation of the facility as necessary.
- 1.7. **Repair or Delay Due to Utility Relocations or Repair.** Approximate utility locations are shown on the plans. The contractor shall be responsible for prompt repair of any damage caused to utilities whether or not such utilities are shown or not shown on the plans. In no way will additional payment be made for time for the repair or relocation of utilities that are damaged during construction whether properly marked or unmarked in the field. Absent extraordinary circumstances, Contract Time will not be adjusted to account for delays due to utility repair or relocation. Should a delay in utility repair or relocation be significant enough that the contractor decides to demobilize from the project site; no additional payment shall be made for remobilization to the project site once the utility has been repaired and/or relocated. Should the contractor desire to have any rearrangement made in any utility facility for his convenience in order to facilitate his construction operations, which rearrangement is in addition to, or different from the rearrangements indicated on the plans or in the special provisions, he shall make whatever arrangements are necessary with the owners of such utility for such rearrangement and bear all expenses in connection therewith.
- 1.8. **Extra Excavation Work.** Should the Contractor desire and/or choose to perform any additional excavation work required for utility adjustments and/or repairs on behalf of the utility owner in order to

expedite construction and minimize delays and down time, the City shall in no way be responsible for costs associated with this additional work done for the utility owner.

- 1.9. **No Additional Payments for Utility Relocation/Repair Work.** No additional payment will be made for field verifying all utility locations whether shown or not shown on the plans, except as shown in the bid schedule and this is the maximum allowance or number of testholes, whichever is greater, coordination with utility companies, utility relocations or down time due to utility relocations or repairs, but shall be considered a subsidiary obligation of the contract.
- 1.10. **Preparation/Sufficiency of Site.** Before commencing the Work, the Contractor shall (i) visit and thoroughly inspect the Project Site and any structure(s) or other man-made features to be modified and become familiar with local conditions under which the Project will be constructed and operated; (ii) familiarize itself with the survey, including the location of all existing buildings, utilities, conditions, streets, equipment, components and other attributes having or likely to have an impact on the Project; (iii) familiarize itself with Arvada's engineering and design requirements, design objectives, and budget for the Project; (iv) familiarize itself with pertinent Project dates and programming needs, including the Project schedule; (v) review and analyze all Project geotechnical, environmental, and construction materials tests, investigations and recommendations, (vi) review all as-built and record drawings, plans and specifications; and (vi) gather any other information necessary for a thorough understanding of the Project. Claims by Contractor resulting from Contractor's failure to familiarize itself with the Site or pertinent documents shall be deemed waived.
- 1.11. **Contract Documents.** The Contract Documents are incorporated herein by reference. The term "Contract Documents" means and includes the following:
- A. Arvada's Request for Proposal, CSB-_____ ("CSB"), including all exhibits and/or addenda;
 - B. Contractor's Response to CSB-____, Advertisement for Bid, Bid Proposal, Bid Schedule, Bid Bond;
 - C. Notice of Award;
 - D. Performance and Payment Bond;
 - E. Notice(s) to Proceed;
 - F. Change Orders (if any);
 - G. City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements;
 - H. Terms and Conditions of the Temporary Easements;
 - I. Requests for Information and Responses (if any);
 - I. All supplementary requirements regarding wage rates, E.E.O., affirmative action and all other Federal-State requirements as outlined in the specifications.
- 1.12. **Interpretation of Contract Documents.** In the event of conflicts or discrepancies among the Contract Documents, the documents shall govern in the following order: (1) the Agreement; (2) Arvada's Request for Proposal; (3) City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements; (4) Consultant's Response to Arvada's Request for Proposals; (5) Change Orders; (6) Requests for Information and Response.

ARTICLE 2. ARVADA'S DUTIES, OBLIGATIONS AND RESONSIBILITIES

- 1.2. **Project Information.** Contractor acknowledges that Arvada has provided Contractor with information regarding Arvada's requirements for the Project as set forth in the Contract Documents, including Project Plans, Specifications and Budget.

- 1.3. **Arvada's Budget.** Arvada has established and will update an overall budget for the Project, including amounts allocated for construction, Arvada's other costs, and reasonable contingencies related to these costs as appropriate.
- 1.4. **Arvada's Representative.** Arvada will designate a representative authorized to act on Arvada's behalf with respect to the Project.
- 1.5. **Purpose of Arvada's Review.** Arvada's review, inspection, or approval of any Work, Design Documents, Applications for Payment, or other submittals shall be solely for the purpose of determining whether the same are generally consistent with Arvada's standards, policies and requirements. No review, inspection, or approval by Arvada of such Work or documents shall relieve Contractor of its responsibility for the performance of its obligations under the Agreement or the accuracy, adequacy, fitness, suitability, or coordination of its Construction Services. Approval by any governmental or other regulatory agency or other governing body of any Work, Design Document, or the Construction Documents shall not relieve Contractor of responsibility for the performance of its obligations under this Agreement. Payment by Arvada pursuant to the Agreement shall not constitute waiver of any of Arvada's rights under the Agreement or at law, and Contractor expressly accepts the risk that defects in its performance, if any, may not be discovered until after payment, including final payment, is made by Arvada. Notwithstanding the foregoing, reasonable notice shall be given by Arvada to the Contractor if Arvada becomes aware of any fault or defect in the Project or non-conformance with the Contract Documents.

ARTICLE 3. CONSTRUCTION SERVICES REQUIREMENTS AND STANDARDS

- 3.1. **Quality of Construction Services.** Contractor shall be responsible for the quality, completeness, accuracy, and coordination of the Work. Contractor shall provide Construction Services that meet all industry standards, including all environmental and regulatory requirements. Contractor shall provide for all testing and inspections required by sound construction practices and by governmental authorities having jurisdiction over the Project.
- 3.2. **Pre- and Post- Construction Photographs.** Contractor shall document via photograph each property before the commencement of any disturbance or construction, and Contractor shall document each property after construction is completed. Copies of the photographs shall be promptly provided to Arvada.
- 3.3. **Arvada's Right to Carry Out the Work.** If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a seven day period after written notice from Arvada to commence and continue correction of such default or neglect with diligence and promptness, Arvada may after such seven-day period, without prejudice to other remedies Arvada may have, correct such deficiencies. In such case, an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for any Consultant's additional services and expenses made necessary by such default, neglect or failure. Such action by Arvada and amounts charged to the Contractor are both subject to prior review and confirmation by the Consultant. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to Arvada within ten days of receipt of an invoice for such amounts from Arvada.
- 3.4. **Legal Standard.** Consultant shall furnish construction services in accordance with design standards currently practiced by construction professionals on projects similar in size, complexity and cost to the Project.

- 3.5. **Construction Standards.** Contractor shall perform all services in accordance with requirements of governmental agencies having jurisdiction over the Project, City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements, and the requirements set forth in the Contract Documents. In addition, the Contractor's work shall comply with all applicable building codes, accessibility laws and regulations, environmental regulations, and other applicable legal requirements in effect at the time of the work. To the extent Arvada's standards exceed applicable legal requirements, such standards shall be met unless Contractor obtains a variance from Arvada in writing.
- 3.6. **Permits.** Contractor shall be responsible for obtaining all necessary permits and other governmental approvals necessary for the development of the Project and shall obtain the same at the times necessary to meet the Project schedule. Contractor's responsibility includes providing environmental services and permitting coordination as further described in the Contract Documents.
- 3.7. **Notice of Non-Compliance.** The Contractor shall carefully study and compare the Contract Documents with each other and with information furnished by Arvada, and shall at once report to Arvada any design errors, inconsistencies or omissions discovered as well as any foreseeable constructability issues arising from the design. If the Contractor performs any construction activity knowing or should have known it involves an error, inconsistent, omission or constructability issue in the Contract Documents without such notice to Arvada, the Contractor shall assume full responsibility for such performance and shall bear the full costs for correction, including reimbursement for any delay caused to the Project.

ARTICLE 4. CHANGES TO THE WORK

- 4.1. **Minor Contract Revisions.** Miscellaneous modifications in the Work, ordered by Arvada in the form of a Field Order, will be considered a Minor Contract Revision. Payment for accepted work performed under this pay item "Minor Contract Revision" will be made in accordance with General condition 2.17 of the Arvada Engineering Code of Standards and Specifications.
- 4.2. **Field Orders.** An authorized representative of the Contractor shall acknowledge receipt of Field Orders by promptly signing all written field orders delivered to the job site. Verbal field orders given by Arvada will be recorded in writing in the municipal inspector's daily report that is to be signed by the Contractor's authorized representative.
- 4.3. **Field Engineered Changes.** Arvada may modify the construction plans including changing the slope and alignment of flow lines and appurtenances or modifying other improvements as necessary to accommodate construction around existing utilities or other field conditions. No additional compensation shall be made for minor costs and inconveniences incurred while performing field engineering changes as directed by Arvada or its Consultant. No additional compensation shall be made for any down time encountered while Arvada determines what field engineered changes would be appropriate to accommodate construction around existing utilities or other field conditions. Reasonable time must be allowed for Arvada or its Consultant to design field engineered changes. Any additional costs for performing field engineered construction changes to accommodate existing utilities or other field conditions and for also allowing Arvada reasonable time to design field engineered changes as necessary to complete the work shall be considered a subsidiary obligation of the contract.
- 4.4. **Pre-Bid and Pre-Construction Meetings.** Consultant agrees to assist in the preparation for and to participate in any pre-bid meetings in order to discuss project concerns and answer bidder questions, as further described in the RFP. Consultant agrees to assist in the preparation for and to participate

in any pre-construction meetings with Arvada and its selected contractor, as further described in the RFP.

- 4.5. **Construction Plan Set.** Consultant shall prepare a Construction Plan Set incorporating any changes or addenda that arise during the bidding process at no additional cost.
- 4.6. **Arvada Change Orders.** Arvada may, by written order signed by Arvada, at any time, and without notice to any surety, and subject to all appropriate adjustments, make changes within the general scope of this Contract in any one or more of the following: (a) changes in scope of services; (b) completion date; (c) contract amount; (d) any applicable material modifications; and, (e) any other matters that the parties deem necessary.
- 4.7. **Contractor Requested Change Orders.** The Contractor may request a Change in the Work ("Requested Change Order"), including one or more of the following: (a) changes in scope of services; (b) completion date; (c) contract amount; (d) any applicable material modifications; and, (e) any other matters that the parties deem necessary.
- 4.8. **Change Order Contents.** Any Requested Change Order shall include (a) a detailed description of the requested change to the original contract; (b) itemized documentation of any subcontractor costs; (c) the total costs associated with the proposed change; (d) the impact on the project completion date, if any, associated with the proposed change; and (e) a statement of the contractual basis for the requested change.
- 4.9. **Basis for Change Order Requests.** The following may be considered a valid basis for requesting a Change Order: (a) Contract Document error or omission; (b) Arvada induced enhancement; (c) unforeseeable constructability issue; (d) unforeseeable geotechnical issue. The following will not be considered a valid basis for requesting a Change Order absent extraordinary circumstances: (a) utility relocation; (b) utility conflicts; (c) foreseeable geotechnical issue; (d) foreseeable constructability issue; (e) defective construction.
- 4.10. **Written Authorization Required.** The Contractor shall not proceed with any change in the Work without the appropriate written authorization.

ARTICLE 5. SUPERVISION AND CONSTRUCTION PROCEDURES

- 5.1. **Supervision.** The Contractor shall supervise and direct the Work using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the Work under this Contract, unless Contract Documents give other specific instructions concerning these matters.
- 5.2. **Acts and Omissions of Subcontractors and Agents.** The Contractor shall be responsible to Arvada for acts and omission of the Contractor's employees, Subcontractors, and their agents and employees, and other persons performing portions of the Work under a contract with the Contractor
- 5.3. **Consultant's Administration of the Contract and Testing.** The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Consultant in the Consultant's administration of the Contract, or by tests, inspections or approvals required or performed by persons other than Contractor.

- 5.4. **Inspection and Subsequent Work.** The Contractor shall be responsible for inspection or portions of Work already performed under this Contract to determine that such portions are in proper condition to receive subsequent Work.

ARTICLE 6. COMPENSATION.

- 6.1. **Completion of Services.** Contractor will furnish all material, supplies, tools, equipment, labor, and other services necessary for the completion of the Work within Arvada's timeframe and monetary limitations.
- 6.2. **Payment for Services.** At least twenty (20) days before the date established for each monthly progress payment, the Contractor shall submit to Arvada an itemized Application for Payment for construction completed in accordance with the Bid Schedule. Such application shall be supported by such data substantiating the Contractor's right to payment as Arvada may require, such as copies of invoices or requisitions from subcontractors and material supplies and reflecting retainage. Arvada shall pay NET 30 for services performed in accordance with the Bid Schedule and with this Agreement, but in no event shall the total Contract Amount exceed \$_____ absent a properly executed Change Order. Measurement of the work performed and monthly payment shall be made in accordance with requirements of the Measurement and Payment Section in the Contract Documents unless otherwise specifically provided herein.
- 6.3. **Non-Conforming Materials or Construction.** Where materials installed or the finished product fails to meet minimum requirements of the Contract Documents, the basis of determining final payment to the Contractor shall be determined in accordance with the current revised Section 105.30 of the Colorado Department of Transportation Standard Specifications.
- 6.4. **Retainage Requirements.** Consultant agrees to submit monthly invoices together with any retainage requirements as prescribed by Colorado state statutes (*see e.g.*, C.R.S. § 24-91-101 et seq). Payment from Arvada will be paid NET 30 days. Invoices will accurately reflect actual work completed by Consultant and its subconsultants or subcontractors.

ARTICLE 7. MISCELLANEOUS.

- 7.1. **Governing Law and Venue.** This Agreement shall be governed by and construed in accordance with the laws of the State of Colorado without regard to its choice of law provisions and venue shall lie in the courts in Jefferson County, Colorado.
- 7.2. **Waiver.** No provision of this Agreement may be waived except by written agreement of the parties. A waiver of any provision on one occasion shall not be deemed a waiver of that provision on any subsequent occasion, unless specifically stated in writing. A waiver of any provision shall not affect or alter the remaining provisions of this Agreement.
- 7.3. **Strict Compliance.** No failure of Arvada to insist upon strict compliance by the Consultant with any provision of the Contract Documents shall operate to release, discharge, modify, change or affect any of the Consultant's obligations.
- 7.4. **Successors and Assigns.** Arvada and Consultant, respectively, bind themselves, their partners, successors, assigns and legal representatives to the other party to this Agreement and to the partners, successors and assigns of such other party with respect to all covenants of this Agreement. Consultant shall not assign (whether partially or wholly) this Agreement whether by operation of law or otherwise, without the written consent of Arvada. If Consultant makes an assignment in

accordance with this provision, Consultant shall nevertheless remain legally responsible for all obligations arising under the Agreement, unless otherwise agreed in writing by Arvada.

- 7.5. **Third Party Beneficiaries.** This Agreement shall inure solely to the benefit of the parties hereto and their successors and assigns, and, except as otherwise specifically provided in this Agreement, nothing contained in this Agreement is intended to or shall create a contractual relationship with, or any rights or cause of action in favor of, any third party against either Arvada or the Consultant.
- 7.6. **Additional Documents.** The parties agree to execute any additional documents and to take any additional action that is necessary to carry out this Agreement.
- 7.7. **Binding Effect.** This Agreement shall inure to the benefit of, and be binding upon, the parties, their respective legal representatives, successors, heirs, and assigns; provided, however, that nothing in this paragraph shall be construed to permit the assignment of this Agreement except as otherwise expressly authorized herein. All provisions of this Agreement which contain continuing obligations shall survive its expiration or termination.
- 7.8. **Paragraph Captions.** The paragraph captions in this Agreement are set forth only for the convenience and reference of the parties and are not intended in any way to define, limit, or describe the scope or intent of this Agreement.
- 7.9. **Integration, Amendment, and Severability.** This Agreement represents the entire agreement between the parties, and there are no oral or collateral agreements or understandings. This Agreement may be amended only by an instrument in writing signed by the parties. If any other provision of this Agreement is held invalid or unenforceable, no other provision shall be affected by such holding, and all of the remaining provisions of this Agreement shall continue in full force and effect if the essential terms and conditions of this Agreement for both parties remain valid, legal, and enforceable.
- 7.10. **Notices.** Any notice or notification required or permitted by the Agreement shall be in writing and shall be deemed to have been sufficiently given for all purposes if sent by certified mail or registered mail, postage and fees prepaid, addressed to the party to whom such notice is to be given at the address set forth on the signature page below, or at such other address as has been previously furnished in writing, to the other party or parties. Such notice or notification shall be deemed to have been given when deposited in the United States mail.
- 7.11. **Binding Authority.** Contractor represents and affirms that the signature page hereof accurately states the full legal name of Contractor (whether as a corporation, partnership, limited liability company, sole proprietorship, or other), contains all requisite signature(s) on behalf of Contractor, has been properly acknowledged by attestation, notary acknowledgment, or both, and in all other respects is effective to bind Contractor, in accordance with all applicable statutes, regulations, resolutions, rules, bylaws, agreements, or similar sources of authority or limitation. This Agreement may be executed in counterpart(s), each of which shall be deemed to be an original, and all of which, taken together, shall constitute one instrument.
- 7.12. **Preferences in Employment of Colorado Labor.** To the extent that obligations and responsibilities may be established by C.R.S. § 8-17-101 *et seq.*, as amended, with respect to certain public entities and those contracting therewith as to the procurement of services:
- a. Colorado labor shall be employed to perform eighty percent (80%) of the work.
 - b. Any waiver of this requirement must comply with C.R.S. § 8-17-101 *et seq.*, as amended.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement which shall be deemed an original on the date first above written.

CITY OF ARVADA, COLORADO

8101 Ralston Road
Arvada, CO 80002

ATTEST/WITNESS:

City Clerk

APPROVED AS TO FORM:

For Rachel A. Morris, City Attorney

By: _____

CONTRACTOR

Name:
Title:

PROJECT SPECIAL PROVISIONS

FOR

**RALSTON ROAD – YUKON STREET
TO GARRISON STREET**

CONSTRUCTION DOCUMENTS

CITY OF ARVADA
PUBLIC WORKS DEPARTMENT

December 30, 2020

City of Arvada Project Number 18-ST-40
FHU Reference No. 118355-01



12-30-2020

PROJECT SPECIAL PROVISIONS
RALSTON ROAD – YUKON TO GARRISON CONSTRUCTION DOCUMENTS

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CONTROL OF WORK

GENERAL CONTRACT CONDITIONS

General Contract Conditions shall be found in the City of Arvada (COA) *Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements*, adopted January 12, 2016.

STANDARD CONSTRUCTION SPECIFICATIONS

The City of Arvada *Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements*, hereinafter referred to as "City Standard Specifications", controls construction for this project. The 2019 CDOT *Standard Specifications for Road and Bridge Construction*, hereinafter referred to as "Standard Specifications", shall be used to supplement construction of items not described in the City of Arvada's specification manual.

The following Project Special Provisions supplement or modify the City and CDOT Standard Specifications and take precedence over the City and CDOT Standard Specifications and plans.

SPECIAL CONDITIONS

City of Arvada Project No.18-ST-40 – Ralston Road Improvements – Yukon Street to Garrison Street.

Conditions peculiar, but essential, to the successful performance and acceptance of the work on this project are itemized below. As such, they shall take precedence over the City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements.

SC-1 MEASUREMENT AND PAYMENT: Measurement of the work performed and payment, at the unit or lump sum price quoted in the Bid Schedule, shall be made in accordance with requirements of the Measurement and Payment Section of the Contract Documents or as hereinafter stated in the Special Conditions, Revision of City Standard Specifications, CDOT Standard Specifications, and Revision of CDOT Standard Specifications.

SC-2 NON CONFORMITY OF MATERIAL OR FINISHED PRODUCT: Where materials installed or the finished product fails to meet the minimum requirements of these Contract Documents, the basis of determining final payment to the Contractor shall be determined in accordance with the current revised Section 105.03 of the Colorado Department of Transportation Standard Specifications.

SC-3 OSHA REQUIREMENTS: Observing the rules and regulations required by the Occupational Health and Safety Administration (OSHA) is the responsibility of the Contractor on this project.

SC-4 CITY HOLIDAYS: The Contractor, when performing work on a city holiday, Saturday, Sunday, or in excess of ten (10) hours on a weekday, in accordance with Section 27-174(b)(2) of the Code of the City of Arvada, agrees to reimburse the Owner for the inspector's time at the following rate:

First 2 hours, or fraction thereof: \$100.00

Each additional 2 hours or fraction thereof: \$100.00

Payment shall be made payable to the City of Arvada within ten days of the date of invoice from the Owner.

SC-5 MINIMIZING WORK ZONE DAMAGES: During all phases of construction including cleanup, contractor shall operate all equipment and utilize personnel so as to minimize or prevent damages to public or private property. Contractor shall limit operation of heavy equipment to safe prudent speeds and minimize operation of equipment over concrete sidewalks, curbs and gutters. Contractors shall also conduct operations to avoid dings, nicks, gouges, scrapes, etc., on streets and concrete curb, gutter and sidewalks as well as other facilities in the construction area. Should contractors' operations cause damages, contractor shall be fully responsible for repairs at no cost to the City.

All public or private property damaged during the construction process must be repaired within two weeks of street and right-of-way clean-up. Should repair items not be completed within two weeks, city may initiate and complete the repair work; deducting costs to complete the work from total contract.

SC-6 PUBLIC CONVENIENCE, SAFETY AND PROJECT SITE CLEANUP: Contractor shall coordinate the work and minimize inconveniences to citizens and affected property owners and minimize obstructions to traffic. Residents and/or businesses shall be notified by the contractor 72 hours prior to the time that access must be denied to their driveway when one half of the driveway will be blocked for a period in excess of one (1) hour. Residents shall be provided access to their driveways at all times between 5:00 pm and 7:30 am, and at all times on weekends or City holidays or all other times when work is not proceeding except in the case of emergency or with written authorization from residents/business owners and/or the City.

No more than fifteen (15) feet of trench is to be left barricaded and opened overnight. Backfilled trenches are to be maintained free of surface ruts until they are permanently resurfaced. During inclement weather or when hot asphaltic concrete is unavailable, trenches shall be temporarily resurfaced at the direction of the Engineer and/or municipal inspector. Temporary resurfacing shall be placed immediately after backfill installation. It shall be maintained rut free and remain in place until weather permits the installation of hot plant mix.

Throughout all phases of construction, including suspension of work, and until final cleanup, the contractor shall keep the work site clean and trench surfaces rut free. The contractor shall abate mud and dust by sweeping, flushing with a fire hose, scraping mud off paved surfaces, removing excess mud from trenches and replacing with crushed rock, etc. Loose rock scattered beyond the trench limits shall be swept, picked-up and removed from the site.

Note: For each calendar day substantive complaints are received from affected citizens, the total contract amount will be reduced by \$100. The Engineer will investigate or have his designated representative investigate, all registered complaints. The Engineer shall determine if the complaint is substantive. The Engineer's decision will be final.

SC-7 PRE-CONSTRUCTION AND SCHEDULING: A pre-construction meeting will be scheduled prior to the start of work. Attendance by the contractor's project manager and/or construction superintendent and sub-contractors will be required. A construction schedule shall be submitted by the contractor to the project engineer at least three (3) days prior to the pre-construction meeting. The schedule shall be in bar chart form and shall at a minimum indicate the start and completion dates of work for each phase. The contractor shall also provide the City with an after-hours emergency contact phone number at the pre-construction meeting. No additional payment will be made this task but shall be considered subsidiary to the contract.

SC-8 SERVICE INTERRUPTION: The contractor shall notify all parties that will be affected, a minimum of seventy-two (72) hours prior to the time he will disconnect or interrupt known sewer or water service or immediately upon the interruption of a service not shown on the plans. All services interrupted or damaged shall be immediately repaired and service restored. No services shall be left inoperative overnight.

The City of Arvada Utilities Division will operate all existing water valves, hydrants, blowoffs, and curb stops. No valve or other control on the existing water system shall be operated for any purpose by the contractor. The contractor shall advise all water customers prior to interrupting flows, so they may make provisions to store sufficient water for their interim needs. Service termination periods shall not exceed four (4) hours. Interruption of water service shall be limited to the hours between 8:30 am and 3:00 pm unless prior approval is received from the Engineer.

SC-9 WEEKLY MEETINGS: The contractor is required to hold weekly meetings with the City and its representatives. Date, time, and location to be determined at a later date. Contractor shall provide a three-week look ahead schedule and agenda for discussion during these meetings. No additional payment will be made for these meetings but shall be considered subsidiary to the contract.

**REVISION OF SECTION 3
MEASUREMENT AND BASIS OF PAYMENT**

Section 3 of the City Standard Specifications is hereby revised for this project as follows:

Subsection 3.2, CLEARING AND GRUBBING, shall include the following:

Removal of bushes or shrubs (all sizes), gravel and decorative rock

Items: Removal of bushes or shrubs (all sizes), gravel and decorative rock

Measurement: Removal of bushes or shrubs (all sizes), gravel including along pavement shoulders and driveways, and decorative rock shall all be included as part of the lump sum pay item of Clearing and Grubbing. Bush and/or shrub stumps and roots must be removed to a minimum depth of three (3) foot below existing grade.

Payment: No separate measurement or payment shall be made for removal of bushes or shrubs (all sizes), gravel, and decorative rock including hauling and disposal and furnishing, hauling, placing, compacting fill and grading the area to drain; protection of facilities designated to remain, but shall be included in the cost of clearing and grubbing.

Subsection 3.5, REMOVAL OF STRUCTURES OR OBSTRUCTIONS TO SALVAGE OR WASTE, shall include the following:

Saw cutting shall be used wherever necessary to make a clean removal of designated items in the plans. Saw cutting shall not be paid for separately but shall be subsidiary to the removal item that requires it.

Removal of Sidewalk has been quantified to include the adjacent areas of concrete driveways. Concrete driveway shall not be paid for as a separate item.

Removal of Tree – Large (Equal to or Greater than 12")

Items: Removal of tree - large (equal to or greater than 12")

Measurement: A large tree will be defined as having a trunk diameter measuring 12" or greater. (Each) Removal of Tree – Large (Equal to or Greater than 12") will be measured as the actual number of locations where trees with a trunk diameter equal to or greater than 12" have been removed and the area properly graded and accepted. Tree stumps and roots must be removed to a minimum depth of three (3) feet below existing grade.

Payment: Accepted areas on which tree removal has been performed will be paid for at the contract amount bid for the specified location. No separate measurement or payment will be made for hauling and disposal of plant material, furnishing, hauling, placing, compacting fill and grading the area to drain; protection of facilities designated to remain, but shall be included in the work.

Subsection 3.6, RESET, RELOCATE, RECONNECT, ADJUST, shall include the following:

The Contractor shall replace all valve box sections damaged or misplaced during construction with new valve box sections complying with the requirements of the utility company's specifications. The Contractor shall set each valve box to be adjusted so that it is ¼ inch to ½ inch below the final grade of the paved surface, or to the satisfaction of the Owner, and so that it is plumb over the operating nut of the valve. Valve boxes may need to be adjusted twice due to the timing of hot mix asphalt lifts. If the top lift of hot mix asphalt is not in place, but the new pavement will be opened to traffic, the valve shall be adjusted a second time after the final lift is in place. Valve box (each) shall be paid for as each valve to be adjusted, but not include each iteration of adjustment, only the final adjustment.

The Contractor shall adjust all manholes that require adjustment with materials conforming to the utility company's specifications. Some adjustments may require the addition, removal, or replacement of a manhole or cone section. If manhole adjustment requires a manhole cone or barrel section to be added, removed, or replaced, this work will not be considered as "Adjust Manhole", but shall be performed in accordance with the Section 210 of the CDOT Standard Specification requirements for the item "Modify Manhole".

The Contractor shall prevent tools, concrete, dirt, or debris of any kind from falling into the channel of the existing manhole. The Contractor shall clean or remove debris from downstream sewer that enters because of the Contractor's work.

RTD Bus stop shelters and benches shall be carefully removed and reset to the locations designated in the plans. The installation of these items at their new locations shall follow the RTD installation and anchoring details included in the plans. After these items have been removed from their original locations, the Contractor shall either store in a secure location or ensure they are protected within the project limits until the new locations have been constructed and ready for installation.

Reset brick paver shall include the careful removal of brick pavers located at Ralston Central Park and the placement in their new location as designated in the plans. The Contractor shall photograph the pavers prior to removal. The plans include the original installation detail to ensure the Contractor can match their original placement and pattern.

Modify Inlet

Item: Modify Inlet – Consists of removing the top of the existing area inlet and raising the structure to the new grade lines established with construction of roadway widening and removing existing storm sewer from the existing inlet and reconnecting to the existing or new replacement storm sewer. Modification of inlet shall be done in accordance with the details included in the plans and in conformance with the appropriate details included the contract drawings and CDOT M-Standard plan, as applicable.

Measurement: Modify Inlet will be measured by the actual number modified which shall include all work required to: remove portion of existing inlet to the top of the barrel, build new barrel to the required height, build new eccentric cones to the required height, add additional steps as required including the manhole rings and cover to the finished grade, structure excavation and backfill.

Payment: All incidental items including removal of existing storm sewer from the existing inlet and reconnecting the existing or new replacement storm sewer shall be included in the work.

Modify Manhole

Item: Modify Manhole - Consists of raising existing storm sewer manholes to the new grade lines established with construction of roadway widening and reconnection to existing and new preplacement storm sewer. Modification of manholes shall be done in accordance with the details included in the plans and in conformance with the appropriate CDOT M-Standard plan, as applicable.

Measurement: (Each) Modify manholes will be measured by the actual number modified which shall include all work required to: remove portion of existing manholes to the top of the barrel, build new barrel to the required height, build new eccentric cones to the required height, add additional steps as required, and reset the manhole ring and cover to the finished grade. If the rings and covers are destroyed or in the opinion of the Engineer cannot be reused, new manhole rings and covers shall be provided.

Payment: All incidental items including connection to existing and new storm sewer shall be included in the work.

Modify Structure (Special)

Item: Modify Structure (Special) - Consists of removing the top of existing inlets and raising the structure to the new grade lines established and converting to a manhole with construction of roadway widening and removing existing storm sewer from the existing inlet and connecting the new replacement storm sewer. Modification of inlets shall be done in accordance with the details included in the plans and in conformance with the appropriate details included the contract drawings and CDOT M-Standard plan, as applicable.

Measurement: (Each) Modify Structure (Special) will be measured by the actual number modified which shall include all work required to: remove portion of existing inlets to the top of the barrel, build new barrel to the required height, build new eccentric cones to the required height, add additional steps as required including the manhole rings and cover to the finished grade.

Payment: All incidental items including removal of existing storm sewer from the existing inlet and reconnecting the new replacement storm sewer shall be included in the work.

Subsection 3.21 shall include the following:

Sidewalk (Special) (Type 1) and Sidewalk (Special) (Type 2) are variations of a concrete sidewalk that require retention of earth on one side utilizing curb and/or short retaining walls. These items be constructed per the specification found in Section 15 and shall be built per the details shown in the plans. The plan quantity and measurement for each of these items shall be the area of sidewalk placed to the nearest square yard. Measurement does not include the retention structure attached to the sidewalk. Payment for these items shall include all formwork, reinforcing, finishing, and other materials and labor necessary to complete the work.

The Landscape Plans include aesthetic paving details for various parts of the sidewalk on the project. **Paving Type 1** includes three different integral colored concrete (Davis colors: Green Slate, Pewter, and Canyon) at various intersection corners. Paving Type 1 also involves an alternate concrete surface finish pattern. **Paving Type 2** includes standard concrete color with a special surface finish pattern. The locations of both Paving Types can be found in the Landscape Plans. These items will not be paid for separately but shall be included in the cost of Concrete Sidewalk (6 Inch), Concrete Sidewalk (Special) (Type 1), Concrete Sidewalk (Special)(Type 2), Concrete Curb Ramp, or Concrete Curb Ramp (Special), as appropriate. Submit 2'x2' mockup for each type (including all colors) for approval before placing flatwork.

Concrete Curb Ramp and Concrete Curb Ramp (Special) shall be constructed per Section 15 and the details provided within the plans. The measurement area for these items match the areas typically shown in the City Standard Details for Curb Ramps. Payment shall include all labor, materials, and other items as necessary to complete the work.

Subsection 3.22, CONCRETE – STRUCTURAL, shall include the following:

Concrete Stairs shall be reconstructed at designated areas, per the locations and details provided in the plans. Each concrete stair shall match the City's appropriate materials and strength specifications. Payment for these items shall include handrailing, if designated, formwork, reinforcing, finishing, and all other labor and materials necessary to complete the work.

Bi-level Sidewalk refers to a special detail at the Carver and Associates property located at 7710 Ralston Road. To ensure that ADA requirements can be met, a ramp will be required between the street's public sidewalk and the access to the building. Construction details for this area have been included in the plans that provide all layout and reinforcing information. All materials and construction methods used for this shall meet the City's specifications. This pay item will be paid for as Lump Sum, which will include all components of the construction detail and work necessary to complete the work on this property.

Wall (Type 1) and Wall (Type 2) shall be constructed using the detail provided in the plans. These walls shall be constructed in accordance with the City's appropriate materials and strength specifications for structural concrete. These walls shall be measured per lineal foot of wall constructed in place. Payment shall include all formwork, reinforcing, finishing, and all other labor and materials necessary to complete the work.

Subsection 3.37, AGGREGATES AND ASPHALT MATERIALS, shall include the following:

Item: **Temporary Driveway Paving** shall consist of constructing and maintaining temporary driveway pavement during the various construction phases to provide access from properties adjacent to Ralston Road to the traveled way. The materials used shall meet the Section 11 in the City Specifications. Temporary driveway paving construction shall include grading, embankment material, planning, shoring, and other items of work necessary for the construction of temporary driveway pavement. The Contractor shall construct temporary ditches, temporary culvert pipe, and maintain existing storm sewer necessary for the control of storm drainage. Temporary driveway pavement thickness shall be as shown on the plans. The Contractor shall remove the temporary pavement when it is no longer needed because permanent roadway pavement has been placed.

The Contractor shall maintain the temporary driveway pavement for the entire period that it is open to access the properties. Any distress that affects the ride, safety or serviceability of the temporary driveway shall be corrected immediately at the Contractor's expense as directed by the Engineer.

The Contractor shall provide smooth pavement transitions between the driveway and the traveled way.

Grade differences shall not exceed 4%.

Measurement: Hot Mix Asphalt used for the temporary driveway paving will be measured by the square yard of asphaltic mixture placed in accordance with City Standard Specifications for Hot Mix Asphalt.

Payment: The accepted quantities will be paid for at the contract unit price for each of the pay items listed below that appears in the bid schedule. All work necessary and incidental to the construction maintenance and removal of the temporary driveway paving, including grading, embankment material, culvert pipe, and planing will not be measured and paid for separately but shall be included in the work.

Subsection 3.50, PARK FACILITIES, shall include the following:

Items: **Tree grates (CIP) and benches (6' and 4')**

Measurement: (Each) - The quantity of site furnishings installed, complete in place according to manufacturer's recommendations and specifications.

Payment: Accepted quantities of tree grates and benches will be paid for at the contract unit price bid. Price shall include all hardware, site preparation and installation to provide a complete system. Tree grates shall be installed flush with adjacent pavement. Benches shall be level and plumb to be considered acceptable.

Subsection 3.52, TOPSOIL, shall include the following:

Amended Topsoil

Item: Topsoil backfill for landscape planting beds

Measurement: (Cubic Yard) - The quantity of imported topsoil installed, complete in place according to plans and specifications.

Payment: Accepted quantities of amended topsoil will be paid for at the contract unit price bid according to depths shown in the plans. Price shall include all materials, testing, excavation, and placement as shown in the plans.

Subsection 3.53, LAWN SOD AND SEEDING, shall include the following:

Seeding On Private Property

Items: - Bluegrass seed, native seed, wood mulch, decorative rock

Measurement: (Acre) - The quantity of seeding for adjacent owners shall be the actual number of the measured units, specified in the Bid Schedule, installed and accepted.

Payment: The accepted quantities will be paid for at the contract unit price bid. No separate measurement or payment will be made for soil preparation. Contractor shall reuse existing groundcovers to the extent possible to cover exposed landscape due to construction activities based on the pre-construction treatment.

Section 3 of the City Standard Specifications shall include the following Subsections:

3.57 WOOD MULCH (WOLFF PARK)

Item: - Natural wood mulch to match existing at Wolff Park

Measurement: (Square Feet) - The quantity of mulch to match the existing design thickness including landscape fabric and replacement of steel edging as needed to renovate the shrub bed shall be the actual number of the measured units, specified in the Bid Schedule, installed and accepted.

Payment: The accepted quantities will be paid for at the contract unit price bid. No separate measurement or payment will be made for landscape fabric or steel edging.

3.58 1-1/2" TYPE 1 ANGULAR DECORATIVE ROCK

Item: - Decorative rock, 4" thick.

Measurement: (Ton) - The quantity of the selected rock to install a uniform 4" thick cover in designated areas on the plans shall be the actual number of the measured units, specified in the Bid Schedule, installed and accepted. Contractor shall submit load tickets for verification.

Payment: The accepted quantities will be paid for at the contract unit price bid.

3.59 DISTRICT MARKERS

Item: District Markers (Inspire, Celebrate, Remember-2)

Measurement: (Each) - The quantity of district markers installed, complete in place according to character and design intent drawings and approved shop drawings furnished by the contractor.

Payment: Accepted quantities of district markers will be paid for at the contract unit price bid. Price shall include all design, engineering, approved shop drawings, fabrication, lighting and utility coordination, hardware, site preparation and installation to provide a complete system. District markers shall be installed level, plumb and fully functional to be considered acceptable for payment.

3.60 DISTRICT MARKER FOUNDATION

Item: District Marker Foundations (Inspire, Celebrate, Remember-2)

Measurement: (Cubic Yard) - The quantity of District Marker Foundations installed, complete in place according to plans and specifications.

Payment: Accepted quantities of district markers will be paid for at the contract unit price bid. Price shall include all materials, excavation, dewatering, backfilling, frost protection and finishing to support district markers as shown in the plans.

3.61 NEIGHBORHOOD MONUMENT

Item: Neighborhood monument

Measurement: (Each) - The quantity of neighborhood monuments installed, complete in place according to character and design intent drawings and approved shop drawings furnished by the contractor.

Payment: Accepted quantities of neighborhood monuments will be paid for at the contract unit price bid. Price shall include all design, engineering, approved shop drawings fabrication, hardware, site preparation and installation to provide a complete system. Neighborhood monuments shall be installed level, plumb and fully functional to be considered acceptable for payment.

3.62 NEIGHBORHOOD MONUMENT FOUNDATION

Item: Neighborhood monument foundations

Measurement: (Cubic Yard) - The quantity of neighborhood monument foundations installed, complete in place according to plans and specifications.

Payment: Accepted quantities of district markers will be paid for at the contract unit price bid. Price shall include all materials, excavation, dewatering, backfilling, frost protection and finishing to support district markers as shown in the plans.

3.63 WOLFF PARK PLANTER WALL

Item: Raised planter / retaining wall system

Measurement: (Lineal Feet) - The quantity of the planter wall including foundation installed, complete in place according to plans and specifications.

Payment: Accepted quantity of planter wall will be paid for at the contract unit price bid. Price shall include all materials, excavation, backfilling and finishing to support future commissioned art and landscape planter as shown in the plans.

**REVISION OF SECTION 5
DEMOLITION SITE PREPARATION EXCAVATION AND EMBANKMENT**

Section 5 of the City Standard Specifications is hereby revised for this project as follows:

Subsection 5.2.2 shall include the following:

PROTECTION OF EXISTING VEGETATION: The Contractor shall save all existing vegetation (including trees, shrubs, ground covers, grasses, wetlands & riparian) in this area, except for that vegetation, which must be removed to accommodate construction of the project, per the plans. Specific areas of vegetation to be protected shall be as directed by the Engineer and shall be protected by using orange construction fencing, wire fencing with metal posts or silt fence. Fencing for trees shall be installed at the drip line of the tree or as approved by the Engineer. Equipment shall not be installed or stockpile material within 15 feet of existing trees to remain.

The Contractor shall perform all the work in such a manner that the least environmental damage will result. All questionable areas or items shall be brought to the attention of the Engineer for approval prior to removal or any damaging activity.

The Contractor shall promptly report any vegetation damaged or scarred during construction to the Engineer for assessment of damages. Damaged or destroyed fenced vegetation, shall be replaced at the expense of the Contractor. Vegetation of replaceable size shall be replaced at the Contractor's expense. When trees, shrubs beyond replaceable size or wetlands have been damaged or destroyed, the Contractor shall be liable for the appraised value based upon the official current publications. For trees and shrubs use the International Society of Arboriculture, Guide for Plant Appraisals. The Contractor shall pay any fines or jail time should a wetland be damaged, at no cost to the project. The value of disturbed vegetation shall be calculated according to the following formula:

$(\text{Vegetation size}) \times (\text{Species}) \times (\text{Location}) \times (\text{Condition}) \times (\text{Arborist or Wetland Specialist}) = \text{Vegetation value}$

A consulting Arborist retained by the City will determine the value of the trees and shrubs. A consulting Wetland Specialist shall determine the value of the wetland or wetland species. This value will be deducted from any money due to the Contractor.

The determination as to whether a plant is of replacement size or beyond will be made by the City's Landscape Architect or Wetland Specialist.

If the fence is knocked down or destroyed by the Contractor, the Engineer will suspend the work, wholly or in part, until the fence is repaired to the Engineer's satisfaction at the Contractor's expense. Time lost due to such suspension will not be considered a basis for adjustment of time charges but will be charged as contract time.

No additional measurement or payment will be made for protection of existing vegetation including furnishing, installing and maintaining a temporary fence but shall be considered subsidiary to the contract.

Subsection 5.7 Erosion Control Best Management Practices (BMPs) shall replace the last sentence of the paragraph with the following:

Formal inspections are required by the SDP every 7 days and after storm events.

Subsection 5.7.1 A. shall include the following:

The Contractor's designated Erosion Control Supervisor (ECS) shall cross out all BMPs that do not apply or highlight those details and notes on the City's Standard Plans and Erosion Control Plans that apply to the Project. The ECS shall write an explanation as to why the detail has been removed or what is being used instead as a Best Management Practice (BMP) ("not applicable" is not an acceptable explanation). The ECS shall be responsible for documentation of all changes at no additional cost to the project.

Subsection 5.7.1 B. shall include the following:

When directed by the Engineer requires that an action be “immediate” or “initiated / taken immediately”, it shall be understood that the Contractor shall at once begin effecting completion of the action and pursue it to completion in a manner acceptable to the Engineer and in accordance with the COA Standard Erosion and Sediment Control Construction Plans and Notes, Standard Stormwater Drawings and the Colorado Discharge Permit System (CDPS) Stormwater Construction Permit (SCP) requirements.

Where BMPs have failed, resulting in noncompliance, the ECS shall contact the Engineer immediately in order to (1) discuss the ECS recommendations to ensure the failed BMPs are repaired or replaced as soon as possible (immediately in most cases) in order to minimize the discharge of pollutants; and (2) for the Engineer to authorize any additional expenditures. Following the implementation, in addition to completing the daily log, the ECS shall update the Erosion Control Plan Notebook by describing and recording new and replacement BMPs.

In the case of repeated failures on the part of the Contractor in controlling erosion, sedimentation, and/or water pollution, the Engineer reserves the right to employ outside assistance or to use COA forces to provide the necessary corrective measures. Such incurred direct costs, plus Engineering cost, will be charged to the Contractor, and appropriate deduction will be made from the Contractor's monthly progress estimate.

This Project is subject to a permit with the Colorado Department of Public Health and Environment (CDPHE) for Stormwater Discharges Associated with Construction Activities. The permit shall be obtained by the Contractor. The Contractor shall prepare all applications required and submit them to the CDPHE. The Contractor shall submit a copy of certification of the permit to the Engineer prior to the start of construction. The Contractor is responsible for all application permit fees. Surface water control generally falls into the following categories:

- (1) Flows from existing storm drain pipelines.
- (2) Local surface inflows not conveyed by pipelines.

At a minimum, the Contractor shall be responsible for diverting the quantity of surface flow around the construction area, so that the excavations will remain free of surface water for the time it takes to install these materials and the time required for curing of any concrete or grout.

The Contractor is cautioned that the minimum quantity of water to be diverted is for erosion control and construction purposes and not for general protection of the construction site. It shall be the Contractor's responsibility to determine the quantity of water which shall be diverted and control measures needed to protect the work from damage caused by storm water.

The Contractor shall conduct operations in such a manner that storm water or other waters may proceed uninterrupted along their existing drainage courses. By submitting a bid, the Contractor acknowledges that he has investigated the risk arising from such waters, has prepared his bid accordingly and assumes all of said risk. All work required accommodating surface water, ground water and control erosion shall be in conformance with the requirements of all applicable federal, State, and local regulations and permits.

This Project may be subject to a “Construction Dewatering Permit” with the CDPHE for dewatering associated with construction activities. The permit shall be obtained by the Contractor. The Contractor shall prepare all applications required and submit them to the CDPHE. The Contractor shall submit a copy of certification of the permit to the Engineer at least three (3) days prior to the start of any dewatering activities. The Contractor is responsible for all application permit fees.

The Contractor shall install adequate measures to maintain the level of groundwater a minimum of two (2) feet below the foundation subgrade elevation and maintain sufficient bearing capacity for all structures, pipelines, utilities and earthwork. Such measures may include, but are not limited to, installation of perimeter subdrains, pumping from sumps excavated below the subgrade elevation. Dewatering from within the foundation excavations shall not be allowed. The foundation bearing surfaces are to be kept dewatered and stable until the structures or other types of work are complete and backfilled. Disturbance of foundation subgrade by Contractor operations shall not be considered as originally unsuitable foundation subgrade and shall be repaired at Contractor's expense. Any

temporary dewatering trenches, settlement ponds or well points shall be restored following dewatering operations to reduce permeability in those areas as approved by the Engineer.

All excavations made as part of dewatering operations shall be backfilled with the same type material as was removed and compacted to ninety five percent (95%) of Maximum Standard Proctor Density (ASTM D698), except where replacement by other materials and/or methods are required and have been approved by the Engineer.

At no time during construction shall the Contractor affect existing surface or subsurface drainage patterns of adjacent property. Any damage to adjacent property resulting from the Contractor's alteration of surface or subsurface drainage patterns shall be the Contractor's responsibility and shall be repaired by the Contractor at no additional cost to owner.

The Contractor shall remove all temporary water control facilities when they are no longer needed or at the completion of the Project. Pumps and generators used for dewatering and water control shall be quiet equipment enclosed in sound deadening devices, unless the Engineer agrees that the quieter equipment isn't needed in isolated instances.

The Project is subject to inspections by CDPHE, U.S. Army Corps of Engineers (USACE) and the Environmental Protection Agency (EPA) at any time. The Contractor shall immediately notify the Engineer when an inspection is scheduled. If and when the CDPHE, the USACE or the EPA reviews the project site and requires additional measures to prevent and control erosion, sediment or pollutants, then the Contractor shall cease and desist activities resulting in pollutant discharge; and the Contractor shall immediately inform the Engineer of what transpired and ask for additional direction on implementing the additional measures requested by one or more of these agencies mentioned above.

Subsection 5.7.2 E. shall include the following:

Streets and other paved areas shall be kept clean throughout the life of the Project. In the event of accidental tracking of mud on streets, the ECS shall notify the Engineer immediately, and the mud shall be removed immediately using a vacuum-type street sweeper, a brush-type street sweeper with dust control, or manually using shovels and brooms. If a large quantity of mud needs to be removed, initial removal may take place using a small road grader or loader, but care shall be exercised to avoid damage to the roadway. Any damage shall be repaired at the Contractor's expense. Streets shall not be washed with water under any circumstance. Streets and roads with gravel surfaces shall be free from mud and debris from construction sites, and any mud or debris will be removed manually using shovels. Street cleaning will not be paid for separately but shall be included in the work.

**REVISION OF SECTION 11
HOT MIX ASPHALT PAVEMENT**

Section 11 of the City Standard Specifications is hereby revised for this project as follows:

Subsection 11.8 shall include the following:

Hot Mix Asphalt (Patching) shall be installed for utility trench patching and other miscellaneous patching that is necessary to maintain the roadway surface prior to construction of final pavement of the project.

Hot Mix Asphalt patching shall be installed at the greater of a 6" depth in the public right-of-way or 4" depth on private property or match existing as well as conform to the original dimensions that were not otherwise altered by construction of the project as shown on the plans. The top lift (2" thickness) shall be Hot Mix Asphalt (Grading SX) (75) (PG 64-22) and lower lifts (2- 2" thickness lifts) shall be Hot Mix Asphalt (Grading S) (75) (PG 64-22). The top lift of asphalt shall be installed in a single 2" lift. The lower lifts shall be installed in a minimum of 2 ¼" lifts and a maximum of 4" lifts. Sawcut of existing asphalt and new curb and gutter edge shall be tack coated prior to patching.

Measurement: Hot Mix Asphalt (Patching) shall be measured based on the delivered tons of accepted material, complete in place.

Payment: The accepted quantities of materials will be paid for at the contract unit price bid. No separate measurement or payment will be made for barricading, saw cutting, removal and disposal of asphalt, removal and disposal of subgrade, disposal of waste materials, subgrade preparation, hauling, placing, wetting, rolling, shaping, compacting, etc., but shall be included in the work.

**REVISION OF SECTION 25
SANITARY SEWER AND DRAINAGE LINES**

Section 25 of the City Standard Specifications is hereby revised for this project as follows:

Subsection 25.2.6 shall include the following:

Manhole lids for storm sewer manhole box base structures as identified in the construction plans as “J5”, “J7”, “J9”, “J11” and “M3” shall consist of fiberglass or an approved composite lid that is lightweight, lockable, traffic rated, pedestrian safe and hinged. These manhole lids are specific for access required for the Swadley Ditch irrigation system located along westbound Ralston Rd in between Estes St. and Cody Ct. Prior to ordering fiberglass or composite lids, the Contractor shall provide product data sheets for approval by COA and Swadley Ditch irrigation representative. Product examples include; VPC Fiberglass Manhole Cover Series distributed by Virtual Polymer Compounds, LLC., and Sewer Cover HD Composite Manhole Ring and Cover distributed by BlueGreen Municipal Solutions.

Approved fiberglass or composite manhole lids will not be measured and paid for separately but shall be included in the cost of the Manhole Box Base (Each) pay item. All incidental items required for installation and connection to manhole box base storm sewer structures shall be included in the work.

**REVISION OF SECTION 45
PLANT LANDSCAPING**

Section 45 of the City Standard Specifications is hereby revised for this project as follows:

Subsection 45.2.3 Grass Materials shall include the following:

- A. **Seeding on Private Property** shall be Native Mix - Low Grow Mix as distributed by Arkansas Valley Seed Company, or approved equal, at 40 lbs/acre.

Arkansas Valley Seed Company
4625 Colorado Blvd.
Denver, CO 80216
303-320-7500

Subsection 45.4.4 Planting Seed shall include the following:

The Contractor will seed areas indicated per the plan and per Section 45 titled Plant Landscaping. All areas shall be fertilized, seeded and hydromulched per the City landscape specifications. See Section 45 titled Plant Landscaping in the "City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements."

**REVISION OF SECTION 101
DEFINITIONS AND TERMS**

Section 101 of the Standard Specifications is hereby revised for this project as follows:

Section 101 shall include the following:

Definition and Abbreviations in Section 1 of the City of Arvada *Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements*, date January 12, 2016.

The following Subsections are hereby deleted and replaced with the following:

101.28 Department. City of Arvada Department of Public Works

101.29 Engineer. The City Engineer of the Department acting directly or through an authorized representative, who is responsible for engineering and administrative supervision of the project. Chief Engineer shall also be defined as the City Engineer of the Department.

101.48 Preconstruction Conference. A meeting of City project personnel, Contractor project personnel and other stakeholders held prior to the beginning of construction at which topics pertinent to the successful prosecution of the work are discussed.

101.51 Project Engineer. The City of Arvada's Engineer directly responsible for the overall administration of assigned construction projects. Only the Resident Engineer can approve and sign vouchers for interim and final Contractor pay estimates or sign and authorize changes to the Contract if the Project Engineer is a Consultant Employee.

101.29 State. The State of Colorado or the City of Arvada acting through its duly authorized representative.

Subsection 101.73 is hereby amended as follows:

Subsection 101.73 (a) first sentence is hereby deleted and replaced with the following:

Standard Specifications: The Colorado Department of Transportation's (CDOT's) printed book (included errata) titled *Standards and Specifications for Road and Bridge Construction*.

Subsection 101.73 shall include the following:

- (c) When specifically referenced in these documents, the Standard Specifications shall also include the current City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements, dated January 12, 2016.

**REVISION OF SECTION 105
COOPERATION WITH UTILITIES**

Section 105 of the Standard Specifications is hereby revised for this project as follows:

Subsection 105.11 shall include the following:

Xcel Energy, Comcast and Lumen (Centurylink) will be relocating their overhead utilities underground from Garrison Street to Allison Street during construction of this project. The Contractor shall cooperate with the utility owners in their removal and relocation operations so that progress is expedited, duplication of work is minimized, and service interruptions are avoided. It shall be the contractor's responsibility to make all arrangements with the utility owner(s) for utility relocations or adjustments if required to install the curb, gutter, sidewalk, and other roadway improvements and to coordinate the sequence of such work to eliminate possible conflict with construction progress. The contractor shall provide any advance notice required by the utility owner(s) prior to commencing any work affecting said utility(ies).

Approximate utility locations are shown on the plans. The contractor shall be responsible for prompt repair of any damage caused to utilities shown or not shown on the plans. In no way will additional payment be made for time for the repair or relocation of utilities that are damaged during construction whether properly marked or unmarked in the field. Contract time only may be adjusted to account for delays due to utility repair or relocation. Should a delay in utility repair or relocation be significant enough that the contractor decides to demobilize from the project site; no additional payment shall be made for remobilization to the project site once the utility has been repaired and/or relocated.

Should the Contractor desire and/or choose to perform any additional excavation work required for utility adjustments and/or repairs on behalf of the utility owner in order to expedite construction and minimize delays and down time, the City shall in no way be responsible for costs associated with this additional work done for the utility owner.

Work involving changes in, or interference with, utility service shall be done at such times and in such a manner that it will cause the least interference with the proper handling and delivery of the utility service to the receiving customers.

Should the contractor desire to have any rearrangement made in any utility facility for his convenience in order to facilitate his construction operations, which rearrangement is in addition to, or different from the rearrangements indicated on the plans or in the special provisions, he shall make whatever arrangements are necessary with the owners of such utility for such rearrangement and bear all expenses in connection therewith.

Attention is directed to the possible existence of underground facilities not known to the City and therefore not shown on the plans or in a location different from that which is indicated on the plans or in the special provisions. The contractor shall take reasonable steps to ascertain the exact location of all underground facilities prior to doing work that may damage such facilities or interfere with their service. If the contractor discovers underground facilities not indicated on the plans, he shall immediately give the Engineer and the utility owner written notification of the existence of such facilities and coordinate the rearrangement of the facility, as necessary.

No additional payment will be made for field verifying all utility locations whether shown or not shown on the plans, except as shown in the "Potholing" bid items in the bid schedule, coordination with utility companies, utility relocations or down time due to utility relocations or repairs, but shall be considered a subsidiary obligation of the contract.

In subsection 105.11 delete the third paragraph and replace with the following:

In accordance with C.R.S. 9-1.5-103 et seq. (Excavation Requirements – Plans and Specifications), the Department will certify in the project plans and specifications which Quality Level (A-D) the depicted existing known utilities are, pursuant to the most recent version of the ASCE Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data (CI/ASCE 38-02). The Contractor shall not be relieved of its responsibility to comply with the requirements set forth therein and shall not rely solely on the Department's plans and specifications when completing its work with respect to existing buried utilities. The Contract will indicate those utility items which are to be relocated or adjusted by the utility owner or which are to be relocated or adjusted by the Contractor. The Contractor shall consider in the bid proposal all of the permanent and temporary utility facilities in their present or relocated positions as shown in the Contract and as revealed by site investigation. Utility delays due to changes which are the

responsibility of the Contractor will be considered nonexcusable delays. Utility delays beyond the Contractor's control and not due to the fault or negligence of the Contractor shall be documented by the Contractor and tied to the project's critical path schedule, so as to demonstrate a timeline of events leading up to the utility owner's failure to perform and subsequent delay to the project. Delays will be determined to be compensable or non-compensable in accordance with subsection

108.08. The Contractor and the Engineer shall meet with the utility owners as often as necessary to coordinate and schedule relocations or adjustments. Additional compensation will not be allowed for foreseeable coordination, inconvenience, or damage sustained due to interference from the utility facilities or the removal or relocation operations as indicated in the Contract.

**REVISION OF SECTION 106
CONTROL OF MATERIAL**

Section 106 of the Standard Specifications is hereby revised to include the following:

The Contractor is responsible for all Quality Control testing as required by the Standard Specifications.

The City is responsible for all Quality Assurance testing as required by the Standard Specifications. The Contractor will be responsible for any extra charges associated with Quality Assurance testing due to Standby Time resulting from delayed material delivery, delayed performance, rejection of materials, retesting of failed tests, or any other extra charges caused by the actions of the Contractor.

The Contractor is responsible for scheduling Quality Control and notifying the City Inspector for Quality Assurance Testing a minimum of 24 hours in advance. Failure to have both Quality Control and Quality Assurance testing available when required will result in rejection of Work and/or materials and the Contractor shall be responsible for all costs associated with said rejections. All Quality Control test results will be forwarded to the City within two weeks of the test.

The Contractor will have representatives, who will be directly involved in the work, attend a pre-construction meeting to discuss the project scope, test scheduling procedure, coordination, and other necessary work items. These representatives will also attend periodic meetings with the City of Arvada staff to review scheduling issues, test results, coordination issues, and resolve other issues, as necessary. The representative performing the work shall be on CDOT's list of pre-qualified consultants as of December 31, 2019.

All technicians and laboratories used on the work shall be certified in accordance with CP10 of CDOT's Field Materials Manual including LABCAT, WAQCT, ACI and Nuclear Gauge Certification for operation of density gauges. All work shall be done under direction of a Colorado Registered Professional Engineer. Laboratories used for all testing shall be AASHTO Accredited for soils, concrete, asphalt, and aggregate testing with all equipment calibrated by certified professional technicians. All equipment and supplies used for the work must be calibrated and operated in accordance with applicable AASHTO, ASTM, ACI, and CDOT Materials Manual.

Method of Measurement

Measurement will be based on the percentage of Work completed, by cost, of the current pay estimate.

Basis of Payment

The lump sum price bid shall include all the Contractor's costs associated with the Work for completion of this item. No additional payment will be authorized for extra charges under this item due to inefficiencies of the Contractor or their subcontractors which require more visits and tests than assumed in the Bid.

Payment will be made under:

PAY ITEM

Materials Testing Services

PAY UNIT

Lump Sum

**REVISION OF SECTION 108
PROSECUTION AND PROGRESS**

Section 108 of the Standard Specifications is hereby revised for this project as follows:

Subsection 108.02 shall include the following:

The "Notice to Proceed" schedule has been defined and can be found in the Contract Documents.

Subsection 108.04 shall include the following:

It is the City's intent that the Contractor order construction items such as pedestrian lights, traffic signals and equipment, waterline, fire hydrants, and other items that have a long lead time, early in the project. These items will be paid for in accordance with 109.07. The City has identified a potential storage location for the equipment (6701 Indiana Street). The Contractor shall coordinate with the City on ordering these items and timing of delivery to the storage location.

Subsection 108.09 shall be deleted and replaced with the following:

Failure to complete work on time shall be assessed per liquidated damages defined in the City Special Conditions.

**REVISION OF SECTION 203
POTHOLING**

Sections 203 of the Standard Specifications are hereby revised for this project as follows:

Subsection 203.05 is hereby revised to include the following:

The contractor shall take reasonable steps to ascertain the exact location of all underground facilities prior to doing work that may damage such facilities or interfere with their service. Potholing shall be paid for under the following bid items:

- a. Potholing (Roadway) – Shall be used to pay for each pothole necessary to locate utilities required to construct the roadway, storm drainage system, and traffic signals.
- b. Potholing (Streetscape) – Shall be used to pay for each pothole necessary to locate utilities required to construct the decorative streetscape items, landscape items, and decorative pedestrian lighting.
- c. Potholing (Water) – Shall be used to pay for each pothole necessary to locate utilities required to construct the proposed waterline, valves, meter boxes, and fire hydrants.

All potholing activities shall be completed immediately after Notice to Proceed and issuance of the GESC Permit prior to any additional Work being started. In the event there are utilities that cannot be accessed immediately at the beginning of Construction, the Contractor shall notify the Engineer, in writing, within two (2) business days of discovery of the constraint and pothole those utilities as soon thereafter as possible and no less than 21 days prior to any Work that may be in conflict. Failure to complete potholing in the time frames stated above will result in waiver of any claims by the Contractor related to the subject utilities. The Contractor shall prepare and updated a Pothole Log throughout the Project. The Contractor shall provide an updated Pothole Log to the City at each weekly progress meeting, failure to submit the updated Pothole Log may result in delayed or non-payment. The Contractor will waive time extensions for Project delays and associated financial impacts to the Contractor if the Contractor does not make the necessary effort to identify pothole conflicts.

As part of the potholing Work the Contractor shall survey the potholed utilities and identify conflicts or issues of concern with the design, in writing, to the City within 3 business days of completing the survey. The potholing line items shall be inclusive of all potholing needed for the Contractor and their Subcontractors

Subsection 203.12 Shall include the following items:

<u>Pay Item</u>	<u>Pay Unit</u>
Potholing (Roadway)	Each
Potholing (Streetscape)	Each
Potholing (Water)	Each

**REVISION OF SECTION 240
PROTECTION OF MIGRATORY BIRDS**

Section 240 of the Standard Specifications is hereby added for this project as follows:

DESCRIPTION

This work consists of protecting migratory birds during construction.

MATERIALS AND CONSTRUCTION REQUIREMENTS

The Contractor shall schedule clearing and grubbing operations and work on structures to avoid taking (pursue, hunt, take, capture or kill; attempt to take, capture, kill or possess) migratory birds protected by the Migratory Bird Treaty Act (MBTA). The Contractor shall retain a qualified wildlife biologist for this project. The wildlife biologist shall have a minimum of three years of experience conducting migratory bird surveys and implementing the requirements of the MBTA. The Contractor shall submit documentation of the biologist's education and experience to the Project Manager for acceptance. A biologist with less experience may be used by the Contractor subject to the approval of the Project Manager based on review of the biologist's qualifications.

The wildlife biologist shall record the location of each protected nest, bird species, the protection method used, and the date installed. A copy of these records shall be submitted to the Project Manager.

Vegetation Removal. When possible, vegetation shall be cleared prior to the time when active nests are present. Vegetation removal activities shall be timed to avoid the migratory bird breeding season which begins on April 1 and runs to August 31. All areas scheduled for clearing and grubbing between April 1 and August 31 shall first be surveyed within the work limits for active migratory bird nests. The Contractor's wildlife biologist shall also survey for active migratory bird nests within 50 feet outside work limits. Contractor personnel shall enter areas outside Arapahoe County Right-of-Way only if a written, signed document granting permission to enter the property has been obtained from the property owner. The Contractor shall document all denials of permission to enter property. The Contractor shall avoid all active migratory bird nests. The Contractor shall conduct no mowing or removal activities of cattails during the nesting season, as it may impact red-wing blackbirds. The Contractor shall avoid the area within 50 feet of the active nests or the area within the distance recommended by the biologist until all nests within that area have become inactive. Inactive nest removal and other necessary measures shall be incorporated into the work as follows:

Tree and Shrub Removal or Trimming. Tree and shrub removal or trimming shall occur before April 1 or after August 31 if possible. If tree and shrub removal or trimming will occur between April 1 and August 31, a survey for active nests shall be conducted by the wildlife biologist within the seven days immediately prior to the beginning of work in each area of tree and shrub removal or trimming. The survey shall be conducted for each phase of tree and shrub removal or trimming.

If an active nest containing eggs or young birds is found, the tree or shrub containing the active nest shall remain undisturbed and protected until the nest becomes inactive. The nest shall be protected by placing fence (plastic) a minimum distance of 50 feet from each nest to be undisturbed. This buffer dimension may be changed if determined appropriate by the wildlife biologist and approved by the Project Manager. Work shall not proceed within the fenced buffer area until the young have fledged or the nests have become inactive.

If the fence is knocked down or destroyed by the Contractor, the Project Manager will suspend the work, wholly or in part, until the fence is satisfactorily repaired at the Contractor's expense. Time lost due to such suspension will not be considered a basis for adjustment of time charges, but will be charged as contract time.

Work on structures. The Contractor shall prosecute work on structures in a manner that does not result in a taking of migratory birds protected by the MBTA. The Contractor shall not prosecute the work on structures during the primary breeding season, April 1 through August 31, unless he takes the following actions:

The Contractor shall remove existing nests prior to April 1. If the Contract is not awarded prior to April 1 and the Arapahoe County has removed existing nests, then the monitoring of nest building shall become the Contractor's responsibility upon Notice to Proceed.

During the time that the birds are trying to build or occupy their nests, between April 1 and August 31, the Contractor shall monitor the structures at least once every three days for any nesting activity.

If the birds have started to build any nests, they shall be removed before the nest is completed. Water shall not be used to remove the nests if nests are located within 50 feet of any surface waters.

Installation of netting may be used to prevent nest building. The netting shall be monitored and repaired or replaced as needed. Netting shall consist of a mesh with openings that are $\frac{3}{4}$ inch by $\frac{3}{4}$ inch or less.

If an active nest become established, i.e., there are eggs or young in the nest, all work that could result in abandonment or destruction of the nest shall be avoided until the young have fledged or the nest is unoccupied as determined by the wildlife biologist and approved by the Project Manager. The Contractor shall prevent construction activity from displacing birds after they have laid their eggs and before the young have fledged.

If the project continues into the following spring, this cycle shall be repeated. When work on the structure is complete, the Contractor shall remove and properly dispose of netting used on the structure.

Taking of a Migratory Bird. The taking of a migratory bird shall be reported to the Project Manager. The Contractor shall be responsible for all penalties levied by the U. S. Fish and Wildlife Service (USFWS) for the taking of a migratory bird.

METHOD OF MEASUREMENT

Wildlife Biologist will be measured by the actual authorized number of hours a wildlife biologist is on site performing the required tasks.

Removal of nests will be measured by the actual number of man-hours spent removing inactive nests just prior to and during the breeding season, April 1 through August 31. During this period, the Contractor shall submit to the Project Manager each week for approval a list of the workers who removed nests and the number of hours each one spent removing nests.

Netting will be measured by the square yard of material placed to keep birds from nesting on the structure. Square yards will be calculated using the length of netting measured where it is attached to the ground and the average height of the netting where it is attached to the structure.

BASIS OF PAYMENT

The accepted quantities measured as provided above will be paid at the contract unit price for each of the pay items listed below that appear in the bid schedule.

Payment will be made under:

Pay Item	Pay Unit
Wildlife Biologist	Hours
Removal of Nests	Hours
Netting (Migratory Birds)	Square Yards

Payment for Wildlife Biologist will be full compensation for all work and materials required to complete the item, including wildlife biologist, wildlife survey, and documentation (record of nest location and protection method)

Payment for Removal of Nests will be full compensation for all work and material required to complete the work.

Payment for netting will be full compensation for all work and material required to complete the item. Overlaps of netting will not be measured and paid for separately, but shall be included in the work. Maintenance and

replacement, removal, and disposal of netting will not be measured and paid for separately, but shall be included in the work.

Clearing and grubbing will be measured and paid in accordance with Section 201. Mowing will not be measured and paid separately, but shall be included in the work. Removal and trimming of trees will be measured and paid separately, but shall be included in the work.

Fence (Plastic) will be measured and paid in accordance with Section 607.

**REVISION OF SECTION 250
ENVIRONMENTAL, HEALTH, AND SAFETY MANAGEMENT**

Section 250 of the Standard Special Provisions, which revised or modified the Section 250 Standard Specification, is hereby revised for this project as follows:

Subsection 250.05 (a) shall include the following between the first and second paragraphs:

The contractor shall provide the project engineer with a Dust Control Plan that details methods for mitigation of fugitive dust resulting from the work. The Dust Control Plan shall be approved by the engineer prior to work commencement. Preparation of this plan shall be included in the lump sum – Environmental Health and Safety Management and shall not be paid for separately.

Water shall be used as a dust palliative where required. Locations shall be directed by the engineer. Water for a dust palliative shall not be paid for separately, but shall be included in the lump sum – Environmental Health and Safety Management. Contaminated groundwater shall not be used as a dust palliative.

Dust control for the project shall be the responsibility of the contractor, the cost of this work shall not be paid for separately but shall be included in the lump sum – Environmental Health and Safety Management.

REVISION OF SECTION 613

LIGHTING

Sections 613 of the Standard Specifications are hereby revised for this project as follows:

Subsection 613.01 is hereby revised to include:

All roadway light standards and luminaires (Type A) shall be furnished and installed by Xcel Energy forces under the City's franchise agreement. Removal of all existing roadway light standards and luminaires shall be performed by Xcel Energy.

Work performed under this section shall be in conformance with the City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements (dated January 12, 2016). Where those specifications and standards conflict with CDOT standards, the City Standards and Specifications shall take precedence.

Subsection 613.02 is hereby revised to include:

The Electrical Contractor shall furnish and install Pedestrian Luminaires and Light Standards (Type B) as specified in the Luminaire Schedule shown on the plans.

Subsection 613.03 General is hereby revised to include:

The electrical point of service and service entrance portion of the installation shall be in compliance with the rules, regulations, and requirements of the utility company supplying power to the project. If there is a conflict between the utility codes or standards and these specifications and/or drawings, the most stringent requirements shall apply.

The Electrical Contractor shall protect all existing surface and underground utilities that are scheduled to remain in place.

The Electrical Contractor shall ensure that all work, all materials employed, all required equipment, and the manner and method of installation conform to accepted construction and engineering practices, and that each piece of equipment is in satisfactory working condition to properly perform its functional operation.

Where removal of existing hardscape (i.e. sidewalk, roadway etc.) or softscape (e.g. sod, planting material etc.) is required, the Electrical Contractor shall remove only the material necessary to do the work. Upon completion of the work, the disturbed area shall be restored to that of, or better than, pre-construction condition.

The Electrical Contractor shall ensure that all installers are licensed in their craft in accordance with applicable regulations and the regulations pertaining to journeyman to apprentice ratios are complied with. Upon request, installers shall provide proof of licensure where such licensure is required.

Subsection 613.03 General, delete the second paragraph and replace with the following:

Each system shall be installed as shown on the plans or as designated. The Contractor shall furnish and install all incidentals necessary to provide a complete working unit or system.

The Contractor is to study all related drawings and report any errors or omissions to the Engineer prior to bidding. The Contractor shall be responsible for the exact fitting of all materials and equipment in the project.

The lighting and electrical drawings that constitute an integral part of this contract shall serve as working drawings. The electrical system layouts indicated on the drawings are generally diagrammatic but shall be followed as closely as actual construction and work of other trades will permit. Govern exact routing of conduit and wiring and the locations of luminaires and electrical enclosures by the curb and sidewalk and the equipment served. Take all dimensions from roadway plan drawings and field conditions. Do not scale from lighting and electrical drawings.

Subsection 613.04 is hereby revised to include the following:

Where installation of Pedestrian lights will require removal of existing sidewalk, the Contractor shall furnish and install the Pedestrian light on a new foundation at the location shown on the plans. This work consists of removal of existing sidewalk to the nearest joints, excavation to previously installed conduit, conduit routing to the proposed foundation, installation of foundation per plan, and concrete restoration.

Payment for LIGHT STANDARD FOUNDATION (SPECIAL) will be full compensation for all work described above.

Subsection 613.05 is hereby revised to include the following:

Pole shall be of the specified type and size shown on the plans.

Light standards shall be installed as shown on the plans. The careful erection and aligning of the light standards to a plumb position is essential. The assembled lighting standard shall, under dead load and at equal ambient temperatures, be as near to true vertical alignment as practical.

Subsection 613.06 Luminaires and Lamps is hereby revised as follows:

Pedestrian luminaires shall be adjusted vertically and horizontally to provide the required mounting height and maximum light distribution on the walkway and to meet Illuminating Engineering Society of North America (IESNA) TM-15-11 "U0" requirements.

After their installation and prior to their acceptance, lenses shall be cleaned to provide maximum lumen output.

Subsection 613.07 Conduit is hereby revised to include the following:

Where cutting, channeling, chasing, or drilling of roadway, sidewalks, or other surfaces is necessary for the proper installation of raceway or other electrical equipment, the work shall be carefully laid out in advance and carefully done. Any damage to the equipment or any defaced finished surface shall be repaired by skilled mechanics of the trades involved at no additional cost to the owner.

Verify locations of all existing and/or new underground utilities prior to installing conduit and, if damaged by this Electrical Contractor, replace immediately in an approved manner and at no expense to the owner.

Subsection 613.08, the first paragraph, is hereby revised to include:

Install all wire continuous from terminal to terminal. Splices in cables when approved shall be made in pull boxes. Make branch circuit splices in splice boxes with water proof splice blocks. Splices shall be held to a minimum. Pull no wire into any portion of the conduit system until all construction work that might damage the wire has been completed. Provide wire markers where number of conductors in a box exceeds five.

Subsection 613.12 is hereby revised as follows:

Pay Item	Pay Unit
1-Inch Electrical Conduit	Linear Foot
2-Inch Electrical Conduit (Plastic)	Linear Foot
3-Inch Electrical Conduit (Plastic)	Linear Foot
Electrical Pullbox (13" x 20" x 12")	Each
Wiring	Lump Sum
Light Standard and Luminaire (Pedestrian)(Type B)	Each
Light Standard Foundation	Each
Light Standard Foundation (Special)	Each
Meter Power Pedestal	Each

**REVISION OF SECTION 614
FIBER OPTIC CABLE (SINGLE MODE)**

Subsection 614 of the Standard Specifications is hereby revised for this project to include Section 50.3.3 of the City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements.

This item shall include Fiber Optic Termination Panels required in each cabinet. See Revision of Section 614 – Fiber Optic Termination Panel.

The Contractor shall GPS all conduit installed for the signal interconnect system as it is installed. This information shall be provided to the City. Payment for this work is included in the installation of the conduit and fiber optic cable and shall not be paid for separately.

BASIS OF PAYMENT

Payment will be made under:

Pay Item	Pay Unit
Fiber Optic Cable (Single Mode)	Linear Feet

**REVISION OF SECTION 614
FIBER OPTIC TERMINATION PANEL**

Subsection 614 of the Standard Specifications is hereby revised for this project to include Section 50.3.3 of the City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements.

BASIS OF PAYMENT AND METHOD OF MEASUREMENT

This item will not be measured and paid for separately but shall be included in the cost of Fiber Optic Cable (Single Mode).

**REVISION OF SECTION 614
TEST FIBER OPTIC CABLE**

Subsection 614 of the Standard Specifications is hereby revised for this project to include Section 50.3.3 of the City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements.

BASIS OF PAYMENT

Payment will be made under:

Pay Item	Pay Unit
Test Fiber Optic Cable	Lump Sum

The cost of splice closures, splicing and fiber tagging shall be included as part of the work and shall not be paid for separately.

**REVISION OF SECTION 614
ETHERNET SWITCH**

Subsection 614 of the Standard Specifications is hereby revised for this project to include Section 50.3.3 of the City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements.

BASIS OF PAYMENT

Payment will be made under:

Pay Item	Pay Unit
Ethernet Switch	Each

When switches are specified in the project plans and/or specifications, and unless otherwise specified, switches shall be the Siemens Ruggedcom RS900GP.

**REVISION OF SECTION 620
FIELD FACILITIES**

Sections 620 of the Standard Specifications are hereby revised for this project as follows:

Subsection 620.05 is hereby revised to include:

Sanitary facilities shall be provided with weekly scheduled cleaning and supplies. These facilities shall be locked during non-working hours to avoid misuse by the public. The facilities shall be located on the project in locations that do not have a negative impact on residents or businesses.

**REVISION OF SECTION 625
CONSTRUCTION SURVEYING**

Section 625.03 Construction Requirements General Shall include the following:

Electronic files used for design will be provided to the Contractor by the Engineer prior to construction. The Contractor and their surveyor shall review this information prior to staking. If the Contractor or their surveyor discovers any discrepancies or errors on the plans they shall notify the Engineer before proceeding with staking.

The Contractor's surveyor shall locate and mark the limits of new right of way and temporary construction easements prior to the start of construction. No additional payment will be made for this surveying.

Section 625.13 Shall include the following:

Basis of Payment

Pay Item	Pay Unit
Construction Surveying	Lump Sum

**REVISION OF SECTION 626
PUBLIC INFORMATION SERVICES
(TIER III)**

The Standard Specification is hereby revised for this project to include the following:

DESCRIPTION

This work consists of providing regular and continuous public information services throughout the duration of the project. Final approval of approach and collateral will be given by the Engineer.

CONSTRUCTION REQUIREMENTS

- (a) *Public Information Manager (PIM)*. The Contractor shall provide a full-time Public Information Manager (PIM) who will be the responsible charge for all activities associated with public information services. As part of the key project staff submittal prior to the Preconstruction Conference, the Contractor shall submit the name, contact information and qualifications of the Public Information Manager (PIM) for this project for approval by the Engineer. The PIM shall have professional experience in Public/Media Relations, Marketing or other related field and good verbal and written communications skills. PIM may be a qualified sub-consultant or a member of the Contractor's personnel, provided they have limited project duties outside those duties relating to Public Information Services. The Engineer will coordinate all aspects of the PIM's work, including all required submittals, with the Communications Manager (City of Arvada personnel).
- (b) *Activities of the PIM*. Throughout the duration of the project, the PIM shall be responsible for the following:
- (1) *On Call*. The PIM shall be available or on call on every day there is work on the project and shall be available upon the Engineer's request at other than normal working hours. When warranted, PIM must be able to be on-site within 2 hours to provide media interviews and/or site tours upon request.
 - (2) *Project Meetings*. The PIM shall physically be present at the weekly project meetings held on-site at a minimum of once a month and more frequently as necessary during critical construction phase implementation. The PIM shall attend all other project weekly meetings via phone if not physically present. At the meetings, PIM will discuss communications issues and develop strategies to provide timely details for upcoming media advisories/press releases, lane closure reports, website updates and information line recordings.
 - (3) *Public Information Line/Communications*. The PIM shall establish a public information office equipped with a telephone, voicemail, computer and email address. The public information office may be located off-site or within the PIM's field office, provided that the telephone line is a local call line. The voicemail greeting for the project information line shall provide an updated message each week, or each day if necessary, concerning the project's completion date and forthcoming activities on the project and allow the recording of a message from the caller. If unable to answer the public information line, the PIM shall check and respond to voicemail messages throughout each day of construction operations and lane closures are being carried out. The PIM shall track inquiries made by citizens and businesses, including names, addresses, phone numbers, and subsequent action taken during construction; these customer inquiries and follow-up action shall be provided to the City in an easily accessible and readable format. The system shall provide an automated report to the Engineer each week. All inquiries and complaints shall be followed up with a return phone call or email from either the PIM and, when necessary, the Engineer. Additionally, the PIM shall provide a text and email alerts registry for weekly project updates and alerts to be sent out to interested parties.
 - (4) *Public Information Plan*. The PIM shall submit a Public Information Plan (PIP) for approval by the Project Engineer. The PIP shall include project milestones and planned public information strategies; primary

stakeholder communications list; identification of any public information issues and proposed outreach and approach to crisis communications. The PIP shall be updated if necessary based on project milestones and progress.

- (5) *Photos/Video.* The PIM shall take and submit photos/videos of the project work on regular intervals. A cell phone camera is permitted. Photographs/videos may include traffic control, paving, slope repair, erosion control, bridge deck and rail work, and other key areas of work identified by the Contractor and the Department for use in reports to interested agencies, social media, and flyers. A minimum of two digital photographs/videos shall be submitted each month to the Engineer.
- (6) *Media Relations.* At least one week prior to the project start date, the PIM shall prepare a media release summarizing the project scope, construction phasing, potential traffic and construction, duration of project and summary of project benefits. The PIM shall develop additional media releases and traffic advisories based on major construction milestones such as major traffic shifts, key closures, etc. or as requested by the City of Arvada. The media releases and traffic advisories will be submitted for approval in accordance with Table 626-2. City of Arvada will distribute media releases, traffic advisories and other information.

The PIM shall immediately notify the Engineer of any on-site situations involving the media. Should media call, the PIM will provide only the City of Arvada's Communications Manager's contact information. The City of Arvada will address all media inquiries and mediarequests.

- (7) *Lane Closure Reports.* PIM shall submit a Lane Closure Report each Thursday by noon, for the following week's activities, to the contacts listed on the Report and at the end of the spec.
- (8) *Web Page Updates.* The PIM shall work with the City of Arvada to develop internet web page content specifically for this project and provide consistent updates with the latest project information (web page development experience is not necessary as the PIM will simply supply information for the City of Arvada web page template). It shall contain all appropriate links to/from other sites if applicable, e.g., local city, county, bus service, etc. PIM will ensure the web page is updated at least weekly with pertinent schedule information, new photos, contact information, etc.
- (9) *Project Fliers.* At least 10 working days prior to the start of work, the PIM shall prepare and deliver one flier to each property owner potentially impacted by the roadway work zone such as properties with direct access to the roadway, nearby businesses, schools, homes, churches or others who rely on regular traffic access in the construction zone. The flier shall be developed as coordinated with the City of Arvada. An email containing the flier shall also be sent to all those known to use the project limits having significant or daily use of the roadway contained within the project corridor. Examples of these are bus services, community centers, schools. Additional fliers may be required, as directed, and may be delivered via <http://uspseverydoordirectmail.com>, the use of a mailing list from county GIS mapping, or other approved method.

The flier shall provide the anticipated project start and end date, location and description of work, traffic impacts and hours/days of operation, PIM's project information line, email address, web address, project map (if necessary) and a construction safety message as defined by the department. Flier may also contain contractor logo, if desired. Fliers shall be submitted for approval in accordance with Table 626-2. Final approval is provided by the Engineer. The PIM shall contact the Communications Manager for a flier template which will include City of Arvada logo, project logo, or both.

- (c) *Construction Signing.* In accordance with Section 630, a minimum of one week prior to start of work, the Contractor shall erect signs at both ends of the project limits, with the estimated dates when the project will commence and end. The signs shall include the Contractor's name and public information contact number.
- (d) *Response Protocol to City and the Public.* The PIM shall conform to Table 626-1 in responding to correspondence from stakeholders and the public:

**Table 626-1
RESPONSE PROTOCOL**

TYPE OF COMMUNICATION	TIMING OF RESPONSE
Hotline Calls	Check messages throughout day Respond same day (initial call) or within 24 hours (including weekends if work is occurring)
Email	Same day (within two business days for high volume situations)
Call from City of Arvada Staff	As soon as possible
Webpage Inquiries	Same day (within two business days for high volume situations)

- (e) *Deliverables Protocol to the City*. The PIM shall conform to Table 626-2 in submitting the following for Department review and approval prior to dissemination:

**Table 626-2
DELIVERABLES AND SUBMITTAL TIME TO CITY ENGINEER**

Deliverable	When to be submitted
PIM Name and Credentials	Before Pre-Construction Meeting (along with key staff submittal)
PIM Contact Information	At Pre-Construction Meeting
Emergency Response Telephone Tree (when required in the Contract)	Before works starts
Local Telephone Hotline	Before works starts
Stakeholder Distribution List (if required for non-work zone flyer recipients and emergency service providers)	At Pre-Construction Meeting
Lane Closure Reports	Weekly, on Thursday by noon
Traffic Advisories/Media Releases	48 hours prior to scheduled distribution date
Fliers, posters or other public material	5 Working Days prior to the scheduled distribution date In cases of rapid response, 48 hours prior to distribution
Photos/Video	Two a month or as requested.

- (f) *Deliverable protocols to the public.* The PIM shall conform to Table 626-3 in providing the following information to the public:

**Table 626-3
DELIVERABLES AND SUBMITTAL TIME TO THE PUBLIC**

Deliverable	When to be published
Full road closures, detours, and major traffic impacts lasting seven days or longer	14 days prior to the beginning of activity in any area of the Project.
Major project activities (such as major lane shifts, bridge demolitions, etc.) lasting seven days or less	7 days prior to the beginning of the activity
Other remaining types of construction Activities in any area of the Project including: ▪ Night Work ▪ Utilities ▪ Change of business/residential access	7 days prior to the beginning of activity in any area of the Project or as determined jointly by teams
Other construction updates (e.g., cancellation of planned closures, additional lane closures, closure removals, major traffic shifts, etc.) that directly impact the public.	As soon as known with at least 24 hours' notice

- (g) *Public Information Contact Sheet.* A Public Information Contact Sheet shall be completed by the PIM with the names of contact as appropriate to the project:

Public Information Services Contact Sheet (To be completed by PIM)

Owners:

City of Arvada

Name: Trang Tran, Project Manager
Address: 8101
Ralston
Road
Arvada,
CO 80002
Phone/s: (720) 898-7646
Email: tran@arvada.org

City

City Manager's Office Contact: Ben Irwin, Communications Manager, 720-898-7507, birwin@arvada.org

City Public Works: Jacqueline Rhoades, City Engineer, 720-898-7774, jrhoades@arvada.org

City PIO:

Rachael Kuroiwa, Infrastructure Communications Manager, 720-898-7607, rkuroiwa@arvada.org

Chamber of Commerce: Arvada Chamber of Commerce, 303-424-0313

City Fire/Rescue: Arvada Fire Protection District
Emergency: 911
Non-emergency: 303-424-3012

Police Department: Emergency: 911
Non-emergency: 720-898-6900

Hospital: Lutheran Medical Center, 303-425-4500

Ambulance: Arvada Fire Emergency Medical Services (EMS) – Emergency 911

Key Stakeholders

Schools/School District: Jefferson County School District – 303-982-6500

Olde Town Arvada Business Improvement District: 303-420-6100

Community Centers: Olde Town Arvada Library 303-235-5275

Churches: First Church of Christ 303-324-2022

Visitor Centers/Tourist Destinations: Arvada Visitors Center 7305 Grandview Ave., 720-898-3380

Special Districts (Business Improvement, Parks, Maintenance, Water, etc.): Arvada Historical Society, 7307 Grandview Ave., 303-431-1261

Utility Owners: (See attached Utility specification as well as Construction plans)

Swadley Ditch: David Parker, President, 303-981-5035

METHOD OF MEASUREMENT

The Engineer will monitor the PIM and all public information services. When the PIM provides acceptable public information services in accordance with these specifications, partial payments for the pay item Public Information Services will be made as the work progresses. Failure to provide acceptable public information services will result in withholding of payment for this item. These partial payments will be made as follows:

Partial payments for public information services will be made once each month as work progresses. The monthly partial payments will be determined by pro-rating the lump sum bid amount by the number of months in the actual construction schedule.

BASIS OF PAYMENT

Payment will be made under:

Pay Item	Pay Unit
Public Information Services (Tier III)	Lump Sum

Payment for Public Information Services will be full compensation for all work, materials and equipment to provide public information throughout the project in accordance with this specification.

Construction Signs will be paid for in accordance with Section 3.46 in the City Specifications.

REVISION OF SECTION 629 SURVEY MONUMENTATION

Section 629 of the standard specifications is hereby revised as follows:

Delete section 629 and replace with the following:

DESCRIPTION

629.01 This work consists of locating, preserving, referencing, installing and restoring land monuments, such as Primary Control monuments from which the Right of Way or any land boundary will be calculated, described or monumented, Public Land Survey System (PLSS) monuments, General Land Office (GLO) monuments, Bureau of Land Management (BLM) monuments, Mineral Survey (MS) monuments, Right of Way (ROW) monuments, property boundary monuments and offsets, range points, benchmarks, easement monuments, and other monuments that are required by law or regulation to be established and recorded by a Professional Land Surveyor (PLS), along with installing or adjusting Monument Boxes.

The production of additional documentation may be required by the City Surveyors' Office. All such work included in this section shall be under the supervision of a PLS who is licensed in the State of Colorado.

MATERIALS AND EQUIPMENT

629.02 The Contractor shall furnish all personnel, survey equipment, safety equipment, materials, and traffic control necessary to perform the required monumentation and related surveying.

CONSTRUCTION REQUIREMENTS

The Contractor shall check and verify all established Primary horizontal and vertical control points.

All survey records generated shall be the property of the City and shall be available to the City Surveyor's Office for inspection or reproduction at all times. All survey records shall be transmitted to the City Surveyor's Office for inclusion into the project records before final project acceptance.

Electronic formats may be acceptable, please coordinate with the City Surveyor's office.

Copies of any new Monument Records filed by the PLS with the State Board of Registration shall be submitted to the City Surveyor's Office prior to filing.

629.04 Locating Monuments. This work consists of field locating all survey monumentation as discussed in 629.01 which is in place within the project limits. A diligent search of construction zones and project limits shall be performed by the PLS.

629.05 Preserving and Referencing Monuments. All monuments as described in 629.01 shall be preserved, reference and reset by a PLS within the project limits.

629.06 Installing Monuments. All monuments as described in 629.01 shall be preserved through construction. If any monuments as described in 629.01 are to be disturbed/removed during construction, it will be the contractor's PLS responsibility to reset all monuments to current City of Arvada standards.

Appropriate documentation will be required for all reset monuments.

629.07 Monument Box. This survey work shall consist of installing or adjusting monument boxes to current City or State requirements.

METHOD OF MEASUREMENT

629.08 Survey Monuments, Monument Boxes, and Adjust Monument Boxes will be measured by the actual number of the various types installed and accepted by the Engineer. Measurement for locating survey monuments, preserving and referencing monuments will not be measured.

BASIS OF PAYMENT

629.09 The accepted quantities will be paid for at the contract unit price for each of the pay items listed below that appear in the bid schedule.

Prior to final payment, all survey records and documentation must be submitted and accepted by the City Surveyor's Office.

The Construction Survey checklist, equipment calibrations, and survey records will not be paid for separately but shall be included in the work. The locating of monuments, preserving and referencing monuments will not be paid for separately but shall be included in the work.

Payment will be made under:

Pay Item	Pay Unit
Reset Survey Monument	Each
Rest Property Pin	Each

Traffic control for construction surveying will be measured and paid for in accordance with Section 3.47 in the City Specifications.

REVISION OF SECTION 630 TRAFFIC CONTROL

Section 630.01 General shall include the following:

The City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements dated January 12, 2016 will be used for Traffic Control. Where those specifications and standards are in conflict with any portion of Section 105, the City Standards and Specifications shall take precedence.

Contractor shall maintain business, residential, side street and alley access at all times. Contractor shall coordinate work activity related to business and residential property owner or property manager including the removal and reconstruction of driveways at least three days prior to the work activity. To maintain access to properties, Contractor shall phase the construction such that half of the driveway width is done at all times or utilize high early strength concrete as coordinated between the Contractor and property owners and approved by the Engineer. Owner/managers shall be made aware of construction schedule. This information shall be included in the MHT to be reviewed by the City of Arvada.

City of Arvada public information staff will be responsible for general notification of the public via email and website updates. The Contractor shall provide the City 72-hour notice of any change in traffic control or detours.

Subsection 630.04 shall include the following:

Subsection 630.04 shall be added to the City Specifications for construction traffic control. To the extent possible, the Contractor shall utilize existing traffic signal poles, signal heads, detectors, controllers, wiring, and other signal equipment for maintaining continuous traffic signal operations at the project intersections during construction. Traffic signal indications (heads) shall be adjusted and centered over any traffic lanes that are shifted during each phase of construction. The signal head configuration/layout shall be in compliance with Section 4 of the latest MUTCD.

Section 630.09 shall include the following:

If the existing traffic signals cannot be utilized for signalization at intersections where lane shifts are required, Temporary Signal (Portable) devices shall be used. The use of these devices shall require authorization from the City prior to implementation. The Contractor shall notify the City of the need to use these devices with enough lead time to avoid any project delays.

Section 630.10 shall be deleted and replaced with the following:

630.10 Transportation Management Plan. All traffic control shall be in accordance with the latest edition of the FHWA “Manual on Uniform Traffic Control Devices” (MUTCD) and Colorado Supplement, and the most current revision of the City of Arvada Engineering Code of Standards and Specifications.

The Contractor shall submit two copies of a “**Traffic Control Plan**” (TCP) for all work locations to the City’s Engineering Division for review and approval at least two business days prior to beginning work on the project. The Contractor shall not proceed with any work until the City’s Traffic Division has approved the site specific traffic control plans. If during construction the City determines that the traffic control plan needs to be adjusted to meet actual field conditions, the Contractor shall immediately make such adjustments and at no additional cost to the City.

The Contractor is responsible to determine the traffic control requirements for each work location with the Engineering Division. The Contractor is directed to Section 50 of the Arvada Engineering Code of Standards and Specifications for more specific information on traffic control. The Contractor shall notify the Traffic Division (720-898-7740) a minimum of five business days in advance of all closures, including temporary lane

closures, on public roads, private and business accesses. Two-way traffic shall be maintained at all times.

Where parking is allowed on a street where work is scheduled, **"No Parking"** signs shall be placed by the contractor at least 24 hours minimum (48 hours on major collectors and arterials) in advance of any phase of work where parking is normally allowed. The Contractor will be required to remove all **"No Parking"** signs promptly upon completion at each location and phase of work. Hand painted signs or other signs which do not meet MUTCD requirements or City of Arvada standards and specifications will not be permitted.

Residential and commercial establishment written notification in advance of each phase of the work is the responsibility of the Contractor, and to ensure that vehicles are cleared from the site prior to each phase of the work. The City will assist the contractor in clearing parked vehicles by private towing contract in isolated cases where vehicles impede the work and vehicle owners fail to respond to "No Parking" signs, and where personal attempts are made by the Contractor to have vehicles moved from the work area.

Prior to start of construction on each property, the Contractor shall personally contact the residents, management of all businesses or other establishments within and adjacent to the work area and inform the residents and/or management of such business establishments of the project schedule three business days prior to the work. At least one half of the access/driveway must be maintained to each property throughout construction. If closure is required overnight, or for an extended period of time, the contractor shall coordinate directly with the property owners regarding site access. This requirement will not be paid for separately but shall be included in the lump sum bid item for Traffic Control.

The Contractor shall furnish standard traffic control including advance-warning signs at the beginning and end of each phase of the work as it progresses. Patching operations shall proceed in such a manner so as to minimize traffic interruption and hazards. Payment for "Traffic Control" in one lump sum shall be paid in accordance with Section 3.46 of the Standard Specifications and shall constitute full compensation for preparation and submittal of traffic control plans, furnishing, placement, maintenance and removal of traffic control signs, working lighted barricades, arrow boards, temporary pavement marking (waterborne), flag persons, traffic control supervisor, coordinating and notifying property owners and business establishments and all labor, equipment, materials and miscellaneous items necessary to complete the work.

No work shall be done between the hours of 9:00 p.m. and 7:00 a.m., or at any time on a Sunday, except with the written permission of the City Manager, or in the case of an emergency.

Barricading, traffic control devices, and protective materials shall remain in place until the work is opened to traffic. Emergency vehicle access shall be maintained at all times. Such access shall be a minimum width of 16 feet.

Lane closures for the street classifications within this project are as follows:

Arterial Street:	Lane closures 8:30 am to 3:30 pm Construction activities 8:30am to 3:30pm Must maintain one lane in each direction at all times
Collector Street:	Lane closures 8:30 am to 3:30 pm Construction activities 7:00am to 7:00pm Must maintain one lane with adequate flagging at all times
Local Street:	Lane closures 7:00 am to 7:00 pm Construction activities 7:00am to 7:00pm May be closed to through traffic unless otherwise noted during work hours.

Ralston Road is classified as an arterial street.

Traffic restrictions on weekends will be determined on a case by case basis.

If the Contractor violates these working time limitations, the Engineer may give written notice to stop work on the project at the beginning of the next work day. Work cannot resume until the Contractor provides a

written explanation for the violation and assurance to the City that there will not be a reoccurrence of the violation. If subsequent working time violations do occur, the Engineer will notify the Contractor in writing that there will be a price reduction for each incident of violation in accordance with the schedule describe further below. The price reduction will not be imposed when changed contract conditions are encountered during the normal working time or the violation was a result of circumstances beyond the control of the Contractor or subcontractor. Delays in material delivery are not considered circumstances beyond the control of the Contractor. The price reduction will not constitute a penalty, but will be considered a failure to perform traffic control in accordance to the contract specifications.

An incident is any violation up to 30 minutes in duration. Each 30 minutes or increment thereof will be considered an incident. A price reduction will be assessed for each successive or cumulative 30 minute period of violation as determined by the Engineer. The price reduction will increase at a progressive rate. A 15 minute grace period may be granted at the beginning of the second incident before a price reduction is applied. The incident charges are cumulative throughout the project. Adherence to this procedure and any violations as a result of non-compliance to this procedure will be strictly enforced by the City.

PRICE REDUCTION SCHEDULE

<u>Incident</u>	<u>Incident Rate</u>	<u>Total Price Reduction</u>
1st	Notice to Stop Work	\$0
2nd	\$250	\$250
3rd	\$500	\$750
4th	\$750	\$1,750
5th	\$1000	\$2,750
Etc.	Etc.	Etc.

Section 630.16 Basis of Payment shall include the following:

Pay Item	Pay Unit
Traffic Control	Lump Sum
Temporary Signal (Portable)	Each

Payment for maintaining access to properties, and phasing the construction of driveways a half at a time shall not be paid separately but shall be included in the work. If high early strength concrete is authorized and approved by the Engineer, the cost for high early strength (Class E) will be paid under the Force Account item.

Payment for Temporary Signal (Portable) shall also include the cost of the field technician required to set up and configure the Temporary Signal (Portable) up to 100 hours.

**REVISION OF SECTION 630
PORTABLE MESSAGE SIGN PANEL**

Section 630 of the Standard Specifications is hereby revised for this project as follows:

Subsection 630.01 shall include the following:

This work includes furnishing, operating, and maintaining a portable message sign panel.

Add subsection 630.031 immediately following subsection 630.03 as follows:

630.031 Portable Message Sign Panel. Portable message sign panel shall be furnished as a device fully self-contained on a portable trailer, capable of being licensed for normal highway travel, and shall include leveling and stabilization jacks. The panel shall display a minimum of three - eight character lines. The panel shall be a dot-matrix type with an LED legend on a flat black background. LED signs shall have a pre-default message that activates before a power failure. The sign shall be solar powered with independent back-up battery power. The sign shall be capable of 360 degrees rotation and shall be able to be elevated to a height of at least five feet above the ground measured at the bottom of the sign. The sign shall be visible from one-half mile under both day and night conditions. The message shall be legible from a minimum of 750 feet. The sign shall automatically adjust its light source to meet the legibility requirements during the hours of darkness. The sign enclosure shall be weather tight and provide a clear polycarbonate front cover.

Solar powered message signs shall be capable of operating continuously for 10 days without any sun. All instrumentation and controls shall be contained in a lockable enclosure. The sign shall be capable of changing and displaying sign messages and other sign features such as flash rates, moving arrows, etc.

Each sign shall also conform to the following:

- (1) In addition to the onboard solar power operation with battery back-up, each sign shall be capable of operating on a hard wire, 100-110 VAC, external power source.
- (2) All electrical wiring, including connectors and switch controls necessary to enable all required sign functions shall be provided with each sign.
- (3) Each sign shall be furnished with an operating and parts manual, wiring diagrams, and trouble-shooting guide.
- (4) The portable message sign shall be capable of maintaining all required operations under Colorado mountain-winter weather conditions.
- (5) Each sign shall be furnished with an attached license plate and mounting bracket.
- (6) Each sign shall be wired with a 7-prong male electric plug for the brake light wiring system.

Subsection 630.13 shall include the following:

The portable message sign panel shall be on the project site at least 15 calendar days prior to the start of active roadway construction. Maintenance, storage, operation, relocation to different sites during the project, and all repairs of portable message sign panels shall be the responsibility of the Contractor.

Subsection 630.16 shall include the following:

Portable Message Sign Panel shall not be paid for separately and should be included in the Traffic Control Lump Sum bid item.

**REVISION OF SECTION 630
TRAFFIC CONTROL MANAGEMENT**

Section 630 of the Standard Specifications is hereby revised as follows:

Subsection 630.10 shall include the following:

The Contractor's Superintendent and Traffic Control Manager (TCM) shall be equipped with a mobile telephone unit at all times that has a local number for contact with one another, the Project Engineer, or emergency response dispatchers when emergency services are required.

The Traffic Control Supervisor and each flagger shall be equipped with a hand held radio, 5-watt, FM band capable of transmitting and receiving on three frequencies. The radios shall be equipped with battery chargers and rechargeable batteries.

Subsection 630.14 shall include the following:

Mobile telephone units and hand-held radios will not be measured and paid for separately, but shall be included in the work.

REVISION OF SECTION 630 MOBILE ATTENUATOR

Section 630 of the Standard Specifications is hereby revised for this project as follows:

Subsection 630.01 shall include the following:

This work shall consist of furnishing, operating, and maintaining a truck with an attached impact attenuator.

Subsection 630.09 shall include the following:

Mobile Attenuator Options:

Truck Mounted Attenuator. The Contractor shall supply a vehicle with a truck mounted attenuator approved by the FHWA to meet NCHRP 350 criteria for level TL-3 collisions. The attenuator shall be mounted to a suitable truck in a manner meeting the Manufacturer's specifications. The truck shall be furnished with a roof mounted Advance Warning Flashing or Sequencing Arrow Panel (B Type). The truck shall be used when setting up or taking down the work zone and shall be parked in the activity area protecting the construction work while work is being performed, unless otherwise directed.

Trailer Attenuator. The Contractor shall supply a vehicle with an attached trailer attenuator approved by the FHWA to meet NCHRP 350 criteria for level TL-3 collisions. The trailer attenuator shall be attached to a suitable host truck in a manner meeting the Manufacturer's specifications, to include factory-installed 20-ton (minimum) rated pintle hook and ½-inch (minimum) steel frame plate, or as specified by Manufacturer. The trailer shall be furnished with a mounted Advance Warning Flashing or Sequencing Arrow Panel (B Type).

The weight of the host truck shall be between 10,000 and 20,000 lbs, or as specified by the trailer attenuator manufacturer. The Contractor shall provide a certified scale ticket confirming the weight of the truck without trailer attached.

The Trailer Attenuator attached to its host truck shall be used when setting up or taking down the work zone and shall be parked in the activity area protecting the construction work while work is being performed, unless otherwise directed. A buffer zone shall be provided in front of the host truck, for worker safety. This buffer zone shall be in accordance with the manufacturer's recommendations, but shall be no less than 100 feet in length, unless otherwise directed.

Subsection 630.13 shall include the following:

Maintenance, storage, operation, and all repairs of Mobile Attenuator and associated vehicle shall be the responsibility of the Contractor.

Subsection 630.15 shall include the following:

Mobile Attenuators will be measured as the actual number of attenuators that are used during construction; or the actual number of authorized 24-hour periods that the attenuator is used.

Subsection 630.16 shall include the following:

Mobile Attenuators shall not be paid for separately and should be included in the Traffic Control Lump Sum bid item.

Payment will be full compensation for all labor, materials and equipment required to operate and maintain the truck and attenuator for the duration of the project, including the attenuator and flashing panel.

REVISION OF SECTION 630 UNIFORMED TRAFFIC CONTROL

Section 630 of the Standard Specifications is hereby revised for this project to include the following:

DESCRIPTION

This work consists of furnishing a uniformed police agency officer from the following local agency, or approved equal, to perform uniformed traffic control:

City of Arvada Police Department
(720) 896-6900

When called for in the Contract, this work includes furnishing a vehicle for the officer to use in performing uniformed traffic control.

MATERIALS

(a) Qualifications. The local agency officer shall have completed "The Safe and Effective Use of Law Enforcement Personnel in Work Zones" Training Course. The Contractor shall provide copies of documentation certifying the officer's successful completion of this course.

(b) Traffic Control Vehicles. When called for in the Contract, the Contractor shall furnish white sedans to be used by uniformed police agency officers in the performance of Uniformed Traffic Control duties. The Contractor shall be responsible for licensing, insuring, servicing, and fueling the vehicle.

For each Traffic Control Vehicle furnished by the Contractor, the Contractor shall furnish Class 1 SAE certified light bar and control panel for exclusive use by uniformed police agency officers while performing Uniformed Traffic Control. The light bar shall have the following configuration:

- (1) minimum of 44 inches in length, and shall be either permanently or temporarily attached to the top of the vehicle.
- (2) flash red on the driver side and blue on the passenger side
- (3) equipped with an amber-colored directional device in the rear of the bar.
- (4) have alley and takedown lights.
- (5) The control panel shall be capable of controlling the front of the bar and the rear of the bar separately.
- (6) The traffic advisor shall be controlled separately.

The light bars shall be mounted on traffic control vehicles, and shall be maintained in good operating condition at all times. The Contractor shall obtain a permit from the police or sheriff department, as appropriate, for the use of the light bars. The Contractor shall keep the light bars covered at all times when the traffic control vehicle is being used by someone other than the authorized uniform police agency officer.

METHOD OF MEASUREMENT

Uniformed Traffic Control will be measured by the total number of hours that are required for uniformed traffic control including minimum shift hours required by the agency.

Traffic Control Vehicle will not be measured separately but will be included in the cost of Uniformed Traffic Control.

BASIS OF PAYMENT

The accepted number of hours of Uniformed Traffic Control will be paid for at the contract unit price per hour.

Payment will be made under:

Pay Item	Pay Unit
Uniformed Traffic Control	Hour

Hours of Uniformed Traffic Control or Uniformed Traffic Control (Vehicle) that are not authorized or approved will not be paid for. Scheduling of traffic control will not be measured and paid for separately, but shall be included in the work.

TRAFFIC CONTROL PLAN - GENERAL

The key elements of the Contractor's method of handling traffic (MHT) are outlined in subsection 50.1.

The components of the Traffic Control Plan for this project are included in the following:

- (1) Schedule of Construction Traffic Control Devices and Construction Traffic Control Plans included in the plans for this project.
- (2) Tabulation of Traffic Control Devices
- (3) City of Arvada, Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements

This project includes restrictions to work times and days that affect traffic during peak traffic times and days, holidays, holiday evenings, holiday weekends, and other circumstances as described in this special provision. Wherever other laws, ordinances, regulations, or orders are more restrictive, they shall take precedence over these requirements.

All lane closures are subject to approval of the City of Arvada. Each lane closure request shall be made at least 72 hours in advance of the time the lane closure is to be implemented. Lane closures will not be allowed to remain unless being utilized continuously for the purpose for which they were set up.

The Contractor shall coordinate and cooperate fully with the City of Arvada, utility owners, and other contractors, to assure adequate and proper traffic control is provided at all times.

The Contractor shall coordinate and cooperate fully with any others providing traffic control for other operations to assure that work or traffic control devices do not interfere with the free flow of traffic except as allowed by the Traffic Control Plan.

RESTRICTED WORK TIMES FOR PEAK TRAFFIC TIMES IN CITY OF ARVADA JURISDICTION

The Contractor shall be limited to one (1) lane closure at one location and in one direction of traffic, unless approved by the Engineer.

All other work, including shoulder closures, shall be performed Monday through Friday (except holidays) 8:30 AM to 3:30 PM. Contractor must submit written request addressed to City Manager for approval to work beyond the limits above.

The Contractor shall be limited to two (2) active work sites, unless approved by the Engineer.

Work performed and material placed that interferes with traffic during the times and in the locations that the roadway is specified to remain open will not be paid for unless the work is directed by the Engineer to be done during those times.

UTILITIES

The known utilities within the limits of this project are:

UTILITY COMPANY ADDRESS	CONTACT NAME EMAIL	PHONE/FAX
City of Arvada (COA) Storm and Sanitary Utilities Department 8101 Ralston Road Arvada, CO 8002	Steve Wyant swyant@arvada.org	720-898-7771
City of Arvada (COA) Traffic Engineering Department 8101 Ralston Road Arvada, CO 8002	Phil Neal pneal@arvada.org	720-898-7743
City of Arvada (COA) Water Utilities Department 8101 Ralston Road Arvada, CO 8002	Ben Sawaya bsawaya@arvada.org	720-898-7790
Comcast 8490 Umatilla Street Federal Heights, CO 80260	Mike Howard michael_howard2@comcast.com	720-219-0642
Lumen 5325 Zuni Street, Room 728 Denver, CO 80221	Gary Crispe gcrispe@terratechllc.net	303-995-1456
Swadley Ditch Company 8525 Ralston Road Arvada, CO 80002	David Parker dpinsinc@gmail.com	303-981-5035
Xcel Energy Application for Gas and Electric Services – Builders Call Line	BCLCO@xcelenergy.com	800-628-2121
Xcel Energy – Distribution 555 Zang St. Ste 250 Lakewood CO 80228	Branda Sloan Branda.L.Sloan@xcelenergy.com	303-628-2276

All new underground facilities, including laterals up to the structure or building being served, installed as part of this project must be electronically locatable when installed, in compliance with Colorado Revised Statutes, Title 9, Article 1.5.

PART 1 – CONTRACTOR SHALL PERFORM THE WORK LISTED BELOW:

Coordinate project construction with the performance by the utility owner of each utility work element listed in Part 2 below. Perform preparatory work specified in Part 2 for each utility work element. Provide an accurate construction schedule that includes all utility work elements to the owner of each impacted utility.

Provide each utility owner with weekly updates to the schedule. Conduct detailed utility coordination meetings prior to each construction phase to coordinate all requirements and schedules, and provide other necessary accommodations as directed by the Engineer. Notify each utility owner in writing two weeks in advance, with a copy to the Engineer, prior to the time each utility work element is to be performed by the utility owner. Provide the notice with the number of days specified in Part 2 immediately prior to the time the utility work must begin to meet the project schedule.

Provide traffic control, as directed by the Engineer, for any utility work performed by the utility owner within the project limits expected to be coordinated with construction. However, traffic control for utility work outside of typical project work hours shall be the responsibility of the utility owner.

Perform each utility work element for every utility owner listed in Part 1. Notify each utility owner in advance of any work being done by the Contractor to its facility, so that the utility owner can coordinate its inspections for final acceptance of the work with the Engineer. Obtain written acceptance from the utility owner for work performed by Contractor. The Contractor shall provide the utility owner written notice at least thirty days immediately prior to each utility work element expected to be coordinated with construction.

The Contractor shall verify the location and depth of existing facilities at potential utility conflicts, and coordinate with the utility owner if a relocation or adjustment to raise/lower lines is needed. If a conflict is determined the Contractor shall expose the utility owner's line if requested by the utility owner so that the utility owner can relocate or adjust to raise/lower as needed. For relocations/adjustments that are expected to be done prior to construction, the Contractor shall coordinate with the utility owner regarding the status of the work and receive as-built information from the utility owner upon completion.

The Contractor shall remove abandoned utility facilities as necessary to accommodate construction of proposed work. The Contractor shall verify with the utility owner if the facility has been abandoned prior to removal.

The Contractor shall follow the utility standards of the City of Arvada (COA), as applicable.

Project Limits – All Utility Owners

The Contractor will contact each utility company a minimum of two business days, unless otherwise noted, prior to working in the utility company's area so that the utility company can provide an inspector and/or complete any necessary adjustments or relocations.

If a need for utility work by either the Contractor or a Utility Company arises, the following shall apply:

The Contractor shall be responsible for coordinating the adjustment of utilities on this project. The Contractor shall keep each utility company advised of any work being performed in the vicinity of their facilities, so that each utility company can coordinate any needed locates, adjustments or inspections. The Contractor shall provide the appropriate utility company ample notice, but not less than two working days, prior to commencing activities in the vicinity of their facilities. Any additional work performed by the Contractor on behalf of the impacted utility company shall not be paid for by the City of Arvada, but shall be paid by the utility company requiring the work, unless otherwise agreed to in writing by the City of Arvada Engineer.

City of Arvada Sanitary

All work on City of Arvada's sanitary sewer facilities shall be in accordance with the current "City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements"

and in accordance with approved plans. The Contractor shall provide at least 24 hours advance notification of required inspections.

The Contractor shall notify the City of Arvada Sanitary staff at least 24 hours in advance of work being conducted in the vicinity of their facilities.

The Contractor shall verify the location and depth of the sanitary service lines, and shall protect them in place during construction. In the event a sanitary service line adjustment is required, the Engineer shall be contacted.

The Contractor shall protect in place City of Arvada's sanitary facilities during storm sewer construction, as shown on the plans.

The Contractor shall adjust to final grade the sanitary manholes at approximately STA 101+55 LT, STA 102+20 LT, STA 103+90 LT, STA 108+45 LT, STA 109+25 LT, STA 111+75 LT, STA 114+95 RT, STA 118+00 RT, STA 121+50 RT, STA 122+55 RT, STA 130+75 RT, STA 134+30 RT, STA 136+40 RT, STA 139+70 RT, STA 143+15 LT, STA 144+65 LT, STA 146+40 LT, and STA 149+60 LT, as shown on the plans. Each manhole shall be adjusted to within ¼ inch below finish grade before the final surface course of HBP (Hot Bituminous Pavement) is placed, per Section 15.3.9 of the City of Arvada "Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements" (updated January 2016).

City of Arvada Traffic

All work on City of Arvada's traffic facilities shall be in accordance with the current "City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements" and in accordance with approved plans.

The Contractor shall provide at least 24 hours advance notification of required inspections.

The Contractor shall notify the City of Arvada Traffic staff at least 24 hours in advance of work being conducted in the vicinity of their facilities.

The Contractor shall verify the location and depth of City of Arvada's existing traffic conduits where they may conflict with new lighting and electrical equipment, including new light poles, and shall coordinate with City of Arvada Traffic staff to adjust the conduits, as shown on the plans.

The Contractor shall remove the traffic signal poles and respective appurtenances and install new at the Ralston Rd. and Garrison St. intersection, Ralston Rd. and Carr St. intersection, Ralston Rd. and Balsam St. intersection, and Ralston Rd. and Allison St. intersection, as shown on the plans.

City of Arvada Water

All work on City of Arvada's water facilities shall be in accordance with the current "City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements" and in accordance with approved plans.

The Contractor shall provide at least 24 hours advance notification of required inspections.

The Contractor shall notify in writing to the City of Arvada's Water staff at least 24 hours in advance of work being conducted in the vicinity of their facilities.

All work shall be done by a Contractor who is properly licensed with the City of Arvada. The licensed Contractor shall obtain all permits, give twenty-four hours written notice to the Public Works Department Engineering Division, setting forth time construction start or when work is to be resumed following a delay. The Contractor shall maintain a complete set of approved drawings and specifications, covering the work being performed, on the project site at all times.

The Contractor shall install new water main and associated appurtenances, services, and laterals from approximately STA 103+85 LT to STA 111+45 LT, and STA 130+40 RT to STA 141+45 LT, as shown on the approved water plans.

The Contractor shall remove and install fire hydrants, and coordinate with the City of Arvada's Water staff regarding the fire hydrant removal and installation, as shown on the approved water plans. Fire hydrants that are removed shall be salvaged and returned to the City of Arvada Water Division.

The Contractor shall remove and install water meters, coordinate with the City of Arvada's Water staff regarding the water meter removal and installation, as shown on the approved water plans.

The Contractor shall adjust to final grade the existing monitoring wells at approximately STA 107+30 RT, STA 107+45 RT, STA 107+50 RT, STA 107+55 RT, STA 107+60 RT, STA 107+65 RT, STA 107+70 RT, STA 107+75 RT, STA 107+78 RT, STA 107+80 RT, STA 107+85 RT, and STA 107+90 RT, as shown on the plans. Each manhole shall be adjusted to within ¼ inch below finish grade before the final surface course of HBP (Hot Bituminous Pavement) is placed, per Section 15.3.9 of the City of Arvada "Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements" (updated January 2016).

The Contractor shall adjust to final grade and clean out water valves, and coordinate with the City of Arvada's Water staff regarding the adjustment of water valves, as shown on the approved water plans.

Comcast

The Contractor shall coordinate with Comcast regarding the work to be completed by Comcast prior to construction. The Contractor shall notify Comcast at least thirty days in advance of work being conducted in the vicinity of Comcast facilities.

The Contractor shall adhere to Comcast's moratorium of construction work on Comcast facilities from the second week of December until the second week of January each year, and other various events requiring increased demand usage.

The Contractor shall verify the location and depth of Comcast's existing conduits where they may conflict with new lighting and electrical equipment, including new light poles, and new traffic signal equipment, and shall coordinate with Comcast to adjust the conduits, as shown on the plans. If the conduits need to be adjusted by Comcast, the Contractor shall notify Comcast at least two months in advance. This work to raise/lower conduits shall be coordinated with construction and take three weeks to complete by Comcast forces. If splicing is necessary, splicing work is expected to take an additional thirty days to complete.

The Contractor shall protect in place all Comcast appurtenances that are located throughout the project corridor.

Lumen

The Contractor shall coordinate with Lumen forces regarding the work to be completed by Lumen prior to construction. The Contractor shall notify Lumen at least thirty days in advance of work being conducted in the vicinity of Lumen facilities.

The Contractor shall verify the location and depth of Lumen's existing conduits where they may conflict with new lighting and electrical equipment, including new light poles, and new traffic signal equipment, and shall coordinate with Lumen to adjust the conduits as necessary. If the conduits need to be adjusted by Lumen forces, the Contractor shall notify Lumen at least two weeks in advance. This work to adjust conduits shall be coordinated with construction and take two weeks to complete.

The Contractor shall coordinate with Lumen regarding the adjustment to final grade of the Lumen manholes at approximately STA 102+20 LT, STA 102+25 LT, STA 107+75 LT, STA 108+15 LT, STA 108+20 LT, STA 114+65 LT, STA 114+65 LT, STA 114+80 LT, STA 121+00 LT, STA 121+25 LT, STA 121+30 LT, STA 127+50 LT, STA 127+55 LT, STA 127+80 LT, STA 131+95 LT, STA 132+00 LT, STA 134+15 LT, STA 134+25 LT, STA 139+80 LT, STA 139+85 LT, STA 141+70 LT, STA 147+25 LT, STA 147+30 LT, and STA 148+30 LT, as shown on the plans. This work shall be coordinated with construction and will require a two-week lead time per manhole adjustment with each manhole requiring one day to get adjusted. Each manhole shall be adjusted to within ¼ inch below finish grade before the final surface course of HBP (Hot Bituminous Pavement) is placed, per Section 15.3.9 of the City of Arvada "Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements" (updated January 2016).

The Contractor shall protect in place all Lumen appurtenances that are located throughout the project corridor.

Swadley Ditch Company

The Contractor shall coordinate with and perform their work with the Swadley Ditch Company as designated in the License Agreement between the City of Arvada and the Swadley Ditch Company. The Contractor is restricted from impacting ditch water operations from April 1st to October 31st, annually.

The Contractor shall notify the Swadley Ditch Company at least seven calendar days in advance of work being conducted in the vicinity of their facilities. The Contractor shall also provide at least seven calendar days advance notification of required inspections.

The Contractor shall coordinate with the Swadley Ditch Company regarding the removal and replacement of the irrigation pipe and associated appurtenances from approximately STA 114+75 LT to STA 121+50 LT, and STA 123+80 LT to STA 125+00 LT, as shown on the plans.

Xcel Energy - Electric Power Source Connections

The Contractor shall provide the utility owner written notice thirty days immediately prior to each utility work element expected to be coordinated with construction.

The Contractor shall be responsible for the coordination of **power source work** to be performed by Xcel Energy. The Contractor shall submit an Xcel Energy Builders Call Line (BCL) Application for the temporary lighting electric meter, and for any new unforeseen work that has not been identified during the design phase. The BCL Application request is to be processed through Xcel Energy–Builder's Call Line at 1-800-628-2121 or BCLCO@XcelEnergy.com. The Contractor shall include Branda Sloan when submitting, and add Branda's name at the top of the application to direct it accordingly. All cost charges from the power service provider, and all necessary materials, labor and coordination required for the temporary lighting electric meter as shown in the plans shall be reimbursed from the Force Account, "F/A 06 Furnish and Install Temporary Lighting."

The proposed street lighting shall be installed, owned, and maintained by Xcel Energy forces as noted in the Lighting Plans, and connected to a flat-rate power source by Xcel Energy. The proposed street lighting shall also be installed at no cost to the project per the City of Arvada and Xcel Energy Franchise Agreement.

Xcel Energy – Electric Distribution

The Contractor shall coordinate with Xcel Energy regarding the electric work to be completed by Xcel Energy prior to construction. The Contractor shall notify Xcel Energy at least forty-five days in advance of work being conducted in the vicinity of Xcel Energy facilities. The Contractor shall request field coordination contact info for standby from Branda Sloan when she has it available.

The Contractor shall initiate relocation work requests through the Xcel Energy Builders Call Line (BCL) for any new unforeseen Xcel Energy electric distribution work that was not identified during the design phase. The Contractor shall include Branda Sloan when submitting and add Branda's name at the top of the application to direct it accordingly. Xcel Energy will require separate applications for the electric distribution and gas distribution facilities.

The Contractor shall verify the location and depth of Xcel Energy's existing electrical lines where they may conflict with new traffic signal equipment, and shall coordinate with Xcel Energy to adjust the conduits as needed, as shown on the plans. The Contractor shall keep 10-foot clearance in all directions from overhead electric lines on this project, and confirm any additional clearance distances with Xcel Energy.

The Contractor shall coordinate with Xcel Energy regarding the relocation of the existing lighting by Xcel Energy to accommodate fifty-percent lighting (temporary lighting) during construction, and will be based on construction phasing.

The Contractor shall protect in place all Xcel Energy switch cabinets, transformers, and appurtenances that are located throughout the project corridor.

Any unforeseen work that has not been identified during the design phase shall be coordinated with construction and will require a forty-five-day lead time, thirty days to design, and three months for construction by Xcel Energy forces.

Xcel Energy- Gas Distribution

The Contractor shall coordinate with Xcel Energy regarding the gas relocation work to be completed by Xcel Energy prior to construction. The Contractor shall notify Xcel Energy at least forty-five days in advance of work being conducted in the vicinity of Xcel Energy facilities to allow for standby as needed. The Contractor shall request field coordination contact information for standby from Branda Sloan when she has it available.

The Contractor shall initiate relocation work requests through the Xcel Energy Builders Call Line (BCL) for any new unforeseen Xcel Energy gas distribution work that was not identified during the design phase. The Contractor shall include Branda Sloan when submitting and add Branda's name at the top of the application to direct it accordingly. Xcel Energy will require separate applications for the electric distribution and gas distribution facilities.

The Contractor shall protect the existing gas facilities in place along Ralston Rd. while work is being conducted in the immediate area.

Any unforeseen work that has not been identified during the design phase shall be coordinated with construction, and will require a forty-five-day lead time, thirty days to design, and three months for construction by Xcel Energy forces.

PART 2 UTILITY OWNERS SHALL PERFORM THE WORK LISTED BELOW:

Although the Contractor shall provide traffic control for utility work expected to be coordinated with construction, traffic control for utility work outside of typical project work hours or outside of project limits shall be the responsibility of the utility owner. The utility owner shall prepare and submit to the City of Arvada Engineer a Method of Handling Traffic for utility work to be performed outside typical project work hours or project limits. The utility owner shall obtain acceptance of the Method of Handling Traffic from the City of Arvada Engineer prior to beginning the utility work to be performed outside typical project work hours or project limits.

This work will be performed by the utility owners as necessary to avoid conflicts with construction activities. New locations shall be as indicated in the plans, and changes or new locations shall be coordinated with the Contractor and Engineer. Utility owners shall comply with schedule requirements of the Contractor and make every effort not to impact the overall construction schedule. Unless otherwise approved by the City of Arvada Engineer, abandoned aboveground appurtenances such as pedestals shall be removed, and abandoned underground utilities and manholes/handholes shall be abandoned in place.

Utility owners shall follow the utility standards of the City of Arvada as stated in the “City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements.” In cases where there are discrepancies between the standards the more stringent standard shall apply.

Utility owners shall coordinate with the Contractor and other utility owners.

Utility owners are responsible for obtaining all necessary permits from the City of Arvada, as required.

City of Arvada Sanitary

City of Arvada Sanitary staff shall coordinate with the Contractor regarding City of Arvada Sanitary staff facilities within the project limits, as described in Part 1. When a new unforeseen relocation or adjustment is necessary that has not been identified during the design phase, City of Arvada Sanitary staff shall coordinate with the Contractor to schedule and facilitate the work by the Contractor.

City of Arvada Sanitary staff shall inspect work completed on its facilities after receiving at least 24 hours advance notification from the Contractor.

City of Arvada Traffic

City of Arvada Traffic shall coordinate with the Contractor regarding City of Arvada Traffic’s facilities at the Ralston Rd. and Garrison St. intersection, Ralston Rd. and Carr St. intersection, Ralston Rd. and Balsam St. intersection, and Ralston Rd. and Allison St. intersection, as described in Part 1. When a new unforeseen relocation or adjustment is necessary that has not been identified during the design phase, City of Arvada Traffic shall coordinate with the Contractor to schedule and facilitate the work by the Contractor.

City of Arvada Traffic shall inspect work completed on its facilities after receiving at least 24 hours advance notification from the Contractor.

City of Arvada Water

City of Arvada Water shall coordinate with the Contractor regarding City of Arvada Water’s facilities within the project limits, as described in Part 1. When a new unforeseen relocation or adjustment is necessary that has not been identified during the design phase, City of Arvada Water shall coordinate with the Contractor to schedule and facilitate the work by the Contractor.

City of Arvada Water shall inspect work on its facilities after receiving at least 24 hours advance notification from the Contractor.

Comcast

Comcast shall coordinate with the Contractor regarding the work to be completed by Comcast prior to construction. The Contractor shall notify Comcast at least thirty days in advance of work being conducted in the vicinity of Comcast facilities.

Comcast shall coordinate with the Contractor regarding the adjustment its conduits where they may conflict with new lighting and electrical equipment, including new light poles, and new traffic signal equipment, as shown on the plans. If the conduits need to be adjusted by Comcast, the Contractor shall notify Comcast at least two months in advance. This work to raise/lower conduits shall be coordinated with construction and take three weeks to complete by Comcast forces. If splicing is necessary, splicing work is expected to take an additional thirty days to complete.

Comcast shall remove its overhead line from Xcel Energy's overhead electric poles along the south side of Ralston Road, and shall install a new underground line along the south side of Ralston Road, as shown on the plans. Comcast shall coordinate the proposed underground line location and scheduling with the City of Arvada. This work is expected to be complete prior to construction.

Lumen

Lumen shall coordinate with the Contractor regarding the work to be completed by Lumen prior to construction. The Contractor shall notify Lumen at least thirty days in advance of work being conducted in the vicinity of Lumen facilities.

Lumen shall coordinate with the Contractor regarding the adjustment of Lumen's existing conduits where they may conflict with new lighting and electrical equipment, including new light poles, and new traffic signal equipment, and shall coordinate with Lumen to adjust the conduits as necessary. If the conduits need to be adjusted by Lumen forces, the Contractor shall notify Lumen at least two weeks in advance. This work to adjust conduits shall be coordinated with construction and take two weeks to complete.

Lumen shall coordinate with the Contractor regarding the adjustment to final grade of the Lumen manholes by Lumen forces at approximately STA 102+20 LT, STA 102+25 LT, STA 107+75 LT, STA 108+15 LT, STA 108+20 LT, STA 114+65 LT, STA 114+65 LT, STA 114+80 LT, STA 121+00 LT, STA 121+25 LT, STA 121+30 LT, STA 127+50 LT, STA 127+55 LT, STA 127+80 LT, STA 131+95 LT, STA 132+00 LT, STA 134+15 LT, STA 134+25 LT, STA 139+80 LT, STA 139+85 LT, STA 141+70 LT, STA 147+25 LT, STA 147+30 LT, and STA 148+30 LT, as shown on the plans. This work shall be coordinated with construction and will require a two-week lead time per manhole adjustment with each manhole requiring one day to get adjusted. Each manhole shall be adjusted to within ¼ inch below finish grade before the final surface course of HBP (Hot Bituminous Pavement) is placed, per Section 15.3.9 of the City of Arvada "Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements" (updated January 2016).

The Contractor shall protect in place all Lumen appurtenances that are located throughout the project corridor.

Swadley Ditch Company

Swadley Ditch Company shall coordinate with the Contractor regarding its facilities within the project limits as designated in the License Agreement between the City of Arvada and the Swadley Ditch Company. The Contractor is restricted from impacting ditch water operations from April 1st to October 31st, annually.

Swadley Ditch Company shall inspect work on its facilities after receiving at least seven calendar days advance notification from the Contractor.

Xcel Energy- Electrical Distribution

Xcel Energy shall coordinate with the Contractor and shall relocate or adjust Xcel Energy electric facilities within the project limits per the City of Arvada and Xcel Energy Franchise Agreement. When an unforeseen relocation or adjustment is necessary, Xcel Energy shall coordinate with the Contractor to schedule and facilitate the work by Xcel Energy forces.

Xcel Energy shall coordinate with the Contractor to install the proposed street lighting wiring, light standards, and applicable street lighting equipment to a flat-rate Xcel Energy power source per the City of Arvada and Xcel Energy Franchise Agreement. This work shall be coordinated and phased with construction and will be installed by Xcel Energy forces.

Xcel Energy shall coordinate with the Contractor upon the Contractor's verification to adjust its electrical lines where they may conflict with new traffic signal equipment, as shown on the plans. Xcel Energy shall provide the Contractor with working clearance distances, in addition to the 10-foot clearance in all directions from overhead electric lines on this project.

Xcel Energy shall remove its overhead electric line along Ralston Road, and shall install a new underground line and associated appurtenances along Ralston Road, as shown on the plans. Xcel Energy shall coordinate the proposed underground line location and scheduling with the City of Arvada. This work is expected to be complete prior to construction.

Xcel shall coordinate with the Contractor regarding the relocation of the existing lighting by Xcel Energy to accommodate fifty-percent lighting (temporary lighting) during construction, and will be based on construction phasing.

The Contractor shall protect in place all Xcel Energy switch cabinets, transformers, and appurtenances that are located throughout the project corridor.

For any unforeseen work that has not been identified during the design phase the work shall be coordinated with construction, and will require a forty-five-day lead time, thirty days to design, and three months for construction by Xcel Energy forces.

Xcel Energy- Gas Distribution

Xcel Energy shall coordinate with the Contractor and shall relocate or adjust Xcel Energy gas facilities within the project limits per the City of Arvada and Xcel Energy Franchise Agreement. When an unforeseen relocation or adjustment is necessary, Xcel Energy shall coordinate with the Contractor to schedule and facilitate the work by Xcel Energy forces.

Xcel Energy shall relocate the 2" gas main and all associated appurtenances and services in Ralston Rd from approximately STA 103+45 RT to STA 111+45 RT, as shown on the plans.

Xcel Energy shall coordinate with the Contractor to protect in place the gas lines in Ralston Road in the vicinity of storm sewer construction, as shown on the plans.

For any unforeseen work that has not been identified during the design phase the work shall be coordinated with construction, and will require a forty-five-day lead time, thirty days to design, and three months for construction by Xcel Energy forces.

GENERAL:

Utilities are depicted on these plans in accordance with their achieved "Quality Level" as defined in the American Society of Civil Engineer's document ASCE 38, "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data. Reliance upon these data for risk management purposes during bidding does not relieve the excavator or utility owner from following all applicable utility damage prevention statutes, policies, and/or procedures during excavation.

The Contractor shall comply with Article 1.5 of Title 9, CRS ("Excavation Requirements") when excavating or grading is planned in the area of underground utility facilities. The Contractor shall notify all affected utilities at least two (2) business days, not including the actual day of notice, prior to commencing such operations. The Contractor shall contact the Utility Notification Center of Colorado (UNCC) at phone no. **811 or 1-800-922-1987**, to have locations of UNCC registered lines marked by member companies. All other underground facilities shall be located by contacting the respective owner. Utility service laterals shall also be located prior to beginning excavation or grading.

The locations of utility facilities as shown on the plan and profile sheets were obtained from the best available information. No warranty is made for the adequacy or accuracy of subsurface information provided. The Contractor shall cooperate with the utility owners in their relocation operations as provided in subsection 105.11 of the Standard Specifications for Road and Bridge Construction. No guarantee is made that utility conflicts will be resolved prior to construction activities and any delays resulting from utility relocation work shall be dealt with in accordance with subsection 108.08 of the Standard Specifications for Road and Bridge Construction as amended.

All costs incidental to the foregoing requirements will not be paid for separately but shall be included in the work.

FORCE ACCOUNT ITEMS

DESCRIPTION

This special provision contains the City's estimate for force account items included in the Contract. The estimated amounts marked with an asterisk will be added to the total bid to determine the amount of the performance and payment bonds. Force Account work shall be performed as directed by the Engineer.

BASIS OF PAYMENT

Payment will be made in accordance with subsection 109.04 of the CDOT standard specifications. Payment will constitute full compensation for all work necessary to complete the item.

Force account work valued at \$5,000 or less, that must be performed by a licensed journeyman in order to comply with federal, state, or local codes, may be paid for after receipt of an itemized statement endorsed by the Contractor.

<u>Force Account Item</u>	<u>Quantity</u>	<u>Estimated Amount</u>
F/A 01 Minor Contract Revisions to include RFI's (Roadway)	F.A.	\$350,000
F/A 02 Erosion Control	F.A.	\$15,000
F/A 03 Environmental Health and Safety Management	F.A.	\$75,000
F/A 04 Irrigation System Repair	F.A.	\$25,000
F/A 05 Utility Adjustment	F.A.	\$75,000
F/A 06 High Early Strength Concrete (Class E)	F.A.	\$40,000
F/A 07 Furnish and Install Electrical Service	F.A.	\$20,000
F/A 08 Minor Contract Revisions to include RFI's (Streetscape)	F.A.	\$100,000
F/A 09 Minor Contract Revisions to include RFI's (Water)	F.A.	\$100,000

F/A 01 Minor Contract Revisions to include RFI's (Roadway) – This work consists of minor work authorized and approved by the Engineer, which is not included in the contract plans or specifications and is necessary to accomplish the scope of work of this contract.

F/A 02 Erosion Control – This work shall include all necessary work and materials for erosion control items not identified in the plans and at the Engineer's direction. Payment will be made based on time and materials used to perform the work. Work must be performed in a workmanlike manner and properly scheduled to minimize cost and inconvenience to the City and or adjacent property owners. The Force Account shall also be used to pay for any additional BMPs or testing which may become required by future changes to the current stormwater regulations by either EPA or CDPHE and could include future effluent limits.

F/A 03 Environmental Health and Safety Management – This item shall be used to compensate the Contractor for the disposal of encountered hazardous waste, including contaminated groundwater, at the appropriate contract unit price for the disposal of material determined to be hazardous waste. The contract unit prices will be full compensation for furnishing all materials, labor, equipment, tools, storage containers for transport, containerization of material for up to 60 days, and incidentals necessary to complete this work. This includes all handling of the material, loading for disposal, unloading for disposal, and borrow material required for replacement of excavated material disposed offsite. It does not include stockpiling or containerization required for analysis which is included in the item Materials Handling (Stockpile & Containerization). Payment for waste disposal fees and transport of hazardous waste will be made as

described in **Section 109.04** and **Section 250.10**. Payment for this work will be in addition to any payment made under other bid items for excavation, embankment, backfill, or material handling (stockpile & containerization) on the project. Any secondary containment required for the project shall also be paid for using this force account.

F/A 04 Irrigation System Repair – This work consists of restoring private irrigation systems authorized and approved by the Engineer, which is not included in the contract plans or specifications and is necessary to accomplish the scope of work in this contract.

F/A 05 Utility Adjustment – This work consists of minor adjustments to utilities authorized and approved by the Engineer, which is not included in the contract plans or specifications and is necessary to accomplish the scope of work in this contract.

F/A 06 High Early Strength Concrete (Class E) – This work consists of using Class E, high early strength concrete when authorized and approved by the Engineer, which is not included in the contract plans or specifications and is necessary to accomplish completing work for private driveway access or other items in the scope of work in this contract.

F/A 07 Furnish and Install Electrical Service – This work consists Xcel's connection and meter settings for the proposed street lighting and traffic signals.

F/A 08 Minor Contract Revisions to include RFI's (Streetscape) – This work consists of minor work authorized and approved by the Engineer, which is not included in the contract plans or specifications and is necessary to accomplish the scope of work of this contract.

F/A 09 Minor Contract Revisions to include RFI's (Water) – This work consists of minor work authorized and approved by the Engineer, which is not included in the contract plans or specifications and is necessary to accomplish the scope of work of this contract.

APPENDIX

Geotechnical Report



Kumar & Associates, Inc.®
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**GEOTECHNICAL ENGINEERING STUDY
AND PAVEMENT THICKNESS DESIGN
RALSTON ROAD IMPROVEMENTS
GARRISON STREET TO YUKON STREET
ARVADA, COLORADO**

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FIGS. 1A through 1F – BORING LOCATIONS

FIG. 2 – LOGS OF EXPLORATORY BORINGS

FIG. 3 – LEGEND AND NOTES

FIGS. 4 through 6 – SWELL-CONSOLIDATION TEST RESULTS

FIG. 7 – GRADATION TEST RESULTS

FIG. 8 – HVEEM STABILOMETER TEST RESULTS

TABLE I – SUMMARY OF LABORATORY TEST RESULTS

APPENDIX A – 18-KIP ESAL CALCULATIONS

APPENDIX B – DARWin™ PAVEMENT DESIGN INPUT PARAMETERS AND CALCULATIONS

SUMMARY

1. Twelve exploratory borings were drilled along the project alignment and encountered a flexible composite pavement section consisting of asphalt overlying aggregate base course. The thickness of the asphalt ranged from about 4.5 to 6.5 inches with an average thickness of about 5.5 inches. The underlying aggregate base course ranged in thickness from about 5.5 to 12 inches with an average thickness of about 8.25 inches.

The subgrade materials encountered below the flexible composite section encountered man-placed fill in 8 of the 12 borings and extended to depths ranging from about 3.5 feet to the maximum explored depth of 10 feet. The existing fill material generally consisted of sandy lean clay and clayey sand which was fine to coarse grained with variable gravel content, moist to very moist and brown, dark brown, and gray. Natural clay was encountered directly below the pavement section in four of the borings and below the fill in one boring. The cohesive soil generally classified as sandy lean clay with fine to coarse sand content, was moist to very moist and light brown in color. Natural sand was encountered below the natural clay in four of the borings and below the fill in two of the borings. The granular soil generally consisted of poorly-graded sand with variable silt content and zones of silty sand. The sand was fine to coarse grained with zones of significant gravel content, slightly moist and tan to light brown in color. Based on the standard penetration tests (blow counts) taken in the borings, the cohesive soils were medium stiff to hard in consistency and the granular soils were very dense.

Groundwater was not encountered in the borings at the time of drilling.

2. Based on the results of the field exploration and laboratory testing programs, the pavement subgrade materials at the site are clayey sand and sandy lean clay and generally classify as A-6 soils with group indices between 0 and 11 in accordance with the American Association of State Highway and Transportation Officials (AASHTO) soil classification system. A Hveem Stabilometer (R-value) test was performed on a composite sample of the granular subgrade materials result in an R-value of 64 at an exudation pressure of 300 psi. Due to the variability in subgrade materials at the site, the R-value was reduced to 10 which correlates to a resilient modulus of 3,562 psi and was used in the design for flexible pavements.
3. Design traffic provided by the client included a PM peak hourly volume of 4,200 vehicles. Assuming that the peak hourly volume is 12% of the average daily traffic (ADT) volume, the overall ADT for the roadway was determined to be 35,000 vehicles. We were also provided a vehicular breakdown of the traffic where 1.9% of the traffic consists of heavy vehicles. We also understand that the project roadway alignment is an RTD bus route. Based on the load equivalency factor developed by CDOT for heavy vehicles, and the load equivalency factor developed by the Metropolitan Government Pavement Engineers Council (MGPEC) for RTD buses, along with the ADT of 35,000, a 20-year 18-kip equivalent single axle loading (ESAL) of 3,500,000 was determined for the roadway alignment.
4. Based on a design subgrade resilient modulus of 3,562 psi (R-value of 10) and a 18-kip ESAL of 3,500,000, we recommend that the project roadway alignment be reconstructed with a flexible composite section consisting of 9.5 inches of asphalt placed on 12 inches of aggregate base course. The alternative full-depth asphalt section consists of 13.5 inches of hot mix asphalt.

PURPOSE AND SCOPE OF WORK

This report presents the results of a geotechnical engineering study and pavement thickness design for the improvements to Ralston Road from Garrison Street to Yukon Street in Arvada, Colorado. The subsurface study was conducted for the purpose of developing pavement section alternatives for reconstruction of the pavement section along with recommendations for earthwork and subgrade preparation requirements. The project site is shown on Figs. 1A through 1F. The study was conducted in accordance with the scope of work in our Proposal No. P-18-687A dated September 14, 2018.

A field exploration program consisting of exploratory borings was conducted to obtain information on subsurface conditions. Samples of the subgrade materials obtained during the field exploration were tested in the laboratory to determine their compressibility or swell potential, classification, soil support value and engineering characteristics. The results of the field exploration and laboratory testing were analyzed to develop recommendations for reconstruction of the pavement section. The results of the field exploration and laboratory testing are presented herein.

This report has been prepared to summarize the data obtained during this study and to present our conclusions and recommendations based on the proposed construction and the subsurface conditions encountered. Design parameters and a discussion of geotechnical engineering considerations related to reconstruction of the existing roadway alignment are included in the report.

PROPOSED CONSTRUCTION

We understand that the proposed project is to consist of the reconstruction of approximately 4,940 lft of Ralston Road from Garrison Street on the west progressing to the east and ending just east of the intersection with Yukon Street.

In general, the roadway template will not significantly change which will consist of two-travel lanes in each direction with a center continuous turn lane. The width of the travel lanes will range from 10 to 12 feet. Minor changes in the vertical profile will occur. Reconstruction of the concrete curb, gutter and sidewalk is proposed.

If the proposed construction varies significantly from that described above or depicted in this report, we should be notified to reevaluate the recommendations provided in this report.

SITE CONDITIONS

At the time of our study, Ralston Road was an asphalt-paved roadway with two travel lanes in each direction with a continuous center, left-hand turn lane. Concrete curb and gutter were present on both sides of the alignment. An attached sidewalk was present along the south side, and the sidewalk on the north side was either attached or detached in areas of the alignment. The roadway services retail and commercial businesses along the alignment.

The asphalt pavement was in fair condition with visual distresses generally consisting of low to medium severity transverse cracking, low severity alligator cracking with isolated areas of medium severity, low to medium severity block cracking and low to medium severity rutting.

SUBSURFACE CONDITIONS

The subsurface conditions were explored by drilling 12 exploratory borings at the approximate locations shown on Figs. 1A through 1F. The borings were logged by a representative of Kumar & Associates, Inc. The exploratory borings were advanced through the pavement sections and into the underlying subgrade using 4-inch diameter continuous flight augers. Samples of the soils encountered in the borings were obtained with a 2-inch diameter California-type drive sampler. The sampler was driven with blows from a 140-pound hammer falling 30 inches. This sampling procedure is similar to the standard penetration test described by ASTM D1586. Penetration resistance values (blow counts) indicate the relative density or consistency of the subsurface soils.

Graphic logs of the exploratory borings are presented on Fig. 2, and a legend and notes describing the subsoils encountered are presented on Fig. 3.

The exploratory borings encountered a flexible composite pavement section consisting of asphalt overlying aggregate base course. The thickness of the asphalt ranged from about 4.5 to 6.5 inches with an average thickness of about 5.5 inches. The underlying aggregate base course ranged in thickness from about 5.5 to 12 inches with an average thickness of about 8.25 inches.

The subgrade materials encountered below the flexible composite section encountered man-placed fill in 8 of the 12 borings and extended to depths ranging from about 3.5 feet to the maximum explored depth of 10 feet. The existing fill material generally consisted of sandy lean clay and clayey sand which was fine to coarse grained with variable gravel content, moist to very moist and brown, dark brown, and gray. Natural clay was encountered directly below the pavement section in four of the borings and below the fill in one boring. The cohesive soil generally classified as sandy lean clay with fine to coarse sand content, was moist to very moist and light brown in color. Natural sand was encountered below the natural clay in four of the borings and below the fill in two of the borings. The granular soil generally consisted of poorly-graded sand with variable silt content and zones of silty sand. The sand was fine to coarse grained with zones of significant gravel content, slightly moist and tan to light brown in color. Based on blow counts taken in the borings, the cohesive soils were medium stiff to hard in consistency and the granular soils were very dense.

Groundwater was not encountered in the borings at the time of drilling. The borings were backfilled and the surface was patched at the completion of the drilling due to their locations being in the vehicular traffic areas.

LABORATORY TESTING

Samples obtained from the exploratory borings were visually classified in the laboratory by the project engineer and samples were selected for laboratory testing. Laboratory testing included index property tests, such as moisture content and dry unit weight, liquid and plastic limits, gradation, and concentration of water-soluble sulfates. Composite bulk samples of the near surface soils were obtained from the borings to determine the R-Value for the pavement thickness design.

Swell-Consolidation Testing: Swell-consolidation tests were conducted on three samples of the existing fill and natural cohesive soils to determine the swell characteristics when wetted under a static surcharge pressure of 200 psf. Each sample was prepared and placed in a confining ring between porous discs. The selected surcharge pressure was applied to the samples, and each sample was allowed to compress to a stabilized height before being submerged in water. The sample height was monitored until deformation practically ceased under each load increment. The swell-consolidation test results indicated that the on-site subgrade materials possess nil to low swell potential with measured swell results of about 1.1% or less.

Results of the laboratory testing program are shown adjacent to the boring logs on Fig. 2, plotted graphically on Figs. 4 through 8 and are summarized in the attached Table I. The laboratory testing was conducted in general accordance with applicable ASTM, AASHTO, and CDOT standards.

Water-Soluble Sulfates: Concentrations of water-soluble sulfates measured in samples of the on-subgrade materials was determined to be 0.00%. This concentration of water-soluble sulfates represents a Class 0 severity exposures of sulfate attack on concrete exposed to these materials. The degree of attack is based on a range of Class 0, Class 1, Class 2, or Class 3 severity exposure as presented in Section 601.04 of the Colorado Department of Transportation Standards Specifications for Road and Bridge Construction (2017).

Based on this information, we believe special sulfate resistant cement will not be required for concrete exposed to the on-site soils.

SITE GRADING

Excavations: We believe the excavations for utilities and other site grading operations can be accomplished by conventional heavy-duty excavation equipment.

Temporary Excavations: For temporary excavations that occur during constructions, the on-site natural clay soils classify as Type B in accordance with OSHA regulations with the existing fill and natural granular soils classifying as Type C soils. All excavations should be constructed in accordance with the applicable OSHA regulations.

Moisture Content and Compaction: Subgrade soils should be free of organics and deleterious matter and have a particle size of 6 inches or less. Prior to placement of fill material, the underlying surface should be thoroughly scarified and well-mixed to a depth of at least 12 inches, and recompact to at least 95% of the modified Proctor (AASHTO T-180) dry density for soils which classify between A-1 and A-2-5 in accordance with the American Association of State Highway and Transportation Officials (AASHTO) soil classification, The minimum compactive effort should be changed to at least 95% of the standard Proctor (AASHTO T-99) dry density for all other soils. The moisture content of the soils should be within 2 percentage points of optimum (1 percentage point below to 3 percentage points above optimum for A-6 and A-7 soils). Fill

should be placed in uniform lifts not exceeding 8 inches and compacted to the same moisture and density requirements.

PAVEMENT THICKNESS DESIGN

Subgrade Materials: Based on the results of the field exploration and laboratory testing programs, the pavement subgrade materials at the site are clayey sand and sandy lean clay and generally classify as A-6 soils with group indices between 0 and 11 in accordance with the American Association of State Highway and Transportation Officials (AASHTO) soil classification system. A Hveem Stabilometer (R-value) test was performed on a composite sample of the granular subgrade materials result in an R-value of 64 at an exudation pressure of 300 psi. Due to the variability in subgrade materials at the site, the R-value was reduced to 10 which correlates to a resilient modulus of 3,562 psi and was used in the design for flexible pavements.

Design Traffic: Design traffic provided by the client included a PM peak hourly volume of 4,200 vehicles. Assuming that the peak hourly volume is 12% of the average daily traffic (ADT) volume, the overall ADT for the roadway was determined to be 35,000 vehicles. We were also provided a vehicular breakdown of the traffic where 1.9% of the traffic consists of heavy vehicles. We also understand that the project roadway alignment is an RTD bus route. Based on the load equivalency factor developed by CDOT for heavy vehicles, and the load equivalency factor developed by the Metropolitan Government Pavement Engineers Council (MGPEC) for RTD buses, along with the ADT of 35,000, a 20-year 18-kip equivalent single axle loading (ESAL) of 3,500,000 was determined for the roadway alignment. The ESAL calculations are provided in Appendix A.

In the event that actual traffic and/or our assumptions are different that what is described above, we should be notified and provided with new information in order to revise the pavement section thickness alternatives provided below.

Pavement Section Alternatives: Based on a design subgrade resilient modulus of 3,562 psi (R-value of 10) and an 18-kip ESAL of 3,500,000, we recommend that the project roadway alignment be reconstructed with a flexible composite section consisting of 9.5 inches of asphalt placed on 12 inches of aggregate base course. The alternative full-depth asphalt section consists of 13.5 inches of hot mix asphalt.

Based on our understanding of RTD requirements, bus pads should be paved using a minimum of 10.0 inches of Portland cement concrete.

The flexible pavement section alternatives were based on the City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements, January 12, 2016. Also, the pavement section alternatives were determined using the DARWin™ computer software which solves the AASHTO 1993 pavement design equation. The pavement thickness calculations are provided in Appendix B.

Asphalt Mix Requirements: The asphalt used in the flexible composite pavement section should consist of a Grading S mix for the bottom and intermediate lifts (3.5 inches thick per lift) and a Grading SX mix for the top lift (2.5 inches thickness). An N_{Design} of 100 should be used in the design of the asphalt mix along with an asphalt binder consisting of PG 64-22. A polymer modified binder, PG 76-28, should be considered for the top lift.

Aggregate Base Course Requirements: The aggregate base course used in the flexible composite pavement section should meet the requirements of a CDOT Class 6 aggregate base course material. The aggregate base course should be compacted to at least 95% of the modified Proctor (AASHTO T-180) maximum dry density at a moisture content within 2 percentage points of optimum.

Subgrade Preparation: Just prior to placement of the pavement section, the underlying subgrade materials should be thoroughly scarified and well-mixed to a minimum depth of 12 inches and recompacted to at least 95% of the modified Proctor (AASHTO T-180) dry density for soils which classify between A-1- and A-2-5 in accordance with the American Association of State Highway and Transportation Officials (AASHTO) soil classification, The minimum compactive effort should be changed to at least 95% of the standard Proctor (AASHTO T-99) dry density for all other soils. The moisture content of the soils should be within 2 percentage points of optimum (1 percentage point below to 3 percentage points above optimum for A-6 and A-7 soils).

The pavement subgrade should be proofrolled prior to placing pavement. Proofrolling should be performed with heavy rubber-tired equipment with a tire pressure of at least 100 psi capable of applying a minimum load of 18-kips per axle. Pavement design procedures assume a stable

subgrade prior to paving. Areas that deform under wheel loads are not stable and should be removed and replaced to achieve a stable subgrade prior to paving.

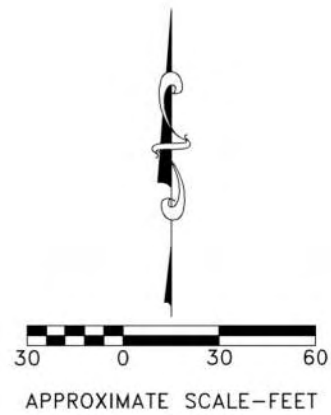
Drainage: The collection and diversion of surface drainage away from paved areas is extremely important to the satisfactory performance of the pavement. Drainage design should provide for the removal of water from paved areas and prevent the wetting of the subgrade soils.

LIMITATIONS

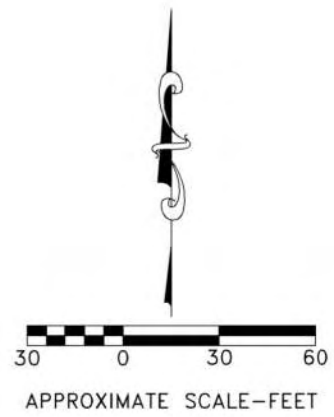
This study has been conducted in accordance with generally accepted geotechnical engineering practice in this area for exclusive use of the client for design purposes. The conclusions and recommendations submitted in this report are based upon the data obtained from the exploratory borings at the locations indicated on Fig. 1A through 1F, and the proposed type of construction. This report does not reflect subsurface variations that may occur between the exploratory borings, and the nature and extent of variations across the site may not become evident until site grading and excavations are performed. If during construction, existing pavement section type and thickness, fill, soil, or ground water conditions appear to be different from those described herein, Kumar & Associates, Inc. should be advised at once so that a re-evaluation of the recommendations presented in this report can be made. Kumar & Associates, Inc. is not responsible for liability associated with interpretation of subsurface data by others.

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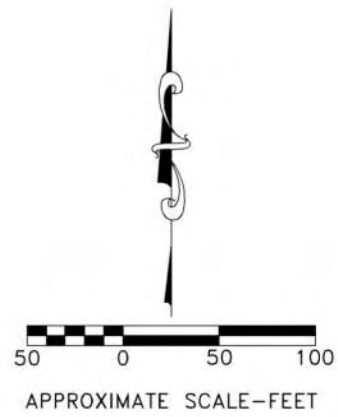
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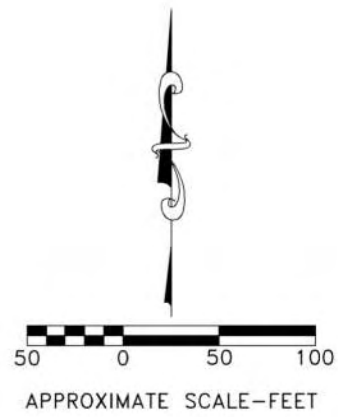
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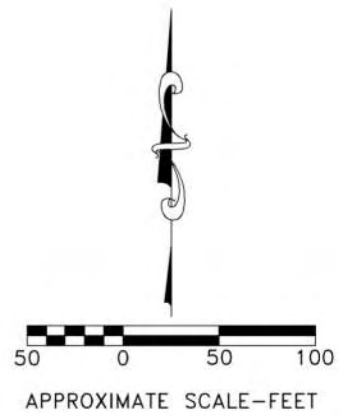
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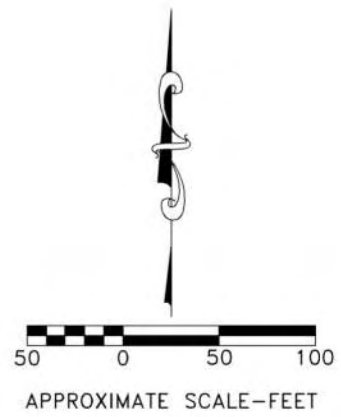
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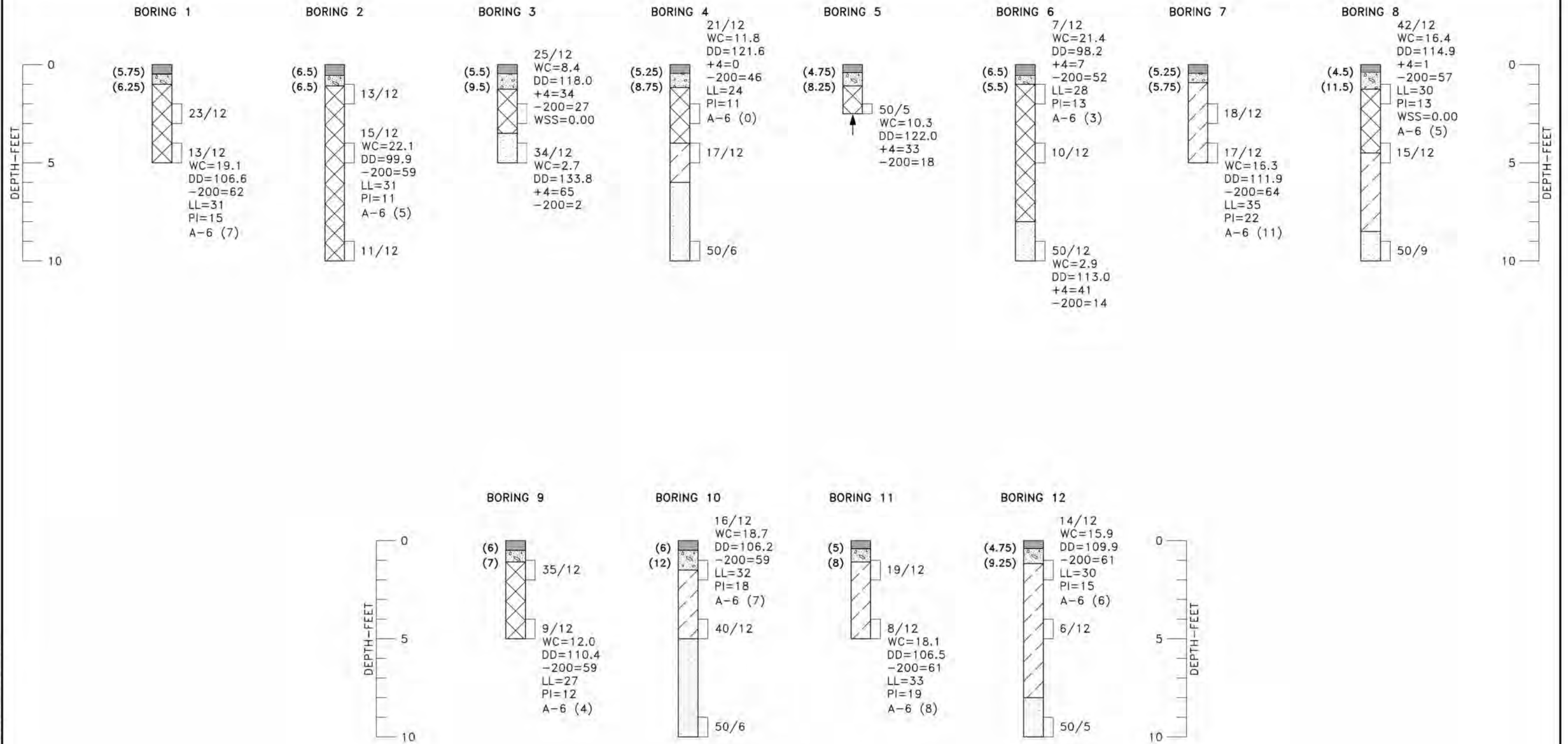


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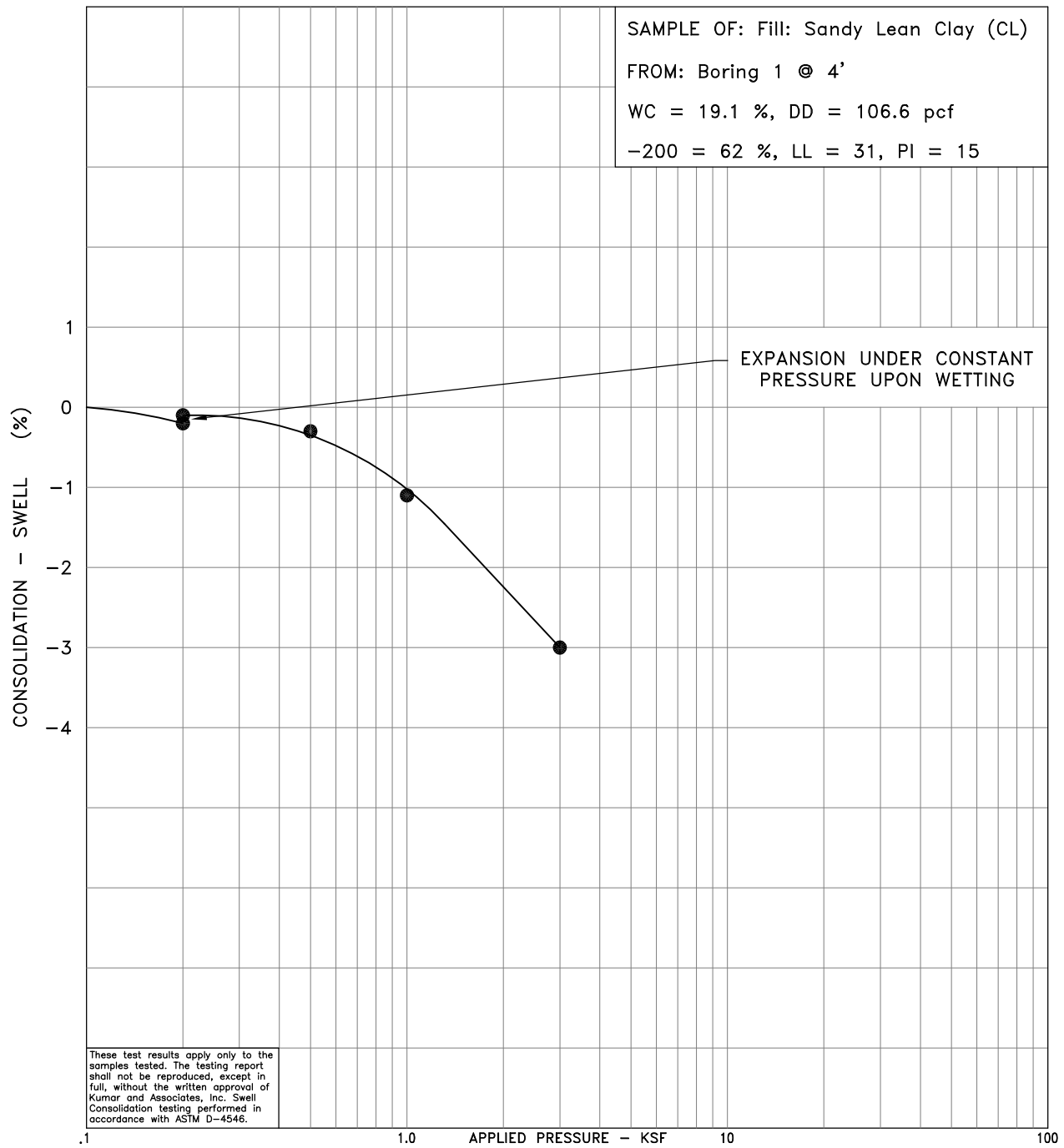


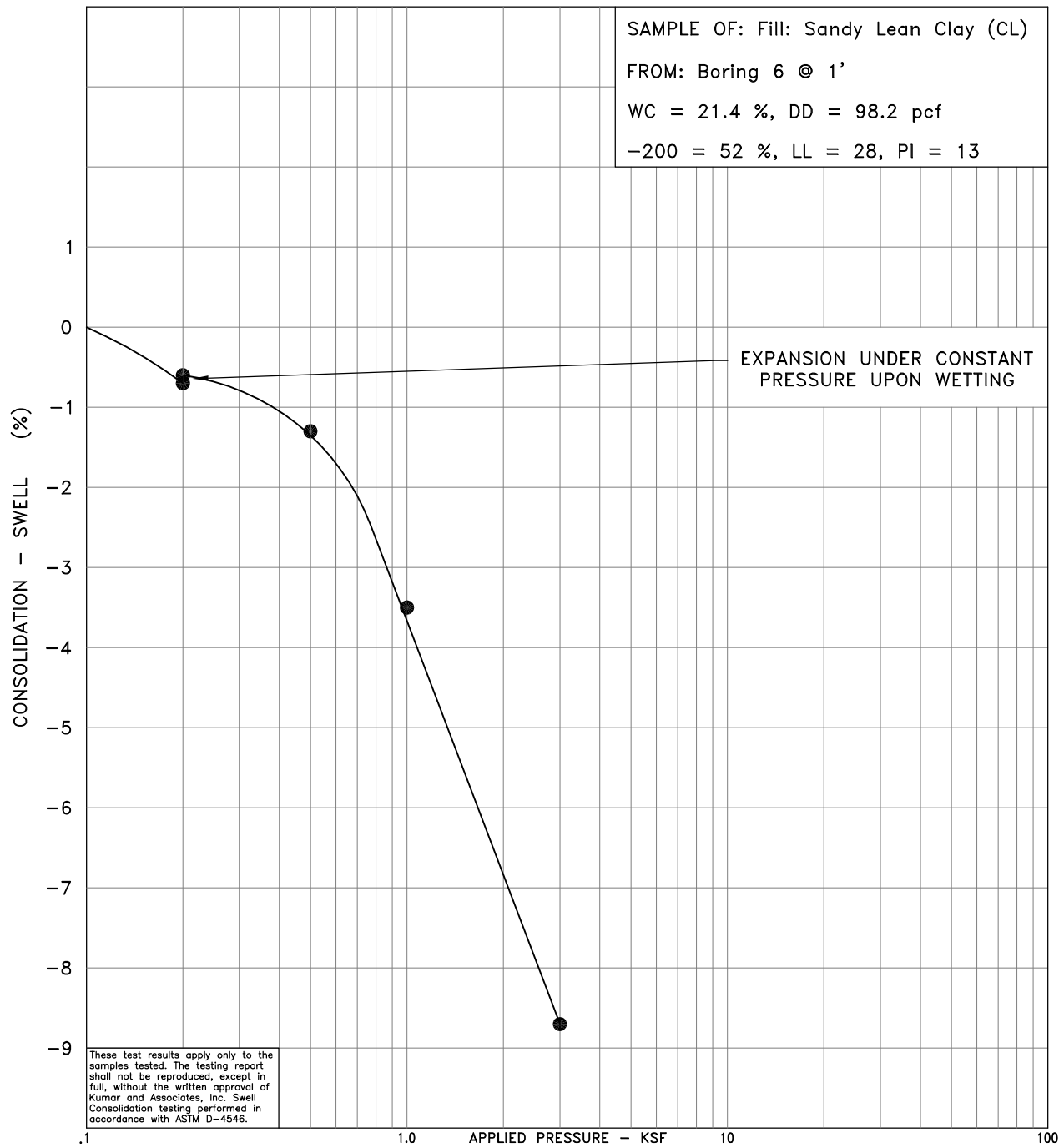
LEGEND

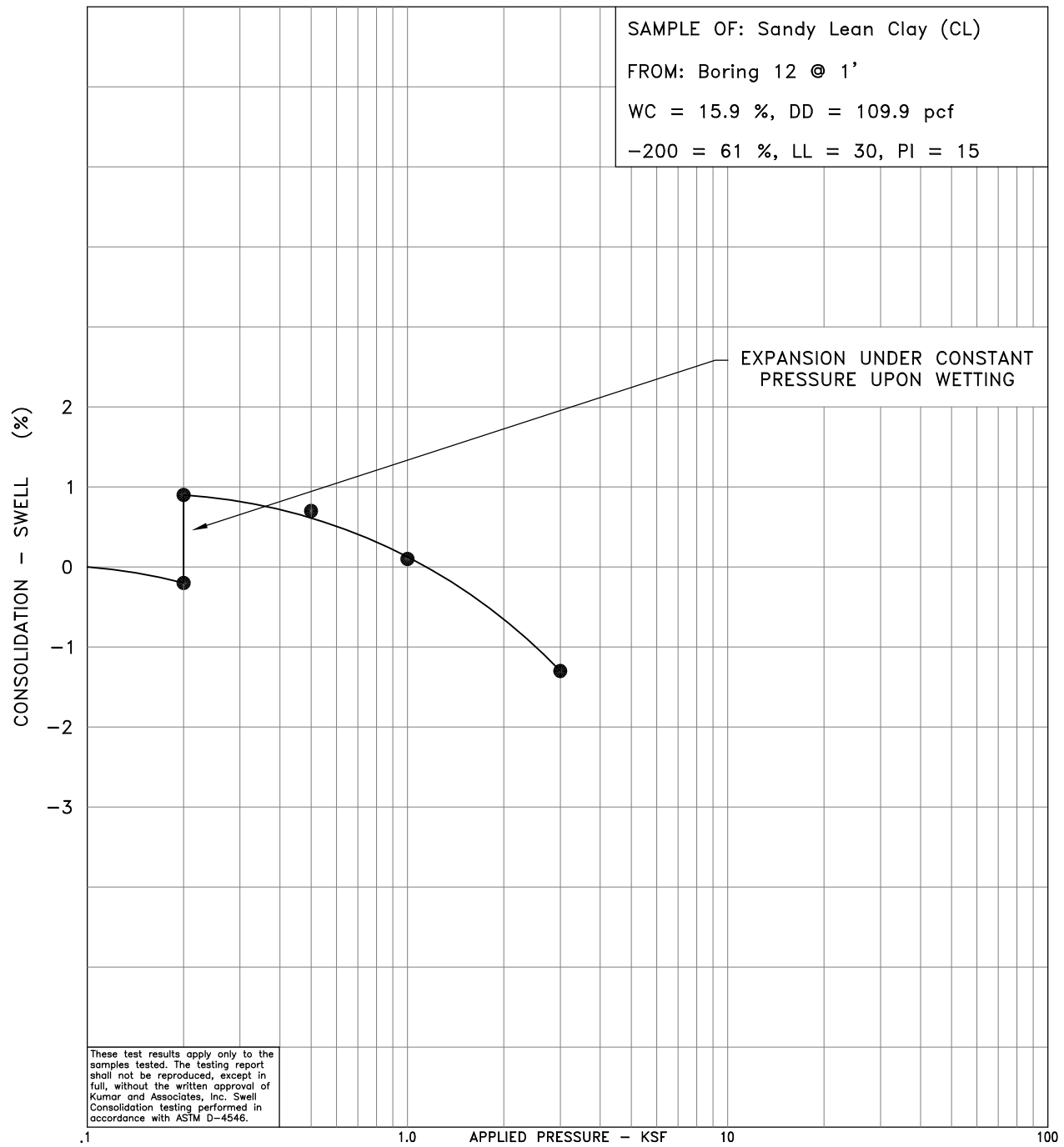
- (5.75)  ASPHALT, THICKNESS IN INCHES SHOWN IN PARENTHESES TO LEFT OF THE LOG.
- (6.25)  BASE COURSE, THICKNESS IN INCHES SHOWN IN PARENTHESES TO LEFT OF THE LOG.
-  FILL: SANDY LEAN CLAY (CL) AND CLAYEY SAND (SC), FINE TO COARSE GRAINED WITH VARIABLE GRAVEL CONTENT, MOIST TO VERY MOIST, BROWN, DARK BROWN, GRAY.
-  SANDY LEAN CLAY (CL), FINE TO COARSE SAND CONTENT, MEDIUM STIFF TO HARD, MOIST TO VERY MOIST, LIGHT BROWN.
-  POORLY GRADED SAND WITH VARIABLE SILT (SP-SM) WITH ZONES OF SILTY SAND (SM), FINE TO COARSE GRAINED WITH ZONES OF SIGNIFICANT GRAVEL CONTENT, VERY DENSE, SLIGHTLY MOIST, TAN, LIGHT BROWN.
-  DRIVE SAMPLE, 2-INCH I.D. CALIFORNIA LINER SAMPLE.
- 23/12 DRIVE SAMPLE BLOW COUNT. INDICATES THAT 23 BLOWS OF A 140-POUND HAMMER FALLING 30 INCHES WERE REQUIRED TO DRIVE THE SAMPLER 12 INCHES.
- ↑ BORING TERMINATED ON POTENTIAL OBSTRUCTION.

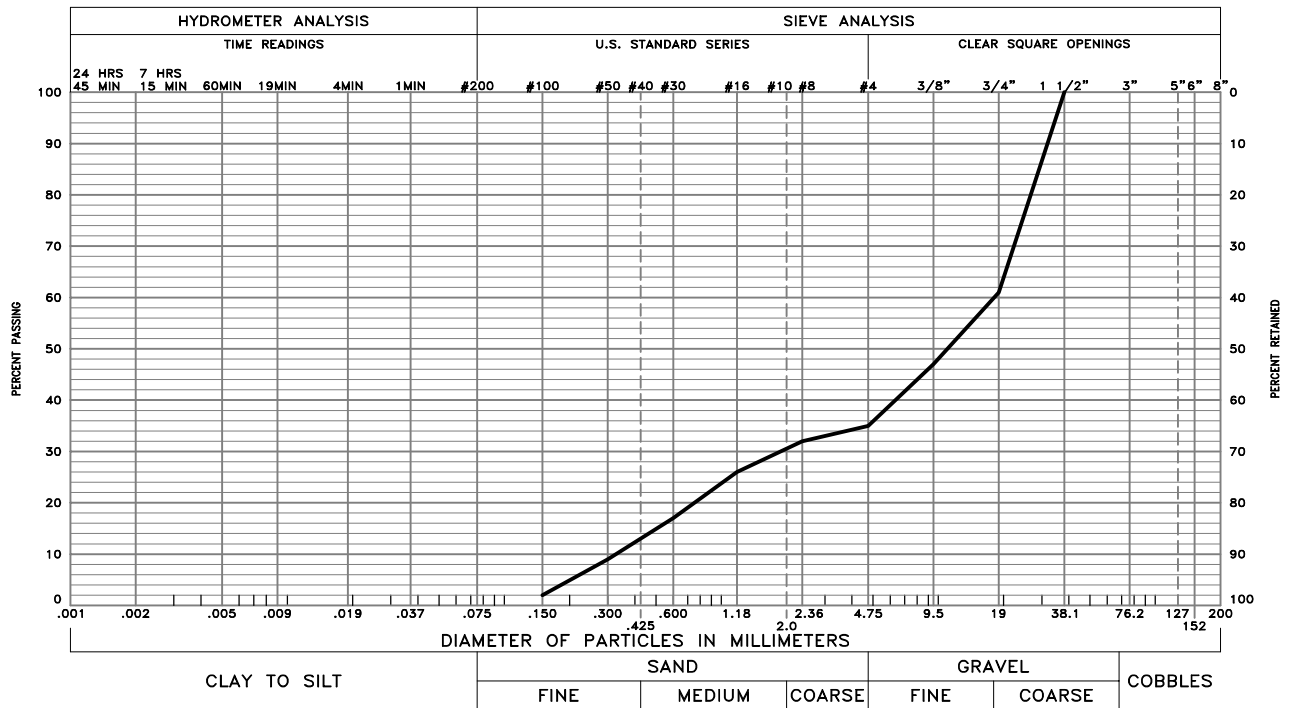
NOTES

1. THE EXPLORATORY BORINGS WERE DRILLED ON MARCH 29, 2019 WITH A 4-INCH-DIAMETER CONTINUOUS-FLIGHT POWER AUGER.
2. THE LOCATIONS OF THE EXPLORATORY BORINGS WERE MEASURED APPROXIMATELY BY PACING FROM FEATURES SHOWN ON THE SITE PLAN PROVIDED.
3. THE ELEVATIONS OF THE EXPLORATORY BORINGS WERE NOT MEASURED AND THE LOGS OF THE EXPLORATORY BORINGS ARE PLOTTED TO DEPTH.
4. THE EXPLORATORY BORING LOCATIONS SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.
5. THE LINES BETWEEN MATERIALS SHOWN ON THE EXPLORATORY BORING LOGS REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN MATERIAL TYPES AND THE TRANSITIONS MAY BE GRADUAL.
6. GROUNDWATER WAS NOT ENCOUNTERED IN THE BORINGS AT THE TIME OF DRILLING. THE BORINGS WERE BACKFILL AND THE SURFACE WAS PATCHED AT THE COMPLETION OF DRILLING.
7. LABORATORY TEST RESULTS:
 - WC = WATER CONTENT (%) (ASTM D2216);
 - DD = DRY DENSITY (pcf) (ASTM D2216);
 - +4 = PERCENTAGE RETAINED ON NO. 4 SIEVE (ASTM D6913);
 - 200 = PERCENTAGE PASSING NO. 200 SIEVE (ASTM D1140);
 - LL = LIQUID LIMIT (ASTM D4318);
 - PI = PLASTICITY INDEX (ASTM D4318);
 - WSS = WATER SOLUBLE SULFATES (%) (CP-L 2103);
 - R = HVEEM R-VALUE (AT 300 psi) (ASTM D2844);
 - A-6 (7) = AASHTO CLASSIFICATION (GROUP INDEX) (AASHTO M145).





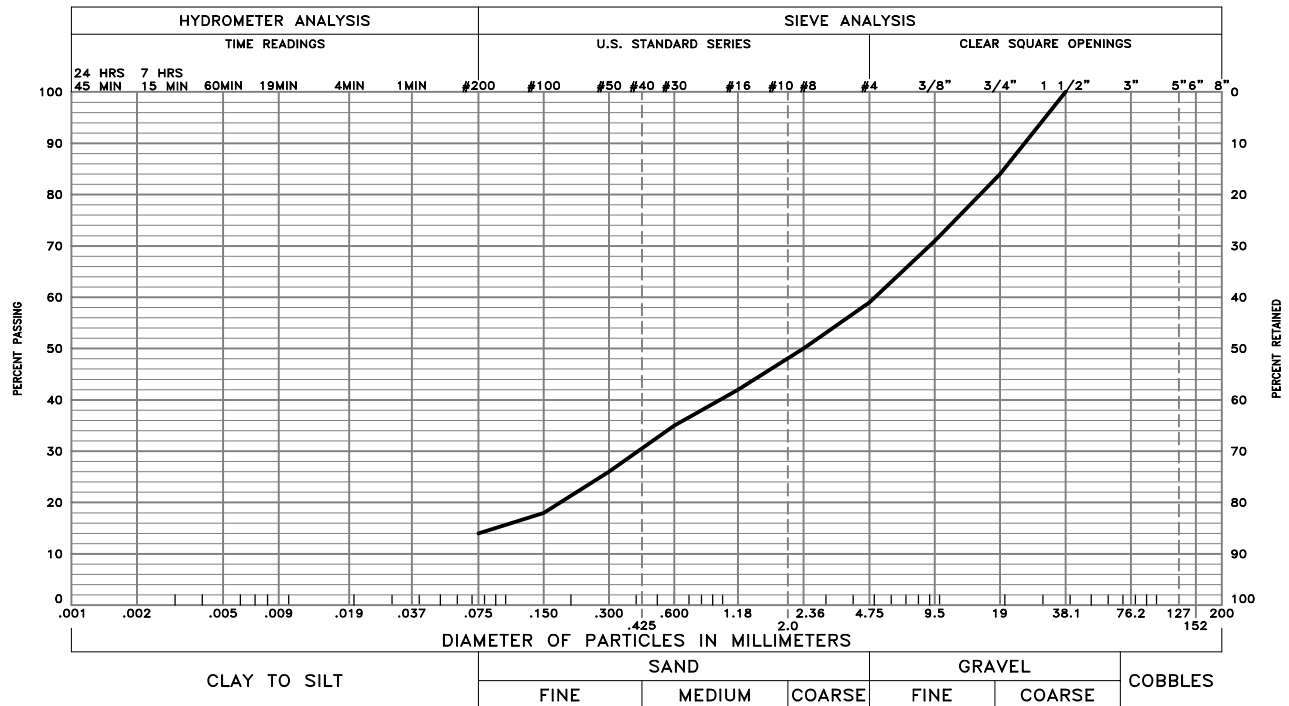




GRAVEL 65 % SAND 33 % SILT AND CLAY 2 %

LIQUID LIMIT PLASTICITY INDEX

SAMPLE OF: Poorly-Graded Gravel with Sand (SP) FROM: Boring 3 @ 4'



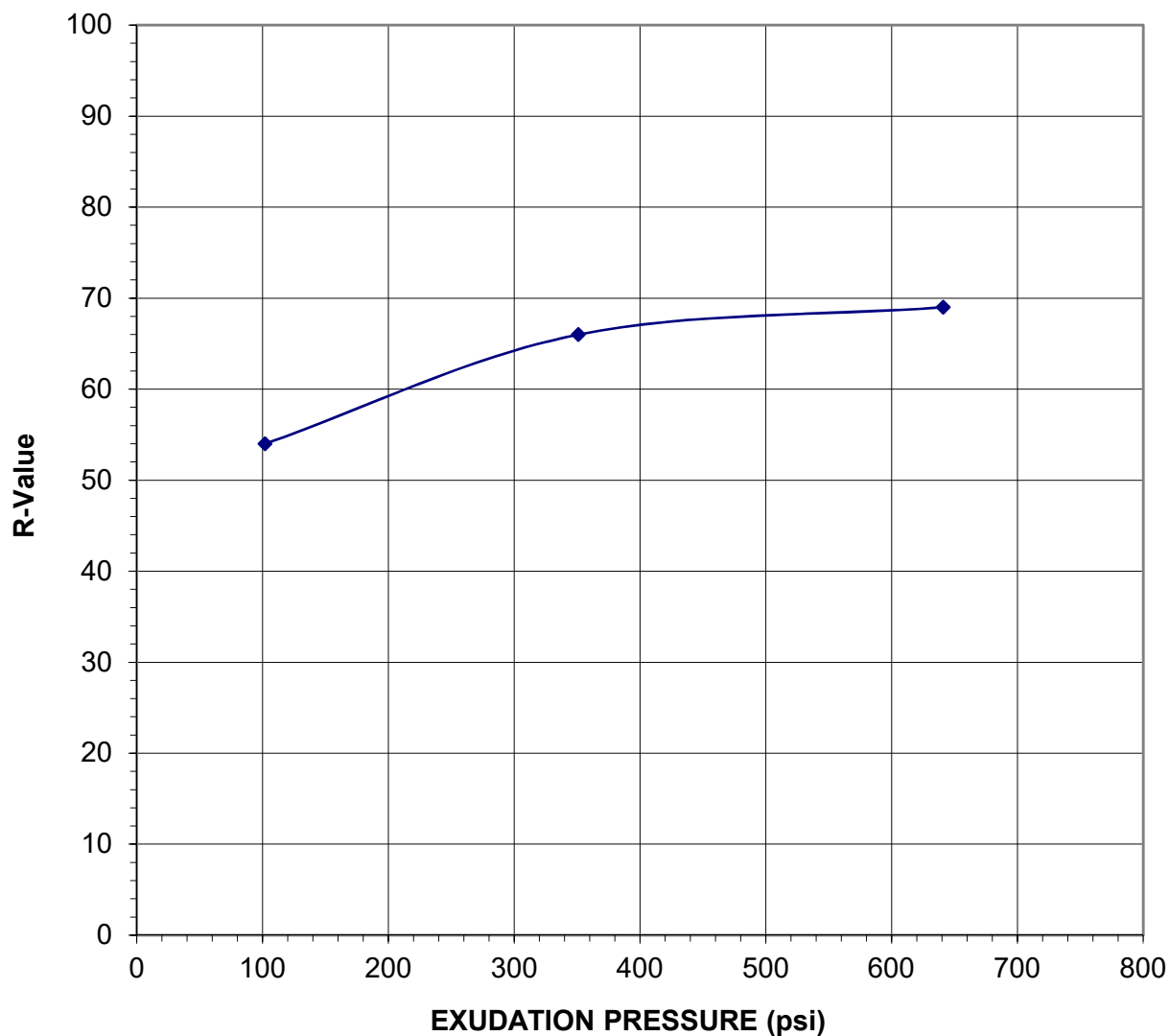
GRAVEL 41 % SAND 45 % SILT AND CLAY 14 %

LIQUID LIMIT PLASTICITY INDEX

SAMPLE OF: Silty Sand with Gravel (SM) FROM: Boring 6 @ 9'

These test results apply only to the samples which were tested. The testing report shall not be reproduced, except in full, without the written approval of Kumar & Associates, Inc. Sieve analysis testing is performed in accordance with ASTM D6913, ASTM D7928, ASTM C136 and/or ASTM D1140.

R-VALUE					
TEST SPECIMEN	1	2	3	4	Rvalue @ 300 psi
MOISTURE CONTENT (%)	9.9	9.0	8.2		
DENSITY (pcf)	124.6	125.6	130.8		
EXPANSION PRESSURE (psi)	0.000	0.150	0.060		
EXUDATION PRESSURE (psi)	102	351	641		
R-VALUE	54	66	69		64



SOIL TYPE: **Clayey Sand (SC)**

LOCATION: **Borings 2, 5-7, 9 @ 2'-3'**

DATE SAMPLED: **3/29/2019**

DATE RECEIVED: **4/1/2019**

DATE TESTED: **4/4/2019**

GRAVEL: **1**

SAND: **70**

SILT AND CLAY: **29**

LIQUID LIMIT: **24**

PLASTICITY INDEX: **10**

These test results apply to the samples which were tested. The testing report shall not be reproduced, except in full, without the written approval of Kumar & Associates, Inc. R-value performed in accordance with ASTM D2844. Atterberg limits performed in accordance with ASTM D4318. Sieve analyses performed in accordance with ASTM D422, D1140

19-1-102	KUMAR & ASSOCIATES	HVEEM STABILOMETER TEST RESULTS	Fig. 8
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TABLE I
SUMMARY OF LABORATORY TEST RESULTS

PROJECT NO.: 19-1-102
 PROJECT NAME: Ralston Road Corridor Improvements, Garrison Street to Yukon Street, Arvada, CO
 DATE SAMPLED: 3-29-19
 DATE RECEIVED: 4-1-19

SAMPLE LOCATION		DATE TESTED	NATURAL MOISTURE CONTENT (%)	NATURAL DRY DENSITY (pcf)	GRADATION		PERCENT PASSING NO. 200 SIEVE	ATTERBERG LIMITS		WATER SOLUBLE SULFATES (%)	R-VALUE @ 300 PSI	AASHTO CLASSIFICATION (group index)	SOIL OR BEDROCK TYPE
BORING	DEPTH (feet)				GRAVEL (%)	SAND (%)		LIQUID LIMIT (%)	PLASTICITY INDEX (%)				
1	4	4-2-19	19.1	106.6			62	31	15			A-6 (7)	Fill: Sandy Lean Clay (CL)
2	4	4-2-19	22.1	99.9			59	31	11			A-6 (5)	Fill: Sandy Lean Clay (CL)
3	2	4-2-19	8.4	118.0	34	39	27			0.00			Fill: Clayey Sand with Gravel (SC)
3	4	4-2-19	2.7	133.8	65	33	2						Poorly-Graded Gravel with Sand (SP)
4	2	4-2-19	11.8	121.6	0	54	46	24	11			A-6 (0)	Fill: Clayey Sand (SC)
5	2	4-2-19	10.3	122.0	33	49	18						Fill: Clayey Sand with Gravel (SC)
6	1	4-2-19	21.4	98.2	7	41	52	28	13			A-6 (3)	Fill: Sandy Lean Clay (CL)
6	9	4-2-19	2.9	113.0	41	45	14						Silty Sand with Gravel (SM)
7	4	4-2-19	16.3	111.9			64	35	22			A-6 (11)	Sandy Lean Clay (CL)
8	1	4-2-19	16.4	114.9	1	42	57	30	13	0.00		A-6 (5)	Fill: Sandy Lean Clay (CL)
9	4	4-2-19	12.0	110.4			59	27	12			A-6 (4)	Fill: Sandy Lean Clay (CL)
10	1	4-2-19	18.7	106.2			59	32	18			A-6 (7)	Sandy Lean Clay (CL)
11	4	4-2-19	18.1	106.5			61	33	19			A-6 (8)	Sandy Lean Clay (CL)
12	1	4-2-19	15.9	109.9			61	30	15			A-6 (6)	Sandy Lean Clay (CL)
COMP.*	2-3	4-4-19			1	70	29	24	10	0.00	64	A-2-4 (0)	Fill: Clayey Sand (SC)

*Composite sample taken from Borings 2, 5-7, 9

APPENDIX A

18-KIP ESAL CALCULATIONS

18-Kip ESAL Calculations
 CDOT Formulas
 Ralston Road Improvements, Garrison Street to Yukon Street, Arvada, CO
 Project Number: 19-1-102

20-year ADT @ mid-year (2030): 35,000

Flexible Pavement 20 Years:

	Traffic Distribution	Volume	18-Kip E.F.	18-Kip EDLA
Cars & P.U:	98.2 %	34370	0.003	103
Heavy Trucks	1.5 %	525	1.087	571
RTD Buses	0.3 %	105	3.701	389
	100.0 %			
Total EDLA =				1062
18-kip ESAL =				7,752,600
18-kip ESAL based on	0.45	lane reduction factor =		3,488,670

***Use 3,500,000**

E.F. - Equivalency Factor per CDOT Traffic Engineering

Lanes per Direction	ESAL Reduction Factor
1	0.6
2	0.45
3	0.3
4	0.25

APPENDIX B

DARWin™ PAVEMENT DESIGN INPUT PARAMETERS AND CALCULATIONS

1993 AASHTO Pavement Design

DARWin Pavement Design and Analysis System

A Proprietary AASHTOWare Computer Software Product

Kumar & Associates, Inc.
2390 South Lipan Street
Denver, Colorado

Flexible Structural Design Module

Ralston Road Corridor Improvements
19-1-102
Flexible Composite Section

Flexible Structural Design

18-kip ESALs Over Initial Performance Period	3,500,000
Initial Serviceability	4.5
Terminal Serviceability	2.5
Reliability Level	90 %
Overall Standard Deviation	0.45
Roadbed Soil Resilient Modulus	3,562 psi
Stage Construction	1
Calculated Design Structural Number	5.21 in

Specified Layer Design

<u>Layer</u>	<u>Material Description</u>	Struct Coef. <u>(Ai)</u>	Drain Coef. <u>(Mi)</u>	Thickness <u>(Di)(in)</u>	Width <u>(ft)</u>	Calculated <u>SN (in)</u>
1	HMA	0.4	1	9.5	12	3.80
2	ABC	0.12	1	12	12	1.44
Total	-	-	-	21.50	-	5.24

1993 AASHTO Pavement Design

DARWin Pavement Design and Analysis System

A Proprietary AASHTOWare Computer Software Product

Kumar & Associates, Inc.
2390 South Lipan Street
Denver, Colorado

Flexible Structural Design Module

Ralston Road Corridor Improvements
19-1-102
Full Depth Asphalt Section

Flexible Structural Design

18-kip ESALs Over Initial Performance Period	3,500,000
Initial Serviceability	4.5
Terminal Serviceability	2.5
Reliability Level	90 %
Overall Standard Deviation	0.45
Roadbed Soil Resilient Modulus	3,562 psi
Stage Construction	1
Calculated Design Structural Number	5.21 in

Specified Layer Design

<u>Layer</u>	<u>Material Description</u>	Struct Coef. <u>(Ai)</u>	Drain Coef. <u>(Mi)</u>	Thickness <u>(Di)(in)</u>	Width <u>(ft)</u>	Calculated SN <u>(in)</u>
1	HMA	0.4	1	13.5	12	5.40
Total		-	-	13.50	-	5.40

ADVERTISEMENT
PLAN SET

RALSTON ROAD - YUKON STREET TO GARRISON STREET

DEPARTMENT OF PUBLIC WORKS

CITY PROJECT No. 18-ST-40

FINAL PLAN

NOT FOR CONSTRUCTION

DECEMBER 30, 2020

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16 - 23	SURVEY CONTROL DIAGRAM
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35	TABULATION OF REMOVAL AND RESET QUANTITIES
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420 - 452	CROSS SECTIONS
453 - 501	RIGHT OF WAY PLANS

BASIS OF BEARINGS: BEARINGS USED IN THE CALCULATIONS OF COORDINATES ARE BASED ON A GRID BEARING OF N89°05'10"E AND A DISTANCE OF 1318.85 FEET FROM THE "ORIGINAL 1973" CENTER-SOUTH SIXTEENTH CORNER OF SECTION 10, TOWNSHIP 3 SOUTH, RANGE 69 WEST OF THE 6TH P.M. MONUMENTED BY A 2" ALUMINUM CAP ON FLUSH IN CONCRETE PAN, STAMPED IN PART "ORIGINAL 1973 PPLS 38359, 2017" TO THE SOUTH-EAST SIXTEENTH CORNER OF SECTION 10, TOWNSHIP 3 SOUTH, RANGE 69 WEST OF THE 6TH P.M., MONUMENTED BY A 2" ALUMINUM CAP DOWN 0.5' IN RANGE BOX, STAMPED "LS 5447 1995". THE SURVEY DATA WAS OBTAINED FROM A GLOBAL POSITIONING SYSTE, (GPS) SURVEY BASED ON THE COLORADO HIGH ACCURACY REFERENCE NETWORK (CHARN) NAD '83 (2011).

BASIS OF ELEVATIONS: PROJECT CONTROL ELEVATIONS WERE ESTABLISHED BY DIFFERENTIAL LEVELING BY AZTEC CONSULTANTS BASED ON THE CITY OF ARVADA CONTROL POINT 120, BEING A 2.5" ALUMINUM CAP ON THE NORTH SIDE OF RALSTON ROAD EAST OF GARRISON STREET. CONTROL POINT 120 HAS A PUBLISHED CITY OF ARVADA DATUM ELEVATION OF 5344.94 ABOVE SEA LEVEL.

COORDINATE DATUM: PROJECT COORDINATES ARE MODIFIED COLORADO STATE PLANE CENTRAL ZONE (502) NAD '83/(2011) COORDINATES. THE COMBINED ELEVATION/SCALE FACTOR USED TO MODIFY THE COORDINATES FROM STATE PLANE TO PROJECT COORDINATES IS 1.0002423410. THE RESULTING PROJECT COORDINATES ARE TRUNCATED BY 1,000,000 SFT IN THE NORTHING AND 3,000,000 SFT IN THE EASTING AFTER CONVERTING FROM STATE PLANE COORDINATES TO PROJECT COORDINATES. THE CHARN IS BASED ON THE NAD '83(2011) DATUM.

PROJECT COORDINATES NORTHING US SURVEY FEET = (STATE PLANE COORDINATE NORTHING * 1.0002423410 - 1,000,000 SFT)
PROJECT COORDINATES EASTING US SURVEY FEET = (STATE PLANE COORDINATE EASTING * 1.0002423410 - 3,000,000 SFT)

CERTIFICATION:
THESE CONSTRUCTION PLANS FOR THE CITY OF ARVADA WERE PREPARED BY ME (OR UNDER MY DIRECT SUPERVISION) IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS."

Andrew J. MeyerKord

12-30-2020

18-ST-40

ANDREW MEYERKORD, P.E.
FELSBURG, HOLT & ULLEVIG

DATE

JOB NUMBER

jacqueline K Rhoades

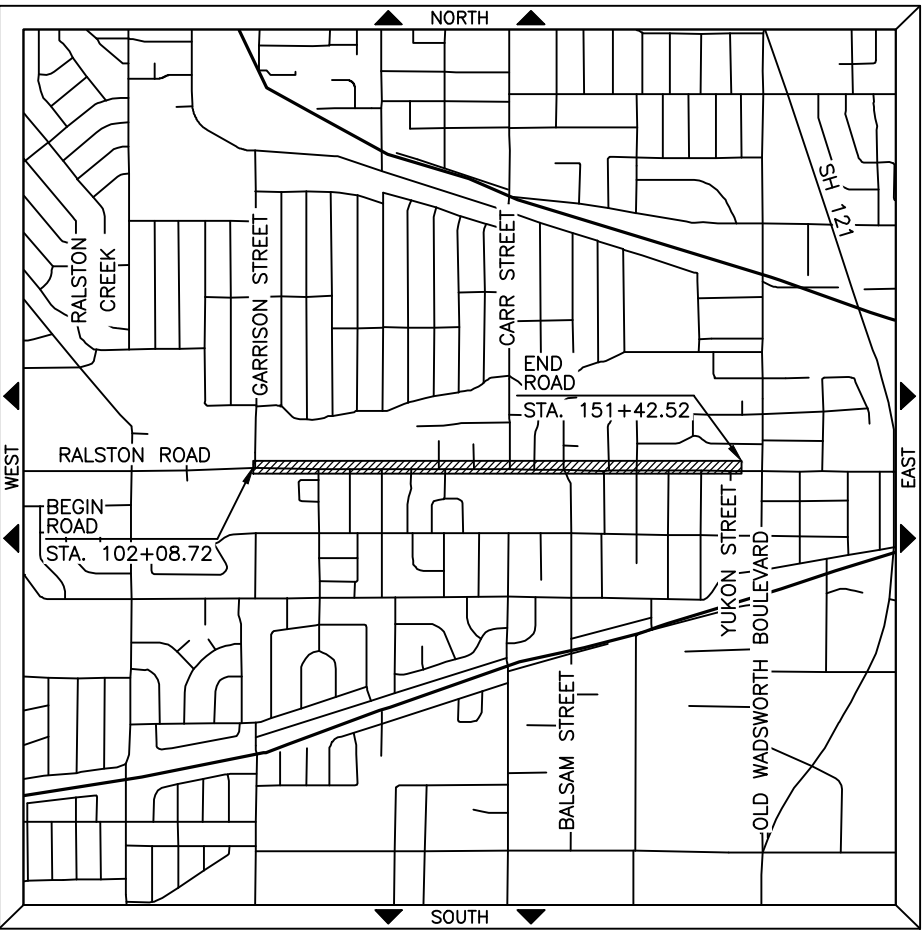
12-30-2020

18-ST-40

JACQUELINE RHOADES, P.E.
CITY ENGINEER

DATE

JOB NUMBER



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12-30-2020

Print Date: 12/23/2020 1:35:23 PM	R-X 0000	Sheet Revisions				CITY OF ARVADA PUBLIC WORKS DEPARTMENT		As Constructed		RALSTON RD - YUKON ST TO GARRISON ST			Project No./Code	
File Name: 118355_GNTS_SH01.DWG		Date	Comments	Initials		8101 RALSTON ROAD ARVADA, CO, 80002		No Revisions:		TITLE SHEET			18-ST-40	
Horizontal Scale: 1" = 2000' Vertical Scale: N/A								Revised:		Designer: JHH	Structure			
								Void:		Detailer: DAL	Numbers			
6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com								Sheet Subset: TITLE		Subset Sheets: TL-01 of 1			Sheet Number 1	

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CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS NOTES:

GENERAL NOTES

- A. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS", DATED JAN. 12, 2016, UNLESS OTHERWISE SPECIFIED HEREIN.
- B. ALL CONTRACTORS AND SUBCONTRACTORS SHALL BE LICENSED WITH THE CITY OF ARVADA ENGINEERING DIVISION.
- C. ALL WORK WILL REQUIRE A CITY OF ARVADA ENGINEERING DIVISION PUBLIC IMPROVEMENT PERMIT PRIOR TO THE START OF CONSTRUCTION. ALL CONTRACTORS AND SUBCONTRACTORS MUST OBTAIN A SEPARATE PERMIT FOR THE WORK BEING COMPLETED BY THE PARTICULAR CONTRACTOR OR SUBCONTRACTOR. ANY CONSTRUCTION WITHIN THE COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) RIGHT-OF-WAY WILL REQUIRE A CDOT CONSTRUCTION PERMIT PRIOR TO ANY WORK IN THEIR RIGHT-OF-WAY.
- D. ALL CONTRACTORS AND SUBCONTRACTORS SHALL HAVE A SET OF APPROVED DRAWINGS SIGNED BY THE CITY ENGINEER OR DESIGNEE AND A PRINTED COPY OF THE CURRENT CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS" ON SITE AT ALL TIMES.
- E. THE CITY OF ARVADA ENGINEERING DIVISION SHALL BE NOTIFIED (PHONE # 720-898-7640) A MINIMUM OF 24 HOURS PRIOR TO THE START OF ANY CONSTRUCTION.
- F. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR BURIED UTILITIES. THE CONTRACTOR IS RESPONSIBLE TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION AND TO PROTECT THEM DURING CONSTRUCTION.
- G. THE CONTRACTOR IS RESPONSIBLE FOR ALL PROJECT SAFETY INCLUDING, BUT NOT LIMITED TO, TRENCH EXCAVATION AND SHORING, TRAFFIC CONTROL AND SECURITY.
- H. BENCHMARK LOCATION, ELEVATION AND DATUM ARE AS NOTED.
- I. AS-BUILT DRAWINGS SHOWING ALL CHANGES FROM THE APPROVED CONSTRUCTION DRAWINGS SHALL BE SUBMITTED TO THE CITY ENGINEER OR DESIGNEE PRIOR TO INITIATION OF THE REQUIRED TWO YEAR WARRANTY PERIOD. UTILITY AS-BUILTS SHALL INCLUDE STATIONING OF ALL FITTINGS, SERVICES AND PERTINENT ELEVATIONS. CERTIFICATES OF OCCUPANCY FOR ANY BUILDINGS OR STRUCTURES WITHIN THE DEVELOPMENT WILL NOT BE ISSUED UNTIL THE AS-BUILTS HAVE BEEN RECEIVED, REVIEWED AND APPROVED BY THE CITY OF ARVADA ENGINEERING DIVISION.
- J. A CITY OF ARVADA TAX CERTIFICATION FORM MUST BE COMPLETED BY ALL CONTRACTORS AND SUBCONTRACTORS PERFORMING WORK ON THIS PROJECT. THIS FORM DETAILS ALL MATERIALS WHICH HAVE BEEN INCLUDED IN THE WORK BY CONTRACTORS AND SUBCONTRACTORS. COPIES OF ALL PAID INVOICES FOR MATERIALS SHALL BE ATTACHED TO THE FORM.
- K. THE CONTRACTOR SHALL OBTAIN A STORMWATER CONSTRUCTION PERMIT FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY CONTROL DIVISION, PRIOR TO CLEARING, GRADING, OR EXCAVATING A PROJECT SITE OF ONE (1) ACRE OR MORE OR LESS THAN ONE ACRE AND PART OF A LARGER DEVELOPMENT. A COPY OF THE APPROVED PERMIT MUST BE SUBMITTED TO THE CITY OF ARVADA ENGINEERING DIVISION PRIOR TO THE START OF CLEARING, GRADING OR EXCAVATING OF THE SITE. A COPY OF THE APPROVED PERMIT MUST ALSO BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION.
- L. CONTRACTOR SHALL OBTAIN A COLORADO STATE CONSTRUCTION DEWATERING DISCHARGE PERMIT FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT FOR ALL AREAS WHERE DEWATERING IS REQUIRED FROM AN EXCAVATION AND WATER IS DISCHARGED INTO A STORM SEWER, CHANNEL, IRRIGATION DITCH OR ANY WATERS OF THE UNITED STATES. A COPY OF THE APPROVED PERMIT MUST BE SUBMITTED TO THE CITY OF ARVADA ENGINEERING DIVISION PRIOR TO THE START OF ANY DEWATERING. A COPY OF THE APPROVED PERMIT MUST ALSO BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION.

- M. ALL CURB RAMPS SHALL COMPLY WITH THE LATEST CITY OF ARVADA AND ADA STANDARDS. CONTRACTOR TO CHECK WITH THE CITY OF ARVADA ENGINEERING DIVISION TO VERIFY THE LATEST CURB RAMP STANDARD PRIOR TO CONSTRUCTION OF ANY RAMP.
- N. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE CITY OF ARVADA ENGINEERING DIVISION. THE CITY RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS".
- O. A PLAN FOR TRAFFIC CONTROL DURING CONSTRUCTION SHALL BE SUBMITTED TO THE CITY OF ARVADA ENGINEERING DIVISION FOR ACCEPTANCE WITH THE PUBLIC IMPROVEMENTS PERMIT APPLICATION. A PUBLIC IMPROVEMENTS CONSTRUCTION PERMIT WILL NOT BE ISSUED WITHOUT AN APPROVED TRAFFIC CONTROL PLAN FOR TRAFFIC CONTROL ON EXISTING ROADS DURING CONSTRUCTION.
- P. PRIOR TO STARTING ANY REMOVAL OR CONSTRUCTION WORK, THE CONTRACTOR SHALL PHOTOGRAPH AND DOCUMENT THE CONDITION OF PROPERTIES ADJACENT TO THE PROJECT. THESE PHOTOGRAPHS SHALL FOCUS ON THE CONDITIONS OF PERTINENT ITEMS TO BE PROTECTED, SUCH AS BUSINESS SIGNS, FENCES, ETC. THIS INFORMATION SHALL BE PROVIDED TO THE CITY. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PROTECT THESE ITEMS DURING CONSTRUCTION AND SHALL BE RESPONSIBLE FOR REPAIRS IF DAMAGE OCCURS DUE TO NEGLIGENCE OF THE CONTRACTOR. THIS WORK WILL NOT BE PAID FOR SEPARATELY.

STREET

- A. CONTRACTOR SHALL HAVE ON SITE A COPY OF THE CITY OF ARVADA APPROVED SUBGRADE SOILS AND PAVEMENT DESIGN REPORT SHOWING MINIMUM REQUIRED SUBGRADE PREPARATION REQUIREMENTS AND MINIMUM REQUIRED PAVEMENT THICKNESSES.
- B. ALL TRENCH BACKFILL AND SUBGRADE PREPARATION SHALL BE TESTED TO ENSURE COMPLIANCE WITH CITY OF ARVADA STANDARDS AND SHALL BE TESTED AT CITY REQUIRED FREQUENCIES BY A CITY APPROVED PRIVATE SOILS TESTING FIRM. TEST RESULTS SHALL BE SUBMITTED TO, REVIEWED, AND APPROVED BY THE CITY OF ARVADA ENGINEERING DIVISION PRIOR TO INSTALLING BASE COURSE, ASPHALT, OR CONCRETE ON PREPARED SUBGRADE. ALL BASE COURSE DENSITY SHALL ALSO BE TESTED BY THE PRIVATE SOILS FIRM AT CITY REQUIRED FREQUENCIES TO ENSURE COMPLIANCE WITH CITY OF ARVADA REQUIREMENTS. BASE COURSE TEST RESULTS SHALL ALSO BE APPROVED BY THE CITY OF ARVADA ENGINEERING DIVISION PRIOR TO INSTALLING PAVEMENT. ALL CONCRETE AND ASPHALT PLACED SHALL BE TESTED IN ACCORDANCE WITH CITY OF ARVADA MINIMUM MATERIALS TESTING STANDARDS. TEST RESULTS SHALL BE REVIEWED AND APPROVED BY THE CITY OF ARVADA ENGINEERING DIVISION PRIOR TO INITIATION OF THE REQUIRED TWO YEAR WARRANTY PERIOD.
- C. THE SUBGRADE MATERIAL SHALL BE THOROUGHLY SCARIFIED AND WELL-MIXED TO A MINIMUM DEPTH OF 12 INCHES AS REQUIRED IN THE PAVEMENT DESIGN REPORT. ADDITIVES OR APPROVED MATERIAL MAY BE REQUIRED IF THE NATIVE MATERIAL IS UNSATISFACTORY. THE SUBGRADE SHALL BE COMPACTED TO A MINIMUM DENSITY DETERMINED IN ACCORDANCE WITH AASHTO DESIGNATION T180 OR T99 AND IN ACCORDANCE WITH CDOT STANDARD SPECIFICATIONS SECTION 203.07.
- D. EXCAVATION REQUIRED FOR COMPACTION OF BASES OF CUTS AND FILLS WILL BE CONSIDERED AS SUBSIDIARY TO THAT OPERATION AND WILL NOT BE PAID FOR SEPARATELY.
- E. FINAL GRADES SHOWN REFLECT A MINIMUM OF SIX (6) INCHES OF TOPSOIL BEING PLACED ON ALL DISTURBED AREAS NOT SURFACED. TOPSOIL TO BE USED IS SUBJECT TO REVIEW AND APPROVAL BY THE ENGINEER.
- F. THE CONTRACTOR SHALL PROOF ROLL ALL SUBGRADE AND BASE COURSE IN A MANNER ACCEPTABLE TO THE CITY OF ARVADA IN ACCORDANCE WITH THE CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS". PROOF ROLLING SHALL BE INSPECTED AND ACCEPTED BY THE CITY PRIOR TO INSTALLATION OF PAVEMENT AND/OR CONCRETE FLATWORK.

- G. ALL CONCRETE CURB, GUTTER, SIDEWALK AND OTHER FLATWORK WITHIN THE CITY

RIGHT OF WAY SHALL BE MINIMUM 6" THICKNESS. CROSSPANS SHALL BE MINIMUM 8" THICKNESS AND MINIMUM 8 FOOT WIDTH. ALL CONCRETE SHALL BE MINIMUM 4000 PSI DESIGN STRENGTH REINFORCED WITH 1.5 LBS/CY FIBERMESH IN ACCORDANCE WITH THE CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS".

IRRIGATION

- A. CONTRACTOR IS TO NOTIFY AFFECTED IRRIGATION COMPANY A MINIMUM OF 5 WORKING DAYS PRIOR TO BEGINNING ANY CONSTRUCTION IN IRRIGATION EASEMENTS OR ON IRRIGATION DITCHES.
- B. ALL IRRIGATION PIPE JOINTS SHALL BE WATERTIGHT AND PASS A LOW AIR PRESSURE TEST.

UTILITIES

- A. CONTRACTOR SHALL NOTIFY ALL AFFECTED PARTIES, CITY OF ARVADA UTILITY AND ENGINEERING DIVISIONS, A MINIMUM OF 72 HOURS PRIOR TO ANY WATER OR SEWER SERVICE INTERRUPTION.
- B. CONTRACTOR IS TO COORDINATE THE OPERATION OF ALL WATER VALVES, FIRE HYDRANTS, AND OTHER APPURTENANCES WITH THE CITY'S WATER OPERATIONS DIVISION THROUGH THE CITY'S ENGINEERING INSPECTOR.
- C. ALL FIRE HYDRANT BRANCH PIPE SHALL BE CLASS 200 AWWA C900 PVC OR CLASS 150 AWWA C909 PVC. ALL FIRE LINES TO BUILDINGS WITH INTERIOR SPRINKLER SYSTEMS SHALL BE CLASS 200 AWWA C900 PVC PIPE OR CLASS 200 AWWA C909 PVC PIPE ONLY.
- D. ALL METALLIC FITTINGS SHALL BE WRAPPED WITH MINIMUM 8 MIL THICKNESS POLYETHYLENE ENCASEMENT.
- E. ALL PVC WATER MAINS SHALL BE INSTALLED WITH WHITE #12 TYPE UF OR USE CABLE SINGLE COPPER CONDUCTOR AS A TRACER WIRE SPIRALLY WRAPPED AROUND THE PIPE. TRACER WIRE TO EXTEND FROM MAIN TO A CATHODIC PROTECTION BOX LOCATED ON THE RIGHT SIDE OF ALL FIRE HYDRANTS. TRACER WIRE SHALL BE CONNECTED TO EXISTING TRACER WIRE WHERE POSSIBLE. WHERE NO TRACER WIRE EXISTS, ENDS OF TRACER WIRE SHALL BE STRIPPED AND GROUNDED INTO NATIVE SOIL A MINIMUM OF 12" DEEP.
- F. ALL METER PITS SHALL BE 24 INCH DIAMETER CONCRETE OR PLASTIC IN ACCORDANCE WITH SECTION 30 OF THE CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS".
- G. STORM, SANITARY AND WATER MANHOLE COVERS SHALL SAY "CITY OF ARVADA STORM, WATER OR SANITARY" WHERE APPLICABLE IN ACCORDANCE WITH THE CITY'S STANDARD LID DETAIL.
- H. BLOW-OFFS, BOTH PERMANENT AND TEMPORARY, SHALL BE IN ACCORDANCE WITH CITY OF ARVADA STANDARD DETAIL DRAWING W-9.
- I. ALL SANITARY SEWER MAINS INSTALLED SHALL BE HIGH PRESSURE JET CLEANED AFTER COMPLETION OF THE FINAL LIFT OF ASPHALT AND PRIOR TO REQUIRED TELEVISION INSPECTION BY THE CITY'S WASTEWATER DIVISION.



12-30-2020

Print Date: 12/28/2020 3:31:33 PM		R-X	Sheet Revisions			 CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed		RALSTON RD - YUKON ST TO GARRISON ST GENERAL NOTES			Project No./Code	
File Name: 118355_GNGN_SH01.DWG			Date	Comments	Initials		No Revisions:					18-ST-40	
Horizontal Scale: N/A Vertical Scale: N/A							Revised:		Designer: JHH	Structure			
 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Detailer: DAL	Numbers			
									Sheet Subset: GENERAL	Subset Sheets: GN-01 of 2		Sheet Number 2	

CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS REQUIRED NOTES (CONT.):

EROSION CONTROL

- A.

THE CITY OF ARVADA STORMWATER INSPECTOR MUST BE MET ON SITE AND PROVIDED WITH A STORMWATER MANAGEMENT PLAN AFTER INSTALLATION OF TEMPORARY BEST MANAGEMENT PRACTICES (BMPS), BUT BEFORE CONSTRUCTION OR GRADING BEGINS.
- B.

THERE SHALL BE NO EARTH-DISTURBING ACTIVITY OUTSIDE THE LIMITS DESIGNATED IN THE ACCEPTED PLANS.
- C.

ALL REQUIRED PERIMETER SILT AND CONSTRUCTION FENCING SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITY (STOCKPILING, STRIPPING, GRADING, ETC.). ALL OTHER REQUIRED EROSION CONTROL MEASURES SHALL BE INSTALLED AT THE APPROPRIATE TIME IN THE CONSTRUCTION SEQUENCE AS INDICATED IN THE APPROVED PROJECT SCHEDULE, CONSTRUCTION PLANS, AND STORMWATER MANAGEMENT PLAN.
- D.

AT ALL TIMES DURING CONSTRUCTION, THE DEVELOPER SHALL BE RESPONSIBLE FOR PREVENTING AND CONTROLLING ON-SITE EROSION INCLUDING KEEPING THE PROPERTY SUFFICIENTLY WATERED SO AS TO MINIMIZE WINDBLOWN SEDIMENT. THE DEVELOPER SHALL ALSO BE RESPONSIBLE FOR INSTALLING AND MAINTAINING ALL EROSION CONTROL FACILITIES SHOWN HEREIN.
- E.

PRE-DISTURBANCE VEGETATION SHALL BE PROTECTED AND RETAINED WHEREVER POSSIBLE. REMOVAL OR DISTURBANCE OF EXISTING VEGETATION SHALL BE LIMITED TO THE AREA(S) REQUIRED FOR IMMEDIATE CONSTRUCTION OPERATIONS, AND FOR THE SHORTEST PRACTICAL PERIOD OF TIME.
- F.

ALL SOILS EXPOSED DURING LAND DISTURBING ACTIVITY (STRIPPING, GRADING, UTILITY INSTALLATIONS, STOCKPILING, FILLING, ETC) SHALL BE KEPT IN A ROUGHENED CONDITION BY RIPPING OR DISKING ALONG LAND CONTOURS UNTIL MULCH, VEGETATION, OR OTHER PERMANENT EROSION CONTROL BMPS ARE INSTALLED. NO DISTURBED AREAS, EXCEPT THOSE WITHIN THE PROJECT STREET RIGHTS-OF-WAY, SHALL REMAIN EXPOSED FOR MORE THAN THIRTY (30) DAYS BEFORE TEMPORARY OR PERMANENT EROSION CONTROL (E.G. SEED/MULCH, LANDSCAPING, ETC.) IS INSTALLED, UNLESS OTHERWISE APPROVED BY THE CITY OF ARVADA STORMWATER INSPECTOR.
- G.

IN ORDER TO MINIMIZE EROSION POTENTIAL, ALL TEMPORARY (STRUCTURAL) EROSION CONTROL MEASURES SHALL:

1.

BE INSPECTED AT A MINIMUM OF ONCE EVERY FOURTEEN (14) DAYS AND AFTER EACH SIGNIFICANT STORM EVENT AND REPAIRED OR RECONSTRUCTED AS NECESSARY IN ORDER TO ENSURE THE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION.

2.

REMAIN IN PLACE UNTIL SUCH TIME AS ALL THE SURROUNDING DISTURBED AREAS ARE SUFFICIENTLY STABILIZED. THE CITY OF ARVADA STORMWATER INSPECTOR MUST BE NOTIFIED PRIOR TO REMOVAL.

3.

BE REMOVED WHEN THEY ARE NO LONGER FUNCTIONAL OR AFTER THE SITE HAS BEEN SUFFICIENTLY STABILIZED AS DETERMINED BY THE STORMWATER INSPECTOR. THE CITY OF ARVADA STORMWATER INSPECTOR MUST BE NOTIFIED PRIOR TO REMOVAL.
- H.

WHEN TEMPORARY EROSION CONTROL MEASURES ARE REMOVED, THE DEVELOPER SHALL BE RESPONSIBLE FOR THE CLEAN UP AND REMOVAL OF ALL SEDIMENT AND DEBRIS FROM ALL DRAINAGE INFRASTRUCTURE AND OTHER PUBLIC FACILITIES.
- I.

THE CONTRACTOR SHALL IMMEDIATELY CLEAN UP ANY CONSTRUCTION MATERIALS INADVERTENTLY DEPOSITED ON EXISTING STREETS, SIDEWALKS, OR OTHER PUBLIC RIGHTS OF WAY, AND MAKE SURE STREETS AND WALKWAYS ARE CLEANED AT THE END OF EACH WORKING DAY.
- J.

ALL SOIL STOCKPILES SHALL NOT BE PLACED WITHIN ONE HUNDRED (100) FEET OF A DRAINAGEWAY, WHERE POSSIBLE, AND SHALL BE PROTECTED FROM SEDIMENT TRANSPORT BY APPROPRIATE EROSION CONTROL METHODS. ANY SOIL STOCKPILE THAT WILL BE DORMANT FOR OVER THIRTY (30) DAYS SHALL BE SEEDED.

- K.

THE STORMWATER VOLUME CAPACITY OF DETENTION PONDS WILL BE RESTORED AND STORM SEWER LINES WILL BE CLEANED UPON COMPLETION OF THE PROJECT AND BEFORE TURNING THE MAINTENANCE OVER TO THE PROPERTY OWNER OR HOMEOWNERS ASSOCIATION (HOA).
- L.

CITY ORDINANCE REQUIREMENTS MAKE IT UNLAWFUL TO DISCHARGE OR ALLOW THE DISCHARGE OF ANY POLLUTANT OR CONTAMINATED WATER FROM CONSTRUCTION SITES. POLLUTANTS INCLUDE, BUT ARE NOT LIMITED TO DISCARDED BUILDING MATERIALS, CONCRETE TRUCK WASHOUT, CHEMICALS, OIL AND GAS PRODUCTS, LITTER, AND SANITARY WASTE. THE DEVELOPER SHALL AT ALL TIMES TAKE WHATEVER MEASURES ARE NECESSARY TO ASSURE THE PROPER CONTAINMENT AND DISPOSAL OF POLLUTANTS ON THE SITE IN ACCORDANCE WITH ANY AND ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.
- M.

A DESIGNATED AREA SHALL BE PROVIDED ON SITE FOR CONCRETE TRUCK CHUTE WASHOUT. THE AREA SHALL BE CONSTRUCTED SO AS TO CONTAIN WASHOUT MATERIAL AND LOCATED AT LEAST FIFTY (50) FEET AWAY FROM ANY WATERWAY DURING CONSTRUCTION. UPON COMPLETION OF CONSTRUCTION ACTIVITIES THE CONCRETE WASHOUT MATERIAL WILL BE REMOVED AND PROPERLY DISPOSED OF PRIOR TO THE AREA BEING RESTORED.
- N.

MASONRY ACTIVITIES WILL BE CONTAINED WITH APPROPRIATE LOT-SPECIFIC BMPS, SUCH AS STOCKPILE PERIMETER CONTROL AND BERMED WASHOUT PITS. ALL WASTE PRODUCTS FROM MASONRY ACTIVITIES WILL BE REMOVED AND DISPOSED OF PROPERLY.
- O.

TO ENSURE THAT SEDIMENT DOES NOT MOVE OFF OF INDIVIDUAL LOTS SEDIMENT/EROSION CONTROL BMPS SHALL BE INSTALLED AND MAINTAINED AT ONE OR MORE OF THE FOLLOWING LOCATIONS UNTIL THE LOTS ARE LANDSCAPED.

1.

BELOW ALL GUTTER DOWNSPOUTS.

2.

OUT TO DRAINAGE SWALES.

3.

ALONG LOT PERIMETER.

4.

OTHER LOCATIONS, IF NEEDED.
- P.

A VEHICLE TRACKING PAD SHALL BE INSTALLED WHEREVER IT IS NECESSARY FOR CONSTRUCTION EQUIPMENT INCLUDING BUT NOT LIMITED TO PERSONAL VEHICLES EXITING EXISTING UNPAVED AREAS ONTO ROADWAYS. NO EARTHEN MATERIALS, I.E., STONE, DIRT, ETC., SHALL BE PLACED IN THE CURB & GUTTER OR ROADWAY AS A RAMP TO ACCESS TEMPORARY STOCKPILES, CONSTRUCTION MATERIALS AND/OR BUILDING SITES.
- Q.

CONDITIONS IN THE FIELD MAY WARRANT EROSION CONTROL MEASURES IN ADDITION TO WHAT IS SHOWN ON THESE PLANS. THE DEVELOPER SHALL IMPLEMENT WHATEVER MEASURES ARE DETERMINED NECESSARY, AS DIRECTED BY THE CITY OF ARVADA.

DRAINAGE/STORM SEWER NOTES

- A.

THE CONTRACTOR IS REQUIRED TO KEEP ALL DRAINAGE FACILITIES FUNCTIONAL AND MAINTAIN DRAINAGE TO THOSE FACILITIES AT ALL TIMES DURING CONSTRUCTION.
- B.

INLET GRATE AND MANHOLE RIM ELEVATIONS SHALL BE VERIFIED BY THE CONTRACTOR AT TIME OF ADJACENT CURB, OR CONCRETE PAVEMENT CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE ENGINEER.
- C.

IT IS A REQUIREMENT THAT ALL MANHOLE INVERTS BE CONSTRUCTED TO CONTOUR TO THE PIPES FLOWING IN AND OUT OF THE MANHOLES TO ELIMINATE POTENTIAL SEDIMENT COLLECTION AREAS. THIS SHALL BE DONE AT NO ADDITIONAL COST AND TO THE SATISFACTION OF THE ENGINEER.

ENVIRONMENTAL NOTES

- A.

THE CONTRACTOR SHALL PREVENT DEBRIS FROM BEING DEPOSITED INTO THE WATERWAY DURING CONSTRUCTION.
- B.

IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN EXISTING BMP'S AND ENSURE THEIR COMPLETE REMOVAL ONCE 70% OF PRE-EXISTING VEGETATION HAS BEEN RE-ESTABLISHED.
- C.

THIS PROJECT ENTAILS SOIL EXCAVATION DURING RECONFIGURATION OF SPECIFIC INTERSECTIONS AND WATER QUALITY FEATURES, AND GROUNDWATER MAY BE ENCOUNTERED DURING DEEP EXCAVATIONS AT THESE LOCATIONS. GROUNDWATER GENERATED DURING EXCAVATIONS SHALL MEET THE CONDITIONS LISTED BEFORE DISCHARGE IN ACCORDANCE WITH A COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT – WATER QUALITY CONTROL DIVISION LOW RISK DISCHARGE GUIDANCE, DISCHARGES OF UNCONTAMINATED GROUNDWATER TO LAND.
- D.

WATER SHALL BE USED AS A DUST PALLIATIVE WHERE REQUIRED. LOCATIONS SHALL BE AS DIRECTED BY THE ENGINEER. WATER FOR A DUST PALLIATIVE WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE WORK. CONTAMINATED GROUNDWATER CANNOT BE USED AS A DUST PALLIATIVE.
- E.

EXISTING MONITORING WELLS WITHIN THE ENVIRONMENTAL STUDY AREA SHALL BE PROTECTED WITH PLASTIC FENCING, AS NECESSARY. THESE WELLS ARE LOCATED ON THE RALSTON CONVENIENCE STORE PROPERTY AS WELL AS WITHIN RALSTON CENTRAL PARK AND ARE DEPICTED ON THE PLANSET. THE CONTRACTOR SHALL CONFIRM THE LOCATION OF THE GROUNDWATER MONITORING WELLS PRIOR TO CONSTRUCTION.
- F.

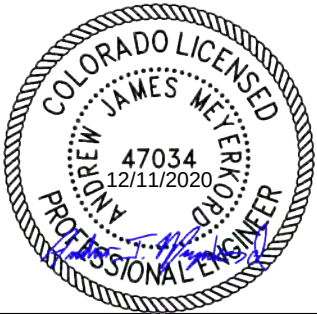
WORKERS ON THIS PROJECT SHALL FOLLOW CDOT SPECIFICATION 250 –ENVIRONMENTAL, HEALTH AND SAFETY MANAGEMENT.
- G.

CONSTRUCTION ACTIVITIES INVOLVING THE REMOVAL OF TREES BE CONDUCTED OUTSIDE OF THE NESTING SEASON OF APRIL 1 THROUGH AUGUST 31. IF THIS IS NOT FEASIBLE, A QUALIFIED BIOLOGIST SHALL CONDUCT A FIELD REVIEW TO ENSURE THAT NO MIGRATORY BIRD NESTS ARE ACTIVE IN TREES SLATED FOR REMOVAL.

RIGHT OF WAY NOTES

- A.

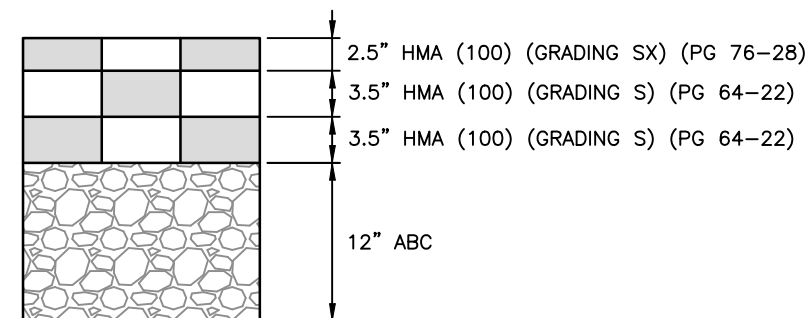
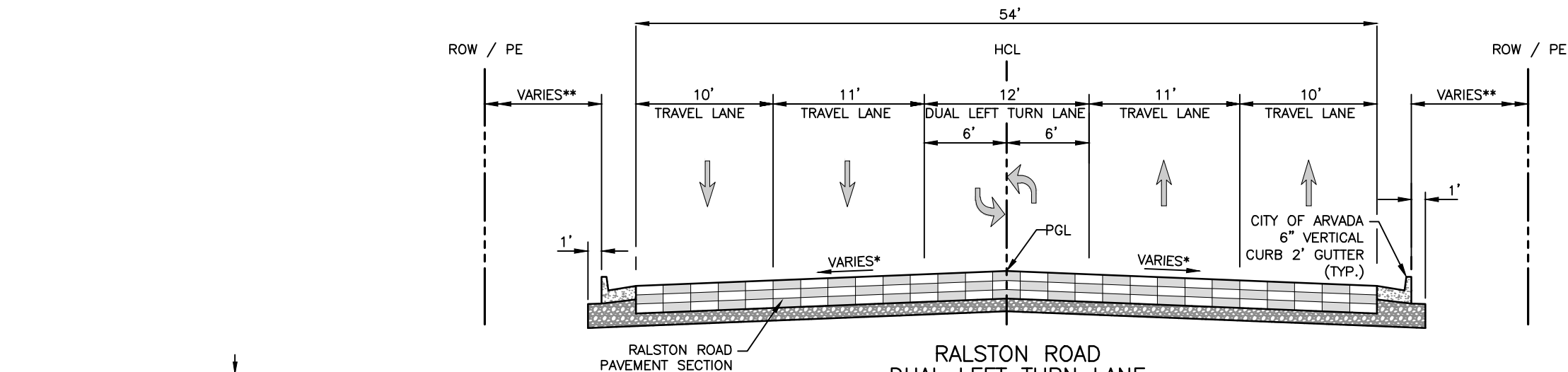
THE RIGHT OF WAY PLANS HAVE BEEN PROVIDED FOR INFORMATION PURPOSES ONLY. PLEASE REFER TO RECORDED LEGAL DESCRIPTIONS FOR EXACT RIGHT OF WAY AND EASEMENT INFORMATION.



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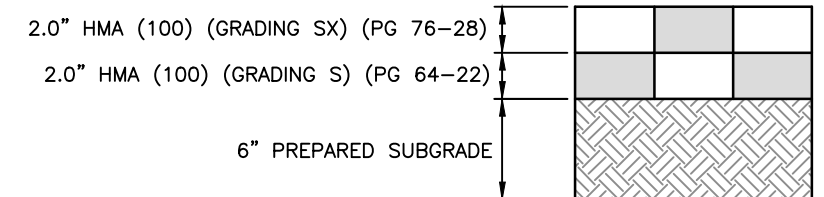
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- * RE: PLAN AND PROFILE SHEETS
FOR ADDITIONAL INFORMATION
- ** RE: SIDEWALK TYPICAL SECTIONS,
ROADWAY GEOMETRIC DETAILS,
AND PROPERTY ACCESS DETAILS
FOR ADDITIONAL INFORMATION

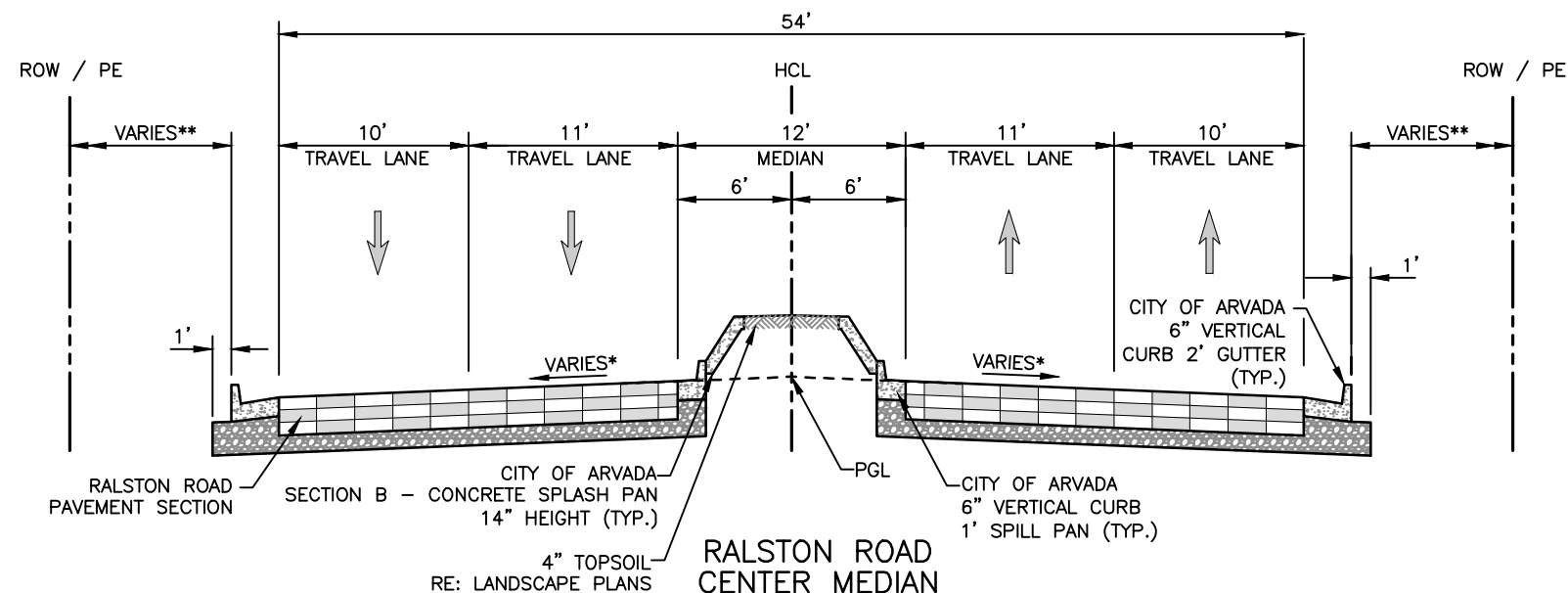


RALSTON ROAD DUAL LEFT TURN LANE TYPICAL SECTION

STA. 104+66.59 TO STA. 106+15.32
STA. 106+77.32 TO STA. 107+03.32
STA. 108+05.00 TO STA. 108+74.58
STA. 133+15.85 TO STA. 135+33.46
STA. 136+86.51 TO STA. 151+42.53

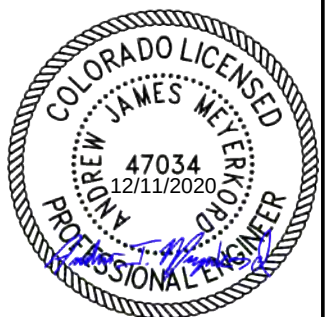


PARKING LOT PAVEMENT SECTION



RALSTON ROAD CENTER MEDIAN TYPICAL SECTION

STA. 104+30.67 TO STA. 104+59.09
STA. 106+50.07 TO STA. 106+65.82
STA. 110+58.03 TO STA. 111+25.46
STA. 135+85.14 TO STA. 136+29.33
STA. 138+67.82 TO STA. 139+48.40



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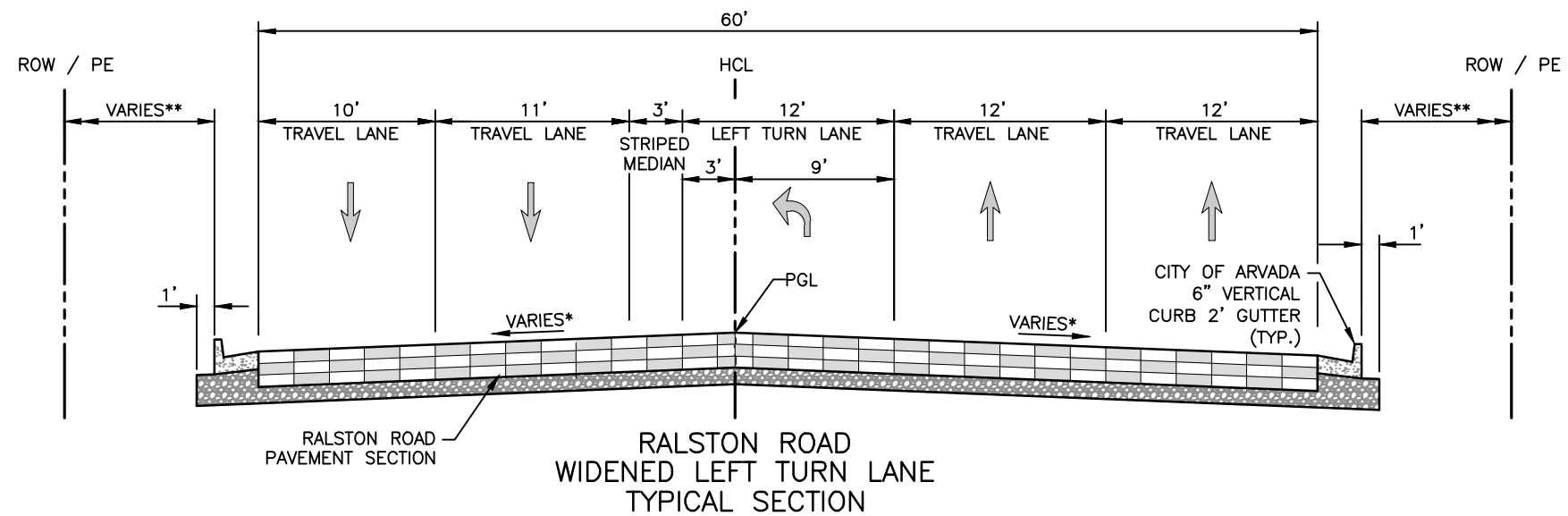
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CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

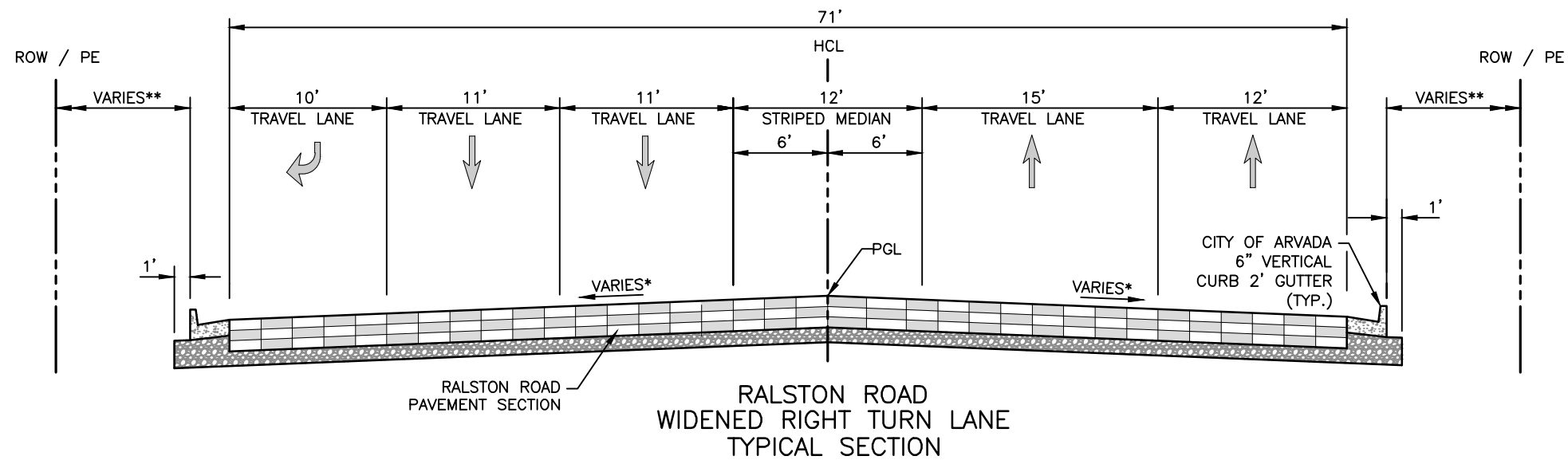
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* RE: PLAN AND PROFILE SHEETS FOR ADDITIONAL INFORMATION

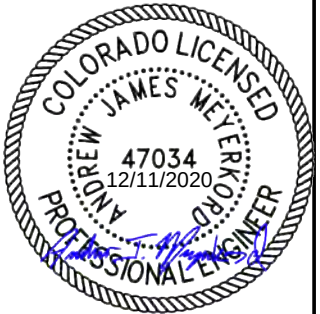
** RE: SIDEWALK TYPICAL SECTIONS, ROADWAY GEOMETRIC DETAILS, AND PROPERTY ACCESS DETAILS FOR ADDITIONAL INFORMATION



STA. 126+65.00 TO STA. 127+56.85



STA. 128+66.35 TO STA. 128+82.00

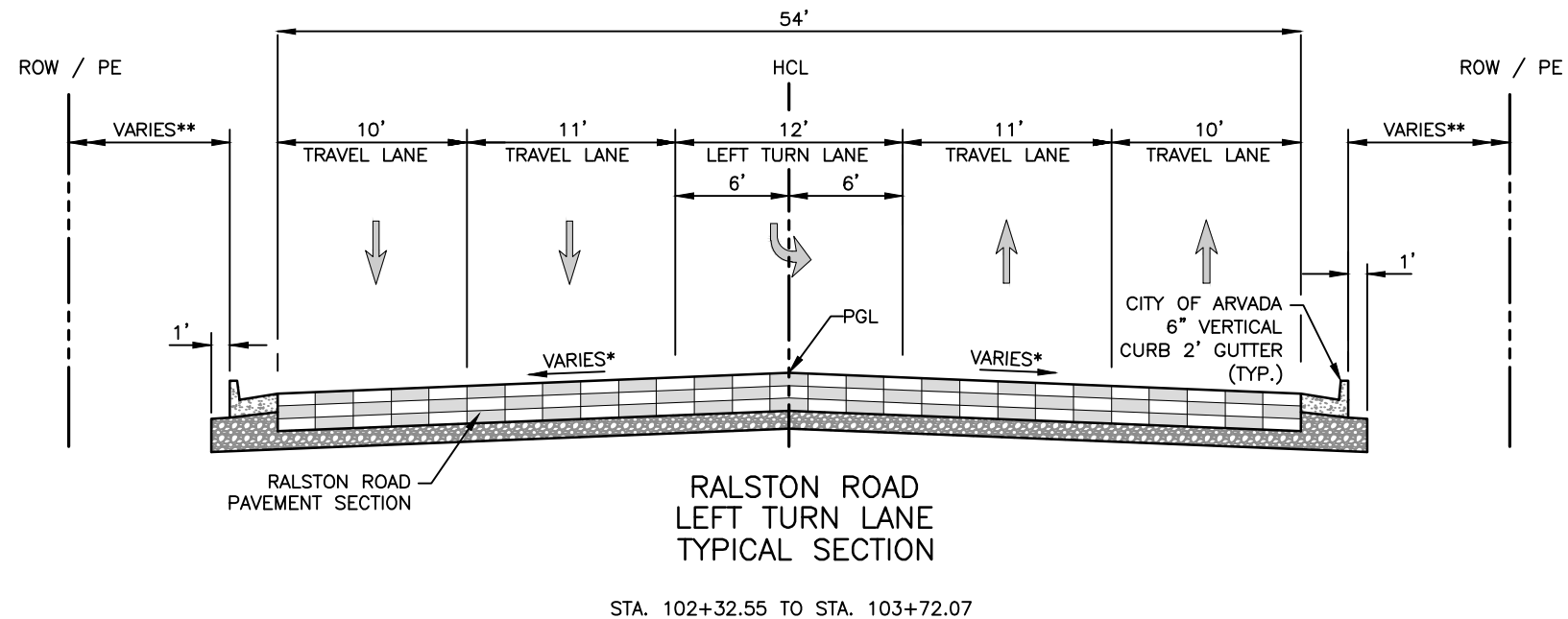


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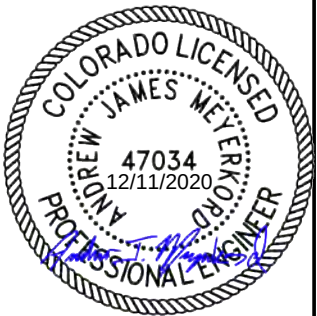
* RE: PLAN AND PROFILE SHEETS
FOR ADDITIONAL INFORMATION

** RE: SIDEWALK TYPICAL SECTIONS,
ROADWAY GEOMETRIC DETAILS,
AND PROPERTY ACCESS DETAILS
FOR ADDITIONAL INFORMATION



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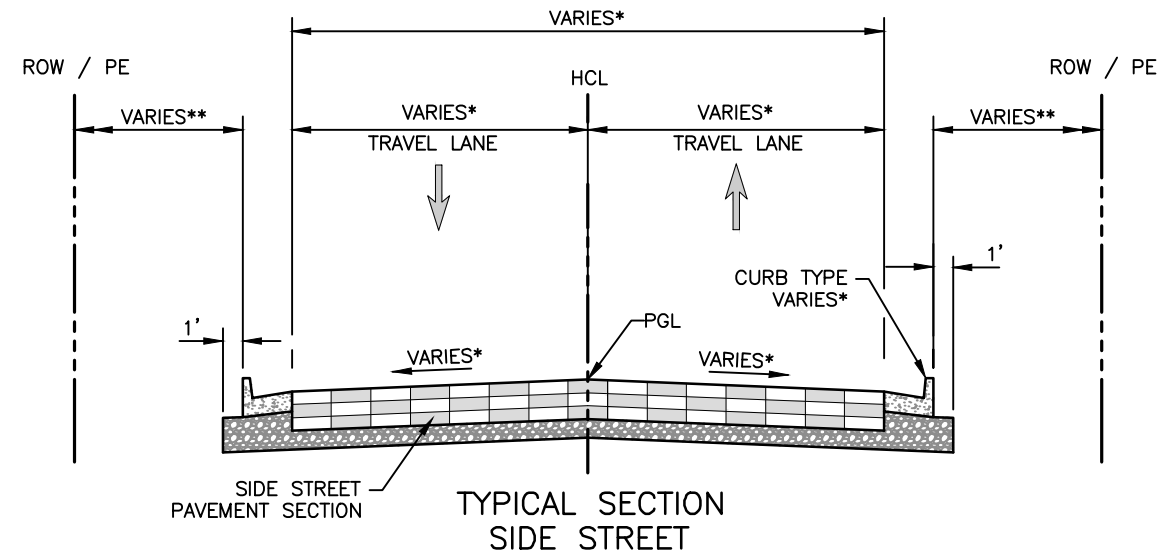
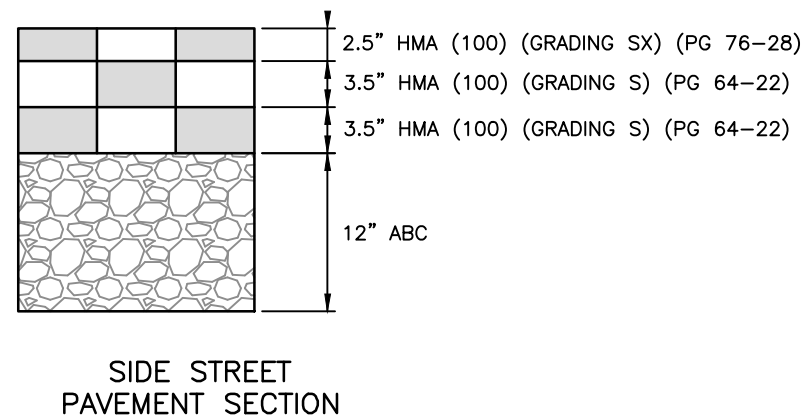
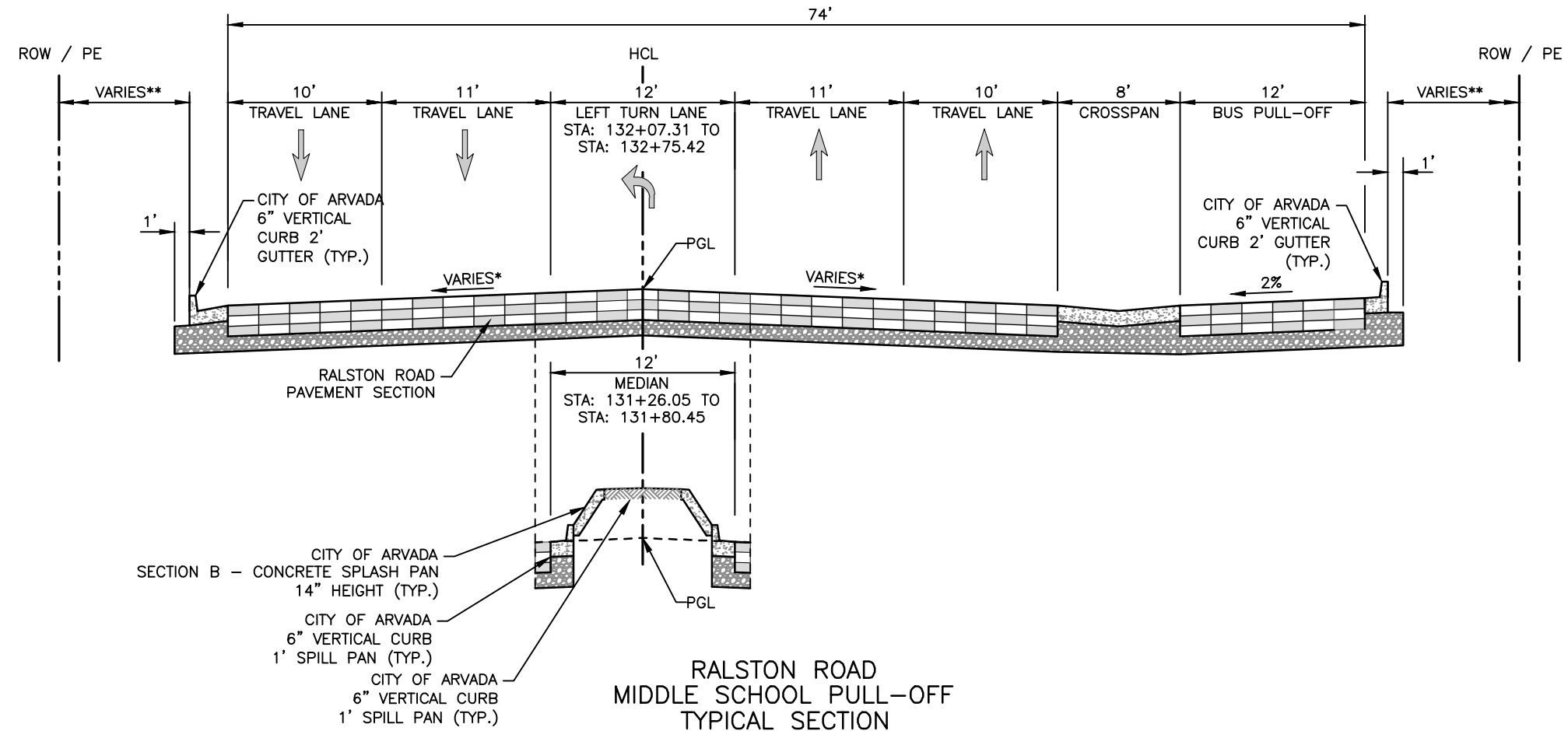
1. PAVEMENT SECTION VARIES WITH RTD CONCRETE BUS PAD, RE: SUBSET
SHEET DT-05.



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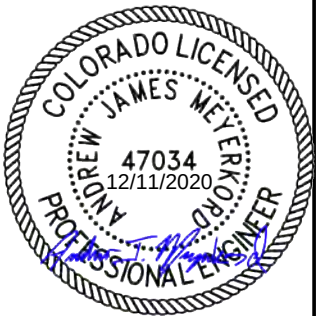
* RE: PLAN AND PROFILE SHEETS FOR ADDITIONAL INFORMATION

** RE: SIDEWALK TYPICAL SECTIONS, ROADWAY GEOMETRIC DETAILS, AND PROPERTY ACCESS DETAILS FOR ADDITIONAL INFORMATION



SIDE STREETS

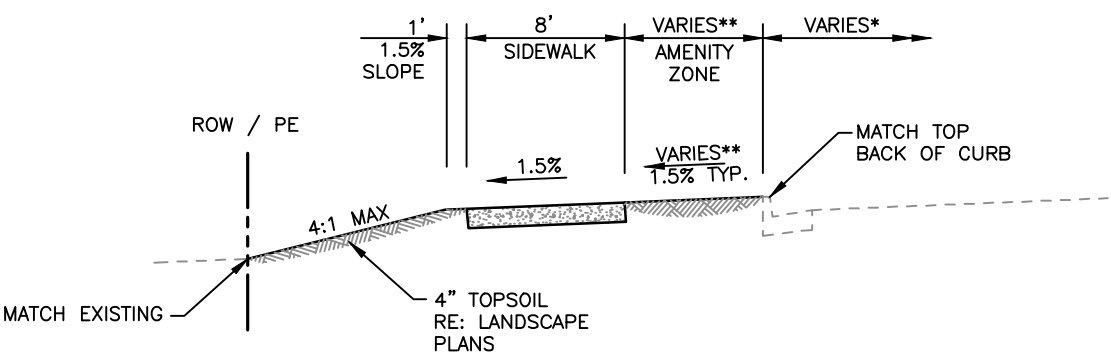
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EVERETT STREET
ESTES STREET
DUDLEY STREET
DOVER COURT
DOVER STREET
CODY COURT
CARR STREET
BRENTWOOD STREET
BALSAM STREET
BALSAM PLACE
AMMONS STREET
ALLISON STREET
ZEPHYR STREET
YARROW STREET
YUKON STREET



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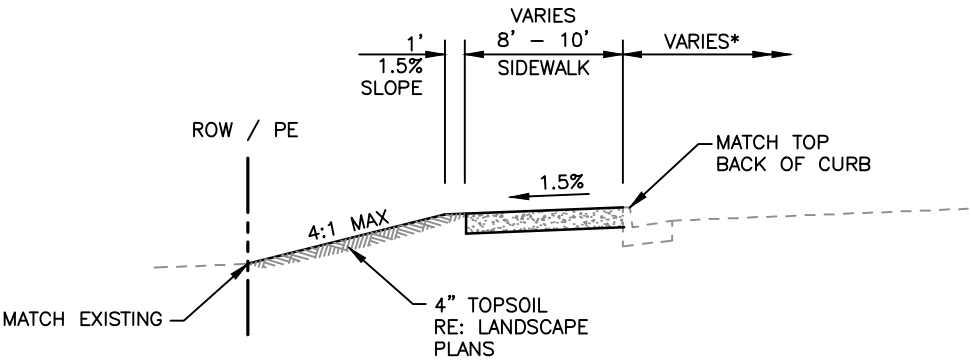
** RE: ROADWAY GEOMETRIC DETAILS, AND PROPERTY ACCESS DETAILS FOR ADDITIONAL INFORMATION



RALSTON CENTRAL PARK
DETACHED SIDEWALK
TYPICAL SECTION

STA. 102+36.03 TO STA. 103+18.44
STA. 105+02.68 TO STA. 111+07.65

AMENITY ZONE, SIDEWALK, AND 1' GRADE BENCH DRAIN AWAY FROM RALSTON ROAD ON THE LEFT. RE: ROADWAY GEOMETRIC DETAILS FOR MORE INFORMATION.

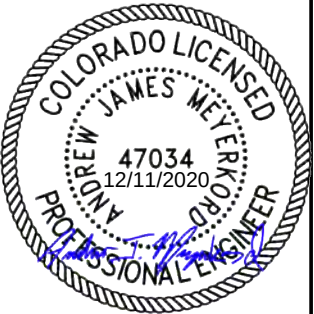


RALSTON CENTRAL PARK
ATTACHED SIDEWALK
TYPICAL SECTION

STA. 103+18.44 TO STA. 105+02.68
STA. 111+07.65 TO STA 112+28.00

SIDEWALK AND 1' GRADE BENCH DRAIN AWAY FROM RALSTON ROAD ON THE LEFT. RE: ROADWAY GEOMETRIC DETAILS FOR MORE INFORMATION.

- NOTES
- 1. FOR SIDEWALK TRANSITIONS RE: ROADWAY GEOMETRIC DETAILS
 - 2. FOR AMENITY ZONE DETAILS RE: LANDSCAPE PLANS



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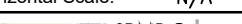
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Index			Contract Item No.	Contract Item	Unit	Roadway		Streetscape		Utilities		Drainage		Erosion Control		Traffic		Project Totals	
Book	Page	Sheet				Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.
			1	CLEARING AND GRUBBING	LS	1												1	
			2	REMOVAL OF TREE	EA	41												41	
			3	REMOVAL OF INLET	EA							17						17	
			4	REMOVAL OF MANHOLE	EA							4						4	
			5	REMOVAL OF FIRE HYDRANT	EA					14								14	
			6	REMOVAL OF VALVE	EA					17								17	
			7	REMOVAL OF PIPE (STORM SEWERS)	EA							34						34	
			8	REMOVAL OF FIBER OPTIC CABLE	LF											2700		2700	
			9	REMOVAL OF WALL	LF	1297												1297	
			10	REMOVAL OF CONCRETE MEDIAN COVER MATERIAL	SY	200												200	
			11	REMOVAL OF SIDEWALK	SY	5452												5452	
			12	REMOVAL OF CURB	LF	952												952	
			13	REMOVAL OF GUTTER	LF	404												404	
			14	REMOVAL OF CURB AND GUTTER	LF	12063												12063	
			15	REMOVAL OF CONCRETE CURB RAMP	SY	436												436	
			16	REMOVAL OF BRICK PAVERS	SY	650												650	
			17	REMOVAL OF CONCRETE PAVEMENT	SY	1,019												1019	
			18	REMOVAL OF ASPHALT MAT	SY	37839												37839	
			19	REMOVAL OF PAVEMENT MARKING	SF	55												55	
			20	REMOVAL OF LIGHT STANDARD	EA			13										13	
			21	REMOVAL OF LIGHT STANDARD FOUNDATION	EA			14										14	
			22	REMOVAL OF LUMINAIRE	EA			13										13	
			23	REMOVAL OF SIGN	EA	30												30	
			24	REMOVAL OF GROUND SIGN	EA											7		7	
			25	REMOVAL OF SIGN PANEL	EA											9		9	
			26	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	LS											1		1	
			27	REMOVAL OF FENCE	LF	391												391	
			28	REMOVAL OF BENCH	EA	1												1	
			29	REPLACE 6" VCP SEWER WITH 6" PVC PIPE	LF					8								8	
			30	REMOVE 4 INCH CI ABANDONED MAIN	LF					198								198	
			31	REMOVE 4 INCH AC MAIN	LF					30								30	
			32	REMOVE 6 INCH AC MAIN	LF					15								15	
			33	REMOVE 6 INCH PVC MAIN	LF					15								15	
			34	REMOVE 8 INCH PVC MAIN	LF					165								165	
			35	REMOVE 12 INCH PVC MAIN	LF					119								119	
			36	ABANDON VALVE BOX	EA					12								12	
			37	UNCLASSIFIED EXCAVATION (COMPLETE IN PLACE)	CY	20,714												20714	
			38	POTHOLING (ROADWAY)	EA	200												200	
			39	POTHOLING (STREETSCAPE)	EA			50										50	
			40	POTHOLING (WATER)	EA					50								50	
			41	SELECT BACKFILL	CY					1450								1450	
			42	STRUCTURE BACKFILL (FLOW-FILL)	CY							115						115	
			43	TOPSOIL	CY	627												627	

12-30-2020



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Index			Contract Item No.	Contract Item	Unit	Roadway		Streetscape		Utilities		Drainage		Erosion Control		Traffic		Project Totals	
Book	Page	Sheet				Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.
			44	STABILIZED STAGING AREA	EA									3				3	
			45	EROSION LOG (12 INCH)	LF									3690				3690	
			46	AGGREGATE BAG	LF									290				290	
			47	PRE-FABRICATED CONCRETE WASHOUT STRUCTURE (TYPE 1)	EA									12				12	
			48	STORM DRAIN INLET PROTECTION (ON GRADE)	LF									1509				1509	
			49	STORM DRAIN INLET PROTECTION (SUMP)	LF									78				78	
			50	STORM DRAIN INLET PROTECTION (SUMP)	LF									174				174	
			51	PRE-FABRICATED VEHICLE TRACKING PAD	EA									2				2	
			52	EROSION CONTROL MANAGEMENT (ECM)	DAY									365				365	
			53	RESET BRICK PAVERS	SY	86												86	
			54	RESET VALVE BOX TO FINISHED GRADE	EA					60								60	
			55	RESET METER BOX TO FINISHED GRADE	EA					2								2	
			56	RESET GROUND SIGN	EA											51		51	
			57	RESET SIGN PANEL	EA											9		9	
			58	RESET FLASHING BEACON ASSEMBLY	EA											2		2	
			59	RESET SIGNAL HEAD	EA											2		2	
			60	RESET FIRE PREEMPTION UNIT AND TIMER	EA											7		7	
			61	ADJUST MANHOLE	EA					32								32	
			62	MODIFY MANHOLE	EA							13						13	
			63	MODIFY INLET	EA							2						2	
			64	MODIFY STRUCTURE (SPECIAL)	EA							15						15	
			65	CLEAN CULVERT	EA							30						30	
			66	RESET RTD SHELTER	EA	2												2	
			67	RESET BENCH	EA	2												2	
			68	RESET SURVEY MONUMENT	EA	4												4	
			69	RESET PROPERTY PIN	EA	95												95	
			70	TREE RETENTION AND PROTECTION	EA	25												25	
			71	SEEDING ON PRIVATE PROPERTY	AC			0.39										0.39	
			72	SOD ON CITY PROPERTY	SY			1623										1623	
			73	WOOD MULCH (WOLFF PARK)	SF			910										910	
			74	MULCH TYPE 1, 1-1/2" ANGULAR DECORATIVE ROCK	TON			268										268	
			75	TREE GRATE	EA			20										20	
			76	TREE (DECIDUOUS)	EA			57										57	
			77	TREE (ORNAMENTAL)	EA			8										8	
			78	DECIDUOUS SHRUB (5 GALLON)	EA			573										573	
			79	EVERGREEN SHRUB (1 GALLON)	EA			50										50	
			80	EVERGREEN SHRUB (5 GALLON)	EA			255										255	
			81	ORNAMENTAL GRASSES (1 GALLON)	EA			592										592	
			82	PERENNIALS (1 GALLON)	EA			287										287	
			83	AMENDED TOPSOIL SHRUB BEDS (18")	CY			944										944	
			84	AMENDED TOPSOIL SHRUB BEDS (24")	CY			178										178	
			85	WILDLIFE BIOLOGIST	HR	10												10	
			86	REMOVAL OF NESTS	HR	10												10	
			87	NETTING (MIGRATORY BIRDS)	SY	20												20	



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CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed

No Revisions:

Revised:

Void:

RALSTON RD - YUKON ST TO GARRISON ST
SUMMARY OF APPROXIMATE QUANTITIES

Designer: JHH
Detailer: DAL
Sheet Subset: GENERAL

Structure Numbers
Subset Sheets: SQ-02 of 6

Project No./Code

18-ST-40

Sheet Number 11

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Index			Contract Item No.	Contract Item	Unit	Roadway		Streetscape		Utilities		Drainage		Erosion Control		Traffic		Project Totals	
Book	Page	Sheet				Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.
			88	ENVIRONMENTAL HEALTH AND SAFETY	LS	1												1	
			89	AGGREGATE BASE COURSE (CLASS 6)	CY	11260												11260	
			90	HOT MIX ASPHALT (GRADING S) (100) (PG 64-22)	TON	13,497												13497	
			91	HOT MIX ASPHALT (GRADING SX) (100) (PG 76-28)	TON	5135												5135	
			92	HOT MIX ASPHALT (PATCHING)	TON					388								388	
			93	EMULSIFIED ASPHALT (SLOW-SETTING)	GAL	3380												3380	
			94	CONCRETE PAVEMENT (6 INCH)	SY	223												223	
			95	CONCRETE BUS PAD (11 INCH)	SY	327												327	
			96	DRILLED CAISSON (18 INCH)	LF											20		20	
			97	DRILLED CAISSON (36 INCH)	LF											194		194	
			98	CONCRETE SLOPE AND DITCH PAVING (4 INCH)	CY	5												5	
			99	HIGH PERFORMANCE POLYPROPYLENE PIPE (HPPE) (COMPLETE IN PLACE) (6 INCH)	LF							83						83	
			100	HIGH PERFORMANCE POLYPROPYLENE PIPE (HPPE) (COMPLETE IN PLACE) (12 INCH)	LF							247						247	
			101	HIGH PERFORMANCE POLYPROPYLENE PIPE (HPPE) (COMPLETE IN PLACE) (15 INCH)	LF							210						210	
			102	HIGH PERFORMANCE POLYPROPYLENE PIPE (HPPE) (COMPLETE IN PLACE) (18 INCH)	LF							1276						1276	
			103	INLET TYPE 13 (5 FOOT)	EA							1						1	
			104	INLET TYPE C (5 FOOT)	EA							1						1	
			105	INLET TYPE 16 (5 FOOT)	EA							16						16	
			106	INLET TYPE 16 (10 FOOT)	EA							1						1	
			107	INLET TYPE 16 (DOUBLE) (5 FOOT)	EA							2						2	
			108	INLET TYPE 16 (TRIPLE) (5 FOOT)	EA							5						5	
			109	INLET TYPE 16 (DOUBLE) (SPECIAL) (5 FOOT)	EA							3						3	
			110	INLET TYPE R L 5 (5 FOOT)	EA							2						2	
			111	INLET TYPE R L 10 (5 FOOT)	EA							1						1	
			112	INLET TYPE R L 10 (10 FOOT)	EA							1						1	
			113	MANHOLE SLAB BASE (5 FOOT)	EA							10						10	
			114	MANHOLE SLAB BASE (10 FOOT)	EA							1						1	
			115	MANHOLE BOX BASE (5 FOOT)	EA							5						5	
			116	4 INCH PVC PIPE	LF					45								45	
			117	6 INCH PVC PIPE	LF					86								86	
			118	8 INCH PVC PIPE	LF					502								502	
			119	12 INCH PVC PIPE	LF					1576								1576	
			120	12 INCH FUSIBLE C900 PVC PIPE	LF					416								416	
			121	PERMANENT PLUG	EA					1								1	
			122	CONNECT TO EXISTING	EA					21								21	
			123	CHLORINATION AND PRESSURE TEST	EA					2								2	
			124	INSTALL WATER METER (3/4 INCH)	EA					19								19	
			125	TAP MAIN & INSTALL CORP STOP (3/4 INCH)	EA					2								2	
			126	RECONNECT WATER SERVICE (3/4 INCH)	EA					18								18	
			127	INSTALL WATER METER (1 INCH)	EA					5								5	
			128	RECONNECT WATER SERVICE (1 INCH)	EA					5								5	
			129	INSTALL WATER METER (1.5 INCH)	EA					1								1	
			130	RECONNECT WATER SERVICE (1.5 INCH)	EA					1								1	
			131	FIRE SPRINKLER FLOW TEST	EA					1								1	



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PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed	RALSTON RD - YUKON ST TO GARRISON ST SUMMARY OF APPROXIMATE QUANTITIES				Project No./Code
No Revisions:					18-ST-40
Revised:	Designer: JHH	Structure			
	Detailer: DAL	Numbers			
Void:	Sheet Subset: GENERAL	Subset Sheets: SQ-03 of 6			Sheet Number 12

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Index			Contract Item No.	Contract Item	Unit	Roadway		Streetscape		Utilities		Drainage		Erosion Control		Traffic		Project Totals	
Book	Page	Sheet				Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.
			132	FENCE (PLASTIC)	LF									15000				15000	
			133	CONCRETE SIDEWALK (6 INCH)	SY	6203										8		6211	
			134	CONCRETE SIDEWALK (SPECIAL) (TYPE 1)	SY	1289												1289	
			135	CONCRETE SIDEWALK (SPECIAL) (TYPE 2)	SY	722												722	
			136	CONCRETE CURB RAMP	SY	856												856	
			137	CONCRETE CURB RAMP (SPECIAL)	SY	501												501	
			138	DRIVEWAY (6 INCH CONCRETE)	SY	936												936	
			139	MOUNTABLE CURB AND SIDEWALK	SY	27												27	
			140	CURB AND GUTTER (SPECIAL)	LF	895												895	
			141	COA 6" VERTICAL CURB & 1' GUTTER	LF	1,234												1234	
			142	COA 6" VERTICAL CURB & 2' GUTTER	LF	10167												10167	
			143	VALLEY GUTTER	SY	986												986	
			144	BI-LEVEL SIDEWALK	LS	1												1	
			145	WALL (TYPE 1)	LF	97												97	
			146	WALL (TYPE 2)	LF	25												25	
			147	CONCRETE SPLASH PAN (14 INCH)	LF	1,230												1230	
			148	CONCRETE EDGING	LF			120										120	
			149	2 INCH ELECTRICAL CONDUIT (BORED)	LF											2375		2375	
			150	3 INCH ELECTRICAL CONDUIT (BORED)	LF											2190		2190	
			151	1 INCH ELECTRICAL CONDUIT (PLASTIC)	LF			195										195	
			152	2 INCH ELECTRICAL CONDUIT (PLASTIC)	LF			12465								1165		13630	
			153	3 INCH ELECTRICAL CONDUIT (PLASTIC)	LF											740		740	
			154	PULL BOX (TYPE M)	EA											1		1	
			155	PULL BOX (TYPE LG)	EA											16		16	
			156	PULL BOX (13"X20"X18")	EA			54										54	
			157	WIRING	LS			1								1		2	
			158	LUMINAIRE (LED)	EA											13		13	
			159	LIGHT STANDARD AND LUMINAIRE (PEDESTRIAN) (TYPE B)	EA			99										99	
			160	LIGHT STANDARD FOUNDATION	EA			86										86	
			161	LIGHT STANDARD FOUNDATION (SPECIAL)	EA			13										13	
			162	LIGHTING CONTROL CENTER	EA			4										4	
			163	SERVICE METER CABINET	EA											4		4	
			164	SIGN PANEL (CLASS I)	SF											312.5		312.5	
			165	STEEL SIGN POST (1.75X1.75 INCH TUBING)	LF											382		382	
			166	SIGNAL HEAD BACKPLATES	EA											34		34	
			167	PEDESTRIAN SIGNAL FACE (16) (COUNTDOWN)	EA											24		24	
			168	TRAFFIC SIGNAL FACE (12-12-12)	EA											39		39	
			169	TRAFFIC SIGNAL FACE (12-12-12-12)	EA											17		17	
			170	TRAFFIC SIGNAL FACE (12-12-12-12-12)	EA											1		1	
			171	TRAFFIC SIGNAL CONTROLLER	EA											4		4	
			172	PEDESTRIAN PUSH BUTTON POST ASSEMBLY	EA											9		9	
			173	PEDESTRIAN PUSH BUTTON STATION AND SIGN	EA											28		28	
			174	MICROWAVE VEHICLE RADAR DETECTOR	EA											22		22	
			175	TRAFFIC SIGNAL CONTROLLER (INSTALL ONLY)	EA											4		4	



Print Date: 12/29/2020 3:23:05 PM			Sheet Revisions					CITY OF ARVADA PUBLIC WORKS DEPARTMENT			As Constructed		RALSTON RD - YUKON ST TO GARRISON ST SUMMARY OF APPROXIMATE QUANTITIES			Project No./Code		
File Name: 118355_GNSQ_SH01.DWG								8101 RALSTON ROAD ARVADA, CO, 80002			No Revisions:					18-ST-40		
Horizontal Scale: N/A Vertical Scale: N/A											Revised:		Designer: JHH		Structure			
FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com											Void:		Detailer: DAL		Numbers			
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Index			Contract Item No.	Contract Item	Unit	Roadway		Streetscape		Utilities		Drainage		Erosion Control		Traffic		Project Totals	
Book	Page	Sheet				Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.
			176	TRAFFIC SIGNAL—LIGHT POLE (1—20 FOOT MAST ARM)	EA											2		2	
			177	TRAFFIC SIGNAL—LIGHT POLE (1—30 FOOT MAST ARM)	EA											1		1	
			178	TRAFFIC SIGNAL—LIGHT POLE (1—35 FOOT MAST ARM)	EA											2		2	
			179	TRAFFIC SIGNAL—LIGHT POLE (1—40 FOOT MAST ARM)	EA											3		3	
			180	TRAFFIC SIGNAL—LIGHT POLE (1—45 FOOT MAST ARM)	EA											1		1	
			181	TRAFFIC SIGNAL—LIGHT POLE (1—50 FOOT MAST ARM)	EA											4		4	
			182	TRAFFIC SIGNAL PEDESTAL POLE STEEL	EA											5		5	
			183	TEMPORARY SIGNAL (PORTABLE)	EA											4		4	
			184	UNINTERRUPTED POWER SUPPLY	EA											4		4	
			185	CLOSED CIRCUIT TELEVISION CAMERA (TRAFFIC SURVEILLANCE)	EA											1		1	
			186	FIBER OPTIC CABLE (SINGLE MODE) (12 FIBER)	LF											1000		1000	
			187	TEST FIBER OPTIC CABLE	LS											1		1	
			188	TERMINATE FIBER OPTIC CABLE (12 STRAND)	EA											4		4	
			189	ETHERNET SWITCH	EA											4		4	
			190	4 INCH GATE VALVE & BOX	EA					1								1	
			191	6 INCH GATE VALVE & BOX	EA					2								2	
			192	8 INCH GATE VALVE & BOX	EA					11								11	
			193	12 INCH GATE VALVE & BOX	EA					9								9	
			194	FIRE HYDRANT (ASSEMBLY)	EA					13						12		25	
			195	STAIR	EA	7												7	
			196	TEMPORARY DRIVEWAY PAVING	SY											3500		3500	
			197	6' BENCH	EA			4										4	
			198	4' BENCH	EA			11										11	
			199	DISTRICT MARKER (INSPIRE, CELEBRATE)	EA			2										2	
			200	DISTRICT MARKER (REMEMBER)	EA			2										2	
			201	DISTRICT MARKER FOUNDATION (INSPIRE, CELEBRATE)	CY			6										6	
			202	DISTRICT MARKER FOUNDATION (REMEMBER)	CY			1										1	
			203	NEIGHBORHOOD MONUMENT	EA			17										17	
			204	NEIGHBORHOOD MONUMENT FOUNDATION	CY			11										11	
			205	WOLFF PARK PLANTER WALL	LF			40										40	
			206	IRRIGATION POINT OF CONNECTION	EA			4										4	
			207	IRRIGATION TAP FEES	SF			21129										21129	
			208	IRRIGATION WITHIN BEDS AND CORNER PLANTERS	SF			20505										20505	
			209	IRRIGATION FOR TREE PITS	EA			20										20	
			210	IRRIGATION MAINLINE	LF			5800										5800	
			211	IRRIGATION SLEEVES FOR MAINLINE	LF			3850										3850	
			212	IRRIGATION SLEEVES FOR LATERALS – BEDS AND CORNER TREATMENTS	LF			4600										4600	
			213	IRRIGATION SLEEVES FOR LATERALS – TREE PITS	LF			1550										1550	
			214	IRRIGATION LATERAL FOR BEDS AND CORNER TREATMENTS	LF			6600										6600	
			215	IRRIGATION LATERAL FOR TREE PITS	LF			1700										1700	
			216	IRRIGATION MODIFICATION FOR ADJACENT OWNERS	LS			38										38	
			217	IRRIGATION MODIFICATION FOR RALSTON CENTRAL PARK	LS			1										1	
			218	IRRIGATION MODIFICATION FOR WOLFF PARK	LS			1										1	
			219	IRRIGATION PIPING BORE ALLOWANCE	LF			963										963	



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CITY OF ARVADA
PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed	RALSTON RD - YUKON ST TO GARRISON ST SUMMARY OF APPROXIMATE QUANTITIES				Project No./Code
No Revisions:					18-ST-40
Revised:	Designer: JHH	Structure			
	Detailer: DAL	Numbers			
Void:	Sheet Subset: GENERAL	Subset Sheets: SQ-05 of 6			Sheet Number 14

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Index			Contract Item No.	Contract Item	Unit	Roadway		Streetscape		Utilities		Drainage		Erosion Control		Traffic		Project Totals	
Book	Page	Sheet				Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.
			220	CONSTRUCTION SURVEYING	LS	1												1	
			221	MATERIALS TESTING SERVICES	LS	1												1	
			222	MOBILIZATION	LS	1												1	
			223	MODIFIED EPOXY PAVEMENT MARKING	GAL											64		64	
			224	PREFORMED THERMOPLASTIC PVMNT MRKNG (WORD-SYMBOL)	SF											316		316	
			225	PREFORMED THERMOPLASTIC PVMNT MRKNG (XWALK-STOPLINE)	SF											786		786	
			226	UNIFORMED TRAFFIC CONTROL	HR											200		200	
			227	TRAFFIC CONTROL	LS											1		1	
			228	PUBLIC INFORMATION SERVICES (TIER III)	LS	1												1	
			229	SANITARY FACILITY	EA	5												5	
			230	F/A 01 MINOR CONTRACT REVISIONS TO INCLUDE RFI'S (ROADWAY)	FA	1												1	
			231	F/A 02 EROSION CONTROL	FA	1												1	
			232	F/A 03 ENVIRONMENTAL HEALTH AND SAFETY MANAGEMENT	FA	1												1	
			233	F/A 04 IRRIGATION SYSTEM REPAIR	FA	1												1	
			234	F/A 05 UTILITY ADJUSTMENT	FA	1												1	
			235	F/A 06 HIGH EARLY STRENGTH CONCRETE (CLASS E)	FA	1												1	
			236	F/A 07 FURNISH AND INSTALL ELECTRICAL SERVICE	FA	1												1	
			237	F/A 08 MINOR CONTRACT REVISIONS TO INCLUDE RFI'S (STREETSCAPE)	FA	1												1	
			238	F/A 09 MINOR CONTRACT REVISIONS TO INCLUDE RFI'S (WATER)	FA	1												1	
																		0	



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File Name: 118355_GNSQ_SH01.DWG			Date	Comments	Initials		No Revisions:					18-ST-40	
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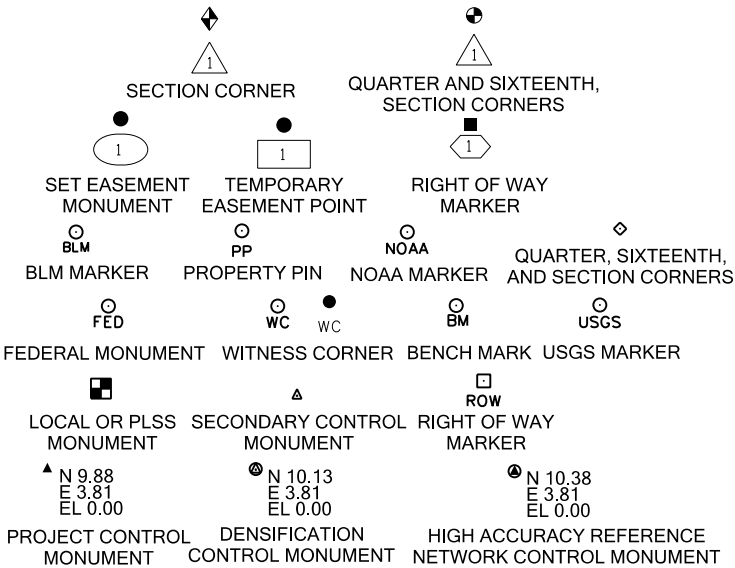
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Land Survey Control Diagram				
Title Sheet				
City of Arvada Project Number: 18-ST-40				
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.				
CITY OF ARVADA, COLORADO				
Project Code	Last Mod. Date	Subset	Sheet No.	
18-40	11-08-2019	4.01 of 4.08	4.01	



Note: For a complete listing of symbology used within this set of plans, please refer to the M-100-1 Standard Symbols of the Colorado Department of Transportation M&S Standards Publication dated July 2012.

General Notes:

1.

This Land Survey Control Diagram is not a boundary survey of the adjoining property and is prepared for the City of Arvada purposes only. No determination has been made to determine if the found monuments as shown are in their proper position or if they are at the corners they are intended to monument.
2.

Title policy, title commitment, and title research are not part of this survey, therefore easements, rights, and restrictions of record were not researched and are not shown on this diagram. The verification of the physical evidence with relation to easements, rights of ways, property boundaries, and restrictions, as described in the instruments of record, were not included in this control survey.
3.

This plan set is subject to change and may not be the most current set. It is the user's responsibility to verify with Aztec Consultants that this set is the most current. The information contained on the attached drawing is not valid unless this copy bears an original signature of the Professional Land Surveyor hereon named.
4.

Refer to the M-629-1 Survey Monuments of the Standard Plans dated July, 2012 found in The Colorado Department of Transportation, M & S Standards for typical survey monument descriptions.

CITY OF ARVADA
JEFFERSON COUNTY
STATE OF COLORADO
CITY OF ARVADA PROJECT NO. 18-ST-40
LAND SURVEY CONTROL DIAGRAM

Ralston Road, Garrison Street to Yukon Street,
Being a part of the Southeast Quarter of Section 10
and the Southwest Quarter of Section 11,
Township 3 South, Range 69 West,
all being in the 6th Principal Meridian
City of Arvada, Jefferson County



PROJECT LOCATION MAP



SHEET NO.	INDEX OF SHEETS
4.01	(1) Title Sheet
4.02-4.04	(3) Monument Coordinate Tables
4.05-4.08	(5) Plan Sheets
	(8) Total Sheets

Basis of Bearings: Bearings used in the calculations of coordinates are based on a grid bearing of N89°05'10"E and a distance of 1318.85 feet from the "Original 1973" Center-South Sixteenth Corner of Section 10, Township 3 South, Range 69 West of the 6th P.M., monumented by a 2" aluminum cap on flush in concrete pan, stamped in part "Original 1973 PLS 38359, 2017" to the South-East Sixteenth Corner of Section 10, Township 3 South, Range 69 West of the 6th P.M., monumented by a 2" aluminum cap down 0.5' in range box, Stamped "LS 5447 1995". The survey data was obtained from a Global Positioning System (GPS) survey based on the Colorado High Accuracy Reference Network (CHARN) NAD '83(2011).

Basis of Elevations: Project control elevations were established by differential leveling by Aztec Consultants based on The City of Arvada Control Point 120, being a 2.5" Aluminum Cap on the North Side of Ralston Road East of Garrison Street. Control Point 120 has a Published City of Arvada Datum Elevation of 5344.94 above sea level.

COORDINATE DATUM: Project coordinates are modified Colorado State Plane Central Zone (502) NAD '83/(2011) coordinates. The combined elevation/scale factor used to modify the coordinates from state plane to project coordinates is 1.0002423410. The resulting project coordinates are truncated by 1,000,000 sft in the Northing and 3,000,000 sft in the Easting after converting from state plane coordinates to project coordinates. The CHARN is based on the NAD '83(2011) datum.
Project Coordinates Northing US Survey Feet =
(State Plane Coordinate Northing * 1.0002423410 - 1,000,000 sft)
Project Coordinates Easting US Survey Feet =
(State Plane Coordinate Easting * 1.0002423410 - 3,000,000 sft)

NOTICE: According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years from the date of the certification shown hereon.

SURVEYOR STATEMENT (LAND SURVEY CONTROL DIAGRAM)

I, Carl J. Gilbert, a professional land surveyor licensed in the State of Colorado, do hereby state to the City of Arvada Colorado this Land Survey Control Diagram was prepared and the field survey it represents was performed under my responsible charge and, based upon my knowledge, information and belief is in accordance with applicable standards of practice defined by Colorado Department of Transportation publications. This statement is not a guaranty or warranty, either expressed or implied.

PLS No. 38287





CITY OF ARVADA COLORADO

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Land Survey Control Diagram				
Monument Coordinate Tables				
City of Arvada Project Number: 18-ST-40				
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.				
CITY OF ARVADA, COLORADO				
Project Code	Last Mod. Date	Subset	Sheet No.	
18-40	11-08-2019	4.02 of 4.08	4.02	



GEODETIC COORDINATE SUMMARY TABLE

Point No.	Geodetic Coordinates NAD-83(2011) (CHARN)		Elipsoid Height (sft)	Colorado State Plane Central (ZONE 502)		City of Arvada Elevation (sft)	Description
	Latitude(N)	Longitude(W)		Northing (sft)	Easting (sft)		
1	N39°48'03.82373"	W105°06'00.41330"	5312.02	1716915.36	3112358.30	5366.55	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
2	N39°48'07.03431"	W105°05'52.64582"	5291.89	1717242.90	3112963.10	5346.46	BRASS CAP, FLUSH IN TOP BACK OF CURB, STAMPED "CITY OF ARVADA BM 781"
3	N39°48'06.97969"	W105°05'40.67812"	5301.84	1717241.53	3113897.17	5356.47	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
4	N39°48'06.66602"	W105°05'28.02404"	5296.91	1717214.21	3114884.93	5351.61	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
5	N39°48'07.78052"	W105°05'16.23334"	5293.63	1717331.14	3115804.66	5348.40	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
6	N39°48'06.86895"	W105°05'10.65032"	5287.56	1717240.89	3116240.82	5342.36	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
7	N39°48'06.80212"	W105°05'02.15918"	5284.94	1717237.15	3116903.56	5339.78	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
8	N39°48'07.54663"	W105°04'55.87338"	5282.40	1717314.74	3117393.81	5337.28	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
9	N39°48'06.72130"	W105°04'52.87926"	5280.73	1717232.30	3117627.87	5335.62	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
107	N39°48'07.70927"	W105°05'13.89032"	5290.07	1717324.76	3115987.56	5344.85	BENCH MARK- CHISELED SQUARE, NORTHEAST CORNER OF AMMONS ST. AND RALSTON RD.
120	N39°48'07.68235"	W105°05'59.51104"	5290.41	1717306.11	3112427.00	5344.93	18" #5 REBAR W-2 1/2" ALUMINUM CAP STAMPED: "CITY OF ARVADA, 120, CP-SPLISH, DO NOT DISTURB"
130	N39°48'07.69216"	W105°05'49.02704"	5293.98	1717310.72	3113245.24	5348.57	18" #5 REBAR W-2 1/2" ALUMINUM CAP STAMPED: "CITY OF ARVADA, 130, CP-SPLASH, DO NOT DISTURB"
140	N39°48'07.64118"	W105°05'33.24844"	5298.31	1717311.05	3114476.74	5352.99	18" #5 REBAR W-2 1/2" ALUMINUM CAP STAMPED: "CITY OF ARVADA, 140, CP-CHURCH, DO NOT DISTURB"
150	N39°48'06.60213"	W105°05'24.74036"	5295.64	1717208.90	3115141.25	5350.36	18" #5 REBAR W-2 1/2" ALUMINUM CAP STAMPED: "CITY OF ARVADA, 150, CP-WOOLF, DO NOT DISTURB"
160	N39°48'07.52428"	W105°05'08.45891"	5287.55	1717307.98	3116411.55	5342.36	18" #5 REBAR W-2 1/2" ALUMINUM CAP STAMPED: "CITY OF ARVADA, 160, CP-SUN, DO NOT DISTURB"
170	N39°48'06.85537"	W105°04'57.97188"	5281.84	1717244.04	3117230.34	5336.70	18" #5 REBAR W-2 1/2" ALUMINUM CAP STAMPED: "CITY OF ARVADA, 170, CP-BELLA, DO NOT DISTURB"
180	N39°48'07.45591"	W105°04'50.70116"	5281.49	1717307.42	3117797.53	5336.39	18" #5 REBAR W-2 1/2" ALUMINUM CAP STAMPED: "CITY OF ARVADA, 180, CP-ARBY, DO NOT DISTURB"
F 412	N39°45'42.33486"	W105°06'33.72428"	5508.64	1702587.28	3109819.99	5560.56	NGS PID KK1457 1/2" STAINLESS STEEL ROD IN RANGE BOX

PROJECT COORDINATE TABLE

Point No.	Project Coordinates		City of Arvda Elevation (ft)	Description
	Northing(ft)	Easting(ft)		
1	717331.44	113112.55	5366.55	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
2	717659.06	113717.50	5346.46	2" BRASS CAP, FLUSH IN TOP BACK OF CURB, STAMPED "CITY OF ARVADA BM 781"
3	717657.68	114651.80	5356.47	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
4	717630.36	115639.80	5351.61	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
5	717747.32	116559.75	5348.40	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
6	717657.04	116996.01	5342.36	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
7	717653.31	117658.91	5339.78	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
8	717730.91	118149.28	5337.28	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
9	717648.45	118383.40	5335.62	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
107	717740.94	116742.69	5344.85	BENCH MARK- CHISELED SQUARE, NORTHEAST CORNER OF AMMONS ST. AND RALSTON RD.
120	717722.28	113181.27	5344.93	18" #5 REBAR W-2 1/2" ALUMINUM CAP STAMPED: "CITY OF ARVADA, 120, CP-SPLISH, DO NOT DISTURB"
130	717726.89	113999.71	5348.57	18" #5 REBAR W-2 1/2" ALUMINUM CAP STAMPED: "CITY OF ARVADA, 130, CP-SPLASH, DO NOT DISTURB"
140	717727.23	115231.51	5352.99	18" #5 REBAR W-2 1/2" ALUMINUM CAP STAMPED: "CITY OF ARVADA, 140, CP-CHURCH, DO NOT DISTURB"
150	717625.05	115896.17	5350.36	18" #5 REBAR W-2 1/2" ALUMINUM CAP STAMPED: "CITY OF ARVADA, 150, CP-WOOLF, DO NOT DISTURB"
160	717724.15	117166.78	5342.36	18" #5 REBAR W-2 1/2" ALUMINUM CAP STAMPED: "CITY OF ARVADA, 160, CP-SUN, DO NOT DISTURB"
170	717660.19	117985.78	5336.70	18" #5 REBAR W-2 1/2" ALUMINUM CAP STAMPED: "CITY OF ARVADA, 170, CP-BELLA, DO NOT DISTURB"
180	717723.59	118553.10	5336.39	18" #5 REBAR W-2 1/2" ALUMINUM CAP STAMPED: "CITY OF ARVADA, 180, CP-ARBY, DO NOT DISTURB"
F 412	702999.89	110573.62	5560.56	NGS PID KK1457 1/2" STAINLESS STEEL ROD IN RANGE BOX

* DENOTES LOCATION TO BE OUTSIDE PROJECT AREA AND OFF OF SHEETS 4.05 - 4.08 AND NOT SHOW HEREON.



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Land Survey Control Diagram				
Monument Coordinate Tables				
City of Arvada Project Number: 18-ST-40				
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.				
CITY OF ARVADA, COLORADO				
Project Code	Last Mod. Date	Subset	Sheet No.	
18-40	11-08-2019	4.03 of 4.08	4.03	



FOUND ALIQUOT MONUMENT COORDINATE TABLE				
Point No.	Northing(ft)	Easting(ft)	Monument Location	Description
204	717656.91	113082.91	1994 RESET CENTER-SOUTH SIXTEENTH CORNER SECTION 10, T. 3 S, R. 69 W., 6TH P.M.	2" ALUMINUM CAP, FLUSH IN CONCRETE PAN, STAMPED IN PART "1994 RESET, 2017 PLS 38359"
205	717653.79	113082.56	ORIGINAL 1973 CENTER-SOUTH SIXTEENTH CORNER SECTION 10, T. 3 S, R. 69 W., 6TH P.M.	2" ALUMINUM CAP, FLUSH IN CONCRETE PAN, STAMPED IN PART "ORIGINAL 1973, 2017 PLS 38359"
206	717674.83	114401.25	SOUTHEAST SIXTEENTH CORNER SECTION 10, T. 3 S, R. 69 W., 6TH P.M.	5/8" DIAMETER REBAR, MISSING CAP 0.3' BELOW SURFACE, BENT EAST, SHOT AT BASE.
207	717693.10	115719.75	SOUTH SIXTEENTH CORNER SECTION 10 & 11, T. 3 S, R. 69 W., 6TH P.M.	2" ALUMINUM CAP, 0.5' BELOW SURFACE IN RANGE BOX, STAMPED "CONTRA LTD 1995 PLS 5447"
208	717689.24	118357.82	SOUTH SIXTEENTH CORNER SECTION 11, T. 3 S, R. 69 W., 6TH P.M	NOT FOUND, DESTROYED IN 2004 BY CONSTRUCTION, ESTABLISHED POSITION FROM TIES & ADJOINING CORNERS
* 209	716369.36	115728.04	SOUTHEAST CORNER SECTION 10, T. 3 S, R. 69 W., 6TH P.M.	2.5" ALUMINUM CAP, 0.4' BELOW SURFACE IN RANGE BOX, STAMPED IN PART "CHARLES H. RUSSELL, PLS 23519"
* 210	716335.23	113089.37	SOUTH QUARTER CORNER SECTION 10, T. 3 S, R. 69 W., 6TH P.M.	3.25" BRASS CAP, 0.3' BELOW SURFACE IN RANGE BOX, STAMPED IN PART "1984, PLS 13212"
* 211	718978.79	113075.98	CENTER QUARTER CORNER SECTION 10, T. 3 S, R. 69 W., 6TH P.M.	3.25" ALUMINUM CAP, 0.3' BELOW SURFACE IN RANGE BOX, STAMPED IN PART "CITY OF ARVADA ,2016, PLS 23496"
* 212	719019.05	118353.53	CENTER QUARTER CORNER SECTION 11, T. 3 S, R. 69 W., 6TH P.M.	3.25" ALUMINUM CAP, 0.3' BELOW SURFACE IN RANGE BOX, STAMPED IN PART "CITY OF ARVADA ,2012, PLS 23496"
* 213	719016.74	115711.26	WEST QUARTER CORNER SECTION 11, T. 3 S, R. 69 W., 6TH P.M.	2" ALUMINUM CAP, 0.6' BELOW SURFACE IN RANGE BOX, STAMPED IN PART "1995, PLS 27258"
* 215	716367.65	117045.06	WEST SIXTEENTH CORNER SECTION 11 & 14, T. 3 S, R. 69 W., 6TH P.M.	2.5" ALUMINUM CAP, 0.8' BELOW SURFACE IN RANGE BOX, STAMPED IN PART "2015, PLS 34580"
* 216	716365.64	118362.59	SOUTH QUARTER CORNER SECTION 11, T. 3 S, R. 69 W., 6TH P.M.	2" ALUMINUM CAP, 0.5' BELOW SURFACE IN RANGE BOX, STAMPED IN PART "PLS 36053"
220	717744.90	118332.04	REFERENCE MONUMENT SOUTH SIXTEENTH CORNER SECTION 11, T. 3 S, R. 69 W., 6TH P.M	2.5" ALUMINUM CAP, 0.8' BELOW SURFACE IN RANGE BOX, STAMPED IN PART "2005, R.M. 61.25' PLS 36561"
221	717627.74	118323.62	REFERENCE MONUMENT SOUTH SIXTEENTH CORNER SECTION 11, T. 3 S, R. 69 W., 6TH P.M	2.5" ALUMINUM CAP, FLUSH WITH SURFACE IN LANDSCAPE BOX, STAMPED IN PART "2005, R.M. 70.33' PLS 36561"

* DENOTES LOCATION TO BE OUTSIDE PROJECT AREA AND OFF OF SHEETS 4.05 - 4.08 AND NOT SHOW HEREON.



PP

FOUND BOUNDARY MONUMENT COORDINATE TABLE			
Point No.	Northing(ft)	Easting(ft)	Description
300	717747.98	118387.48	1-1/2" ALUMINUM CAP, FLUSH IN ASPHALT PARKING LOT, STAMPED "PLS 38390"
301	717717.90	118407.22	1-1/2" ALUMINUM CAP, FLUSH IN ASPHALT PARKING LOT, STAMPED "PLS 38390"
310	717719.44	118327.65	NAIL & 3/4" DIA. BRASS TAG, FLUSH IN CONCRETE WALK, ILLEGIBLE STAMPING
311	717719.36	118151.56	NAIL & 3/4" DIA. BRASS TAG, FLUSH IN CONCRETE WALK,STAMPED "PLS 22917"
312	717719.29	118001.32	CHISELED "X" IN CONCRETE WALK
314	717719.92	117457.51	2" DIA. IRON PIPE, WITH RUSTED 1/2" REBAR, NO CAP. UP 0.6' ABOVE SURFACE
315	717510.21	117350.84	BROKEN 1" YELLOW PLASTIC CAP, ON 1/2" REBAR, 0.3' BELOW SURFACE, STAMPING ILLEGIBLE
325	717854.30	117757.85	1-1/4" YELLOW PLASTIC CAP, ON 5/8" REBAR, 0.1' ABOVE SURFACE, STAMPED "PLS 38138 HUFFMAN"
326	717734.41	115637.27	1/2" REBAR, 0.3' BELOW SURFACE, 1.0 FEET BEHIND WALK, NO CAP
327	717921.81	115444.82	1-1/4" YELLOW PLASTIC CAP, ON 5/8" REBAR, 0.1' ABOVE SURFACE, STAMPING ILLEGIBLE, REBAR- THROUGH CAP
328	717719.36	114136.95	CHISELED "X" IN CONCRETE
329	717719.66	114011.97	1-1/4" YELLOW PLASTIC CAP, ON 5/8" REBAR, 0.4' ABOVE SURFACE, STAMPED "PLS 13213" - OFFSET DUE TO POWERPOLE
330	717724.69	114425.77	NAIL & 3/4" DIA. BRASS TAG, FLUSH IN CONCRETE WALK,STAMPED "PLS 3??17"
335	717632.26	114325.11	NAIL & 1" DIA. BRASS TAG, FLUSH IN ASPHALT PARKING LOT, STAMPING ILLEGIBLE
336	717631.35	114262.45	NAIL & 1" DIA. BRASS TAG, FLUSH IN ASPHALT PARKING LOT, STAMPING ILLEGIBLE
337	717520.97	114098.16	1" RED PLASTIC CAP, ON 1/2" REBAR, 0.1' ABOVE SURFACE, STAMPED "PLS 26296 CCS"
338	717512.59	115031.14	CHISELED "X" IN CONCRETE WALK
339	717664.41	115024.86	NAIL & 1" DIA. BRASS TAG, FLUSH IN HANDICAP RAMP, STAMPED "PLS 33202"
340	717511.84	114890.72	5/8" REBAR, UP 0.2' IN FENCE LINE, NO CAP
341	717664.56	114890.84	NAIL & 1" DIA. BRASS TAG, FLUSH IN HANDICAP RAMP, STAMPED "PLS 33202"
342	717527.68	115081.08	CHISELED "X" IN CONCRETE WALK
343	717592.73	115080.82	CHISELED "X" IN CONCRETE WALK
344	717995.20	117016.68	1" YELLOW PLASTIC CAP, IN TOP OF CONCRETE RETAINING WALL, STAMPING ILLEGIBLE
345	717660.97	117208.34	NAIL & 1" DIA. BRASS TAG, FLUSH IN CONCRETE, STAMPED "PLS 36062"
346	717536.02	117209.34	NAIL & 1" DIA. BRASS TAG, FLUSH IN CONCRETE, STAMPED "PLS 36062"
347	717661.14	117070.95	NAIL & 1" DIA. BRASS TAG, FLUSH IN CONCRETE, STAMPED "PLS 36062"
348	717534.32	118002.73	1" RED PLASTIC CAP, ON 1/2" REBAR, 0.5' BELOW SURFACE, STAMPING ILLEGIBLE
349	717546.60	113718.98	BROKE OFF MAG NAIL IN ASPHALT PARKING LOT, NO TAG
350	717554.34	113718.04	MAG NAIL IN ASPHALT PARKING LOT, NO TAG
351	717549.26	113907.27	5/8" REBAR DOWN 0.1, NO CAP BENT WEST, MEASURE FROM BASE OF MONUMENT



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CITY OF ARVADA, COLORADO				
Project Code	Last Mod. Date	Subset	Sheet No.	
18-40	11-08-2019	4.04 of 4.08	4.04	

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FOUND BOUNDARY MONUMENT COORDINATE TABLE			
Point No.	Northing(ft)	Easting(ft)	Description
352	717660.09	114096.89	1" RED PLASTIC CAP, ON 1/2" REBAR, 0.5' BELOW SURFACE, STAMPING ILLEGIBLE
353	717523.67	114264.26	1" RED PLASTIC CAP, ON 1/2" REBAR, 0.1' ABOVE SURFACE, STAMPED "PLS 26296 CCS"
354	717663.82	114324.62	NAIL & 3/4" DIA. BRASS TAG, FLUSH IN ASPHALT, ILLEGIBLE STAMPING
355	717900.28	114374.20	1.5" ALUMINUM CAP, ON 5/8" REBAR, FLUSH IN ASPHALT, ILLEGIBLE STAMPING
356	717979.52	114398.36	1.5" ALUMINUM CAP, ON 5/8" REBAR, FLUSH WITH SURFACE,STAMPED "CONTRA, PLS 5447"
357	717953.89	114135.65	1/2" REBAR, 0.1' ABOVE SURFACE, NO CAP
358	717910.12	114963.31	3/8" REBAR, NO CAP, DOWN 0.3' BELOW SURFACE
359	717732.50	114821.12	1/2" REBAR, NO CAP, UP 0.3' BELOW SURFACE, WITH OLD SURVEY LATH
360	717459.22	114664.32	CHISELED "X" IN CONCRETE WALK
361	717514.15	115031.69	CHISELED "X" WITH MAG NAIL, IN CONCRETE WALK
362	717462.67	115081.57	CHISELED "X" IN CONCRETE WALK
363	717393.98	115178.34	CHISELED "X" IN CONCRETE WALK
364	717641.68	115697.64	NAIL & 1" DIA. BRASS TAG, FLUSH IN CONCRETE, STAMPED "ESC, PLS 33202"
365	717641.85	115719.86	NAIL & 1" DIA. BRASS TAG, FLUSH IN CONCRETE, STAMPED "ESC, PLS 33202"
366	717642.06	115742.20	NAIL & 1" DIA. BRASS TAG, FLUSH IN CONCRETE, STAMPED "ESC, PLS 33202"
367	717872.68	115748.73	1.5" ALUMINUM CAP, ON 5/8" REBAR, 0.2' BELOW ASPHALT, ILLEGIBLE STAMPING
368	717732.24	115815.61	BROKEN 1" YELLOW PLASTIC CAP, ON 1/2" REBAR, 0.2' BELOW SURFACE, STAMPING ILLEGIBLE
369	717872.47	115963.77	1.5" ALUMINUM CAP, ON 5/8" REBAR, 0.2' BELOW ASPHALT, ILLEGIBLE STAMPING
370	717972.40	115968.18	CHISELED "X" IN CONCRETE WALK
371	717789.19	116270.31	CHISELED "X" IN CONCRETE WALK
372	717721.60	116415.48	1" YELLOW PLASTIC CAP, IN TOP OF CONCRETE INLET, STAMPING ILLEGIBLE
373	717993.12	116413.67	1" YELLOW PLASTIC CAP, FLUSH BEHIND BACK OF WALK, STAMPING ILLEGIBLE
374	717863.25	117675.25	1/2" REBAR, FLUSH WITH SURFACE, NO CAP
375	717863.16	117680.18	1-1/4" YELLOW PLASTIC CAP, ON 1/2" REBAR, FLUSH WITH SURFACE, STAMPED "PLS 2432?"
376	717729.34	117676.07	1/2" REBAR, 0.5' ABOVE SURFACE, NO CAP, IN FENCE LINE
377	717719.88	118220.75	CHISELED "X" IN CONCRETE WALK
378	717460.17	117351.09	1/2" REBAR, 0.3' DOWN SURFACE, NO CAP
379	717310.83	117353.23	1/2" DIA. IRON PIPE, DOWN 0.3' BELOW SURFACE, NO CAP
380	717436.18	117010.13	3/4" DIA. REBAR, NO CAP, DOWN 0.3 BELOW SURFACE
381	717486.27	117010.10	1" DIA. IRON PIPE, DOWN 0.3' BELOW SURFACE, NO CAP
383	717649.03	118384.19	CHISELED "X" IN CONCRETE CURB
384	717649.29	118326.58	CHISELED "X" IN CONCRETE CURB
385	717459.99	117676.44	1/2" DIA. IRON PIPE, DOWN 0.3' BELOW SURFACE, NO CAP
386	717584.08	118002.28	1/2" DIA. IRON PIPE, DOWN 0.2' BELOW SURFACE, NO CAP



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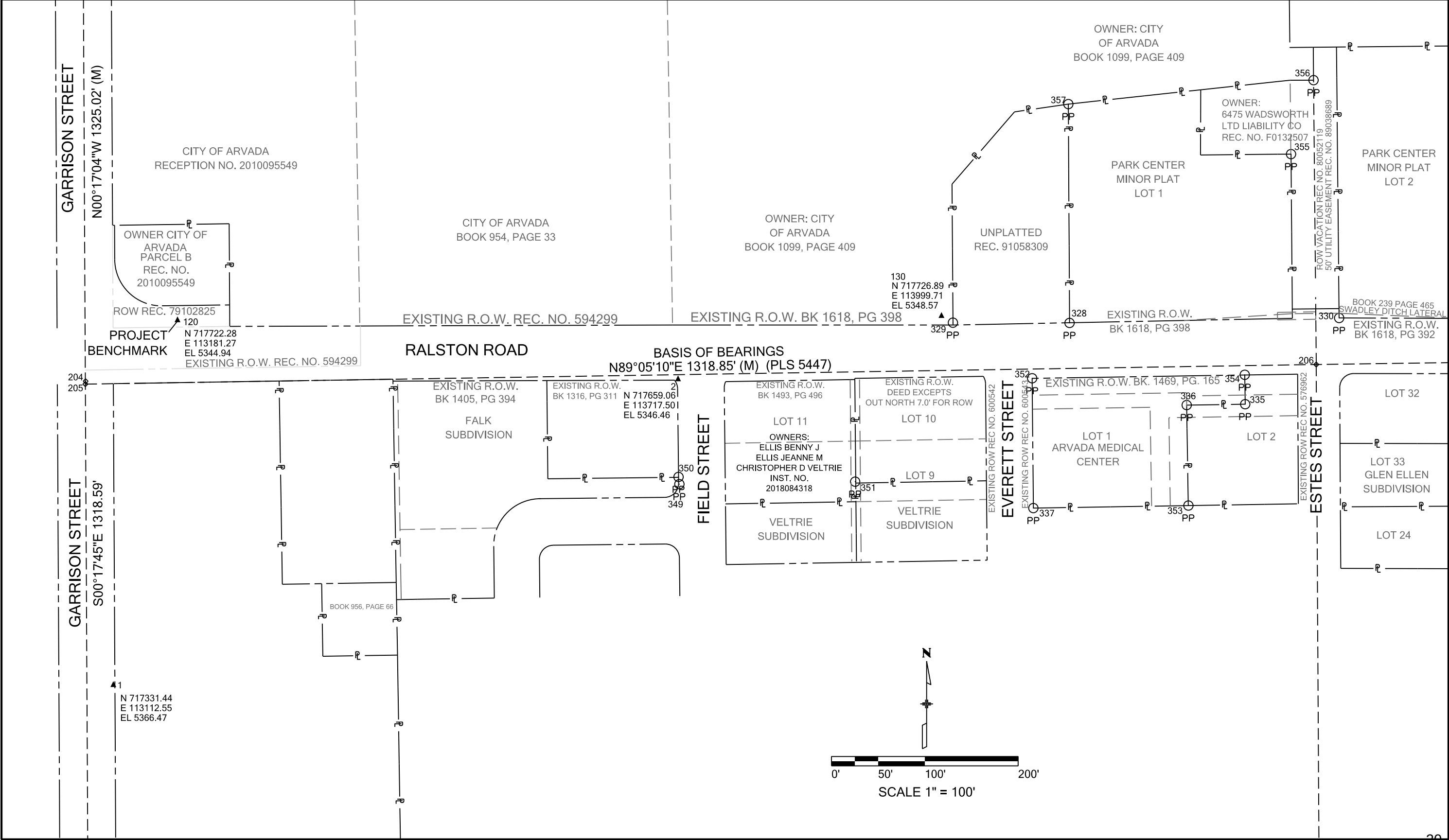
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Sheet Revisions		
Date	Description	Initials



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Land Survey Control Diagram				
Plan Sheet				
City of Arvada Project Number: 18-ST-40				
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.				
CITY OF ARVADA, COLORADO				
Project Code	Last Mod. Date	Subset	Sheet No.	
18-40	11-08-2019	4.05 of 4.08	4.05	





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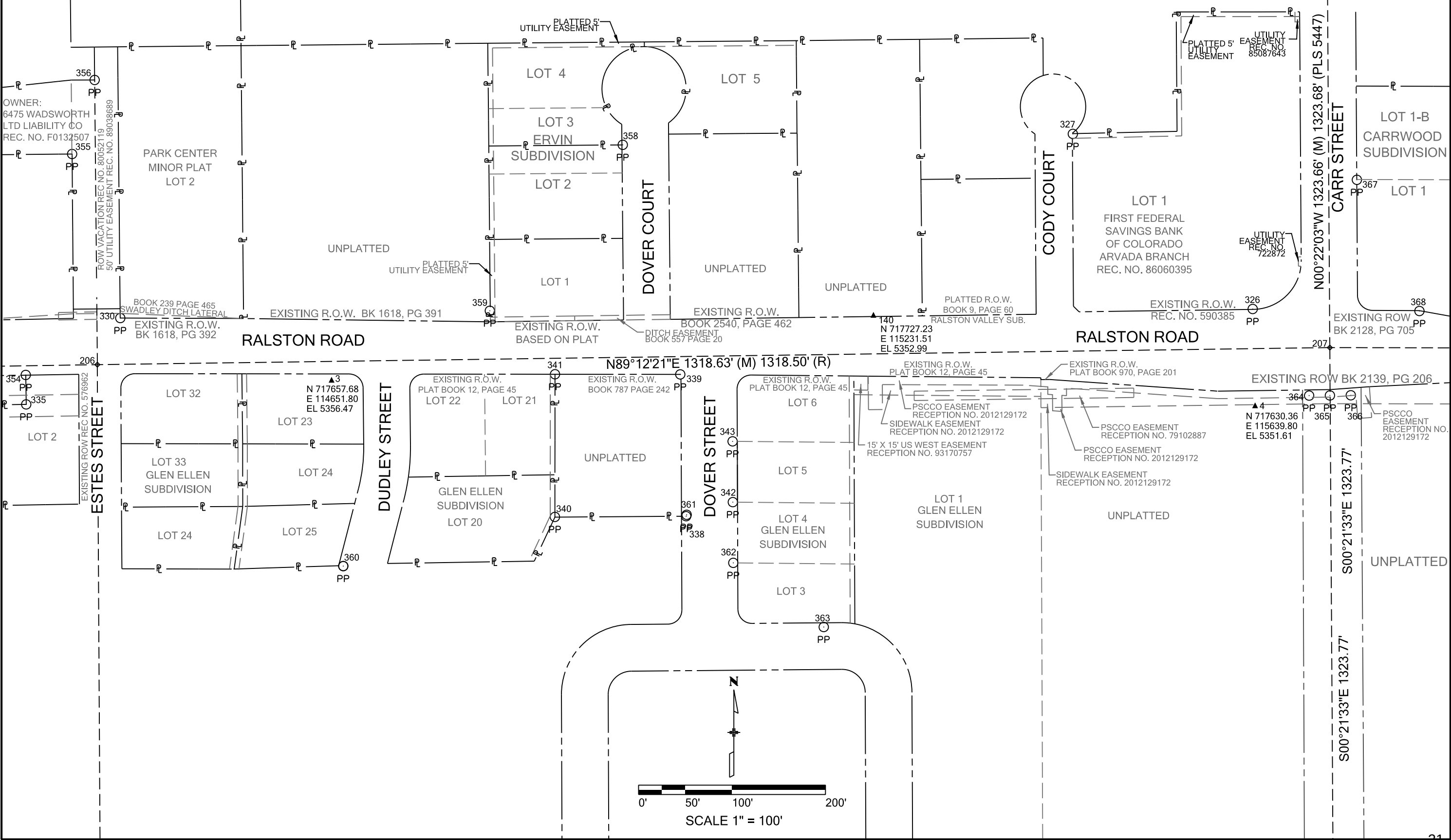
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Date	Description	Initials

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Land Survey Control Diagram				
Plan Sheet				
City of Arvada Project Number: 18-ST-40				
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.				
CITY OF ARVADA, COLORADO				
Project Code	Last Mod. Date	Subset	Sheet No.	
18-40	11-08-2019	4.06 of 4.08	4.06	





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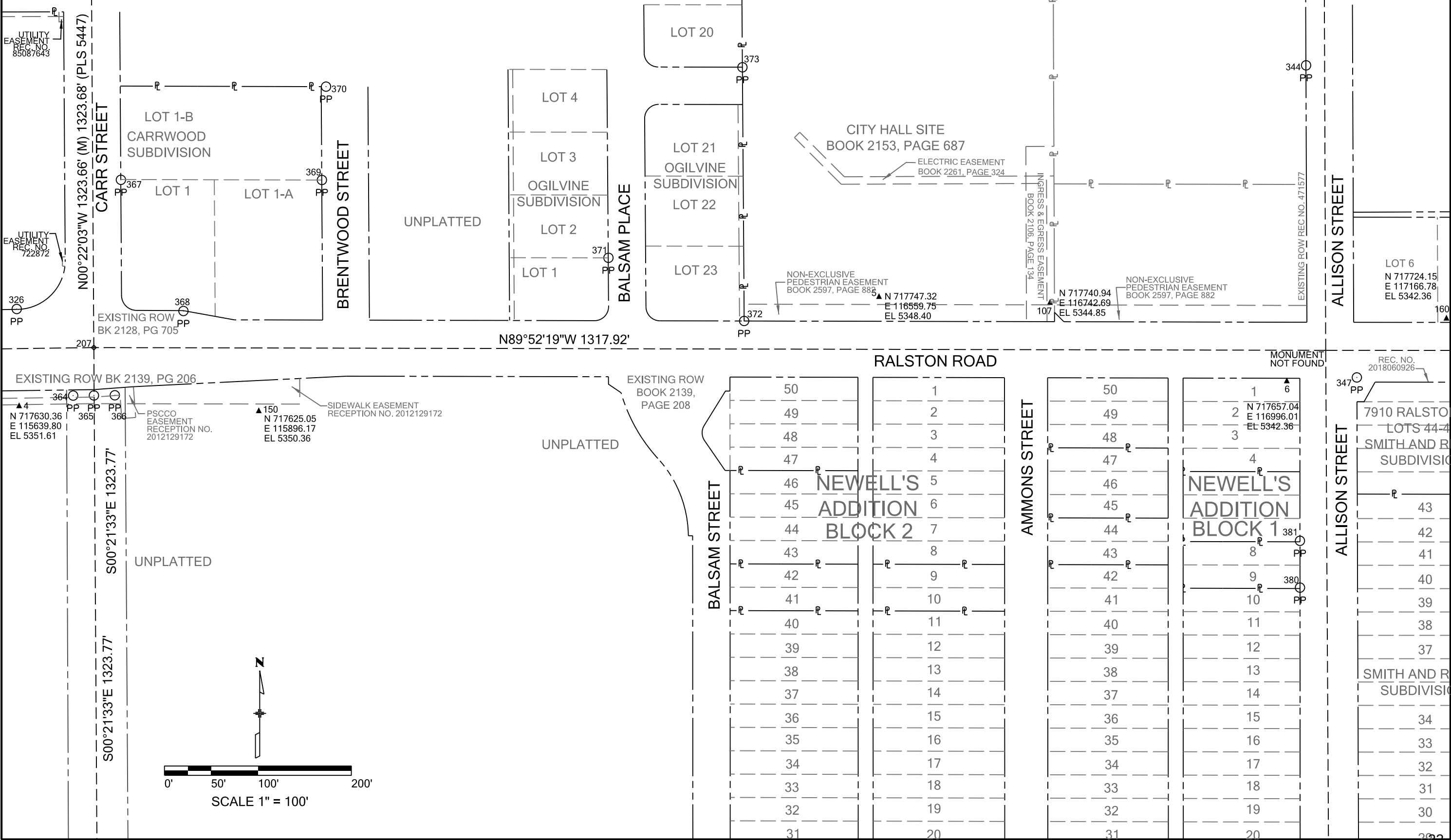
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Date	Description	Initials

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Land Survey Control Diagram				
Plan Sheet				
City of Arvada Project Number: 18-ST-40				
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.				
CITY OF ARVADA, COLORADO				
Project Code	Last Mod. Date	Subset	Sheet No.	
18-40	11-08-2019	4.07 of 4.08	4.07	





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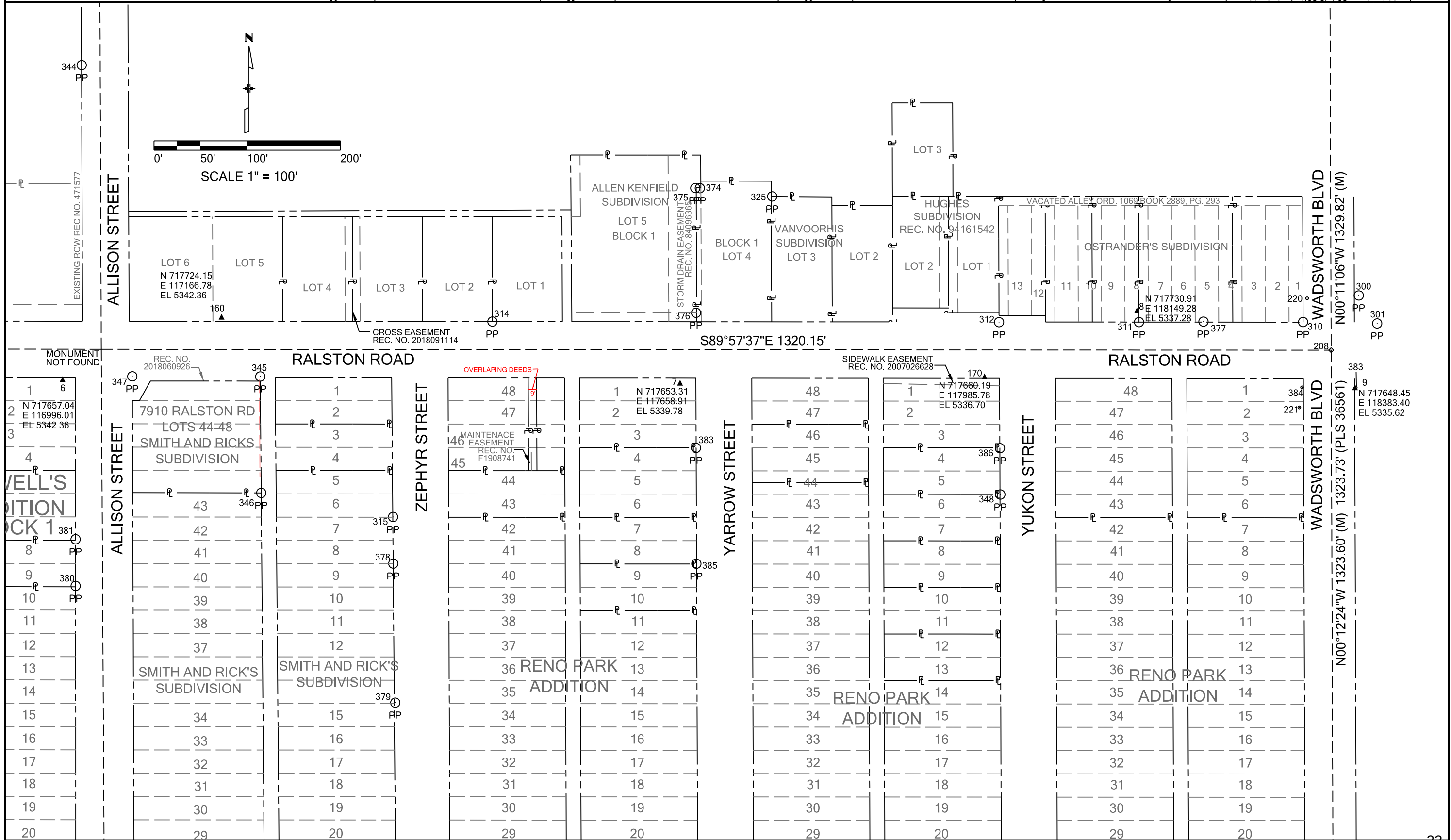
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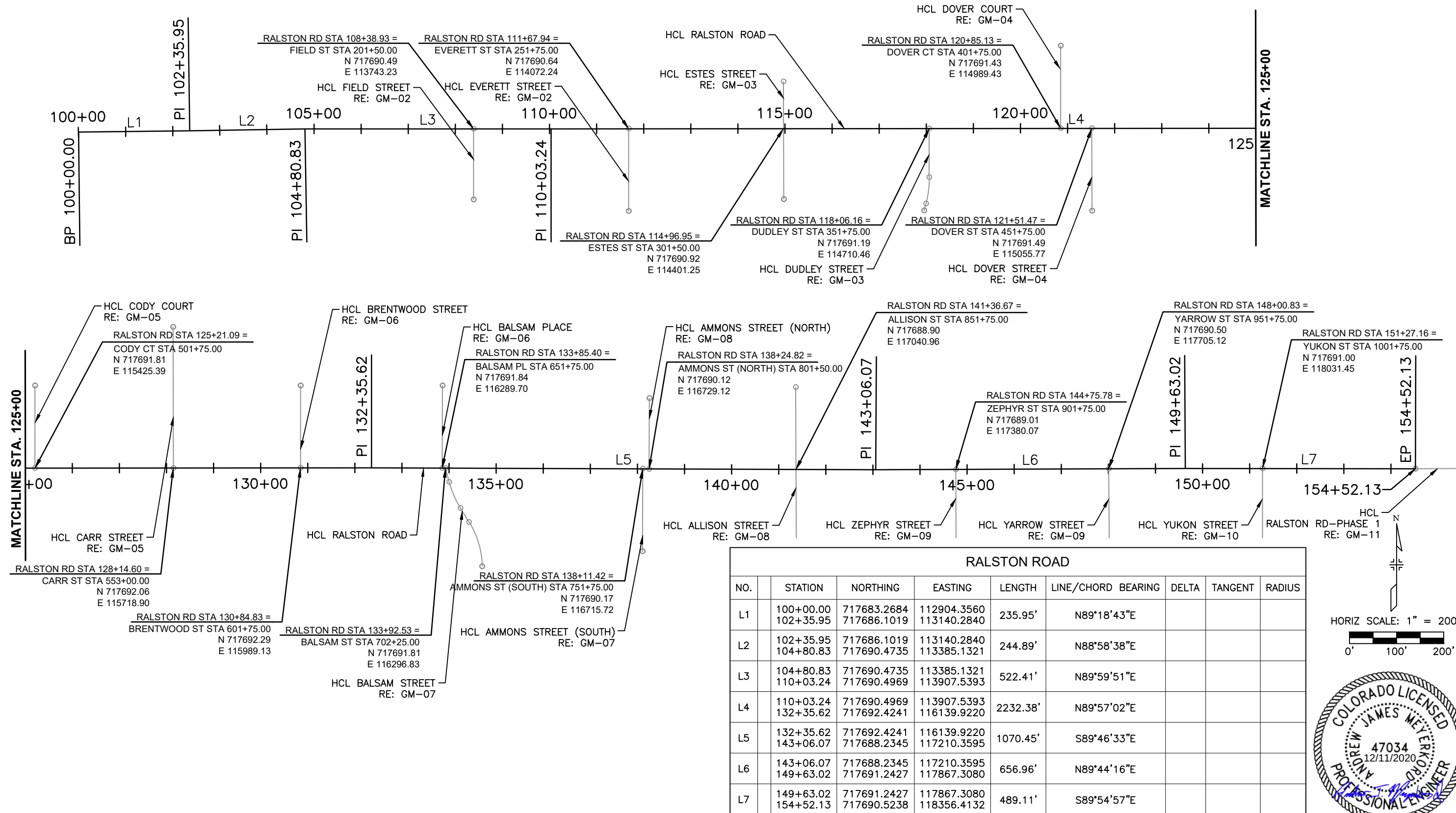
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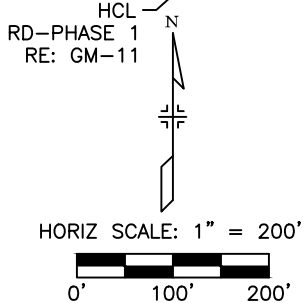
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Project Code	Last Mod. Date	Subset	Sheet No.
18-40	11-08-2019	4.08 of 4.08	4.08



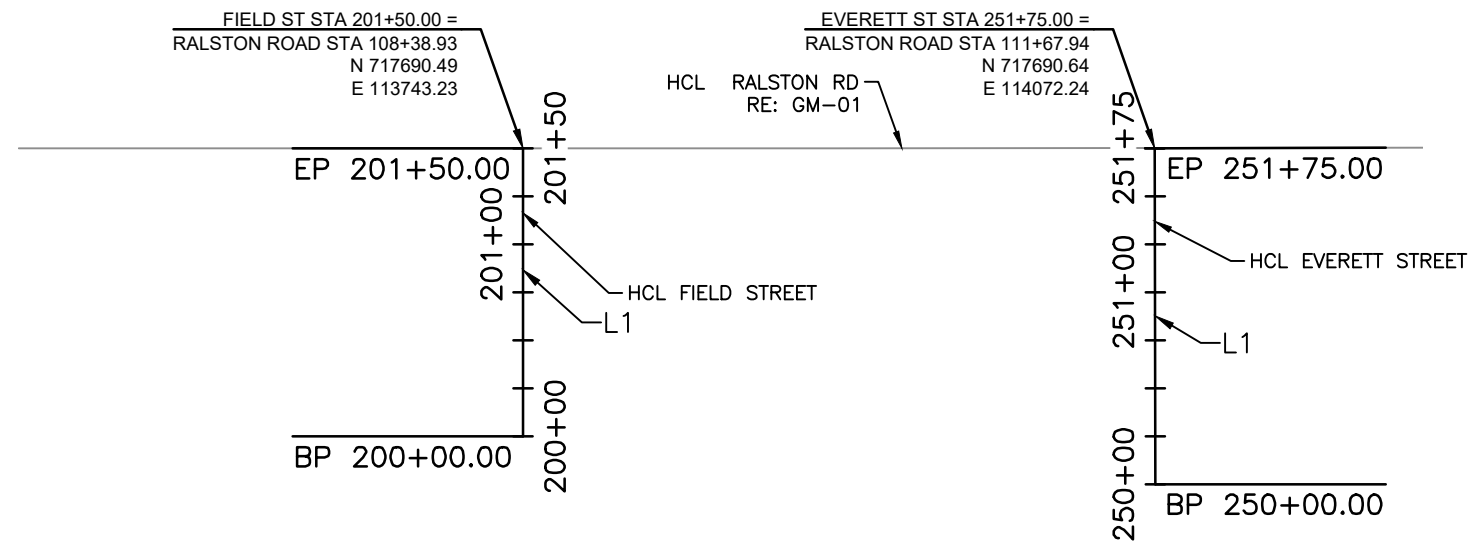
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RALSTON ROAD								
NO.	STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L1	100+00.00 102+35.95	717683.2684 717686.1019	112904.3560 113140.2840	235.95'	N89°18'43"E			
L2	102+35.95 104+80.83	717686.1019 717690.4735	113140.2840 113385.1321	244.89'	N88°58'38"E			
L3	104+80.83 110+03.24	717690.4735 717690.4969	113385.1321 113907.5393	522.41'	N89°59'51"E			
L4	110+03.24 132+35.62	717690.4969 717692.4241	113907.5393 116139.9220	2232.38'	N89°57'02"E			
L5	132+35.62 143+06.07	717692.4241 717688.2345	116139.9220 117210.3595	1070.45'	S89°46'33"E			
L6	143+06.07 149+63.02	717688.2345 717691.2427	117210.3595 117867.3080	656.96'	N89°44'16"E			
L7	149+63.02 154+52.13	717691.2427 717690.5238	117867.3080 118356.4132	489.11'	S89°54'57"E			

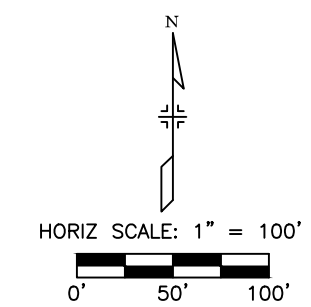


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Horizontal Scale: 1" = 200' Vertical Scale: N/A						Revised:	Designer: JHH	Structure				
6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com						Void:	Detailer: DAL	Numbers		Sheet Number 24		
							Sheet Subset: GEOMETRY	Subset Sheets: GM-01 of 11				



FIELD STREET								
NO.	STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L1	200+00.00 201+50.00	717540.4895 717690.4895	113743.2381 113743.2314	150.00'	N0°00'09"W			

EVERETT STREET								
NO.	STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L1	250+00.00 251+75.00	717515.6391 717690.6390	114072.3896 114072.2385	175.00'	N0°02'58"W			



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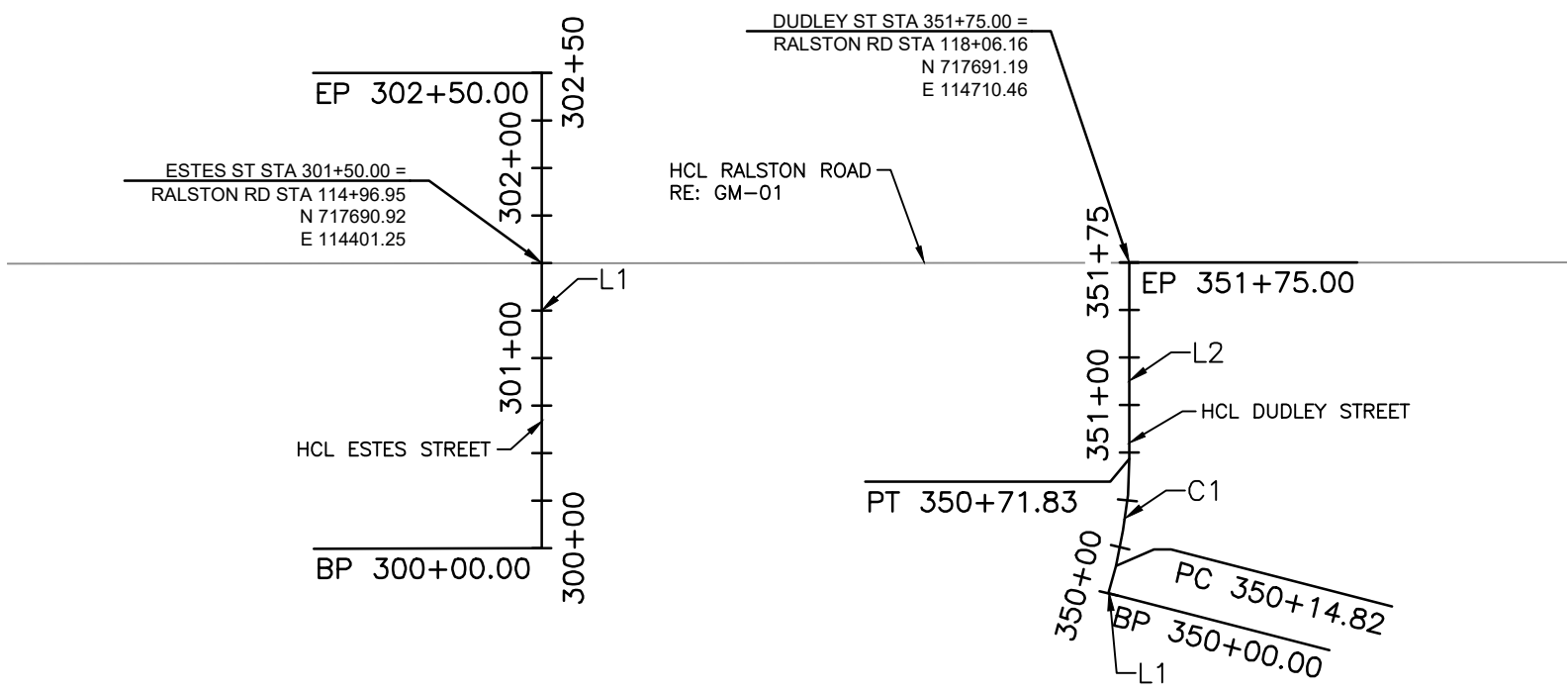


CITY OF ARVADA
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8101 RALSTON ROAD
ARVADA, CO, 80002

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No Revisions:	
Revised:	
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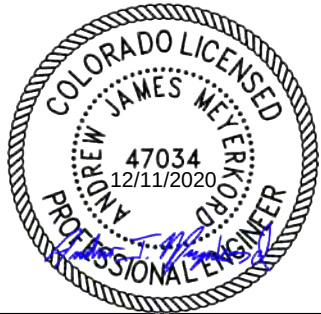
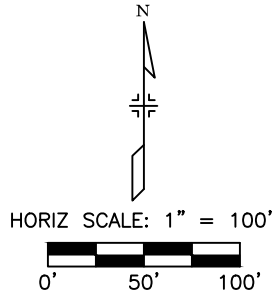
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Designer:	JHH	Structure	
Detailer:	DAL	Numbers	
Sheet Subset:	GEOMETRY	Subset Sheets:	GM-02 of 11

Project No./Code
18-ST-40
Sheet Number 25



ESTES STREET								
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT
L1		300+00.00 302+50.00	717540.9231 717790.9230	114401.3798 114401.1640	250.00'	N0°02'58"W		

DUDLEY STREET								
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT
L1		350+00.00 350+14.82	717517.2620 717531.6093	114699.7097 114703.4119	14.82'	N14°28'09"E		
C1	PC= PI= PT=	350+14.82 350+43.48 350+71.83	717531.6093 717559.3610 717588.0216	114703.4119 114710.5730 114710.5482	57.01'	N7°12'35"E	14°31'07"	28.66'
L2		350+71.83 351+75.00	717588.0216 717691.1900	114710.5482 114710.4592	103.17'	N0°02'58"W		



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Sheet Revisions

Date	Comments	Initials



CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed

No Revisions:

Revised:

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RALSTON RD - YUKON ST TO GARRISON ST
GEOMETRIC LAYOUT
ESTES STREET & DUDLEY STREET

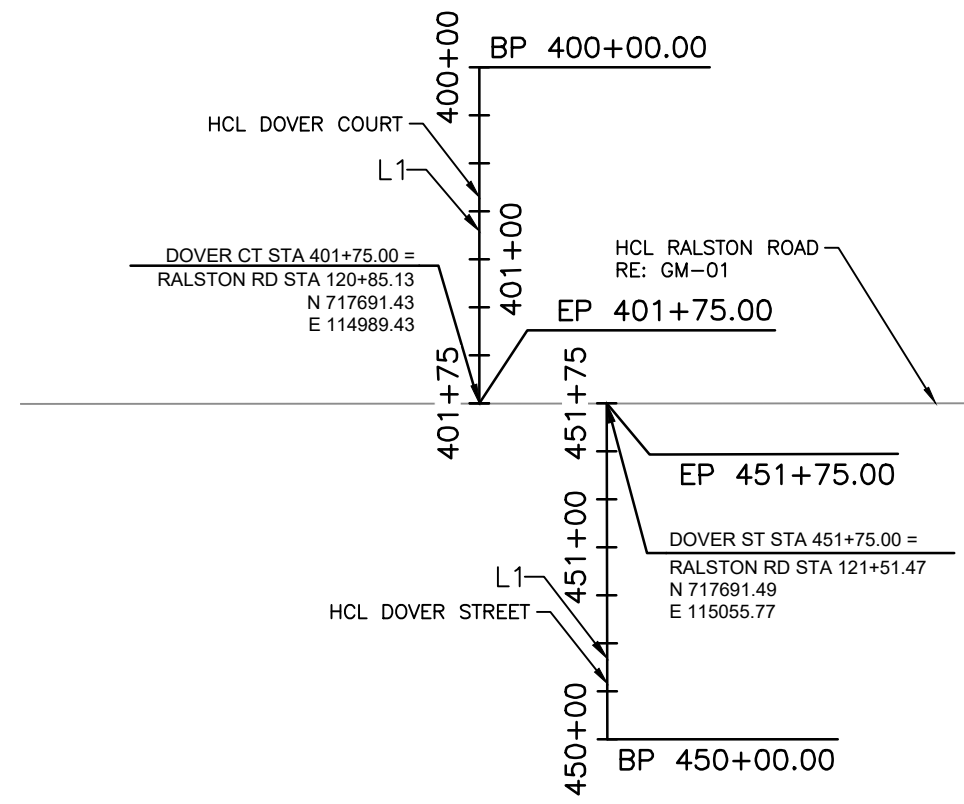
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Project No./Code

18-ST-40

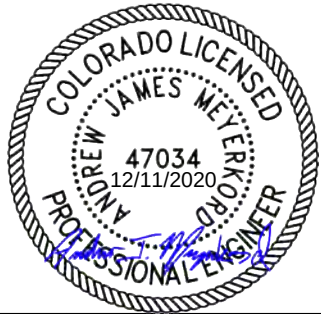
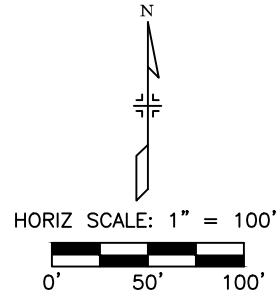
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DOVER COURT								
NO.	STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L1	400+00.00 401+75.00	717866.4308 717691.4309	114989.2769 114989.4280	175.00'	S0°02'58"E			

DOVER STREET								
NO.	STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L1	450+00.00 451+75.00	717516.4882 717691.4881	115055.9201 115055.7690	175.00'	N0°02'58"W			



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CITY OF ARVADA

PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD

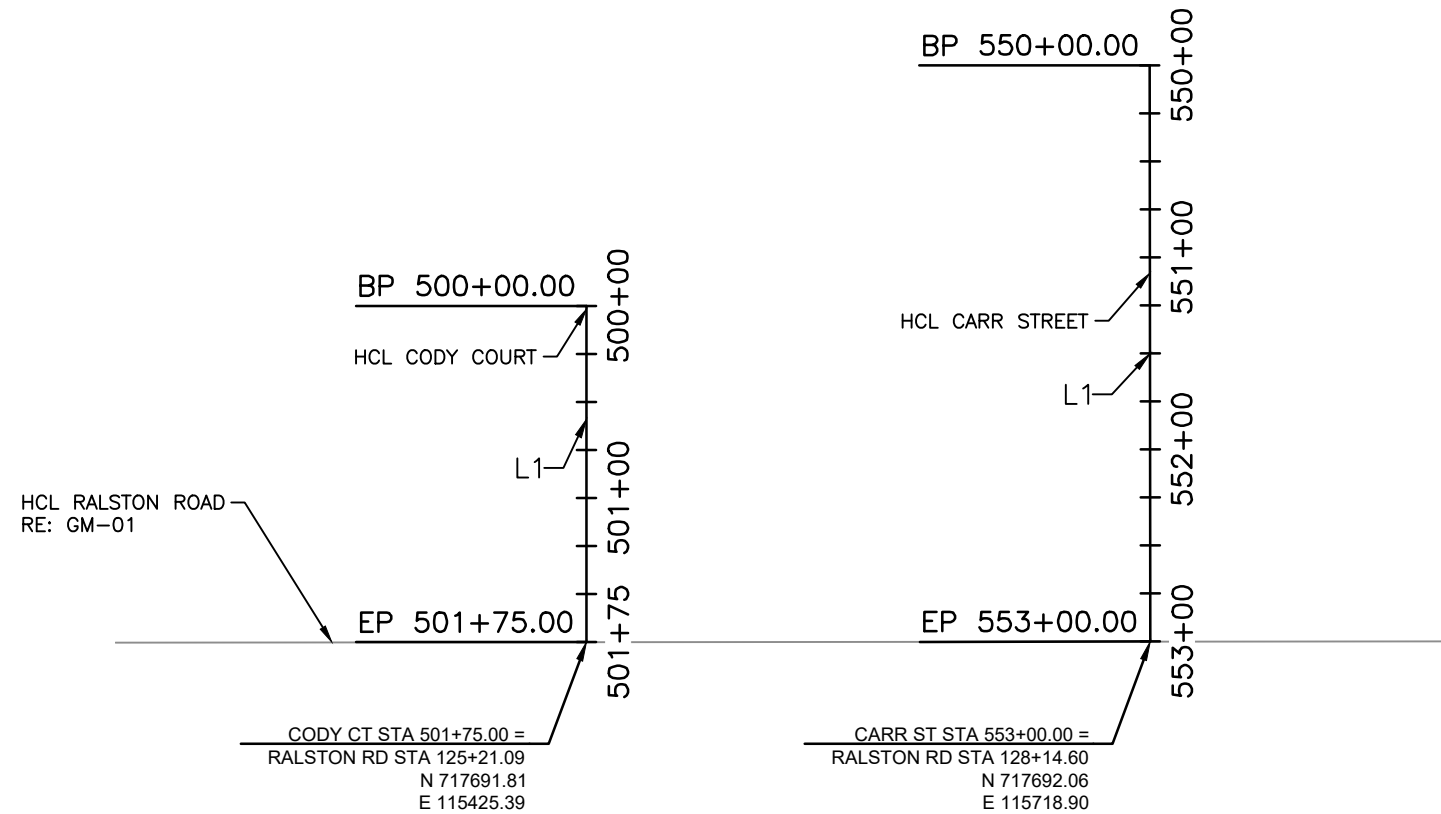
ARVADA, CO, 80002

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No Revisions:	
Revised:	
Void:	

RALSTON RD - YUKON ST TO GARRISON ST			
GEOMETRIC LAYOUT			
DOVER COURT & DOVER STREET			
Designer:	JHH	Structure	
Detailer:	DAL	Numbers	
Sheet Subset:	GEOMETRY	Subset Sheets:	GM-04 of 11

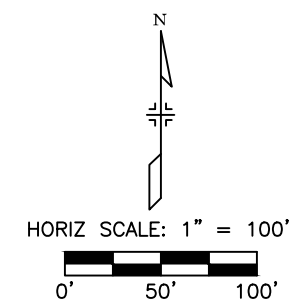
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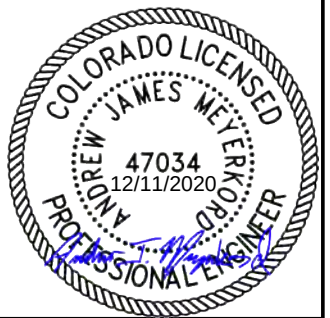
CODY COURT								
NO.	STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L1	500+00.00 501+75.00	717866.8072 717691.8072	115425.2354 115425.3865	175.00'	S0°02'58"E			

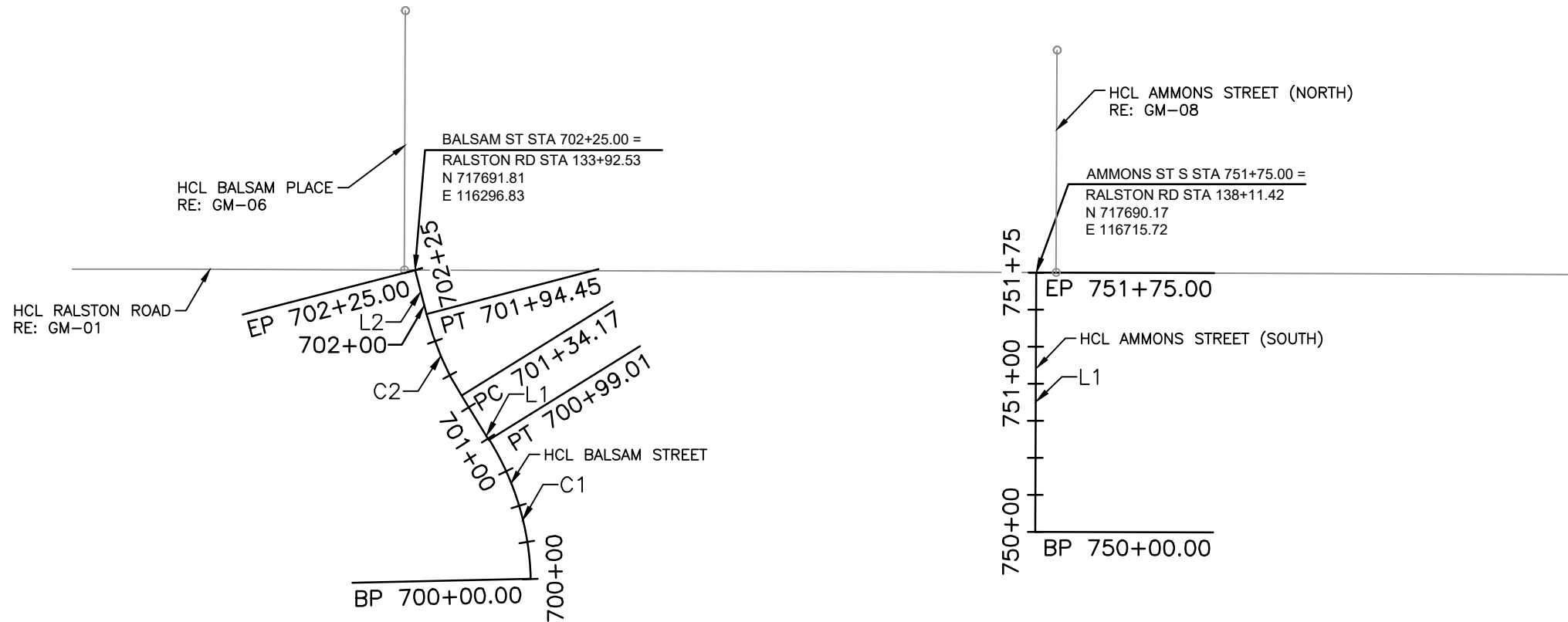
CARR STREET								
NO.	STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L1	550+00.00 553+00.00	717992.0598 717692.0599	115718.6434 115718.9024	300.00'	S0°02'58"E			



Print Date: 12/7/2020 1:58:26 PM File Name: 118355_RDGM_SH05_CODY.DWG Horizontal Scale: 1" = 100' Vertical Scale: N/A 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com	R-X	Sheet Revisions			CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed		RALSTON RD - YUKON ST TO GARRISON ST GEOMETRIC LAYOUT CODY COURT & CARR STREET			Project No./Code		
						No Revisions:					18-ST-40		
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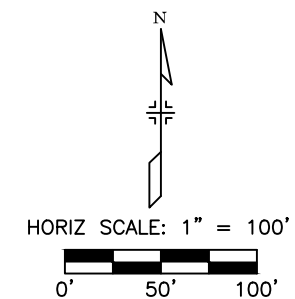
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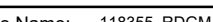


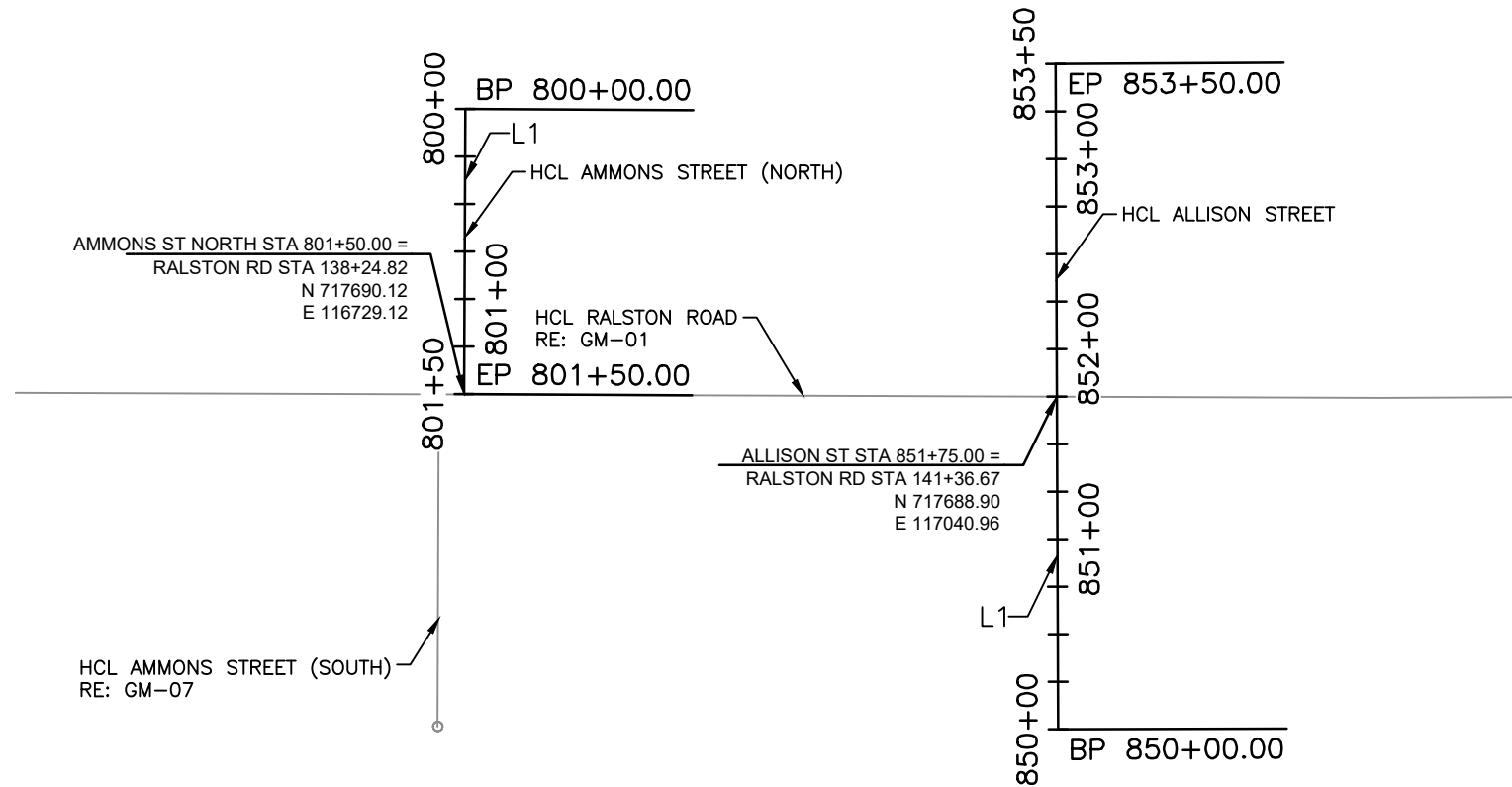


BALSAM STREET									
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C1	PC=	700+00.00	717483.3902	116374.5968	99.01'	N16°33'42"W	30°32'30"	50.71'	185.75'
	PI=	700+50.71	717534.0910	116373.4543					
	PT=	700+99.01	717577.1771	116346.7061					
L1		700+99.01	717577.1771	116346.7061	35.16'	N31°49'57"W			
		701+34.17	717607.0474	116328.1623					
C2	PC=	701+34.17	717607.0474	116328.1623	60.28'	N23°11'55"W	17°16'03"	30.37'	200.00'
	PI=	701+64.54	717632.8477	116312.1452					
	PT=	701+94.45	717662.2397	116304.5084					
L2		701+94.45	717662.2397	116304.5084	30.55'	N14°33'53"W			
		702+25.00	717691.8100	116296.8253					

AMMONS STREET (SOUTH)									
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L1		750+00.00	717515.1718	116715.0304	175.00'	N0°13'27"E			
		751+75.00	717690.1705	116715.7154					

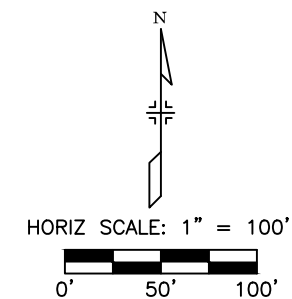


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Horizontal Scale: 1" = 100' Vertical Scale: N/A							Revised:		Designer: JHH	Structure			
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AMMONS STREET (NORTH)								
NO.	STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L1	800+00.00 801+50.00	717840.1169 717690.1180	116729.7048 116729.1177	150.00'	S0°13'27"W			

ALLISON STREET								
NO.	STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L1	850+00.00 853+50.00	717513.8991 717863.8959	117041.7116 117040.2063	350.00'	N0°14'47"W			



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Sheet Revisions

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CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed

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RALSTON RD - YUKON ST TO GARRISON ST
GEOMETRIC LAYOUT
AMMONS STREET (NORTH) & ALLISON STREET

Designer:	JHH	Structure	
Detailer:	DAL	Numbers	
Sheet Subset:	GEOMETRY	Subset Sheets:	GM-08 of 11

Project No./Code

18-ST-40

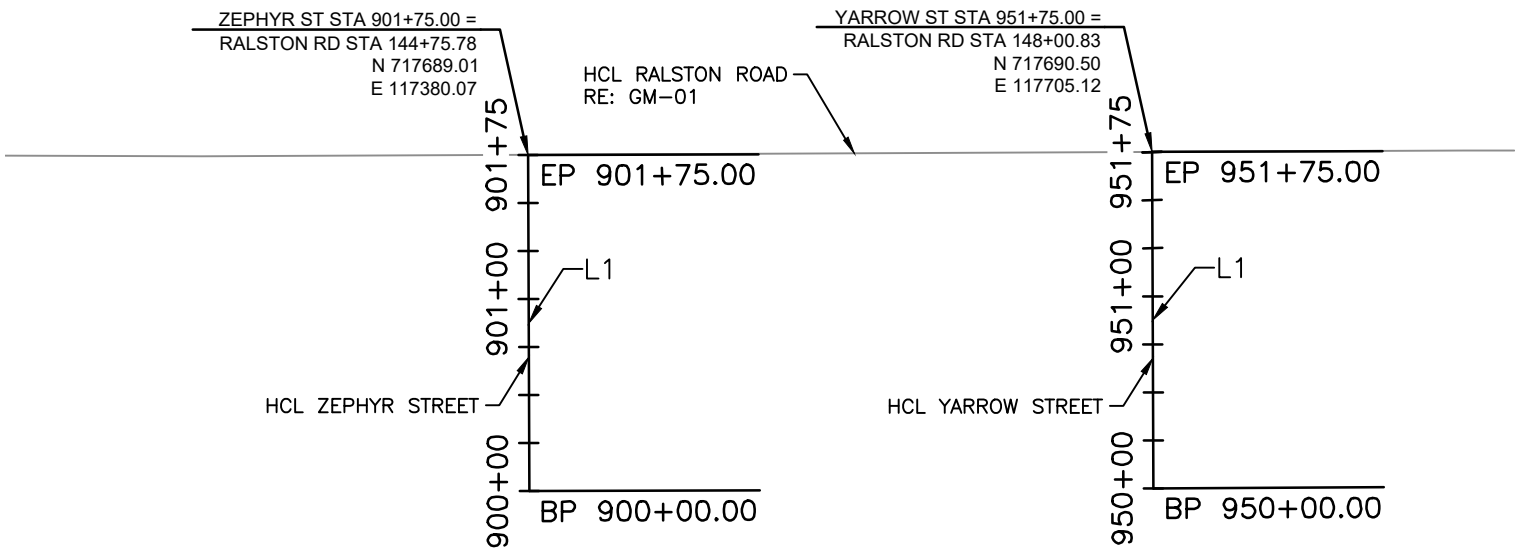
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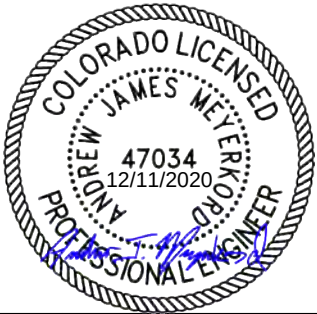
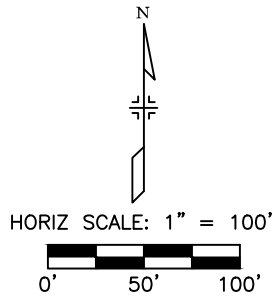
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ZEPHYR STREET								
NO.	STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L1	900+00.00 901+75.00	717514.0127 717689.0116	117380.7039 117380.0691	175.00'	N0°12'28"W			

YARROW STREET								
NO.	STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L1	950+00.00 951+75.00	717515.5019 717690.5000	117705.9172 117705.1158	175.00'	N0°15'44"W			



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8101 RALSTON ROAD
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No Revisions:	
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RALSTON RD - YUKON ST TO GARRISON ST GEOMETRIC LAYOUT ZEPHYR STREET & YARROW STREET			
Designer:	JHH	Structure	
Detailer:	DAL	Numbers	
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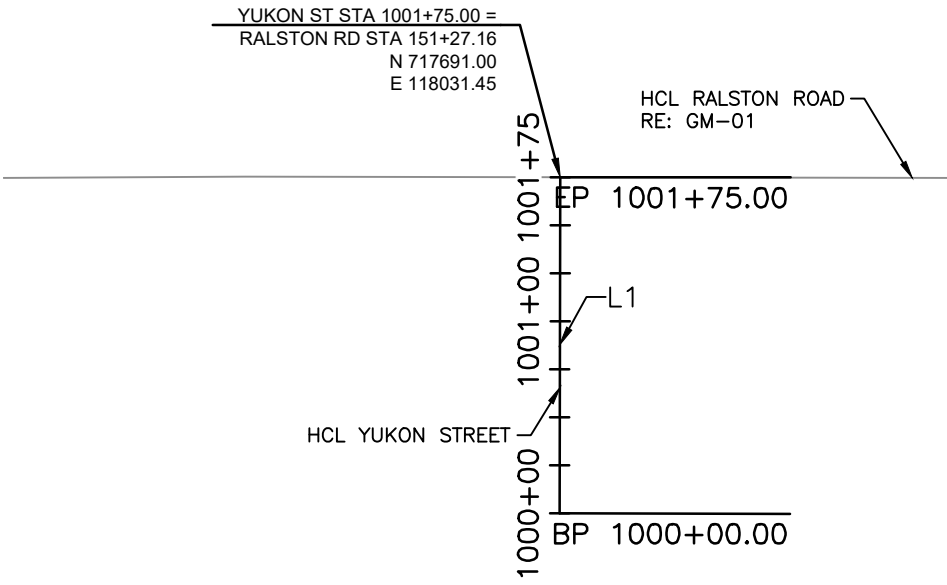
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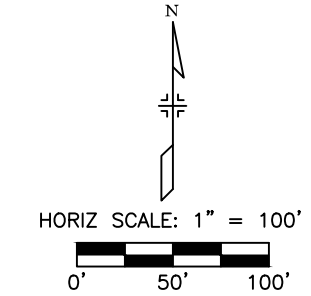
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YUKON STREET								
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT
L1		1000+00.00 1001+75.00	717516.0016 717691.0014	118031.1881 118031.4453	175.00'	N0°05'03"E		



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CITY OF ARVADA

PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD

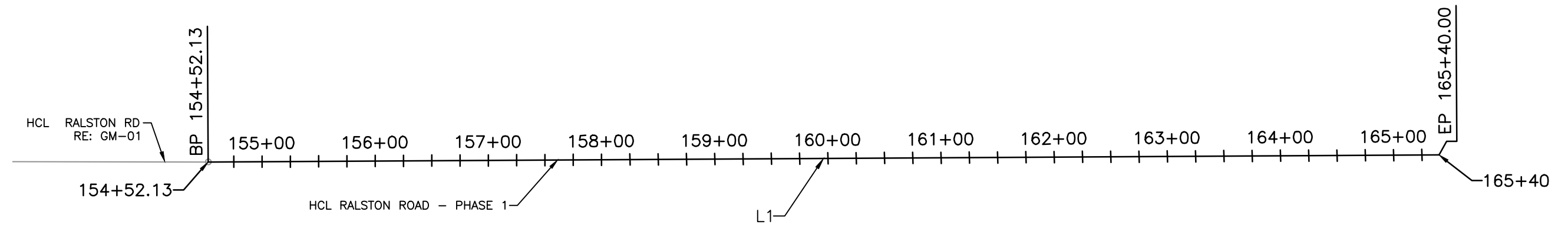
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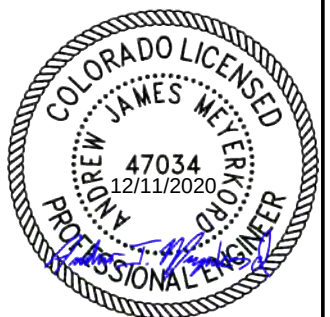
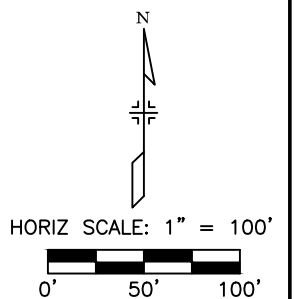
RALSTON RD - YUKON ST TO GARRISON ST GEOMETRIC LAYOUT YUKON STREET			
Designer:	JHH	Structure	
Detailer:	DAL	Numbers	
Sheet Subset:	GEOMETRY	Subset Sheets: GM-10 of 11	

Project No./Code	
18-ST-40	
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RALSTON ROAD - PHASE 1								
NO.	STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L1	154+52.13 165+40.00	717690.5238 717696.8104	118356.4132 119444.2679	1087.87'	N89°40'08"E			



- NOTES:
1. RALSTON ROAD - PHASE 1 ALIGNMENT SHALL BE USED FOR LAYOUT OF PHASE 1 PEDESTRIAN LIGHTING ON RALSTON ROAD FROM YUKON STREET TO UPHAM STREET. RE: LIGHTING PLANS.

Print Date: 12/7/2020 2:01:38 PM		R-X	Sheet Revisions			CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed		RALSTON RD - YUKON ST TO GARRISON ST GEOMETRIC LAYOUT RALSTON ROAD - PHASE 1				Project No./Code	
File Name: 118355_RDGM_SH11_PH1.DWG			Date	Comments	Initials		No Revisions:						18-ST-40	
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					Void:		Sheet Subset: GEOMETRY		Subset Sheets: GM-11 of 11		Sheet Number 34			

TABULATION OF REMOVAL QUANTITIES

LOCATION / SHEET	REMOVAL OF TREE	REMOVAL OF WALL	REMOVAL OF CONCRETE MEDIAN COVER MATERIAL	REMOVAL OF SIDEWALK	REMOVAL OF CURB	REMOVAL OF GUTTER	REMOVAL OF CURB AND GUTTER	REMOVAL OF CONCRETE CURB RAMP	REMOVAL OF SIGN	REMOVAL OF BRICK PAVERS	REMOVAL OF CONCRETE PAVEMENT
	EACH	LF	SY	SY	LF	LF	LF	SY	EA	SY	SY
RALSTON ROAD	41	1,297	200	5,452	952	404	12,063	436	30	650	1,019
RM-02	3	80	39	765	0	2	1,199	39	2	0	38
RM-03	14	35	0	980	232	29	1,415	43	3	0	65
RM-04	4	286	0	561	303	0	1,155	27	4	0	30
RM-05	4	393	0	623	174	100	1,257	46	4	0	184
RM-06	8	0	0	273	48	30	944	27	0	0	0
RM-07	6	0	21	752	50	31	1,555	60	1	0	22
RM-08	2	20	140	408	25	111	1,573	83	3	448	111
RM-09	0	224	0	326	81	0	1,343	53	3	202	255
RM-10	0	259	0	612	0	65	1,281	37	9	0	142
RM-11	0	0	0	140	37	35	342	10	1	0	172
RM-12	0	0	0	11	0	0	107	11	0	0	0
PROJECT TOTALS	41	1,297	200	5,452	952	404	12,063	436	30	650	1,019

TABULATION OF REMOVAL QUANTITIES

REMOVAL OF ASPHALT MAT	REMOVAL OF FENCE	SAWING ASPHALT MATERIAL (6 INCH)	SAWING ASPHALT MATERIAL (10 INCH)	RESET BRICK PAVERS	TREE RETENTION AND PROTECTION	SAWING CONCRETE PAVEMENT	RESET RTD SHELTER	RESET BENCH	REMOVE BENCH
SY	LF	LF	LF	SY	EACH	LF	EA	EA	EA
37,839	391	3,017	955	86	25	457	2	2	1
3,441	0	291	132	69	4	0	1	1	0
4,309	18	466	60	0	2	41	0	0	0
4,172	13	458	122	0	0	0	0	0	0
3,946	51	370	101	0	2	99	0	1	0
3,072	141	145	29	0	0	0	0	0	0
5,903	18	266	70	0	3	15	1	0	1
3,803	0	93	195	0	0	87	0	0	0
4,094	39	376	64	0	5	88	0	0	0
4,058	70	540	64	0	6	64	0	0	0
1,042	41	10	119	17	3	62	0	0	0
25	0	0	0	0	0	0	0	0	0
37,839	391	3,017	955	86	25	457	2	2	1



12-30-2020

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								Void:	Sheet Subset: TABULATIONS	Subset Sheets: TB-01 of 3		Sheet Number	35

TABULATION OF ROADWAY QUANTITIES

LOCATION / SHEET	AGGREGATE BASE COURSE (CLASS 6)	HOT MIX ASPHALT (GRADING S) (100) (PG 64-22)	HOT MIX ASPHALT (GRADING SX) (100) (PG 76-28)	EMULSIFIED ASPHALT (SLOW-SETTING)	CONCRETE PAVEMENT (6 INCH)	CONCRETE BUS PAD (11 INCH)	CONCRETE SLOPE AND DITCH PAVING (4 INCH)	CONCRETE SIDEWALK (6 INCH)	CONCRETE SIDEWALK (SPECIAL)(TYPE 1)	CONCRETE SIDEWALK (SPECIAL)(TYPE 2)	CONCRETE CURB RAMP
	CY	TON	TON	GAL	SY	SY	CY	SY	SY	SY	SY
Ralston Road	11,260	13,497	5,135	3,380	223	327	5	6,203	1,289	722	856
PP-02	858	1,066	428	258	0	47	0	834	0	90	95
PP-04	1,250	1,505	577	375	0	0	0	832	234	0	47
PP-06	1,184	1,425	545	355	0	93	0	778	73	102	55
PP-08	1,265	1,497	558	379	60	0	0	511	252	205	44
PP-10	966	1,125	408	290	0	47	0	428	16	0	72
PP-12	1,669	1,947	708	501	0	47	0	900	182	0	186
PP-14	1,265	1,470	530	380	0	0	0	754	30	0	141
PP-16	1,212	1,434	534	364	73	93	5	504	45	211	95
PP-18	1,205	1,448	553	362	42	0	0	506	414	62	53
PP-20	386	445	159	116	48	0	0	156	43	52	34
PP-39	0	134	134	0	0	0	0	0	0	0	34
PROJECT TOTALS	11,260	13,497	5,135	3,380	223	327	5	6,203	1,289	722	856

TABULATION OF ROADWAY QUANTITIES

CONCRETE CURB RAMP (SPECIAL)	DRIVEWAY (6 INCH CONCRETE)	MOUNTABLE CURB AND SIDEWALK	CURB AND GUTTER (SPECIAL)	COA 6" VERTICAL CURB AND 1' GUTTER	COA 6" VERTICAL CURB AND 2' GUTTER	VALLEY GUTTER	WALL (TYPE 1)	WALL (TYPE 2)	CONCRETE SPLASH PAN	STAIR
SY	SY	SY	LF	LF	LF	SY	LF	SY	LF	EA
501	936	27	895	1,234	10,167	986	97	25	1,230	7
0	97	0	37	184	885	24	97	0	179	1
76	136	0	255	253	1,260	61	0	25	249	1
37	88	0	91	0	1,071	0	0	0	0	1
148	193	27	50	0	1,084	130	0	0	0	0
0	38	0	132	0	905	40	0	0	0	0
39	61	0	20	180	1,336	314	0	0	177	1
69	31	0	60	415	1,069	204	0	0	425	1
37	100	0	10	202	1,207	61	0	0	201	1
95	150	0	87	0	1,042	84	0	0	0	1
0	43	0	13	0	308	38	0	0	0	0
0	0	0	140	0	0	30	0	0	0	0
501	936	27	895	1,234	10,167	986	97	25	1,230	7



12-30-2020

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INDEX			ITEM	PROJECT TOTALS	
BOOK	PAGE	SHEET			
			UNCLASSIFIED EXCAVATION (COMPLETE IN PLACE) 203-00010 FROM SURFACE VOLUME: FROM GRID VOLUME: ADJUSTMENTS:	CU. YDS. 21,632	
			TOTAL (PAY QUANTITY)	21,632	
			EMBANKMENT MATERIAL (COMPLETE IN PLACE) FROM SURFACE VOLUME: FROM GRID VOLUME: ADDITIONAL EMBANKMENT MATERIAL:	CU. YDS. 798	
			TOTAL	798	
			COMPACTION (MOISTURE & DENSITY CONTROL) EMBANKMENT (NET) BASES OF CUTS & FILLS (12" DEPTH)	CU. YDS. 798	
			TOTAL	798	
			WETTING QUANTITIES (FOR COMPACTION) (798 x 0.040 MILLION GALLONS / CY)	M. GAL. 32	
			TOTAL	32	
			EARTHWORK QUANTITY BALANCE EMBANKMENT x FACTOR (1.15) EMBANKMENT REQUIRED FOR SHRINKAGE BASES OF CUTS & FILLS BALANCE TOTAL UNCLASSIFIED EXCAVATION TO BE DISPOSED OF BY CONTRACTOR BALANCE TOTAL	CU. YDS. 918 0 918 21,632 20,714 918	



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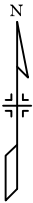
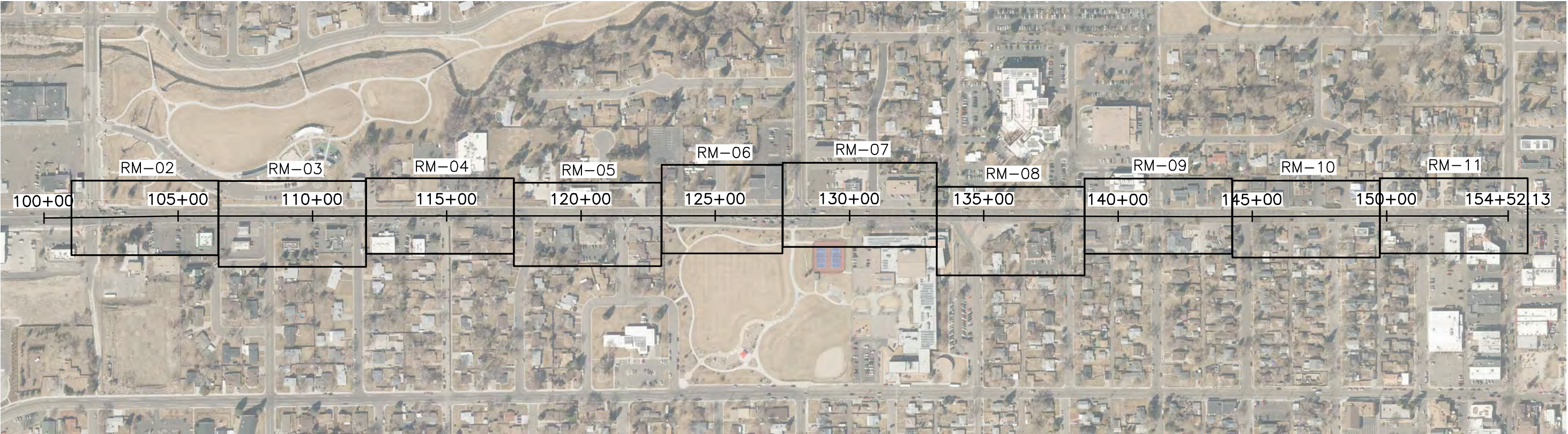
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8101 RALSTON ROAD
ARVADA, CO, 80002

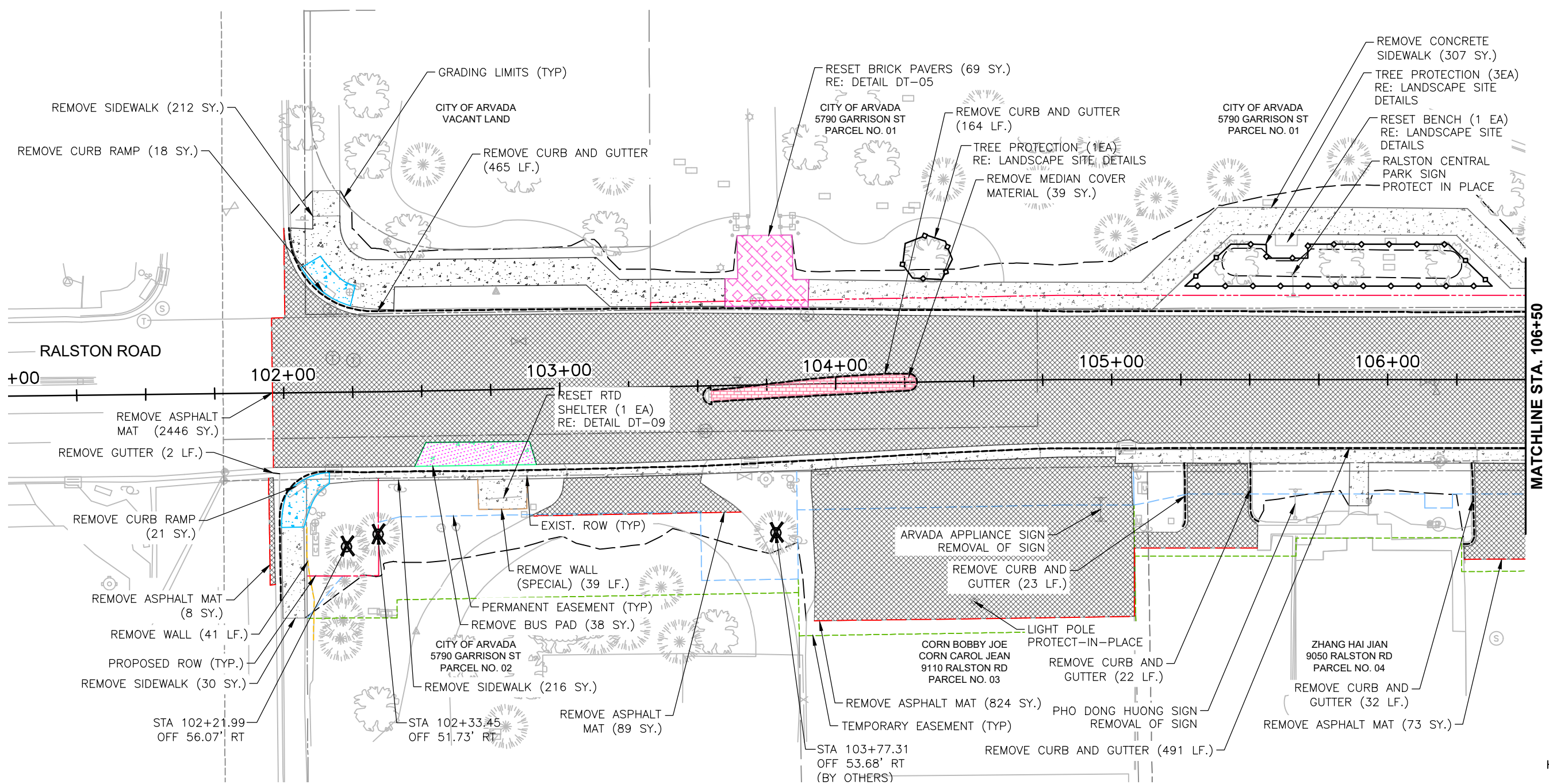
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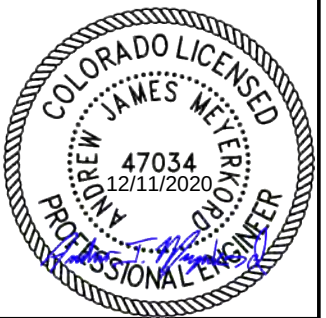
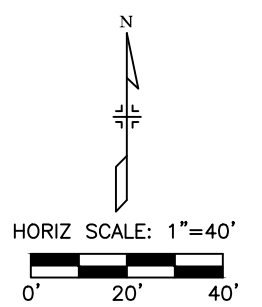


REMOVAL AND RESET LEGEND

	REMOVAL OF ASPHALT MAT		RESET BRICK PAVERS
	REMOVAL OF ASPHALT MAT (PLANING)		REMOVAL OF FENCE
	REMOVAL OF CONCRETE PAVEMENT		SAWCUT EXISTING PAVEMENT
	REMOVAL OF CONCRETE MEDIAN COVER MATERIAL		REMOVAL OF CURB AND GUTTER
	REMOVAL OF SIDEWALK (CONCRETE)		REMOVAL OF CURB
	REMOVAL OF CONCRETE CURB RAMP		REMOVAL OF GUTTER
	REMOVAL OF BRICK PAVERS		REMOVAL OF WALL (LANDSCAPE)
			REMOVAL OF WALL (SPECIAL)
			REMOVAL OF WALL
			REMOVAL OF TREE (1 EA)

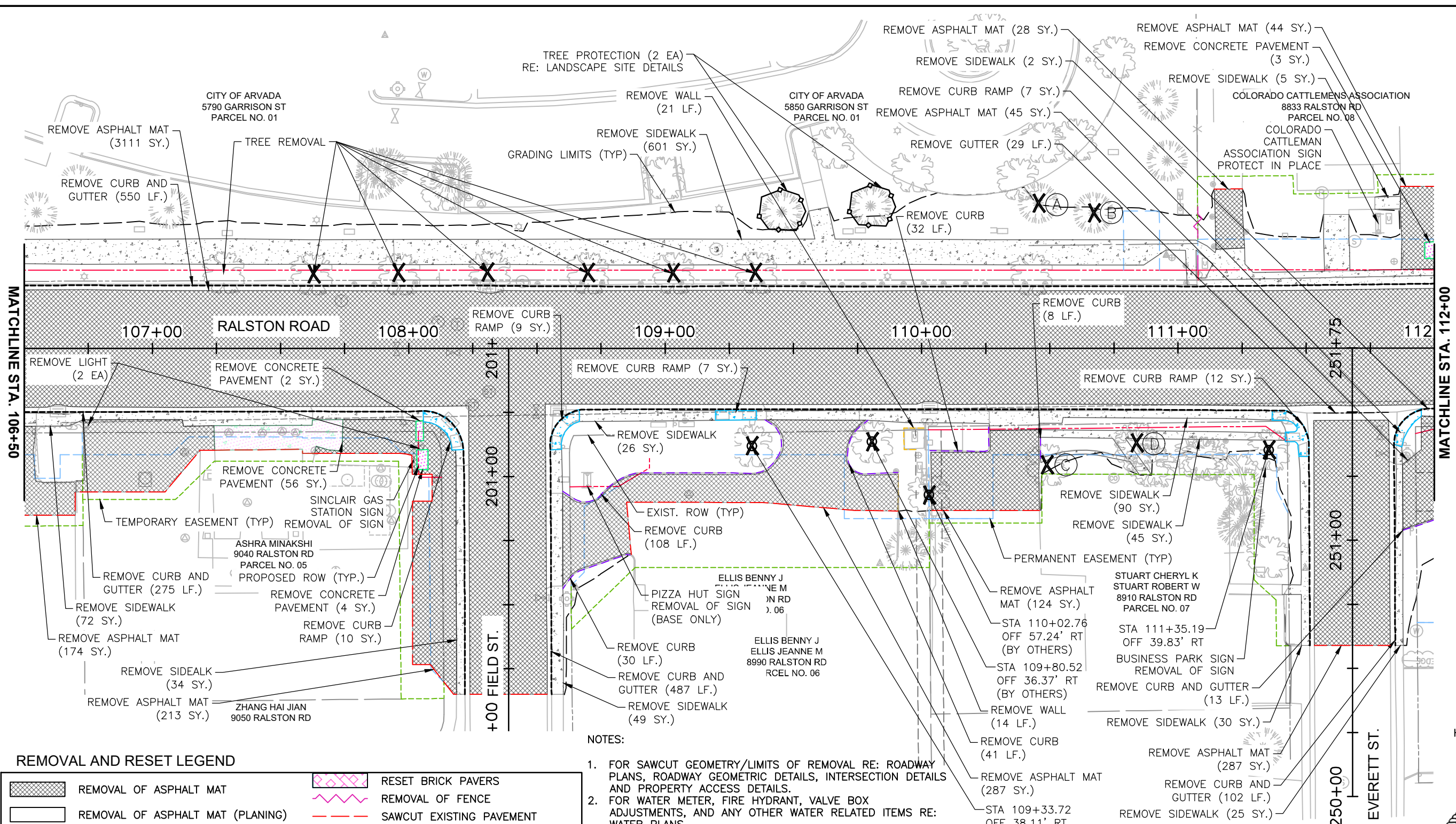
NOTES:

1. FOR SAWCUT GEOMETRY/LIMITS OF REMOVAL RE: ROADWAY PLANS, ROADWAY GEOMETRIC DETAILS, INTERSECTION DETAILS AND PROPERTY ACCESS DETAILS.
2. FOR WATER METER, FIRE HYDRANT, VALVE BOX ADJUSTMENTS, AND ANY OTHER WATER RELATED ITEMS RE: WATER PLANS.
3. FOR STORM SEWER STRUCTURE ADJUSTMENTS RE: DRAINAGE PLANS.
4. FOR SANITARY SEWER, GAS, ELECTRICAL AND ALL OTHER UTILITY ADJUSTMENTS RE: UTILITY PLANS.
5. FOR TRAFFIC SIGNAL ADJUSTMENTS RE: TRAFFIC SIGNAL PLANS.
6. FOR SIGNING AND STRIPING ADJUSTMENTS RE: SIGNING AND STRIPING PLANS.
7. FOR LIGHTING ADJUSTMENTS RE: LIGHTING PLANS.
8. FOR IRRIGATION ADJUSTMENTS RE: IRRIGATION PLANS.



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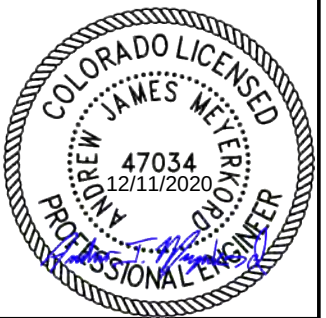
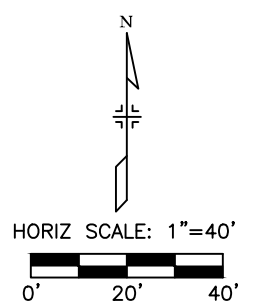


REMOVAL AND RESET LEGEND

	REMOVAL OF ASPHALT MAT		RESET BRICK PAVERS
	REMOVAL OF ASPHALT MAT (PLANING)		REMOVAL OF FENCE
	REMOVAL OF CONCRETE PAVEMENT		SAWCUT EXISTING PAVEMENT
	REMOVAL OF CONCRETE MEDIAN COVER MATERIAL		REMOVAL OF CURB AND GUTTER
	REMOVAL OF SIDEWALK (CONCRETE)		REMOVAL OF CURB
	REMOVAL OF CONCRETE CURB RAMP		REMOVAL OF GUTTER
	REMOVAL OF BRICK PAVERS		REMOVAL OF WALL (LANDSCAPE)
			REMOVAL OF WALL (SPECIAL)
			REMOVAL OF WALL
			REMOVAL OF TREE (1 EA)

NOTES:

1. FOR SAWCUT GEOMETRY/LIMITS OF REMOVAL RE: ROADWAY PLANS, ROADWAY GEOMETRIC DETAILS, INTERSECTION DETAILS AND PROPERTY ACCESS DETAILS.
2. FOR WATER METER, FIRE HYDRANT, VALVE BOX ADJUSTMENTS, AND ANY OTHER WATER RELATED ITEMS RE: WATER PLANS.
3. FOR STORM SEWER STRUCTURE ADJUSTMENTS RE: DRAINAGE PLANS.
4. FOR SANITARY SEWER, GAS, ELECTRICAL AND ALL OTHER UTILITY ADJUSTMENTS RE: UTILITY PLANS.
5. FOR TRAFFIC SIGNAL ADJUSTMENTS RE: TRAFFIC SIGNAL PLANS.
6. FOR SIGNING AND STRIPING ADJUSTMENTS RE: SIGNING AND STRIPING PLANS.
7. FOR LIGHTING ADJUSTMENTS RE: LIGHTING PLANS.
8. FOR IRRIGATION ADJUSTMENTS RE: IRRIGATION PLANS.



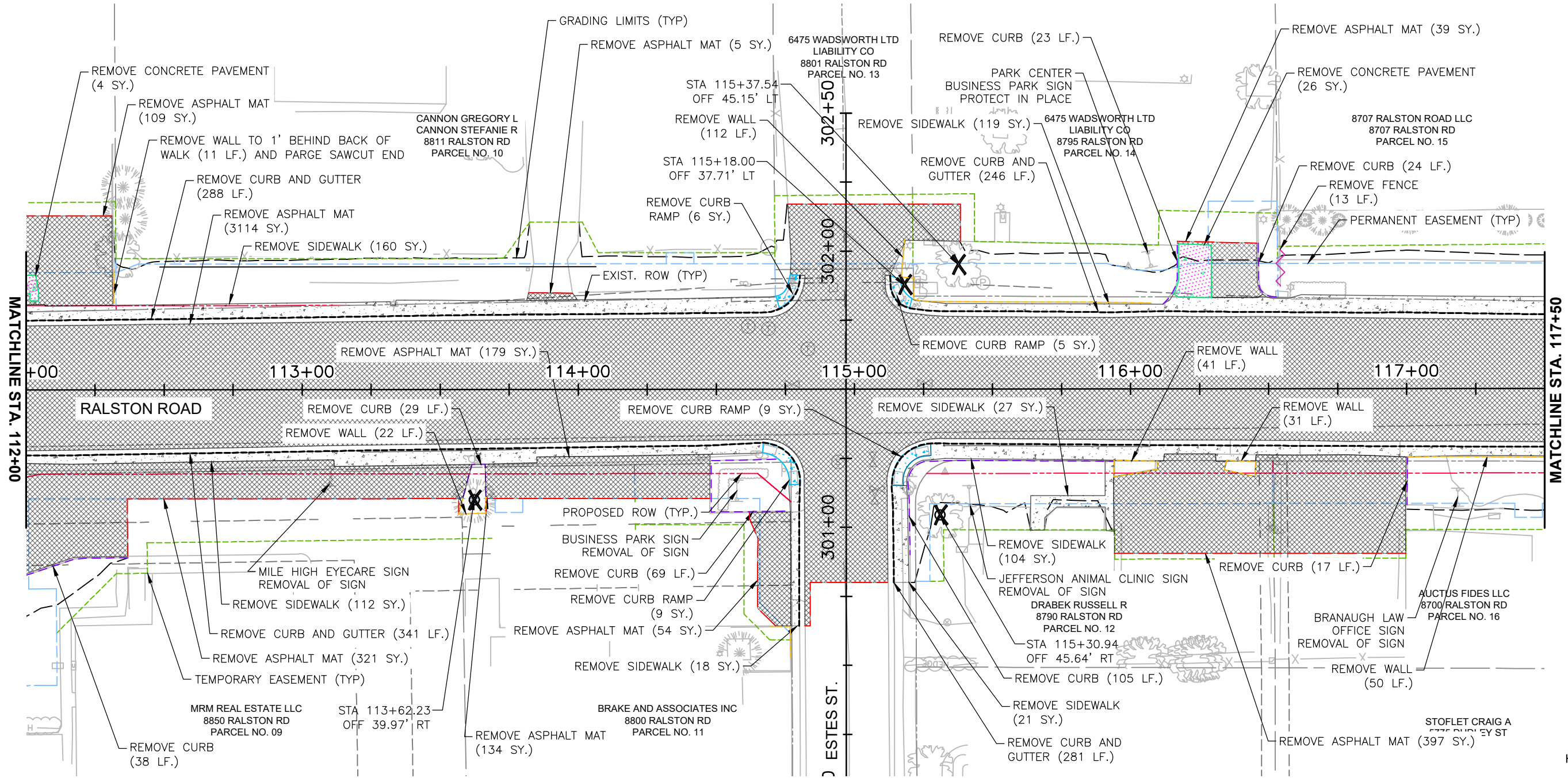
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8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST REMOVAL AND RESET PLANS RALSTON ROAD (STA. 106+50 - STA. 112+00)				Project No./Code	
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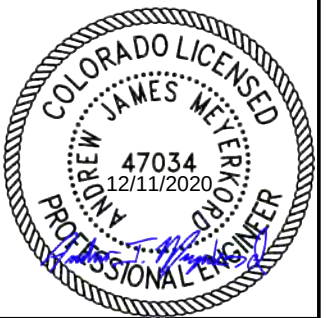
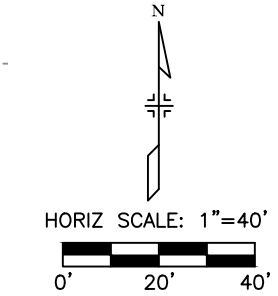


REMOVAL AND RESET LEGEND

	REMOVAL OF ASPHALT MAT		RESET BRICK PAVERS
	REMOVAL OF ASPHALT MAT (PLANING)		REMOVAL OF FENCE
	REMOVAL OF CONCRETE PAVEMENT		SAWCUT EXISTING PAVEMENT
	REMOVAL OF CONCRETE MEDIAN COVER MATERIAL		REMOVAL OF CURB AND GUTTER
	REMOVAL OF SIDEWALK (CONCRETE)		REMOVAL OF CURB
	REMOVAL OF CONCRETE CURB RAMP		REMOVAL OF GUTTER
	REMOVAL OF BRICK PAVERS		REMOVAL OF WALL (LANDSCAPE)
			REMOVAL OF WALL (SPECIAL)
			REMOVAL OF WALL
			REMOVAL OF TREE (1 EA)

NOTES:

1. FOR SAWCUT GEOMETRY/LIMITS OF REMOVAL RE: ROADWAY PLANS, ROADWAY GEOMETRIC DETAILS, INTERSECTION DETAILS AND PROPERTY ACCESS DETAILS.
2. FOR WATER METER, FIRE HYDRANT, VALVE BOX ADJUSTMENTS, AND ANY OTHER WATER RELATED ITEMS RE: WATER PLANS.
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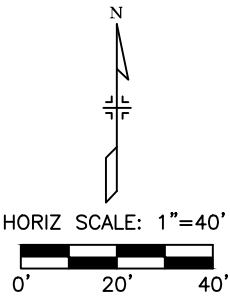
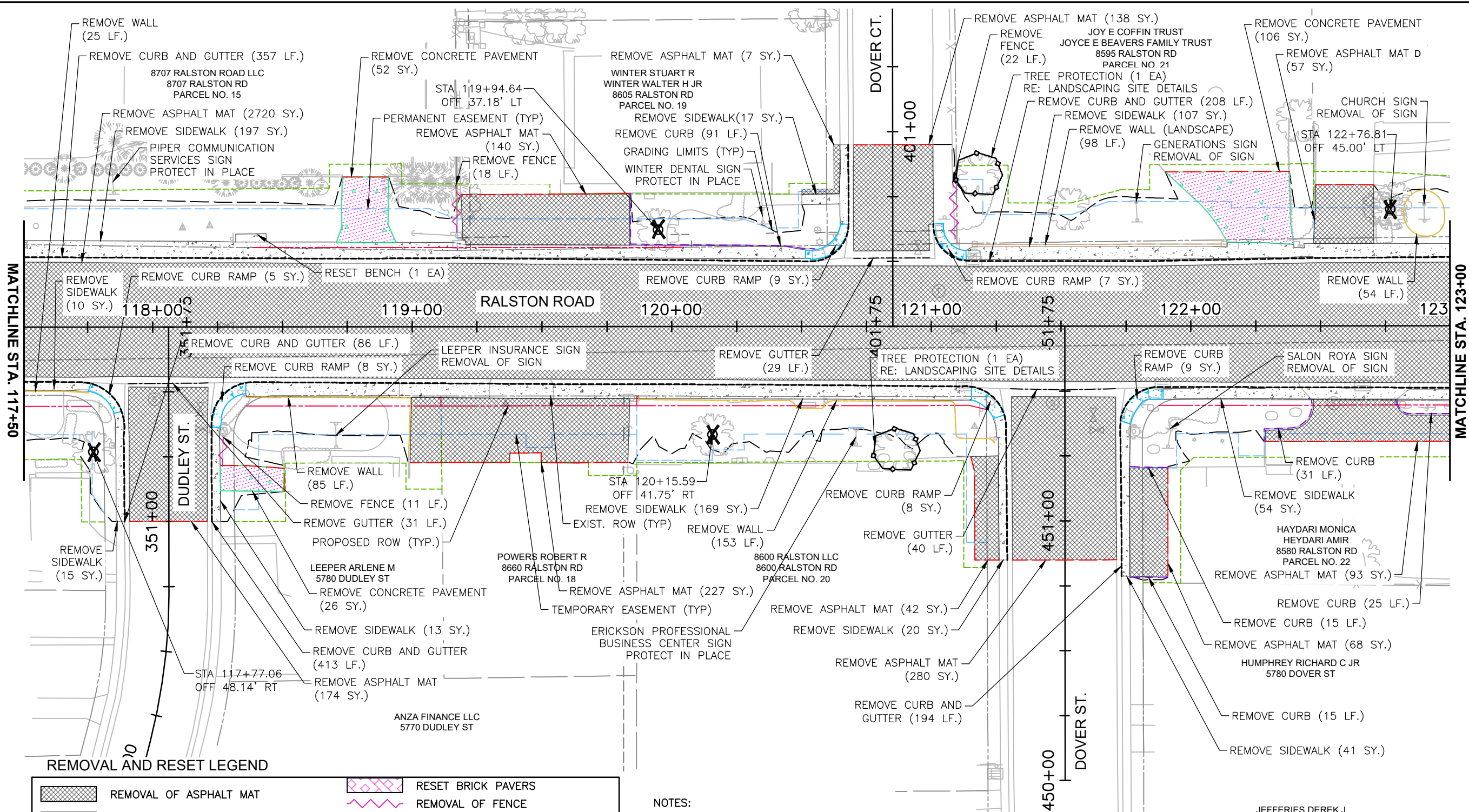
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CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST REMOVAL AND RESET PLANS RALSTON ROAD (STA. 112+00 - STA. 117+50)			Project No./Code
No Revisions:		Designer: JHH	Structure		18-ST-40
Revised:		Detailer: BCN	Numbers		
Void:		Sheet Subset: ROADWAY	Subset Sheets: RM-04 of 12		Sheet Number 41



REMOVAL AND RESET LEGEND

	REMOVAL OF ASPHALT MAT		RESET BRICK PAVERS
	REMOVAL OF ASPHALT MAT (PLANING)		REMOVAL OF FENCE
	REMOVAL OF CONCRETE PAVEMENT		SAWCUT EXISTING PAVEMENT
	REMOVAL OF CONCRETE MEDIAN COVER MATERIAL		REMOVAL OF CURB AND GUTTER
	REMOVAL OF SIDEWALK (CONCRETE)		REMOVAL OF CURB
	REMOVAL OF CONCRETE CURB RAMP		REMOVAL OF GUTTER
	REMOVAL OF BRICK PAVERS		REMOVAL OF WALL (LANDSCAPE)
			REMOVAL OF WALL (SPECIAL)
			REMOVAL OF WALL
			REMOVAL OF TREE (1 EA)

NOTES:

1. FOR SAWCUT GEOMETRY/LIMITS OF REMOVAL RE: ROADWAY PLANS, ROADWAY GEOMETRIC DETAILS, INTERSECTION DETAILS AND PROPERTY ACCESS DETAILS.
2. FOR WATER METER, FIRE HYDRANT, VALVE BOX ADJUSTMENTS, AND ANY OTHER WATER RELATED ITEMS RE: WATER PLANS.
3. FOR STORM SEWER STRUCTURE ADJUSTMENTS RE: DRAINAGE PLANS.
4. FOR SANITARY SEWER, GAS, ELECTRICAL AND ALL OTHER UTILITY ADJUSTMENTS RE: UTILITY PLANS.
5. FOR TRAFFIC SIGNAL ADJUSTMENTS RE: TRAFFIC SIGNAL PLANS.
6. FOR SIGNING AND STRIPING ADJUSTMENTS RE: SIGNING AND STRIPING PLANS.
7. FOR LIGHTING ADJUSTMENTS RE: LIGHTING PLANS.
8. FOR IRRIGATION ADJUSTMENTS RE: IRRIGATION PLANS.

JIEFFERIES DEREK J



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	6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com

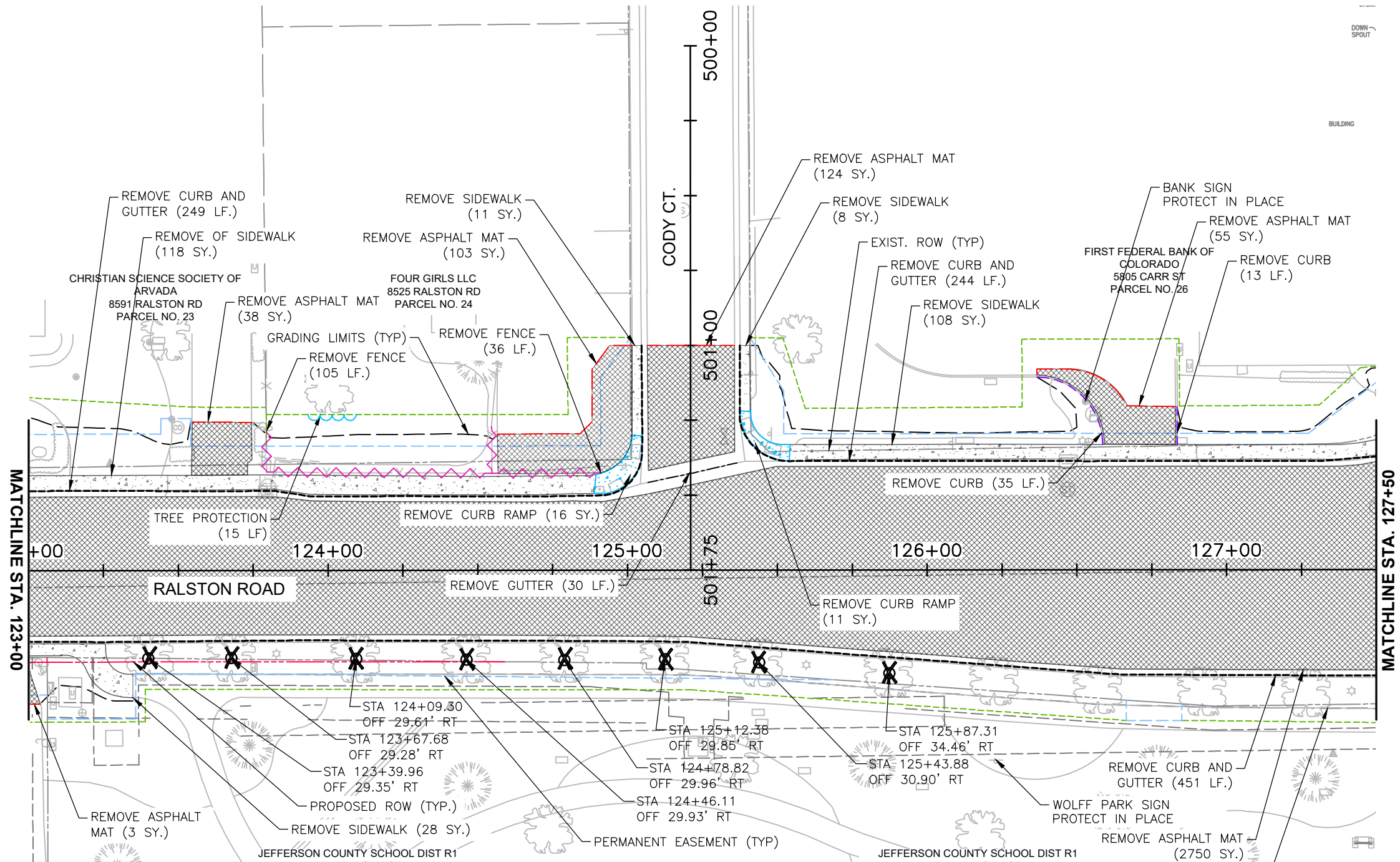
Sheet Revisions			
Date	Comments	Initials	



CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST REMOVAL AND RESET PLANS RALSTON ROAD (STA. 117+50 - STA. 123+00)			Project No./Code
No Revisions:		Designer:	JHH	Structure	18-ST-40
Revised:		Detailer:	BCN	Numbers	
Void:		Sheet Subset:	ROADWAY	Subset Sheets: RM-05 of 12	Sheet Number 42

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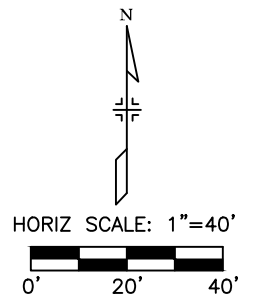


REMOVAL AND RESET LEGEND

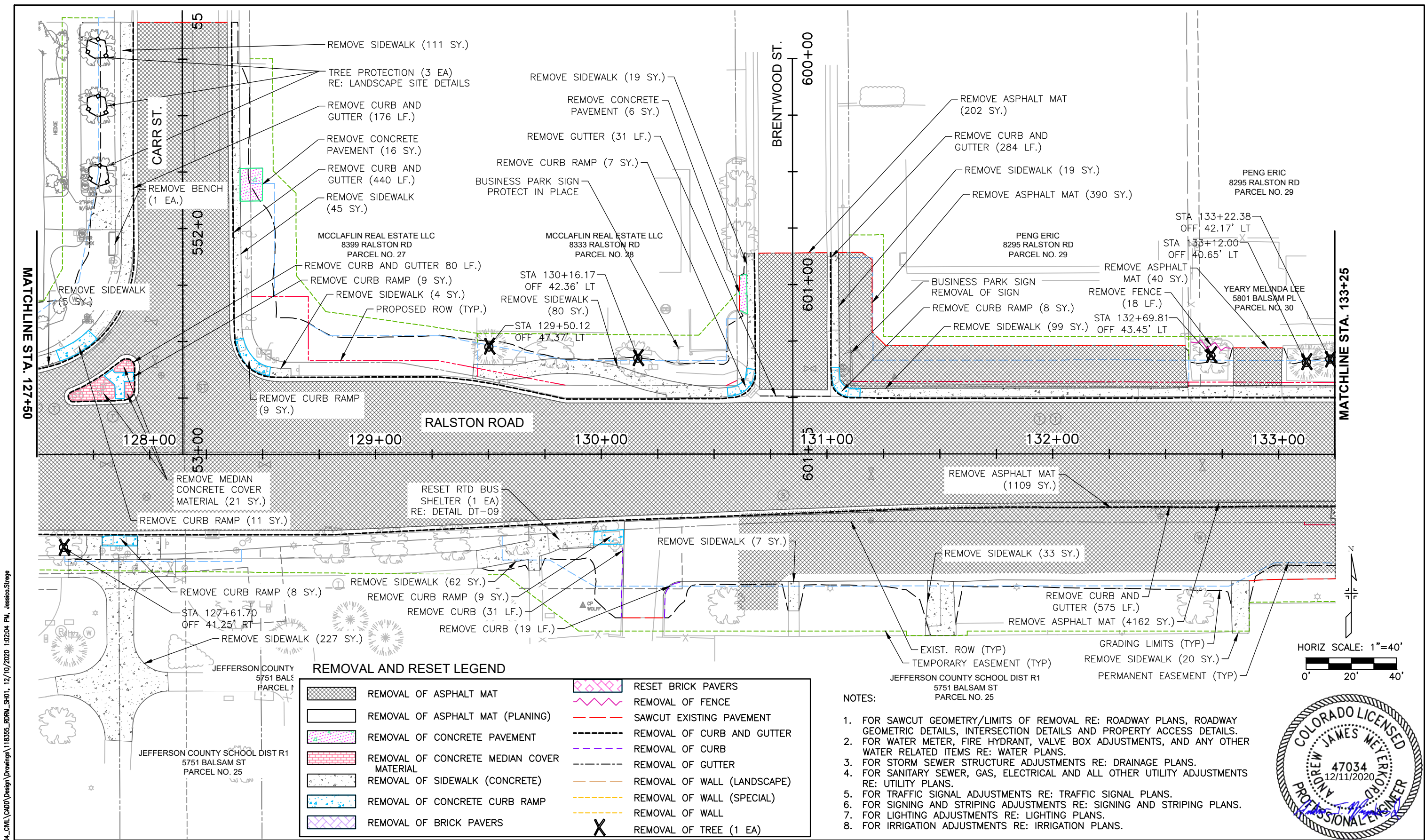
	REMOVAL OF ASPHALT MAT		RESET BRICK PAVERS
	REMOVAL OF ASPHALT MAT (PLANING)		REMOVAL OF FENCE
	REMOVAL OF CONCRETE PAVEMENT		SAWCUT EXISTING PAVEMENT
	REMOVAL OF CONCRETE MEDIAN COVER MATERIAL		REMOVAL OF CURB AND GUTTER
	REMOVAL OF SIDEWALK (CONCRETE)		REMOVAL OF CURB
	REMOVAL OF CONCRETE CURB RAMP		REMOVAL OF GUTTER
	REMOVAL OF BRICK PAVERS		REMOVAL OF WALL (LANDSCAPE)
			REMOVAL OF WALL (SPECIAL)
			REMOVAL OF WALL
			REMOVAL OF TREE (1 EA)

NOTES:

1. FOR SAWCUT GEOMETRY/LIMITS OF REMOVAL RE: ROADWAY PLANS, ROADWAY GEOMETRIC DETAILS, INTERSECTION DETAILS AND PROPERTY ACCESS DETAILS.
2. FOR WATER METER, FIRE HYDRANT, VALVE BOX ADJUSTMENTS, AND ANY OTHER WATER RELATED ITEMS RE: WATER PLANS.
3. FOR STORM SEWER STRUCTURE ADJUSTMENTS RE: DRAINAGE PLANS.
4. FOR SANITARY SEWER, GAS, ELECTRICAL AND ALL OTHER UTILITY ADJUSTMENTS RE: UTILITY PLANS.
5. FOR TRAFFIC SIGNAL ADJUSTMENTS RE: TRAFFIC SIGNAL PLANS.
6. FOR SIGNING AND STRIPING ADJUSTMENTS RE: SIGNING AND STRIPING PLANS.
7. FOR LIGHTING ADJUSTMENTS RE: LIGHTING PLANS.
8. FOR IRRIGATION ADJUSTMENTS RE: IRRIGATION PLANS.



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File Name: 118355_RDRM_SH01.DWG			Date	Comments	Initials		No Revisions:					18-ST-40		
Horizontal Scale: 1" = 40' Vertical Scale: N/A							Revised:		Designer: JHH		Structure Numbers			
 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Sheet Subset: ROADWAY		Subset Sheets: RM-06 of 12		Sheet Number 43	



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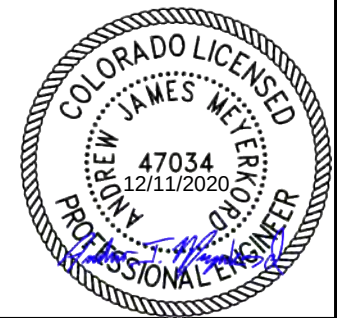
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Greenwood Village, CO 80111
Phone: 303.721.1440
www.FHUENG.com

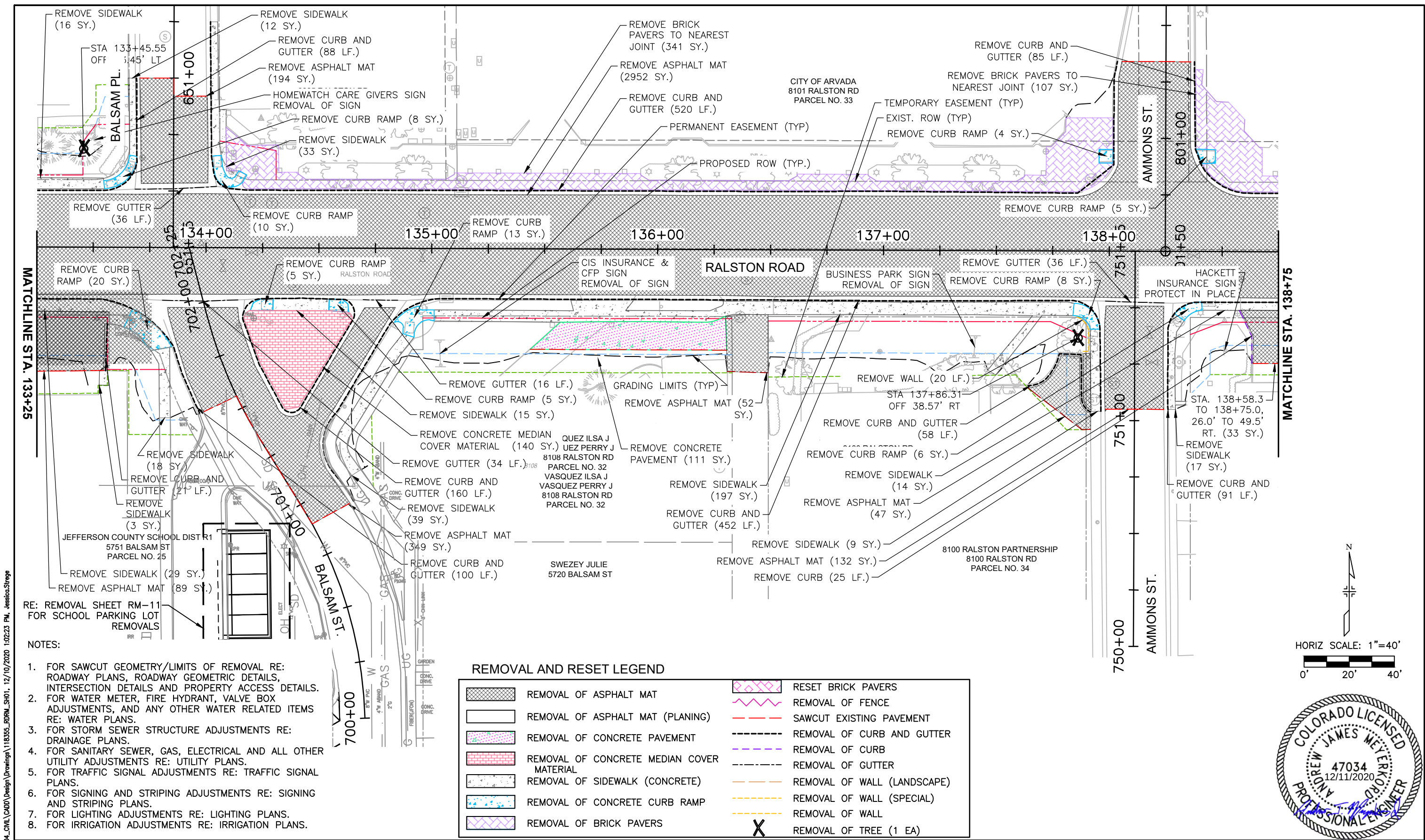
Sheet Revisions			
R-X	Date	Comments	Initials

CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST REMOVAL AND RESET PLANS RALSTON ROAD (STA. 127+50 - STA. 133+25)			Project No./Code	
No Revisions:					18-ST-40	
Revised:	Designer:	JHH	Structure			
	Detailer:	BCN	Numbers			
Void:	Sheet Subset:	ROADWAY	Subset Sheets: RM-07 of 12		Sheet Number	44

- NOTES:
- FOR SAWCUT GEOMETRY/LIMITS OF REMOVAL RE: ROADWAY PLANS, ROADWAY GEOMETRIC DETAILS, INTERSECTION DETAILS AND PROPERTY ACCESS DETAILS.
 - FOR WATER METER, FIRE HYDRANT, VALVE BOX ADJUSTMENTS, AND ANY OTHER WATER RELATED ITEMS RE: WATER PLANS.
 - FOR STORM SEWER STRUCTURE ADJUSTMENTS RE: DRAINAGE PLANS.
 - FOR SANITARY SEWER, GAS, ELECTRICAL AND ALL OTHER UTILITY ADJUSTMENTS RE: UTILITY PLANS.
 - FOR TRAFFIC SIGNAL ADJUSTMENTS RE: TRAFFIC SIGNAL PLANS.
 - FOR SIGNING AND STRIPING ADJUSTMENTS RE: SIGNING AND STRIPING PLANS.
 - FOR LIGHTING ADJUSTMENTS RE: LIGHTING PLANS.
 - FOR IRRIGATION ADJUSTMENTS RE: IRRIGATION PLANS.

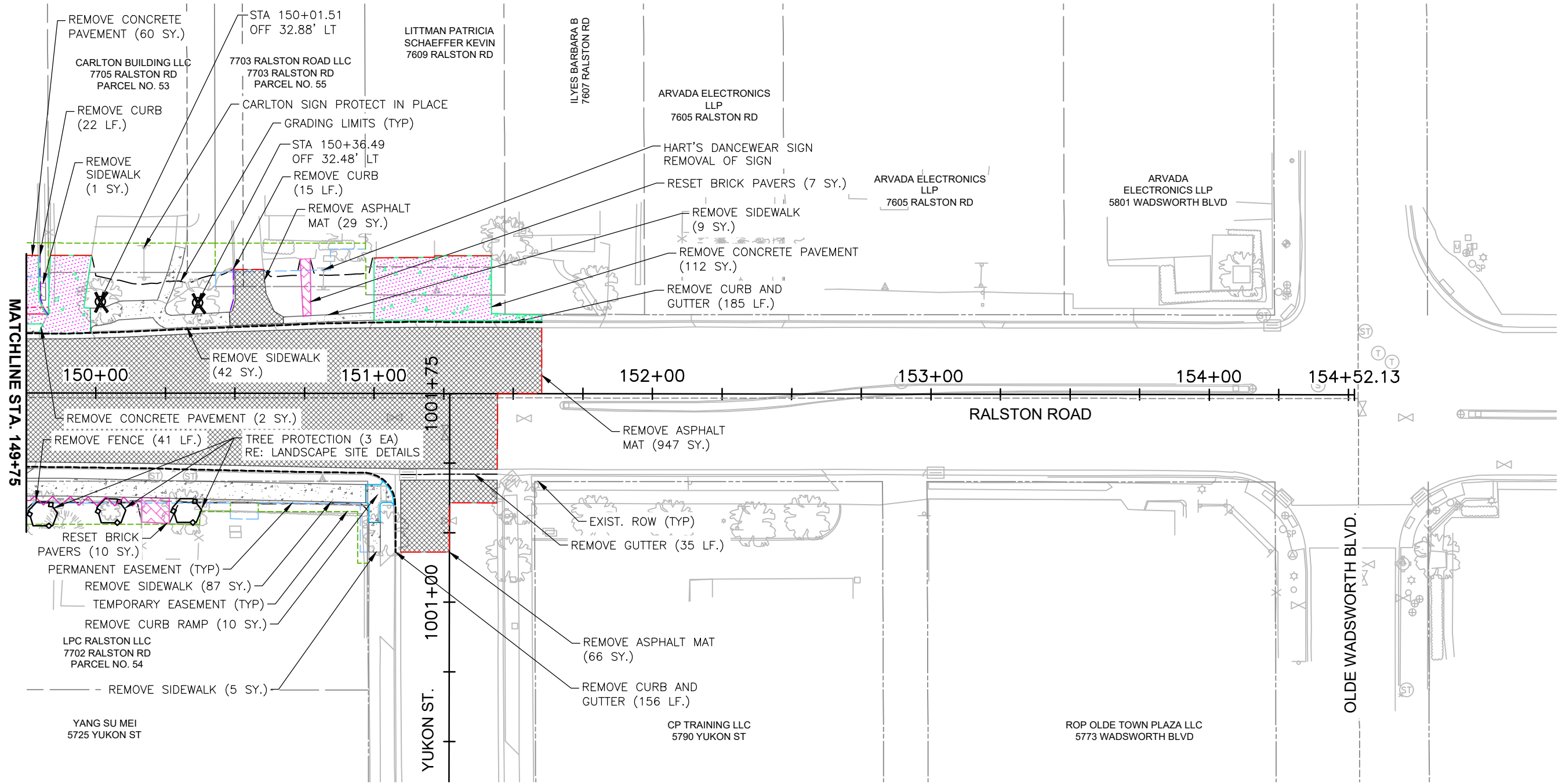




- RE: REMOVAL SHEET RM-11 FOR SCHOOL PARKING LOT REMOVALS
- NOTES:
1. FOR SAWCUT GEOMETRY/LIMITS OF REMOVAL RE: ROADWAY PLANS, ROADWAY GEOMETRIC DETAILS, INTERSECTION DETAILS AND PROPERTY ACCESS DETAILS.
 2. FOR WATER METER, FIRE HYDRANT, VALVE BOX ADJUSTMENTS, AND ANY OTHER WATER RELATED ITEMS RE: WATER PLANS.
 3. FOR STORM SEWER STRUCTURE ADJUSTMENTS RE: DRAINAGE PLANS.
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 8. FOR IRRIGATION ADJUSTMENTS RE: IRRIGATION PLANS.

REMOVAL AND RESET LEGEND			
	REMOVAL OF ASPHALT MAT		RESET BRICK PAVERS
	REMOVAL OF ASPHALT MAT (PLANING)		REMOVAL OF FENCE
	REMOVAL OF CONCRETE PAVEMENT		SAWCUT EXISTING PAVEMENT
	REMOVAL OF CONCRETE MEDIAN COVER MATERIAL		REMOVAL OF CURB AND GUTTER
	REMOVAL OF SIDEWALK (CONCRETE)		REMOVAL OF CURB
	REMOVAL OF CONCRETE CURB RAMP		REMOVAL OF GUTTER
	REMOVAL OF BRICK PAVERS		REMOVAL OF WALL (LANDSCAPE)
			REMOVAL OF WALL (SPECIAL)
			REMOVAL OF WALL
			REMOVAL OF TREE (1 EA)

Print Date: 12/10/2020 1:02:23 PM		Sheet Revisions			CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed	RALSTON RD - YUKON ST TO GARRISON ST REMOVAL AND RESET PLANS RALSTON ROAD (STA. 133+25 - STA. 138+75)		Project No./Code 18-ST-40											
File Name: 118355_RDRM_SH01.DWG																				
Horizontal Scale: 1" = 40'	Vertical Scale: N/A	<table><tr><th>Date</th><th>Comments</th><th>Initials</th></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></table>		Date		Comments	Initials										No Revisions:		Designer: JHH	Structure:
Date	Comments	Initials																		
		6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com		Revised:		Detailer: BCN	Numbers:													
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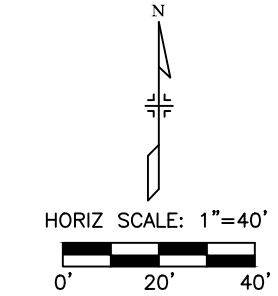


REMOVAL AND RESET LEGEND

	REMOVAL OF ASPHALT MAT		RESET BRICK PAVERS
	REMOVAL OF ASPHALT MAT (PLANING)		REMOVAL OF FENCE
	REMOVAL OF CONCRETE PAVEMENT		SAWCUT EXISTING PAVEMENT
	REMOVAL OF CONCRETE MEDIAN COVER MATERIAL		REMOVAL OF CURB AND GUTTER
	REMOVAL OF SIDEWALK (CONCRETE)		REMOVAL OF CURB
	REMOVAL OF CONCRETE CURB RAMP		REMOVAL OF GUTTER
	REMOVAL OF BRICK PAVERS		REMOVAL OF WALL (LANDSCAPE)
			REMOVAL OF WALL (SPECIAL)
			REMOVAL OF WALL
			REMOVAL OF TREE (1 EA)

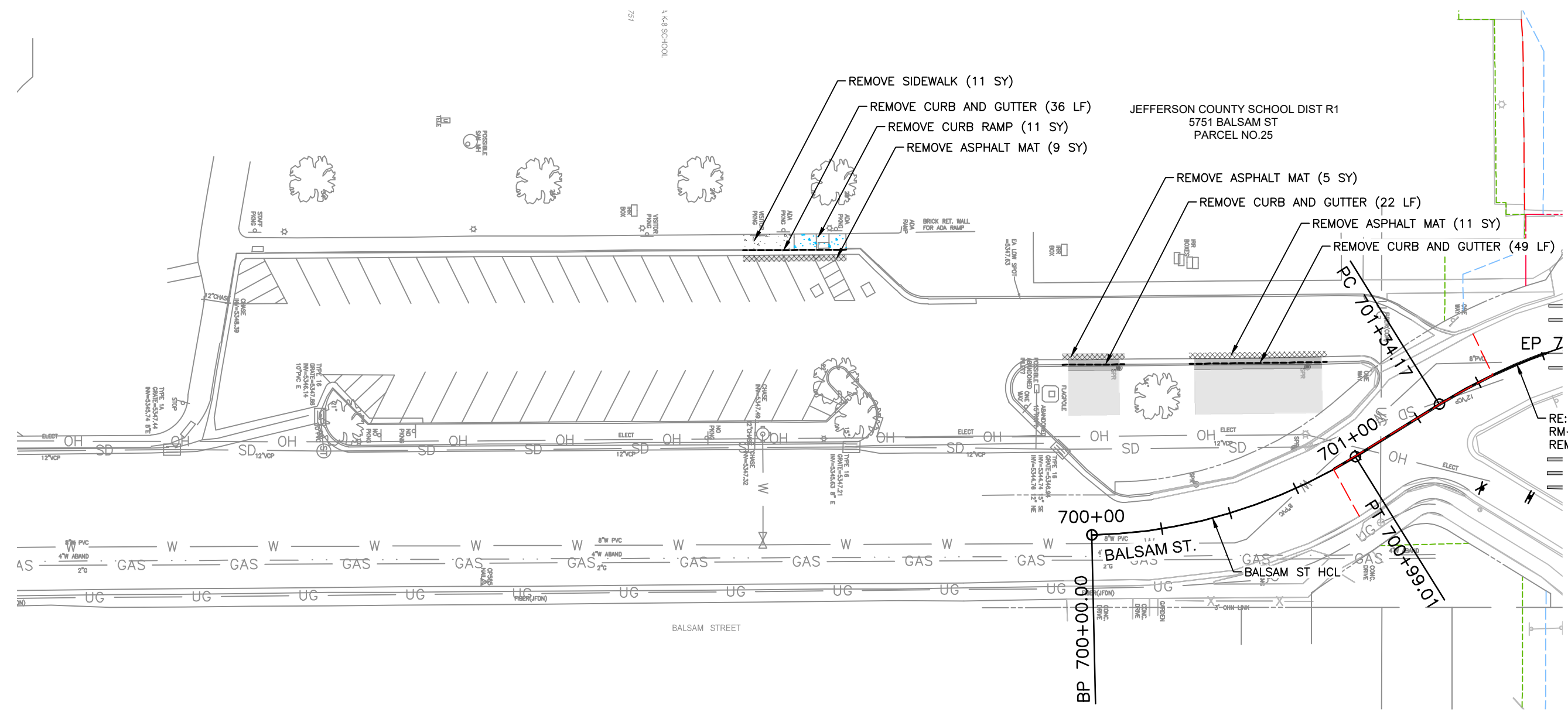
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2. FOR WATER METER, FIRE HYDRANT, VALVE BOX ADJUSTMENTS, AND ANY OTHER WATER RELATED ITEMS RE: WATER PLANS.
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8. FOR IRRIGATION ADJUSTMENTS RE: IRRIGATION PLANS.



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File Name: 118355_RDRM_SH01.DWG											No Revisions:					18-ST-40												
Horizontal Scale: 1" = 40' Vertical Scale: N/A											Revised:																	
FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com		R-X	<table><thead><tr><th>Date</th><th>Comments</th><th>Initials</th></tr></thead><tbody><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></tbody></table>			Date	Comments	Initials													Void:		Designer: JHH Detailer: BCN Sheet Subset: ROADWAY		Structure Numbers Subset Sheets: RM-11 of 12		Sheet Number 48	
Date	Comments	Initials																										



RE: REMOVAL SHEET
RM-08 FOR BALSAM ST
REMOVALS

REMOVAL AND RESET LEGEND

	REMOVAL OF ASPHALT MAT		RESET BRICK PAVERS
	REMOVAL OF ASPHALT MAT (PLANING)		REMOVAL OF FENCE
	REMOVAL OF CONCRETE PAVEMENT		SAWCUT EXISTING PAVEMENT
	REMOVAL OF CONCRETE MEDIAN COVER MATERIAL		REMOVAL OF CURB AND GUTTER
	REMOVAL OF SIDEWALK (CONCRETE)		REMOVAL OF CURB
	REMOVAL OF CONCRETE CURB RAMP		REMOVAL OF GUTTER
	REMOVAL OF BRICK PAVERS		REMOVAL OF WALL (LANDSCAPE)
			REMOVAL OF WALL (SPECIAL)
			REMOVAL OF WALL
			REMOVAL OF TREE (1 EA)

NOTES:

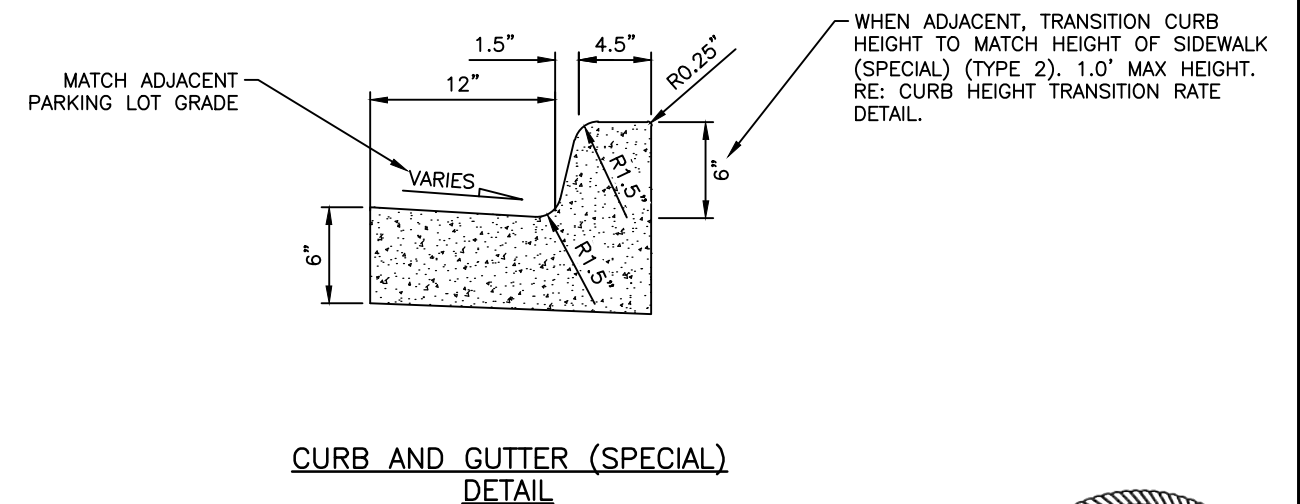
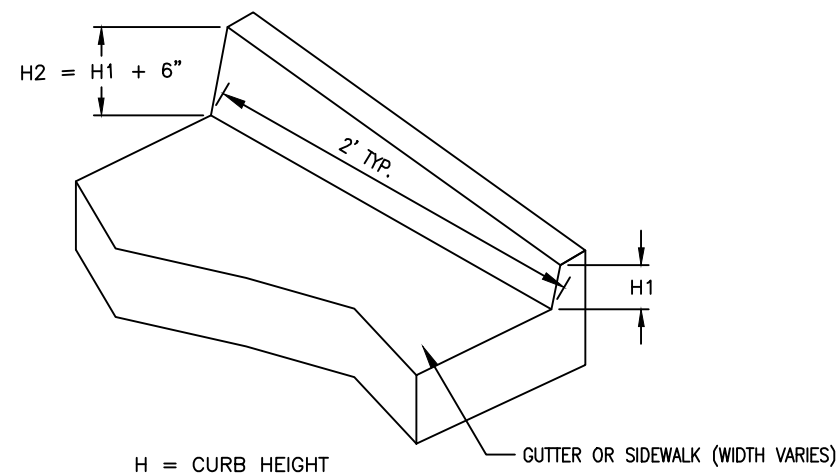
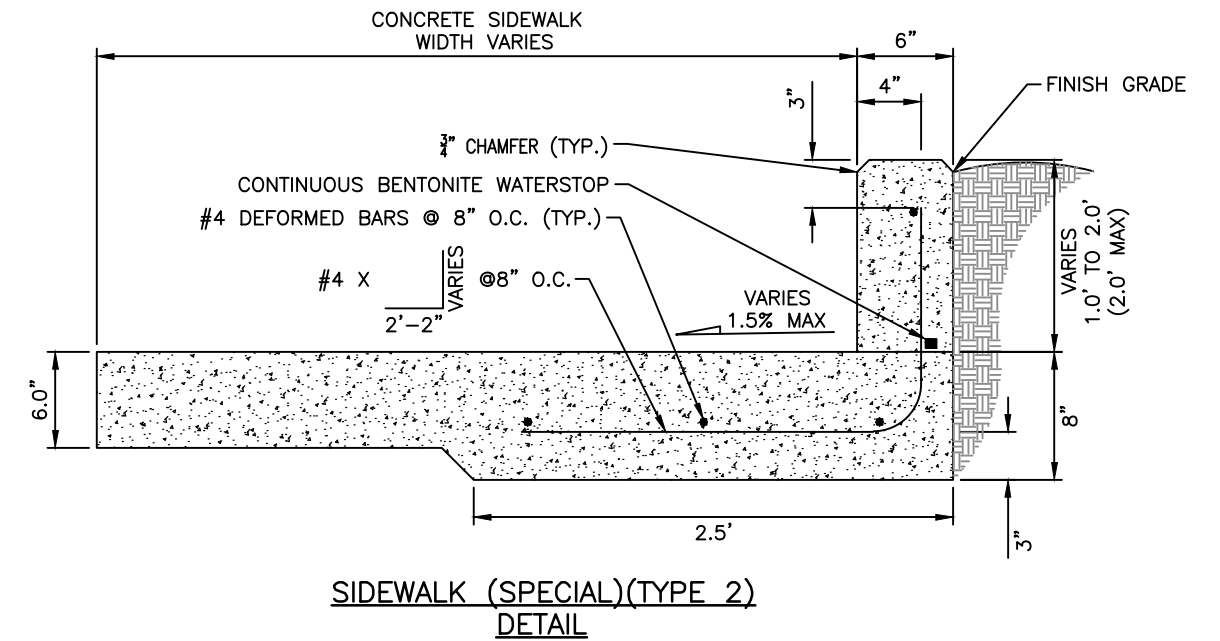
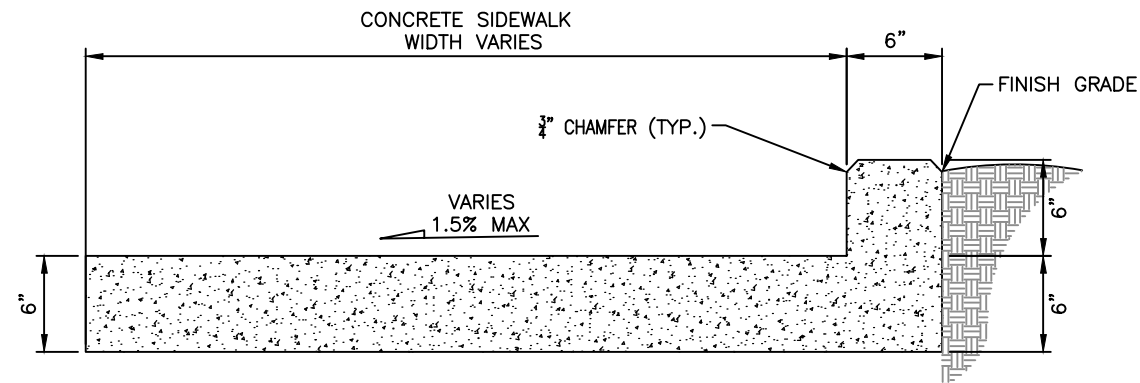
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7. FOR LIGHTING ADJUSTMENTS RE: LIGHTING PLANS.
8. FOR IRRIGATION ADJUSTMENTS RE: IRRIGATION PLANS.

HORIZ SCALE: 1"=20'
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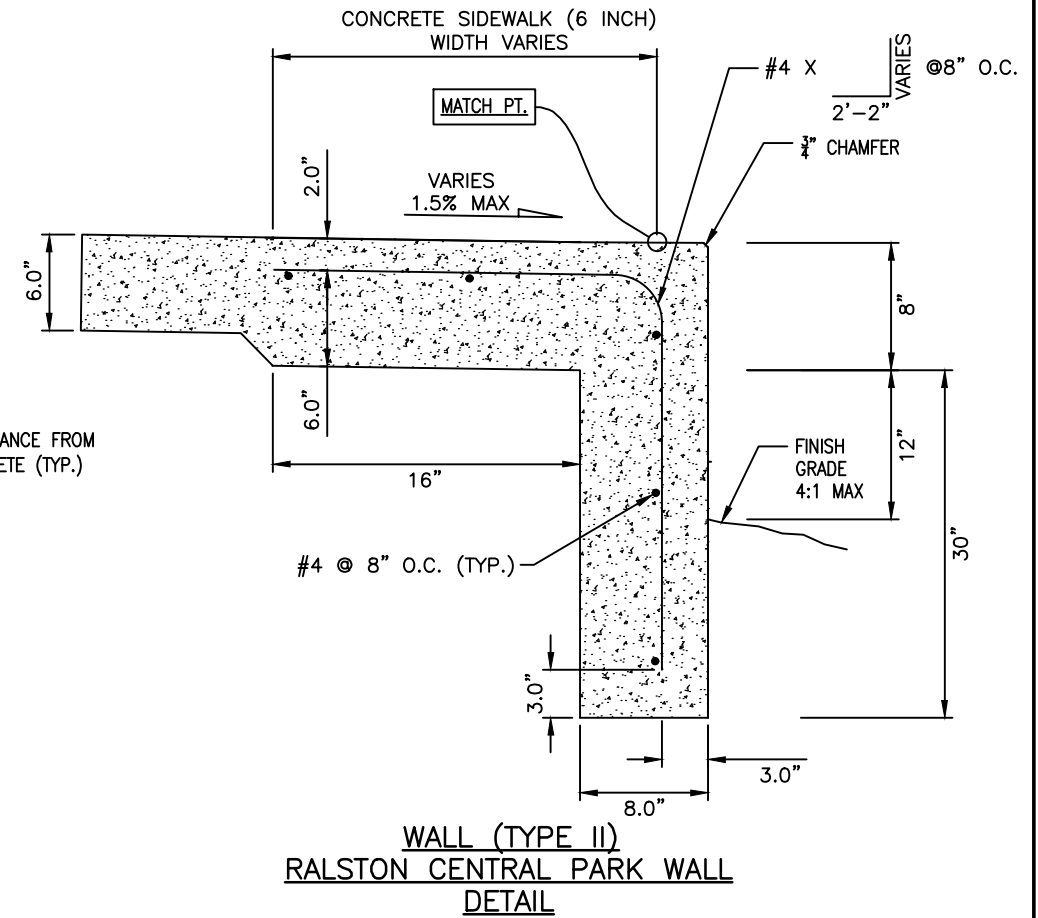
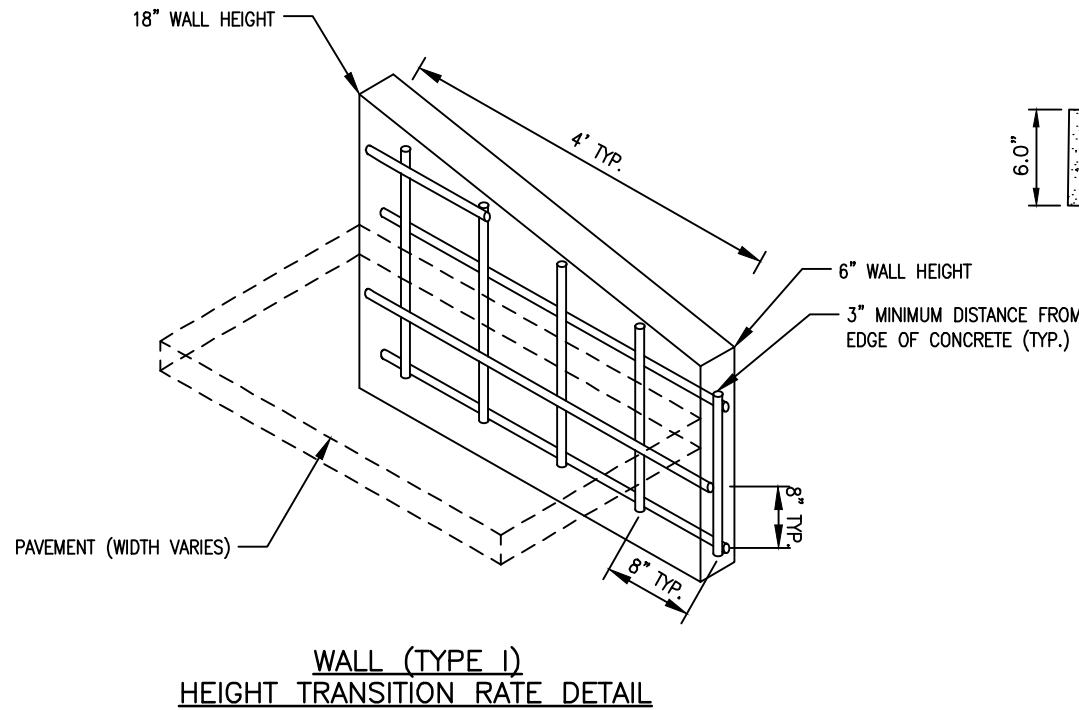
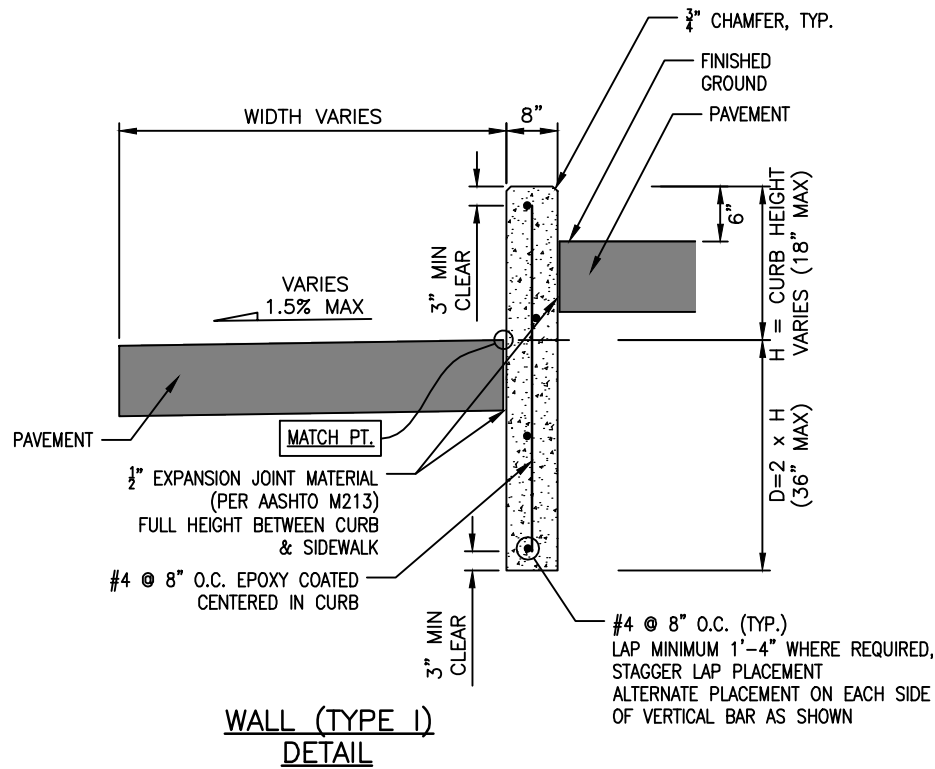


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File Name: 118355_RDPL_SH02.DWG							No Revisions:		Designer: JHH Detailer: BCN Structure Numbers			18-ST-40	
Horizontal Scale: 1" = 20' Vertical Scale: N/A		   	Revised:			Sheet Number 49							
 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com			Void:			Sheet Subset: ROADWAY Subset Sheets: RM – 12 of 12							

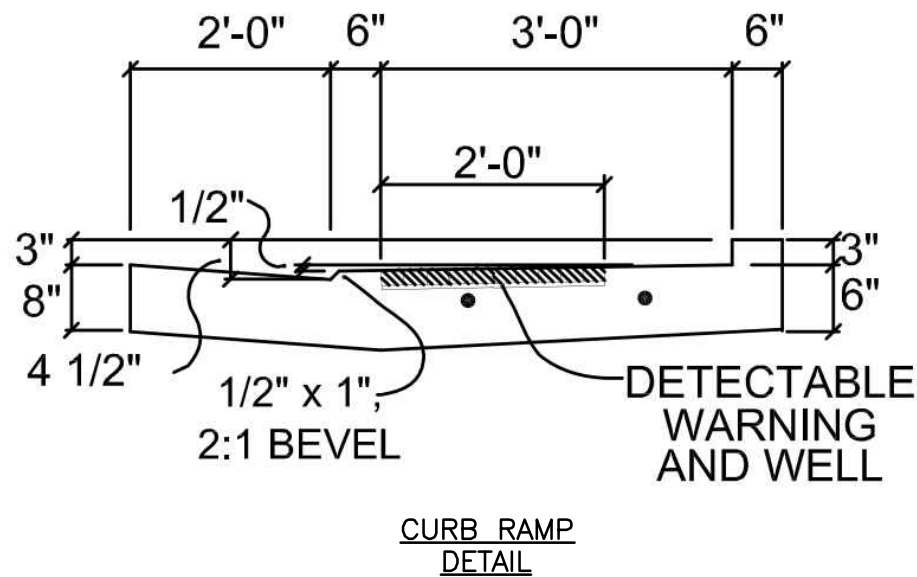


A circular professional engineer seal for the State of Colorado. The outer ring contains the text "COLORADO LICENSED" at the top and "PROFESSIONAL ENGINEER" at the bottom. The inner circle contains the name "ANDREW JAMES MEYER" and the license number "47034". Below the license number is the expiration date "12/11/2020". A blue ink signature is written across the bottom of the seal.



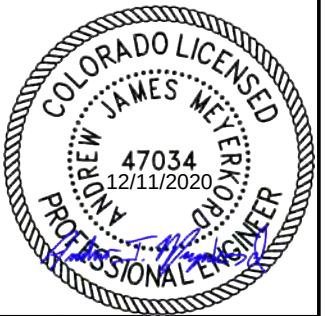
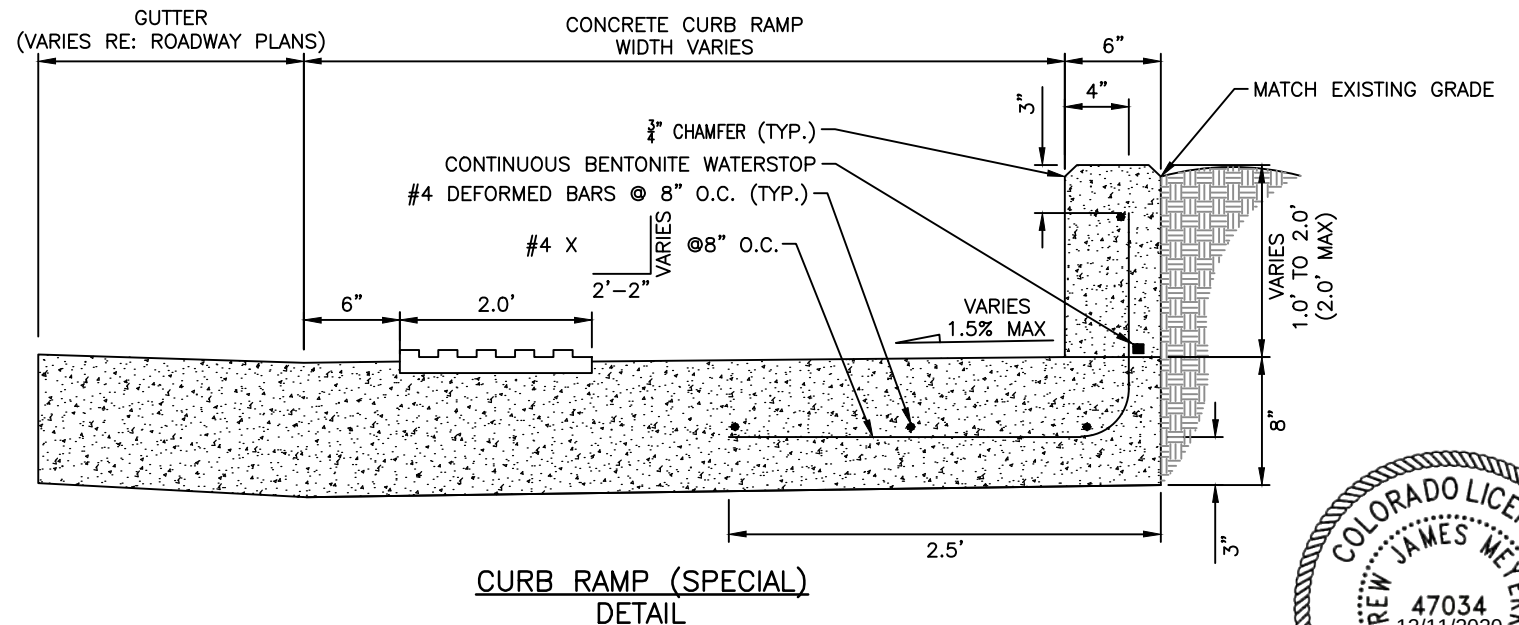
REINFORCING NOTES

1. ALL REINFORCING STEEL ON THIS SHEET SHALL BE GRADE 60 (FY = 60 KSI) AND SHALL BE EPOXY COATED IN ACCORDANCE WITH ASTM A775.
2. MINIMUM LAP SPLICES FOR THE CONT. #4 REINFORCING BARS SHALL BE 1'-6" WHERE REQUIRED.



CURB RAMP NOTES

1. 8" MINIMUM REPLACEMENT THICKNESS IN GUTTER IN ADA RAMP SECTION.
2. FIBER MESH REINFORCED CONCRETE 1.5 LBS/CY.
3. ALL WORK IN ACCORDANCE WITH FED. REGISTER 1, VOL. 59, NO. 117, 6/20/94



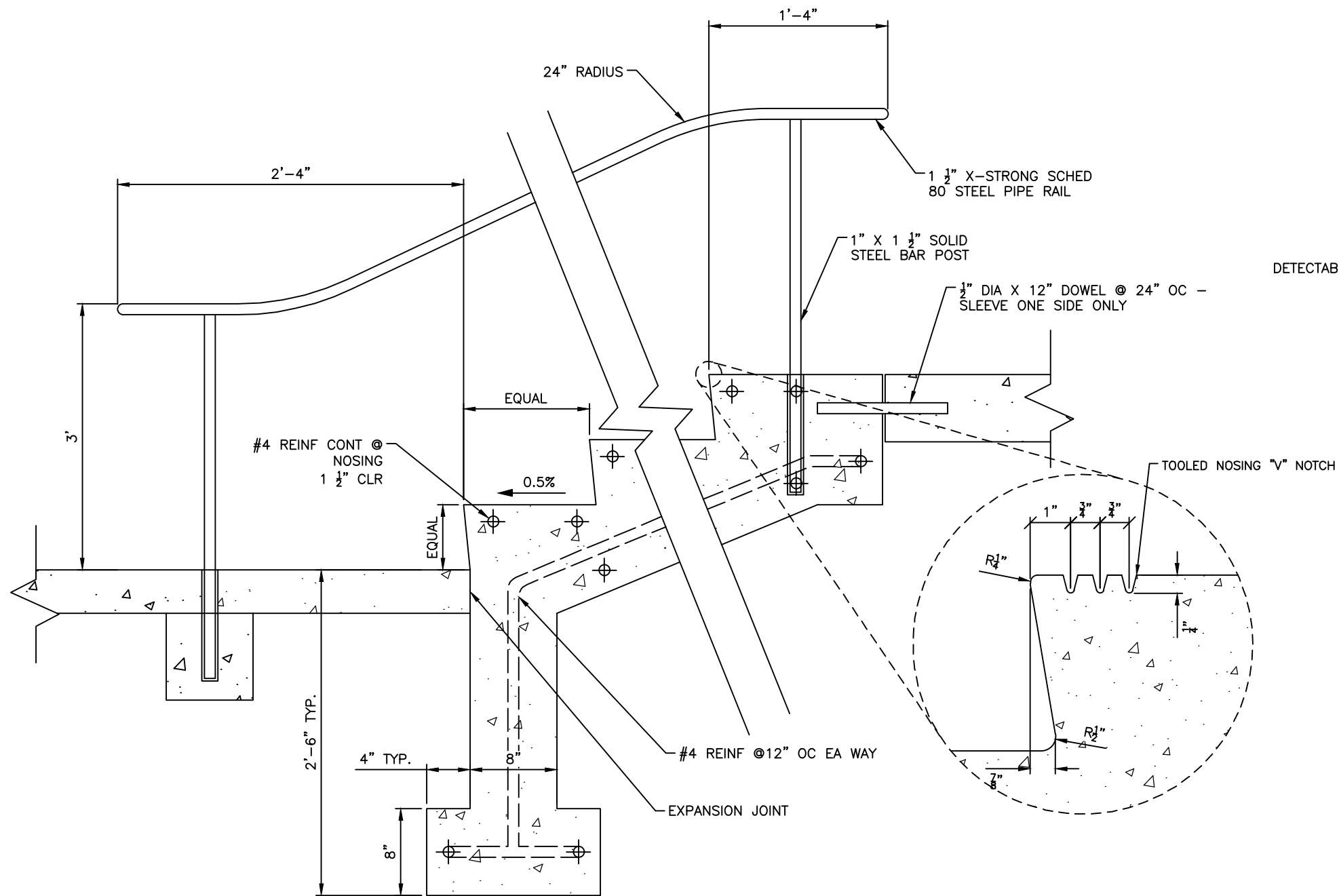
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Sheet Revisions			
Date	Comments	Initials	

**CITY OF ARVADA
PUBLIC WORKS DEPARTMENT**

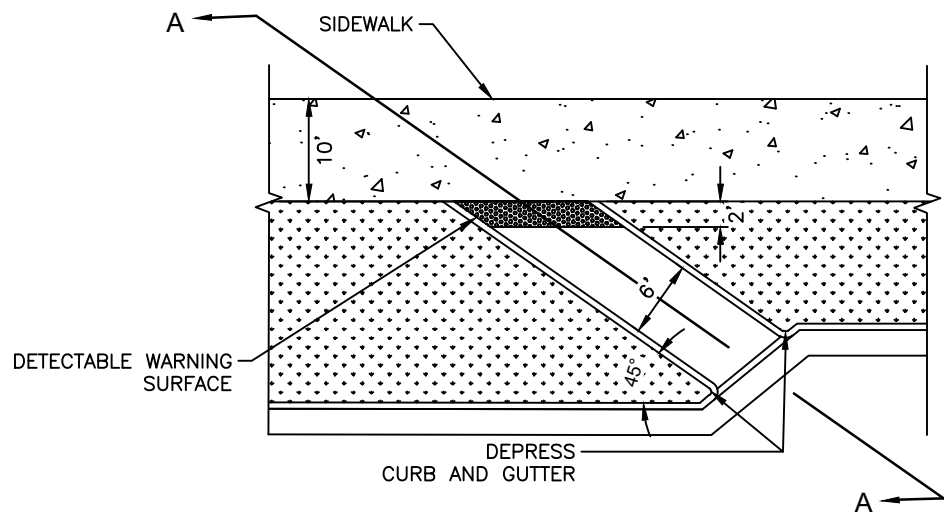
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY DETAIL WALL AND CURB RAMP			Project No./Code
No Revisions:		Designer:	JHH	Structure	18-ST-40
Revised:		Detailer:	JVS	Numbers	
Void:		Sheet Subset:	ROADWAY	Subset Sheets:	DT-02 of 10
					Sheet Number 51



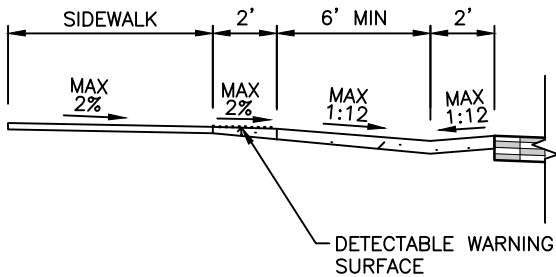
RALSTON CENTRAL PARK STAIR DETAIL

- NOTES:
1. ALL RISERS AND TREADS TO BE EQUAL.
 2. LIGHT BROOM FINISH ON ALL EXPOSED SURFACES.
 3. ALL RAILS AND POSTS TO HAVE A BLACK POWDERCOAT FINISH
 4. GRIND ALL WELDS SMOOTH.

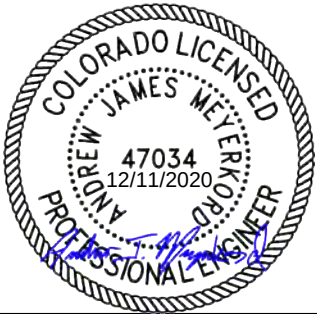


BIKE RAMP DETAIL

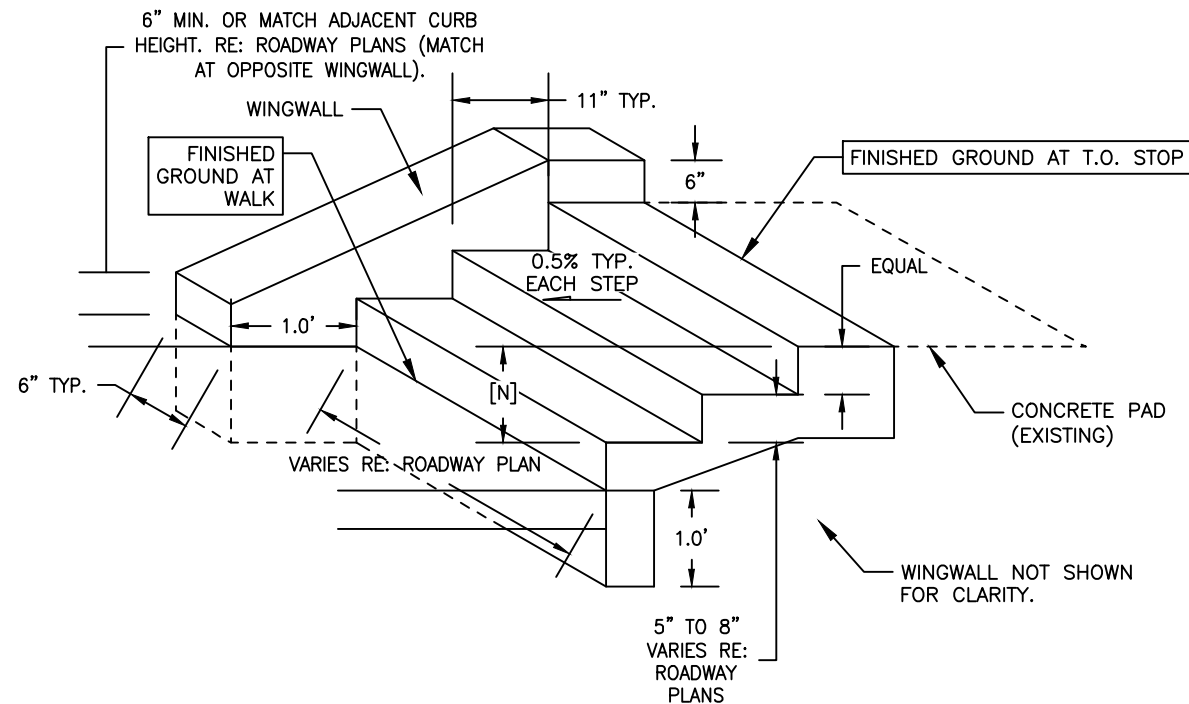
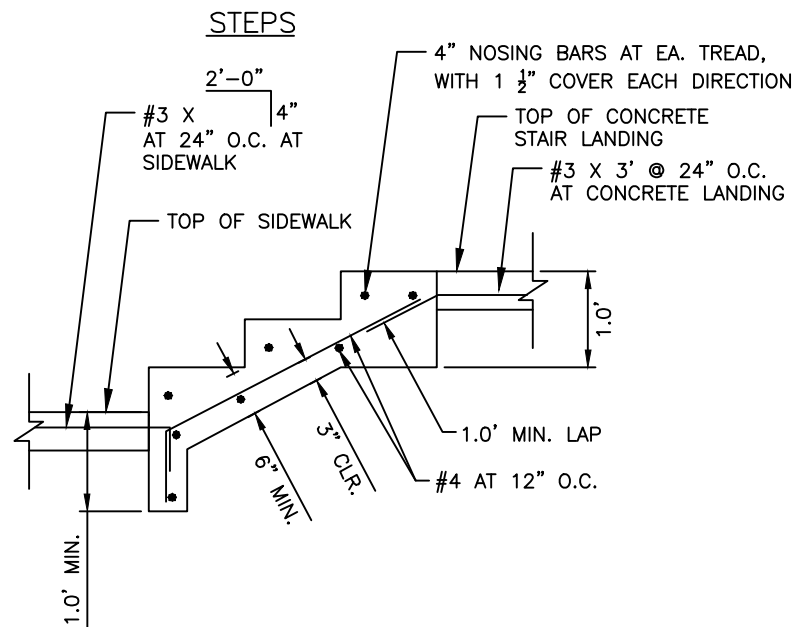
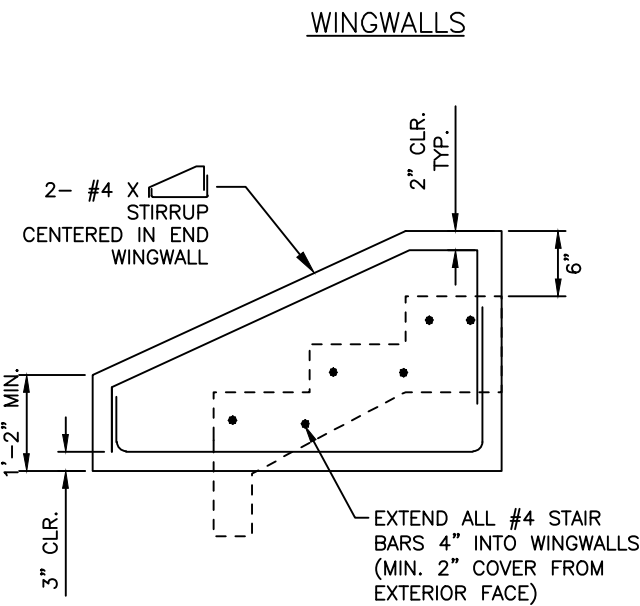
(TAKEN FROM "AASHTO GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES", 4TH EDITION)
TO BE PAID FOR AS CONCRETE CURB RAMP.



BIKE RAMP DETAIL
SECTION A

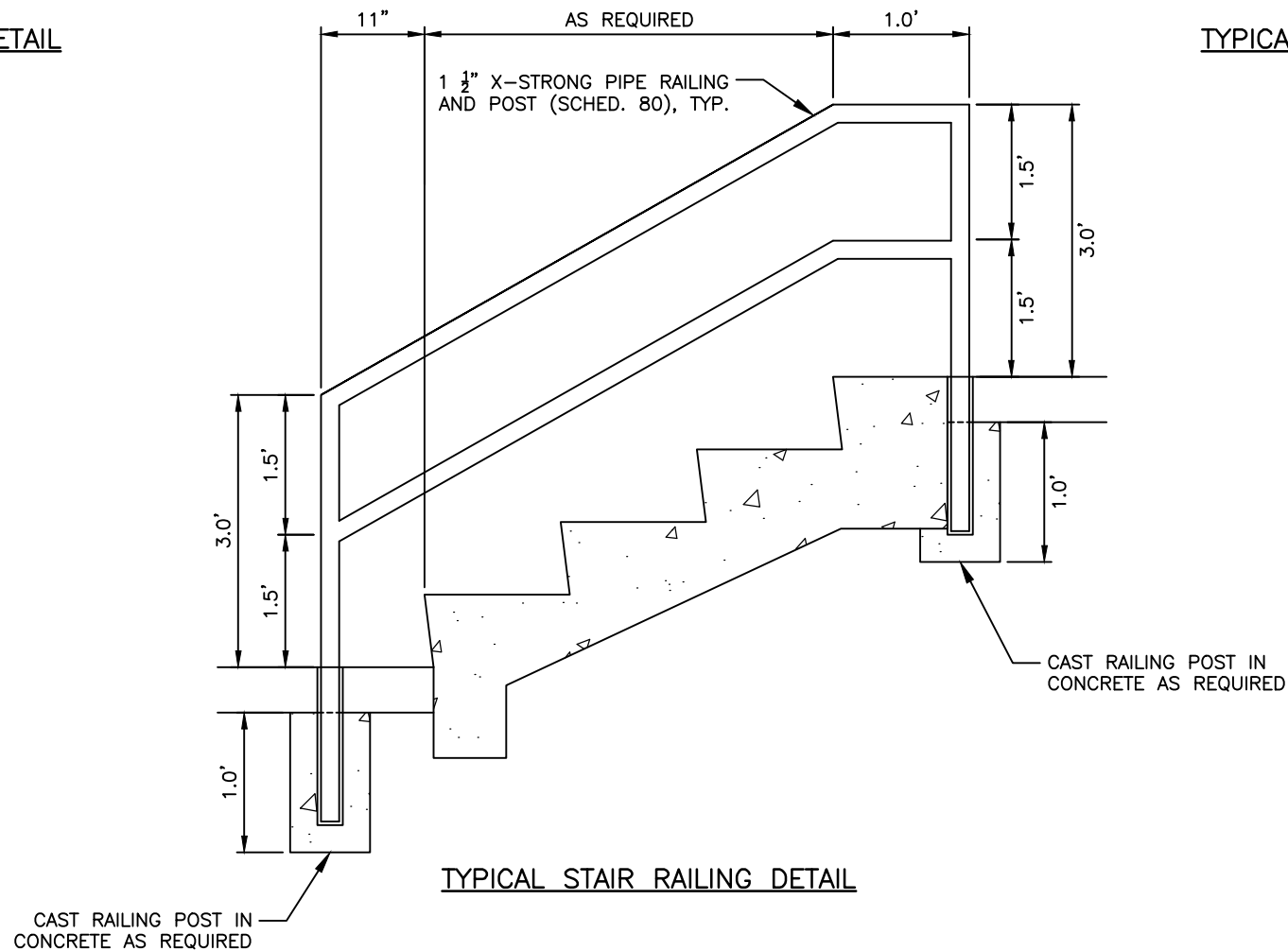


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	Horizontal Scale: NTS Vertical Scale: NTS							Revised:		Designer: JHH Structure Numbers				
	 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Detailer: JVS Structure Numbers				
								Sheet Subset: ROADWAY Subset Sheets: DT-03 of 10		Sheet Number 52				



TYPICAL STAIR REBAR DETAIL

TYPICAL STAIR DETAIL



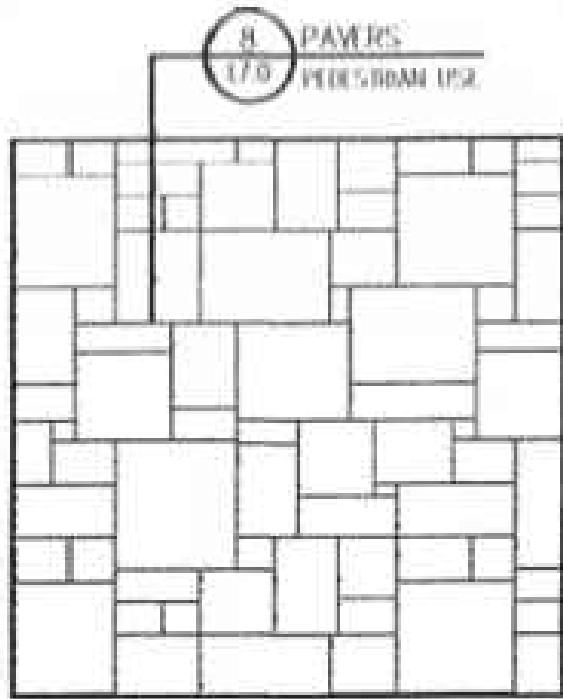
TYPICAL STAIR RAILING DETAIL



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	FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com					Void:		Designer: JHH		Structure Numbers				
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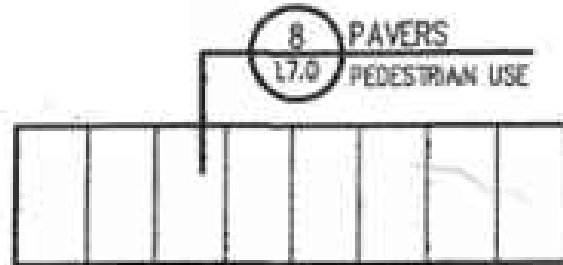
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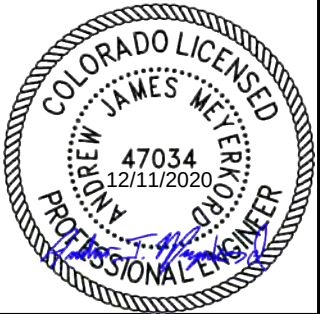
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8x8 (NOMINAL)
THICKNESS: 60 MM
PATTERN: HERRING BONE
NOTE: COORDINATE PATTERN ANGLE
AND LAYOUT WITH PLANS

6 PAVERS
(PEDESTRIAN USE) NTS



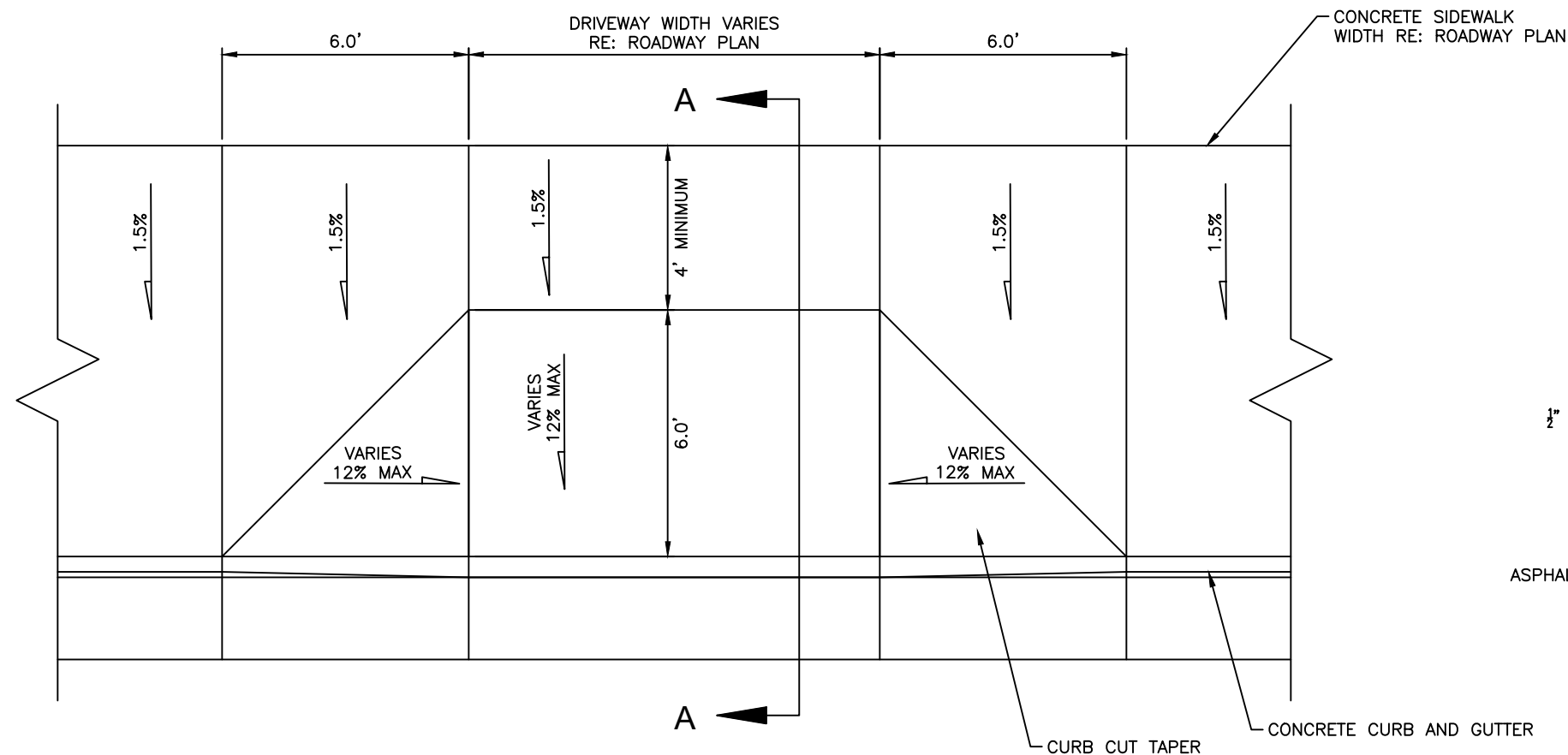
PAVESTONE: HOLLAND STONE
COLOR: CHARCOAL
PAVER SIZES: 4x8 (NOMINAL)
THICKNESS: 60 MM
NOTE: COORDINATE PATTERN ANGLE
AND LAYOUT WITH PLANS

8 PAVERS (BAND)
(PEDESTRIAN USE) NTS

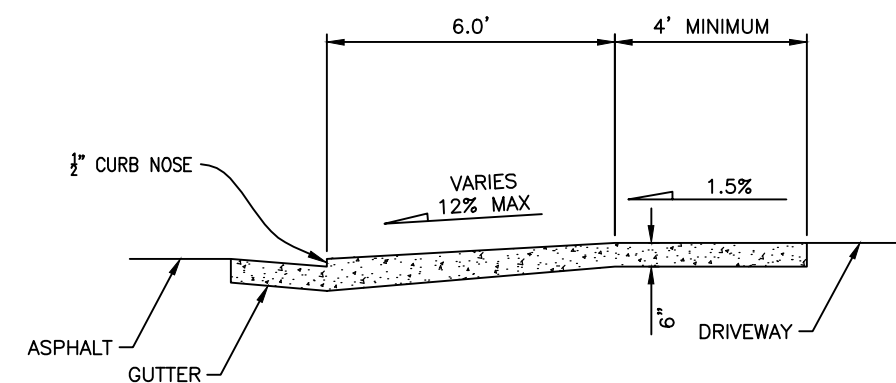


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File Name: 118355_RDDT_SH01.DWG											18-ST-40	
Horizontal Scale: NTS	Vertical Scale: NTS	(R-X)	Date	Comments	Initials		No Revisions:	Designer: JHH	Structure		Sheet Number 54	
							Revised:	Detailer: JVS	Numbers			
6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:	Sheet Subset: ROADWAY	Subset Sheets: DT-05 of 10			

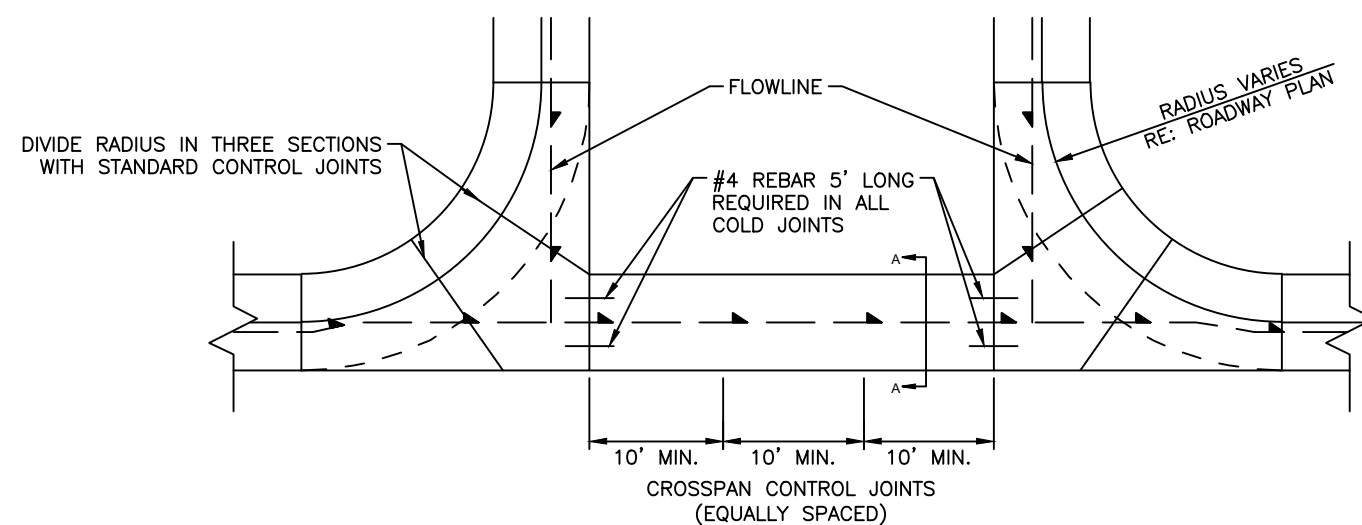
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CUT GRADING



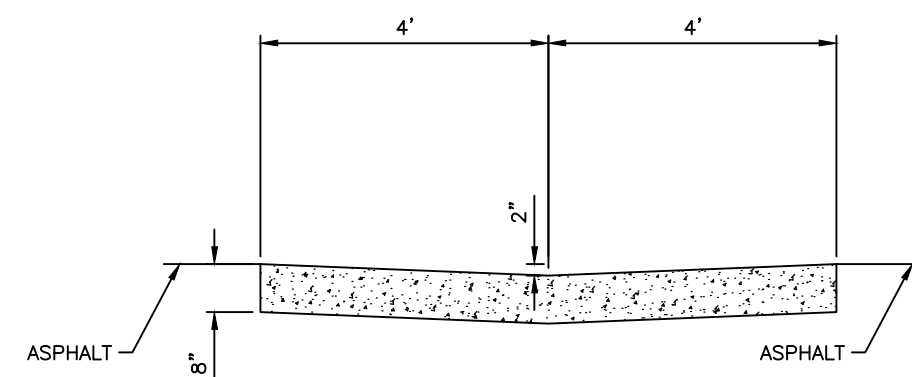
CURB CUT (SPECIAL) – ATTACHED SIDEWALK DETAIL*
PLAN



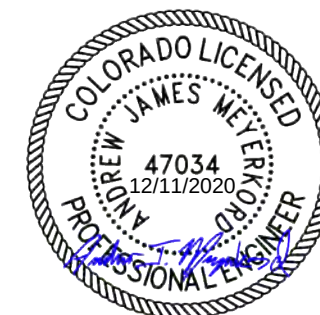
CURB CUT (SPECIAL) – ATTACHED SIDEWALK DETAIL*
SECTION A



VALLEY GUTTER DETAIL
PLAN



VALLEY GUTTER DETAIL
SECTION A



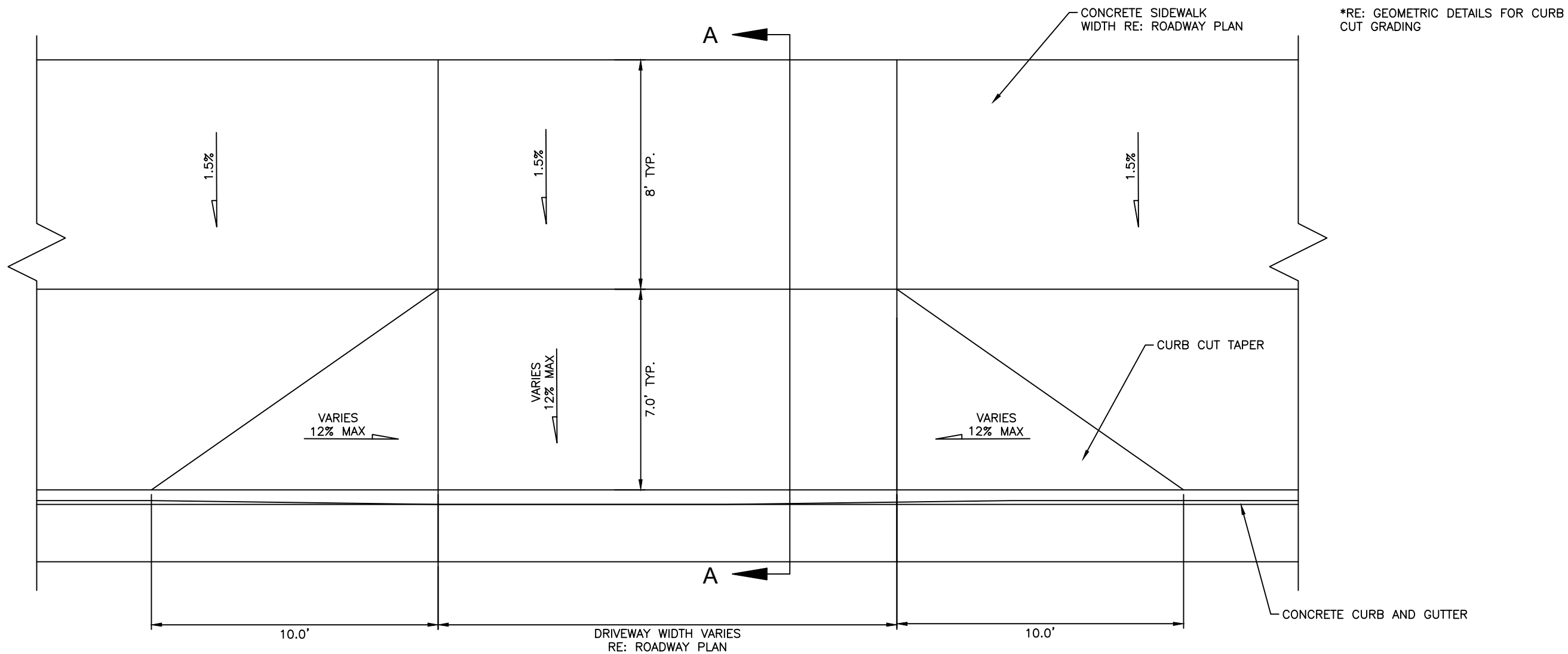
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Sheet Revisions			
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R-X			

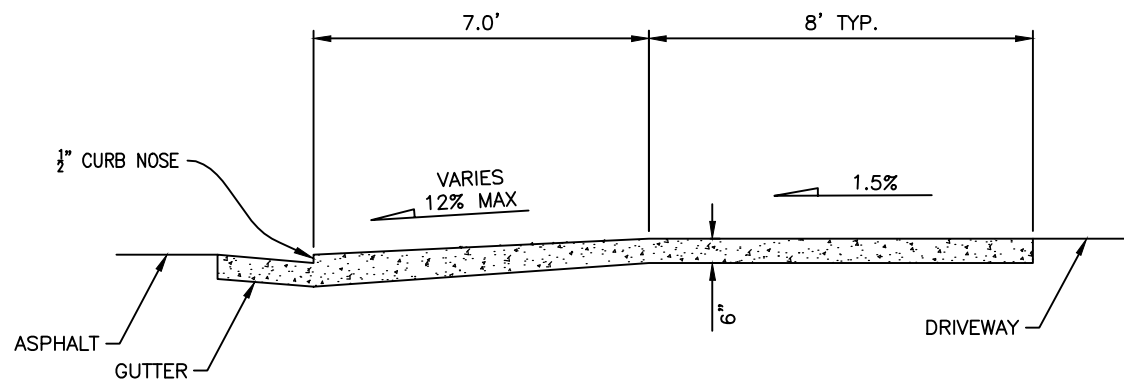


CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed	RALSTON RD - YUKON ST TO GARRISON ST ROADWAY DETAIL		Project No./Code
No Revisions:	ATTACHED WALK CURB CUT AND VALLEY GUTTER		18-ST-40
Revised:	Designer: JHH	Structure Numbers	
	Detailer: JVS		
Void:	Sheet Subject: ROADWAY	Subset Sheets: DT-06 of 10	Sheet Number 55

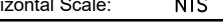


CURB CUT (SPECIAL) – DETACHED SIDEWALK DETAIL*
PLAN

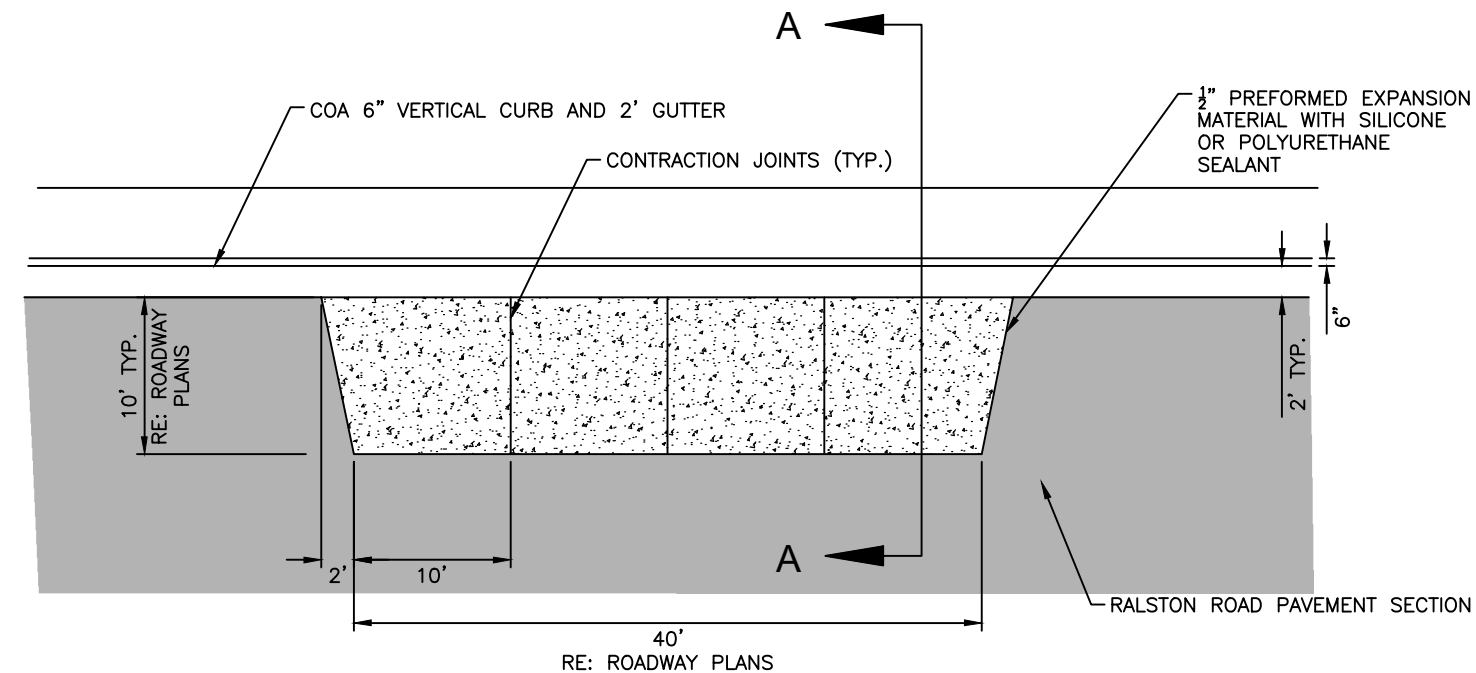


CURB CUT (SPECIAL) – DETACHED SIDEWALK DETAIL*
SECTION A

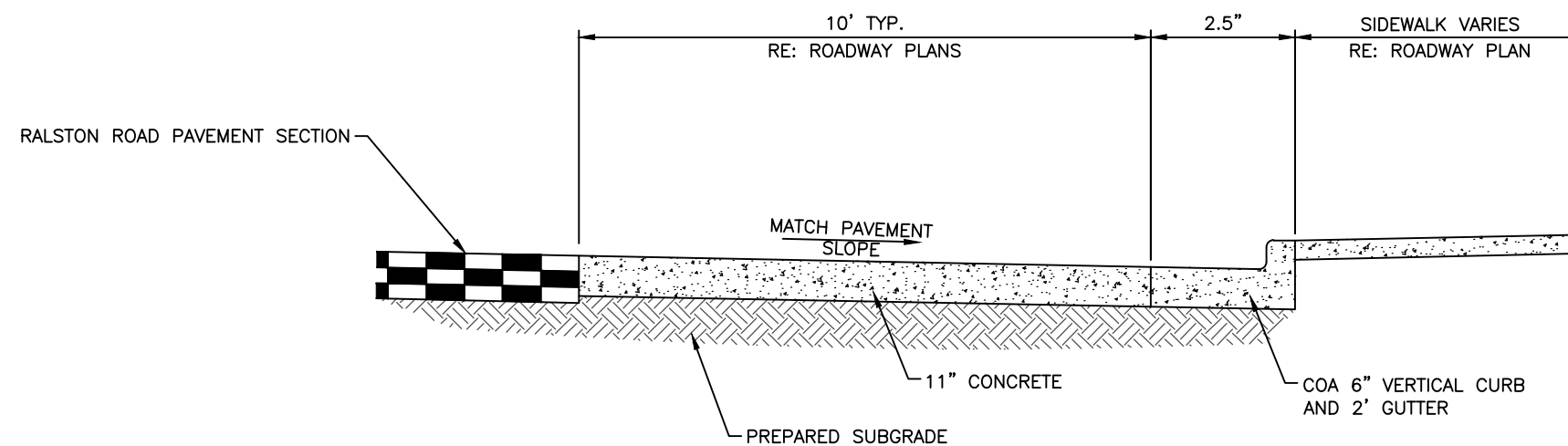


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Horizontal Scale: NTS Vertical Scale: NTS							Revised:		Designer: JHH		Structure			
 FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Detailer: JVS		Numbers					
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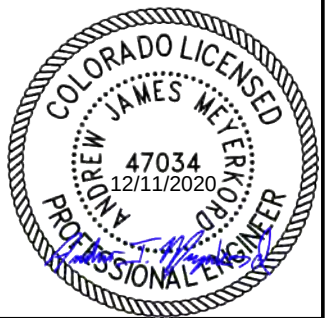
* DETAIL ADAPTED FROM 2016 RTD
STANDARD DRAWINGS



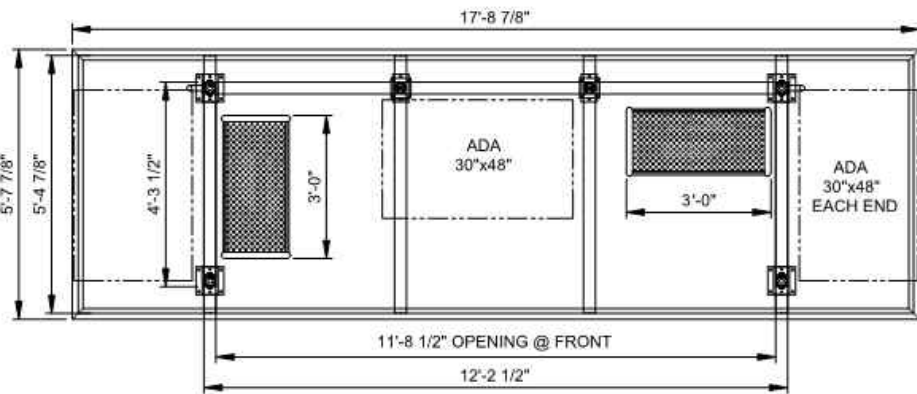
PLAN - CONCRETE BUS PAD *
DETAIL



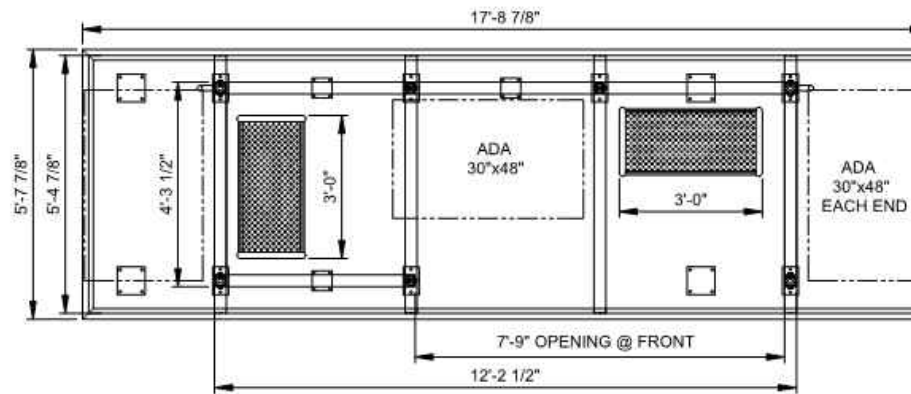
SECTION - CONCRETE BUS PAD *
DETAIL



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File Name: 118355_RDDT_SH01.DWG				No Revisions:						18-ST-40	
Horizontal Scale: NTS Vertical Scale: NTS						Revised:		Designer: JHH Detailer: JVS			
FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com						Void:		Sheet Subset: ROADWAY Subset Sheets: DT-08 of 10		Sheet Number 57	



OPTION 1

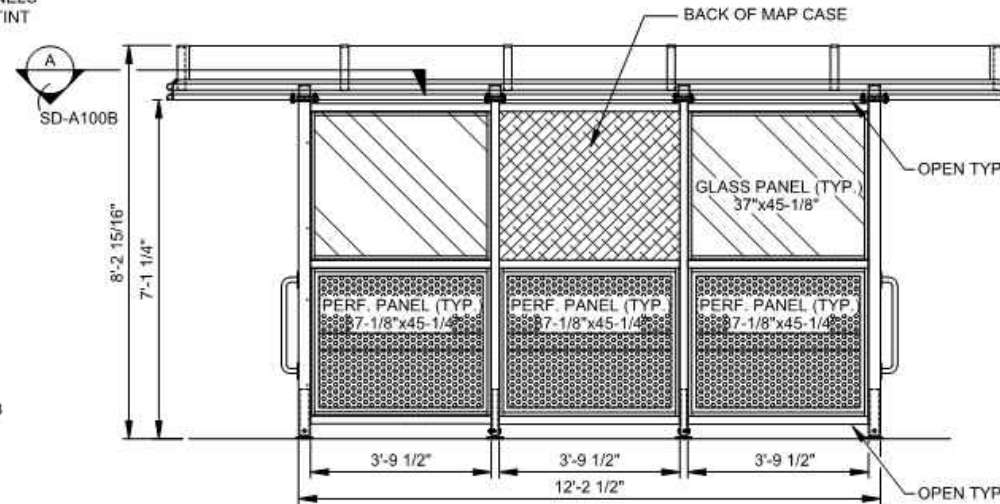
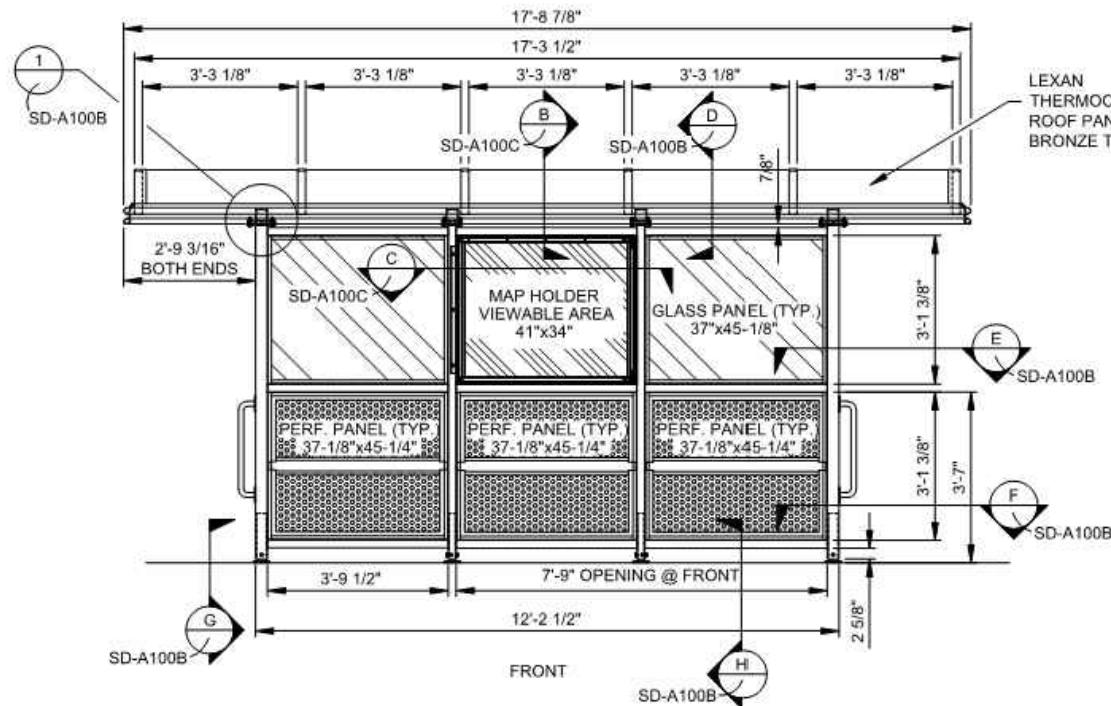


OPTION 2 - FRONT ENTRANCE SHIFTED TO RIGHT SIDE

FLOOR PLANS

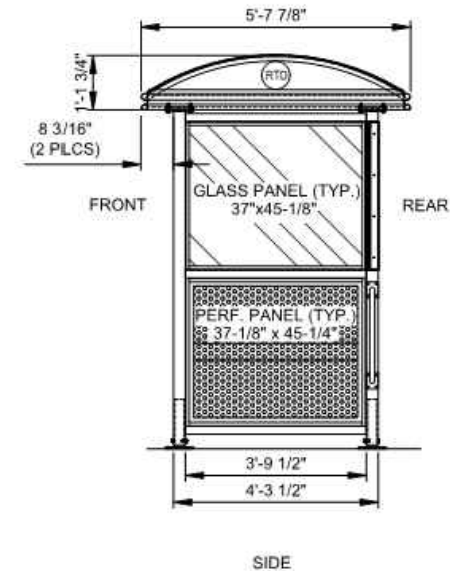
SCALE: 1/2" = 1'-0"

NOTE: FLOOR PLAN - OPTION 3
FRONT ENTRANCE SHIFTED
TO LEFT SIDE (NOT SHOWN)



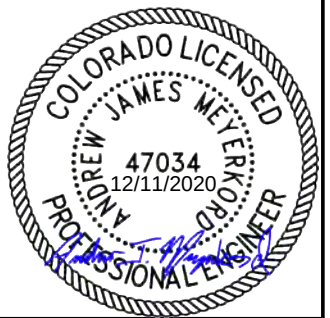
ELEVATION PLANS

SCALE: 1/2" = 1'-0"



NOTES:

1. UNLESS OTHERWISE NOTED, SHELTER TO BE ALL ALUMINUM OF ALLOY 6063-T5.
2. ALL HOLES SHALL BE DRILLED OR PUNCHED
3. ALUMINUM WELDING SHALL CONFORM TO AMERICAN WELDING SOCIETY STANDARD D1. 2-97. ELECTRODES SHALL CONFORM TO AWS/SFA 5.10 ER4043.
4. ALL WELDING TO BE DONE BY AWS CERTIFIED WELDERS AT TOLAR MANUF. CO. INC. FACILITY AT 258 MARIAH CIRCLE, CORONA, CA 92879 UNDER THE SUPERVISION OF THE RECORD DESIGN ENGINEER.
5. SHELTER TO BE ANCHORED WITH STAINLESS STEEL HILTI, 1/2" X 4 1/2"
6. SCREEN TO BE ALL ALUMINUM PERFORATED METAL 1/8 THK, 1/4 DIA. HOLES ON 3/8" CENTERS
7. ALL GLAZING TO BE 3/8" CLEAR TEMPERED SAFETY GLASS
8. ALL FASTENERS TO BE STAINLESS STEEL
9. SHELTER COMPLIES WITH ALL CONSTRUCTION STANDARDS OF DENVER CO.. SHELTER COMPLIES WITH ADA HANDICAP REQUIREMENTS.
10. SHELTER STD. COLOR SHALL BE RAL 6008 FIR GREEN.



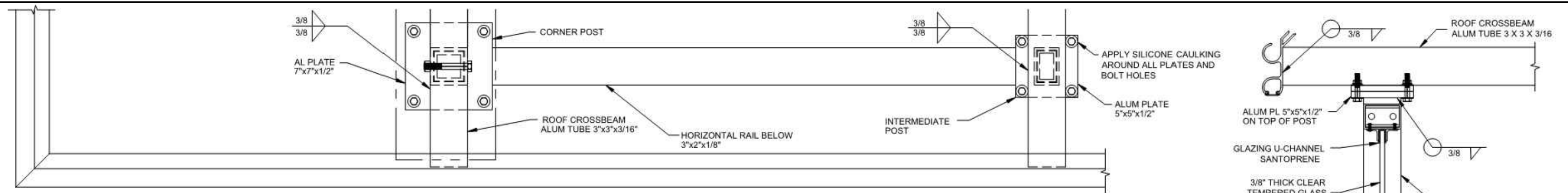
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6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com	

Sheet Revisions			
Date	Comments	Initials	

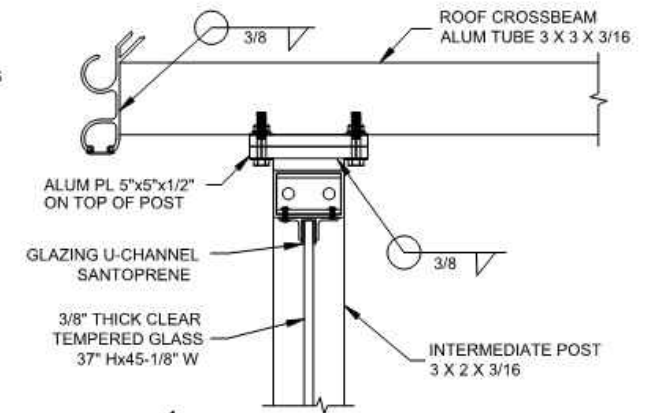


CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

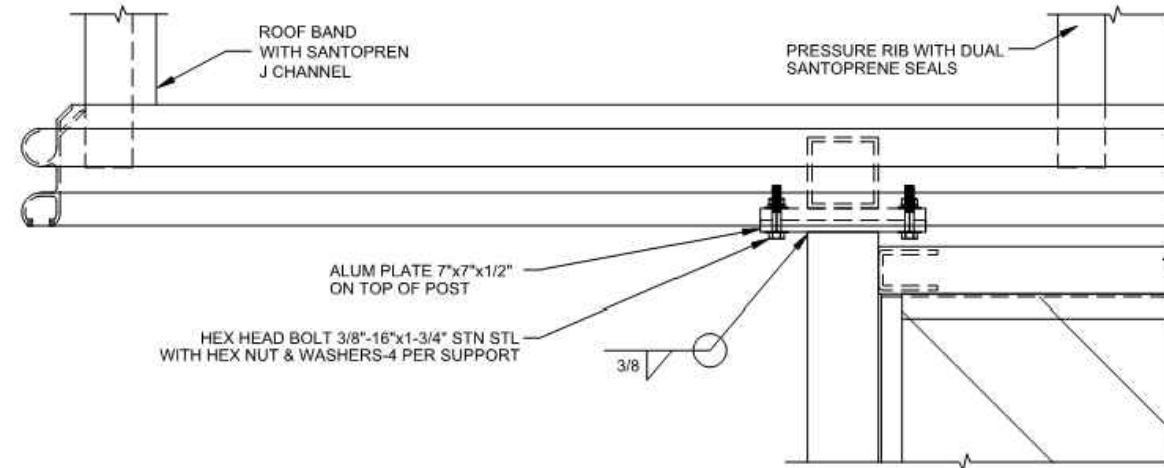
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No Revisions:		Designer:	JHH	Structure	18-ST-40
Revised:		Detailer:	JVS	Numbers	
Void:		Sheet Subset:	ROADWAY	Subset Sheets:	DT-09 of 10
					Sheet Number 58



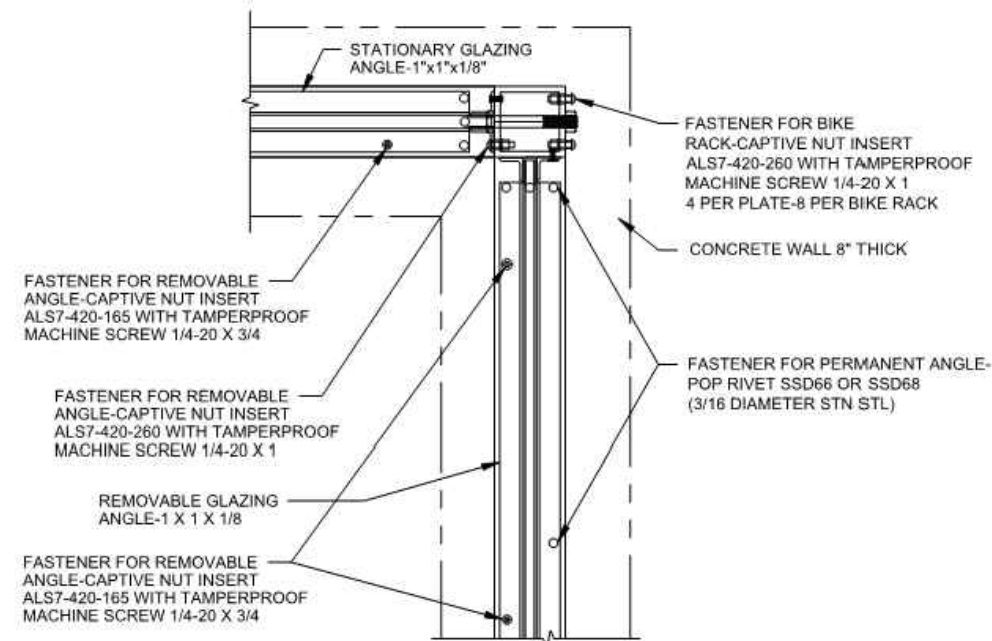
SECTION A - ROOF PLATE VIEW
SD-A100A NTS



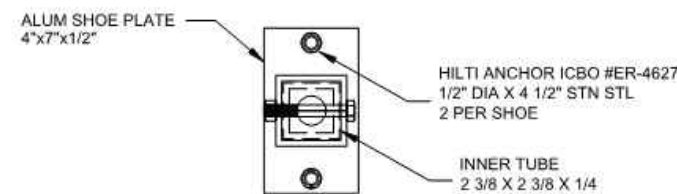
SECTION D - GLAZING
SD-A100A NTS



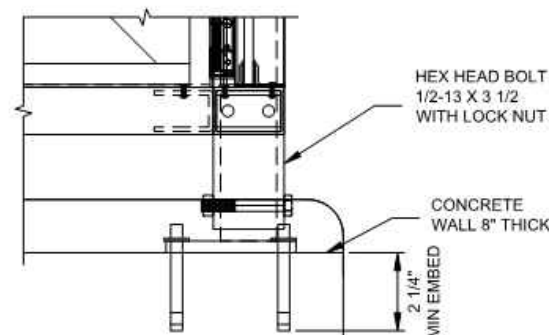
DETAIL 1 - ROOF TO POST CONNECTION
SD-A100A NTS



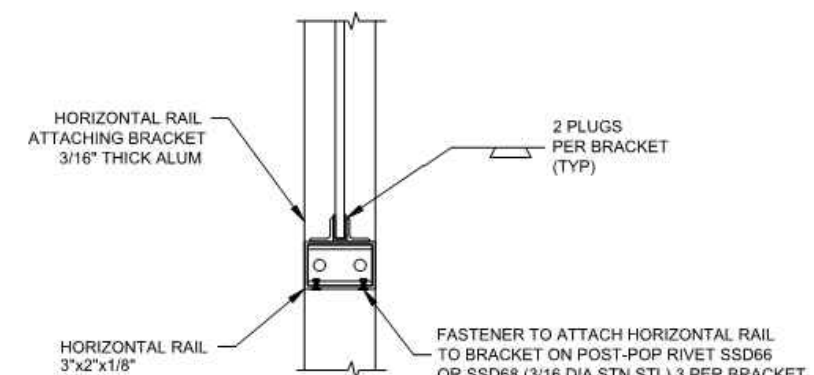
SECTION E - GLAZING ANGLE SECURING
SD-A100A NTS



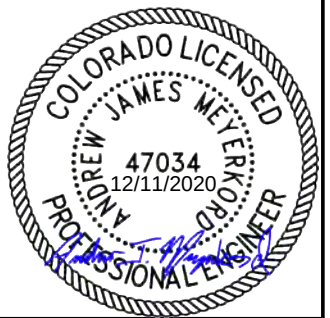
SECTION F - SHOE VIEW
SD-A100A NTS



SECTION G - ANCHORING AND POST/SHOE CONNECTION
SD-A100A NTS

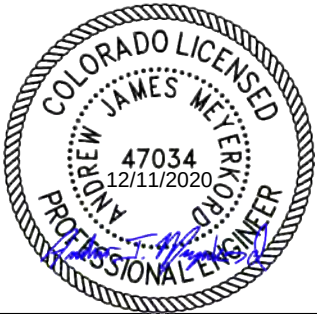
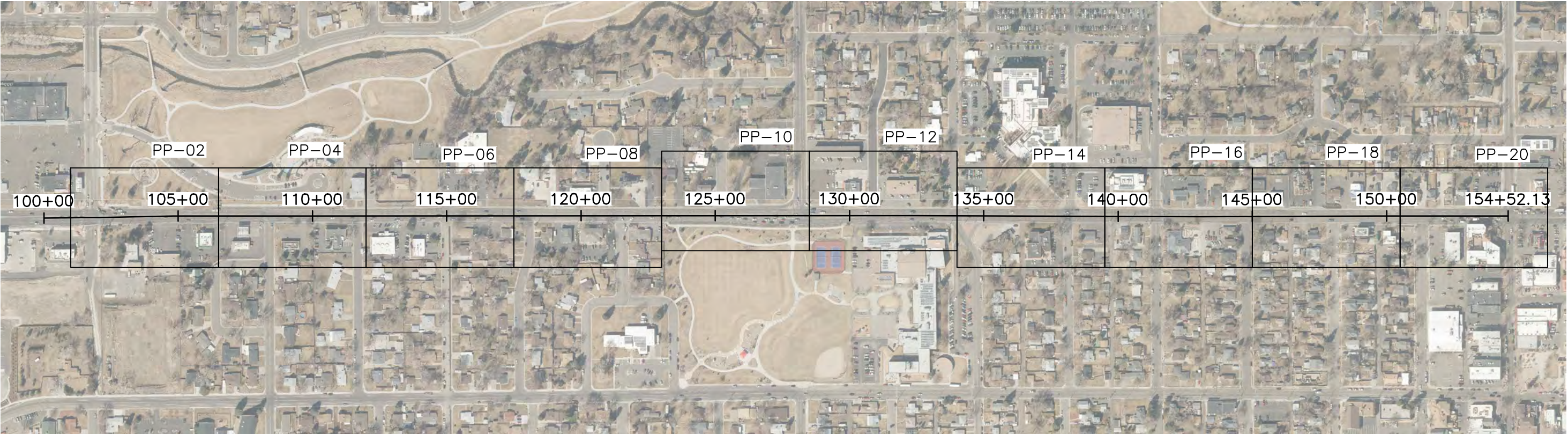


SECTION H - GLAZING SECTION
SD-A100A NTS



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FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com						Void:						
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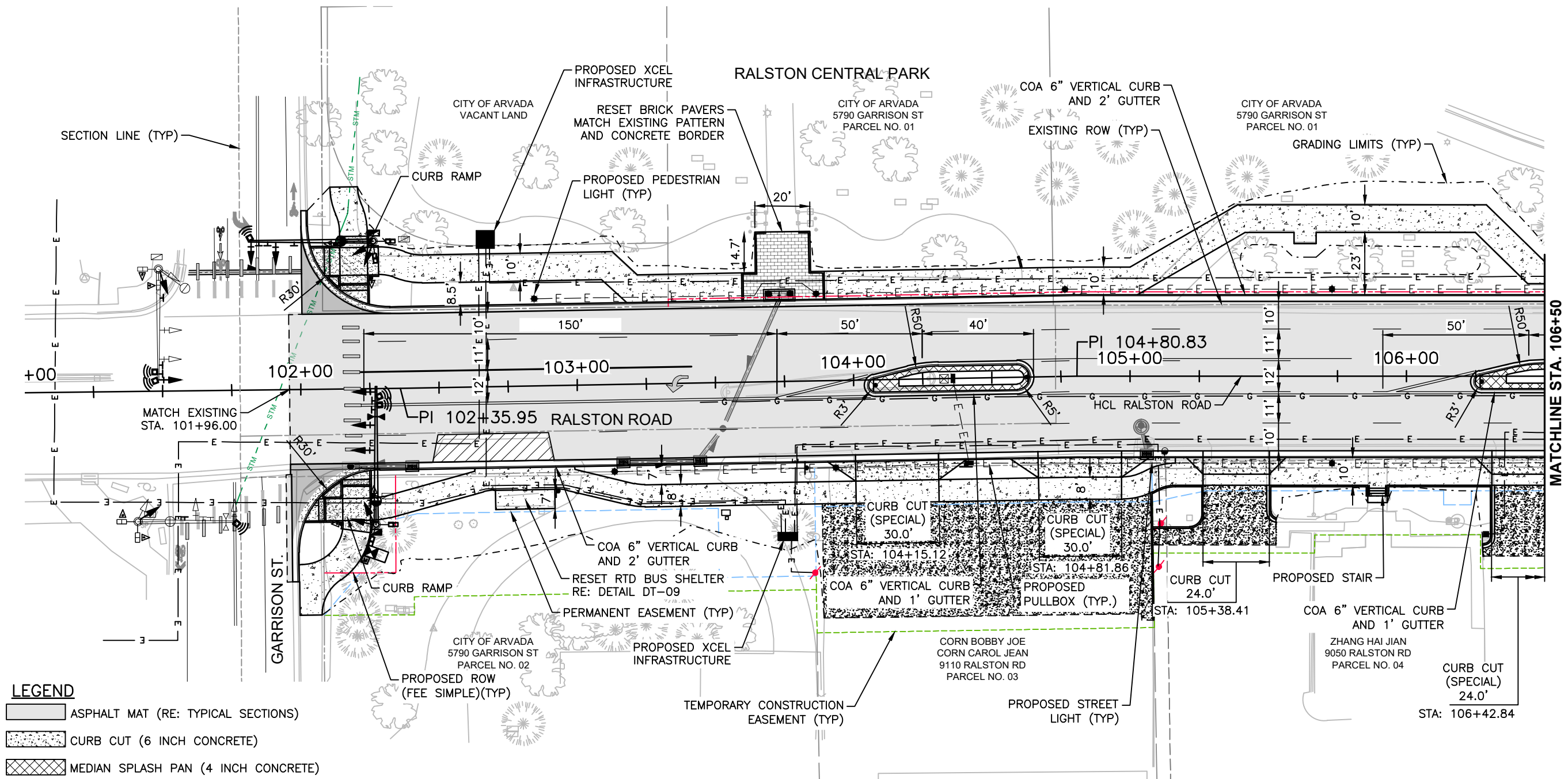
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FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Detailer: DAL		Numbers			
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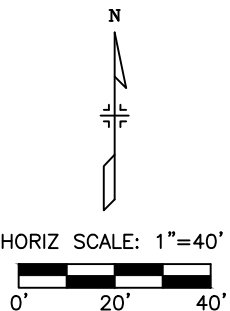


LEGEND

- ASPHALT MAT (RE: TYPICAL SECTIONS)
- CURB CUT (6 INCH CONCRETE)
- MEDIAN SPLASH PAN (4 INCH CONCRETE)
- SIDEWALK (6 INCH CONCRETE)
- CURB RAMP (8 INCH CONCRETE)
- VALLEY GUTTER (8 INCH CONCRETE)
- RTD BUS PAD (11 INCH CONCRETE)
- SLOPE PAVING (4 INCH CONCRETE)
- BRICK PAVERS (REMOVE AND RESET)
- PARKING LOT (4 INCH HMA)
- PARKING LOT (6 INCH CONCRETE)

NOTES:

1. FOR ADDITIONAL ROADWAY AND PROPERTY GRADING RE: ROADWAY GEOMETRIC DETAILS, INTERSECTION DETAILS AND PROPERTY ACCESS DETAILS.
2. FOR ALL NON-ROADWAY CURBS AT THE BACK OF SIDEWALK AND ON PRIVATE PROPERTY RE: ROADWAY DETAILS, ROADWAY GEOMETRIC DETAILS AND PROPERTY ACCESS DETAILS.
3. FOR DECORATIVE PAVEMENT DETAILS REQUIRED IN THE SIDEWALK AND CURB RAMPS RE: LANDSCAPE PLANS AND LANDSCAPE DETAILS.
4. FOR CURB CUT DETAILS RE: ROADWAY DETAILS.
5. FOR RTD BUS PAD DETAILS RE: ROADWAY DETAILS.
6. FOR STAIR DETAIL RE: ROADWAY DETAILS.
7. ALL STRIPING DIMENSIONS MEASURED TO EDGE OF PAVEMENT AND CENTER OF STRIPE.
8. ALL RADII MEASURED TO FLOWLINE OF CURB.



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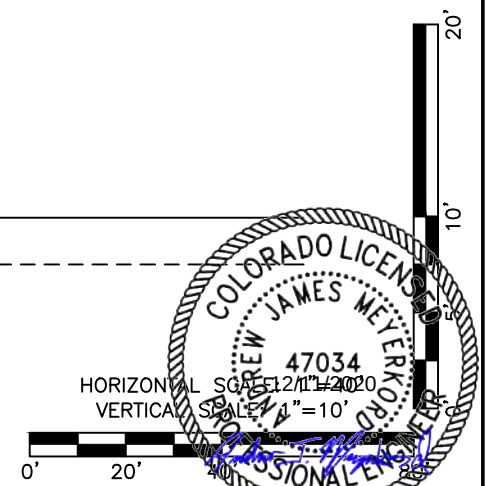
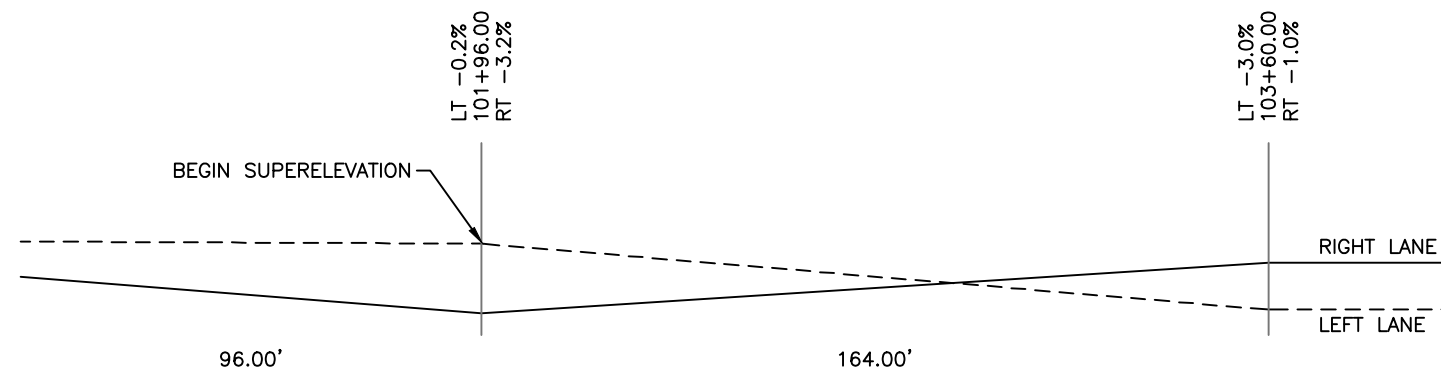
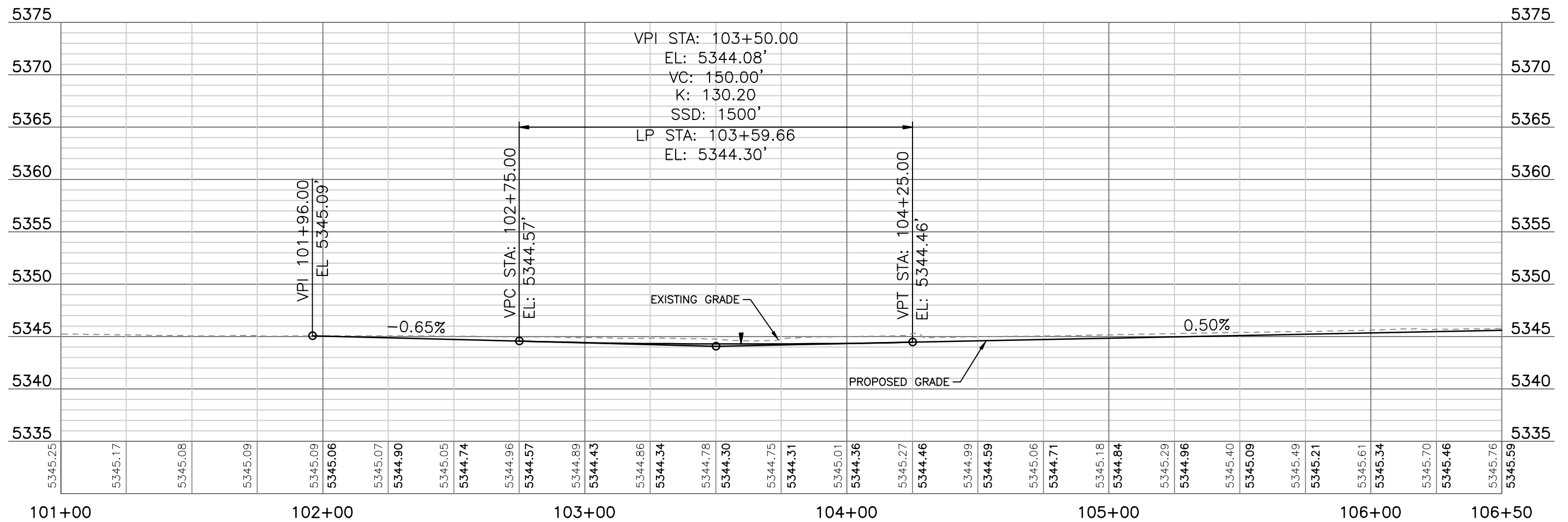
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Greenwood Village, CO 80111
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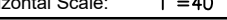
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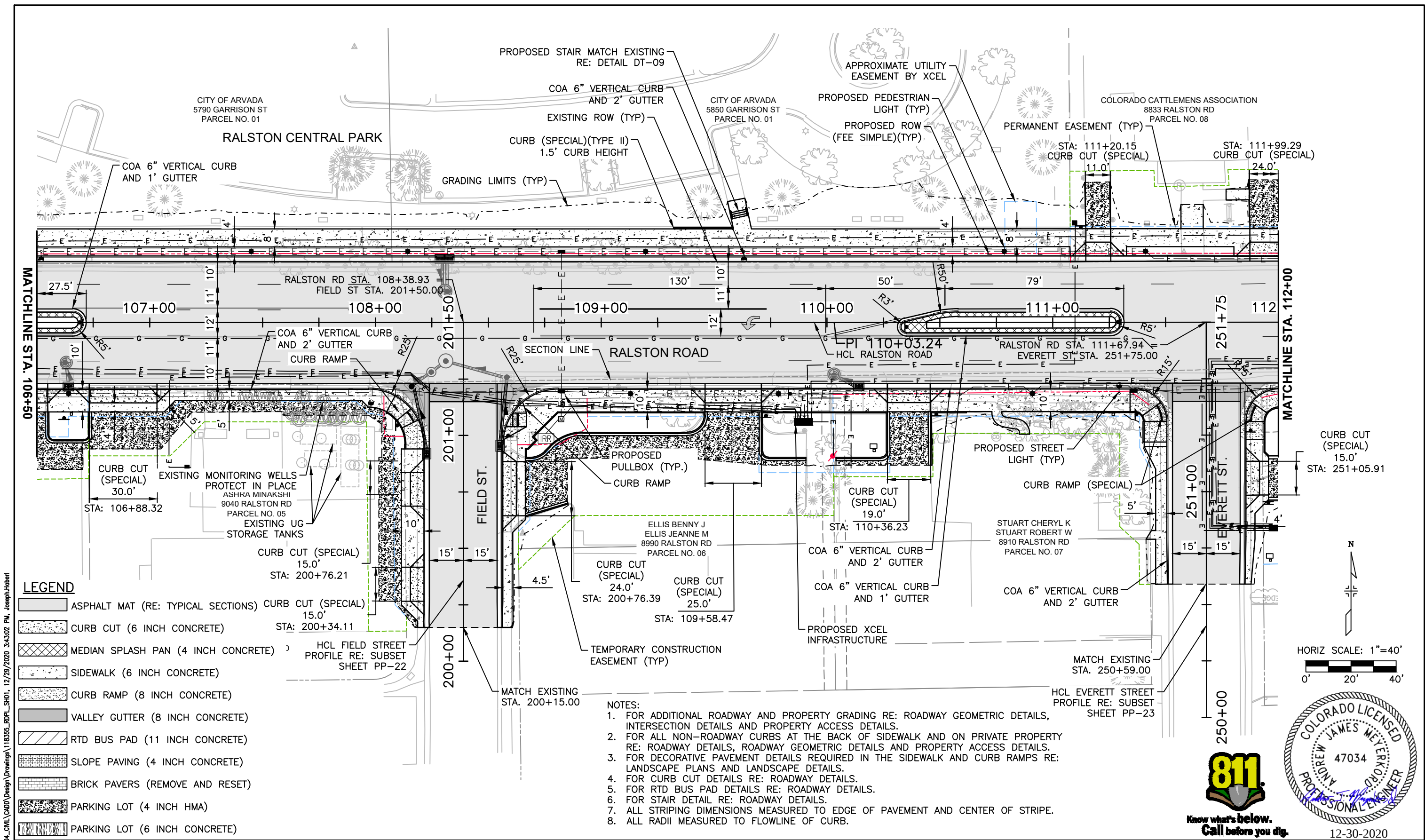
CITY OF ARVADA
PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed	RALSTON RD - YUKON ST TO GARRISON ST ROADWAY PLAN RALSTON ROAD (BEGIN - STA. 106+50)			Project No./Code
No Revisions:				18-ST-40
Revised:	Designer: JHH	Structure		
	Detailer: BCN	Numbers		
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	 FELSBERG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com								Void:	Sheet Subset: ROADWAY	Subset Sheets: PP-03 of 38	Sheet Number 62			

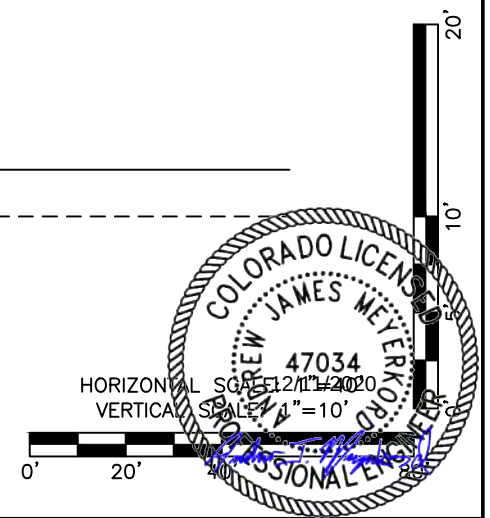
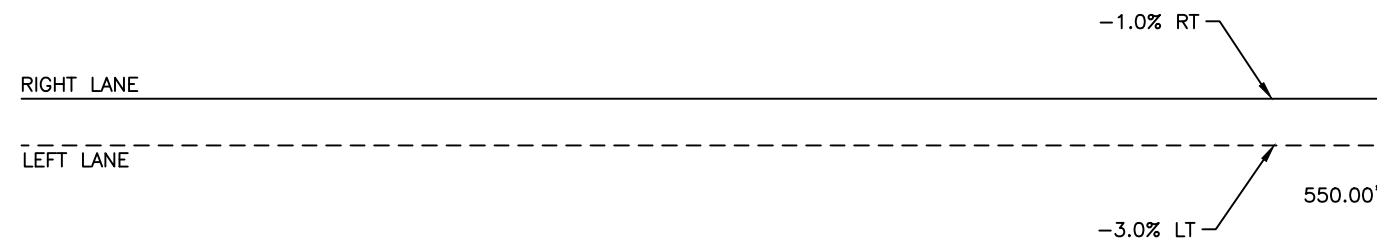
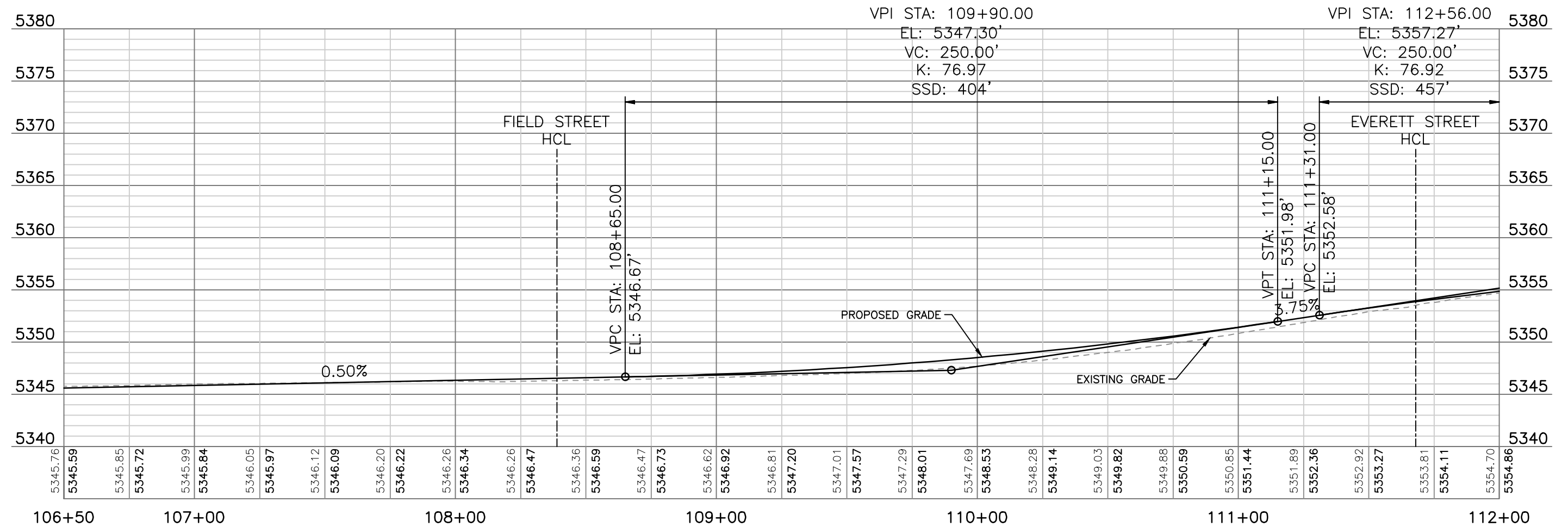


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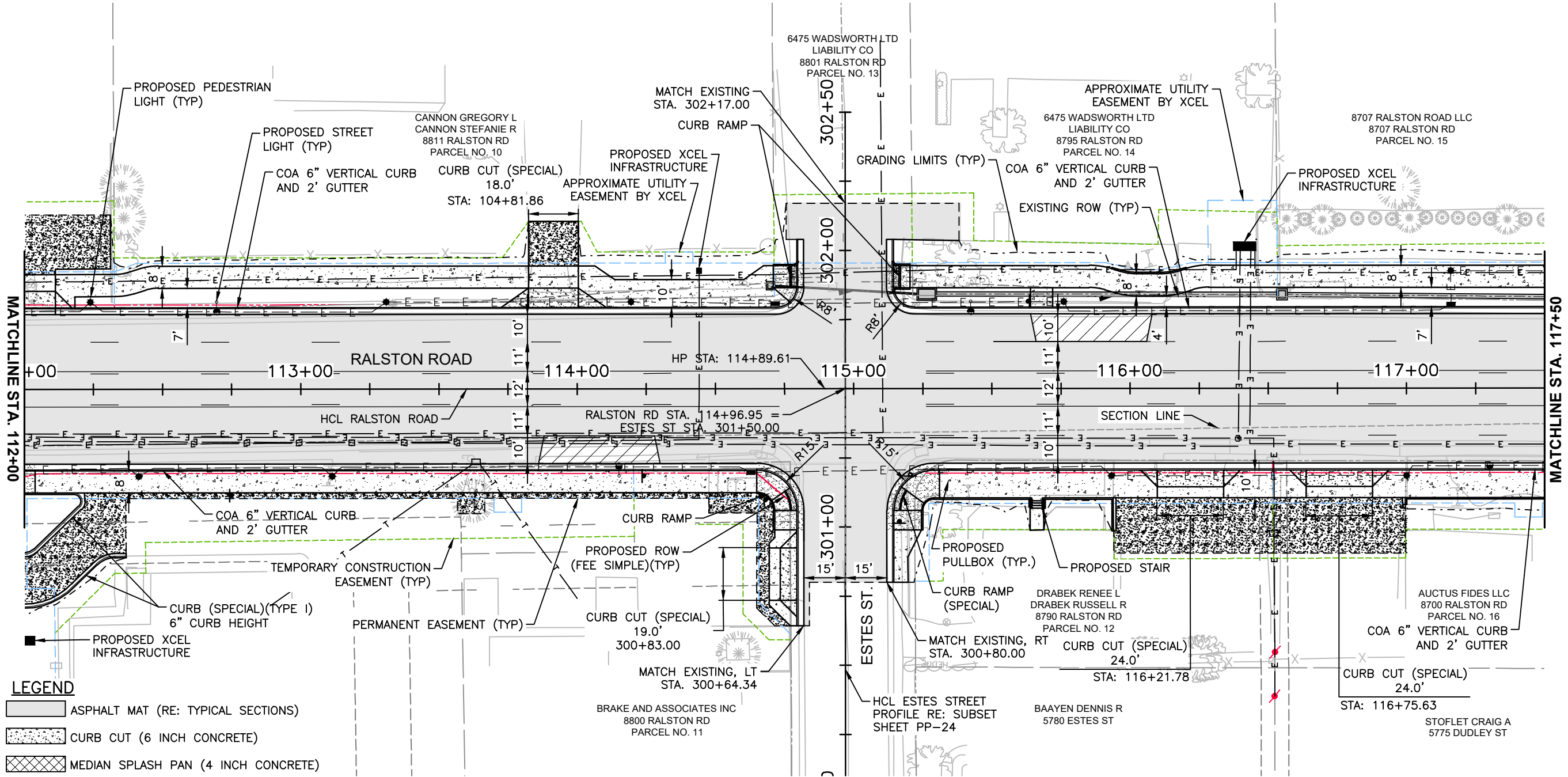
- ASPHALT MAT (RE: TYPICAL SECTIONS)
- CURB CUT (6 INCH CONCRETE)
- MEDIAN SPLASH PAN (4 INCH CONCRETE)
- SIDEWALK (6 INCH CONCRETE)
- CURB RAMP (8 INCH CONCRETE)
- VALLEY GUTTER (8 INCH CONCRETE)
- RTD BUS PAD (11 INCH CONCRETE)
- SLOPE PAVING (4 INCH CONCRETE)
- BRICK PAVERS (REMOVE AND RESET)
- PARKING LOT (4 INCH HMA)
- PARKING LOT (6 INCH CONCRETE)

- NOTES:**
1. FOR ADDITIONAL ROADWAY AND PROPERTY GRADING RE: ROADWAY GEOMETRIC DETAILS, INTERSECTION DETAILS AND PROPERTY ACCESS DETAILS.
 2. FOR ALL NON-ROADWAY CURBS AT THE BACK OF SIDEWALK AND ON PRIVATE PROPERTY RE: ROADWAY DETAILS, ROADWAY GEOMETRIC DETAILS AND PROPERTY ACCESS DETAILS.
 3. FOR DECORATIVE PAVEMENT DETAILS REQUIRED IN THE SIDEWALK AND CURB RAMPS RE: LANDSCAPE PLANS AND LANDSCAPE DETAILS.
 4. FOR CURB CUT DETAILS RE: ROADWAY DETAILS.
 5. FOR RTD BUS PAD DETAILS RE: ROADWAY DETAILS.
 6. FOR STAIR DETAIL RE: ROADWAY DETAILS.
 7. ALL STRIPING DIMENSIONS MEASURED TO EDGE OF PAVEMENT AND CENTER OF STRIPE.
 8. ALL RADII MEASURED TO FLOWLINE OF CURB.

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FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com			Initials				Void:			Detailer: DAL		Numbers	
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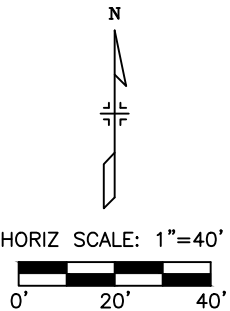


LEGEND

- ASPHALT MAT (RE: TYPICAL SECTIONS)
- CURB CUT (6 INCH CONCRETE)
- MEDIAN SPLASH PAN (4 INCH CONCRETE)
- SIDEWALK (6 INCH CONCRETE)
- CURB RAMP (8 INCH CONCRETE)
- VALLEY GUTTER (8 INCH CONCRETE)
- RTD BUS PAD (11 INCH CONCRETE)
- SLOPE PAVING (4 INCH CONCRETE)
- BRICK PAVERS (REMOVE AND RESET)
- PARKING LOT (4 INCH HMA)
- PARKING LOT (6 INCH CONCRETE)

NOTES:

- FOR ADDITIONAL ROADWAY AND PROPERTY GRADING RE: ROADWAY GEOMETRIC DETAILS, INTERSECTION DETAILS AND PROPERTY ACCESS DETAILS.
- FOR ALL NON-ROADWAY CURBS AT THE BACK OF SIDEWALK AND ON PRIVATE PROPERTY RE: ROADWAY DETAILS, ROADWAY GEOMETRIC DETAILS AND PROPERTY ACCESS DETAILS.
- FOR DECORATIVE PAVEMENT DETAILS REQUIRED IN THE SIDEWALK AND CURB RAMPS RE: LANDSCAPE PLANS AND LANDSCAPE DETAILS.
- FOR CURB CUT DETAILS RE: ROADWAY DETAILS.
- FOR RTD BUS PAD DETAILS RE: ROADWAY DETAILS.
- FOR STAIR DETAIL RE: ROADWAY DETAILS.
- ALL STRIPING DIMENSIONS MEASURED TO EDGE OF PAVEMENT AND CENTER OF STRIPE.
- ALL RADII MEASURED TO FLOWLINE OF CURB.



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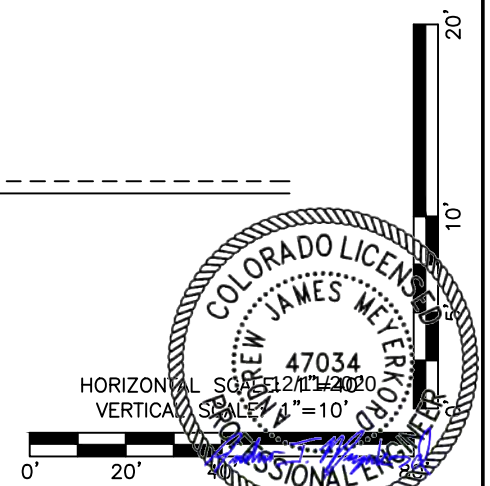
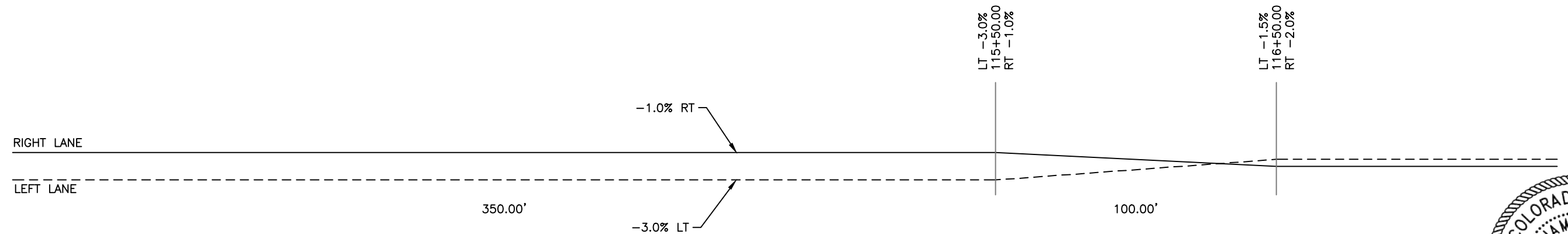
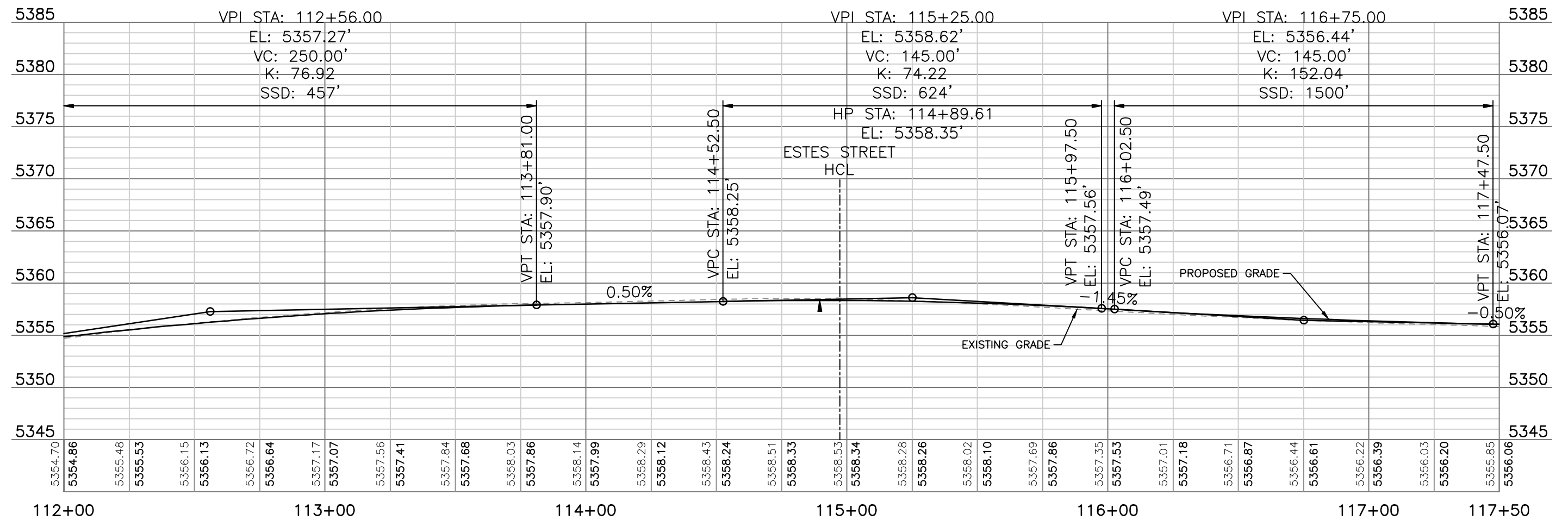
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6400 South Fiddlers Green Circle, Suite 1500
Greenwood Village, CO 80111
Phone: 303.721.1440
www.FHUENG.com

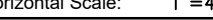
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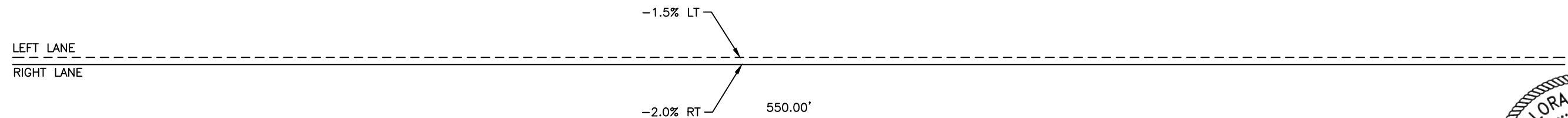
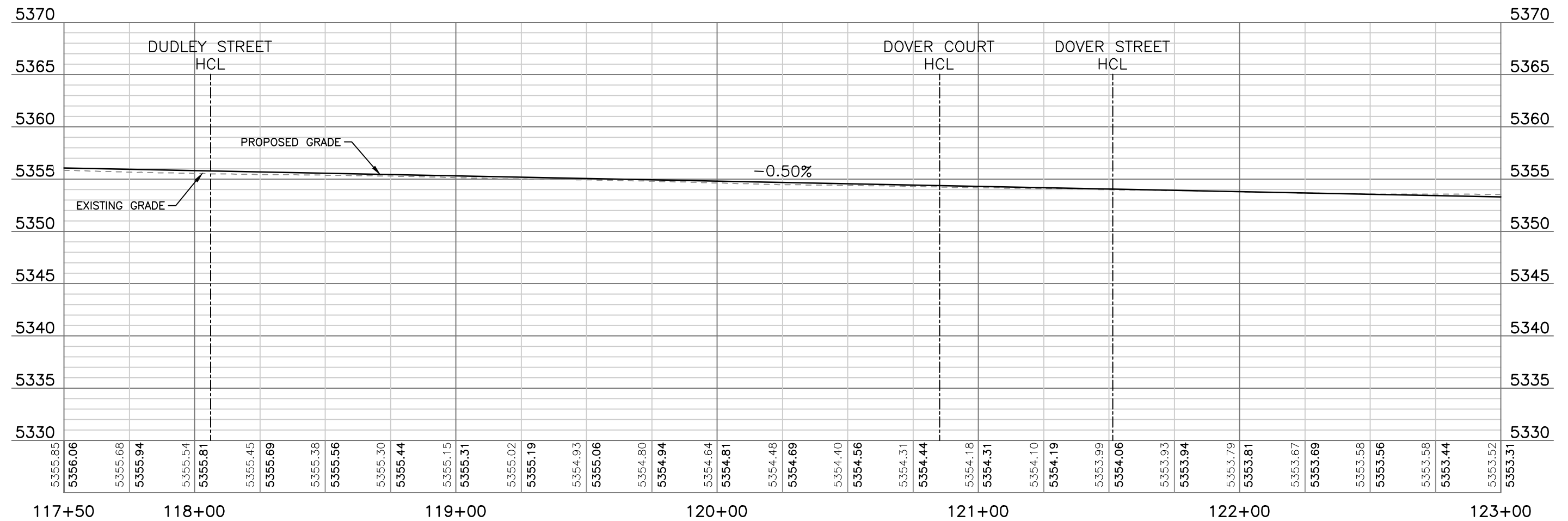
CITY OF ARVADA
PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY PLAN RALSTON ROAD (STA. 112+00 - STA. 117+50)			Project No./Code
No Revisions:		Designer:	JHH	Structure	18-ST-40
Revised:		Detailer:	BCN	Numbers	
Void:		Sheet Subset:	ROADWAY	Subset Sheets: PP-06 of 40	Sheet Number 65



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 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Detailer: DAL		Numbers				
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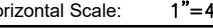


HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=10'

0' 20'

0' 10' 20'

COLORADO LICENSE
JAMES MEYER
47034
PROFESSIONAL ENGINEER

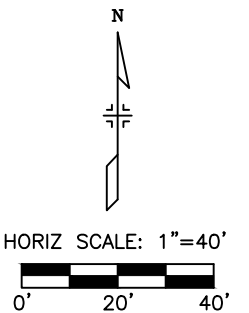
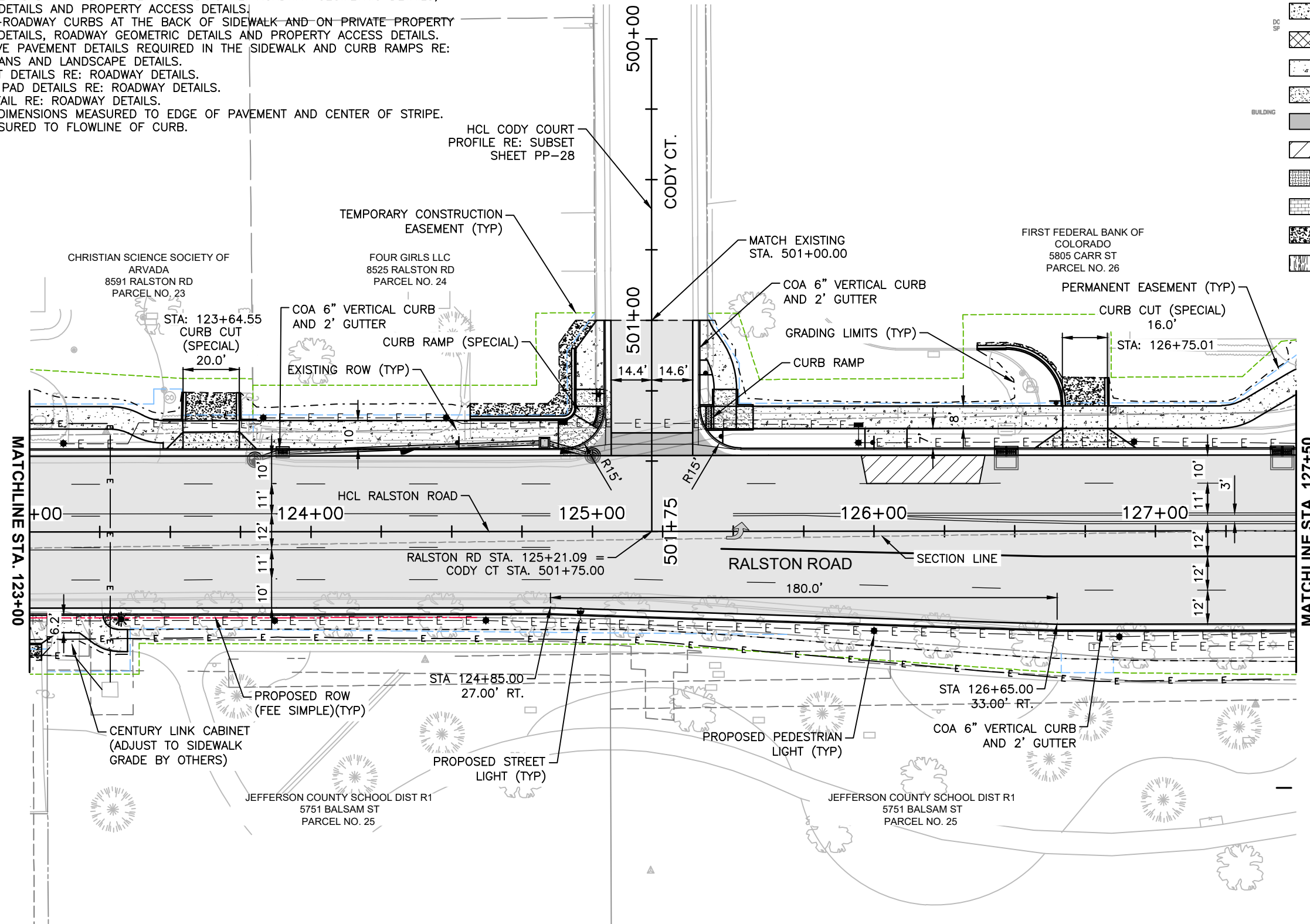
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 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Detailer: DAL	Numbers			
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NOTES:

1. FOR ADDITIONAL ROADWAY AND PROPERTY GRADING RE: ROADWAY GEOMETRIC DETAILS, INTERSECTION DETAILS AND PROPERTY ACCESS DETAILS.
2. FOR ALL NON-ROADWAY CURBS AT THE BACK OF SIDEWALK AND ON PRIVATE PROPERTY RE: ROADWAY DETAILS, ROADWAY GEOMETRIC DETAILS AND PROPERTY ACCESS DETAILS.
3. FOR DECORATIVE PAVEMENT DETAILS REQUIRED IN THE SIDEWALK AND CURB RAMPS RE: LANDSCAPE PLANS AND LANDSCAPE DETAILS.
4. FOR CURB CUT DETAILS RE: ROADWAY DETAILS.
5. FOR RTD BUS PAD DETAILS RE: ROADWAY DETAILS.
6. FOR STAIR DETAIL RE: ROADWAY DETAILS.
7. ALL STRIPING DIMENSIONS MEASURED TO EDGE OF PAVEMENT AND CENTER OF STRIPE.
8. ALL RADII MEASURED TO FLOWLINE OF CURB.

LEGEND

- ASPHALT MAT (RE: TYPICAL SECTIONS)
- CURB CUT (6 INCH CONCRETE)
- MEDIAN SPLASH PAN (4 INCH CONCRETE)
- SIDEWALK (6 INCH CONCRETE)
- CURB RAMP (8 INCH CONCRETE)
- VALLEY GUTTER (8 INCH CONCRETE)
- RTD BUS PAD (11 INCH CONCRETE)
- SLOPE PAVING (4 INCH CONCRETE)
- BRICK PAVERS (REMOVE AND RESET)
- PARKING LOT (4 INCH HMA)
- PARKING LOT (6 INCH CONCRETE)



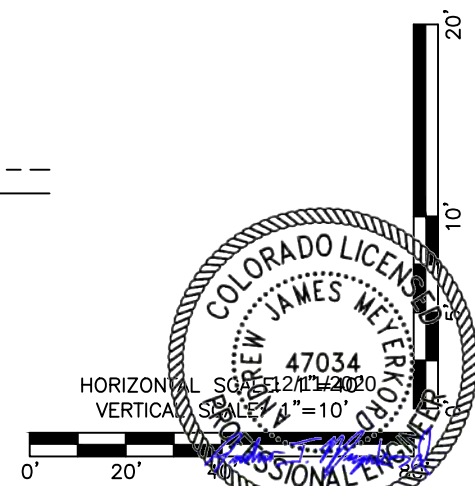
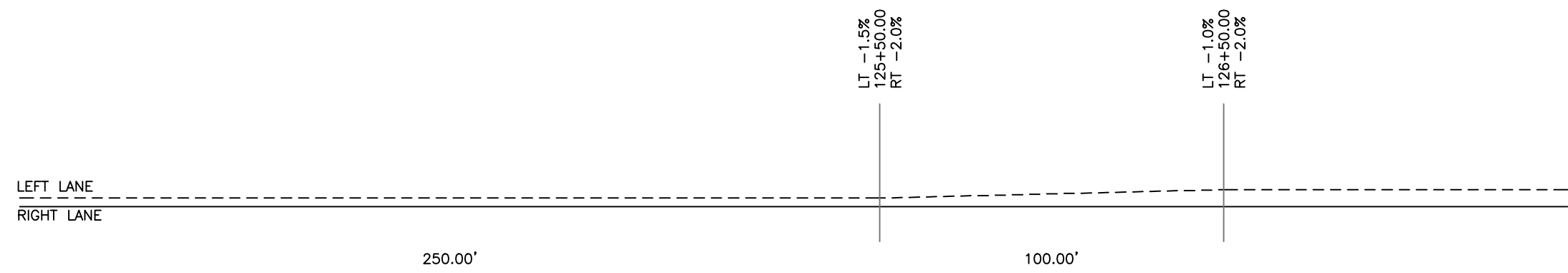
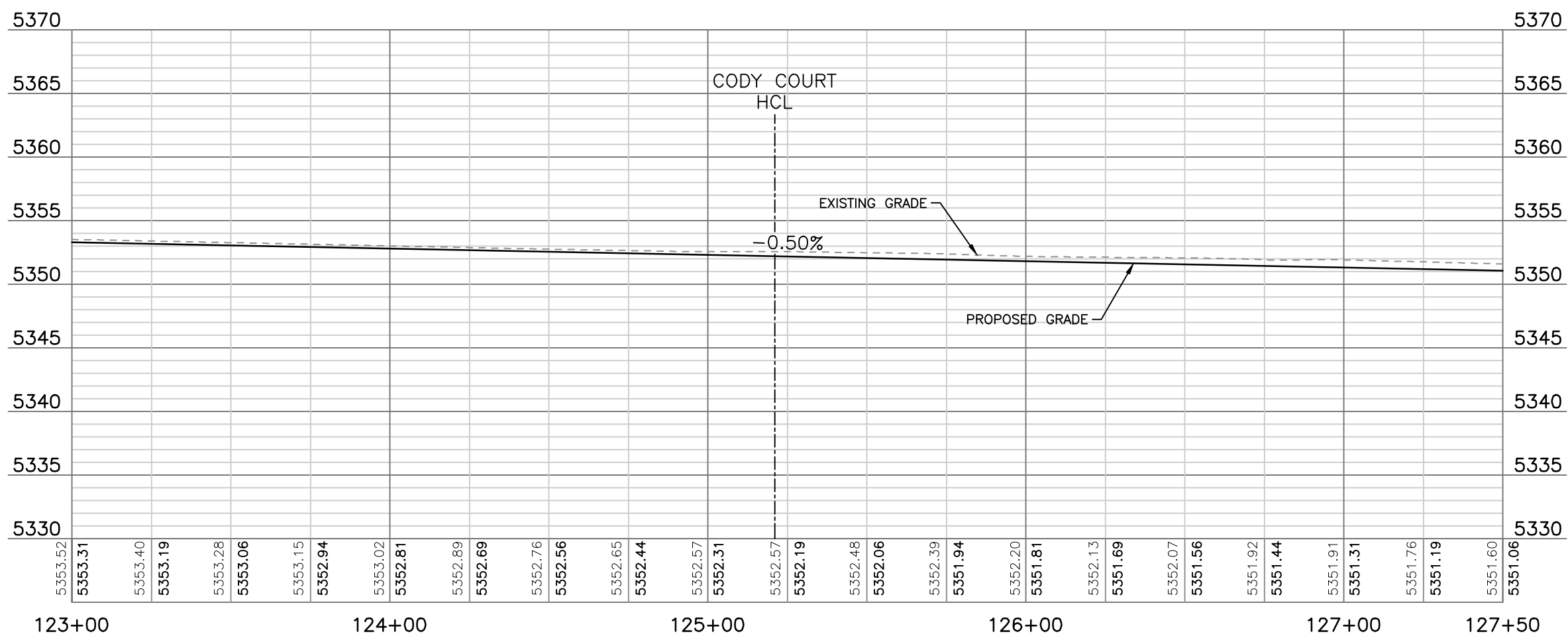
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Date	Comments	Initials	



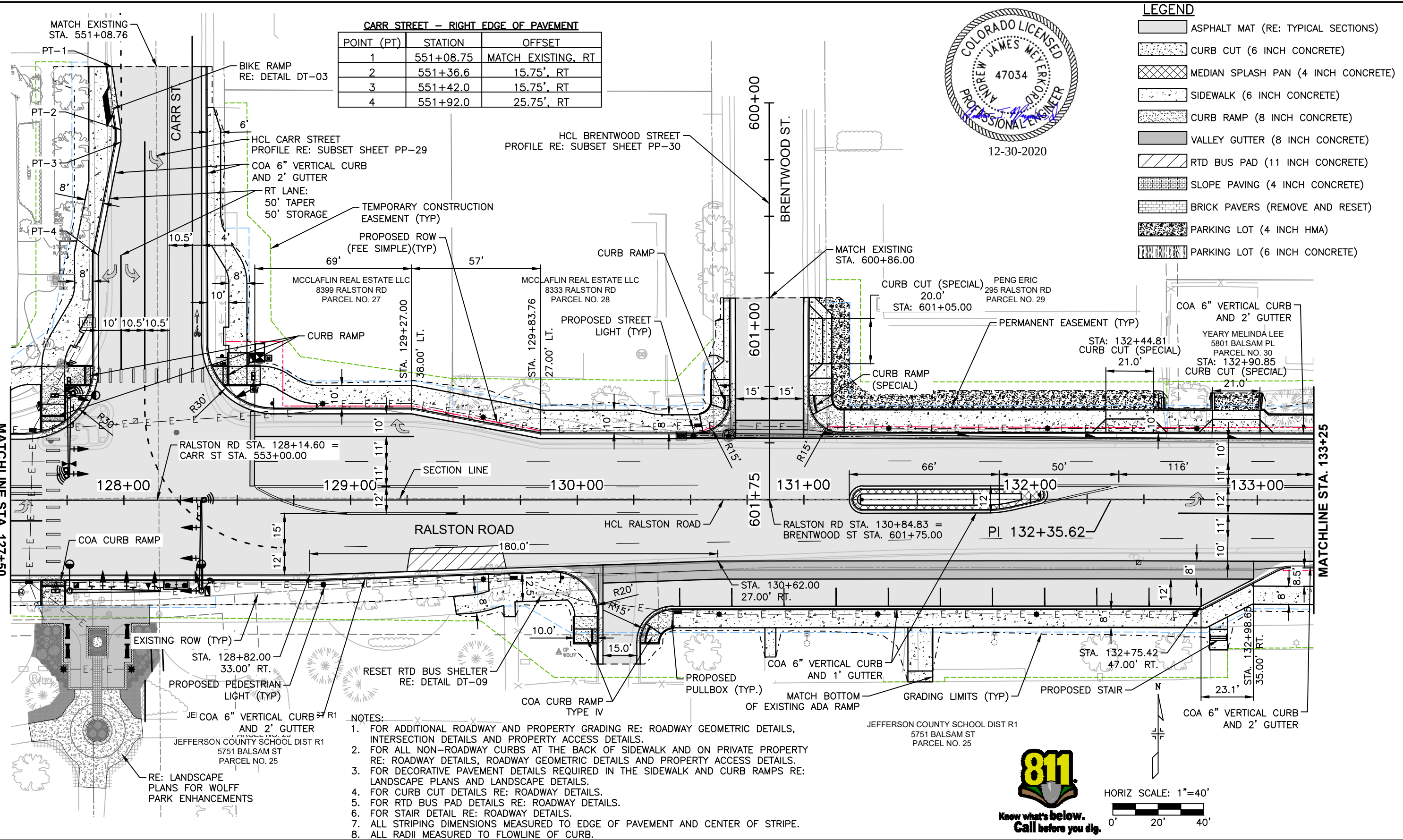
CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY PLAN RALSTON ROAD (STA. 123+00 - STA. 127+50)			Project No./Code
No Revisions:		Designer:	JHH	Structure	18-ST-40
Revised:		Detailer:	BCN	Numbers	
Void:		Sheet Subset:	ROADWAY	Subset Sheets: PP-10 of 40	
					Sheet Number 69



EA118355-01 Revision Revisions	Print Date: 12/7/2020 12:08:10 PM		Sheet Revisions <table><tr><th>Date</th><th>Comments</th><th>Initials</th></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table>	Date	Comments	Initials																CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY PROFILE RALSTON ROAD (STA. 123+00 - STA. 127+50)			Project No./Code	
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FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com				Detailer: DAL Numbers																									
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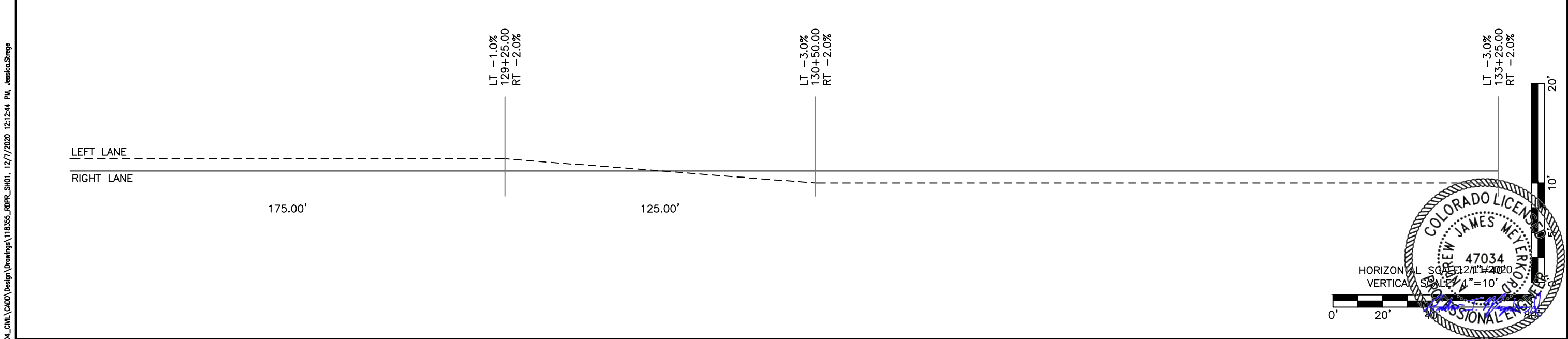
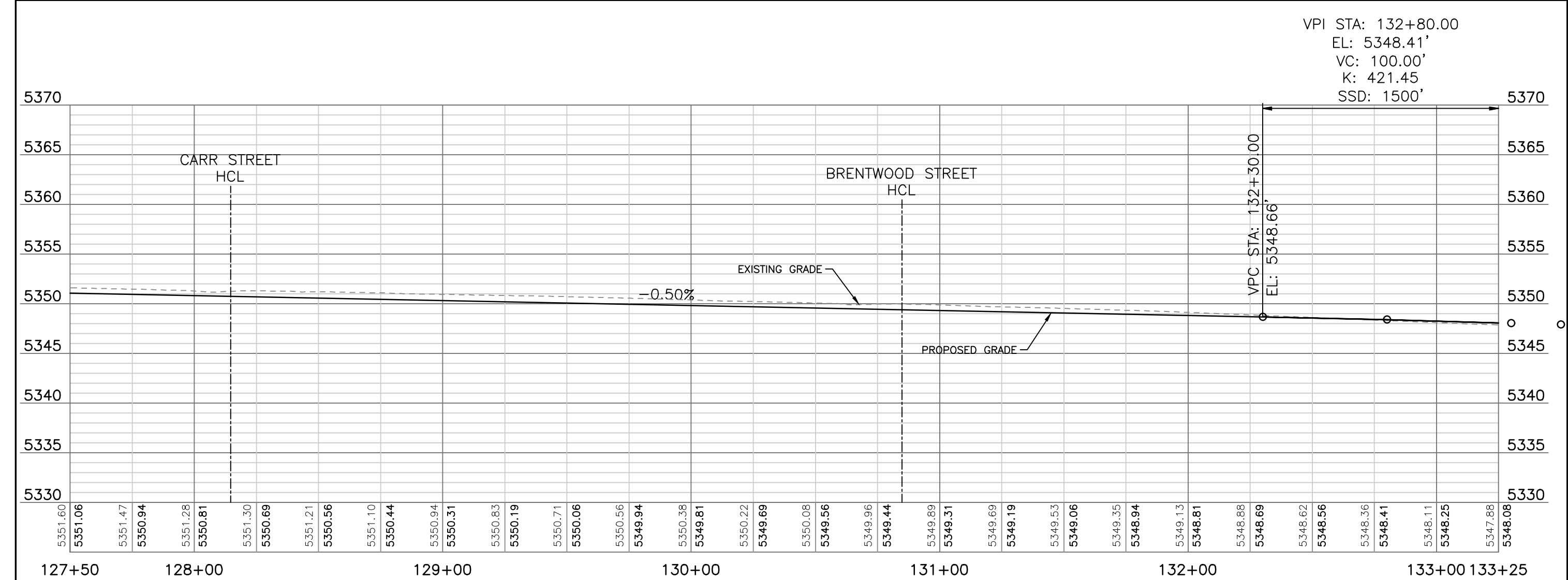
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Sheet Revisions			
Date	Comments	Initials	

CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY PLAN RALSTON ROAD (STA. 127+50 - STA. 133+25)		Project No./Code
No Revisions:		Designer: JHH	Structure	18-ST-40
Revised:		Detailer: BCN	Numbers	
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Sheet Revisions		
Date	Comments	Initials

CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed	
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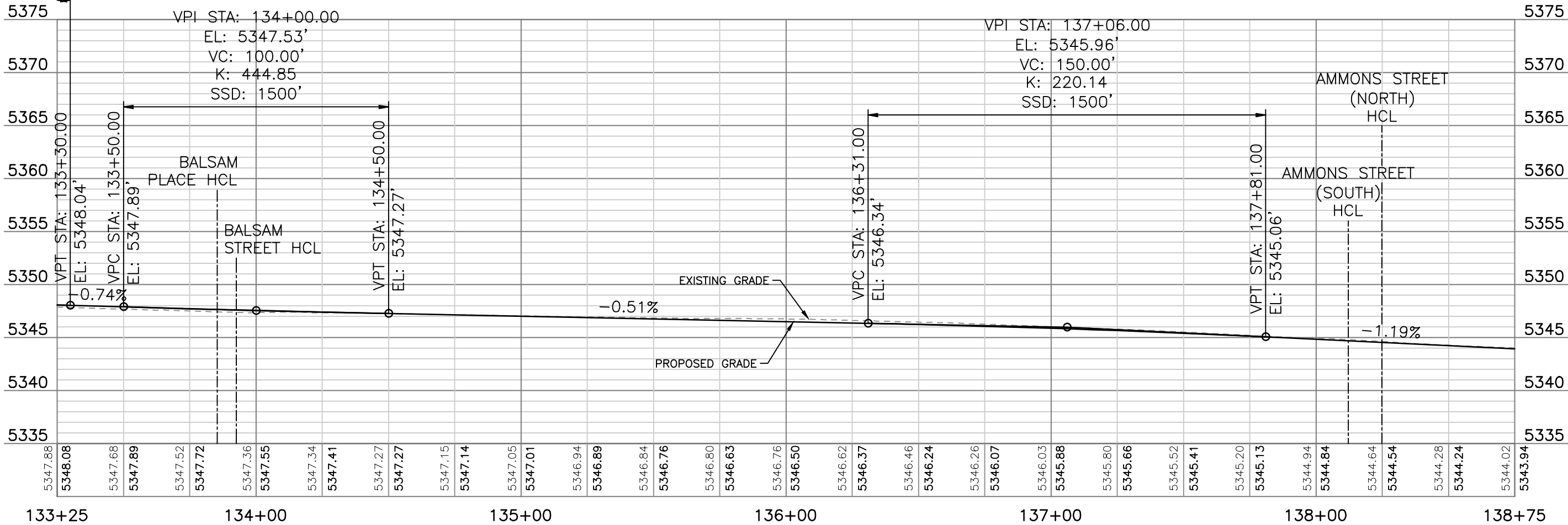
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Project No./Code	
18-ST-40	
Sheet Number	72

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VERTICAL SCALE: 1"=10'

VPI STA: 132+80.00
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VC: 100.00'
K: 421.45
SSD: 1500'



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RT -2.0%

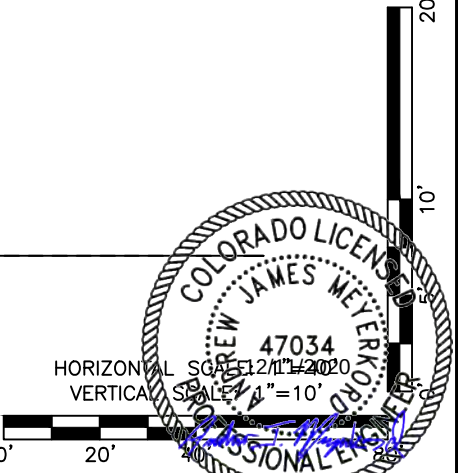
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134+25.00
RT -2.0%

LT -3.0%
135+15.00
RT -2.0%

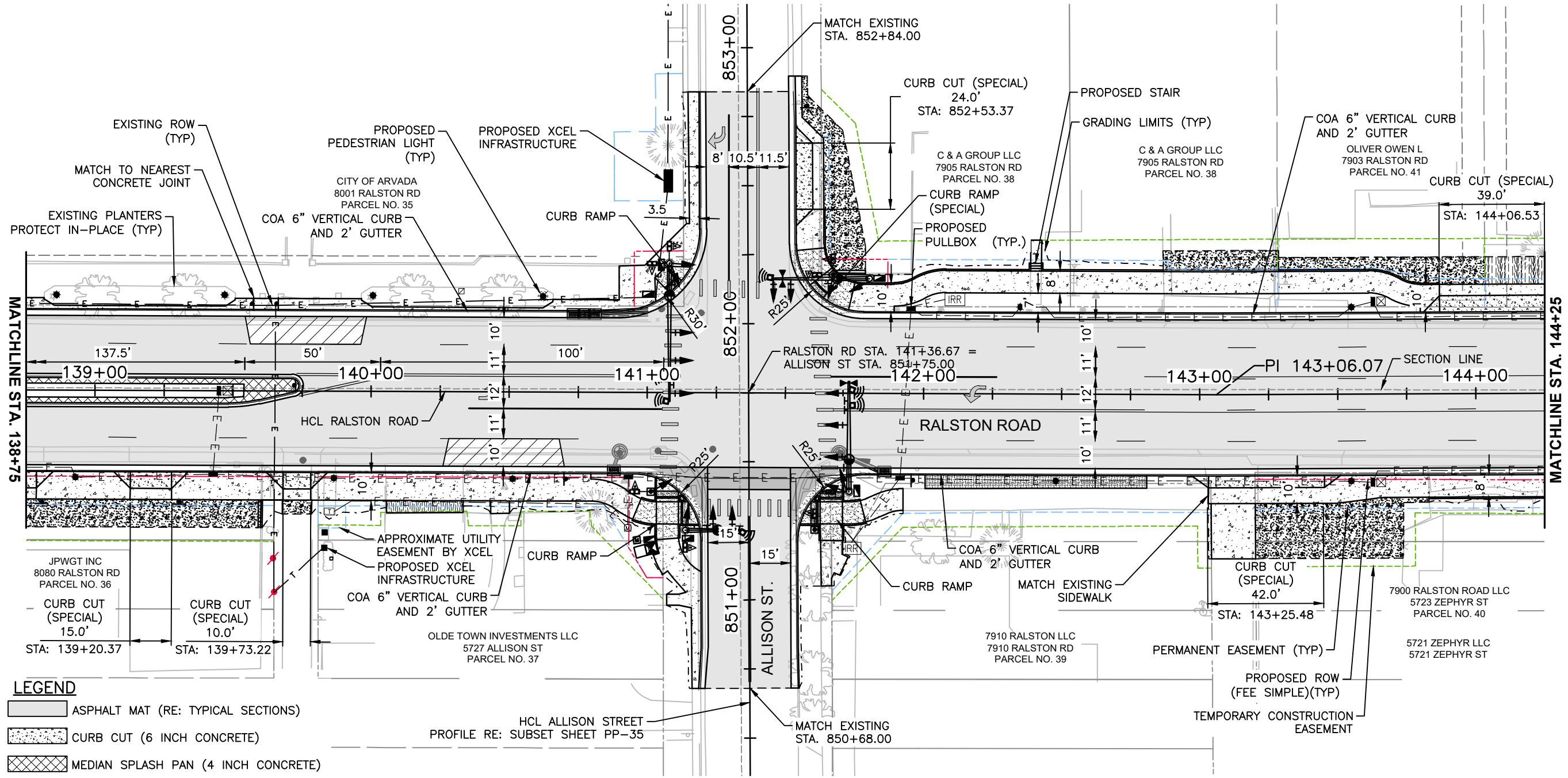
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136+15.00
RT -2.0%

RIGHT LANE
LEFT LANE

100.00'



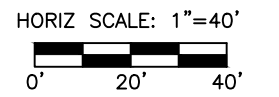
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				Void:		Sheet Subset: ROADWAY Subset Sheets: PP-15 of 38																			
								Sheet Number 74																	



LEGEND

- ASPHALT MAT (RE: TYPICAL SECTIONS)
- CURB CUT (6 INCH CONCRETE)
- MEDIAN SPLASH PAN (4 INCH CONCRETE)
- SIDEWALK (6 INCH CONCRETE)
- CURB RAMP (8 INCH CONCRETE)
- VALLEY GUTTER (8 INCH CONCRETE)
- RTD BUS PAD (11 INCH CONCRETE)
- SLOPE PAVING (4 INCH CONCRETE)
- BRICK PAVERS (REMOVE AND RESET)
- PARKING LOT (4 INCH HMA)
- PARKING LOT (6 INCH CONCRETE)

- NOTES:**
1. FOR ADDITIONAL ROADWAY AND PROPERTY GRADING RE: ROADWAY GEOMETRIC DETAILS, INTERSECTION DETAILS AND PROPERTY ACCESS DETAILS.
 2. FOR ALL NON-ROADWAY CURBS AT THE BACK OF SIDEWALK AND ON PRIVATE PROPERTY RE: ROADWAY DETAILS, ROADWAY GEOMETRIC DETAILS AND PROPERTY ACCESS DETAILS.
 3. FOR DECORATIVE PAVEMENT DETAILS REQUIRED IN THE SIDEWALK AND CURB RAMPS RE: LANDSCAPE PLANS AND LANDSCAPE DETAILS.
 4. FOR CURB CUT DETAILS RE: ROADWAY DETAILS.
 5. FOR RTD BUS PAD DETAILS RE: ROADWAY DETAILS.
 6. FOR STAIR DETAIL RE: ROADWAY DETAILS.
 7. ALL STRIPING DIMENSIONS MEASURED TO EDGE OF PAVEMENT AND CENTER OF STRIPE.
 8. ALL RADII MEASURED TO FLOWLINE OF CURB.



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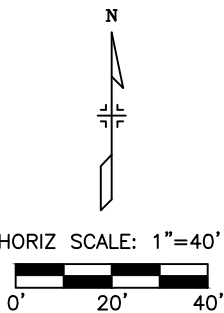
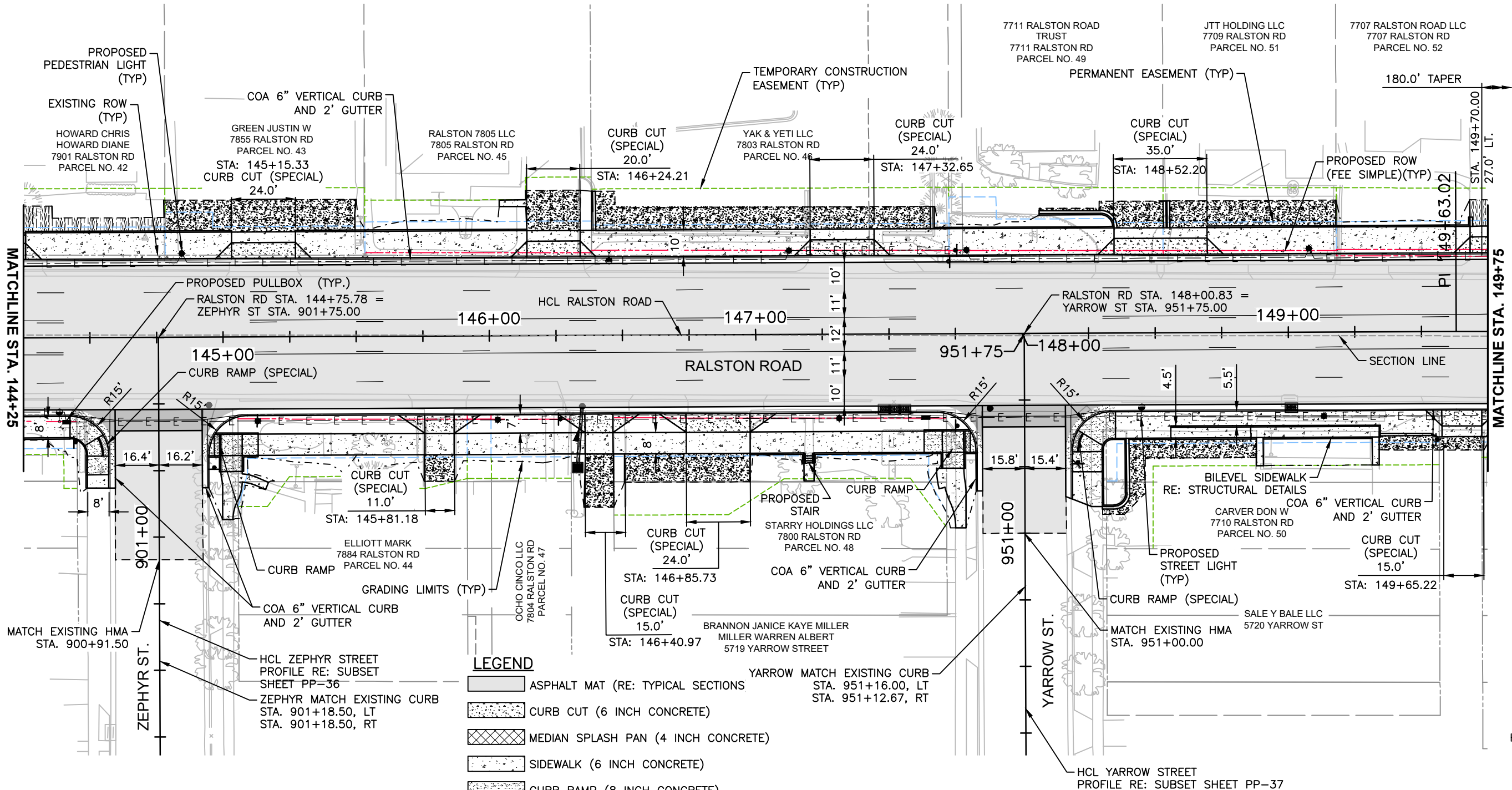
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Sheet Revisions			
R-X	Date	Comments	Initials

CITY OF ARVADA
PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed	RALSTON RD - YUKON ST TO GARRISON ST ROADWAY PLAN RALSTON ROAD (STA. 138+75 - STA. 144+25)			Project No./Code
No Revisions:	Designer: JHH	Structure		18-ST-40
Revised:	Detailer: BCN	Numbers		
Void:	Sheet Subset: ROADWAY	Subset Sheets: PP-16 of 40		
				Sheet Number 75



LEGEND

- ASPHALT MAT (RE: TYPICAL SECTIONS)
- CURB CUT (6 INCH CONCRETE)
- MEDIAN SPLASH PAN (4 INCH CONCRETE)
- SIDEWALK (6 INCH CONCRETE)
- CURB RAMP (8 INCH CONCRETE)
- VALLEY GUTTER (8 INCH CONCRETE)
- RTD BUS PAD (11 INCH CONCRETE)
- SLOPE PAVING (4 INCH CONCRETE)
- BRICK PAVERS (REMOVE AND RESET)
- PARKING LOT (4 INCH HMA)
- PARKING LOT (6 INCH CONCRETE)

NOTES:

- FOR ADDITIONAL ROADWAY AND PROPERTY GRADING RE: ROADWAY GEOMETRIC DETAILS, INTERSECTION DETAILS AND PROPERTY ACCESS DETAILS.
- FOR ALL NON-ROADWAY CURBS AT THE BACK OF SIDEWALK AND ON PRIVATE PROPERTY RE: ROADWAY DETAILS, ROADWAY GEOMETRIC DETAILS AND PROPERTY ACCESS DETAILS.
- FOR DECORATIVE PAVEMENT DETAILS REQUIRED IN THE SIDEWALK AND CURB RAMPS RE: LANDSCAPE PLANS AND LANDSCAPE DETAILS.
- FOR CURB CUT DETAILS RE: ROADWAY DETAILS.
- FOR RTD BUS PAD DETAILS RE: ROADWAY DETAILS.
- FOR STAIR DETAIL RE: ROADWAY DETAILS.
- ALL STRIPING DIMENSIONS MEASURED TO EDGE OF PAVEMENT AND CENTER OF STRIPE.
- ALL RADII MEASURED TO FLOWLINE OF CURB.



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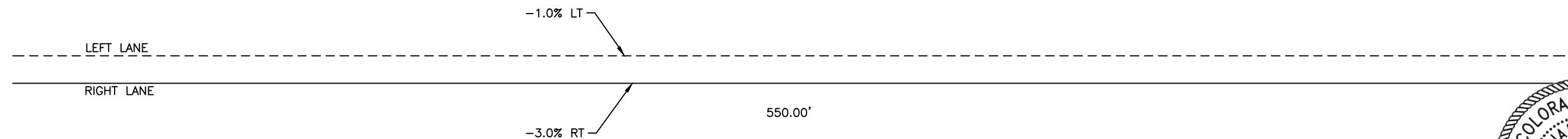
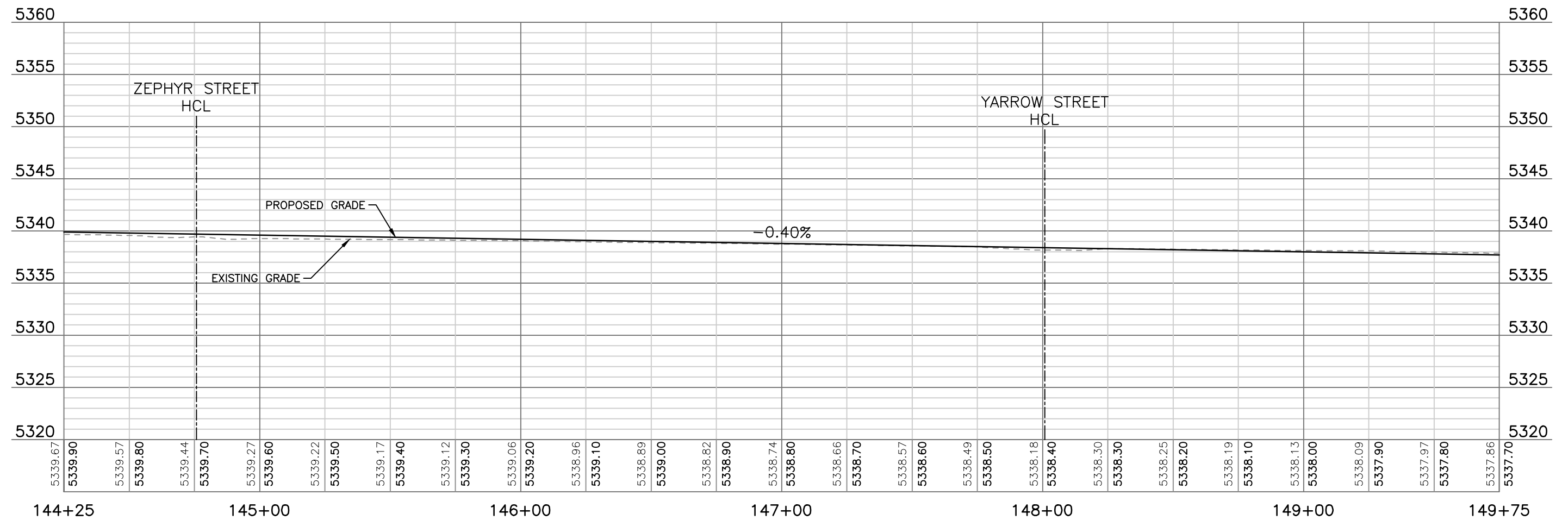


CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed
No Revisions:
Revised:
Void:

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Detailer:	BCN	Numbers	
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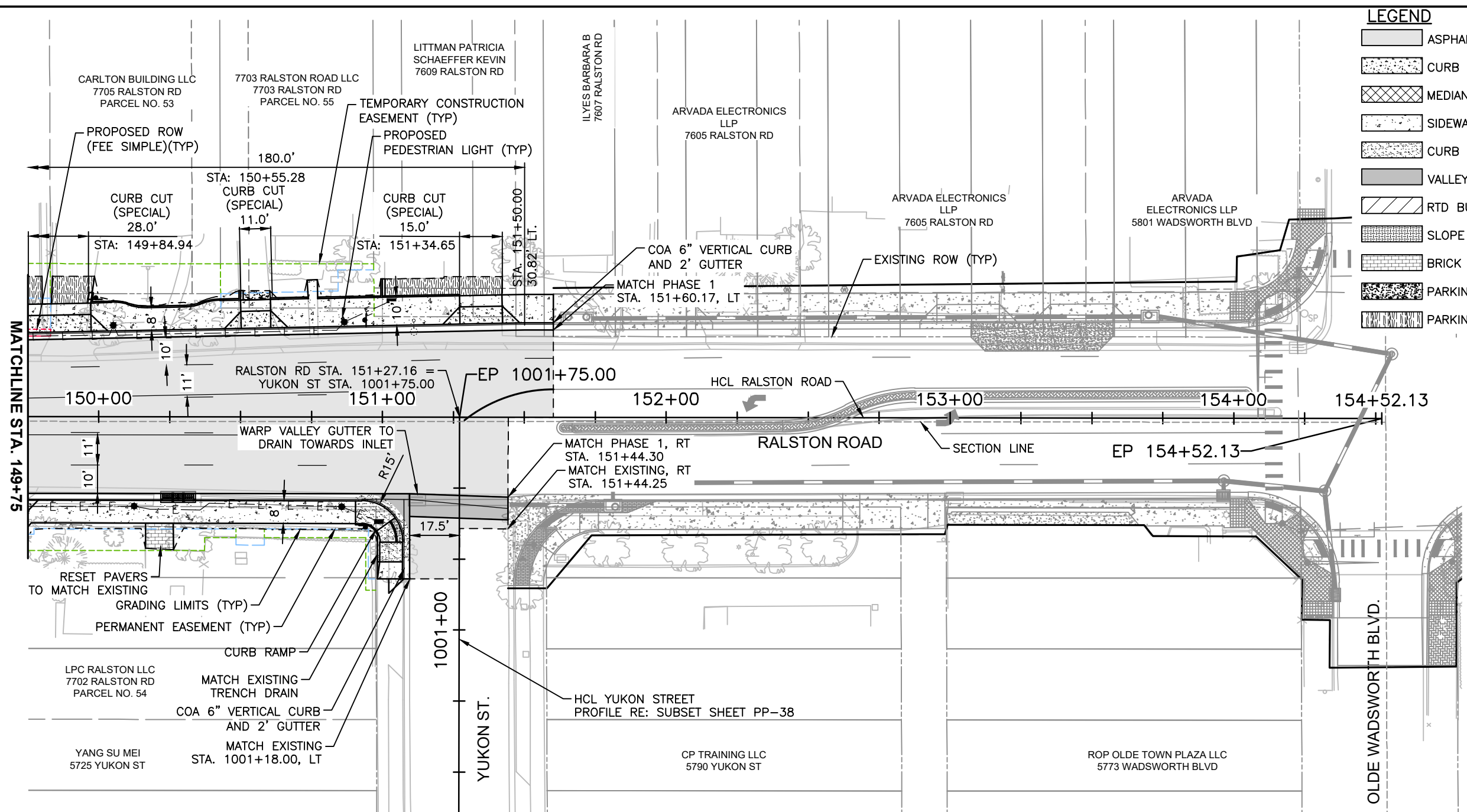
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18-ST-40
Sheet Number
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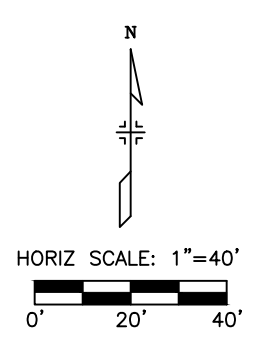
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JAMES MEYER
47034
PROFESSIONAL ENGINEER

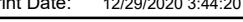
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FELSBERG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Detailer: DAL		Numbers			
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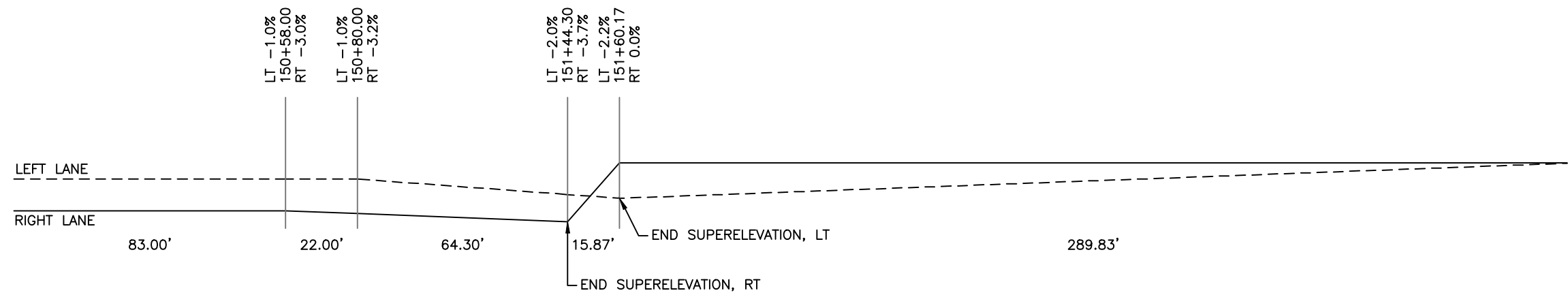
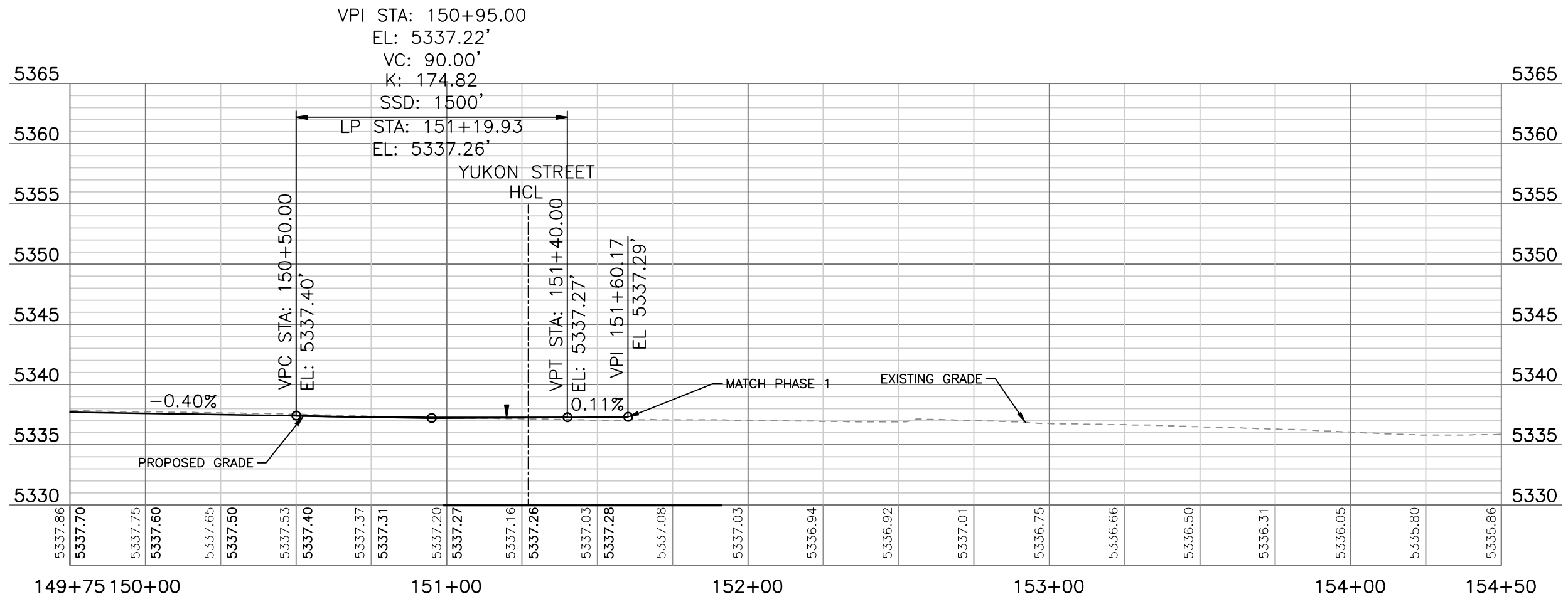


- LEGEND**
- ASPHALT MAT (RE: TYPICAL SECTIONS)
 - CURB CUT (6 INCH CONCRETE)
 - MEDIAN SPLASH PAN (4 INCH CONCRETE)
 - SIDEWALK (6 INCH CONCRETE)
 - CURB RAMP (8 INCH CONCRETE)
 - VALLEY GUTTER (8 INCH CONCRETE)
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- NOTES:**
1. FOR ADDITIONAL ROADWAY AND PROPERTY GRADING RE: ROADWAY GEOMETRIC DETAILS, INTERSECTION DETAILS AND PROPERTY ACCESS DETAILS.
 2. FOR ALL NON-ROADWAY CURBS AT THE BACK OF SIDEWALK AND ON PRIVATE PROPERTY RE: ROADWAY DETAILS, ROADWAY GEOMETRIC DETAILS AND PROPERTY ACCESS DETAILS.
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 5. FOR RTD BUS PAD DETAILS RE: ROADWAY DETAILS.
 6. FOR STAIR DETAIL RE: ROADWAY DETAILS.
 7. ALL STRIPING DIMENSIONS MEASURED TO EDGE OF PAVEMENT AND CENTER OF STRIPE.
 8. ALL RADII MEASURED TO FLOWLINE OF CURB.



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	 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com						Void:		Detailer: BCN	Numbers				
							Sheet Subset: ROADWAY		Subset Sheets: PP-20 of 40	Sheet Number 79				



0'20'

10'

20'

HORIZONTAL SCALE: 1"=40'

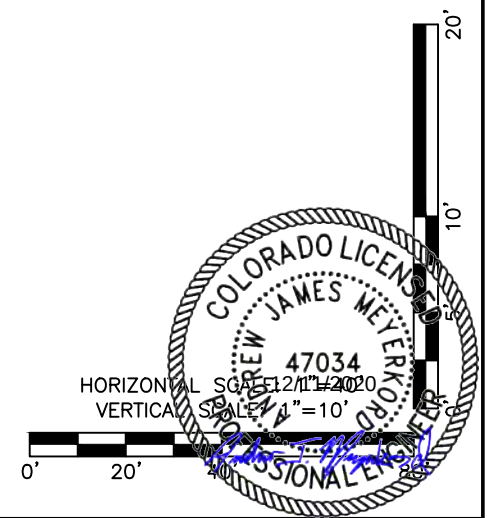
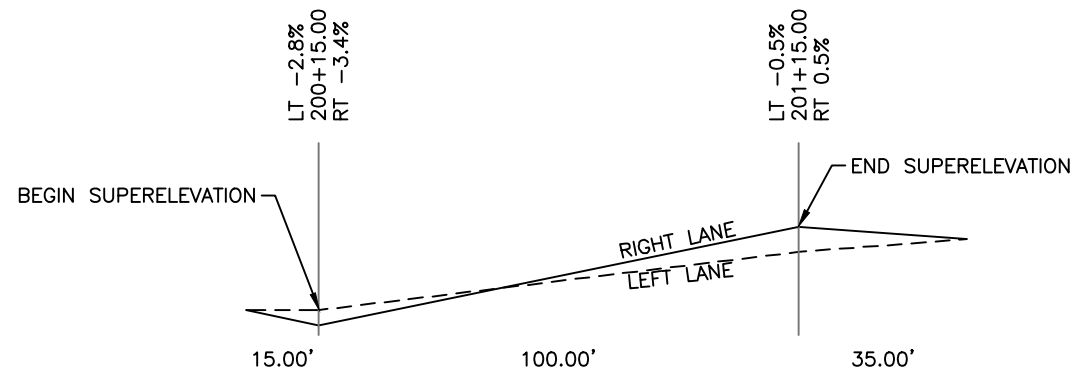
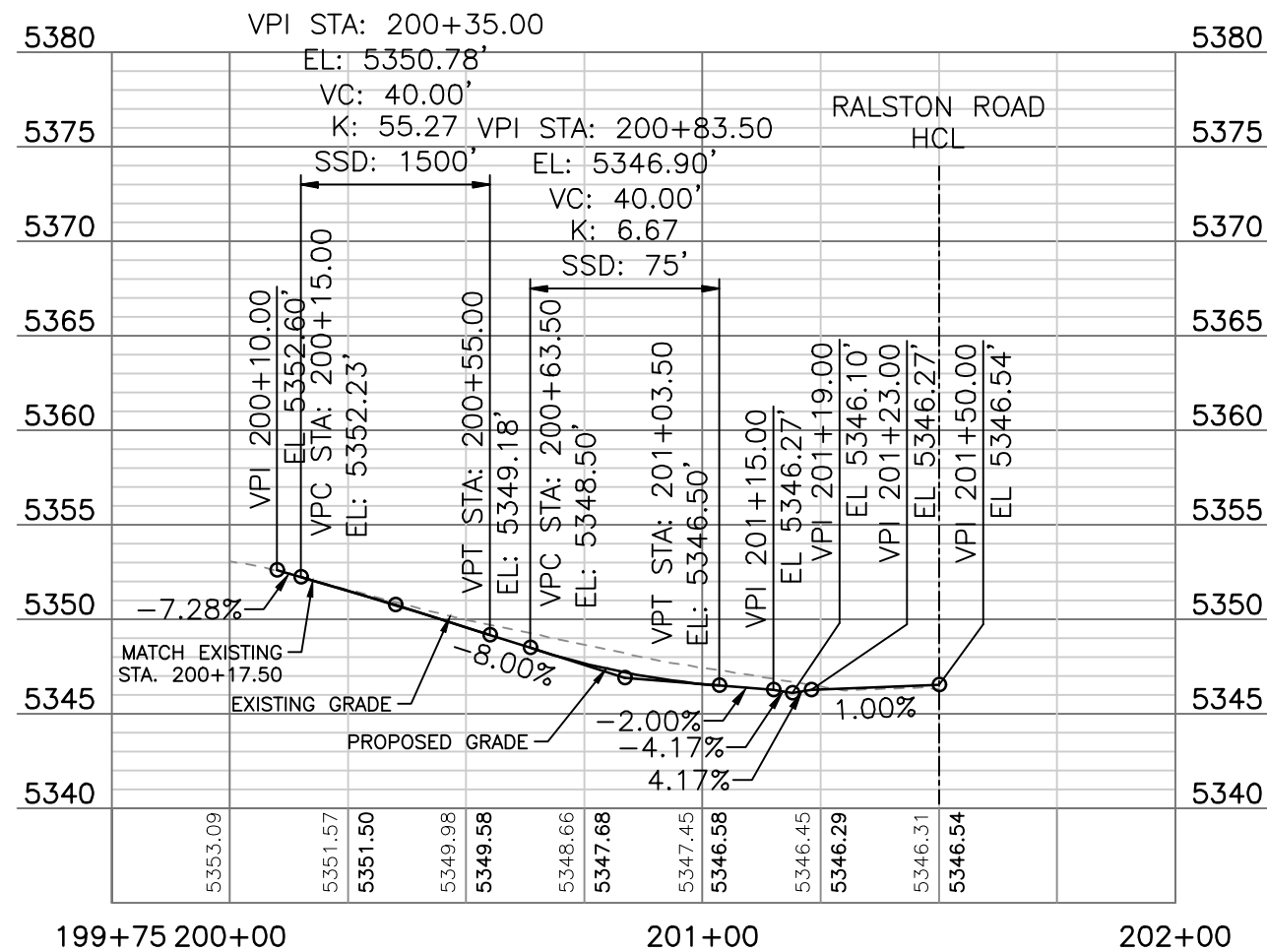
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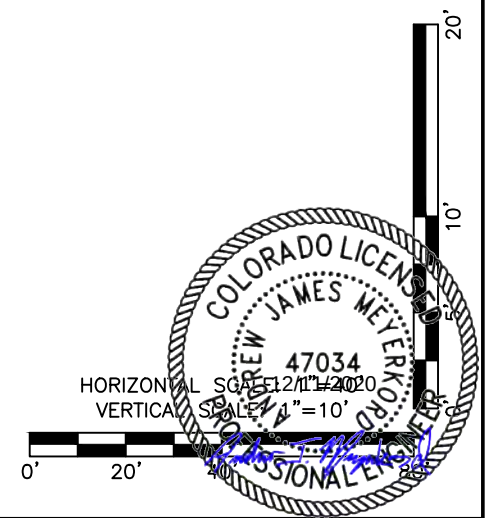
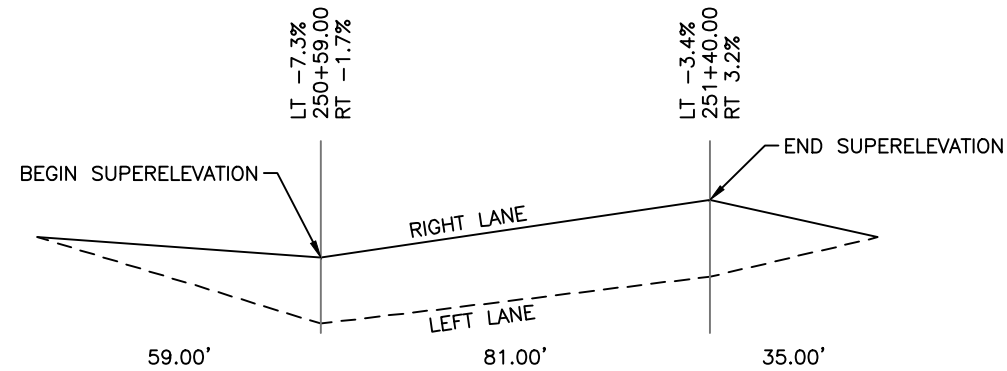
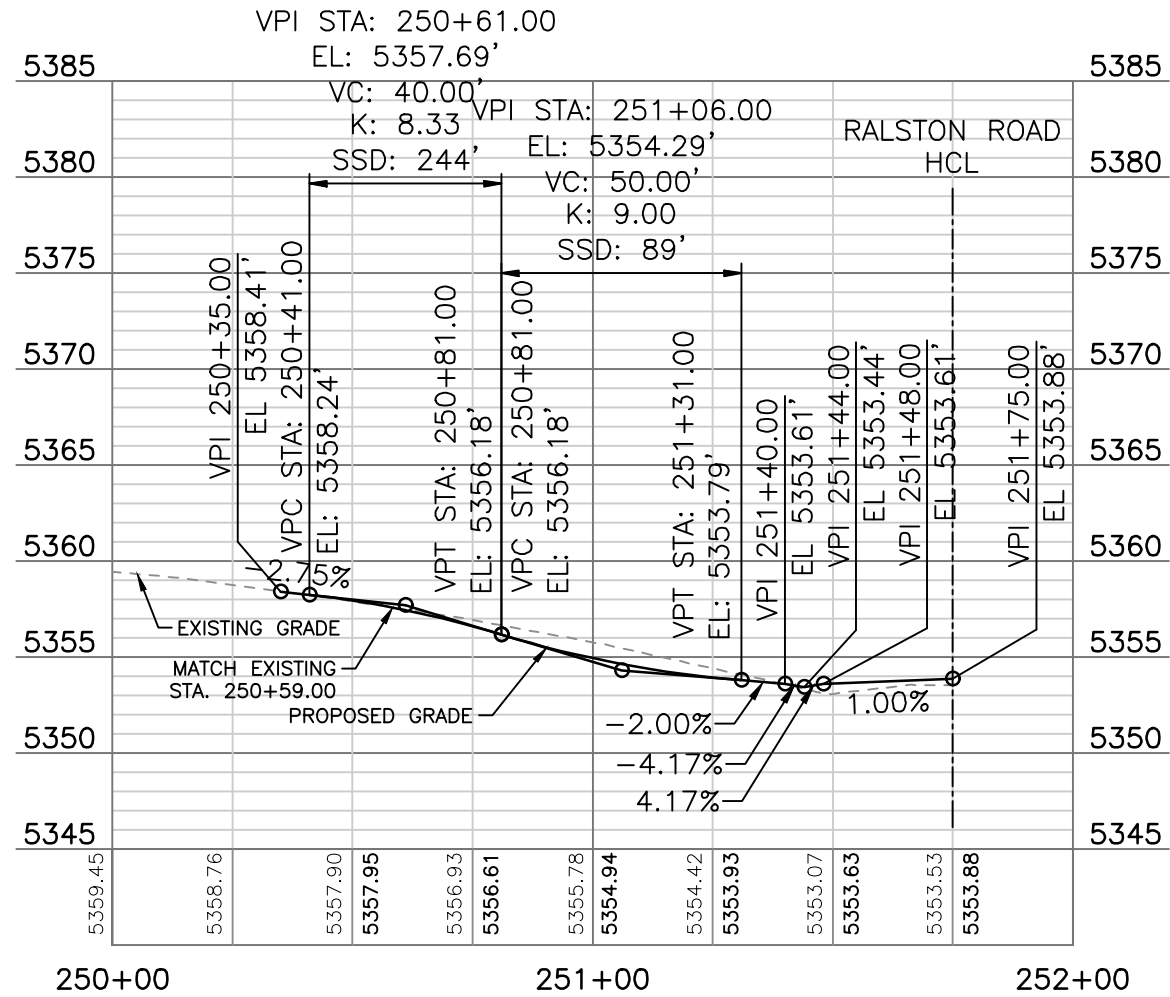
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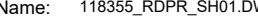
PROFESSIONAL ENGINEER

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	 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Detailer: DAL				
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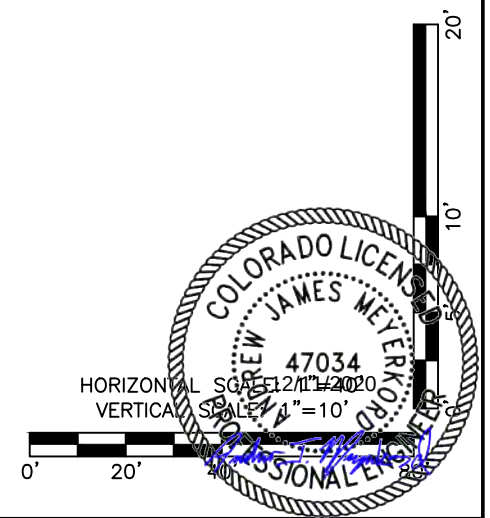
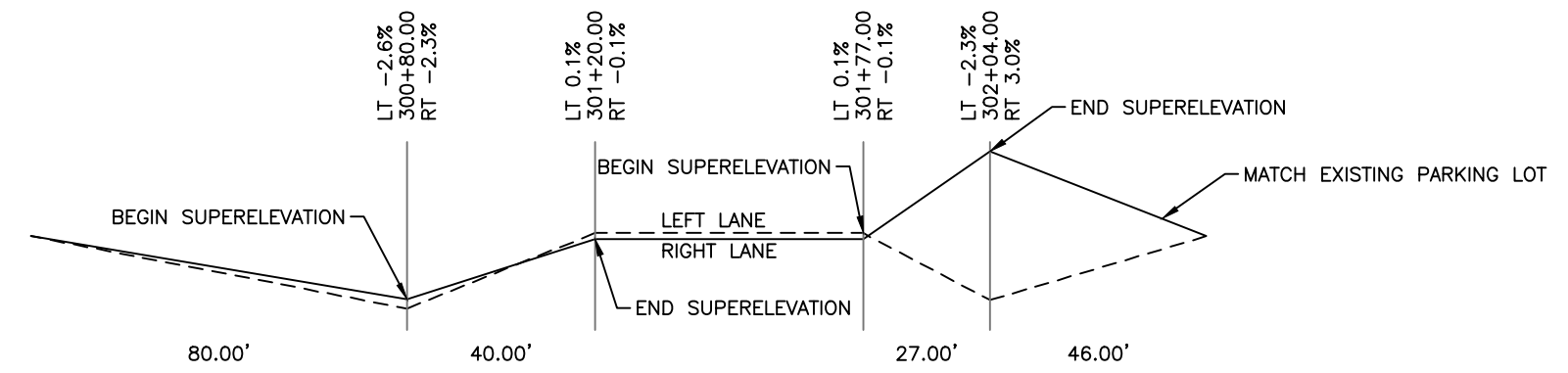
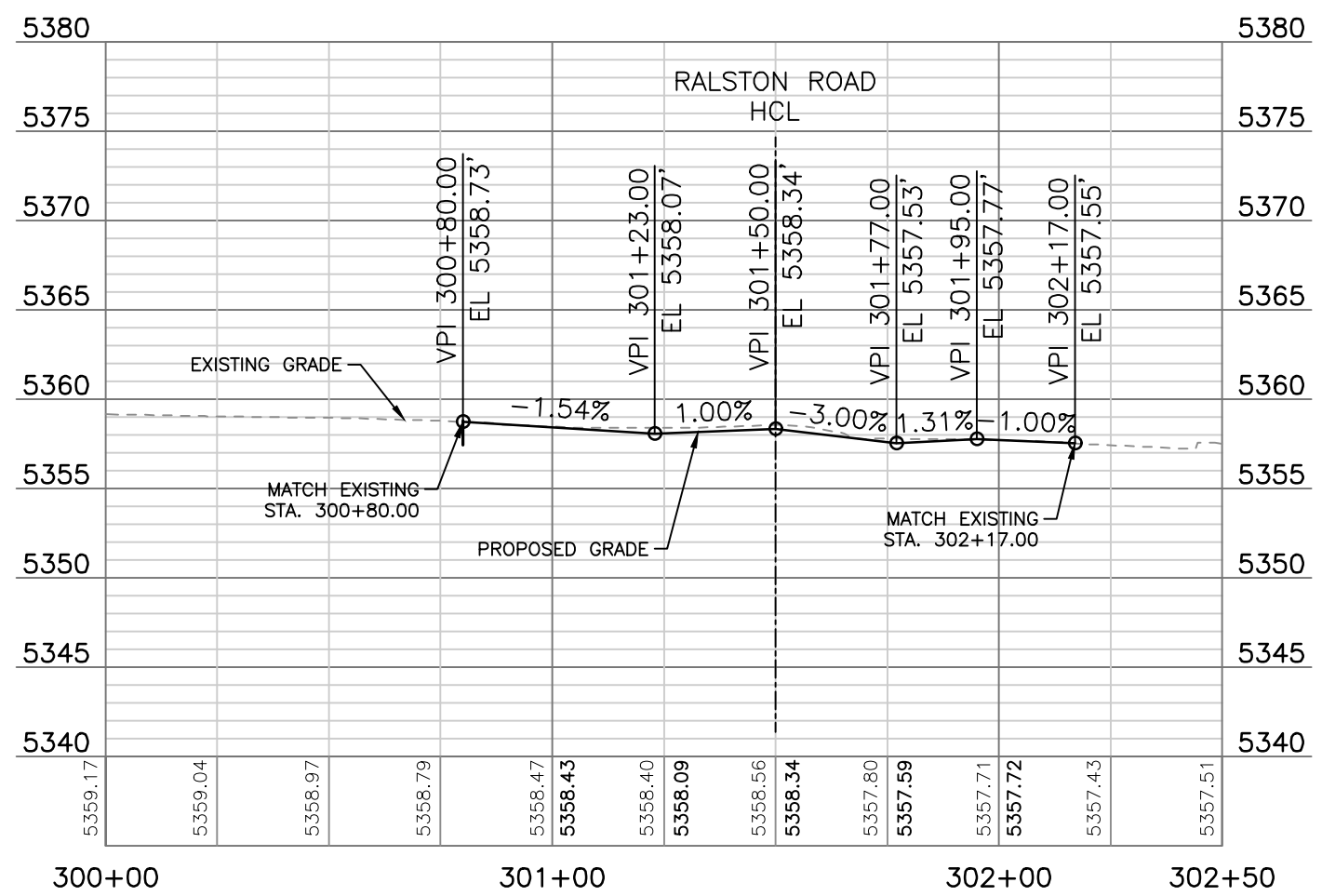


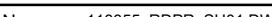
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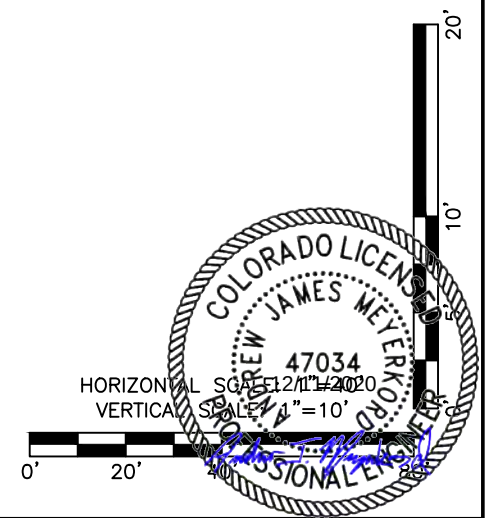
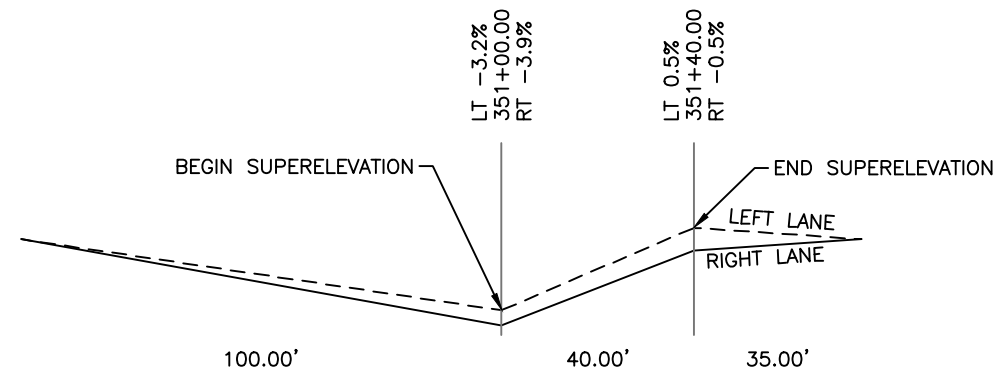
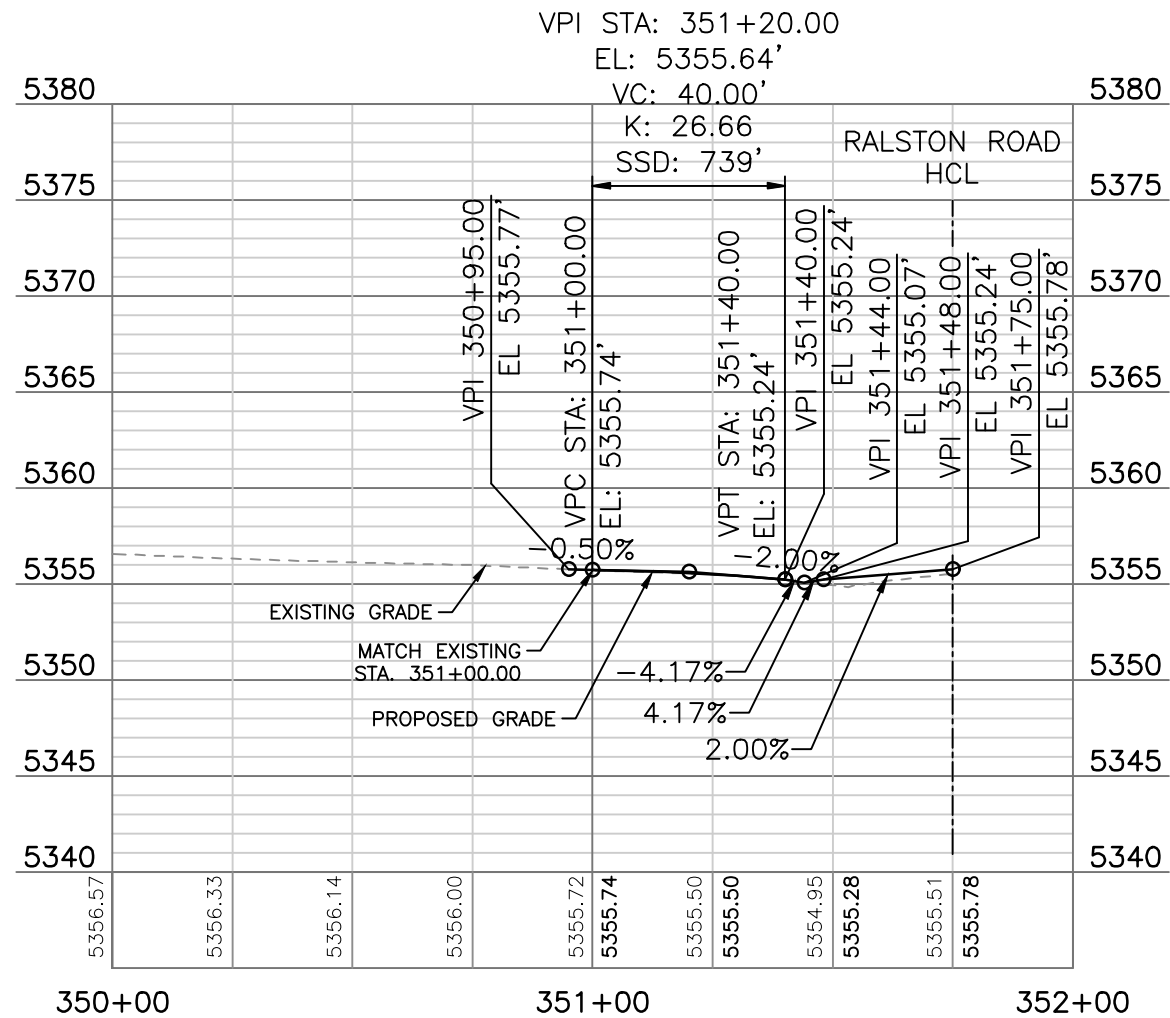
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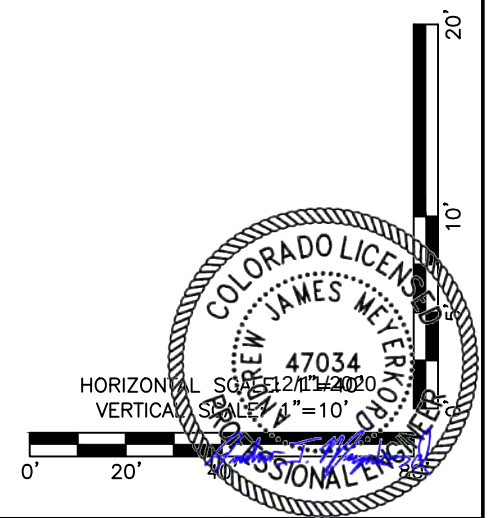
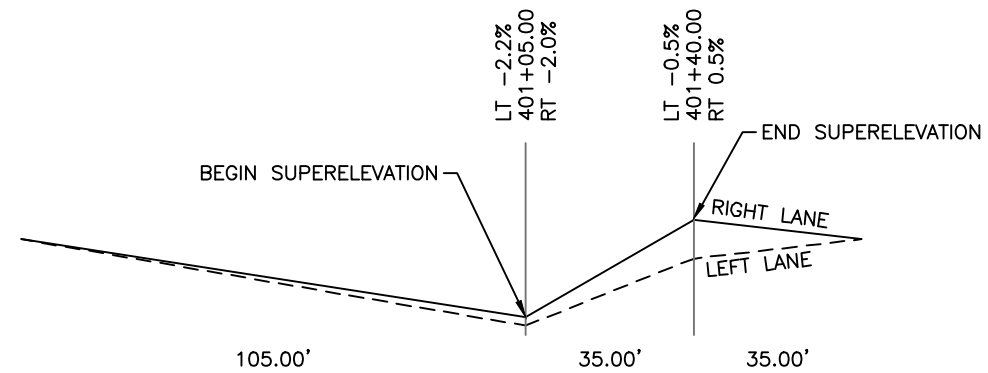
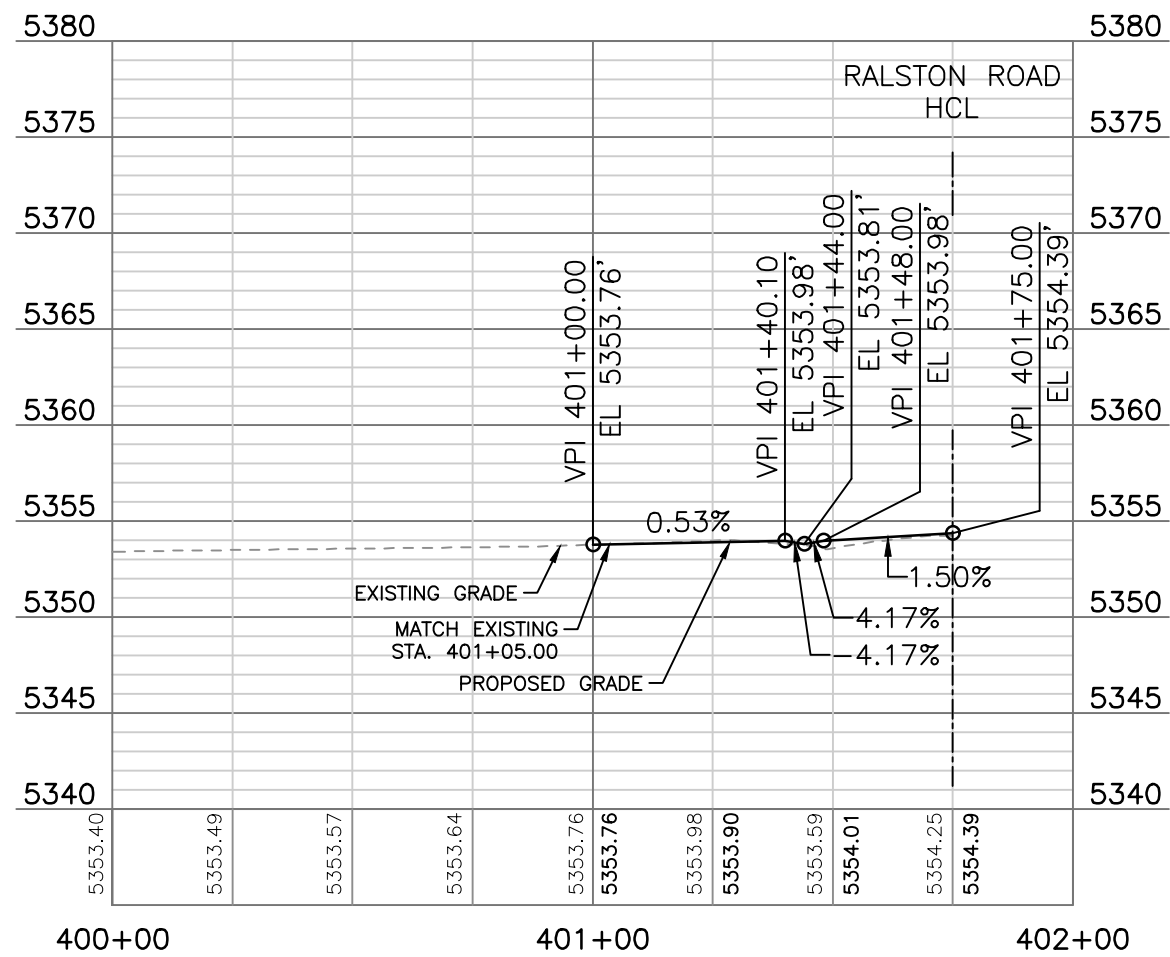


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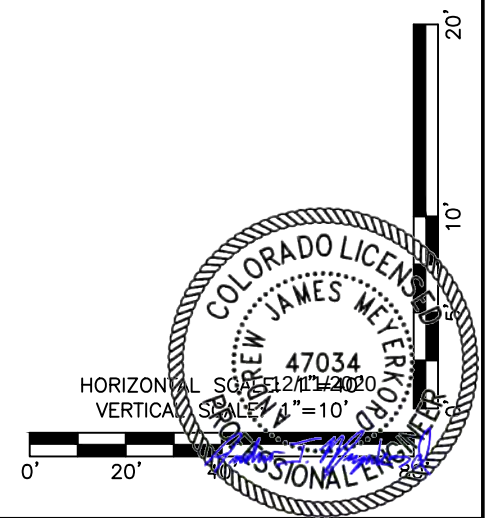
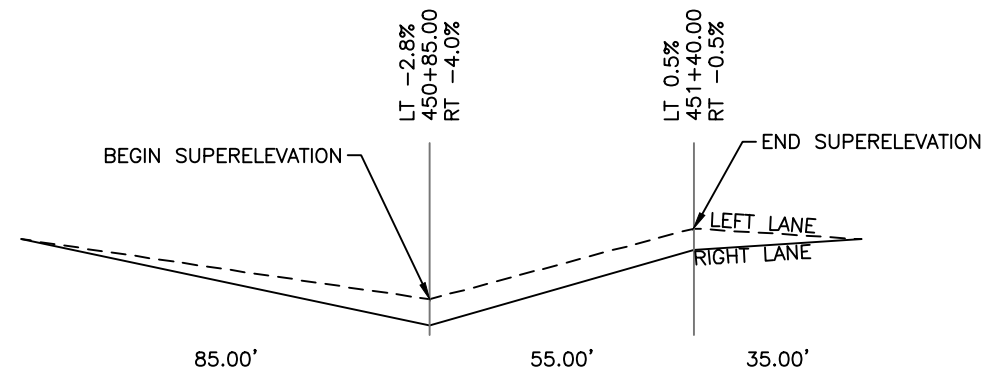
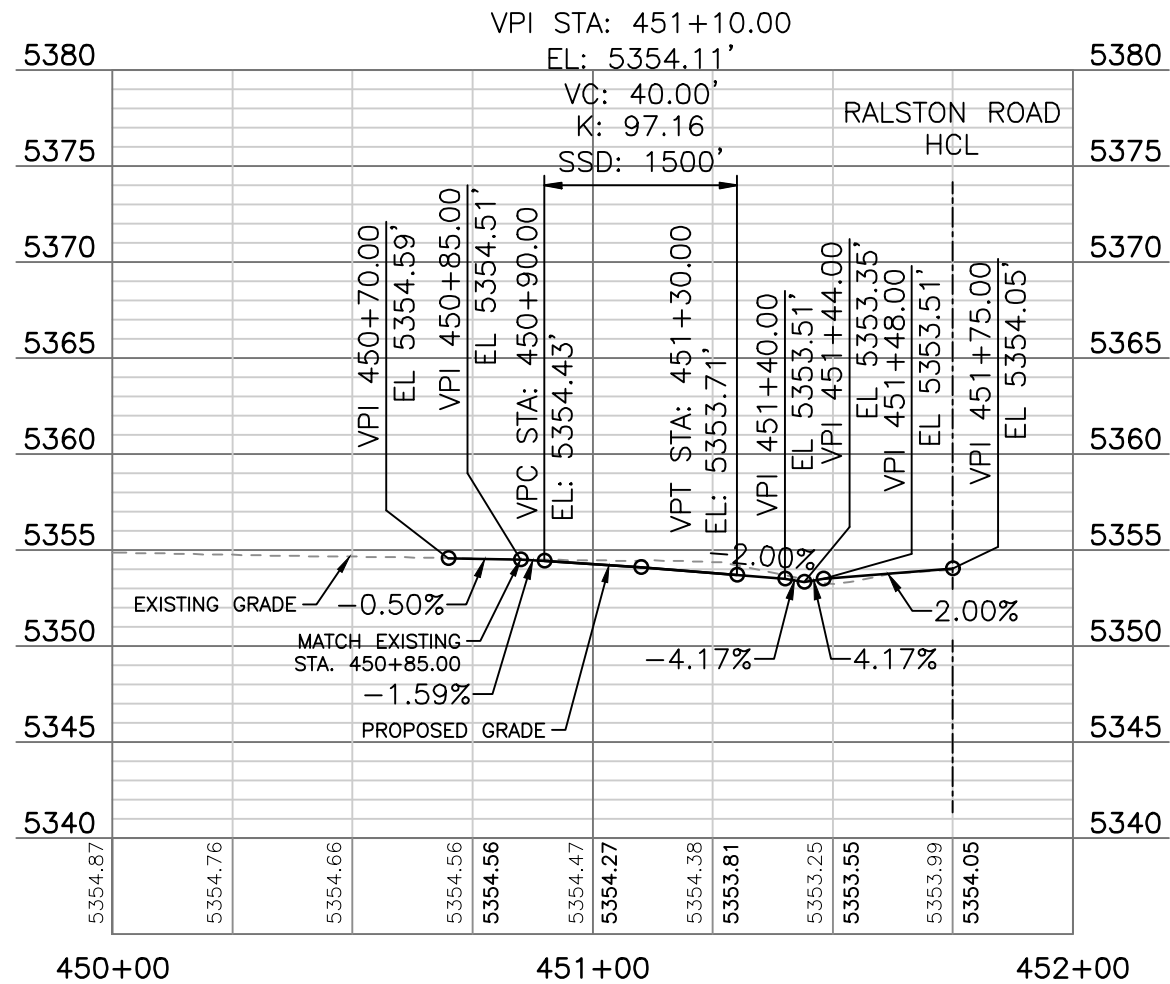


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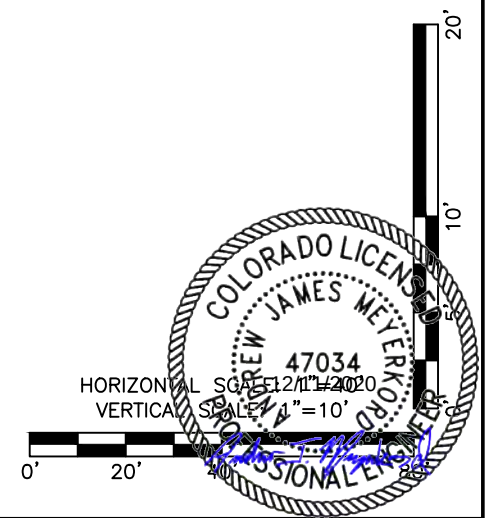
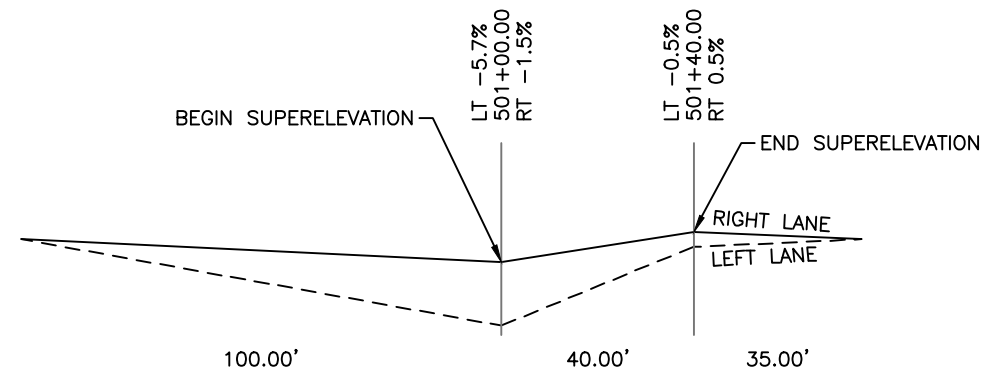
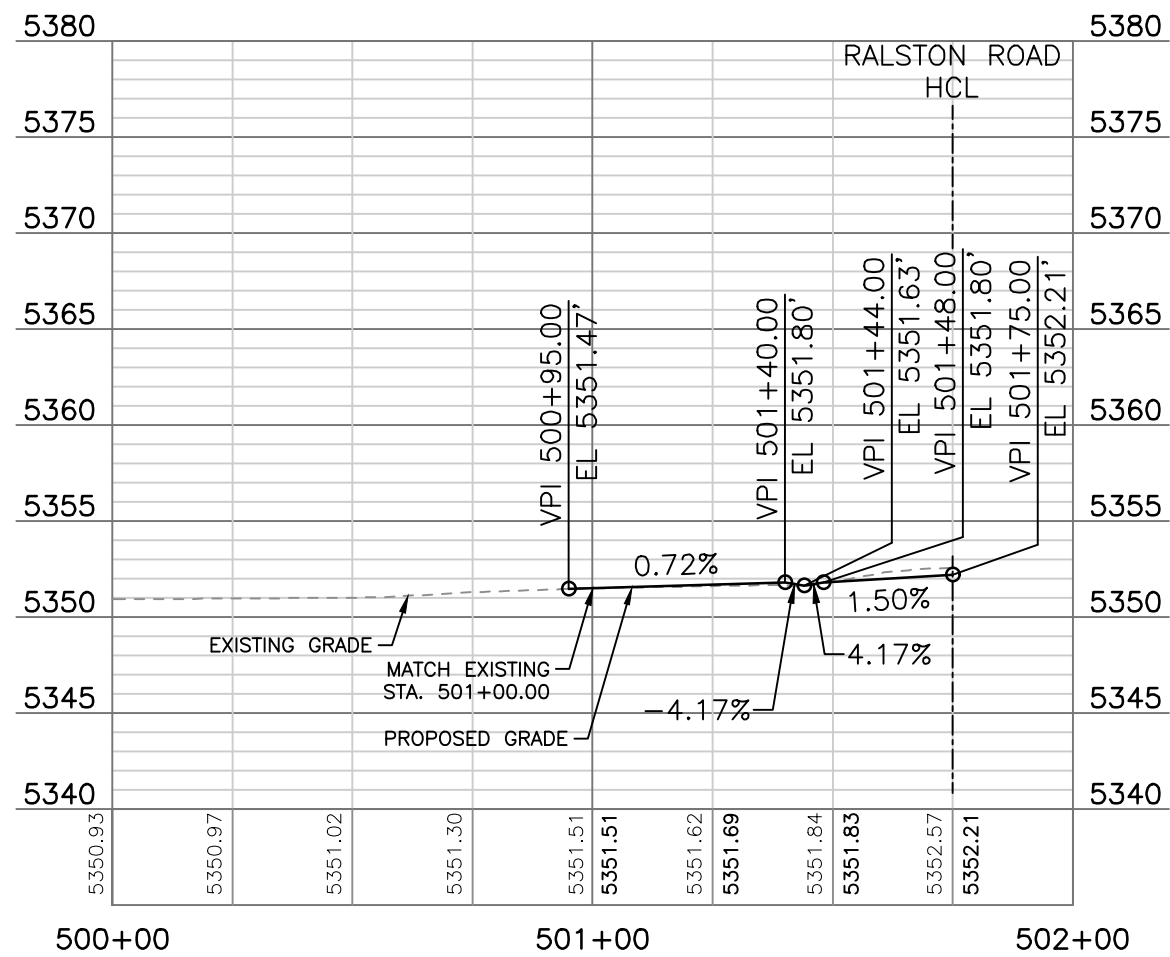
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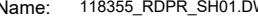
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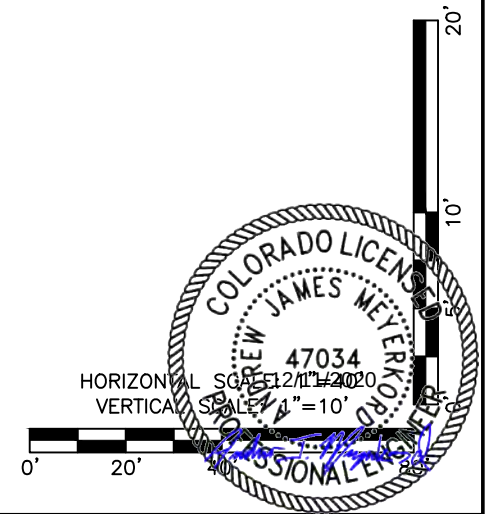
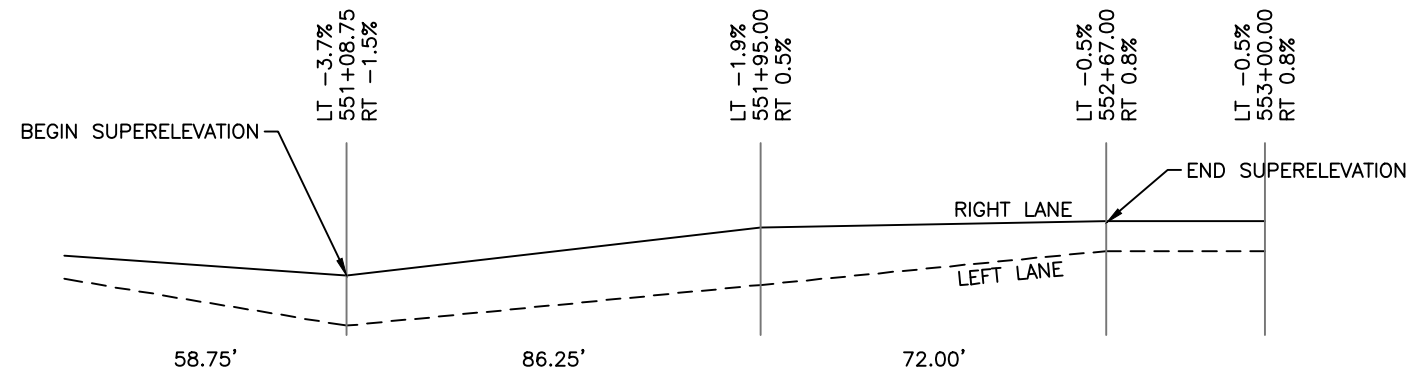
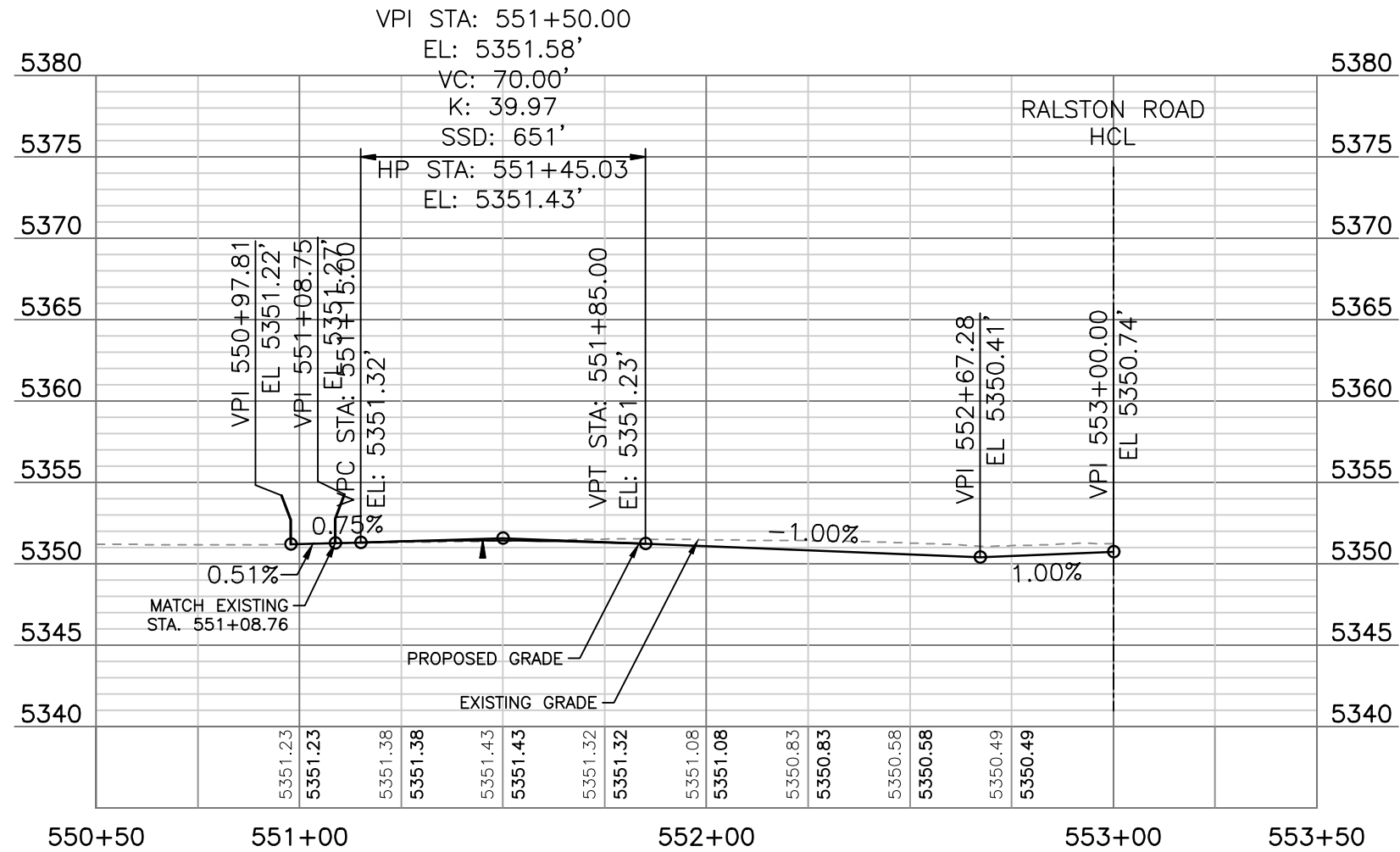
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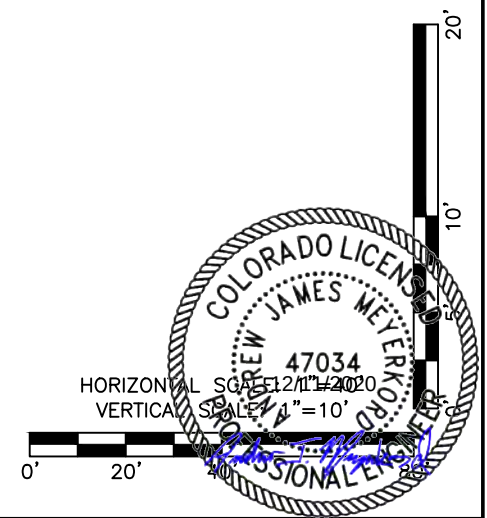
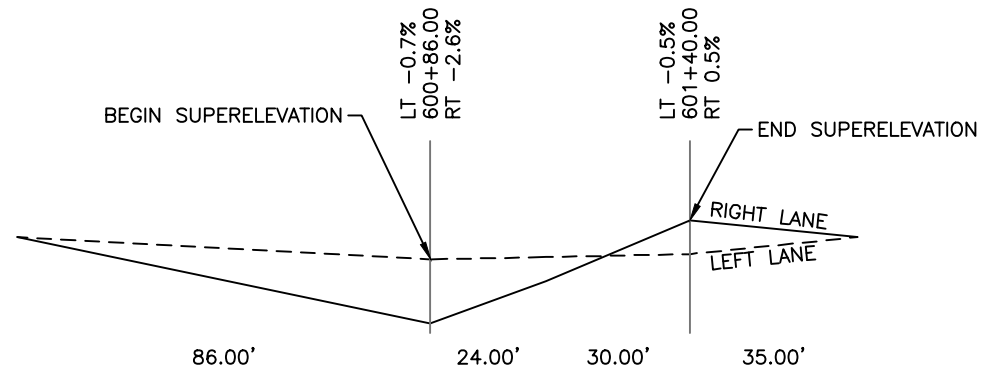
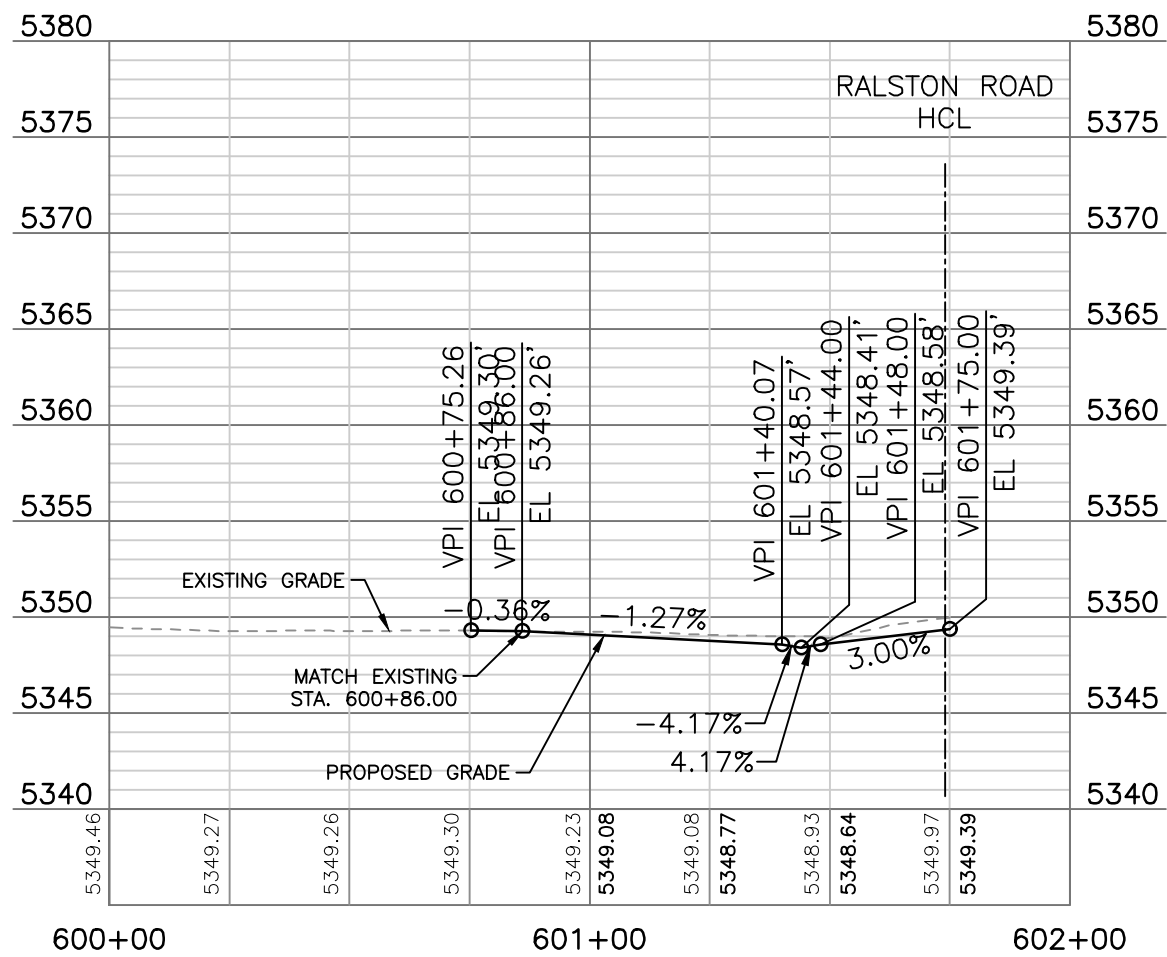
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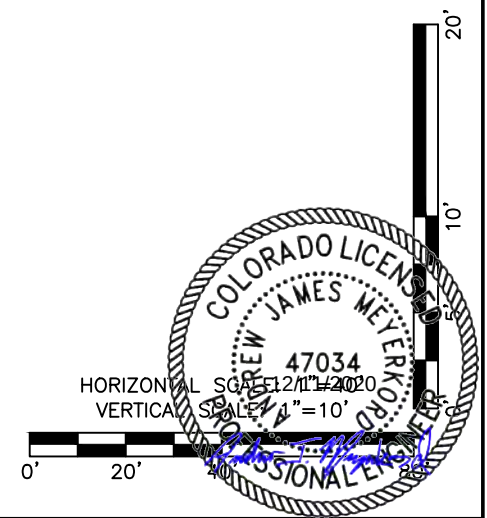
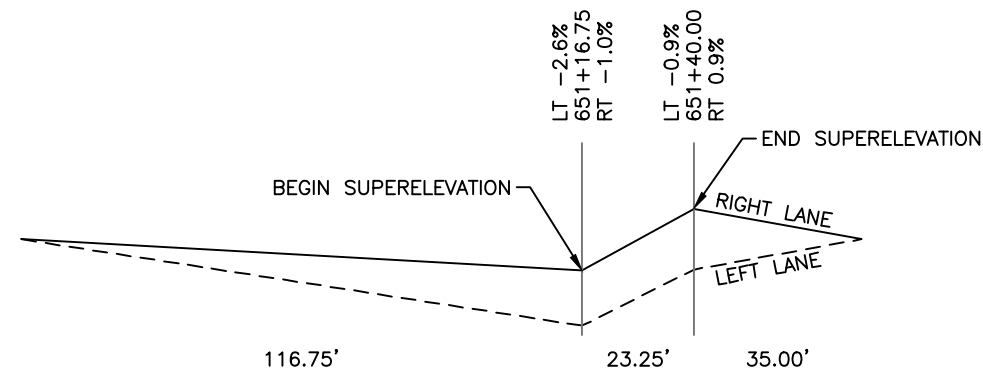
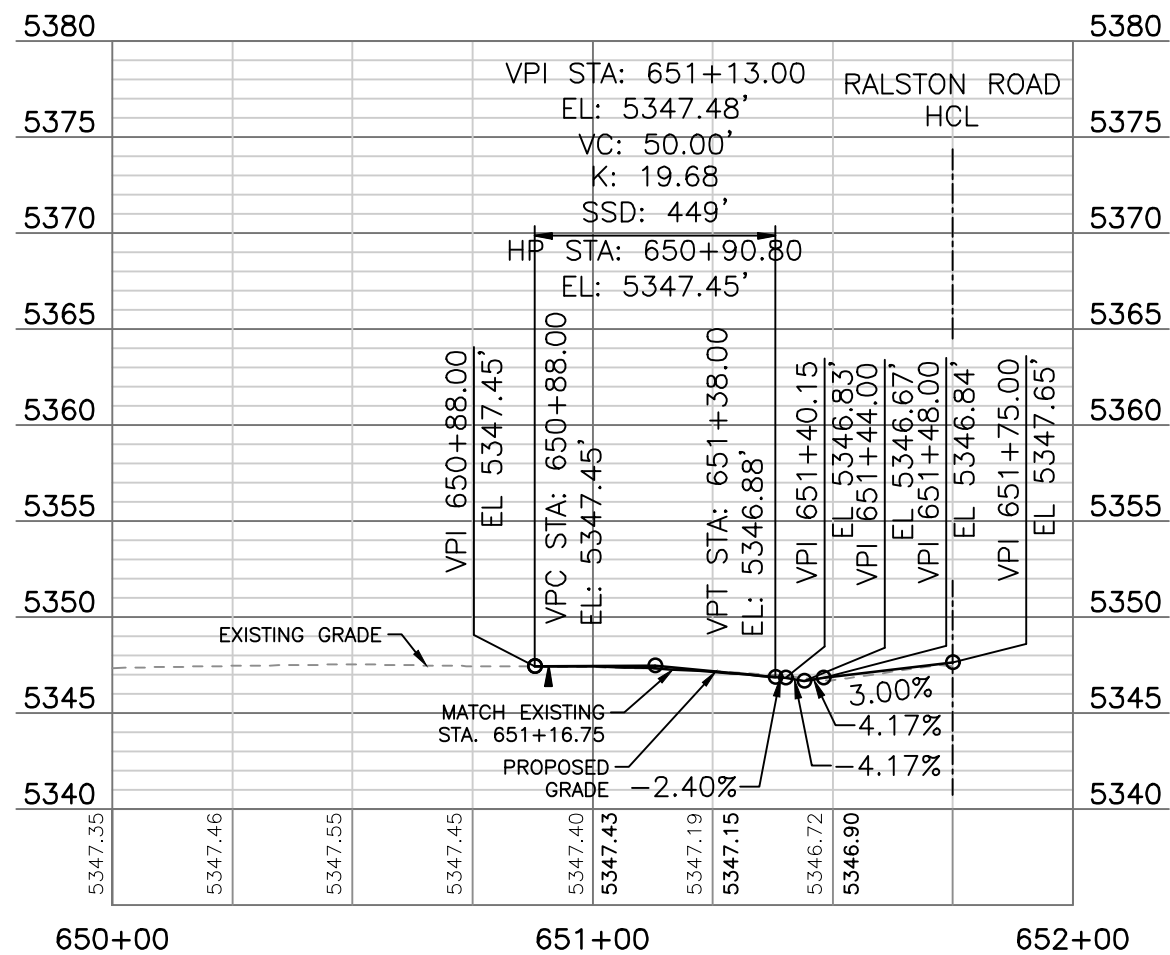
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PUBLIC WORKS DEPARTMENT

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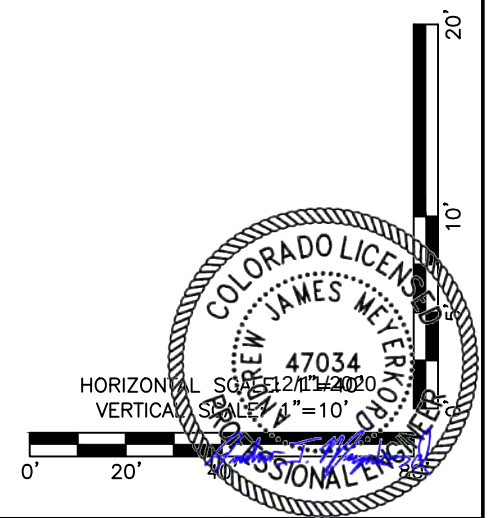
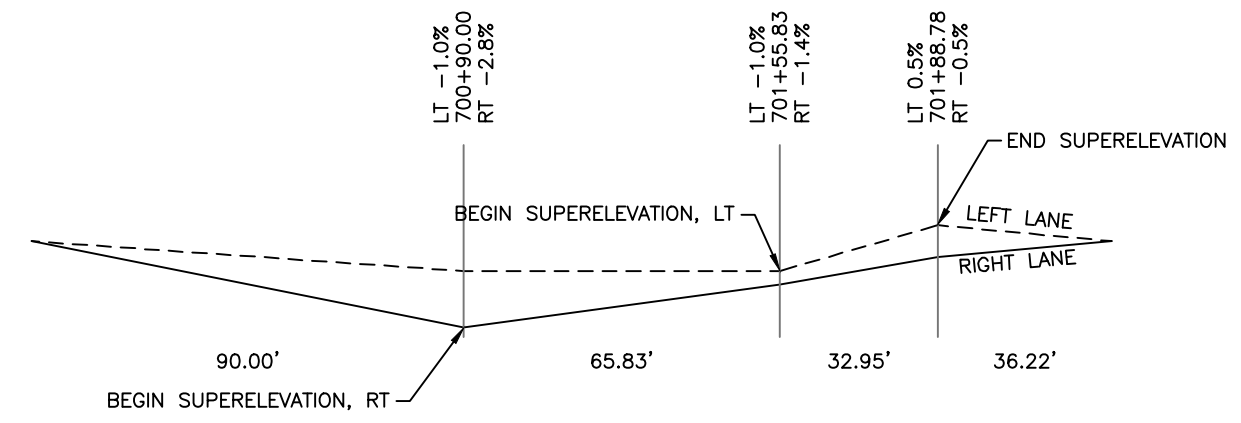
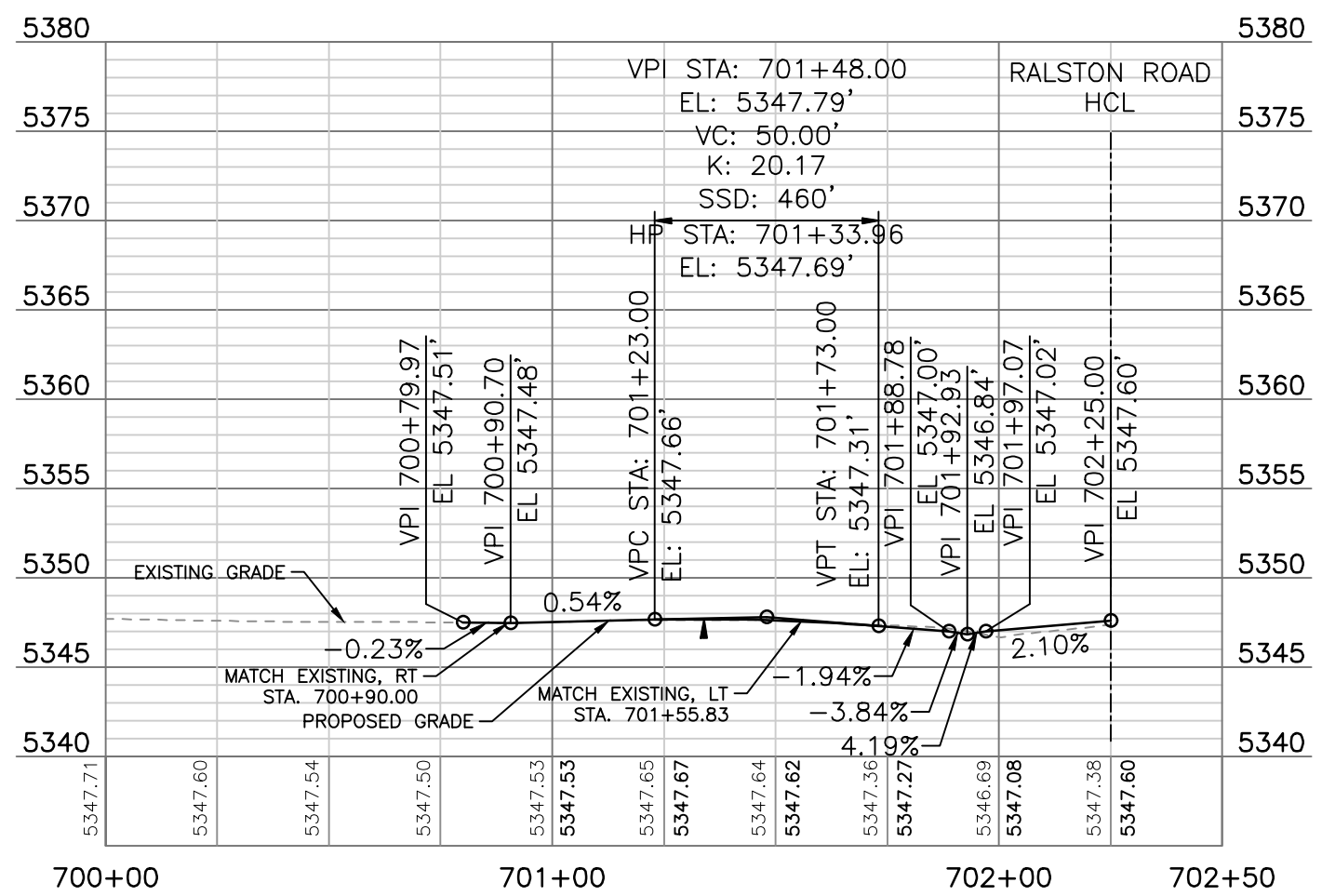
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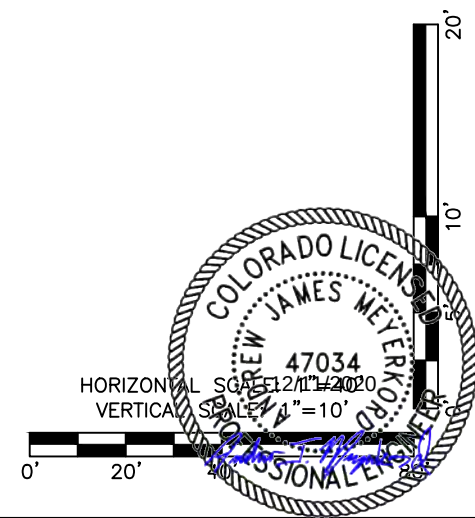
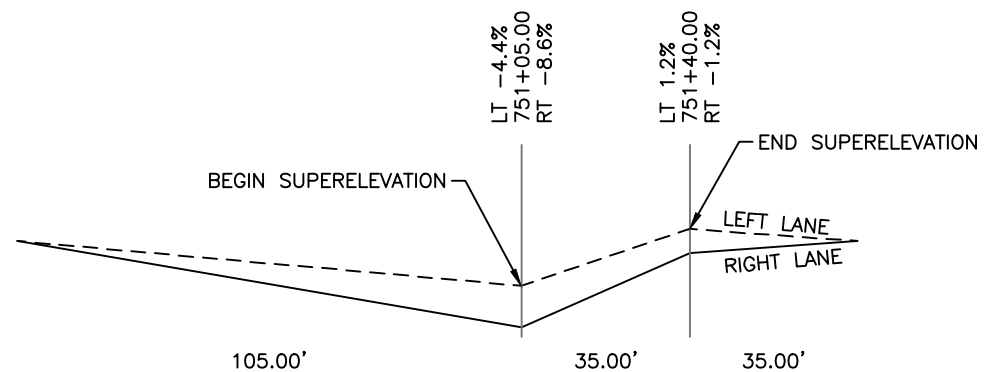
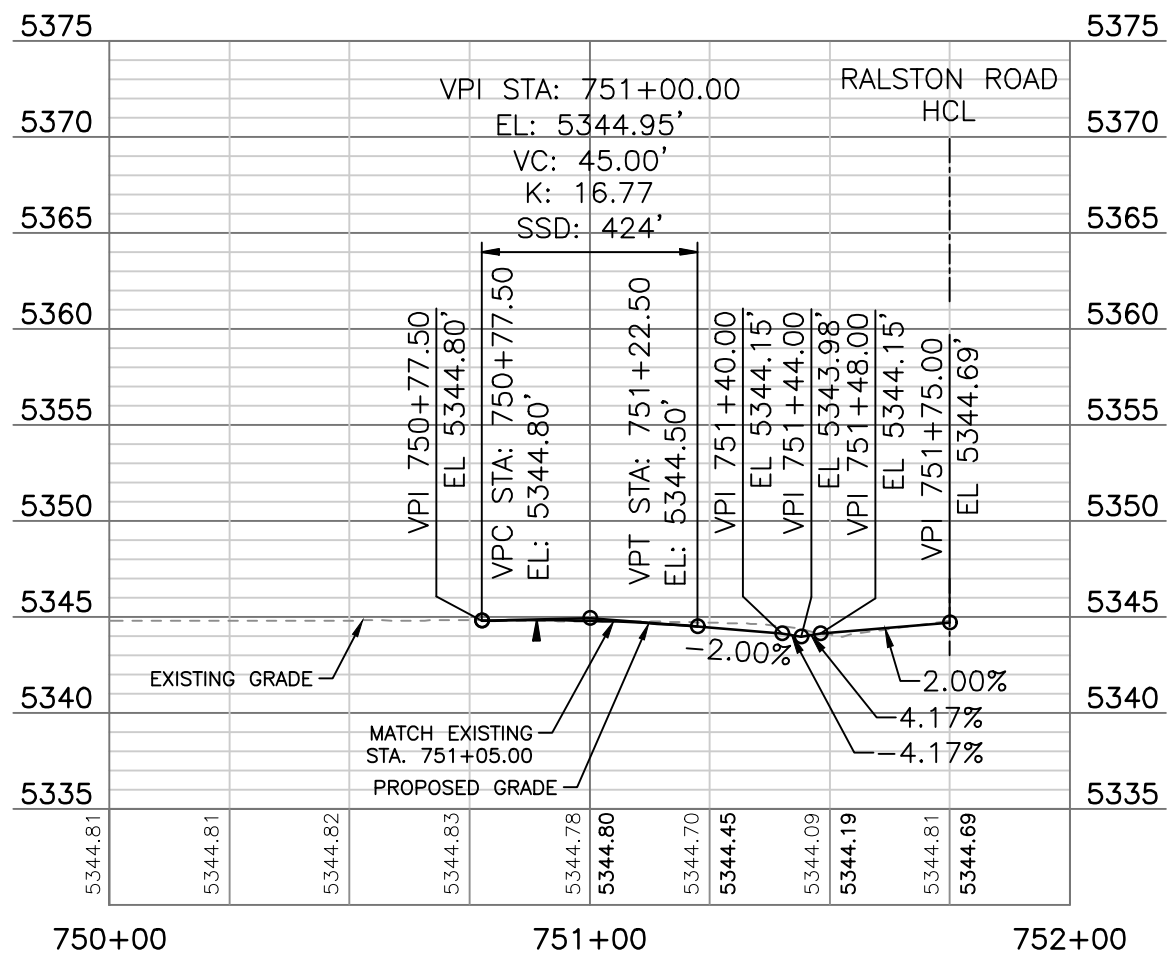


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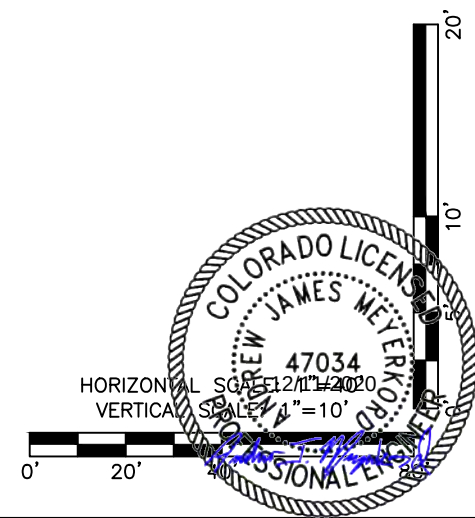
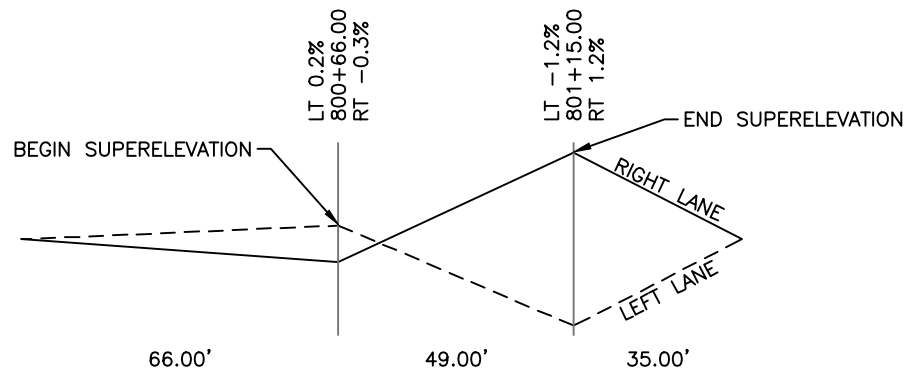
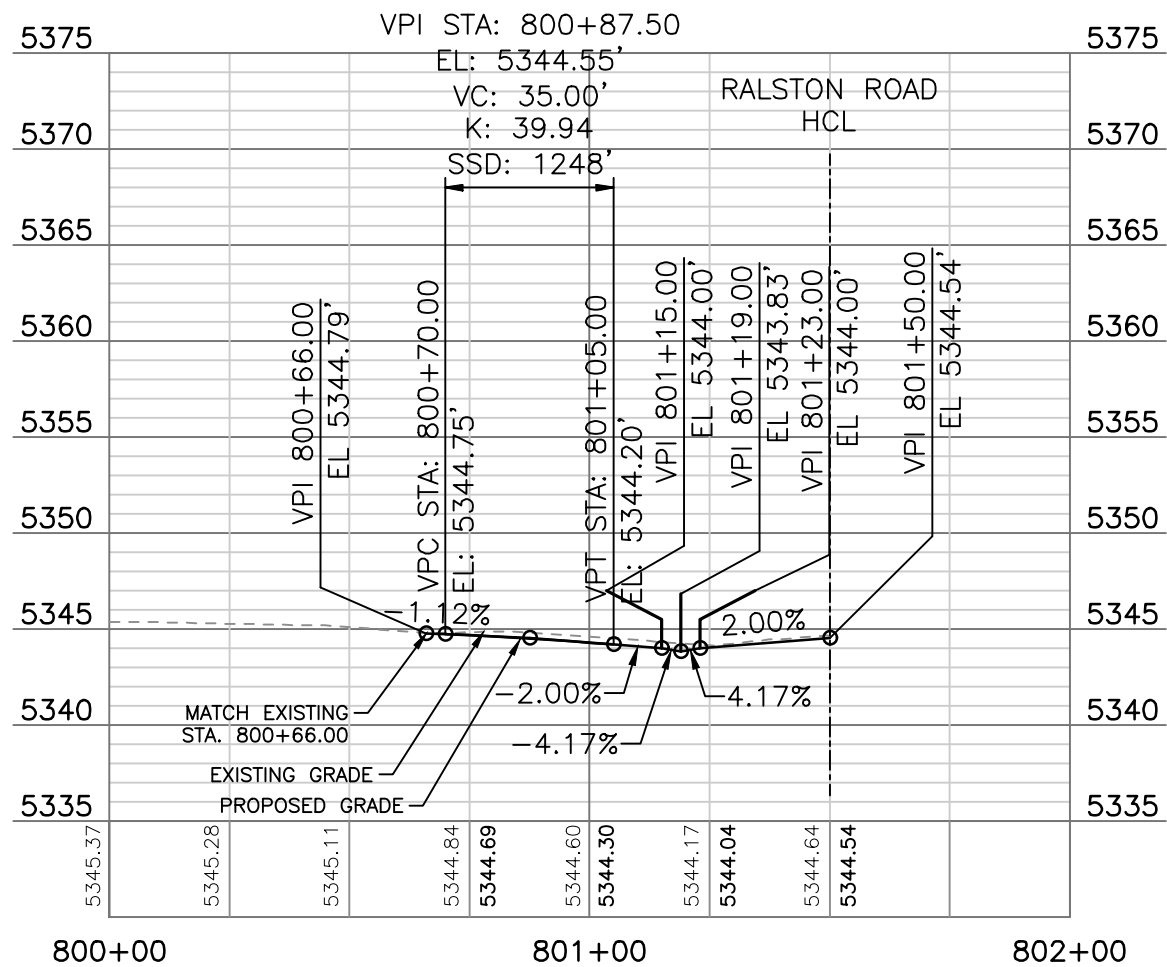
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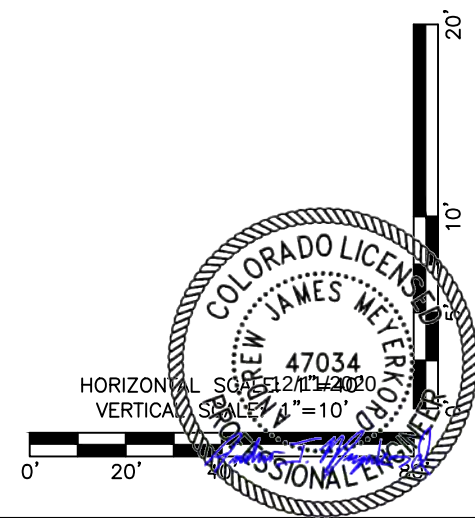
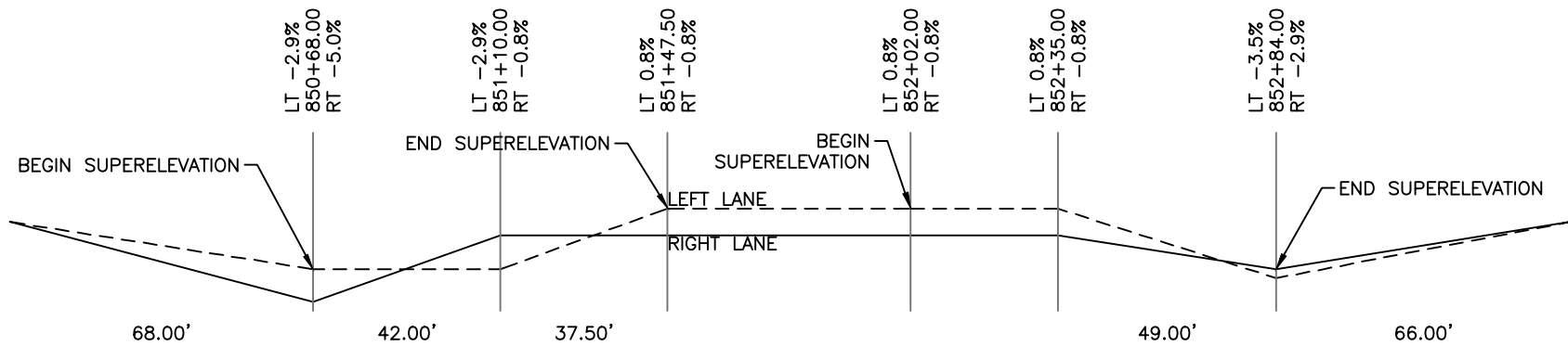
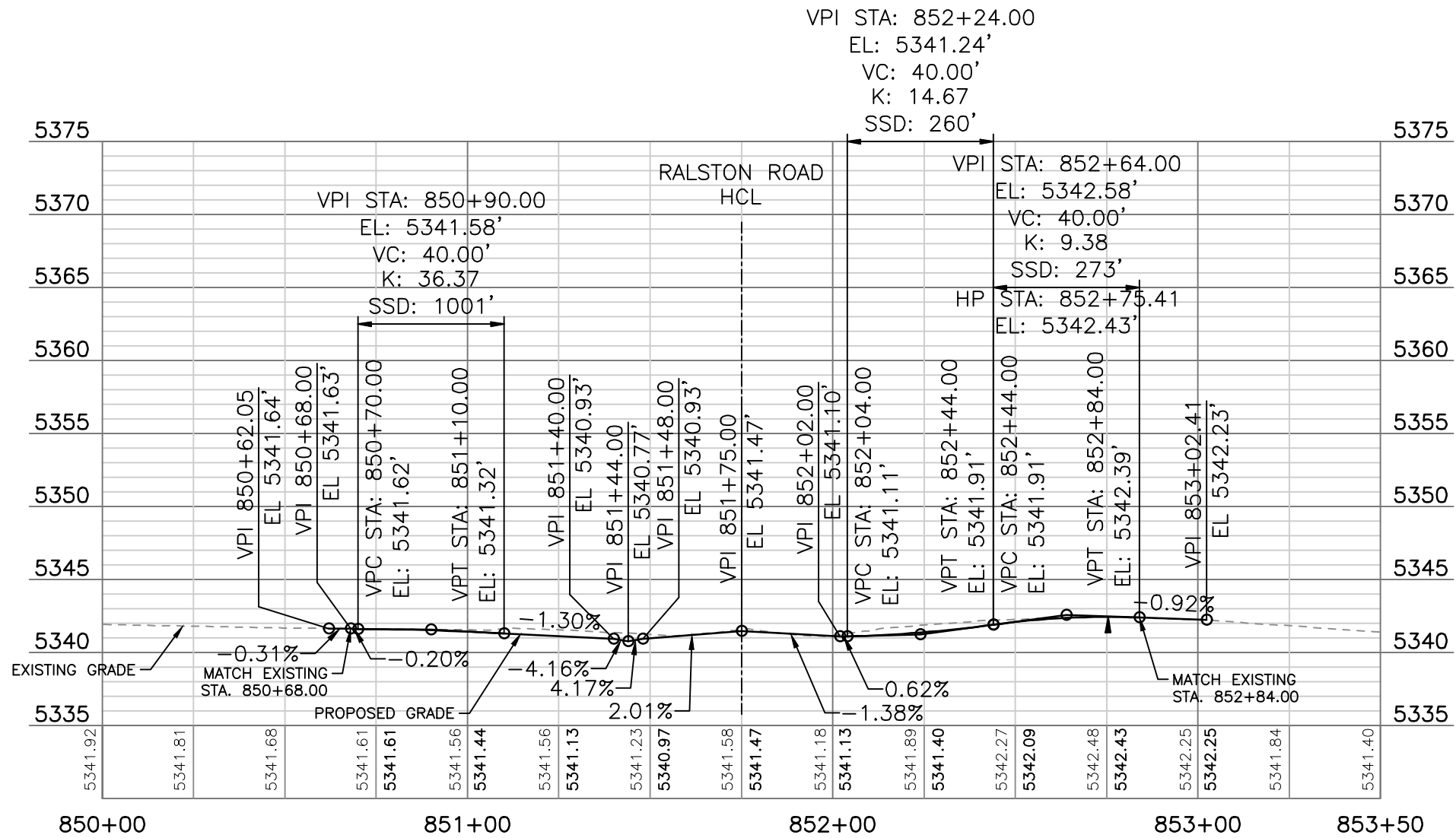


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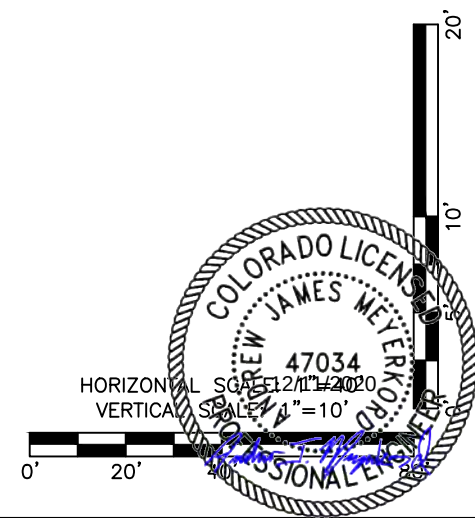
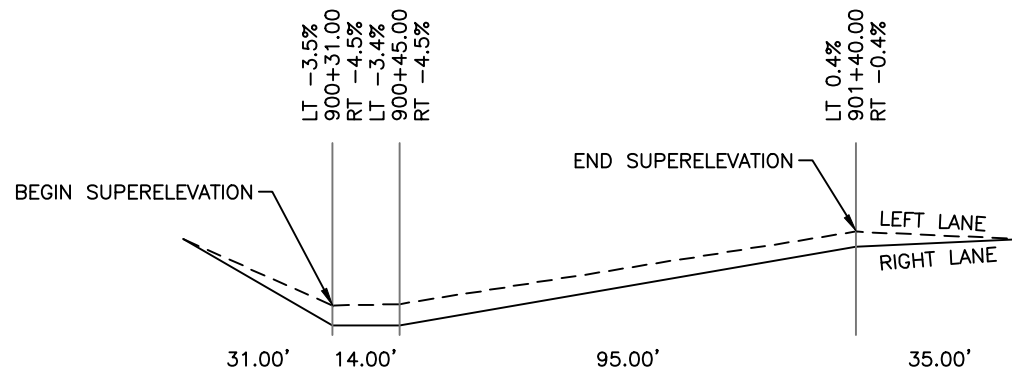
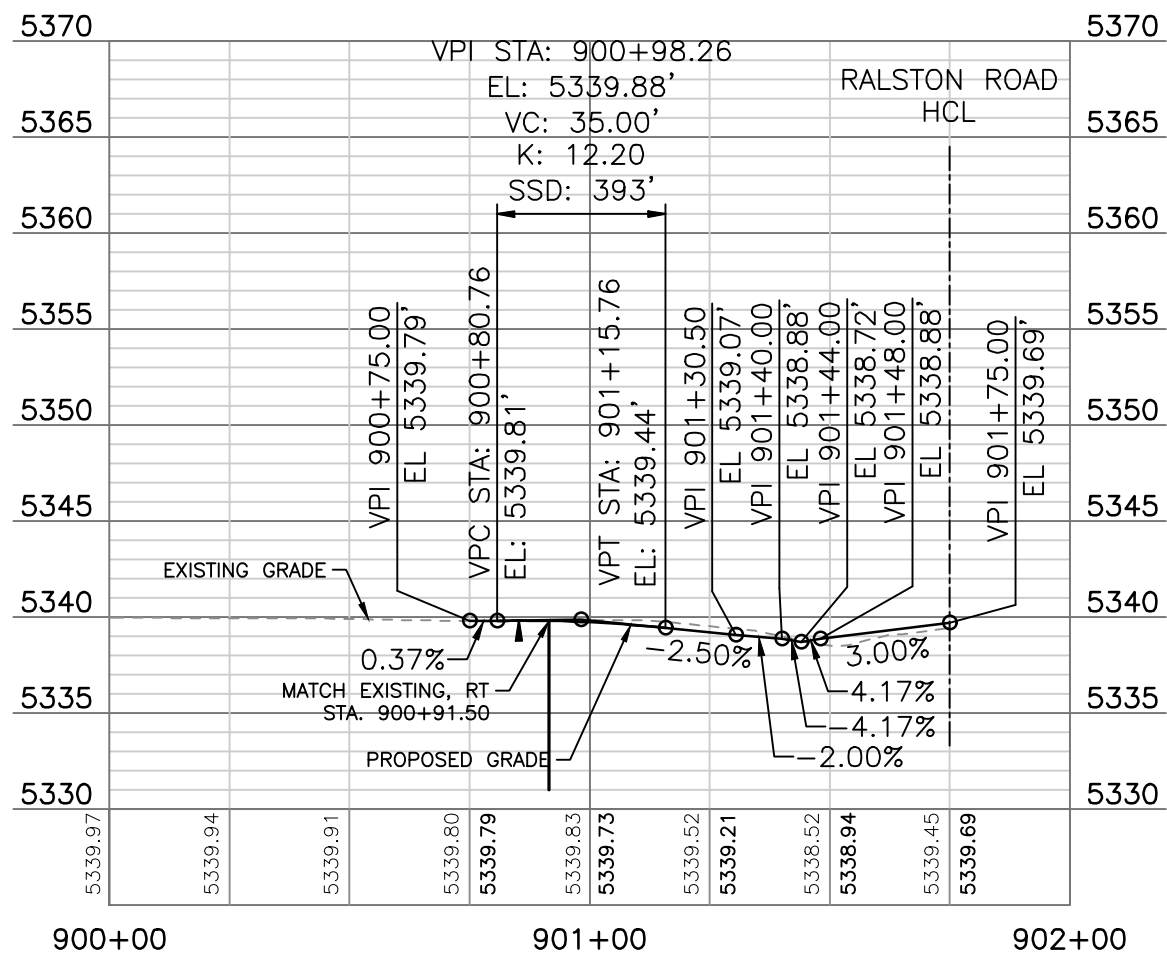
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	FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Designer: JHH Structure					
								Detailer: DAL Numbers							
								Sheet Subset: ROADWAY Subset Sheets: PP-34 of 38		Sheet Number 93					

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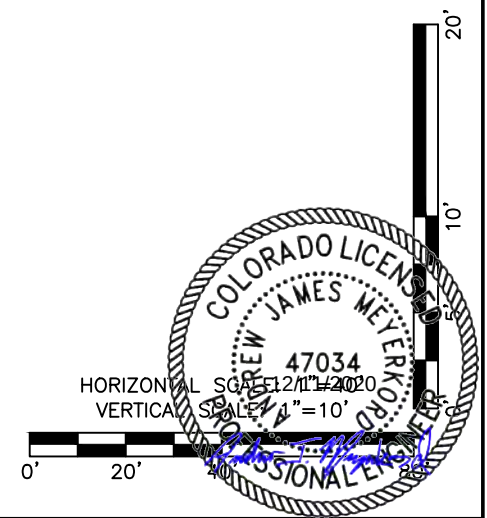
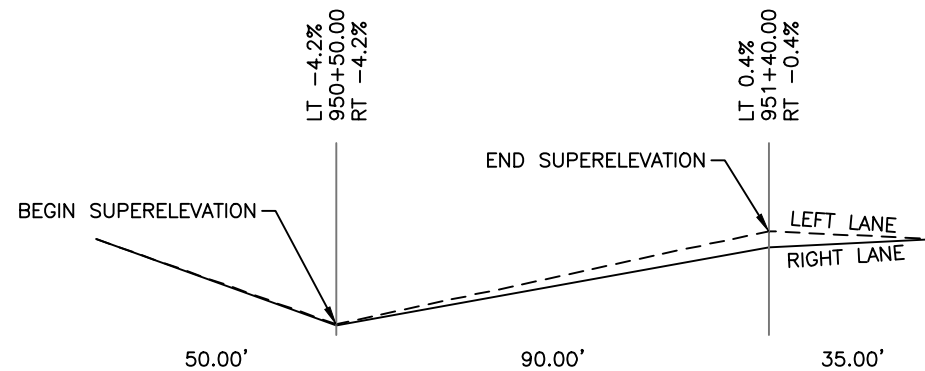
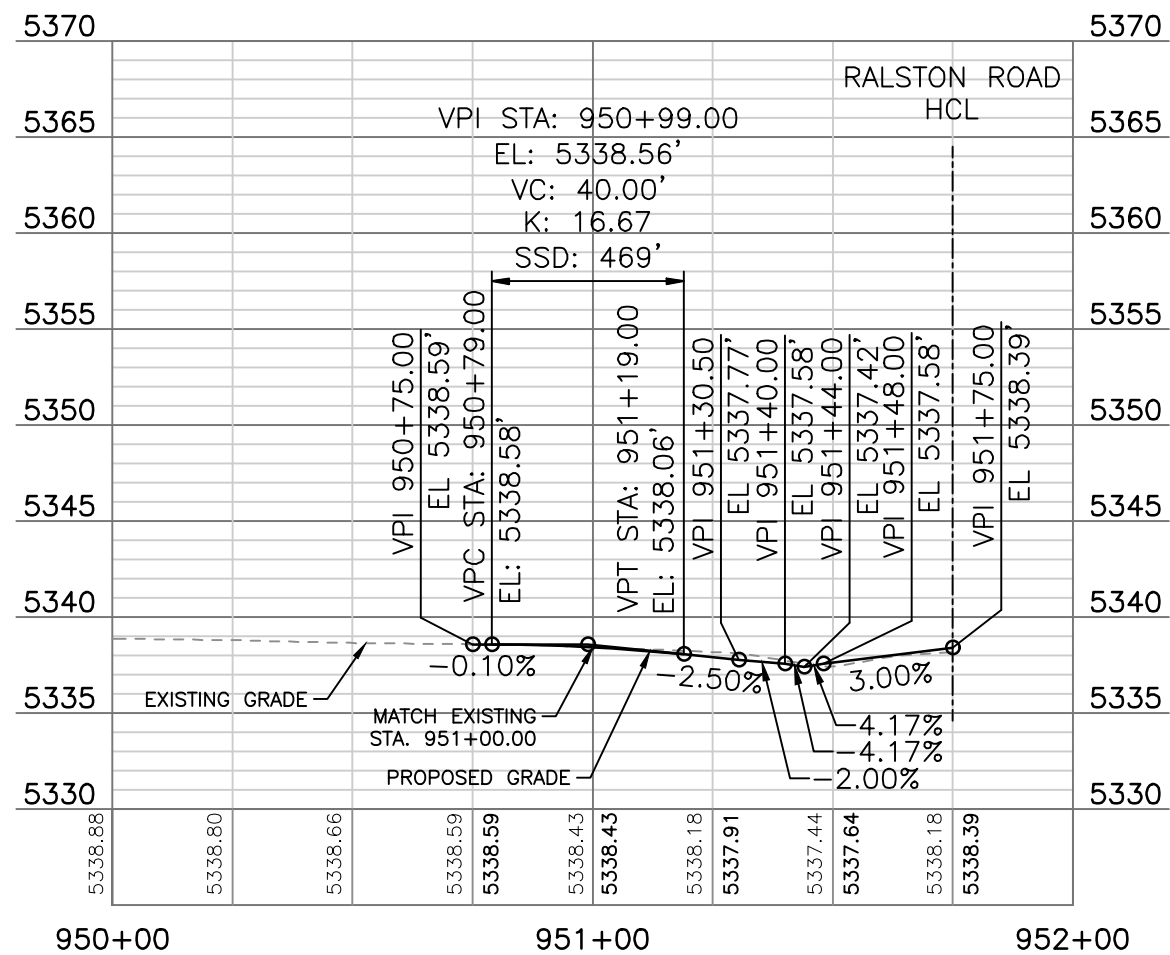
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	File Name: 118355_RDPR_SH01.DWG			Date	Comments	Initials		No Revisions:		18-ST-40					
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	 FELSBERG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Detailer: DAL		Numbers			
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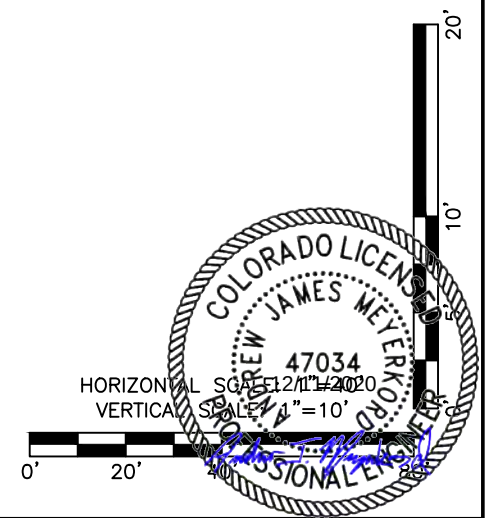
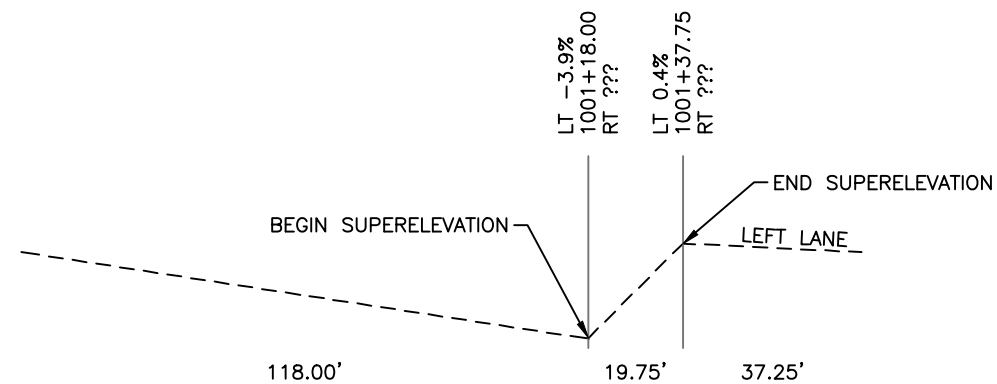
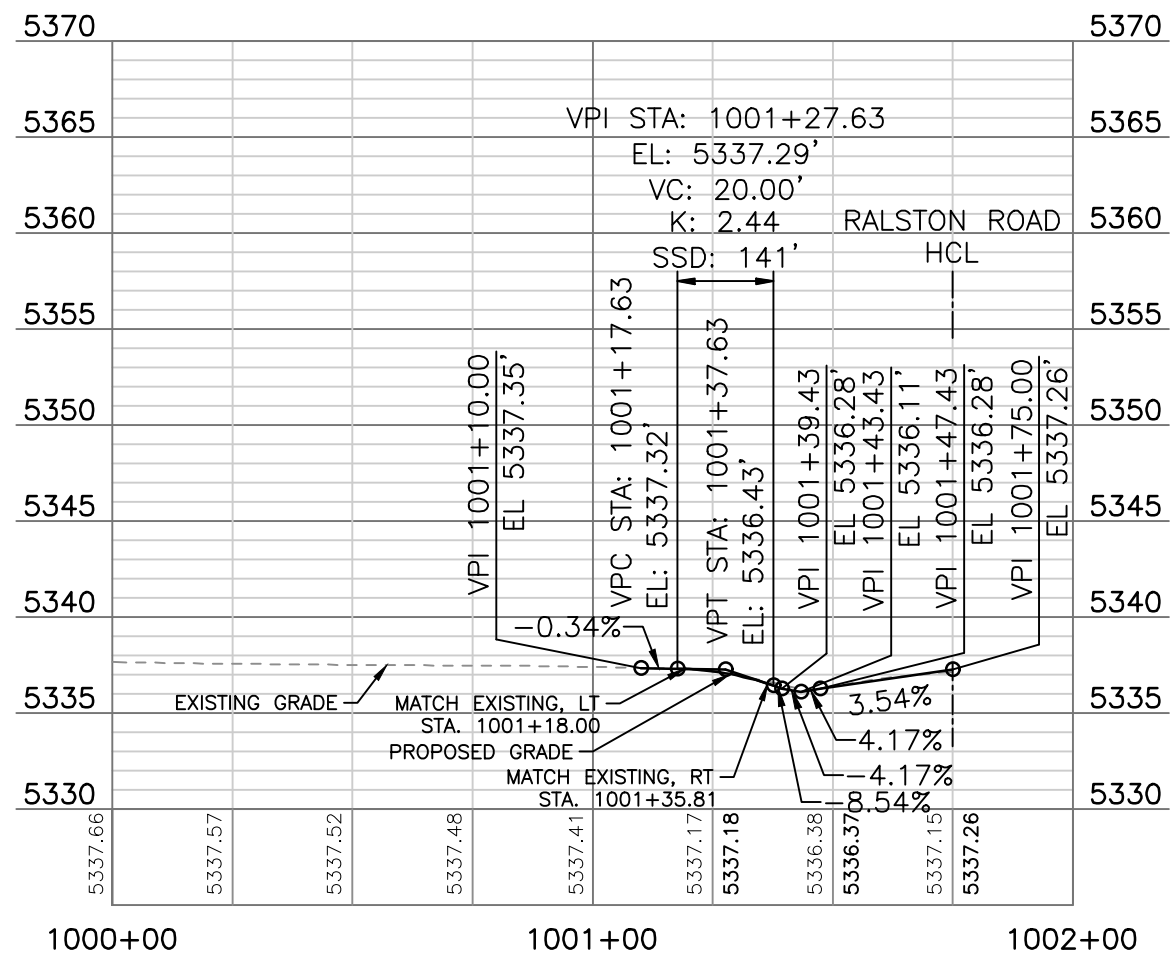


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	Date	Comments		Initials																					
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6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com			Void:		Detailer: DAL																				
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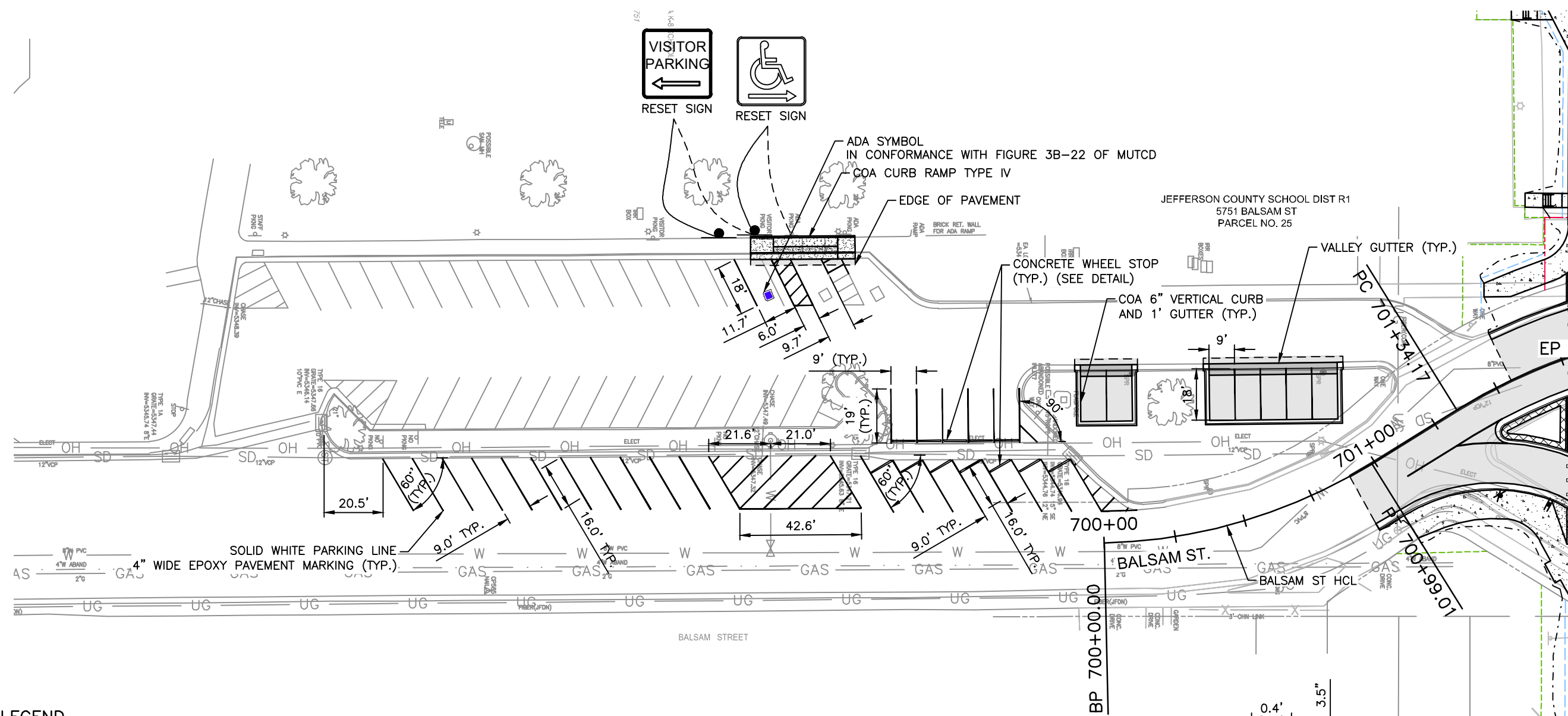


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	Horizontal Scale: 1"=40' Vertical Scale: 1"=10'			Date				Revised:			Designer: JHH		Structure	
	FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:			Detailer: DAL		Numbers	
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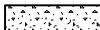
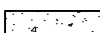
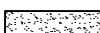
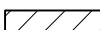
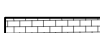
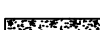
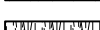


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	File Name: 118355_RDPR_SH01.DWG			Date	Comments	Initials		No Revisions:		18-ST-40				
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	 FELSBERG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Detailer: DAL				
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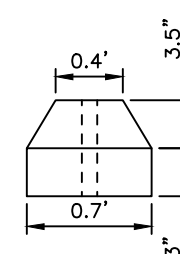
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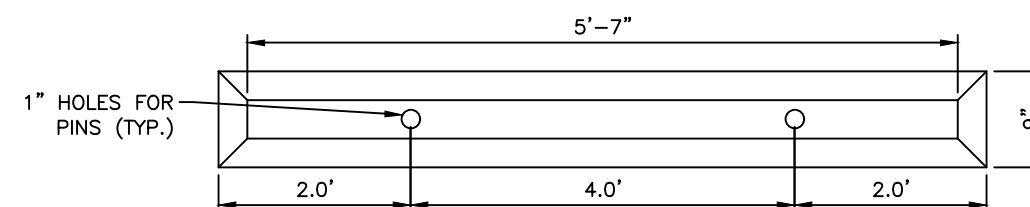
LEGEND

- | | |
|---|-------------------------------------|
|  | ASPHALT MAT (RE: TYPICAL SECTIONS) |
|  | CURB CUT (6 INCH CONCRETE) |
|  | MEDIAN SPLASH PAN (4 INCH CONCRETE) |
|  | SIDEWALK (6 INCH CONCRETE) |
|  | CURB RAMP (8 INCH CONCRETE) |
|  | VALLEY GUTTER (8 INCH CONCRETE) |
|  | RTD BUS PAD (11 INCH CONCRETE) |
|  | SLOPE PAVING (4 INCH CONCRETE) |
|  | BRICK PAVERS (REMOVE AND RESET) |
|  | PARKING LOT (4 INCH HMA) |
|  | PARKING LOT (6 INCH CONCRETE) |

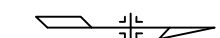
- NOTES:
1. FOR ADDITIONAL ROADWAY AND PROPERTY GRADING RE: ROADWAY GEOMETRIC DETAILS, INTERSECTION DETAILS AND PROPERTY ACCESS DETAILS.
 2. FOR ALL NON-ROADWAY CURBS AT THE BACK OF SIDEWALK AND ON PRIVATE PROPERTY RE: ROADWAY DETAILS, ROADWAY GEOMETRIC DETAILS AND PROPERTY ACCESS DETAILS.
 3. FOR DECORATIVE SIDEWALK PAVEMENT RE: LANDSCAPE PLANS AND LANDSCAPE DETAILS.
 4. FOR STAIR DETAIL RE: ROADWAY DETAILS.
 5. ALL STRIPING DIMENSIONS MEASURED TO EDGE OF PAVEMENT AND CENTER OF STRIPE.



CONCRETE WHEEL STOP DETAIL – SECTION VIEW
N.T.S.



CONCRETE WHEEL STOP DETAIL – PLAN VIEW
N.T.S.



HORIZ SCALE: 1"=20'

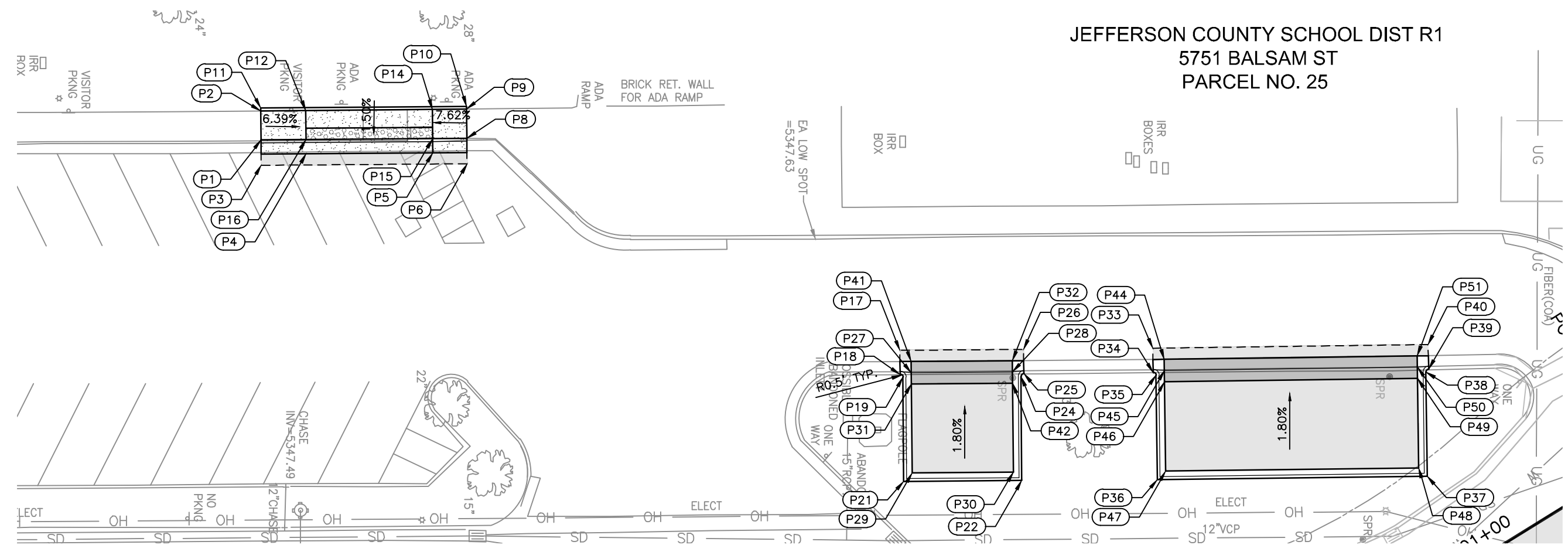


A horizontal scale bar with alternating black and white segments. It is marked with '0'', '10'', and '20'' at the bottom.



Print Date: 12/7/2020 12:35:04 PM		CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002		As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY PLAN SCHOOL PARKING LOT			Project No./Code		
File Name: 118355_RDPL_SH02.DWG				No Revisions:		Designer: JHH Detailer: BCN			18-ST-40		
Horizontal Scale: 1" = 20' Vertical Scale: N/A				Revised:					Sheet Number 98		
FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com				R-X		Date		Comments		Initials	

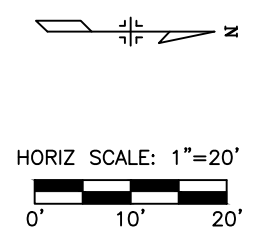
JEFFERSON COUNTY SCHOOL DIST R1
5751 BALSAM ST
PARCEL NO. 25



POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
P1	717359.4670	116272.8857	5348.82	TOP OF RAMP; MATCH EXISTING
P2	717359.4268	116267.7319	5348.90	TOP OF RAMP; MATCH EXISTING
P3	717359.5001	116277.3856	5348.18	EOP, MATCH EXISTING
P4	717367.4857	116275.3291	5348.22	CURB RAMP BOTTOM; EOP
P5	717389.9934	116275.1702	5348.30	CURB RAMP BOTTOM; EOP
P6	717396.0944	116277.1272	5348.24	EOP, MATCH EXISTING
P8	717396.0627	116272.6273	5348.81	EOP, MATCH EXISTING
P9	717396.0258	116267.4061	5348.89	EOP, MATCH EXISTING
P10	717396.0223	116266.9061	5348.94	EOP, MATCH EXISTING
P11	717359.4223	116267.2319	5348.90	EOP, MATCH EXISTING
P12	717367.4266	116267.6714	5348.39	CURB RAMP BOTTOM
P14	717389.9392	116267.4961	5348.42	CURB RAMP BOTTOM
P15	717389.9758	116272.6703	5348.35	CURB RAMP BOTTOM
P16	717367.4664	116272.8292	5348.31	CURB RAMP BOTTOM
P17	717473.0553	116310.2617	5347.50	EOP, MATCH EXISTING
P18	717473.0765	116314.5588	5347.86	BOC, P.C., MATCH EXISTING

POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
P19	717473.5778	116315.0547	5347.88	BOC, P.T.
P21	717473.7263	116333.5596	5347.92	BOC, MATCH EXISTING
P22	717494.7256	116333.3885	5347.87	BOC, MATCH EXISTING
P24	717494.5772	116314.8907	5347.68	BOC, P.T.
P25	717495.0739	116314.3867	5347.78	BOC, P.C., MATCH EXISTING
P26	717495.0439	116310.0933	5347.48	EOP, MATCH EXISTING
P27	717475.0714	116314.2464	5347.39	FLOWLINE
P28	717493.0708	116314.1085	5347.34	FLOWLINE
P29	717475.2142	116332.0476	5347.76	EOP
P30	717493.2136	116331.9005	5347.70	EOP
P31	717475.0874	116316.2463	5347.48	EOP
P32	717493.0548	116312.1086	5347.43	EOP
P33	717518.0309	116309.8762	5347.44	EOP, MATCH EXISTING
P34	717518.0737	116314.2174	5347.75	BOC, P.C., MATCH EXISTING
P35	717518.5771	116314.7110	5347.77	BOC, P.T.
P36	717518.8122	116333.2193	5347.81	EOP, MATCH EXISTING

POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
P37	717566.8083	116332.6097	5347.68	EOP, MATCH EXISTING
P38	717566.5732	116314.1003	5347.60	BOC, P.T.
P39	717567.0614	116313.5942	5347.46	BOC, P.C., MATCH EXISTING
P40	717566.9584	116309.2313	5347.25	EOP, MATCH EXISTING
P41	717475.0553	116312.2464	5347.45	EOP
P42	717493.0869	116316.1084	5347.42	EOP
P44	717520.0409	116311.8544	5347.40	EOP
P45	717520.0663	116313.8542	5347.27	FLOWLINE
P46	717520.0917	116315.8540	5347.36	EOP
P47	717520.2930	116331.7004	5347.64	EOP
P48	717565.2894	116331.1289	5347.51	EOP
P49	717565.0878	116315.2566	5347.23	EOP
P50	717565.0624	116313.2568	5347.14	FLOWLINE
P51	717565.0370	116311.2570	5347.21	EOP



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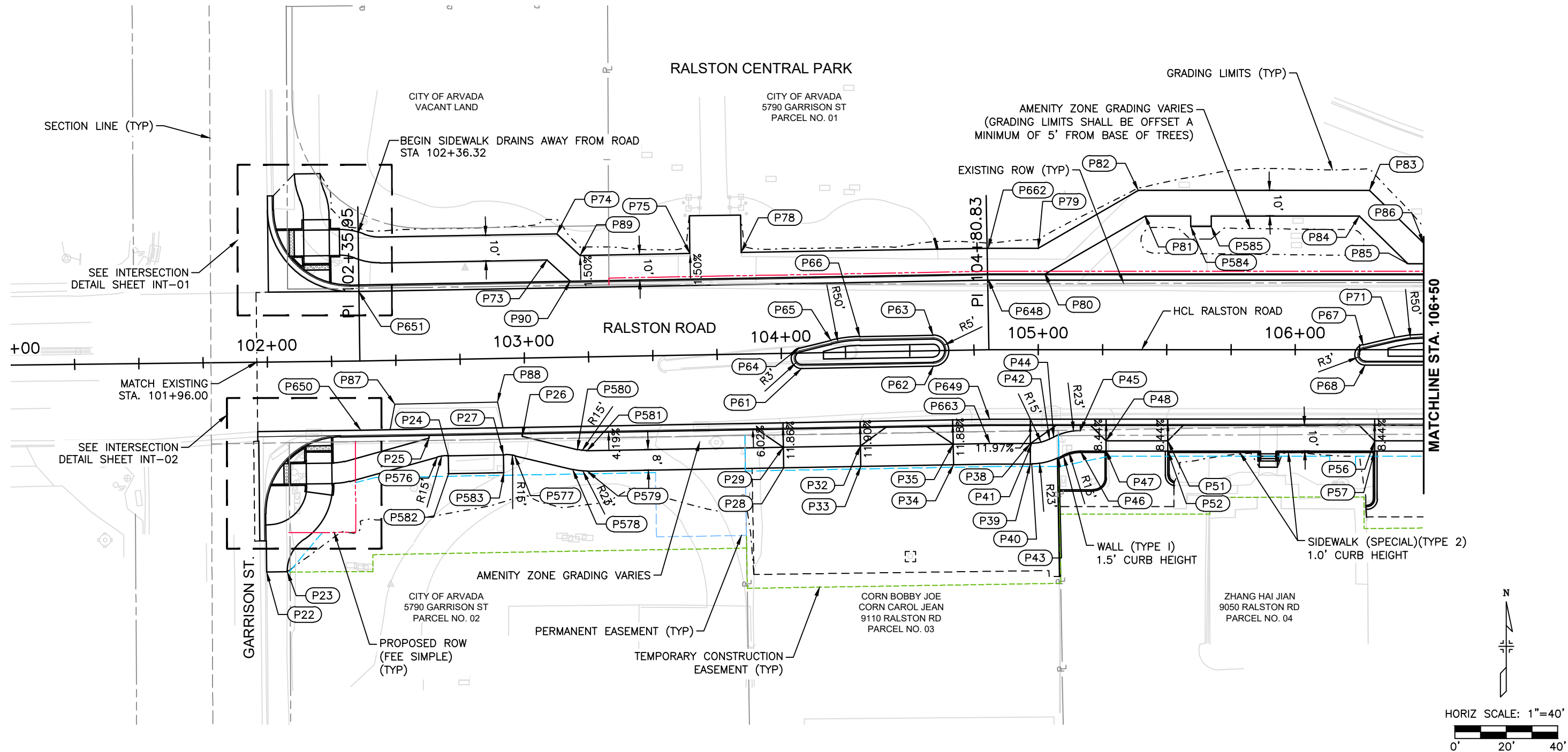
6400 South Fiddlers Green Circle, Suite 1500
Centennial, CO 80111
Phone: 303.721.1440
www.FHUENG.com

Sheet Revisions			
R-X	Date	Comments	Initials

CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed	RALSTON RD - YUKON ST TO GARRISON ST ROADWAY PLAN SCHOOL PARKING LOT DETAILS			Project No./Code
No Revisions:				18-ST-40
Revised:	Designer: JHH	Structure		
	Detailer: BCN	Numbers		
Void:	Sheet Subset: ROADWAY	Subset Sheets: PP—40 of 40		Sheet Number 99

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- NOTES**
1. ALL RADII ANNOTATIONS ARE MEASURED TO FLOWLINE OF CURB AND GUTTER OR EDGE OF SIDEWALK.
 2. CROSS-SLOPE OF SIDEWALK IS 1.5% TYPICAL.
 3. 0.5" CURB NOSE REQUIRED AT ALL CURB CUTS. RE: ROADWAY DETAILS.
 4. RE: PROPERTY ACCESS DETAILS FOR ADDITIONAL INFORMATION REGARDING IMPROVEMENTS TO PROPERTIES OUTSIDE OF THE ROADWAY.
 5. RE: LANDSCAPE PLANS FOR DECORATIVE PAVING INFORMATION.
 6. RE: DETAIL DT-01 FOR TRANSITION BETWEEN SIDEWALK CURB HEIGHTS.



Print Date: 12/7/2020 12:40:37 PM		R-X	Sheet Revisions			CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY GEOMETRIC DETAILS RALSTON ROAD (BEGIN - STA. 106+50)			Project No./Code		
File Name: 118355_RDGM_DT_SH01.DWG			Date				No Revisions:					18-ST-40		
Horizontal Scale: 1" = 40' Vertical Scale: N/A							Revised:		Designer: JHH		Structure			
FELSBERG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Detailer: JVS		Detailer: JVS		Numbers			
							Void:		Sheet Subset: ROADWAY		Subset Sheets: GD-01 of 20		Sheet Number 100	

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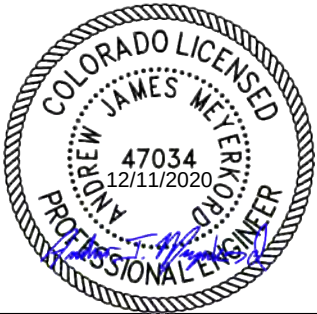
RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
22	101+98.73	81.70R	5346.63	FOW, MATCH EXISTING
23	102+06.73	81.70R	5346.77	BOW, MATCH EXISTING
24	102+69.74	37.50R	5344.47	FOW, BUS STOP
25	102+62.40	30.50R	5344.40	BOC, BUS STOP
26	102+98.58	30.50R	5344.30	BOC, BUS STOP
27	102+91.24	37.50R	5344.42	FOW, BUS STOP
28	104+00.12	44.50R	5344.98	BOW, DRIVEWAY
29	104+00.12	36.50R	5344.86	FOW, DRIVEWAY
32	104+30.12	36.50R	5344.99	FOW, DRIVEWAY
33	104+30.12	44.50R	5345.11	BOW, DRIVEWAY
34	104+66.19	44.50R	5345.29	BOW, DRIVEWAY
35	104+66.19	36.50R	5345.17	FOW, DRIVEWAY
38	104+96.87	36.50R	5345.33	FOW, DRIVEWAY
39	104+96.87	44.50R	5345.45	BOW, DRIVEWAY
40	104+97.48	44.50R	5345.44	BOW, P.C.
41	104+97.48	36.50R	5345.32	FOW, P.C.
42	105+04.32	34.85R	5345.21	FOW, P.T.
43	105+07.97	41.97R	5345.28	BOW, P.R.C.
44	105+05.93	34.03R	5345.18	FOW, P.C.
45	105+16.41	31.50R	5345.01	FOW, P.T.
46	105+16.41	39.50R	5345.13	BOW, P.T.
47	105+26.41	39.50R	5345.18	BOW, DRIVEWAY
48	105+26.41	35.50R	5345.12	FOW, DRIVEWAY

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
51	105+50.41	35.50R	5345.84	FOW, DRIVEWAY
52	105+50.41	39.50R	5345.30	BOW, DRIVEWAY
56	106+30.84	35.50R	5345.65	FOW, DRIVEWAY
57	106+30.84	39.51R	5346.49	BOW, DRIVEWAY
61	104+07.79	6.00R	5344.33	MEDIAN, P.T.
62	104+59.09	6.00R	5344.57	MEDIAN, P.C.
63	104+59.09	6.00L	5344.45	MEDIAN, P.T.
64	104+06.91	1.90L	5344.33	MEDIAN, P.C.
65	104+19.36	4.73L	5344.29	MEDIAN, P.C.
66	104+30.67	6.00L	5344.31	MEDIAN, P.T.
67	106+26.31	1.90L	5345.41	MEDIAN, P.C.
68	106+27.20	6.00R	5345.42	MEDIAN, P.T.
71	106+38.77	4.73L	5345.39	MEDIAN, P.C.
73	103+09.50	38.00L	5344.28	FOW
74	103+13.50	48.00L	5344.40	BOW
75	103+65.15	39.50L	5343.67	BOW
78	103+85.03	39.50L	5343.70	BOW
79	105+00.00	39.50L	5344.21	BOW
80	105+02.68	29.50L	5344.37	FOW
81	105+41.57	52.00L	5342.38	FOW
82	105+38.89	62.00L	5342.19	BOW
83	106+28.92	62.00L	5343.72	BOW
84	106+24.85	52.00L	5343.80	FOW

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
85	106+43.79	33.50L	5345.02	FOW
86	106+49.91	41.50L	5344.93	BOW
87	102+49.24	17.00R	5344.32	BUS PAD
88	102+89.24	17.00R	5344.16	BUS PAD
89	103+22.43	39.50L	5344.20	BOW
90	103+18.44	29.50L	5344.08	TBOC
576	102+65.44	37.98R	5344.49	BOC, BUS STOP
577	102+95.54	37.98R	5344.42	BOC, BUS STOP
578	103+17.98	43.77R	5344.62	BOC, BUS STOP
579	103+23.73	44.50R	5344.67	BOC, BUS STOP
580	103+19.98	36.02R	5344.51	BOC, BUS STOP
581	103+23.73	36.50R	5344.55	BOC, BUS STOP
582	102+69.74	44.50R	5344.58	BOC, BUS STOP
583	102+91.24	44.50R	5344.52	BOC, BUS STOP
584	105+59.22	48.00L	5343.03	FOW
585	105+41.57	52.00L	5342.24	FOW
648			5343.93	EOP, RALSTON P.I.
649	104+81.07	27.00R	5344.47	EOP, RALSTON P.I.
650			5344.12	EOP, P.I.
651	102+36.02	27.00L	5344.59	EOP, P.I.
662			5344.12	BOW, RALSTON P.I.
663	104+81.16	36.50R	5345.25	FOW, RALSTON P.I.

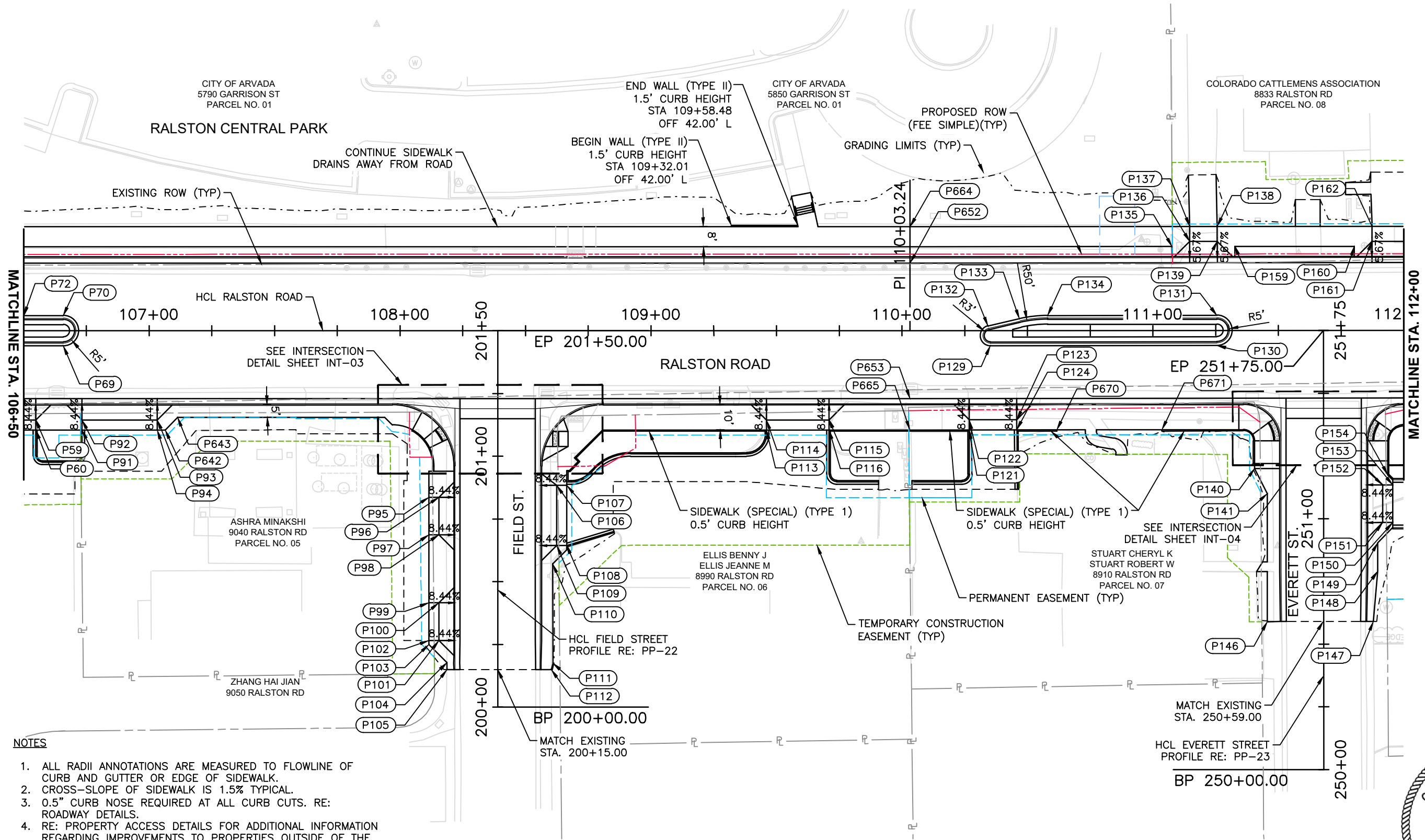
LEGEND

FOW: FRONT OF WALK
BOW: BACK OF WALK
TBOC: TOP BACK OF CURB
FOC: FACE OF CURB

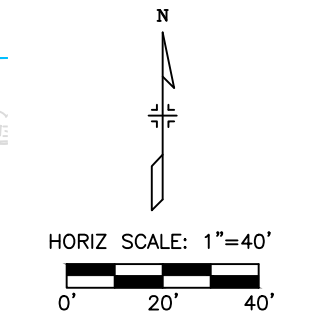


Print Date: 12/7/2020 12:40:42 PM		R-X	Sheet Revisions			 CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY GEOMETRIC DETAILS POINT TABLE (BEGIN - STA. 106+50)			Project No./Code	
File Name: 118355_RDGM_DT_SH01.DWG							No Revisions:					18-ST-40	
Horizontal Scale: 1" = 40' Vertical Scale: N/A							Revised:		Designer: JHH		Structure		
 FELSBERG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Detailer: JVS		Numbers		
									Sheet Subset: ROADWAY		Subset Sheets: GD-02 of 20		Sheet Number 101

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- NOTES**
- 1. ALL RADII ANNOTATIONS ARE MEASURED TO FLOWLINE OF CURB AND GUTTER OR EDGE OF SIDEWALK.
 - 2. CROSS-SLOPE OF SIDEWALK IS 1.5% TYPICAL.
 - 3. 0.5" CURB NOSE REQUIRED AT ALL CURB CUTS. RE: ROADWAY DETAILS.
 - 4. RE: PROPERTY ACCESS DETAILS FOR ADDITIONAL INFORMATION REGARDING IMPROVEMENTS TO PROPERTIES OUTSIDE OF THE ROADWAY.
 - 5. RE: LANDSCAPE PLANS FOR DECORATIVE PAVING INFORMATION.
 - 6. RE: DETAIL DT-01 FOR TRANSITION BETWEEN SIDEWALK CURB HEIGHTS.



Print Date: 12/7/2020 12:41:00 PM		R-X	Sheet Revisions			CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed	RALSTON RD - YUKON ST TO GARRISON ST ROADWAY GEOMETRIC DETAILS RALSTON ROAD (STA. 106+50 - STA. 112+00)			Project No./Code		
File Name: 118355_RDGM_DT_SH01.DWG							No Revisions:				18-ST-40		
Horizontal Scale: 1" = 40' Vertical Scale: N/A							Revised:	Designer: JHH	Structure				
FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:	Detailer: JVS	Numbers				
						Sheet Subset: ROADWAY	Subset Sheets: GD—03 of 20			Sheet Number 102			

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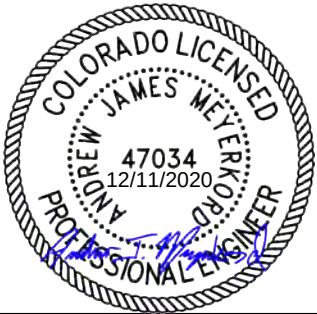
RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
59	106+54.84	35.50R	5345.77	FOW, DRIVEWAY
60	106+54.84	39.50R	5345.83	BOW, DRIVEWAY
69	106+65.82	6.00R	5345.61	MEDIAN, P.C.
70	106+65.82	6.00L	5345.49	MEDIAN, P.T.
72	106+50.07	6.00L	5345.41	MEDIAN, P.T.
91	106+73.32	39.50R	5345.92	BOW, DRIVEWAY
92	106+73.32	35.50R	5345.86	FOW, DRIVEWAY
93	107+03.32	35.50R	5346.01	FOW, DRIVEWAY
94	107+03.32	39.50R	5346.07	BOW, DRIVEWAY
95	200+83.71	27.50L	5347.49	BOW, DRIVEWAY
96	200+83.71	23.50L	5347.43	FOW, DRIVEWAY
97	200+68.71	27.50L	5348.35	BOW, DRIVEWAY
98	200+68.71	23.50L	5348.29	FOW, DRIVEWAY
99	200+41.61	27.50L	5350.39	BOW, DRIVEWAY
100	200+41.61	23.50L	5350.33	FOW, DRIVEWAY
101	200+26.61	23.50L	5351.42	FOW, DRIVEWAY
102	200+26.61	27.50L	5351.48	BOW, DRIVEWAY
103	200+24.95	27.50L	5351.60	BOW
104	200+17.75	20.30L	5351.99	BOW
105	200+15.00	20.30L	5352.21	BOW, MATCH EXISTING
106	200+88.39	23.50R	5347.32	FOW, DRIVEWAY
107	200+88.39	27.50R	5347.38	BOW, DRIVEWAY
108	200+64.39	27.50R	5348.69	BOW, DRIVEWAY
109	200+64.39	23.50R	5348.63	FOW, DRIVEWAY
110	200+57.14	21.90R	5349.14	BOW, DRIVEWAY

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
111	200+17.57	21.97R	5351.95	BOW
112	200+15.00	21.37R	5352.11	BOW, MATCH EXISTING
113	109+45.97	39.50R	5347.71	BOW, DRIVEWAY
114	109+45.97	35.50R	5347.65	FOW, DRIVEWAY
115	109+70.97	35.50R	5348.08	FOW, DRIVEWAY
116	109+70.97	39.50R	5348.14	BOW, DRIVEWAY
121	110+26.73	39.50R	5349.39	BOW, DRIVEWAY
122	110+26.73	35.50R	5349.33	FOW, DRIVEWAY
123	110+45.73	35.50R	5349.85	FOW, DRIVEWAY
124	110+45.73	39.50R	5349.91	BOW, DRIVEWAY
129	110+35.15	6.00R	5349.34	MEDIAN, P.T.
130	111+25.46	6.00R	5352.32	MEDIAN, P.C.
131	111+25.46	6.00L	5352.20	MEDIAN, P.T.
132	110+34.27	1.90L	5349.32	MEDIAN, P.C.
133	110+46.73	4.73L	5349.58	MEDIAN, P.C.
134	110+58.03	6.00L	5349.88	MEDIAN, P.T.
135	111+07.65	33.50L	5351.18	FOW
136	111+14.65	35.50L	5351.40	FOW, DRIVEWAY
137	111+14.65	41.50L	5351.31	BOW, DRIVEWAY
138	111+25.65	41.50L	5351.73	BOW, DRIVEWAY
139	111+25.64	35.50L	5351.82	FOW, DRIVEWAY
140	251+20.00	27.50L	5353.91	BOW
141	251+10.00	22.50L	5354.14	BOW
146	250+58.94	22.50L	5356.78	BOW, MATCH EXISTING
147	250+59.00	19.80R	5357.67	BOW, MATCH EXISTING

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
148	250+79.00	21.50R	5356.64	BOW
149	250+90.42	21.50R	5355.94	BOW
150	250+98.41	27.50R	5355.62	BOW, DRIVEWAY
151	250+98.41	23.50R	5355.56	FOW, DRIVEWAY
152	251+13.41	23.50R	5354.98	FOW, DRIVEWAY
153	251+13.41	27.50R	5355.03	BOW, DRIVEWAY
154	251+17.41	25.50R	5354.89	BOW
159	111+32.65	33.50L	5352.11	FOW
160	111+80.29	33.50L	5353.74	FOW
161	111+87.29	35.50L	5353.92	FOW, DRIVEWAY
162	111+87.29	41.50L	5353.83	BOW, DRIVEWAY
642	107+06.39	39.50R	5346.09	BOW
643	107+11.39	34.50R	5346.04	BOW
652	110+03.27	27.00L	5347.80	EOP, RALSTON P.I.
653	110+03.24	27.00R	5348.33	EOP, RALSTON P.I.
664	110+03.28	41.50L	5347.95	BOW, RALSTON P.I.
665	110+03.13	39.50R	5348.82	BOW, RALSTON P.I.
670	110+61.72	39.50R	5350.38	BOW, END SIDEWALK (SPECIAL)
671	111+03.58	39.50R	5351.78	BOW, BEGIN SIDEWALK (SPECIAL)

LEGEND

FOW: FRONT OF WALK
BOW: BACK OF WALK
TBOC: TOP BACK OF CURB
FOC: FACE OF CURB



Print Date: 12/7/2020 12:41:06 PM		R-X	Sheet Revisions			 CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY GEOMETRIC DETAILS POINT TABLE (STA. 106+50 - STA. 112+00)			Project No./Code	
File Name: 118355_RDGM_DT_SH01.DWG			Date	Comments	Initials		No Revisions:					18-ST-40	
Horizontal Scale: 1" = 40' Vertical Scale: N/A							Revised:		Designer: JHH	Structure			
 FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Detailer: JVS	Numbers			
									Sheet Subset: ROADWAY	Subset Sheets: GD-04 of 20		Sheet Number 103	

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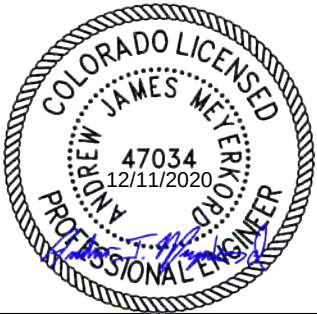
LEGEND

FOW: FRONT OF WALK
 BOW: BACK OF WALK
 TBOC: TOP BACK OF CURB
 FOC: FACE OF CURB

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
163	112+11.29	41.50L	5354.52	BOW, DRIVEWAY
164	112+11.29	35.50L	5354.61	FOW, DRIVEWAY
165	112+18.29	33.50L	5354.83	FOW
166	112+32.97	33.50L	5355.28	FOW, P.C.
167	112+39.73	34.52L	5355.49	FOW, P.R.C.
168	112+32.97	41.50L	5355.34	BOW, P.C.
169	112+37.38	42.16L	5355.54	BOW, P.T.
171	112+44.02	35.84L	5355.61	FOW, P.C.
172	112+48.43	36.50L	5355.72	FOW, P.T.
173	112+41.67	43.48L	5355.67	BOW, P.C.
174	112+48.43	44.50L	5355.84	BOW, P.T.
175	113+82.49	44.50L	5357.65	BOW, DRIVEWAY
176	113+82.49	36.50L	5357.53	FOW, DRIVEWAY
177	114+00.49	44.50L	5357.74	BOW, DRIVEWAY
178	114+00.49	36.50L	5357.62	FOW, DRIVEWAY
179	113+87.95	17.00R	5357.76	BUS PAD
180	114+27.95	17.00R	5357.96	BUS PAD
181	300+96.16	25.50L	5358.71	BOW
182	300+94.16	27.50L	5358.75	BOW
183	300+92.50	27.50L	5358.76	BOW, DRIVEWAY

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
184	300+92.50	23.50L	5358.70	FOW, DRIVEWAY
185	300+73.50	27.50L	5358.86	BOW, DRIVEWAY
186	300+73.50	23.50L	5358.71	FOW, DRIVEWAY
187	300+71.84	27.50L	5358.86	BOW
188	300+64.45	20.10L	5358.59	BOW
189	300+64.31	20.10L	5358.74	BOW, MATCH EXISTING
190	300+80.05	22.67R	5358.80	BOW, MATCH EXISTING
191	300+90.00	22.52R	5358.73	BOW
196	115+63.95	36.50L	5357.66	FOW, BUS STOP
197	115+63.95	29.50L	5357.55	BUS STOP
198	115+71.95	29.50L	5357.50	BUS STOP
199	115+71.95	36.50L	5357.61	FOW, BUS STOP
200	115+65.94	17.00L	5357.48	BUS PAD
201	116+05.94	16.97L	5357.07	BUS PAD
202	116+09.78	39.50R	5357.44	BOW, DRIVEWAY
203	116+09.78	35.50R	5357.38	FOW, DRIVEWAY
204	116+33.78	39.50R	5357.05	BOW, DRIVEWAY
205	116+33.78	35.50R	5356.99	FOW, DRIVEWAY
206	116+63.63	35.50R	5356.61	FOW, DRIVEWAY
207	116+63.63	39.50R	5356.67	BOW, DRIVEWAY

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
208	116+87.63	39.50R	5356.43	BOW, DRIVEWAY
209	116+87.63	35.50R	5356.37	FOW, DRIVEWAY
588	115+85.22	36.50L	5357.50	FOW, P.C.
589	115+85.22	44.50L	5357.62	BOW, P.C.
590	115+90.97	35.66L	5357.44	FOW, P.T.
591	115+93.27	43.32L	5357.53	BOW, P.T.
592	115+94.22	34.68L	5357.39	FOW, P.C.
593	115+96.52	42.34L	5357.48	BOW, P.C.
594	116+02.27	33.50L	5357.29	FOW, P.T.
595	116+02.27	41.50L	5357.41	BOW, P.T.
596	116+11.40	33.50L	5357.20	FOW, P.C.
597	116+11.40	41.50L	5357.32	BOW, P.C.
598	116+19.44	34.68L	5357.14	FOW, P.T.
599	116+17.15	42.34L	5357.27	BOW, P.T.
600	116+22.70	35.66L	5357.12	FOW, P.C.
601	116+20.40	43.32L	5357.26	BOW, P.C.
602	116+28.44	36.50L	5357.08	FOW, P.T.
603	116+28.44	44.50L	5357.20	BOW, P.T.
644	114+06.50	44.50L	5357.77	BOW
645	114+13.64	39.50L	5357.73	BOW



Print Date: 12/7/2020 12:41:30 PM		R-X	Sheet Revisions			CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY GEOMETRIC DETAILS POINT TABLE (STA. 112+00 - STA. 117+50)			Project No./Code		
File Name: 118355_RDGM_DT_SH01.DWG							No Revisions:					18-ST-40		
Horizontal Scale: 1" = 40' Vertical Scale: N/A							Revised:		Designer: JHH Detailer: JVS		Structure Numbers			
FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Sheet Subset: ROADWAY		Subset Sheets: GD-06 of 20		Sheet Number 105	

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
210	351+11.14	27.50L	5355.82	BOW
211	351+00.00	20.26L	5355.51	BOW, MATCH EXISTING
212	351+00.00	19.99R	5355.26	BOW, MATCH EXISTING
213	351+11.60	27.50R	5355.71	BOW, MATCH EXISTING
216	118+72.83	44.50L	5355.60	BOW, DRIVEWAY
217	118+72.83	36.50L	5355.48	FOW, DRIVEWAY
218	118+90.83	36.50L	5355.39	FOW, DRIVEWAY
219	118+90.83	44.50L	5355.51	BOW, DRIVEWAY
220	118+99.30	35.50R	5355.20	FOW, DRIVEWAY
221	118+99.30	39.50R	5355.26	BOW, DRIVEWAY
222	119+23.30	39.50R	5355.14	BOW, DRIVEWAY
223	119+23.30	35.50R	5355.08	FOW, DRIVEWAY
224	119+34.80	39.50L	5355.22	BOW, DRIVEWAY
225	119+34.80	35.50L	5355.16	FOW, DRIVEWAY
226	119+58.80	35.50L	5355.04	FOW, DRIVEWAY
227	119+58.80	39.50L	5355.10	BOW, DRIVEWAY
228	119+67.96	35.50R	5354.85	FOW, DRIVEWAY
229	119+67.96	39.50R	5354.91	BOW, DRIVEWAY
230	119+82.96	35.50R	5354.78	FOW, DIRVEWAY
231	119+82.96	39.50R	5354.84	BOW, DRIVEWAY

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
232	451+13.68	32.50L	5354.29	BOW, DRIVEWAY
233	451+13.68	28.50L	5354.23	FOW, DRIVEWAY
234	450+98.68	32.50L	5354.38	BOW, DRIVEWAY
235	450+98.68	28.50L	5354.32	FOW, DRIVEWAY
236	450+97.02	32.50L	5354.39	BOW
237	450+89.99	25.47L	5354.31	BOW
238	450+85.00	25.45L	5354.17	BOW, DRIVEWAY
239	120+26.08	39.50L	5354.76	BOW, P.C.
240	120+32.78	37.92L	5354.70	BOW, P.R.C.
241	120+43.03	35.50L	5354.61	BOW, P.T.
242	401+05.02	20.51R	5353.87	BOW, MATCH EXISTING
243	121+53.88	31.50L	5354.00	FOW, P.C.
244	121+65.31	34.53L	5353.99	FOW, P.R.C.
245	121+72.74	36.50L	5353.98	FOW, P.T.
246	121+53.89	39.50L	5354.12	BOW, P.C.
247	121+61.34	41.47L	5354.11	BOW, P.R.C.
248	121+72.74	44.50L	5354.10	BOW, P.T.
249	122+14.44	36.50L	5353.26	FOW, DRIVEWAY
250	122+14.44	44.50L	5353.38	BOW, DRIVEWAY
251	122+70.44	36.50L	5353.60	FOW, DRIVEWAY

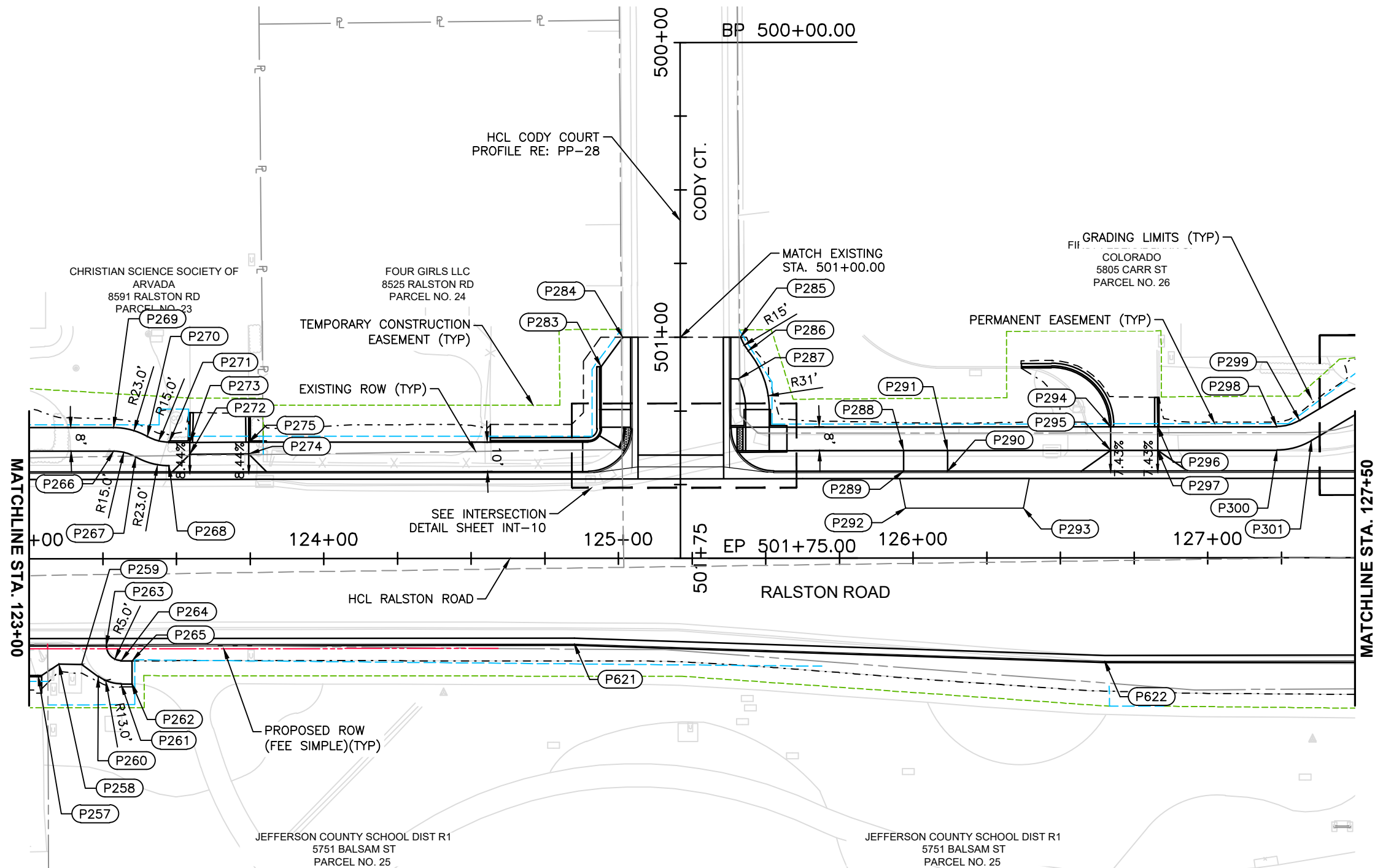
RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
252	122+70.44	44.50L	5353.72	BOW, DRIVEWAY
253	122+47.11	39.50R	5353.52	BOW, DRIVEWAY
254	122+47.11	35.50R	5353.46	FOW, DRIVEWAY
255	122+79.11	39.50R	5353.36	BOW, DRIVEWAY
256	122+79.11	35.50R	5353.30	FOW, DRIVEWAY
276	450+78.72	26.50R	5353.94	BOW, MATCH EXISTING
277	118+95.34	44.50L	5355.49	BOW, P.C.
278	119+06.75	41.47L	5355.39	BOW, P.R.C.
279	119+14.20	39.50L	5355.32	BOW, P.T.
280	118+95.34	36.50L	5355.37	FOW, P.C.
281	119+02.78	34.53L	5355.30	FOW, P.R.C.
282	119+14.17	31.50L	5355.20	FOW, P.T.
634	120+55.84	39.50R	5354.48	BOW, P.C.
635	120+61.34	38.73R	5354.44	BOW, P.T.
636	120+62.95	38.27R	5354.42	BOW, P.C.
637	120+68.45	37.50R	5354.38	BOW, P.T.
638	120+72.64	37.50R	5354.36	BOW, P.C.
639	120+78.14	38.27R	5354.35	BOW, P.T.
640	120+79.75	38.73R	5354.34	BOW, P.C.
641	120+85.24	39.50R	5354.33	BOW, P.T.

LEGEND

FOW: FRONT OF WALK
 BOW: BACK OF WALK
 TBOC: TOP BACK OF CURB
 FOC: FACE OF CURB

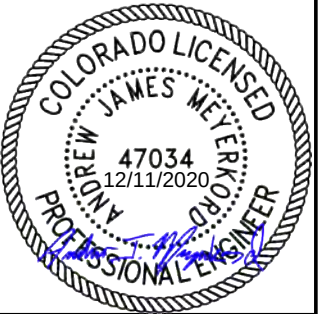
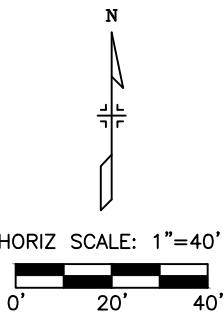


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File Name: 118355_RDGM_DT_SH01.DWG			Date	Comments	Initials		No Revisions:					18-ST-40	
Horizontal Scale: 1" = 40' Vertical Scale: N/A							Revised:		Designer: JHH	Structure			
									Detailer: JVS	Numbers			
							Void:		Sheet Subset: ROADWAY	Subset Sheets: GD-08 of 20		Sheet Number 107	



NOTES

1. ALL RADII ANNOTATIONS ARE MEASURED TO FLOWLINE OF CURB AND GUTTER OR EDGE OF SIDEWALK.
2. CROSS-SLOPE OF SIDEWALK IS 1.5% TYPICAL.
3. 0.5" CURB NOSE REQUIRED AT ALL CURB CUTS. RE: ROADWAY DETAILS.
4. RE: PROPERTY ACCESS DETAILS FOR ADDITIONAL INFORMATION REGARDING IMPROVEMENTS TO PROPERTIES OUTSIDE OF THE ROADWAY.
5. RE: LANDSCAPE PLANS FOR DECORATIVE PAVING INFORMATION.
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18355-01 Ralston Rd	Print Date: 12/7/2020 12:42:15 PM		R-X	Sheet Revisions			CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY GEOMETRIC DETAILS RALSTON ROAD (STA. 123+00 - STA. 127+50)				Project No./Code	
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	Horizontal Scale: 1" = 40' Vertical Scale: N/A							Revised:		Designer: JHH		Structure			
	FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Detailer: JVS		Numbers					
								Void:		Sheet Subset: ROADWAY		Subset Sheets: GD-09 of 20		Sheet Number 108	

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LEGEND

FOW: FRONT OF WALK
 BOW: BACK OF WALK
 TBOC: TOP BACK OF CURB
 FOC: FACE OF CURB

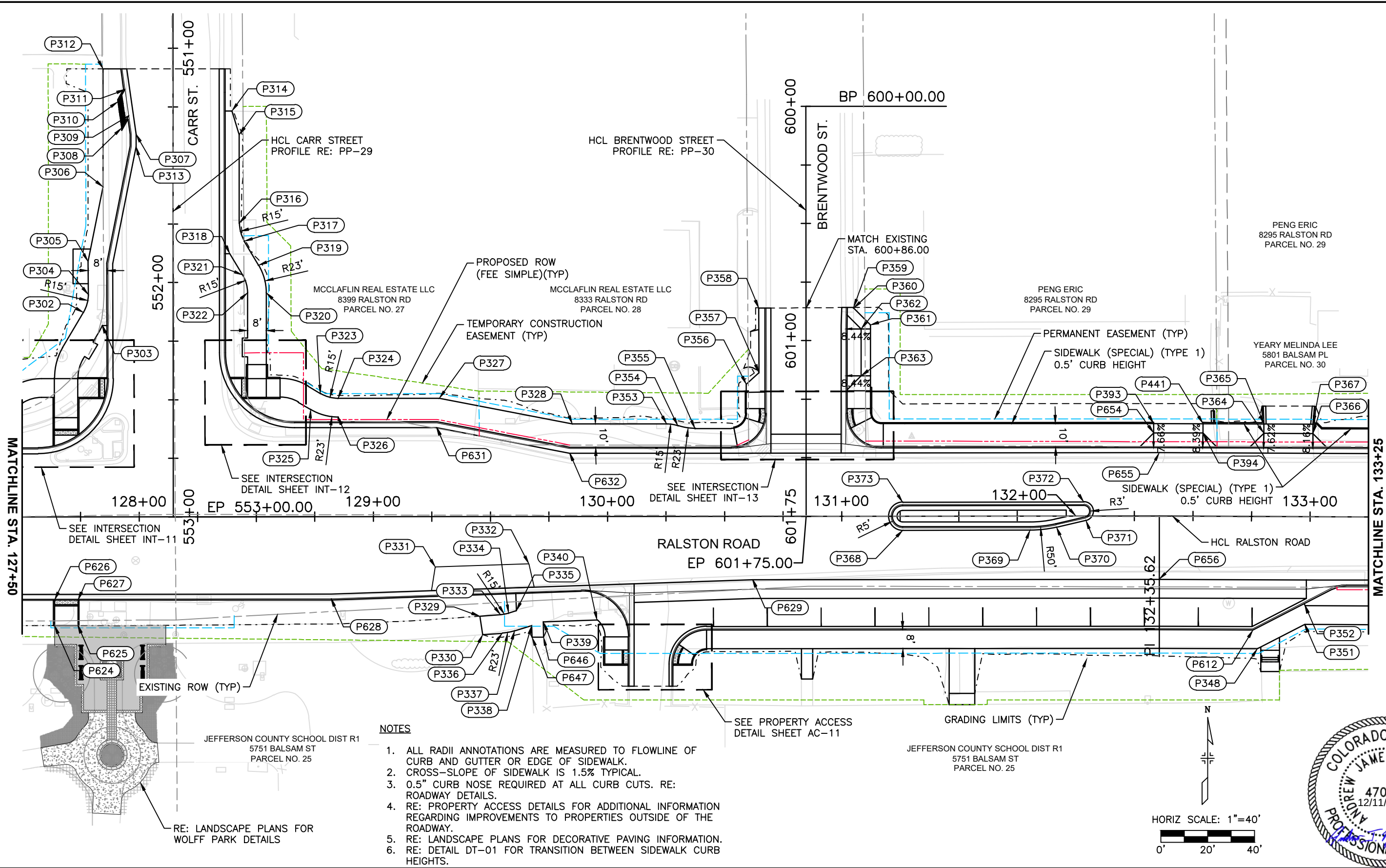
RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
257	123+02.95	39.50R	5353.24	BOW
258	123+10.01	35.68R	5353.15	BOW
259	123+17.77	35.77R	5353.11	BOW
260	123+23.39	39.91R	5353.20	BOW, P.C.
261	123+31.14	42.45R	5353.32	BOW, P.T.
262	123+34.82	42.44R	5353.35	BOW, MATCH EXISTING
263	123+26.11	29.65R	5352.98	FOW, P.C.
264	123+31.12	34.63R	5353.08	FOW, P.T.
265	123+34.82	34.62R	5353.13	FOW, MATCH EXISTING
266	123+28.70	36.50L	5353.31	FOW, P.C.
267	123+36.13	34.53L	5353.13	FOW, P.R.C.
268	123+47.52	31.50L	5353.03	FOW
269	123+28.70	44.50L	5353.43	BOW, P.C.
270	123+40.10	41.47L	5353.22	BOW, P.R.C.
271	123+47.52	39.50L	5353.15	BOW, P.T.
272	123+54.55	35.50L	5353.06	FOW, DRIVEWAY
273	123+54.55	39.50L	5353.12	BOW, DRIVEWAY
274	123+74.55	35.50L	5352.96	FOW, DRIVEWAY
275	123+74.55	39.50L	5353.02	BOW, DRIVEWAY
283	501+10.00	26.92R	5351.82	BOW

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
284	501+00.00	19.58R	5351.63	BOW, MATCH EXISTING
285	501+00.00	20.30L	5351.06	BOW, MATCH EXISTING
286	501+04.69	22.93L	5351.22	BOW, P.R.C.
287	501+14.15	19.62L	5351.42	FOW
288	125+96.76	36.50L	5351.92	FOW, BUS STOP
289	125+96.76	29.50L	5351.82	BUS STOP
290	126+11.76	29.50L	5351.76	BUS STOP
291	126+11.76	36.50L	5351.87	FOW, BUS STOP
292	125+97.45	17.00L	5351.61	BUS PAD
293	126+37.45	17.00L	5351.44	BUS PAD
294	126+67.01	44.50L	5351.76	BOW, DRIVEWAY
295	126+67.01	36.50L	5351.64	FOW, DRIVEWAY
296	126+83.01	44.50L	5351.68	BOW, DRIVEWAY
297	126+83.01	36.50L	5351.56	FOW, DRIVEWAY
298	127+23.49	44.50L	5351.48	BOW, P.C.
299	127+31.15	46.60L	5351.53	BOW, P.T.
300	127+23.49	36.50L	5351.36	FOW, P.C.
301	127+35.24	39.73L	5351.42	FOW, P.T.
621	124+84.97	29.00R	5351.68	FLOWLINE, BEGIN ROAD WIDENING
622	126+64.97	35.00R	5350.66	FLOWLINE, END ROAD WIDENING



Print Date: 12/7/2020 12:42:20 PM		Sheet Revisions			CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY GEOMETRIC DETAILS POINT TABLE (STA. 123+00 - STA. 127+50)		Project No./Code	
File Name: 118355_RDGM_DT_SH01.DWG		Date	Comments	Initials		No Revisions:			18-ST-40		
Horizontal Scale: 1" = 40' Vertical Scale: N/A						Revised:					
6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com						Void:	Designer: JHH Detailer: JVS Sheet Subset: ROADWAY	Structure Numbers Subset Sheets: GD-10 of 20	Sheet Number 109		

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NOTES

1. ALL RADII ANNOTATIONS ARE MEASURED TO FLOWLINE OF CURB AND GUTTER OR EDGE OF SIDEWALK.
2. CROSS-SLOPE OF SIDEWALK IS 1.5% TYPICAL.
3. 0.5" CURB NOSE REQUIRED AT ALL CURB CUTS. RE: ROADWAY DETAILS.
4. RE: PROPERTY ACCESS DETAILS FOR ADDITIONAL INFORMATION REGARDING IMPROVEMENTS TO PROPERTIES OUTSIDE OF THE ROADWAY.
5. RE: LANDSCAPE PLANS FOR DECORATIVE PAVING INFORMATION.
6. RE: DETAIL DT-01 FOR TRANSITION BETWEEN SIDEWALK CURB HEIGHTS.

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Date	Comments	Initials	

**CITY OF ARVADA
PUBLIC WORKS DEPARTMENT**

8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY GEOMETRIC DETAILS RALSTON ROAD (STA. 127+50 - STA. 133+25)		Project No./Code
No Revisions:		Designer: JHH	Structure Numbers	18-ST-40
Revised:		Detailer: JVS		
Void:		Sheet Subset: ROADWAY	Subset Sheets: GD-11 of 20	
				Sheet Number 110

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RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
302	552+12.74	38.35R	5351.91	BOW, P.C.
303	552+18.29	30.26R	5351.74	FOW
304	552+05.09	36.25R	5351.96	BOW, P.T.
305	551+90.92	36.25R	5352.05	BOW
306	551+59.17	29.90R	5351.83	BOW
307	551+36.62	15.75R	5351.30	EDGE OF PAVEMENT
308	551+33.95	21.90R	5351.66	BIKE RAMP
309	551+28.75	18.90R	5351.15	BIKE RAMP
310	551+22.74	23.51R	5351.55	BIKE RAMP
311	551+17.54	20.51R	5351.01	BIKE RAMP
312	551+08.73	29.90R		BOW, MATCH EXISTING
313	551+41.96	15.75R	5351.33	EDGE OF PAVEMENT
314	551+26.81	25.18L	5351.12	BOW, MATCH EXISTING
315	551+36.89	28.25L	5351.23	BOW
316	551+74.64	28.25L	5351.28	BOW, P.C.
317	551+82.30	30.36L	5351.28	BOW, P.T.
318	551+87.67	24.24L	5351.16	FOW
319	551+92.65	36.51L	5351.31	BOW, P.C.
320	552+04.40	39.75L	5351.29	BOW, P.T.
321	551+96.75	29.64L	5351.18	FOW, P.C.
322	552+04.41	31.75L	5351.17	FOW, P.T.
323	128+77.38	52.60L	5350.56	BOW, P.C.
324	128+85.04	50.50L	5350.49	BOW, P.T.
325	128+73.30	45.72L	5350.48	FOW, P.C.
326	128+85.04	42.50L	5350.37	FOW, P.T.
327	129+28.20	50.50L	5350.26	BOW
328	129+84.96	39.50L	5349.84	BOW

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
329	129+45.45	42.49R	5350.29	FOW, MATCH EXISTING
330	129+46.68	50.36R	5350.44	BOW, MATCH EXISTING
331	129+26.43	21.51R	5349.75	BUS PAD
332	129+66.41	20.18R	5349.58	BUS PAD
333	129+54.27	41.89R	5350.09	FOW, P.C.
334	129+57.70	41.24R	5350.01	FOW, P.T.
335	129+61.07	40.19R	5349.94	FOW
336	129+54.95	49.81R	5350.24	BOW, P.C.
337	129+60.26	48.82R	5350.10	BOW, P.T.
338	129+67.60	46.54R	5349.91	BOW
339	129+72.60	44.98R	5349.87	BOW
340	129+95.48	44.23R	5350.03	BOW
348	132+77.74	56.50R	5348.75	BOW
351	132+97.93	46.00R	5348.41	BOW
352	132+97.98	38.00R	5348.29	FOW
353	130+25.25	39.50L	5349.47	BOW, P.C.
354	130+30.05	38.71L	5349.41	BOW, P.R.C.
355	130+37.39	37.50L	5349.32	BOW, P.T.
356	601+18.62	25.50R	5349.18	BOW
357	601+13.62	20.04R	5349.11	BOW
358	600+86.14	20.22R	5349.24	BOW, MATCH EXISTING
359	600+85.86	20.32L	5349.61	BOW, MATCH EXISTING
360	600+86.17	20.32L	5349.53	BOW
361	600+93.35	27.50L	5349.55	BOW
362	600+95.00	23.50L	5349.47	FOW, DRIVEWAY
363	601+15.00	23.50L	5349.23	FOW, DRIVEWAY
364	132+80.08	35.50L	5347.94	FOW, DRIVEWAY

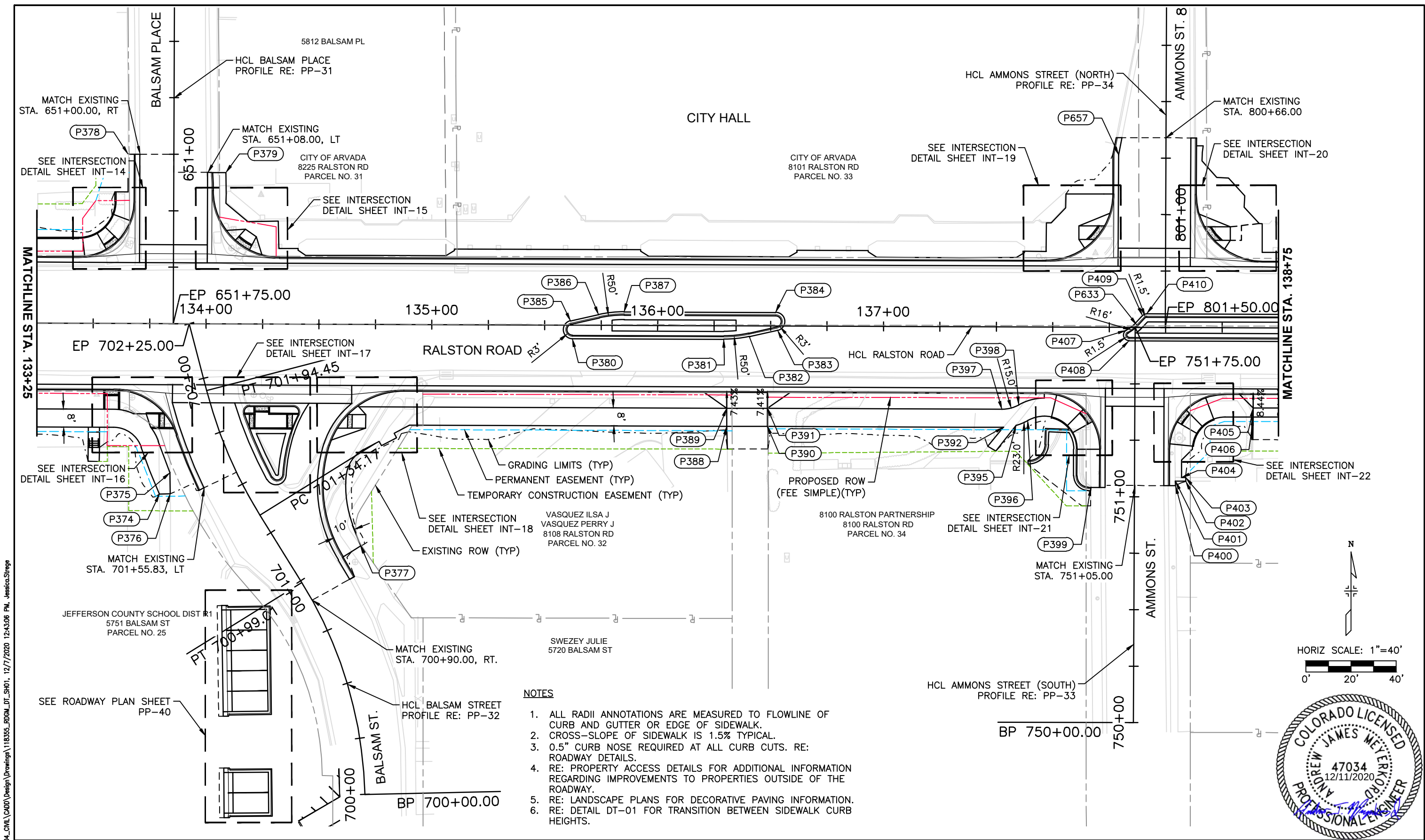
RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
365	132+80.08	39.50L	5347.97	BOW, DRIVEWAY
366	133+01.08	35.50L	5347.86	FOW, DRIVEWAY
367	133+01.08	39.50L	5347.85	BOW, DRIVEWAY
368	131+26.05	6.00R	5349.06	MEDIAN, P.T.
369	131+80.45	6.00R	5348.79	MEDIAN, P.C.
370	131+91.74	4.73R	5348.76	MEDIAN, P.T.
371	132+04.22	1.90R	5348.75	MEDIAN, P.C.
372	132+03.34	6.00L	5348.61	MEDIAN, P.T.
373	131+26.05	6.00L	5349.00	MEDIAN, P.T.
393	132+33.26	39.51L	5348.32	BOW, DRIVEWAY
394	132+54.08	35.50L	5348.15	FOW, DRIVEWAY
441	132+54.08	39.50L	5348.21	BOW, DRIVEWAY
612	132+75.79	48.50R	5348.65	FOW
624	127+63.85	46.34R	5351.19	TOP OF RAMP
625	127+73.85	46.36R	5351.12	TOP OF RAMP
626	127+63.85	35.50R	5350.67	BOTTOM OF RAMP
627	127+73.85	35.50R	5350.62	BOTTOM OF RAMP
628	128+82.03	35.00R	5349.58	FLOWLINE, BEGIN ROAD NARROWING
629	130+62.00	27.00R	5348.96	EOP, END ROAD NARROWING
631	129+27.19	38.00L	5349.78	EOP, BEGIN TURN LANE TRANSITION
632	129+83.95	27.00L	5349.37	EOP, END TURN LANE TRANSITION
646	129+72.66	51.49R		BOW
647	129+67.78	51.54R		BOW
654	132+33.24	35.51L	5348.26	FOW, DRIVEWAY
655	132+35.62	27.00L	5347.82	EOP, RALSTON P.I.
656	132+35.69	26.99R	5348.09	EOP, RALSTON P.I.

LEGEND

FOW: FRONT OF WALK
BOW: BACK OF WALK
TBOC: TOP BACK OF CURB
FOC: FACE OF CURB



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File Name: 118355_RDGM_DT_SH01.DWG			R-X	Date	Comments		Initials	No Revisions:				18-ST-40	
Horizontal Scale: 1" = 40' Vertical Scale: N/A								Revised:	Designer: JHH	Structure			
FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com									Detailer: JVS	Numbers			
								Void:	Sheet Subset: ROADWAY	Subset Sheets: GD-12 of 20		Sheet Number	111



NOTES

1. ALL RADII ANNOTATIONS ARE MEASURED TO FLOWLINE OF CURB AND GUTTER OR EDGE OF SIDEWALK.
2. CROSS-SLOPE OF SIDEWALK IS 1.5% TYPICAL.
3. 0.5" CURB NOSE REQUIRED AT ALL CURB CUTS. RE: ROADWAY DETAILS.
4. RE: PROPERTY ACCESS DETAILS FOR ADDITIONAL INFORMATION REGARDING IMPROVEMENTS TO PROPERTIES OUTSIDE OF THE ROADWAY.
5. RE: LANDSCAPE PLANS FOR DECORATIVE PAVING INFORMATION.
6. RE: DETAIL DT-01 FOR TRANSITION BETWEEN SIDEWALK CURB HEIGHTS.

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Vertical Scale:	N/A
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R-X	Date	Comments	Initials



CITY OF ARVADA
PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed	RALSTON RD - YUKON ST TO GARRISON ST ROADWAY GEOMETRIC DETAILS RALSTON ROAD (STA. 133+25 - STA. 138+75)			Project No./Code
No Revisions:				18-ST-40
Revised:	Designer: JHH	Structure Numbers		
	Detailer: JVS			
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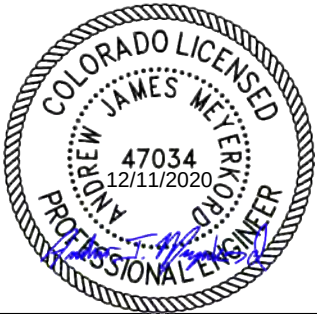
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RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
374	701+60.99	35.00L	5347.97	BOW, MATCH EXISTING
375	701+66.89	27.00L	5347.80	FOW
376	701+59.34	30.64L	5347.91	FOW, MATCH EXISTING
377	700+99.01	30.78R	5347.42	BOW, MATCH EXISTING
378	651+00.02	20.22R	5347.68	BOW, MATCH EXISTING
379	651+08.00	23.10L	5347.35	BOW, MATCH EXISTING
380	135+62.27	6.00R	5346.57	MEDIAN, P.T.
381	136+29.33	6.00R	5346.23	MEDIAN, P.C.
382	136+40.63	4.73R	5346.20	MEDIAN, P.T.
383	136+53.09	1.90R	5346.18	MEDIAN, P.C.
384	136+52.21	6.00L	5346.10	MEDIAN, P.T.
385	135+61.38	1.90L	5346.65	MEDIAN, P.C.
386	135+73.84	4.73L	5346.52	MEDIAN, P.C.
387	135+85.14	6.00L	5346.44	MEDIAN, P.T.
388	136+30.74	44.50R	5346.36	BOW, DRIVEWAY
389	136+30.74	36.50R	5346.24	FOW, DRIVEWAY
390	136+48.74	44.50R	5346.26	BOW, DRIVEWAY
391	136+48.74	36.50R	5346.14	FOW, DRIVEWAY
392	137+53.27	44.49R	5345.39	BOW
395	137+58.87	43.63R	5345.32	BOW, P.C.

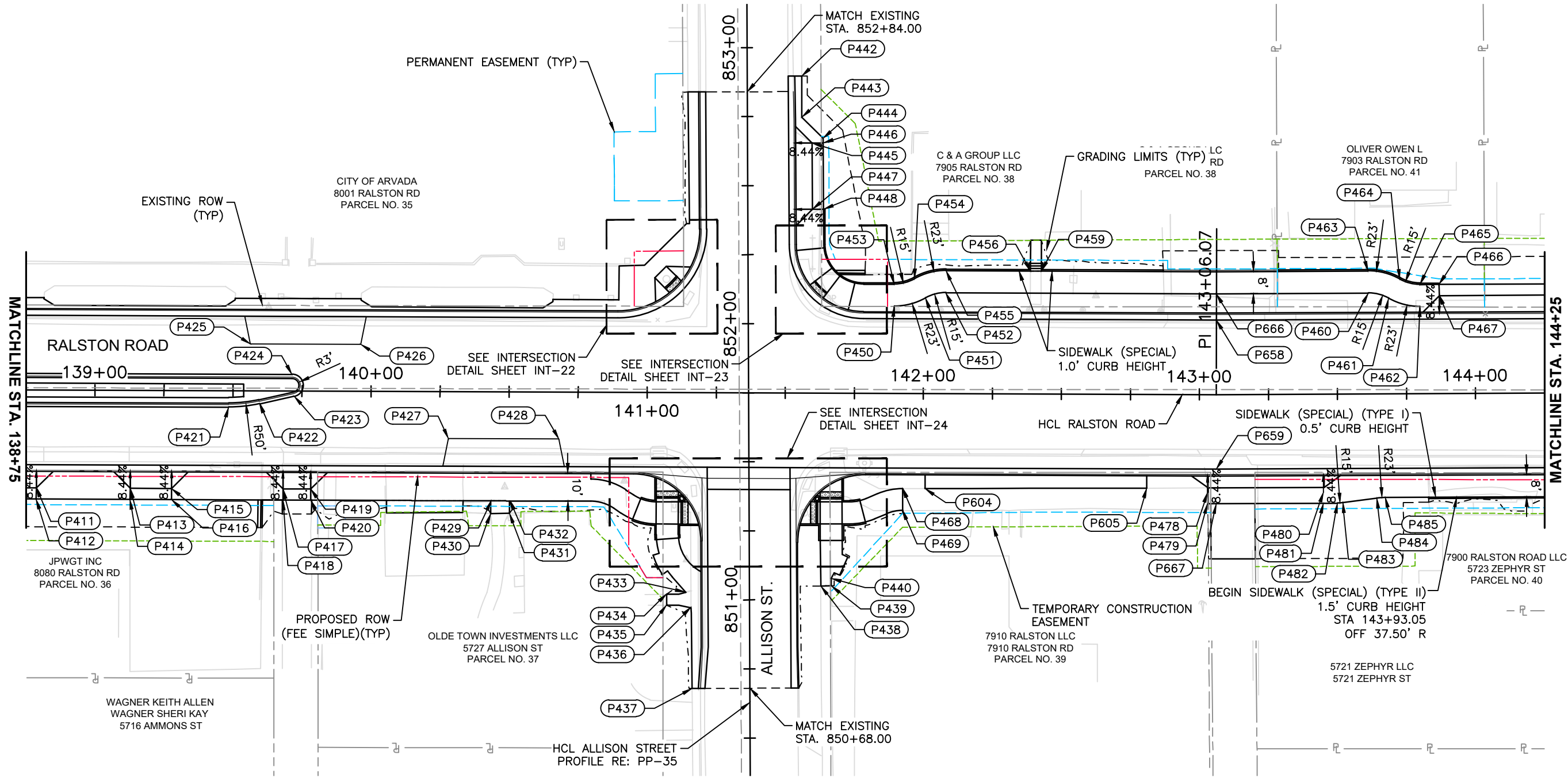
RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
396	137+64.02	41.47R	5345.23	BOW, P.R.C.
397	137+52.62	36.50R	5345.28	FOW, P.C.
398	137+60.05	34.53R	5345.17	FOW, P.R.C.
399	751+04.09	19.32L	5344.59	BOW, MATCH EXISTING
400	751+05.00	18.15R	5344.02	BOW, MATCH EXISTING
401	751+06.94	18.18R	5344.05	BOW
402	751+06.96	22.69R	5344.12	MATCH EXISTING
403	751+08.57	22.68R		MATCH EXISTING
404	751+08.57	20.88R	5344.12	BOW
405	138+63.88	35.50R	5343.96	FOW, DRIVEWAY
406	138+63.88	39.50R	5344.02	BOW, DRIVEWAY
407	138+07.49	1.32R	5344.72	MEDIAN, P.R.C.
408	138+08.71	6.00R	5344.61	MEDIAN, P.T.
409	138+14.70	5.21L	5344.56	MEDIAN, P.C.
410	138+16.53	6.00L	5344.52	MEDIAN, P.T.
633	138+12.18	1.04L	5344.67	MEDIAN, P.C.
657	800+73.59	21.00R	5344.69	EOP

LEGEND

FOW: FRONT OF WALK
BOW: BACK OF WALK
TBOC: TOP BACK OF CURB
FOC: FACE OF CURB



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File Name: 118355_RDGM_DT_SH01.DWG			R-X	Date	Comments		Initials	No Revisions:				18-ST-40	
Horizontal Scale: 1" = 40' Vertical Scale: N/A								Revised:	Designer: JHH	Structure			
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- NOTES**
1. ALL RADII ANNOTATIONS ARE MEASURED TO FLOWLINE OF CURB AND GUTTER OR EDGE OF SIDEWALK.
 2. CROSS-SLOPE OF SIDEWALK IS 1.5% TYPICAL.
 3. 0.5" CURB NOSE REQUIRED AT ALL CURB CUTS. RE: ROADWAY DETAILS.
 4. RE: PROPERTY ACCESS DETAILS FOR ADDITIONAL INFORMATION REGARDING IMPROVEMENTS TO PROPERTIES OUTSIDE OF THE ROADWAY.
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CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY GEOMETRIC DETAILS RALSTON ROAD (STA. 138+75 - STA. 144+25)			Project No./Code
No Revisions:					18-ST-40
Revised:		Designer: JHH	Structure		
		Detailer: JVS	Numbers		
Void:		Sheet Subset: ROADWAY	Subset Sheets: GD-15 of 20		Sheet Number 114

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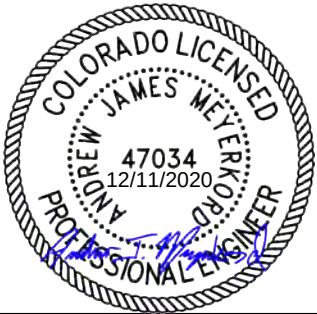
RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
411	138+78.88	35.50R	5343.78	FOW, DRIVEWAY
412	138+78.88	39.50R	5343.84	BOW, DRIVEWAY
413	139+12.87	35.50R	5343.39	FOW, DRIVEWAY
414	139+12.87	39.50R	5343.45	BOW, DRIVEWAY
415	139+27.87	35.50R	5343.22	FOW, DRIVEWAY
416	139+27.87	39.50R	5343.28	BOW, DRIVEWAY
417	139+68.22	35.50R	5342.81	FOW, DRIVEWAY
418	139+68.22	39.50R	5342.87	BOW, DRIVEWAY
419	139+78.22	35.50R	5342.71	FOW, DRIVEWAY
420	139+78.22	39.50R	5342.77	BOW, DRIVEWAY
421	139+48.40	6.00R	5343.00	MEDIAN, P.C.
422	139+59.70	4.73R	5342.91	MEDIAN, P.T.
423	139+72.16	1.90R	5342.85	MEDIAN, P.C.
424	139+71.27	6.00L	5342.77	MEDIAN, P.T.
425	139+56.22	17.00L	5342.70	BUS PAD
426	139+96.22	17.00L	5342.32	BUS PAD
427	140+28.11	17.00R	5342.04	BUS PAD
428	140+68.11	17.00R	5341.71	BUS PAD
429	140+43.65	39.50R	5342.19	BOW
430	140+43.44	44.12R	5342.60	MATCH EXISTING
431	140+50.27	43.96R	5342.56	MATCH EXISTING
432	140+50.50	39.50R	5342.14	BOW
433	851+02.98	23.15L	5341.58	BOW
434	851+02.28	29.96L	5341.60	MATCH EXISTING
435	850+98.30	29.99L	5341.59	MATCH EXISTING

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
436	850+97.43	21.20L	5341.57	BOW
437	850+68.00	20.90L	5341.49	BOW, MATCH EXISTING
438	851+04.88	25.98R	5341.30	FOW, MATCH EXISTING
439	851+04.94	29.74R	5341.36	BOW, MATCH EXISTING
440	851+07.64	29.75R	5341.36	BOW
442	852+89.60	19.82R	5342.22	BOW, MATCH EXISTING
443	852+74.73	19.80R	5342.42	BOW
444	852+67.03	27.50R	5342.55	BOW
445	852+65.37	23.50R	5342.48	FOW, DRIVEWAY
446	852+65.37	27.50R	5342.54	BOW, DRIVEWAY
447	852+41.37	23.50R	5342.08	FOW, DRIVEWAY
448	852+41.37	27.50R	5342.14	BOW, DRIVEWAY
450	141+89.28	31.50L	5341.14	FOW, P.C.
451	142+00.59	34.53L	5341.10	FOW, P.R.C.
452	142+08.03	36.50L	5341.08	FOW, P.T.
453	141+89.26	39.50L	5341.26	BOW, P.C.
454	141+96.62	41.47L	5341.24	BOW, P.R.C.
455	142+08.03	44.50L	5341.20	BOW, P.T.
456	142+38.61	44.50L	5341.00	BOW
459	142+42.57	44.50L	5340.98	BOW
460	143+61.29	36.50L	5340.32	FOW, P.C.
461	143+68.73	34.53L	5340.26	FOW, P.R.C.
462	143+80.03	31.50L	5340.17	FOW, P.T.
463	143+61.29	44.50L	5340.44	BOW, P.C.
464	143+72.69	41.47L	5340.35	BOW, P.R.C.

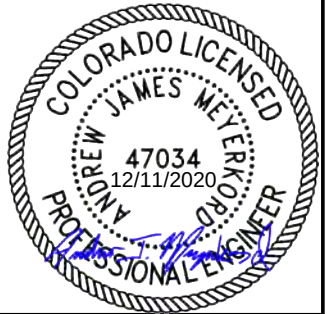
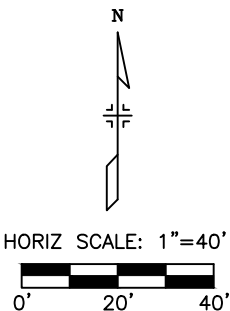
RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
465	143+80.06	39.50L	5340.29	BOW, P.T.
466	143+87.03	39.50L	5340.26	BOW, DRIVEWAY
467	143+87.03	35.50L	5340.20	FOW, DRIVEWAY
468	141+92.70	34.52R	5341.69	FOW, MATCH EXISTING
469	141+92.70	42.45R	5341.79	BOW, MATCH EXISTING
478	143+03.06	35.50R	5340.06	FOW, DRIVEWAY
479	143+03.06	39.50R	5340.10	BOW, DRIVEWAY
480	143+44.76	35.50R	5339.83	FOW, DRIVEWAY
481	143+44.76	39.50R	5339.89	BOW, DRIVEWAY
482	143+49.76	39.50R	5339.87	BOW, P.C.
483	143+51.76	39.37R	5339.86	BOW, P.T.
484	143+64.11	37.71R	5339.79	BOW, P.C.
485	143+67.18	37.50R	5339.77	BOW, P.T.
604	142+00.75	34.47R	5341.98	SLOPE PAVEMENT, MATCH EXISTING
605	142+81.02	33.94R	5341.14	SLOPE PAVEMENT, MATCH EXISTING
658	143+06.18	27.00L	5340.10	EOP, RALSTON P.I.
659	143+06.07	27.00R	5339.56	EOP, RALSTON P.I.
666	143+05.91	36.50L	5340.54	FOW, RALSTON P.I.
667	143+06.07	39.50R	5340.04	BOW, RALSTON P.I.

LEGEND

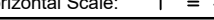
FOW: FRONT OF WALK
BOW: BACK OF WALK
TBOC: TOP BACK OF CURB
FOC: FACE OF CURB



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File Name: 118355_RDGM_DT_SH01.DWG							No Revisions:						18-ST-40	
Horizontal Scale: 1" = 40' Vertical Scale: N/A							Revised:		Designer: JHH		Structure			
FELSBERG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Detailer: JVS		Numbers			
									Sheet Subset: ROADWAY		Subset Sheets: GD-16 of 20		Sheet Number 115	



1. ALL RADII ANNOTATIONS ARE MEASURED TO FLOWLINE OF CURB AND GUTTER OR EDGE OF SIDEWALK.
2. CROSS-SLOPE OF SIDEWALK IS 1.5% TYPICAL.
3. 0.5" CURB NOSE REQUIRED AT ALL CURB CUTS. RE: ROADWAY DETAILS.
4. RE: PROPERTY ACCESS DETAILS FOR ADDITIONAL INFORMATION REGARDING IMPROVEMENTS TO PROPERTIES OUTSIDE OF THE ROADWAY.
5. RE: LANDSCAPE PLANS FOR DECORATIVE PAVING INFORMATION.
6. RE: DETAIL DT-01 FOR TRANSITION BETWEEN SIDEWALK CURB HEIGHTS.

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File Name: 118355_RDGM_DT_SH01.DWG			Date	Comments	Initials		No Revisions:					18-ST-40	
Horizontal Scale: 1" = 40' Vertical Scale: N/A							Revised:		Designer: JHH	Structure			
 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Detailer: JVS	Numbers			
									Sheet Subset: ROADWAY	Subset Sheets: GD-17 of 20		Sheet Number 116	

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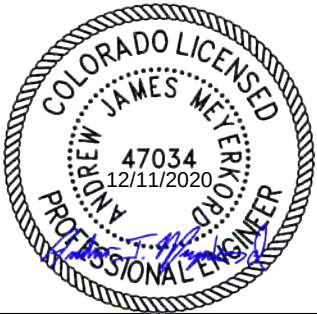
RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
487	144+26.03	39.50L	5340.10	BOW, DRIVEWAY
488	144+26.03	35.50L	5340.04	FOW, DRIVEWAY
489	901+18.50	26.93L	5339.54	BOW, MATCH EXISTING
490	901+06.53	27.66R	5339.18	BOW, MATCH EXISTING
491	901+13.47	29.39R		BOW, P.R.C.
492	901+20.53	31.11R	5339.44	BOW, P.T.
495	901+18.40	23.83R		FOW, P.C.
496	901+21.48	23.52R	5339.37	FOW, P.R.C.
497	145+03.33	39.50L	5339.80	BOW, DRIVEWAY
498	145+03.33	35.50L	5339.74	FOW, DRIVEWAY
499	145+27.33	39.50L	5339.70	BOW, DRIVEWAY
500	145+27.33	35.50L	5339.64	FOW, DRIVEWAY
501	145+75.61	36.50R	5338.92	FOW, DRIVEWAY
502	145+75.61	44.50R	5339.04	BOW, DRIVEWAY
503	145+86.61	36.50R	5338.88	FOW, DRIVEWAY
504	145+86.61	44.50R	5339.00	BOW, DRIVEWAY
505	146+14.21	39.50L	5339.33	BOW, DRIVEWAY
506	146+14.21	35.50L	5339.28	FOW, DRIVEWAY
507	146+34.21	39.50L	5339.19	BOW, DRIVEWAY
508	146+34.21	35.50L	5339.16	FOW, DRIVEWAY
513	146+35.72	36.50R	5338.68	FOW, DRIVEWAY
514	146+35.72	44.50R	5338.80	BOW, DRIVEWAY
515	146+50.72	36.50R	5338.62	FOW, DRIVEWAY

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
516	146+50.72	44.50R	5338.74	BOW, DRIVEWAY
517	146+73.73	36.50R	5338.53	FOW, DRIVEWAY
518	146+73.73	44.50R	5338.65	BOW, DRIVEWAY
519	146+97.73	36.50R	5338.43	FOW, DRIVEWAY
520	146+97.73	44.50R	5338.55	BOW, DRIVEWAY
525	147+20.65	39.50L	5338.83	BOW, DRIVEWAY
526	147+20.65	35.50L	5338.81	FOW, DRIVEWAY
527	147+44.65	39.50L	5338.73	BOW, DRIVEWAY
528	147+44.65	35.50L	5338.71	FOW, DRIVEWAY
529	951+11.74	28.14L	5338.60	BOW, P.R.C.
530	951+02.20	26.10L	5338.56	BOW, MATCH EXISTING
531	951+02.16	22.16L	5338.50	FOW, MATCH EXISTING
532	951+15.33	22.12L	5338.51	FOW, P.C.
533	951+19.27	22.45L	5338.43	FOW, P.R.C.
534	951+09.89	29.06R	5338.58	BOW, MATCH EXISTING
535	148+34.70	39.50L	5338.48	BOW, DRIVEWAY
536	148+34.70	35.50L	5338.41	FOW, DRIVEWAY
537	148+69.70	39.50L	5338.33	BOW, DRIVEWAY
538	148+69.70	35.50L	5338.27	FOW, DRIVEWAY
547	149+58.36	35.50R	5337.38	FOW, DRIVEWAY
548	149+58.36	39.50R	5337.44	BOW, DRIVEWAY
549	149+73.57	35.50R	5337.31	FOW, DRIVEWAY
550	149+73.57	39.50R	5337.37	BOW, DRIVEWAY

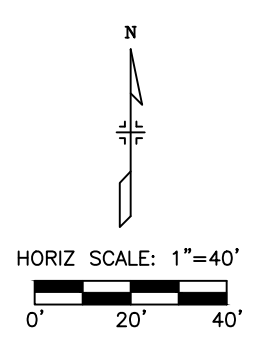
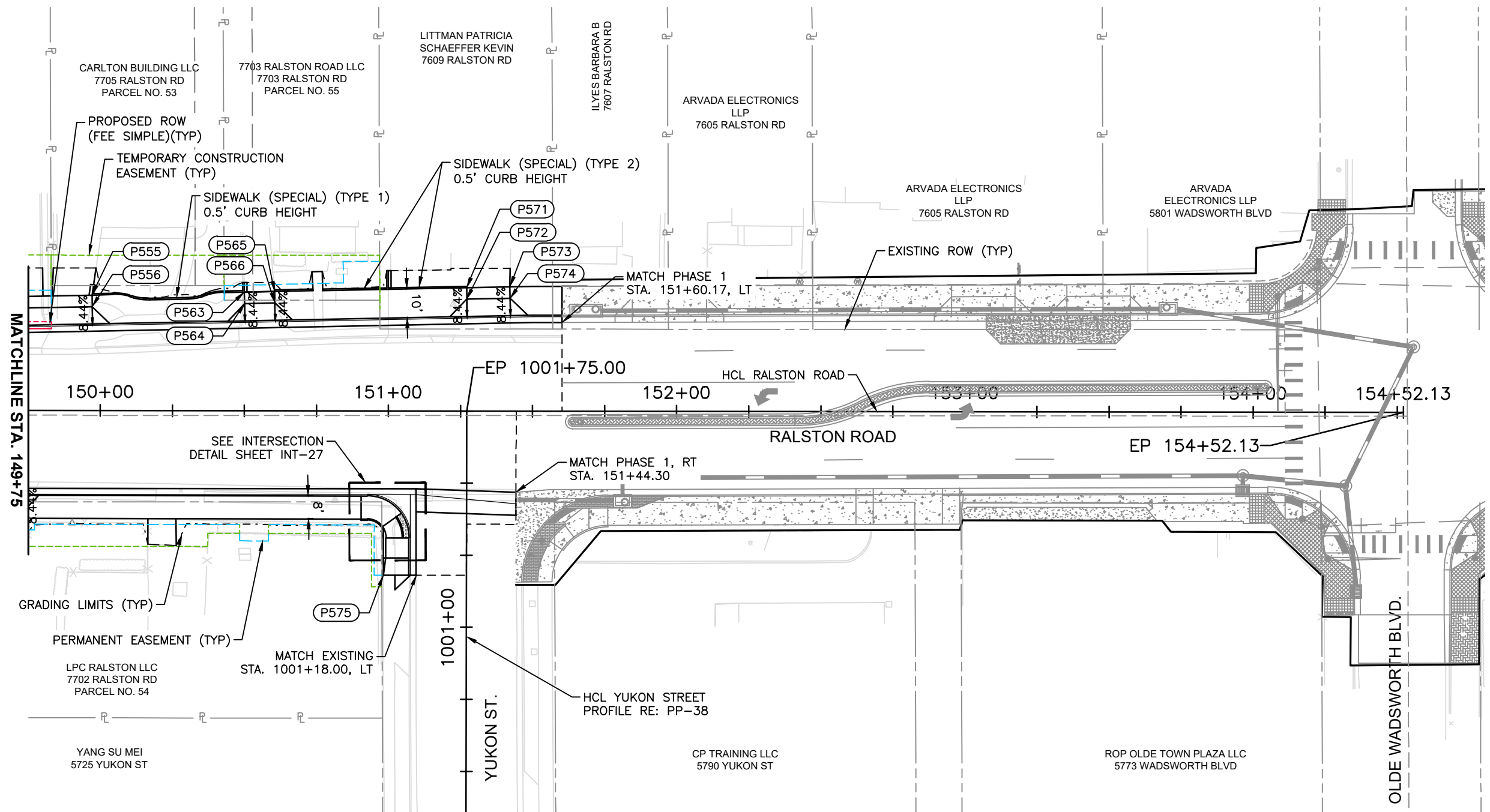
RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
551	149+68.15	39.50L	5337.94	FOW, DRIVEWAY
552	149+68.16	35.50L	5337.88	BOW, DRIVEWAY
606	148+55.78	29.50R	5337.70	FOW
608	149+33.92	29.50R	5337.38	FOW
614	148+55.78	39.50R	5337.84	BOTTOM OF RAMP
616	149+33.92	39.50R	5339.03	END RAMP
660	149+72.82	27.06L	5337.43	EOP, RALSTON P.I.
661	149+63.11	27.00R	5336.93	EOP, RALSTON P.I.
668	149+62.90	39.53R	5337.42	BOW, RALSTON P.I.
669	149+72.56	39.60L	5337.92	BOW, RALSTON P.I.

LEGEND

FOW: FRONT OF WALK
BOW: BACK OF WALK
TBOC: TOP BACK OF CURB
FOC: FACE OF CURB



Print Date: 12/7/2020 12:43:59 PM		(R-X)	Sheet Revisions			CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed	RALSTON RD - YUKON ST TO GARRISON ST ROADWAY GEOMETRIC DETAILS POINT TABLE (STA. 144+25 - STA. 149+75)			Project No./Code	
File Name: 118355_RDGM_DT_SH01.DWG			Date	Comments	Initials		No Revisions:				18-ST-40	
Horizontal Scale: 1" = 40' Vertical Scale: N/A							Revised:	Designer: JHH	Structure			
FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:	Detailer: JVS	Numbers			
								Sheet Subset: ROADWAY	Subset Sheets: GD-18 of 20	Sheet Number 117		



- NOTES**
1. ALL RADII ANNOTATIONS ARE MEASURED TO FLOWLINE OF CURB AND GUTTER OR EDGE OF SIDEWALK.
 2. CROSS-SLOPE OF SIDEWALK IS 1.5% TYPICAL.
 3. 0.5" CURB NOSE REQUIRED AT ALL CURB CUTS. RE: ROADWAY DETAILS.
 4. RE: PROPERTY ACCESS DETAILS FOR ADDITIONAL INFORMATION REGARDING IMPROVEMENTS TO PROPERTIES OUTSIDE OF THE ROADWAY.
 5. RE: LANDSCAPE PLANS FOR DECORATIVE PAVING INFORMATION.
 6. RE: DETAIL DT-01 FOR TRANSITION BETWEEN SIDEWALK CURB HEIGHTS.



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	Date	Comments		Initials																					
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Horizontal Scale: 1" = 40' Vertical Scale: N/A					RALSTON ROAD (STA. 149+75 - END)																				
 FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com			Revised:		Designer: JHH		Structure																		
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LEGEND

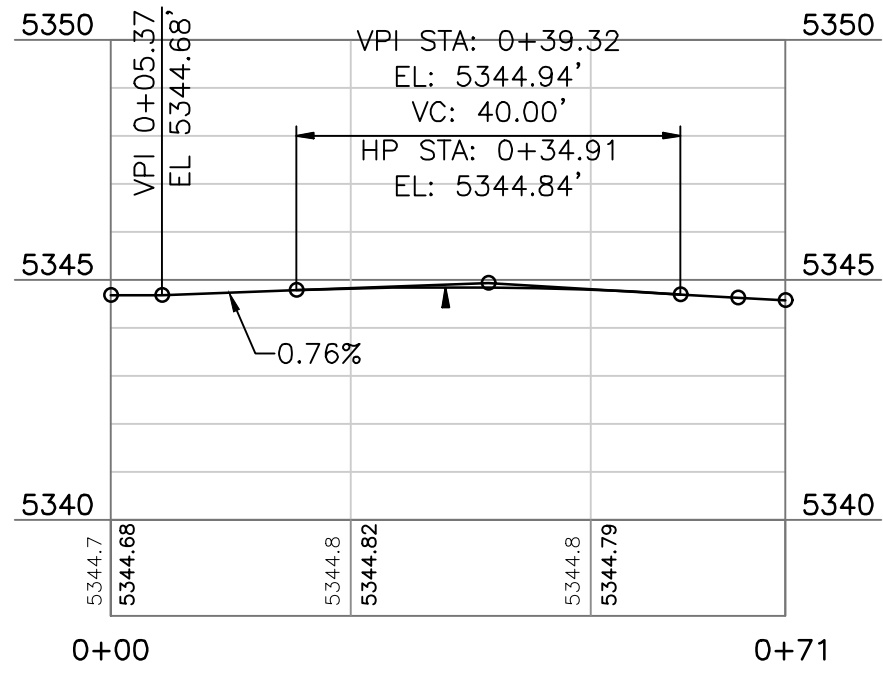
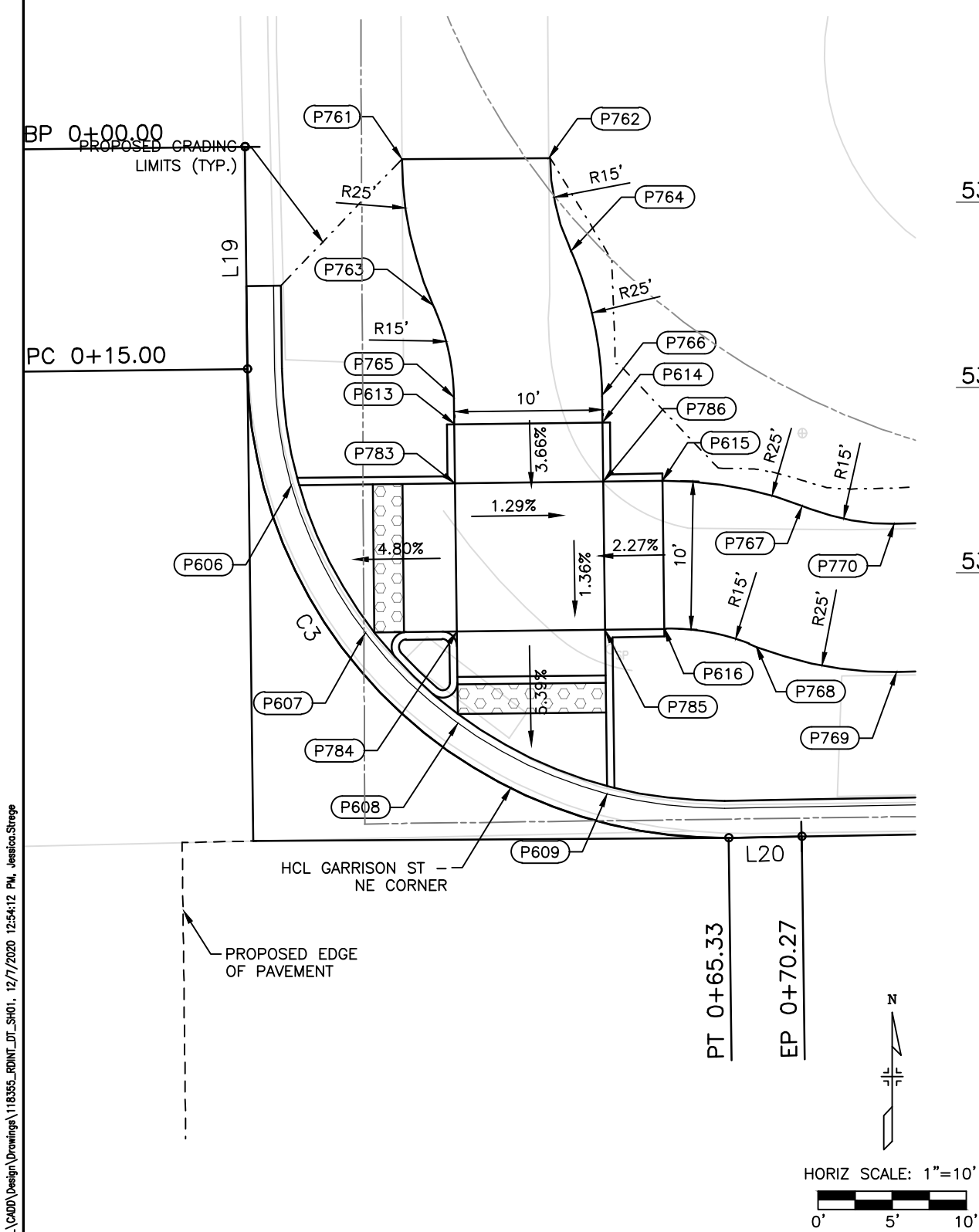
FOW: FRONT OF WALK
BOW: BACK OF WALK
TBOC: TOP BACK OF CURB
FOC: FACE OF CURB

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
555	149+97.09	40.08L	5337.81	BOW, DRIVEWAY
556	149+97.17	36.08L	5337.75	FOW, DRIVEWAY
563	150+49.90	41.20L	5337.59	BOW, DRIVEWAY
564	150+50.03	37.20L	5337.53	FOW, DRIVEWAY
565	150+60.44	41.42L	5337.55	BOW, DRIVEWAY
566	150+60.53	37.42L	5337.49	FOW, DRIVEWAY
571	151+27.08	42.83L	5337.22	BOW, DRIVEWAY
572	151+27.13	38.83L	5337.16	FOW, DRIVEWAY
573	151+42.08	43.15L	5337.16	BOW, DRIVEWAY
574	151+42.16	39.15L	5337.10	FOW, DRIVEWAY
575	1001+18.00	28.91L	5337.10	BOW, MATCH EXISTING



Print Date: 12/7/2020 12:44:25 PM		R-X	Sheet Revisions			CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY GEOMETRIC DETAILS POINT TABLE (STA. 149+75 - END)			Project No./Code		
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Horizontal Scale: 1" = 40' Vertical Scale: N/A							Revised:		Designer: JHH		Structure			
FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Detailer: JVS		Numbers			
									Sheet Subset: ROADWAY		Subset Sheets: GD-20 of 20		Sheet Number 119	

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GARRISON ST - NE CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
606	0+23.45	1.83L	5344.66	CURB RAMP; FLOWLINE
607	0+35.31	1.86L	5344.69	CURB RAMP; FLOWLINE
608	0+44.64	1.89L	5344.66	CURB RAMP; FLOWLINE
609	0+56.54	1.95L	5344.57	CURB RAMP; FLOWLINE
613	0+21.75	13.50L	5345.30	TOP OF CURB RAMP
614	0+29.30	23.03L	5345.48	TOP OF CURB RAMP
615	0+49.94	23.12L	5345.43	TOP OF CURB RAMP
616	0+58.07	13.66L	5345.21	TOP OF CURB RAMP
761	0+00.96	10.58L	5345.16	FOW, MATCH EXISTING
762	0+01.01	20.48L	5345.29	BOW, MATCH EXISTING
763	0+10.84	12.57L	5345.20	FOW, P.R.C.
764	0+07.29	21.92L	5345.32	BOW, P.R.C.
765	0+18.62	13.79L	5345.28	FOW, P.T.
766	0+22.96	23.65L	5345.46	BOW, P.T.
767	102+38.31	49.32L	5345.19	BOW, P.R.C.
768	102+34.84	39.84L	5345.09	FOW, P.R.C.
769	102+44.50	38.00L	5344.96	FOW, P.T.
770	102+44.50	48.00L	5345.11	BOW, P.T.
783	0+28.14	12.27L	5345.18	CURB RAMP LANDING
784	0+39.94	6.57L	5345.05	CURB RAMP LANDING
785	0+51.66	12.38L	5345.17	CURB RAMP LANDING
786	0+39.70	20.71L	5345.30	CURB RAMP LANDING

GARRISON ST - NE CORNER - EDGE OF PAVEMENT									
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L19		0+00.00 0+15.00	717759.6735 717744.6746	113104.1707 113104.3509	15.00'	S0°41'17"E			
C3	PC= PI= PT=	0+15.00 0+47.06 0+65.33	717744.6746 717712.6123 717713.0621	113104.3509 113104.7359 113136.7973	50.33'	S45°44'45"E	90°06'56"	32.06'	32.00'
L20		0+65.33 0+70.27	717713.0621 717713.1313	113136.7973 113141.7324	4.94'	N89°11'47"E			



Print Date: 12/7/2020 12:54:12 PM

File Name: 118355_RDINT_DT_SH01.DWG

Horizontal Scale: 1"=10' Vertical Scale: 1"=8'

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Sheet Revisions		
Date	Comments	Initials

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Centennial, CO 80111
Phone: 303.721.1440
www.FHUENG.com

CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed

No Revisions:

Revised:

Void:

RALSTON RD - YUKON ST TO GARRISON ST
INTERSECTION DETAIL
GARRISON STREET - NORTHEAST CORNER

Designer: JHH
Detailer: JVS
Sheet Subset: ROADWAY

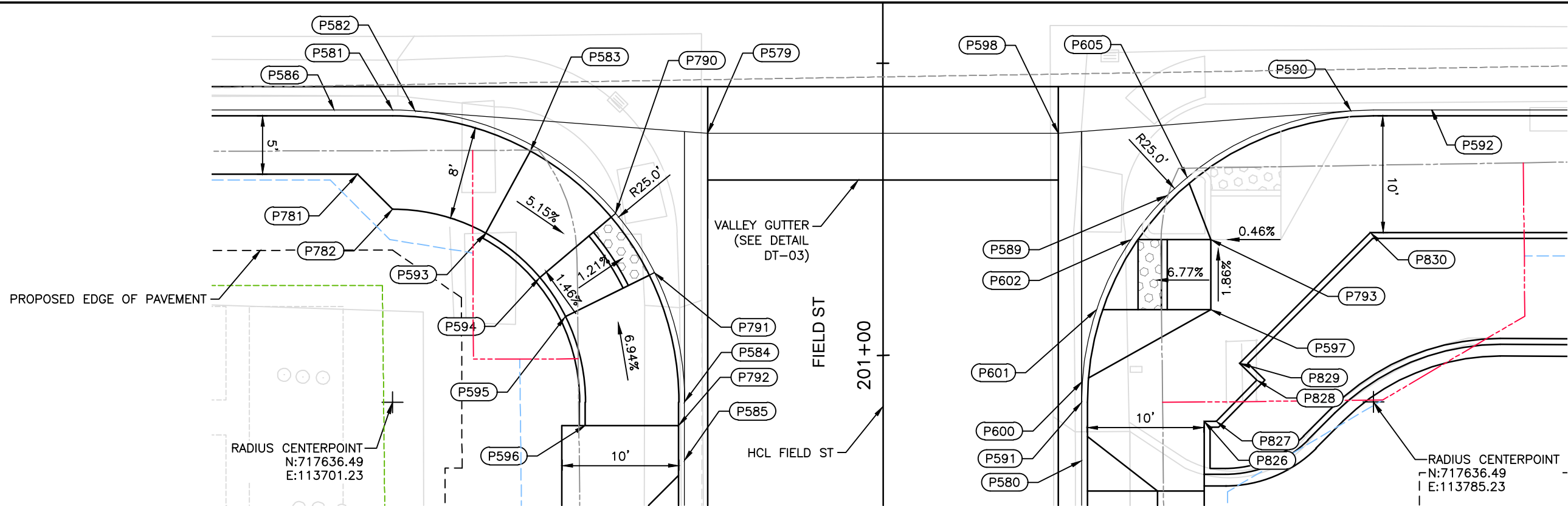
Structure Numbers

Subset Sheets: INT-01 of 27

Project No./Code

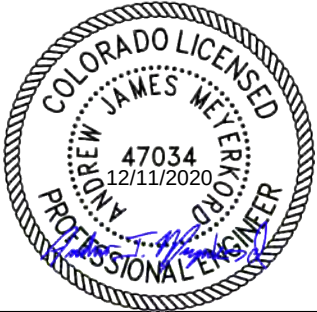
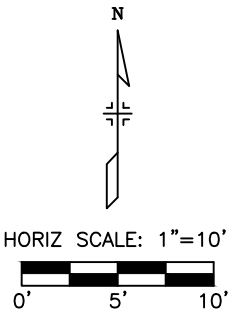
18-ST-40

Sheet Number 120



FIELD ST SW CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
579	201+19.00	15.00L	5346.03	VALLEY GUTTER FLOWLINE
581	201+21.00	42.00L	5345.89	FLOWLINE; P.C.
582	201+20.93	40.09L	5345.90	VALLEY GUTTER FLOWLINE
583	201+17.47	30.20L	5346.48	TOP OF RAMP
584	200+96.00	17.00L	5346.38	FLOWLINE; P.T.
585	200+91.00	17.00L	5346.54	FLOWLINE
586	201+21.00	47.00L	5345.87	FLOWLINE
593	201+10.46	34.05L	5346.60	TOP OF RAMP
594	201+06.66	29.41L	5346.22	CURB RAMP LANDING
595	201+03.32	27.21L	5346.29	CURB RAMP LANDING
596	200+94.00	25.50L	5347.06	TOP OF RAMP
781	201+15.50	45.00L	5346.45	BOW
782	201+12.50	42.00L	5346.51	BOW
790	201+12.15	22.92L	5346.10	CURB RAMP LANDING; FLOWLINE
791	201+07.09	19.59L	5346.20	CURB RAMP LANDING; FLOWLINE
792	200+94.00	17.50L	5346.94	TOP OF RAMP

FIELD ST SE CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
580	200+91.00	17.00R	5346.63	FLOWLINE
589	201+13.68	24.32R	5346.31	FLOWLINE
590	201+20.93	40.09R	5346.32	VALLEY GUTTER FLOWLINE
591	200+96.00	17.00R	5346.49	FLOWLINE; P.C.
592	201+21.00	47.00R	5346.37	FLOWLINE
597	201+03.92	28.07R	5346.99	TOP OF RAMP
600	200+97.75	17.06R	5346.47	FOC
601	201+03.92	18.29R	5346.41	TBOC
602	201+09.92	21.23R	5346.35	TBOC
605	201+15.24	26.04R	5346.30	FOC
793	201+09.92	28.07R	5346.88	TOP OF RAMP
826	200+94.35	27.50R	5347.18	BACK OF WALK
827	200+94.35	28.54R	5347.21	BACK OF WALK
828	200+97.87	32.01R	5347.16	BACK OF WALK
829	200+99.32	30.54R	5347.11	BACK OF WALK
830	201+10.50	41.73R	5346.98	BACK OF WALK



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File Name: 118355_RDINT_DT_SH01.DWG

Horizontal Scale: 1" = 10' Vertical Scale: N/A

R-X

Sheet Revisions

Date	Comments	Initials

CITY OF ARVADA

PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD

ARVADA, CO, 80002

As Constructed

No Revisions:

Revised:

Void:

RALSTON RD - YUKON ST TO GARRISON ST

INTERSECTION DETAIL

FIELD STREET - SOUTH

Designer: JHH

Detailer: JVS

Sheet Subset: ROADWAY

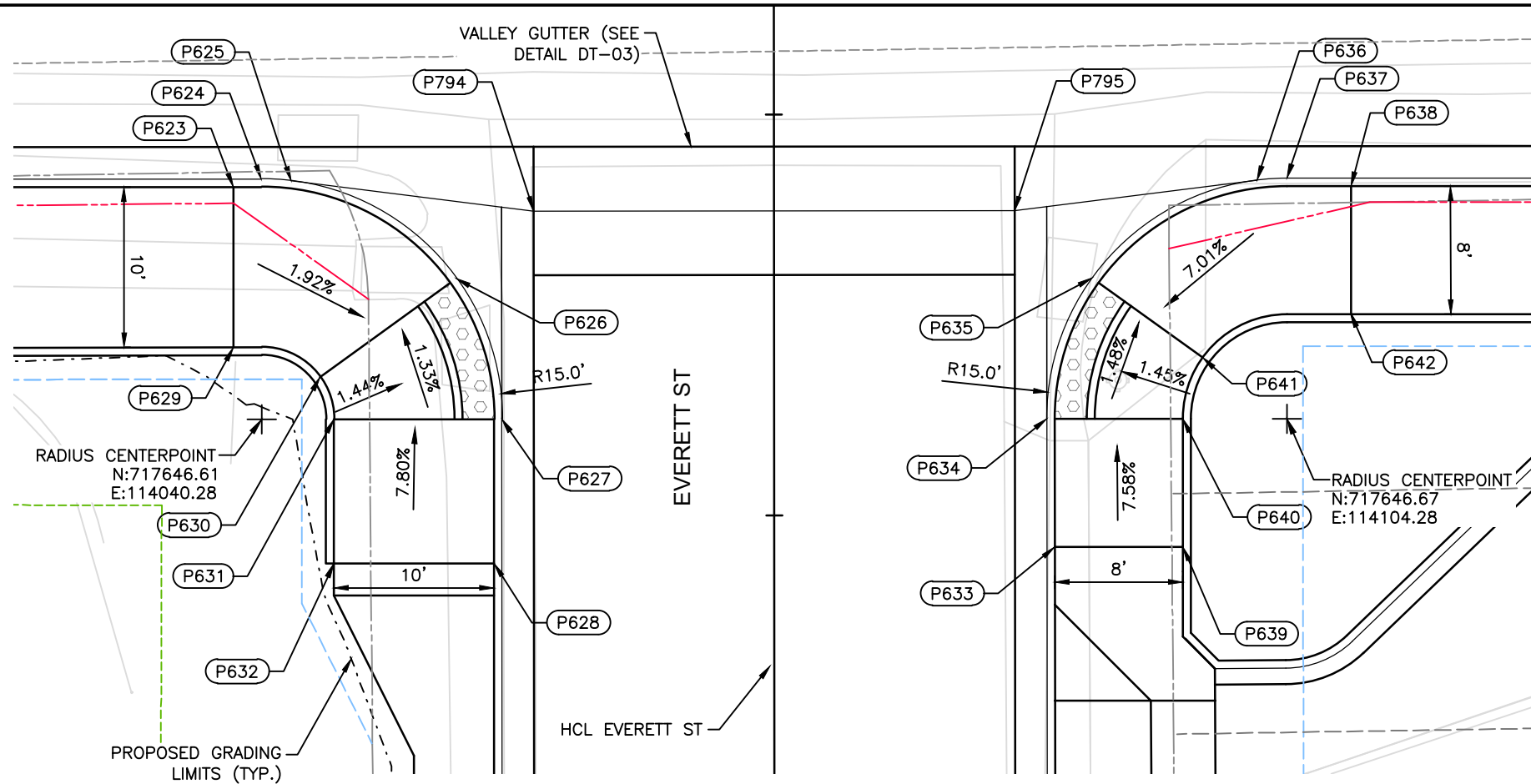
Structure Numbers

Subset Sheets: INT-03 of 27

Project No./Code

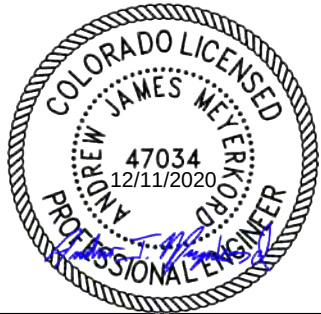
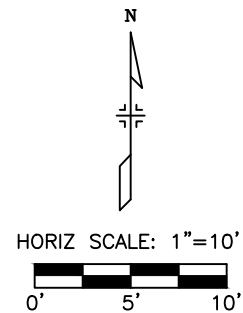
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Sheet Number 122



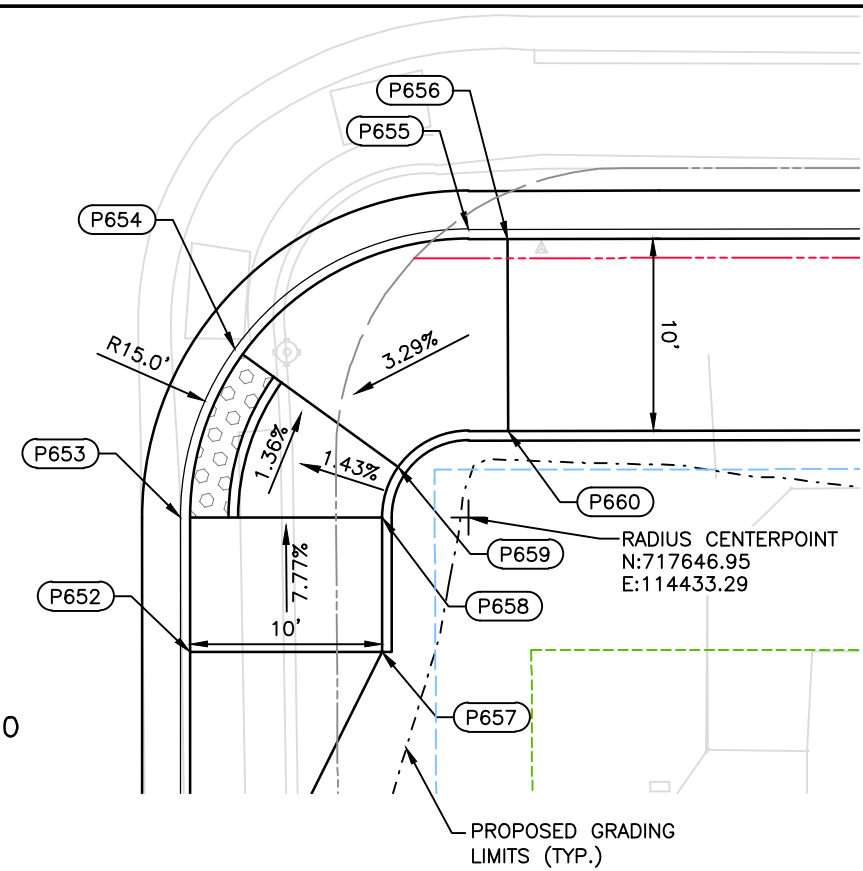
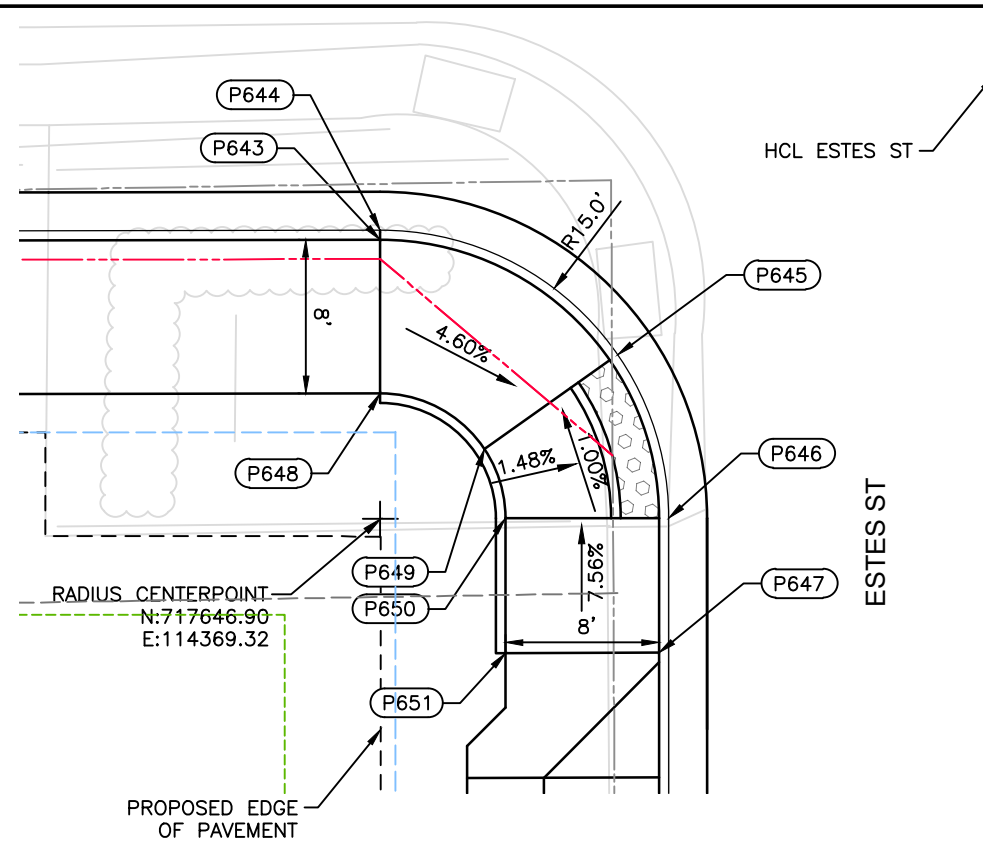
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POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
623	251+45.50	33.75L	5352.77	TOP OF RAMP
624	251+46.00	32.00L	5352.33	FLOWLINE; P.C.
625	251+45.89	30.15L	5352.42	FLOWLINE; VALLEY GUTTER
626	251+39.78	19.84L	5352.94	CURB RAMP LANDING; FLOWLINE
627	251+31.00	17.00L	5353.05	TOP OF CURB RAMP
628	251+22.00	17.50L	5353.72	TOP OF RAMP
629	251+35.50	33.75L	5352.92	TOP OF RAMP
630	251+33.63	28.35L	5353.10	TOP OF CURB RAMP
631	251+31.00	27.50L	5353.16	TOP OF CURB RAMP
632	251+22.00	27.50L	5353.87	TOP OF RAMP
794	251+44.00	15.00L	5352.94	FLOWLINE; VALLEY GUTTER

EVERETT ST SE CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
633	251+23.00	17.50R	5354.64	TOP OF CURB RAMP
634	251+31.00	17.00R	5354.03	CURB RAMP LANDING; FLOWLINE; P.C.
635	251+39.78	19.84R	5354.12	CURB RAMP LANDING; FLOWLINE
636	251+45.89	30.15R	5354.38	FLOWLINE; VALLEY GUTTER
637	251+46.00	32.00R	5354.42	FLOWLINE; P.T.
638	251+45.50	36.00R	5355.04	TOP OF CURB RAMP
639	251+23.00	25.50R	5354.76	TOP OF CURB RAMP
640	251+31.00	25.50R	5354.16	CURB RAMP LANDING
641	251+34.81	26.73R	5354.25	CURB RAMP LANDING
642	251+37.50	36.00R	5355.16	TOP OF CURB RAMP
795	251+44.00	15.00R	5353.92	FLOWLINE; VALLEY GUTTER



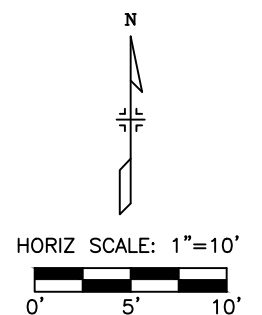
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	FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Detailer: JVS Structure Numbers				
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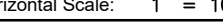


ESTES ST SW CORNER				
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643	301+20.50	32.00L	5358.37	TOP OF RAMP
644	301+21.00	32.00L	5357.87	FLOWLINE; P.C.
645	301+14.52	19.65L	5357.97	CURB RAMP LANDING; FLOWLINE
646	301+06.00	17.00L	5358.04	CURB RAMP LANDING; FLOWLINE; P.T.
647	300+99.00	17.50L	5358.58	TOP OF RAMP
648	301+12.50	32.00L	5358.49	TOP OF RAMP
649	301+09.61	26.59L	5358.10	CURB RAMP LANDING
650	301+06.00	25.50L	5358.17	CURB RAMP LANDING
651	300+99.00	25.50L	5358.70	TOP OF RAMP

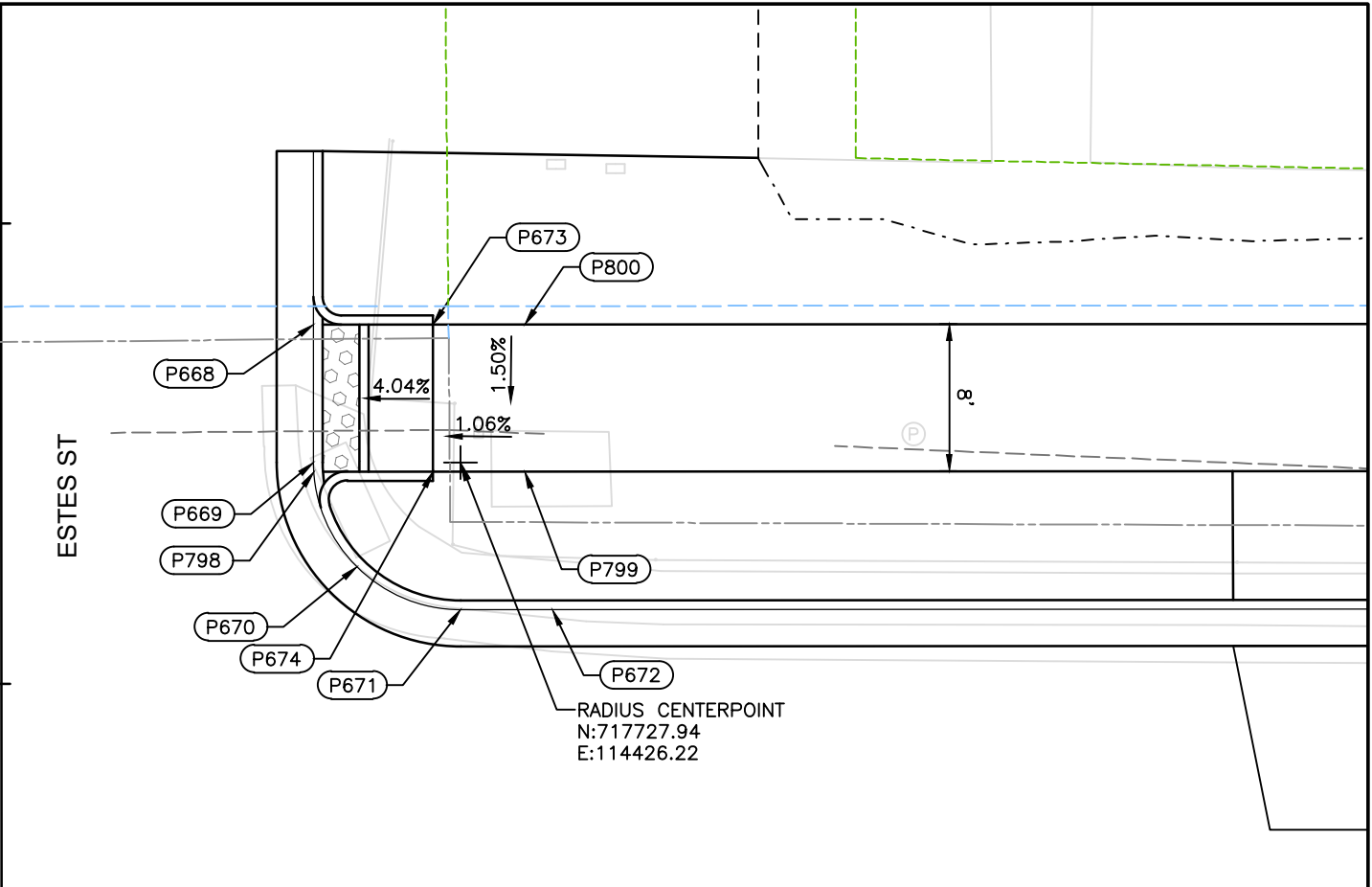
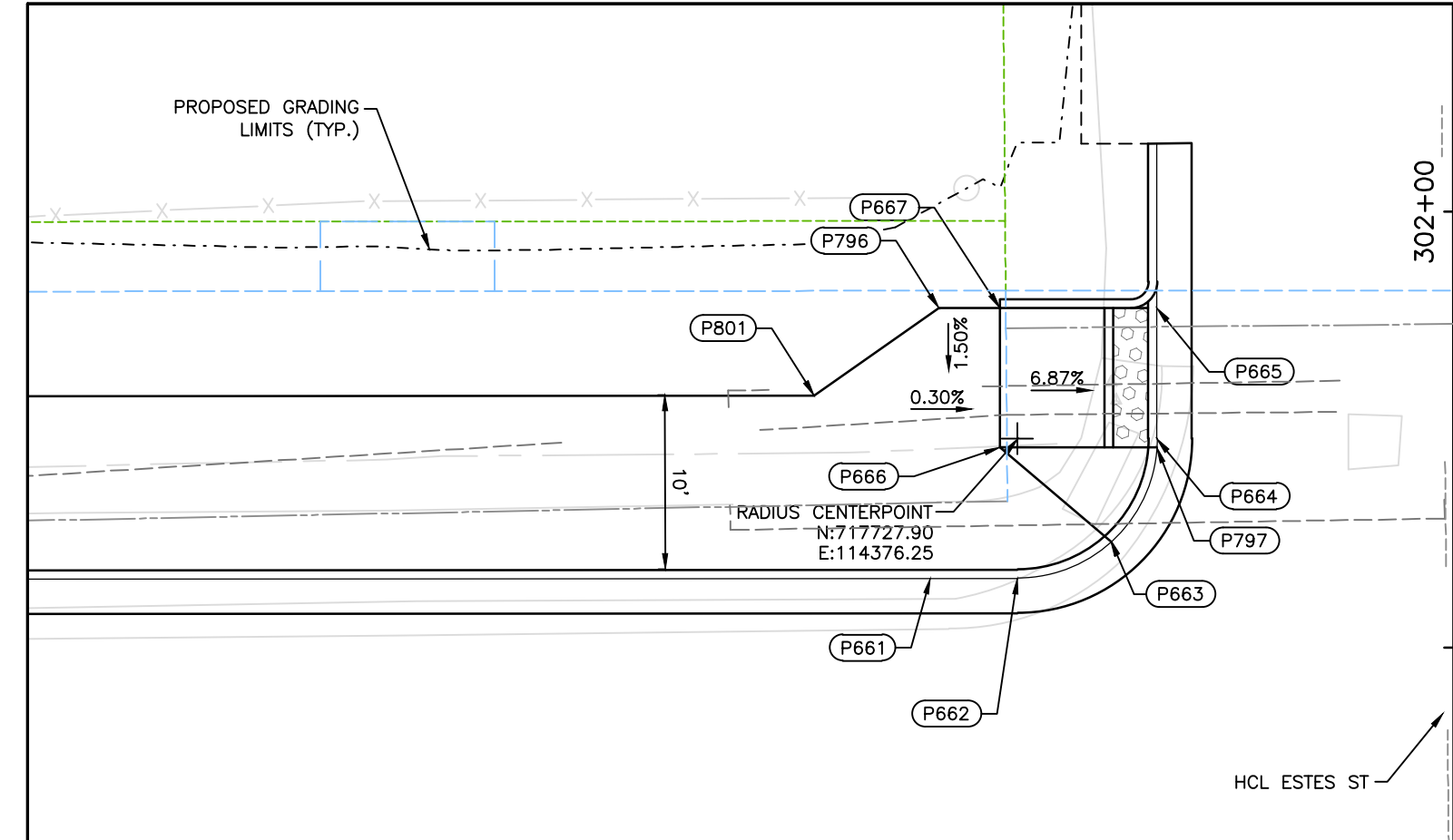
ESTES ST SE CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
652	300+99.00	17.50R	5358.59	TOP OF RAMP
653	301+06.00	17.00R	5358.04	CURB RAMP LANDING; FLOWLINE; P.C.
654	301+14.78	19.84R	5357.94	CURB RAMP LANDING; FLOWLINE
655	301+21.00	32.00R	5357.81	FLOWLINE; P.T.
656	301+20.50	34.05R	5358.29	TOP OF RAMP
657	300+99.00	27.50R	5358.74	TOP OF RAMP
658	301+06.00	27.50R	5358.20	CURB RAMP LANDING
659	301+08.63	28.35R	5358.10	CURB RAMP LANDING
660	301+10.50	34.05R	5358.44	TOP OF RAMP



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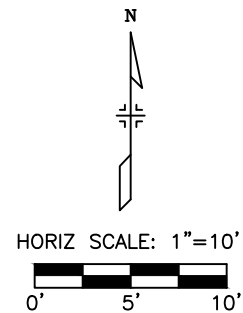
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 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com		 CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002																										

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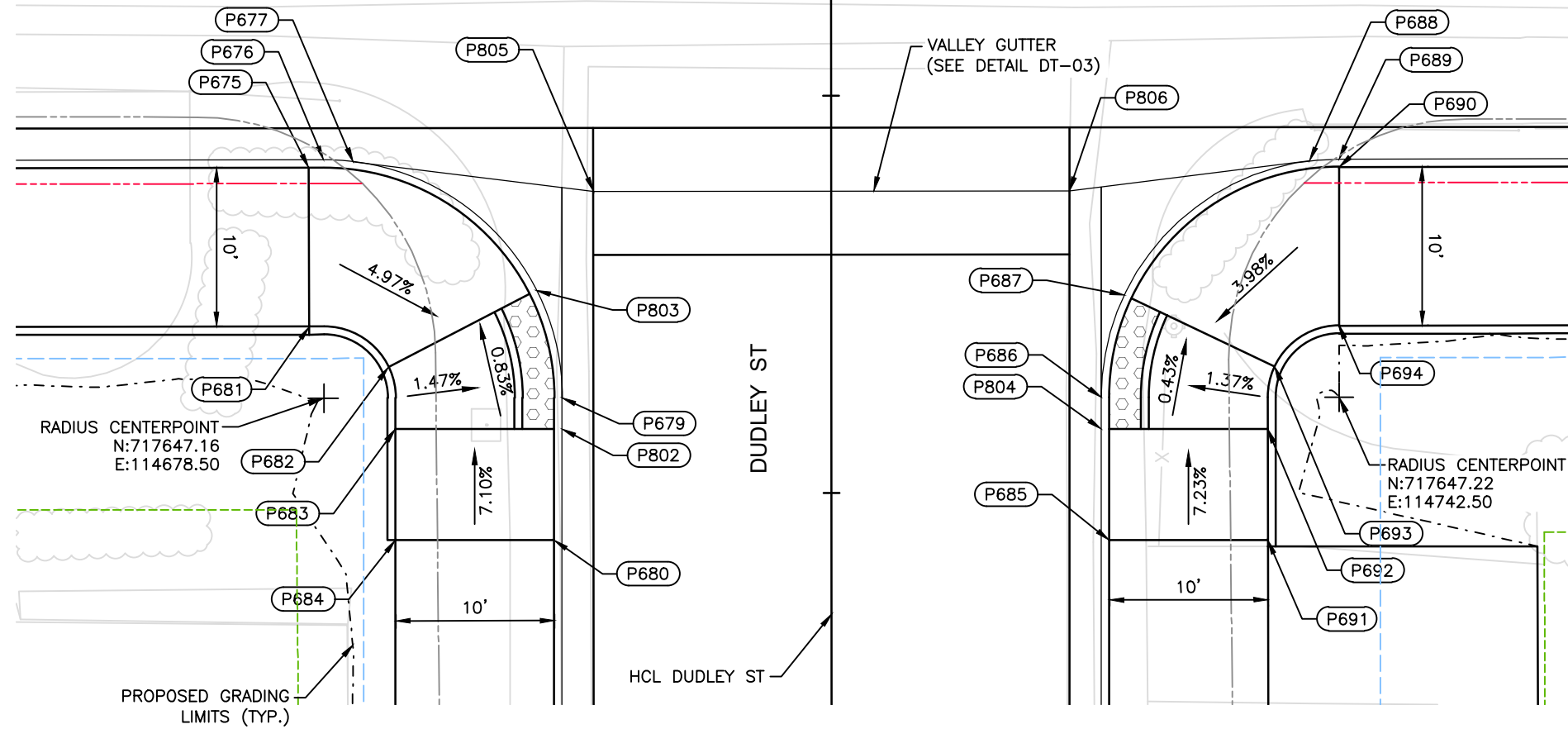


ESTES ST NW CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
661	301+79.00	30.00L	5357.34	FLOWLINE
662	301+79.00	25.00L		FLOWLINE; P.C.
663	301+81.09	19.61L	5357.37	FLOWLINE
664	301+87.00	17.00L	5357.38	FLOWLINE; P.T.
665	301+94.50	17.00L	5357.38	BOTTOM OF RAMP; FLOWLINE
666	301+86.50	26.00L	5357.95	TOP OF RAMP
667	301+94.50	26.00L	5358.07	TOP OF RAMP
796	301+94.50	29.51L	5358.06	CURB RAMP LANDING
797	301+86.50	17.02L	5357.38	BOTTOM OF RAMP; FLOWLINE
801	301+89.50	36.65L	5357.96	BACK OF WALK

ESTES ST NE CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
668	301+94.50	17.00R	5357.88	BOTTOM OF RAMP; FLOWLINE
669	301+87.00	17.00R	5357.66	FLOWLINE; P.C.
670	301+81.34	19.34R	5357.48	FLOWLINE
671	301+79.00	25.00R	5357.30	FLOWLINE; P.T.
672	301+79.00	30.00R	5357.28	FLOWLINE
673	301+94.50	23.50R	5358.10	TOP OF RAMP
674	301+86.50	23.50R	5357.95	TOP OF RAMP
798	301+86.50	17.02R	5357.64	BOTTOM OF RAMP; FLOWLINE
799	301+86.50	28.50R	5357.89	CURB RAMP LANDING
800	301+94.50	28.50R	5358.01	CURB RAMP LANDING

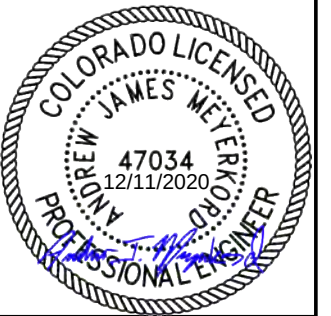
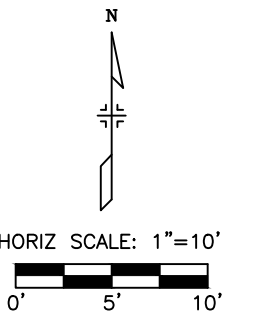


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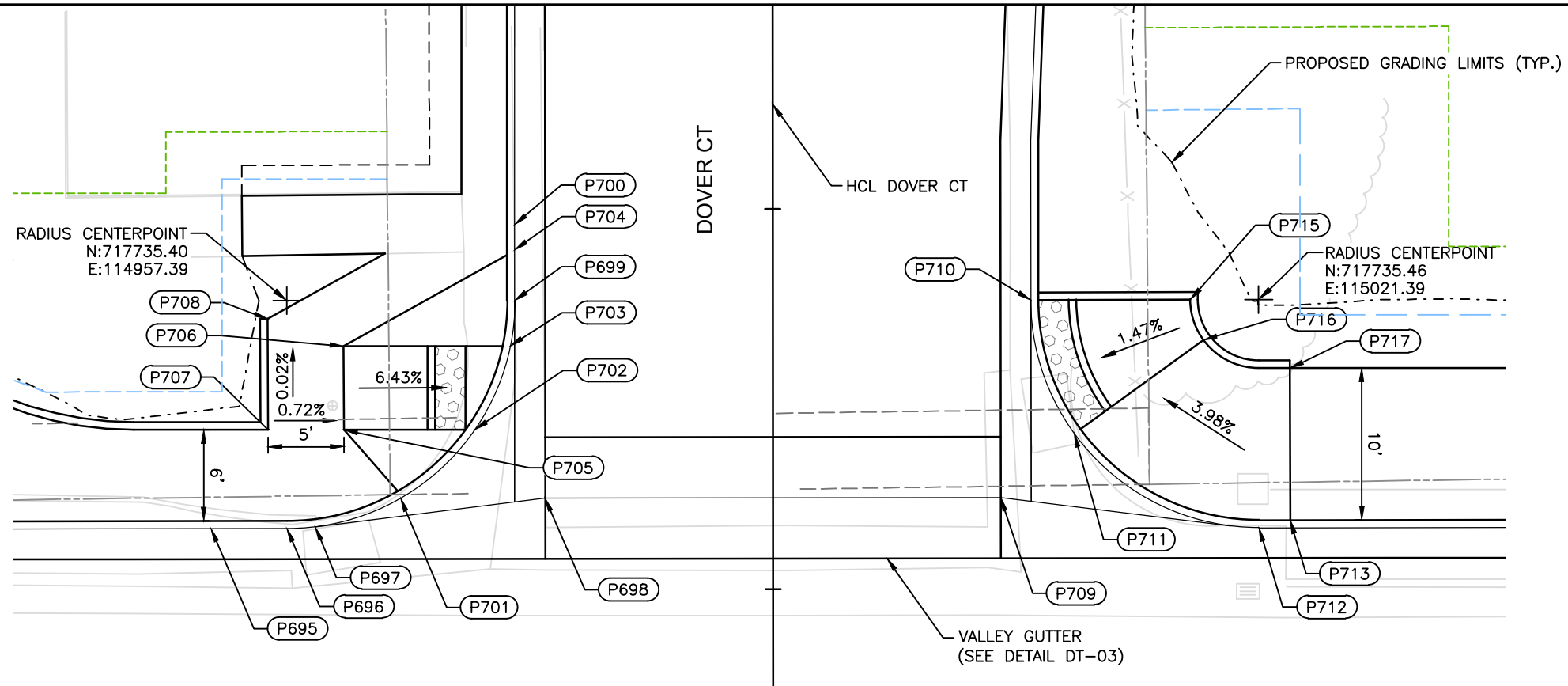


DUDLEY ST SW CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
675	351+45.50	32.93L	5355.74	TOP OF RAMP
676	351+46.00	32.00L	5355.23	FLOWLINE; P.C.
677	351+45.89	30.15L	5355.24	FLOWLINE; VALLEY GUTTER
679	351+31.00	17.00L	5355.19	FLOWLINE; P.T.
680	351+22.05	17.50L	5355.70	TOP OF RAMP
681	351+35.50	32.93L	5355.89	TOP OF RAMP
682	351+32.93	27.94L	5355.41	CURB RAMP LANDING
683	351+29.05	27.50L	5355.35	CURB RAMP LANDING
684	351+22.05	27.50L	5355.85	TOP OF RAMP
802	351+31.00	17.00L	5355.19	CURB RAMP LANDING; FLOWLINE
803	351+31.00	17.00L	5355.19	CURB RAMP LANDING; FLOWLINE
805	351+45.89	30.15L	5355.22	FLOWLINE; VALLEY GUTTER

DUDLEY ST SE CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
685	351+22.00	17.50R	5355.57	TOP OF RAMP
686	351+31.00	17.00R	5355.05	FLOWLINE; P.C.
687	351+37.45	18.46R	5355.01	CURB RAMP LANDING; FLOWLINE
688	351+45.89	30.15R	5354.92	FLOWLINE; VALLEY GUTTER
689	351+46.00	32.00R	5354.91	FLOWLINE; P.T.
690	351+45.50	32.00R	5355.41	TOP OF RAMP
691	351+22.00	27.50R	5355.72	TOP OF RAMP
692	351+29.00	27.50R	5355.21	CURB RAMP LANDING
693	351+32.93	27.94R	5355.17	CURB RAMP LANDING
694	351+35.50	32.00R	5355.56	TOP OF RAMP
804	351+29.00	17.00R	5355.05	CURB RAMP LANDING; FLOWLINE
806	351+44.00	15.00R	5355.00	FLOWLINE; VALLEY GUTTER

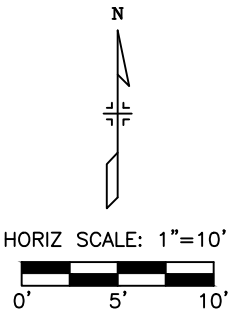


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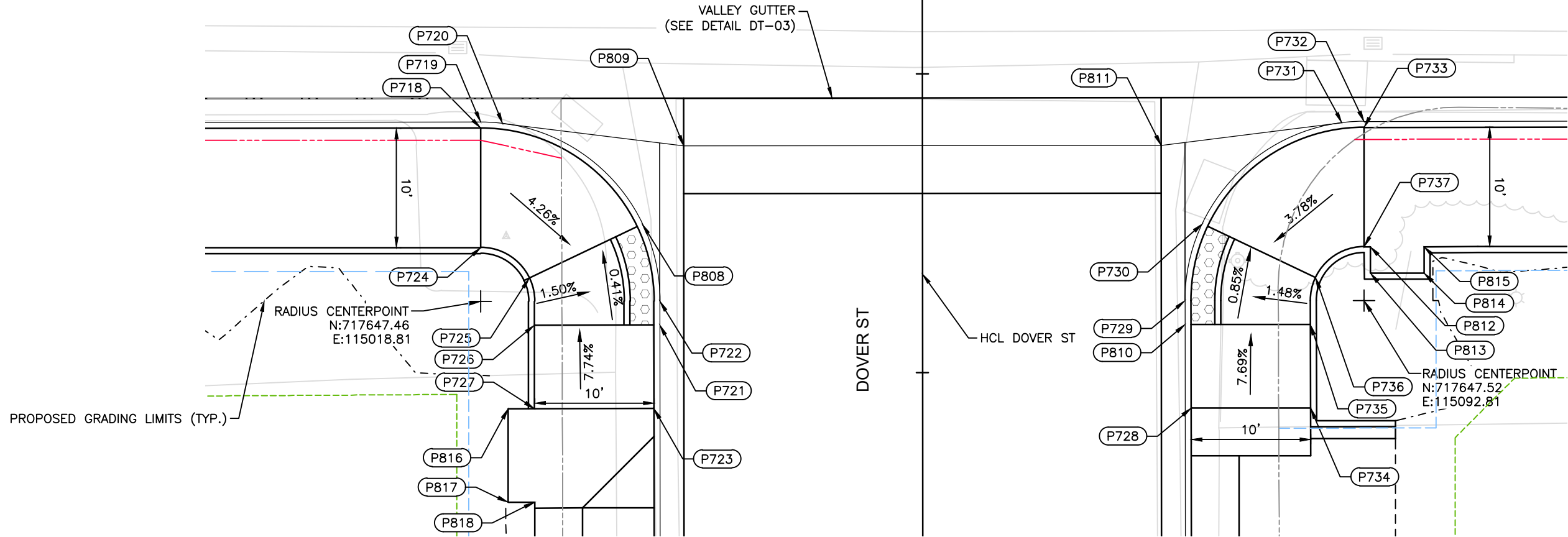
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POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
695	401+46.00	37.00R	5354.00	FLOWLINE
696	401+46.00	32.00R	5354.11	FLOWLINE; P.C.
697	401+45.88	30.14R	5353.97	FLOWLINE; VALLEY GUTTER
698	401+44.00	15.00R	5353.89	FLOWLINE; VALLEY GUTTER
699	401+31.00	17.00R	5353.74	FLOWLINE; P.T.
700	401+26.00	17.00R	5353.66	FLOWLINE
701	401+44.00	24.52R	5353.90	CURB RAMP; FLOWLINE
702	401+39.50	19.64R	5353.88	BOTTOM OF RAMP; FLOWLINE
703	401+34.00	17.30R	5353.78	BOTTOM OF RAMP; FLOWLINE
704	401+27.67	17.00R	5353.69	CURB RAMP; FLOWLINE
705	401+39.50	28.25R	5354.53	TOP OF RAMP
706	401+34.00	28.25R	5354.54	TOP OF RAMP
707	401+39.50	33.25R	5354.57	CURB RAMP LANDING
708	401+32.21	33.25R	5354.57	CURB RAMP LANDING

DOVER CT NE CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
709	401+44.00	15.00L	5353.74	FLOWLINE; VALLEY GUTTER
710	401+31.00	17.00L	5353.62	CURB RAMP LANDING; FLOWLINE; P.C.
711	401+39.78	19.84L	5353.72	CURB RAMP LANDING; FLOWLINE
712	401+46.00	32.00L	5353.65	FLOWLINE; P.T.
713	401+45.50	34.05L	5354.14	TOP OF RAMP
715	401+31.00	27.50L	5353.77	CURB RAMP LANDING
716	401+33.63	28.35L	5353.88	CURB RAMP LANDING
717	401+35.50	34.05L	5354.29	TOP OF RAMP



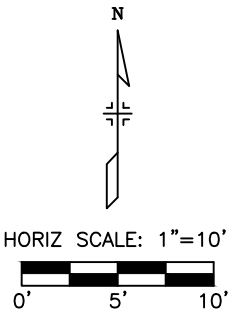
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Revised:											
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FELSBURG HOLT & ULLEVIG		6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com						Detailer: JVS		Sheet Subsets: INT-08 of 27	



DOVER ST SW CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
718	451+45.50	37.00L	5354.03	TOP OF RAMP
719	451+46.00	37.00L	5353.53	FLOWLINE; P.C.
720	451+45.89	35.15L	5353.55	FLOWLINE; VALLEY GUTTER
721	451+29.00	22.00L	5353.54	CURB RAMP LANDING; FLOWLINE
722	451+31.00	22.00L	5353.52	FLOWLINE; P.T.
723	451+22.00	22.50L	5354.09	TOP OF RAMP
724	451+35.50	37.00L	5354.11	TOP OF RAMP
725	451+32.93	32.94L	5353.73	CURB RAMP LANDING
726	451+29.00	32.50L	5353.69	CURB RAMP LANDING
727	451+22.00	32.50L	5354.24	TOP OF RAMP
808	451+37.45	23.46L	5353.57	CURB RAMP LANDING; FLOWLINE
809	451+44.00	20.00L	5353.45	FLOWLINE; VALLEY GUTTER
816	451+22.00	34.72L	5354.47	BACK OF WALK; BENCH CUTOUT
817	451+14.16	34.72L	5354.60	BACK OF WALK; BENCH CUTOUT
818	451+14.18	32.50L	5354.29	BACK OF WALK; BENCH CUTOUT

DOVER ST SE CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
728	451+22.00	22.50R	5353.87	TOP OF RAMP
729	451+31.00	22.00R	5353.31	FLOWLINE; P.C.
730	451+37.45	23.46R	5353.27	CURB RAMP LANDING; FLOWLINE
731	451+45.89	35.15R	5353.17	FLOWLINE; VALLEY GUTTER
732	451+46.00	37.00R	5353.16	FLOWLINE; P.T.
733	451+45.50	37.00R	5353.66	TOP OF RAMP
734	451+22.00	32.50R	5354.02	TOP OF RAMP
735	451+29.00	32.50R	5353.48	CURB RAMP LANDING
736	451+32.93	32.94R	5353.43	CURB RAMP LANDING
737	451+35.50	37.00R	5353.81	TOP OF RAMP
810	451+29.00	22.00R	5353.33	CURB RAMP LANDING; FLOWLINE
811	451+44.00	20.00R	5353.25	FLOWLINE; VALLEY GUTTER
812	451+35.50	37.52R	5353.81	BACK OF WALK; BENCH CUTOUT
813	451+33.28	37.52R	5353.84	BACK OF WALK; BENCH CUTOUT
814	451+33.27	42.02R	5353.82	BACK OF WALK; BENCH CUTOUT
815	451+35.50	42.02R	5353.79	BACK OF WALK; BENCH CUTOUT



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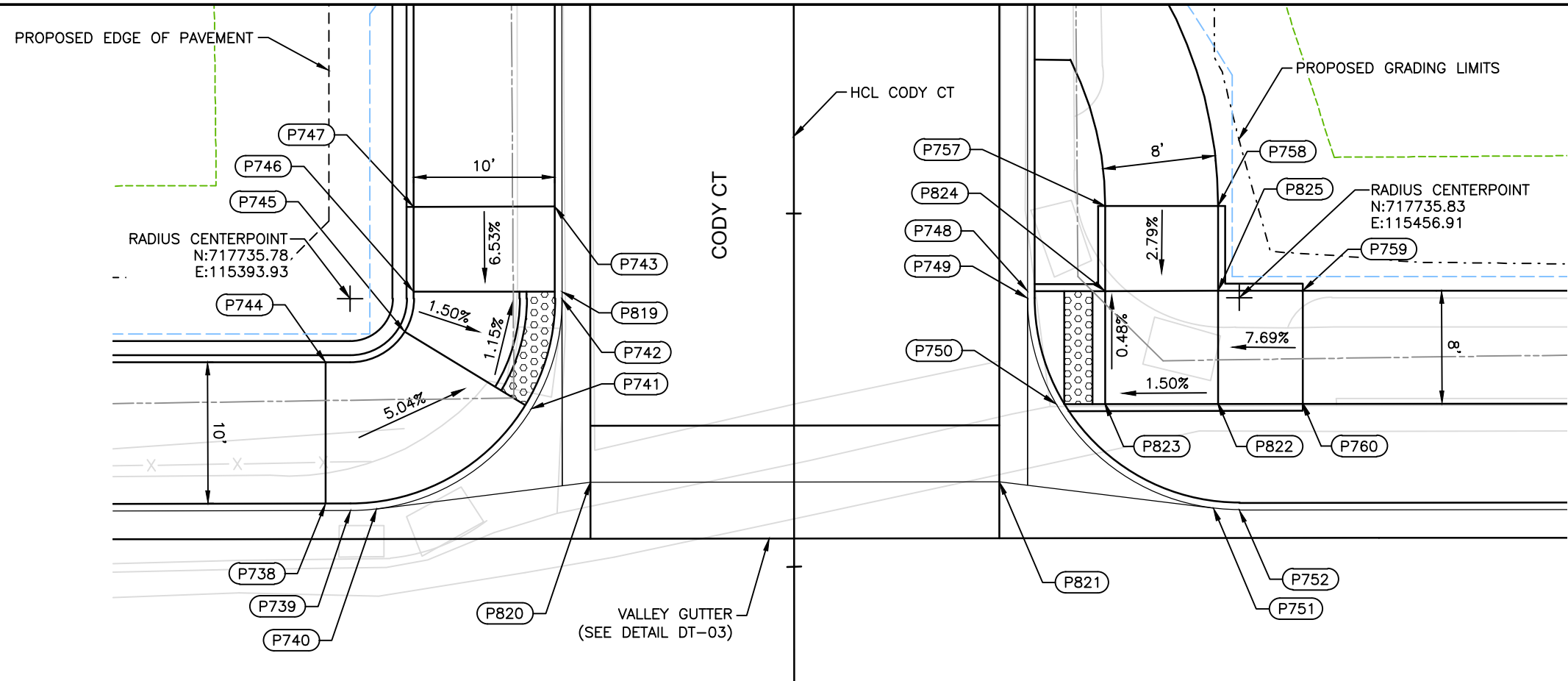
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Sheet Revisions			
R-X	Date	Comments	Initials

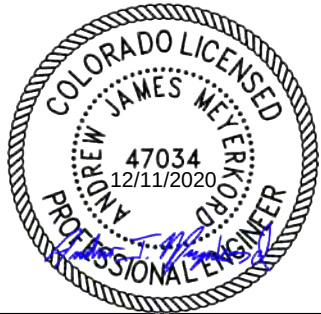
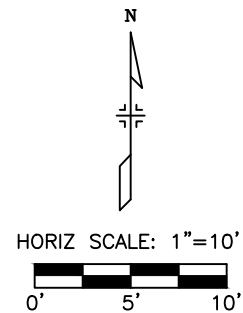
CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST INTERSECTION DETAIL DOVER STREET - SOUTH			Project No./Code
No Revisions:					18-ST-40
Revised:		Designer: JHH	Structure		
		Detailer: JVS	Numbers		
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CODY CT NW CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
738	501+45.50	33.18R	5352.30	TOP OF RAMP
739	501+46.00	31.42R	5351.79	FLOWLINE; P.C.
740	501+45.89	29.57R	5351.77	FLOWLINE; VALLEY GUTTER
741	501+38.81	18.62R	5351.65	CURB RAMP LANDING; FLOWLINE
742	501+31.00	16.42R	5351.58	FLOWLINE; P.T.
743	501+24.50	16.92R	5351.98	TOP OF RAMP
744	501+35.50	33.18R	5352.45	TOP OF RAMP
745	501+33.34	27.58R	5351.81	CURB RAMP LANDING
746	501+30.50	26.92R	5351.73	CURB RAMP LANDING
747	501+24.50	26.92R	5352.10	TOP OF RAMP
819	501+30.50	16.42R	5351.57	CURB RAMP LANDING; FLOWLINE
820	501+44.00	14.42R	5351.71	FLOWLINE; VALLEY GUTTER

CODY CT NE CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
748	501+30.50	16.56L	5351.31	BOTTOM OF RAMP; FLOWLINE
749	501+31.00	16.56L	5351.32	FLOWLINE; P.C.
750	501+38.50	18.57L	5351.38	BOTTOM OF RAMP; FLOWLINE
751	501+45.89	29.71L	5351.47	FLOWLINE; VALLEY GUTTER
752	501+46.00	31.56L	5351.48	FLOWLINE; P.T.
757	501+24.50	22.06L	5351.73	TOP OF CURB RAMP
758	501+24.50	30.06L	5351.85	TOP OF CURB RAMP
759	501+30.50	36.06L	5352.19	TOP OF CURB RAMP
760	501+38.50	36.06L	5352.07	TOP OF CURB RAMP
821	501+44.00	14.56L	5351.56	FLOWLINE; VALLEY GUTTER
822	501+38.50	30.06L	5351.64	CURB RAMP LANDING
823	501+38.50	22.06L	5351.52	CURB RAMP LANDING
824	501+30.51	22.06L	5351.56	CURB RAMP LANDING
825	501+30.50	30.06L	5351.68	CURB RAMP LANDING

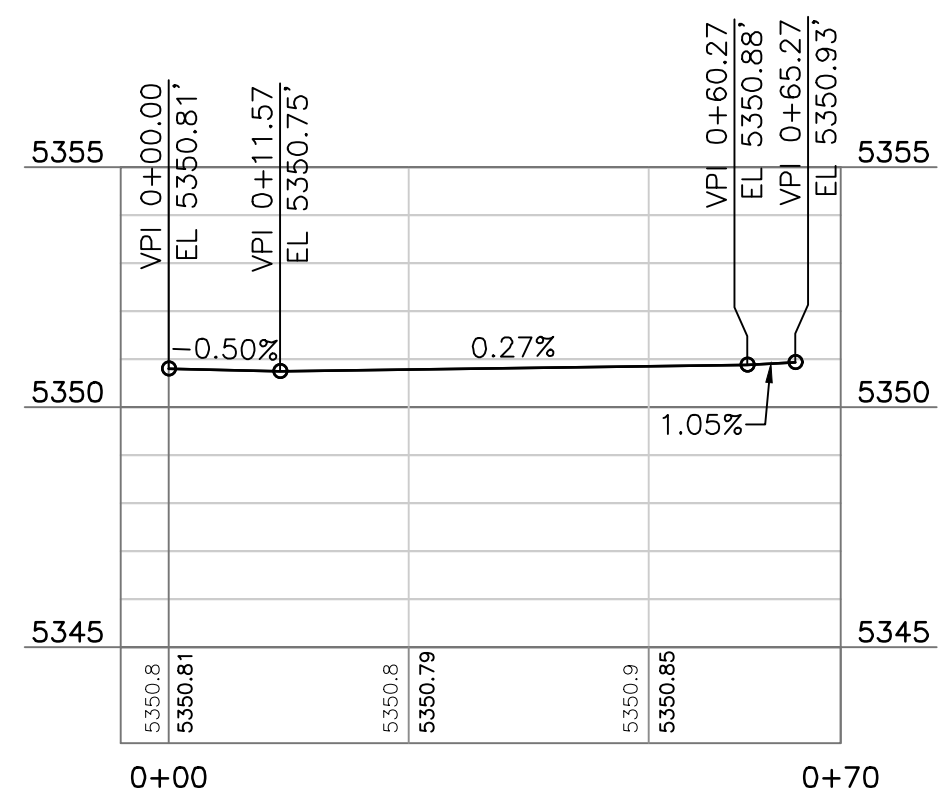
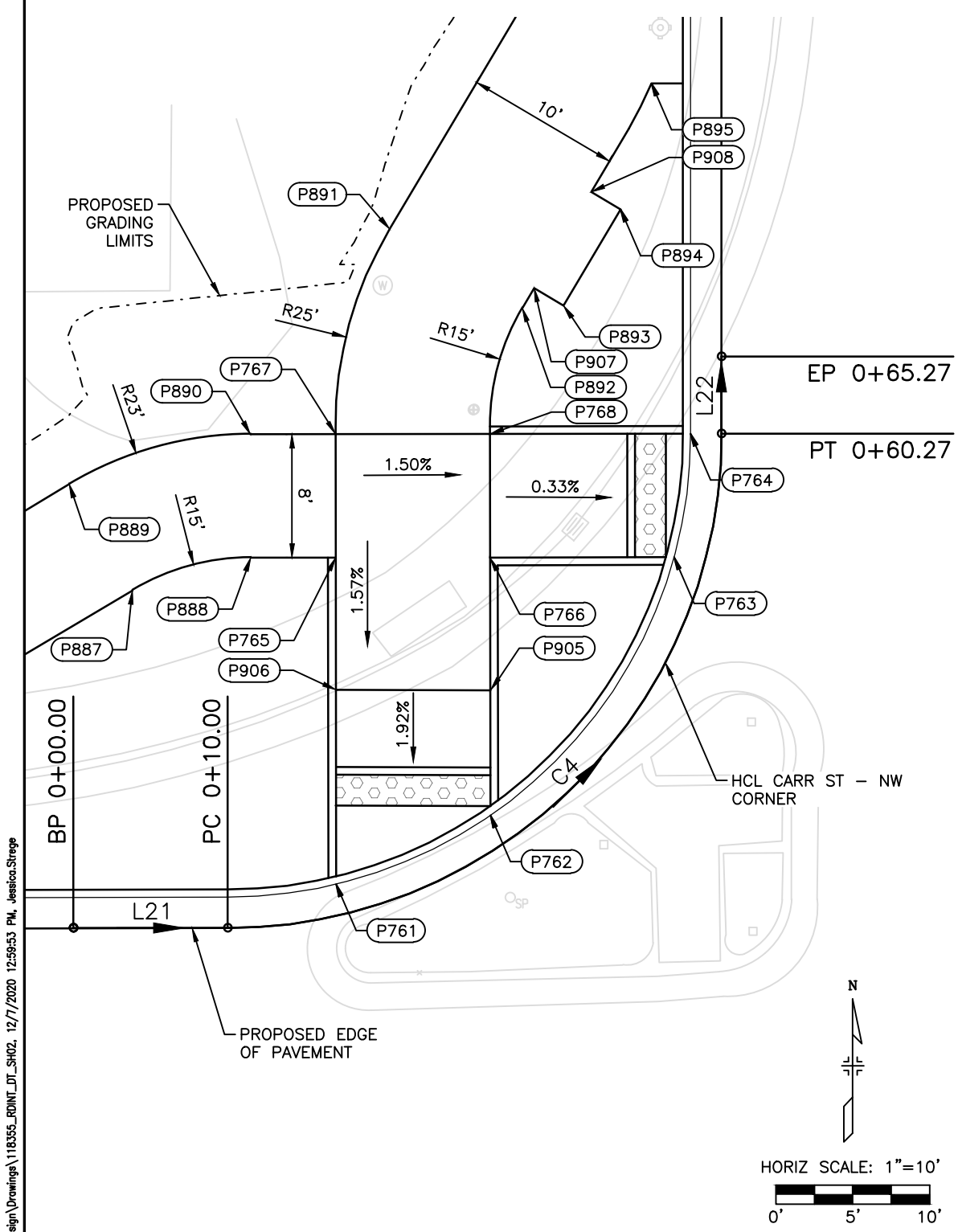


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File Name: 118355_RDINT_DT_SH01.DWG		Date	Comments	Initials			No Revisions:						
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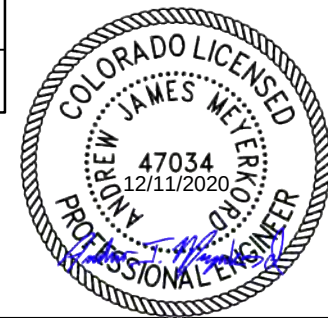
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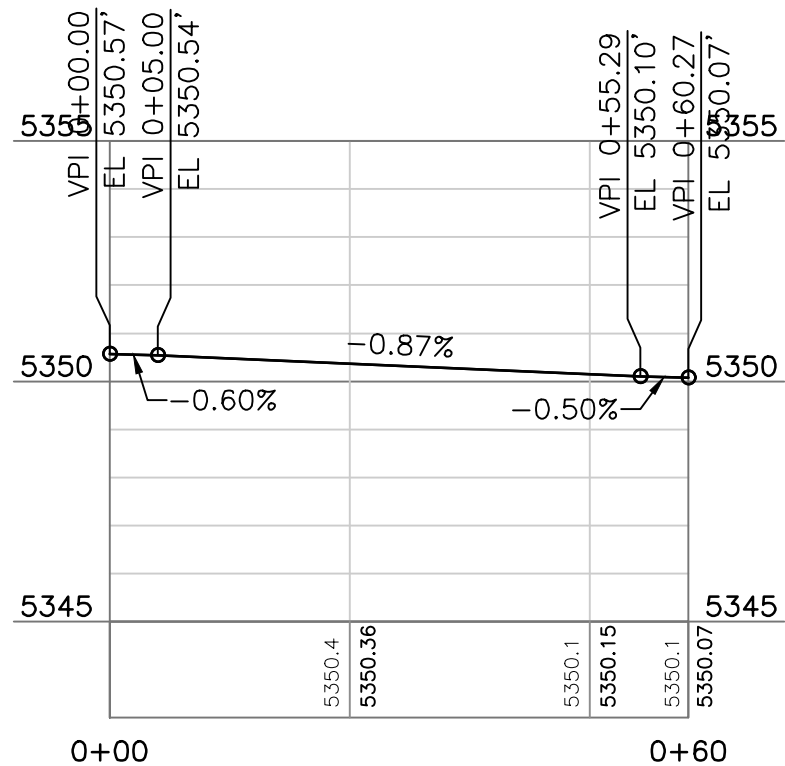
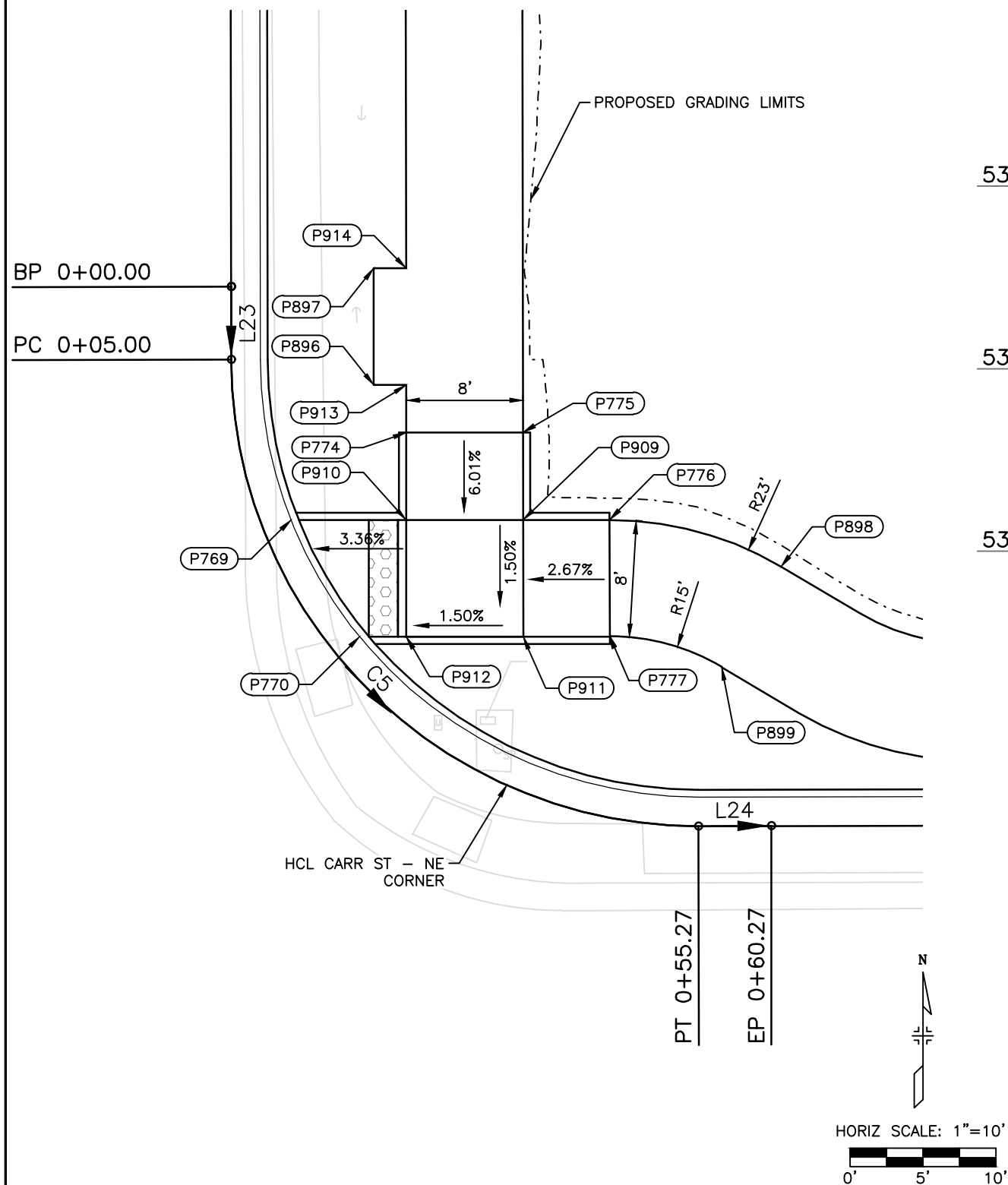
CARR ST NW CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
761	552+70.17	50.75R	5350.64	BOTTOM OF RAMP; FLOWLINE
762	552+65.72	40.75R	5350.73	BOTTOM OF RAMP; FLOWLINE
763	552+49.00	28.84R	5350.90	BOTTOM OF RAMP; FLOWLINE
764	552+41.00	27.75R		BOTTOM OF RAMP; FLOWLINE
765	552+49.00	50.75R	5351.57	CURB RAMP LANDING
766	552+49.00	40.75R	5351.42	CURB RAMP LANDING
767	552+41.00	50.75R	5351.69	CURB RAMP LANDING
768	552+41.00	40.75R	5351.54	CURB RAMP LANDING
887	552+51.11	63.92R	5351.50	FOW, P.C.
888	552+49.00	56.25R	5351.54	FOW, P.T.
889	552+44.23	68.01R	5351.62	BOW, P.C.
890	552+41.00	56.26R	5351.66	BOW, P.T.
891	552+27.72	47.24R	5351.81	BOW, P.T.
892	552+32.83	38.64R	5351.59	FOW, P.T.
893	552+32.68	35.96R	5351.58	FOW, BENCH CUTOUT
894	552+26.45	32.26R	5351.63	FOW, BENCH CUTOUT
895	552+18.29	30.26R	5351.74	FOW
905	552+57.61	40.72R	5351.36	CURB RAMP LANDING
906	552+57.57	50.72R	5351.38	CURB RAMP LANDING
907	552+32.68	35.96R	5351.58	FOW, BENCH CUTOUT
908	552+26.45	32.26R	5351.63	FOW, BENCH CUTOUT

CARR ST - NW CORNER - EDGE OF PAVEMENT									
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L21		0+00.00 0+10.00	717719.0021 717719.0108	115651.1291 115661.1291	10.00'	N89°57'02"E			
C4	PC= PI= PT=	0+10.00 0+42.00 0+60.27	717719.0108 717719.0384 717751.0384	115661.1291 115693.1291 115693.1014	50.27'	N44°57'02"E	90°00'00"	32.00'	32.00'
L22		0+60.27 0+65.27	717751.0384 717756.0382	115693.1014 115693.0971	5.00'	N0°02'58"W			



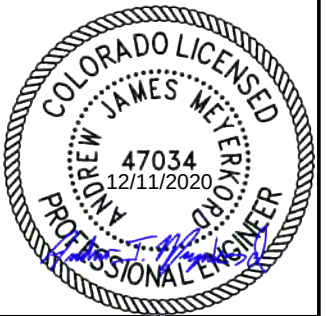
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File Name: 118355_RDINT_DT_SH02.DWG		Date	Comments	Initials				18-ST-40			
Horizontal Scale: 1"=10' Vertical Scale: 1"=8'											
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							No Revisions:	Designer: JHH	Structure Numbers	Sheet Number 130	
							Revised:	Detailer: JVS			
							Void:	Sheet Subset: ROADWAY	Subset Sheets: INT-11 of 27		

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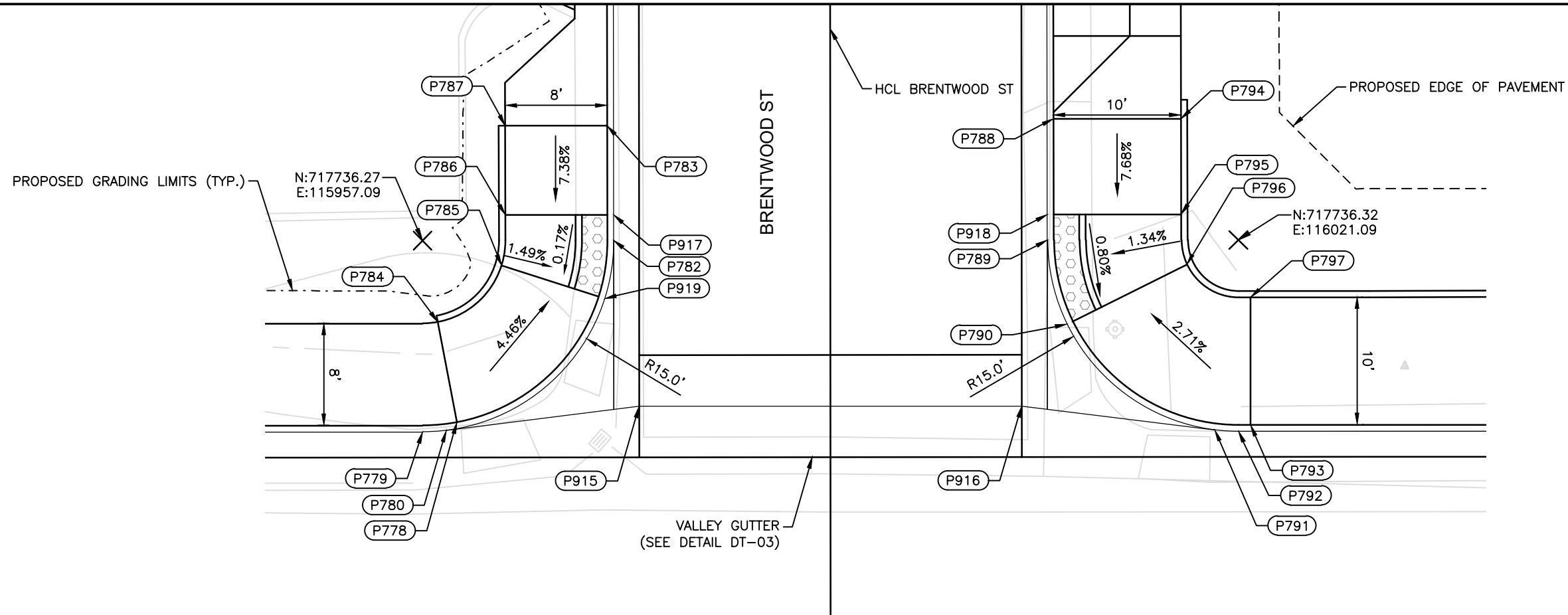


CARR ST NE CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
769	552+41.00	23.84L	5350.27	BOTTOM OF RAMP; FLOWLINE
770	552+49.00	28.53L	5350.26	BOTTOM OF RAMP; FLOWLINE
774	552+35.00	31.75L	5350.93	TOP OF CURB RAMP
775	552+35.00	39.75L	5351.01	TOP OF CURB RAMP
776	552+41.00	45.68L	5350.83	TOP OF CURB RAMP
777	552+49.00	45.68L	5350.71	TOP OF CURB RAMP
896	552+31.75	29.52L	5350.96	FOW, BENCH CUTOUT
897	552+23.75	29.53L	5351.02	FOW, BENCH CUTOUT
898	552+44.23	57.44L	5350.63	BOW, P.T.
899	552+51.11	53.35L	5350.55	FOW, P.T.
909	552+41.00	39.75L	5350.67	CURB RAMP LANDING
910	552+41.00	31.75L	5350.55	CURB RAMP LANDING
911	552+49.00	39.75L	5350.55	CURB RAMP LANDING
912	552+49.00	31.75L	5350.43	CURB RAMP LANDING
913	552+31.75	31.75L	5350.99	FOW, BENCH CUTOUT
914	552+23.75	31.75L	5351.05	FOW, BENCH CUTOUT

CARR ST - NE CORNER - EDGE OF PAVEMENT									
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L23		0+00.00 0+05.00	717767.0777 717762.0780	115738.5876 115738.5919	5.00'	S0°02'58"E			
C5	PC= PI= PT=	0+05.00 0+37.00 0+55.27	717762.0780 717730.0747 717730.1049	115738.5919 115738.6196 115770.6228	50.27'	S45°03'06"E	90°00'17"	32.00'	32.00'
L24		0+55.27 0+60.27	717730.1049 717730.1096	115770.6228 115775.6195	5.00'	N89°56'45"E			

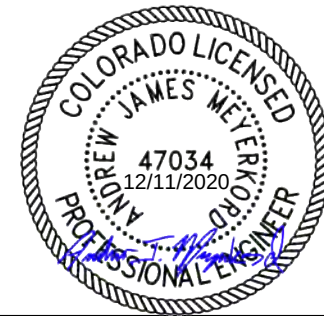
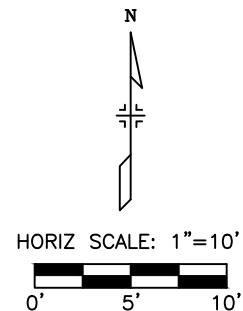


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File Name: 118355_RDINT_DT_SH02.DWG			Date	Comments	Initials		No Revisions:					18-ST-40		
Horizontal Scale: 1"=10' Vertical Scale: 1"=8'							Revised:		Designer: JHH Detailer: JVS		Structure Numbers			
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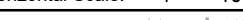


BRENTWOOD ST NW CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
778	601+45.25	29.32R	5349.06	TOP OF RAMP
779	601+46.00	32.00R	5348.57	FLOWLINE; P.C.
780	601+45.89	30.15R	5348.57	FLOWLINE; VALLEY GUTTER
782	601+31.00	17.00R	5348.52	FLOWLINE; P.T.
783	601+22.00	17.50R	5349.05	TOP OF RAMP
784	601+37.39	30.80R	5349.18	TOP OF RAMP
785	601+32.97	25.81R	5348.65	CURB RAMP LANDING
786	601+29.00	25.50R	5348.65	CURB RAMP LANDING
787	601+22.00	25.50R	5349.17	TOP OF RAMP
915	601+44.00	15.00R	5348.49	FLOWLINE; VALLEY GUTTER
917	601+29.00	17.00R	5348.52	CURB RAMP LANDING; FLOWLINE
919	601+35.54	17.70R	5348.53	CURB RAMP LANDING; FLOWLINE

BRENTWOOD ST NE CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
788	601+21.50	17.50L	5349.04	TOP OF RAMP
789	601+31.00	17.00L	5348.44	FLOWLINE; P.C.
790	601+37.60	18.53L	5348.39	CURB RAMP LANDING; FLOWLINE
791	601+45.89	30.15L	5348.27	FLOWLINE; VALLEY GUTTER
792	601+46.00	32.00L	5348.25	FLOWLINE; P.T.
793	601+45.50	32.93L	5348.75	TOP OF RAMP
794	601+21.50	27.50L	5349.21	TOP OF RAMP
795	601+29.00	27.50L	5348.62	CURB RAMP LANDING
796	601+32.93	27.94L	5348.54	CURB RAMP LANDING
797	601+35.50	32.93L	5348.90	TOP OF RAMP
916	601+44.00	15.00L	5348.34	FLOWLINE; VALLEY GUTTER
918	601+29.00	17.00L	5348.47	CURB RAMP LANDING; FLOWLINE



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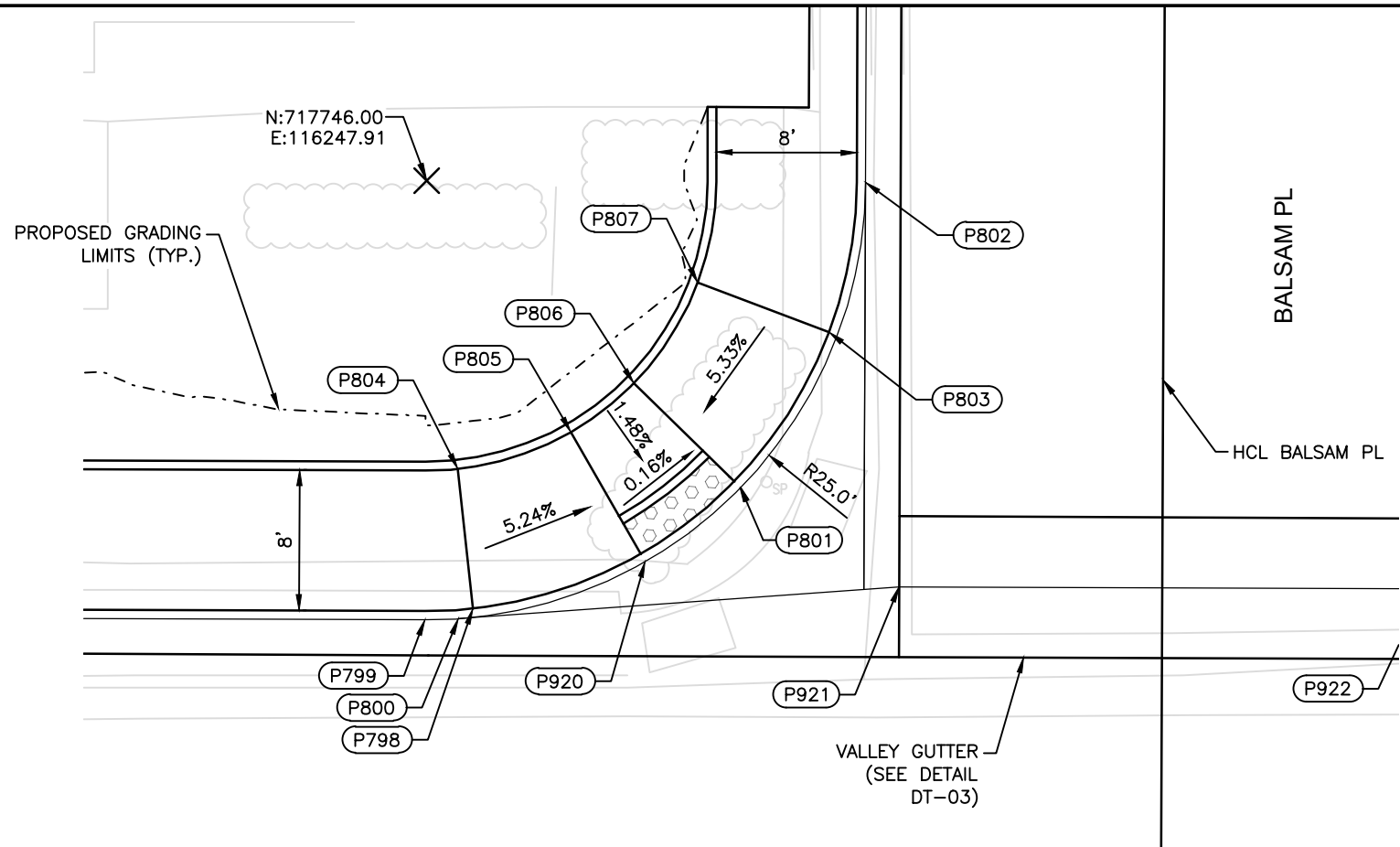
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	Date	Comments		Initials																																		
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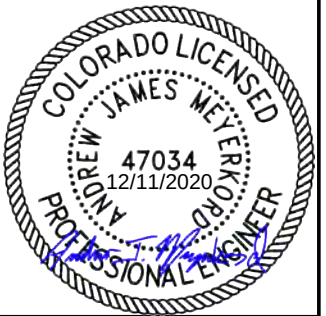
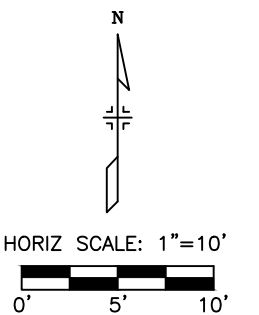


CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002



BALSAM PL NW CORNER

POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
798	651+45.35	39.28R	5347.48	TOP OF RAMP
799	651+46.00	42.00R	5346.97	FLOWLINE; P.C.
800	651+45.93	40.09R	5346.98	FLOWLINE; VALLEY GUTTER
801	651+38.40	24.05R	5347.03	CURB RAMP LANDING; FLOWLINE
802	651+21.00	17.00R	5346.96	FLOWLINE; P.T.
803	651+29.54	19.04R	5347.51	TOP OF RAMP
804	651+37.40	40.17R	5347.60	TOP OF RAMP
805	651+35.28	33.73R	5347.15	CURB RAMP LANDING
806	651+32.48	30.15R	5347.16	CURB RAMP LANDING
807	651+26.75	26.53R	5347.63	TOP OF RAMP
920	651+42.63	29.46R	5347.02	CURB RAMP LANDING; FLOWLINE
921	651+44.00	15.00R	5346.77	FLOWLINE; VALLEY GUTTER



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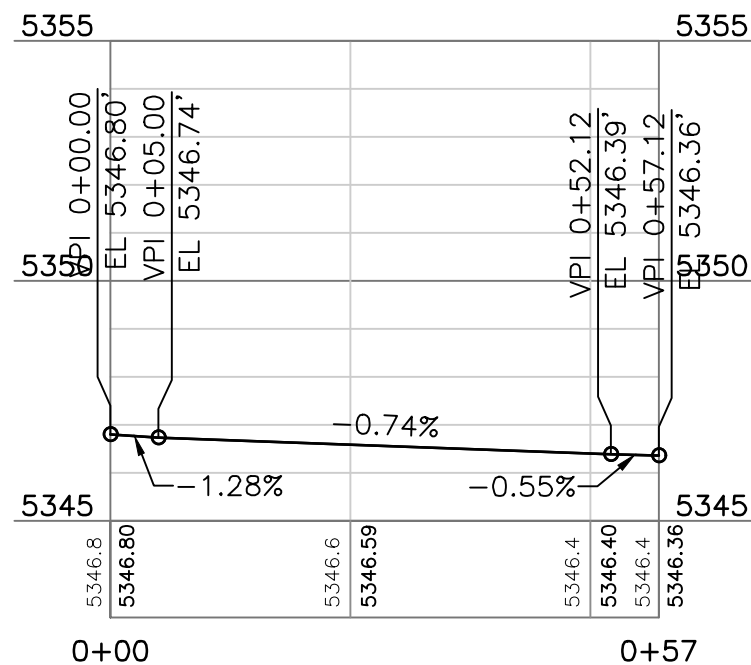
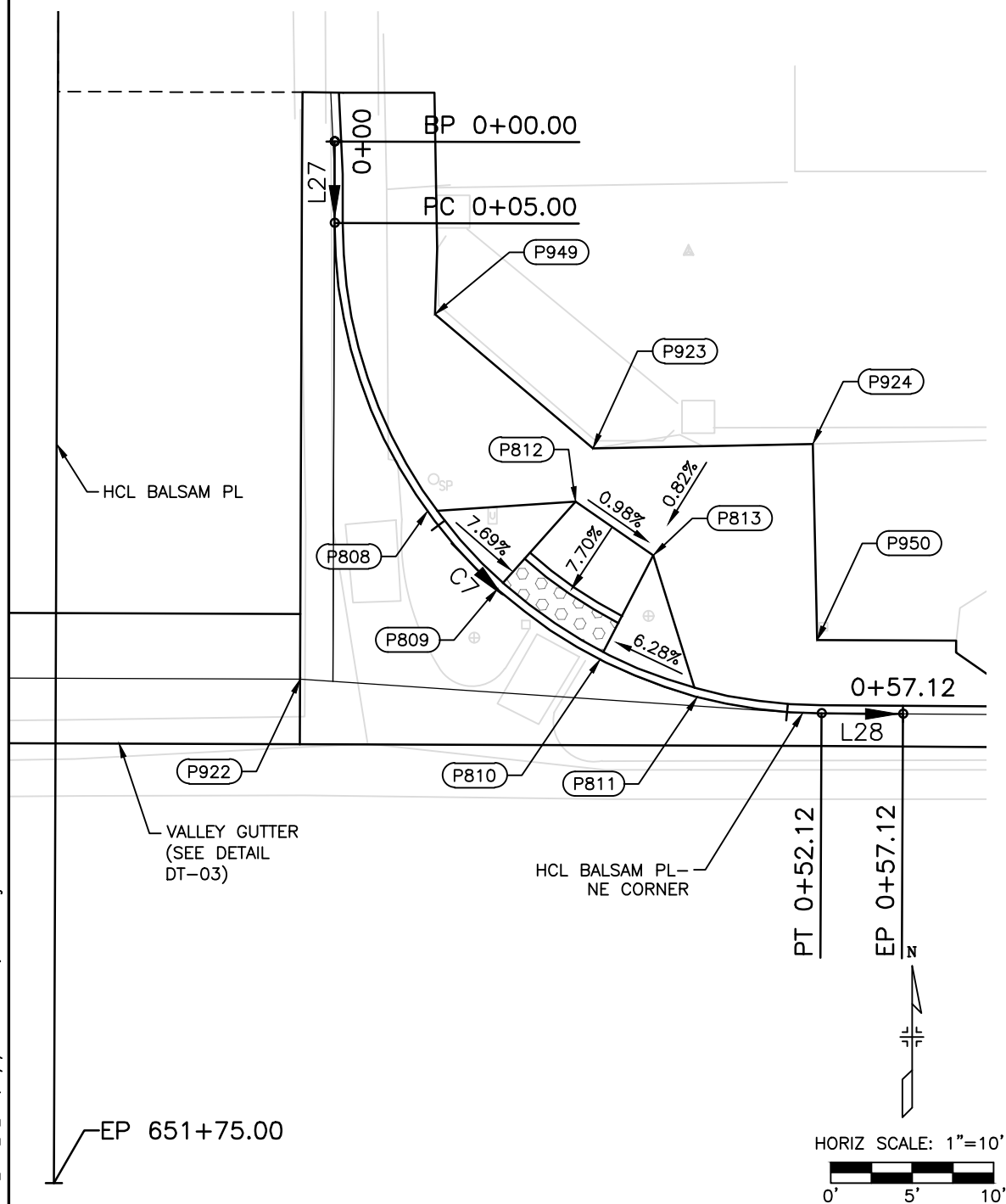
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PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST INTERSECTION DETAIL BALSAM PLACE - NORTHWEST CORNER			Project No./Code
No Revisions:					18-ST-40
Revised:		Designer: JHH	Structure Numbers		
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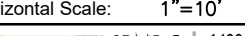
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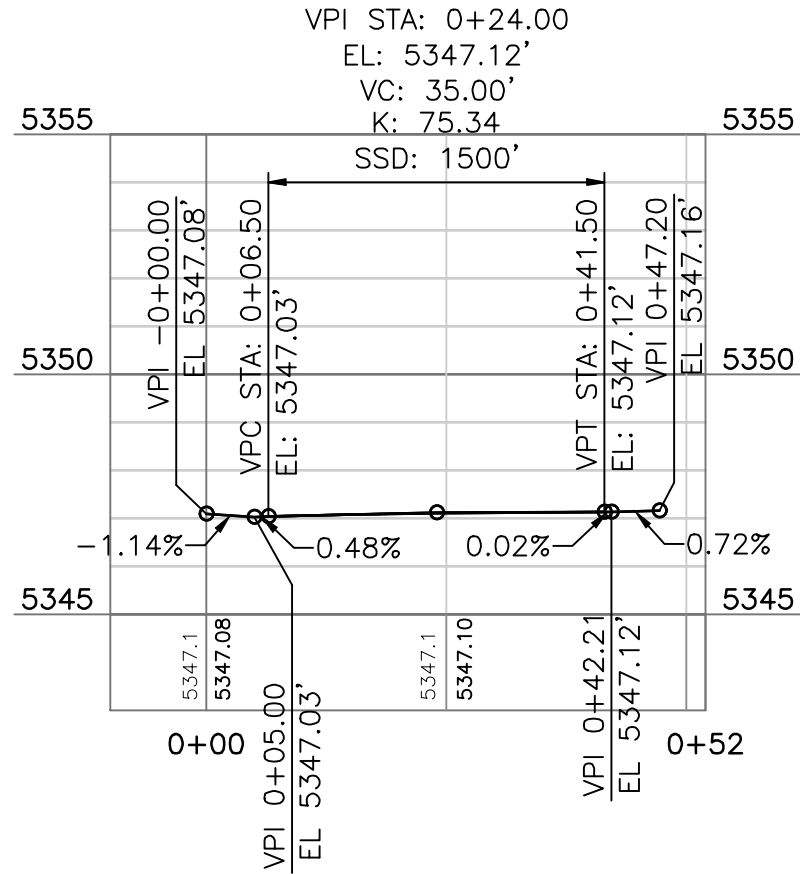
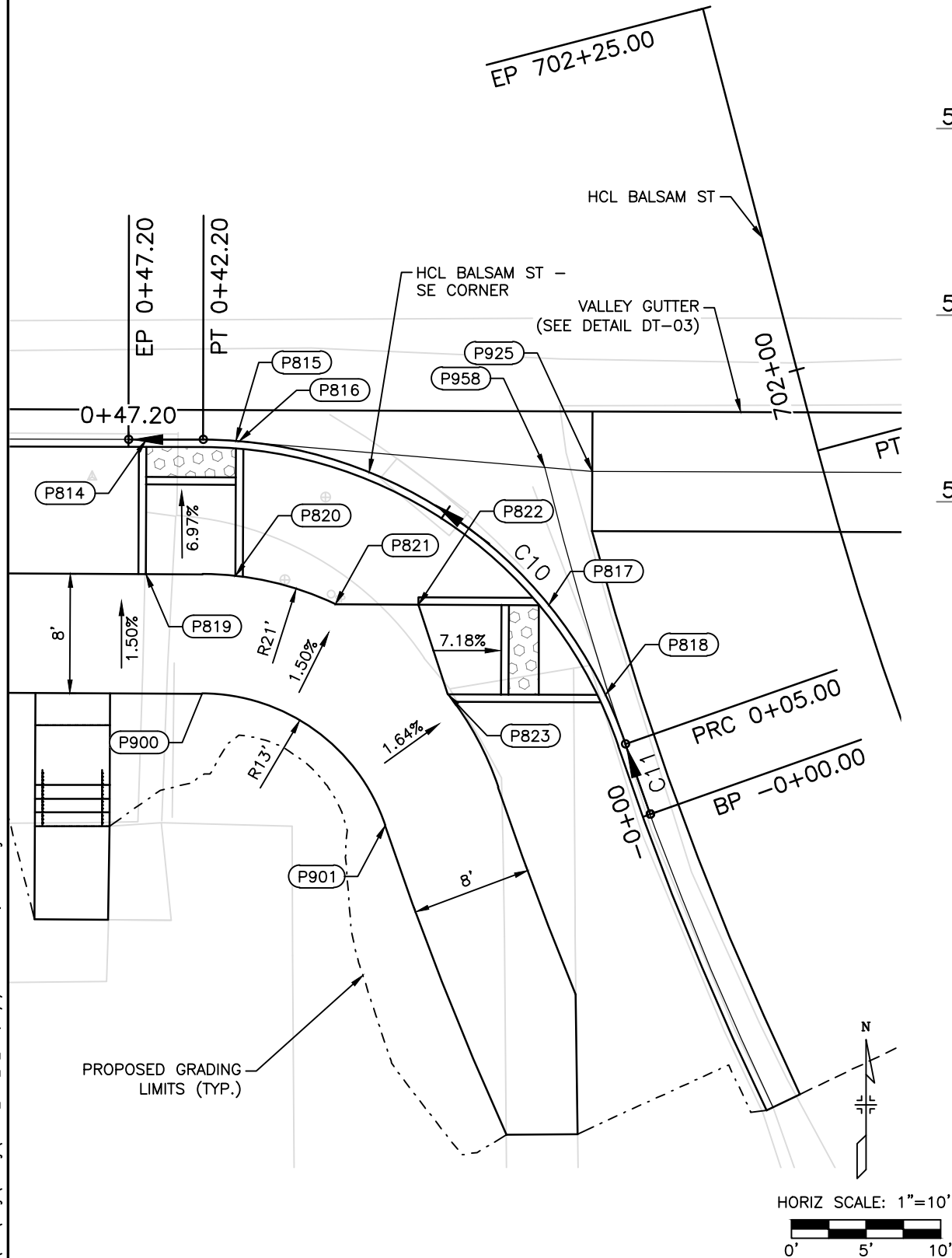
BALSAM PL NE CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
808	651+33.68	22.77L	5346.60	FLOWLINE; CURB RAMP
809	651+38.42	27.07L	5346.55	FLOWLINE; CURB RAMP
810	651+42.73	33.38L	5346.49	FLOWLINE; CURB RAMP
811	651+45.01	39.37L	5346.44	FLOWLINE; CURB RAMP
812	651+33.04	31.85L	5347.11	BACK OF CURB RAMP
813	651+36.31	36.65L	5347.06	BACK OF CURB RAMP
922	651+44.00	15.00L	5346.58	FLOWLINE; VALLEY GUTTER
923	651+29.76	32.91L	5347.16	BACK OF WALK
924	651+29.45	46.41L	5347.05	BACK OF WALK
949	651+21.60	23.17L	5347.23	BACK OF WALK
950	651+41.50	46.72L	5346.93	BACK OF WALK; MATCH EXISTING

BALSAM PL - NE CORNER - FLOWLINE								
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT
L27		0+00.00 0+05.00	717755.7709 717750.7709	116306.9456 116306.9280	5.00'	S0°12'09"W		
C7	PC= PI= PT=	0+05.00 0+34.99 0+52.12	717750.7709 717720.7826 717720.6537	116306.9280 116306.8220 116336.8103	47.12'	S44°46'33"E	89°57'22"	29.99'
L28		0+52.12 0+57.12	717720.6537 717720.6342	116336.8103 116341.8103	5.00'	S89°46'33"E		



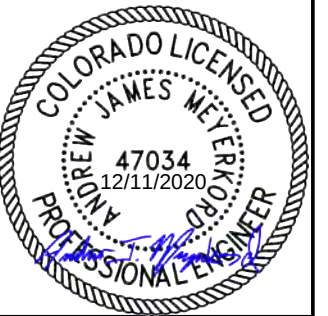
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Horizontal Scale: 1"=10' Vertical Scale: 1"=8'		R-X	Date	Comments	Initials	Revised:		Designer: JHH	Structure Numbers	Sheet Number 134			
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						Void:		Sheet Subset: ROADWAY Subset Sheets: INT-15 of 27					

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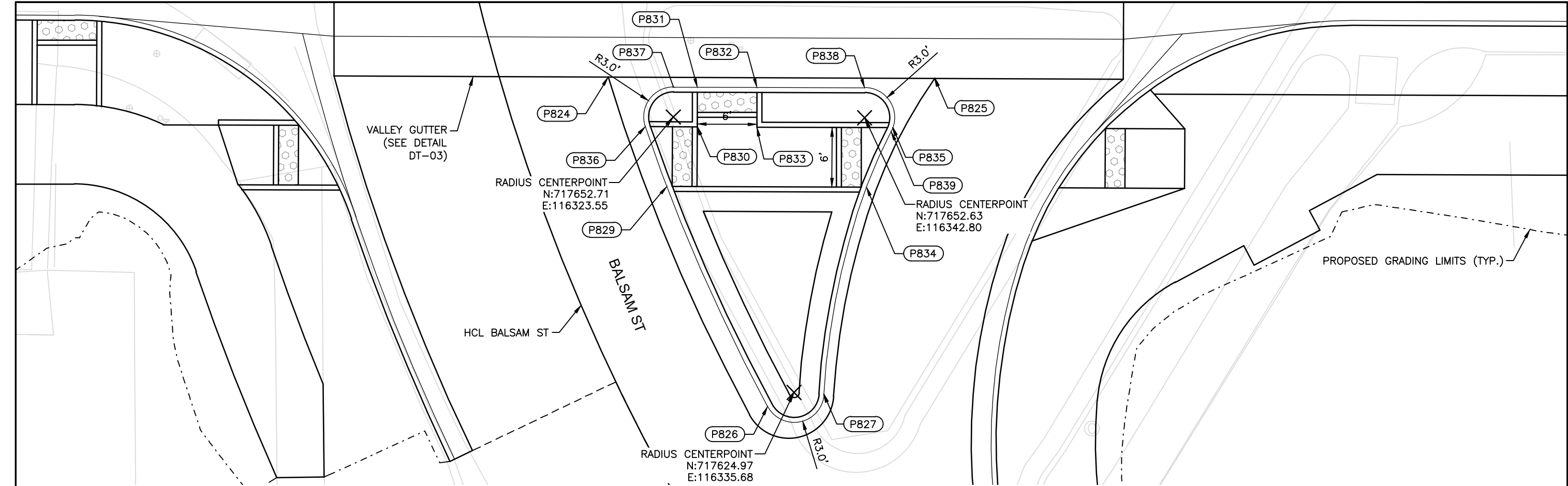


BALSAM ST SW CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
814	702+06.45	43.36L	5347.15	CURB RAMP; FLOWLINE
815	702+04.84	37.58L	5347.11	CURB RAMP; FLOWLINE
816	702+04.78	37.39L	5347.12	VALLEY GUTTER FLOWLINE
817	701+89.44	20.13L	5347.06	CURB RAMP; FLOWLINE
818	701+83.18	18.24L	5347.03	CURB RAMP; FLOWLINE
819	701+97.75	45.66L	5347.78	TOP OF CURB RAMP
820	701+96.11	39.89L	5347.75	TOP OF CURB RAMP
821	701+92.86	33.89L	5347.74	SIDEWALK
822	701+91.58	28.52L	5347.67	TOP OF CURB RAMP
823	701+86.04	28.29L	5347.69	TOP OF CURB RAMP
900	701+90.02	44.09L	5347.87	BOW, P.C.
901	701+79.94	35.00L	5347.77	BOW, P.T.
925	701+96.89	14.97L	5346.90	VALLEY GUTTER; FLOWLINE
958	701+97.95	17.97L	5346.91	FLOWLINE TIE IN

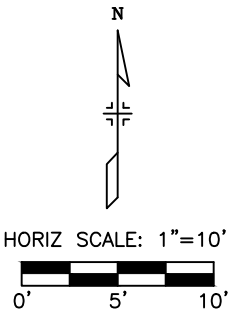
BALSAM ST - SW CORNER - FLOWLINE									
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
C11	PC=	-0+00.00	717637.8538	116293.2757	5.00'	N19°24'55"W	0°19'41"	2.50'	873.03'
	PI=	0+02.50	717640.2092	116292.4379					
	PT=	0+05.00	717642.5694	116291.6136					
C10	PC=	0+05.00	717642.5694	116291.6136	37.20'	N54°14'52"W	71°03'21"	21.42'	30.00'
	PI=	0+26.42	717662.8571	116284.7387					
	PT=	0+42.20	717662.9409	116263.3180					



Print Date: 12/7/2020 1:01:18 PM		Sheet Revisions				CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed	RALSTON RD - YUKON ST TO GARRISON ST INTERSECTION DETAIL BALSAM STREET - SOUTHWEST CORNER			Project No./Code	
File Name: 118355_RDINT_DT_SH02.DWG											18-ST-40	
Horizontal Scale: 1"=10' Vertical Scale: 1"=8'		R-X	Date	Comments	Initials							
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BALSAM ISLAND				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
824	701+85.51	10.50R	5346.93	VALLEY GUTTER
825	701+73.13	41.57R	5346.76	VALLEY GUTTER
826	701+46.39	12.50R	5347.38	GUTTER TRANSITION
827	701+44.64	18.04R	5347.46	GUTTER TRANSITION
829	701+72.42	12.50R	5347.17	PEDESTRIAN REFUGE
830	701+77.36	17.44R	5347.11	PEDESTRIAN REFUGE
831	701+81.50	18.74R	5346.92	PEDESTRIAN REFUGE
832	701+79.33	24.42R	5346.89	PEDESTRIAN REFUGE
833	701+75.07	23.07R	5347.08	PEDESTRIAN REFUGE
834	701+63.86	31.09R	5347.08	PEDESTRIAN REFUGE
835	701+69.28	35.83R	5346.93	PEDESTRIAN REFUGE
836	701+79.24	12.50R	5347.05	PEDESTRIAN REFUGE; FLOWLINE; P.C.
837	701+82.33	16.46R	5346.94	FLOWLINE; P.T.
838	701+75.03	34.63R	5346.84	FLOWLINE; P.C.
839	701+68.93	35.54R	5346.95	FLOWLINE; P.T.



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File Name: 118355_RDINT_DT_SH02.DWG

Horizontal Scale: 1" = 10' Vertical Scale: N/A

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Sheet Revisions

Date	Comments	Initials

CITY OF ARVADA

PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD

ARVADA, CO, 80002

As Constructed

No Revisions:

Revised:

Void:

RALSTON RD - YUKON ST TO GARRISON ST

INTERSECTION DETAIL

BALSAM STREET - ISLAND

Designer:	JHH	Structure	
Detailer:	JVS	Numbers	
Sheet Subset:	ROADWAY	Subset Sheets:	INT-17 of 27

Project No./Code

18-ST-40

Sheet Number

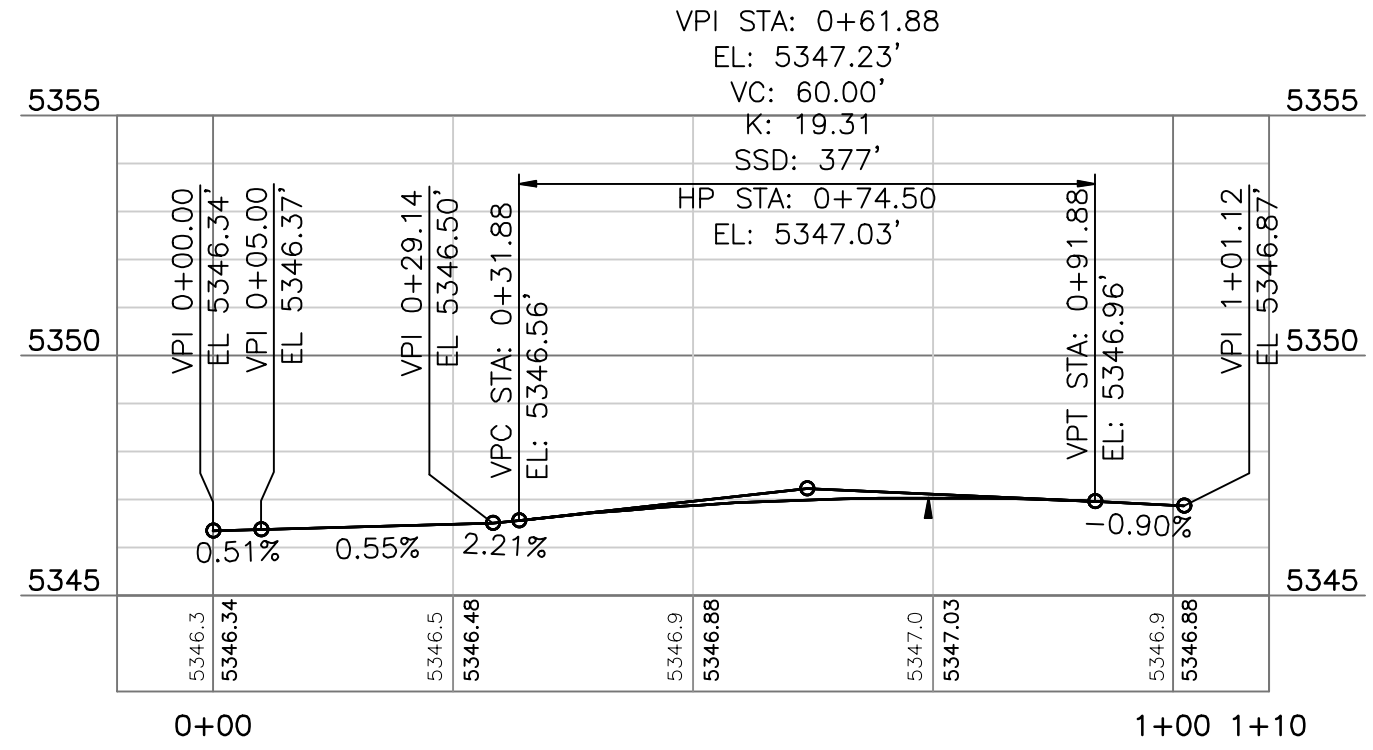
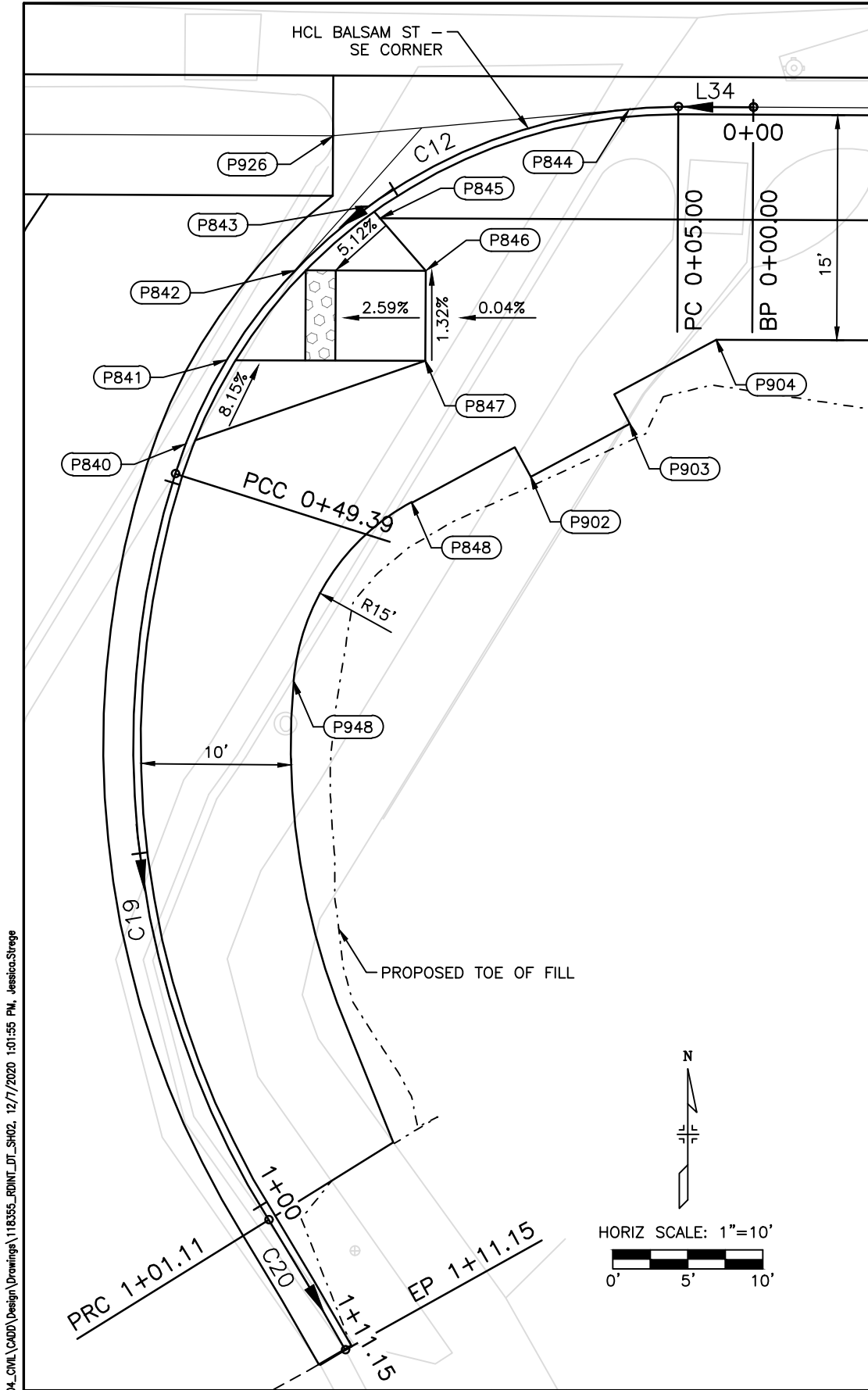
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BALSAM ST - SE CORNER - FLOWLINE								
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT
L34		0+00.00 0+05.00	717662.4184 717662.4380	116396.8239 116391.8240	5.00'	N89°46'33"W		
C12	PC= PI= PT=	0+05.00 0+30.74 0+49.39	717662.4380 717662.5387 717637.9925	116391.8240 116366.0796 116358.3162	44.39'	S53°53'15"W	72°40'24"	25.74'
C19	PC= PI= PT=	0+49.39 0+76.98 1+01.11	717637.9925 717611.6904 717588.2533	116358.3162 116349.9975 116364.5475	51.71'	S7°08'27"E	49°23'00"	27.59'
C20	PC= PI= PT=	1+01.11 1+06.13 1+11.15	717588.2533 717583.9836 717579.5941	116364.5475 116367.1959 116369.6405	10.05'	S30°27'44"E	2°41'47"	5.02'

BALSAM ST SE CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
840	701+49.13	43.15R	5346.84	CURB RAMP; FLOWLINE
841	701+53.97	48.11R	5346.83	CURB RAMP; FLOWLINE
842	701+58.60	54.81R	5346.69	CURB RAMP; FLOWLINE
843	701+61.23	61.06R	5346.49	CURB RAMP; FLOWLINE
844	701+59.28	79.50R	5346.39	VALLEY GUTTER; FLOWLINE
845	701+59.72	61.38R	5346.99	CURB RAMP FLARE
846	701+53.24	62.64R	5347.02	TOP OF CURB RAMP

BALSAM ST SE CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
847	701+45.58	59.85R	5347.11	TOP OF CURB RAMP
848	701+34.78	54.31R	5347.01	BOW, P.T.
902	701+31.89	61.94R	5347.09	BOW, BENCH CUTOUT
903	701+31.40	69.43R	5347.53	BOW, BENCH CUTOUT
904	701+33.14	77.27R	5347.08	BOW
926	701+68.77	60.69R	5346.49	VALLEY GUTTER; FLOWLINE
948	701+28.61	41.33R	5347.11	BOW, P.C.



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File Name: 118355_RDINT_DT_SH02.DWG

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Sheet Revisions

Date	Comments	Initials

CITY OF ARVADA

PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD

ARVADA, CO, 80002

As Constructed

No Revisions:

Revised:

Void:

RALSTON RD - YUKON ST TO GARRISON ST

INTERSECTION DETAIL

BALSAM STREET - SOUTHEAST CORNER

Designer: JHH

Detailer: JVS

Sheet Subset: ROADWAY

Structure Numbers

Subset Sheets: INT-18 of 27

Project No./Code

18-ST-40

Sheet Number 137

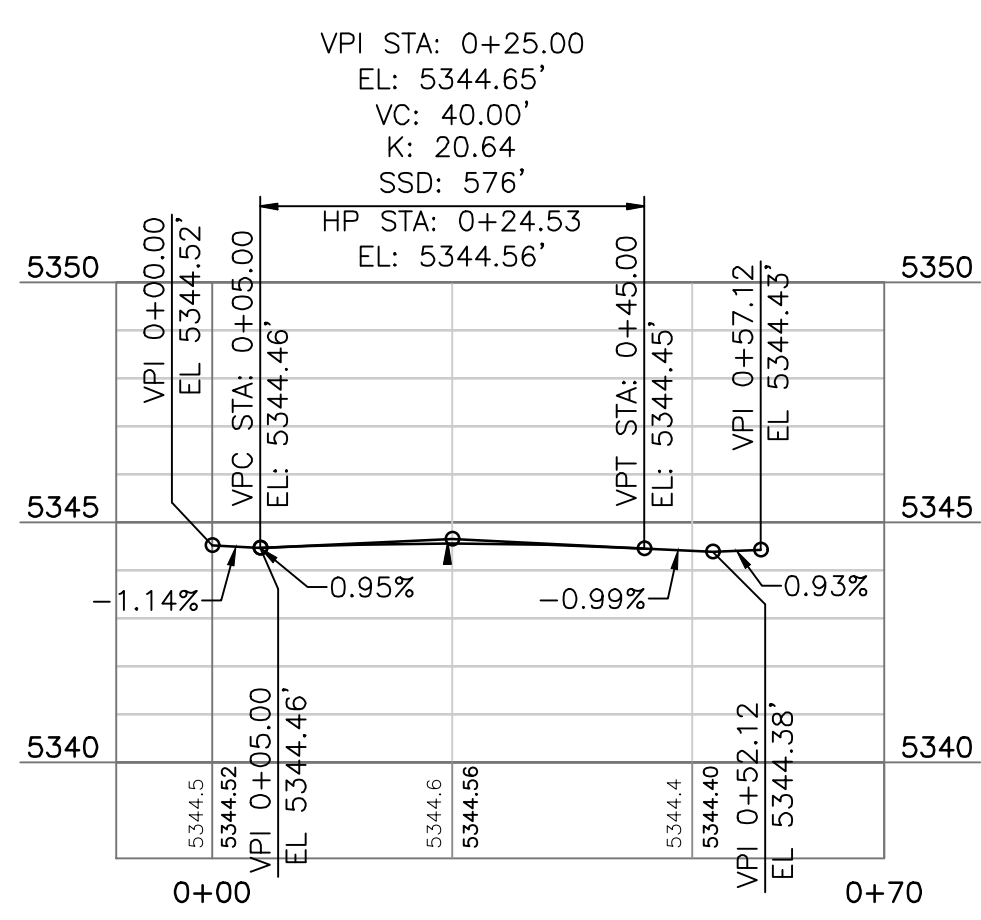
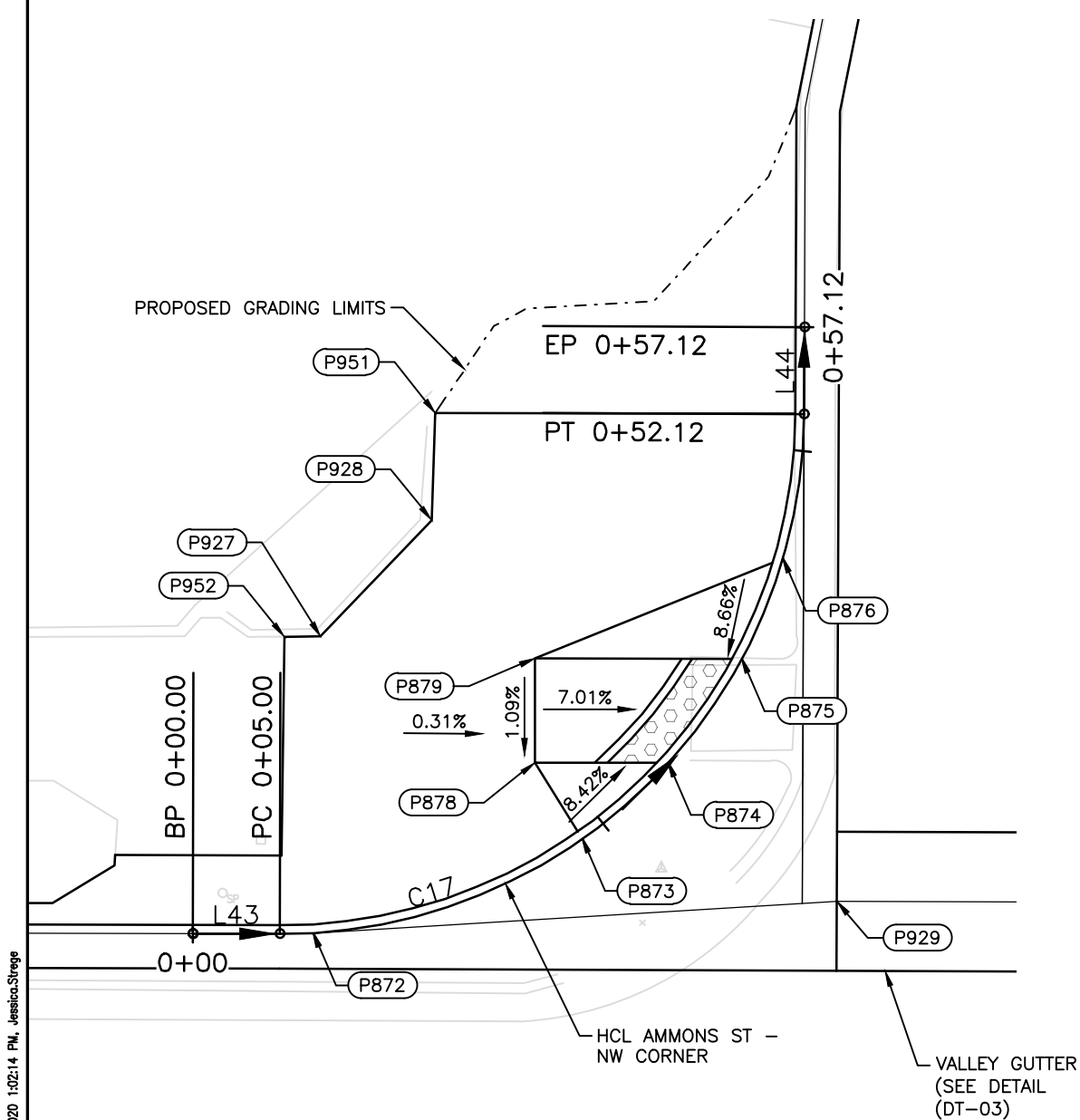
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Centennial, CO 80111

Phone: 303.721.1440

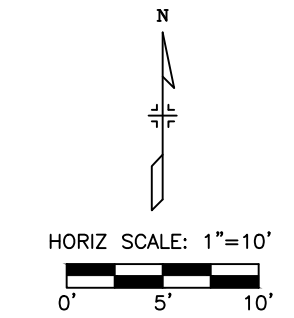
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AMMONS ST NW CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
872	801+20.94	51.07R	5344.48	VALLEY GUTTER FLOWLINE
873	801+15.46	35.63R	5344.55	CURB RAMP; FLOWLINE
874	801+11.08	30.71R	5344.55	CURB RAMP; FLOWLINE
875	801+05.08	26.51R	5344.51	CURB RAMP; FLOWLINE
876	800+99.30	24.17R	5344.47	CURB RAMP; FLOWLINE
878	801+11.09	38.39R	5345.12	TOP OF CURB RAMP
879	801+05.09	38.40R	5345.19	TOP OF CURB RAMP
927	801+03.89	50.72R	5345.25	BACK OF WALK
928	800+97.17	44.37R	5345.32	BACK OF WALK
929	801+19.00	21.00R	5344.08	VALLEY GUTTER FLOWLINE
951	800+91.02	44.17R	5345.19	BACK OF WALK; MATCH EXIS
952	801+03.91	52.80R	5345.22	BACK OF WALK; MATCH EXIS

AMMONS ST - NW CORNER - EDGE OF PAVEMENT								
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT
L43		0+00.00 0+05.00	717719.3448 717719.3253	116671.2317 116676.2316	5.00'	S89°46'33"E		
C17	PC= PI= PT=	0+05.00 0+35.00 0+52.12	717719.3253 717719.2078 717749.2076	116676.2316 116706.2314 116706.3488	47.12'	N45°13'27"E	90°00'00"	30.00'
L44		0+52.12 0+57.12	717749.2076 717754.2076	116706.3488 116706.3684	5.00'	N0°13'27"E		



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File Name: 118355_RDINT_DT_SH02.DWG

Horizontal Scale: 1"=10' Vertical Scale: 1"=8'

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Sheet Revisions

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CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed

No Revisions:

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Void:

RALSTON RD - YUKON ST TO GARRISON ST
INTERSECTION DETAIL
AMMONS STREET - NORTHWEST CORNER

Designer: JHH
Detailer: JVS
Sheet Subset: ROADWAY

Structure Numbers
Subset Sheets: INT-19 of 27

Project No./Code

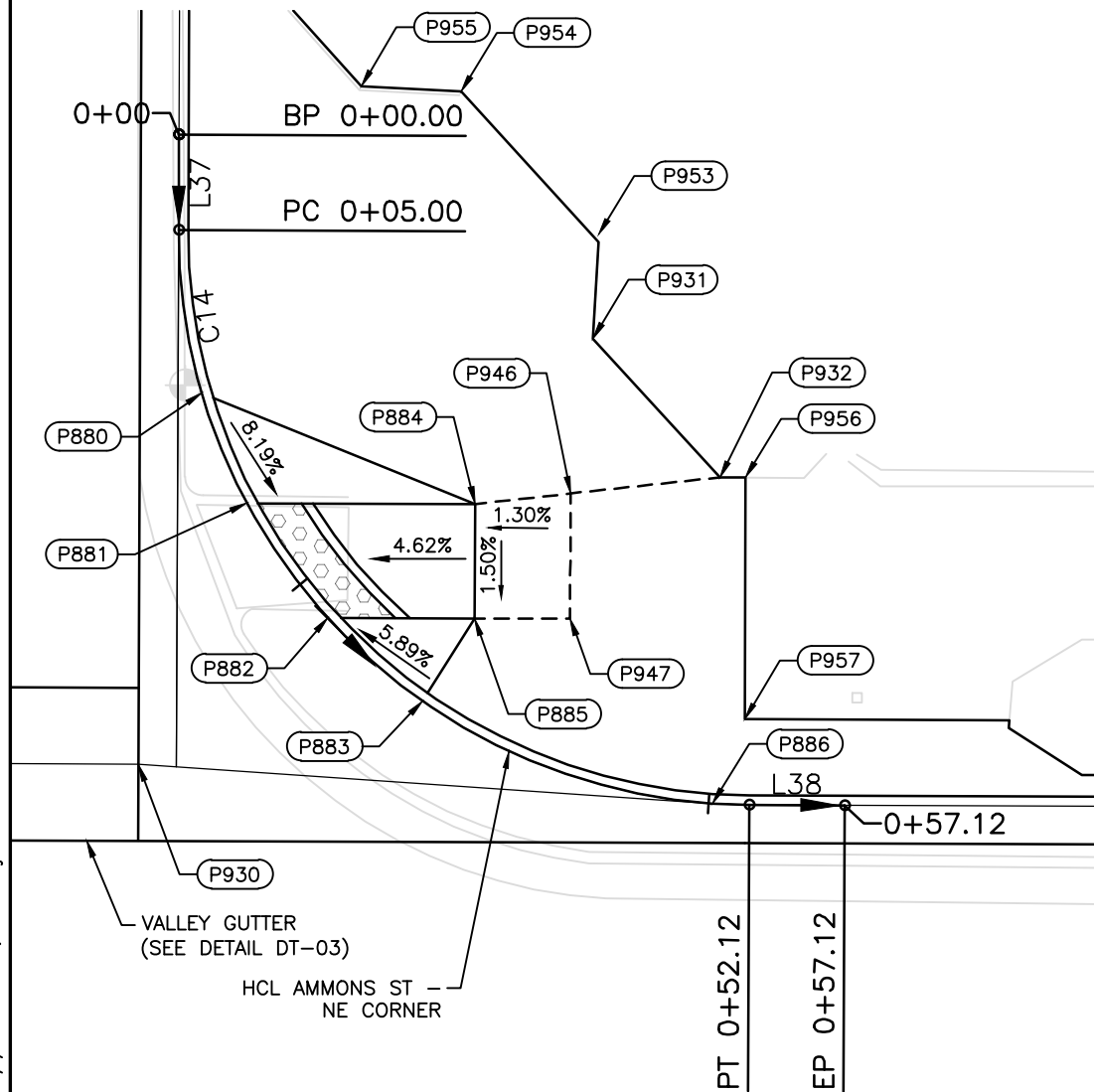
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Sheet Number 138

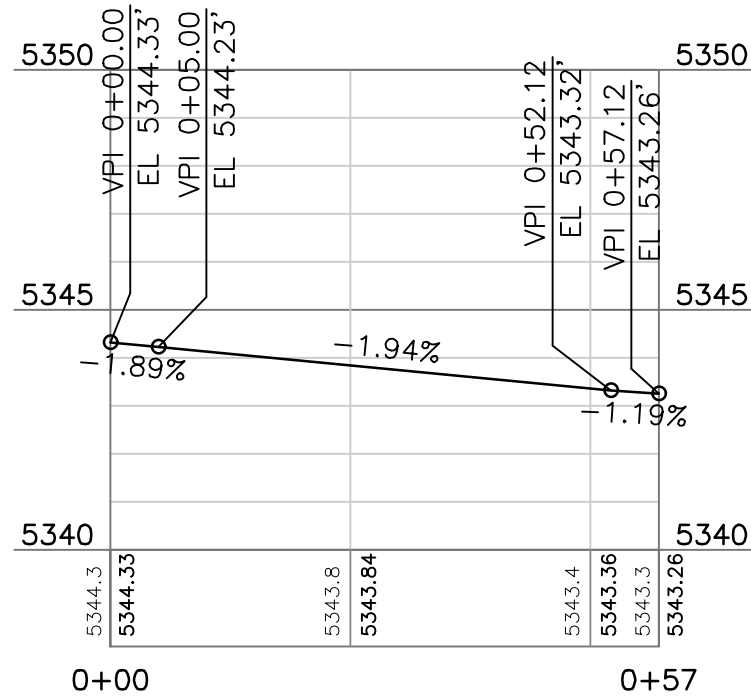


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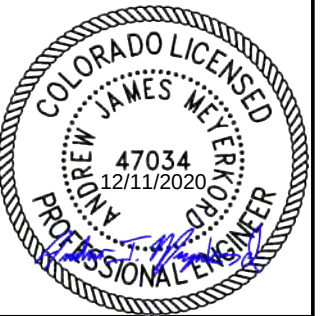
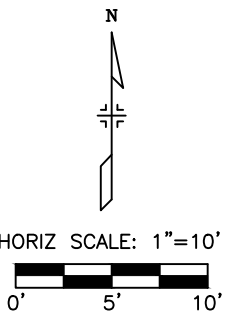


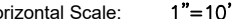
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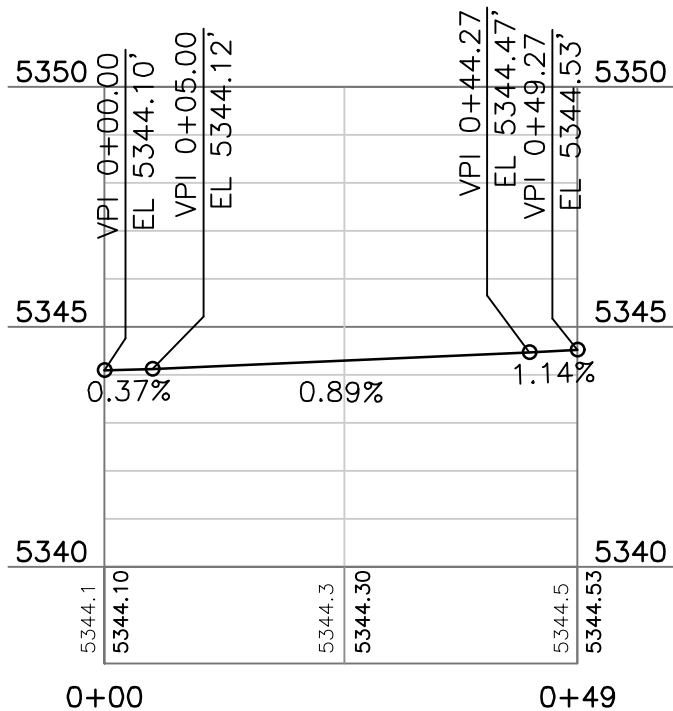
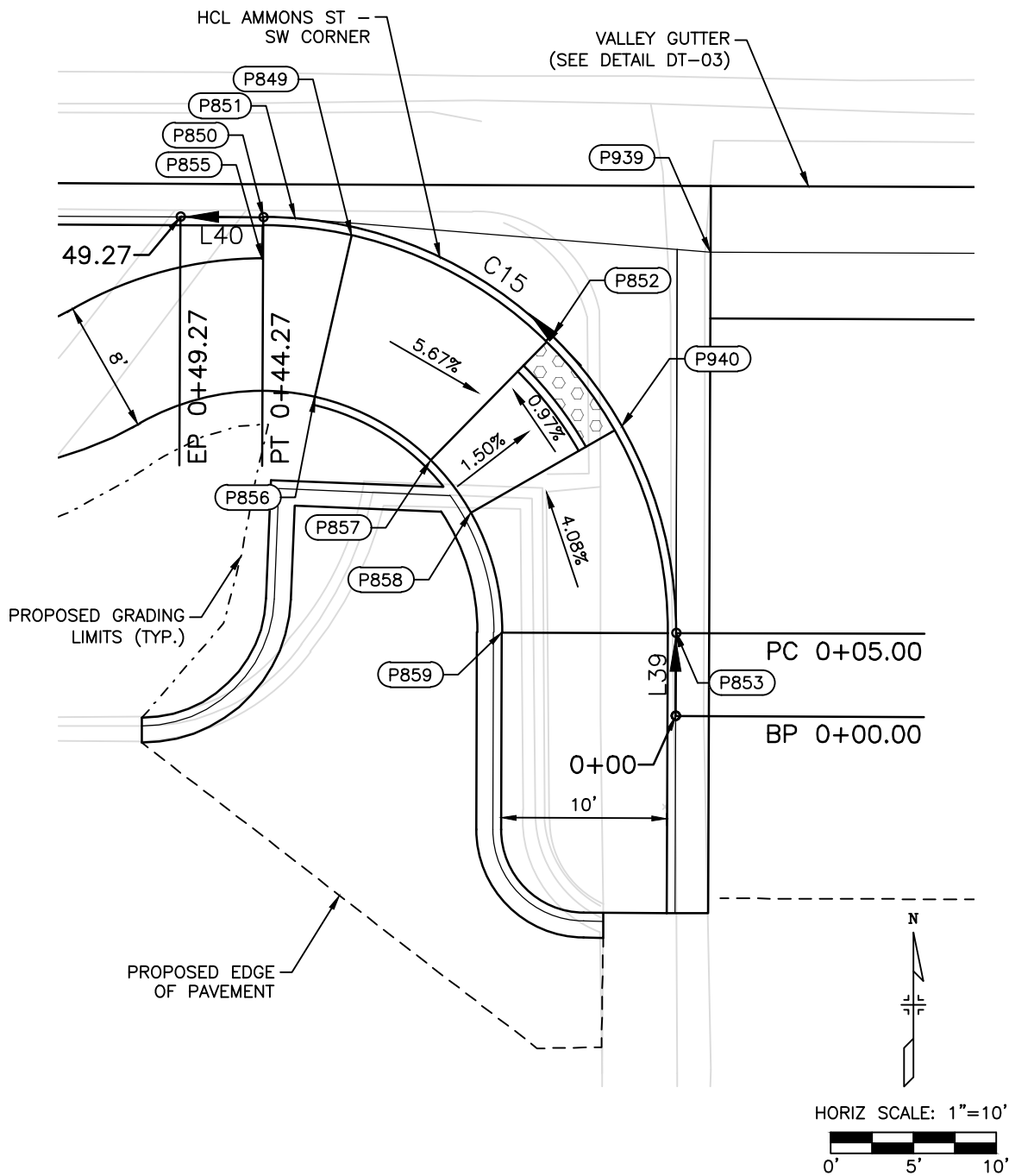
AMMONS ST NE CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
880	800+99.53	14.24L	5344.06	CURB RAMP; FLOWLINE
881	801+05.29	16.62L	5343.94	CURB RAMP; FLOWLINE
882	801+11.29	20.90L	5343.80	CURB RAMP; FLOWLINE
883	801+15.62	25.86L	5343.67	CURB RAMP; FLOWLINE
884	801+05.28	28.58L	5344.42	CURB RAMP LANDING
885	801+11.28	28.58L	5344.33	CURB RAMP LANDING
886	801+20.94	41.07L	5343.36	VALLEY GUTTER FLOWLINE
930	801+19.00	11.00L	5343.70	VALLEY GUTTER FLOWLINE
931	800+96.61	34.71L	5344.68	BOW
932	801+03.84	41.41L	5344.20	BOW
946	801+04.72	33.58L	5344.36	CURB RAMP LANDING
947	801+11.28	33.58L	5344.26	CURB RAMP LANDING
953	800+91.15	34.98L		BOW
954	800+83.68	27.77L	5345.08	BOW
955	800+83.42	22.53L	5345.01	BOW
956	801+03.85	42.74L	5344.18	BOW; MATCH EXISTING
957	801+16.50	42.74L	5343.90	BOW; MATCH EXISTING

AMMONS ST - NE CORNER - EDGE OF PAVEMENT								
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT
L37		0+00.00 0+05.00	717754.0667 717749.0667	116742.3681 116742.3485	5.00'	S0°13'27"W		
C14	PC= PI= PT=	0+05.00 0+35.00 0+52.12	717749.0667 717719.0669 717718.9495	116742.3485 116742.2311 116772.2309	47.12'	S44°46'33"E	90°00'00"	30.00'
L38		0+52.12 0+57.12	717718.9495 717718.9300	116772.2309 116777.2309	5.00'	S89°46'33"E		



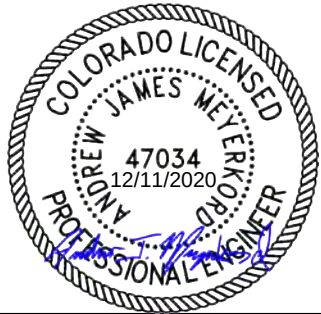
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Date	Comments				Initials																				
File Name: 118355_RDINT_DT_SH02.DWG		No Revisions:		AMMONS STREET - NORTHEAST CORNER			18-ST-40																		
Horizontal Scale: 1"=10' Vertical Scale: 1"=8'		Revised:		Designer: JHH		Structure Numbers																			
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		Sheet Subset: ROADWAY		Subset Sheets: INT-20 of 27		Sheet Number 139																			

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AMMONS ST SW CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
849	751+44.91	34.67L	5344.92	TOP OF RAMP
850	751+46.00	40.00L	5344.47	FLOWLINE; P.C.
851	751+45.93	38.09L	5344.45	VALLEY GUTTER FLOWLINE
852	751+38.88	22.53L	5344.30	CURB RAMP LANDING; FLOWLINE
853	751+21.00	15.00L	5344.12	TOP OF RAMP
855	751+43.50	40.05L	5345.00	SIDEWALK
856	751+35.15	36.85L	5345.07	TOP OF RAMP
857	751+31.37	29.87L	5344.45	CURB RAMP LANDING
858	751+28.22	27.42L	5344.39	CURB RAMP LANDING
859	751+21.00	25.50L	5344.77	TOP OF RAMP
939	751+44.00	13.00L	5344.15	VALLEY GUTTER FLOWLINE
940	751+33.44	18.32L	5344.24	CURB RAMP LANDING; FLOWLINE

AMMONS ST - SW CORNER - FLOWLINE									
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L39		0+00.00 0+05.00	717631.2297 717636.2296	116700.4845 116700.5041	5.00'	N0°13'27"E			
C15	PC= PI= PT=	0+05.00 0+30.00 0+44.27	717636.2296 717661.2294 717661.3273	116700.5041 116700.6020 116675.6022	39.27'	N44°46'33"W	90°00'00"	25.00'	25.00'
L40		0+44.27 0+49.27	717661.3273 717661.3468	116675.6022 116670.6022	5.00'	N89°46'33"W			



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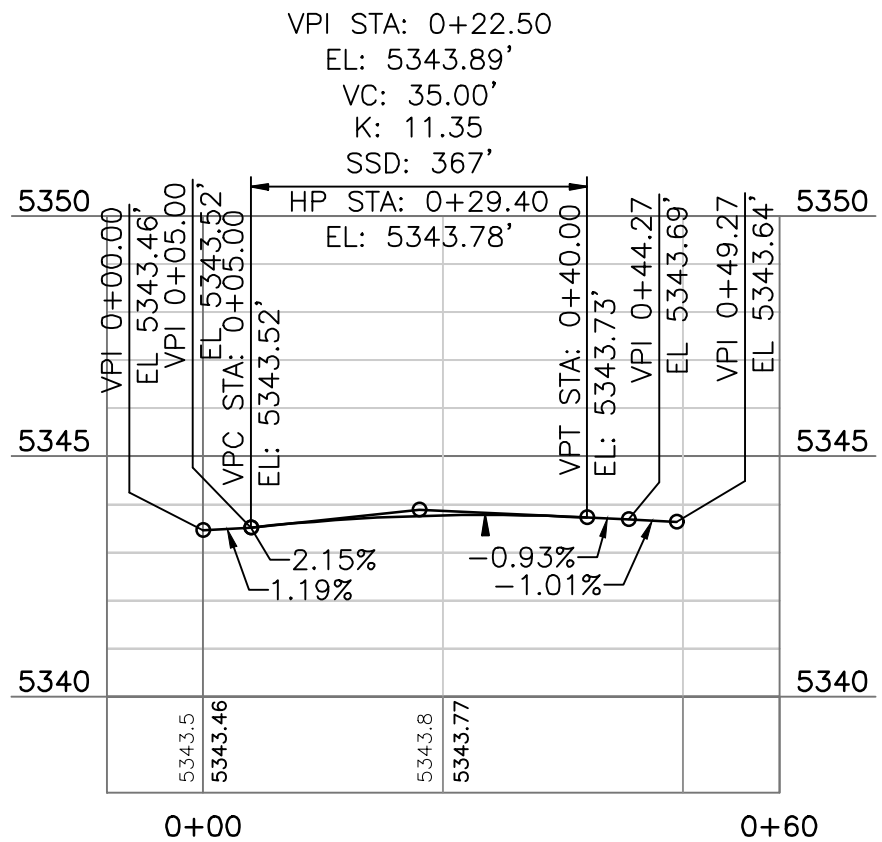
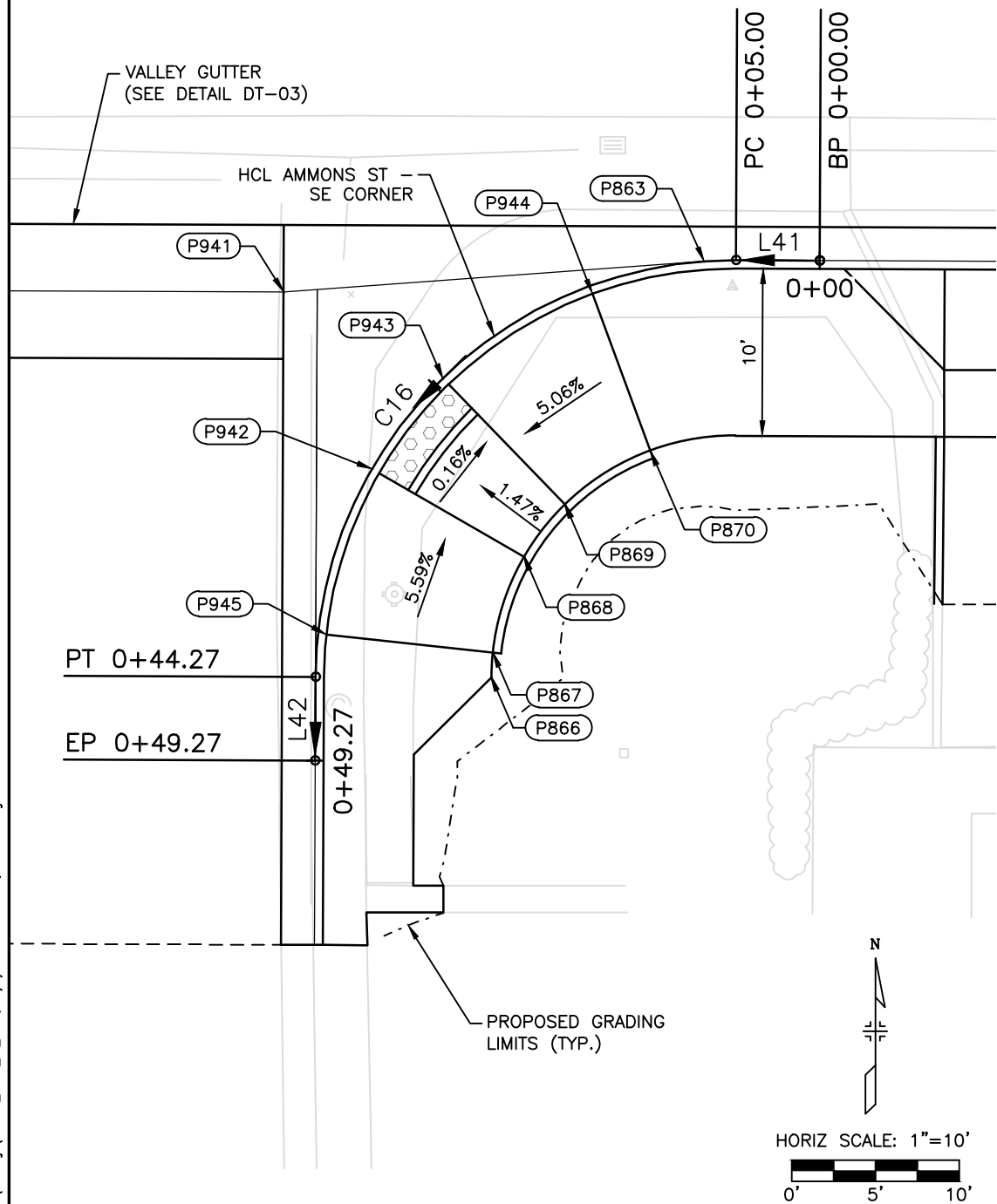
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CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
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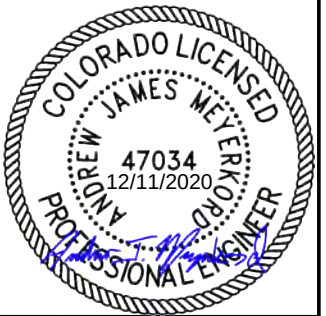
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No Revisions:					18-ST-40
Revised:		Designer: JHH	Structure Numbers		
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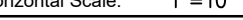
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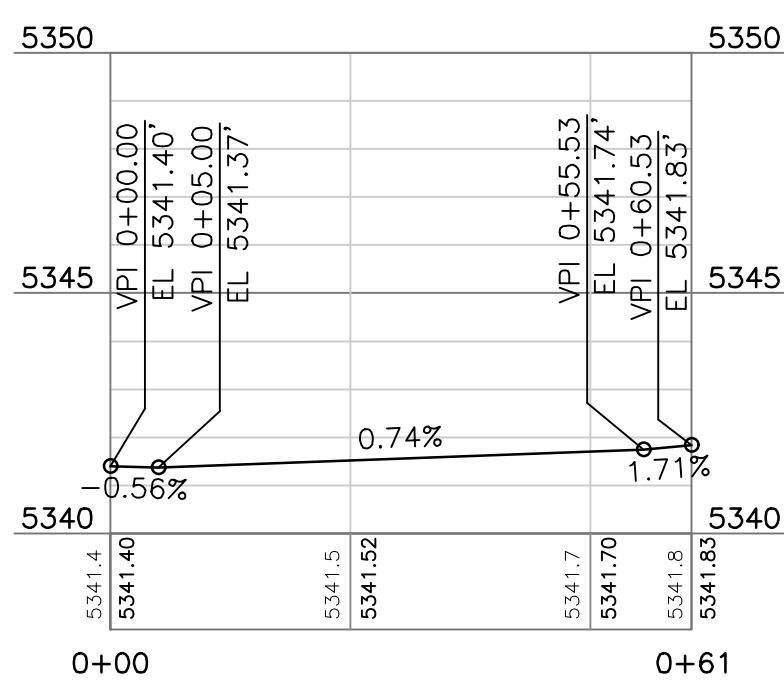
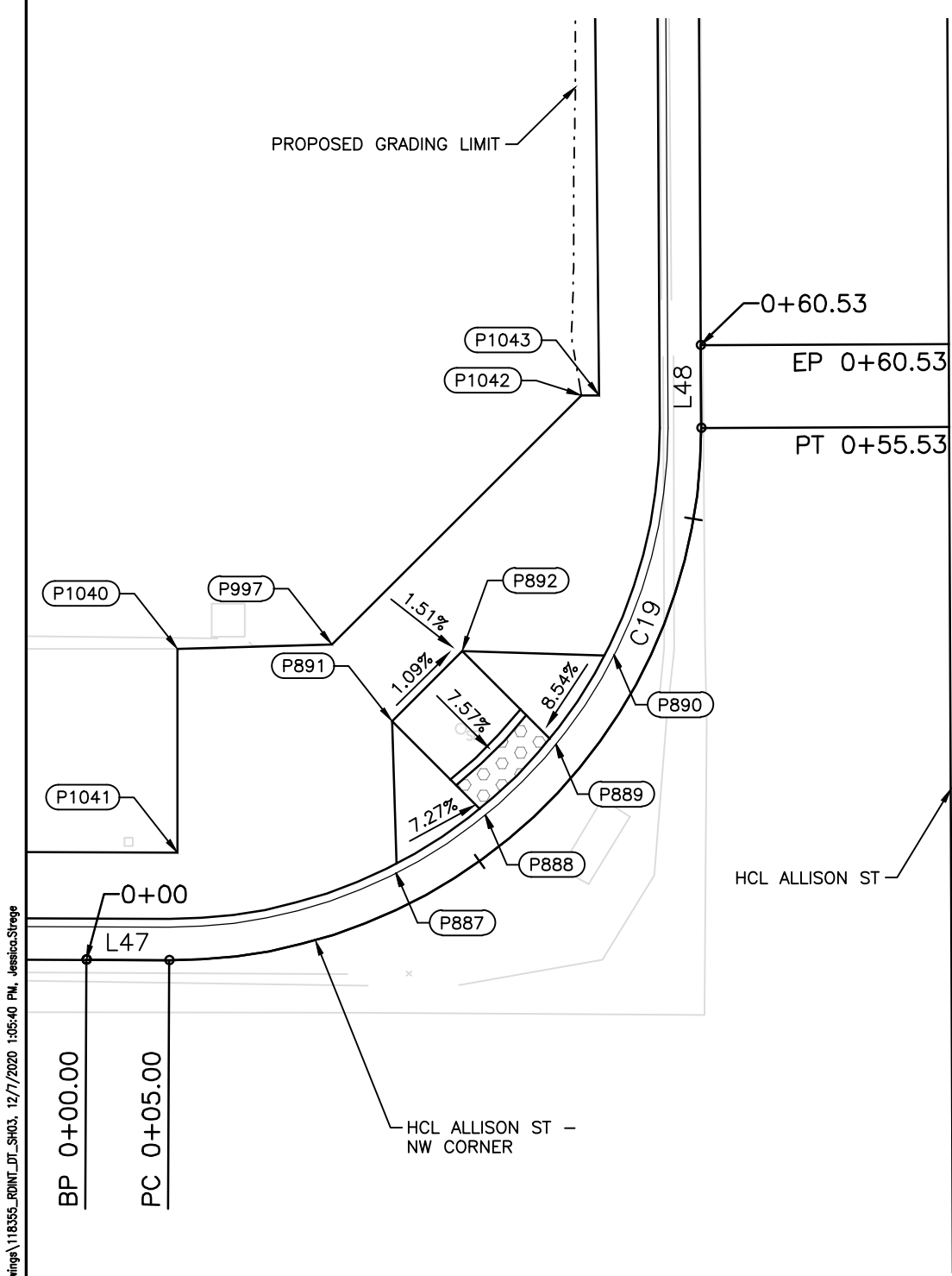
AMMONS ST SE CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
863	751+45.93	38.09R	5343.55	VALLEY GUTTER FLOWLINE
866	751+21.00	25.50R	5344.34	SIDEWALK
867	751+22.51	25.58R	5344.36	TOP OF RAMP
868	751+28.22	27.42R	5343.93	CURB RAMP LANDING
869	751+31.37	29.87R	5343.92	CURB RAMP LANDING
870	751+34.59	34.93R	5344.32	TOP OF RAMP
941	751+44.00	13.00R	5343.84	VALLEY GUTTER FLOWLINE
942	751+33.44	18.32R	5343.78	CURB RAMP LANDING; FLOWLINE
943	751+38.88	22.53R	5343.77	CURB RAMP LANDING; FLOWLINE
944	751+43.95	31.44R	5344.17	TOP OF RAMP
945	751+23.54	15.63R	5344.21	TOP OF RAMP

AMMONS ST - SE CORNER - FLOWLINE									
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L41		0+00.00 0+05.00	717660.9946 717661.0142	116760.6015 116755.6015	5.00'	N89°46'33"W			
C16	PC= PI= PT=	0+05.00 0+30.00 0+44.27	717661.0142 717661.1120 717636.1122	116755.6015 116730.6017 116730.5039	39.27'	S45°13'27"W	90°00'00"	25.00'	25.00'
L42		0+44.27 0+49.27	717636.1122 717631.1122	116730.5039 116730.4843	5.00'	S0°13'27"W			



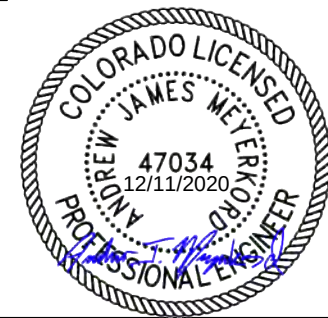
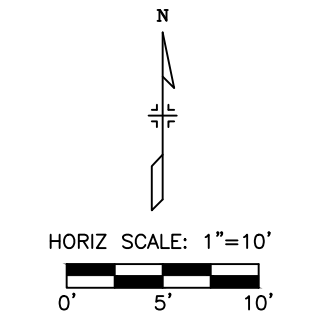
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File Name: 118355_RDINT_DT_SH02.DWG			Date	Comments	Initials		No Revisions:				18-ST-40		
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							Sheet Subset: ROADWAY	Subset Sheets: INT-22 of 27			Sheet Number	141	

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ALLISON ST NW CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
887	852+07.59	33.52L	5341.31	CURB RAMP; FLOWLINE
888	852+11.08	28.11L	5341.37	CURB RAMP; FLOWLINE
889	852+15.31	23.85L	5341.42	CURB RAMP; FLOWLINE
890	852+20.69	20.31L	5341.46	CURB RAMP; FLOWLINE
891	852+16.76	33.75L	5341.97	TOP OF CURB RAMP
892	852+20.99	29.49L	5342.03	TOP OF CURB RAMP
997	852+21.43	37.36L	5342.06	BACK OF WALK
1040	852+21.18	46.67L	5341.95	BOW; MATCH EXISTING
1041	852+08.89	46.74L	5341.77	BOW; MATCH EXISTING
1042	852+36.38	22.20L	5342.16	BACK OF WALK
1043	852+36.38	21.13L	5342.17	BACK OF WALK

ALLISON ST - NW CORNER - EDGE OF PAVEMENT								
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT
L47		0+00.00 0+05.00	717716.1027 717716.0832	116988.5788 116993.5787	5.00'	S89°46'33"E		
C19	PC= PI= PT=	0+05.00 0+37.26 0+55.53	717716.0832 717715.9569 717748.2205	116993.5787 117025.8424 117025.7037	50.53'	N44°59'20"E	90°28'14"	32.26'
L48		0+55.53 0+60.53	717748.2205 717753.2205	117025.7037 117025.6822	5.00'	N0°14'47"W		



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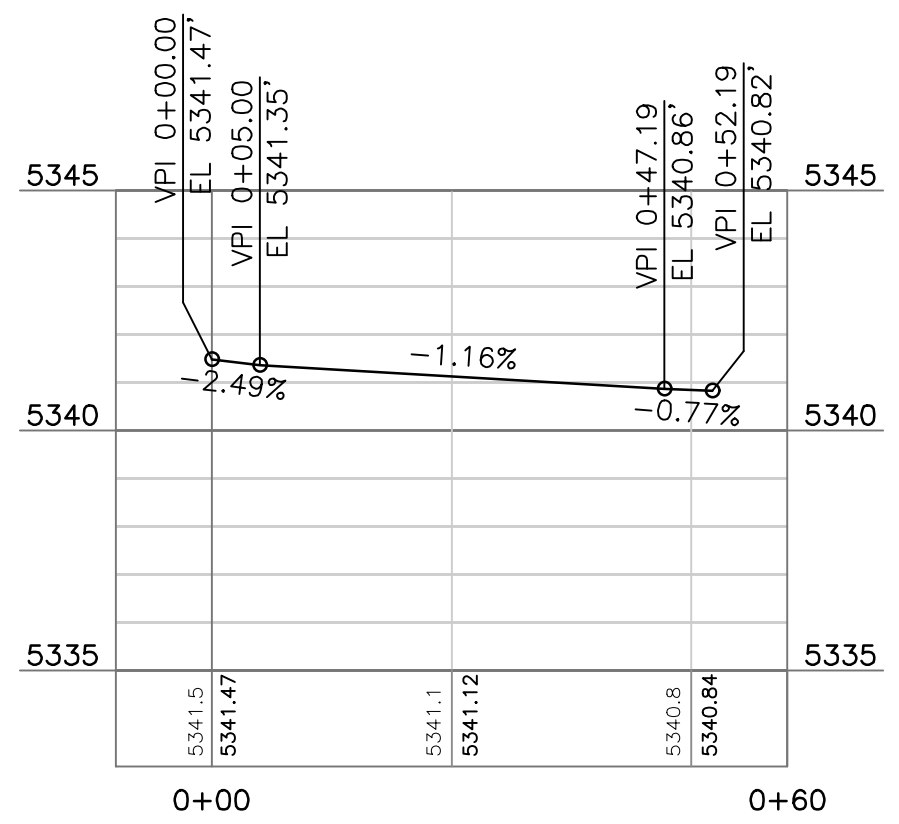
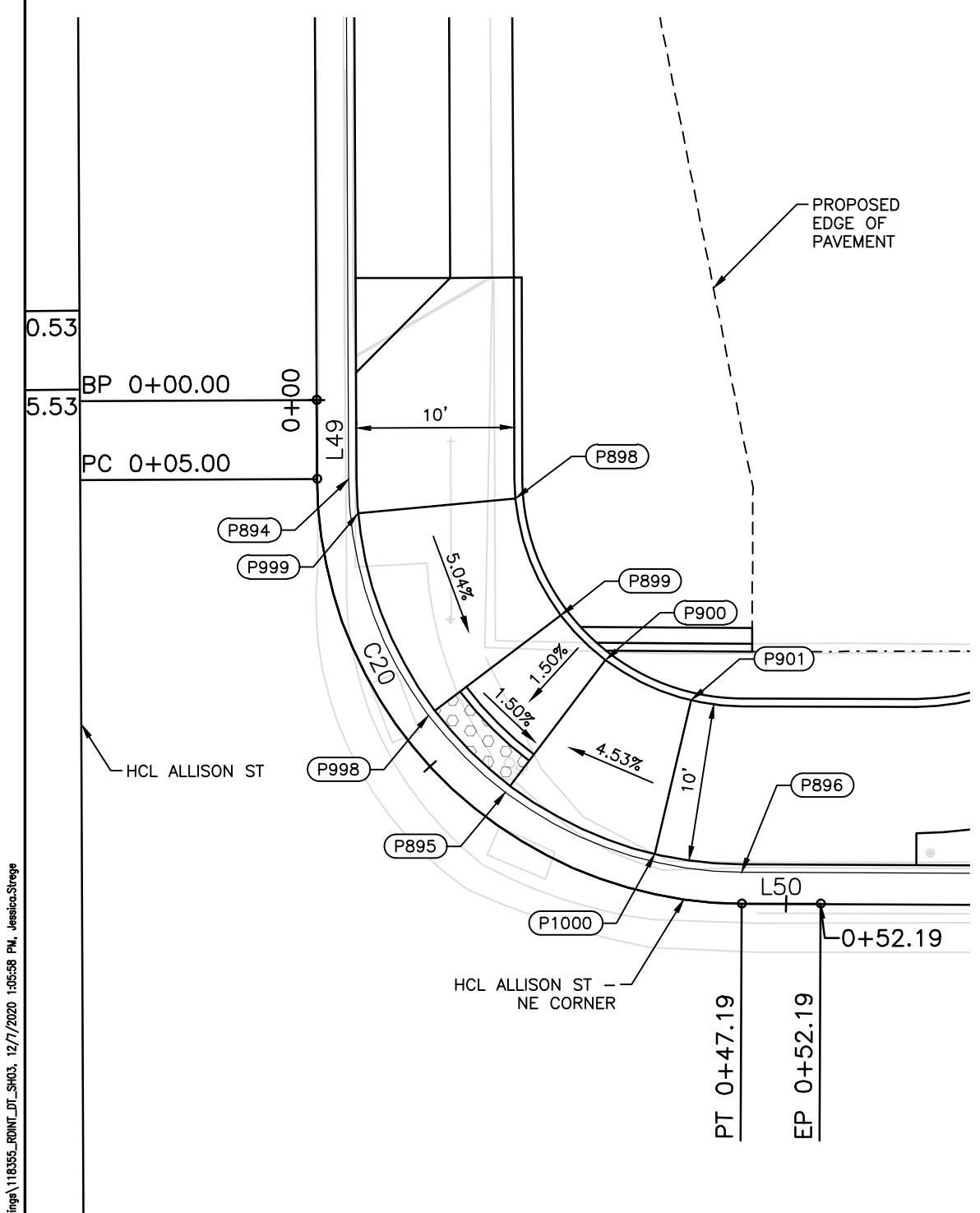
Date	Comments	Initials

CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed	RALSTON RD - YUKON ST TO GARRISON ST INTERSECTION DETAIL ALLISON STREET - NORTHWEST CORNER			Project No./Code
No Revisions:				18-ST-40
Revised:	Designer: JHH	Structure		
	Detailer: JVS	Numbers		
Void:	Sheet Subset: ROADWAY	Subset Sheets: INT-22 of 27		Sheet Number 142

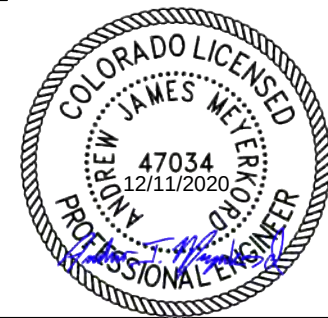
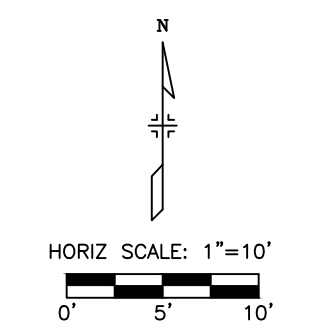
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ALLISON ST NE CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
894	852+28.66	17.00R	5341.18	FLOWLINE; P.C.
895	852+08.78	26.84R	5340.90	CURB RAMP LANDING; FLOWLINE
896	852+03.66	41.79R	5340.70	FLOWLINE; P.T.C
898	852+27.37	27.56R	5341.81	TOP OF RAMP
899	852+19.96	30.40R	5341.14	CURB RAMP LANDING
900	852+17.13	33.21R	5341.06	CURB RAMP LANDING
901	852+14.55	38.63R	5341.42	TOP OF RAMP
998	852+13.66	22.00R	5340.98	CURB RAMP LANDING; FLOWLINE
999	852+26.49	17.60R	5341.31	TOP OF RAMP
1000	852+04.83	36.30R	5341.27	TOP OF RAMP

ALLISON ST - NE CORNER - EDGE OF PAVEMENT								
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT
L49		0+00.00 0+05.00	717747.6183 717742.6183	117055.7065 117055.7280	5.00'	S0°14'47"E		
C20	PC= PI= PT=	0+05.00 0+31.78 0+47.19	717742.6183 717715.8395 717715.7347	117055.7280 117055.8432 117082.6221	42.19'	S45°00'40"E	89°31'46"	26.78'
L50		0+47.19 0+52.19	717715.7347 717715.7151	117082.6221 117087.6221	5.00'	S89°46'33"E		



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CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
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As Constructed

No Revisions:

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RALSTON RD - YUKON ST TO GARRISON ST
INTERSECTION DETAIL
ALLISON STREET - NORTHEAST CORNER

Designer: JHH
Detailer: JVS
Sheet Subset: ROADWAY

Structure Numbers

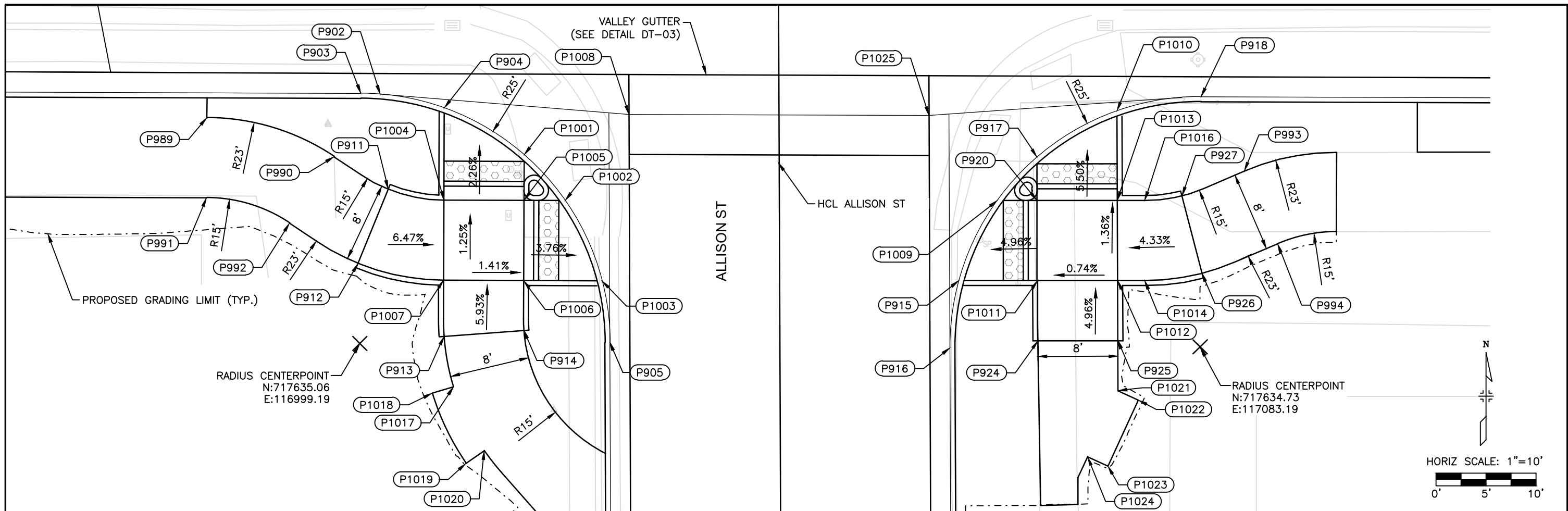
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Project No./Code

18-ST-40

Sheet Number 143

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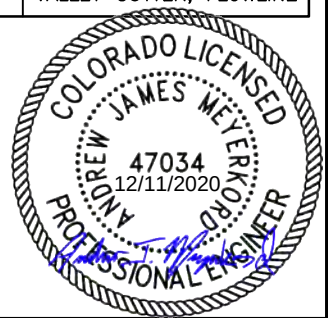


ALLISON ST SW CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
902	851+46.25	39.87L	5341.11	FLOWLINE
903	851+46.34	41.79L	5341.11	FLOWLINE; P.C.
904	851+44.84	33.46L	5341.08	CURB RAMP; FLOWLINE
905	851+21.34	17.00L	5340.95	FLOWLINE; P.T.
911	851+36.76	39.11L	5341.73	TOP OF CURB RAMP
912	851+29.36	42.14L	5341.86	TOP OF CURB RAMP
913	851+22.02	33.58L	5341.70	TOP OF CURB RAMP
914	851+22.57	25.60L	5341.58	TOP OF CURB RAMP
989	851+43.97	57.19L	5341.77	FOW
990	851+40.03	44.51L	5341.72	FOW, P.R.C.
991	851+35.97	57.26L	5341.89	BOW, P.C.
992	851+33.40	48.99L	5341.86	BOW, P.R.C.
1001	851+40.13	25.50L	5341.04	CURB RAMP; FLOWLINE
1002	851+35.54	21.42L	5341.01	CURB RAMP; FLOWLINE

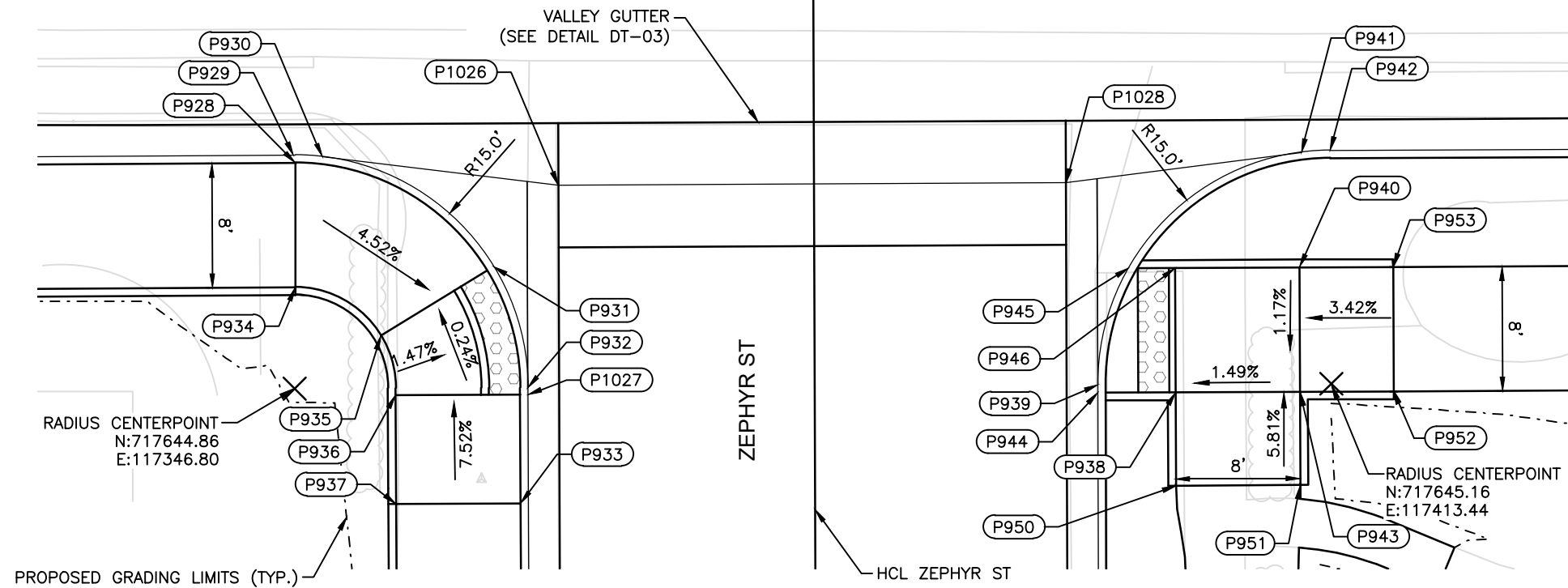
ALLISON ST SW CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
1003	851+27.51	17.77L	5340.98	CURB RAMP; FLOWLINE
1004	851+35.64	33.54L	5341.29	CURB RAMP LANDING
1005	851+35.57	25.54L	5341.18	CURB RAMP LANDING
1006	851+27.57	25.60L	5341.28	CURB RAMP LANDING
1007	851+27.64	33.60L	5341.39	CURB RAMP LANDING
1008	851+44.12	15.00L	5340.89	VALLEY GUTTER; FLOWLINE
1017	851+16.98	32.67L	5341.69	BOW; BENCH CUTOUT
1018	851+16.34	34.79L	5341.72	BOW; BENCH CUTOUT
1019	851+09.32	31.44L	5341.70	BOW; BENCH CUTOUT
1020	851+10.58	29.61L	5341.66	BOW; BENCH CUTOUT

ALLISON ST SE CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
915	851+27.37	17.92R	5340.66	CURB RAMP; FLOWLINE
916	851+20.65	17.00R	5340.66	FLOWLINE; P.C.
917	851+39.68	25.79R	5340.60	CURB RAMP; FLOWLINE
918	851+45.65	42.21R	5340.42	FLOWLINE; P.T.
920	851+35.34	25.77R	5340.93	CURB RAMP LANDING
924	851+21.34	25.79R	5341.29	TOP OF CURB RAMP
925	851+21.30	33.78R	5341.40	TOP OF CURB RAMP
926	851+27.99	42.21R	5341.45	TOP OF CURB RAMP
927	851+35.75	40.26R	5341.27	TOP OF CURB RAMP
993	851+38.20	46.49R	5341.42	FOW, P.R.C.
994	851+30.90	49.79R	5341.64	BOW, P.R.C.
1009	851+35.36	21.78R	5340.63	CURB RAMP; FLOWLINE
1010	851+44.26	33.78R	5340.53	CURB RAMP; FLOWLINE
1011	851+27.34	25.78R	5341.03	CURB RAMP LANDING

ALLISON ST SE CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
1012	851+27.30	33.78R	5341.09	CURB RAMP LANDING
1013	851+35.30	33.78R	5340.98	CURB RAMP LANDING
1014	851+27.29	36.49R	5341.18	CURB RAMP; P.C.
1016	851+35.29	36.53R	5341.09	CURB RAMP; P.C.
1021	851+16.30	33.78R	5341.41	BOW; BENCH CUTOUT
1022	851+15.37	35.80R	5341.44	BOW; BENCH CUTOUT
1023	851+08.78	32.74R		BOW; BENCH CUTOUT
1024	851+09.72	30.71R	5341.37	BOW; BENCH CUTOUT
1025	851+43.88	15.00R	5340.64	VALLEY GUTTER; FLOWLINE



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File Name: 118355_RDINT_DT_SH03.DWG		Date	Comments	Initials				No Revisions:	Designer: JHH	Structure Numbers	Sheet Number 144	
Horizontal Scale: 1" = 10' Vertical Scale: N/A								Revised:	Detailer: JVS			
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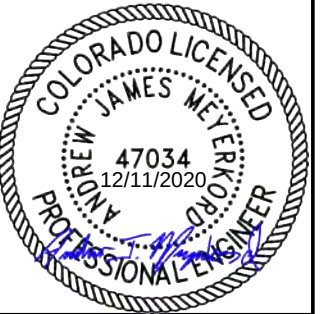
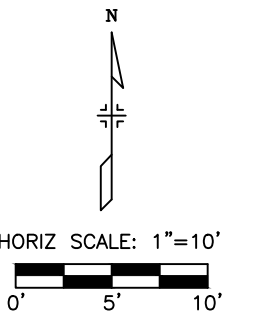


ZEPHYR ST SW CORNER

POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
928	901+45.47	33.33L	5339.35	TOP OF RAMP
929	901+45.97	33.44L	5338.85	FLOWLINE; P.C.
930	901+45.86	31.59L	5338.85	VALLEY GUTTER FLOWLINE
931	901+38.76	20.61L	5338.83	CURB RAMP LANDING; FLOWLINE
932	901+30.97	18.43L	5338.83	FLOWLINE; P.C.
933	901+23.52	18.93L	5339.36	TOP OF RAMP
934	901+37.47	33.36L	5339.47	TOP OF RAMP
935	901+34.34	27.87L	5338.96	CURB RAMP LANDING
936	901+30.52	26.93L	5338.96	CURB RAMP LANDING
937	901+23.52	26.93L	5339.48	TOP OF RAMP
1026	901+43.98	16.43L	5338.78	VALLEY GUTTER FLOWLINE
1027	901+30.52	18.43L	5338.83	CURB RAMP LANDING; FLOWLINE

ZEPHYR ST SE CORNER

POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
938	901+30.52	23.21R	5338.95	CURB RAMP LANDING
939	901+31.03	18.21R	5338.70	FLOWLINE; P.C.
940	901+38.53	31.21R	5338.98	CURB RAMP LANDING
941	901+45.91	31.34R	5338.61	VALLEY GUTTER FLOWLINE
942	901+46.03	33.20R	5338.69	FLOWLINE; P.T.
943	901+30.53	31.21R	5339.07	CURB RAMP LANDING
944	901+30.52	18.21R	5338.70	BOTTOM OF RAMP; FLOWLINE
945	901+38.52	20.21R	5338.71	BOTTOM OF RAMP; FLOWLINE
946	901+38.52	23.21R	5338.86	CURB RAMP LANDING
950	901+24.52	23.21R	5339.30	TOP OF CURB RAMP
951	901+24.53	31.21R	5339.42	TOP OF CURB RAMP
952	901+30.54	37.22R	5339.29	TOP OF CURB RAMP
953	901+38.54	37.21R	5339.17	TOP OF CURB RAMP
1028	901+44.02	16.21R	5338.65	VALLEY GUTTER FLOWLINE



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No Revisions:

Revised:

Void:

RALSTON RD - YUKON ST TO GARRISON ST
INTERSECTION DETAIL
ZEPHYR STREET - SOUTH

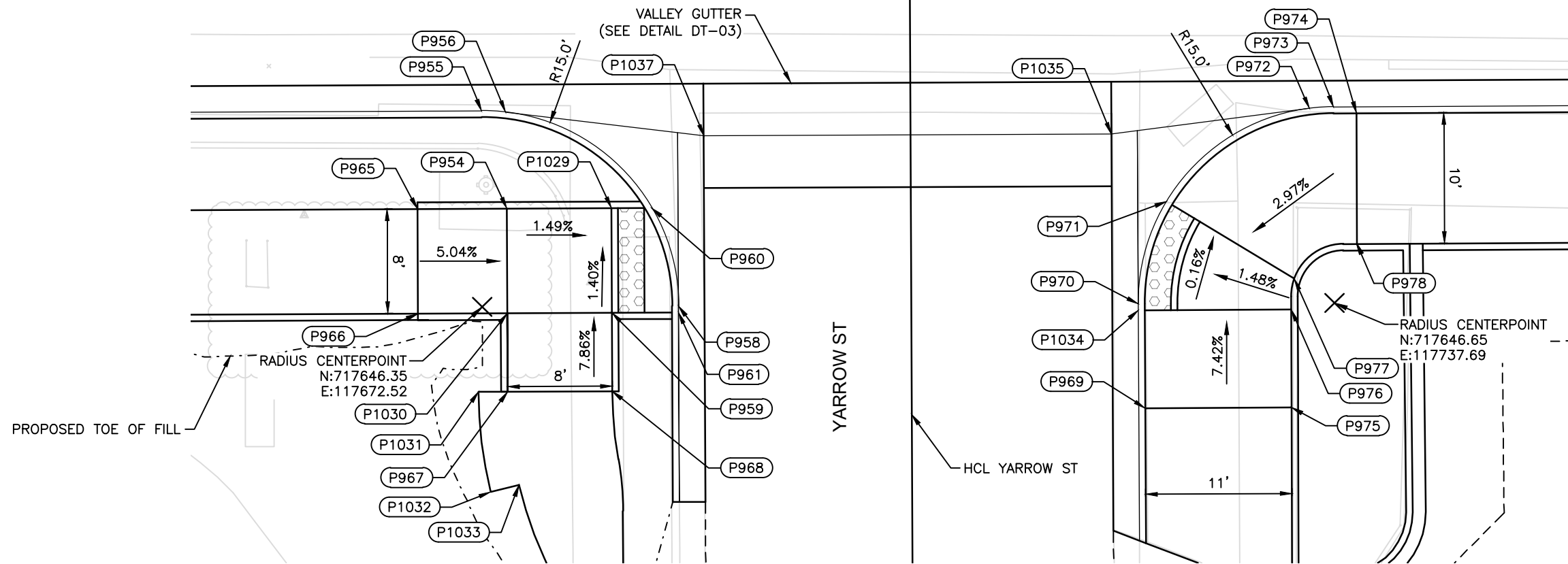
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Detailer: JVS
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Structure Numbers
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Project No./Code

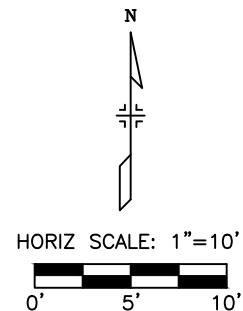
18-ST-40

Sheet Number 145

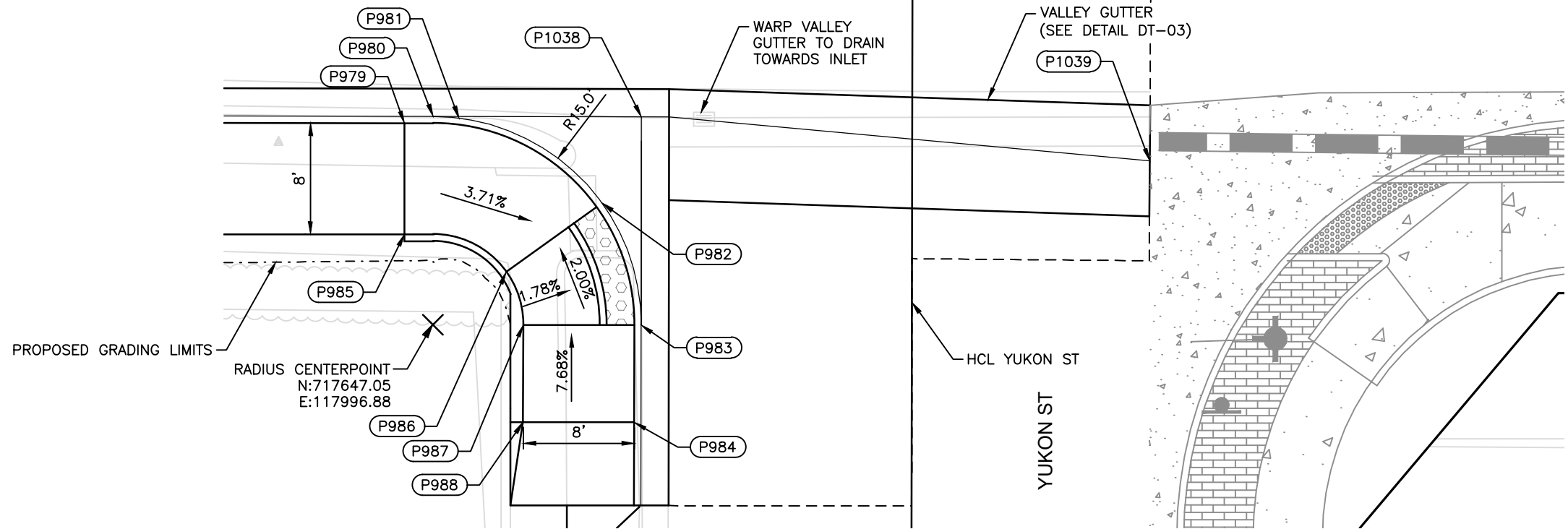


YARROW ST SW CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
954	951+38.50	30.89L	5337.83	CURB RAMP LANDING
955	951+46.00	32.80L	5337.55	FLOWLINE; P.C.
956	951+45.89	30.95L	5337.55	VALLEY GUTTER FLOWLINE
958	951+31.00	17.80L	5337.56	FLOWLINE; P.T.
959	951+30.50	22.89L	5337.82	CURB RAMP LANDING
960	951+38.50	19.81L	5337.56	BOTTOM OF RAMP; FLOWLINE
961	951+30.50	17.80L	5337.57	BOTTOM OF RAMP; FLOWLINE
965	951+38.50	37.74L	5338.17	TOP OF CURB RAMP
966	951+30.50	37.74L	5338.29	TOP OF CURB RAMP
967	951+24.50	30.89L	5338.41	TOP OF CURB RAMP
968	951+24.50	22.89L	5338.29	TOP OF CURB RAMP
1029	951+38.50	22.89L	5337.71	CURB RAMP LANDING
1030	951+30.50	30.89L	5337.94	CURB RAMP LANDING
1031	951+24.50	33.12L	5338.73	BOW; BENCH CUTOUT
1032	951+16.83	32.22L	5338.64	BOW; BENCH CUTOUT
1033	951+17.35	30.05L	5338.60	BOW; BENCH CUTOUT
1037	951+44.00	15.80L	5337.48	VALLEY GUTTER FLOWLINE

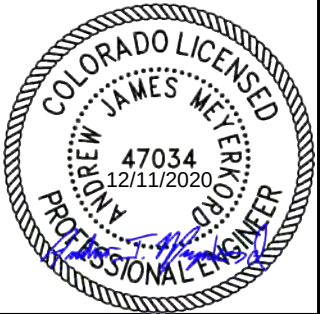
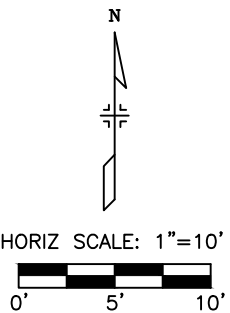
YARROW ST SE CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
969	951+23.00	17.88R	5337.96	TOP OF RAMP
970	951+31.00	17.38R	5337.41	FLOWLINE; P.C.
971	951+38.81	19.57R	5337.42	CURB RAMP LANDING; FLOWLINE
972	951+45.89	30.52R	5337.31	VALLEY GUTTER FLOWLINE
973	951+46.00	32.38R	5337.29	FLOWLINE; P.T.
974	951+45.50	34.13R	5337.78	TOP OF RAMP
975	951+23.00	29.06R	5338.17	TOP OF RAMP
976	951+30.50	29.06R	5337.59	CURB RAMP LANDING
977	951+32.88	29.30R	5337.60	CURB RAMP LANDING
978	951+35.50	34.13R	5337.93	TOP OF RAMP
1034	951+30.50	17.38R	5337.42	CURB RAMP LANDING; FLOWLINE
1035	951+44.00	15.38R	5337.36	VALLEY GUTTER FLOWLINE



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Date			Comments	Initials										



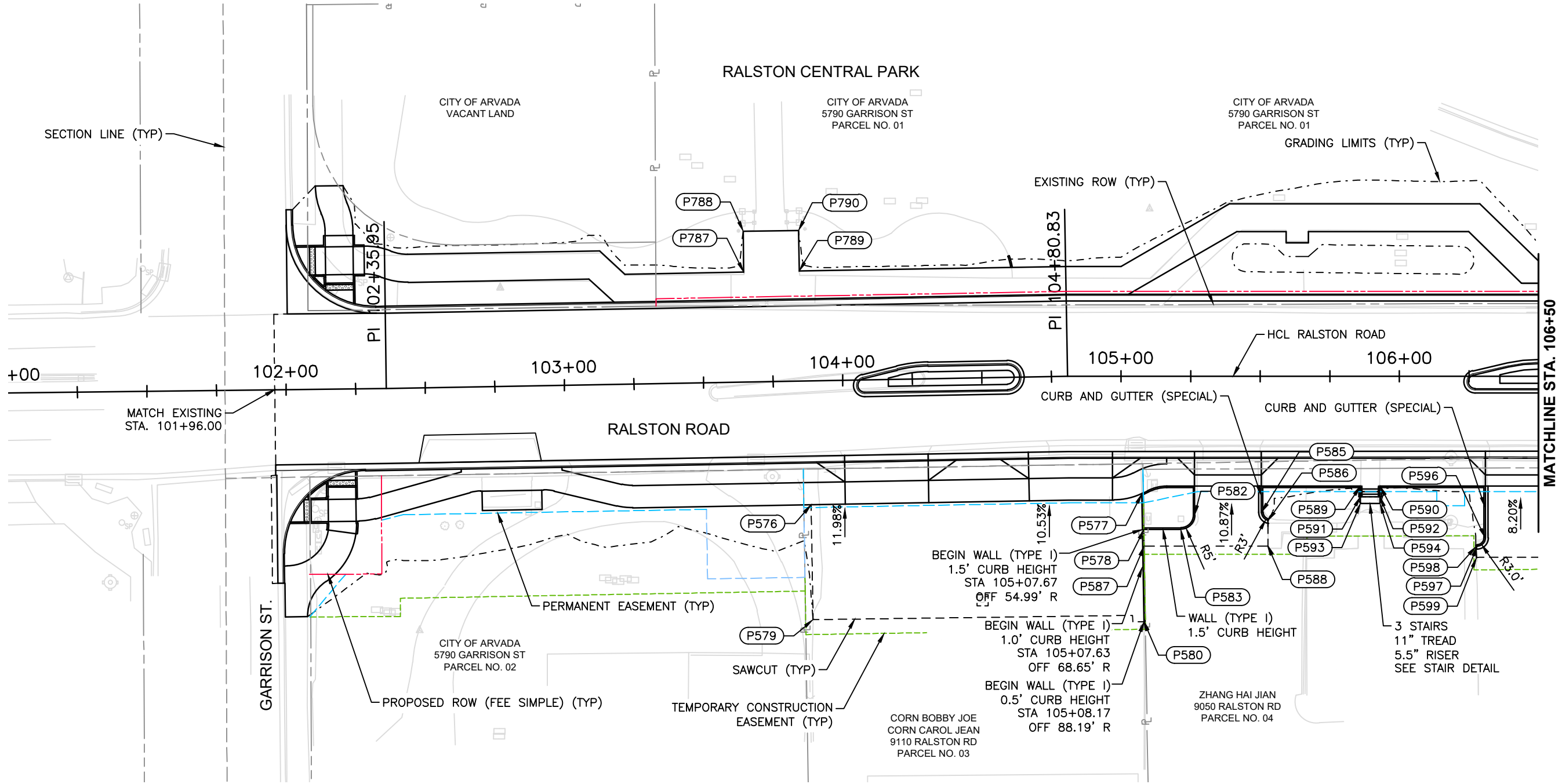
YUKON ST SW CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
979	1001+45.50	36.55L	5336.73	TOP OF RAMP
980	1001+46.00	34.50L	5336.23	FLOWLINE; P.C.
981	1001+45.88	32.65L	5336.25	VALLEY GUTTER FLOWLINE
982	1001+39.78	22.34L	5336.42	CURB RAMP LANDING; FLOWLINE
983	1001+31.00	19.50L	5336.54	CURB RAMP LANDING; FLOWLINE; P.T.
984	1001+24.00	20.00L	5337.09	TOP OF RAMP
985	1001+37.50	36.55L	5336.85	TOP OF RAMP
986	1001+34.81	29.23L	5336.54	CURB RAMP LANDING
987	1001+31.00	28.00L	5336.67	CURB RAMP LANDING
988	1001+24.00	28.00L	5337.21	TOP OF RAMP
1038	1001+46.00	19.50L	5336.18	VALLEY GUTTER FLOWLINE
1039	1001+42.87	17.09R	5336.07	VALLEY GUTTER FLOWLINE; MATCH EXISTING



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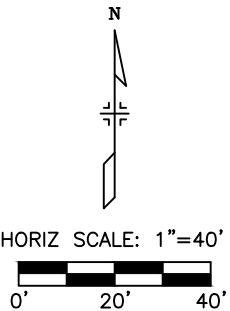
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No Revisions:												18-ST-40			
File Name: 118355_RDINT_DT_SH03.DWG										Revised:		Designer: JHH		Structure	
Horizontal Scale: 1" = 10' Vertical Scale: N/A										Void:		Detailer: JVS		Numbers	
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NOTES

1. ALL RADII ANNOTATIONS ARE MEASURED TO FLOWLINE OF CURB AND GUTTER OR EDGE OF SIDEWALK.
2. RE: ROADWAY GEOMETRIC DETAILS AND INTERSECTION DETAILS FOR SIDEWALK AND ROADWAY GEOMETRIC INFORMATION.



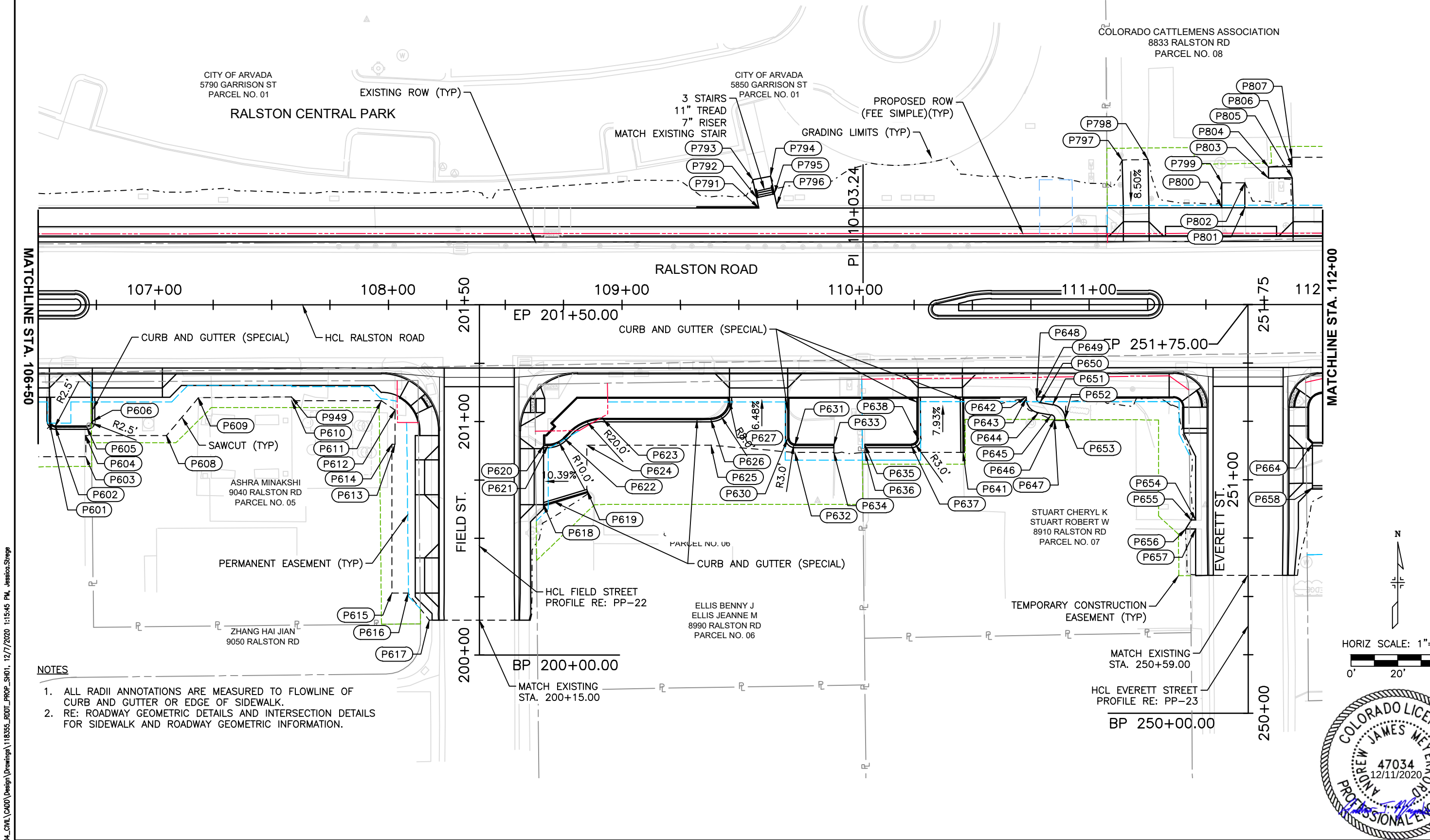
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							Void:		Sheet Subset: ROADWAY		Subset Sheets: AC-01 of 20		Sheet Number 148

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
576	103+87.83	44.50R	5344.93	EOP
577	105+07.48	42.21R	5345.29	FOC
578	105+08.17	54.98R	5347.94	FOC
579	103+87.83	85.81R	5350.29	EOP, MATCH EXISTING
580	105+08.17	88.19R	5349.44	EOP, MATCH EXISTING
582	105+26.41	49.98R	5346.39	FOC, P.C.
583	105+21.41	54.98R	5347.29	FOC, P.T.
585	105+50.41	48.97R	5346.39	FOC, P.C.
586	105+52.81	51.91R	5347.22	FOC, MATCH EXISTING
587	105+08.26	61.00R	5348.27	EOP, MATCH EXISTING
588	105+52.80	61.00R	5347.62	EOP, MATCH EXISTING
589	105+85.96	39.50R	5345.48	FOC, WALKWAY
590	105+93.00	39.50R	5345.52	FOC, WALKWAY
591	105+85.96	43.27R	5346.87	FOC, TOP OF STAIR
592	105+93.00	43.27R	5346.87	FOC, TOP OF STAIR
593	105+85.96	45.73R	5346.74	WALKWAY, MATCH EXISTING
594	105+93.00	45.73R	5346.88	WALKWAY, MATCH EXISTING
596	106+30.84	58.11R	5347.79	FOC, P.C.
597	106+27.94	61.11R	5348.30	FOC, P.T.
598	106+27.48	61.12R	5349.47	FOC, MATCH EXISTING

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
599	106+27.62	65.12R	5349.32	EOP, MATCH EXISTING
787	103+65.15	39.50L	5343.67	WALKWAY
788	103+65.15	54.20L	5343.18	WALKWAY, MATCH EXISTING
789	103+85.03	39.50L	5343.70	WALKWAY
790	103+85.03	54.06L	5343.18	WALKWAY, MATCH EXISTING



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Horizontal Scale: 1" = 40' Vertical Scale: N/A							Revised:		Designer: JHH	Structure			
FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Detailer: JVS		Numbers				
							Void:		Sheet Subset: ROADWAY		Subset Sheets: AC-02 of 20		Sheet Number 149



- NOTES
1. ALL RADII ANNOTATIONS ARE MEASURED TO FLOWLINE OF CURB AND GUTTER OR EDGE OF SIDEWALK.
 2. RE: ROADWAY GEOMETRIC DETAILS AND INTERSECTION DETAILS FOR SIDEWALK AND ROADWAY GEOMETRIC INFORMATION.

N

HORIZ SCALE: 1"=40'

0' 20' 40'

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ANDREW JAMES MEYER
47034
12/11/2020
PROFESSIONAL ENGINEER

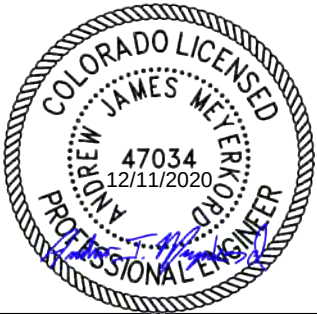
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	 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Detailer: JVS					
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RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
601	106+54.84	49.83R	5346.65	FOC, P.C.
602	106+57.34	52.33R	5346.97	FOC, P.T.
603	106+70.41	65.00R	5348.25	EOP, MATCH EXISTING
604	106+70.39	56.00R	5347.75	EOP, MATCH EXISTING
605	106+70.82	52.33R	5347.20	FOC, P.T.
606	106+73.32	49.83R	5346.85	FOC, P.C.
608	107+04.97	55.99R	5346.52	EOP, MATCH EXISTING
609	107+18.64	39.76R	5346.20	EOP, MATCH EXISTING
610	107+58.53	41.00R	5346.37	EOP, MATCH EXISTING
611	107+96.93	41.00R	5346.74	EOP, MATCH EXISTING
612	201+04.94	36.10L	5346.91	EOP, MATCH EXISTING
613	200+90.37	36.05L	5347.51	EOP, MATCH EXISTING
614	200+90.37	37.50L	5347.48	EOP, MATCH EXISTING
615	200+26.61	37.50L	5350.75	EOP, MATCH EXISTING
616	200+26.61	30.50L	5351.20	EOP, MATCH EXISTING
617	200+15.00	21.47L	5352.14	
618	200+64.39	27.50R	5348.69	FOC
619	200+70.09	46.23R	5350.36	FOC, MATCH EXISTING
620	200+89.82	27.50R	5347.32	FOC
621	200+89.82	29.31R	5347.54	FOC, P.C.
622	200+92.75	36.38R	5348.17	FOC, P.R.C.
623	201+00.94	52.88R	5348.27	FOC, P.T.
624	200+89.94	45.95R	5348.88	EOP, MATCH EXISTING
625	109+38.08	60.09R	5349.25	EOP, MATCH EXISTING
626	109+38.02	49.09R	5348.50	FOC, P.T.

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
627	109+45.97	41.09R	5347.80	FOC, P.C.
630	109+70.97	57.19R	5349.38	FOC, P.C.
631	109+73.97	60.19R	5349.52	FOC, P.T.
632	109+73.97	63.19R	5349.62	EOP, MATCH EXISTING
633	109+90.66	60.19R	5349.89	FOC, MATCH EXISTING
634	109+90.66	63.19R	5350.05	EOP, MATCH EXISTING
635	110+03.91	60.19R	5351.53	FOC, MATCH EXISTING
636	110+03.93	63.19R	5351.74	EOP, MATCH EXISTING
637	110+23.73	60.21R	5350.93	FOC, P.T.
638	110+26.73	57.21R	5350.72	FOC, P.C.
641	110+45.94	63.23R	5352.00	FOC, MATCH EXISTING
642	110+72.93	39.50R	5350.74	WALKWAY
643	110+72.93	40.12R	5350.74	WALKWAY, P.C.
644	110+78.14	46.28R	5350.83	WALKWAY, P.T.
645	110+83.63	47.22R	5350.86	WALKWAY, P.C.
646	110+85.09	48.94R	5350.91	WALKWAY, P.T.
647	110+85.09	49.57R	5350.92	WALKWAY, MATCH EXISTING
648	110+77.43	39.50R	5350.88	WALKWAY
649	110+77.43	40.12R	5350.88	WALKWAY, P.C.
650	110+78.89	41.85R	5350.90	WALKWAY, P.T.
651	110+84.39	42.78R	5350.93	WALKWAY, P.C.
652	110+89.59	48.94R	5350.98	WALKWAY, P.T.
653	110+89.59	49.57R	5350.98	WALKWAY, MATCH EXISTING
654	250+82.73	22.50L	5355.53	WALKWAY
655	250+82.71	24.33L	5356.08	WALKWAY, MATCH EXISTING

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
656	250+78.89	26.71L	5356.40	WALKWAY, MATCH EXISTING
657	250+78.89	22.50L	5355.79	WALKWAY
658	250+96.41	27.50R	5355.71	FOC
664	251+15.41	27.50R	5354.97	FOC
791	109+58.58	41.50L	5347.05	FOC, WALKWAY
792	109+57.62	45.91L	5347.02	WALKWAY, TOP OF STAIR
793	109+55.95	53.59L	5345.19	WALKWAY, MATCH EXISTING
794	109+63.57	55.15L	5345.22	WALKWAY, MATCH EXISTING
795	109+65.21	47.57L	5347.08	WALKWAY, TOP OF STAIR
796	109+66.27	42.65L	5347.17	WALKWAY
797	111+14.16	61.98L	5349.64	EOP, MATCH EXISTING
798	111+25.15	62.18L	5349.82	EOP, MATCH EXISTING
799	111+56.84	52.09L	5352.81	EOP, MATCH EXISTING
800	111+56.84	41.50L	5352.85	EOP
801	111+66.64	41.50L	5353.18	EOP
802	111+66.64	52.13L	5352.94	EOP, MATCH EXISTING
803	111+76.80	54.13L	5352.77	WALKWAY, MATCH EXISTING
804	111+76.73	58.92L	5352.72	WALKWAY, MATCH EXISTING
805	111+86.99	54.28L	5352.82	EOP, WALKWAY
806	111+86.86	59.12L	5352.73	EOP, WALKWAY
807	111+86.76	63.00L	5352.36	EOP, MATCH EXISTING
949	107+58.52	39.38R	5346.34	EOP, MATCH EXISTING

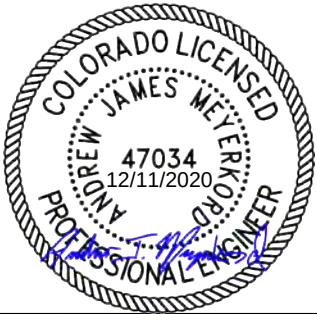


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18-ST-40												
Sheet Number 151												
File Name: 118355_RDDT_PROP_SH01.DWG		Sheet Revisions										
Horizontal Scale: 1" = 40' Vertical Scale: N/A		Date		Comments		Initials						
FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com												

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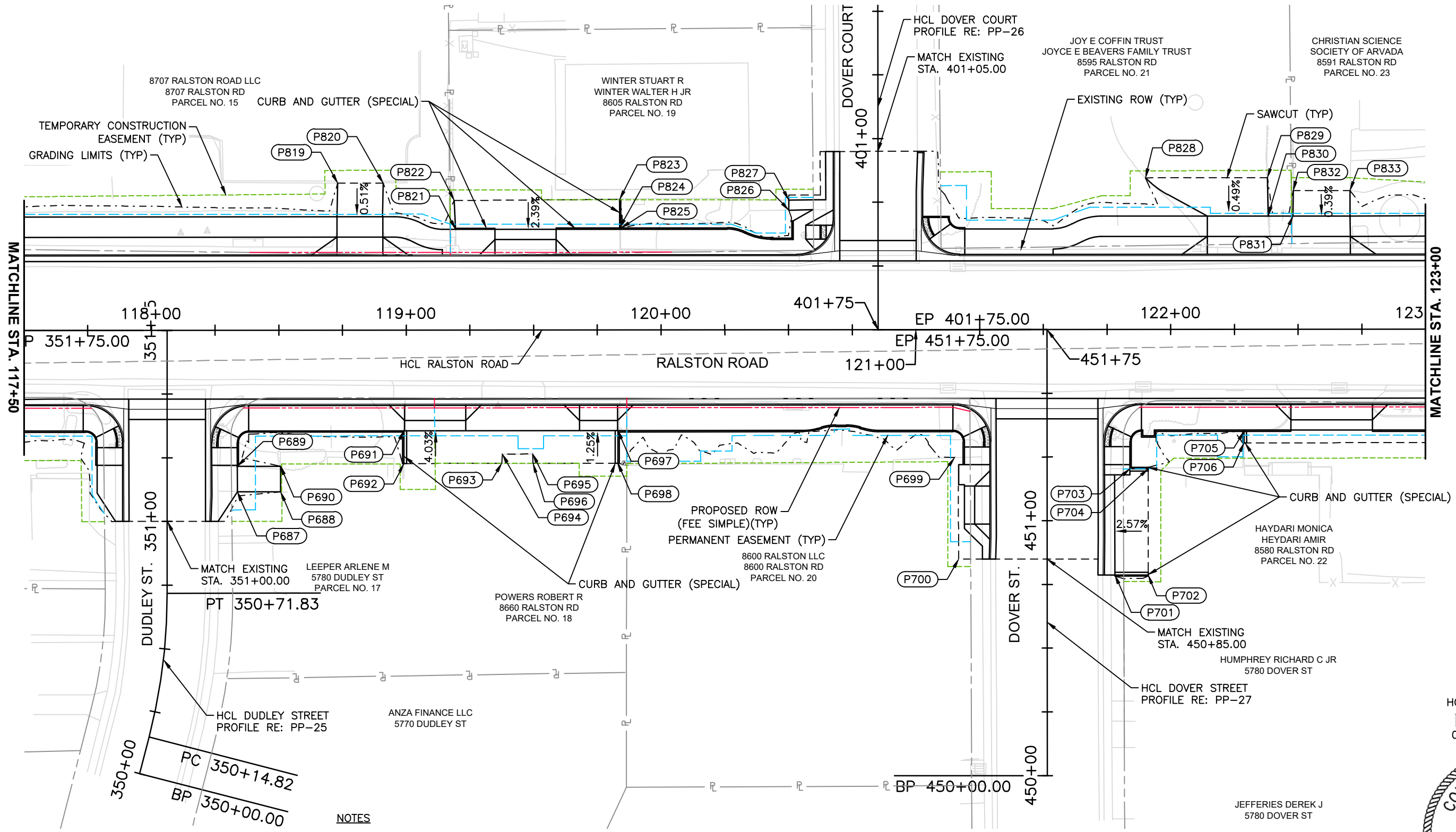
RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
659	111+99.87	78.59R	5355.82	FOC, P.C.
660	112+17.92	70.88R	5356.30	FOC, P.T.
661	112+25.98	63.16R	5356.57	FOC, P.C.
662	112+32.73	60.38R	5356.75	FOC, P.T.
663	112+36.77	60.31R	5356.84	FOC, MATCH EXISTING
665	111+99.84	59.59R	5355.09	FOC, P.C.
666	112+03.99	57.92R	5355.21	FOC, P.T.
667	112+17.83	37.50R	5355.53	FOC, P.C
668	112+19.90	42.67R	5355.80	FOC, P.T.
669	112+36.73	39.50R	5356.19	EOP, MATCH EXISTING
670	114+47.51	39.50R	5358.51	EOP, MATCH EXISTING
671	114+47.51	44.89R	5358.57	EOP, MATCH EXISTING
672	301+05.07	31.97L	5359.02	EOP, MATCH EXISTING
673	300+70.74	32.05L	5358.62	EOP, MATCH EXISTING
674	300+64.30	25.61L	5358.60	EOP, MATCH EXISTING
675	115+63.85	39.50R	5358.15	FOC, WALKWAY
676	115+63.85	43.27R	5359.62	FOC, TOP OF STAIR
677	115+63.85	51.27R	5359.75	WALKWAY, MATCH EXISTING
678	115+68.74	39.50R	5358.09	FOC, WALKWAY
679	115+68.74	43.27R	5359.62	FOC, TOP OF STAIR

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
680	115+68.74	51.09R	5359.71	WALKWAY, MATCH EXISTING
681	115+93.86	39.50R	5357.71	FOC
682	115+93.92	51.48R	5359.12	FOC, MATCH EXISTING
683	115+94.05	59.47R	5359.02	EOP, MATCH EXISTING
684	116+99.51	39.50R	5356.33	FOC
685	116+99.51	41.97R	5356.48	FOC, MATCH EXISTING
686	116+99.58	59.57R	5357.06	EOP, MATCH EXISTING
808	112+11.29	43.50L	5354.39	EOP
809	112+31.33	43.50L	5354.60	EOP
810	112+31.23	63.00L	5353.64	EOP, MATCH EXISTING
811	113+82.49	60.59L	5356.57	EOP, MATCH EXISTING
812	114+00.30	60.59L	5356.66	EOP, MATCH EXISTING
813	114+79.95	53.94L	5357.17	FOC
814	114+75.62	53.94L	5357.16	EOP, MATCH EXISTING
815	114+75.62	67.00L	5356.95	EOP, MATCH EXISTING
816	115+13.95	53.92L	5357.97	FOC
817	115+38.16	67.00L	5357.89	EOP, MATCH EXISTING
818	115+38.16	53.52L	5358.73	EOP, MATCH EXISTING
956	113+56.62	45.08R	5358.11	EOP, MATCH EXISTING
957	113+66.48	45.08R	5358.29	EOP, MATCH EXISTING

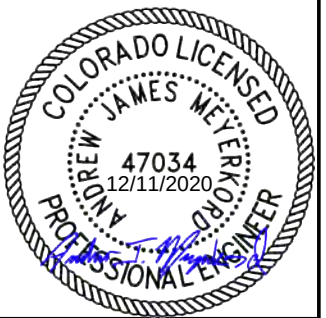
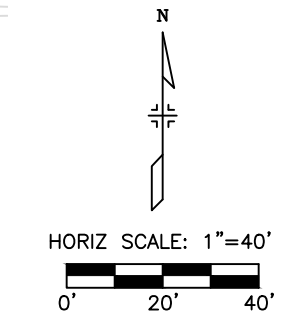


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Horizontal Scale: 1" = 40' Vertical Scale: N/A		Sheet Revisions			R-X				Revised:		Designer: JHH			
		Date	Comments	Initials					Void:		Detailer: JVS			
FELSBURG HOLT & ULLEVIG		6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com									Structure Numbers			
											Sheet Subset: ROADWAY		Subset Sheets: AC-06 of 20	
													Sheet Number 153	

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- NOTES**
1. ALL RADII ANNOTATIONS ARE MEASURED TO FLOWLINE OF CURB AND GUTTER OR EDGE OF SIDEWALK.
 2. RE: ROADWAY GEOMETRIC DETAILS AND INTERSECTION DETAILS FOR SIDEWALK AND ROADWAY GEOMETRIC INFORMATION.



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	Date	Comments		Initials																					
File Name: 118355_RDDT_PROP_SH01.DWG		(R-X)	Revised:	Designer: JHH Detailer: JVS	Structure Numbers																				
Horizontal Scale: 1" = 40' Vertical Scale: N/A																									
 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com																									
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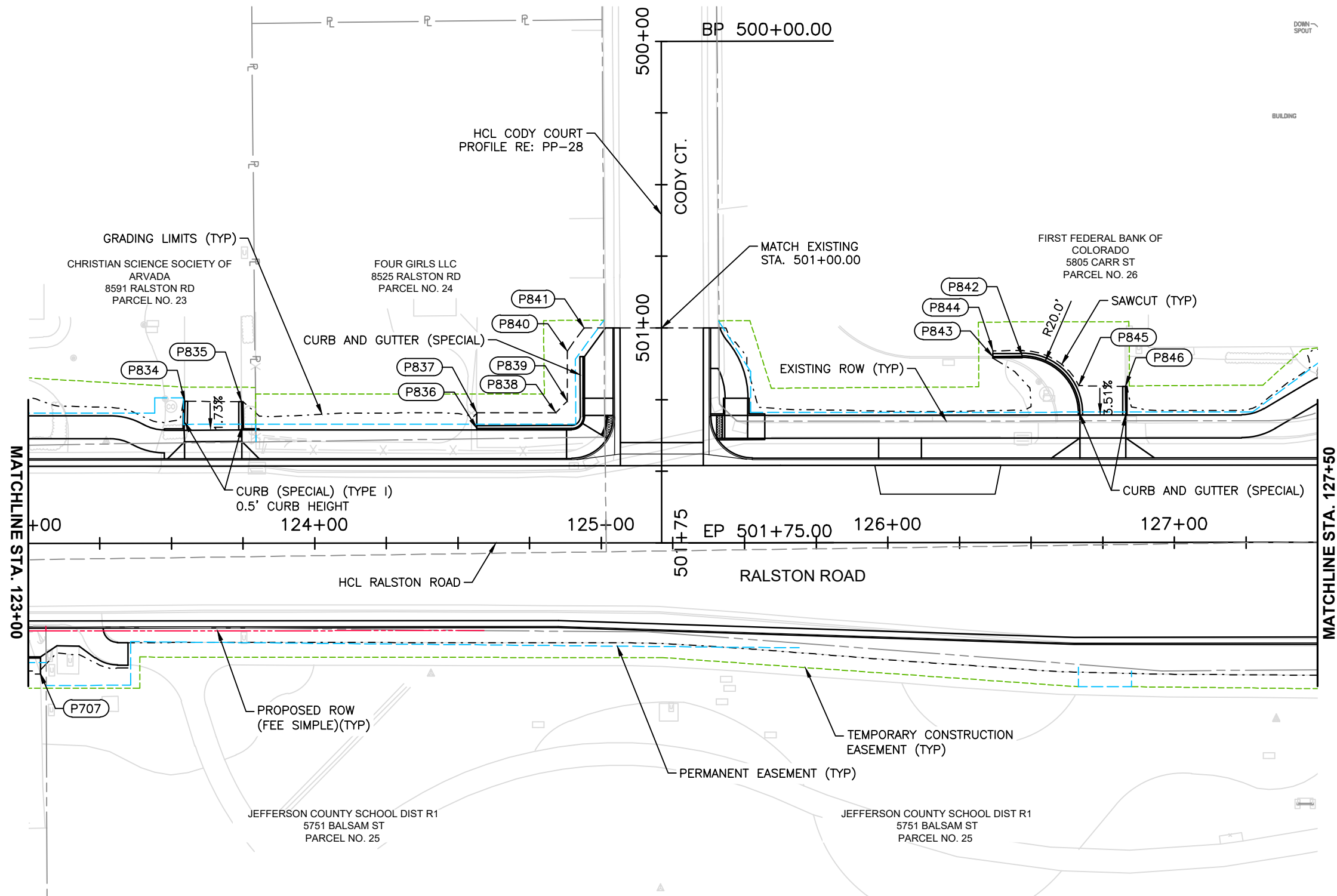
6400 South Fiddlers Green Circle, Suite 1500
Centennial, CO 80111
Phone: 303.721.1440
www.FHUENG.com

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
687	351+11.60	27.50R	5355.71	WALKWAY
688	118+50.66	63.40R		WALKWAY, MATCH EXISTING
689	351+21.60	27.50R	5355.72	WALKWAY
690	118+50.66	53.40R	5356.20	WALKWAY, MATCH EXISTING
691	118+99.05	39.50R	5355.26	FOC
692	118+99.05	52.32R	5355.61	FOC, MATCH EXISTING
693	119+37.44	52.34R	5355.90	EOP, MATCH EXISTING
694	119+37.66	48.71R	5355.57	EOP, MATCH EXISTING
695	119+49.64	48.58R	5355.46	EOP, MATCH EXISTING
696	119+49.72	52.33R	5355.83	EOP, MATCH EXISTING
697	119+83.02	39.50R	5354.84	FOC
698	119+83.00	52.34R	5354.88	FOC, MATCH EXISTING
699	451+24.77	36.29L	5354.57	EOP, MATCH EXISTING
700	450+85.00	34.75L	5354.84	EOP, MATCH EXISTING
701	450+78.72	26.50R	5353.94	FOC
702	450+78.72	39.56R	5354.40	FOC, MATCH EXISTING
703	451+20.43	32.50R	5354.03	FOC
704	451+20.43	39.60R	5354.38	FOC, MATCH EXISTING
705	122+28.70	40.00R	5354.61	FOC
706	122+28.73	44.50R	5354.20	FOC, MATCH EXISTING

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
819	118+73.12	57.70L	5355.65	EOP, MATCH EXISTING
820	118+90.97	57.70L	5355.61	EOP, MATCH EXISTING
821	119+19.40	39.50L	5355.29	FOC
822	119+18.81	50.84L	5355.36	EOP, MATCH EXISTING
823	119+83.73	51.24L	5355.95	FOC, MATCH EXISTING
824	119+83.79	40.00L	5355.47	BOC
825	119+84.29	40.00L	5355.47	BOC
826	401+28.08	34.93R	5355.01	EOP, MATCH EXISTING
827	401+24.11	34.97R	5355.09	EOP, MATCH EXISTING
828	121+90.16	59.50L	5353.10	EOP, MATCH EXISTING
829	122+37.95	59.50L	5353.31	EOP, MATCH EXISTING
830	122+38.25	44.50L	5353.24	EOP
831	122+47.99	44.50L	5353.38	EOP
832	122+48.11	54.50L	5353.47	EOP, MATCH EXISTING
833	122+70.38	54.50L	5353.69	EOP, MATCH EXISTING

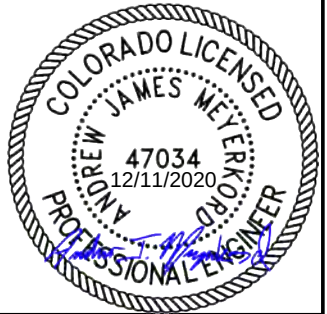


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File Name: 118355_RDDT_PROP_SH01.DWG			Date	Comments	Initials		No Revisions:					18-ST-40		
Horizontal Scale: 1" = 40' Vertical Scale: N/A							Revised:		Designer: JHH Detailer: JVS		Structure Numbers			
FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Sheet Subset: ROADWAY		Subset Sheets: AC-08 of 20		Sheet Number 155	



NOTES

1. ALL RADII ANNOTATIONS ARE MEASURED TO FLOWLINE OF CURB AND GUTTER OR EDGE OF SIDEWALK.
2. RE: ROADWAY GEOMETRIC DETAILS AND INTERSECTION DETAILS FOR SIDEWALK AND ROADWAY GEOMETRIC INFORMATION.



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								Void:		Sheet Subset: ROADWAY		Subset Sheets: AC-09 of 20		Sheet Number 156	

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RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
707	123+04.24	45.58R	5353.72	EOP, MATCH EXISTING
834	123+54.74	49.54L	5353.38	FOC, MATCH EXISTING
835	123+74.51	49.41L	5353.07	FOC, MATCH EXISTING
836	124+56.59	40.00L	5352.61	FOC
837	124+56.59	45.50L	5351.92	EOP, MATCH EXISTING
838	124+84.17	45.50L	5351.79	EOP, MATCH EXISTING
839	501+25.50	32.92R	5351.74	EOP, MATCH EXISTING
840	501+08.03	32.92R	5351.60	EOP, MATCH EXISTING
841	501+00.00	27.02R	5351.68	EOP, MATCH EXISTING
842	126+46.96	64.98L	5352.65	FOC, P.T.
843	126+36.74	64.96L	5352.84	FOC, MEET EXISTING
844	126+36.74	66.96L	5352.88	EOP, MEET EXISTING
845	126+66.72	54.74L	5352.12	EOP, MEET EXISTING
846	126+82.95	54.50L	5352.04	FOC, MEET EXISTING



Print Date: 12/7/2020 1:16:57 PM

File Name: 118355_RDDT_PROP_SH01.DWG

Horizontal Scale: 1" = 40' Vertical Scale: N/A



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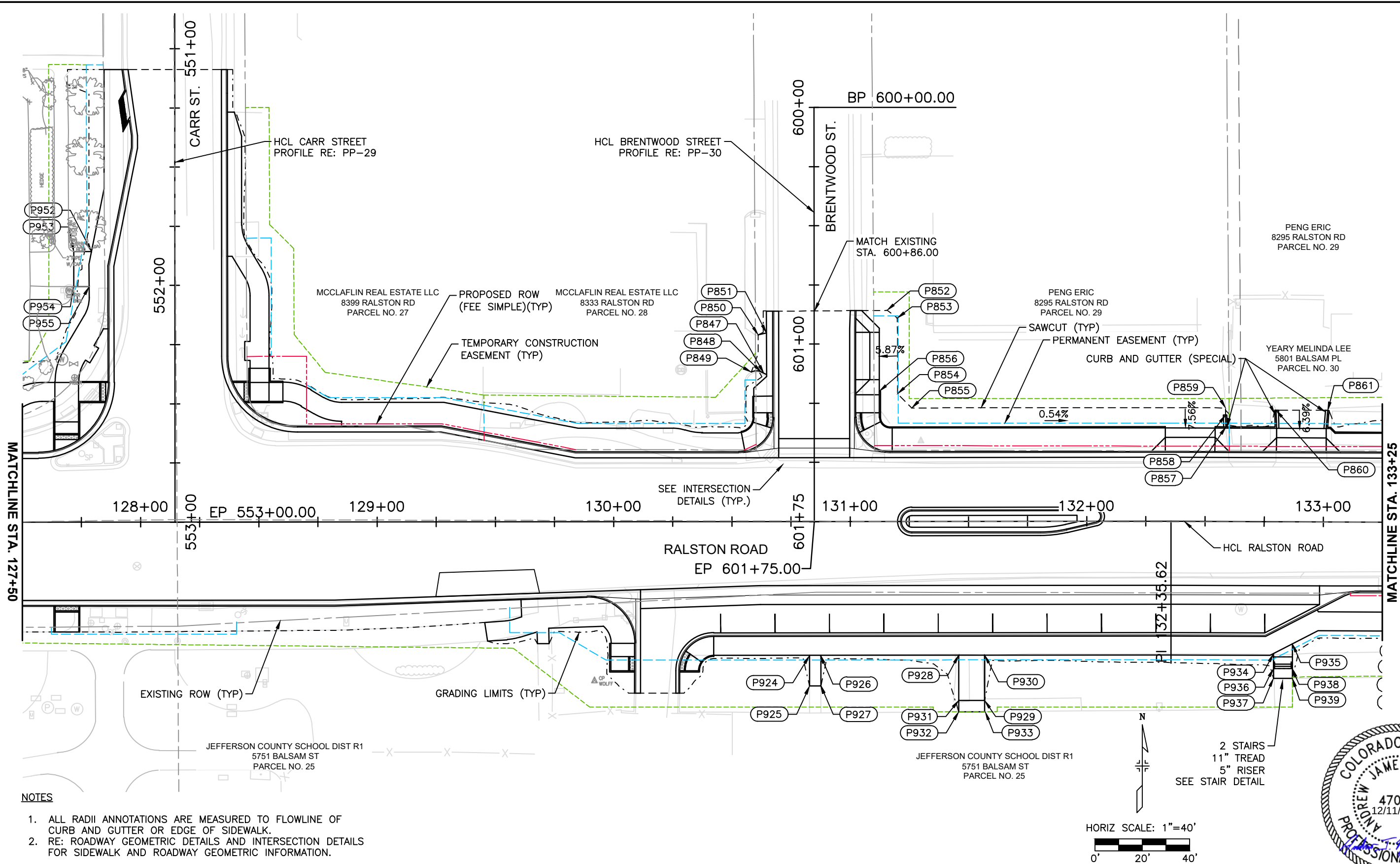
R-X	Sheet Revisions		
	Date	Comments	Initials



CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed	RALSTON RD - YUKON ST TO GARRISON ST PROPERTY ACCESS DETAILS POINT TABLE (STA. 123+00 - STA. 127+50)			Project No./Code
No Revisions:				18-ST-40
Revised:	Designer: JHH	Structure		
Void:	Detailer: JVS	Numbers		
Sheet Subset: ROADWAY		Subset Sheets: AC-10 of 20	Sheet Number 157	

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NOTES

1. ALL RADII ANNOTATIONS ARE MEASURED TO FLOWLINE OF CURB AND GUTTER OR EDGE OF SIDEWALK.
2. RE: ROADWAY GEOMETRIC DETAILS AND INTERSECTION DETAILS FOR SIDEWALK AND ROADWAY GEOMETRIC INFORMATION.

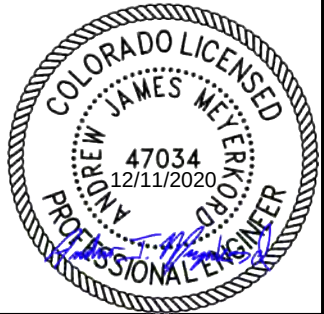
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Sheet Revisions			
Date	Comments	Initials	



CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

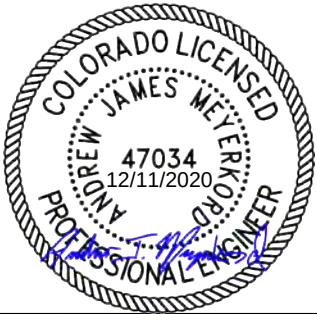
As Constructed		RALSTON RD - YUKON ST TO GARRISON ST PROPERTY ACCESS DETAILS RALSTON ROAD (STA. 127+50 - STA. 133+25)		Project No./Code
No Revisions:		Designer: JHH Detailer: JVS		18-ST-40
Revised:		Structure Numbers		
Void:		Sheet Subset: ROADWAY Subset Sheets: AC-11 of 20		Sheet Number 158



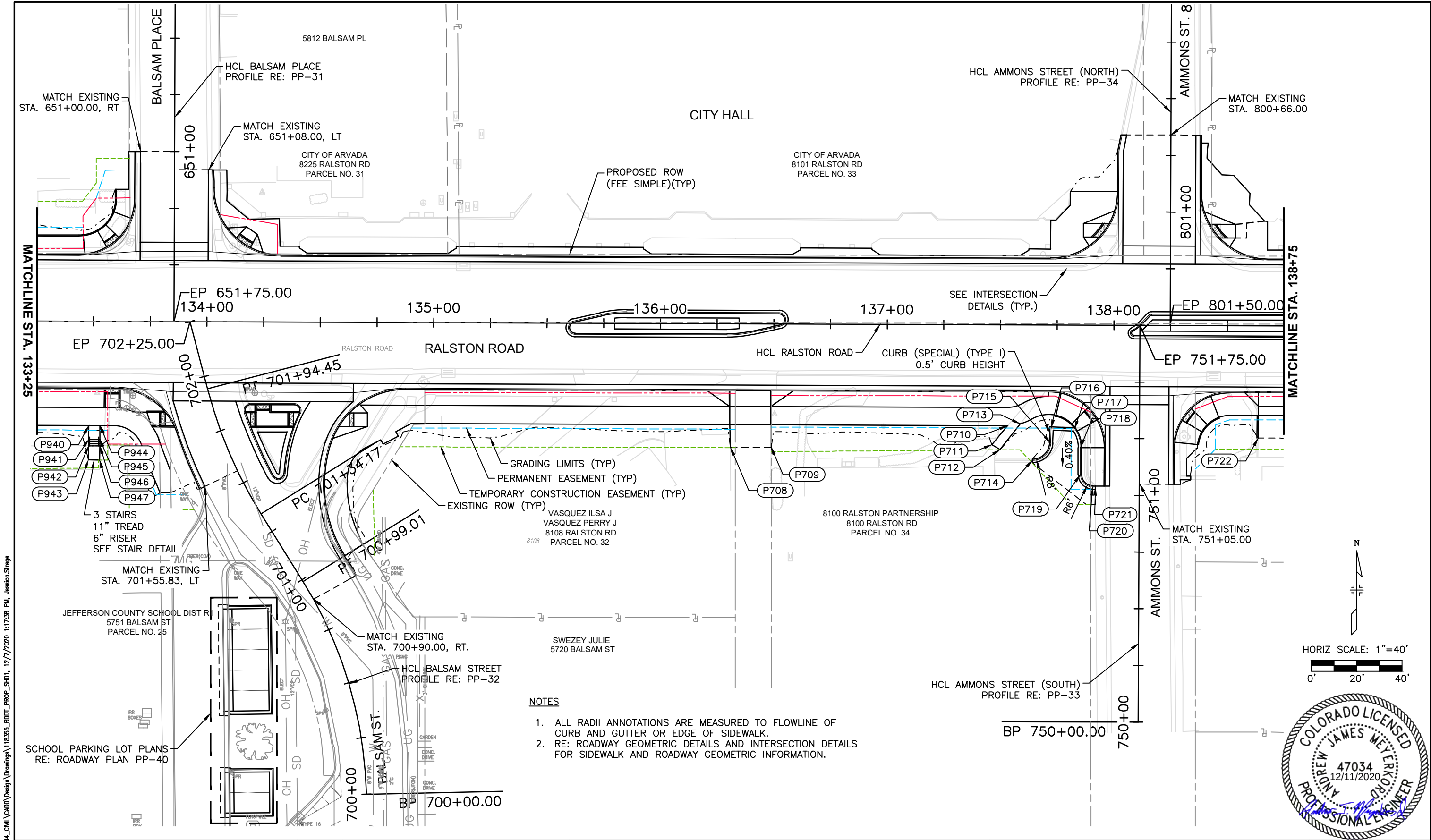
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RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
847	601+12.36	21.25R	5349.13	FOC
848	601+11.82	22.41R	5349.14	FOC, P.C.
849	601+11.86	26.58R	5349.18	FOC, MATCH EXISTING
850	600+96.08	23.66R	5349.40	FOC, MATCH EXISTING
851	600+95.33	20.16R	5349.20	FOC
852	600+85.79	30.81L	5349.87	EOP, MATCH EXISTING
853	600+89.00	35.19L	5350.06	EOP, MATCH EXISTING
854	601+21.00	35.21L	5349.67	EOP, MATCH EXISTING
855	601+27.00	41.21L	5349.61	EOP, MATCH EXISTING
856	601+20.01	27.50L	5349.23	FOC
857	132+58.67	40.00L	5348.40	FOC
858	132+58.52	45.00L	5348.49	FOC
859	132+58.46	48.00L	5348.55	EOP, MATCH EXISTING
860	132+79.82	47.05L	5348.54	FOC, MATCH EXISTING
861	133+01.68	47.07L	5348.38	FOC, MATCH EXISTING
924	130+82.68	56.76R	5349.77	WALKWAY
925	130+82.74	69.50R	5350.09	WALKWAY, MATCH EXISTING
926	130+87.46	56.69R	5349.74	WALKWAY
927	130+87.52	69.50R	5350.07	WALKWAY, MATCH EXISTING
928	131+45.79	56.50R	5349.44	WALKWAY
929	131+56.79	75.63R	5350.28	WALKWAY, MATCH EXISTING
930	131+56.79	56.50R	5349.39	WALKWAY
931	131+45.79	75.63R	5350.12	WALKWAY
932	131+45.79	80.45R	5350.24	WALKWAY, MATCH EXISTING

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
933	131+57.05	80.37R	5349.97	WALKWAY, MATCH EXISTING
934	132+79.12	55.79R	5348.73	WALKWAY
935	132+87.10	51.63R	5348.60	WALKWAY
936	132+79.14	62.08R	5349.68	WALKWAY, TOP OF STAIR
937	132+79.16	66.16R	5349.74	WALKWAY, MATCH EXISTING
938	132+87.14	62.05R	5349.68	WALKWAY, TOP OF STAIR
939	132+87.16	66.13R	5349.70	WALKWAY, MATCH EXISTING
952	551+85.65	35.20R	5352.06	BOW, WALKWAY
953	551+85.68	42.69R		WALKWAY, MATCH EXISTING
954	552+00.47	42.70R		WALKWAY, MATCH EXISTING
955	552+00.47	36.25R	5352.01	BOW, WALKWAY



Print Date: 12/7/2020 1:17:20 PM		R-X	Sheet Revisions			CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed		RALSTON RD - YUKON ST TO GARRISON ST PROPERTY ACCESS DETAILS POINT TABLE (STA. 127+50 - STA. 133+25)			Project No./Code	
File Name: 118355_RDDT_PROP_SH01.DWG							No Revisions:					18-ST-40	
Horizontal Scale: 1" = 40' Vertical Scale: N/A							Revised:		Designer: JHH		Structure		
FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com									Detailer: JVS		Numbers		
							Void:		Sheet Subset: ROADWAY		Subset Sheets: AC-12 of 20		Sheet Number 159



NOTES

1. ALL RADII ANNOTATIONS ARE MEASURED TO FLOWLINE OF CURB AND GUTTER OR EDGE OF SIDEWALK.
2. RE: ROADWAY GEOMETRIC DETAILS AND INTERSECTION DETAILS FOR SIDEWALK AND ROADWAY GEOMETRIC INFORMATION.

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	File Name: 118355_RDDT_PROP_SH01.DWG			(R-X)	Date	Comments		Initials	No Revisions:					18-ST-40	
	Horizontal Scale: 1" = 40' Vertical Scale: N/A								Revised:		Designer: JHH		Structure		
	FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com								Void:		Detailer: JVS		Numbers		
									Sheet Subset: ROADWAY		Subset Sheets: AC-13 of 20		Sheet Number 160		

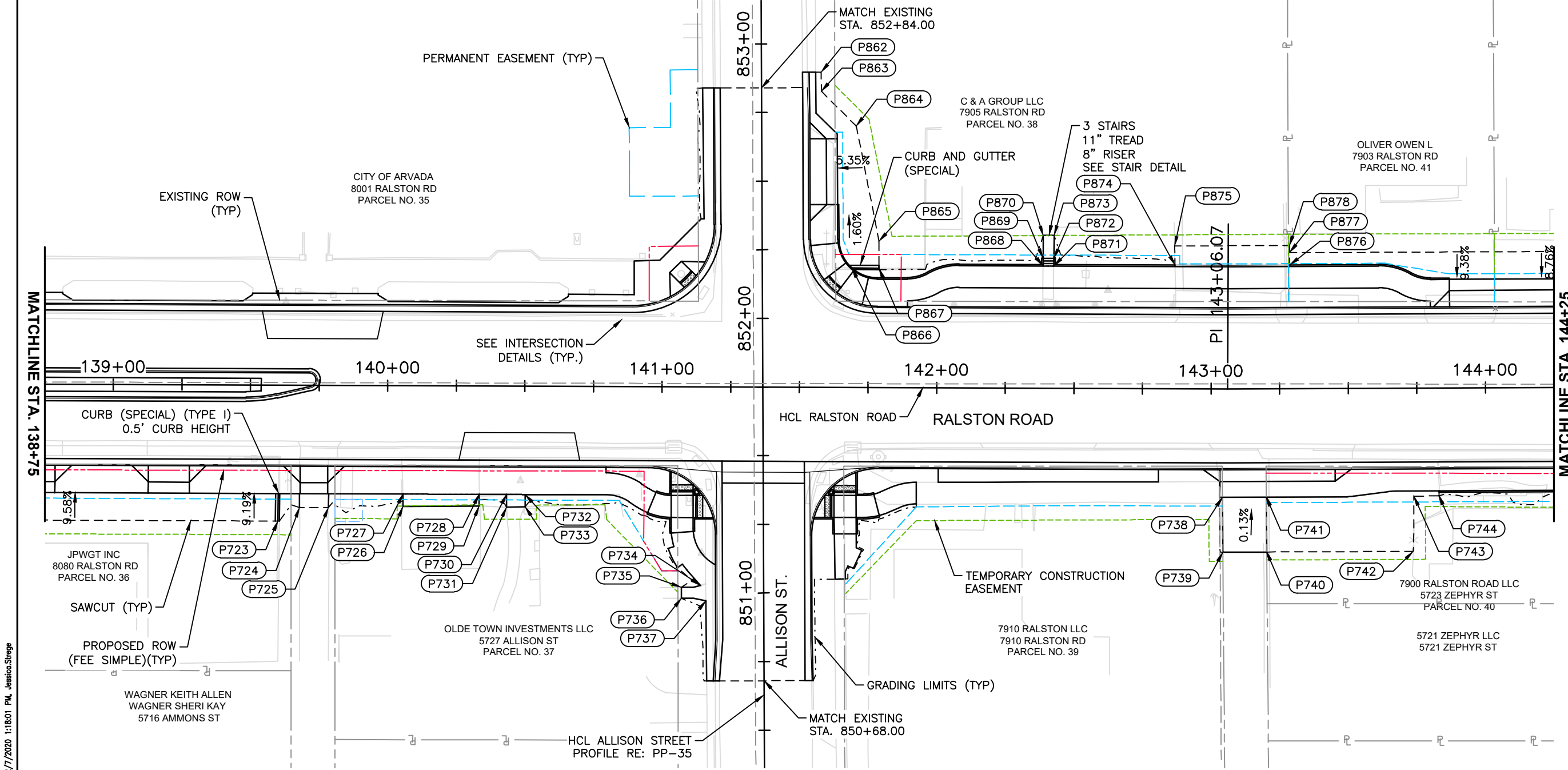
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RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
708	136+31.04	54.50R	5346.61	EOP, MATCH EXISTING
709	136+49.05	54.50R	5346.78	EOP, MATCH EXISTING
710	137+53.27	44.49R	5345.39	WALKWAY
711	137+46.42	52.93R	5346.36	WALKWAY, MATCH EXISTING
712	137+49.98	54.94R	5346.49	WALKWAY, MATCH EXISTING
713	137+58.87	43.63R	5345.32	WALKWAY
714	137+64.20	59.74R	5345.67	FOC, MATCH EXISTING
715	137+72.17	52.02R	5345.24	FOC, P.C.
716	137+72.41	45.38R	5345.01	FOC
717	137+82.73	45.75R	5344.93	FOC
718	751+21.00	26.00L	5344.78	FOC, P.T.
719	751+09.09	26.00L	5344.61	FOC, P.C.
720	751+03.59	20.50L	5344.49	FOC, P.T.
721	751+03.59	19.32L	5344.47	FOC, MATCH EXISTING
722	138+63.81	49.50R	5344.90	FOC, MATCH EXISTING
940	133+47.99	46.00R	5347.95	WALKWAY
941	133+47.99	52.15R	5348.60	BOTTOM OF STAIR
942	133+47.99	54.90R	5349.61	TOP OF STAIR
943	133+47.99	61.15R	5349.55	WALKWAY, MATCH EXISTING
944	133+52.99	46.00R	5347.91	WALKWAY

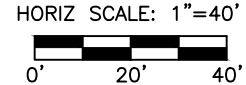
RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
945	133+52.99	52.13R	5348.59	BOTTOM OF STAIR
946	133+52.99	54.88R	5349.61	TOP OF STAIR
947	133+52.90	61.15R	5349.55	WALKWAY, MATCH EXISTING



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File Name: 118355_RDDT_PROP_SH01.DWG			R-X	Date	Comments		Initials	No Revisions:						18-ST-40		
Horizontal Scale: 1" = 40' Vertical Scale: N/A								Revised:		Designer: JHH		Structure				
FELSBURG HOLT & ULLEVIG								Void:		Detailer: JVS		Numbers				
								Sheet Subset: ROADWAY		Subset Sheets: AC- 14 of 20		Sheet Number 161				



- NOTES
1. ALL RADII ANNOTATIONS ARE MEASURED TO FLOWLINE OF CURB AND GUTTER OR EDGE OF SIDEWALK.
 2. RE: ROADWAY GEOMETRIC DETAILS AND INTERSECTION DETAILS FOR SIDEWALK AND ROADWAY GEOMETRIC INFORMATION.

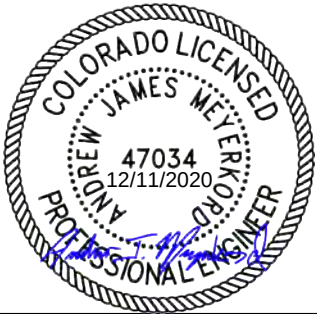


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Horizontal Scale: 1" = 40'	Vertical Scale: N/A							No Revisions:		Designer: JHH	Structure Numbers		
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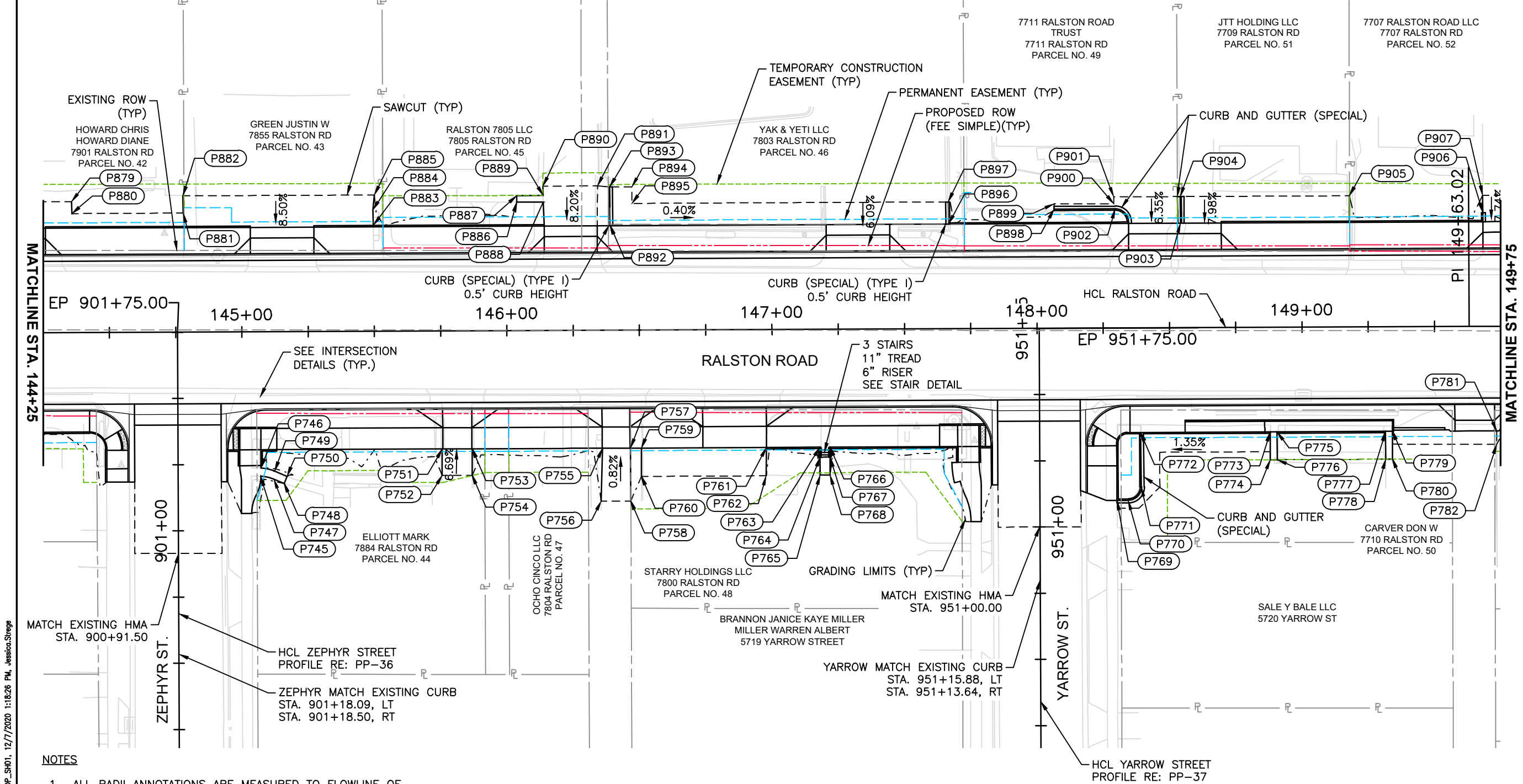
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RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
723	139+60.18	49.50R	5343.72	FOC, MATCH EXISTING
724	139+68.07	44.50R	5343.28	EOP, MATCH EXISTING
725	139+78.53	44.50R	5343.25	EOP, MATCH EXISTING
726	140+05.75	44.02R	5342.76	EOP, MATCH EXISTING
727	140+05.75	39.50R	5342.52	EOP
728	140+33.42	39.50R	5342.28	EOP
729	140+33.42	43.77R	5342.44	EOP, MATCH EXISTING
730	140+43.44	39.50R	5342.20	WALKWAY
731	140+43.44	44.12R	5342.60	WALKWAY, MATCH EXISTING
732	140+50.27	39.50R	5342.14	WALKWAY
733	140+50.27	43.96R	5342.56	WALKWAY, MATCH EXISTING
734	851+02.84	23.03L	5341.58	WALKWAY
735	851+02.15	29.96L	5341.82	WALKWAY, MATCH EXISTING
736	850+98.18	29.99L	5341.81	WALKWAY, MATCH EXISTING
737	850+97.20	21.10L	5341.57	WALKWAY
738	143+04.30	39.50R	5340.05	EDGE OF CONCRETE
739	143+04.54	59.49R	5340.22	EDGE OF CONCRETE, MATCH EXISTING
740	143+20.03	59.48R	5340.05	EDGE OF CONCRETE, MATCH EXISTING
741	143+19.96	39.50R	5339.99	EDGE OF CONCRETE
742	143+73.40	59.52R	5340.04	EOP, MATCH EXISTING
743	143+73.71	39.36R	5340.02	EOP, MATCH EXISTING
744	143+82.88	39.36R	5340.00	EOP, MATCH EXISTING
862	852+89.59	21.82R	5342.34	EOP, MATCH EXISTING
863	852+82.63	21.80R	5342.44	EOP, MATCH EXISTING
864	852+69.93	34.50R	5342.95	EOP, MATCH EXISTING

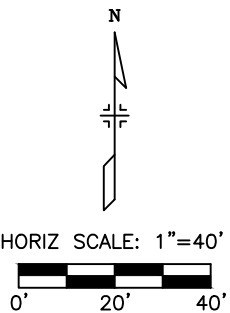
RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
865	852+27.99	42.60R	5342.96	EOP, MATCH EXISTING
866	852+18.21	32.68R	5341.58	FOC
867	852+18.11	42.50R	5342.90	FOC, MATCH EXISTING
868	142+38.61	44.50L	5341.00	FOC
869	142+38.61	47.25L	5343.01	FOC, TOP OF STAIR
870	142+38.61	55.53L	5343.00	WALKWAY, MATCH EXISTING
871	142+42.57	44.50L	5340.98	FOC
872	142+42.57	47.25L	5342.99	FOC, TOP OF STAIR
873	142+42.57	55.62L	5343.18	WALKWAY, MATCH EXISTING
874	142+86.71	45.00L	5341.75	EOP
875	142+86.52	52.00L	5342.22	EOP, MATCH EXISTING
876	143+28.83	45.00L	5341.22	EOP
877	143+28.84	49.50L	5341.40	EOP, MATCH EXISTING
878	143+28.84	52.09L	5341.45	EOP, MATCH EXISTING



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File Name: 118355_RDDT_PROP_SH01.DWG								No Revisions:					18-ST-40	
Horizontal Scale: 1" = 40' Vertical Scale: N/A			R-X	Date				Comments	Initials	Revised:		Designer: JHH	Structure	
FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com										Detailer: JVS	Numbers			
								Void:	Sheet Subset: ROADWAY	Subset Sheets: AC-16 of 20		Sheet Number 163		



- NOTES
1. ALL RADII ANNOTATIONS ARE MEASURED TO FLOWLINE OF CURB AND GUTTER OR EDGE OF SIDEWALK.
 2. RE: ROADWAY GEOMETRIC DETAILS AND INTERSECTION DETAILS FOR SIDEWALK AND ROADWAY GEOMETRIC INFORMATION.



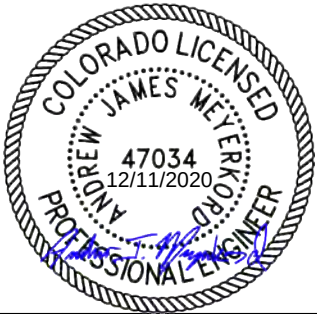
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File Name: 118355_RDDT_PROP_SH01.DWG											
Horizontal Scale: 1" = 40'	Vertical Scale: N/A	R-X	Date	Comments	Initials		No Revisions:	Designer: JHH	Structure Numbers	Sheet Number 164	
							Revised:	Detailer: JVS			
6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:	Sheet Subset: ROADWAY	Subset Sheets: AC-17 of 20		

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RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
745	901+20.53	31.11R	5339.44	WALKWAY
746	901+23.64	31.21R	5339.43	WALKWAY
747	901+19.44	36.09R	5339.64	WALKWAY, P.T.
748	901+17.70	39.98R	5339.81	WALKWAY, MEET EXISTING
749	901+22.42	36.45R		WALKWAY, P.T.
750	901+20.48	41.08R	5339.77	WALKWAY, MATCH EXISTING
751	145+75.40	44.50R	5339.04	EOP
752	145+75.30	54.50R	5339.81	EOP, MATCH EXISTING
753	145+86.75	44.50R	5339.00	EOP
754	145+86.68	54.50R	5339.56	EOP, MATCH EXISTING
755	146+35.83	44.50R	5338.80	EOP
756	146+35.27	64.50R	5338.37	EOP, MATCH EXISTING
757	146+46.46	44.50R	5338.76	EOP
758	146+46.46	64.50R	5339.25	EOP, MATCH EXISTING
759	146+50.54	44.50R	5338.74	EOP
760	146+50.54	55.21R	5339.31	EOP, MATCH EXISTING
761	146+97.73	44.50R	5338.55	EOP
762	146+97.58	55.21R	5338.96	EOP, MATCH EXISTING
763	147+17.92	44.50R	5338.47	FOC
764	147+17.92	48.28R	5339.98	FOC, TOP OF STAIR
765	147+17.92	55.01R	5339.97	WALKWAY, MATCH EXISTING
766	147+21.67	44.50R	5338.46	FOC
767	147+21.67	48.28R	5339.95	FOC, TOP OF STAIR

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
768	147+21.67	55.01R	5340.06	WALKWAY, MATCH EXISTING
769	148+29.94	65.15R	5338.58	FOC, MATCH EXISTING
770	148+34.14	65.07R	5338.63	FOC, P.C.
771	148+39.11	60.04R	5338.54	FOC, P.T.
772	148+38.97	39.50R	5337.91	FOC
773	148+87.78	39.50R	5339.22	WALKWAY
774	148+87.78	50.00R	5339.88	WALKWAY, MATCH EXISTING
775	148+90.43	39.50R	5339.21	WALKWAY
776	148+90.43	50.00R	5340.03	WALKWAY, MATCH EXISTING
777	149+31.36	39.50R	5339.04	WALKWAY
778	149+31.36	50.00R	5339.72	WALKWAY, MATCH EXISTING
779	149+33.92	39.50R	5339.03	WALKWAY
780	149+33.92	50.00R	5339.80	WALKWAY, MATCH EXISTING
781	149+73.56	39.50R	5337.37	EOP
782	149+73.56	44.50R	5337.86	EOP, MATCH EXISTING
879	144+36.01	49.50L	5341.04	EOP, MATCH EXISTING
880	144+36.01	45.00L	5341.01	EOP, MATCH EXISTING
881	144+78.03	45.00L	5340.59	EOP, MATCH EXISTING
882	144+78.00	51.50L	5340.73	EOP, MATCH EXISTING
883	145+49.72	40.00L	5340.11	EOP
884	145+49.65	45.85L	5340.53	EOP
885	145+50.23	51.50L	5340.84	EOP, MATCH EXISTING
886	146+03.91	48.62L	5340.65	WALKWAY, MATCH EXISTING

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
887	146+03.93	51.01L	5340.75	WALKWAY, MATCH EXISTING
888	146+13.92	48.56L	5340.11	EOP, WALKWAY
889	146+13.93	51.01L	5340.32	EOP, WALKWAY
890	146+13.83	54.50L	5340.62	EOP, MATCH EXISTING
891	146+34.45	54.58L	5340.14	EOP, MATCH EXISTING
892	146+39.15	39.50L	5339.15	FOC
893	146+39.04	54.15L	5339.16	FOC, MATCH EXISTING
894	146+47.43	54.17L	5339.32	EOP, MATCH EXISTING
895	146+47.41	47.88L	5339.17	EOP, MATCH EXISTING
896	147+66.78	39.50L	5338.64	FOC
897	147+66.69	47.89L	5338.75	FOC, MATCH EXISTING
898	148+06.66	45.00L	5339.60	FOC, MATCH EXISTING
899	148+06.66	47.00L	5339.58	EOP, MATCH EXISTING
900	148+29.13	46.89L	5339.08	EOP, MATCH EXISTING
901	148+29.13	49.51L	5339.10	EOP, MATCH EXISTING
902	148+29.71	44.99L	5339.14	FOC, P.C.
903	148+54.37	39.50L	5338.39	FOC
904	148+54.20	49.47L	5338.95	FOC, MATCH EXISTING
905	149+18.08	49.50L	5339.11	EOP, MATCH EXISTING
906	149+68.15	43.00L	5338.22	FOC
907	149+68.13	49.50L	5338.75	EOP, MATCH EXISTING



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File Name: 118355_RDDT_PROP_SH01.DWG

Horizontal Scale: 1" = 40' Vertical Scale: N/A



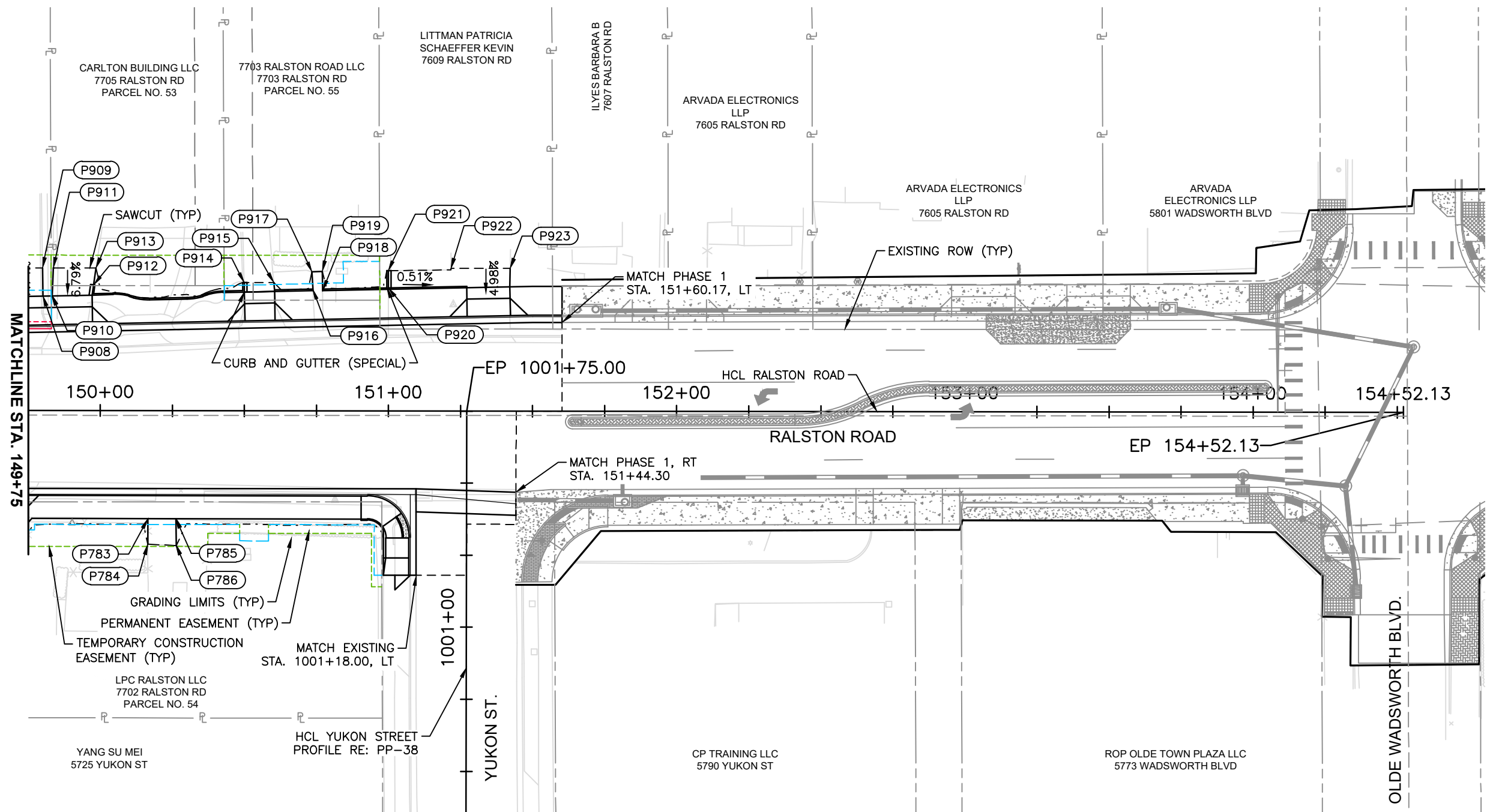
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Sheet Revisions		
R-X	Date	Comments

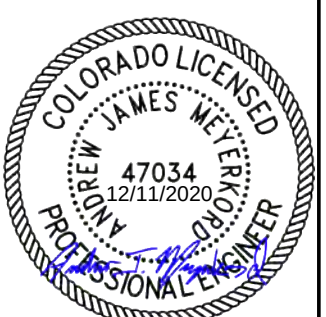
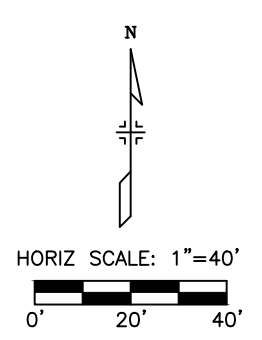


CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed	RALSTON RD - YUKON ST TO GARRISON ST PROPERTY ACCESS DETAILS POINT TABLE (STA. 144+25 - STA. 149+75)			Project No./Code
No Revisions:				18-ST-40
Revised:	Designer: JHH	Structure		
	Detailer: JVS	Numbers		
Void:	Sheet Subset: ROADWAY	Subset Sheets: AC-18 of 20		Sheet Number 165



- NOTES**
1. ALL RADII ANNOTATIONS ARE MEASURED TO FLOWLINE OF CURB AND GUTTER OR EDGE OF SIDEWALK.
 2. RE: ROADWAY GEOMETRIC DETAILS AND INTERSECTION DETAILS FOR SIDEWALK AND ROADWAY GEOMETRIC INFORMATION.

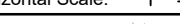


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Horizontal Scale: 1" = 40' Vertical Scale: N/A

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CITY OF ARVADA
PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed

No Revisions:

Revised:

Void:

RALSTON RD - YUKON ST TO GARRISON ST
PROPERTY ACCESS DETAILS
RALSTON ROAD (STA. 149+75 - END)

Designer: JHH

Detailer: JVS

Sheet Subset: ROADWAY

Structure Numbers

Subset Sheets: AC-19 of 20

Project No./Code

18-ST-40

Sheet Number 166

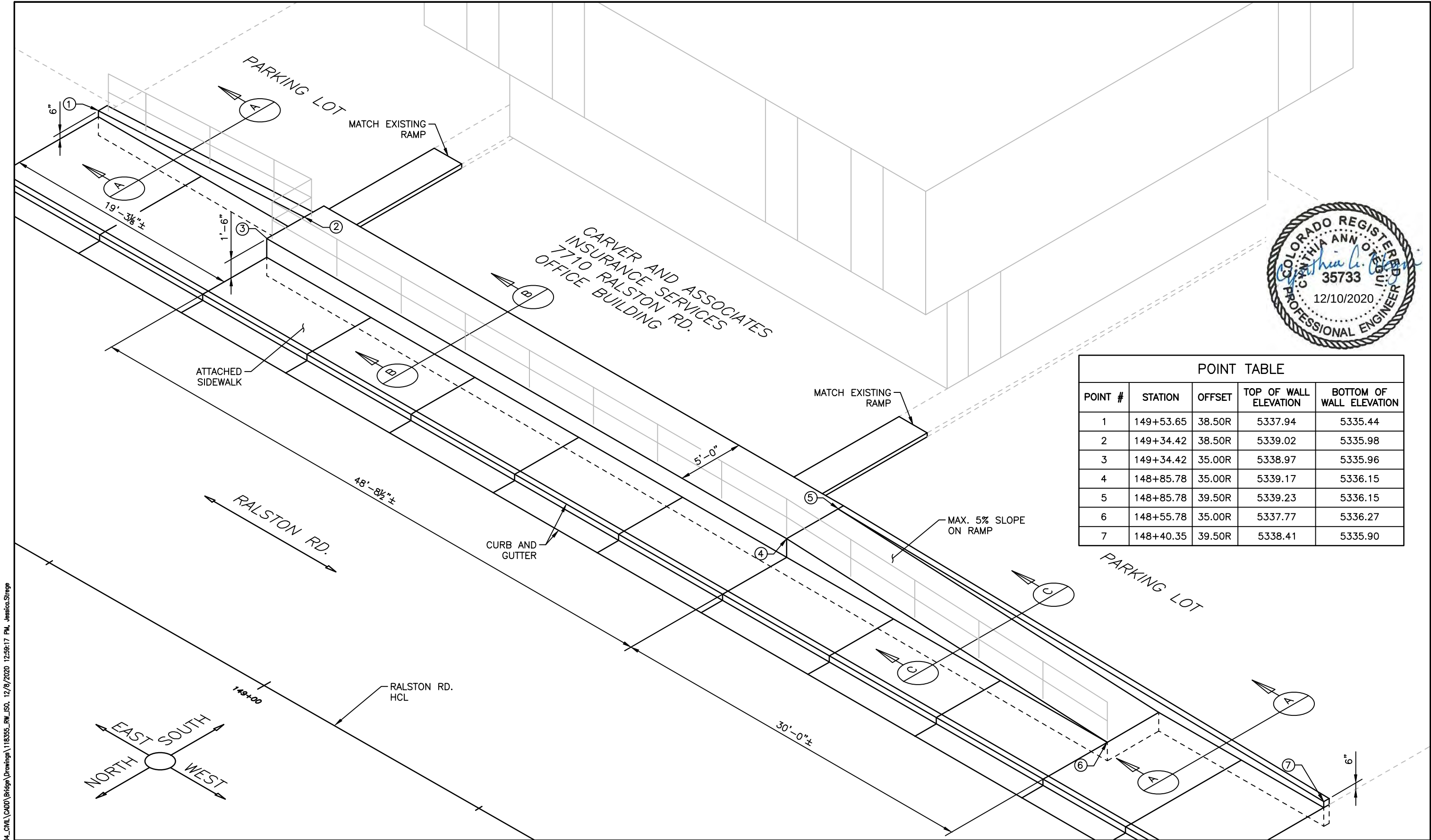
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I:\118355-01 Ralston Rd\04_CIVIL\CADD\Design\Drawings\118355_RDDT_PROP_SH01, 12/7/2020 1:18:55 PM, Jessica.Strege

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
783	150+16.55	37.59R	5337.18	EOP
784	150+16.58	46.37R	5337.70	EOP, MATCH EXISTING
785	150+26.38	37.50R	5337.13	EOP
786	150+26.46	46.78R	5337.82	EOP, MATCH EXISTING
908	149+80.04	39.72L	5337.89	EOP
909	149+79.86	49.50L	5338.56	EOP, MATCH EXISTING
910	149+83.31	39.79L	5337.87	EOP
911	149+83.67	49.50L	5338.49	EOP, MATCH EXISTING
912	149+97.62	43.63L	5338.10	FOC
913	149+98.49	49.50L	5338.58	EOP, MATCH EXISTING
914	150+49.85	44.50L	5337.68	FOC, MATCH EXISTING
915	150+60.14	44.50L	5337.76	EOP, MATCH EXISTING
916	150+73.71	42.20L	5337.54	WALKWAY
917	150+73.40	48.19L	5337.87	WALKWAY, MATCH EXISTING
918	150+77.08	41.77L	5337.50	WALKWAY
919	150+77.00	48.45L	5337.94	WALKWAY, MATCH EXISTING
920	150+99.86	42.76L	5337.85	FOC
921	150+99.86	48.69L	5337.76	FOC, MATCH EXISTING
922	151+21.56	49.50L	5337.80	EOP, MATCH EXISTING
923	151+42.17	49.50L	5337.46	EOP, MATCH EXISTING



Print Date: 12/7/2020 1:18:55 PM		   	Sheet Revisions			 CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed		RALSTON RD - YUKON ST TO GARRISON ST PROPERTY ACCESS DETAILS POINT TABLE (STA. 149+75 - END)				Project No./Code	
File Name: 118355_RDDT_PROP_SH01.DWG			Date	Comments	Initials		No Revisions:						18-ST-40	
Horizontal Scale: 1" = 40' Vertical Scale: N/A							Revised:		Designer: JHH		Structure			
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							Void:		Sheet Subset: ROADWAY		Subset Sheets: AC-20 of 20		Sheet Number 167	



POINT TABLE				
POINT #	STATION	OFFSET	TOP OF WALL ELEVATION	BOTTOM OF WALL ELEVATION
1	149+53.65	38.50R	5337.94	5335.44
2	149+34.42	38.50R	5339.02	5335.98
3	149+34.42	35.00R	5338.97	5335.96
4	148+85.78	35.00R	5339.17	5336.15
5	148+85.78	39.50R	5339.23	5336.15
6	148+55.78	35.00R	5337.77	5336.27
7	148+40.35	39.50R	5338.41	5335.90

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File Name: 118355_RW_ISO.DWG

Horizontal Scale: N/A Vertical Scale: N/A

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Sheet Revisions

Date	Comments	Initials



CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed

No Revisions:

Revised:

Void:

RALSTON RD - YUKON ST TO GARRISON ST

STRUCTURE DETAILS

BILEVEL SIDEWALK ISOMETRIC DETAIL

Designer: D. JODER

Detailer: V.MIRANDA

Sheet Subset: STRUCTURE

Structure Numbers: X

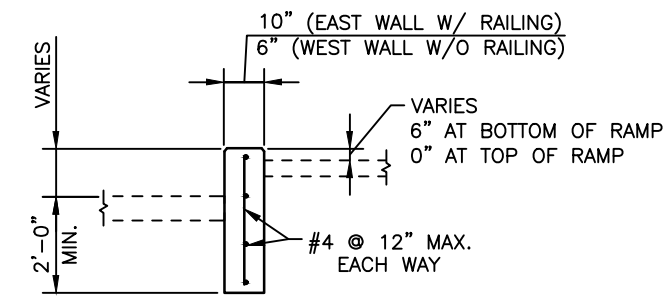
Subset Sheets: ST-01 of 2

Project No./Code

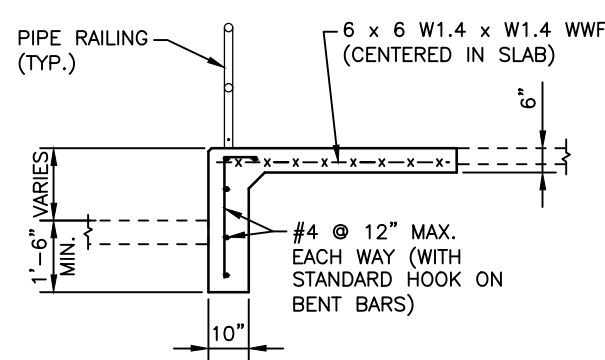
18-ST-40

Sheet Number 168

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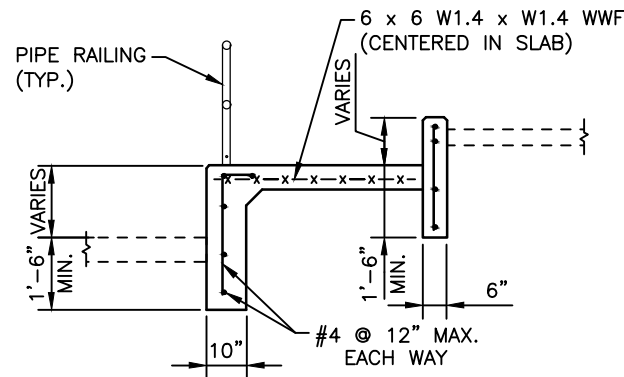


SECTION A-A

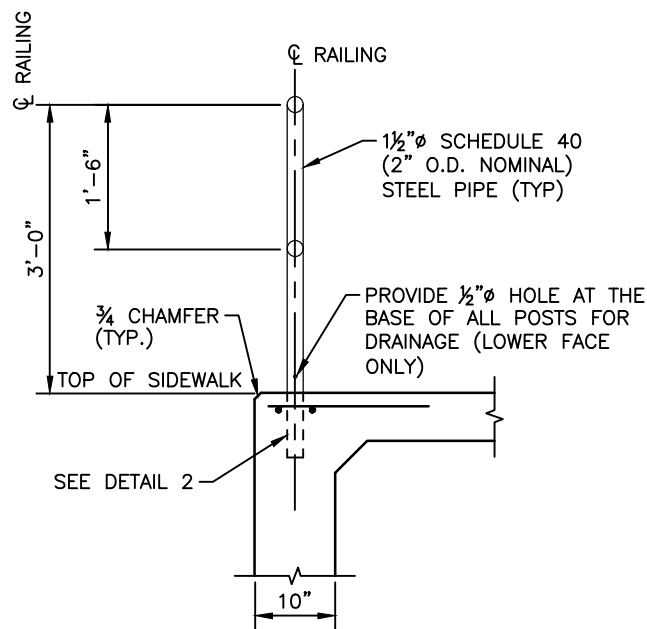


SECTION B-B

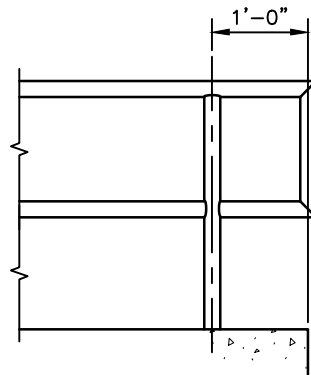
NOTE:
EXTEND SECTION B-B AROUND EACH
END OF THE ELEVATED SIDEWALK.



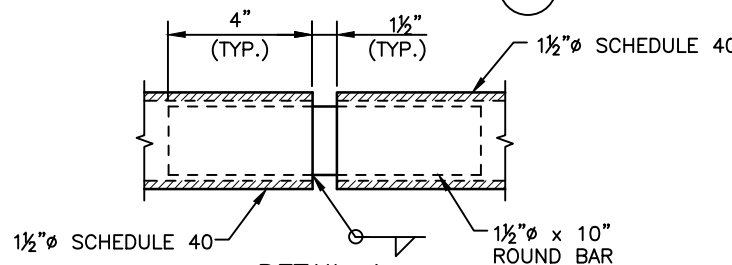
SECTION C-C



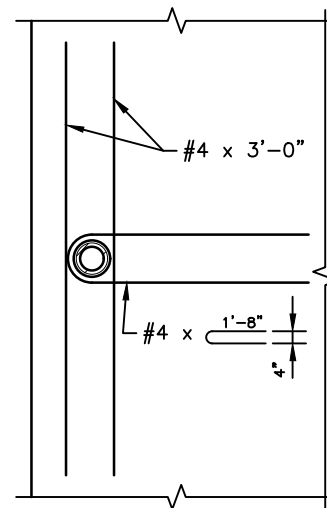
SECTION D-D



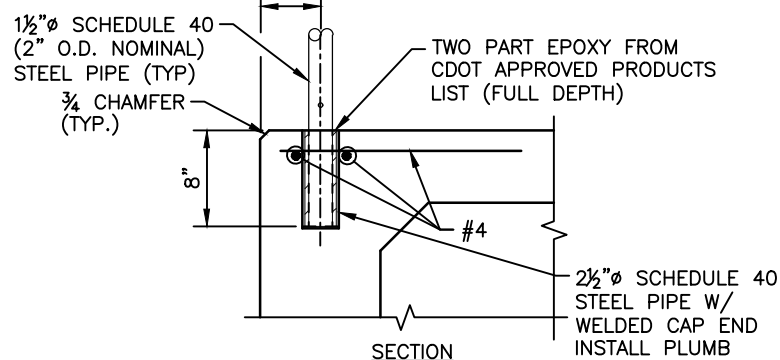
TYPICAL END TREATMENT DETAIL



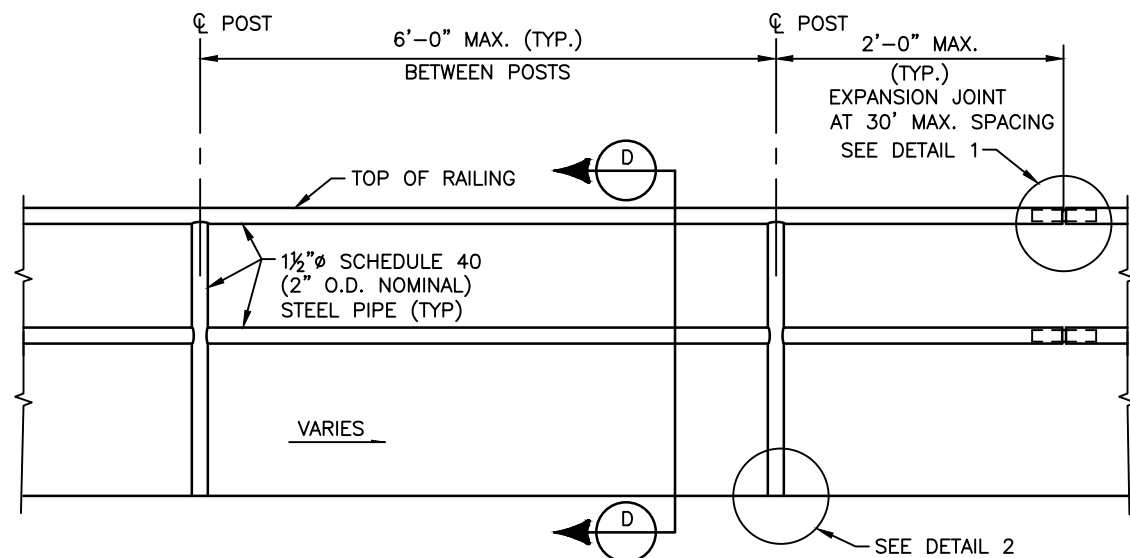
DETAIL 1
EXPANSION JOINT DETAIL



PLAN



DETAIL 2
ANCHORAGE DETAIL



ELEVATION VIEW OF RAILING

GENERAL NOTES

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2019 EDITION, AS APPLICABLE TO THE PROJECT.

EXPANSION JOINT MATERIAL SHALL MEET AASHTO SPECIFICATION M-213.

ALL CONCRETE SHALL BE CLASS D (SIDEWALK).

THE FINAL FINISH FOR ALL EXPOSED CONCRETE SURFACES SHALL BE CLASS 1.

ALL CONSTRUCTION JOINTS NOT SHOWN ON THE PLANS SHALL BE APPROVED BY THE ENGINEER.

ALL CONSTRUCTION JOINTS SHALL BE ROUGHENED TO 1/4" AMPLITUDE MINIMUM AND THOROUGHLY CLEANED BEFORE FRESH CONCRETE IS PLACED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION

THE CONTRACTOR SHALL NOT BACKFILL STRUCTURES UNTIL TOP SLAB AND WALLS HAVE REACHED 80% OF DESIGN STRENGTH.

ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 3/4", UNLESS SHOWN OR OTHERWISE NOTED.

GRADE 60 REINFORCING STEEL IS REQUIRED.

ALL REINFORCING STEEL SHALL BE BLACK UNLESS OTHERWISE NOTED.

ALL REINFORCEMENT SHALL HAVE A CLEAR COVERAGE OF 2", EXCEPT AS SHOWN ON THE PLANS. CLEAR COVERAGE SHALL BE MEASURED FROM THE SURFACE OF THE CONCRETE TO THE OUTSIDE OF THE REINFORCEMENT.

THE INFORMATION SHOWN ON THESE PLANS CONCERNING THE TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO AT 811 (1-800-922-1987) THREE BUSINESS DAYS (TWO FULL BUSINESS DAYS IN ADVANCE NOT INCLUDING THE DAY OF NOTIFICATION) PRIOR TO ANY EXCAVATION OR OTHER EARTHWORK.

DESIGN DATA

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 9TH EDITION (2020)

DESIGN METHOD:

LOAD RESISTANCE FACTOR DESIGN

DESIGN LOADING (SIDEWALKS):

PEDESTRIAN LIVE LOAD = 100 psf

NOMINAL BEARING PRESSURE = 6,400 psf

UNIT SOIL WEIGHT = 135 pcf

EQUIVALENT FLUID PRESSURE = 38 psf

NOMINAL COEFFICIENT OF SLIDING FRICTION = 0.40

REINFORCED CONCRETE:

CLASS D CONCRETE: $f'_c = 4,500$ psi

REINFORCING STEEL: $f_y = 60,000$ psi

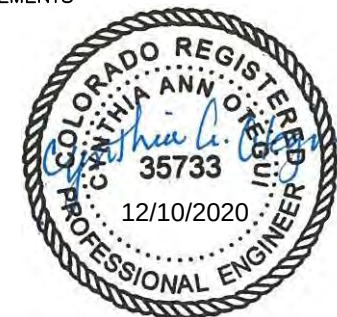
PIPE RAILING NOTES

ALL PIPE SHALL BE 2" NOMINAL DIAMETER, SCHEDULE 40 STEEL CONFORMING TO THE REQUIREMENTS IN ASTM A53 FOR GRADE B STEEL ($F_y=35$ KSI), AND ALL PLATES, BOLTS AND NUTS SHALL MEET THE REQUIREMENTS IN AASHTO M270 FOR GRADE 36 KSI STEEL.

ALL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH CDOT SPECIFICATION 509.

THE CONTRACTOR SHALL FIELD VERIFY ALL SIDEWALK MEASUREMENTS BEFORE FABRICATION OF RAILING.

PAYMENT FOR PIPE RAILING WILL BE MADE UNDER ITEM 514 - PIPE RAILING.



Print Date:	12/8/2020 12:59:21 PM
File Name:	118355_RW_ISO.DWG
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Vertical Scale:	N/A
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Date	Comments	Initials	



CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST STRUCTURE DETAILS BILEVEL SIDEWALK DETAILS		Project No./Code
No Revisions:		Designer: D. JODER	Structure X	18-ST-40
Revised:		Detailer: V.MIRANDA	Numbers X	
Void:		Sheet Subset: STRUCTURE	Subset Sheets: ST-02 of 2	Sheet Number 169

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I.D. NO.		INLET TYPE										MANHOLE SLAB BASE			MANHOLE BOX BASE	MEASURED HEIGHT (H)	ELEVATIONS			PIPE-SEWER										REMOVAL OF INLET	REMOVAL OF MANHOLE	REMOVAL OF PIPE	MODIFY MANHOLE	MODIFY INLET	MODIFY STRUCTURE (SPECIAL)	CLEAN CULVERT	STRUCTURE BACKFILL (FLOW FILL) (10)	MISC.				
																				13	C	16	16 (DOUBLE)	16 (TRIPLE)	16 (DOUBLE) (SPECIAL)	R L5	R L10	INVERT ELEVATIONS	GRADE										HIGH PERFORMANCE POLYPROPYLENE PIPE (HPPE) (COMPLETE IN PLACE)			
																																							LF			
		5'	5'	5'	10'	5'	5'	5'	5'	5'	10'	5'	10'	5'	FT		RIM	INVERT	LOWER	UPPER	%	6"	12"	15"	18"	EA	EA	EA	EA										EA	EA	EA	CY
		H (PAY)																																								
	RALSTON ROAD																																									
G6																																										
G7	108+21.93, 58.0' RT.			1										3.27	5347.01	5343.74	5343.60	5343.74	0.50		28																					
G8																	5341.95	5343.40	6.00		24																					
G9	108+58.20, 24.2' RT.																5346.39	5343.40																								
G10																	5343.30	5343.70	1.40		29																					
G11	108+55.93, 54.6' RT.			1										3.30	5347.00	5343.70																										
H1	108+30.74, 13.8' LT.											1		2.63	5346.08	5343.45																										
H2																	5343.44	5343.63	1.90		20																					
H3	108+30.63, 29.0' LT.					1								2.39	5346.02	5343.63																										
I1	110+02.99, 22.9' RT.												1	5.67	5348.37	5342.70																										
I2																	5344.50	5344.76	2.60		10																					
I3	110+14.00, 29.0' RT.			1										4.16	5348.92	5344.76																										
J1	121+45.00, 24.2' LT.											1		2.66	5353.72	5351.06																										
J2																	5353.06	5351.10	0.40																							
J3	121+35.00, 29.0' LT.			1										2.96	5354.06	5351.10																										
J4																	5351.08	5352.15	0.50																							
J5	119+18.32, 31.7' LT.											1		3.03	5355.18	5352.15																										
J6																	5353.45	5352.15	0.50																							
J7	116+54.99, 34.0' LT.											1		3.36	5356.81	5353.45																										
J8																	5353.45	5354.07	0.50																							
J9	115+26.50, 34.3' LT.											1		3.78	5357.85	5354.07																										
J10																	5354.07	5354.34	0.50	53																						
J11	114+70.00, 37.3' LT.											1		3.62	5357.96	5354.34																										
J12	121+16.66, 24.0' LT.																5353.87																									
K1	122+69.30, 25.2' LT.																5353.09	5350.10																								
K2																	5350.10	5353.40	0.70																							
K3	122+66.27, 23.0' RT.																5353.02	5350.40																								
K4																	5350.40	5350.51	0.50																							
K5	122+90.00, 29.0' RT.			1										2.64	5353.15	5350.51																										
K6	122+87.00, 29.0' LT.													3.22	5353.30	5350.08																										
K7	121+89.19, 22.6' RT.																5353.41	5351.09																								
K8																	5351.10	5351.25	0.40		34																					
SHEET DT-2 TOTALS		0	0	5	0	1	0	1	0	0	0	2	1	4							53	145	69	608	3	4	9	0	0	4	0	0										

(1) SEE SHEET DT-01 FOR DRAINAGE TABULATION NOTES



Print Date: 12/28/2020 4:09:28 PM		R-X	Sheet Revisions			 CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed		RALSTON RD - YUKON ST TO GARRISON ST DRAINAGE TABULATIONS				Project No./Code	
File Name: 118355_DRTB_SH01.DWG			Date	Comments	Initials		No Revisions:						18-ST-40	
Horizontal Scale: N/A Vertical Scale: N/A							Revised:		Designer: CDT	Structure Numbers				
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							Sheet Subset: DRAINAGE		Subset Sheets: DT-02 of 4		Sheet Number 171			

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I.D. NO.		INLET TYPE										MANHOLE SLAB BASE		MANHOLE BOX BASE		MEASURED HEIGHT (H)	ELEVATIONS		PIPE-SEWER										MISC.											
																			INVERT ELEVATIONS				% GRADE	HIGH PERFORMANCE POLYPROPYLENE PIPE (HPPE) (COMPLETE IN PLACE)				REMOVAL OF INLET											REMOVAL OF MANHOLE	REMOVAL OF PIPE
		LF																																						
		13	C	16	16 (DOUBLE)	16 (TRIPLE)	16 (DOUBLE) (SPECIAL)	R L5	R L10	5'	5'													5'	10'	5'	5'													
		H (PAY)										LF																												
	RALSTON ROAD	5'	5'	5'	10'	5'	5'	5'	5'	5'	10'	5'	10'	5'	FT	RIM	INVERT	LOWER	UPPER	%	6"	12"	15"	18"	EA	EA	EA	EA	EA	EA	EA	EA	CY							
K9	121+73.47, 55.0' RT.			1											2.64	5353.89	5351.25																							
K10	121+12.34, 22.6' RT.															5353.80	5351.10																							
K11																		5351.10	5351.12	1.00		2											1							
K12	121+10.00, 28.0' RT.	1													3.02	5354.14	5351.12																							
L1	123+90.00, 29.0' LT.			1											3.02	5352.79	5349.77																							
L2																		5349.77	5350.00	2.90				8																
L3	123+80.00, 25.5' LT.											1			2.53	5352.53	5350.00							1																
M1	125+00.00, 26.9' LT.											1			2.65	5351.91	5349.26							1																
M2																		5349.26	5349.33	0.50				15																
M3	124+83.00, 31.5' LT.												1		3.02	5352.35	5349.33																							
M4																		5349.33	5349.77	0.50				90					1											
M5	126+47.00, 29.0' LT.														2.86	5351.64	5348.78							1					2											
M6	127+67.80, 26.2' LT.															5350.71								1			1				1									
M7	128+23.09, 35.0' RT.										1				7.14	5350.37	5343.23							1			2													
M8	128+23.22, 29.8' LT.															5350.40													1											
M9	127+45.00, 29.0' LT.														2.69	5351.15	5348.46												1											
N1	141+19.34, 28.8' LT.															5341.26	5337.90												1											
N2	141+02.58, 29.2' LT.															5341.42	5338.60														1									
N2A																		5338.60	5338.77	0.80		44																		
N3	140+77.00, 29.0' LT.														3.00	5341.77	5338.77											1												
N4	137+92.17, 29.6' LT.															5344.25	5341.30														1									
N5	137+60.00, 29.0' LT.														3.74	5345.10	5341.36											1												
N6	135+12.96, 24.7' LT.															5346.21	5341.80													1										
N7																		5341.80	5342.43	31.50				2																
N8	135+13.00, 29.0' LT.														4.04	5346.47	5342.43																							
N9																		5341.80	5344.01	0.50				443			1													
N10	130+66.79, 28.4' LT.											1			4.59	5348.60	5344.01							1																
N11																		5343.99	5344.50	2.80				18																
N12	130+46.00, 29.0' LT.			1											4.62	5349.12	5344.50																							
N13																		5341.80	5343.26	3.20				46			1													
N14	135+06.64, 21.5' RT.															5346.55	5343.26													1										
N15																		5343.26	5343.30	1.00				4																
SHEET DT-3 TOTALS		1	0	3	0	1	2	2	0	0	1	3	0	1											0	46	0	626	6	0	10	3	0	6	0	0				

(1) SEE SHEET DT-01 FOR DRAINAGE TABULATION NOTES



Print Date: 12/28/2020 4:09:43 PM		R-X	Sheet Revisions			 CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed	RALSTON RD - YUKON ST TO GARRISON ST DRAINAGE TABULATIONS				Project No./Code	
File Name: 118355_DRTB_SH01.DWG			Date	Comments	Initials		No Revisions:					18-ST-40	
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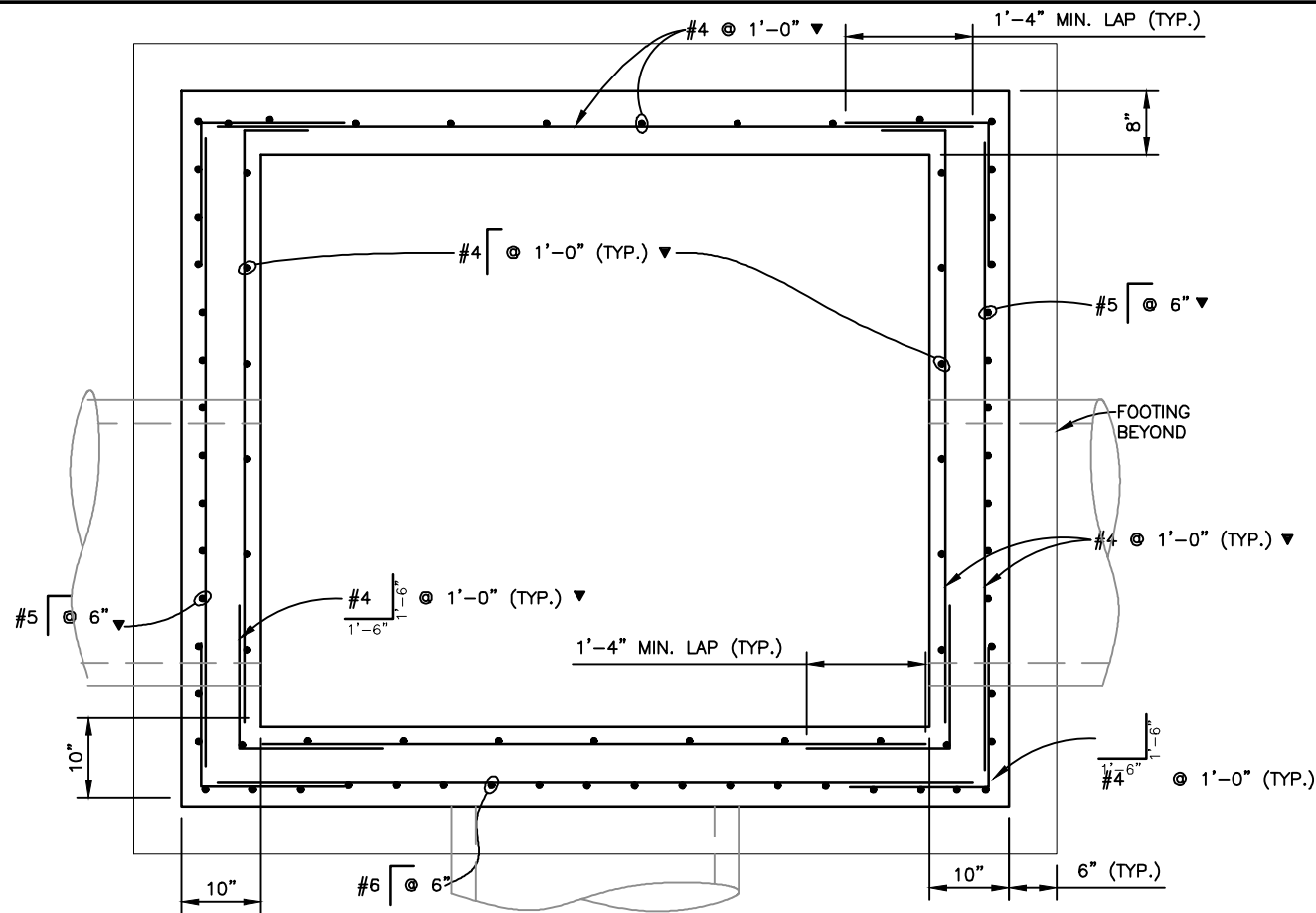
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I.D. NO.	RALSTON ROAD	INLET TYPE										MANHOLE SLAB BASE		MANHOLE BOX BASE	MEASURED HEIGHT (H)	ELEVATIONS			PIPE-SEWER										MISC.											
		13	C	16	16 (DOUBLE)	16 (TRIPLE)	16 (DOUBLE) (SPECIAL)	R L5	R L10	INVERT ELEVATIONS	GRADE								HIGH PERFORMANCE POLYPROPYLENE PIPE (HPPE) (COMPLETE IN PLACE)				REMOVAL OF INLET	REMOVAL OF MANHOLE	REMOVAL OF PIPE	MODIFY MANHOLE	MODIFY INLET	MODIFY STRUCTURE (SPECIAL)											CLEAN CULVERT	STRUCTURE BACKFILL (FLOW FILL) (10)
																			LF																					
		5'	5'	5'	10'	5'	5'	5'	5'	5'	10'	5'	10'	5'	FT	RIM	INVERT	LOWER	UPPER	%	6"	12"	15"	18"	EA	EA	EA	EA	EA	EA	EA	EA	CY							
		N16	135+05.00, 29.0' RT.			1										3.48	5346.78	5343.30																						
N17	138+30.01, 32.2' RT.														5343.78	5340.70																								
N18																	5340.90	5341.05	0.70			21									1									
N19	138+54.00, 29.0' RT.								1					2.93	5343.98	5341.05																								
N20	138+23.23, 39.4' RT.											1		3.29	5343.99	5340.70											1													
N21																	5340.70	5340.79	0.50			19																		
N22	138+25.67, 65.0' RT.						1							3.27	5344.06	5340.79																								
N23	138+02.27, 58.7' RT.														5344.38	5340.70											1													
N24																	5340.89	5340.96	1.20		6																			
N25	137+94.25, 64.2' RT.													2.62	5343.58	5340.96																								
N26	138+44.16, 21.1' RT.														5343.89																	1								
N27	136+36.57, 29.8' RT.														5346.11																		1							
O1	141+23.74, 20.5' RT.														4351.17																		1							
O2	141+03.95, 21.2' RT.														5341.32	5339.10																1								
O3	140+90.00, 21.5' RT.											1		2.37	5341.43	5339.06															1									
O4																	5339.10	5339.20	2.50		4																			
O5	140+88.00, 29.0' RT.			1										2.47	5341.67	5339.20																								
O6	141+69.43, 21.7' RT.											1		1.45	5340.77	5339.32								1																
O7																	5339.10	5339.17	0.50	30													DUAL PIPES							
O8	141+86.00, 29.0' RT.			1										1.70	5340.87	5339.17																								
O9	139+75.37, 25.1' RT.														5342.35																	1								
P1	146+34.71, 26.6' RT.														5338.26	5336.10																1								
P2																	5336.10	5336.65	2.80		20										1									
P3	146+32.99, 49.6' RT.		1											1.76	5338.41	5336.65																								
P4	144+94.57, 25.5' RT.														5338.85																	1								
Q1	151+12.32, 29.1' RT.													2.64	5336.74	5334.10															1									
Q2	150+28.02, 29.0' RT.						1							2.51	5337.01	5334.50								1		1														
Q3	149+01.00, 29.0' RT.			1										4.25	5337.51	5333.26								1		1														
Q4	147+87.84, 28.1' RT.														5337.59																1									
Q5	147+52.00, 29.0' RT.						1							2.61	5338.11	5335.50								1		1														
																															30	115	SEE DRAINAGE PLANS							
SHEET DT-1 TOTALS		0	0	4	1	0	0	0	0	1	0	2	0	0											0	26	101	42	4	0	9	3	1	2	0	0				
SHEET DT-2 TOTALS		0	0	5	0	1	0	1	0	0	0	2	1	4											53	145	69	608	3	4	9	0	0	4	0	0				
SHEET DT-3 TOTALS		1	0	3	0	1	2	2	0	0	1	3	0	1											0	46	0	626	6	0	10	3	0	6	0	0				
SHEET DT-4 TOTALS		0	1	4	0	0	3	0	2	0	0	3	0	0											30	30	40	0	4	0	6	7	1	3	30	115				
PROJECT TOTALS		1	1	16	1	2	5	3	2	1	1	10	1	5											83	247	210	1276	17	4	34	13	2	15	30	115				

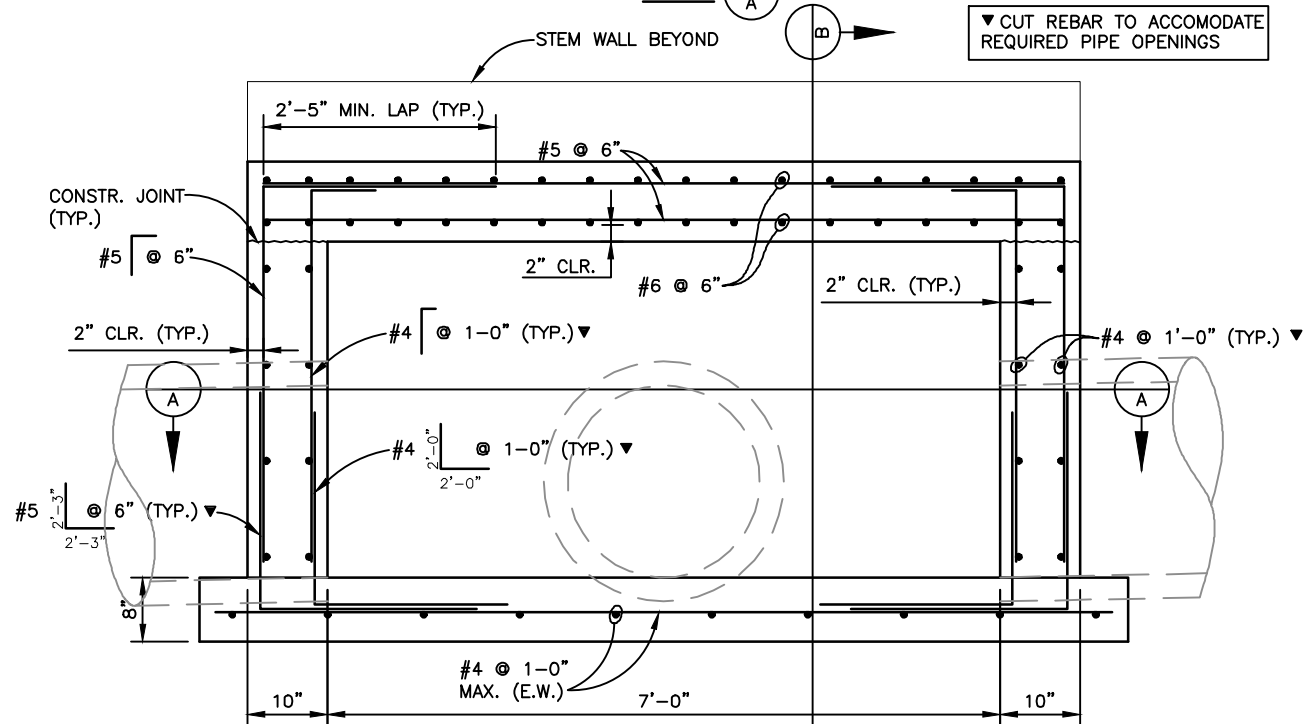
(1) SEE SHEET DT-01 FOR DRAINAGE TABULATION NOTES



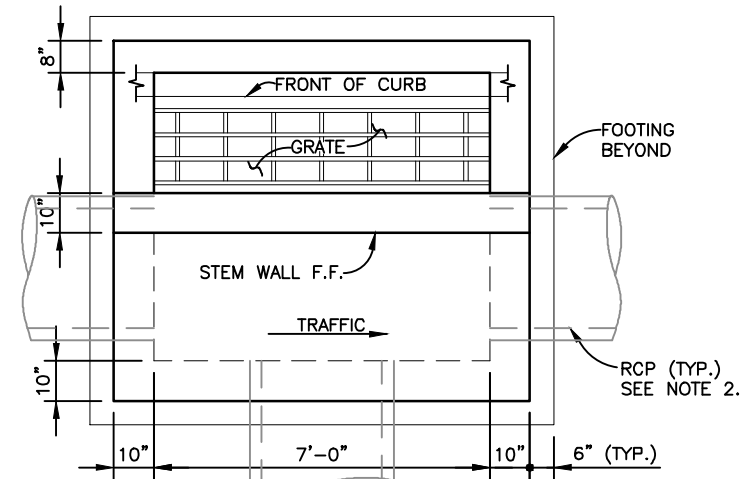
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	File Name: 118355_DRTB_SH01.DWG			Date	Comments	Initials		No Revisions:						18-ST-40	
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								Sheet Subset: DRAINAGE		Subset Sheets: DT-04 of 4		Sheet Number 173			



PLAN A



ELEVATION B

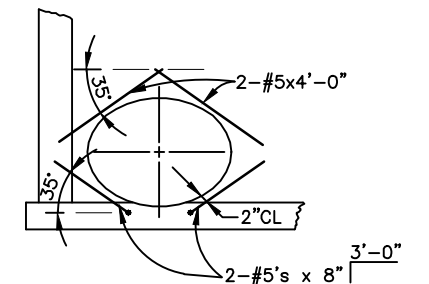


GENERAL PLAN LAYOUT

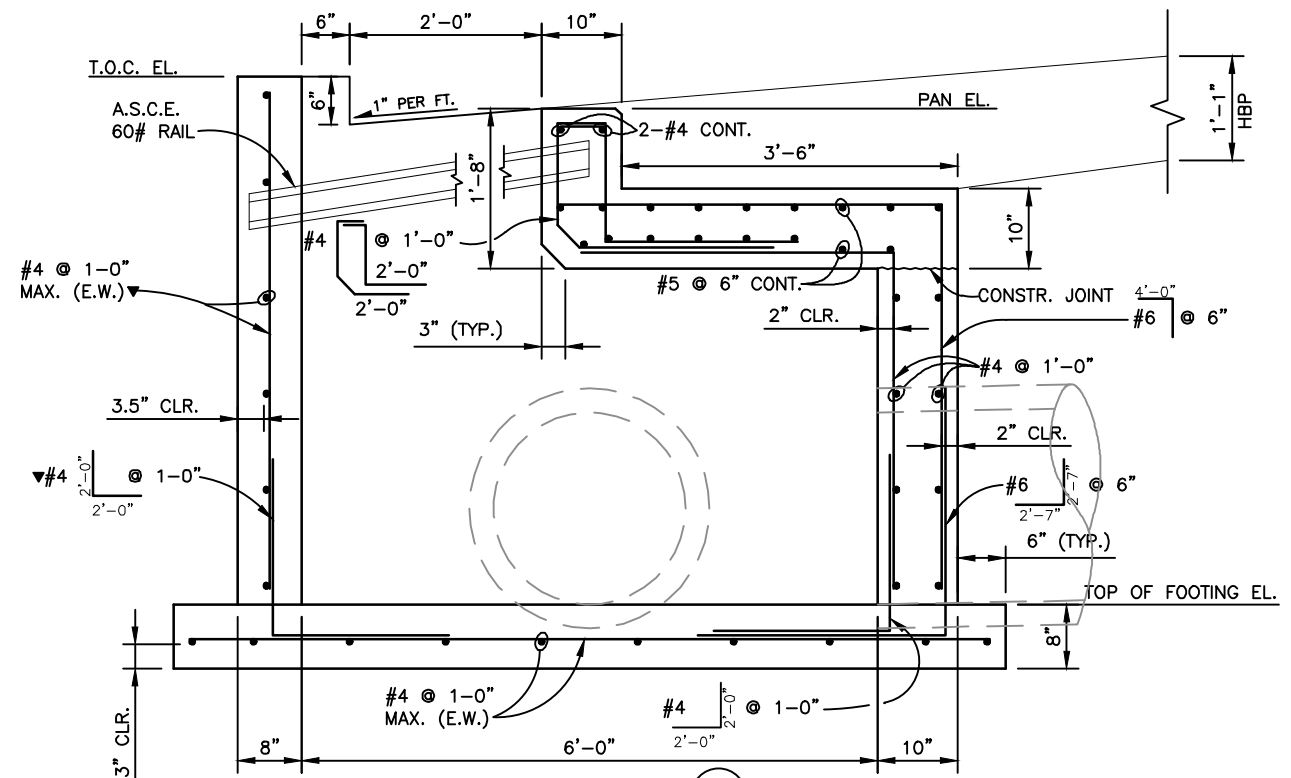
INLET	T.O.C. EL.	PAN EL.	TOP OF FOOTING EL.
M5	5351.64	5351.31	5348.78
K6	5353.30	5352.97	5350.08
K6	5351.15	5350.82	5348.46

NOTES:

- SEE STORM DRAINAGE PLANS AND PROFILES FOR ADDITIONAL INFORMATION.
- THE INLET HEIGHT AND PIPE SIZE COMING INTO AND OUT OF EACH INLET VARIES. SEE DRAINAGE PROFILES FOR ADDITIONAL INFORMATION.
- SEE DETAILS THIS SHEET FOR ADDITIONAL GRATE INSTALLATION DETAILS.



REBAR PLACEMENT FOR RCP WALL PENETRATION



SECTION B

Print Date: 12/7/2020 5:52:52 PM

File Name: 118355_DRDT_SH01.DWG

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8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed

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Revised:

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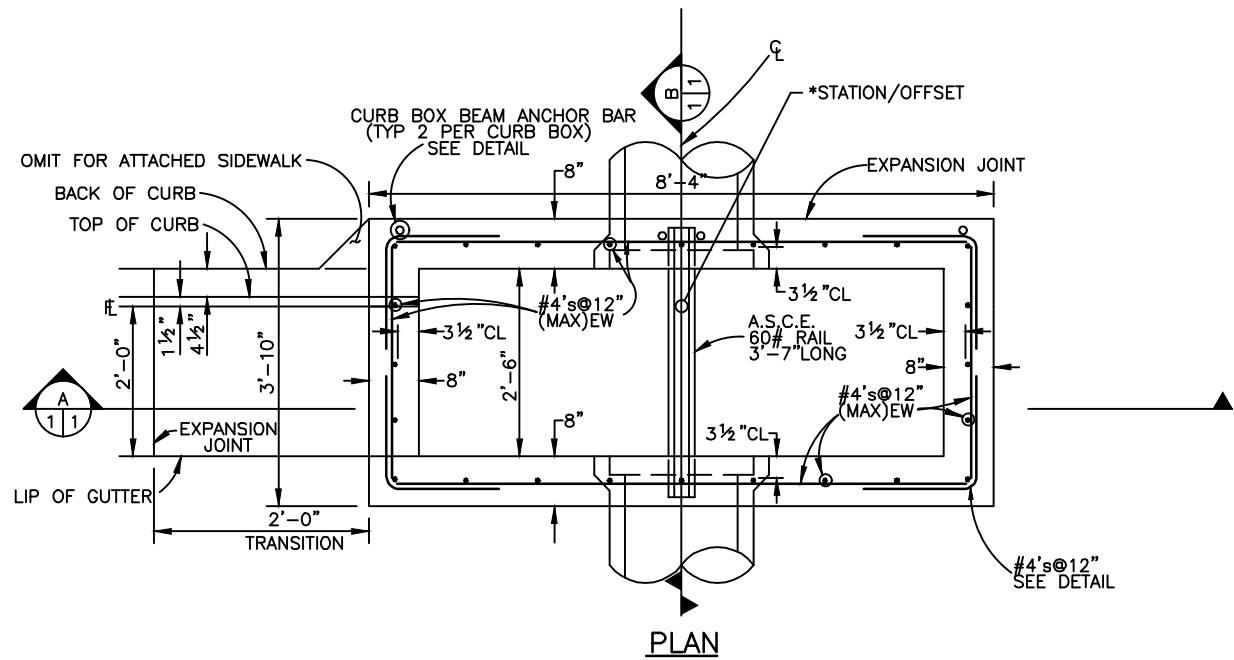
RALSTON RD - YUKON ST TO GARRISON ST
DRAINAGE DETAILS
INLET TYPE 16 (DOUBLE) (SPECIAL)

Designer:	CDT	Structure	
Detailer:	SMT	Numbers	
Sheet Subset:	DRAINAGE	Subset Sheets:	DD-01 of 3

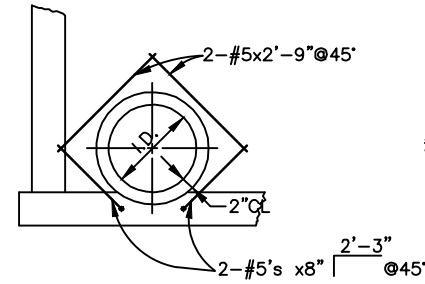
Project No./Code

18-ST-40

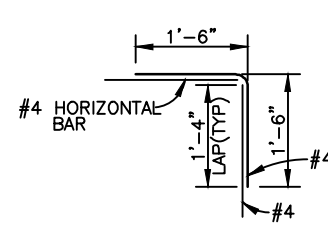
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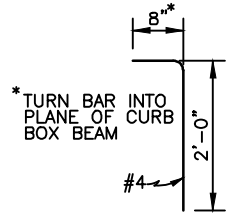
REBAR PLACEMENT
INLET WALL PENETRATION



TYPICAL CORNER
REBAR PLACEMENT

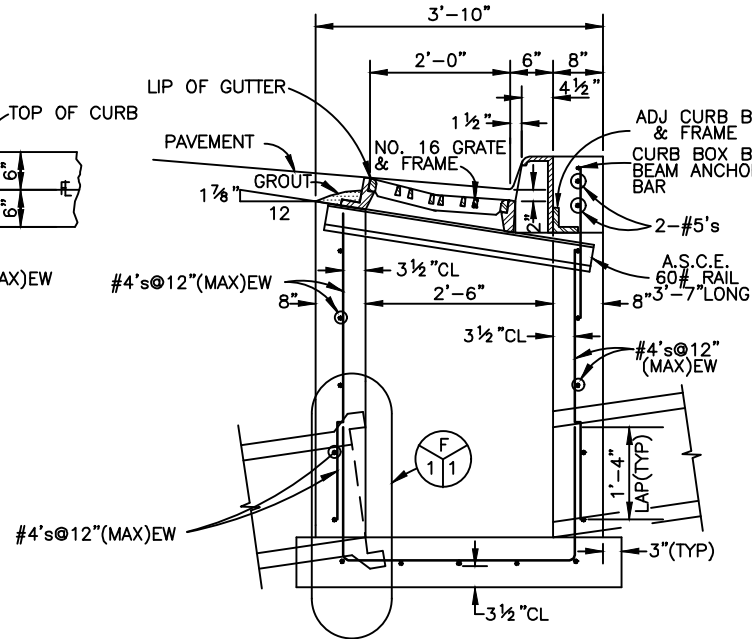
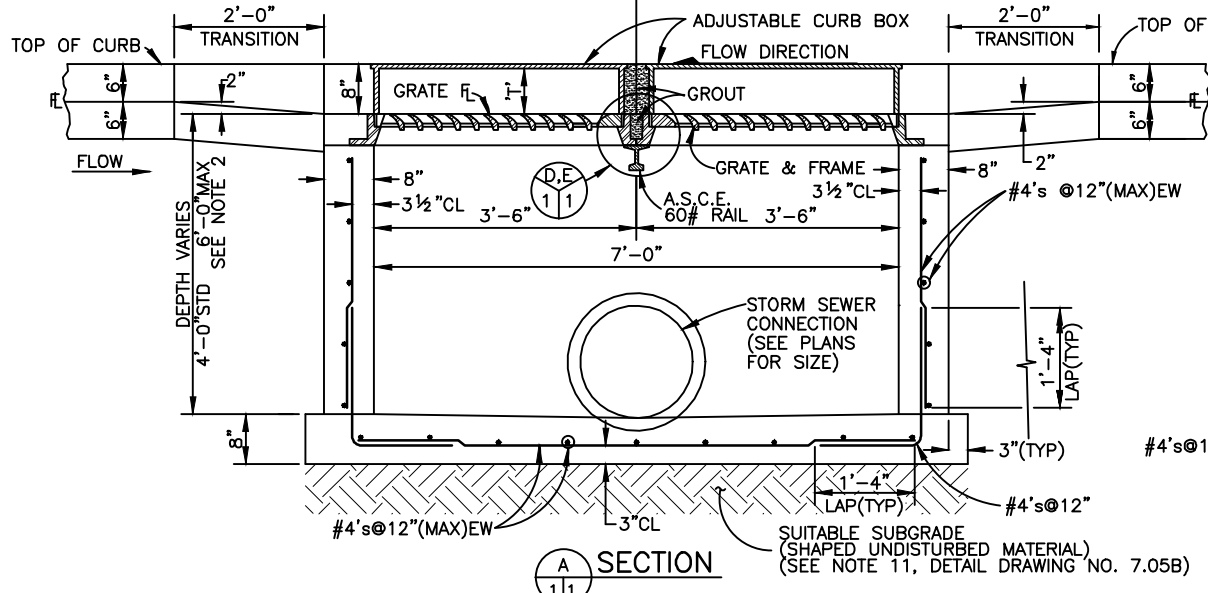


CURB BOX BEAM
ANCHOR BAR (TYP)

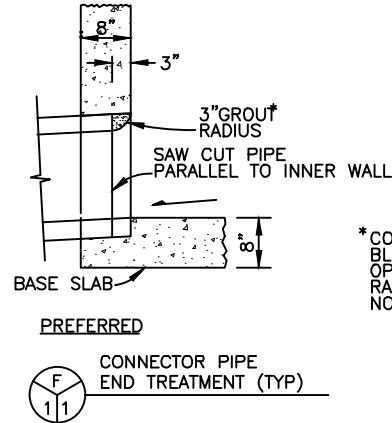


- NOTES:
1. FOR PAYMENT PURPOSES, INLET STRUCTURE SHALL ALSO INCLUDE 2'-0" CURB AND GUTTER TRANSITION SECTION AT EACH END OF INLET.
 2. STANDARD INLET DEPTH=4'-0". INLETS DEEPER THAN 6' MAXIMUM DEPTH SHALL REQUIRE SUBMISSION OF SHOP DRAWINGS AND DESIGN ANALYSIS FOR APPROVAL.
 3. MINIMUM CONNECTOR PIPE DIAMETER VARIES.
 4. ALL WORK SHALL CONFORM TO AASHTO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" 1990 EDITION.
 5. CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 4000 PSI.
 6. FLOOR SLOPE MAY BE POURED MONOLITHIC WITH BASE.
 7. NO FORMWORK SHALL REMAIN INSIDE STRUCTURE WHEN COMPLETED.
 8. ALL REINFORCING STEEL SHALL BE ASTM, A-615, GRADE 60 DEFORMED BARS. DIAMETER OF BEND MEASURED ON THE INSIDE OF THE BAR SHALL BE A MINIMUM OF 6 BAR DIAMETERS.
 9. ALL REINFORCING STEEL SHALL BE 2" (MIN) CLEARANCE FROM FORMED SURFACES, AND 3" CLEARANCE AGAINST EARTH UNLESS OTHERWISE NOTED.
 10. SPLICING OF REINFORCING STEEL SHALL BE PERMITTED ONLY WHERE DETAILED IN DRAWINGS.
 11. SUB-GRADE SHALL BE SHAPED UNDISTURBED MATERIAL OR OVER EXCAVATED AND BACKFILLED WITH CLASS B BEDDING MATERIAL.
 12. SUB-GRADE SHALL BE A GRADATION EQUAL TO CLASS B BEDDING COMPACTED TO 95% MAXIMUM DRY DENSITY, AASHTO DESIGNATION T-180.
 13. BACKFILL AROUND STRUCTURE TO BE HAND TAMPERED IN 6" LIFTS. (BACKFILL METHOD B).
 14. INLET WALLS SHALL BE FORMED BOTH INSIDE AND OUTSIDE. CASTINGS OF SIDEWALLS AGAINST EARTH IS NOT PERMITTED.
 15. LEAN CONCRETE FILL TO BE $F_c = 2000$ PSI.
 16. DOUBLE NO. 16 INLETS ARE TO BE INSTALLED ON A TANGENT (STRAIGHT) PORTION OF CURB ONLY AND SHALL NOT BE INSTALLED WITHIN A CURB RADIUS OR OTHER CURVILINEAR CURB AND GUTTER SECTIONS.

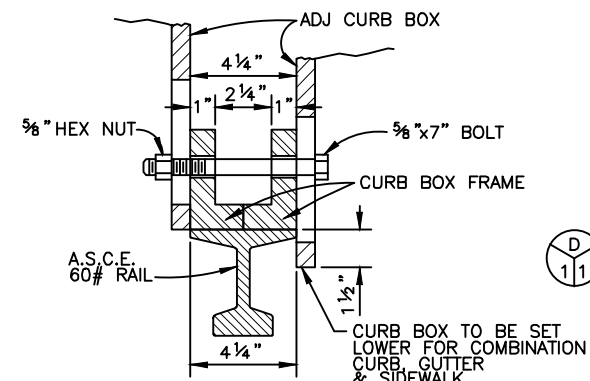
* STATION AND OFFSET DISTANCES ARE TO THE CENTER LINE OF THE STRUCTURE AT THE PROJECTED GUTTER FLOWLINE.



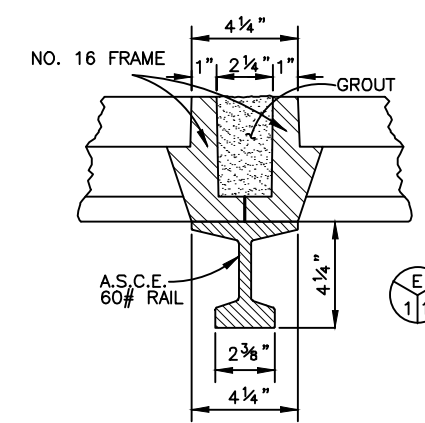
SECTION B
VERTICAL CURB
AND GUTTER



* CONTRACTOR TO NOTCH & BLOCK OUT AROUND PIPE OPENING AND FORM SMOOTH RADIUS AROUND PIPE WITH NON-SHRINK GROUT



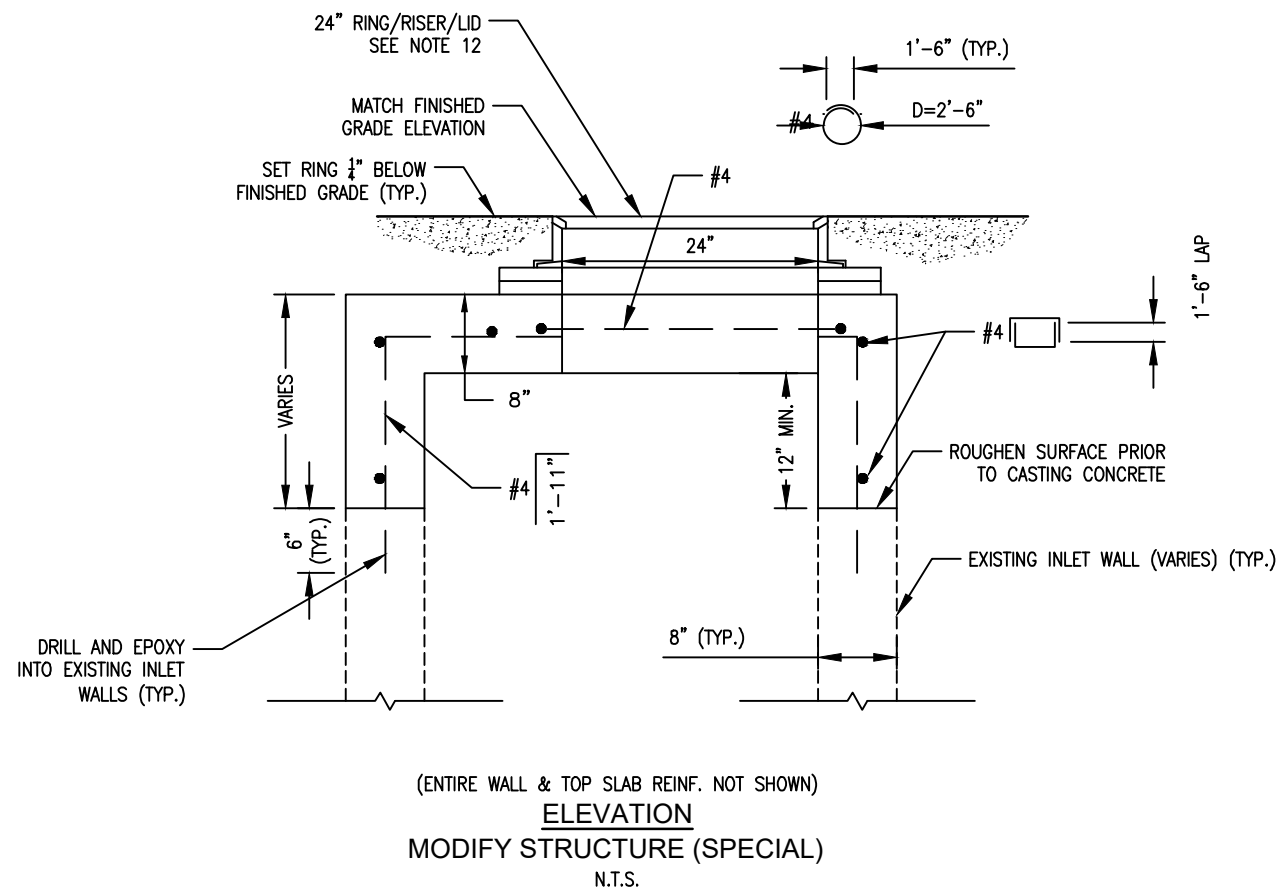
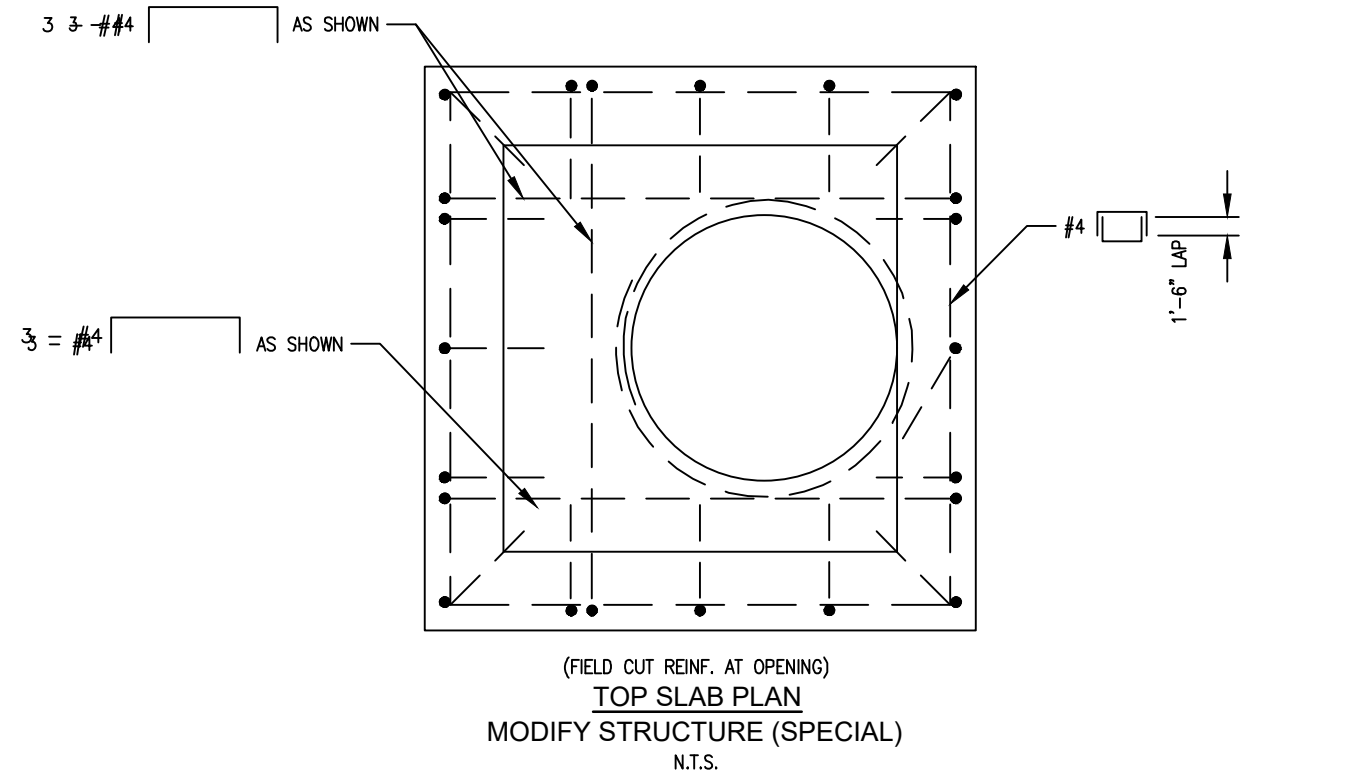
PLACEMENT OF ADJ CURB
BOX ON SUPPORT RAIL (TYP)



"T"=THROAT OPENING
"T"=6" FOR 6" VERTICAL CURB & GUTTER
"T"=5" FOR COMBINATION CURB, GUTTER & SIDEWALK
DROP FROM GUTTER FL ELEVATION TO GRATE FL ELEVATION (TRANSITION) IS 2"

INLET TYPE 16 DETAILS
(DOUBLE)

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File Name: 118355_DRDT_SH02.DWG			Date	Comments	Initials		No Revisions:					18-ST-40		
Horizontal Scale: 1" = 40' Vertical Scale: N/A							Revised:		Designer: CDT		Structure			
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							Void:		Sheet Subset: DRAINAGE		Subset Sheets: DD-02 of 3		Sheet Number 175	



NOTES:

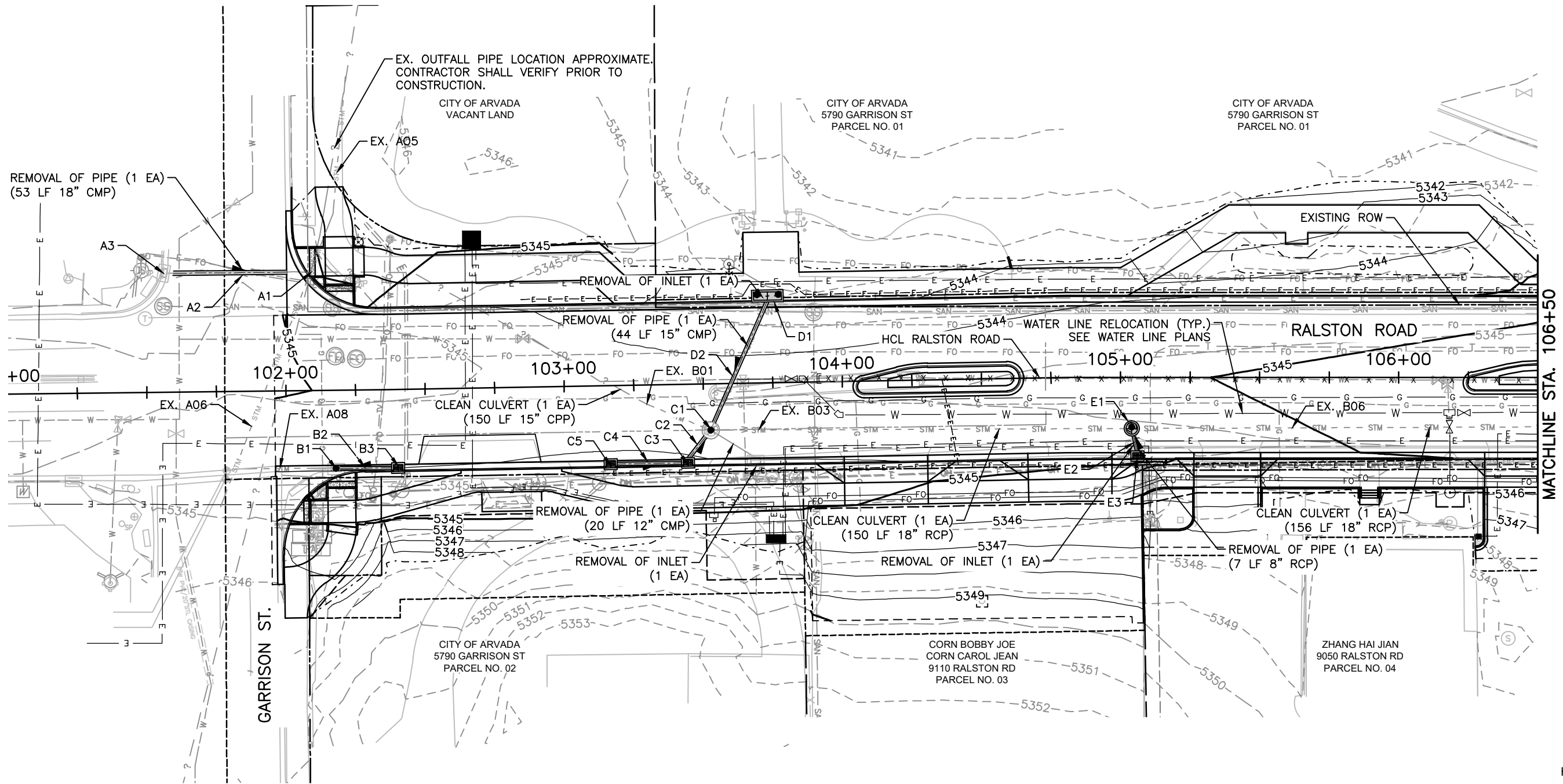
1. ALL INCIDENTAL ITEMS REQUIRED TO CONSTRUCT, CONNECT PIPES, EXCAVATE/BACKFILL MODIFY INLET SHALL BE INCLUDED IN THE UNIT PRICE OF MODIFY STRUCUTRE (SPECIAL) (1 EACH).
2. MANHOLE STEPS ARE REQUIRED AND SHALL BE IN ACCORDANCE WITH DENVER STANDARD DETAIL S-750.
3. ALL CONCRETE, UNLESS NOTED OTHERWISE, SHALL BE CDOT CLASS D, $f'c=4,500$ PSI.
4. THE CONTRACTOR SHALL NOT BACKFILL STRUCTURES UNTIL TOP SLAB AND WALLS HAVE REACHED DESIGN STRENGTH $f'c=4500$ PSI.
5. ALL REINFORCING STEEL SHALL BE GRADE 60.
6. ALL REINFORCING STEEL SHALL BE BLACK (NON-EPOXY-COATED).
7. ALL REINFORCEMENT SHALL HAVE A CLEAR COVER OF 2 INCHES, EXCEPT WHERE SHOWN OTHERWISE ON THE PLANS.
8. ALL EXPOSED CONCRETE CORNERS/EDGES SHALL HAVE A $\frac{3}{4}$ " CHAMFER.
9. ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED AND ROUGHENED BEFORE FRESH CONCRETE IS PLACED.
10. ALL CONSTRUCTION JOINTS NOT SHOWN ON THE PLANS SHALL BE APPROVED BY THE ENGINEER.
11. EPOXY SHALL BE HILTI HY 150, OR APPROVED EQUAL.
12. INLETS CONVERTED TO A MANHOLE SHALL HAVE INVERTS SHAPED TO DRAIN AND ENVIRONMENTAL MESSAGE (FISH COVERS) REPLACING EXISTING MANHOLE LIDS.



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	File Name: 118355_DRDT_SH03.DWG			Date	Comments	Initials		No Revisions:					18-ST-40	
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MATCHLINE STA. 106+50

I.D.	STATION, OFFSET	ITEM	LENGTH (FT)	PAY DEPTH (FT)	MISC (NOTES)
A1	102+04.05, 42.8' LT.				CONNECT TO EX. PIPE
A2		18 INCH HPPE (CIP)	42		CONNECT TO A3
A3	101+57.64, 42.7' LT.	MODIFY INLET			CONNECT TO A2
B1	102+17.58, 28.0' RT.	MODIFY STRUCTURE (SPECIAL)			CONNECT TO EX. INLET TO MH SEE DRAINAGE DETAILS
B2		15 INCH HPPE (CIP)	20		CONNECT TO B1
B3	102+39.82, 29.0' RT.	INLET TYPE 16 (5 FT)		5	
C1	103+52.38, 16.7' RT.	MODIFY MANHOLE			RIM EL. & CONNECT TO C2 & D2
C2		15 INCH HPPE (CIP)	10		CONNECT TO C1
C3	103+44.00, 29.0' RT.	INLET TYPE 16 (10 FT)		10	

I.D.	STATION, OFFSET	ITEM	LENGTH (FT)	PAY DEPTH (FT)	MISC (NOTES)
C4		15 INCH HPPE (CIP)	26		
C5	103+16.24, 29.0' RT.	INLET TYPE 16 (5 FT)		5	
D1	105+04.00, 18.4' RT.	INLET TYPE R L10 (5 FT)		5	
D2		15 INCH HPPE (CIP)	45		CONNECT TO C1
E1	105+04.00, 18.4' RT.	MANHOLE SLAB BASE (5 FT)		5	CONNECT TO EX. & PROP. STORM
E2		12 INCH HPPE (CIP)	7		
E3	105+06.00, 29.0' RT.	INLET TYPE 16 (5 FT)		5	

HORIZ SCALE: 1"=40'
0' 20' 40'



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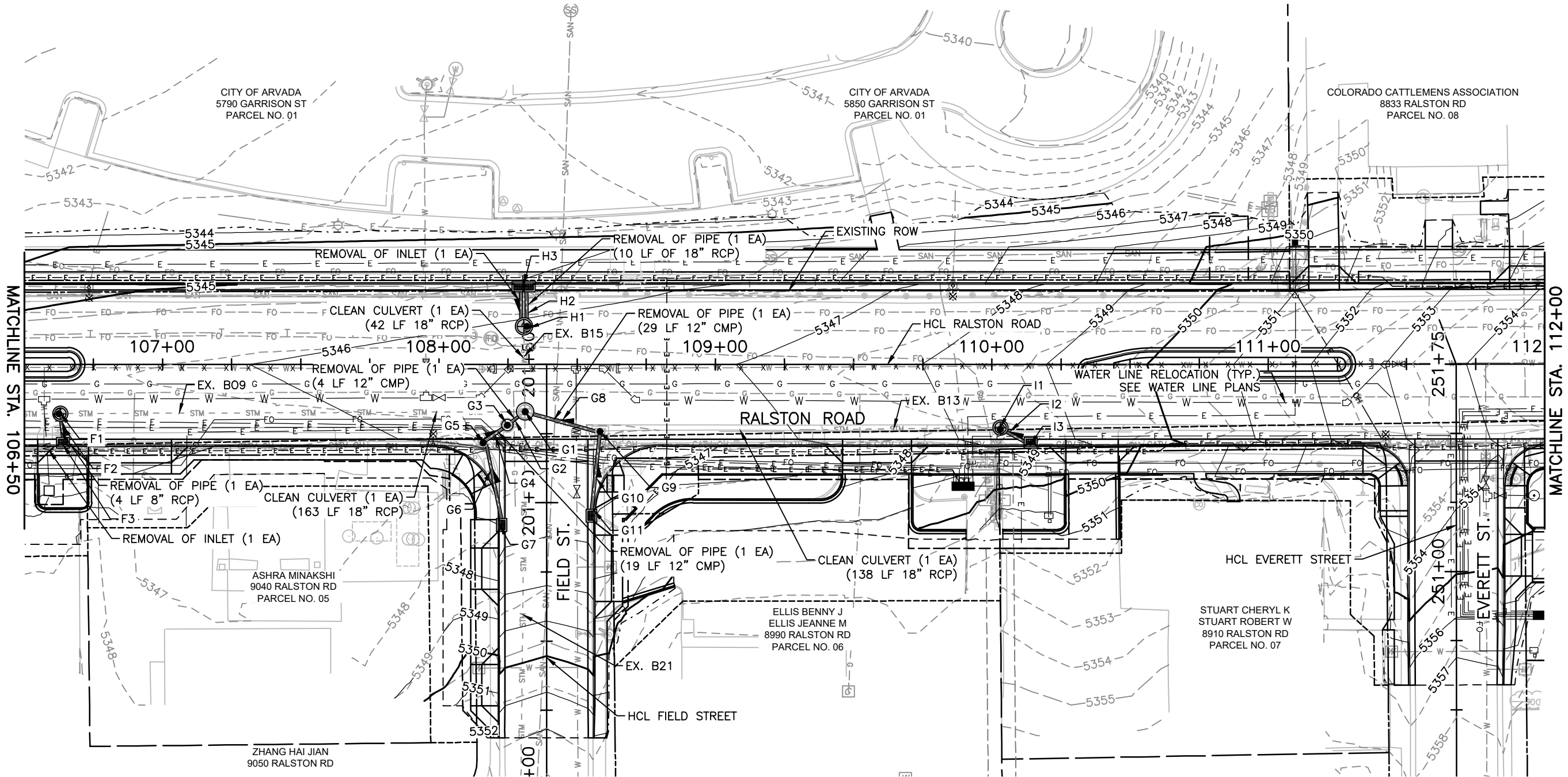
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8101 RALSTON ROAD
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As Constructed		RALSTON RD - YUKON ST TO GARRISON ST DRAINAGE PLAN RALSTON ROAD (BEGIN - STA. 106+50)			Project No./Code
No Revisions:		Designer: CDT	Structure		18-ST-40
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Void:		Sheet Subset: DRAINAGE	Subset Sheets: PL-01 of 10		Sheet Number 177



I.D.	STATION, OFFSET	ITEM	LENGTH (FT)	PAY DEPTH (FT)	MISC (NOTES)
F1	106+63.00, 17.7' RT.	MANHOLE SLAB BASE (5 FT)		5	CONNECT TO EX. & PROP. STORM
F2		12 INCH HPPE (CIP)	7		
F3	106+64.00, 29.0' RT.	INLET TYPE 16 (5 FT)		5	
G1	108+31.15, 17.1' RT.	MODIFY MANHOLE			CONNECT TO PROP. STORM
G2		12 INCH HPPE (CIP)	4		CONNECT TO G1
G3	108+24.71, 22.0' RT.	MODIFY MANHOLE			CONNECT TO G3
G4		12 INCH HPPE (CIP)	8		
G5	108+15.96, 28.3' RT.	MODIFY STRUCTURE (SPECIAL)			CONNECT TO G3
G6		12 INCH HPPE (CIP)	28		CONNECT TO G5
G7	108+21.93, 58.0' RT.	INLET TYPE 16 (5 FT)		5	
G8		12 INCH HPPE (CIP)	24		CONNECT TO G1

I.D.	STATION, OFFSET	ITEM	LENGTH (FT)	PAY DEPTH (FT)	MISC (NOTES)
G9	108+58.20, 24.2' RT.	MODIFY STRUCTURE (SPECIAL)			CONNECT EX. INLET TO MH SEE DRAINAGE DETAILS
G10		12 INCH HPPE (CIP)	29		CONNECT TO G9
G11	108+55.93, 54.6' RT.	INLET TYPE 16 (5 FT)		5	
H1	108+30.74, 13.8' LT.	MANHOLE SLAB BASE (5 FT)		5	CONNECT TO EX. & PROP. STORM
H2		12 INCH HPPE (CIP)	20		DUAL PIPES - CONNECT TO H1
H3	108+30.63, 29.0' LT.	INLET TYPE 16 (DOUBLE) (5 FT)		5	
I1	110+02.99, 22.9' RT.	MANHOLE SLAB BASE (10 FT)		10	CONNECT TO EX. & PROP. STORM
I2		12 INCH HPPE (CIP)	10		
I3	110+14.00, 29.0' RT.	INLET TYPE 16 (5 FT)		5	

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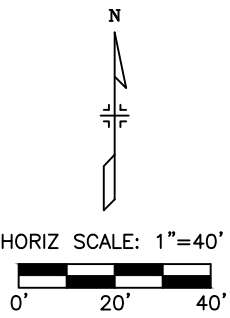
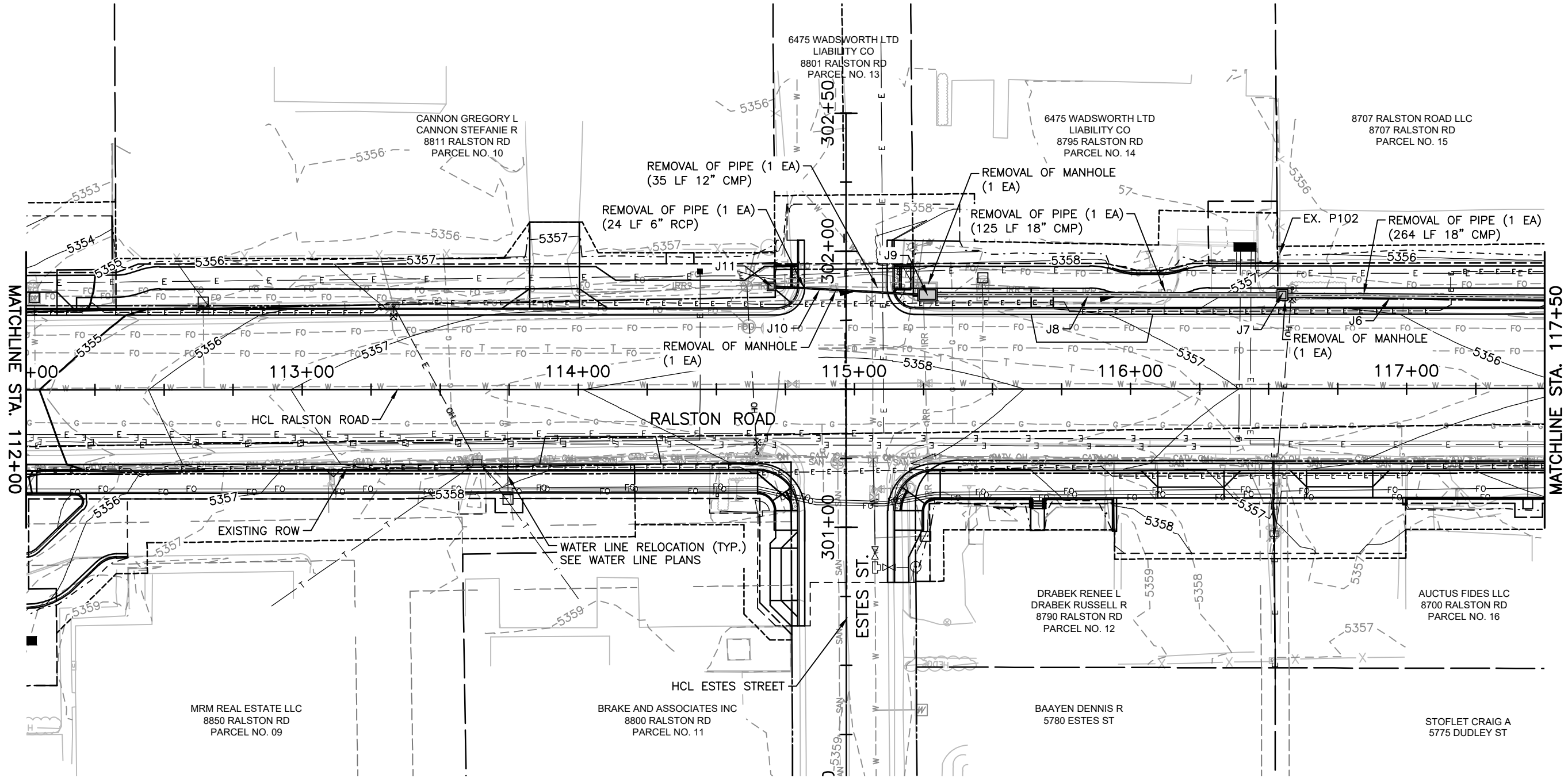
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8101 RALSTON ROAD
ARVADA, CO, 80002

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No Revisions:		Designer: CDT	Structure Numbers	18-ST-40
Revised:		Detailer: SMT		
Void:		Sheet Subst: DRAINAGE	Subst Sheets: PL-02 of 10	Sheet Number 178



I.D.	STATION, OFFSET	ITEM	LENGTH (FT)	PAY DEPTH (FT)	MISC (NOTES)
J6		18 INCH HPPE (CIP)	260		
J7	116+54.99, 34.0' LT.	MANHOLE BOX BASE (5 FT)		5	CONNECT TO EX. AND PROP. STORM
J8		18 INCH HPPE (CIP)	125		
J9	115+26.50, 34.3' LT.	MANHOLE BOX BASE (5 FT)		5	CONNECT TO J8 & EX. IRR SOUTH
J10		6 INCH HPPE (CIP)	53		
J11	114+70.00, 37.3' LT.	MANHOLE BOX BASE (5 FT)		5	CONNECT TO J9 & EX. IRR WEST



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File Name: 118355_DRPL_SH01.DWG

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Sheet Revisions

Date	Comments	Initials

CITY OF ARVADA

PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD

ARVADA, CO, 80002

As Constructed

No Revisions:

Revised:

Void:

RALSTON RD - YUKON ST TO GARRISON ST

DRAINAGE PLAN

RALSTON ROAD (STA. 112+00 – STA. 117+50)

Designer:	CDT	Structure	
Detailer:	SMT	Numbers	
Sheet Subset:	DRAINAGE	Subset Sheets:	PL-03 of 10

Project No./Code

18-ST-40

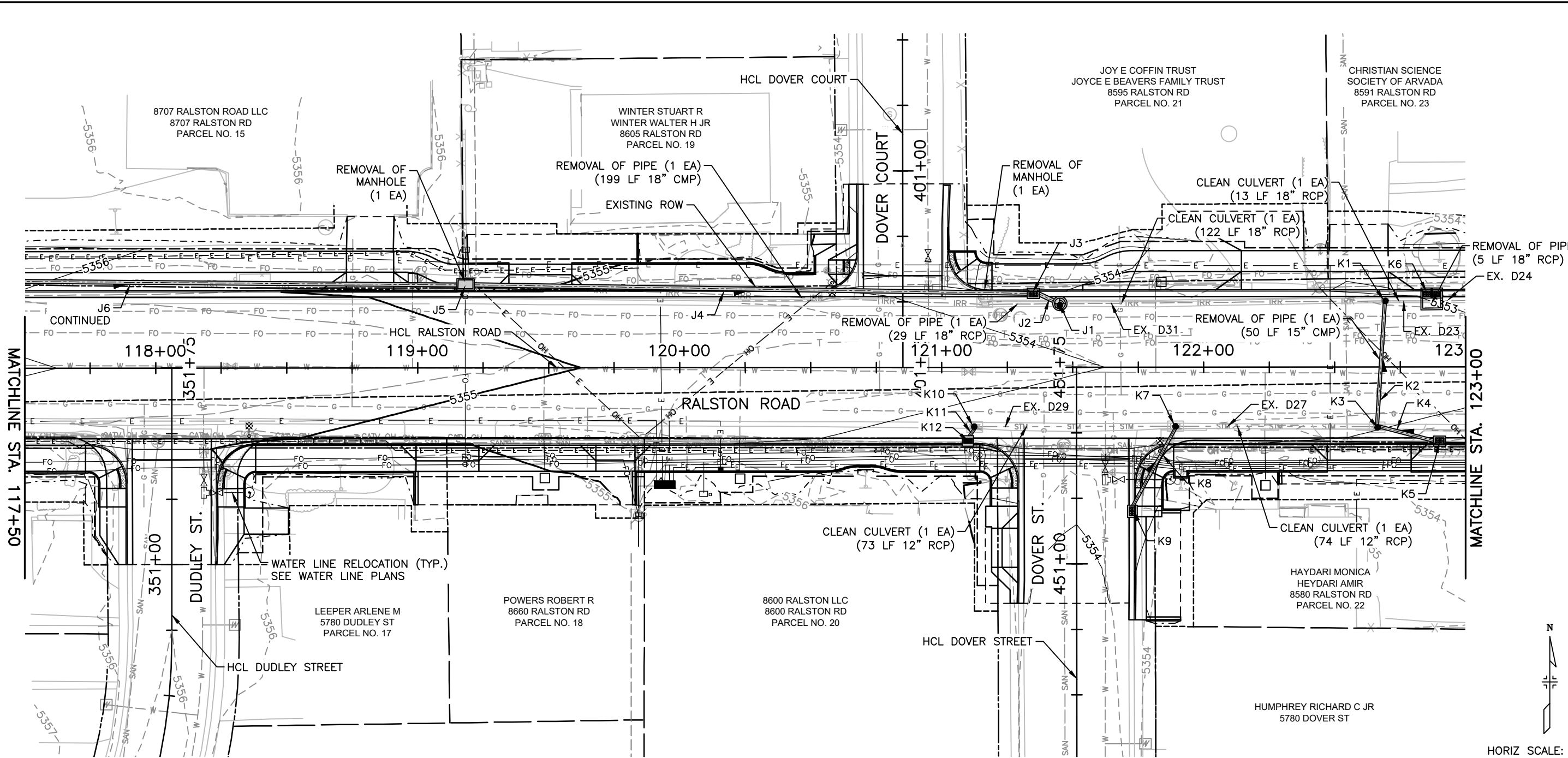
Sheet Number 179

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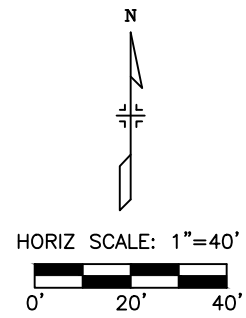
Phone: 303.721.1440

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I.D.	STATION, OFFSET	ITEM	LENGTH (FT)	PAY DEPTH (FT)	MISC (NOTES)
J1	121+45.00, 24.2' LT.	MANHOLE SLAB BASE (5 FT)		5	CONNECT TO EX. & PROP. STORM
J2		18 INCH HPPE (CIP)	9		
J3	121+35.00, 29.0' LT.	INLET TYPE 16 (5 FT)		5	
J4		18 INCH HPPE (CIP)	214		
J5	119+18.32, 31.7' LT.	MANHOLE BOX BASE (5 FT)		5	
K1	122+69.30, 25.2' LT.	MODIFY STRUCTURE (SPECIAL)			CONVERT EX. INLET TO MH & CONNECT TO EX. & PROP. STORM
K2		15 INCH HPPE (CIP)	46		CONNECT TO K1
K3	122+66.27, 23.0' RT.	MODIFY STRUCTURE (SPECIAL)			CONVERT EX. INLET TO MH SEE DRAINAGE DETAILS
K4		15 INCH HPPE (CIP)	23		

I.D.	STATION, OFFSET	ITEM	LENGTH (FT)	PAY DEPTH (FT)	MISC (NOTES)
K5	122+90.00, 29.0' RT.	INLET TYPE 16 (5 FT)		5	
K6	122+87.00, 29.0' LT.	INLET TYPE 16 (DOUBLE) (SPECIAL)		5	SEE DRAINAGE DETAILS
K7	121+89.19, 22.6' RT.	MODIFY STRUCTURE (SPECIAL)			CONVERT EX. INLET TO MH SEE DRAINAGE DETAILS
K8		12 INCH HPPE (CIP)	34		CONNECT TO K7
K9	121+73.47, 55.0' RT.	INLET TYPE 16 (5 FT)		5	
K10	121+12.34, 22.6' RT.	MODIFY STRUCTURE (SPECIAL)			CONVERT EX. INLET TO MH SEE DRAINAGE DETAILS
K11		12 INCH HPPE (CIP)	2		CONNECT TO K10
K12	121+10.00, 28.0' RT.	INLET TYPE 13 (5 FT)			



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Sheet Revisions

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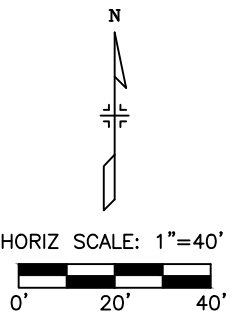
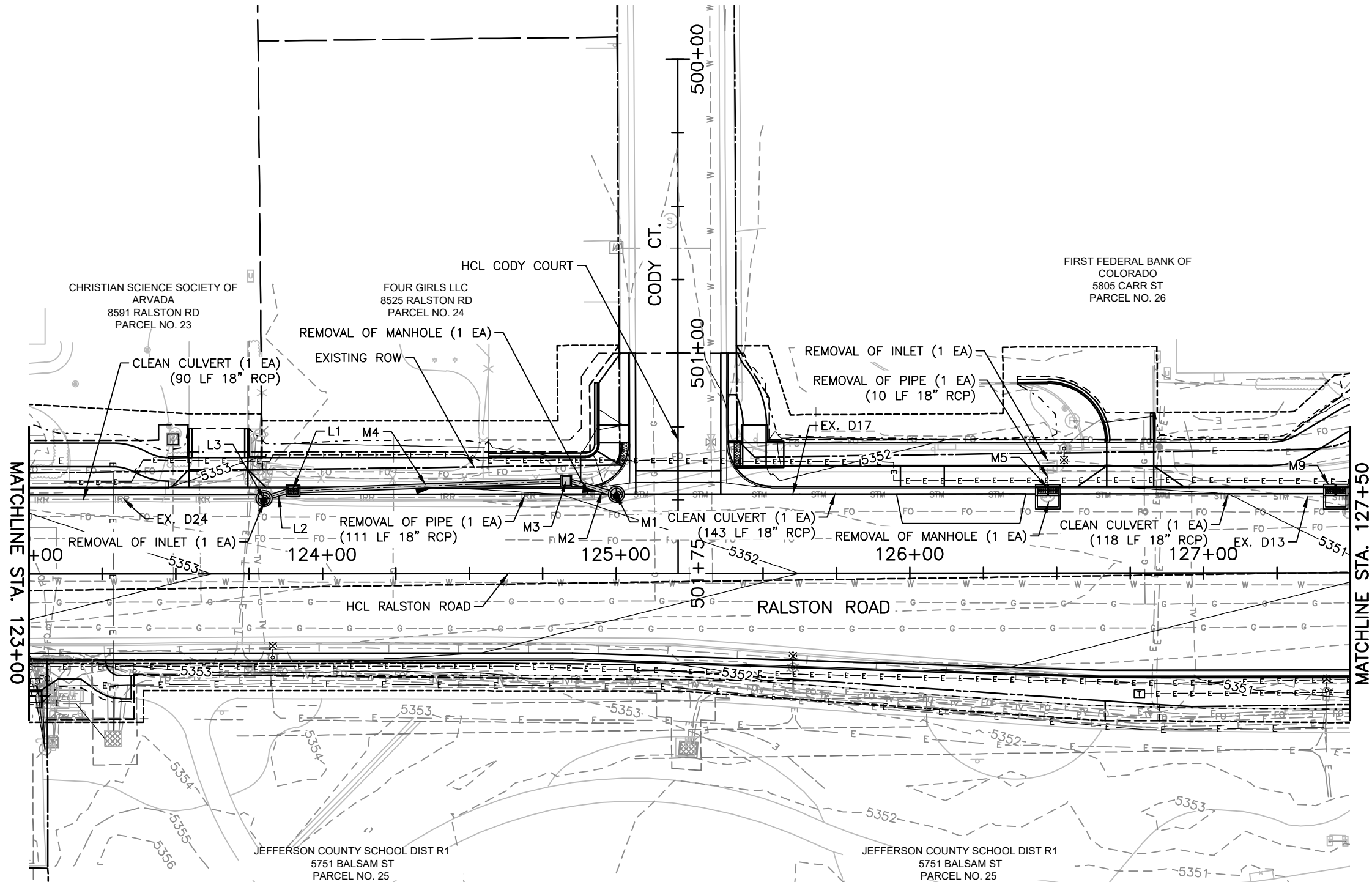
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8101 RALSTON ROAD
ARVADA, CO, 80002

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RALSTON RD - YUKON ST TO GARRISON ST DRAINAGE PLAN RALSTON ROAD (STA. 117+50 - STA. 123+00)	
Designer: CDT	Structure Numbers
Detailer: SMT	
Sheet Subset: DRAINAGE	Subset Sheets: PL-04 of 10

Project No./Code	
18-ST-40	
Sheet Number	180



I.D.	STATION, OFFSET	ITEM	LENGTH (FT)	PAY DEPTH (FT)	MISC (NOTES)
L1	123+90.00, 29.0' LT.	INLET TYPE 16 (5 FT)		5	CONNECT TO EX. STORM NORTH SIDE
L2		18 INCH HPPE (CIP)	8		
L3	123+80.00, 25.5' LT.	MANHOLE SLAB BASE (5 FT)		5	CONNECT TO EX. & PROP. STORM

I.D.	STATION, OFFSET	ITEM	LENGTH (FT)	PAY DEPTH (FT)	MISC (NOTES)
M1	125+00.00, 26.9' LT.	MANHOLE SLAB BASE (5FT)		5	CONNECT TO EX. & PROP. STORM
M2		18 INCH HPPE (CIP)	15		
M3	124+83.00, 31.5' LT.	MANHOLE BOX BASE (5 FT)		5	
M4		18 INCH HPPE (CIP)	90		
M5	126+47.00, 29.0' LT.	INLET TYPE 16 (DOUBLE) (SPECIAL)		5	SEE DRAINAGE DETAILS
M9	127+45.00, 29.0' LT.	INLET TYPE 16 (DOUBLE) (SPECIAL)		5	SEE DRAINAGE DETAILS



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Sheet Revisions

Date	Comments	Initials



CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed

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RALSTON RD - YUKON ST TO GARRISON ST
DRAINAGE PLAN
RALSTON ROAD (STA. 123+00 – STA. 127+50)

Designer:	CDT	Structure	
Detailer:	SMT	Numbers	
Sheet Subset:	DRAINAGE	Subset Sheets:	PL-05 of 10

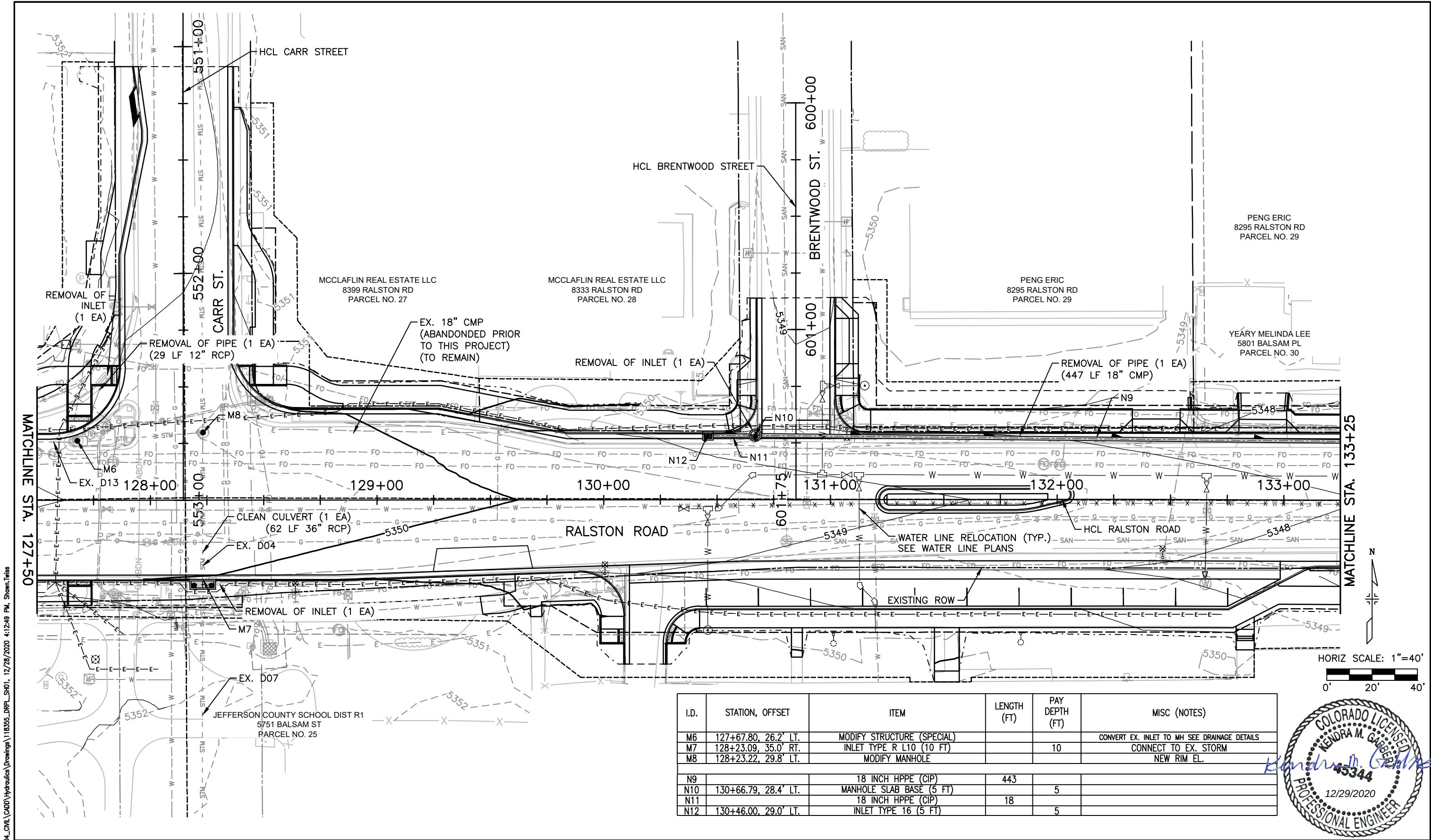
Project No./Code

18-ST-40

Sheet Number 181



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I.D.	STATION, OFFSET	ITEM	LENGTH (FT)	PAY DEPTH (FT)	MISC (NOTES)
M6	127+67.80, 26.2' LT.	MODIFY STRUCTURE (SPECIAL)			CONVERT EX. INLET TO MH SEE DRAINAGE DETAILS
M7	128+23.09, 35.0' RT.	INLET TYPE R L10 (10 FT)		10	CONNECT TO EX. STORM
M8	128+23.22, 29.8' LT.	MODIFY MANHOLE			NEW RIM EL.
N9		18 INCH HPPE (CIP)	443		
N10	130+66.79, 28.4' LT.	MANHOLE SLAB BASE (5 FT)		5	
N11		18 INCH HPPE (CIP)	18		
N12	130+46.00, 29.0' LT.	INLET TYPE 16 (5 FT)		5	



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PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD

ARVADA, CO, 80002

As Constructed

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RALSTON RD - YUKON ST TO GARRISON ST

DRAINAGE PLAN

RALSTON ROAD (STA. 127+50 - STA. 133+25)

Designer:	CDT	Structure	
Detailer:	SMT	Numbers	
Sheet Subset:	DRAINAGE	Subset Sheets:	PL-06 of 10

Project No./Code

18-ST-40

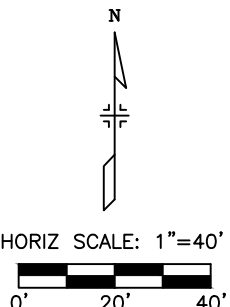
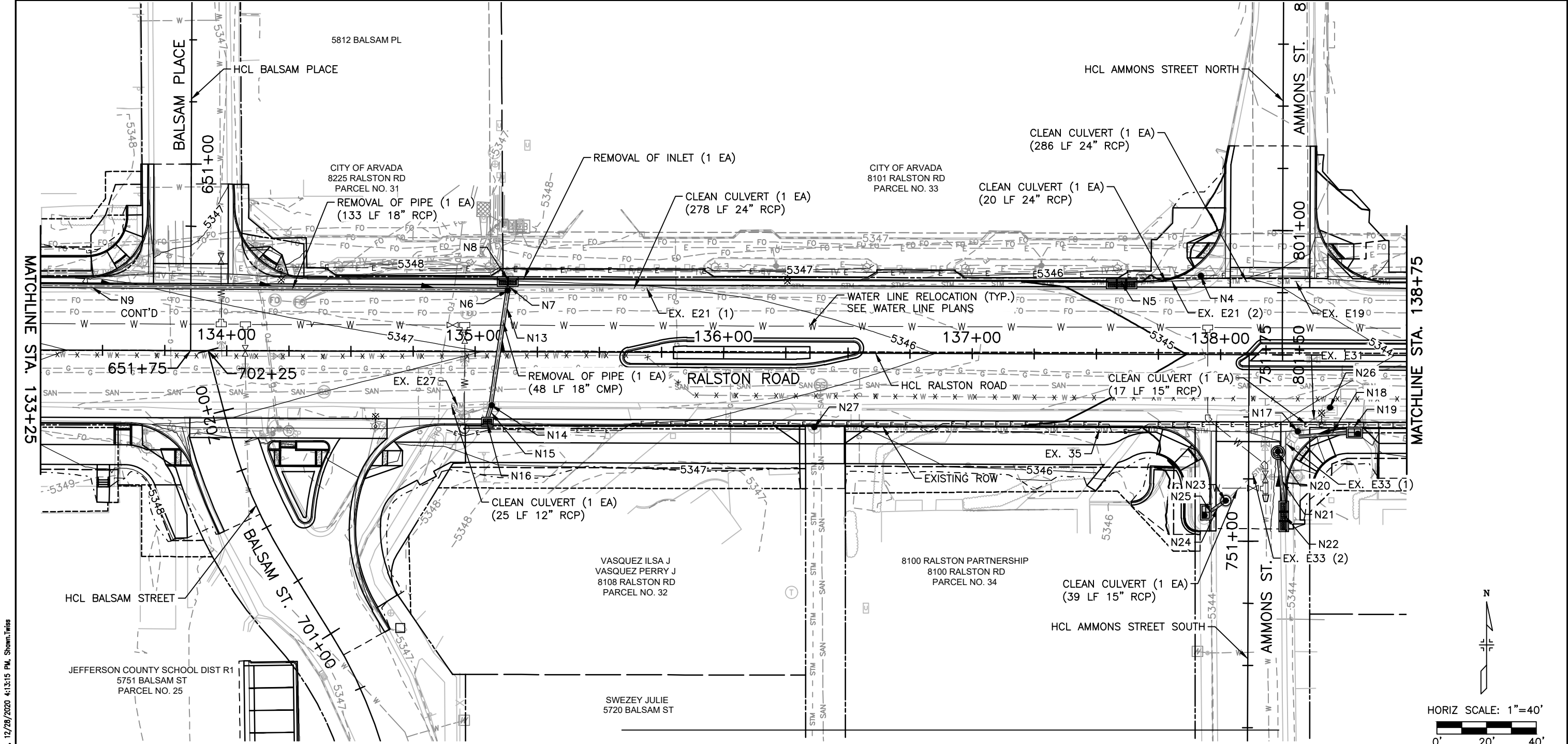
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I.D.	STATION, OFFSET	ITEM	LENGTH (FT)	PAY DEPTH (FT)	MISC (NOTES)
N4	137+92.17, 29.6' LT.	MODIFY STRUCTURE (SPECIAL)			NEW RIM EL. & CONVERT EX. INLET TO MH
N5	137+60.00, 29.0' LT.	INLET TYPE 16 (TRIPLE) (5 FT)		5	CONNECT TO EX. RCP
N6	135+12.96, 24.7' LT.	MODIFY STRUCTURE (SPECIAL)			CONNECT EX. INLET TO MH & CONNECT TO EX./PROP. STORM
N7		18 INCH HPPE (CIP)	2		CONNECT TO N6
N8	135+13.00, 29.0' LT.	INLET TYPE 16 (DOUBLE) (5 FT)		5	
N13		18 INCH HPPE (CIP)	46		CONNECT TO N6
N14	135+06.64, 21.5' RT.	MODIFY STRUCTURE (SPECIAL)			NEW RIM EL. & CONVERT EX. INLET TO MH
N15		18 INCH HPPE (CIP)	4		CONNECT TO N14
N16	135+05.00, 29.0' RT.	INLET TYPE 16 (5 FT)		5	

I.D.	STATION, OFFSET	ITEM	LENGTH (FT)	PAY DEPTH (FT)	MISC (NOTES)
N17	138+30.01, 32.2' RT.	MODIFY STRUCTURE (SPECIAL)			CONNECT EX. INLET TO MH & CONNECT PROP. STORM
N18		15 INCH HPPE (CIP)	21		CONNECT TO N17
N19	138+54.00, 29.0' RT.	INLET TYPE R L5 (5 FT)		5	
N20	138+23.23, 39.4' RT.	MANHOLE SLAB BASE (5 FT)		5	CONNECT TO EX. & PROP. STORM
N21		15 INCH HPPE (CIP)	19		
N22	138+25.67, 65.0' RT.	INLET TYPE 16 (TRIPLE) (5 FT)		5	
N23	138+02.27, 58.7' RT.	MODIFY MANHOLE			NEW RIM EL. & CONNECT TO PROP. STORM
N24		12 INCH HPPE (CIP)	6		CONNECT TO N23
N25	137+94.25, 64.2' RT.	INLET TYPE R L5 (5 FT)		5	
N26	138+44.16, 21.1' RT.	MODIFY STRUCTURE (SPECIAL)			NEW RIM EL. CONVERT EX. INLET TO MH
N27	136+36.57, 29.8' RT.	MODIFY MANHOLE			NEW RIM EL.

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8101 RALSTON ROAD
ARVADA, CO, 80002

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RALSTON RD - YUKON ST TO GARRISON ST
DRAINAGE PLAN
RALSTON ROAD (STA. 133+25 - STA. 138+75)

Designer: CDT
Detailer: SMT
Sheet Subset: DRAINAGE

Structure Numbers

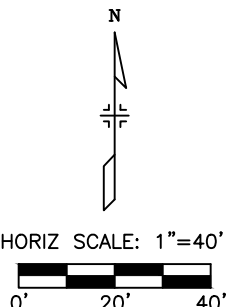
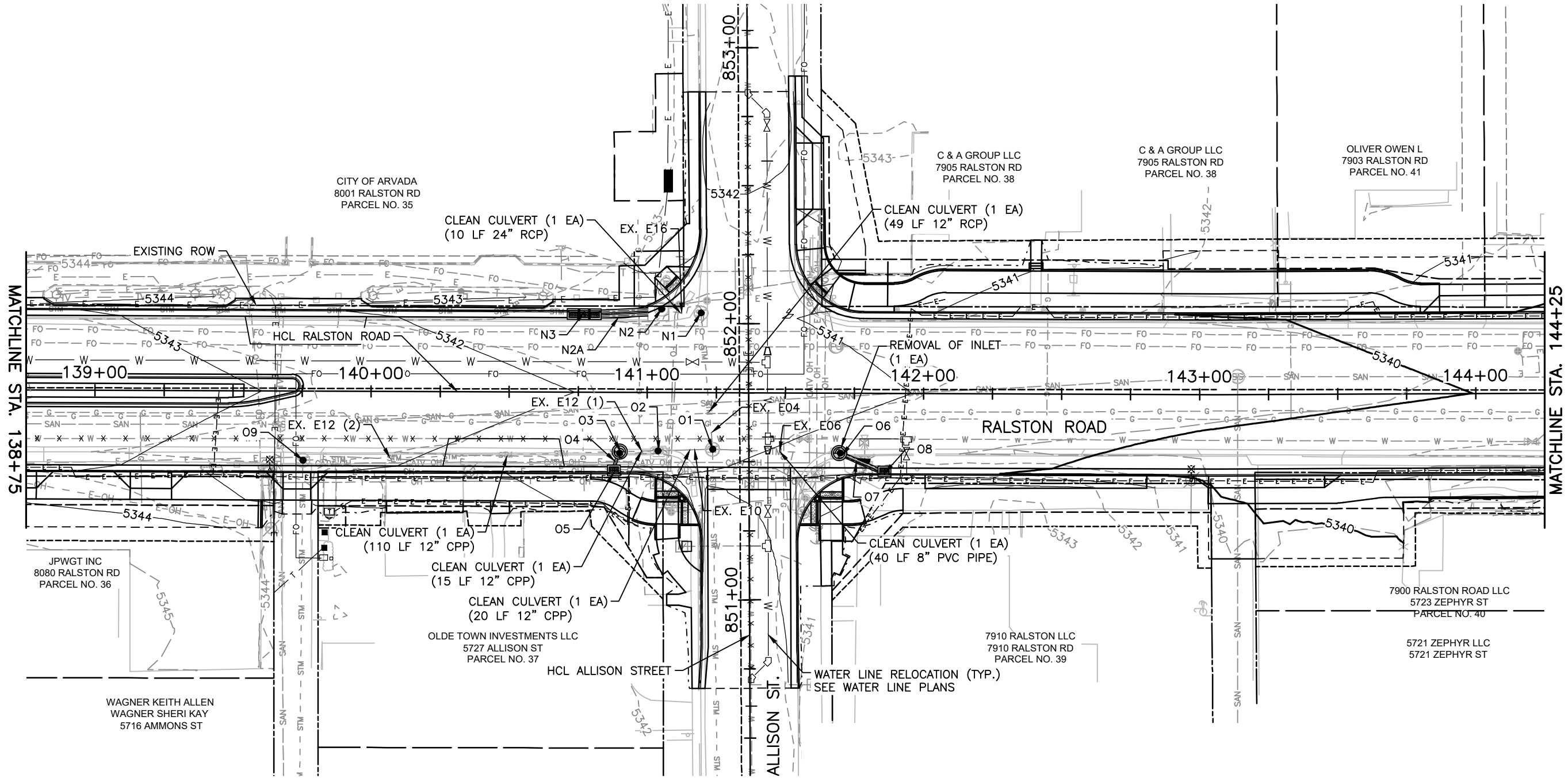
Subset Sheets: PL-07 of 10

Project No./Code

18-ST-40

Sheet Number 183

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I.D.	STATION, OFFSET	ITEM	LENGTH (FT)	PAY DEPTH (FT)	MISC (NOTES)
N1	141+19.34, 28.8' LT.	MODIFY MANHOLE			NEW RIM EL.
N2	141+02.58, 29.2' LT.	MODIFY STRUCTURE (SPECIAL)			NEW RIM EL. & CONVERT EX. INLET TO MH
N2A		12 INCH HPPE (CIP)	44		DUAL PIPE CONNECT TO N2
N3	140+77.00, 29.0' LT.	INLET TYPE 16 (TRIPLE) (5 FT)		5	CONNECT TO EX. RCP

I.D.	STATION, OFFSET	ITEM	LENGTH (FT)	PAY DEPTH (FT)	MISC (NOTES)
01	141+23.74, 20.5' RT.	MODIFY MANHOLE			NEW RIM EL.
02	141+03.95, 21.2' RT.	MODIFY STRUCTURE (SPECIAL)			NEW RIM EL. & CONVERT EX. INLET TO MH
03	140+90.00, 21.5' RT.	MANHOLE SLAB BASE (5 FT)		5	CONNECT TO EX. & PROP. STORM
04		12 INCH HPPE (CIP)	4		
05	140+88.00, 29.0' RT.	INLET TYPE 16 (5 FT)		5	
06	141+69.43, 21.7' RT.	MANHOLE SLAB BASE (5 FT)		5	CONNECT TO EX. & PROP. STORM
07		6 INCH HPPE (CIP)	30		DUAL PIPES - CONNECT TO 06
08	141+86.00, 29.0' RT.	INLET TYPE 16 (5 FT)		5	
09	139+75.37, 25.1' RT.	MODIFY MANHOLE			



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Sheet Revisions

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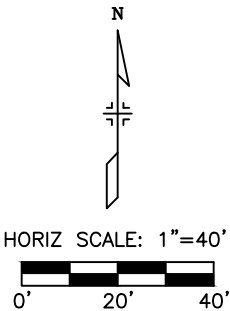
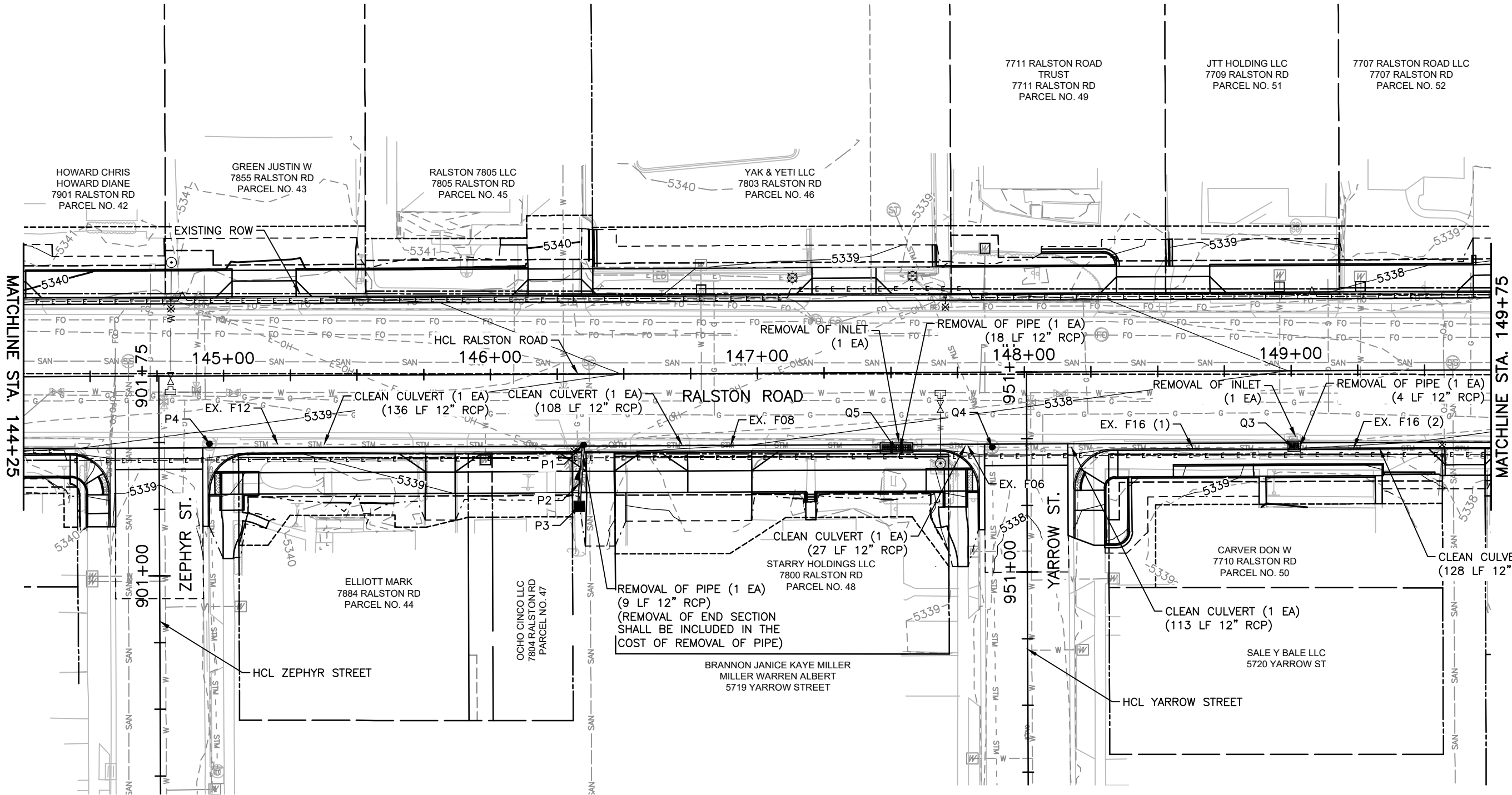
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PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed	
No Revisions:	
Revised:	
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RALSTON RD - YUKON ST TO GARRISON ST DRAINAGE PLAN RALSTON ROAD (STA. 138+75 - STA. 144+25)			
Designer:	CDT	Structure	
Detailer:	SMT	Numbers	
Sheet Subset:	DRAINAGE	Subset Sheets:	PL-08 of 10

Project No./Code	
18-ST-40	
Sheet Number	184



I.D.	STATION, OFFSET	ITEM	LENGTH (FT)	PAY DEPTH (FT)	MISC (NOTES)
P1	146+34.71, 26.6' RT.	MODIFY MANHOLE			NEW RIM EL. & CONNECT TO EX./PROP. STORM
P2		12 INCH HPPE (CIP)	20		CONNECT TO P1
P3	146+32.99, 49.6' RT.	INLET TYPE C (5 FT)		5	
P4	144+94.57, 25.5' RT.	MODIFY MANHOLE			NEW RIM EL.

I.D.	STATION, OFFSET	ITEM	LENGTH (FT)	PAY DEPTH (FT)	MISC (NOTES)
Q3	149+01.00, 29.0' RT.	INLET TYPE 16 (5 FT)		5	CONNECT TO EX. STORM
Q4	147+87.84, 28.1' RT.	MODIFY MANHOLE			NEW RIM EL.
Q5	147+52.00, 29.0' RT.	INLET TYPE 16 (TRIPLE) (5 FT)		5	CONNECT TO EX. STORM



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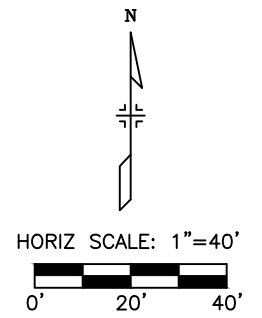
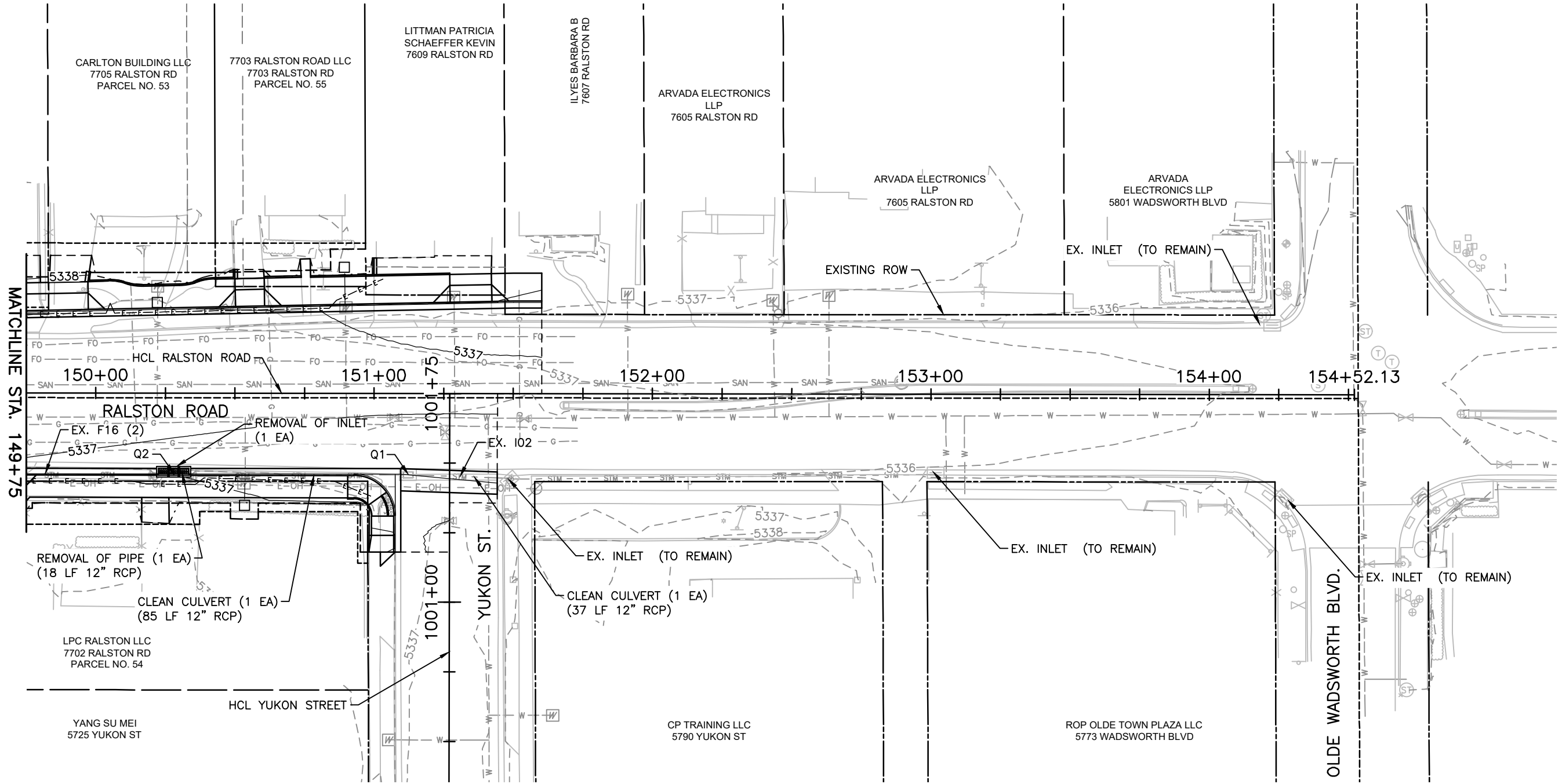
Sheet Revisions

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8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed	RALSTON RD - YUKON ST TO GARRISON ST DRAINAGE PLAN RALSTON ROAD (STA. 144+25 - STA. 149+75)		Project No./Code
No Revisions:			18-ST-40
Revised:	Designer: CDT	Structure Numbers	
	Detailer: SMT		
Void:	Sheet Subset: DRAINAGE	Subset Sheets: PL-09 of 10	Sheet Number 185



I.D.	STATION, OFFSET	ITEM	LENGTH (FT)	PAY DEPTH (FT)	MISC (NOTES)
Q1	151+12.32, 29.1' RT.	MODIFY INLET			RESET GRATE TO FINISHED GRADE EL.
Q2	150+28.02, 29.0' RT.	INLET TYPE 16 (TRIPLE) (5 FT)		5	CONNECT TO EX. STORM



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File Name: 118355_DRPL_SH01.DWG

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Sheet Revisions

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CITY OF ARVADA

PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD

ARVADA, CO, 80002

As Constructed

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RALSTON RD - YUKON ST TO GARRISON ST

DRAINAGE PLAN

RALSTON ROAD (STA. 149+75 - END)

Designer: CDT

Detailer: DAL

Sheet Subset: DRAINAGE

Structure Numbers

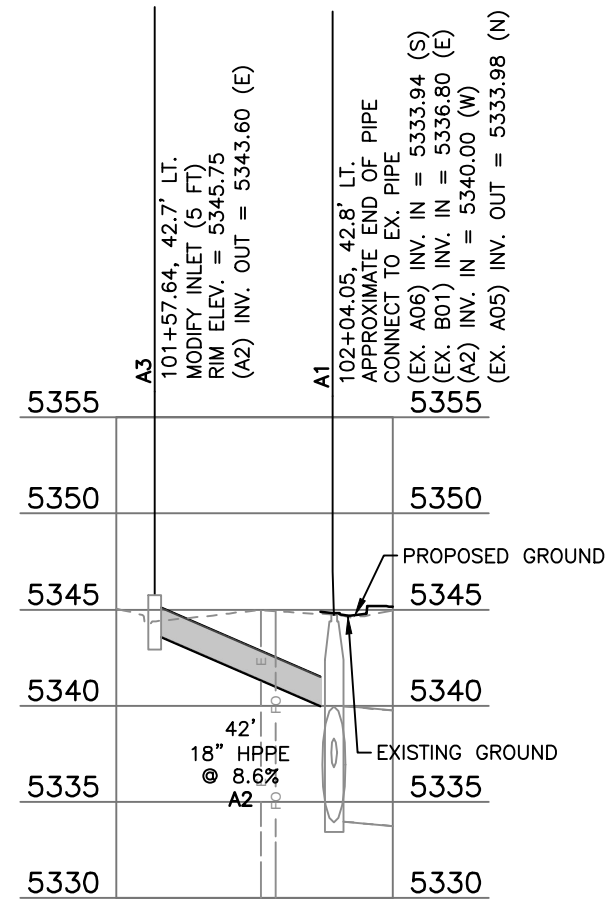
Subset Sheets: PL-10 of 10

Project No./Code

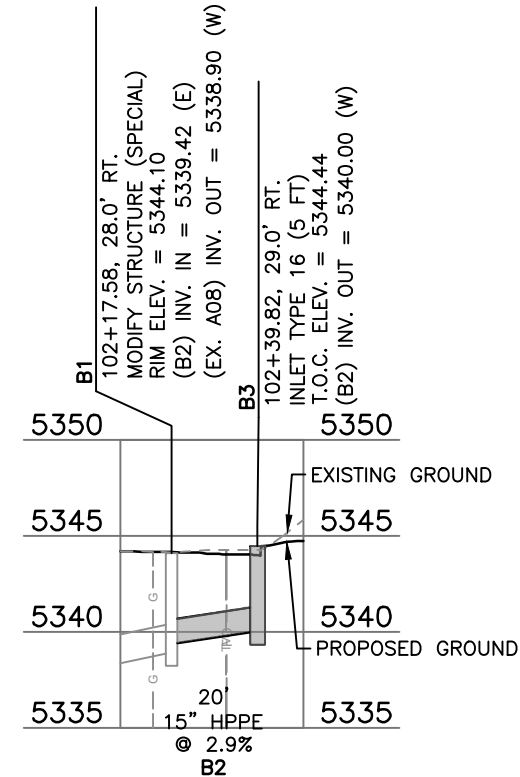
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Sheet Number 186

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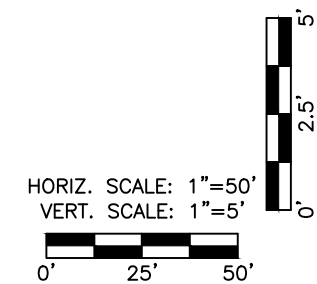


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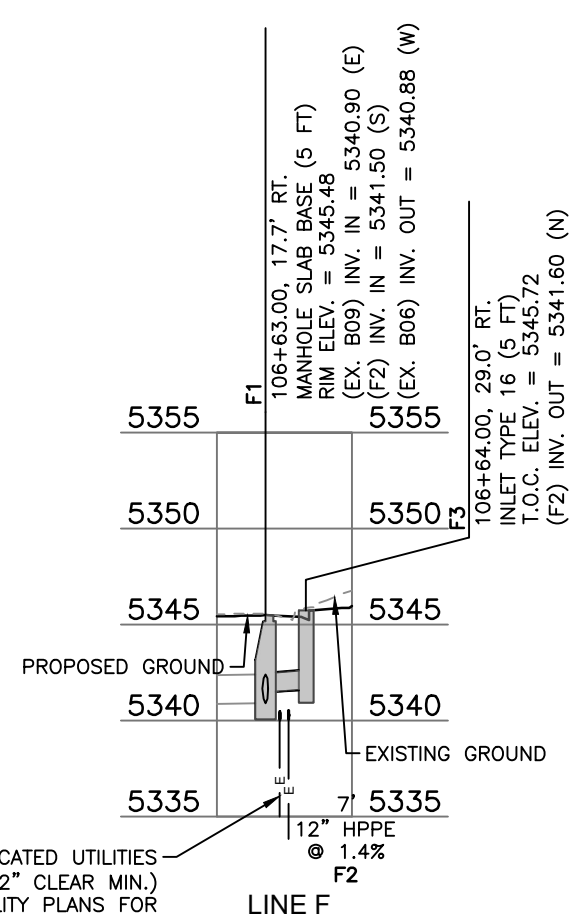
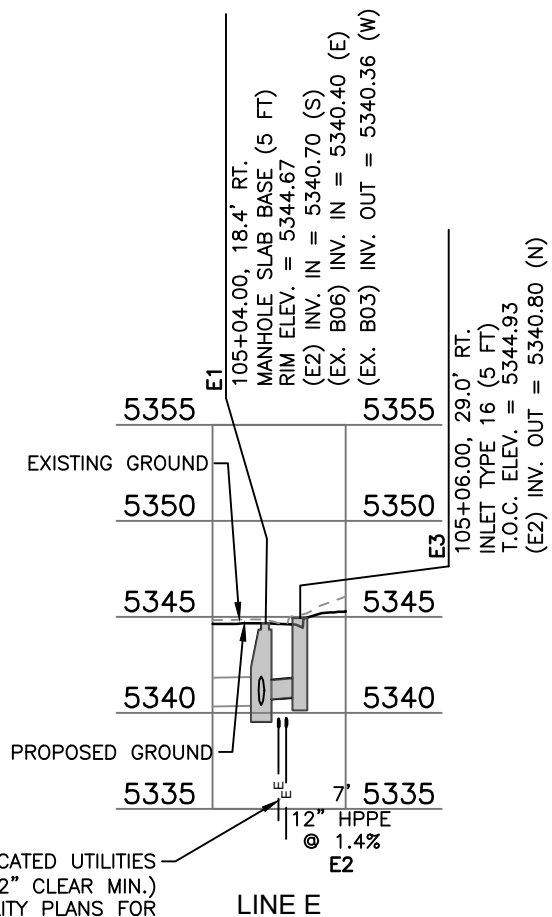
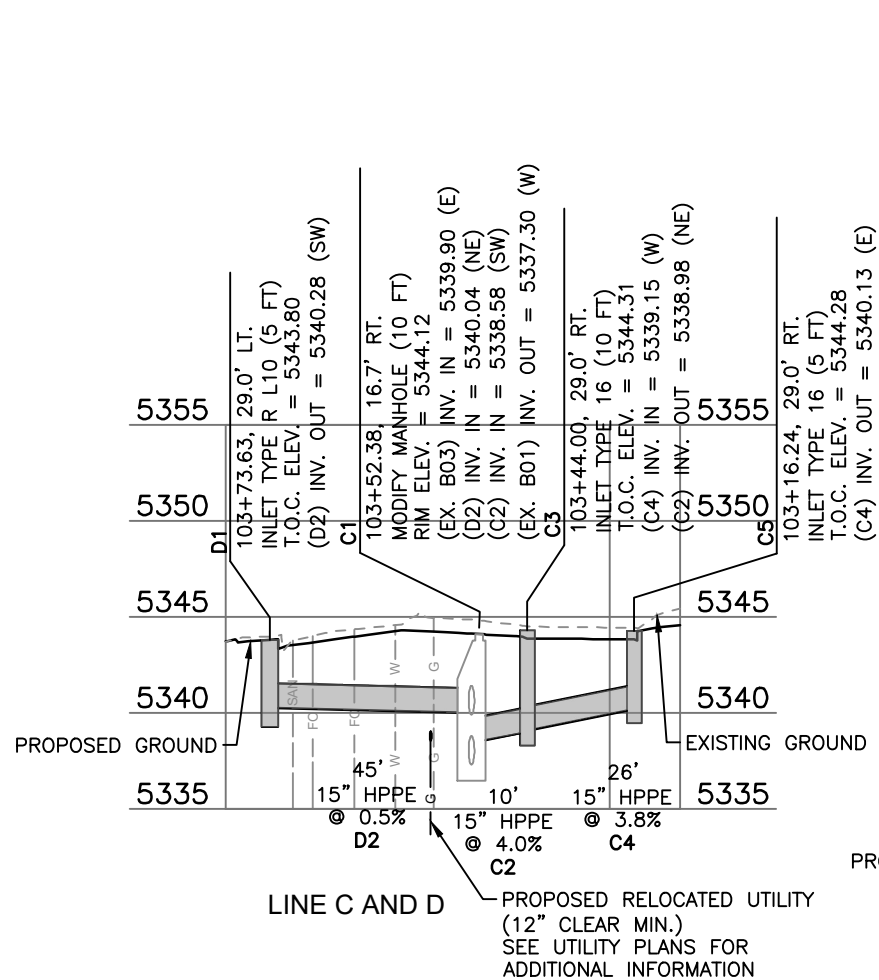
LINE B

NOTE: ALL INCIDENTAL ITEMS REQUIRED FOR NEW STORM DRAINAGE PIPE OR NEW INLET RE-CONNECTIONS INTO EXISTING STORM DRAINAGE SYSTEMS SHALL BE INCLUDED IN THE COST OF THE PIPE, MODIFY INLET, MODIFY MANHOLE OR MODIFY STRUCTURE (SPECIAL).

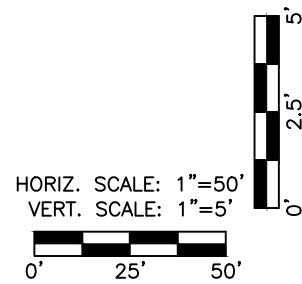


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File Name: 118355_DRPP_SH01.DWG			R-X	Date	Comments		Initials	No Revisions:					18-ST-40	
Horizontal Scale: 1" = 50' Vertical Scale: N/A								Revised:		Designer: CDT		Structure		
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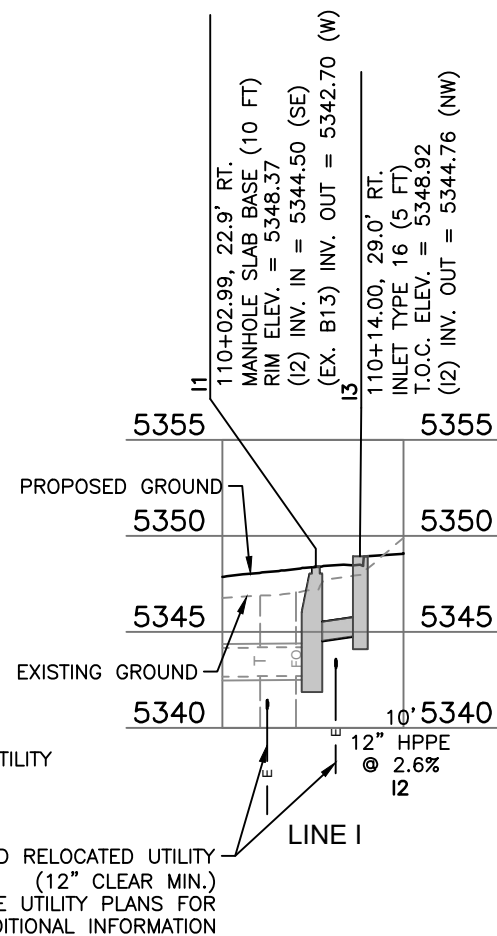
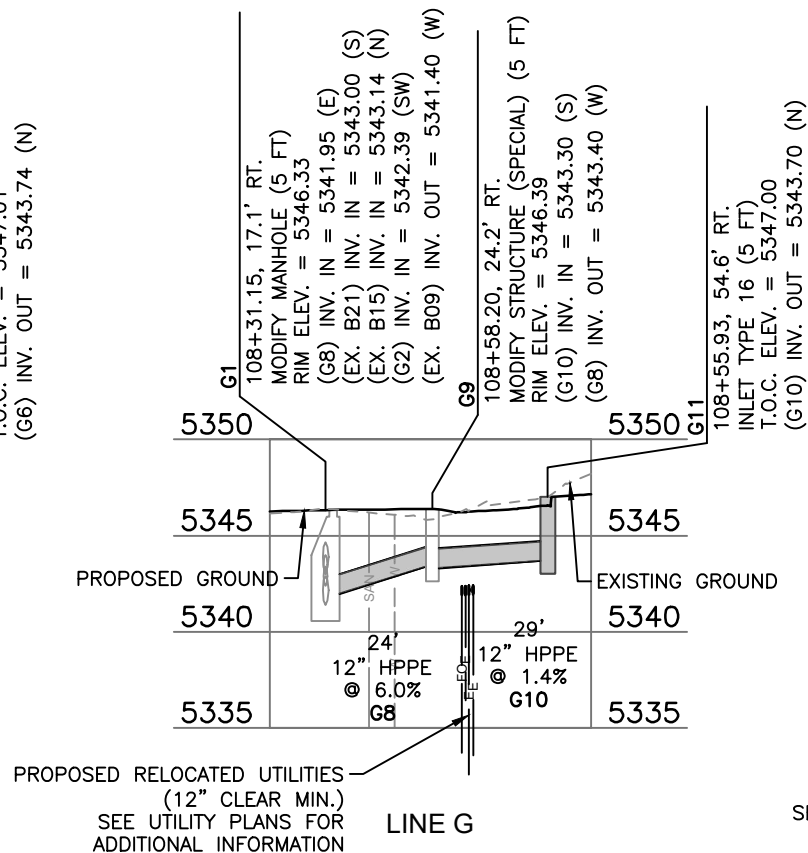
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NOTE: ALL INCIDENTAL ITEMS REQUIRED FOR NEW STORM DRAINAGE PIPE OR NEW INLET RE-CONNECTIONS INTO EXISTING STORM DRAINAGE SYSTEMS SHALL BE INCLUDED IN THE COST OF THE PIPE, MODIFY INLET, MODIFY MANHOLE OR MODIFY STRUCTURE (SPECIAL).



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File Name: 118355_DRPP_SH01.DWG			Date	Comments	Initials		No Revisions:					18-ST-40		
Horizontal Scale: 1" = 50' Vertical Scale: N/A							Revised:		Designer: CDT		Structure			
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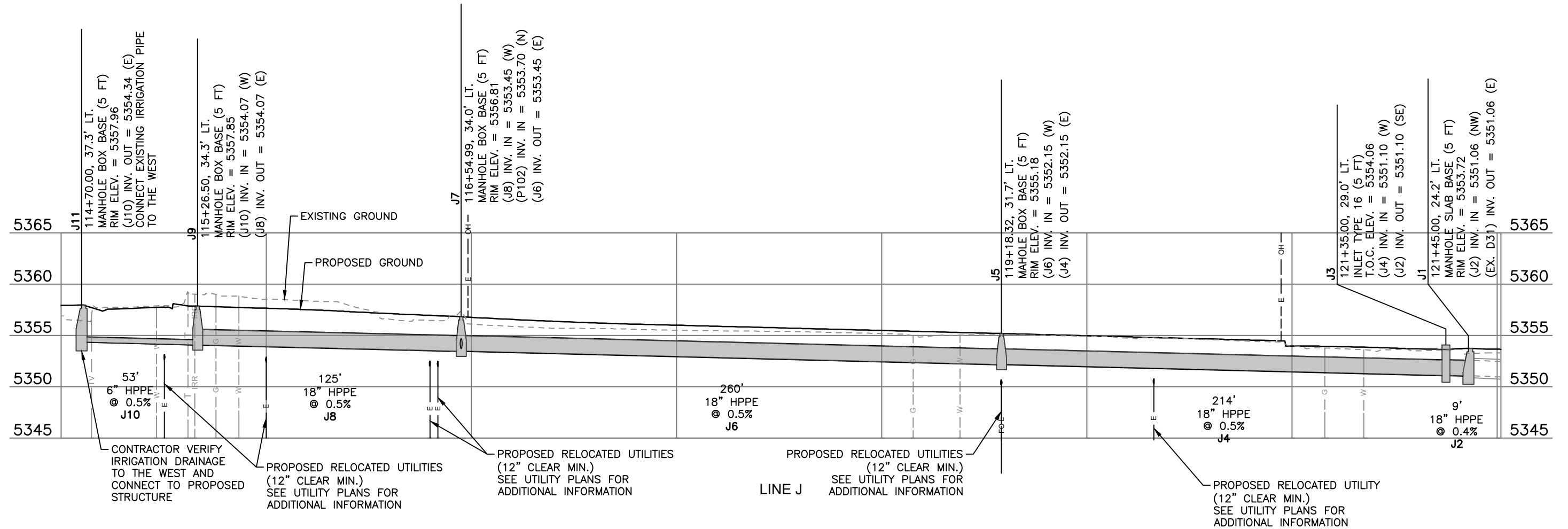
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VERT. SCALE: 1"=5'



0' 25' 50'



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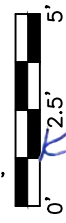


PROPOSED RELOCATED UTILITIES (12" CLEAR MIN.) SEE UTILITY PLANS FOR ADDITIONAL INFORMATION

PROPOSED RELOCATED UTILITY (12" CLEAR MIN.) SEE UTILITY PLANS FOR ADDITIONAL INFORMATION

NOTE: ALL INCIDENTAL ITEMS REQUIRED FOR NEW STORM DRAINAGE PIPE OR NEW INLET RE-CONNECTIONS INTO EXISTING STORM DRAINAGE SYSTEMS SHALL BE INCLUDED IN THE COST OF THE PIPE, MODIFY INLET, MODIFY MANHOLE OR MODIFY STRUCTURE (SPECIAL).

HORIZ. SCALE: 1"=50'
VERT. SCALE: 1"=5'



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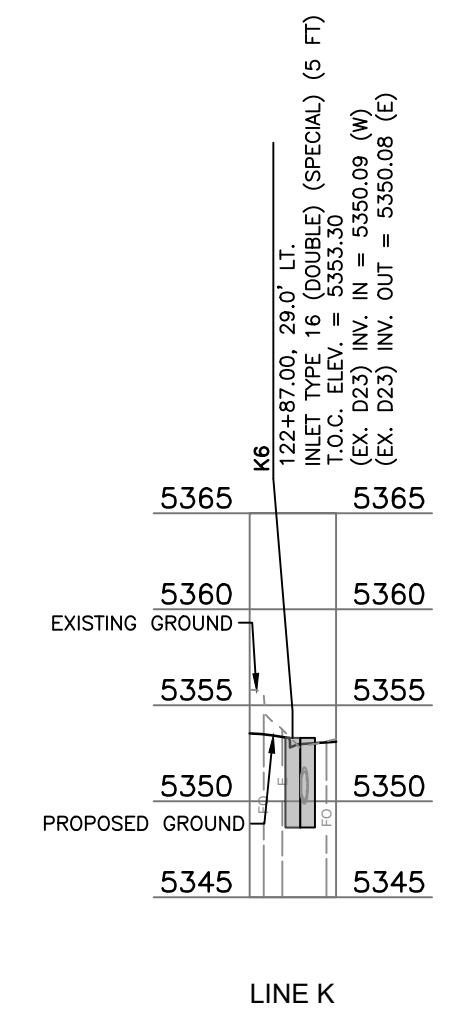
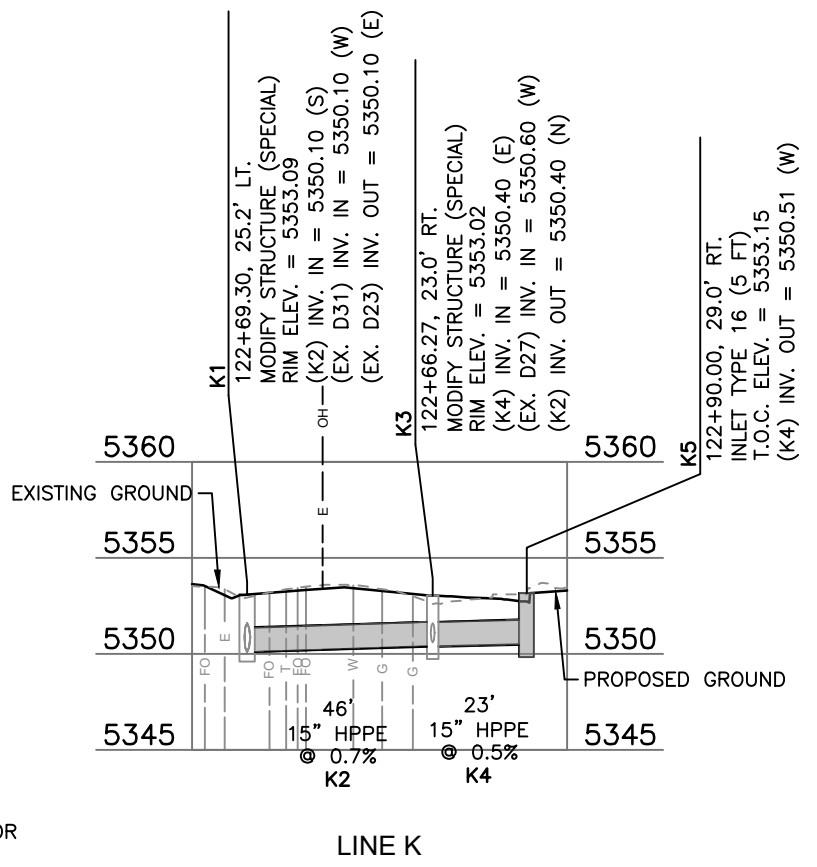
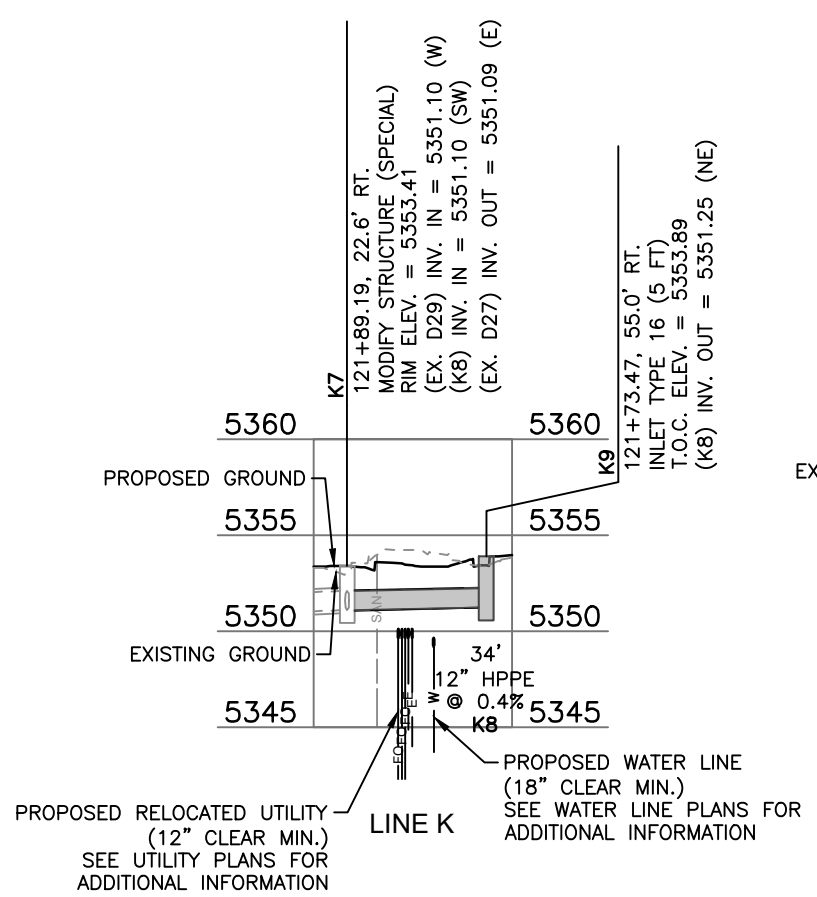
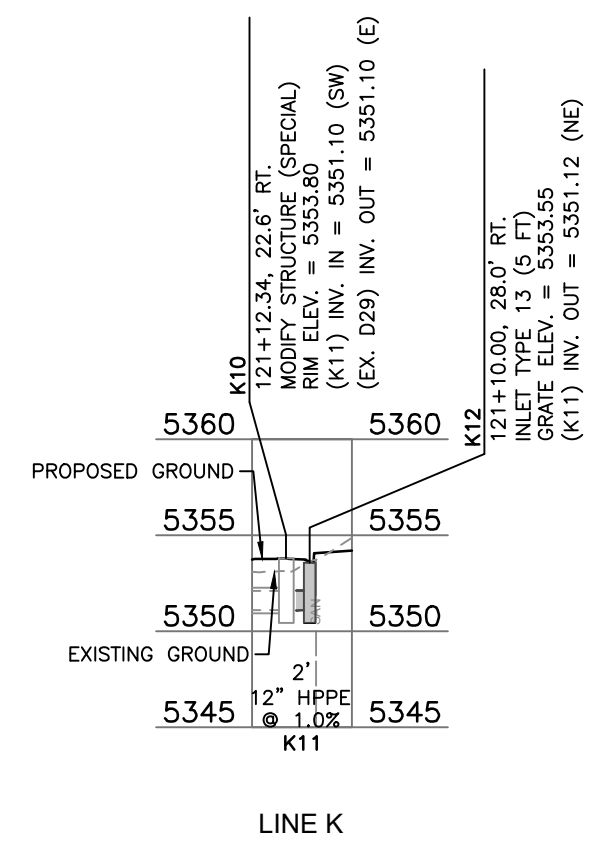


CITY OF ARVADA
PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST DRAINAGE PROFILE LINE J			Project No./Code
No Revisions:					18-ST-40
Revised:		Designer:	CDT	Structure	
		Detailer:	SMT	Numbers	
Void:		Sheet Subset:	DRAINAGE	Subset Sheets:	PP-04 of 10
					Sheet Number 190

INFORMATION



NOTE: ALL INCIDENTAL ITEMS REQUIRED FOR NEW STORM DRAINAGE PIPE OR NEW INLET RE-CONNECTIONS INTO EXISTING STORM DRAINAGE SYSTEMS SHALL BE INCLUDED IN THE COST OF THE PIPE, MODIFY INLET, MODIFY MANHOLE OR MODIFY STRUCTURE (SPECIAL).

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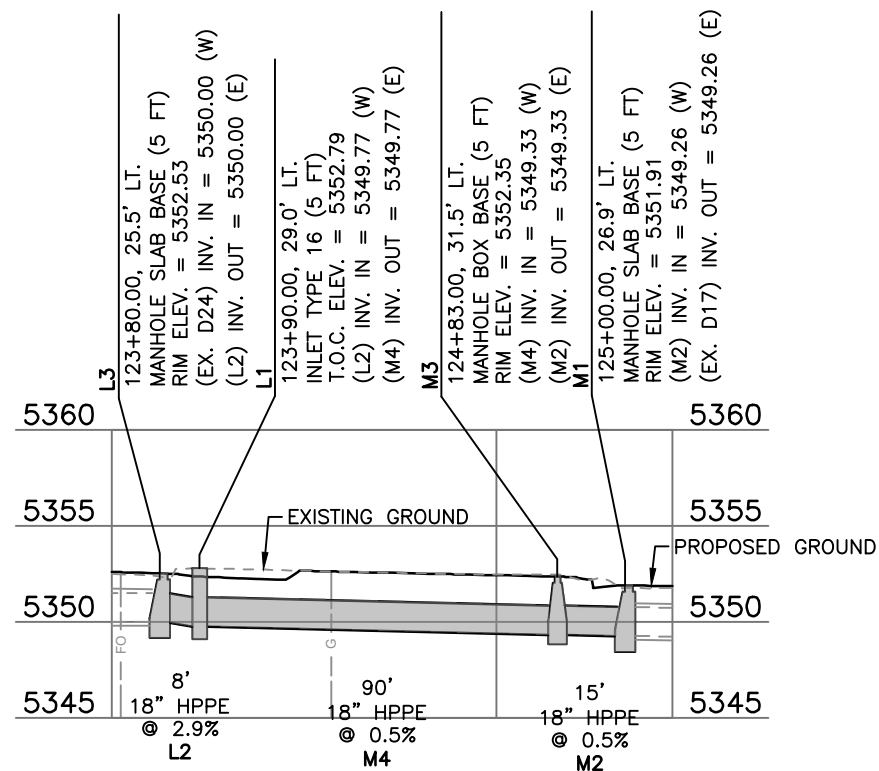
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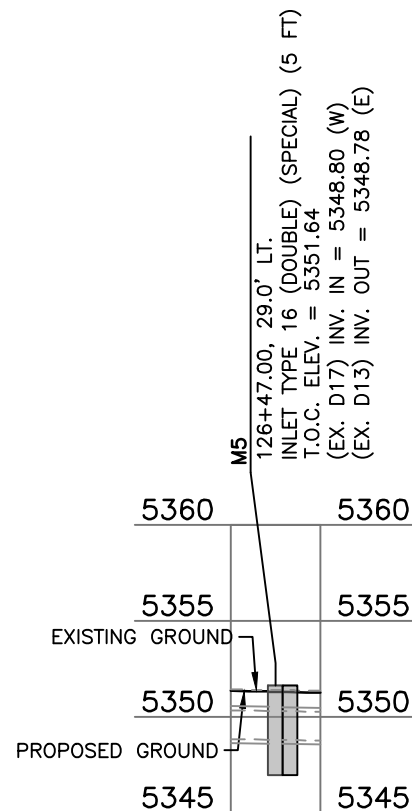
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KENDRA M. GARRETT
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12/29/2020
PROFESSIONAL ENGINEER

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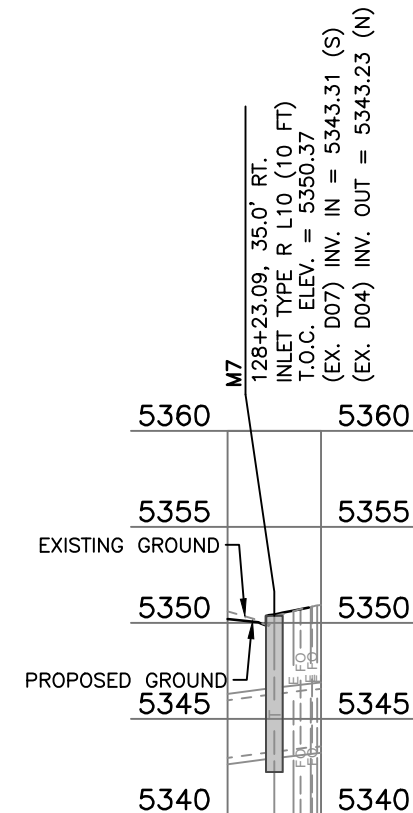
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	 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com						Void:		Detailer: SMT				
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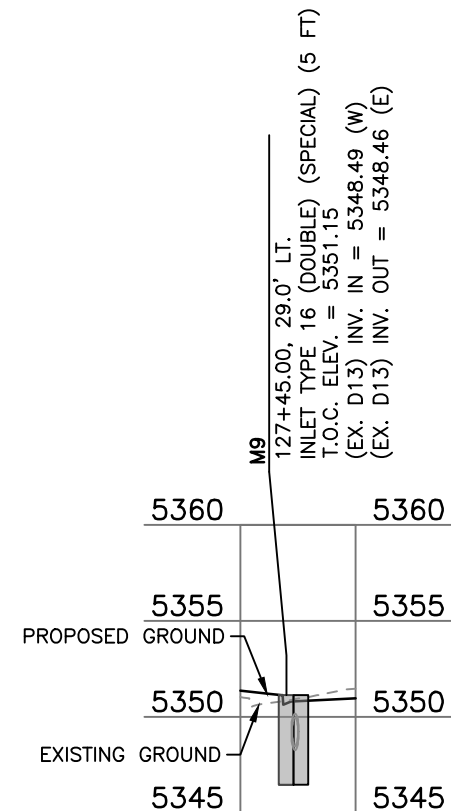
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LINE M

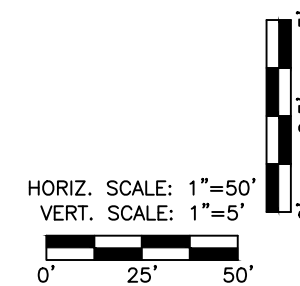


LINE M



LINE M

NOTE: ALL INCIDENTAL ITEMS REQUIRED FOR NEW STORM DRAINAGE PIPE OR NEW INLET RE-CONNECTIONS INTO EXISTING STORM DRAINAGE SYSTEMS SHALL BE INCLUDED IN THE COST OF THE PIPE, MODIFY INLET, MODIFY MANHOLE OR MODIFY STRUCTURE (SPECIAL).



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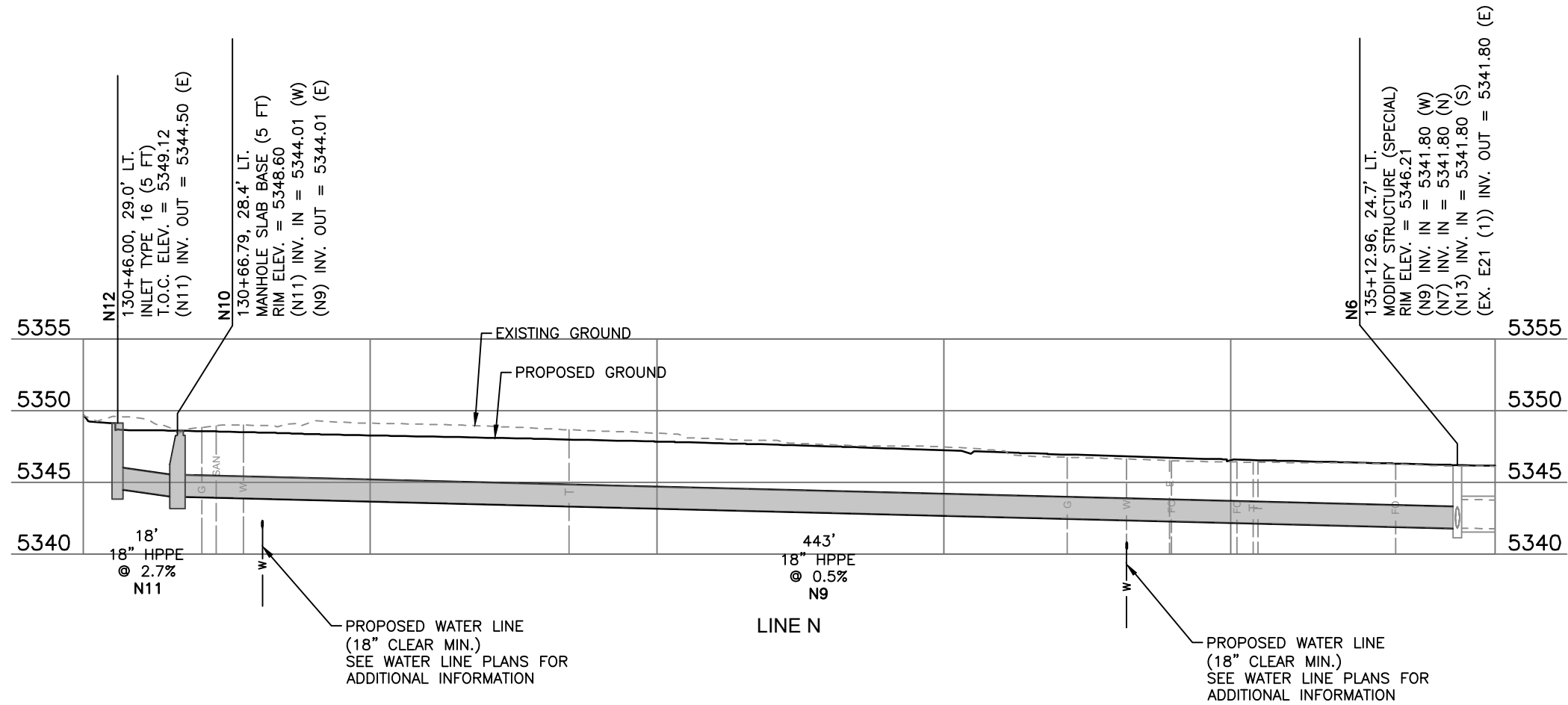
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CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

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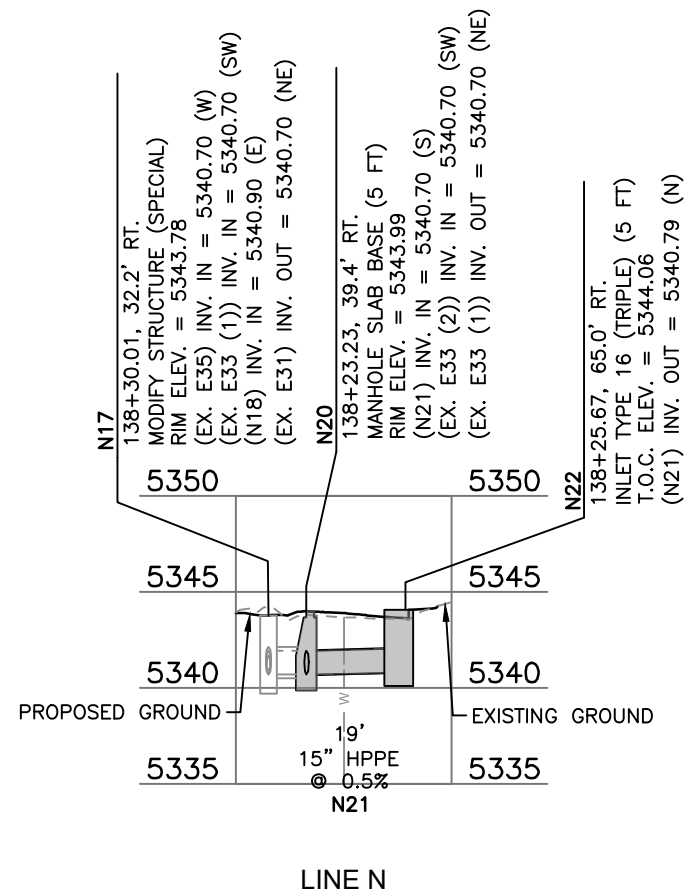
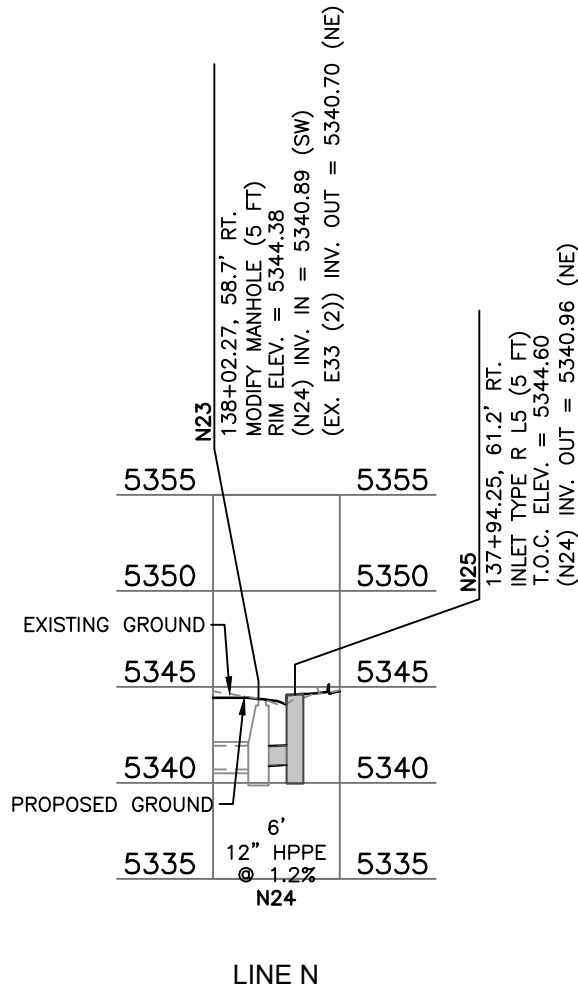
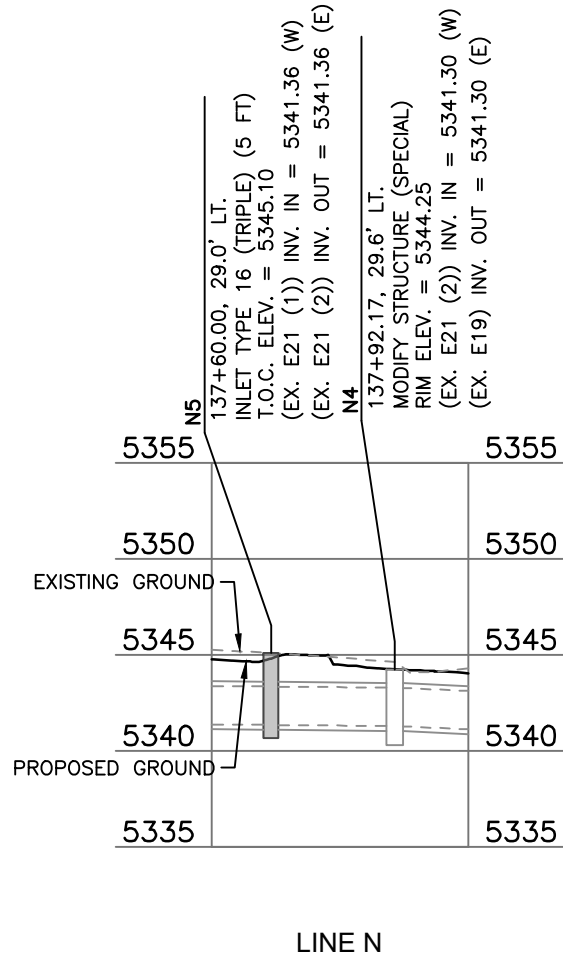
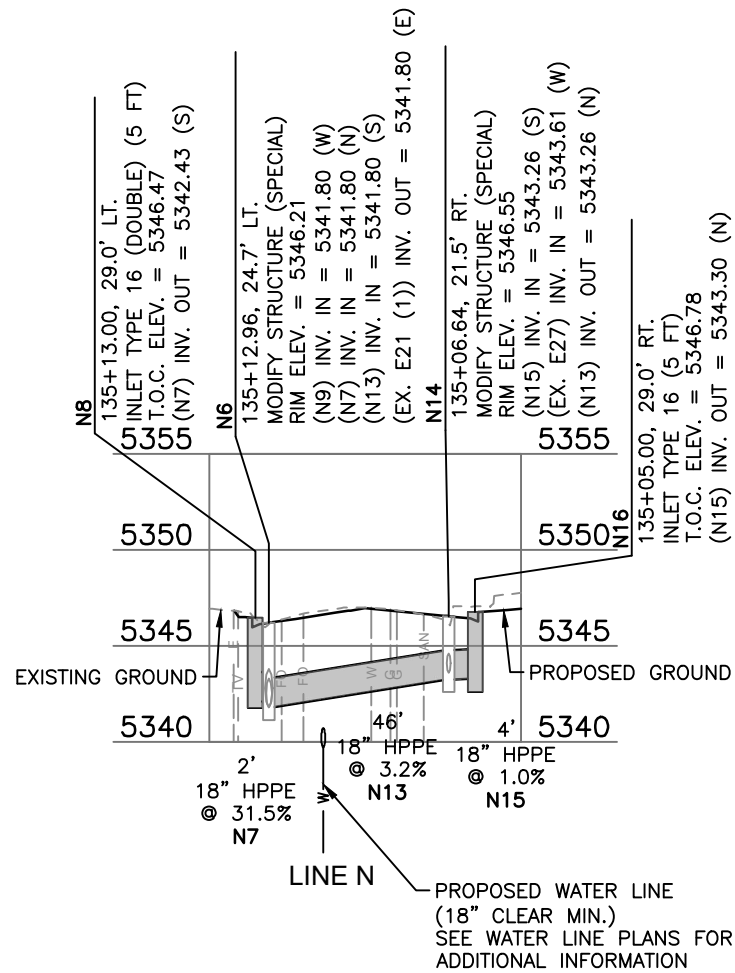
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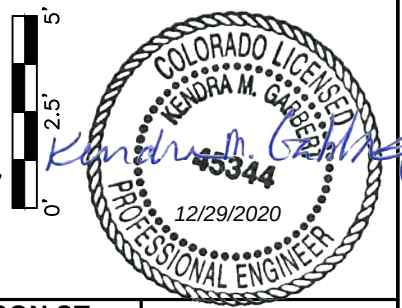
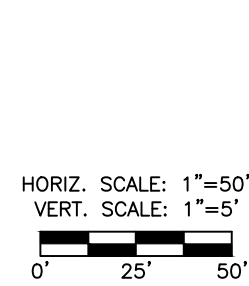
CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

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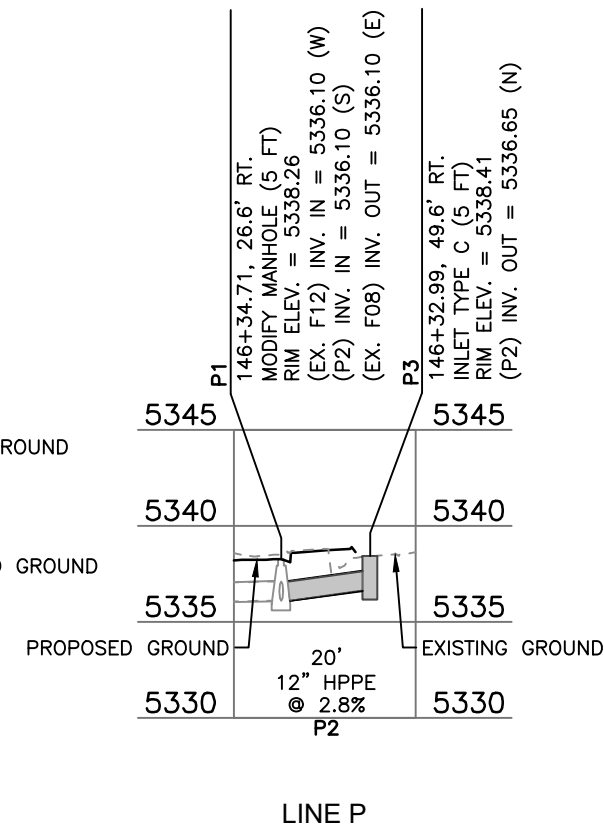
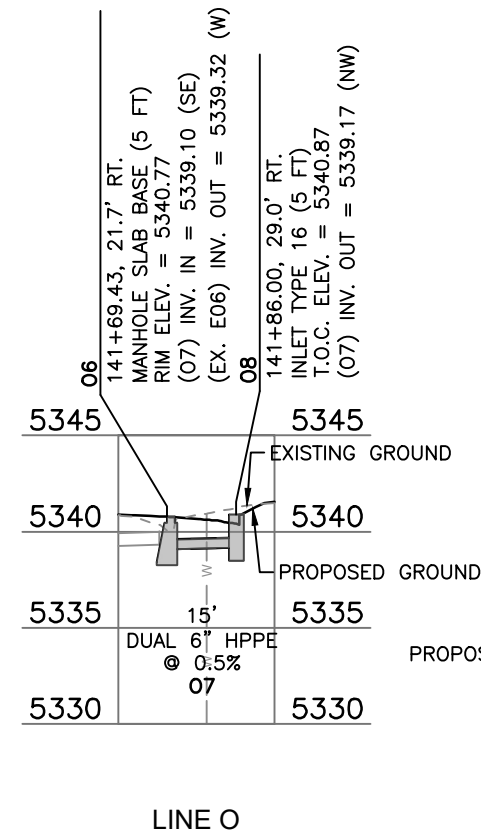
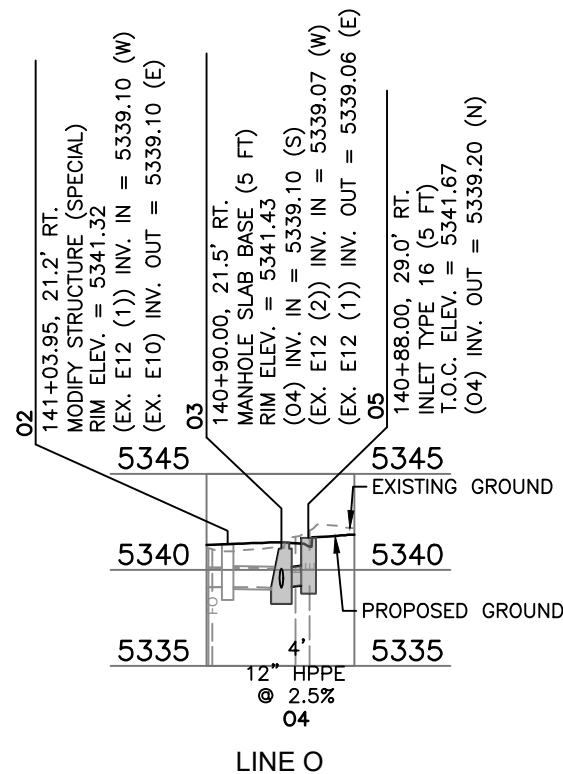
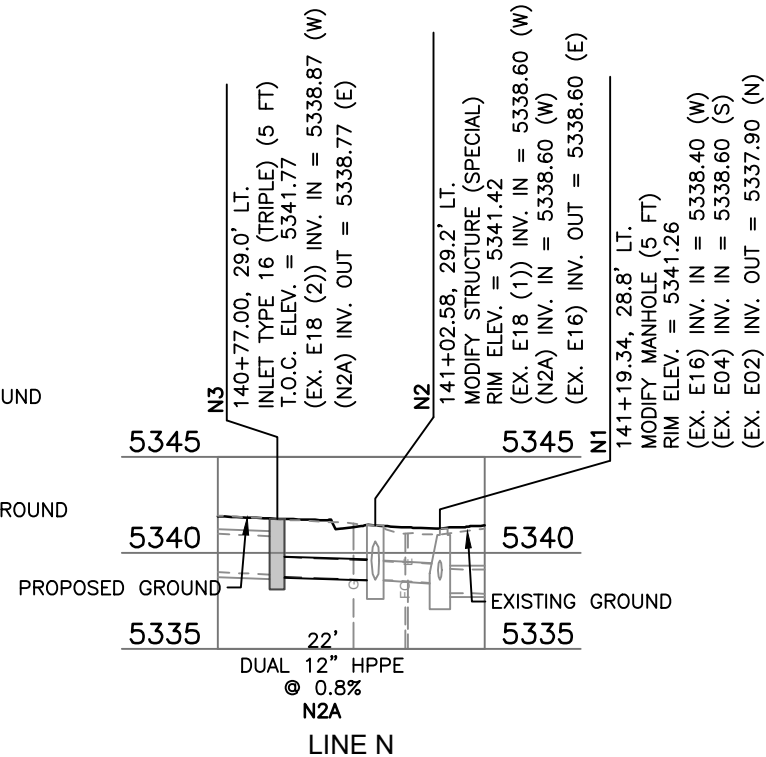
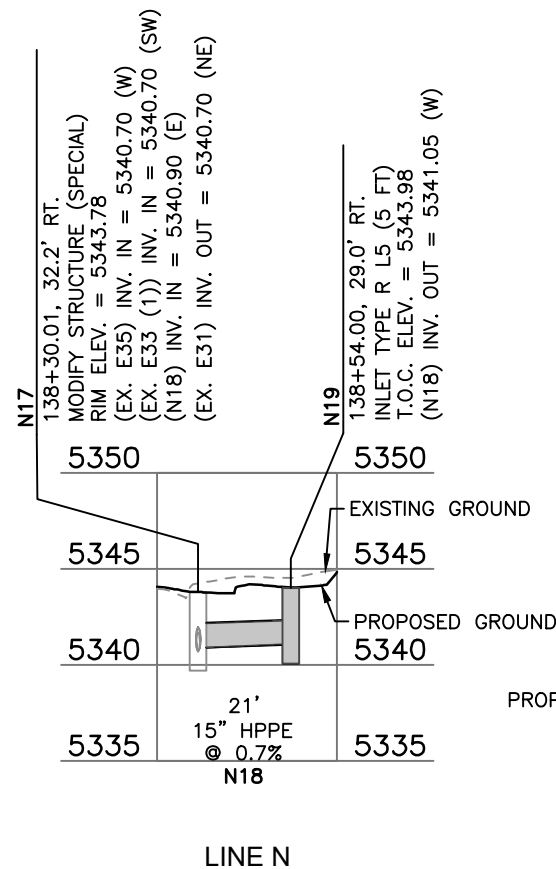
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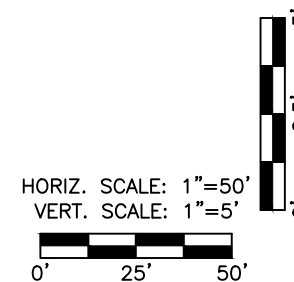
NOTE: ALL INCIDENTAL ITEMS REQUIRED FOR NEW STORM DRAINAGE PIPE OR NEW INLET RE-CONNECTIONS INTO EXISTING STORM DRAINAGE SYSTEMS SHALL BE INCLUDED IN THE COST OF THE PIPE, MODIFY INLET, MODIFY MANHOLE OR MODIFY STRUCTURE (SPECIAL).



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NOTE: ALL INCIDENTAL ITEMS REQUIRED FOR NEW STORM DRAINAGE PIPE OR NEW INLET RE-CONNECTIONS INTO EXISTING STORM DRAINAGE SYSTEMS SHALL BE INCLUDED IN THE COST OF THE PIPE, MODIFY INLET, MODIFY MANHOLE OR MODIFY STRUCTURE (SPECIAL).



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8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed

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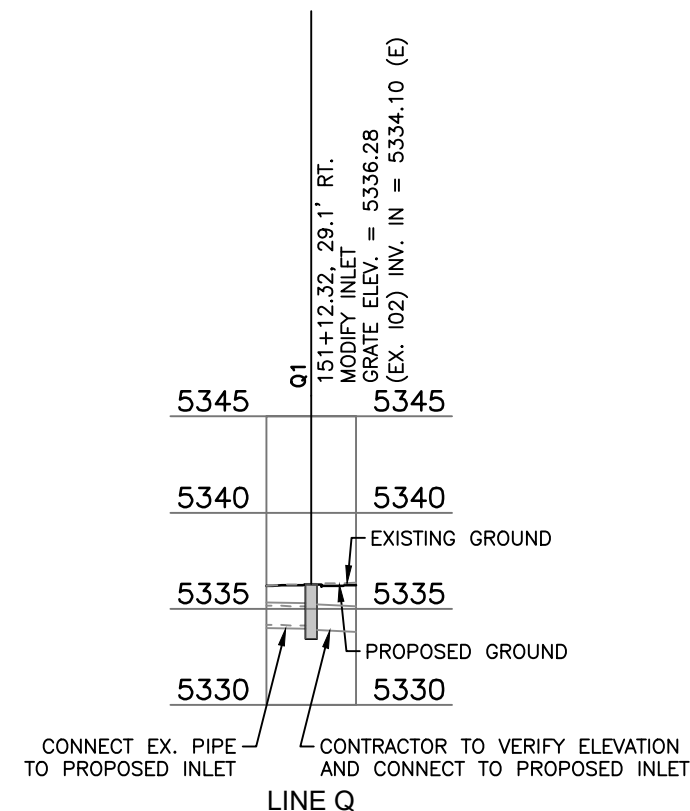
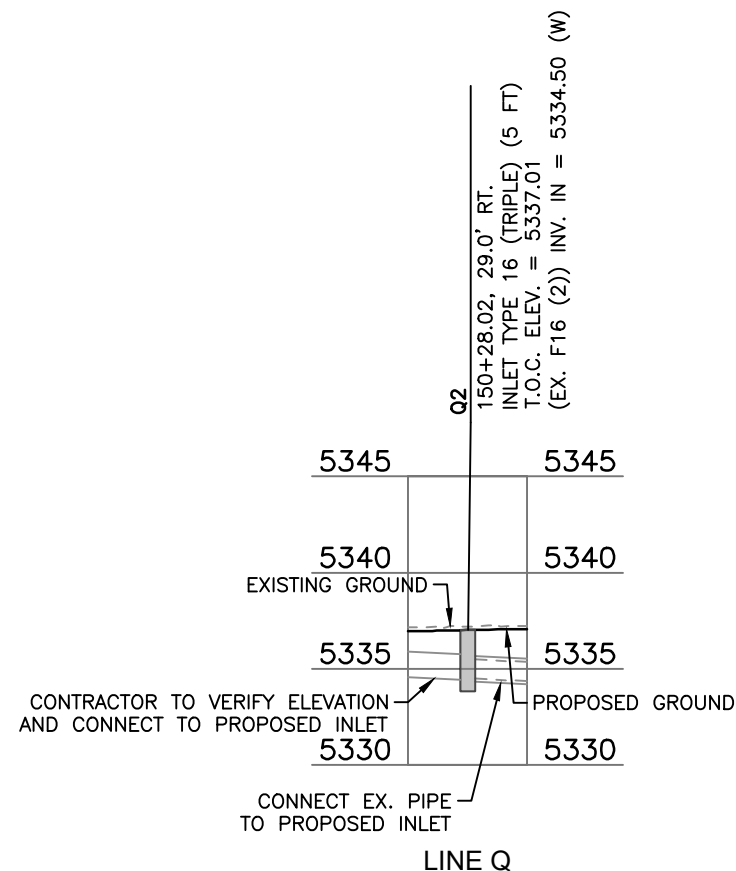
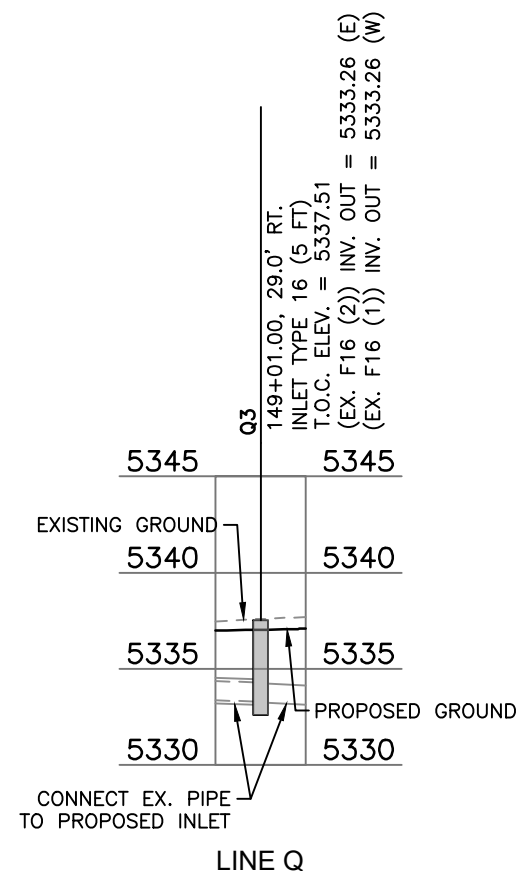
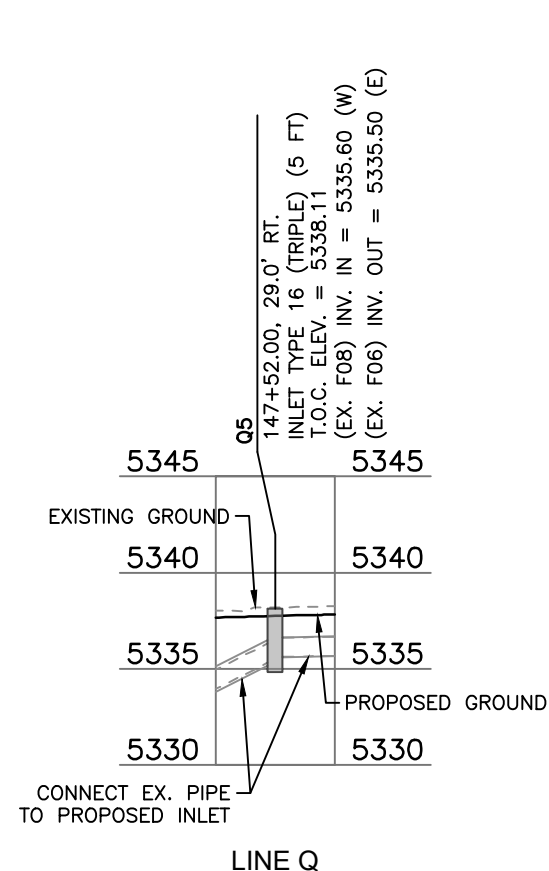
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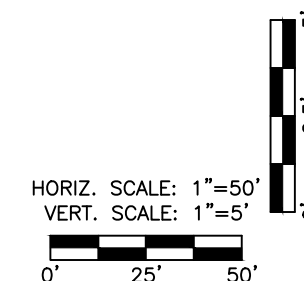
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NOTE: ALL INCIDENTAL ITEMS REQUIRED FOR NEW STORM DRAINAGE PIPE OR NEW INLET RE-CONNECTIONS INTO EXISTING STORM DRAINAGE SYSTEMS SHALL BE INCLUDED IN THE COST OF THE PIPE, MODIFY INLET, MODIFY MANHOLE OR MODIFY STRUCTURE (SPECIAL).



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CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
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As Constructed	RALSTON RD - YUKON ST TO GARRISON ST DRAINAGE PROFILE LINE Q			Project No./Code
	No Revisions:			18-ST-40
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CITY OF ARVADA
STANDARD EROSION CONTROL NOTES:

1. AT ANYTIME THE CITY DETERMINES THE PROJECT TO BE OUT OF COMPLIANCE WITH EROSION AND SEDIMENT CONTROL/GOOD HOUSEKEEPING REQUIREMENTS, THEY HAVE THE AUTHORITY TO IMMEDIATELY STOP WORK ON THE PROJECT UNTIL THE DETERMINATION HAS BEEN MADE BY CITY STAFF THAT THE SITE HAS REGAINED COMPLIANCE WITH REQUIREMENTS.
2. THE CONTRACTOR SHALL ENSURE STORMWATER QUALITY BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED TO MINIMIZE SOIL EROSION, SEDIMENTATION, INCREASED POLLUTANT LOADS, AND CHANGED WATER FLOW CHARACTERISTICS RESULTING FROM LAND DISTURBING ACTIVITY TO THE MAXIMUM EXTENT PRACTICAL, SO AS TO MINIMIZE POLLUTION TO THE MS4 OR RECEIVING WATERS.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REQUIRED STATE OR LOCAL PERMITS. STANDARD FEES FOR THE CITY PERMIT SHALL BE WAIVED BY THE CITY. THE CITY RESERVES THE RIGHT TO WITHHOLD RETAINAGE ON A PROJECT AS NECESSARY FOR PERFORMANCE OF MAINTENANCE ON BMP's DUE TO CONTRACTORS FAILURE TO COMPLY OR PERFORM EROSION CONTROL MEASURES IN ACCORDANCE WITH THIS PLAN.
4. AT A MINIMUM ALL BEST MANAGEMENT PRACTICES (BMP's) AS GENERALLY OUTLINED IN STANDARD DRAWINGS, IN ACCORDANCE WITH CITY OF ARVADA SITE DEVELOPMENT PERMIT REQUIREMENTS AND IN ACCORDANCE WITH APPROVED INSTALLATION AND MAINTENANCE DETAILS, WILL BE CORRECTLY INSTALLED AND FUNCTIONING AS DESIGNED AT ALL TIMES.
5. CONTRACTOR SHALL DESIGNATE AN EROSION CONTROL REPRESENTATIVE AVAILABLE ON-CALL AT ALL TIMES. REPRESENTATIVE SHALL PERFORM ROUTINE AND POST-STORM INSPECTIONS OF ALL BMP's PER CITY SITE DEVELOPMENT PERMIT REQUIREMENTS.
6. ALL BMP's IDENTIFIED BY THE CITY AS DEFICIENT SHALL BE MAINTAINED, REPAIRED, OR INSTALLED BY CONTRACTOR AS SOON AS POSSIBLE, IN MOST CASES IMMEDIATELY.
7. CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING & MAINTAINING EROSION & SEDIMENT CONTROL MEASURES AT ALL TIMES BEFORE, DURING AND AFTER LAND DISTURBING ACTIVITIES. SUCH MEASURES SHALL BE PLACED AS CONSTRUCTION SEQUENCING & ACCESS DICTATES. CONTRACTOR SHALL REMOVE ALL SEDIMENT FROM EROSION CONTROL MEASURES AFTER EACH EROSION EVENT, AS NEEDED AND AT THE DIRECTION OF THE CITY.
8. THE CITY MAY REQUEST THE MODIFICATION OF THE EROSION & SEDIMENT CONTROLS AS FIELD CONDITIONS WARRANT.
9. SEE ARVADA DETAILS FOR BMP INSTALLATION AND MAINTENANCE STANDARDS FOR THE FOLLOWING BMP's: ROCK SOCKS, INLET PROTECTION, SILT FENCE, SEDIMENT CONTROL LOGS, CONCRETE WASHOUT AREA, EROSION CONTROL BLANKET, STABILIZED STAGING AREA AND VEHICLE TRACKING CONTROL. OTHER APPROVED BMP INSTALLATION/MAINTENANCE DETAILS CAN BE FOUND IN THE UDFCD VOLUME III CRITERIA MANUAL.
10. SURFACE DRAINAGE PASSING THROUGH OR ORIGINATING FROM EACH SITE SHALL BE TREATED/CAPTURED BY ONE OR MORE BMP's DEPENDANT ON AREA OF DISTURBANCE.
11. SOIL STABILIZATION MEASURES SHALL BE IMPLEMENTED WITHIN 14 DAYS TO ALL DISTURBED AREAS THAT MAY OR MAY NOT BE AT FINAL GRADE BUT WILL REMAIN UNDISTURBED FOR PERIODS LONGER THAN 30 CALENDAR DAYS OR FOR AN INDETERMINATE LENGTH OF TIME.
12. ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMP's MUST BE REMOVED UPON FINAL STABILIZATION.
13. ALL CONSTRUCTION WASTES, FUEL, LUBRICANTS, CHEMICAL WASTES, TRASH OR DEBRIS SHALL BE CONTAINED WHEN STORED ON SITE AND PROTECTED FROM CONTACT WITH RAIN/SNOWFALL OR SURFACE RUNOFF. PROPER DISPOSAL OF SUCH WASTE SHALL BE IMMEDIATE AND THE RESPONSIBILITY OF THE CONTRACTOR.
14. ROUTINE VEHICLE MAINTENANCE SHALL NOT BE PREFORMED ON SITE. IF EQUIPMENT MAINTENANCE/REPAIR BECOME NECESSARY APPROPRIATE BMP's WILL BE IMPLEMENTED SUCH AS DRIP PANS, SPILL MATERIALS, ETC. ON SITE FUELING SHOULD BE PREFORMED BY DELIVERY VEHICLES WITH ADEQUATE SPILL PREVENTION AND RESPONSE CAPABILITY.
15. CONCRETE WASHOUT ACTIVITIES MUST BE CONDUCTED IN A MANNER THAT DOES NOT CONTRIBUTE POLLUTANTS TO SURFACE WATERS OR STORMWATER RUNOFF. CONCRETE WASHOUT SHALL BE PERFORMED IN A DESIGNATED CONCRETE WASHOUT AREA OR OFFSITE WASHOUT. PORTABLE UNITS ARE ACCEPTABLE WITH A MANUFACTURES SPECIFICATION.
16. CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST EMISSIONS. A WATER TRUCK SHALL BE USED WITH TWENTY FOUR (24) HOURS OF REQUEST BY CITY.
17. CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF TRACKED MATERIALS ON STREETS, SIDEWALKS, DRIVEWAYS OR PARKING LOTS. TRACKED MATERIALS WILL BE REMOVED IMMEDIATELY BY SCRAPING AND SWEEPING. FLUSHING MATERIALS FROM HARD SURFACE WITH WATER IS PROHIBITED. CONTRACTOR WILL HAVE ACCESS TO MEANS OF MECHANICAL SWEEPING AT ALL TIMES.
18. AREAS TO BE RESEEDD AT THE COMPLETION OF UTILITY INSTALLATION OR GRADING ACTIVITIES SHOULD BE IN ACCORDANCE WITH UDFCD VOL III SEED/MULCH SPECIFICATIONS.
19. NECESSARY EROSION CONTROL MEASURES MUST REMAIN IN PLACE AND FUNCTIONING AS DESIGNED UNTIL A VIABLE VEGETATIVE COVER HAS BEEN ESTABLISHED OR ROAD RESURFACED.
20. IN HIGH TRAFFIC AREAS WHERE LANE CLOSURED ARE OPENED A THE END OF THE WORK DAY, BMP's MAY BE REMOVED AT THE END OF WORK DAY AND REINSTALLED AT THE BEGINNING OF THE NEXT WORK DAY PROVIDED ALL DIRT AND MATERIALS ARE REMOVED FROM THE AREA AND AT THE DISCRETION OF THE CITY OF ARVADA INSPECTOR.



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 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Detailer: DAL	DAL	Numbers		
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DRAWING NUMBER	EROSION LOG TYPE 1 (12 INCH) SCL	AGGREGATE BAG RS	PRE-FABRICATED CONCRETE WASHOUT STRUCTURE (TYPE 1) CWA	STORM DRAIN INLET PROTECTION (ON-GRADE) IP	STORM DRAIN INLET PROTECTION (SUMP) IP	STORM DRAIN INLET PROTECTION (AREA) IP	PRE-FABRICATED VEHICLE TRACKING PAD VTC	FENCE (PLASTIC) CF	STABILIZED STAGING AREA SSA
	LF	LF	EA	LF	LF	LF	EA	LF	EA
INITIAL (EN-1 TO EN-10)	3690	284	6	630	78	120	2	10000	3
INTERIM (ET-1 TO ET-10)	0	6	6	879	0	54		5000	
FINAL (EF-1 TO EF-10)									
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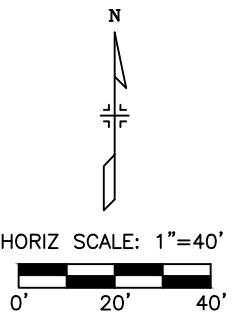
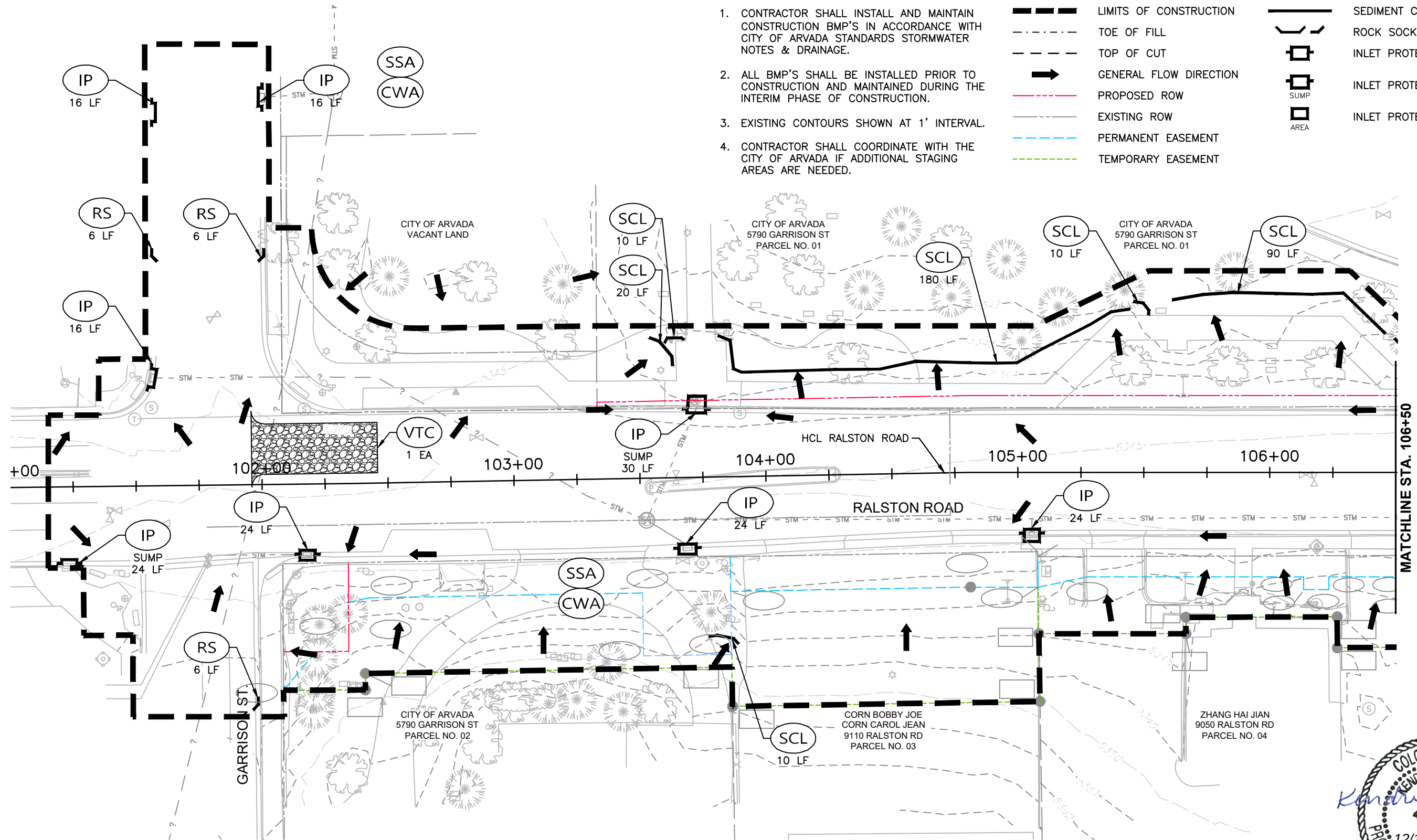
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							Sheet Subset: EROSION	Subset Sheets: GN-02 of 2		Sheet Number 198			

NOTES:

1. CONTRACTOR SHALL INSTALL AND MAINTAIN CONSTRUCTION BMP'S IN ACCORDANCE WITH CITY OF ARVADA STANDARDS STORMWATER NOTES & DRAINAGE.
2. ALL BMP'S SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND MAINTAINED DURING THE INTERIM PHASE OF CONSTRUCTION.
3. EXISTING CONTOURS SHOWN AT 1' INTERVAL.
4. CONTRACTOR SHALL COORDINATE WITH THE CITY OF ARVADA IF ADDITIONAL STAGING AREAS ARE NEEDED.

LEGEND

	LIMITS OF CONSTRUCTION		SEDIMENT CONTROL LOG
	TOE OF FILL		ROCK SOCK
	TOP OF CUT		INLET PROTECTION ON-GRADE
	GENERAL FLOW DIRECTION		INLET PROTECTION SUMP
	PROPOSED ROW		INLET PROTECTION AREA
	EXISTING ROW		
	PERMANENT EASEMENT		
	TEMPORARY EASEMENT		



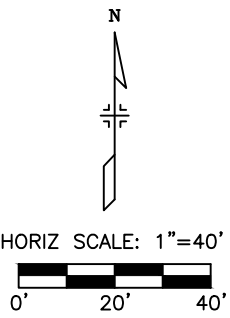
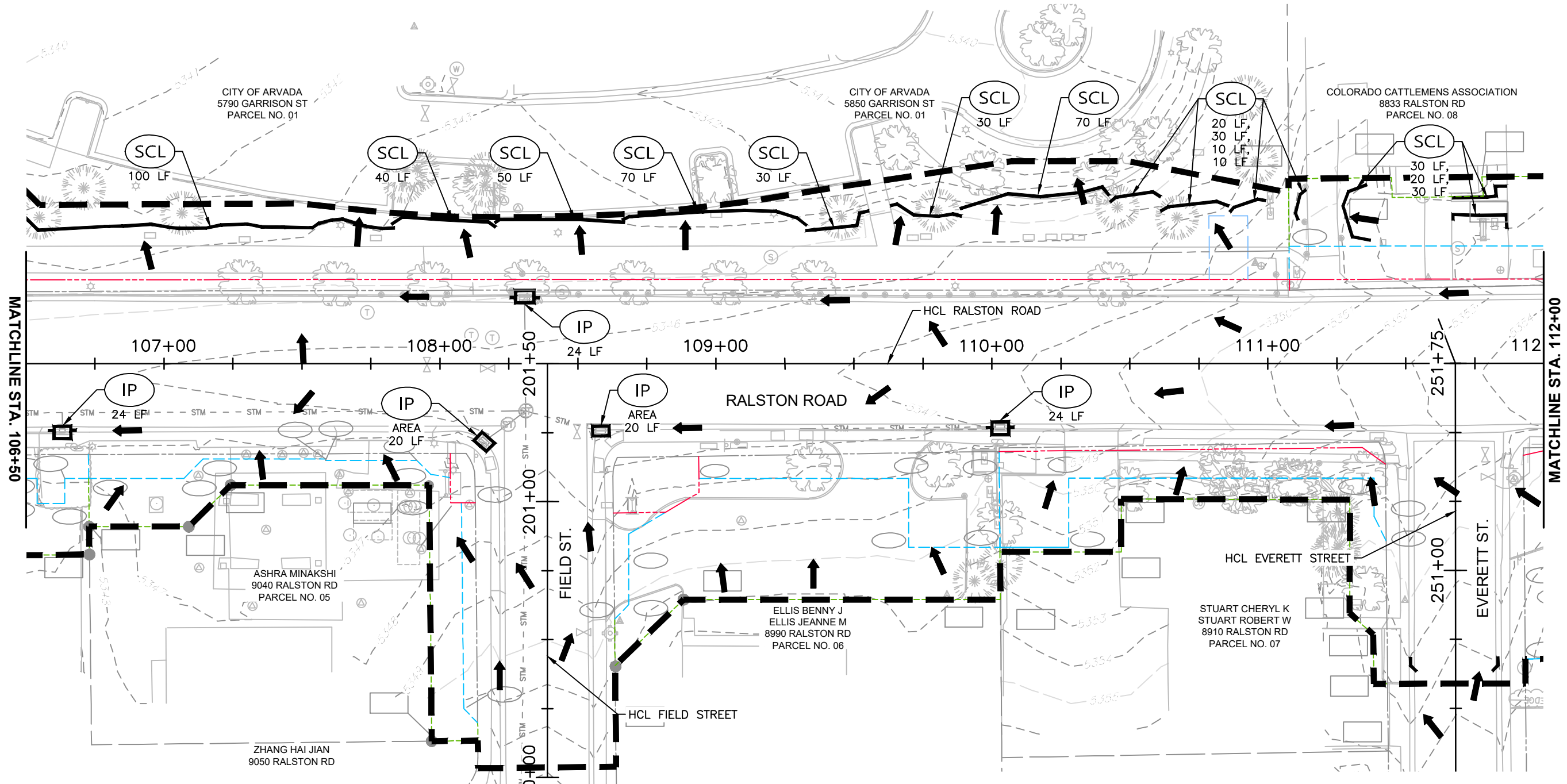
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Sheet Revisions			
Date	Comments	Initials	

CITY OF ARVADA
PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed	RALSTON RD - YUKON ST TO GARRISON ST INITIAL EROSION CONTROL RALSTON ROAD (BEGIN - STA. 106+50)				Project No./Code
No Revisions:					18-ST-40
Revised:	Designer: CDT	Structure Numbers			
Void:	Detailer: DAL	Subset Sheets: EI-01 of 10			Sheet Number 199



NOTES:

1. CONTRACTOR SHALL INSTALL AND MAINTAIN CONSTRUCTION BMP'S IN ACCORDANCE WITH CITY OF ARVADA STANDARDS STORMWATER NOTES & DRAINAGE.
2. ALL BMP'S SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND MAINTAINED DURING THE INTERIM PHASE OF CONSTRUCTION.
3. EXISTING CONTOURS SHOWN AT 1' INTERVAL.
4. CONTRACTOR SHALL COORDINATE WITH THE CITY OF ARVADA IF ADDITIONAL STAGING AREAS ARE NEEDED.

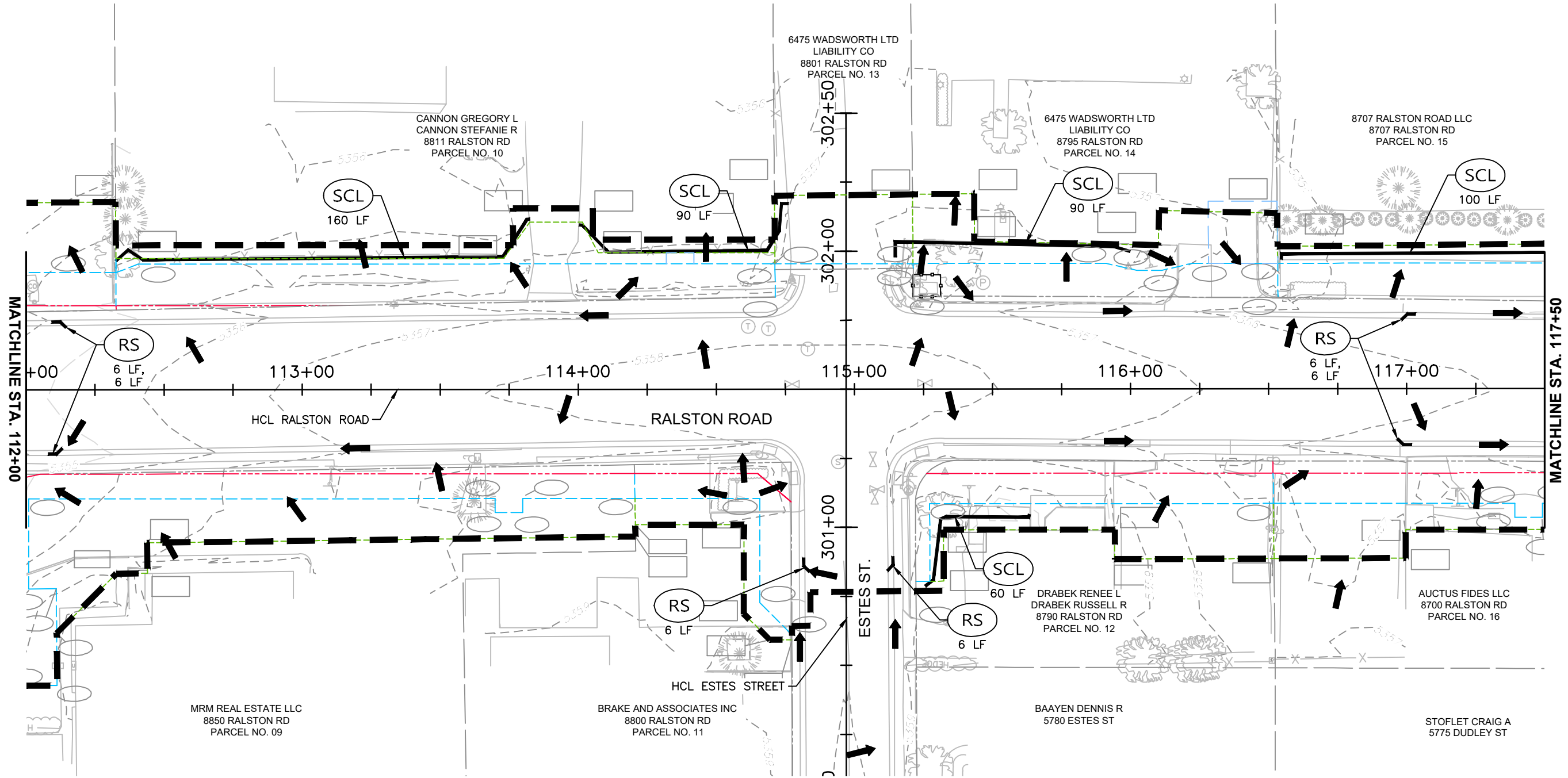
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|-----|------------------------|-----|---------------------------|
| --- | LIMITS OF CONSTRUCTION | --- | SEDIMENT CONTROL LOG |
| --- | TOE OF FILL | --- | ROCK SOCK |
| --- | TOP OF CUT | --- | INLET PROTECTION ON-GRADE |
| → | GENERAL FLOW DIRECTION | --- | INLET PROTECTION SUMP |
| --- | PROPOSED ROW | --- | INLET PROTECTION AREA |
| --- | EXISTING ROW | | |
| --- | PERMANENT EASEMENT | | |
| --- | TEMPORARY EASEMENT | | |



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Horizontal Scale: 1" = 40' Vertical Scale: N/A		R-X	Date	Comments	Initials	8101 RALSTON ROAD ARVADA, CO, 80002	No Revisions:		Designer: CDT		Structure Numbers	Sheet Number 200	
FELSBERG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Revised:		Detailer: DAL				
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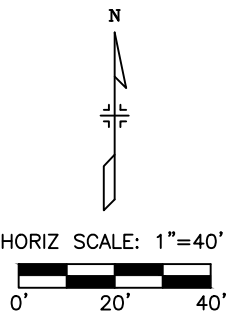


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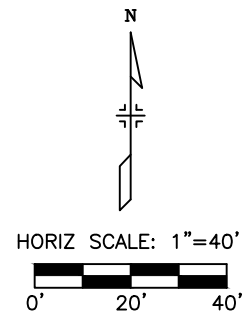
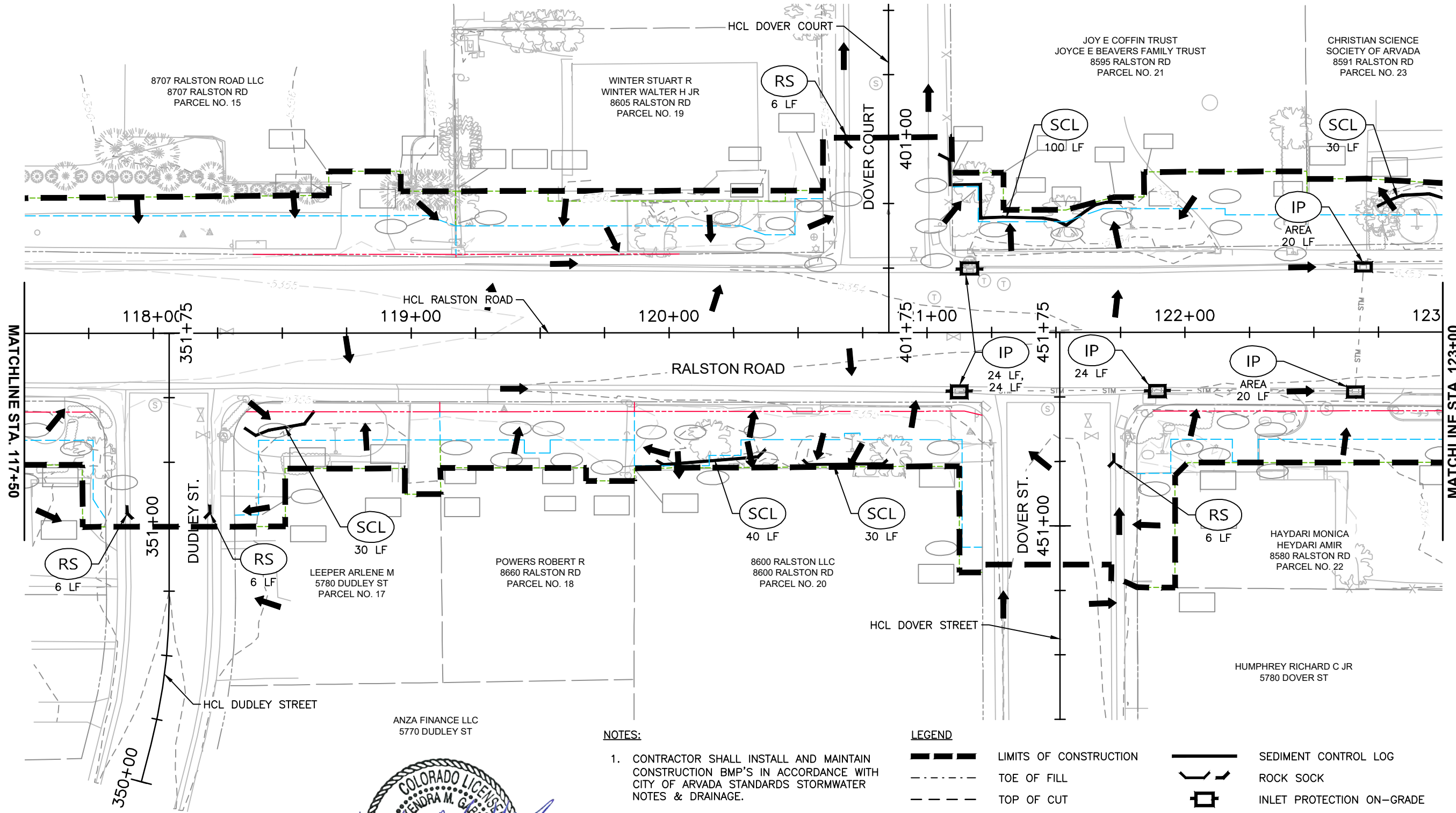
1. CONTRACTOR SHALL INSTALL AND MAINTAIN CONSTRUCTION BMP'S IN ACCORDANCE WITH CITY OF ARVADA STANDARDS STORMWATER NOTES & DRAINAGE.
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LEGEND

- | | | | |
|--|------------------------|--|---------------------------|
| | LIMITS OF CONSTRUCTION | | SEDIMENT CONTROL LOG |
| | TOE OF FILL | | ROCK SOCK |
| | TOP OF CUT | | INLET PROTECTION ON-GRADE |
| | GENERAL FLOW DIRECTION | | INLET PROTECTION SUMP |
| | PROPOSED ROW | | INLET PROTECTION AREA |
| | EXISTING ROW | | |
| | PERMANENT EASEMENT | | |
| | TEMPORARY EASEMENT | | |



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File Name: 118355_ECIN_SH01.DWG								No Revisions:					18-ST-40	
Horizontal Scale: 1" = 40'	Vertical Scale: N/A							Revised:		Designer: CDT	Structure Numbers			
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6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com										Sheet Subset: EROSION	Subset Sheets: EI-03 of 10		Sheet Number	201



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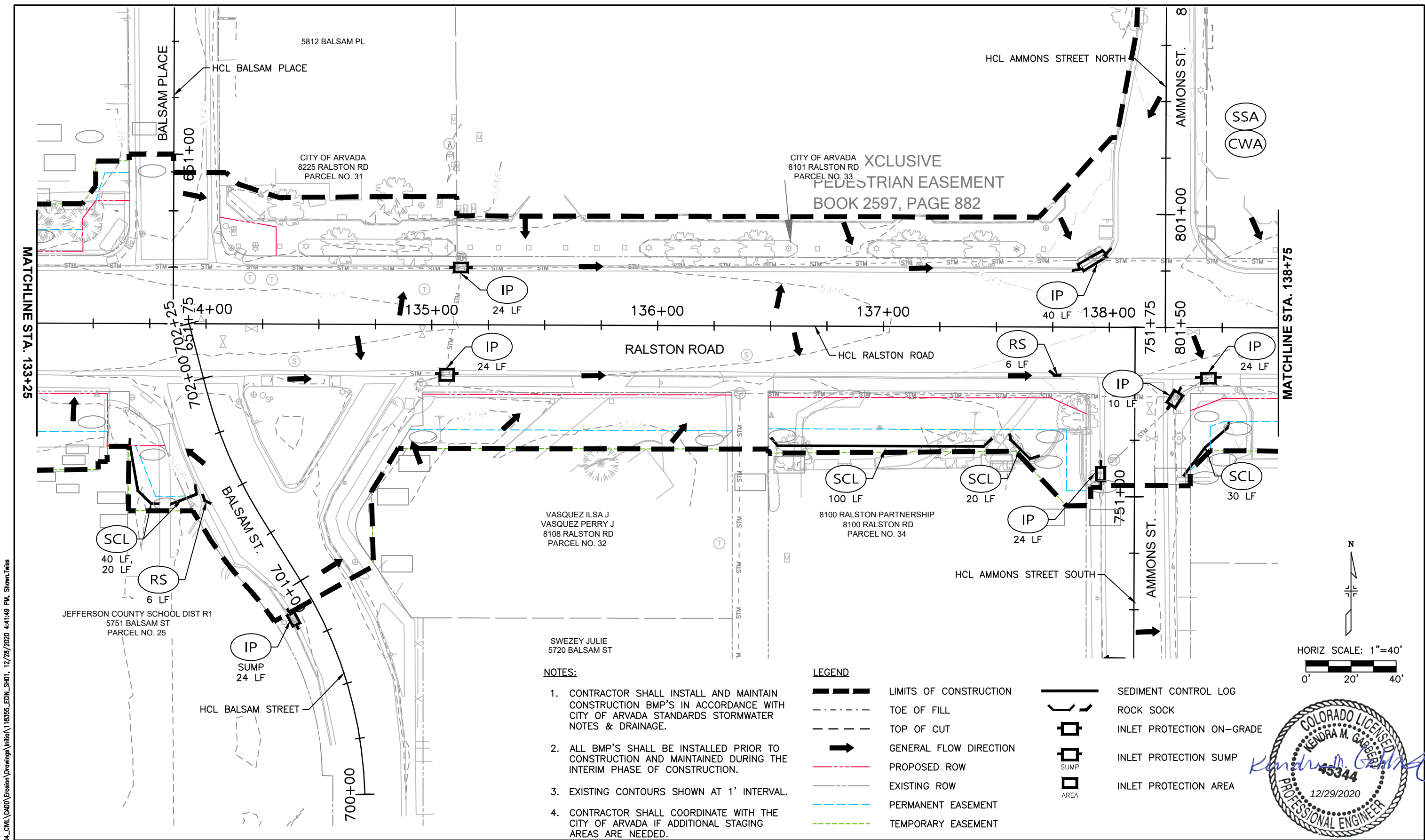
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LEGEND

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|-------|------------------------|-----|---------------------------|
| --- | LIMITS OF CONSTRUCTION | --- | SEDIMENT CONTROL LOG |
| - - - | TOE OF FILL | --- | ROCK SOCK |
| - - - | TOP OF CUT | --- | INLET PROTECTION ON-GRADE |
| → | GENERAL FLOW DIRECTION | --- | INLET PROTECTION SUMP |
| --- | PROPOSED ROW | --- | INLET PROTECTION AREA |
| --- | EXISTING ROW | | |
| --- | PERMANENT EASEMENT | | |
| --- | TEMPORARY EASEMENT | | |



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 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com								Detailer: DAL	Numbers					
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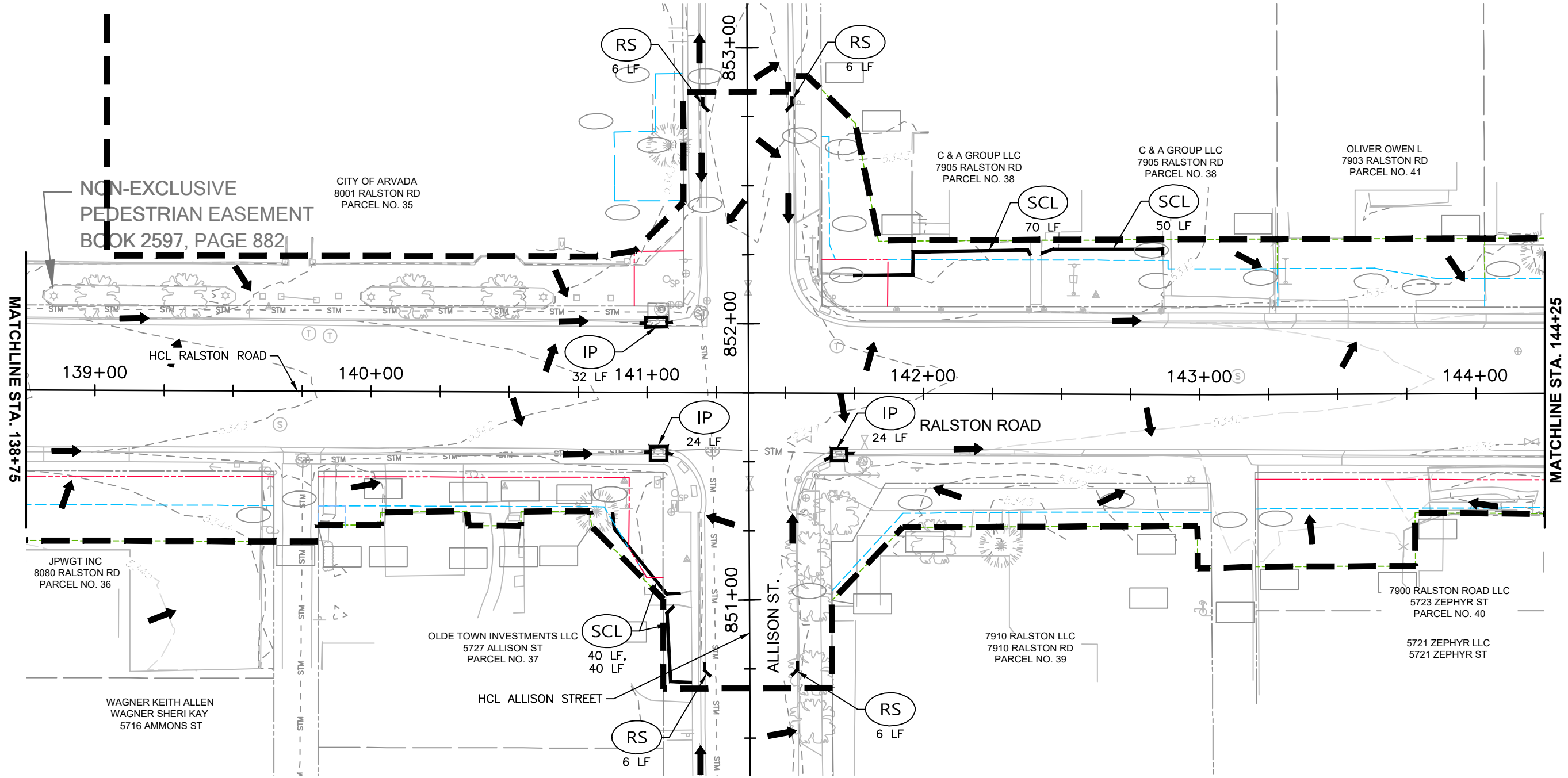
6400 South Fiddlers Green Circle, Suite 1500
Greenwood Village, CO 80111
Phone: 303.721.1440
www.FHUENG.com

Sheet Revisions			
Date	Comments	Initials	

CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST INITIAL EROSION CONTROL RALSTON ROAD (STA. 133+25 - STA. 138+75)				Project No./Code	
No Revisions:						18-ST-40	
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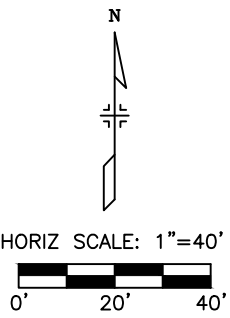


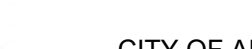
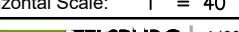
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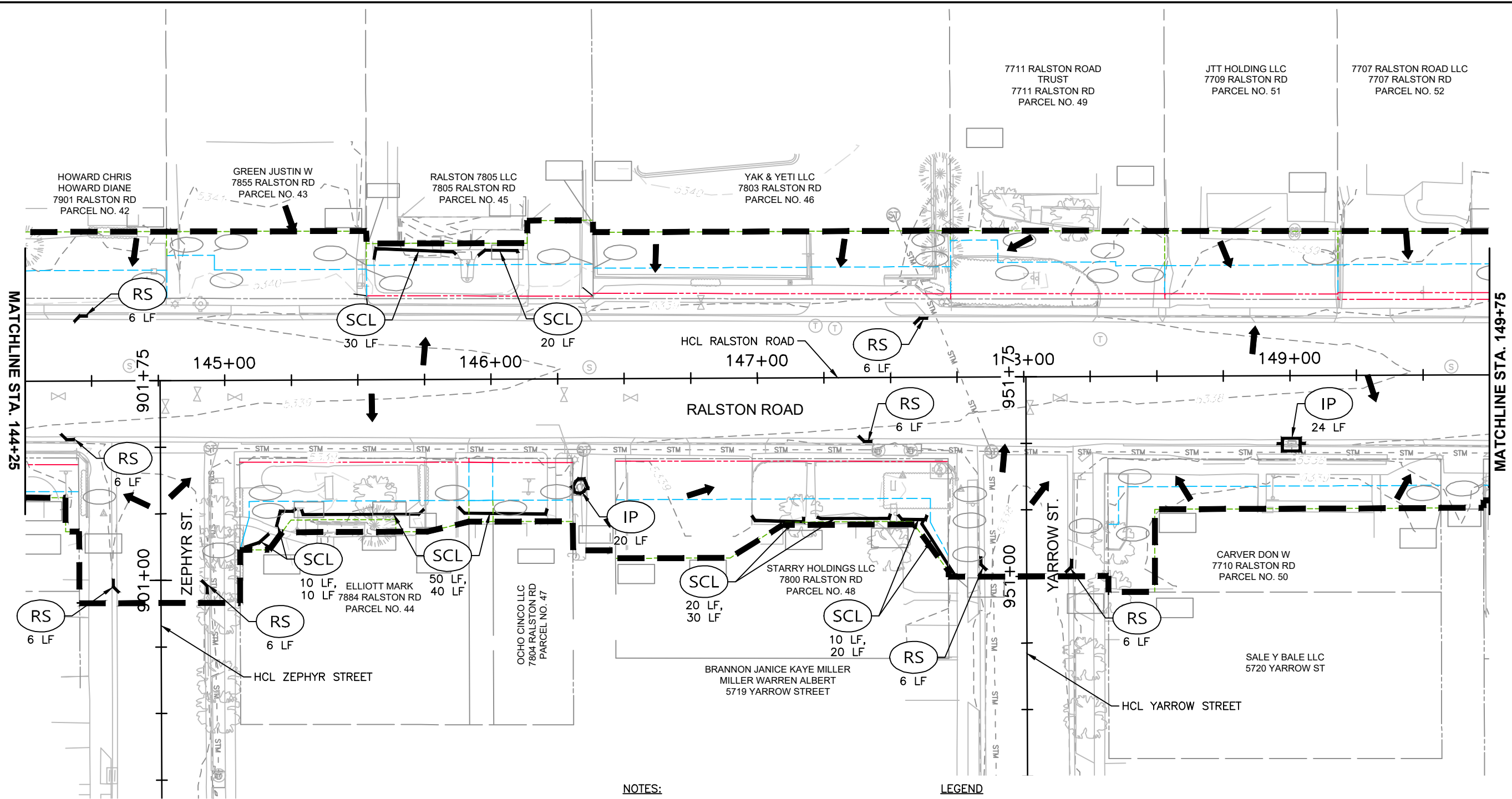
1. CONTRACTOR SHALL INSTALL AND MAINTAIN CONSTRUCTION BMP'S IN ACCORDANCE WITH CITY OF ARVADA STANDARDS STORMWATER NOTES & DRAINAGE.
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LEGEND

- | | | | |
|--|------------------------|--|---------------------------|
| | LIMITS OF CONSTRUCTION | | SEDIMENT CONTROL LOG |
| | TOE OF FILL | | ROCK SOCK |
| | TOP OF CUT | | INLET PROTECTION ON-GRADE |
| | GENERAL FLOW DIRECTION | | INLET PROTECTION SUMP |
| | PROPOSED ROW | | INLET PROTECTION AREA |
| | EXISTING ROW | | |
| | PERMANENT EASEMENT | | |
| | TEMPORARY EASEMENT | | |



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Horizontal Scale: 1" = 40' Vertical Scale: N/A		R-X	Date	Comments	Initials	Revised:		Designer: CDT		Structure							
 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com						Detailer: DAL		Numbers									
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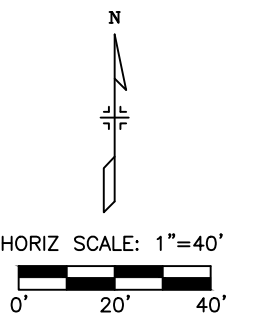


NOTES:

1. CONTRACTOR SHALL INSTALL AND MAINTAIN CONSTRUCTION BMP'S IN ACCORDANCE WITH CITY OF ARVADA STANDARDS STORMWATER NOTES & DRAINAGE.
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4. CONTRACTOR SHALL COORDINATE WITH THE CITY OF ARVADA IF ADDITIONAL STAGING AREAS ARE NEEDED.

LEGEND

	LIMITS OF CONSTRUCTION		SEDIMENT CONTROL LOG
	TOE OF FILL		ROCK SOCK
	TOP OF CUT		INLET PROTECTION ON-GRADE
	GENERAL FLOW DIRECTION		INLET PROTECTION SUMP
	PROPOSED ROW		INLET PROTECTION AREA
	EXISTING ROW		
	PERMANENT EASEMENT		
	TEMPORARY EASEMENT		



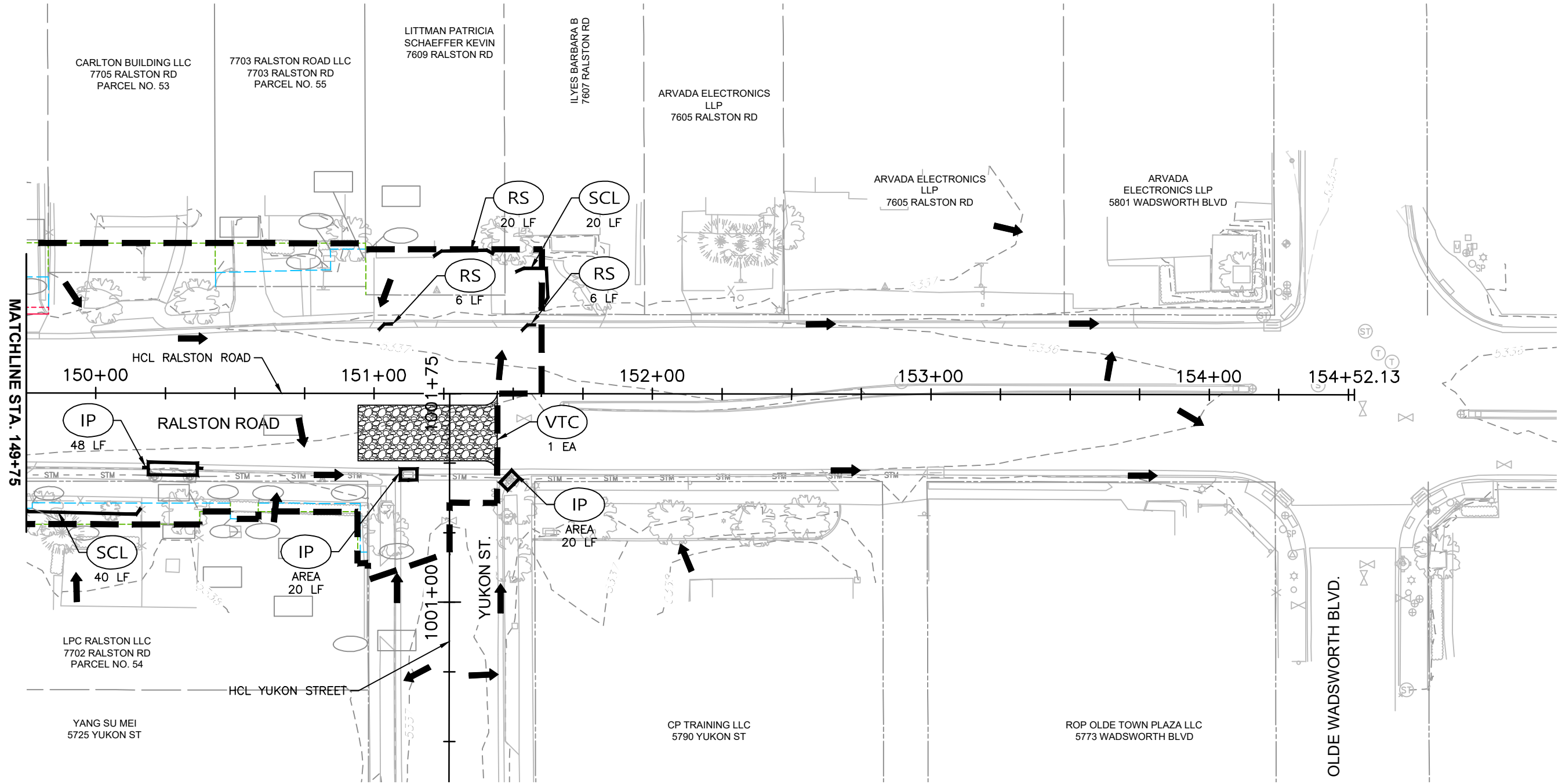
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Sheet Revisions			
Date	Comments	Initials	



CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST INITIAL EROSION CONTROL RALSTON ROAD (STA. 144+25 - STA. 149+75)				Project No./Code
No Revisions:						18-ST-40
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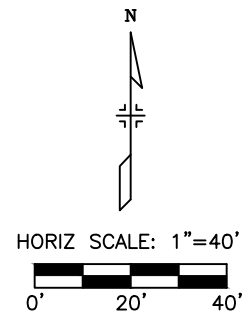


NOTES:

1. CONTRACTOR SHALL INSTALL AND MAINTAIN CONSTRUCTION BMP'S IN ACCORDANCE WITH CITY OF ARVADA STANDARDS STORMWATER NOTES & DRAINAGE.
2. ALL BMP'S SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND MAINTAINED DURING THE INTERIM PHASE OF CONSTRUCTION.
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4. CONTRACTOR SHALL COORDINATE WITH THE CITY OF ARVADA IF ADDITIONAL STAGING AREAS ARE NEEDED.

LEGEND

- | | | | |
|---------|------------------------|-----|---------------------------|
| --- | LIMITS OF CONSTRUCTION | --- | SEDIMENT CONTROL LOG |
| - - - - | TOE OF FILL | --- | ROCK SOCK |
| - - - - | TOP OF CUT | --- | INLET PROTECTION ON-GRADE |
| → | GENERAL FLOW DIRECTION | --- | INLET PROTECTION SUMP |
| --- | PROPOSED ROW | --- | INLET PROTECTION AREA |
| --- | EXISTING ROW | | |
| --- | PERMANENT EASEMENT | | |
| --- | TEMPORARY EASEMENT | | |



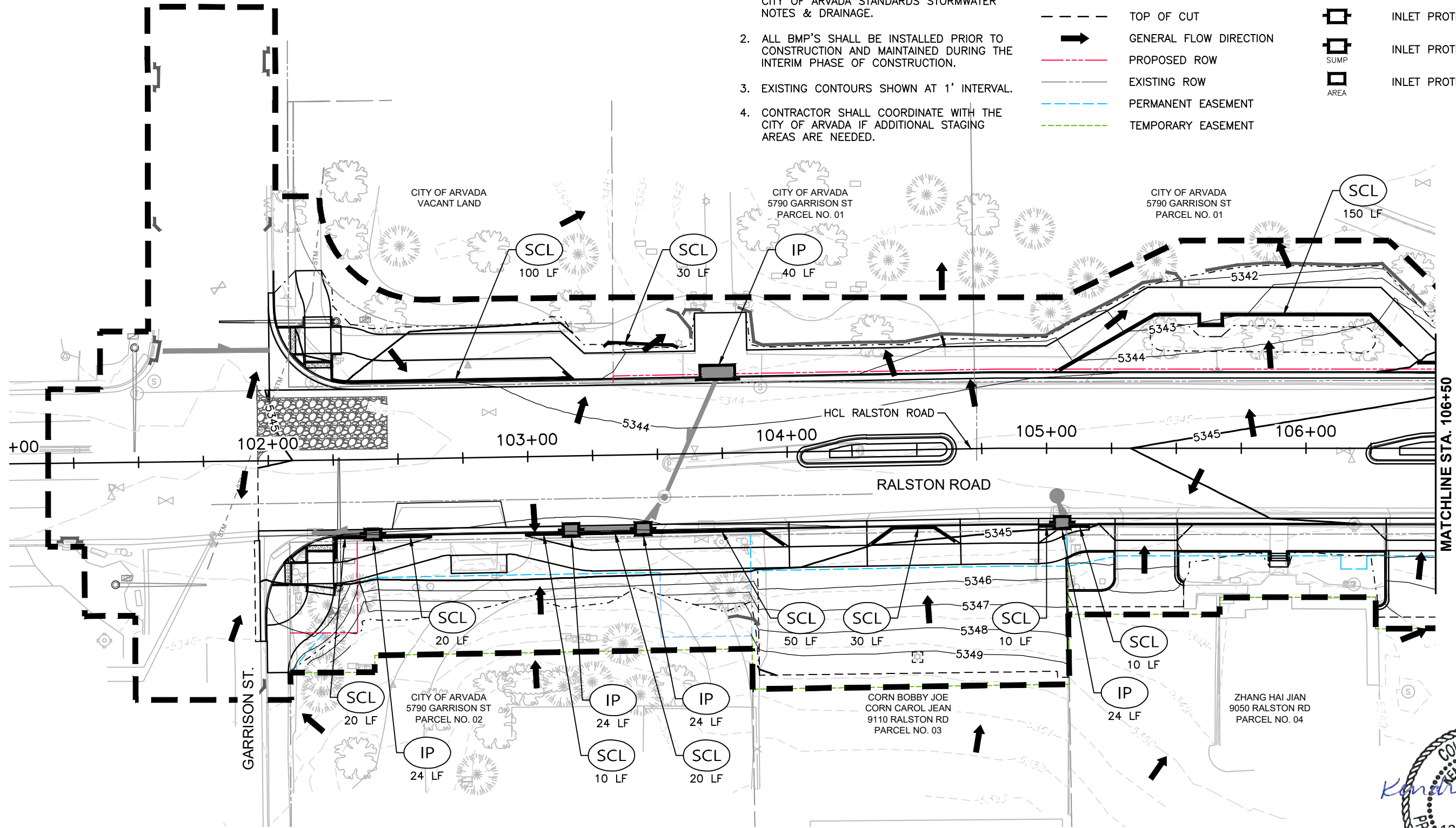
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								Sheet Subset: EROSION		Subset Sheets: EI-10 of 10		Sheet Number 208			

NOTES:

1. CONTRACTOR SHALL INSTALL AND MAINTAIN CONSTRUCTION BMP'S IN ACCORDANCE WITH CITY OF ARVADA STANDARDS STORMWATER NOTES & DRAINAGE.
2. ALL BMP'S SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND MAINTAINED DURING THE INTERIM PHASE OF CONSTRUCTION.
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4. CONTRACTOR SHALL COORDINATE WITH THE CITY OF ARVADA IF ADDITIONAL STAGING AREAS ARE NEEDED.

LEGEND

	LIMITS OF CONSTRUCTION		SEDIMENT CONTROL LOG
	TOE OF FILL		ROCK SOCK
	TOP OF CUT		INLET PROTECTION ON-GRADE
	GENERAL FLOW DIRECTION		INLET PROTECTION SUMP
	PROPOSED ROW		INLET PROTECTION AREA
	EXISTING ROW		
	PERMANENT EASEMENT		
	TEMPORARY EASEMENT		

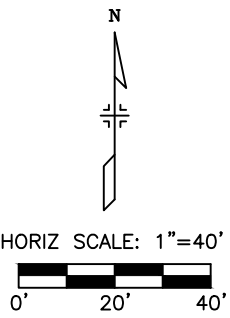
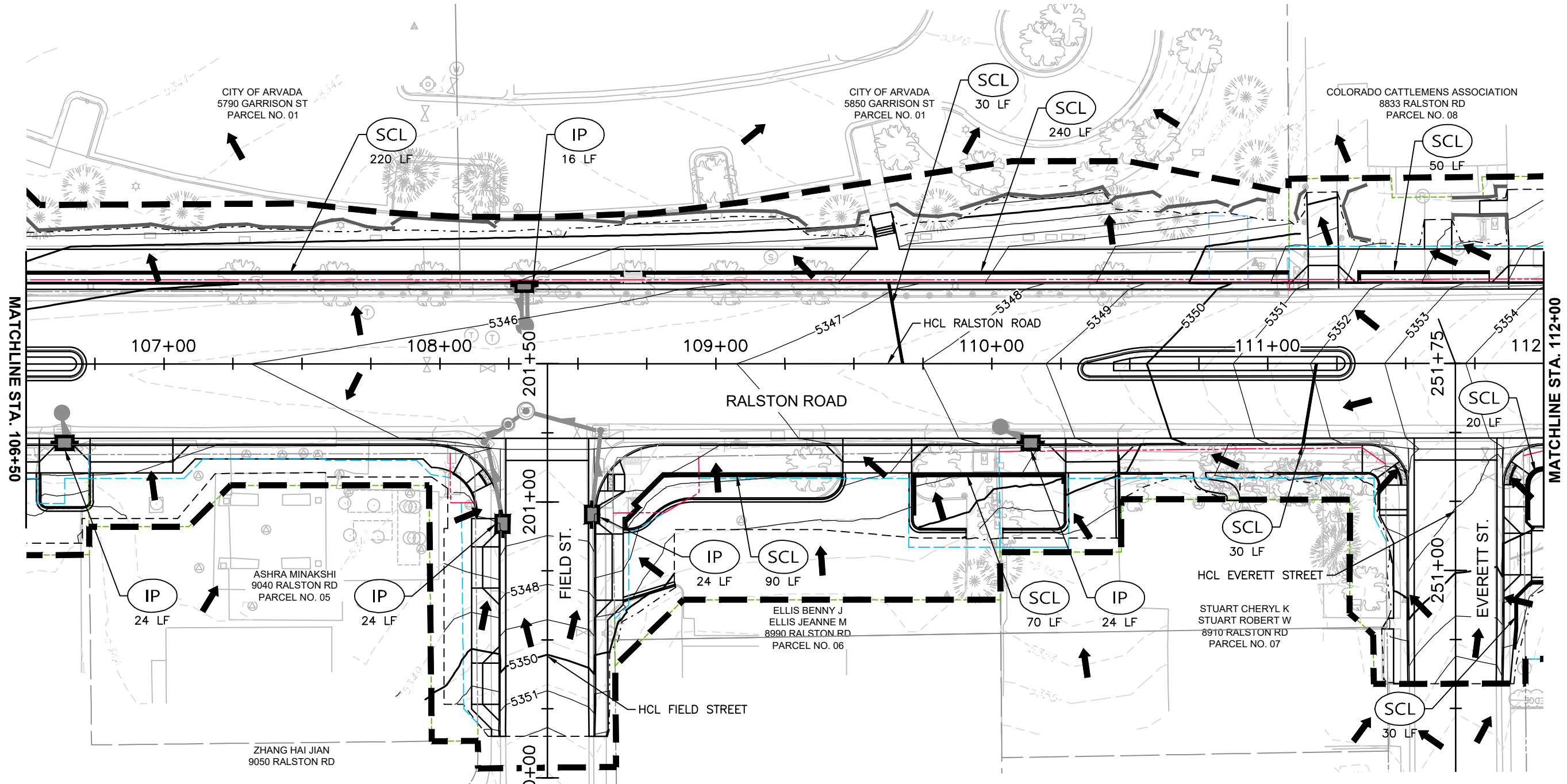


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Date	Comments	Initials	

CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST INTERIM EROSION CONTROL RALSTON ROAD (BEGIN - STA. 106+50)			Project No./Code
No Revisions:					18-ST-40
Revised:		Designer: CDT	Structure		
		Detailer: DAL	Numbers		
Void:		Sheet Subset: EROSION	Subset Sheets: ET-01 of 10		Sheet Number 209



NOTES:

1. CONTRACTOR SHALL INSTALL AND MAINTAIN CONSTRUCTION BMP'S IN ACCORDANCE WITH CITY OF ARVADA STANDARDS STORMWATER NOTES & DRAINAGE.
2. ALL BMP'S SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND MAINTAINED DURING THE INTERIM PHASE OF CONSTRUCTION.
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LEGEND

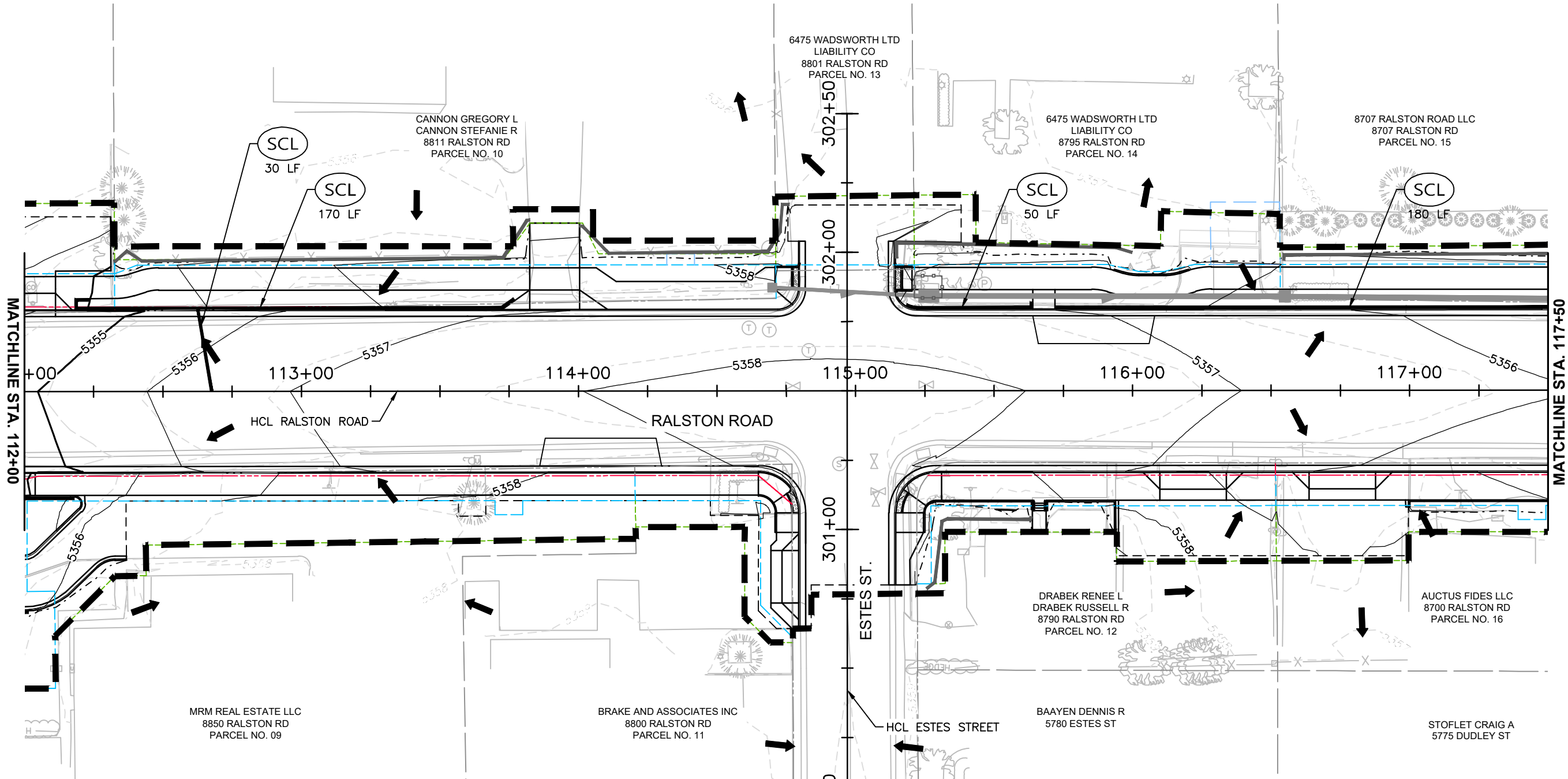
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| --- | LIMITS OF CONSTRUCTION | --- | SEDIMENT CONTROL LOG |
| - - - | TOE OF FILL | --- | ROCK SOCK |
| - - - | TOP OF CUT | --- | INLET PROTECTION ON-GRADE |
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| --- | PROPOSED ROW | --- | INLET PROTECTION AREA |
| --- | EXISTING ROW | | |
| --- | PERMANENT EASEMENT | | |
| --- | TEMPORARY EASEMENT | | |



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Horizontal Scale: 1" = 40' Vertical Scale: N/A		R-X	Date	Comments	Initials	No Revisions:	Designer: CDT			Sheet Number 210	
 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com						Revised:	Detailer: DAL				
						Void:	Sheet Subset: EROSION		Subset Sheets: ET-02 of 10		
					 CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002						



CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

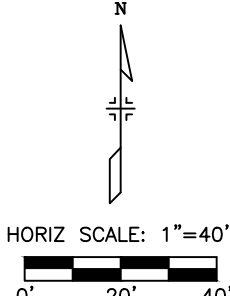


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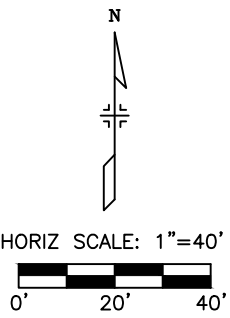
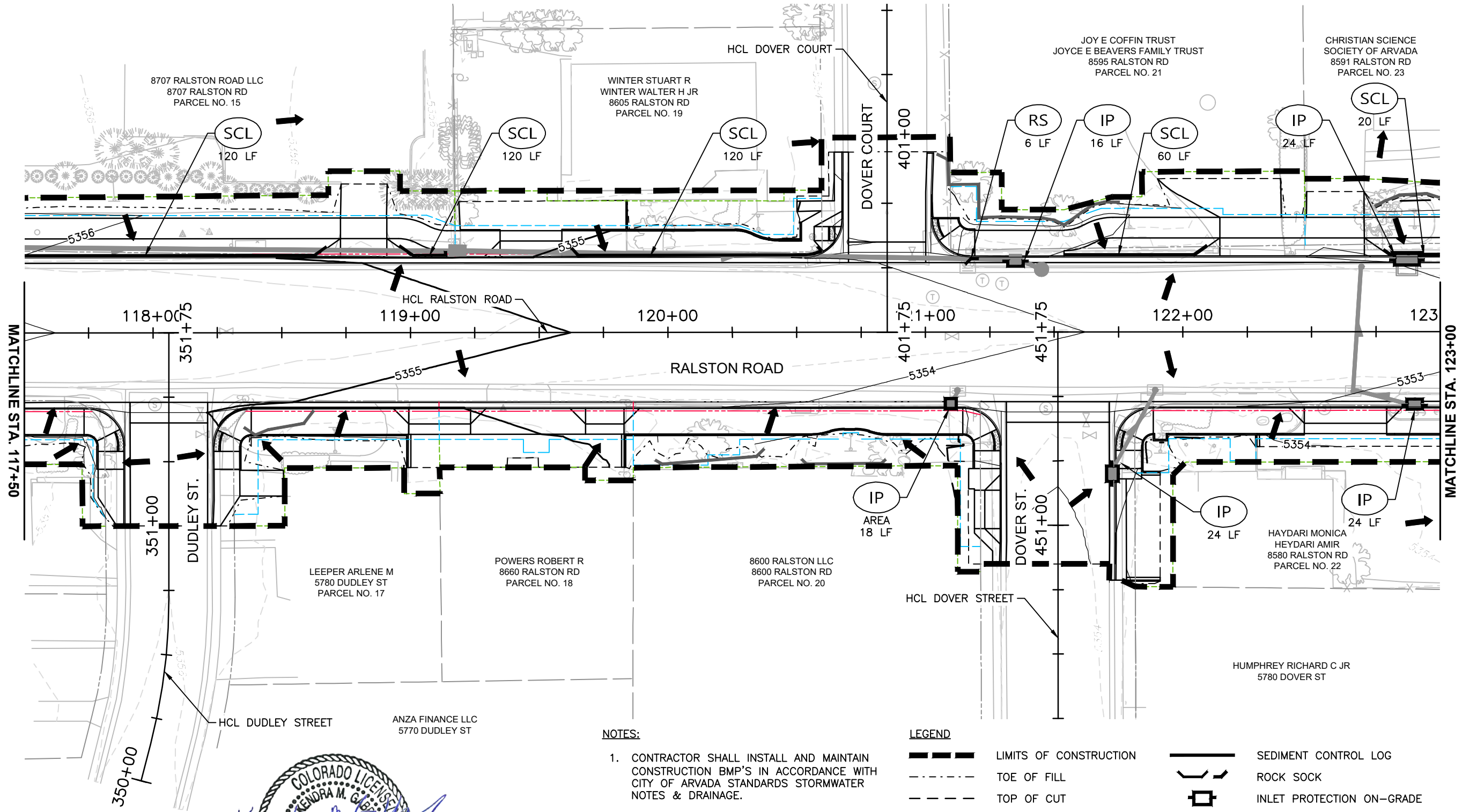
1. CONTRACTOR SHALL INSTALL AND MAINTAIN CONSTRUCTION BMP'S IN ACCORDANCE WITH CITY OF ARVADA STANDARDS STORMWATER NOTES & DRAINAGE.
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LEGEND

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|---------|------------------------|-----|---------------------------|
| --- | LIMITS OF CONSTRUCTION | — — | SEDIMENT CONTROL LOG |
| - - - - | TOE OF FILL | — — | ROCK SOCK |
| - - - - | TOP OF CUT | — — | INLET PROTECTION ON-GRADE |
| → | GENERAL FLOW DIRECTION | — — | INLET PROTECTION SUMP |
| --- | PROPOSED ROW | — — | INLET PROTECTION AREA |
| --- | EXISTING ROW | — — | |
| --- | PERMANENT EASEMENT | — — | |
| --- | TEMPORARY EASEMENT | — — | |



Print Date: 12/8/2020 9:22:14 AM			Sheet Revisions			 CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed		RALSTON RD - YUKON ST TO GARRISON ST INTERIM EROSION CONTROL RALSTON ROAD (STA. 112+00 - STA. 117+50)			Project No./Code	
File Name: 118355_ECIT_SH01.DWG			Date				No Revisions:			18-ST-40			
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 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:			Detailer: DAL Sheet Subst: EROSION Subset Sheets: ET-03 of 10			
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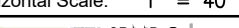
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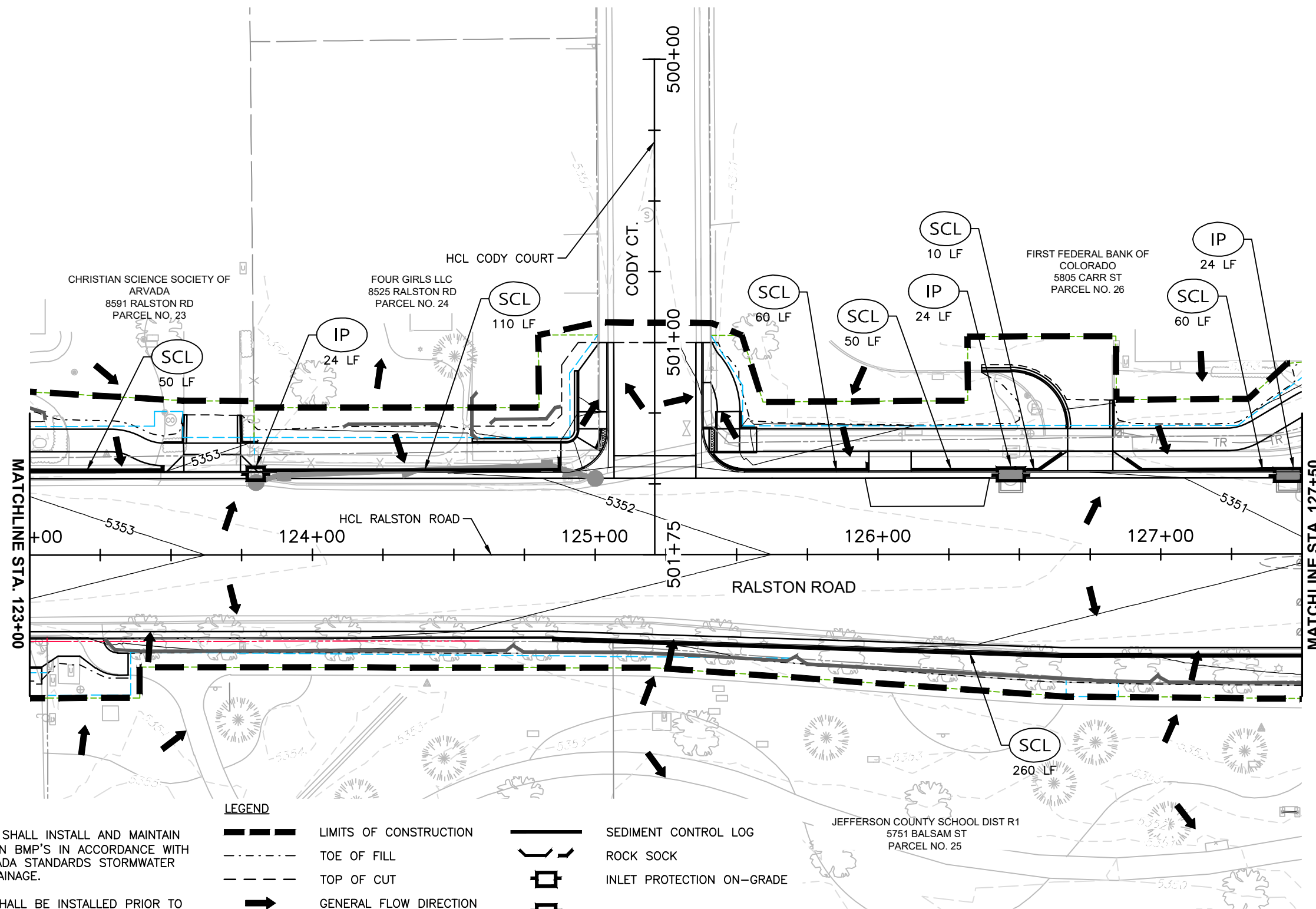
1. CONTRACTOR SHALL INSTALL AND MAINTAIN CONSTRUCTION BMP'S IN ACCORDANCE WITH CITY OF ARVADA STANDARDS STORMWATER NOTES & DRAINAGE.
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LEGEND

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|-------|------------------------|-----|---------------------------|
| --- | LIMITS OF CONSTRUCTION | --- | SEDIMENT CONTROL LOG |
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| --- | EXISTING ROW | | |
| --- | PERMANENT EASEMENT | | |
| --- | TEMPORARY EASEMENT | | |



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File Name: 118355_ECIT_SH01.DWG								18-ST-40			
Horizontal Scale: 1" = 40' Vertical Scale: N/A		R-X	Date	Comments	Initials	No Revisions:	Designer: CDT Structure			Sheet Number 212	
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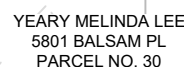
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2. ALL BMP'S SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND MAINTAINED DURING THE INTERIM PHASE OF CONSTRUCTION.
3. EXISTING CONTOURS SHOWN AT 1' INTERVAL.
4. CONTRACTOR SHALL COORDINATE WITH THE CITY OF ARVADA IF ADDITIONAL STAGING AREAS ARE NEEDED.

	LIMITS OF CONSTRUCTION
	TOE OF FILL
	TOP OF CUT
	GENERAL FLOW DIRECTION
	PROPOSED ROW
	EXISTING ROW
	PERMANENT EASEMENT
	TEMPORARY EASEMENT

	SEDIMENT CONTROL LOG
	ROCK SOCK
	INLET PROTECTION ON-GRADE
	INLET PROTECTION SUMP
	INLET PROTECTION AREA

JEFFERSON COUNTY SCHOOL DIST R1
5751 BALSAM ST
PARCEL NO. 25

Print Date: 12/8/2020 9:22:44 AM		CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002			As Constructed		RALSTON RD - YUKON ST TO GARRISON ST INTERIM EROSION CONTROL RALSTON ROAD (STA. 123+00 - STA. 127+50)			Project No./Code	
File Name: 118355_ECIT_SH01.DWG					No Revisions:					18-ST-40	
Horizontal Scale: 1" = 40' Vertical Scale: N/A					Revised:		Designer: CDT		Structure		
FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com					Void:		Detailer: DAL		Numbers		
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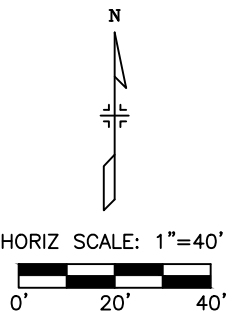
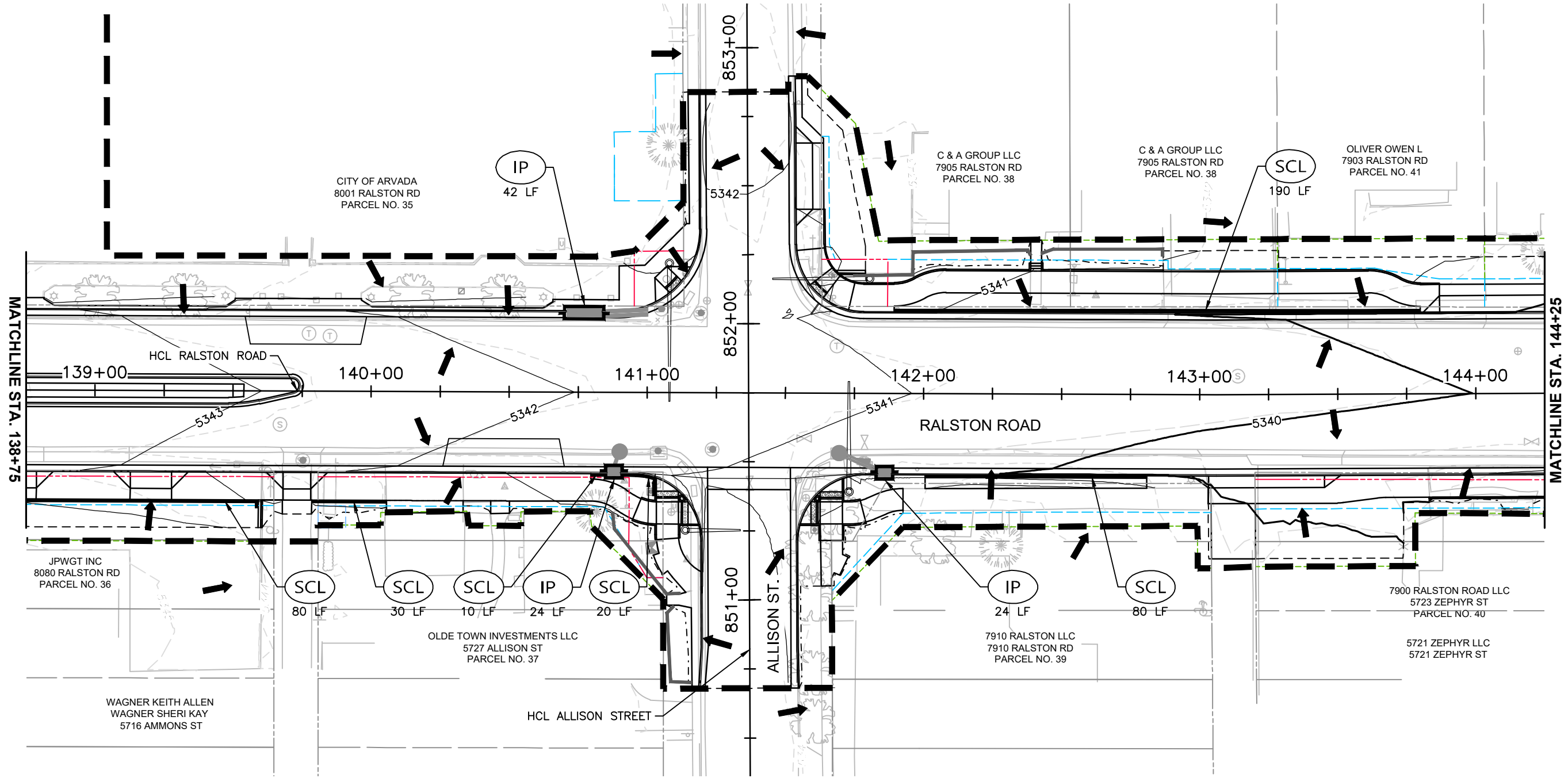


- LEGEND**
- | | |
|--|------------------------|
| | LIMITS OF CONSTRUCTION |
| | TOE OF FILL |
| | TOP OF CUT |
| | GENERAL FLOW DIRECTION |
| | PROPOSED ROW |
| | EXISTING ROW |
| | PERMANENT EASEMENT |
| | TEMPORARY EASEMENT |

- | | |
|---|---------------------------|
|  | SEDIMENT CONTROL LOG |
|  | ROCK SOCK |
|  | INLET PROTECTION ON-GRADE |
|  | INLET PROTECTION SUMP |
|  | INLET PROTECTION AREA |

6400 South Fiddlers Green Circle, Suite 1500
Greenwood Village, CO 80111
Phone: 303.721.1440
www.FHUENG.com

Sheet Number 214



NOTES:

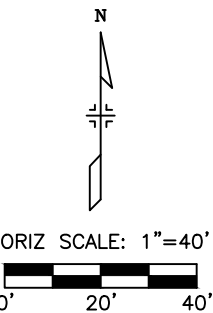
1. CONTRACTOR SHALL INSTALL AND MAINTAIN CONSTRUCTION BMP'S IN ACCORDANCE WITH CITY OF ARVADA STANDARDS STORMWATER NOTES & DRAINAGE.
2. ALL BMP'S SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND MAINTAINED DURING THE INTERIM PHASE OF CONSTRUCTION.
3. EXISTING CONTOURS SHOWN AT 1' INTERVAL.
4. CONTRACTOR SHALL COORDINATE WITH THE CITY OF ARVADA IF ADDITIONAL STAGING AREAS ARE NEEDED.

LEGEND

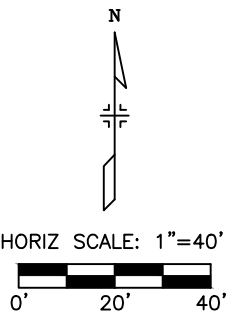
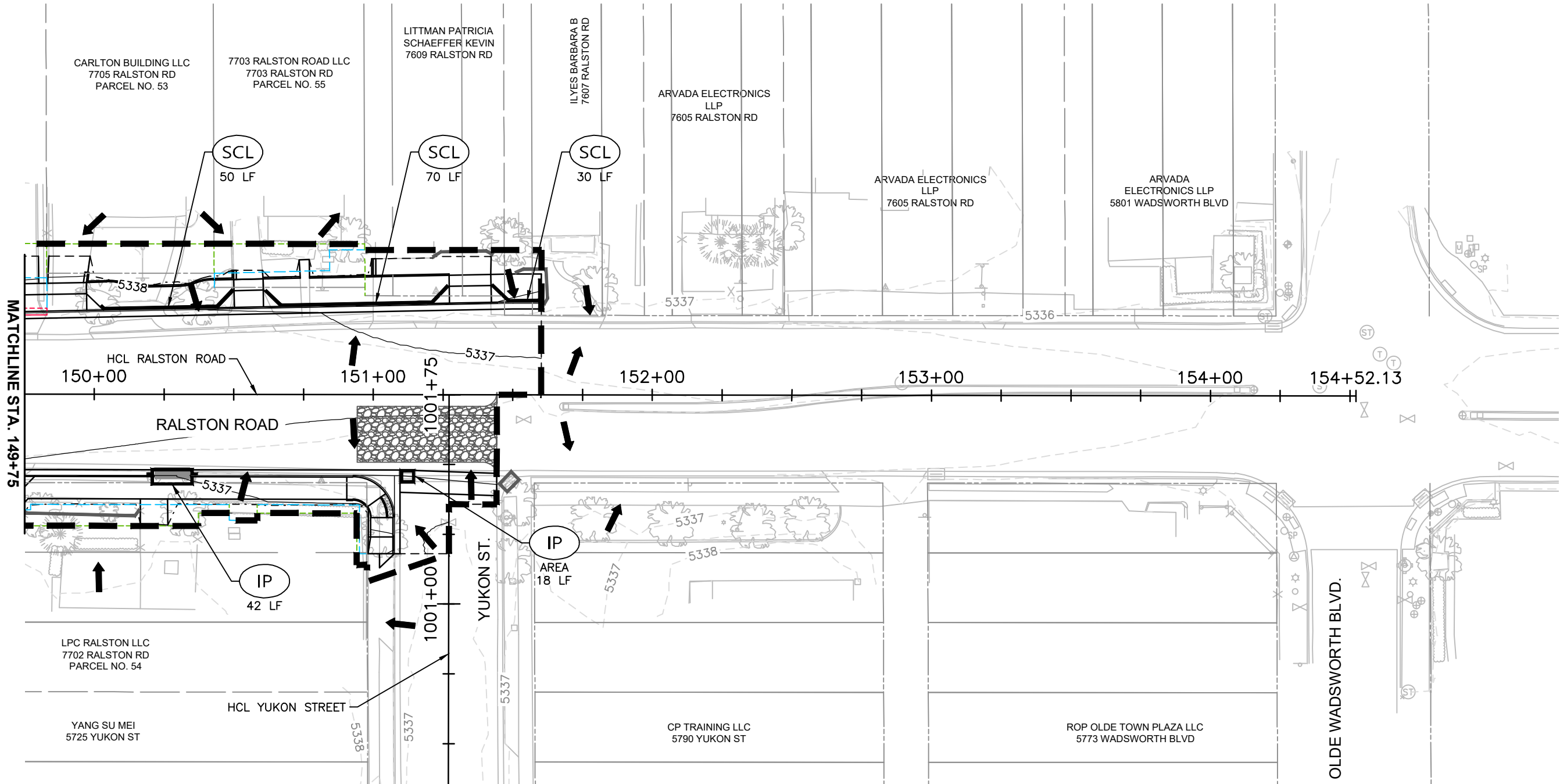
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|--|------------------------|--|---------------------------|
| | LIMITS OF CONSTRUCTION | | SEDIMENT CONTROL LOG |
| | TOE OF FILL | | ROCK SOCK |
| | TOP OF CUT | | INLET PROTECTION ON-GRADE |
| | GENERAL FLOW DIRECTION | | INLET PROTECTION SUMP |
| | PROPOSED ROW | | INLET PROTECTION AREA |
| | EXISTING ROW | | |
| | PERMANENT EASEMENT | | |
| | TEMPORARY EASEMENT | | |



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Horizontal Scale: 1" = 40' Vertical Scale: N/A		R-X	Date	Comments	Initials	No Revisions:	Designer: CDT Structure				
6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com						Revised:	Detailer: DAL Numbers				
						Void:	Sheet Subset: EROSION		Subset Sheets: ET-08 of 10		
			CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002						Sheet Number 216		



Sheet Number 217



NOTES:

1. CONTRACTOR SHALL INSTALL AND MAINTAIN CONSTRUCTION BMP'S IN ACCORDANCE WITH CITY OF ARVADA STANDARDS STORMWATER NOTES & DRAINAGE.
2. ALL BMP'S SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND MAINTAINED DURING THE INTERIM PHASE OF CONSTRUCTION.
3. EXISTING CONTOURS SHOWN AT 1' INTERVAL.
4. CONTRACTOR SHALL COORDINATE WITH THE CITY OF ARVADA IF ADDITIONAL STAGING AREAS ARE NEEDED.

LEGEND

- | | | | |
|--|------------------------|--|---------------------------|
| | LIMITS OF CONSTRUCTION | | SEDIMENT CONTROL LOG |
| | TOE OF FILL | | ROCK SOCK |
| | TOP OF CUT | | INLET PROTECTION ON-GRADE |
| | GENERAL FLOW DIRECTION | | INLET PROTECTION SUMP |
| | PROPOSED ROW | | INLET PROTECTION AREA |
| | EXISTING ROW | | |
| | PERMANENT EASEMENT | | |
| | TEMPORARY EASEMENT | | |



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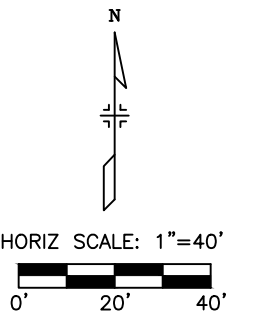
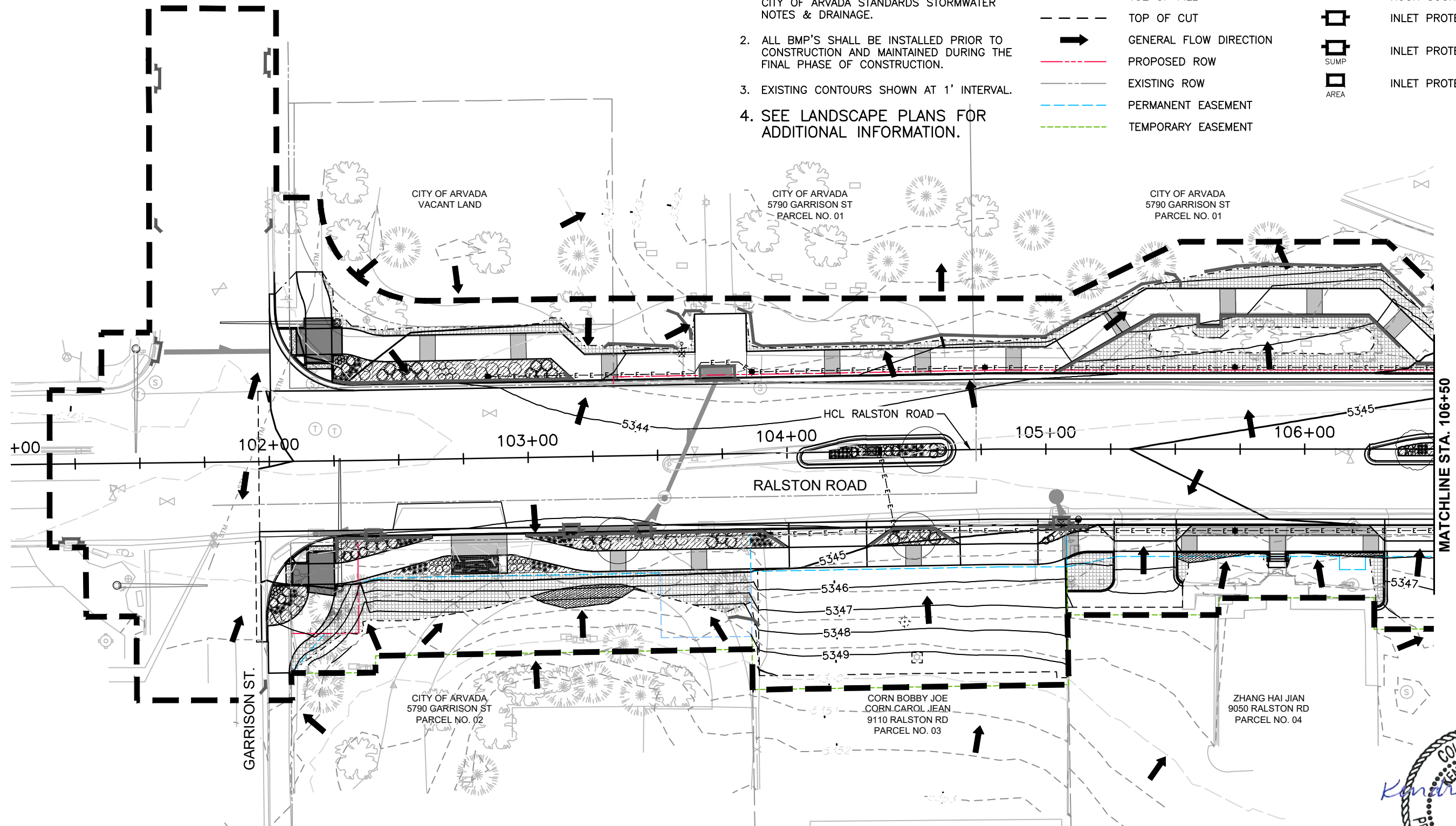
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File Name: 118355_ECIT_SH01.DWG			Date	Comments	Initials		No Revisions:					18-ST-40		
Horizontal Scale: 1" = 40' Vertical Scale: N/A							Revised:		Designer: CDT Detailer: DAL		Structure Numbers			
 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Sheet Subset: EROSION		Subset Sheets: ET-10 of 10		Sheet Number 218	

NOTES:

1. CONTRACTOR SHALL INSTALL AND MAINTAIN CONSTRUCTION BMP'S IN ACCORDANCE WITH CITY OF ARVADA STANDARDS STORMWATER NOTES & DRAINAGE.
2. ALL BMP'S SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND MAINTAINED DURING THE FINAL PHASE OF CONSTRUCTION.
3. EXISTING CONTOURS SHOWN AT 1' INTERVAL.
4. SEE LANDSCAPE PLANS FOR ADDITIONAL INFORMATION.

LEGEND

- | | | | |
|--|------------------------|--|---------------------------|
| | LIMITS OF CONSTRUCTION | | SEDIMENT CONTROL LOG |
| | TOE OF FILL | | ROCK SOCK |
| | TOP OF CUT | | INLET PROTECTION ON-GRADE |
| | GENERAL FLOW DIRECTION | | INLET PROTECTION SUMP |
| | PROPOSED ROW | | INLET PROTECTION AREA |
| | EXISTING ROW | | |
| | PERMANENT EASEMENT | | |
| | TEMPORARY EASEMENT | | |



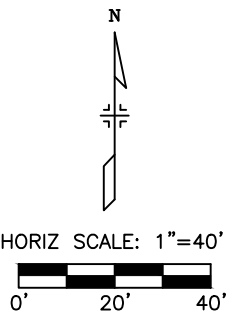
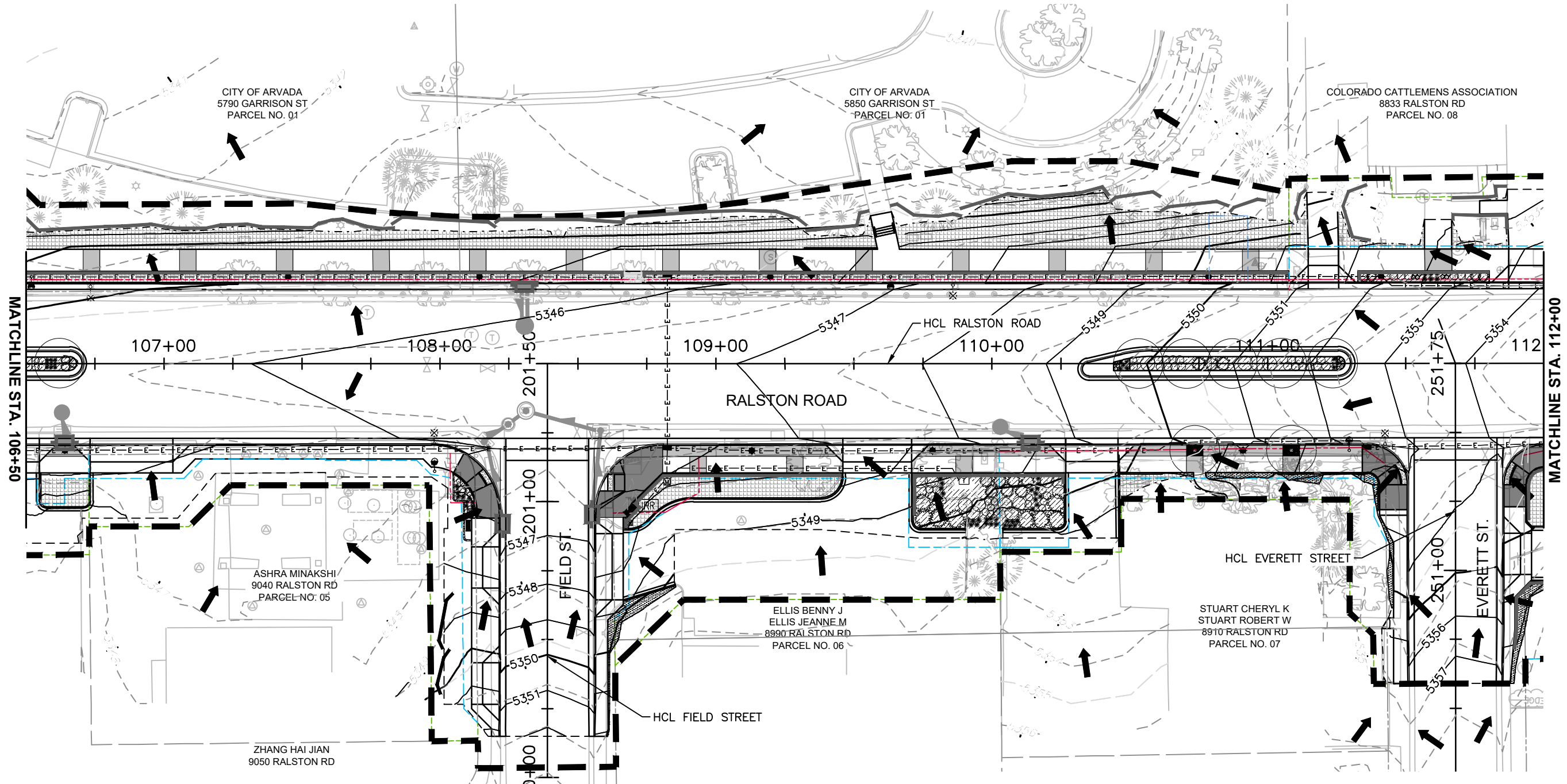
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6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com	

Sheet Revisions			
Date	Comments	Initials	



CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed	RALSTON RD - YUKON ST TO GARRISON ST FINAL EROSION CONTROL RALSTON ROAD (BEGIN - STA. 106+50)				Project No./Code
No Revisions:					18-ST-40
Revised:	Designer:	CDT	Structure		
	Detailer:	DAL	Numbers		
Void:	Sheet Subset:	EROSION	Subset Sheets:	EF-01 of 10	Sheet Number 219



NOTES:

1. CONTRACTOR SHALL INSTALL AND MAINTAIN CONSTRUCTION BMP'S IN ACCORDANCE WITH CITY OF ARVADA STANDARDS STORMWATER NOTES & DRAINAGE.
2. ALL BMP'S SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND MAINTAINED DURING THE FINAL PHASE OF CONSTRUCTION.
3. EXISTING CONTOURS SHOWN AT 1' INTERVAL.
4. SEE LANDSCAPE PLANS FOR ADDITIONAL INFORMATION.

LEGEND

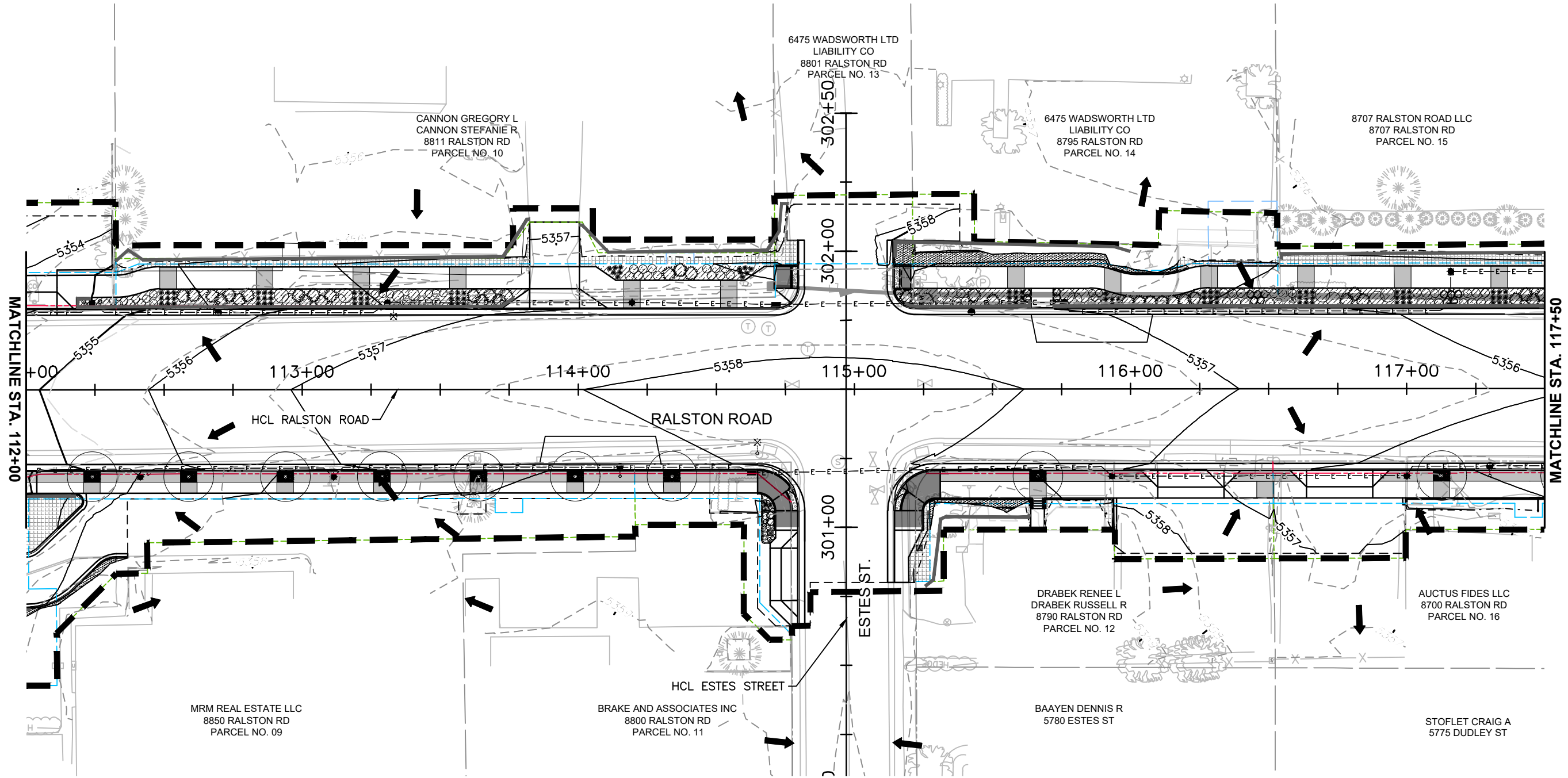
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| --- | LIMITS OF CONSTRUCTION | --- | SEDIMENT CONTROL LOG |
| - - - | TOE OF FILL | --- | ROCK SOCK |
| - - - | TOP OF CUT | --- | INLET PROTECTION ON-GRADE |
| → | GENERAL FLOW DIRECTION | --- | INLET PROTECTION SUMP |
| --- | PROPOSED ROW | --- | INLET PROTECTION AREA |
| --- | EXISTING ROW | | |
| --- | PERMANENT EASEMENT | | |
| --- | TEMPORARY EASEMENT | | |



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	FELSBERG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Detailer: DAL		Structure Numbers					
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CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

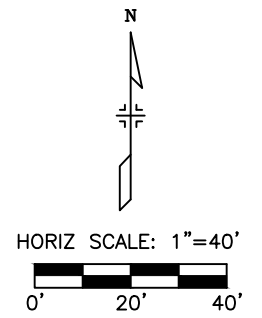


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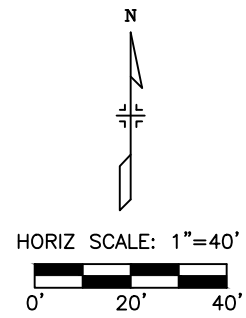
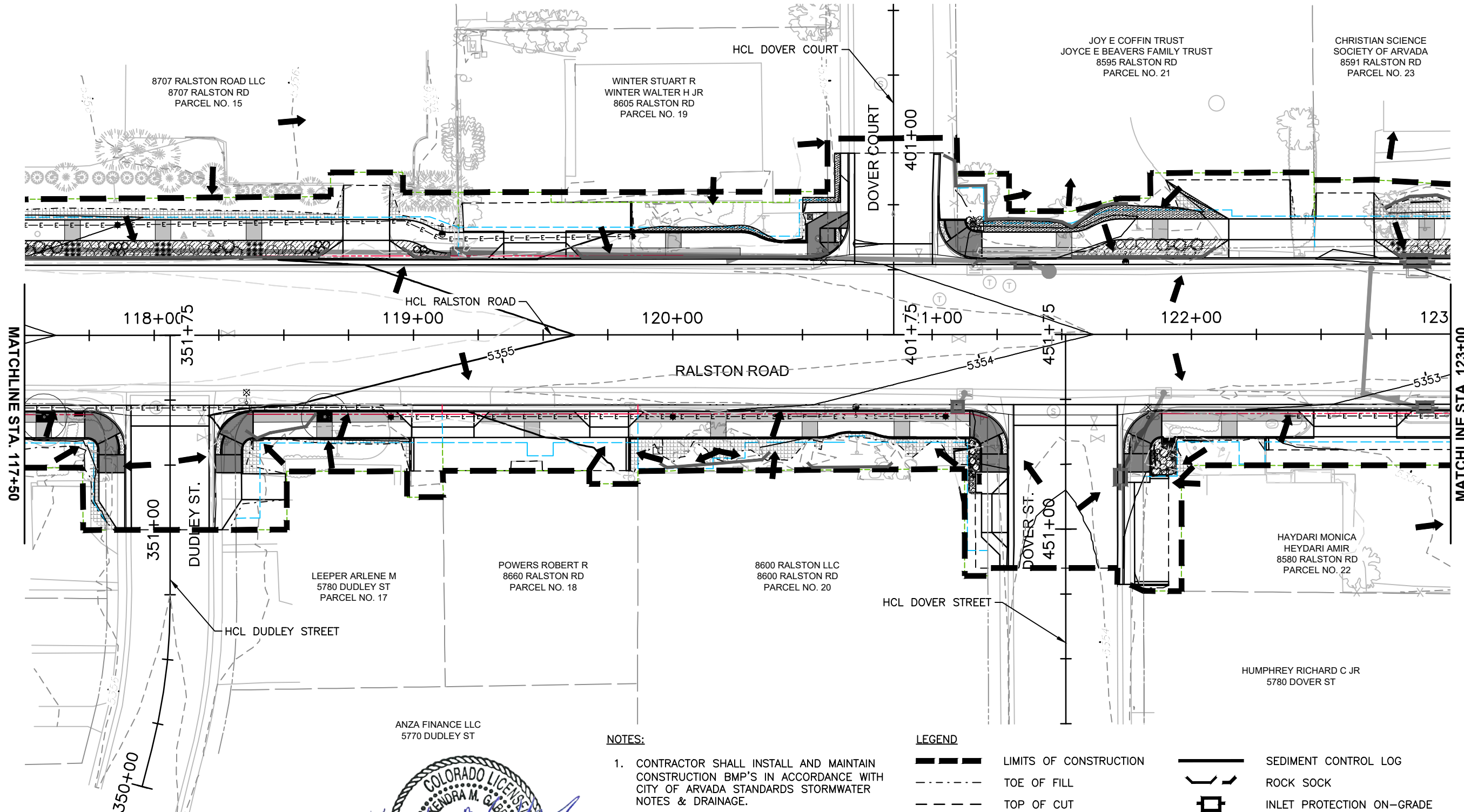
1. CONTRACTOR SHALL INSTALL AND MAINTAIN CONSTRUCTION BMP'S IN ACCORDANCE WITH CITY OF ARVADA STANDARDS STORMWATER NOTES & DRAINAGE.
2. ALL BMP'S SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND MAINTAINED DURING THE FINAL PHASE OF CONSTRUCTION.
3. EXISTING CONTOURS SHOWN AT 1' INTERVAL.
4. SEE LANDSCAPE PLANS FOR ADDITIONAL INFORMATION.

LEGEND

- | | | | |
|--|------------------------|--|---------------------------|
| | LIMITS OF CONSTRUCTION | | SEDIMENT CONTROL LOG |
| | TOE OF FILL | | ROCK SOCK |
| | TOP OF CUT | | INLET PROTECTION ON-GRADE |
| | GENERAL FLOW DIRECTION | | INLET PROTECTION SUMP |
| | PROPOSED ROW | | INLET PROTECTION AREA |
| | EXISTING ROW | | |
| | PERMANENT EASEMENT | | |
| | TEMPORARY EASEMENT | | |



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	Horizontal Scale: 1" = 40' Vertical Scale: N/A							Revised:			Designer: CDT			
	 FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Detailer:			Structure		Sheet Number 221	
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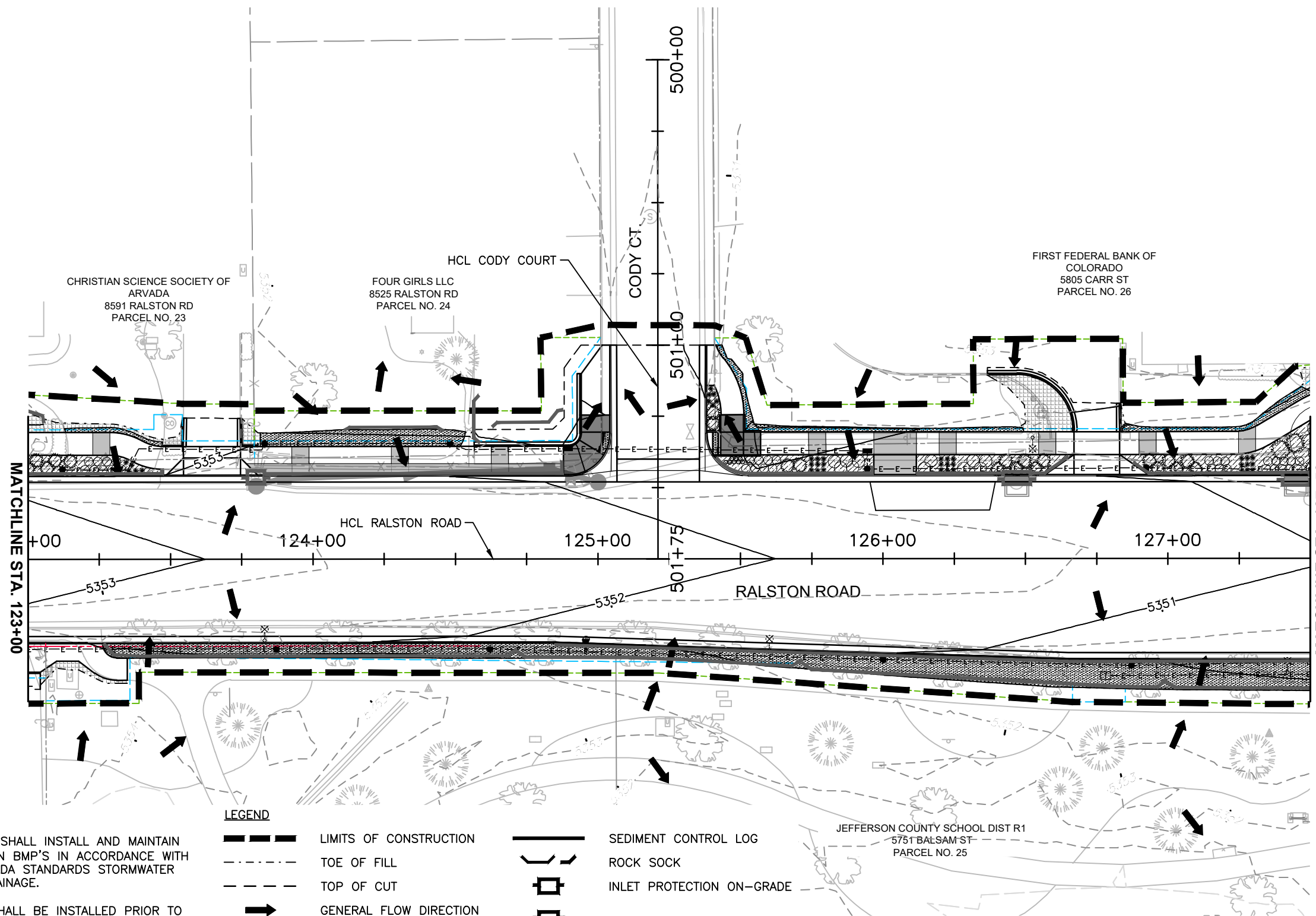
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3. EXISTING CONTOURS SHOWN AT 1' INTERVAL.
4. SEE LANDSCAPE PLANS FOR ADDITIONAL INFORMATION.

LEGEND

- | | | | |
|-------|------------------------|-----|---------------------------|
| --- | LIMITS OF CONSTRUCTION | --- | SEDIMENT CONTROL LOG |
| - - - | TOE OF FILL | --- | ROCK SOCK |
| - - - | TOP OF CUT | --- | INLET PROTECTION ON-GRADE |
| → | GENERAL FLOW DIRECTION | --- | INLET PROTECTION SUMP |
| --- | PROPOSED ROW | --- | INLET PROTECTION AREA |
| --- | EXISTING ROW | | |
| --- | PERMANENT EASEMENT | | |
| --- | TEMPORARY EASEMENT | | |



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Horizontal Scale: 1" = 40' Vertical Scale: N/A		R-X	Date	Comments	Initials		Revised:	Designer: CDT	Structure				
 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Detailer: DAL	DAL	Numbers				
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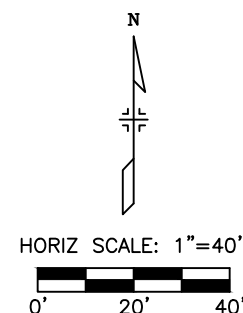


NOTES:

1. CONTRACTOR SHALL INSTALL AND MAINTAIN CONSTRUCTION BMP'S IN ACCORDANCE WITH CITY OF ARVADA STANDARDS STORMWATER NOTES & DRAINAGE.
2. ALL BMP'S SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND MAINTAINED DURING THE FINAL PHASE OF CONSTRUCTION.
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4. SEE LANDSCAPE PLANS FOR ADDITIONAL INFORMATION.

LEGEND

- | | | | |
|---------|------------------------|-----|---------------------------|
| --- | LIMITS OF CONSTRUCTION | --- | SEDIMENT CONTROL LOG |
| - - - - | TOE OF FILL | --- | ROCK SOCK |
| - - - - | TOP OF CUT | --- | INLET PROTECTION ON-GRADE |
| → | GENERAL FLOW DIRECTION | --- | INLET PROTECTION SUMP |
| --- | PROPOSED ROW | --- | INLET PROTECTION AREA |
| --- | EXISTING ROW | --- | |
| --- | PERMANENT EASEMENT | --- | |
| --- | TEMPORARY EASEMENT | --- | |



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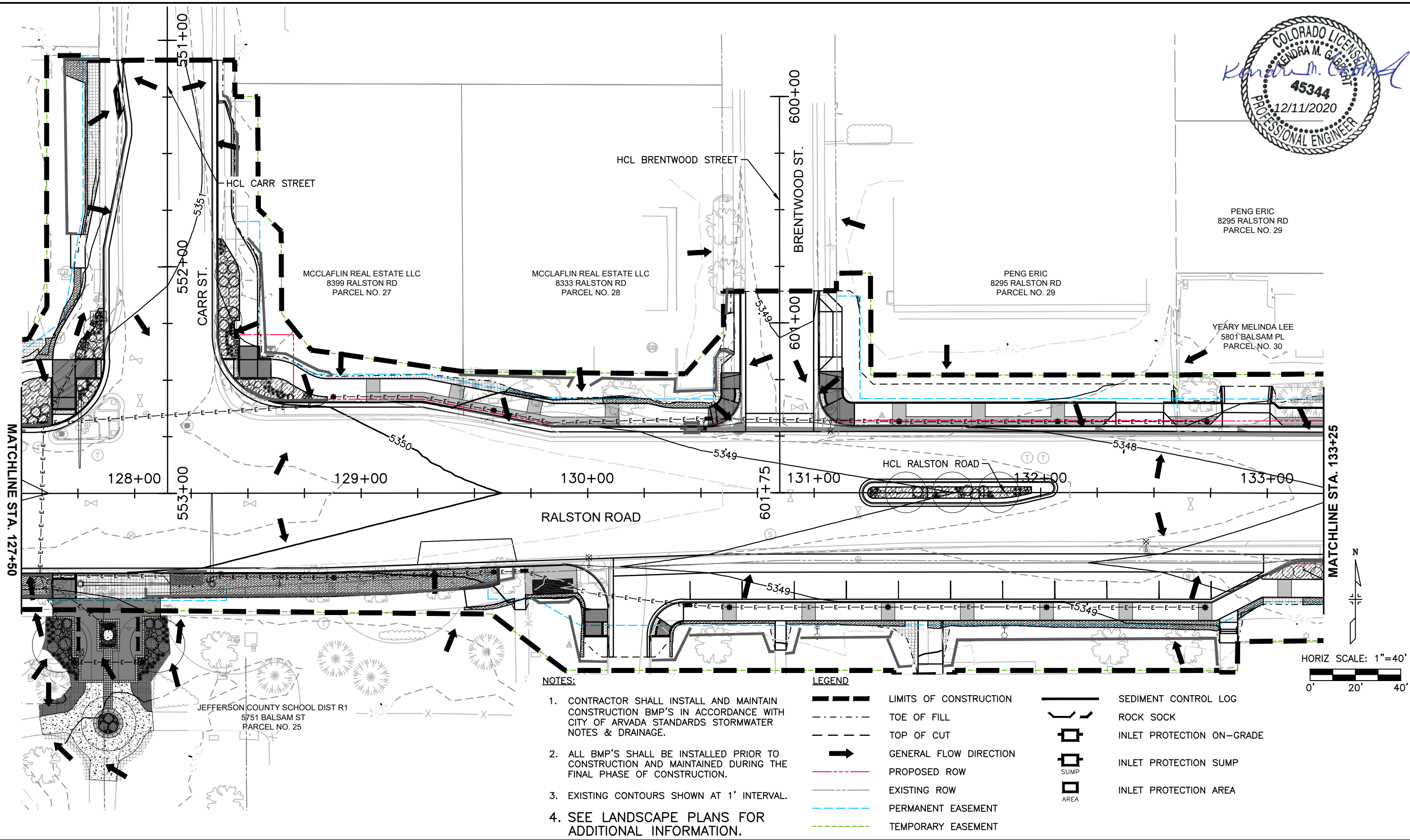
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Date	Comments	Initials	



CITY OF ARVADA
PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST FINAL EROSION CONTROL RALSTON ROAD (STA. 123+00 - STA. 127+50)			Project No./Code
No Revisions:					18-ST-40
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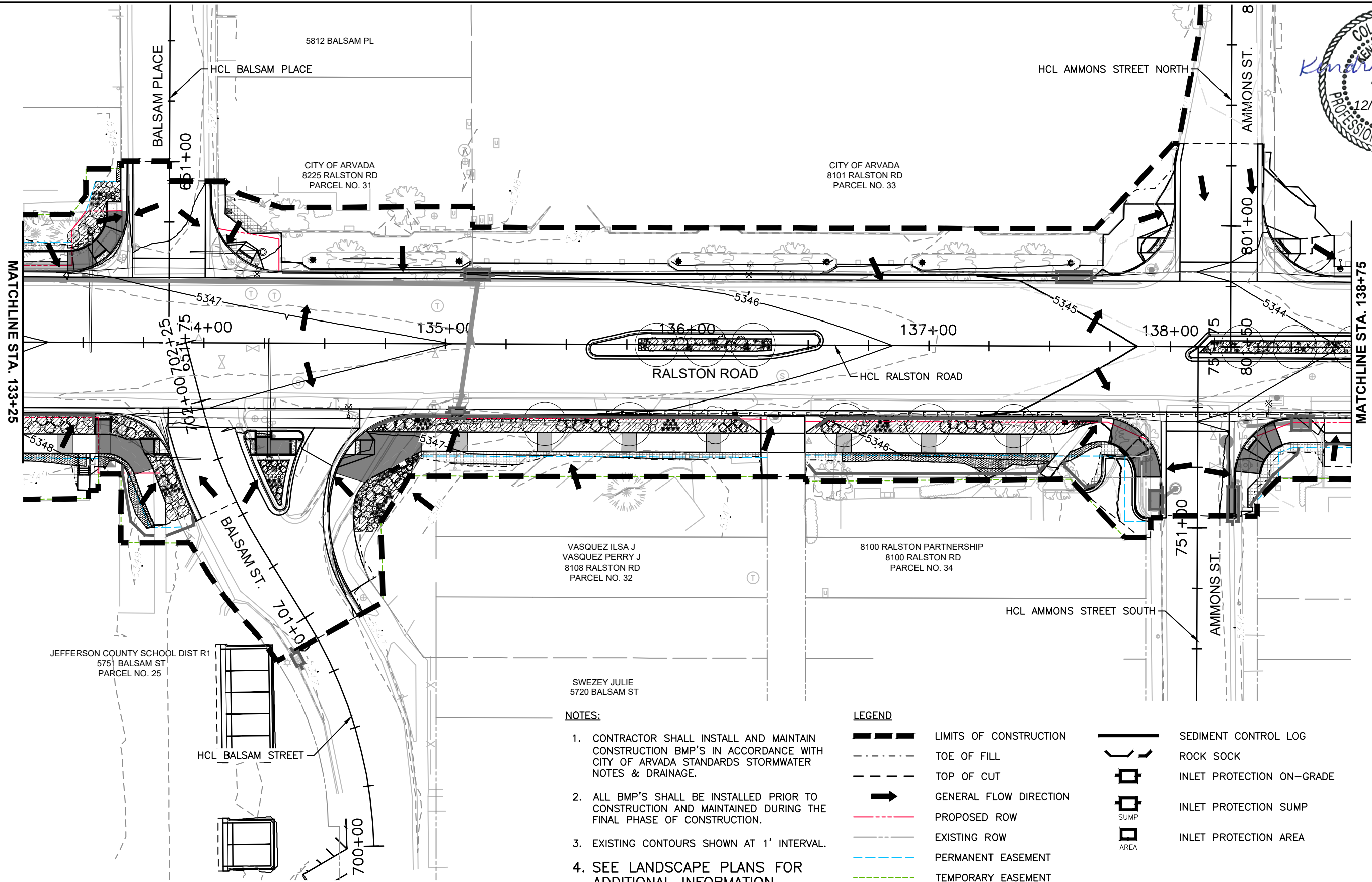
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2. ALL BMP'S SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND MAINTAINED DURING THE FINAL PHASE OF CONSTRUCTION.
3. EXISTING CONTOURS SHOWN AT 1' INTERVAL.
4. SEE LANDSCAPE PLANS FOR ADDITIONAL INFORMATION.

LEGEND

- | | | | |
|--------------------|------------------------|-------------------------------|---------------------------|
| --- (thick dashed) | LIMITS OF CONSTRUCTION | --- (thin dashed) | SEDIMENT CONTROL LOG |
| - - - - - | TOE OF FILL | --- (dashed with cross-hatch) | ROCK SOCK |
| - - - - - | TOP OF CUT | □ (with cross-hatch) | INLET PROTECTION ON-GRADE |
| → | GENERAL FLOW DIRECTION | □ (with cross-hatch) | INLET PROTECTION SUMP |
| --- | PROPOSED ROW | □ (with cross-hatch) | INLET PROTECTION AREA |
| --- | EXISTING ROW | | |
| --- | PERMANENT EASEMENT | | |
| --- | TEMPORARY EASEMENT | | |

HORIZ SCALE: 1"=40'

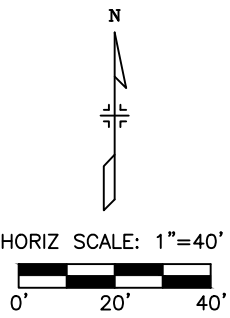
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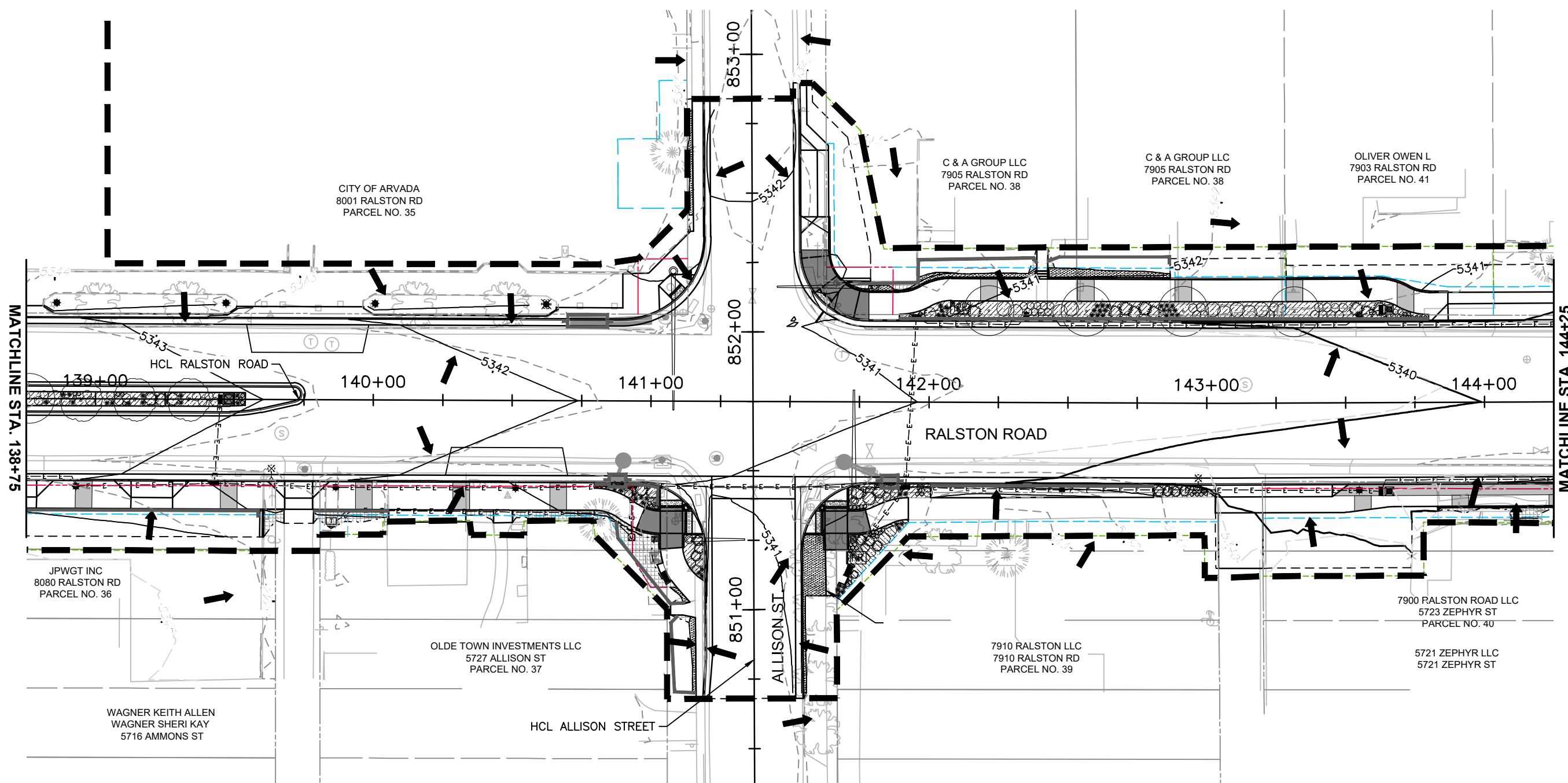
- NOTES:**
1. CONTRACTOR SHALL INSTALL AND MAINTAIN CONSTRUCTION BMP'S IN ACCORDANCE WITH CITY OF ARVADA STANDARDS STORMWATER NOTES & DRAINAGE.
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 3. EXISTING CONTOURS SHOWN AT 1' INTERVAL.
 4. SEE LANDSCAPE PLANS FOR ADDITIONAL INFORMATION.

- LEGEND**
- LIMITS OF CONSTRUCTION
 - - - TOE OF FILL
 - - - TOP OF CUT
 - GENERAL FLOW DIRECTION
 - - - PROPOSED ROW
 - - - EXISTING ROW
 - - - PERMANENT EASEMENT
 - - - TEMPORARY EASEMENT

- SEDIMENT CONTROL LOG
- ROCK SOCK
- INLET PROTECTION ON-GRADE
- INLET PROTECTION SUMP
- INLET PROTECTION AREA



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Horizontal Scale: 1" = 40' Vertical Scale: N/A																									
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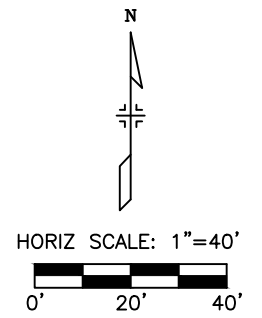


NOTES:

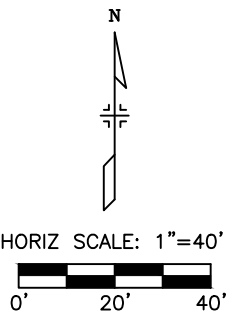
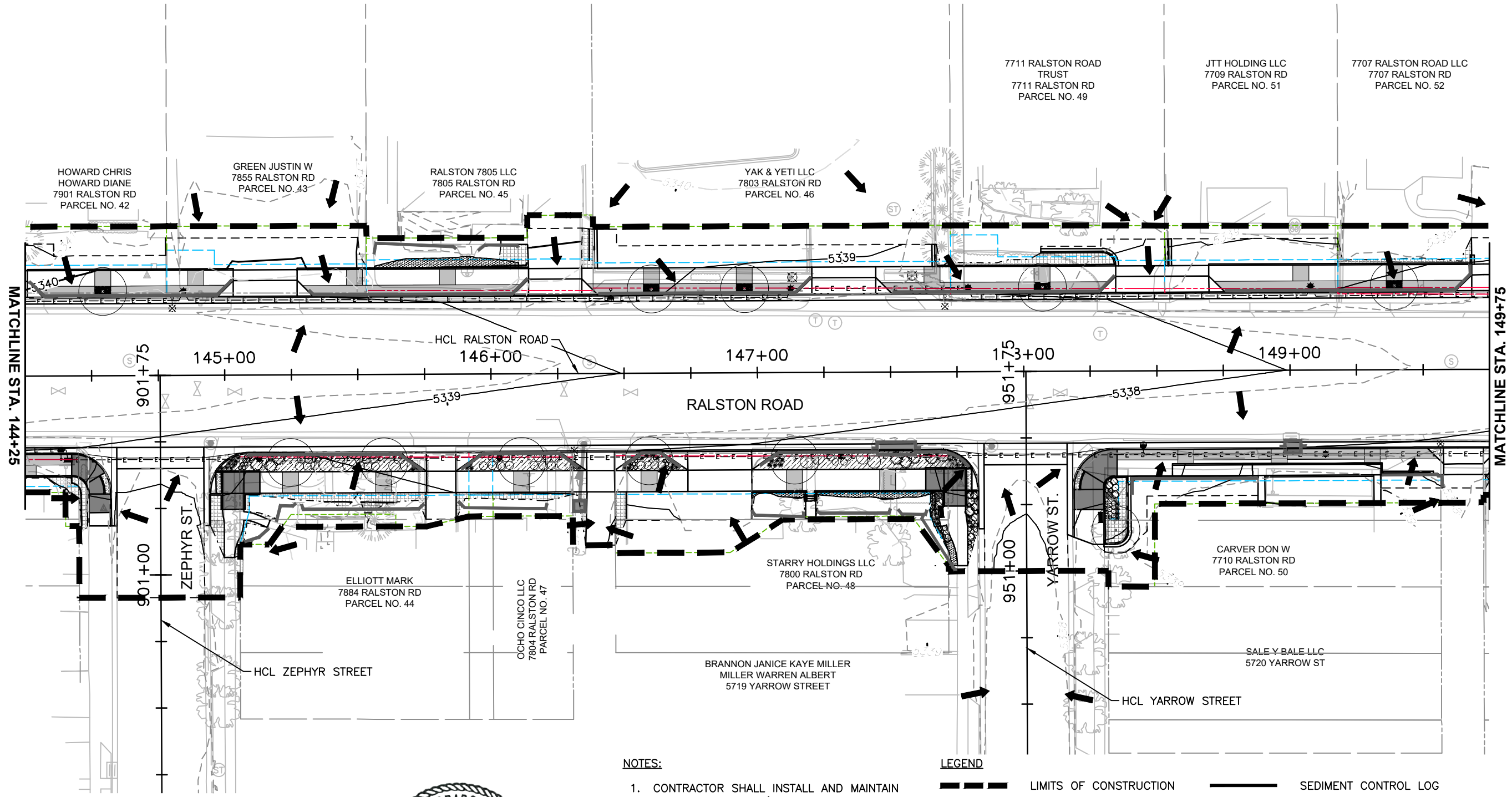
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LEGEND

- LIMITS OF CONSTRUCTION
- - - TOE OF FILL
- - - TOP OF CUT
- GENERAL FLOW DIRECTION
- - - PROPOSED ROW
- - - EXISTING ROW
- - - PERMANENT EASEMENT
- - - TEMPORARY EASEMENT
- SEDIMENT CONTROL LOG
- ROCK SOCK
- INLET PROTECTION ON-GRADE
- INLET PROTECTION SUMP
- INLET PROTECTION AREA



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	 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Detailer:	DAL	Numbers		
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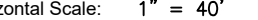
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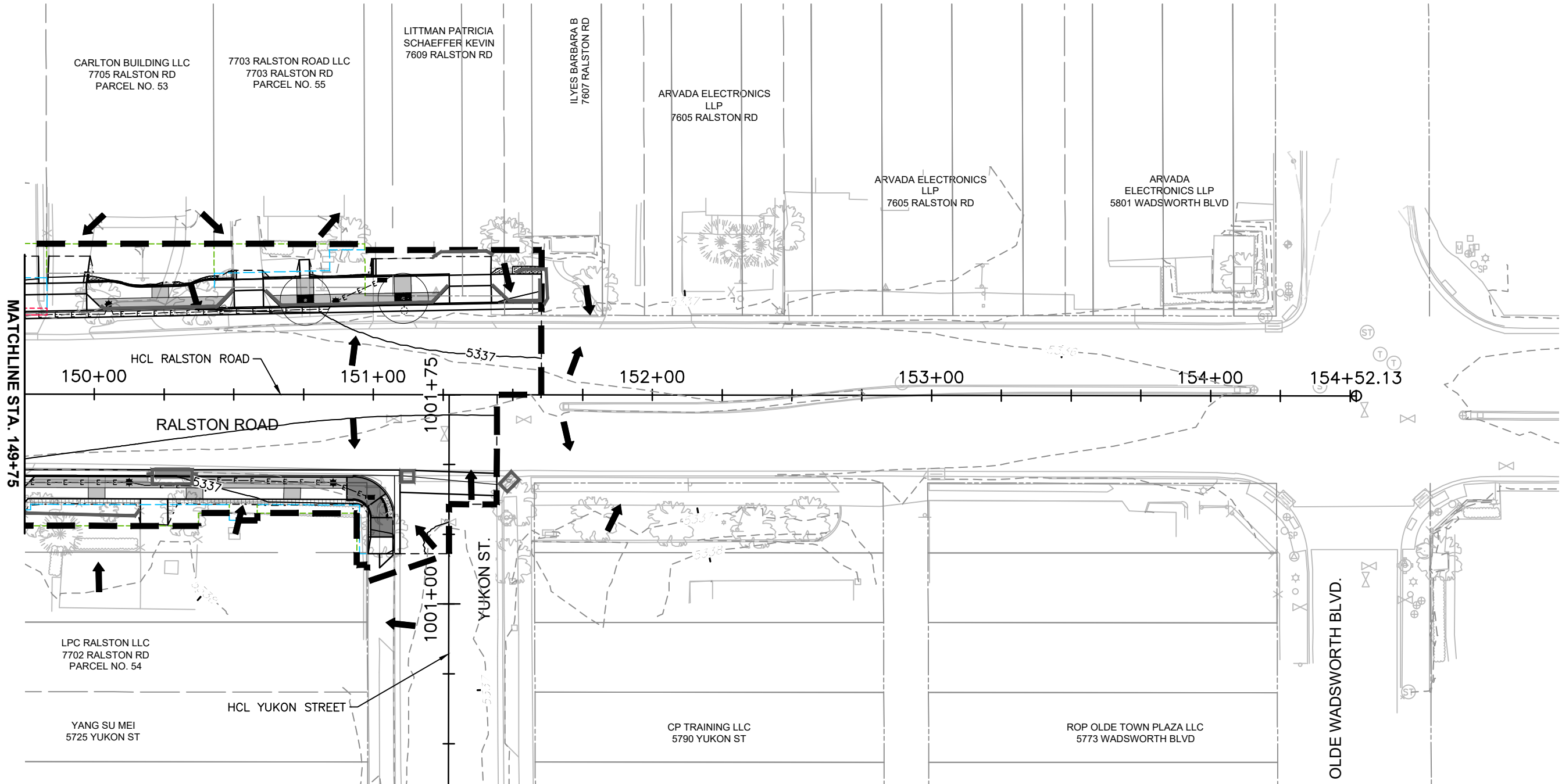
1. CONTRACTOR SHALL INSTALL AND MAINTAIN CONSTRUCTION BMP'S IN ACCORDANCE WITH CITY OF ARVADA STANDARDS STORMWATER NOTES & DRAINAGE.
2. ALL BMP'S SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND MAINTAINED DURING THE FINAL PHASE OF CONSTRUCTION.
3. EXISTING CONTOURS SHOWN AT 1' INTERVAL.
4. SEE LANDSCAPE PLANS FOR ADDITIONAL INFORMATION.

LEGEND

- | | | | |
|--|------------------------|--|---------------------------|
| | LIMITS OF CONSTRUCTION | | SEDIMENT CONTROL LOG |
| | TOE OF FILL | | ROCK SOCK |
| | TOP OF CUT | | INLET PROTECTION ON-GRADE |
| | GENERAL FLOW DIRECTION | | INLET PROTECTION SUMP |
| | PROPOSED ROW | | INLET PROTECTION AREA |
| | EXISTING ROW | | |
| | PERMANENT EASEMENT | | |
| | TEMPORARY EASEMENT | | |



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	File Name: 118355_ECFL_SH01.DWG			Date	Comments	Initials		No Revisions:					18-ST-40	
	Horizontal Scale: 1" = 40' Vertical Scale: N/A							Revised:		Designer: CDT Structure Numbers				
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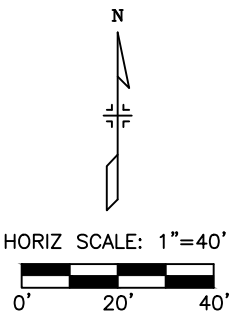


NOTES:

1. CONTRACTOR SHALL INSTALL AND MAINTAIN CONSTRUCTION BMP'S IN ACCORDANCE WITH CITY OF ARVADA STANDARDS STORMWATER NOTES & DRAINAGE.
2. ALL BMP'S SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND MAINTAINED DURING THE FINAL PHASE OF CONSTRUCTION.
3. EXISTING CONTOURS SHOWN AT 1' INTERVAL.
4. SEE LANDSCAPE PLANS FOR ADDITIONAL INFORMATION.

LEGEND

- | | | | |
|--|------------------------|--|---------------------------|
| | LIMITS OF CONSTRUCTION | | SEDIMENT CONTROL LOG |
| | TOE OF FILL | | ROCK SOCK |
| | TOP OF CUT | | INLET PROTECTION ON-GRADE |
| | GENERAL FLOW DIRECTION | | INLET PROTECTION SUMP |
| | PROPOSED ROW | | INLET PROTECTION AREA |
| | EXISTING ROW | | |
| | PERMANENT EASEMENT | | |
| | TEMPORARY EASEMENT | | |



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Horizontal Scale: 1" = 40' Vertical Scale: N/A

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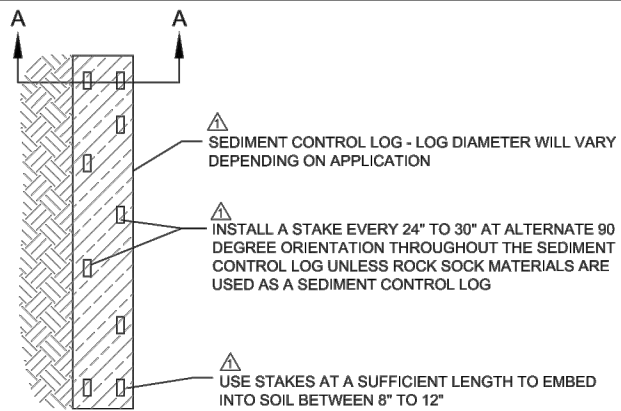
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CITY OF ARVADA
PUBLIC WORKS DEPARTMENT

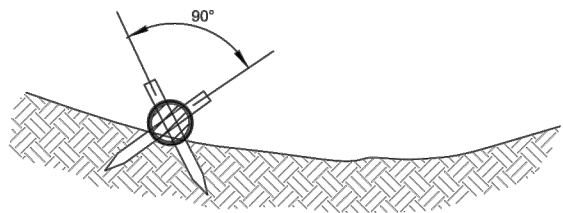
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed	RALSTON RD - YUKON ST TO GARRISON ST FINAL EROSION CONTROL RALSTON ROAD (STA. 149+75 - END)			Project No./Code
No Revisions:				18-ST-40
Revised:	Designer: CDT	Structure		
	Detailer: DAL	Numbers		
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* THIS DETAIL MAY BE MODIFIED UPON APPROVAL BY THE CITY OF ARVADA PROJECT ENGINEER OR BY THE CITY OF ARVADA INSPECTOR.*							
					 ARVADA	ROCK SOCK	
				APPROVED:			
				DATE: 6-2015		SCALE: NTS	DWN: RGN
K.B.C.	6/05/15	DETAIL TITLE, NOTES, MISC.					
NO DWN DATE REVISION							
PUBLIC WORKS DEPARTMENT, ENGINEERING DIVISION							



PLAN



SECTION A - A

NOTE:
SEDIMENT CONTROL LOGS MAY CONSIST
OF MATERIAL DEFINED IN THIS DETAIL
OR ROCK SOCKS - SEE DETAIL SW-2.

NOTES

- 1) SEE PLAN VIEW FOR LOCATION OF SEDIMENT CONTROL LOG.
- 2) SEDIMENT CONTROL LOGS INDICATED ON INITIAL EROSION CONTROL PLANS SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES OTHER THAN INITIAL GRADING.
- 3) SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR, OR COCONUT FIBER.
- 4) **NOT FOR USE IN CONCENTRATED FLOW AREAS.**
- 5) THE SEDIMENT CONTROL LOGS SHALL BE TRENCHED INTO THE GROUND BETWEEN 1" AND 2" AND BE DESIGNED TO CURVE UPHILL/UPSTREAM OF FLOW DIRECTION.

SEDIMENT CONTROL LOG MAINTENANCE NOTES

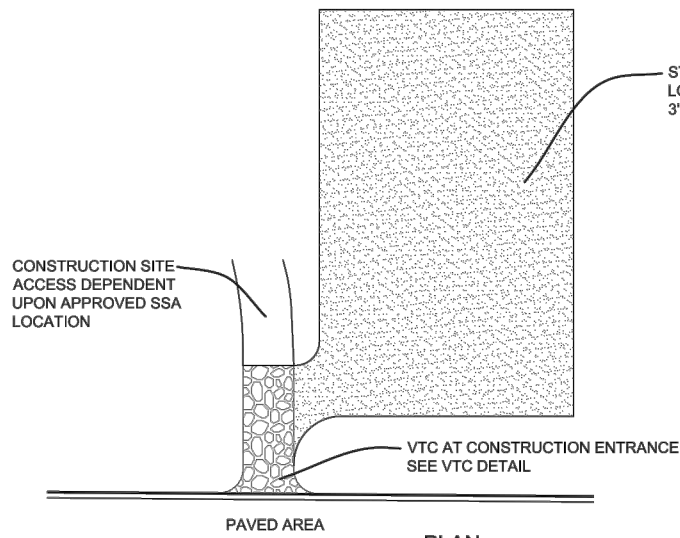
- 1) THE SEDIMENT CONTROL LOGS SHALL BE INSPECTED ROUTINELY, DURING AND AFTER ANY STORM EVENT. MAKE REPAIRS AND REMOVE AND DISPOSE OF ACCUMULATED SEDIMENT IMMEDIATELY.
- 2) SEDIMENT CONTROL LOGS SHALL BE MAINTAINED AND FUNCTIONING AS DESIGNED AT ALL TIMES.
- 3) SEDIMENT CONTROL LOGS SHALL BE REMOVED AT THE END OF CONSTRUCTION. IF ANY DISTURBED AREA EXISTS AFTER REMOVAL, IT SHALL BE COVERED WITH TOP SOIL, DRILL SEEDED AND CRIMPED MULCHED OR OTHERWISE STABILIZED IN A MANNER AS APPROVED BY THE CITY OF ARVADA INSPECTOR.

* THIS DETAIL MAY BE MODIFIED UPON APPROVAL BY THE CITY OF ARVADA PROJECT ENGINEER OR BY THE CITY OF ARVADA INSPECTOR.*

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					SEDIMENT CONTROL LOG	
					APPROVED:	
					DATE: 6-2015 SCALE: NTS DWN: RGN	
					PUBLIC WORKS DEPARTMENT, ENGINEERING DIVISION	
NO	DWN	DATE	REVISION			

SW-4



PLAN

STABILIZED STAGING AREA INSTALLATION NOTES

1. SEE PLAN VIEW FOR GENERAL LOCATION OF STAGING AREA. CONTRACTOR MAY MODIFY LOCATION AND SIZE OF STABILIZED STAGING AREA WITH APPROVAL FROM THE CITY OF ARVADA INSPECTOR.
2. STABILIZED STAGING AREA SHALL BE LARGE ENOUGH TO FULLY CONTAIN PARKING, STORAGE, AND UNLOADING AND LOADING OPERATIONS.
3. INCLUSION OF CONSTRUCTION SITE ACCESS IS DEPENDENT ON LOCATION OF THE STABILIZED STAGING AREA.
4. STAGING AREA SHALL BE STABILIZED PRIOR TO ANY OTHER OPERATIONS ON THE SITE OTHER THAN INITIAL GRADING.
5. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM OF 3" OF GRANULAR MATERIAL .

STABILIZED STAGING AREA MAINTENANCE NOTES

1. THE CONTRACTOR SHALL INSPECT THE STABILIZED STAGING AREA WEEKLY, DURING AND AFTER ANY STORM EVENT AND ADD MATERIAL AS NECESSARY AND AS DIRECTED BY THE CITY OF ARVADA INSPECTOR.
2. CONTRACTOR SHALL PROVIDE ADDITIONAL THICKNESS OF GRANULAR MATERIAL IF ANY RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.
3. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING AND LOADING OPERATIONS.
4. ANY ACCUMULATED DIRT OR MUD SHALL BE REMOVED FROM THE SURFACE OF THE STABILIZED STAGING AREA IMMEDIATELY.
5. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE CITY OF ARVADA INSPECTOR, USED ON SITE, AND THE AREA TOPSOILED, DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED.
6. EROSION CONTROL MEASURES SHALL BE MAINTAINED AND FUNCTIONING AS DESIGNED AT ALL TIMES AND AS DIRECTED BY THE CITY OF ARVADA INSPECTOR.

* THIS DETAIL MAY BE MODIFIED UPON APPROVAL BY THE CITY OF ARVADA PROJECT ENGINEER OR BY THE CITY OF ARVADA INSPECTOR.*

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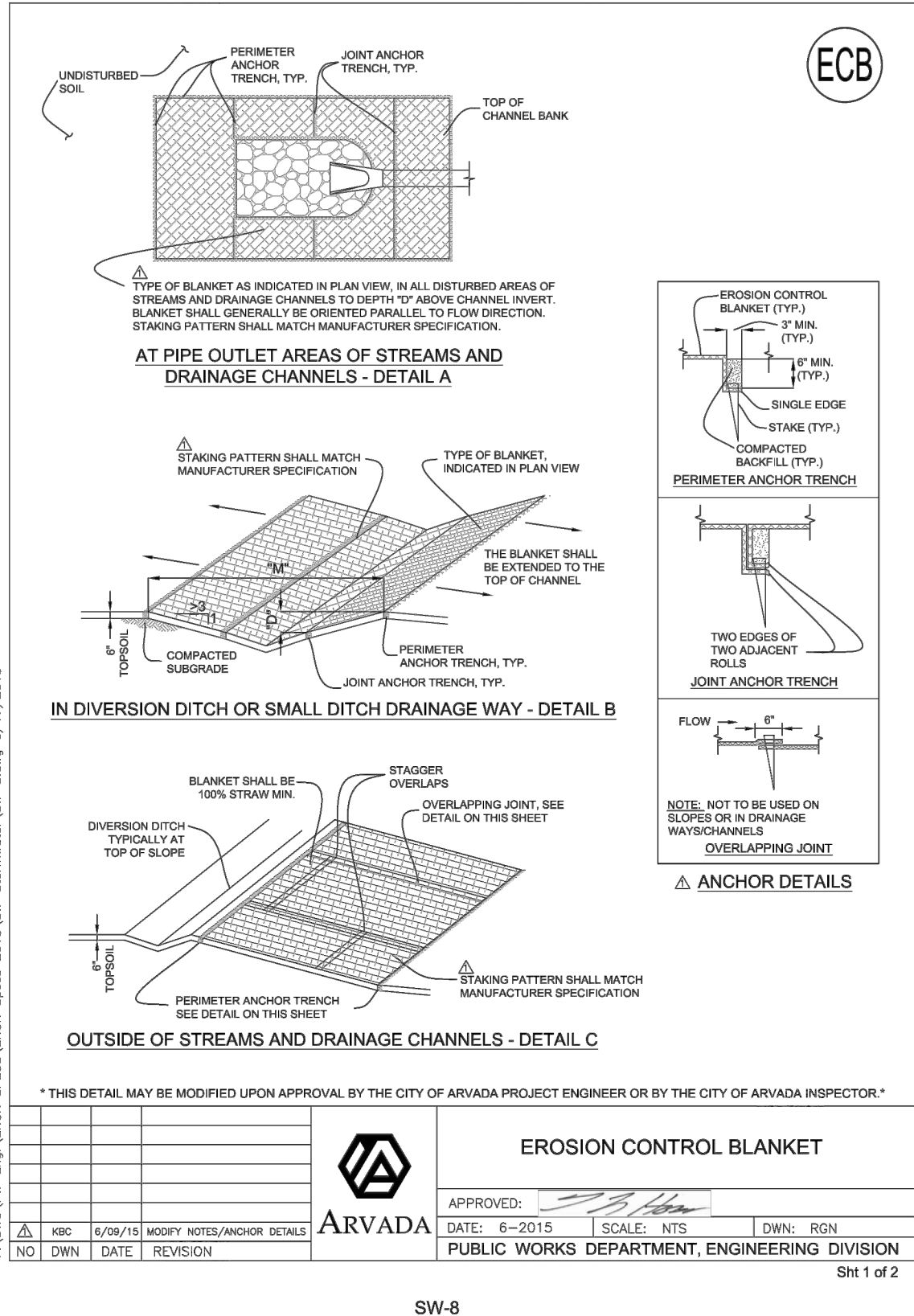
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					APPROVED:	
					DATE: 6-2015 SCALE: NTS DWN: RGN	
					PUBLIC WORKS DEPARTMENT, ENGINEERING DIVISION	
NO	DWN	DATE	REVISION			

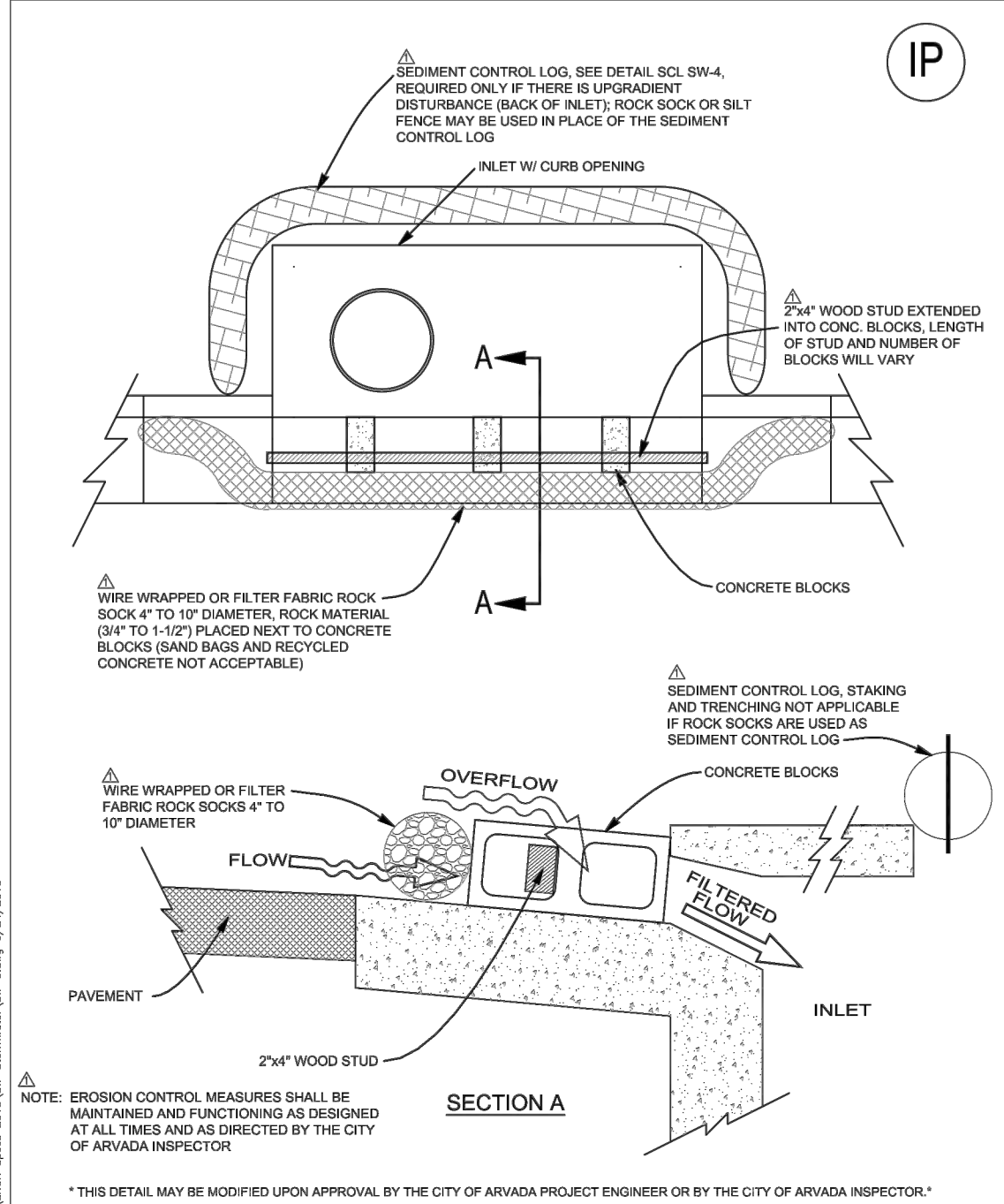
SW-7

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File Name: 118355_ECGN_SH02.DWG				Date	Comments	Initials		No Revisions:							
Horizontal Scale: NTS Vertical Scale: N/A										Revised:	Designer: CDT	Structure Numbers			
		6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com								Void:	Detailer: DAL	Subset Sheets: GD-02 of 8	Sheet Number 230		

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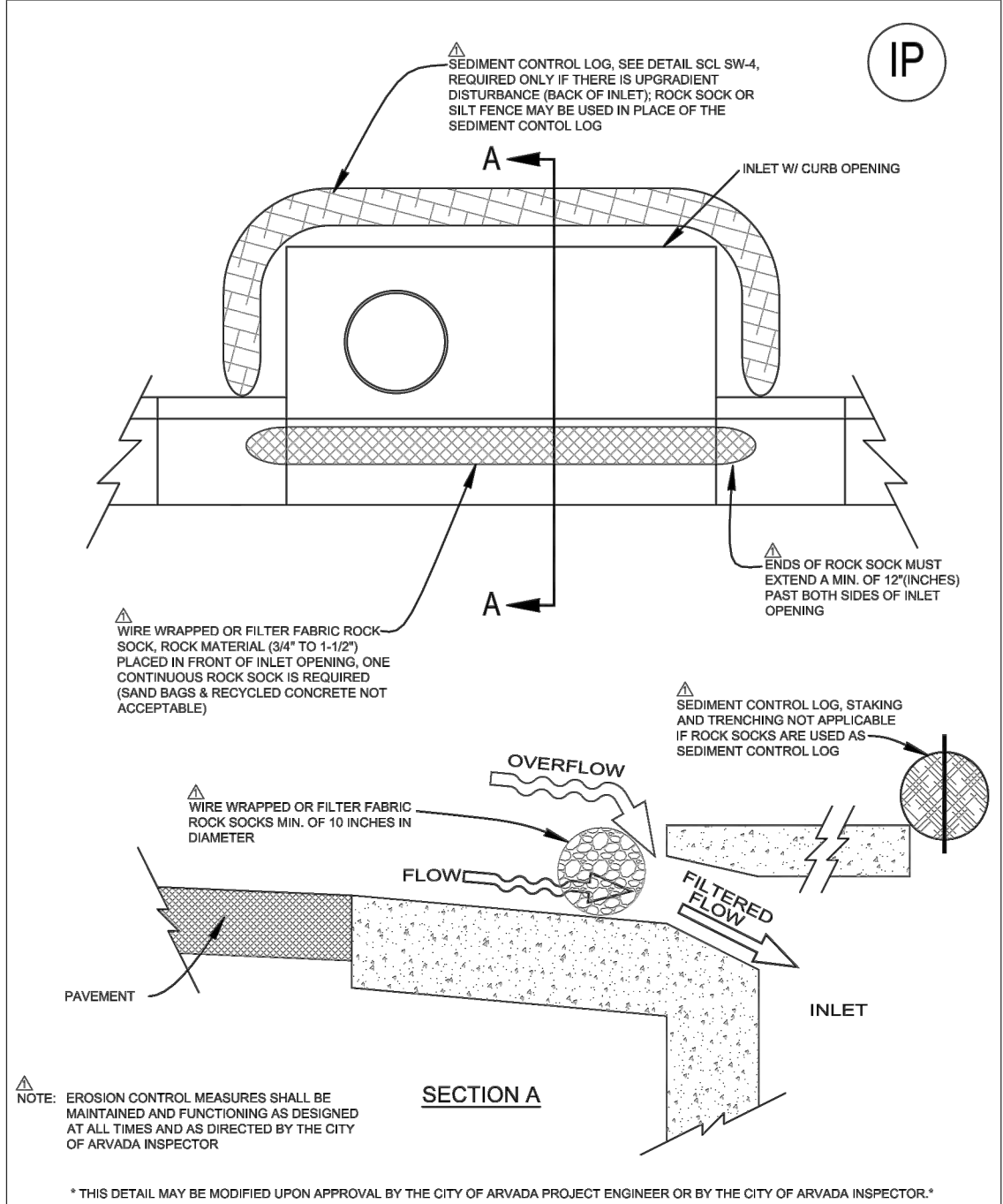




					 ARVADA	TYPICAL INLET PROTECTION FOR SUMP INLET LOCATIONS		
						APPROVED: 		
						DATE: 6-2015		
						SCALE: NTS		DWN: RGN
						PUBLIC WORKS DEPARTMENT, ENGINEERING DIVISION		
	K.B.C.	6/09/15	MODIFY NOTES					
NO	DWN	DATE	REVISION					

Sht 1 of 3

SW-9



				 ARVADA	TYPICAL INLET PROTECTION ALTERNATIVE		
	K.B.C.	6/09/15	MODIFY NOTES		APPROVED: 		
NO	DWN	DATE	REVISION		DATE: 6-2015	SCALE: NTS	DWN: RGN
					PUBLIC WORKS DEPARTMENT, ENGINEERING DIVISION		

Sht 2 of 3

SW-9a

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6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com	

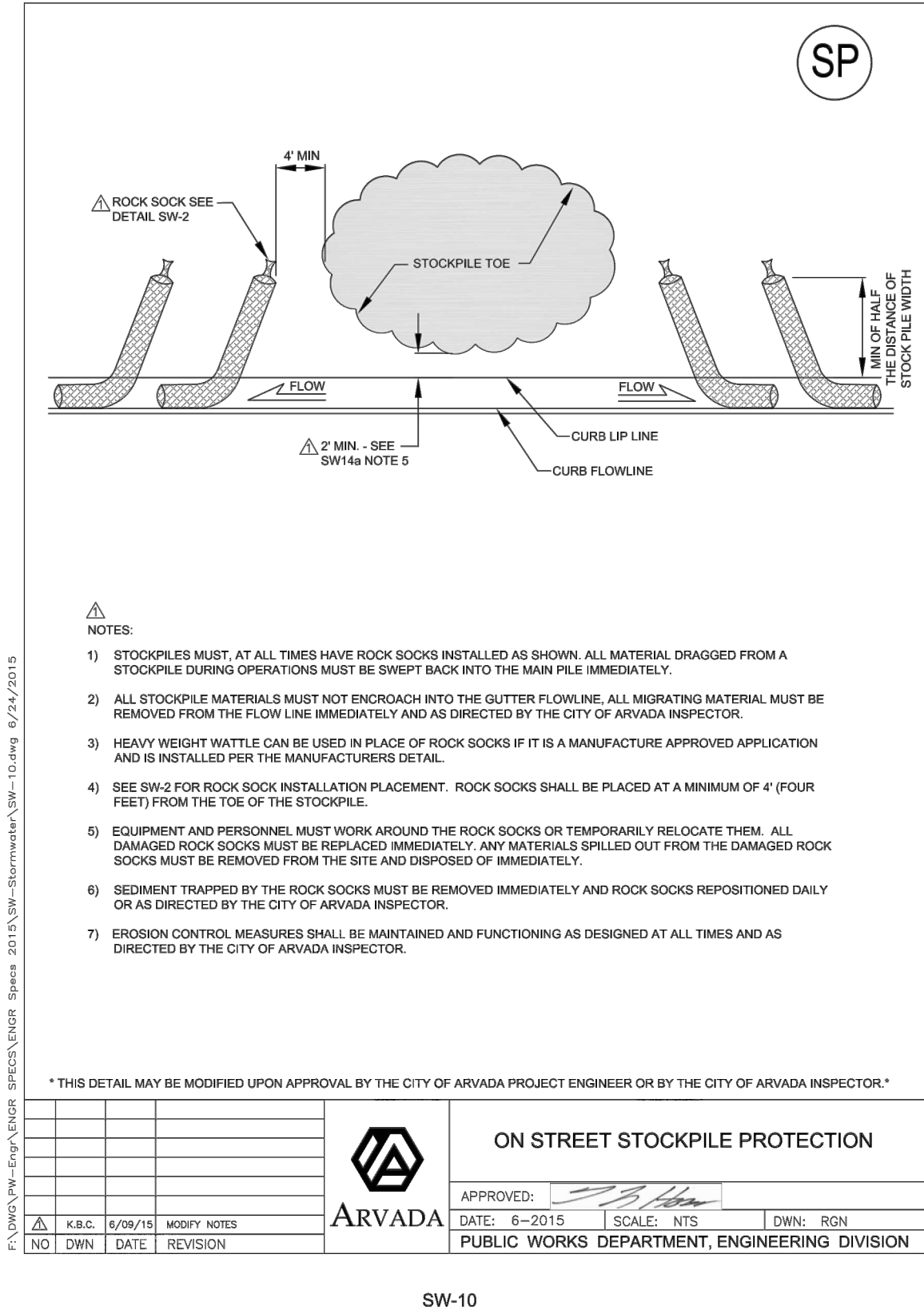
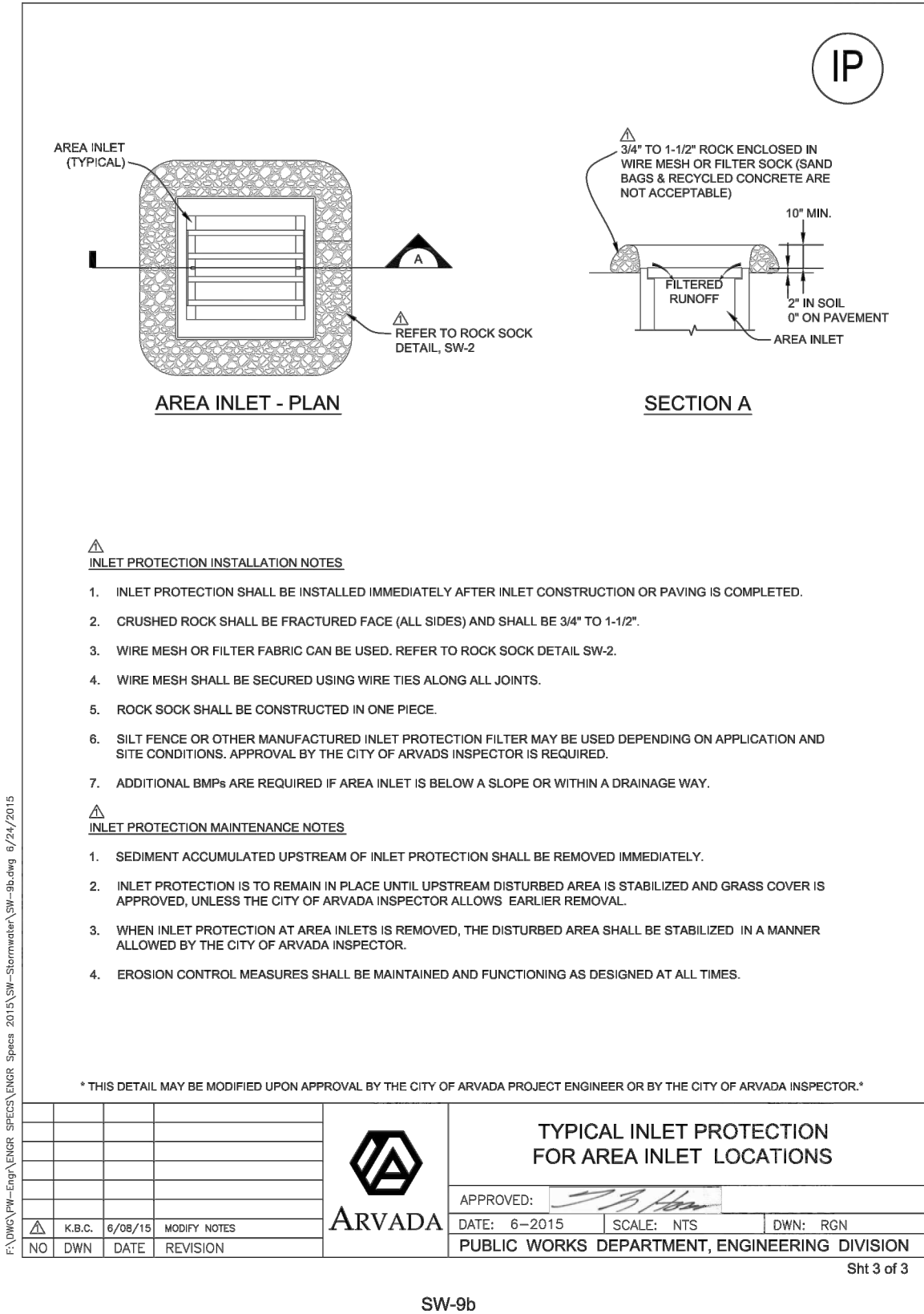
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CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST EROSION CONTROL DETAILS CITY OF ARVADA			Project No./Code
No Revisions:					18-ST-40
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File Name: 118355_ECGN_SH02.DWG		Date	Comments	Initials			No Revisions:				18-ST-40
Horizontal Scale: NTS Vertical Scale: N/A							Revised:	Designer: CDT	Structure Numbers		
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CONSTRUCTION NOTES

- 1) LIMIT THE TIME THE TRENCH IS OPEN TO THE EXTENT FEASIBLE. IN PARTICULAR AREAS, CROSSING SIDE STREETS ETC., SHOULD KEEP ONE LANE OPEN AS POSSIBLE. ADDITIONAL CARE SHOULD BE TAKEN FOR ACCESS TO ADJACENT PROPERTIES. THIS SHOULD BE DONE THROUGH PHASING OF THE CONSTRUCTION.
- 2) DO NOT BEGIN TRENCHING OR POTHOLE OPERATIONS UNTIL INLET PROTECTION AND OTHER NECESSARY BMP'S ARE IN PLACE FOR ALL AREAS THAT MAY RECEIVE SEDIMENT OR POLLUTANTS FROM THE WORK AREA.
- 3) PLACE EXCAVATED MATERIAL ON THE UPHILL SIDE OF THE TRENCH WHEN CONDITIONS OF THE ALIGNMENT PERMIT. NO MATERIAL SHOULD EXTEND BEYOND THE CROWN OF THE STREET.
- 4) ALL DEMOLISHED / EXCESS MATERIAL PRODUCED IN POTHOLES OR TRENCHING ACTIVITIES WILL BE COLLECTED AND PROPERLY DISPOSED OF OFFSITE IMMEDIATELY BY CONTRACTOR AND REMOVED AT THEIR EXPENSE.
- 5) TEMPORARY STOCKPILED MATERIAL INCLUDING SQUEEGEE, BASE COURSE, AND OTHER MATERIALS WILL BE TYPICALLY PLACED WITHIN A 2 FOOT OFFSET OF THE CURB & GUTTER, ROCK SOCKS SHALL BE IMPLEMENTED SEE SW-10.
- 6) CONSTRUCTION DEWATERING: CONTRACTOR SHALL REMOVE WATER ENCOUNTERED IN THE TRENCH TO THE EXTENT AS NECESSARY TO PROVIDE A FIRM SUBGRADE. ALL DISCHARGES WILL BE FILTERED WITH AN APPROVED FILTER SOCK OR DEWATERING BAG AND NOT ALLOWED TO FLOW THROUGH STOCKPILED MATERIALS. FLOW LINES MUST BE CLEANED PRIOR TO DISCHARGE.
- 7) WATER LINE FLUSHING WILL ONLY OCCUR AFTER FLOW LINES HAVE BEEN CLEANED AND STOCKPILED MATERIAL REMOVED OR PROTECTED. ROCK SOCKS AND INLET PROTECTION MAY BE REMOVED FOR LINE FLUSHING AND REINSTALLED IMMEDIATELY WHEN FLUSHING OPERATIONS ARE COMPLETED. LINE FLUSHING MUST BE DONE IN ACCORDANCE WITH CDPHE TREATED WATER GENERAL PERMIT REQUIREMENTS.
- 8) SLURRY GENERATED FROM SAW CUT OR POTHOLE OPERATIONS MUST BE CONTAINED AND REMOVED FROM THE SITE IMMEDIATELY.

NO	DWN	DATE	REVISION

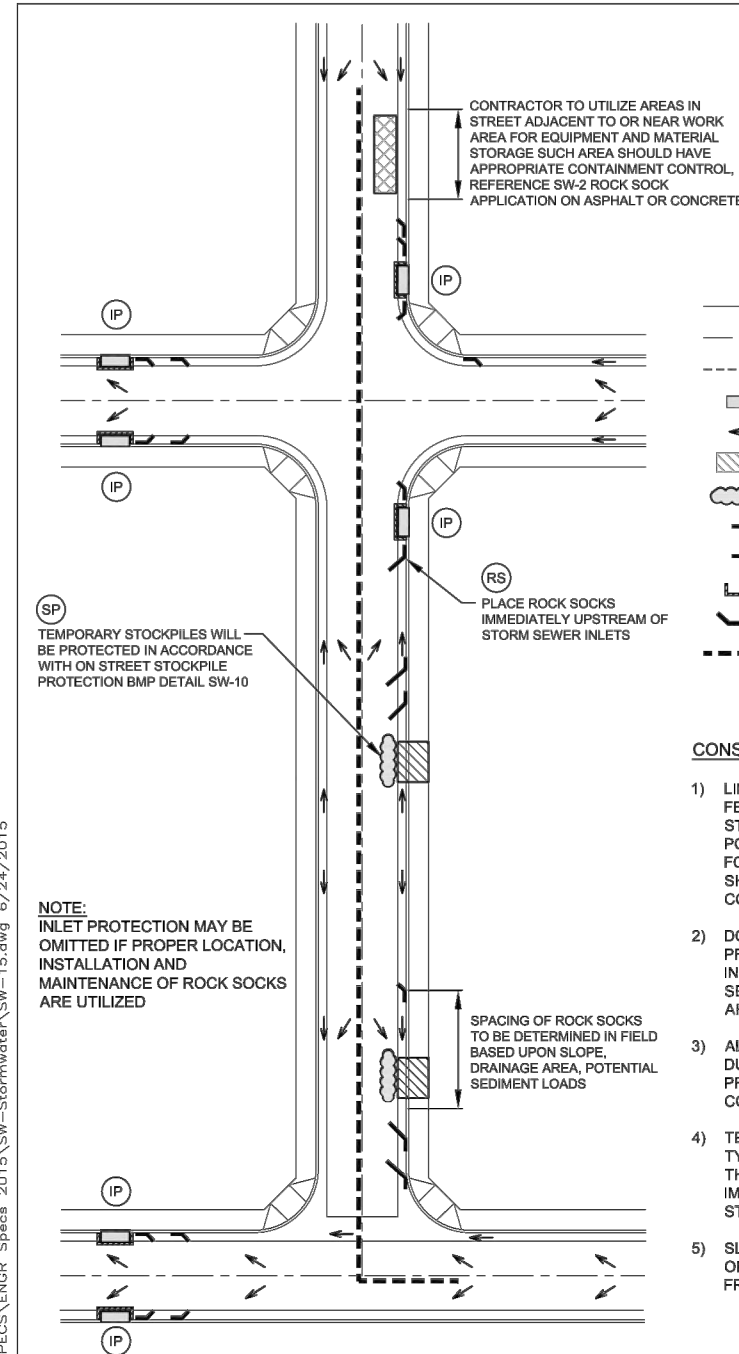


STANDARD EROSION CONTROL PLAN FOR UTILITY REPLACEMENT

APPROVED:		
DATE: 6-2015	SCALE: NTS	DWN: KBC
PUBLIC WORKS DEPARTMENT, ENGINEERING DIVISION		

Sht 2 of 2

SW-14a



LEGEND:

- | | |
|---|---|
|  | CURB, GUTTER, WALK - EOA |
|  | STREET CENTERLINE |
|  | REPLACEMENT UTILITY ALIGNMENT |
|  | STORM SEWER INLET |
|  | FLOW ARROWS |
|  | TRENCHED AREA |
|  | TEMPORARY STOCKPILE |
|  | ON STREET STOCKPILE PROTECTION (SP) SW-10 |
|  | ROCK SOCK (RS) SW-2 |
|  | INLET PROTECTION (IP) SW-9, SW-9a, SW-9b |
|  | SEDIMENT CONTROL LOG (SCL) SW-4 |
|  | LIMITS OF CONSTRUCTION |

CONSTRUCTION NOTES

- 1) LIMIT THE TIME THE AREA IS OPEN TO THE EXTENT FEASIBLE. IN PARTICULAR AREAS, CROSSING SIDE STREETS ETC., SHOULD KEEP ONE LANE OPEN AS POSSIBLE. ADDITIONAL CARE SHOULD BE TAKEN FOR ACCESS TO ADJACENT PROPERTIES. THIS SHOULD BE DONE THROUGH PHASING OF THE CONSTRUCTION.
- 2) DO NOT BEGIN OPERATIONS UNTIL INLET PROTECTION AND OTHER NECESSARY BMP'S ARE IN PLACE FOR ALL AREAS THAT MAY RECEIVE SEDIMENT OR POLLUTANTS FROM THE WORK AREA.
- 3) ALL DEMOLISHED/EXCESS MATERIAL PRODUCED DURING THE PROJECT WILL BE COLLECTED AND PROPERLY DISPOSED OF OFFSITE IMMEDIATELY BY CONTRACTOR AND REMOVED AT THEIR EXPENSE.
- 4) TEMPORARY STOCKPILED MATERIALS WILL BE TYPICALLY PLACED WITHIN A 2 FOOT OFFSET OF THE CURB & GUTTER, ROCK SOCKS SHALL BE IMPLEMENTED IN ACCORDANCE WITH ON STREET STOCKPILE PROTECTION SW-10.
- 5) SLURRY GENERATED FROM SAW CUT OR POTHOLE OPERATIONS MUST BE CONTAINED AND REMOVED FROM THE SITE IMMEDIATELY.

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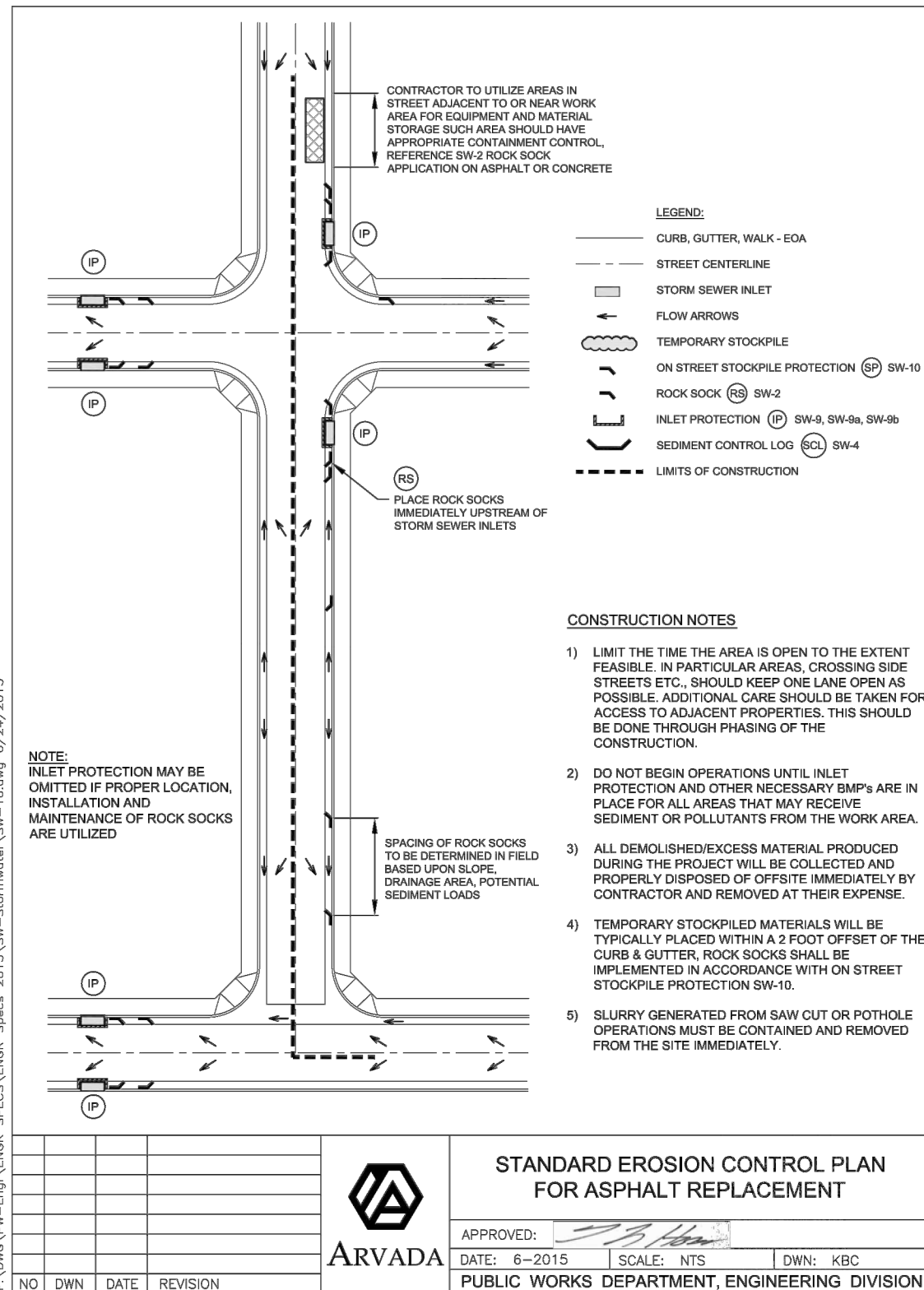


STANDARD EROSION CONTROL PLAN FOR CONCRETE REPLACEMENT

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SW-15

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SW-16

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FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Detailer: DAL		Numbers			
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UTILITY CONTACT LIST

UTILITY COMPANY	CONTACT NAME	TELEPHONE	ADDRESS	E-MAIL
CITY OF ARVADA (COA) STORM & SANITARY	STEVE WYANT	720-898-7771	8101 RALSTON ROAD, ARVADA, CO 80002	SWYANT@ARVADA.ORG
CITY OF ARVADA (COA) TRAFFIC	PHIL NEAL	720-898-7743	8101 RALSTON ROAD, ARVADA, CO 80002	PNEAL@ARVADA.ORG
CITY OF ARVADA (COA) WATER	BEN SAWAYA	720-898-7790	8101 RALSTON ROAD, ARVADA, CO 80002	BSAWAYA@ARVADA.ORG
COMCAST	MIKE HOWARD	720-219-0642	8490 UMATILLA STREET, FEDERAL HEIGHTS, CO 80260	MICHAEL_HOWARD2@COMCAST.COM
JEFFERSON COUNTY EMERGENCY COMMUNICATIONS AUTHORITY (JCECA)	TOM DILLON	303-517-1386	N/A	TOMZTOY18@COMCAST.NET
LUMEN	GARY CRISPE	303-995-1456	5325 ZUNI STREET, ROOM 728, DENVER, CO 80221	GCRISPE@TERRATECHLLC.NET
SWADLEY DITCH	DAVID PARKER	303-981-5035	8525 RALSTON ROAD, ARVADA, CO 80002	DPINSINC@GMAIL.COM
XCEL ENERGY	BUILDER'S CALL LINE	800-628-2121	N/A	BCLCO@XCELENERGY.COM
XCEL ENERGY DISTRIBUTION (ELECTRIC & GAS)	BRANDA SLOAN	303-628-2276	555 ZANG STREET, SUITE 250, LAKEWOOD, CO 80228	BRANDA.L.SLOAN@XCELENERGY.COM

GENERAL UTILITY NOTES

- UTILITIES ARE DEPICTED ON THESE PLANS IN ACCORDANCE WITH THEIR ACHIEVED "QUALITY LEVELS" AS DEFINED IN THE AMERICAN SOCIETY OF CIVIL ENGINEERS DOCUMENT ASCE 38, "STANDARD GUIDELINE FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA." LOCATION OF EXISTING UTILITIES IS DEPICTED ACCORDING TO THE BEST AVAILABLE INFORMATION AND REPRESENT CONDITIONS AT THE TIME OF DATA COLLECTION. THESE PLANS DO NOT RELIEVE THE CONTRACTOR FROM FOLLOWING ALL APPLICABLE UTILITY DAMAGE PREVENTION STATUTES AND PROCEDURES DURING EXCAVATION. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY EXISTING UTILITIES WITH THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) AND/OR UTILITY COMPANIES. ALL COSTS ASSOCIATED WITH FIELD VERIFICATION OF LOCATION AND DEPTHS OF UTILITIES FOR DAMAGE PREVENTION SHALL BE BORNE BY THE CONTRACTOR AND SHALL BE COMPLETED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT ALL UTILITIES TO COORDINATE SCHEDULING. SHOULD ANY CONFLICTS, RECONSTRUCTION, OR OTHER INTERRUPTIONS IN SERVICE BE REQUIRED, CONTRACTOR SHALL COORDINATE UTILITY SCHEDULING.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXAMINE THE SITE FOR EVIDENCE OF FAILURES OR DEFICIENCIES IN UTILITY COMPANY FACILITIES (I.E. XCEL, CITY OF ARVADA WATER, ETC.) AND TO IMMEDIATELY CALL ANY SUCH EVIDENCE OF PRE-EXISTING DAMAGE TO THE ATTENTION OF THE UTILITY COMPANY ALONG WITH PROPER DOCUMENTATION. THE CONTRACTOR HEREBY AGREES THAT THE REPAIR OF ANY AND ALL DAMAGES (DIRECT OR INDIRECT), THAT MAY BE SUBSEQUENTLY DISCOVERED AND PROVEN TO HAVE BEEN CAUSED BY THE CONSTRUCTION ACTIVITIES, IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR WITHOUT SUCH EVIDENCE OF PRE-EXISTING DAMAGE. THE CONTRACTOR HEREBY AGREES THAT ANY AND ALL DAMAGES (DIRECT OR INDIRECT) TO UTILITY COMPANY FACILITIES, WHICH MAY BE SUBSEQUENTLY DISCOVERED WITHIN THOSE AREAS WHERE CONSTRUCTION OCCURRED WITHIN SIX FEET OF UTILITY COMPANY FACILITIES (DIRECT OR INDIRECT), AND WITHIN A PERIOD OF THREE YEARS FROM THE DATE OF CONSTRUCTION, WERE CAUSED BY THE CONSTRUCTION ACTIVITIES. FURTHERMORE, THE REPAIR IS AGREED TO BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ALL UTILITY COMPANY FACILITIES WITHIN THE AREA OF CONSTRUCTION. THIS INCLUDES ALL STEPS NECESSARY TO PREVENT SUBSIDENCE OF THE SOIL ADJACENT TO OR NEAR UTILITY COMPANY FACILITIES.
- CONTRACTOR SHALL ADJUST ALL MANHOLES AND VALVES TO FINAL GRADE.
- NOT ALL SERVICE LINES ARE SHOWN ON THE DRAWINGS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO RECONNECT ALL EXISTING SERVICES FOR RELOCATED WATER AND SANITARY LINES. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY OWNER OR AGENCY ON THEIR SERVICE LINES.
- THE CONTRACTOR SHALL COMPLY WITH ARTICLE 1.5 OF TITLE 9, CRS ("EXCAVATION REQUIREMENTS") WHEN EXCAVATING OR GRADING IS PLANNED IN THE AREA OF UNDERGROUND UTILITY FACILITIES. THE CONTRACTOR SHALL NOTIFY ALL AFFECTED UTILITIES AT LEAST THREE (3) BUSINESS DAYS, NOT INCLUDING THE ACTUAL DAY OF NOTICE, PRIOR TO COMMENCING SUCH OPERATIONS. THE CONTRACTOR SHALL COOPERATE AND COORDINATE ALL UTILITY WORK WITH THE CONCERNED UTILITY COMPANY OR AGENCY.
- IT IS SUGGESTED THAT THE CONTRACTOR INITIATE A REQUEST TO PUBLIC SERVICE COMPANY OF COLORADO (D/B/A) XCEL ENERGY FOR ANY CONSTRUCTION RELATED ELECTRICAL POWER SOURCES AS SOON AS POSSIBLE. THE REQUEST IS TO BE PROCESSED THROUGH XCEL ENERGY'S BUILDER'S CALL LINE AT 1-800-628-2121.
- QUALITY LEVELS DEPICTED ON THESE PLANS ARE BASED ON THE QL-B INVESTIGATION CONDUCTED BY AZTEC CONSULTANTS IN MARCH 2019 AND THE QL-A INVESTIGATION CONDUCTED BY AJ VENTURES AND GOODBEE & ASSOCIATES IN APRIL 2020. SEE UTILITY PLANS FOR QUALITY LEVEL DESIGNATIONS.

UTILITY LEGEND

QUALITY LEVEL D

--- IRR? --- IRR? --- IRR?
--- G? --- G? --- G?
--- ? --- ? --- ?
--- ? --- ? --- ?

EXISTING IRRIGATION LINE
EXISTING GAS
EXISTING SANITARY
EXISTING STORM

ABOVE GROUND/SURVEY FEATURES

--- CATV-OH ---
--- E-OH --- E-OH ---
--- T-OH --- T-OH ---

EXISTING CABLE TV OVERHEAD
EXISTING ELECTRIC OVERHEAD
EXISTING TELEPHONE OVERHEAD
EXISTING COMMUNICATION CABINET
EXISTING COMMUNICATION PEDESTAL
EXISTING COMMUNICATION MANHOLE
EXISTING ELECTRIC BREAKER BOX
EXISTING ELECTRIC CABINET
EXISTING ELECTRIC METER
EXISTING ELECTRIC PEDESTAL
EXISTING ELECTRIC POLE
EXISTING ELECTRIC TRANSFORMER
EXISTING ELECTRIC OUTLET
EXISTING ELECTRIC VAULT
EXISTING FIBER OPTIC VAULT
EXISTING GAS METER
EXISTING GAS VALVE
EXISTING GUY ANCHOR POLE
EXISTING GUY WIRE
EXISTING IRRIGATION CONTROL BOX
EXISTING IRRIGATION METER
EXISTING IRRIGATION VALVE
EXISTING LANDSCAPE LIGHT
EXISTING LIGHT POLE
EXISTING SANITARY MANHOLE
EXISTING STORM INLET
EXISTING STORM FLARED END SECTION (FES)
EXISTING STORM MANHOLE
EXISTING TRAFFIC CONTROL CABINET
EXISTING TRAFFIC CONTROL VAULT
EXISTING TRAFFIC SIGNAL
EXISTING WATER FIRE HYDRANT
EXISTING WATER MANHOLE
EXISTING WATER METER
EXISTING WATER VALVE
EXISTING WELL POINT

QUALITY LEVEL B

--- TV ---
--- E --- E ---
--- FO --- FO ---
--- G --- G ---
--- T --- T ---
--- W --- W ---

EXISTING CABLE TV UNDERGROUND
EXISTING ELECTRIC UNDERGROUND
EXISTING FIBER OPTIC UNDERGROUND
EXISTING GAS
EXISTING TELEPHONE UNDERGROUND
EXISTING WATER

QUALITY LEVEL A

TEST HOLE

PROPOSED

--- E --- E ---
--- FO --- FO ---
--- G --- G ---
--- IRR --- IRR ---
--- E --- E ---
--- T --- T ---
--- W --- W ---
--- E --- E ---
--- FO --- FO ---
--- G --- G ---
--- IRR --- IRR ---
--- E --- E ---
--- T --- T ---
--- W --- W ---

PROPOSED ELECTRIC
PROPOSED FIBER OPTIC
PROPOSED GAS
PROPOSED IRRIGATION
PROPOSED LIGHTING
PROPOSED REMOVAL
PROPOSED STORM PIPE
PROPOSED TRAFFIC CONDUIT
PROPOSED WATER
PROPOSED ELECTRIC FACILITIES
PROPOSED ELECTRIC LIGHT
PROPOSED ELECTRIC POLE
PROPOSED FIBER OPTIC FACILITIES
PROPOSED IRRIGATION VALVE
PROPOSED LIGHTING FACILITIES
PROPOSED STORM MANHOLE
PROPOSED STORM INLET



Print Date: 12/7/2020 1:18:17 PM		R-X	Sheet Revisions			 CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO 80002	As Constructed		RALSTON RD - YUKON TO GARRISON UTILITY CONTACTS, GENERAL NOTES, LEGEND				Project No./Code	
File Name: 118355_UTPL_CD01_EN_DWG			Date	Comments	Initials		No Revisions:						18-ST-40	
Horizontal Scale: Vertical Scale:							Revised:		Designer: DB		Structure Numbers			
GOODBEE & ASSOCIATES, INC.							Void:		Detailer: ML					
									Sheet Subset: UTILITIES		Subset Sheets: UGN01 OF 1		Sheet Number 237	

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GOODBEE

& ASSOCIATES, INC.

R-X	Sheet Revisions		
	Date	Comments	Initials

CITY OF ARVADA

PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD

ARVADA, CO 80002

As Constructed	RALSTON RD - YUKON TO GARRISON TEST HOLE TABLE				Project No./Code
	No Revisions:				18-ST-40
Revised:	Designer:	DB	Structure		Sheet Number 238
Void:	Detailer:	ML	Numbers		
	Sheet Subset:	UTILITIES	Subset Sheets:	UPH01 OF 1	



TESTHOLE TABLE

TH #	UTILITY OWNER	UTILITY TYPE	LOCATION	GROUND ELEV (FT)	SIZE (IN)	MATERIAL	GA DEPTH TO TOP (IN)	GA DEPTH TO BOP (IN)	TOP ELEV (FT)	BOP ELEV (FT)	DATE POTHOLED
TH-01	CITY OF ARVADA	STORM	NORTH OF RALSTON ROAD / EAST SIDE OF GARRISON	5345.075	72	STEEL	51	123	5340.83	5334.83	3/30/2020
TH-02	XCEL	GAS	WEST OF FIELD ST / SOUTH SIDE OF RALSTON ROAD	5346.388	2	STEEL	47	86	5342.47	5339.22	3/30/2020
TH-03	LUMEN	FIBER OPTIC	EAST OF FIELD ST / SOUTH SIDE OF RALSTON ROAD	5347.222	1.25	PLASTIC	28	30	5344.89	5344.72	4/2/2020
TH-04	XCEL	GAS SERVICE	EAST OF ESTES ST / NORTH SIDE OF RALSTON ROAD	5358.938	2	STEEL	38	40	5355.77	5355.60	3/31/2020
TH-05	LUMEN	STORM	EAST OF ESTES ST / NORTH SIDE OF RALSTON ROAD	5357.704	18	CONCRETE	8	26	5357.04	5355.54	3/31/2020
TH-05.1	LUMEN	FIBER OPTIC	EAST OF ESTES ST / NORTH SIDE OF RALSTON ROAD	5357.677	23" THICK	CONCRETE	35	58	5354.76	5352.84	3/31/2020
TH-05.2	LUMEN	FIBER OPTIC	EAST OF ESTES ST / NORTH SIDE OF RALSTON ROAD	5357.738	12	CLAY	33	45	5354.99	5353.99	3/31/2020
TH-06	LUMEN	FIBER OPTIC	EAST OF ESTES ST / NORTH SIDE OF RALSTON ROAD	5358.05	3" THICK	CONCRETE CAP	57	60	5353.30	5353.05	3/31/2020
TH-07	LUMEN	TELEPHONE	EAST OF ESTES ST / NORTH SIDE OF RALSTON ROAD	5358.124	1	CABLE	44	45	5354.46	5354.37	3/31/2020
TH-08	XCEL	GAS	EAST OF ESTES ST / SOUTH SIDE OF RALSTON ROAD	5358.065	2	STEEL	41	43	5354.65	5354.48	3/31/2020
TH-09	XCEL	GAS	WEST OF DOVER CT / NORTH SIDE OF RALSTON ROAD	5353.832	2	STEEL	45	47	5350.08	5349.92	4/2/2020
TH-10	CITY OF ARVADA	WATER	EAST SIDE OF DOVER CT / NORTH SIDE OF RALSTON ROAD	5353.669	10	PVC	39	49	5350.42	5349.59	4/2/2020
TH-11	XCEL	ELECTRIC	EAST OF DOVER CT / NORTH SIDE OF RALSTON ROAD	5353.248	3-1"	CABLE	28	31	5350.91	5350.66	4/1/2020
TH-12	XCEL/LUMEN	ELECTRIC	WEST OF CODY CT / NORTH SIDE OF RALSTON ROAD	5352.409	1	CABLE	37	38	5349.33	5349.24	4/1/2020
TH-12A	XCEL/LUMEN	TELEPHONE	WEST OF CODY CT / NORTH SIDE OF RALSTON ROAD	5344.67	2-1"	CABLE	35	37	5341.75	5341.59	4/1/2020
TH-13	COMCAST	CABLE TV	WEST OF CODY CT / NORTH SIDE OF RALSTON ROAD	5352.405	1	CABLE	38	39	5349.24	5349.16	4/1/2020
TH-14	XCEL	GAS SERVICE	WEST OF CODY CT / NORTH SIDE OF RALSTON ROAD	5351.749	1	STEEL	31	32	5349.17	5349.08	4/1/2020
TH-15	XCEL	GAS	WEST SIDE OF CODY CT / NORTH SIDE OF RALSTON ROAD	5351.795	2	STEEL	40	42	5348.46	5348.30	4/1/2020
TH-16	CITY OF ARVADA	WATER	EAST SIDE OF CODY CT / NORTH SIDE OF RALSTON ROAD	5351.642	8	PVC	64	72	5346.31	5345.64	4/1/2020
TH-17	XCEL	GAS SERVICE	EAST OF CODY CT / NORTH SIDE OF RALSTON ROAD	5351.198	1.25	STEEL	38	40	5348.03	5347.86	4/1/2020
TH-18	XCEL	ELECTRIC	EAST OF CODY CT / NORTH SIDE OF RALSTON ROAD	5351.173	8	PLASTIC	70	78	5345.34	5344.67	4/1/2020
TH-19	COMCAST	TELEVISION	EAST OF CODY CT / NORTH SIDE OF RALSTON ROAD	5351.086	2	PLASTIC	65	67	5345.67	5345.50	4/1/2020
TH-20	CITY OF ARVADA	STORM	CARR ST / RALSTON ROAD INTERSECTION, NORTH SIDE	5351.185	18	CONCRETE	17	35	5349.77	5348.27	4/17/2020
TH-20.1	CITY OF ARVADA	WATER	CARR ST / RALSTON ROAD INTERSECTION, NORTH SIDE	5351.187	10	PVC	43	53	5347.60	5346.77	4/17/2020
TH-21	XCEL	GAS	CARR ST / RALSTON ROAD INTERSECTION, NORTH SIDE	5351.18	4	PLASTIC	45	49	5347.43	5347.10	4/17/2020
TH-23	XCEL	GAS	CARR ST / RALSTON ROAD INTERSECTION, SOUTH SIDE	5350.413	6	PLASTIC	48	54	5346.41	5345.91	4/15/2020
TH-24	XCEL	DNF	CARR ST / RALSTON ROAD INTERSECTION, SOUTH SIDE	5350.373	DNF	DNF	DNF	DNF	DNF	DNF	4/15/2020
TH-25.1	XCEL	GAS	CENTER OF BALSAM PL / NORTH SIDE OF RALSTON ROAD	5346.921	2	STEEL	34	36	5344.09	5343.92	4/20/2020
TH-26	XCEL	ELECTRIC	SW CORNER OF ALLISON AND RALSTON	5346.959	1	PVC	6	7	5346.46	5346.38	4/21/2020
TH-101	CITY OF ARVADA	WATER	EAST SIDE OF GARRISON ST / NORTH SIDE OF RALSTON ROAD		10	PVC	41	51	-3.42	-4.25	3/30/2020
TH-102	LUMEN	FIBER OPTIC	EAST OF GARRISON ST / NORTH SIDE OF RALSTON ROAD	5344.67	3" THICK	CONCRETE	43	46	5341.09	5340.84	3/30/2020
TH-103	XCEL	GAS	WEST OF FIELD ST / SOUTH SIDE OF RALSTON ROAD	5345.638	2	STEEL	44	46	5341.97	5341.80	3/30/2020
TH-104	XCEL	GAS	EAST SIDE OF FIELD ST / SOUTH SIDE OF RALSTON ROAD	5346.379	2	STEEL	38	40	5343.21	5343.05	3/30/2020
TH-201	XCEL	UNK	9110 RALSTON RD / CENTER OF RALSTON ROAD	5344.89	8	STEEL	60	68	5339.89	5339.22	4/2/2020
TH-201.1	XCEL	GAS SERVICE	9110 RALSTON RD / CENTER OF RALSTON ROAD	5344.874	2	STEEL	44	46	5341.21	5341.04	4/2/2020
TH-202	XCEL	GAS SERVICE	9110 RALSTON RD / CENTER OF RALSTON ROAD	5344.794	1.25	STEEL	40	42	5341.46	5341.29	4/2/2020
TH-202.1	XCEL	GAS SERVICE	9110 RALSTON RD / CENTER OF RALSTON ROAD	5344.85	1 1/4	STEEL	40	42	5341.52	5341.35	4/2/2020
TH-203	XCEL	GAS	9040 RALSTON RD / SOUTH SIDE OF RALSTON ROAD	5345.855	1.25	STEEL	41	42	5342.44	5342.36	4/2/2020
TH-204	XCEL	GAS	SW CORNER OF ESTES ST AND RALSTON RD	5358.331	2	STEEL	41	43	5354.91	5354.75	3/31/2020
TH-204A	COMCAST	CABLE TV	SW CORNER OF ESTES ST AND RALSTON RD	5358.331	2	PVC	20	22	5356.66	5356.50	3/31/2020
TH-205	LUMEN	TELEPHONE	SOUTH SIDE OF RALSTON RD NEAR 8790 RALSTON RD	5356.394	1	CABLE	57	58	5351.64	5351.56	3/31/2020
TH-206	XCEL	GAS	RALSTON RD/DUDLEY ST, SW CORNER	5355.066	2	STEEL	38	40	5351.90	5351.73	4/14/2020
TH-207	LUMEN	DNF	SOUTH SIDE OF RALSTON RD, 8600 RALSTON RD	5353.942	DNF	DNF	DNF	DNF	DNF	DNF	4/14/2020
TH-208	XCEL	GAS	SOUTH SIDE OF RALSTON RD, 8600 RALSTON RD	5353.966	2	STEEL	48	50	5349.97	5349.80	4/14/2020
TH-209	XCEL	GAS	SOUTH SIDE OF RALSTON RD, 8900 RALSTON RD	5353.586	8	STEEL	42	50	5350.09	5349.42	4/14/2020
TH-210	XCEL	GAS	DOVER ST/RALSTON RD, SW CORNER	5353.416	2	STEEL	39	41	5350.17	5350.00	4/14/2020
TH-211	LUMEN	UGFO	SOUTH SIDE OF RALSTON, WOLFF PARK	5352.713	4	PVC	26	30	5350.55	5350.21	4/14/2020
TH-212	XCEL	ELEC	EAST OF CODY CT AND RALSTON TD	5351.313	6	PLASTIC	93	99	5343.56	5343.06	4/15/2020
TH-212.1	XCEL	ELEC	EAST OF CODY CT AND RALSTON TD	5351.319	18" W X 10" T	CONC ENC	27	37	5349.07	5348.24	4/15/2020
TH-212.2	XCEL	ELEC	EAST OF CODY CT AND RALSTON TD	5351.295	18" W X 10" T	CONC ENC	27	37	5349.05	5348.21	4/15/2020
TH-213	XCEL	GAS	EAST OF CARR ST AND RALSTON RD	5350.899	6	STEEL	55	61	5346.32	5345.82	4/17/2020
TH-214	XCEL	GAS	EAST OF CARR ST AND RALSTON RD	5351.226	2	STEEL	48	50	5347.23	5347.06	4/17/2020
TH-215	XCEL	GAS	CENTER OF RALSTON RD/ 5201 BLASALM PL	5348.273	2	STEEL	46	48	5344.44	5344.27	4/17/2020
TH-216	XCEL	GAS	INTERSECTION OF BALSAM ST AND RALSTON RD	5347.196	2	STEEL	48	50	5343.20	5343.03	4/21/2020
TH-217	XCEL	GAS	WEST OF BALSAM ST AND RALSTON RD	5346.943	6	STEEL	58	64	5342.11	5341.61	4/21/2020
TH-218	XCEL	GAS	INTERSECTION OF AMMONS ST AND RALSTON RD	5344.54	6	STEEL	53	59	5340.12	5339.62	4/21/2020
TH-219	LUMEN	FIBER OPTIC	CENTER OF RALSTON RD/8060 RALSTON RD	5343.149	2-2"	PLASTIC	26	30	5340.98	5340.65	4/20/2020
TH-220	XCEL	DNF	CENTER OF RALSTON RD/8060 RALSTON RD	5343.099	DNF	DNF	DNF	DNF	DNF	DNF	4/20/2020
TH-221	XCEL	GAS	WEST OF ALLISON ST AND RALSTON RD	5341.765	1 1/4"	STEEL	53	54 1/4"	5337.35	5337.35	4/20/2020
TH-222	LUMEN	DNF	NORTH OF ALLISON ST AND RALSTON RD	5341.346	DNF	DNF	DNF	DNF	DNF	DNF	4/20/2020
TH-223	LUMEN	FIBER OPTIC	NORTH OF ALLISON ST AND RALSTON RD	5341.359	DNF	CONC ENCASED	37	58	5338.28	5336.53	4/20/2020
TH-224	XCEL	GAS	SOUTH OF THE INTERSECTION OF ALLISON ST AND RALSTON RD	5341.399	6	STEEL	53	59	5336.98	5336.48	4/21/2020
TH-225	XCEL	GAS	SOUTH OF INTERSECTION OF ALLISON ST AND RALSTON RD	5341.37	2	STEEL	46	48	5337.54	5337.37	4/21/2020
TH-226	XCEL	GAS	SOUTH SIDE OF RALSTON, WOLFF PARK	5352.652	8	STEEL	45	53	5348.90	5348.24	4/14/2020
TH-227	XCEL	GAS	S OF CODY CT AND RALSTON RD	5352.176	2	STEEL	44	46	5348.51	5348.34	4/15/2020
TH-228	XCEL	GAS	S OF CODY CT AND RALSTON RD	5351.693	6	STEEL	40	46	5348.36	5347.86	4/15/2020

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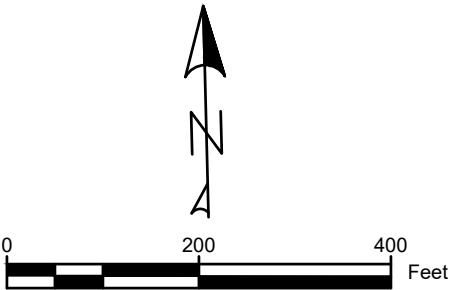
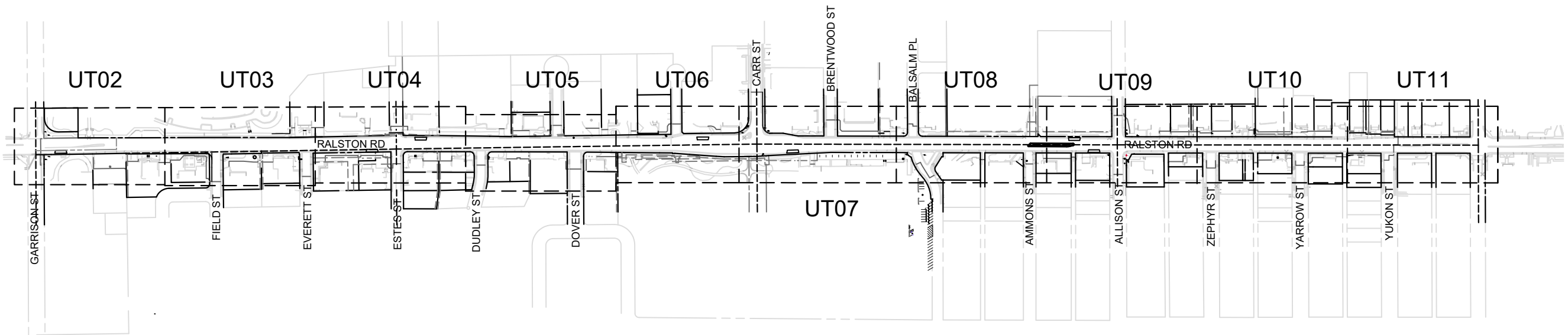
MANHOLE SUMMARY TABLE

ID #	UTILITY OWNER	UTILITY TYPE	UTILITY SHEET	APPROX STATION	OFFSET	NORTHING	EASTING	DIRECTION N, S, E, W (In or Out)	PIPE SIZE (IN)	INVERT (FT)	DIRECTION N, S, E, W (In or Out)	PIPE SIZE (IN)	INVERT (FT)	DIRECTION N, S, E, W (In or Out)	PIPE SIZE (IN)	INVERT (FT)	DIRECTION N, S, E, W (In or Out)	PIPE SIZE (IN)	INVERT (FT)
1015L	COA	SAN	3	101+50	30' LT	717715.98	113060.29	N	12" PVC	5334.1	E	8" CLAY	5334.3	W	8" PVC	5335.50			
1022L	COA	SAN	3	102+16	30' LT	717715.53	113120.97	W	8" CLAY	5334.8	E	8" CLAY	5335.2						
1035R	COA	STM	3	103+55	16' LT	717671.48	113257.09	NW	18" CPP	5337.3	NE	15" CMP	5338.5	E	18" RCP	5339.9	SE	15" ELLIP CMP	5341.0
1038L	COA	SAN	3	103+90	25' LT	717713.97	113294.09	W	8" CLAY	5336.1	E	8" CLAY	5336.1	S	6" CLAY	5336.4			
1082R	COA	STM	4	108+25	22' RT	717668.40	113728.95	NE	12" CMP	5343.1	SW	12" CMP	5343.2						
1083R	COA	STM	4	108+31	17' RT	717673.33	113735.22	W	18" RCP	5341.4	E	18" CMP	5341.9	N	18" RCP	5343.1	SW	12" CMP	5343.0
1084L	COA	SAN	4	108+44	25' LT	717716.10	113748.51	W	8" CLAY	5338.1	NE	8" CLAY	5338.1	S	8" CLAY	5338.1	N	6" PVC	5338.3
1091L	COA	SAN	4	109+19	38' LT	717729.04	113824.04	SW	8" CLAY	5339.0	E	8" CLAY	5339.1						
1116L	COA	SAN	4	111+68	41' LT	717732.17	114073.20	W	8" CLAY	5341.0	E	8" CLAY	5341.1						
1149R	COA	SAN	5	114+94	26' RT	717664.51	114398.28	W	8" CIPP	5347.9	E	8" CIPP	5348.0	S	8" CIPP	5348.0			
1180R	COA	SAN	6	118+00	28' RT	717663.25	114705.25	E	8" CIPP	5346.7	W	8" CIPP	5346.7	S	8" CIPP	5346.7			
1211L	COA	STM	6	121+17	27' RT	717718.48	115020.72	N/A	ICE IN	MANHOLE									
1214R	COA	SAN	6	121+47	30' RT	717661.67	115050.89	E	8" CIPP	5345.6	W	8" CIPP	5345.7	S	8" CIPP	5345.7			
1225R	COA	SAN	6	122+54	30' RT	717661.88	115159.05	N	8" CIPP	5345.2	W	8" CIPP	5345.6						
1265L	COA	STM	7	126+46	27' LT	717718.71	115551.17	E	18" RCP	5348.8	W	18" RCP	5348.8	N	12" CMP	5349.3			
1283L	COA	STM	8	128+24	30' LT	717721.95	115727.66	N	36" RCP	5341.2	S	36" RCP	5341.6	W	18" RCP	5347.6			
1309R	COA	SAN	8	130+80	19' RT	717673.86	115984.98	E	10" CIPP	5337.7	N	8" PVC	5337.7						
1344R	COA	SAN	8	134+39	16' RT	717675.28	116343.45	E	10" CIPP	5336.9	W	10" CIPP	5336.8						
1364R	COA	SAN	9	136+39	13' RT	717677.72	116543.22	E	10" CIPP	5336.4	W	10" CIPP	5336.5	S	8" PVC	5336.6			
1363R	COA	STM	9	136+36	30' RT	717661.01	116540.85	E	12" PVC	5342.6	S	12" PVC	5342.8						
1380R	COA	STM	9	138+00	59' RT	717631.02	116706.31	NE	15" RCP	5340.7	SW	15" RCP	5340.7						
1396R	COA	SAN	10	139+67	12' RT	717677.46	116871.47	E	10" CIPP	5334.7	W	10" CIPP	5334.7	N	8" CLAY	5334.7	S	8" PVC	5334.7
1397R	COA	STM	10	139+74	25' RT	717664.45	116879.56	E	12" CPP	5339.7	S	12" CPP	5339.7						
1412L	COA	STM	10	141+20	29' LT	717717.56	117023.70	N	15" RCP	5337.9	E	2-12" PVC	5338.4	S	12" RCP				
1412R	COA	STM	10	141+24	20' RT	717668.36	117028.12	W	12" PVC	5339.1	E	8" PVC	5339.1	S	12" RCP	5339.1	N	12" RCP	5339.1
1432L	COA	SAN	10	143+14	6' LT	717694.75	117218.00	E	10" CIPP	5333.5	W	10" CIPP	5333.5	S	8" CIPP	5333.6			
1447L	COA	SAN	11	144+64	6' LT	717694.60	117368.70	E	10" CIPP	5332.3	W	10" CIPP	5332.3	S	8" CIPP	5332.5			
1449R	COA	STM	11	144+94	26' RT	717663.57	117398.97	E	12" PVC	5336.4	S	12" PVC	5336.7						
1464L	COA	SAN	11	146+37	4' RT	717691.37	117542.79	E	12" PVC	5336.1	W	12" PVC	5336.1	S	12" RCP	5336.4			
1475L	COA	STM	11	147+51	61' LT	717751.28	117655.40	N	33" RCP	5326.7	SE	33" RCP	5326.9						
1478R	COA	STM	11	147+88	28' RT	717662.37	117692.26	NW	33"RCP	5327.3	S	33" RCP	5327.4	E	12" RCP	5332.0	W	12" RCP	5332.1
1496L	COA	SAN	11	149+60	3' LT	717694.26	117864.74	E	10" CIPP	5330.9	W	10" CIPP	5331.1	S	8" PVC	5331.1			
1529L	COA	SAN	12	152+90	4' LT	717695.09	118193.81	E	10" CIPP	5328.5	W	10" CIPP	5328.5	S	8" PVC	5328.5			



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CITY OF ARVADA

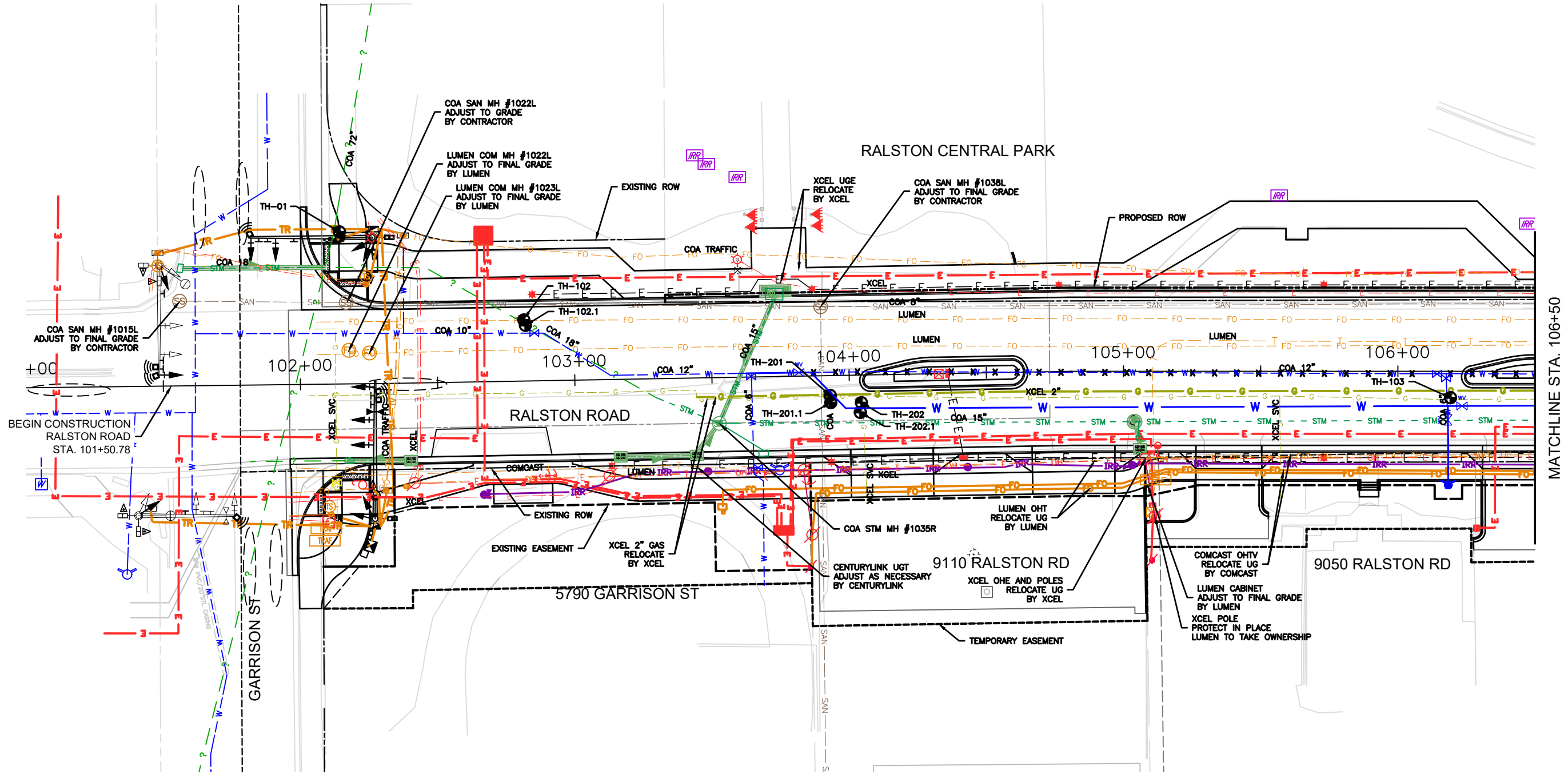
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8101 RALSTON ROAD

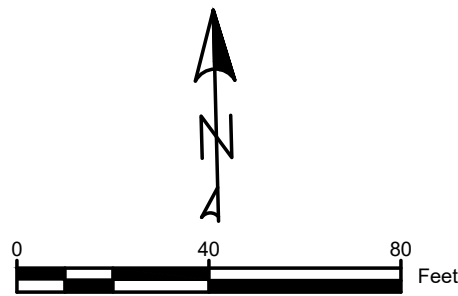
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- NOTE:
- 1. SEE DRAINAGE PLANS FOR STORM SEWER DETAILS.
 - 2. SEE TRAFFIC PLANS FOR TRAFFIC SIGNAL DETAILS.
 - 3. SEE LIGHTING PLANS FOR LIGHTING DETAILS.
 - 4. SEE IRRIGATION PLANS FOR IRRIGATION DETAILS.
 - 5. SEE WATER PLANS FOR WATER MAIN RELOCATION DETAILS.
 - 6. ALL UTILITIES ARE TO BE PROTECTED IN PLACE DURING CONSTRUCTION UNLESS OTHERWISE IDENTIFIED ON THESE PLANS.

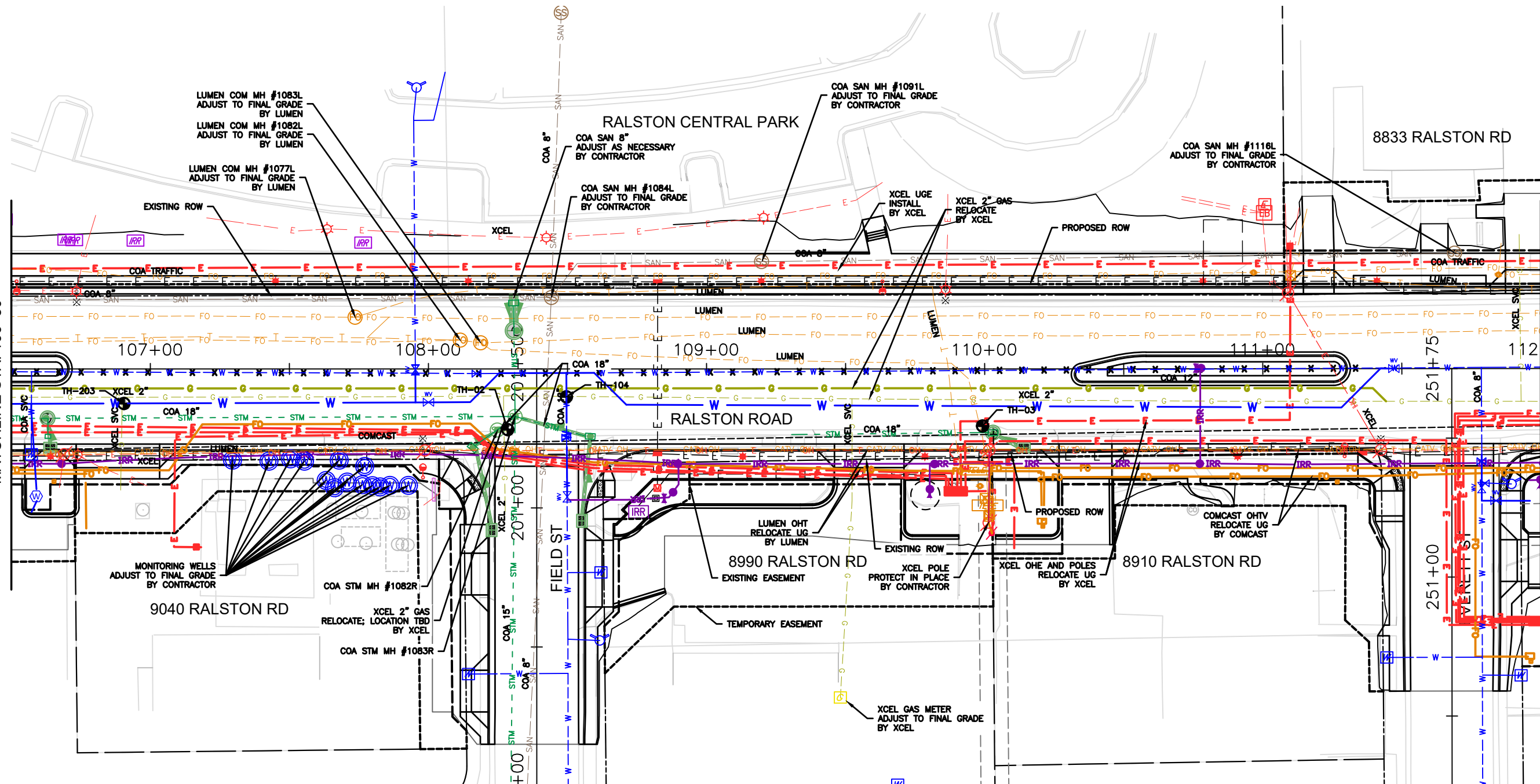


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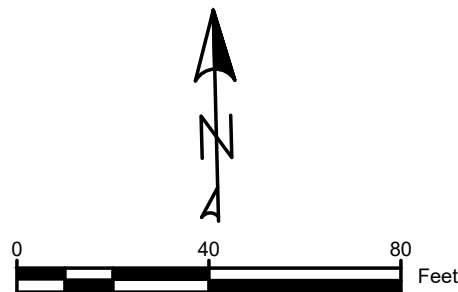
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MATCHLINE STA. 106+50

MATCHLINE STA. 112+00



- NOTE:
1. SEE DRAINAGE PLANS FOR STORM SEWER DETAILS.
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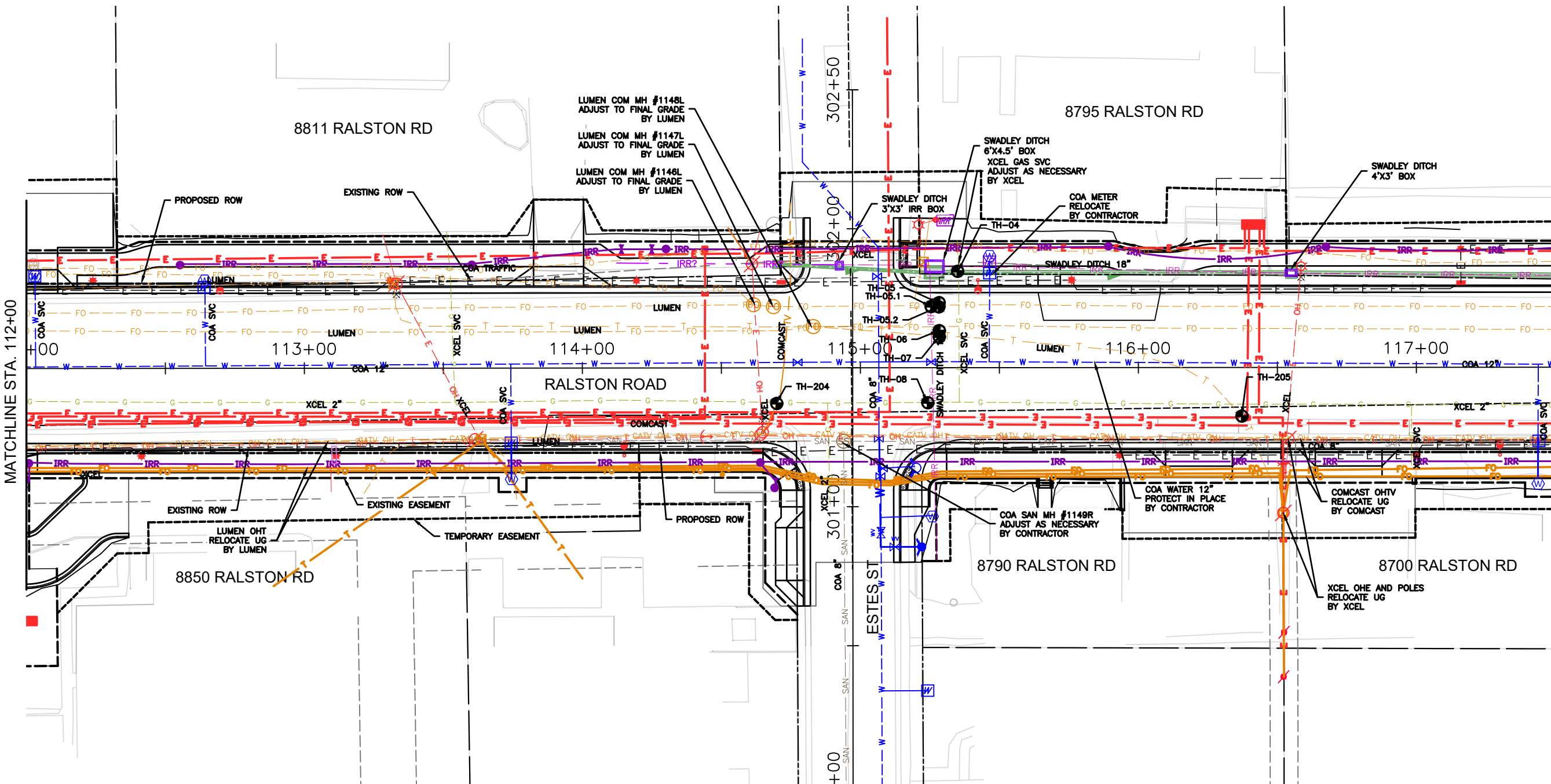


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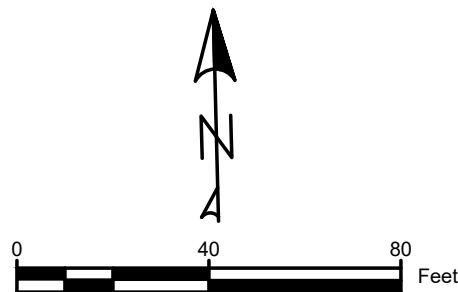
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MATCHLINE STA. 112+00

MATCHLINE STA. 117+50



- NOTE:
- 1. SEE DRAINAGE PLANS FOR STORM SEWER DETAILS.
 - 2. SEE TRAFFIC PLANS FOR TRAFFIC SIGNAL DETAILS.
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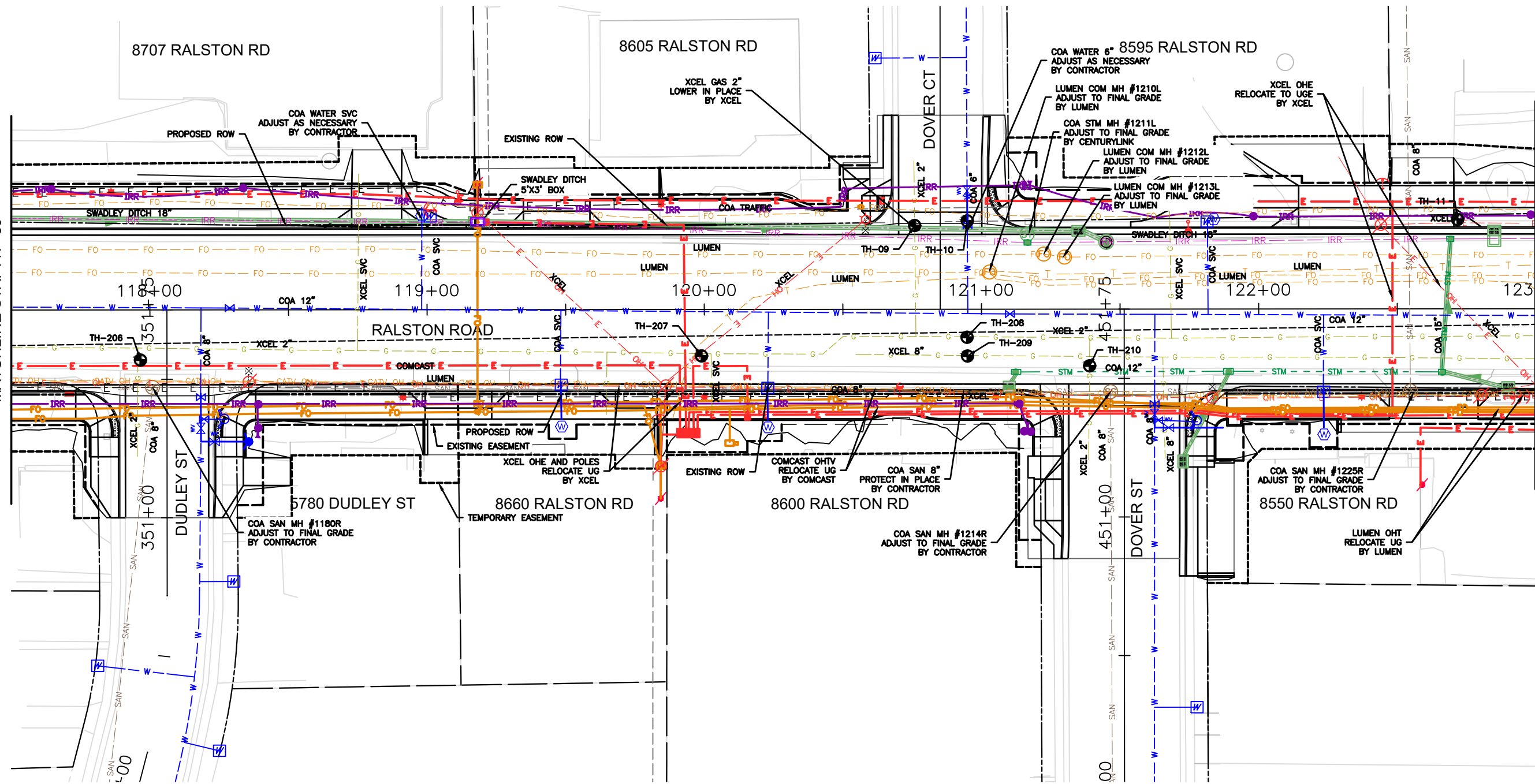
 **CITY OF ARVADA**
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO 80002

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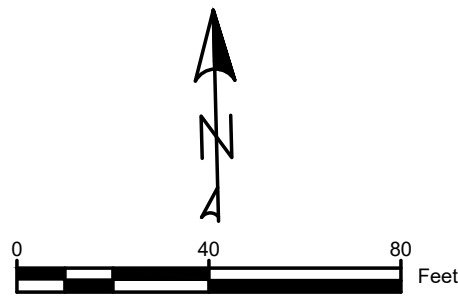
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MATCHLINE STA. 117+50

MATCHLINE STA. 123+00

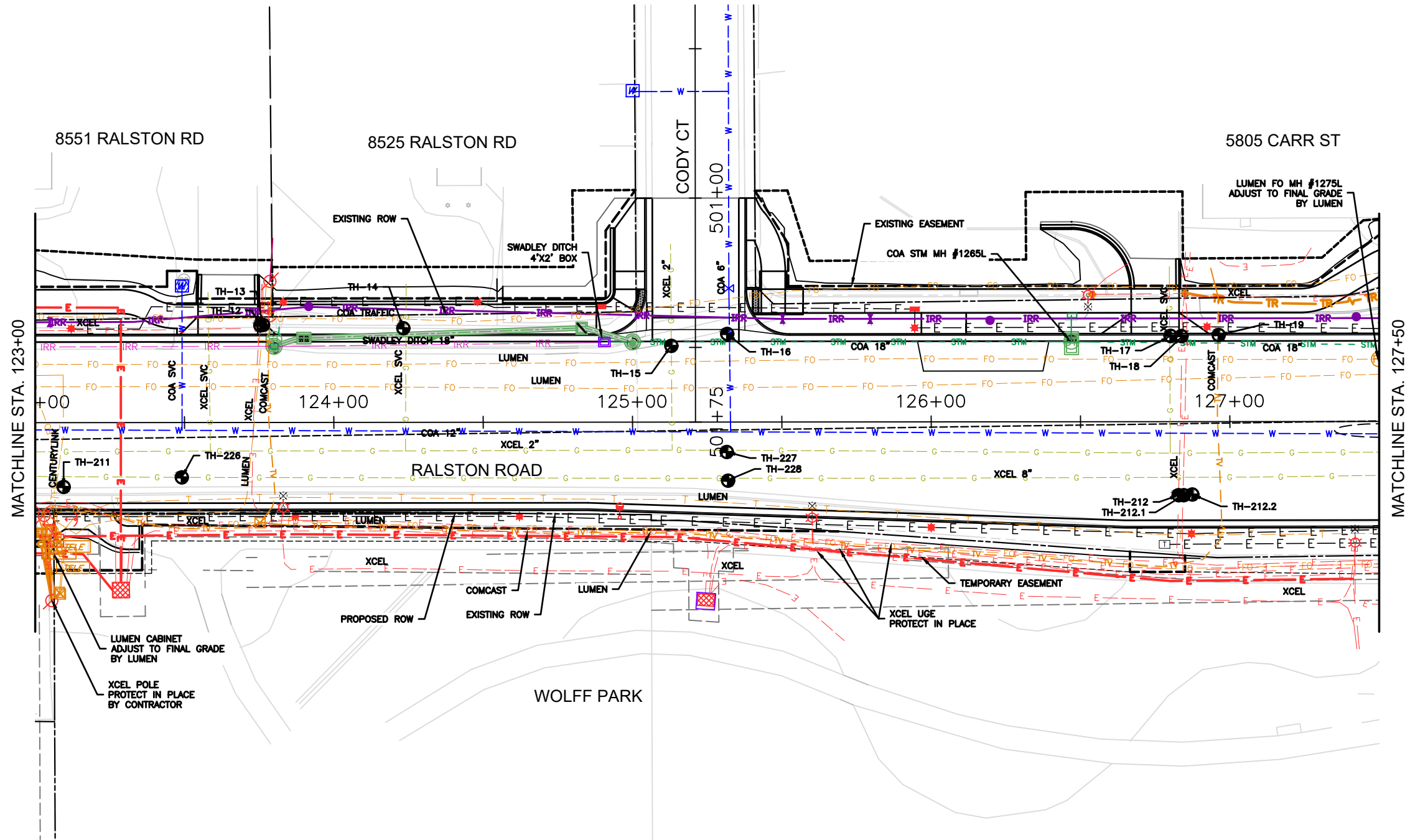


- NOTE:
- 1. SEE DRAINAGE PLANS FOR STORM SEWER DETAILS.
 - 2. SEE TRAFFIC PLANS FOR TRAFFIC SIGNAL DETAILS.
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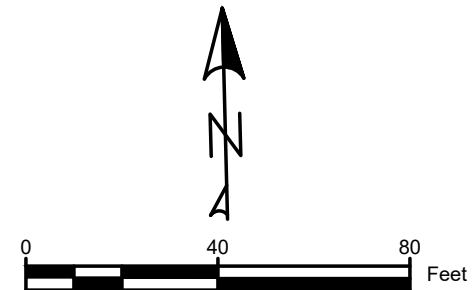


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- NOTE:
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- NOTE:
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& ASSOCIATES, INC.

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CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO 80002

As Constructed

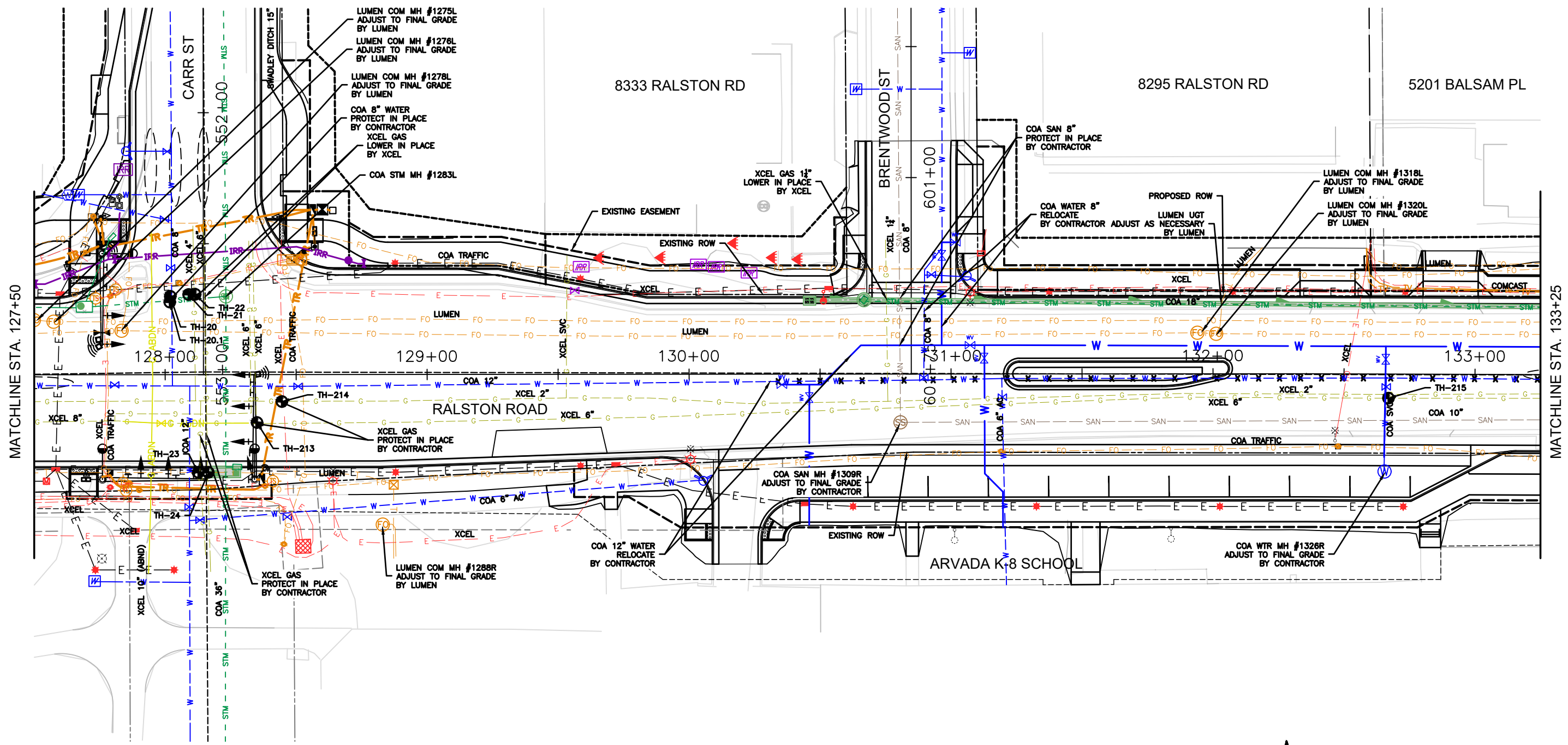
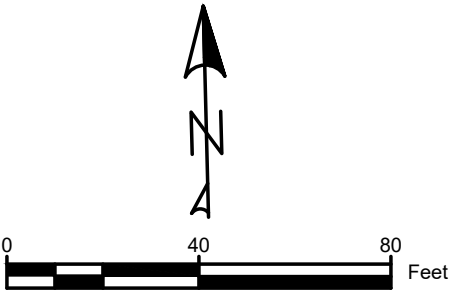
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**RALSTON RD - YUKON TO GARRISON
UTILITY PLAN**

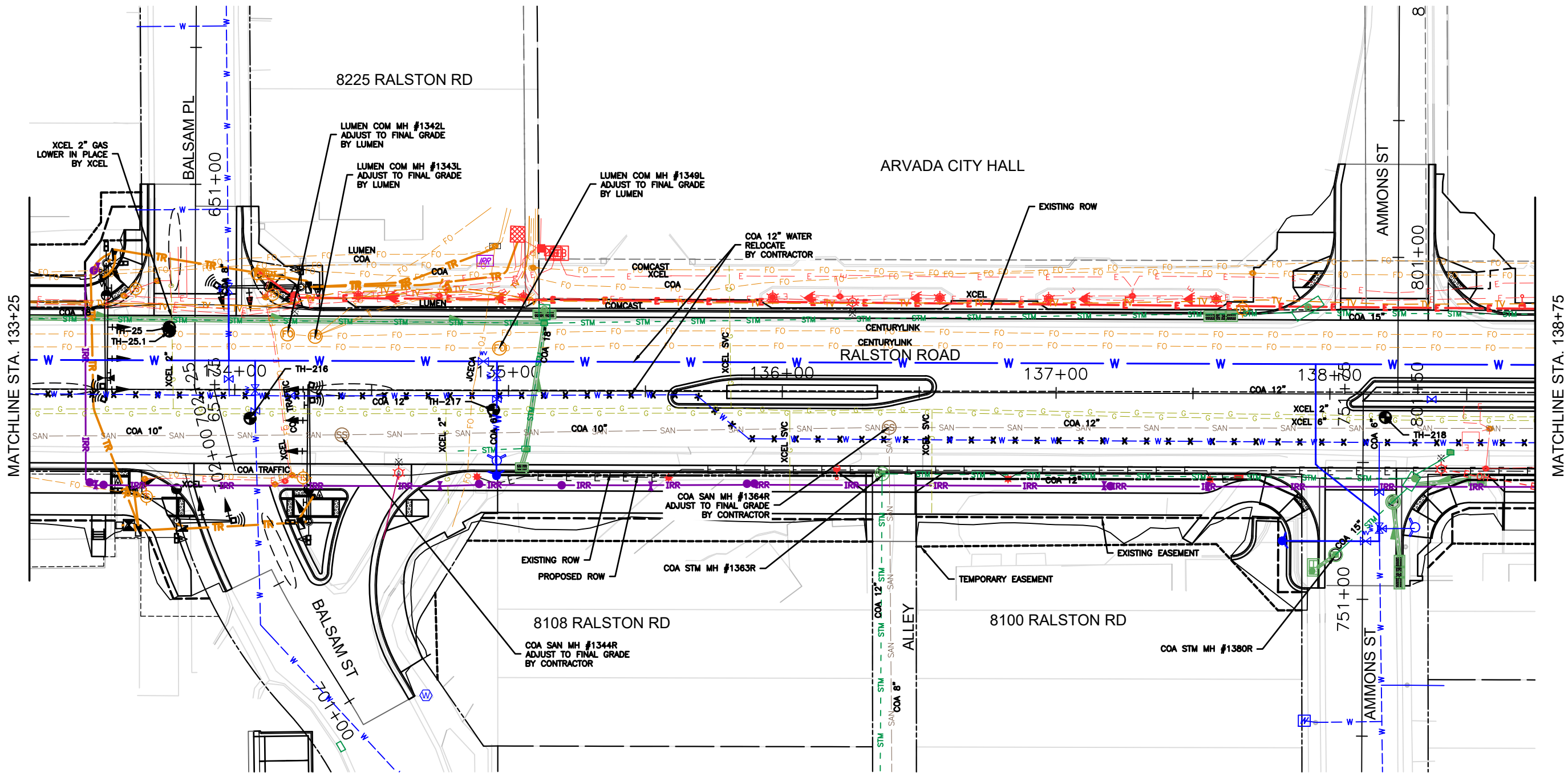
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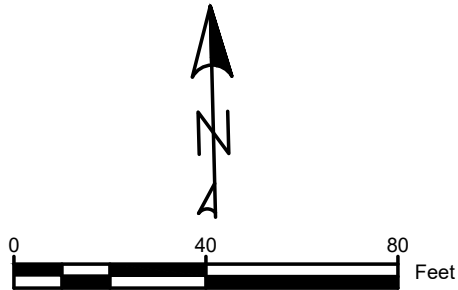
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- NOTE:
1. SEE DRAINAGE PLANS FOR STORM SEWER DETAILS.
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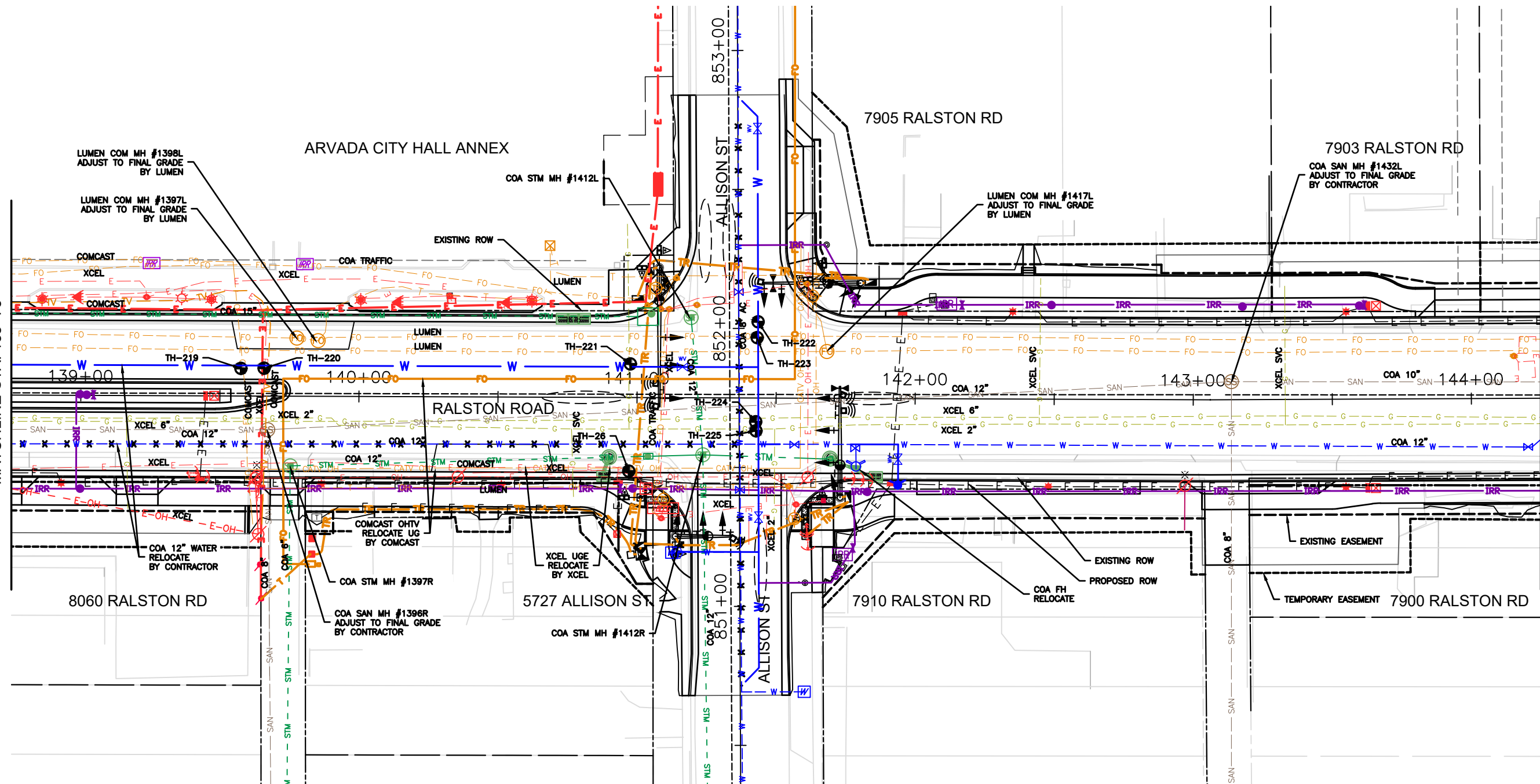
 **CITY OF ARVADA**
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO 80002

As Constructed	RALSTON RD - YUKON TO GARRISON UTILITY PLAN			Project No./Code
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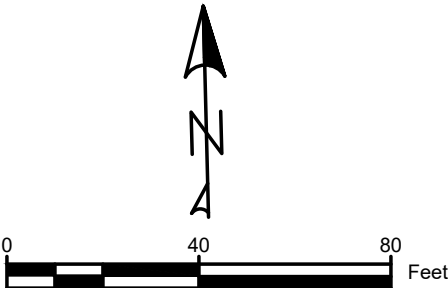
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MATCHLINE STA. 144+25

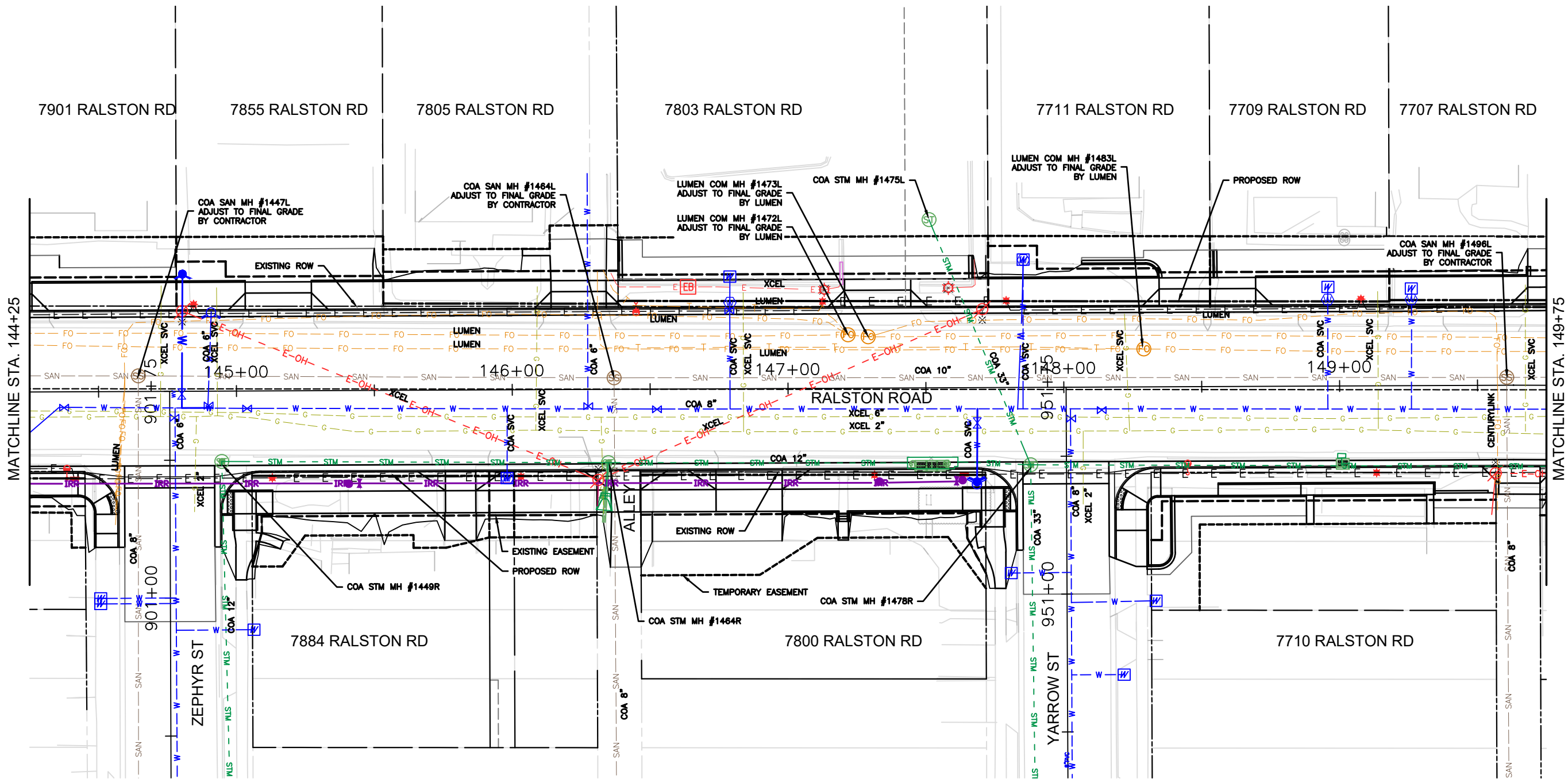


- NOTE:
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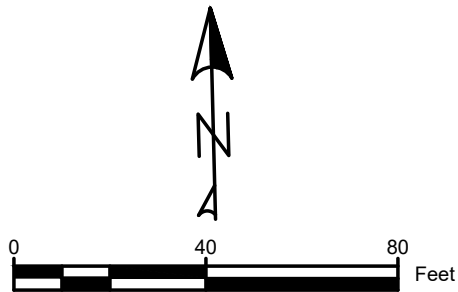


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- NOTE:
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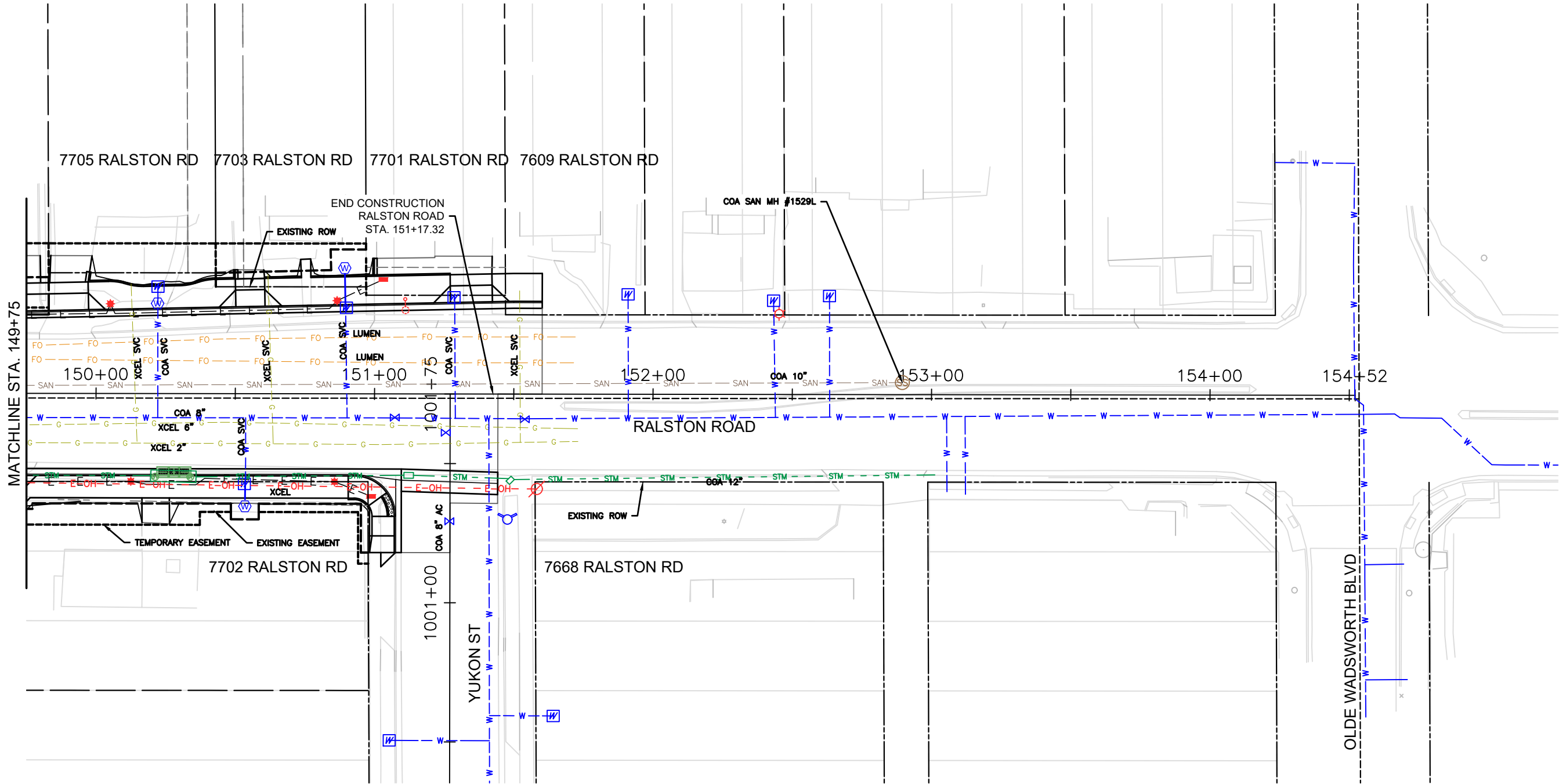
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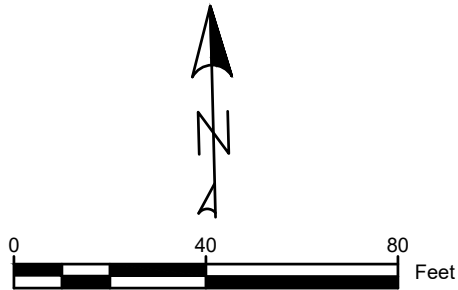
CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO 80002

As Constructed	RALSTON RD - YUKON TO GARRISON UTILITY PLAN			Project No./Code
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- NOTE:
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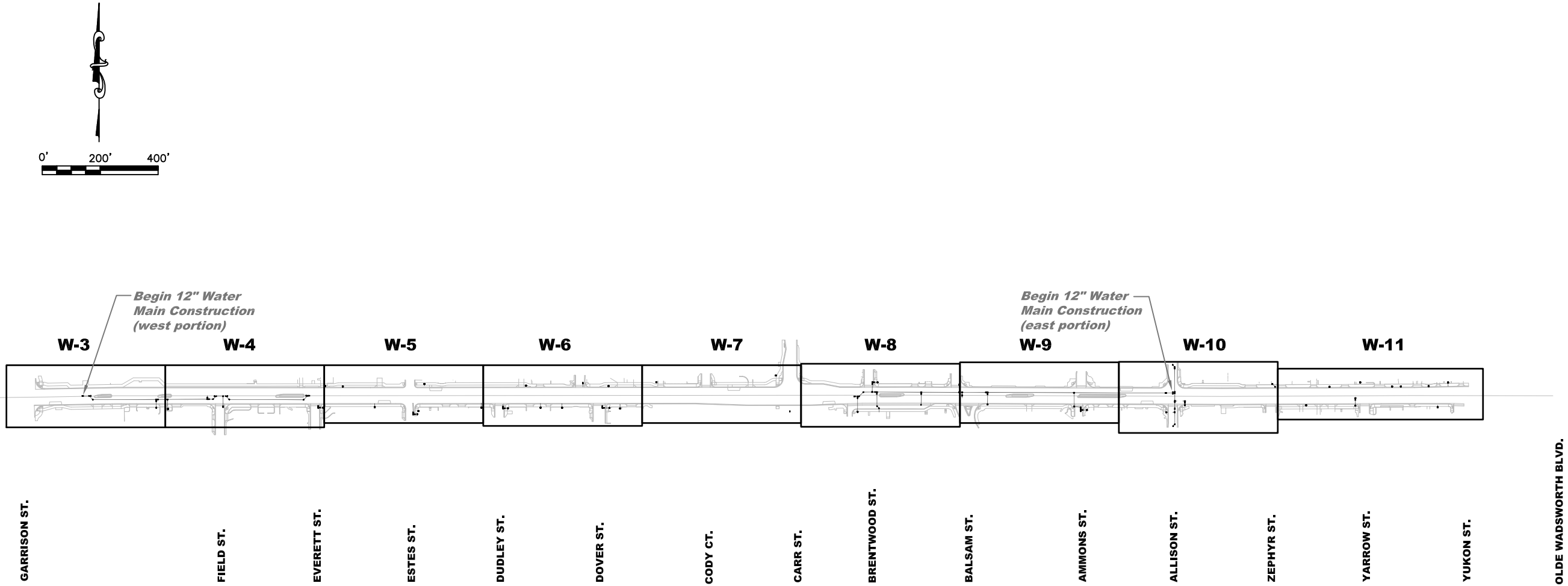
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 **CITY OF ARVADA**
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO 80002

As Constructed	RALSTON RD - YUKON TO GARRISON UTILITY PLAN			Project No./Code
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RALSTON ROAD - WATER MAIN CONSTRUCTION

APPROVED BY: jacqueline K Rhoades 12-30-2020
CITY ENGINEER DATE

PROJECT NO. 18-ST-40 RALSTON ROAD - YUKON ST. TO GARRISON ST. 12" WATER MAIN REPLACEMENT SHEET INDEX		Public Works Department Engineering Division 8101 Ralston Road Arvada, Colorado 80002 Phone 720-898-7640		NO.	REVISION	DATE	BY
				1			
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ENGINEER TTT CHECKED BY		DESIGN BY KBC		SUBSET SHEET W-1			
SHEET NUMBER				251			

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GENERAL NOTES:

1. All contractors and subcontractors shall be licensed with the City of Arvada Engineering Division and obtain individual no charge public improvement permits for the work.
2. The Engineering Division shall be notified (720--898--7640) a minimum of 24 hours prior to any construction.
3. The contractor is responsible for all project safety including, but not limited to, trench excavation and shoring, traffic control and security.
4. Contractor to coordinate required utility relocations with utility companies to avoid construction delays. The engineer assumes no responsibility for buried utilities. The contractor is responsible to verify the location of all utilities prior to construction and to protect them during construction.
5. All existing water service lines shall be transferred to the new main unless otherwise directed by the project engineer.
6. Metallic fittings, valves and inline appurtenances shall be wrapped with one (1) layer of 8 mil polyethylene in accordance with Arvada Code of Engineering Standards and Specifications, Section 30.3.8.
7. Length of restrained pipe and concrete kickblocks are required at all tees, bends, branches and fittings and shall be placed in accordance with Arvada Code of Engineering Standards and Specifications.
8. Existing water lines, services and fire hydrants shall remain in service until chlorine and pressure tests of the new line are approved.
9. The contractor is to coordinate the operation of all valves, fire hydrants and other appurtenances with the City Water Division, through the City's municipal inspector.
10. All water services connected to the new PVC main that do not have outside meter pits will require meter pit installation.
11. Any existing meter pits that do not have all copper service inside the pit will be replaced, including new copper, yoke, and meter pit rings.
12. All abandoned pipe ends shall be plugged with 6 inches concrete pushed inside the abandoned pipe.
13. All new water mains shall have a minimum of 4' of cover.
14. All trench spoils shall be loaded into dump trucks and immediately hauled away from the project site. Trench spoils shall not be placed directly on any street. All trenches shall be filled with select or flowable backfill material.

15. All meter pits shall be PVC 24 inch diameter designed to fit 20 inch cover.
16. All new fire hydrants shall be installed prior to placing new mains in service unless otherwise noted.
17. Service lines shown in bold are to be connected to new water main.
18. Valves and fire hydrants shown in bold on existing water mains are to be abandoned/removed.
19. Fire Hydrant removal shall include abandoning the hydrant valve box where the box is outside paved area.
20. Asphalt removed as part of this work will be replaced under separate contract. Concrete and asphalt removal required to install watermain and appurtenances shall be considered a subsidiary obligation of the work on this project.
21. All construction work in City Of Arvada parks shall meet the requirements of section 40 (Irrigation Systems) and section 45 (Plant Landscaping) of the City Of Arvada Engineering Code of Standards and Specifications.
22. A City of Arvada Site Disturbance Permit must be obtained from the Engineering Division for all projects with a combined land disturbance, including stockpiles and materials storage, of 10,000 square feet or more. For Permit requirements go to: arvada.org/business/permits-and-applications/develop/site-disturbance-permit or if you have any questions or are unsure whether the project encompasses 10,000 square feet, call 720--898--7640.
23. Best management practices, such as inlet protection and street sweeping, must be implemented and maintained on all projects to limit tracking, protect stormwater inlets, and control runoff from stockpiles. Uncontrolled releases of dirt or silt from the project into drainage ways, which includes the gutter or stormwater inlets, constitutes a violation of Arvada Ordinance punishable by up to \$999 per day per incident.
24. All tee installations shall be swivel tees.

APPROX. PAY QUANTITIES		
QUANTITY		ITEM
WATER		
45	LF	4" PVC PIPE
86	LF	6" PVC PIPE
502	LF	8" PVC PIPE
1576	LF	12" PVC PIPE
416	LF	12" FUSIBLE C900 PVC PIPE
198	LF	REMOVE 4" CI ABANDONED MAIN
30	LF	REMOVE 4" AC MAIN
15	LF	REMOVE 6" AC MAIN
15	LF	REMOVE 6" PVC MAIN
165	LF	REMOVE 8" PVC MAIN
119	LF	REMOVE 12" PVC MAIN
1	EA	4" GATE VALVE & BOX
2	EA	6" GATE VALVE & BOX
11	EA	8" GATE VALVE & BOX
9	EA	12" GATE VALVE & BOX
17	EA	REMOVE VALVE
12	EA	ABANDON VALVE BOX
60	EA	RESET VALVE BOX TO FINISHED GRADE
13	EA	F.H. ASSEMBLY
14	EA	REMOVE F.H.
1	EA	PERMANENT PLUG
21	EA	CONNECT TO EXISTING
2	EA	CHLORINATION & PRESSURE TEST
19	EA	INSTALL WATER METER (3/4")
2	EA	TAP MAIN & INSTALL CORP STOP (3/4")
18	EA	RECONNECT WATER SERVICE (3/4")
5	EA	INSTALL WATER METER (1")
5	EA	RECONNECT WATER SERVICE (1")
1	EA	INSTALL WATER METER (1.5")
1	EA	RECONNECT WATER SERVICE (1.5")
1	EA	REMOVE OLD ABANDONED WATER METER
2	EA	RESET EXIST. METER BOX TO FINISHED GRADE
1	EA	FIRE SPRINKLER FLOW TEST
MISCELLANEOUS		
1450	CY±	SELECT BACKFILL
SANITARY		
8	LF	REPLACE 6" VCP SEWER WITH 6" PVC PIPE

NOTES:

1. PIPE REMOVALS 10 LF OR LONGER ARE NOTED AS A PAY ITEM. SHORTER PIPE REMOVALS ARE SUBSIDIARY TO THE CONTRACT.
2. REMOVE F.H. INCLUDES REMOVAL OF FIRE HYDRANT LINE IF REQUIRED.
3. INSTALL WATER METER SHALL INCLUDE INSTALLATION OF THE SERVICE LINE AND THE PIPE COST.

PROJECT NO. 18-ST-40
RALSTON ROAD - GARRISON ST. TO YUKON ST.
12" WATER MAIN REPLACEMENT
GENERAL NOTES & QUANTITIES

ENGINEER
TTT
CHECKED BY

DESIGN BY
KBC

SUBSET
SHEET
W-2

SHEET
NUMBER

Public Works Department
Engineering Division
8101 Ralston Road
Arvada, Colorado 80002
Phone 720-898-7640

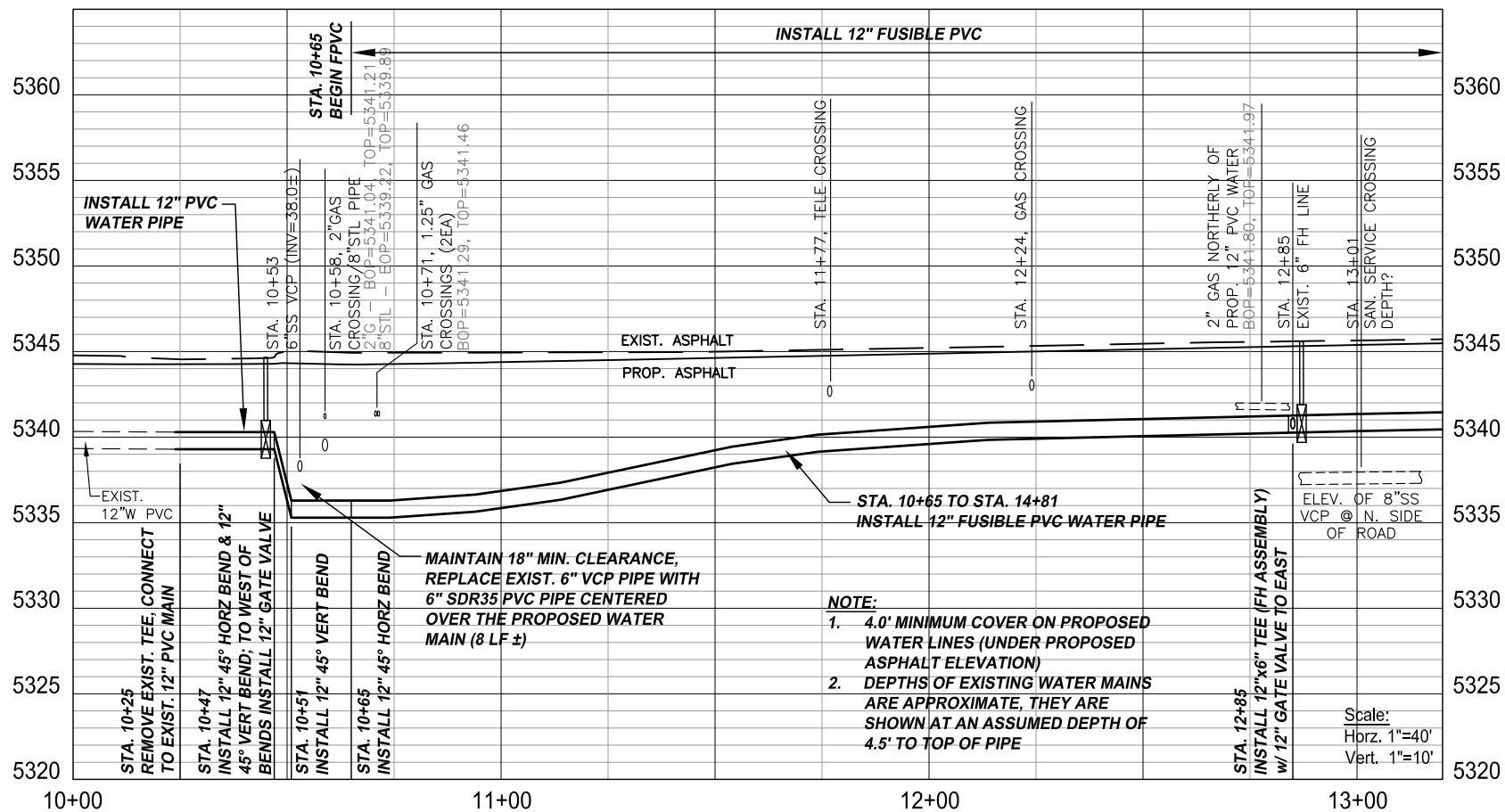
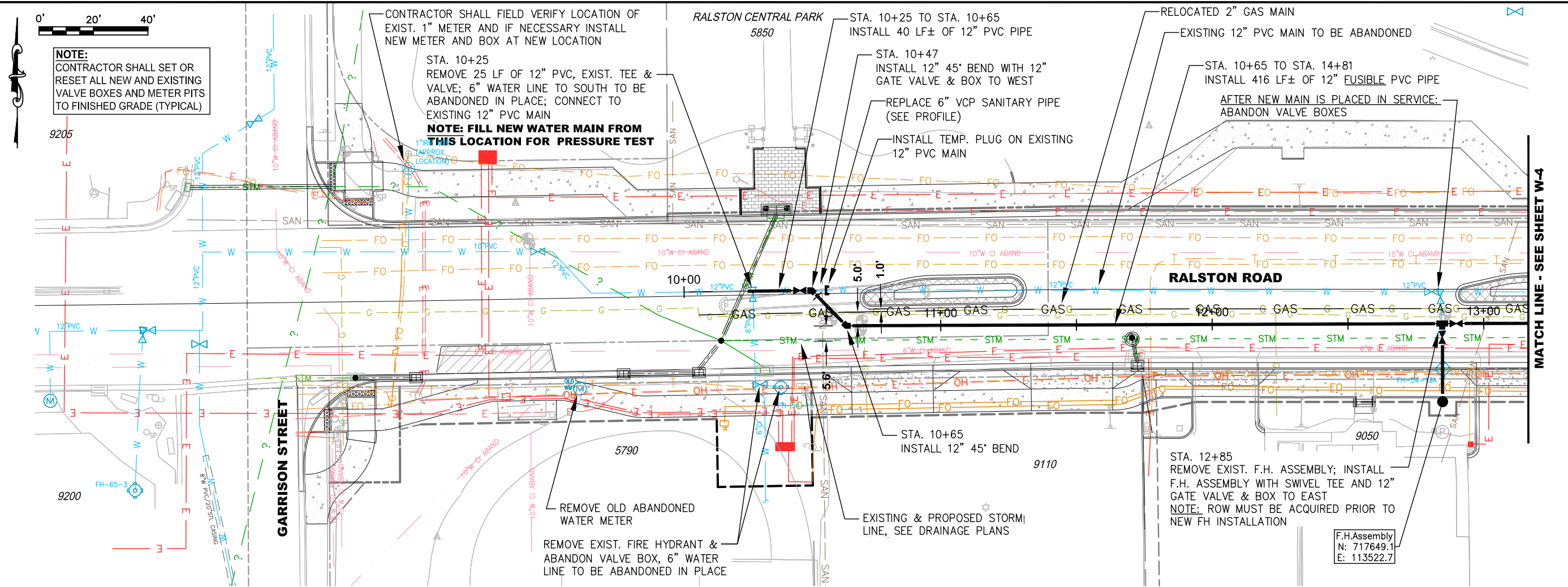


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NOTE:
CONTRACTOR SHALL SET OR
RESET ALL NEW AND EXISTING
VALVE BOXES AND METER PITS
TO FINISHED GRADE (TYPICAL)

CONTRACTOR SHALL FIELD VERIFY LOCATION OF
EXIST. 1" METER AND IF NECESSARY INSTALL
NEW METER AND BOX AT NEW LOCATION

STA. 10+25
REMOVE 25 LF OF 12" PVC, EXIST. TEE &
VALVE; 6" WATER LINE TO SOUTH TO BE
ABANDONED IN PLACE; CONNECT TO
EXISTING 12" PVC MAIN

**NOTE: FILL NEW WATER MAIN FROM
THIS LOCATION FOR PRESSURE TEST**

STA. 10+25 TO STA. 10+65
INSTALL 40 LF± OF 12" PVC PIPE

STA. 10+47
INSTALL 12" 45° BEND WITH 12"
GATE VALVE & BOX TO WEST

REPLACE 6" VCP SANITARY PIPE
(SEE PROFILE)

INSTALL TEMP. PLUG ON EXISTING
12" PVC MAIN

RELOCATED 2" GAS MAIN

EXISTING 12" PVC MAIN TO BE ABANDONED

STA. 10+65 TO STA. 14+81
INSTALL 416 LF± OF 12" FUSIBLE PVC PIPE

AFTER NEW MAIN IS PLACED IN SERVICE:
ABANDON VALVE BOXES

RALSTON ROAD

STA. 10+65
INSTALL 12" 45° BEND

STA. 12+85
REMOVE EXIST. F.H. ASSEMBLY; INSTALL
F.H. ASSEMBLY WITH SWIVEL TEE AND 12"
GATE VALVE & BOX TO EAST
**NOTE: ROW MUST BE ACQUIRED PRIOR TO
NEW FH INSTALLATION**

F.H. Assembly
N: 717649.1
E: 113522.7

MATCH LINE - SEE SHEET W-4

INSTALL 12" FUSIBLE PVC

**INSTALL 12" PVC
WATER PIPE**

**INSTALL 12" PVC
WATER PIPE**

**INSTALL 12" PVC
WATER PIPE**

**INSTALL 12" PVC
WATER PIPE**

**INSTALL 12" PVC
WATER PIPE**

**INSTALL 12" PVC
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**INSTALL 12" PVC
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**INSTALL 12" PVC
WATER PIPE**

INSTALL 12" FUSIBLE PVC

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INSTALL 12" FUSIBLE PVC

INSTALL 12" FUSIBLE PVC

NOTE:
1. 4.0' MINIMUM COVER ON PROPOSED
WATER LINES (UNDER PROPOSED
ASPHALT ELEVATION)
2. DEPTHS OF EXISTING WATER MAINS
ARE APPROXIMATE, THEY ARE
SHOWN AT AN ASSUMED DEPTH OF
4.5' TO TOP OF PIPE

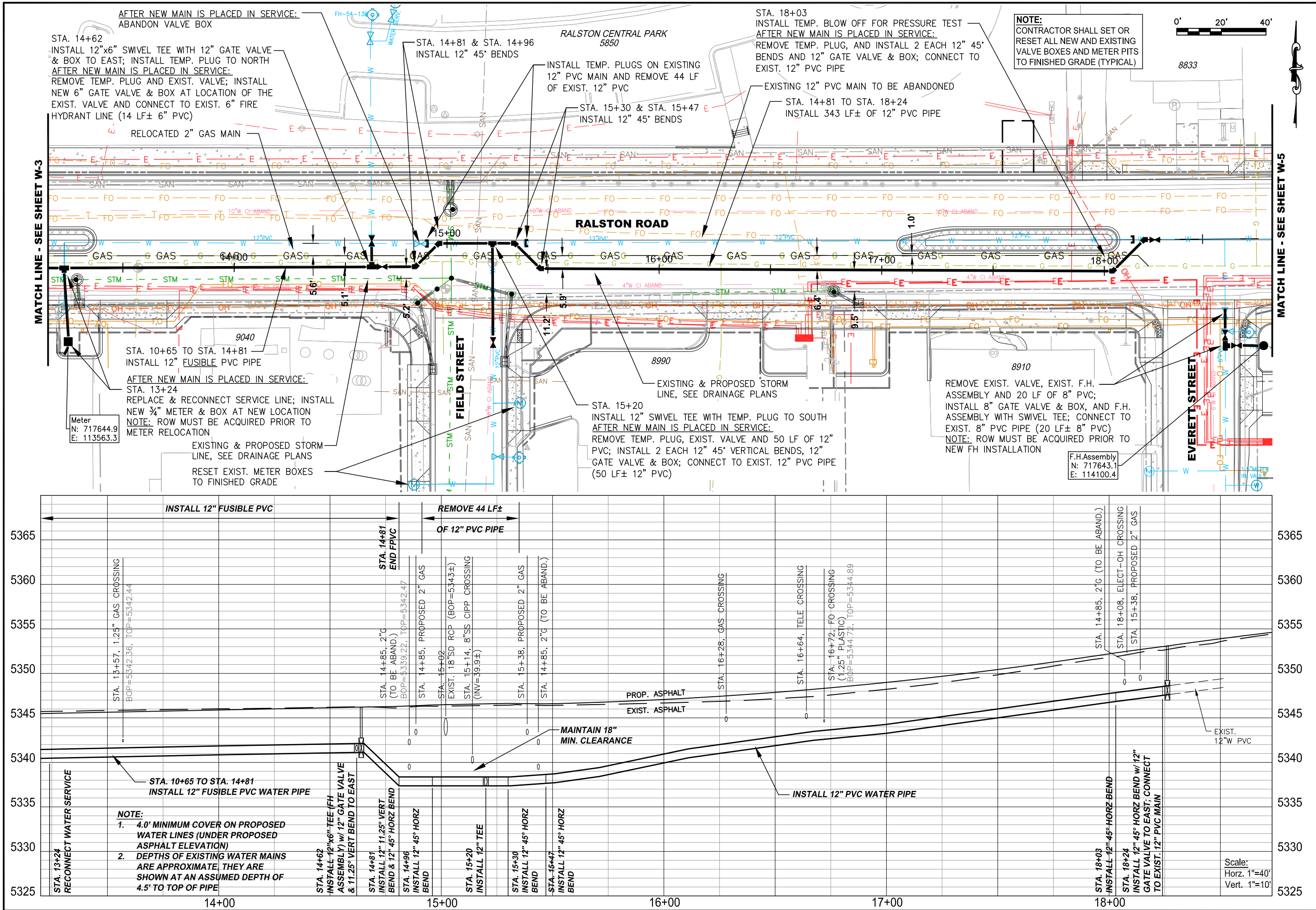
STA. 12+85
INSTALL 12"x6" TEE (FH ASSEMBLY)
w/ 12" GATE VALVE TO EAST

Scale:
Horz. 1"=40'
Vert. 1"=10'

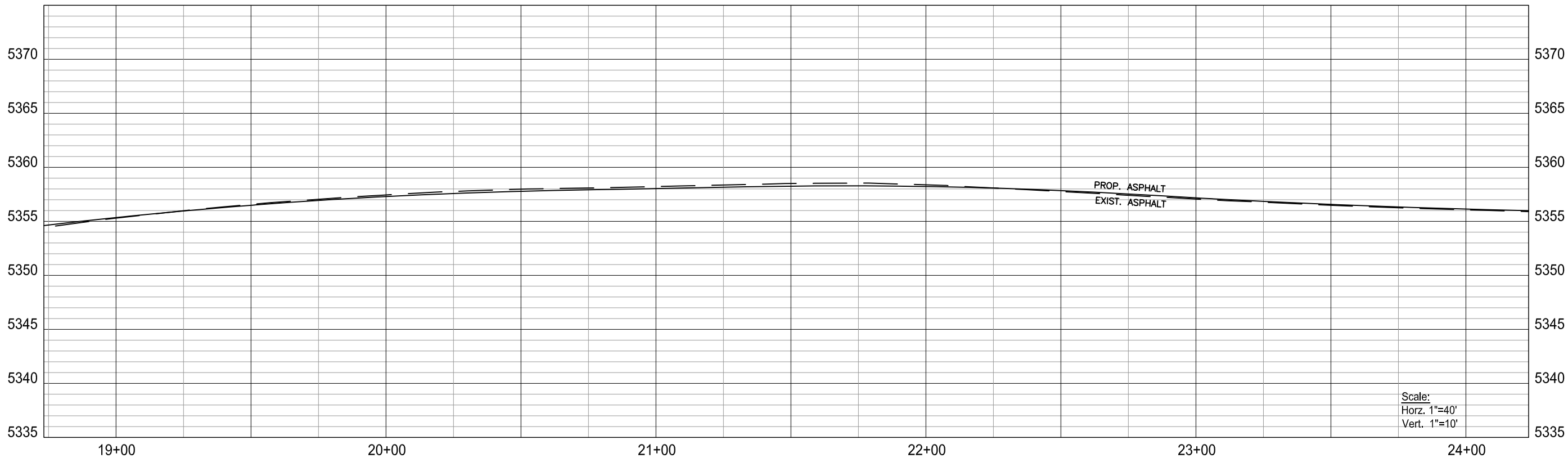
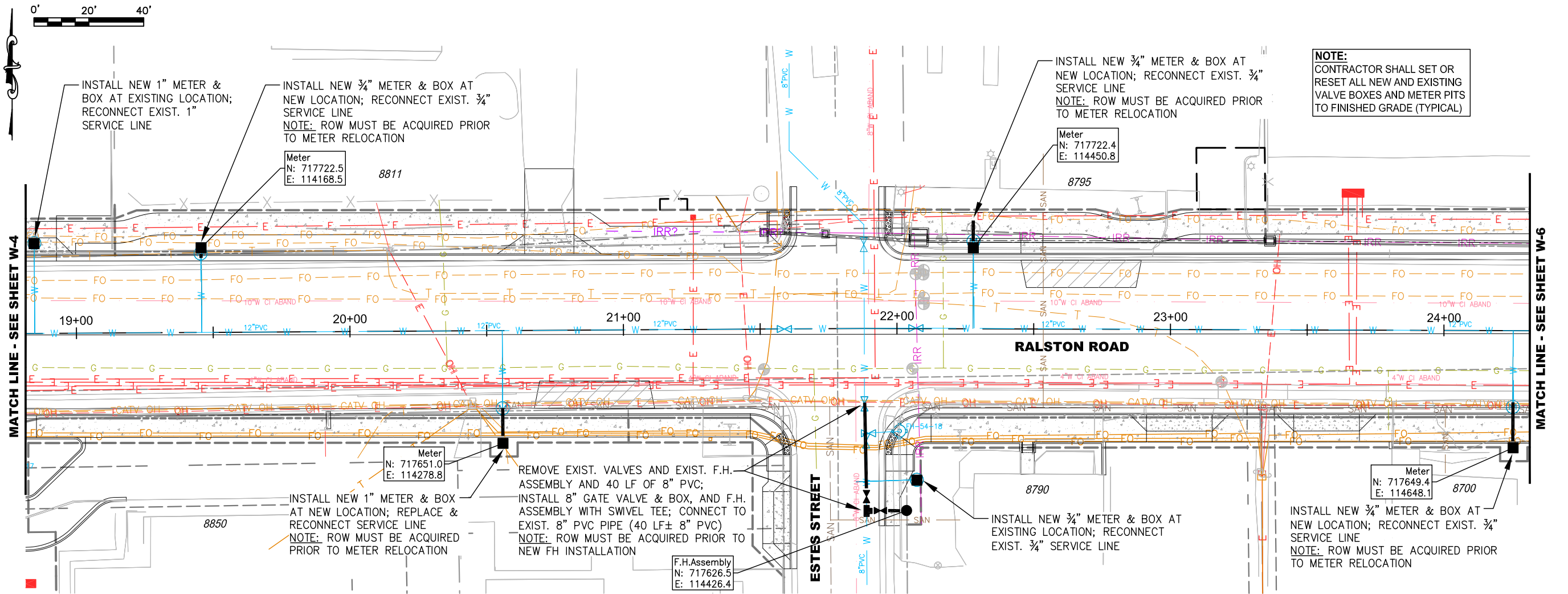
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Public Works Department Engineering Division 8101 Ralston Road Arvada, Colorado 80002 Phone 720-898-7640
CITY OF ARVADA
PROJECT NO. 18-ST-40 RALSTON ROAD - YUKON ST. TO GARRISON ST. 12" WATER MAIN REPLACEMENT PLAN & PROFILE
ENGINEER TTT CHECKED BY
DESIGN BY KBC
SUBSET SHEET W-3
SHEET NUMBER 253

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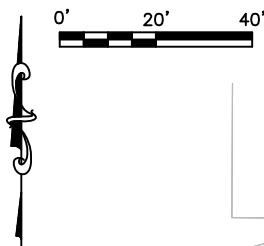
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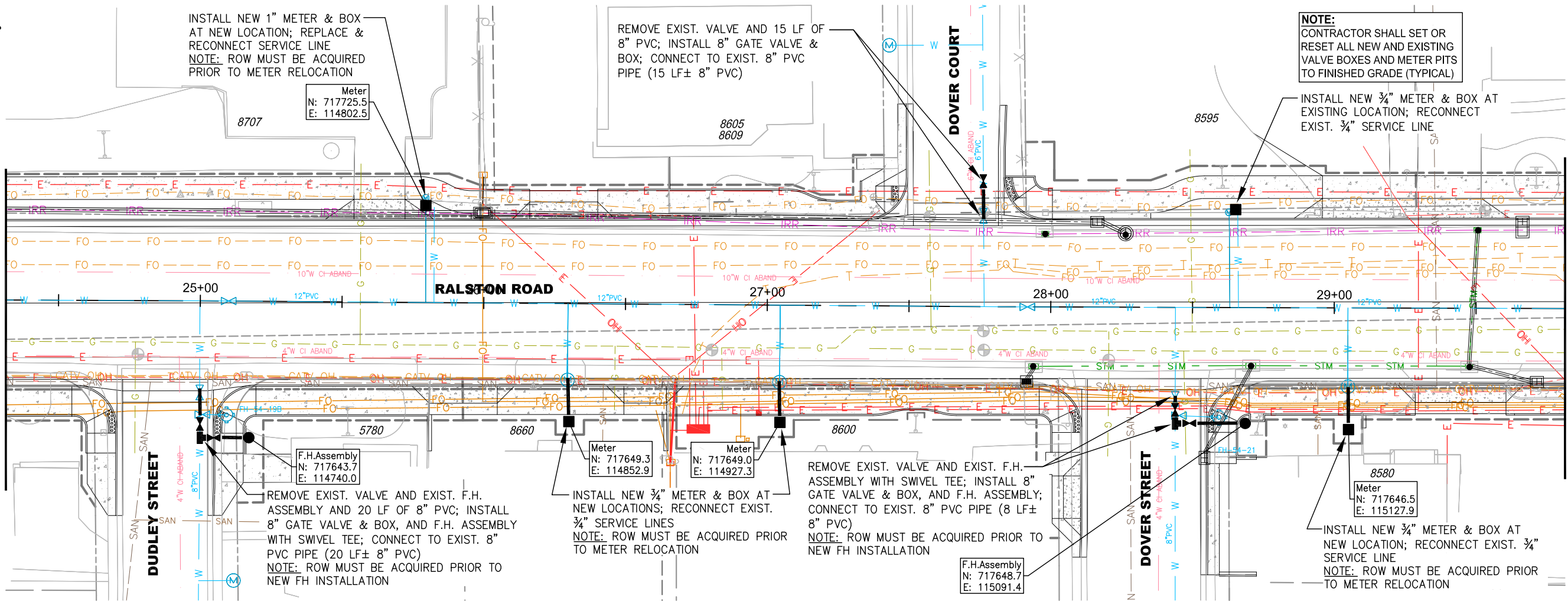
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Public Works Department Engineering Division 8101 Ralston Road Arvada, Colorado 80002 Phone 720-898-7640
PROJECT NO. 18-ST-40 RALSTON ROAD - YUKON ST. TO GARRISON ST. 12" WATER MAIN REPLACEMENT PLAN & PROFILE
ENGINEER TTT CHECKED BY DESIGN BY KBC
SUBSET SHEET W-5
SHEET NUMBER 255

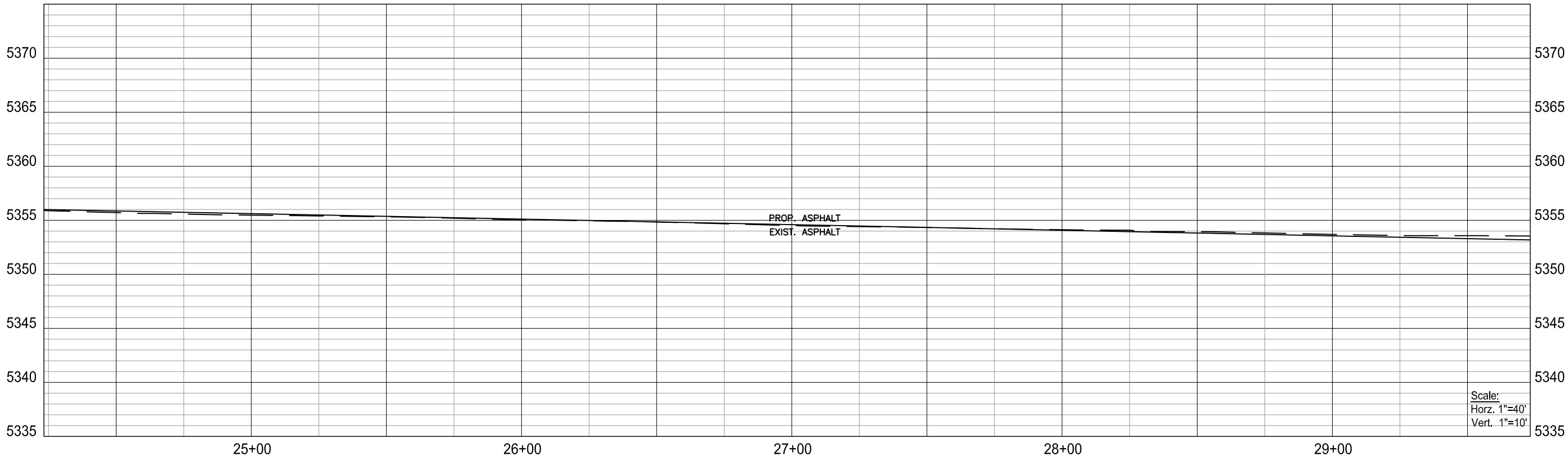
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MATCH LINE - SEE SHEET W-5



MATCH LINE - SEE SHEET W-7

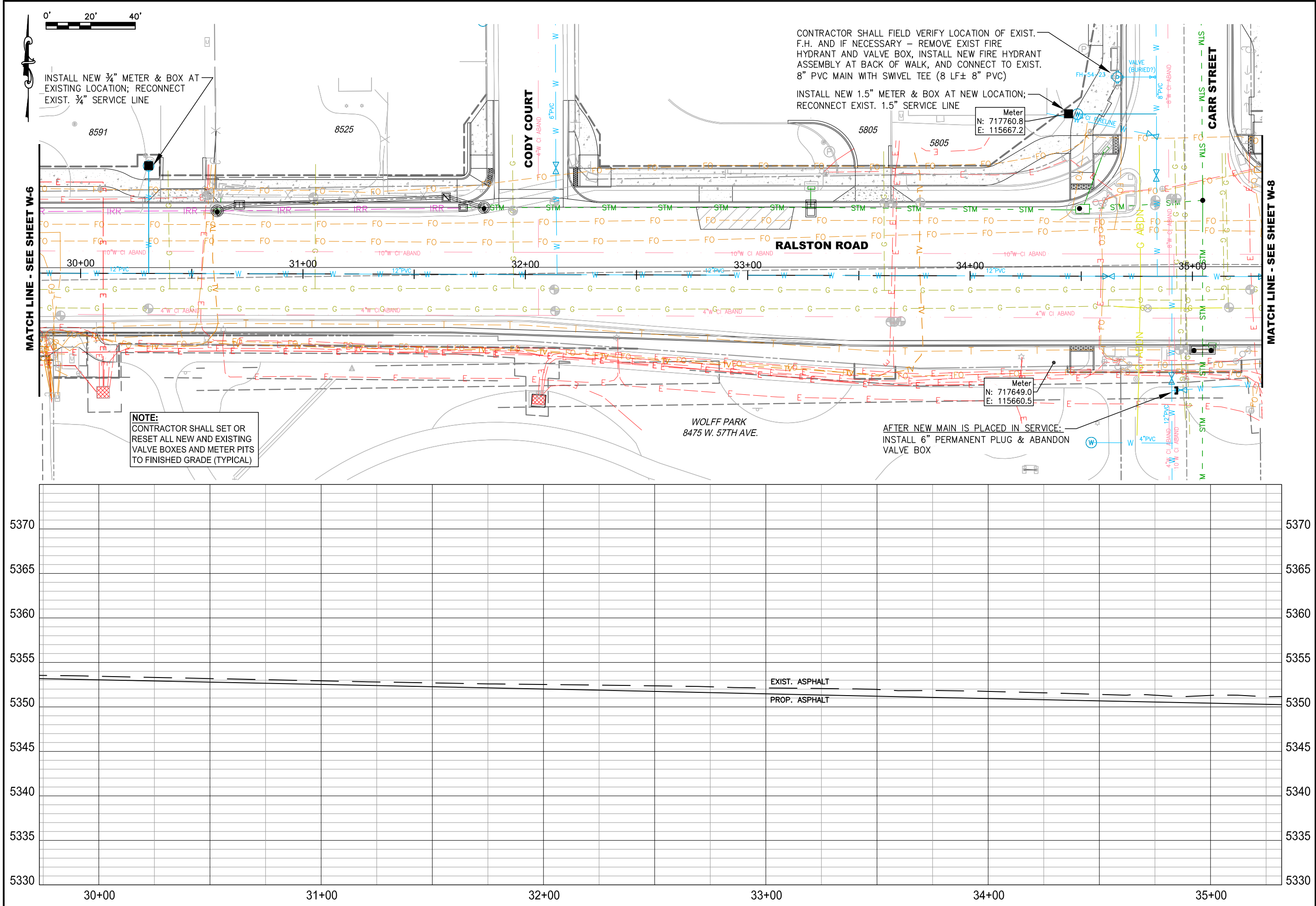


Scale:
Horz. 1"=40'
Vert. 1"=10'

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Public Works Department Engineering Division 8101 Ralston Road Arvada, Colorado 80002 Phone 720-898-7640
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ENGINEER TTT CHECKED BY
DESIGN BY KBC
SUBSET SHEET W-6
SHEET NUMBER 256

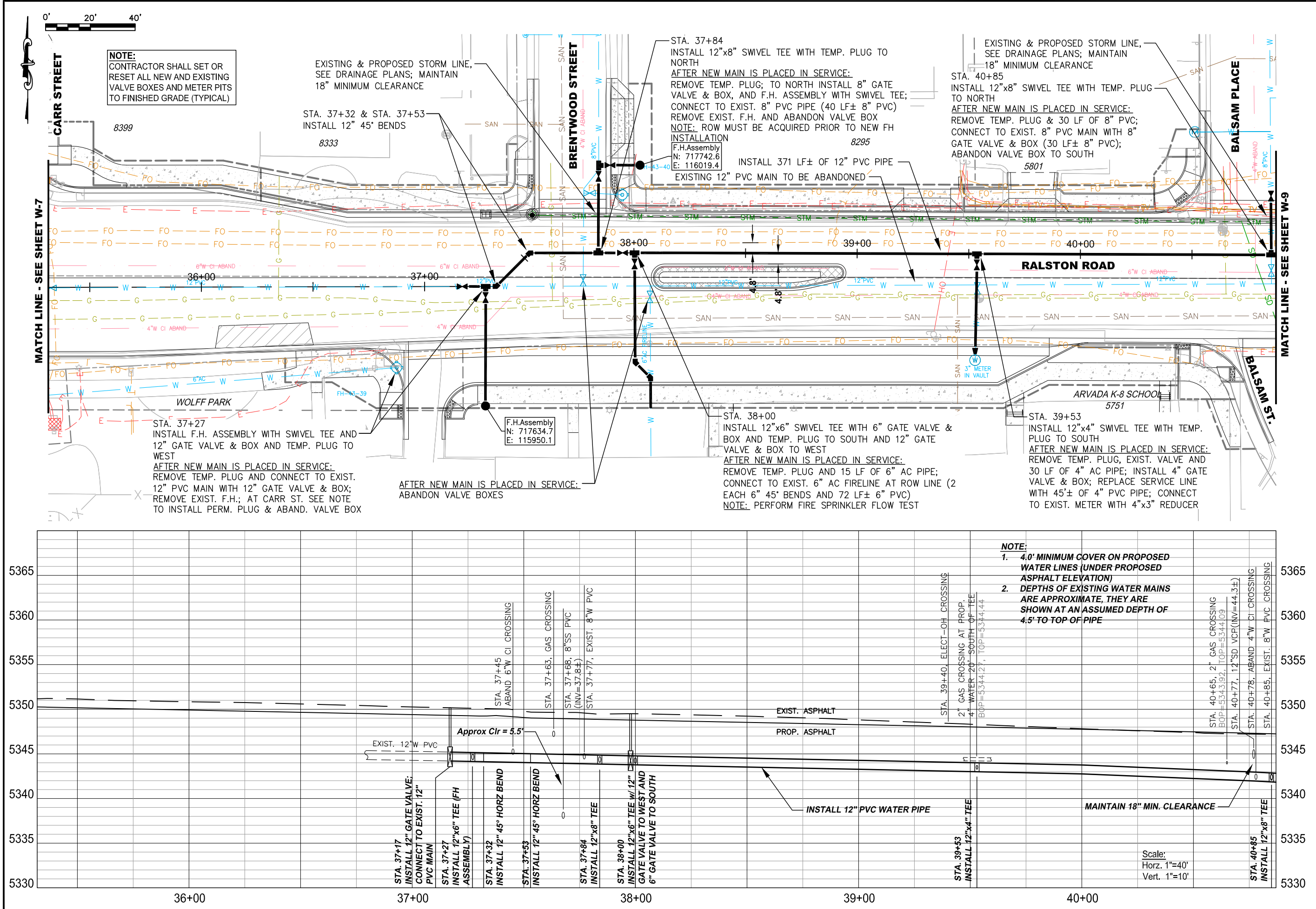
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Public Works Department Engineering Division 8101 Ralston Road Arvada, Colorado 80002 Phone 720-898-7640
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ENGINEER TTT CHECKED BY
DESIGN BY KBC
SUBSET SHEET W-7
SHEET NUMBER 257

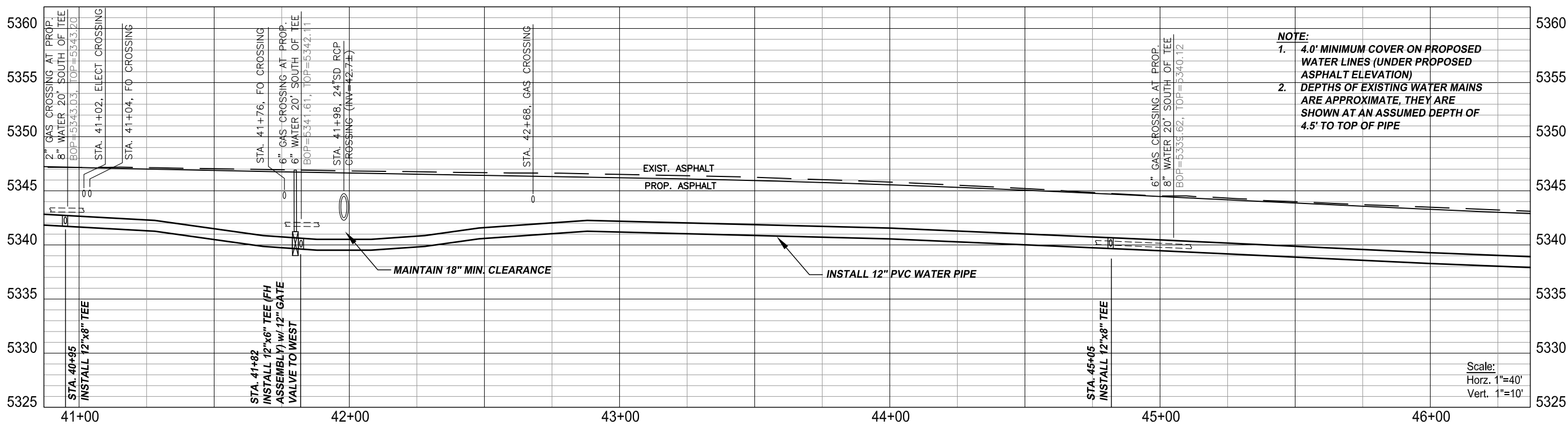
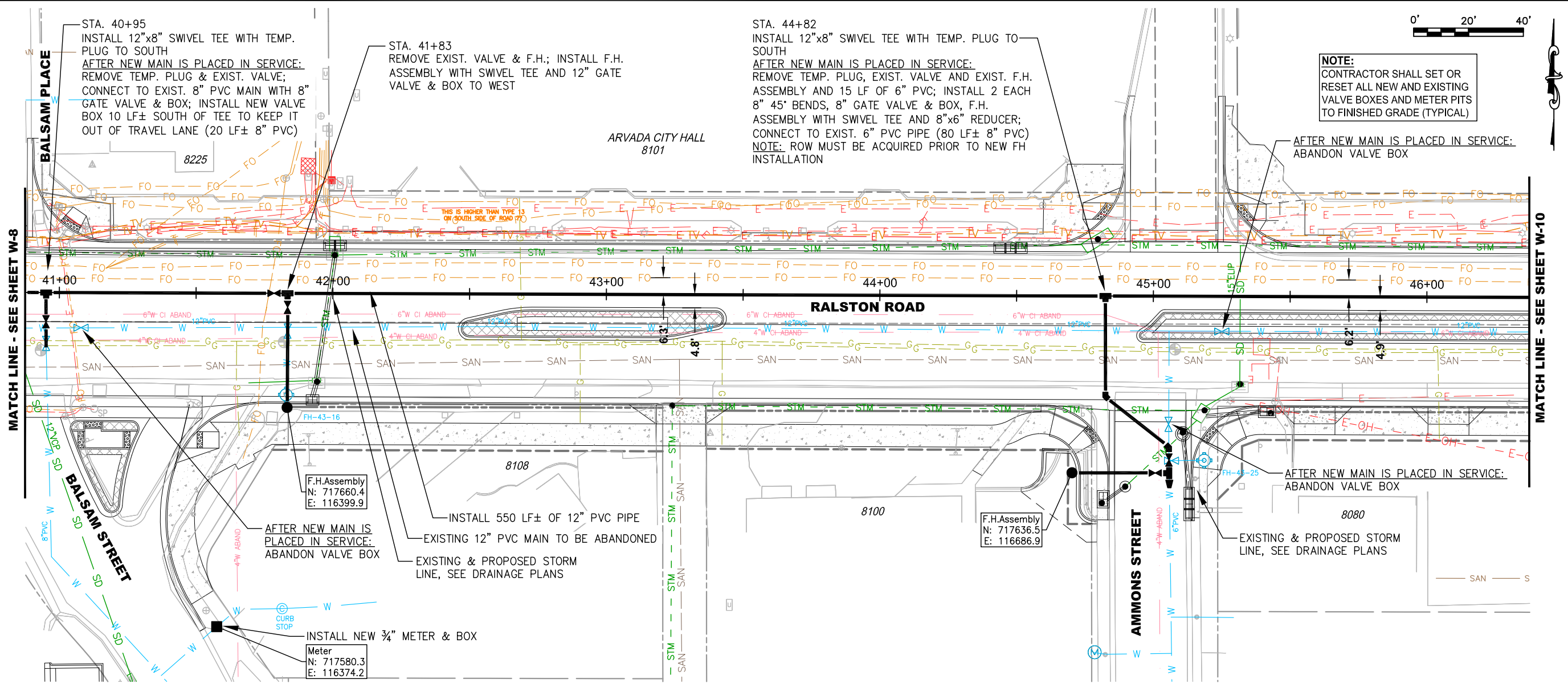
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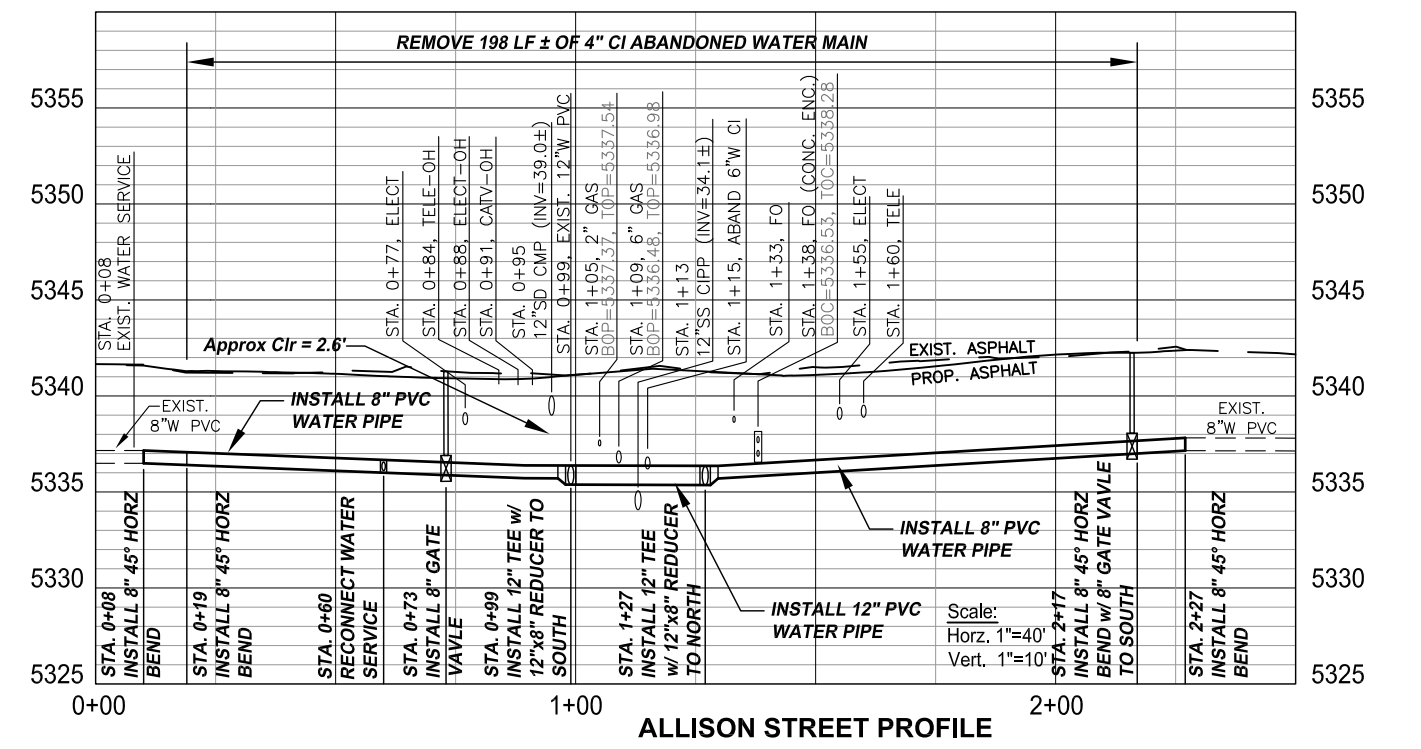
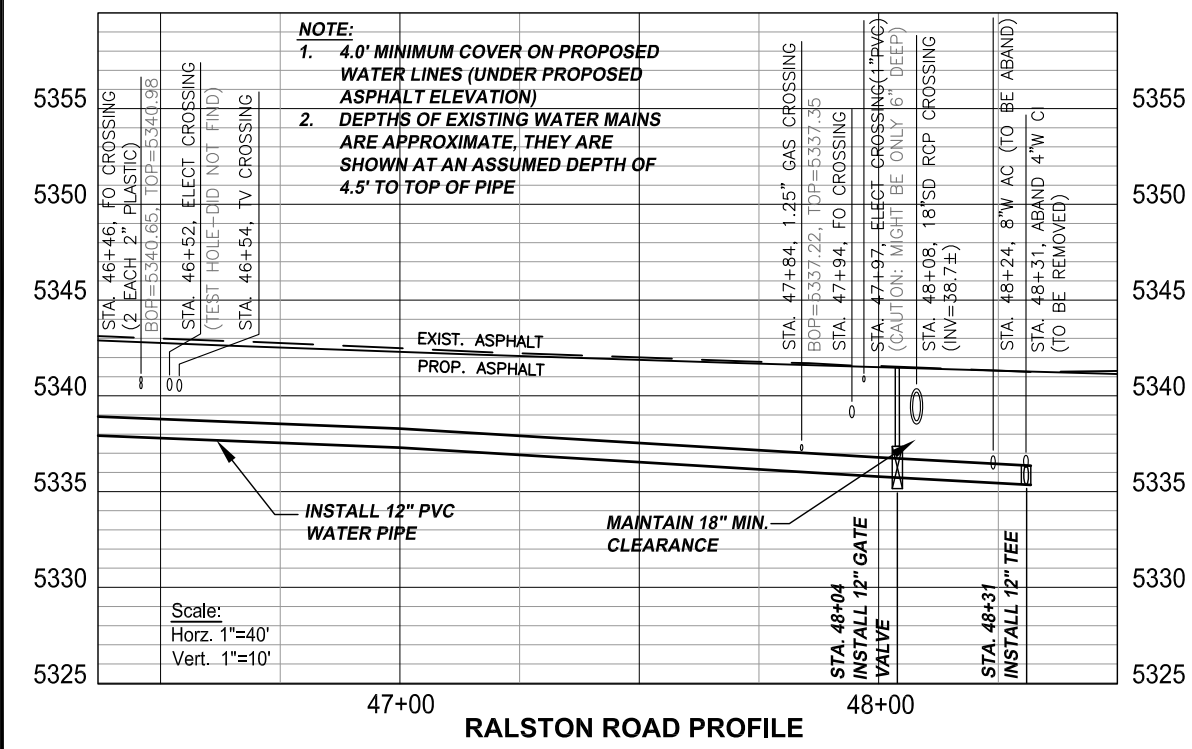
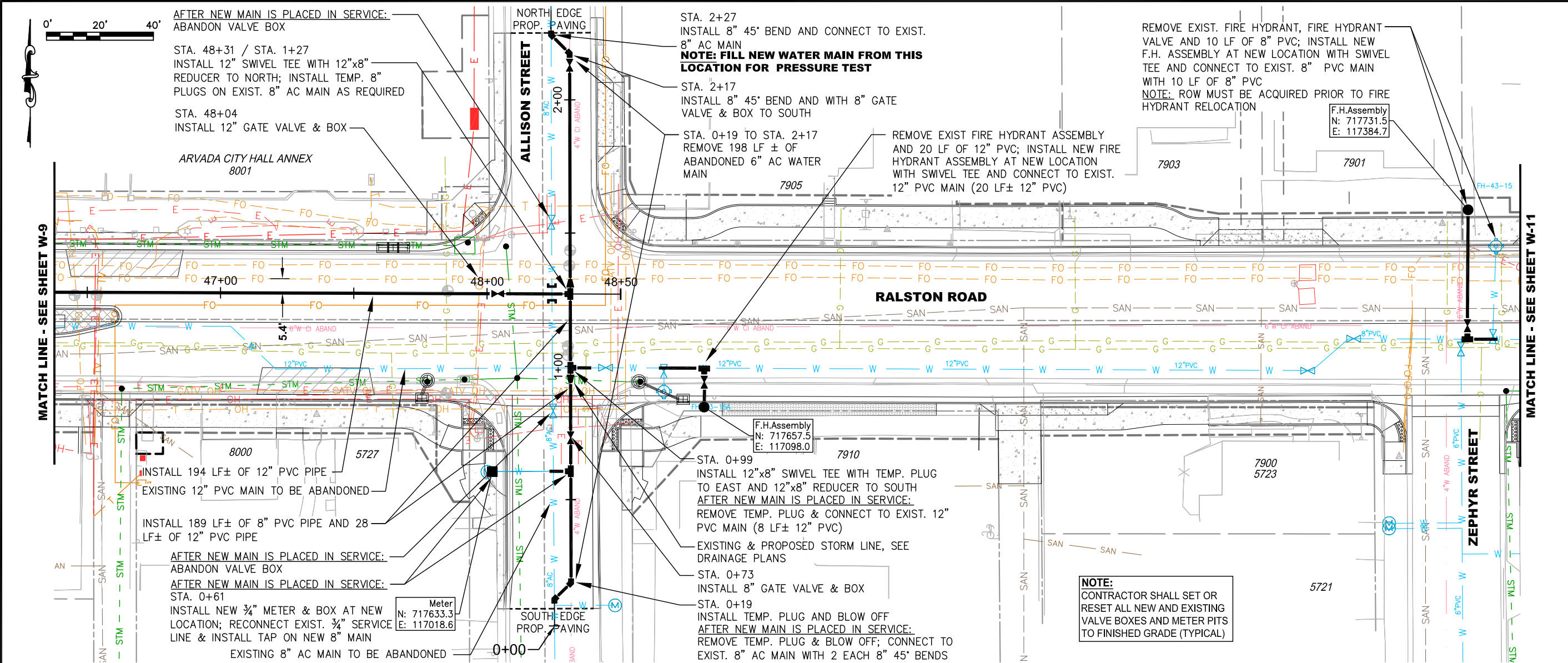
Public Works Department Engineering Division 8101 Ralston Road Arvada, Colorado 80002 Phone 720-898-7640
CITY OF ARVADA
PROJECT NO. 18-ST-40 RALSTON ROAD - YUKON ST. TO GARRISON ST. 12" WATER MAIN REPLACEMENT PLAN & PROFILE
ENGINEER TTT CHECKED BY
DESIGN BY KBC
SUBSET SHEET W-8
SHEET NUMBER 258

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Public Works Department Engineering Division 8101 Ralston Road Arvada, Colorado 80002 Phone 720-898-7640
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ENGINEER TTT CHECKED BY
DESIGN BY KBC
SUBSET SHEET W-9
SHEET NUMBER 259



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Public Works Department
Engineering Division
8101 Ralston Road
Arvada, Colorado 80002
Phone 720-898-7640

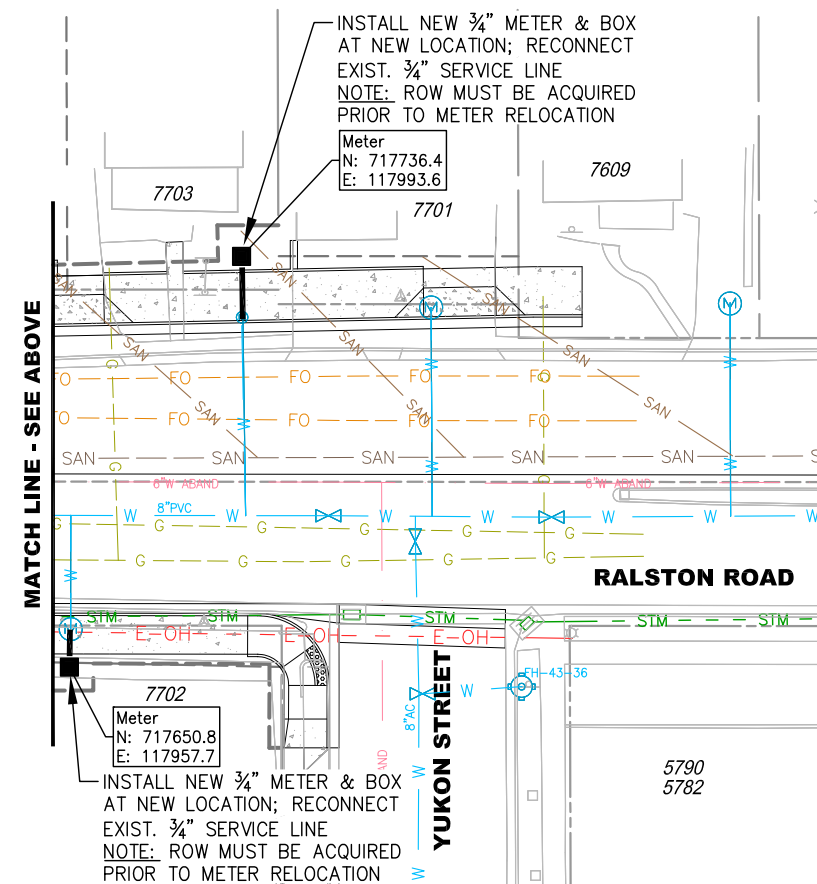
CITY OF
ARVADA

PROJECT NO. 18-ST-40
RALSTON ROAD - YUKON ST. TO GARRISON ST.
12" WATER MAIN REPLACEMENT
PLAN & PROFILE

ENGINEER
TTT
CHECKED BY
KBC
DESIGN BY
KBC

SUBSET SHEET
W-10

SHEET NUMBER
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261

TRAFFIC SIGNAL GENERAL NOTES:

1. TRAFFIC SIGNAL MATERIAL INSTALLATION SHALL COMPLY WITH THE CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS". ITEMS NOT REFERENCED IN THESE DOCUMENTS SHALL CONFORM TO THE LATEST EDITIONS OF THE COLORADO DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND "M&S STANDARD PLANS", THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", THE "NATIONAL ELECTRIC CODE", AND LOCAL ORDINANCES AND REGULATIONS THAT APPLY, EXCEPT AS NOTED IN THE PLANS, STANDARDS SPECIAL PROVISIONS, OR PROJECT SPECIAL PROVISIONS.
 2. CONDUIT, POLE, PULL BOX AND CONTROLLER CABINET LOCATIONS ARE APPROXIMATE. EXACT LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR AND SHALL BE VERIFIED BY THE CITY OF ARVADA PROJECT MANAGER IN THE FIELD. TRAFFIC SIGNAL POLES AND MAST ARMS SHALL NOT BE ORDERED UNTIL THE EXACT LOCATION OF THE POLE BASES IS FIELD VERIFIED. THE CONTRACTOR SHALL CONTACT THE CITY (720-898-7740) A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO STARTING TRAFFIC SIGNAL CONSTRUCTION. A PRE-CONSTRUCTION MEETING SHALL BE HELD TWO WEEKS PRIOR TO ANY WORK AND EQUIPMENT SUBMITTALS ARE DUE AT THIS TIME. THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF ARVADA 5 WORKING DAYS IN ADVANCE TO SET THE MEETING DATE AND LOCATION.
 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING OVERHEAD AND UNDERGROUND UTILITIES AND FOR THE PROTECTING OF THESE UTILITIES. A SUBSURFACE UTILITY ENGINEERING (SUE) INVESTIGATION WAS CONDUCTED AND PREPARED BY GOODBEE AND ASSOCIATES AND THE SUE INFORMATION IS REFLECTED IN THESE PLANS. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE ENTITIES TO LOCATE UNDERGROUND FACILITIES AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE EXACT LOCATION OF EACH UTILITY SHALL BE FIELD VERIFIED BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY OCCUR AS A RESULT OF THE CONTRACTOR'S FAILURE TO LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL POTHOLE EXISTING UTILITIES AS NECESSARY TO VERIFY UTILITY LOCATIONS. POTHOLING SHALL BE INCIDENTAL TO THE PROJECT.
 4. THE CONTRACTOR SHALL FURNISH AND INSTALL A METERED ELECTRICAL SERVICE PEDESTAL AT THE FIELD STREET, CARR STREET AND BALSAM STREET INTERSECTIONS. A SERVICE PEDESTAL SHALL BE INSTALLED PER XCEL ENERGY GUIDELINES. PULL SEPARATE WIRES FOR STREET LIGHTS AND TAG FOR XCEL ENERGY STREET LIGHT AT BOTTOM OF MAST ARM POLE. THE CONTRACTOR SHALL CALL THE XCEL ENERGY BUILDERS CALL LINE AT 1-800-628-2121 TO COORDINATE INSTALLATION OF THE SERVICE PEDESTAL AND POWER METER.
 5. PAYMENT SHALL BE MADE ONLY FOR ITEMS ON THE PAY ITEM LIST. ALL OTHER ITEMS TO PROVIDE A FULLY FUNCTIONAL TRAFFIC SIGNAL INSTALLATION AT COMPLETION OF THE PROJECT SHALL BE CONSIDERED INCIDENTAL TO THE WORK.
 6. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN FOR CONSTRUCTION TO THE CITY WITH THE PERMIT APPLICATION 48 HOURS IN ADVANCE OF CONSTRUCTION. A RIGHT OF WAY PERMIT WILL NOT BE ISSUED WITHOUT AN APPROVED TRAFFIC CONTROL PLAN.
 7. WORKING HOURS SHALL BE IN COMPLIANCE WITH THE CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS".
 8. THE CONTRACTOR SHALL EMAIL THE EQUIPMENT SPECIFICATIONS/DESCRIPTIONS TO THE CITY (SYLVIA LOPO, SLOPO@ARVADA.ORG) AND OBTAIN APPROVALS BEFORE ORDERING THE EQUIPMENT.
 9. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL SUBMIT RECORD DRAWINGS, CORRECTED PLANS AND ANY ADDITIONAL DATA REQUIRED BY THE CITY SHOWING IN DETAIL ALL CONSTRUCTION CHANGES.
 10. THE SIGNAL POLES SHALL BE VALMONT POLES-ARVADA STANDARD UNLESS OTHERWISE APPROVED. ALSO, DESIGN CRITERIA: 2015 AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRS AND TRAFFIC SIGNALS, FIRST EDITION" INCLUDING ALL SUBSEQUENT REVISIONS. THE POLES SHALL BE FACTORY PAINTED ARVADA BRONZE IN COLOR, VALMONT SPECIFICATION F540DE. SIGNAL POLE FOUNDATIONS SHALL BE INSTALLED ACCORDING TO THE LATEST ARVADA STANDARDS. TOP OF CAISSON ELEVATIONS ARE SHOWN ON SHEET SIG-03 AND SIG-04. TOP OF CAISSON ELEVATIONS ARE APPROXIMATELY SIX (6) INCHES BELOW PAVED SURFACE AREAS AND APPROXIMATELY TWO (2) INCHES ABOVE GROUND LEVEL IN GRASS/LANDSCAPED AREAS. DRILLED CAISSON (36 INCH) PAY ITEM IS QUANTIFIED FOR COHESIVE SOIL DEPTH PER CITY STANDARD TS-14.
 11. THE CONTROLLER SHALL BE AN ECONOLITE COBALT ADVANCED TRANSPORTATION CONTROLLER THAT CAN COMMUNICATE WITH THE CITY'S ECONOLITE CENTRACS SYSTEM UNLESS OTHERWISE APPROVED. THE CONTROLLER CABINET SHALL BE A TS2 TYPE 1 P CABINET AND SHALL BE NATURAL ALUMINUM. THE CONTROLLER CABINET SHALL BE INSTALLED SUCH THAT WITH THE FRONT DOOR OPEN, A TECHNICIAN VIEWS BOTH THE CONTROLLER AND THE INTERSECTION. THE CONTROLLER CABINET SHALL BE MOUNTED ON A FIBERGLASS BASE. TRAFFIC SIGNAL CONTROLLERS SHALL BE DELIVERED TO THE CITY FOR INSPECTION AND PROGRAMMING AT LEAST 15 DAYS PRIOR TO INSTALLATION.
 12. UNINTERRUPTED POWER SUPPLY (UPS) SHALL BE PROVIDED TO RUN THE TRAFFIC SIGNAL FOR A MINIMUM OF 2 HOURS IN ALL PHASES AND FLASH UP TO AN ADDITIONAL 3 HOURS. UPS TYPE SHALL BE PER CITY STANDARDS.
 13. ALL SIGNAL HEADS SHALL BE BLACK POLYCARBONATE. ALL OVERHEAD SIGNAL INDICATIONS SHALL HAVE BACKPLATES. BACKPLATES SHALL BE LOUVERED WITH YELLOW REFLECTIVE BORDER TAPE OUTLINING THE OUTSIDE EDGES. PLACEMENT OF SIGNAL AND PEDESTRIAN HEADS SHALL BE APPROVED BY THE CITY'S PROJECT MANAGER.
 14. MAST ARM SIGNAL HEADS SHALL BE MOUNTED APPROXIMATELY LEVEL WITH ONE ANOTHER, WITH A 17 TO 19 FOOT CLEARANCE ABOVE GRADE AT THE HIGHEST PAVEMENT ELEVATION. MAST ARM MOUNTED SIGNAL HEADS SHALL HAVE A MINIMUM 8-FOOT SEPARATION AND ADHERE TO MUTCD SPACING GUIDANCE.
 15. ALL VEHICLE AND PEDESTRIAN INDICATIONS SHALL BE APPROVED LED, NON-GLARE TYPE. ALL VEHICLE INDICATIONS SHALL BE 12". ALL PEDESTRIAN INDICATIONS SHALL BE 16".
 16. PEDESTRIAN SIGNALS SHALL BE COUNTDOWN TYPE AS PER CITY SPECIFICATIONS. PEDESTRIAN PUSH BUTTONS SHALL BE POLARA INAVIGATOR 2-WIRE PUSH BUTTON STATION.
 17. ALL SIGNAL HEADS SHALL BE WIRED SEPARATELY FROM SIGNAL HEAD TO HANDHOLE ABOVE GRADE AT THE BASE OF THE SIGNAL POLE WITH NO OVERHEAD SPLICES. A SEPARATE 19-CONDUCTOR CABLE SHALL RUN FROM THE CONTROLLER CABINET TO THE HANDHOLE AT EACH POLE WITH NO SPLICES.
 18. TRAFFIC SIGNAL INDICATIONS MOUNTED ON MAST ARMS SHALL BE FURNISHED WITH ASTRO-TYPE MOUNTING BRACKETS.
 19. PTZ CAMERA SHALL BE BOSCH AUTODOME IP DYNAMIC 7000 HP
 20. ALL CONDUIT SHALL BE DIRECTIONALLY BORED UNDER EXISTING STREETS UNLESS ANOTHER METHOD IS APPROVED BY THE CITY. ALL CONDUIT SHALL BE SCHEDULE 80 PVC. ALL CONDUIT SHALL INCLUDE A #12 LOCATE WIRE AND A MULE TAPE. ALL PULL BOXES SHALL BE FIBERGLASS REINFORCED POLYMER CONCRETE INSTALLED FLUSH WITH THE GROUND OR HARDSCAPE.
 21. LUMINAIRES SHALL BE LED WITH LIGHT OUTPUT EQUIVALENT TO A 250 WATT HPS AT A 30 FT. MOUNTING HEIGHT UNLESS APPROVED OTHERWISE. LED LUMINS ESTIMATED TO BE 4,000.
 22. STOP LINE AND ADVANCE DETECTION SHALL BE BY WAVETRONIX SMART SENSOR MATRIX OR APPROVED EQUAL. WAVETRONIX RADAR DETECTION EQUIPMENT TO BE LOCATED AND SET UP WITH THE ASSISTANCE OF SUMMIT TRAFFIC SOLUTIONS. COORDINATION CONTACT IS STEVE O'CONNOR (303-933-2843).
 23. WIRING FOR LUMINAIRES SHALL BE PROVIDED FROM THE POWER SOURCE TO THE END OF THE LUMINAIRE ARM. A BREAKAWAY INCLINE FUSE SHALL BE PROVIDED AT THE HAND HOLE ACCESS AT THE BASE OF THE POLE.
 24. OPTICOM PREEMPTION SYSTEM SHALL BE INSTALLED FOR PREEMPTING THE DIRECTIONS AS INDICATED ON THE PLANS. THE PREEMPTION SYSTEM SHALL BE COMPATIBLE WITH THE CITY'S EXISTING SYSTEM. OPTICOM WIRE SHALL BE USED FOR THE INSTALLATION.
 25. STREET NAME SIGNS SHALL BE PER CITY OF ARVADA STANDARDS. "LEFT TURN YIELD ON FLASHING YELLOW ARROW" SIGN DIMENSIONS, LETTER SIZES, FONT STYLE, ETC. SHALL BE COORDINATED WITH THE CITY OF ARVADA. SEE CITY STANDARD TR-12 FOR DESIGN CRITERIA FOR STREET NAME SIGNS.
 26. THE CONTRACTOR SHALL REPLACE ANY DAMAGED LANDSCAPE, INCLUDING BUT NOT LIMITED TO TOPSOIL, GRASS, IRRIGATION SYSTEM COMPONENTS, TREES, SHRUBS, GROUND COVERS AND MULCH, TO ITS ORIGINAL CONDITION. SOD SHALL MATCH EXISTING. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER'S LANDSCAPE MAINTENANCE PERSONNEL AT LEAST FIVE (5) WORKING DAYS IN ADVANCE OF STARTING WORK IN THE AREA. WITH PROPER AND TIMELY NOTIFICATION, THE OWNER'S LANDSCAPE MAINTENANCE PERSONNEL SHALL MARK AND IDENTIFY THE IRRIGATION SYSTEM COMPONENTS. THIS IS IN NO WAY ALL INCLUSIVE OF ALL UTILITIES OR ALL OF THE IRRIGATION SYSTEM. NO LANDSCAPE SHALL BE WITHOUT WATERING SERVICES DURING THE GROWING SEASON. IF THE IRRIGATION SERVICES ARE INTERRUPTED FOR MORE THAN THREE DAYS, THE CONTRACTOR SHALL BE LIABLE TO HAND/TRUCK WATER AND POSSIBLY REPLACE ALL PLANT MATERIAL IN THE AFFECTED LANDSCAPE. LANDSCAPE RESTORATION SHALL BE CONSIDERED COMPLETE WHEN THE LANDSCAPE AND IRRIGATION SYSTEM IS RESTORED TO ITS ORIGINAL CONDITION AND APPROVED BY THE MAINTAINING PERSONNEL. THE OWNER'S LANDSCAPE MAINTENANCE PERSONNEL, PRIOR TO BURIAL, SHALL INSPECT ALL REPAIR WORK TO ANY IRRIGATION COMPONENTS, AND PROVIDE ACCEPTANCE OF SAID WORK. ALL INCIDENTAL LANDSCAPE DAMAGE NOT INCLUDED IN THE PROJECT PLANS SHALL BE RESTORED AT THE CONTRACTORS'S EXPENSE.
 27. THE CONTRACTOR SHALL ENSURE THAT NO MATERIALS, EQUIPMENT, OR VEHICLES ARE STAGED OR PARKED NEAR WETLAND OR DRAINAGE AREAS. THE CONTRACTOR SHALL REMOVE IN A TIMELY MANNER ALL SEDIMENT, MUD DEBRIS OR OTHER POTENTIAL POLLUTANTS WHICH MAY BE DISCHARGED TO, OR ACCUMULATE IN, THE FLOW LINES AND PUBLIC RIGHT-OF-WAYS AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT.
 28. THE CONTRACTOR SHALL LIMIT CONSTRUCTION ACTIVITIES TO THOSE AREAS WITHIN THE LIMITS OF THE PROJECT. ANY DISTURBANCE BEYOND THESE LIMITS SHALL BE RESTORED TO ORIGINAL CONDITION BY THE CONTRACTOR AT THE CONTRACTORS EXPENSE. CONSTRUCTION ACTIVITIES IN ADDITION TO NORMAL CONSTRUCTION PROCEDURES SHALL INCLUDE THE PARKING OF VEHICLES OR EQUIPMENT, DISPOSAL OF LITTER AND OTHER ACTIONS WHICH WOULD ALTER EXISTING CONDITIONS.
 29. NO CONSTRUCTION VEHICLES SHALL BE IN THE TRAVELED WAY AT ANY TIME WITHOUT APPROPRIATE CONSTRUCTION TRAFFIC CONTROL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING APPROVED TRAFFIC CONTROL PLANS FROM THE CITY.
 30. ALL CONSTRUCTION TRAFFIC CONTROL DEVICES SHALL BE MOVEABLE. ALL SUCH DEVICES SHALL BE REMOVED BY THE CONTRACTOR FROM THE WORK SITE AT THE END OF EACH WORK DAY.



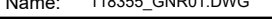
Print Date: 12/29/2020 10:01:32 AM			CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002			As Constructed		RALSTON RD - YUKON ST TO GARRISON ST GENERAL NOTES TRAFFIC SIGNAL				Project No./Code 18-ST-40					
File Name: 118355_GNR01.DWG										No Revisions:							
Horizontal Scale: Vertical Scale:										Revised:		Designer: RRF		Structure			
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FELSBURG HOLT ULLEVIG		6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com					Sheet Subset: GENERAL		Subset Sheets: GN-01 of 02		Sheet Number 262						

TRAFFIC SIGNAL GENERAL NOTES:

31. EROSION/SEDIMENT CONTROL MEASURES MUST BE IMPLEMENTED BEFORE CONSTRUCTION OPERATIONS BEGIN. ALL EROSION/SEDIMENT CONTROL BMPS SHALL BE PLACED AS NEEDED ACCORDING TO THE INITIAL, INTERIM AND FINAL EROSION CONTROL PLANS AND THE CITY OF ARVADA GENERAL NOTES AND DETAILS FOR ADDITIONAL INFORMATION.
32. ALL DRILLING FLUID SHALL BE CONTAINED AND NOT ALLOWED TO DISCHARGE INTO WELTANDS OR WATERWAYS. THE CONTRACTOR SHALL MONITOR FOR SURFACE RELEASES OF DRILLING FLUID AND STOP DRILLING OPERATIONS IF A SUDDEN OR UNEXPECTED LOSS OF DRILLING FLUID RETURNS IS OBSERVED UNTIL THE LOCATION OF ANY SURFACE RELEASE CAN BE IDENTIFIED. DISCHARGE OF DRILLING FLUID TO WETLANDS OR WATERWAYS SHALL BE REPORTED TO THE PROJECT ENGINEER IMMEDIATELY.
33. ANY REMAINING SOIL LEFT FROM DRILLING SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED OFF-SITE AT THE COST OF THE CONTRACTOR. EXCESS MATERIALS/DEBRIS SHALL BE REMOVED OFF-SITE AT NO COST TO THE PROJECT.
34. INLET PROTECTION SHALL BE USED AT INLETS TO INTERCEPT AND FILTER SEDIMENT-LADEN WATER FLOWS FROM THE DISTURBED CONSTRUCTION SITE. PRIOR TO COMMENCING CONSTRUCTION, INLETS NEEDING PROTECTION SHALL BE EVALUATED FOR THE APPROPRIATE PROTECTION, PROTECTED AND THE STORMWATER MANAGEMENT PLAN REVISED ACCORDINGLY. PROTECTION SHALL BE REMOVED ONCE WORK AT THE SITE IS COMPLETE. PROTECTION SHALL BE MAINTAINED AND KEPT IN OPERATING CONDITION AT ALL TIMES. PROTECTION SHALL BE MOBILE (I.E., RE-USED IN OTHER LOCATIONS) AND IS REQUIRED UNTIL ALL DISTURBANCES ADJACENT TO OR UPSTREAM OF INLETS HAVE BEEN COMPLETED AND STABILIZED. MOBILIZATION OF INLET PROTECTION SHALL BE INCLUDED IN THE COST OF THE BMP. BMP MUST REMAIN UNDAMAGED IN ORDER TO BE RE-USED. THE CONTRACTOR SHALL ENSURE THAT NO MATERIALS, EQUIPMENT, OR VEHICLES ARE STAGED OR PARKED NEAR WETLAND OR DRAINAGE AREAS. THE CONTRACTOR SHALL REMOVE IN A TIMELY MANNER ALL SEDIMENT, MUD, DEBRIS OR OTHER POTENTIAL POLLUTANTS WHICH MAY BE DISCHARGED TO, OR ACCUMULATED IN, THE FLOW LINES AND PUBLIC RIGHTS-OF-WAY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT.
35. WHERE IT IS REQUIRED TO CUT EXISTING PAVEMENT, OR SIDEWALK/CURB/GUTTER, THE CUTTING SHALL BE PERFORMED TO A NEAT WORK LINE TO THE FULL DEPTH OF THE PAVEMENT WITH A PAVEMENT CUTTING SAW OR OTHER METHOD AS APPROVED BY THE CONSTRUCTION ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE WORK. ALL SAWCUT RESIDUE MATERIAL SHALL BE PROPERLY CONTAINED AND NOT ALLOWED TO DRAIN TO ANY STORM DRAINS OR WATERWAYS.
36. ANY CURB AND GUTTER, SIDEWALK, ASPHALT PAVEMENT, OR CONCRETE PAVEMENT WHICH IS TO REMAIN AND IS DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. FOR ANY CONCRETE WORK REQUIRED, THE CONTRACTOR SHALL COMPLY WITH THE FOLLOWING: TO PROVIDE FOR ADEQUATE SULFATE RESISTANCE IN ALL CONCRETE SUPPLIED, SEVERITY OF POTENTIAL EXPOSURE SHALL BE CLASS 2 FOR THIS PROJECT. THE CONTRACTOR MAY AT THEIR OWN EXPENSE HAVE A CERTIFIED LABORATORY TEST THE SUBGRADE PER THE FIELD MATERIALS MANUAL. TESTING SHALL BE AT THE SAME SCHEDULE AND FREQUENCY AS REQUIRED FOR A PRELIMINARY SOIL SURVEY. THE CONTRACTOR MAY PROPOSE A DIFFERENT CLASS OF EXPOSURE FOR THE PROJECT BASED ON THESE TEST RESULTS.
37. BACKFILL OF EXCAVATED AREAS WILL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT SHALL BE INCIDENTAL TO THE ASSOCIATED WORK.
38. REFER TO THE INITIAL, INTERIM AND FINAL EROSION CONTROL PLANS AND CITY OF ARVADA EROSION CONTROL GENERAL NOTES AND DETAILS FOR ADDITIONAL INFORMATION REGARDING EROSION CONTROL REQUIREMENTS FOR THIS PROJECT, INCLUDING QUANTITIES.



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Print Date: 12/7/2020 2:21:59 PM		R-X	Sheet Revisions			 CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed		RALSTON RD - YUKON ST TO GARRISON ST			Project No./Code		
File Name: 118355_GNR01.DWG							No Revisions:		GENERAL NOTES			18-ST-40		
Horizontal Scale:							Revised:		TRAFFIC SIGNAL					
 FELSBERG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Designer: RRF		Structure			
									Detailer: DEM		Numbers			
							Sheet Subset: GENERAL		Subset Sheets: GN-02 of 02		Sheet Number 263			

TABULATION OF TRAFFIC SIGNAL QUANTITIES

ITEM DESCRIPTION	UNIT	GARRISON ST & RALSTON ROAD	CARR ST & RALSTON ROAD	BALSAM ST & RALSTON ROAD	ALLISON ST & RALSTON ROAD	TOTAL	COMMENTS
REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	LS	0.25	0.25	0.25	0.25	1	
RESET SIGNAL HEAD	EACH	2	—	—	—	2	
RESET FIRE PREEMPTION UNIT AND TIMER	EACH	1	2	2	2	7	
DRILLED CAISSON (18 INCH)	LF	—	4	4	12	20	FOR THE INSTALLATION OF PEDESTAL POLES
DRILLED CAISSON (36 INCH)	LF	36	39	62	57	194	CAISSON DEPTH IS FOR COHESIVE SOIL
CONCRETE SIDEWALK	SY	2	2	2	2	8	
2 INCH ELECTRICAL CONDUIT (BORED)	LF	645	430	720	580	2375	
3 INCH ELECTRICAL CONDUIT (BORED)	LF	645	430	535	580	2190	
2 INCH ELECTRICAL CONDUIT (PLASTIC)	LF	160	440	200	365	1165	INSTALL BY TRENCHING METHOD
3 INCH ELECTRICAL CONDUIT (PLASTIC)	LF	80	265	185	210	740	INSTALL BY TRENCHING METHOD
PULL BOX (TYPE M)	EACH	—	1	—	—	1	
PULL BOX (TYPE LG)	EACH	2	3	5	6	16	
WIRING	LS	0.25	0.25	0.25	0.25	1	SEE TRAFFIC SIGNAL GENERAL NOTE 22
LUMINAIRE (LED)	EACH	2	3	4	4	13	4000 LUMEN
SERVICE METER CABINET	EACH	1	1	1	1	4	SEE NOTE ONE
SIGN PANEL (CLASS I)	SF	84	78.5	69	81	312.5	
SIGNAL HEAD BACKPLATES	EACH	6	8	10	10	34	LOUVERED WITH YELLOW REFLECTIVE BORDER; SEE TRAFFIC SIGNAL GENERAL NOTE 13
PEDESTRIAN SIGNAL FACE (16) (COUNTDOWN)	EACH	4	4	8	8	24	
TRAFFIC SIGNAL FACE (12-12-12)	EACH	5	10	11	13	39	
TRAFFIC SIGNAL FACE (12-12-12-12)	EACH	7	2	4	4	17	
TRAFFIC SIGNAL FACE (12-12-12-12-12)	EACH	—	—	—	1	1	
TRAFFIC SIGNAL CONTROLLER CABINET	EACH	1	1	1	1	4	TS2 TYPE 1 P
PEDESTRIAN PUSH BUTTON POST ASSEMBLY	EACH	4	3	2	—	9	
PEDESTRIAN PUSH BUTTON STATION AND SIGN	EACH	8	4	8	8	28	9" x 12" WITH ACCESIBLE PEDESTRIAN SIGNAL CAPABILITY
MICROWAVE VEHICLE RADAR DETECTOR	EACH	6	4	6	6	22	SEE TRAFFIC SIGNAL GENERAL NOTE 21
TRAFFIC SIGNAL CONTROLLER	EACH	1	1	1	1	4	ECONOLITE COBALT ATC
TRAFFIC SIGNAL-LIGHT POLE (1-20 FOOT MAST ARM)	EACH	—	—	1	1	2	
TRAFFIC SIGNAL-LIGHT POLE (1-30 FOOT MAST ARM)	EACH	—	—	1	—	1	
TRAFFIC SIGNAL-LIGHT POLE (1-35 FOOT MAST ARM)	EACH	—	1	—	1	2	
TRAFFIC SIGNAL-LIGHT POLE (1-40 FOOT MAST ARM)	EACH	—	2	—	1	3	
TRAFFIC SIGNAL-LIGHT POLE (1-45 FOOT MAST ARM)	EACH	1	—	—	—	1	
TRAFFIC SIGNAL-LIGHT POLE (1-50 FOOT MAST ARM)	EACH	1	—	2	1	4	
TRAFFIC SIGNAL PEDESTAL POLE STEEL	EACH	—	1	1	3	5	
UNINTERRUPTED POWER SUPPLY	EACH	1	1	1	1	4	
CLOSED CIRCUIT TELEVISION CAMERA (TRAFFIC SURVEILLANCE)	EACH		1			1	BOSCH AUTODOME IP DYNAMIC 7000 HD

NOTES:

1. SERVICE METER CABINET PAY ITEM SHALL BE USED FOR THE INSTALLATION OF FOUR NEW SERVICE METER CABINETS.
2. ALL PAY ITEMS FOR ELECTRICAL CONDUIT (BORED AND TRENCHED) SHALL BE MEASURED AS FOLLOWS:

A. CENTER OF PULL BOX TO CENTER OF PULL BOX

B. CENTER OF PULL BOX TO CENTER OF CAISSON

CAISSONS ARE TO BE PROVIDED WITH CONDUIT STUB OUTS AS SPECIFIED ON THE PLANS AND ARE TO BE CONSIDERED AS PART OF THE CAISSON BID ITEM.



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Print Date: 12/29/2020 10:06:14 AM	R-X	Sheet Revisions			 CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed		RALSTON RD - YUKON ST TO GARRISON ST TRAFFIC SIGNAL TABULATION OF QUANTITIES			Project No./Code 18-ST-40	
File Name: 118355_TRPL_TAB01.DWG		Date	Comments	Initials		No Revisions:						
Horizontal Scale: N/A Vertical Scale: N/A						Revised:	Designer: RRF	Structure Numbers				
 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com						Void:	Detailer: DEM	Numbers				
						Sheet Subset: TRAFFIC	Subset Sheets: TAB-01 of 05			Sheet Number 264		

TABULATION OF SIGNING QUANTITIES (TABLE 1 OF 3)

SIGN NO.	PLAN SHEET	EXISTING STATION	PROPOSED STATION	SIGN DESIGNATION	SIGN PANEL SIZE	BACKGROUND COLOR	SIGN LEGEND / DESCRIPTION	SIGN PANEL (SF)	SIGN BACKING TYPE(S)	REMOVAL OF GROUND SIGN	REMOVAL OF SIGN PANEL	RESET GROUND SIGN	RESET SIGN PANEL	RESET FLASHING BEACON ASSEMBLY	STEEL SIGN POST (1.75 x 1.75 IN TUBING) (SEE NOTE 1)
								CLASS 1 614-00011		EACH	EACH	EACH	EACH	EACH	LF
1	SS-02	102+92	102+93	SPECIAL		RED	RTD BUS STOP SIGN					1			
2	SS-02	103+83	103+83	R5-6 SPECIAL		WHITE	NO BIKES WITH SPECIAL MESSAGE						1		10.5
3A	SS-02	103+55	104+08	R4-7		WHITE	KEEP RIGHT					1			
3B				OM-3L		YELLOW	OBJECT MARKER								
4A	SS-02	104+27	104+63	R4-7		WHITE	KEEP RIGHT					1			
4B				OM-3L		YELLOW	OBJECT MARKER								
5	SS-02		104+41	R3-2	24 x 24	WHITE	NO LEFT TURNS	4.0							9.5
6A	SS-02		106+27	R4-7	24 x 30	WHITE	KEEP RIGHT	5.0							10
6B				OM-3L	12 x 36	YELLOW	OBJECT MARKER	3.0							
7-9						NOT USED									
10	SS-03		106+62	R3-2	24 x 24	WHITE	NO LEFT TURNS	4.0							9.5
11	SS-03	106+67		R3-9b		WHITE	TWO-WAY LEFT TURN ONLY				1				
12A	SS-03		106+69	R4-7	24 x 30	WHITE	KEEP RIGHT	5.0							10
12B				OM-3L	12 x 36	YELLOW	OBJECT MARKER	3.0							
13A	SS-03	108+13	108+10	D3-1		BLUE	FIELD ST STREET NAME SIGN					1			
13B				D3-1		BLUE	RALSTON RD STREET NAME SIGN								
14/34	SS-03	108+11	115+63	SPECIAL		RED	RTD BUS STOP SIGN					1			
15	SS-03	108+60	108+59	R1-1		RED	STOP					1			
16A/31	SS-03	109+04	114+29	SPECIAL		RED	RTD BUS STOP SIGN					1			
16B				SPECIAL		WHITE	RTD ADOPT A STOP			1					
17	SS-03		109+73	R3-2	24 x 24	WHITE	NO LEFT TURNS	4.0							9.5
18	SS-03	109+84	109+92	R2-1		WHITE	SPEED LIMIT 35 MPH					1			10.5
19A	SS-03		110+35	R4-7	24 x 30	WHITE	KEEP RIGHT	5.0							10.0
19B				OM-3L	12 x 36	YELLOW	OBJECT MARKER	3.0							
20	SS-03		110+48	R3-1	24 x 24	WHITE	NO LEFT TURNS	4.0							9.5
21A	SS-03	111+41	111+37	D3-1		BLUE	RALSTON RD STREET NAME SIGN					1			
21B				D3-1		BLUE	EVERETT ST STREET NAME SIGN								
22A	SS-03		111+28	R4-7	24 x 30	WHITE	KEEP RIGHT	5.0							10
22B				OM-3L	12 x 36	YELLOW	OBJECT MARKER	3.0							
23	SS-03		111+12	R3-2	24 x 24	WHITE	NO LEFT TURNS	4.0							9.5
24	SS-03	111+91	111+95	SPECIAL		YELLOW	ENTER SIGN (ONE SIGN WITH TWO SIDES)					1			
25	SS-03	111+88	111+87	R1-1		RED	STOP					1			
26-29						NOT USED									
30	SS-04		112+75	R3-9b	24 x 36	WHITE	TWO-WAY LEFT TURN ONLY	6.0							10.5
31/16A	SS-04		114+24	SPECIAL		RED	RTD BUS STOP SIGN								
32A	SS-04	114+74	114+68	D3-1		BLUE	ESTES ST STREET NAME SIGN					1			
32B				D3-1		BLUE	RALSTON RD STREET NAME SIGN								
33	SS-04	115+20	115+16	R1-1		RED	STOP					1			
34/14	SS-04		115+63	SPECIAL		RED	RTD BUS STOP SIGN								
35A	SS-05	117-80	117+74	D3-1		BLUE	DUDLEY ST STREET NAME SIGN					1			
35B				D3-1		BLUE	RALSTON RD STREET NAME SIGN								
36	SS-05	118+27	118+26	R1-1		RED	STOP					1			
37	SS-05	118+30	118+26	SPECIAL		RED	RTD BUS STOP SIGN			1					
38	SS-05		118+51	R3-9b	24 x 36	WHITE	TWO-WAY LEFT TURN ONLY	6.0							10.5
39	SS-05	119+19	119+10	R5-6 SPECIAL	24 x 36	WHITE	NO BIKES WITH SPECIAL MESSAGE	6.0			1				10.5
40	SS-05		120+23	R3-9b	24 x 36	WHITE	TWO-WAY LEFT TURN ONLY	6.0							10.5
41	SS-05	120+57	120+47	S5-2		WHITE	END SCHOOL ZONE						1		10
42	SS-05	120+60	120+60	SPECIAL		RED	RTD BUS STOP SIGN					1			
43	SS-05	120+63	120+65	R1-1		RED	STOP					1			
44A	SS-05	121+19	121+16	D3-1		BLUE	DOVER ST STREET NAME SIGN					1			
44B				D3-1		BLUE	RALSTON RD STREET NAME SIGN								
45	SS-05	121+25	121+18	SPECIAL		WHITE	NEIGHBORHOOD WATCH					1			
46	SS-05	121+05	121+14	W14-1		YELLOW	DEAD END					1			
TOTAL								76.0		1	3	19	3	0	161

* RESET EXISTING SIGN POST; REPLACE SIGN PANEL.

NOTES:

1. STEEL SIGN POST PAY ITEM SHALL INCLUDE 2" X 2" X 3' SIGN BASES AND PVC SLEEVES PER ARVADA CITY STANDARD TR-1.



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CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST SIGNING AND STRIPING TABULATION OF QUANTITIES				Project No./Code
No Revisions:						18-ST-40
Revised:		Designer:	RRF	Structure		
		Detailer:	DEM	Numbers		
Void:		Sheet Subset:	TRAFFIC	Subset Sheets:	TAB-02 of 05	Sheet Number 265

TABULATION OF SIGNING QUANTITIES (TABLE 2 OF 3)

SIGN NO.	PLAN SHEET	EXISTING STATION	PROPOSED STATION	SIGN DESIGNATION	SIGN PANEL SIZE	BACKGROUND COLOR	SIGN LEGEND / DESCRIPTION	SIGN PANEL (SF)	SIGN BACKING TYPE(S)	REMOVAL OF GROUND SIGN	REMOVAL OF SIGN PANEL	RESET GROUND SIGN	RESET SIGN PANEL	RESET FLASHING BEACON ASSEMBLY	STEEL SIGN POST (1.75 x 1.75 IN TUBING) (SEE NOTE 1)
								CLASS 1 614-00011		EACH	EACH	EACH	EACH	EACH	LF
47A	SS-05	121+19	121+19	D3-1		BLUE	DOVER CT STREET NAME SIGN					1			
47B				D3-1		BLUE	RALSTON RD STREET NAME SIGN								
48	SS-05	121+78	121+86	R1-1		RED	STOP					1			
49	SS-05		122+04	R3-9b	24 x 36	WHITE	TWO-WAY LEFT TURN ONLY	6.0							10.5
50A	SS-05	122+43	122+04	R2-1		WHITE	SPEED LIMIT 35 MPH					1			10.5
50B				SPECIAL		BLUE	ARVADA FOOD BANK SIGN					1			
51-54							NOT USED								
55A	SS-06	123+29	123+33	S5-1		WHITE	SCHOOL SPEED LIMIT 25 MPH							1	
55B				SPECIAL		WHITE	ALL FINES DOUBLE IN SCHOOL ZONE								
56	SS-06		124+52	R3-9b	24 x 36	WHITE	TWO-WAY LEFT TURN ONLY	6.0							10.5
57A	SS-06	124+99	125+02	W14-1aR		YELLOW	DEAD END WITH RIGHT ARROW					1			
57B				W14-1aL		YELLOW	DEAD END WITH LEFT ARROW								
57C				R1-1		RED	STOP								
58A	SS-06	125+41	125+40	W14-1		YELLOW	DEAD END					1			
58B				SPECIAL		BLUE	NEIGHBORHOOD WATCH								
59A	SS-06	125+47	125+46	D3-1		BLUE	CODY CT STREET NAME SIGN					1			
59B				D3-1		BLUE	RALSTON RD STREET NAME SIGN								
60	SS-06	126+08	125+99	SPECIAL		RED	RTD BUS STOP SIGN					1			
61	SS-06		126+65	R3-2	24 x 24	WHITE	NO LEFT TURNS	4.0							9.5
62-64							NOT USED								
65A	SS-07		127+83	R3-17	24 x 18	BLACK	BIKE LANE SIGN	3.0							9.0
65B				R3-17bP	24 x 8	WHITE	ENDS	1.3							
66	SS-07	127+85		R3-8		WHITE	LANE USE CONTROL SIGN			1					
67	SS-07	127+85		R8-3a		WHITE	NO PARKING WITH LEFT ARROW			1					
68	SS-07	127+60		R1-2		WHITE	YIELD			1					
69	SS-07	127+97	128+10	SPECIAL		WHITE	ARVADA PARK REGULATIONS SIGN					1			
70	SS-07	128+43	128+43	SPECIAL		BLUE	MEMORIAL PARK NEIGHBORHOOD SIGN					1			
71A	SS-07	128+65	128+65	R3-7		WHITE	RIGHT TURN MUST TURN RIGHT					1			
71B				SPECIAL		WHITE	RIGHT TURN ON RED AFTER STOP				1				
72	SS-07	129+95	129+93	SPECIAL		RED	RTD BUS STOP SIGN					1			
73A	SS-07	130+63	130+65	D3-1		BLUE	BRENTWOOD ST STREET NAME SIGN					1			
73B				D3-1		BLUE	RALSTON RD STREET NAME SIGN								
73C				R1-1		RED	STOP								
74A	SS-07		131+26	R4-7	24 x 30	WHITE	KEEP RIGHT	5.0							10
74B				OM-3L	12 x 36	YELLOW	OBJECT MARKER	3.0							
75	SS-07	131+58		R7-8		WHITE	HANDICAPPED PARKING SIGN			1					
76A	SS-07		132+04	R4-7	24 x 30	WHITE	KEEP RIGHT	5.0							10
76B				OM-3L	12 x 36	YELLOW	OBJECT MARKER	3.0							
77-84							NOT USED								
85A	SS-08	133+65		R10-22		WHITE	TO REQUEST GREEN WAIT ON SYMBOL				1				
85B				R7-108		WHITE	2 HOUR PARKING 8:00 AM TO 6:00 PM								
86	SS-08	134+06	134+06	R8-3a		WHITE	NO PARKING WITH RIGHT ARROW					1			
87	SS-08	134+22	134+48	SPECIAL			ANIMAL CONTROL, POLICE SIGN					1			10.5
88	SS-08	134+60	134+36	R2-1		WHITE	SPEED LIMIT 35 MPH					1			10.5
89	SS-08	135+06		SPECIAL		RED	RTD BUS STOP SIGN			1					
90A	SS-08	134+55	134+54	R3-2		WHITE	NO LEFT TURNS					1			
90B				R8-3a	24 x 30	WHITE	NO PARKING WITH DOUBLE ARROW	5.0							
91	SS-08	134+23	134+19	R3-1		WHITE	NO RIGHT TURNS					1			
92A	SS-08	134+63	134+40	R3-2		WHITE	NO LEFT TURNS					1			
92B				R5-1a		RED	WRONG WAY								
93A	SS-08		135+62	R4-7	24 x 30	WHITE	KEEP RIGHT	5.0							10
93B				OM-3L	12 x 36	YELLOW	OBJECT MARKER	3.0							
TOTAL								49.3		5	2	15	4	1	101

* RESET EXISTING SIGN POST; REPLACE SIGN PANEL.

NOTES:

- STEEL SIGN POST PAY ITEM SHALL INCLUDE 2" X 2" X 3' SIGN BASES AND PVC SLEEVES PER ARVADA CITY STANDARD TR-1.



I:\18355-01 Ralston Rd\04_Civil\CADD\Traffic\Drawings\18355_TRPL_TAB01.dwg, 12/7/2020 2:25:51 PM, David Morah

Print Date: 12/7/2020 2:25:51 PM File Name: 118355_TRPL_TAB01.DWG Horizontal Scale: N/A Vertical Scale: N/A		(R-X) Date Comments Initials		CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed No Revisions: Revised: Void:		RALSTON RD - YUKON ST TO GARRISON ST SIGNING AND STRIPING TABULATION OF QUANTITIES			Project No./Code 18-ST-40	
6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Designer: RRF Detailer: DEM Sheet Subset: TRAFFIC			Structure Numbers Subset Sheets: TAB-03 of 05	
										Sheet Number 266	

TABULATION OF SIGNING QUANTITIES (TABLE 3 OF 3)

SIGN NO.	PLAN SHEET	EXISTING STATION	PROPOSED STATION	SIGN DESIGNATION	SIGN PANEL SIZE	BACKGROUND COLOR	SIGN LEGEND / DESCRIPTION	SIGN PANEL (SF)	SIGN BACKING TYPE(S)	REMOVAL OF GROUND SIGN	REMOVAL OF SIGN PANEL	RESET GROUND SIGN	RESET SIGN PANEL	RESET FLASHING BEACON ASSEMBLY	STEEL SIGN POST (1.75 x 1.75 IN TUBING) (SEE NOTE 1)
								CLASS 1 614-00011		EACH	EACH	EACH	EACH	EACH	LF
94A 94B	SS-08	134+83	134+56	R1-1 R5-1a		RED RED	STOP WRONG WAY				1	1			
95	SS-08	136+01	136+01	SPECIAL		BLUE	POLICE, MUNICIPAL COURT, POST OFFICE SIGN					1			
96A 96B	SS-08		136+52	R4-7 OM-3L	24 x 30 12 x 36	WHITE YELLOW	KEEP RIGHT OBJECT MARKER	5.0 3.0							10
97	SS-08		136+56	R3-2	24 x 24	WHITE	NO LEFT TURNS	4.0							9.5
98A 98B	SS-08	137+69	137+69	S5-1 SPECIAL		WHITE WHITE	SCHOOL SPEED LIMIT 25 MPH ALL FINES DOUBLE IN SCHOOL ZONE							1	
99A 99B	SS-08	137+87	137+79	D3-1 D3-1		BLUE BLUE	AMMONS ST STREET NAME SIGN RALSTON RD STREET NAME SIGN					1			
100A 100B	SS-08	137+99	137+98	R1-1 SPECIAL		RED BLUE	STOP BE SAFE AND BUCKLE UP				1	1			
101A 101B	SS-08		138+11	R4-7 OM-3L	24 x 30 12 x 36	WHITE YELLOW	KEEP RIGHT OBJECT MARKER	5.0 3.0							10
102	SS-08	138+31	138+30	R1-1		RED	STOP					1			
103	SS-08	138+53	138+49	S5-2		WHITE	END SCHOOL ZONE						1		10
104A 104B	SS-08		138+19	R3-2 R3-2	24 x 24 24 x 24	WHITE WHITE	NO LEFT TURNS NO LEFT TURNS	4.0 4.0							9.5
105-109							NOT USED								
110	SS-09		138+81	R3-2	24 x 24	WHITE	NO LEFT TURNS	4.0							9.5
111	SS-09		139+31	R3-2	24 x 24	WHITE	NO LEFT TURNS	4.0							9.5
112	SS-09	139+55	139+57	SPECIAL		BLUE	POLICE, MUNICIPAL COURT, POST OFFICE SIGN					1			
113	SS-09	139+63	139+66	SPECIAL		RED	RTD BUS STOP SIGN					1			
114A 114B	SS-09		139+72	R4-7 OM-3L	24 x 30 12 x 36	WHITE YELLOW	KEEP RIGHT OBJECT MARKER	5.0 3.0							10
115	SS-09	139+88	140+70	SPECIAL		RED	RTD BUS STOP SIGN					1			
116A 116B	SS-09	131+14		S1-1 W16-7P		FLUORESCENT YELLOW-GREEN FLUORESCENT YELLOW-GREEN	SCHOOL CROSSING DIAGONAL ARROW			1					
117	SS-09	141+55	141+58	SPECIAL		BLUE	MEMORIAL PARK NEIGHBORHOOD					1			
118A 118B	SS-09	141+61		S1-1 W16-7P		FLUORESCENT YELLOW-GREEN FLUORESCENT YELLOW-GREEN	SCHOOL CROSSING DIAGONAL ARROW			1 1					
119	SS-09	141+97	141+96	R5-6 SPECIAL		WHITE	NO BIKES WITH SPECIAL MESSAGE						1		10.5
120-124							NOT USED								
125A 125B	SS-10	144+45	144+45	D3-1 D3-1		BLUE BLUE	ZEPHYR ST STREET NAME SIGN RALSTON RD STREET NAME SIGN					1			
126	SS-10	144+97	144+97	R1-1		RED	STOP					1			
127	SS-10		145+13	R3-9b	24 x 36	WHITE	TWO-WAY LEFT TURN ONLY	6.0							10.5
128	SS-10	146+29	146+27	SPECIAL	24 x 24	BROWN	RENO PARK, NATURAL HISTORIC DISTRICT	4.0				1			
129A 129B	SS-10	147+75	147+76	D3-1 D3-1		BLUE BLUE	YARROW ST STREET NAME SIGN RALSTON RD STREET NAME SIGN					1			
130	SS-10	147+72	147+75	R2-1		WHITE	SPEED LIMIT 35 MPH					1			
131A 131B	SS-10	148+21	148+21	R1-1 R8-3a		RED WHITE	STOP NO PARKING WITH RIGHT ARROW					1			
132	SS-10		149+56	R2-1	30 x 36	WHITE	SPEED LIMIT 35 MPH	7.5							10.5
133-134							NOT USED								
135	SS-11	149+95	149+99	R5-1		RED	DO NOT ENTER					1			
136	SS-11		150+94	R3-9b	24 x 36	WHITE	TWO-WAY LEFT TURN ONLY	6.0							10.5
137A 137B	SS-11	151+05	150+94	D3-1 D3-1		BLUE BLUE	YUKON ST STREET NAME SIGN RALSTON RD STREET NAME SIGN					1			
TOTAL								67.5		1	4	17	2	1	120
PROJECT TOTAL								192.8		7	9	51	9	2	382

- NOTES:
- STEEL SIGN POST PAY ITEM SHALL INCLUDE 2" X 2" X 3' SIGN BASES AND PVC SLEEVES PER ARVADA CITY STANDARD TR-1.



*RESET EXISTING SIGN POST; REPLACE SIGN PANEL.

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File Name: 118355_TRPL_TAB01.DWG		Date	Comments	Initials			No Revisions:		Designer: RRF		Structure	Numbers	18-ST-40		
Horizontal Scale: N/A Vertical Scale: N/A							Revised:		Detailer: DEM						
6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Sheet Subset: TRAFFIC		Subset Sheets: TAB-04 of 05		Sheet Number 267		

TABULATION OF STRIPING QUANTITIES

STATION/LOCATION (PLAN SHEET)	PAVEMENT MARKING DESCRIPTION		REMOVAL OF PAVEMENT MARKINGS		MODIFIED EPOXY PAVEMENT MARKING (LF)								PREFORMED THERMOPLASTIC PAVEMENT MARKING (WORD-SYMBOL) (SF)					PREFORMED THERMOPLASTIC PAVEMENT MARKING (XWALK-STOPLINE) (SF)	
			BIKE DETECTION SYMBOL	XWALK (1'x6')	LANE	BIKE LANE LINE	CHANNEL	CENTER			DOTTED	PARKING LINE	LEFT ARROW	RIGHT ARROW	2 PIECE ARROW	BIKE LANE SYMBOL	HANDICAP SYMBOL	24" STOP LINE	XWALK (1'x6')
			WHITE SOLID	WHITE SOLID	WHITE BROKEN	SOLID WHITE	WHITE SOLID	DBL. YELLOW SOLID	YELLOW SOLID	YELLOW BROKEN	WHITE BROKEN	YELLOW SOLID	WHITE SOLID	WHITE SOLID	WHITE SOLID	WHITE SOLID	WHITE SOLID	WHITE SOLID	WHITE SOLID
			SF (2 EA)	SF	4 INCH	4 INCH	6 INCH	4 INCH	4 INCH	4 INCH	4 INCH	4 INCH	SF (16.1 EA)	SF (16.1 EA)	SF (4 EA)	SF (10.5 EA)	SF (12 EA)	SF	SF
BEGIN TO STA. 106+50 (SHEET SS-02)	REMOVAL OF BIKE DETECTION SYMBOL	1	2																
	REMOVAL OF XWALK (1'x6')	15	90																
	LANE LINE			860		120													
	CHANNELIZING LINE						295												
	DOUBLE YELLOW							250											
	YELLOW SOLID								250										
	YELLOW BROKEN																		
	LEFT ARROW	1									16.1								
	2 PIECE ARROW	1											4						
BIKE LANE SYMBOL	1												10.5						
XWALK (1'x6')	23																138		
STA. 106+50 TO STA. 112+00 (SHEET SS-03)	LANE LINE			905		100													
	CHANNELIZING LINE						195												
	DOUBLE YELLOW							280											
	YELLOW SOLID								280										
STA. 112+00 TO STA. 117+50 (SHEET SS-04)	YELLOW BROKEN																		
	LEFT ARROW	1									16.1								
	LANE LINE			995															
	YELLOW SOLID							995											
STA. 117+50 TO STA. 123+00 (SHEET SS-05)	YELLOW BROKEN								995										
	LANE LINE			925															
	YELLOW SOLID							745											
	YELLOW BROKEN								745										
STA. 123+00 TO STA. 127+50 (SHEET SS-06)	LANE LINE			835															
	CHANNELIZING LINE					205													
	DOUBLE YELLOW						305												
	YELLOW SOLID							370											
	YELLOW BROKEN								370										
	LEFT ARROW	1									48.3								
STA. 127+50 TO STA. 133+25 (SHEET SS-07)	LANE LINE			890															
	BIKE LANE LINE				150														
	CHANNELIZING LINE					235													
	DOUBLE YELLOW						495												
	YELLOW SOLID							215											
	YELLOW BROKEN								215										
	DOTTED EXTENSION LINE									150									
	PARKING LINE										90								
	LEFT ARROW	4										64.4							
	RIGHT ARROW	2											32.2						
	2 PIECE ARROW	1												4					
	BIKE LANE SYMBOL	1													10.5				
	STOP LINE	1															66		
XWALK (1'x6')	20																120		
STA. 133+25 TO STA. 138+75 (SHEET SS-08)	LANE LINE			855															
	CHANNELIZING LINE					225													
	DOUBLE YELLOW						645												
	LEFT ARROW	2									32.2								
	RIGHT ARROW	1										16.1							
XWALK (1'x6')	39																	234	
STA. 138+75 TO STA. 144+25 (SHEET SS-09)	LANE LINE			1005															
	CHANNELIZING LINE					190													
	DOUBLE YELLOW						410												
	YELLOW SOLID							290											
	YELLOW BROKEN								290										
	LEFT ARROW	2									32.2								
STA. 144+25 TO STA. 149+75 (SHEET SS-10)	RIGHT ARROW	1										16.1							
	XWALK (1'x6')	38																	228
	LANE LINE			975															
	YELLOW SOLID							820											
STA. 149+75 TO END (SHEET SS-11)	YELLOW BROKEN								820										
	LANE LINE			305															
	YELLOW SOLID							250											
ROADWAY PLAN (SHEET PP-39)	YELLOW BROKEN								250										
	PARKING LINE										969								
HANDICAP SYMBOL		1														12			
TOTAL SEGMENT LENGTH (LF)			-	-	8,550	150	1,075	2,345	4,215	4,215	150	1,059	-	-	-	-	-	-	-
ACTUAL MARKING LENGTH (LF)			-	-	2,138	150	1,075	4,690	4,215	1,054	50	1,059	-	-	-	-	-	-	-
SUBTOTAL (SQ. FT.)			2	90	713	50	538	1,564	1,405	352	17	353	210	65	8	21	12	66	720
SUBTOTAL (GALS)			-	-	9	1	7	19	17	5	1	5	-	-	-	-	-	-	-
TOTAL GALS			-	-				64											
TOTAL SQ.FT.				92				4,992							316				786

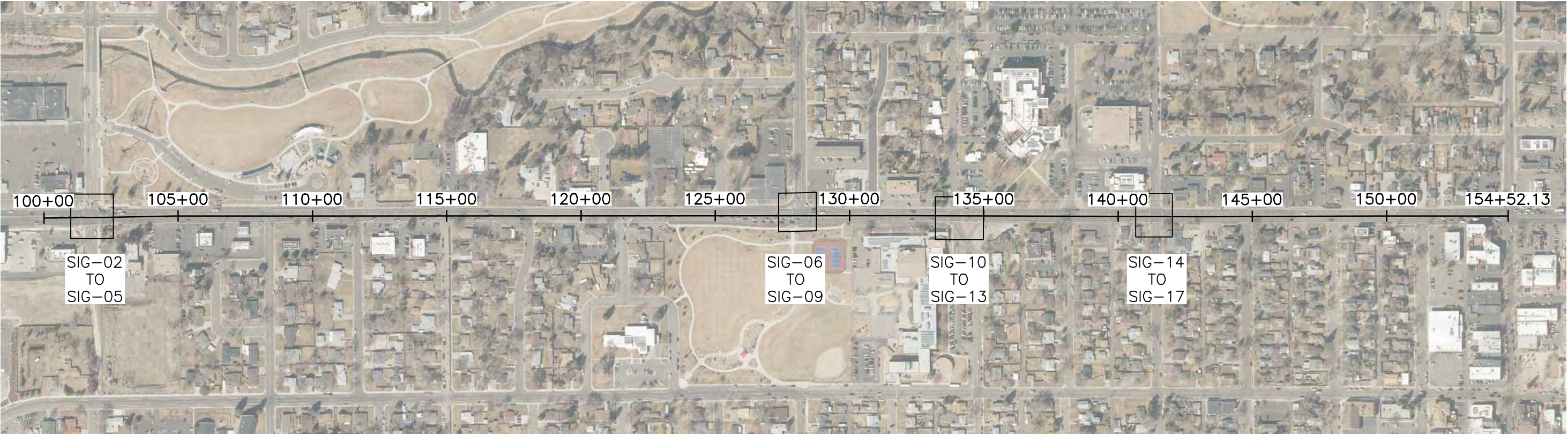
NOTES:

- 1) 85 SF/GAL USED
FOR EPOXY PAINT
QUANTITY ESTIMATE



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	File Name: 118355_TRPL_TAB01.DWG			Date	Comments	Initials		No Revisions:				18-ST-40			
	Horizontal Scale: N/A Vertical Scale: N/A							Revised:		Designer: RRF Detailer: DEM					
	 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Sheet Subset: TRAFFIC Subset Sheets: TAB-05 of 05		Sheet Number 268			



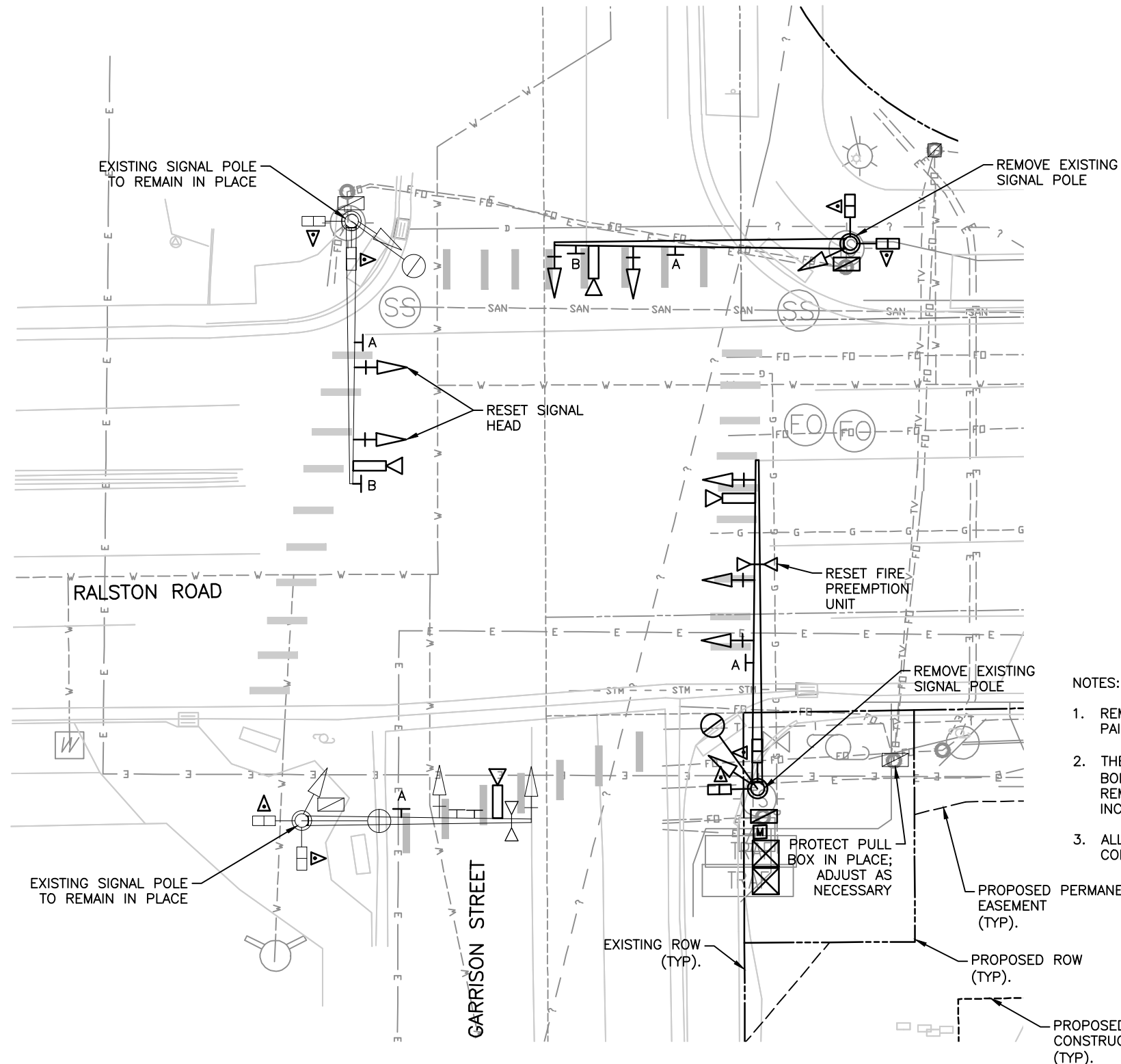
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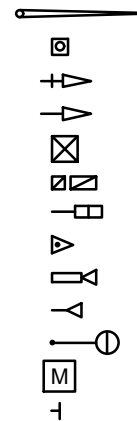


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THE INFORMATION SHOWN ON THIS DRAWING, CONCERNING THE TYPE AND LOCATION OF UTILITIES, IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE TYPE AND LOCATION OF ALL UTILITIES AS NECESSARY TO AVOID DAMAGE THERETO.



EXISTING



LEGEND

DESCRIPTION

TRAFFIC SIGNAL POLE WITH MAST ARM
TRAFFIC SIGNAL PEDESTAL POLE
TRAFFIC SIGNAL HEAD WITH BACKPLATE
TRAFFIC SIGNAL HEAD
TRAFFIC SIGNAL CONTROLLER AND CABINET
PULL BOXES
PEDESTRIAN SIGNAL HEAD
PEDESTRIAN PUSH BUTTON
VIDEO DETECTION CAMERA
FIRE PREEMPTION UNIT
LUMINAIRE
SERVICE METER HOUSING
MAST ARM SIGN

REMOVAL ITEMS

TRAFFIC SIGNAL POLE/MAST ARM	2 EACH
TRAFFIC SIGNAL HEAD	7 EACH
PEDESTRIAN SIGNAL HEAD	4 EACH
PEDESTRIAN PUSH BUTTON AND SIGN	8 EACH
TRAFFIC SIGNAL CONTROLLER CABINET	2 EACH
PULL BOX	2 EACH
VIDEO DETECTION CAMERA	4 EACH
STREET NAME SIGN (A)	4 EACH
LANE USE/OPERATION SIGN (B)	2 EACH
LUMINAIRE	1 EACH
ELECTRIC SERVICE METER	1 EACH
SERVICE METER HOUSING	1 EACH

ITEMS TO BE RESET

FIRE PREEMPTION UNIT AND TIMER (2 CHANNEL)	1 EACH
SIGNAL HEAD	2 EACH

NOTES:

1. REMOVAL ITEMS ARE FOR INFORMATION ONLY. REMOVAL ITEMS SHALL BE PAID FOR AS REMOVAL OF TRAFFIC SIGNAL EQUIPMENT, LUMP SUM.
2. THE CONTRACTOR SHALL REMOVE EXISTING CAISSONS/ANCHOR BOLTS/CONDUIT TO TWO FEET BELOW GROUND SURFACE AND SHALL REMOVE EXISTING ELECTRICAL CABLE FROM ABANDONED CONDUITS INCIDENTAL TO THE REMOVAL OF TRAFFIC SIGNAL EQUIPMENT, LUMP SUM.
3. ALL REMOVED VIDEO DETECTION EQUIPMENT AND TRAFFIC SIGNAL CONTROLLER SHALL BE SALVAGED AND RETURNED TO THE CITY OF ARVADA.



HORIZ SCALE: 1"=20'
0' 10' 20'

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Horizontal Scale: 1" = 20' Vertical Scale: N/A
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Sheet Revisions			
Date	Comments	Initials	



CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

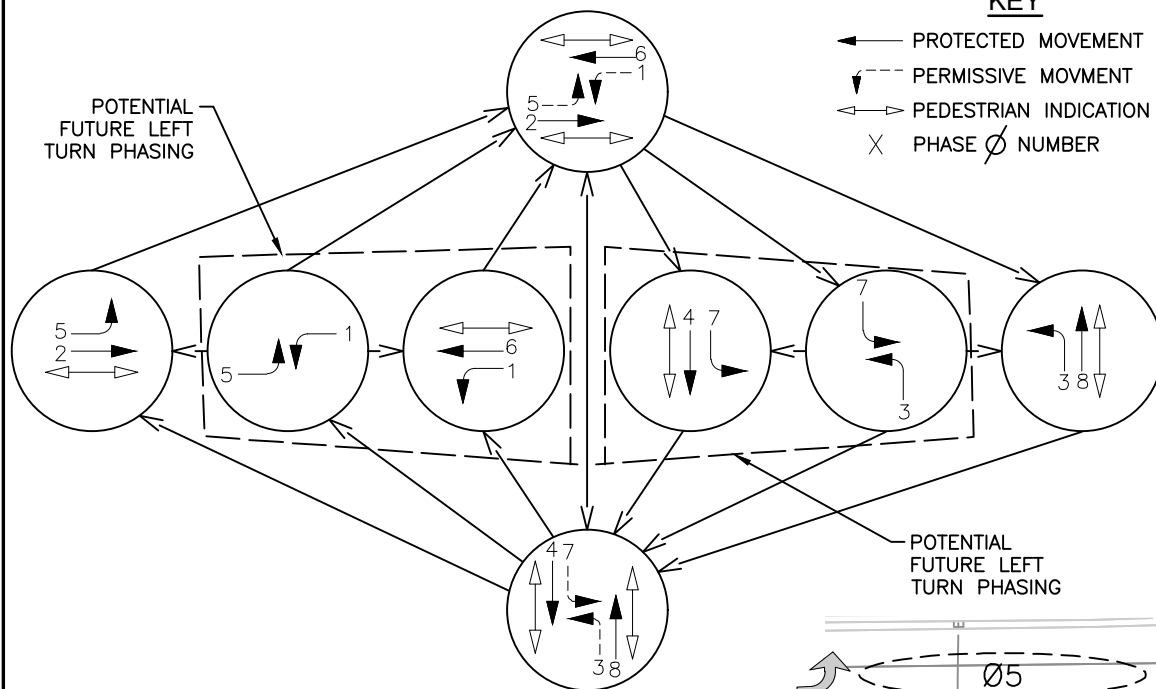
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No Revisions:		Designer: RRF	Structure Numbers		18-ST-40
Revised:		Detailer: DEM			
Void:		Sheet Subset: TRAFFIC	Subset Sheets: TR-02 of 17		Sheet Number 270



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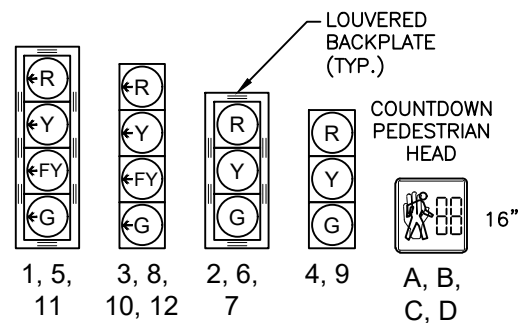
SIGNAL PHASING DIAGRAM



KEY

- PROTECTED MOVEMENT
- PERMISSIVE MOVEMENT
- PEDESTRIAN INDICATION
- PHASE Ø NUMBER

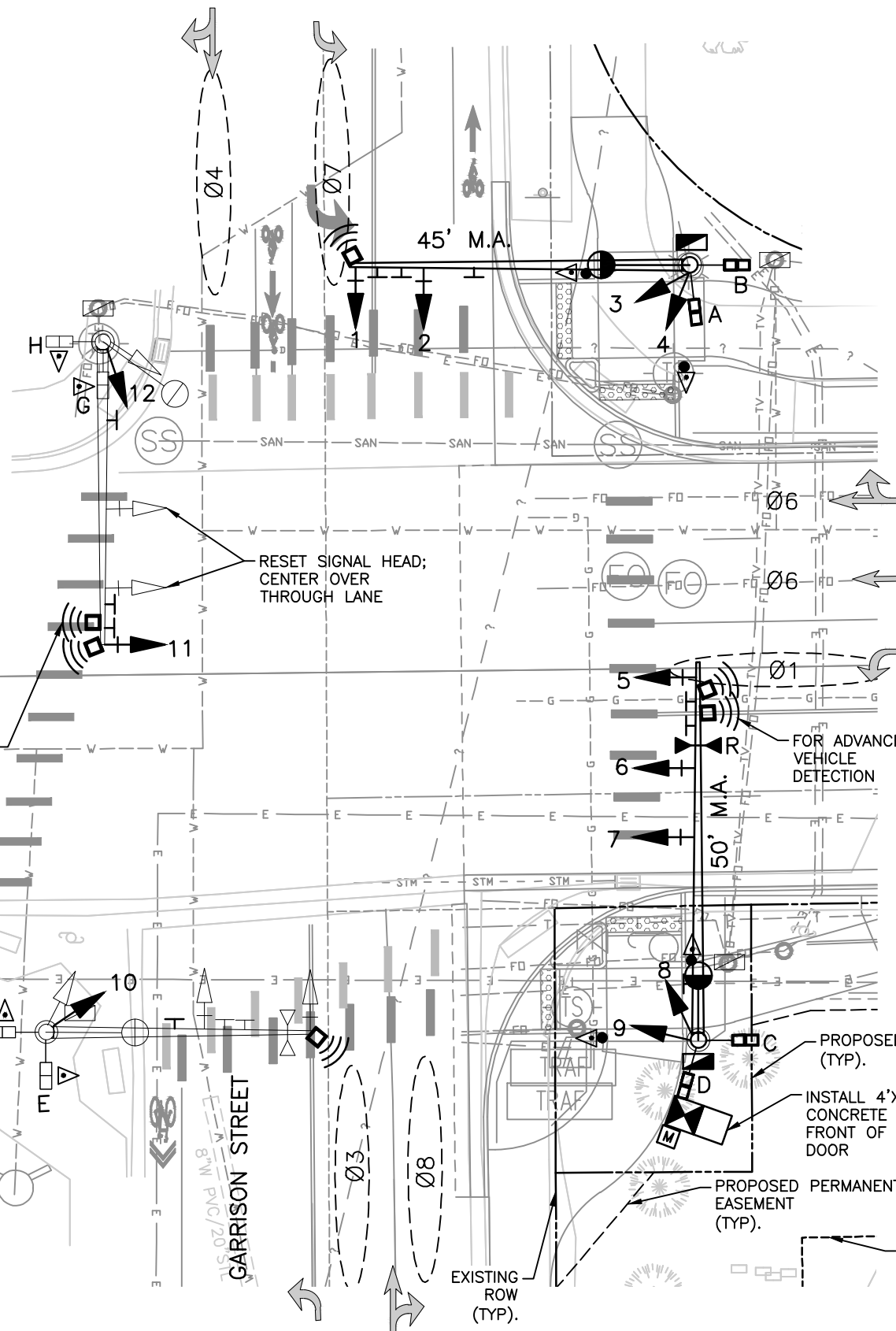
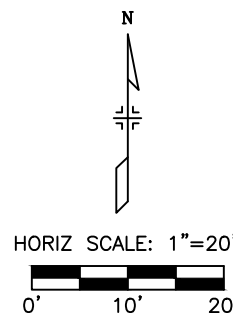
SIGNAL HEADS



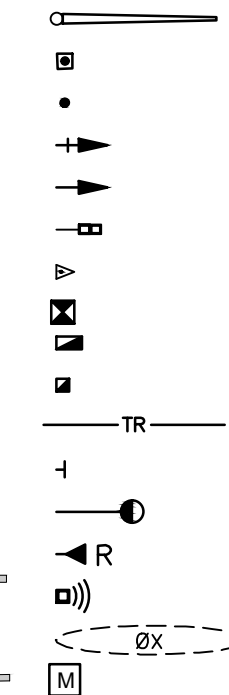
NOTES:

- DESIGN CRITERIA: 2015 AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, FIRST EDITION" INCLUDING ALL SUBSEQUENT REVISIONS.

LANE USE ARROWS ARE SHOWN FOR INFORMATION ONLY



SYMBOL



DESCRIPTION

- TRAFFIC SIGNAL POLE AND MAST ARM
- TRAFFIC SIGNAL PEDESTAL POLE
- PEDESTRIAN PUSH BUTTON POLE
- TRAFFIC SIGNAL HEAD & BACKPLATE
- TRAFFIC SIGNAL HEAD
- PEDESTRIAN SIGNAL HEAD
- PEDESTRIAN PUSH BUTTON STATION
- TRAFFIC SIGNAL CONTROLLER CABINET
- PULL BOX - TYPE LG (24"x36"x18")
- PULL BOX - TYPE M (13"x24"x12")
- SIGNAL CONDUIT (PVC SCH. 80)
- SIGN PANEL
- LUMINAIRE (LED)
- FIRE PREEMPTION UNIT (RESET)
- MICROWAVE RADAR DETECTOR
- DETECTION ZONE & PHASE
- SERVICE METER HOUSING

AUDIBLE PEDESTRIAN PUSH BUTTON STATION



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Date	Comments	Initials	



CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed
No Revisions:
Revised:
Void:

RALSTON RD - YUKON ST TO GARRISON ST TRAFFIC SIGNAL PLANS RALSTON ROAD & GARRISON STREET			
Designer:	RRF	Structure	
Detailer:	DEM	Numbers	
Sheet Subset:	TRAFFIC	Subset Sheets:	TR-03 of 17

Project No./Code
18-ST-40
Sheet Number
271

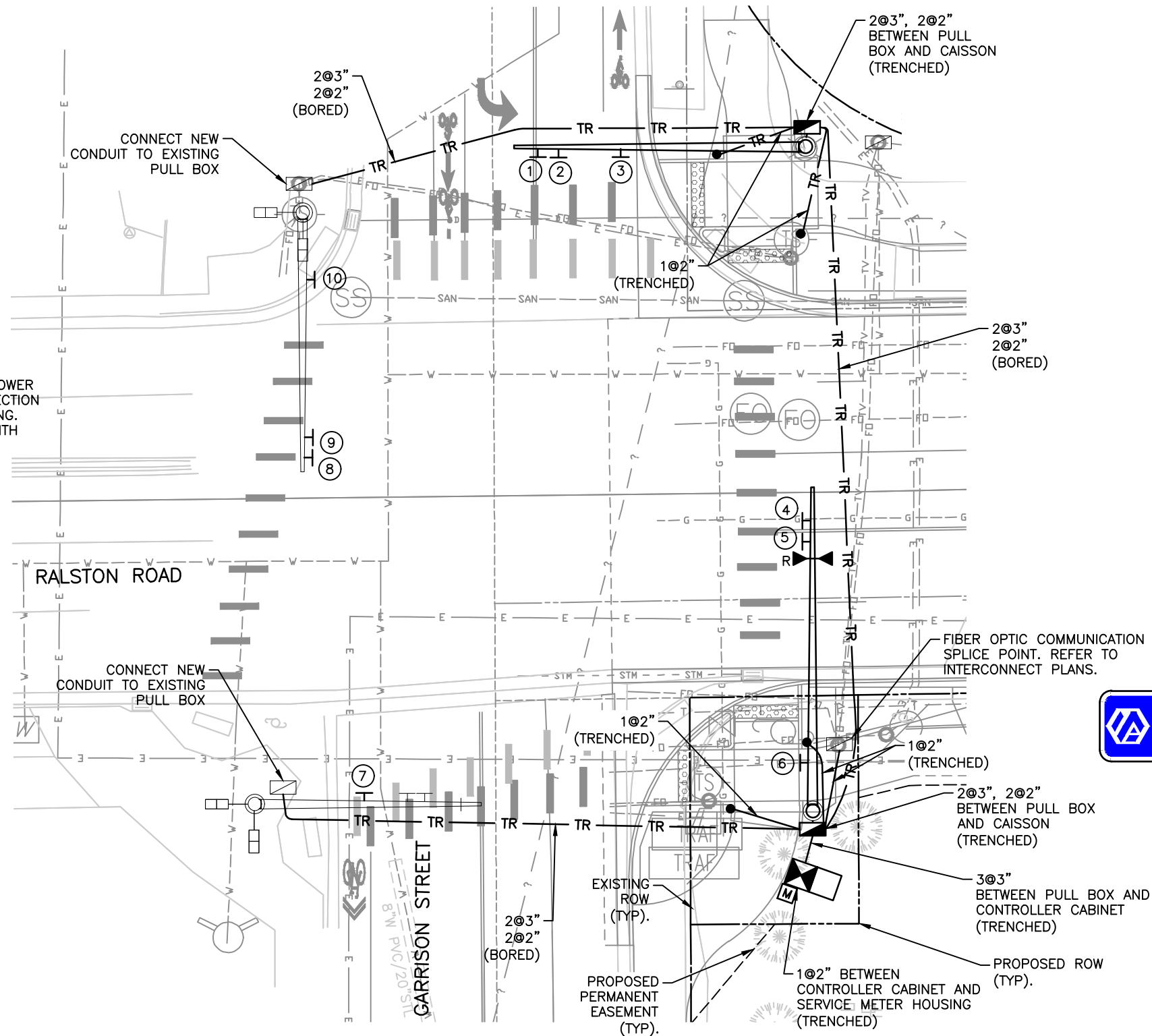
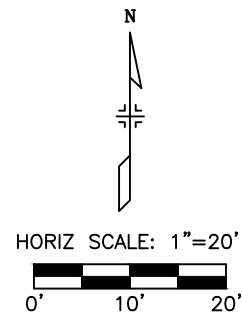


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NOTES:

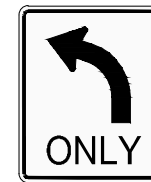
1. CITY OF ARVADA TO PROVIDE POWER SOURCE ALIGNMENT AND CONNECTION TO NEW SERVICE METER HOUSING. CONTRACTOR TO COORDINATE WITH CITY OF ARVADA ENGINEERING (TRANG TRAN, 720-898-7646)



LEGEND

SYMBOL	DESCRIPTION
	TRAFFIC SIGNAL POLE AND MAST ARM
	TRAFFIC SIGNAL PEDESTAL POLE
	PEDESTRIAN PUSH BUTTON POLE
	TRAFFIC SIGNAL HEAD & BACKPLATE
	TRAFFIC SIGNAL HEAD
	PEDESTRIAN SIGNAL HEAD
	PEDESTRIAN PUSH BUTTON STATION
	TRAFFIC SIGNAL CONTROLLER CABINET
	PULL BOX - TYPE LG (24"x36"x18")
	PULL BOX - TYPE M (13"x24"x12")
	SIGNAL CONDUIT (PVC SCH. 80)
	SIGN PANEL
	LUMINAIRE (LED)
	FIRE PREEMPTION UNIT
	MICROWAVE RADAR DETECTOR
	DETECTION ZONE & PHASE
	SERVICE METER HOUSING

SIGNS



R3-5L
30"x36"
① ④ ⑧



SPECIAL
30" X 36"
② ⑤ ⑨



SPECIAL - SEE CITY
STANDARD TR-12
72" X 18" (APPROX.)
③ ⑦



SPECIAL - SEE CITY
STANDARD TR-12
84" X 18" (APPROX.)
⑥ ⑩

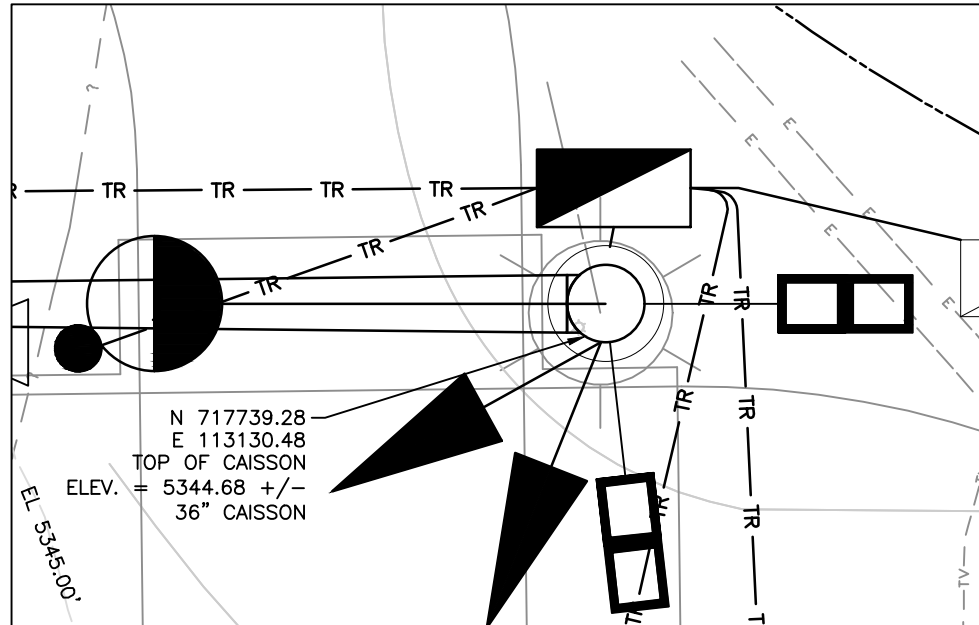


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File Name: 118355_TRPL_SH02.DWG			R-X	Date	Comments		Initials	No Revisions:					18-ST-40	
Horizontal Scale: 1" = 20' Vertical Scale: N/A								Revised:		Designer: RRF Structure Numbers				
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								Sheet Subset: TRAFFIC		Subset Sheets: TR-04 of 17		Sheet Number 272		

LEGEND	
SYMBOL	DESCRIPTION
	TRAFFIC SIGNAL POLE AND MAST ARM
	TRAFFIC SIGNAL PEDESTAL POLE
	PEDESTRIAN PUSH BUTTON POLE
	TRAFFIC SIGNAL HEAD & BACKPLATE
	TRAFFIC SIGNAL HEAD
	PEDESTRIAN SIGNAL HEAD
	PEDESTRIAN PUSH BUTTON STATION
	TRAFFIC SIGNAL CONTROLLER CABINET
	PULL BOX - TYPE LG (24"x36"x18")
	PULL BOX - TYPE M (13"x24"x12")
	SIGNAL CONDUIT (PVC SCH. 80)
	SIGN PANEL
	LUMINAIRE (LED)
	SERVICE METER HOUSING

SIGNAL POLE FOOTING DETAILS RALSTON RD. & GARRISON ST.

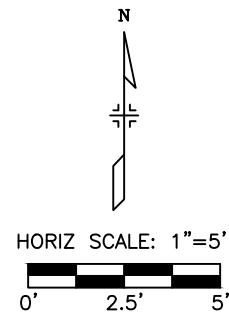
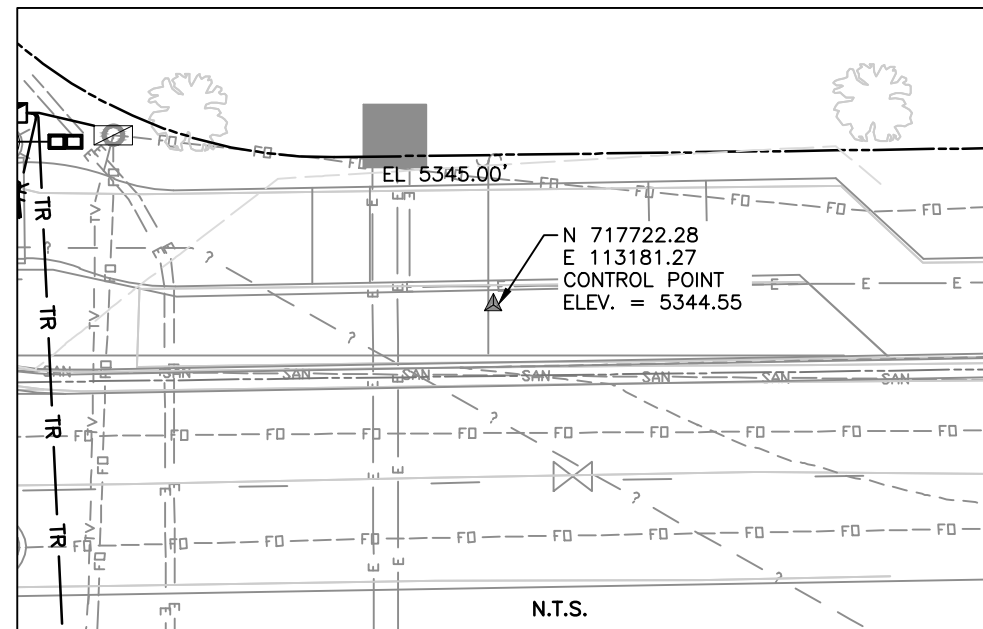
NE CORNER



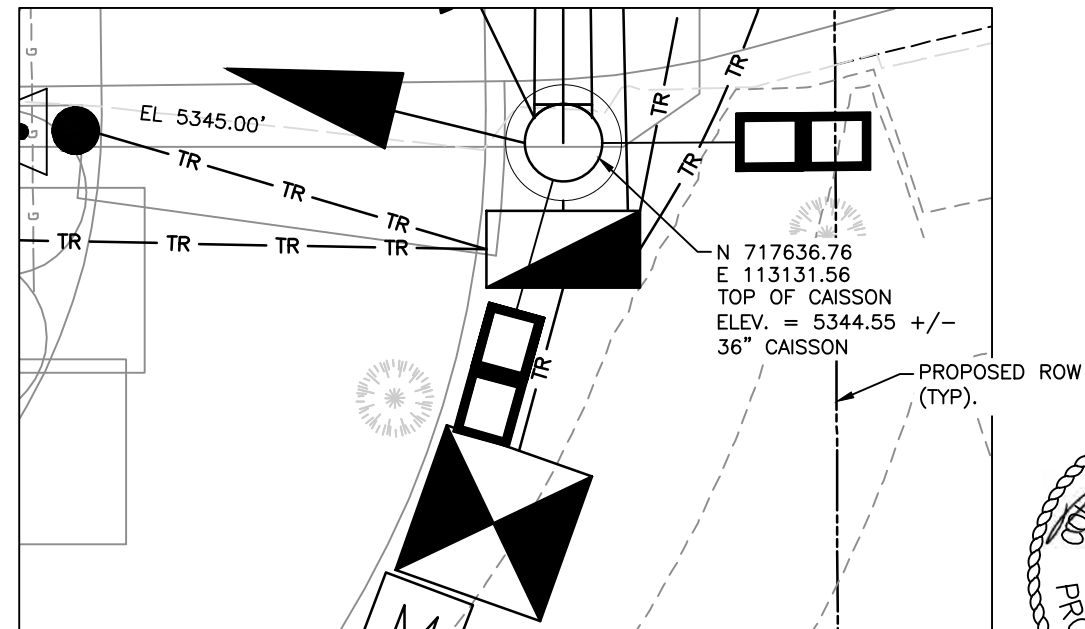
NOTES:

1. TOP OF CAISSON ELEVATIONS ARE APPROXIMATELY SIX (6) INCHES BELOW PAVED SURFACE AREAS AND APPROXIMATELY TWO (2) INCHES ABOVE GROUND LEVEL IN GRASS/LANDSCAPED AREAS.
2. CAISSONS SHALL BE CONSTRUCTED USING CDOT CLASS BZ CONCRETE NON-AIR ENTRAINED.

CITY OF ARVADA CONTROL POINT —NORTH SIDE OF RALSTON ROAD—



SE CORNER



Print Date: 12/7/2020 2:51:58 PM					As Constructed No Revisions: Revised: Void:		RALSTON RD - YUKON ST TO GARRISON ST TRAFFIC SIGNAL PLANS RALSTON ROAD & GARRISON STREET			Project No./Code													
18-ST-40																							
File Name: 118355_TRPL_SH02.DWG							Horizontal Scale: 1" = 20'		Vertical Scale: N/A		Designer: RRF		Structure Numbers										
FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com		R-X		Sheet Revisions <table><tr><th>Date</th><th>Comments</th><th>Initials</th></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table>		Date	Comments	Initials										CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002		Detailer: DEM			
Date	Comments	Initials																					
						Sheet Subset: TRAFFIC		Subset Sheets: TR-05 of 17															
								Sheet Number 273															

I:\18355-01 Ralston Rd\04_Civil\CADD\Traffic\JTS\Drawings\118355_TRPL_SH02_12/7/2020 2:51:58 PM David.Morish



Know what's below.
Call before you dig.

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PROPOSED TEMPORARY
CONSTRUCTION EASEMENT
(TYP).

PROPOSED PERMANENT EASEMENT
(TYP).

EXISTING ROW
(TYP).

CARR STREET

RESET FIRE
PREEMPTION
UNIT

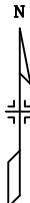
PROPOSED ROW
(TYP)

RESET FIRE
PREEMPTION
UNIT

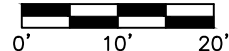
RALSTON ROAD

NOTES:

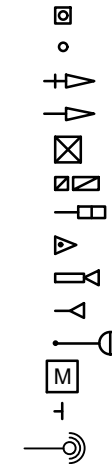
1. REMOVAL ITEMS ARE FOR INFORMATION ONLY. REMOVAL ITEMS SHALL BE PAID FOR AS REMOVAL OF TRAFFIC SIGNAL EQUIPMENT, LUMP SUM.
2. THE CONTRACTOR SHALL REMOVE EXISTING CAISSONS/ANCHOR BOLTS/CONDUIT TO TWO FEET BELOW GROUND SURFACE AND SHALL REMOVE EXISTING ELECTRICAL CABLE FROM ABANDONED CONDUITS INCIDENTAL TO THE REMOVAL OF TRAFFIC SIGNAL EQUIPMENT, LUMP SUM.
3. ALL REMOVED VIDEO DETECTION EQUIPMENT, TRAFFIC SIGNAL CONTROLLER AND CABINET SHALL BE SALVAGED AND RETURNED TO THE CITY OF ARVADA.



HORIZ SCALE: 1"=20'



EXISTING



LEGEND

DESCRIPTION

TRAFFIC SIGNAL POLE WITH MAST ARM
TRAFFIC SIGNAL PEDESTAL POLE
PEDESRIAN PUSH BUTTON POLE
TRAFFIC SIGNAL HEAD WITH BACKPLATE
TRAFFIC SIGNAL HEAD
TRAFFIC SIGNAL CONTROLLER AND CABINET
PULL BOXES
PEDESTRIAN SIGNAL HEAD
PEDESTRIAN PUSH BUTTON
VIDEO DETECTION CAMERA
FIRE PREEMPTION UNIT
LUMINAIRE
SERVICE METER HOUSING
MAST ARM SIGN
PTZ CAMERA

REMOVAL ITEMS

TRAFFIC SIGNAL POLE/MAST ARM	2 EACH
TRAFFIC SIGNAL PEDESTAL POLE	2 EACH
TRAFFIC SIGNAL HEAD	11 EACH
PEDESTRIAN SIGNAL HEAD	4 EACH
PEDESTRIAN PUSH BUTTON AND SIGN	4 EACH
PEDESTRIAN PUSH BUTTON POLE	2 EACH
TRAFFIC SIGNAL CONTROLLER CABINET	1 EACH
PULL BOX	6 EACH
VIDEO DETECTION CAMERA	3 EACH
STREET NAME SIGN	3 EACH
SCHOOL CROSSING SIGN	2 EACH
PAN-TILT-ZOOM CAMERA	1 EACH

ITEMS TO BE RESET

FIRE PREEMPTION UNIT AND TIMER	2 EACH
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Sheet Revisions			
R-X	Date	Comments	Initials



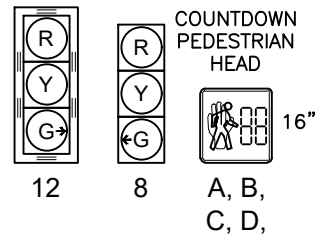
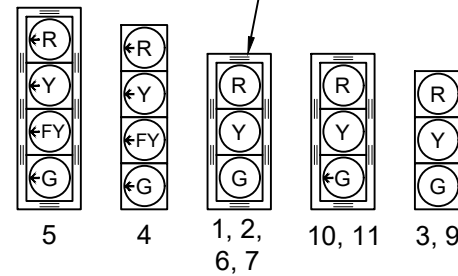
CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST TRAFFIC SIGNAL PLANS RALSTON ROAD & CARR STREET				Project No./Code	
No Revisions:						18-ST-40	
Revised:		Designer: RRF	Structure				
		Detailer: DEM	Numbers				
Void:		Sheet Subset: TRAFFIC	Subset Sheets: TR-06 of 17			Sheet Number	274



SIGNAL HEADS

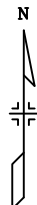
LOUVERED
BACKPLATE (TYP.)



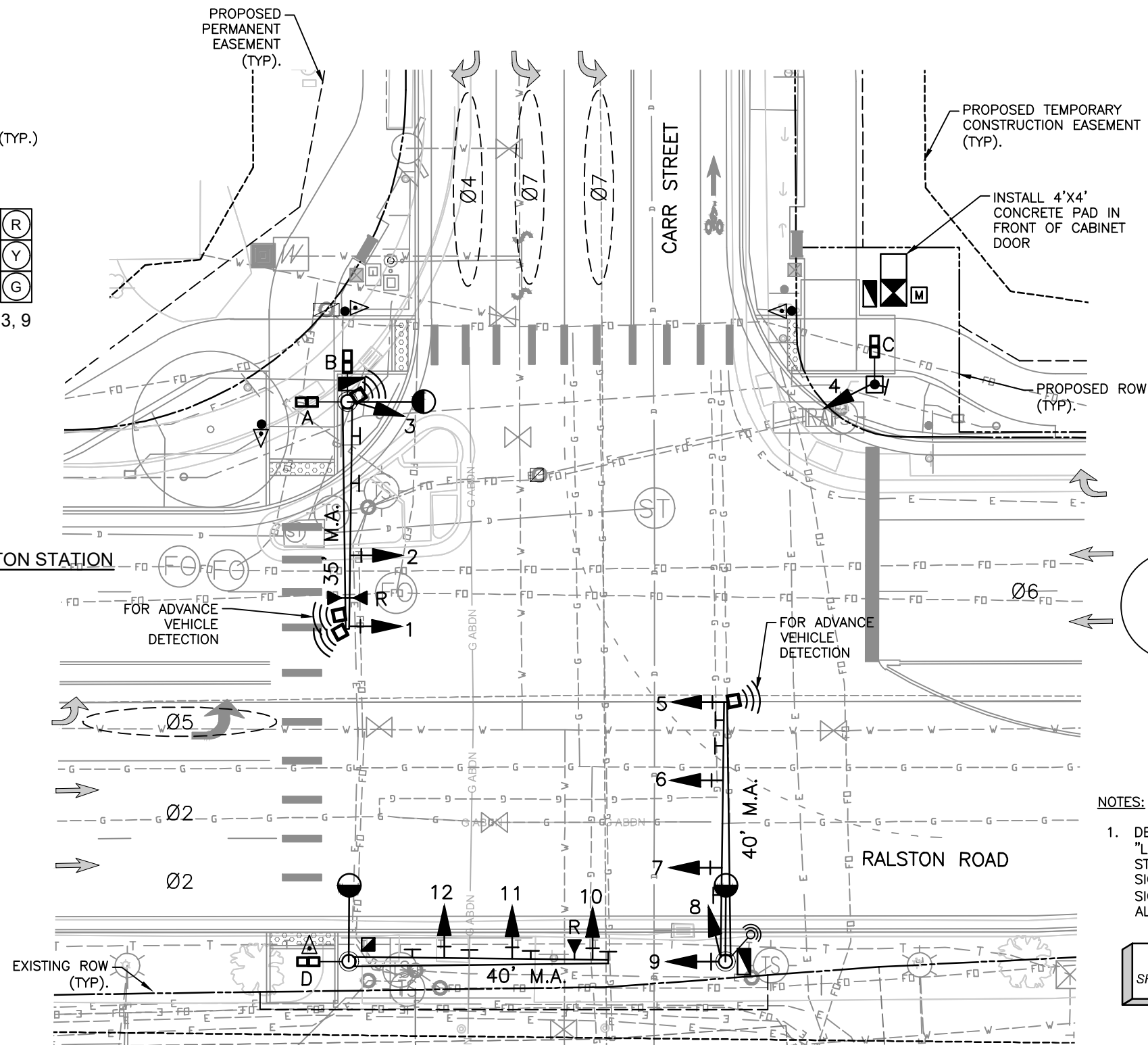
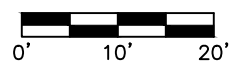
AUDIBLE PEDESTRIAN PUSH BUTTON STATION



R10-3
9"X12"
A TO D
3 - LEFT ARROW
1 - RIGHT ARROW



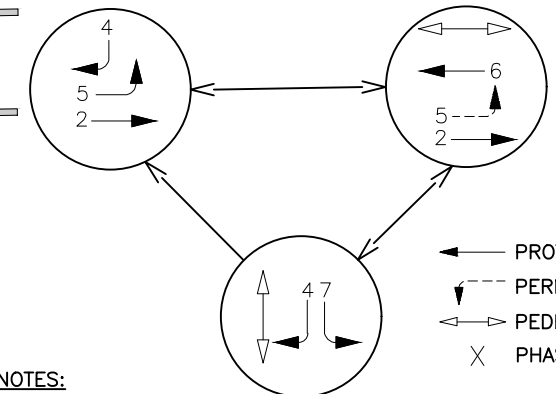
HORIZ SCALE: 1"=20'



LEGEND

<u>SYMBOL</u>	<u>DESCRIPTION</u>
	TRAFFIC SIGNAL POLE AND MAST ARM
	TRAFFIC SIGNAL PEDESTAL POLE
	PEDESTRIAN PUSH BUTTON POLE
	TRAFFIC SIGNAL HEAD & BACKPLATE
	TRAFFIC SIGNAL HEAD
	PEDESTRIAN SIGNAL HEAD
	PEDESTRIAN PUSH BUTTON STATION
	TRAFFIC SIGNAL CONTROLLER CABINET
	PULL BOX – TYPE LG (24"x36"x18")
	PULL BOX – TYPE M (13"x24"x12")
	SIGNAL CONDUIT (PVC SCH. 80)
	SIGN PANEL
	LUMINAIRE (LED)
	FIRE PREEMPTION UNIT (RESET)
	MICROWAVE RADAR DETECTOR
	DETECTION ZONE & PHASE
	SERVICE METER HOUSING
	PTZ CAMERA

SIGNAL PHASING DIAGRAM



KEY

-  PROTECTED MOVEMENT
 PERMISSIVE MOVEMENT
 PEDESTRIAN INDICATION
 PHASE  NUMBER

NOTES:

1. DESIGN CRITERIA: 2015 AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, FIRST EDITION" INCLUDING ALL SUBSEQUENT REVISIONS.

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Date	Comments	Initials	



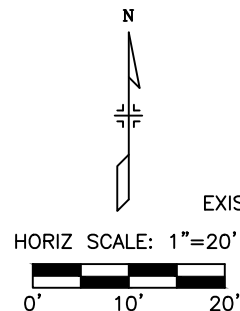
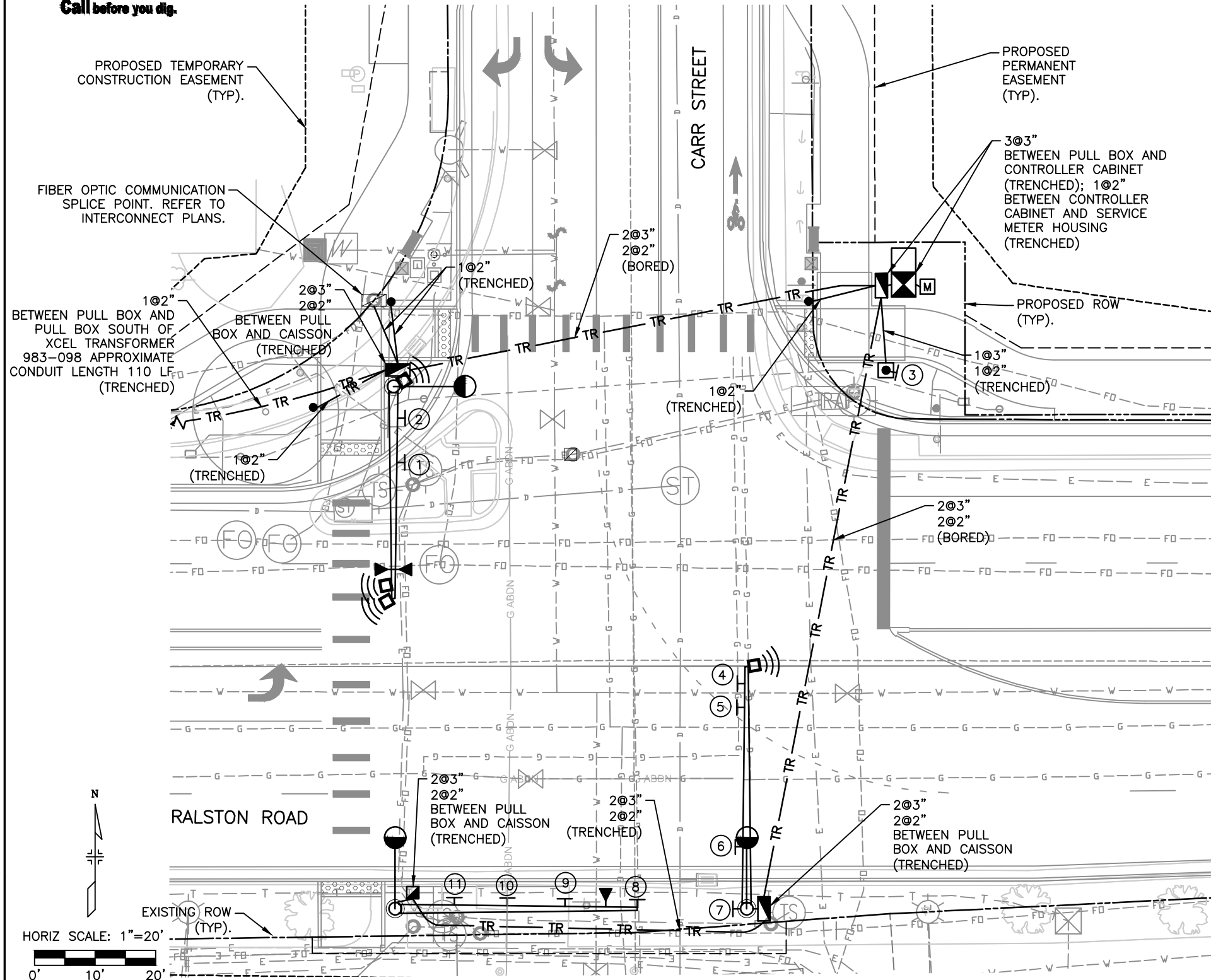
CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed	RALSTON RD - YUKON ST TO GARRISON ST			Project No./Code
No Revisions:	TRAFFIC SIGNAL PLANS			18-ST-40
	RALSTON ROAD & CARR STREET			
Revised:	Designer: RRF	Structure		
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				Sheet Number 275



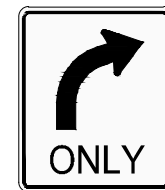
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LEGEND	
SYMBOL	DESCRIPTION
	TRAFFIC SIGNAL POLE AND MAST ARM
	TRAFFIC SIGNAL PEDESTAL POLE
	PEDESTRIAN PUSH BUTTON POLE
	TRAFFIC SIGNAL HEAD & BACKPLATE
	TRAFFIC SIGNAL HEAD
	PEDESTRIAN SIGNAL HEAD
	PEDESTRIAN PUSH BUTTON STATION
	TRAFFIC SIGNAL CONTROLLER CABINET
	PULL BOX - TYPE LG (24"x36"x18")
	PULL BOX - TYPE M (13"x24"x12")
	SIGNAL CONDUIT (PVC SCH. 80)
	SIGN PANEL
	LUMINAIRE (LED)
	FIRE PREEMPTION UNIT
	MICROWAVE RADAR DETECTOR
	DETECTION ZONE & PHASE
	SERVICE METER HOUSING
	PTZ CAMERA

SIGNS



R3-5L
30"x36"
① ⑩



SPECIAL - SEE CITY
STANDARD TR-12
66" X 18" (APPROX.)
② ⑥



R9-3a
24" X 24"
③

ORIENTED
TOWARDS THE
SOUTHEAST
CORNER



R3-5L
30"x36"
④ ⑧ ⑨



SPECIAL
30" X 36"
⑤



R9-3a
24" X 24"
⑦

ORIENTED
TOWARDS THE
NORTHEAST
CORNER



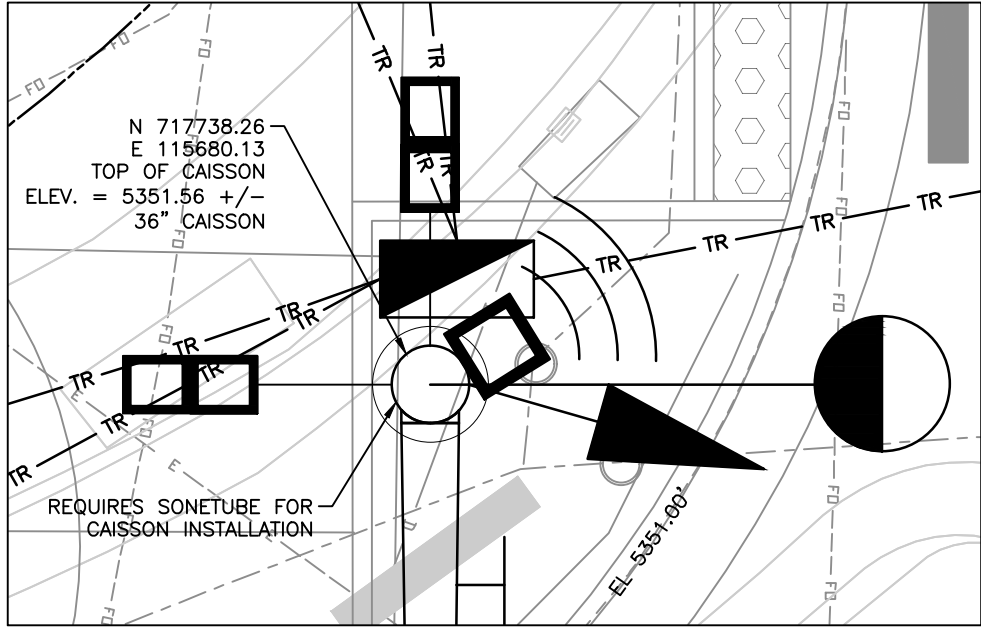
SPECIAL - SEE CITY
STANDARD TR-12
72" X 18" (APPROX.)
⑪



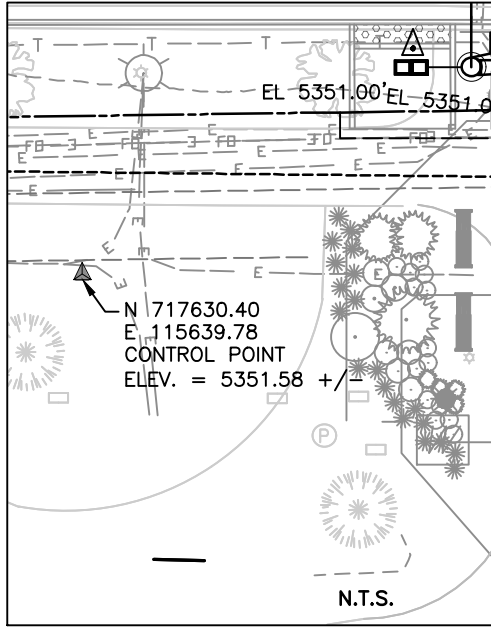
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File Name: 118355_TRPL_SH02.DWG											
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							Void:	Sheet Subset: TRAFFIC	Subset Sheets: TR-08 of 17		

SIGNAL POLE FOOTING DETAILS
RALSTON RD. & CARR ST.

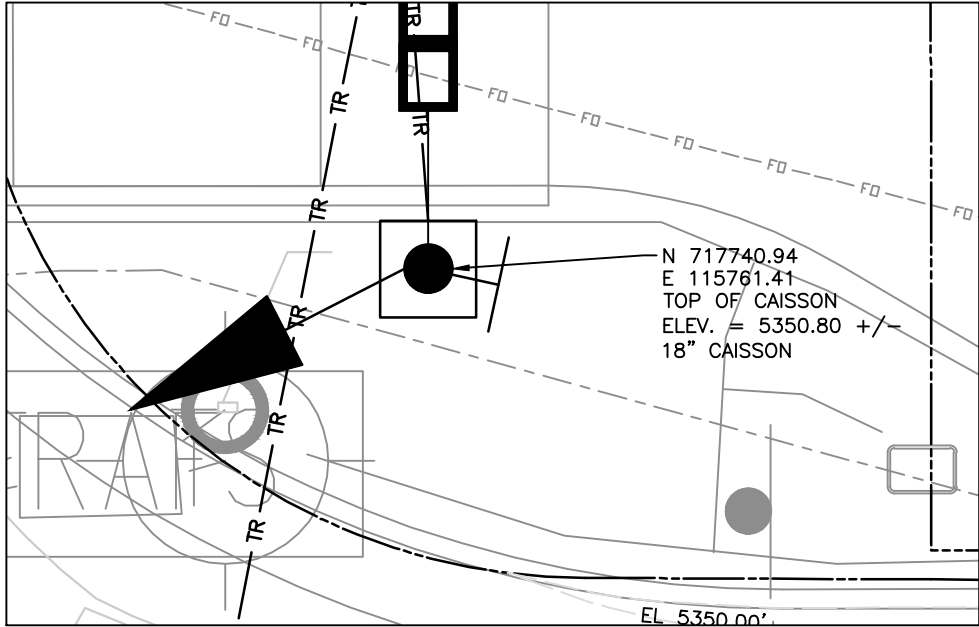
NW CORNER



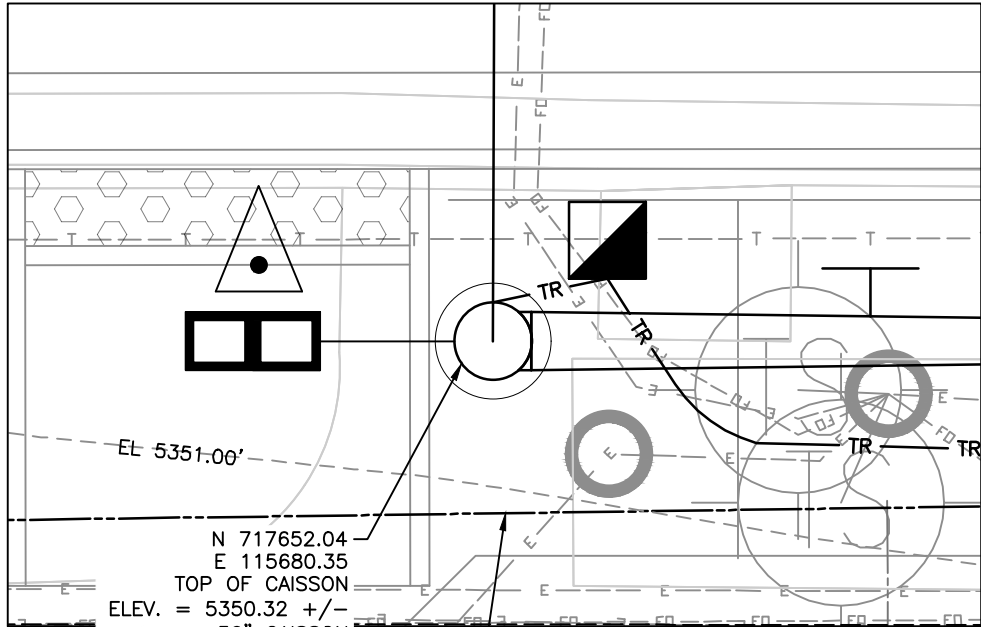
CITY OF ARVADA CONTROL POINT
-SOUTHWEST CORNER-



NE CORNER

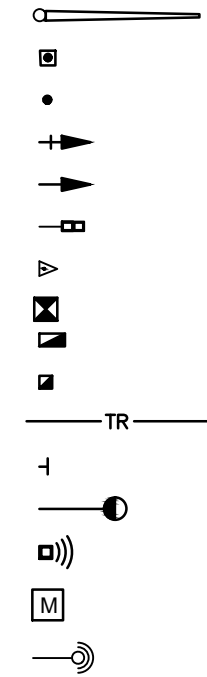


SW CORNER



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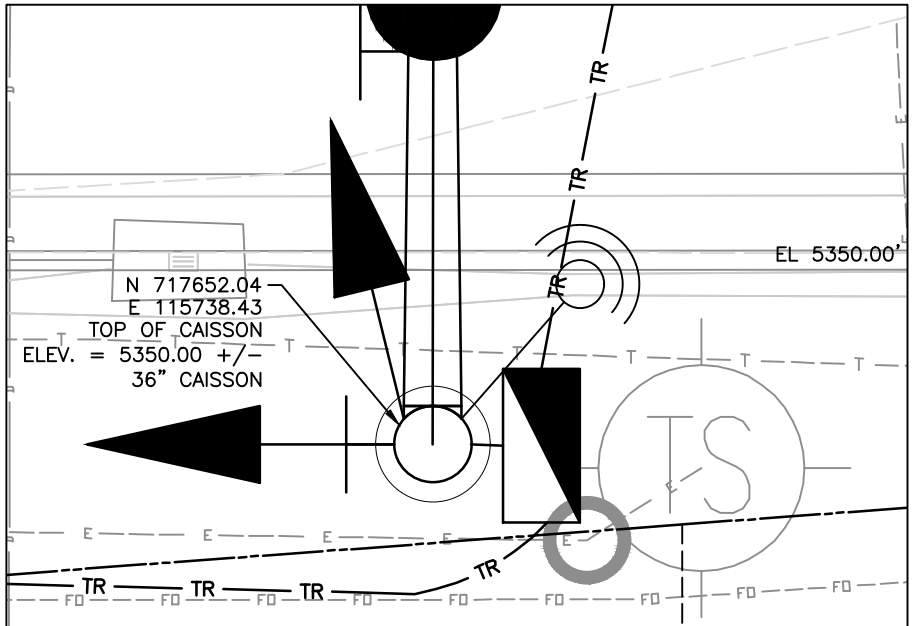
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DESCRIPTION

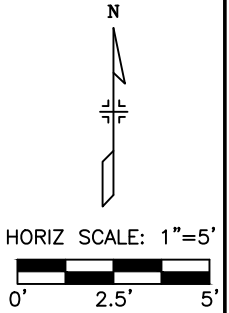
TRAFFIC SIGNAL POLE AND MAST ARM
TRAFFIC SIGNAL PEDESTAL POLE
PEDESTRIAN PUSH BUTTON POLE
TRAFFIC SIGNAL HEAD & BACKPLATE
TRAFFIC SIGNAL HEAD
PEDESTRIAN SIGNAL HEAD
PEDESTRIAN PUSH BUTTON STATION
TRAFFIC SIGNAL CONTROLLER CABINET
PULL BOX - TYPE LG (24"x36"x18")
PULL BOX - TYPE M (13"x24"x12")
SIGNAL CONDUIT (PVC SCH. 80)
SIGN PANEL
LUMINAIRE (LED)
MICROWAVE RADAR DETECTOR
SERVICE METER HOUSING
PTZ CAMERA

SE CORNER



NOTES:

1. TOP OF CAISSON ELEVATIONS ARE APPROXIMATELY SIX (6) INCHES BELOW PAVED SURFACE AREAS AND APPROXIMATELY TWO (2) INCHES ABOVE GROUND LEVEL IN GRASS/LANDSCAPED AREAS.
2. CAISSONS SHALL BE CONSTRUCTED USING CDOT CLASS BZ CONCRETE NON-AIR ENTRAINED.



I:\18355-01 Ralston Rd\04_CADD\Traffic\TIS\Drawings\18355_TRPL_SH02_12/29/2020 10:17:59 AM David.Morish

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Date	Comments	Initials	



CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

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No Revisions:					18-ST-40
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		Detailer: DEM			
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NOTES:

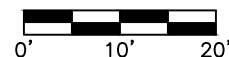
1. REMOVAL ITEMS ARE FOR INFORMATION ONLY. REMOVAL ITEMS SHALL BE PAID FOR AS REMOVAL OF TRAFFIC SIGNAL EQUIPMENT, LUMP SUM.
2. THE CONTRACTOR SHALL REMOVE EXISTING CAISSONS/ANCHOR BOLTS/CONDUIT TO TWO FEET BELOW GROUND SURFACE AND SHALL REMOVE EXISTING ELECTRICAL CABLE FROM ABANDONED CONDUITS INCIDENTAL TO THE REMOVAL OF TRAFFIC SIGNAL EQUIPMENT, LUMP SUM.
3. REMOVED TRAFFIC SIGNAL CONTROLLER AND CABINET SHALL BE SALVAGED AND RETURNED TO THE CITY OF ARVADA.

PROPOSED PERMANENT EASEMENT (TYP).

PROPOSED ROW (TYP).

PROPOSED TEMPORARY CONSTRUCTION EASEMENT (TYP).

HORIZ SCALE: 1"=20'



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Sheet Revisions			
R-X	Date	Comments	Initials



CITY OF ARVADA
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ARVADA, CO, 80002

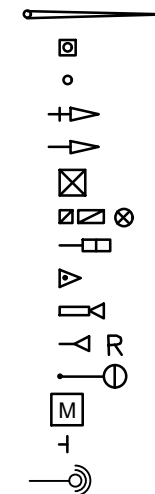
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RALSTON RD - YUKON ST TO GARRISON ST TRAFFIC SIGNAL PLANS RALSTON ROAD & BALSAM STREET			
Designer:	RRF	Structure	
Detailer:	DEM	Numbers	
Sheet Subset:	TRAFFIC	Subset Sheets:	TR-10 of 17

Project No./Code
18-ST-40
Sheet Number 278

LEGEND

EXISTING



DESCRIPTION

TRAFFIC SIGNAL POLE WITH MAST ARM
TRAFFIC SIGNAL PEDESTAL POLE
PEDESTRIAN PUSH BUTTON POLE
TRAFFIC SIGNAL HEAD WITH BACKPLATE
TRAFFIC SIGNAL HEAD
TRAFFIC SIGNAL CONTROLLER AND CABINET
PULL BOXES
PEDESTRIAN SIGNAL HEAD
PEDESTRIAN PUSH BUTTON
VIDEO DETECTION CAMERA
FIRE PREEMPTION UNIT
LUMINAIRE
SERVICE METER HOUSING
MAST ARM SIGN
PTZ CAMERA

REMOVAL ITEMS

TRAFFIC SIGNAL POLE/MAST ARM	4 EACH
TRAFFIC SIGNAL HEAD	12 EACH
PEDESTRIAN SIGNAL HEAD	8 EACH
PEDESTRIAN PUSH BUTTON AND SIGN	8 EACH
PEDESTRIAN PUSH BUTTON POLE	1 EACH
TRAFFIC SIGNAL CONTROLLER CABINET	1 EACH
PULL BOX	6 EACH
PULL BOX (SPECIAL)	3 EACH
STREET NAME SIGN	4 EACH
SCHOOL CROSSING SIGN	4 EACH
SCHOOL SPEED LIMIT SIGN	1 EACH
PAN-TILE-ZOOM CAMERA	1 EACH

ITEMS TO BE RESET

FIRE PREEMPTION UNIT AND TIMER	2 EACH
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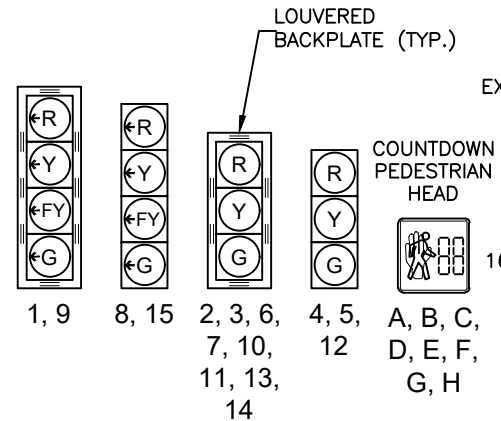




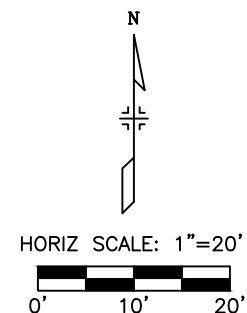
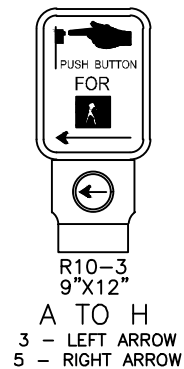
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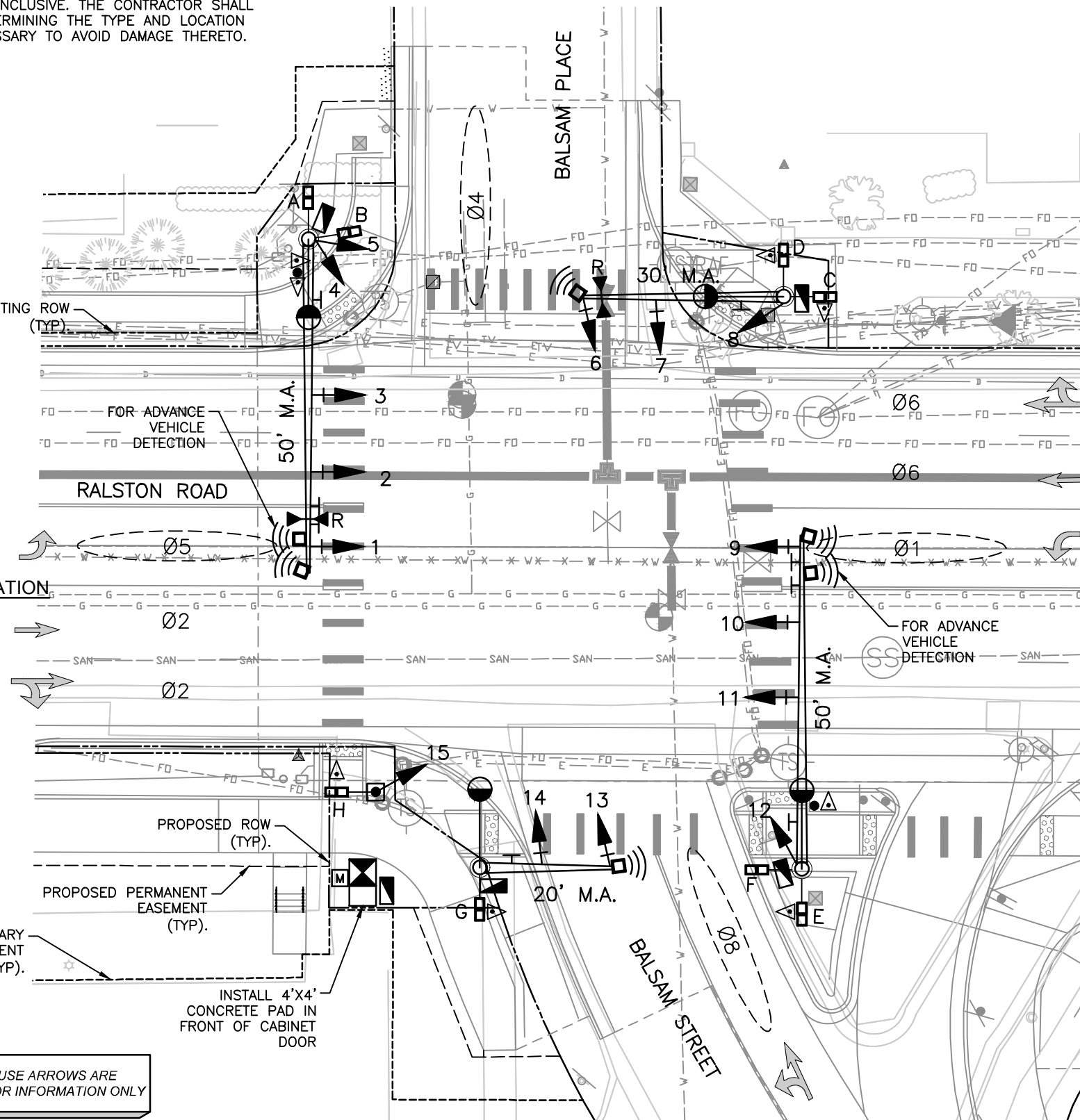
SIGNAL HEADS



AUDIBLE PEDESTRIAN PUSH BUTTON STATION



LANE USE ARROWS ARE SHOWN FOR INFORMATION ONLY



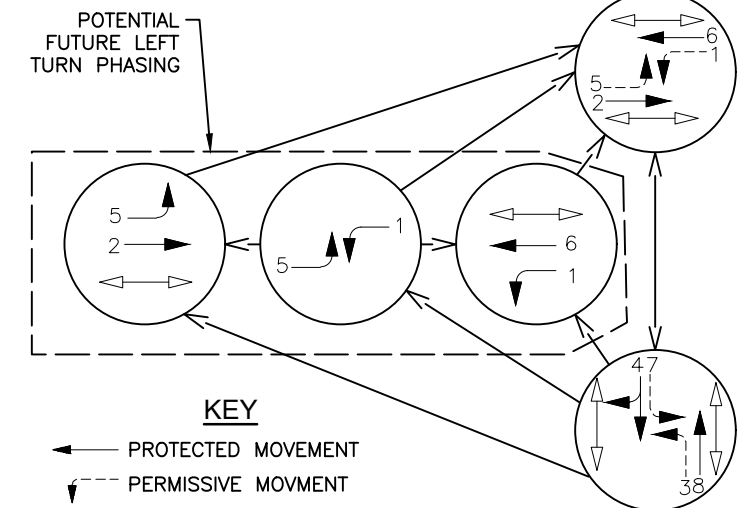
LEGEND

SYMBOL

DESCRIPTION

- TRAFFIC SIGNAL POLE AND MAST ARM
- TRAFFIC SIGNAL PEDESTAL POLE
- PEDESTRIAN PUSH BUTTON POLE
- TRAFFIC SIGNAL HEAD & BACKPLATE
- TRAFFIC SIGNAL HEAD
- PEDESTRIAN SIGNAL HEAD
- PEDESTRIAN PUSH BUTTON STATION
- TRAFFIC SIGNAL CONTROLLER CABINET
- PULL BOX - TYPE LG (24"x36"x18")
- PULL BOX - TYPE M (13"x24"x12")
- SIGNAL CONDUIT (PVC SCH. 80)
- SIGN PANEL
- LUMINAIRE (LED)
- FIRE PREEMPTION UNIT (RESET)
- MICROWAVE RADAR DETECTOR
- DETECTION ZONE & PHASE
- SERVICE METER HOUSING

SIGNAL PHASING DIAGRAM



KEY

- PROTECTED MOVEMENT
- PERMISSIVE MOVEMENT
- PEDESTRIAN INDICATION
- PHASE / NUMBER

NOTES:

- DESIGN CRITERIA: 2015 AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, FIRST EDITION" INCLUDING ALL SUBSEQUENT REVISIONS.



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Sheet Revisions			
Date	Comments	Initials	

CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed	RALSTON RD - YUKON ST TO GARRISON ST TRAFFIC SIGNAL PLANS RALSTON ROAD & BALSAM STREET			Project No./Code
No Revisions:	Designer: RRF	Structure Numbers		18-ST-40
Revised:	Detailer: DEM			
Void:	Sheet Subset: TRAFFIC	Subset Sheets: TR-11 of 17		Sheet Number 279



Know what's below.
Call before you dig.

THE INFORMATION SHOWN ON THIS DRAWING, CONCERNING THE TYPE AND LOCATION OF UTILITIES, IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE TYPE AND LOCATION OF ALL UTILITIES AS NECESSARY TO AVOID DAMAGE THERETO.

SIGNS



R3-5L
30"X36"
① ⑤



SPECIAL
30" X 36"
② ⑥



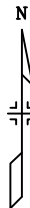
SPECIAL - SEE CITY
STANDARD TR-12
84" X 18" (APPROX.)
③



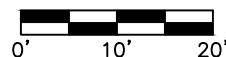
SPECIAL - SEE CITY
STANDARD TR-12
72" X 18" (APPROX.)
④ ⑧



SPECIAL - SEE CITY
STANDARD TR-12
84" X 18" (APPROX.)
⑦



HORIZ SCALE: 1"=20'



PROPOSED PERMANENT EASEMENT (TYP).

2@3"
2@2"
BETWEEN PULL BOX AND CAISSON (TRENCHED)

BALSAM PLACE

FIBER OPTIC COMMUNICATION
SPLICE POINT IS APPROXIMATELY
100 LF EAST OF BALSAM PLACE.
REFER TO INTERCONNECT PLANS.

1@2"
BETWEEN PULL BOX AND
XCEL TRANSFORMER
798-030 APPROXIMATE
CONDUIT LENGTH 100 LF
(BORED)

2@3"
2@2"
BETWEEN PULL BOX AND CAISSON (TRENCHED)

1@2"
(BORED)

EXISTING ROW (TYP).

RALSTON ROAD

2@3"
2@2"
(BORED)

1@3"
1@2"
(TRENCHED)

1@2"
(TRENCHED)

PROPOSED TEMPORARY
CONSTRUCTION EASEMENT (TYP).

3@3"
BETWEEN PULL BOX AND
CONTROLLER CABINET
(TRENCHED);
1@2" BETWEEN
CONTROLLER CABINET
AND SERVICE METER
HOUSING (TRENCHED)

PROPOSED ROW (TYP).
2@3"
2@2"
(TRENCHED)

2@3"
2@2"
BETWEEN PULL BOX AND CAISSON (TRENCHED)

2@3"
2@2"
(BORED)

2@3"
2@2"
BETWEEN PULL BOX AND CAISSON (TRENCHED)

BALSAM STREET

LEGEND

SYMBOL

DESCRIPTION

	TRAFFIC SIGNAL POLE AND MAST ARM
	TRAFFIC SIGNAL PEDESTAL POLE
	PEDESTRIAN PUSH BUTTON POLE
	TRAFFIC SIGNAL HEAD & BACKPLATE
	TRAFFIC SIGNAL HEAD
	PEDESTRIAN SIGNAL HEAD
	PEDESTRIAN PUSH BUTTON STATION
	TRAFFIC SIGNAL CONTROLLER CABINET
	PULL BOX - TYPE LG (24"x36"x18")
	PULL BOX - TYPE M (13"x24"x12")
	SIGNAL CONDUIT (PVC SCH. 80)
	SIGN PANEL
	LUMINAIRE (LED)
	FIRE PREEMPTION UNIT
	MICROWAVE RADAR DETECTOR
	DETECTION ZONE & PHASE
	SERVICE METER HOUSING



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Sheet Revisions			
Date	Comments	Initials	

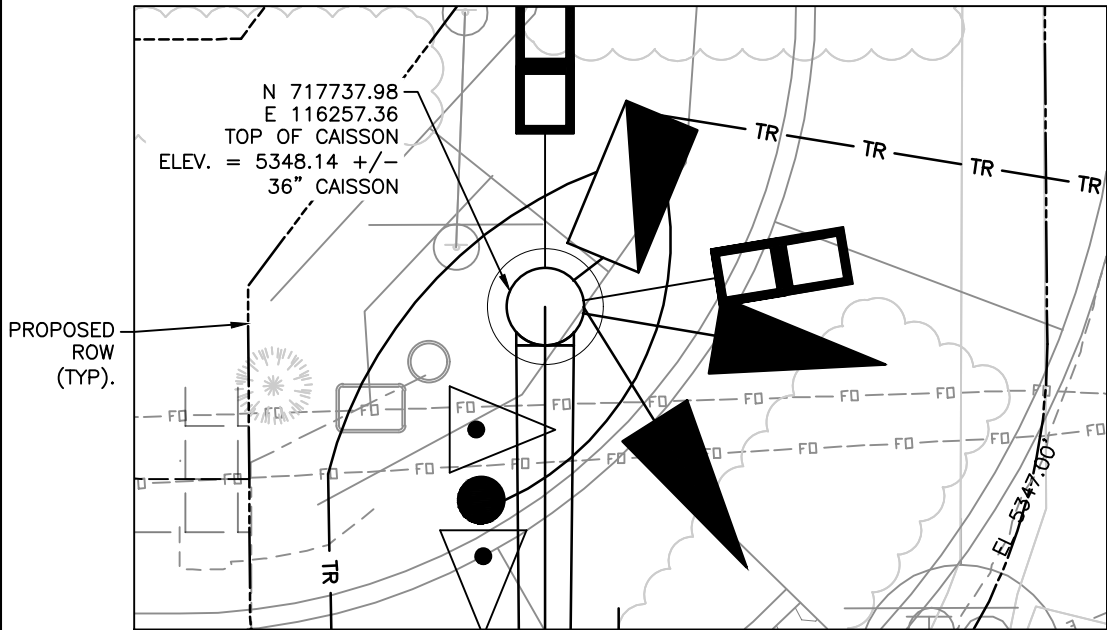


CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

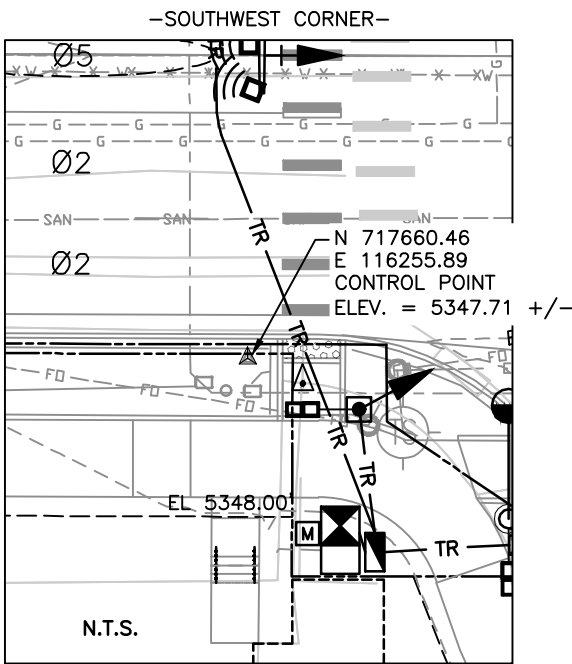
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Revised:		Designer: RRF	Structure Numbers		
		Detailer: DEM			
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SIGNAL POLE FOOTING DETAILS
RALSTON RD. & BALSAM ST.

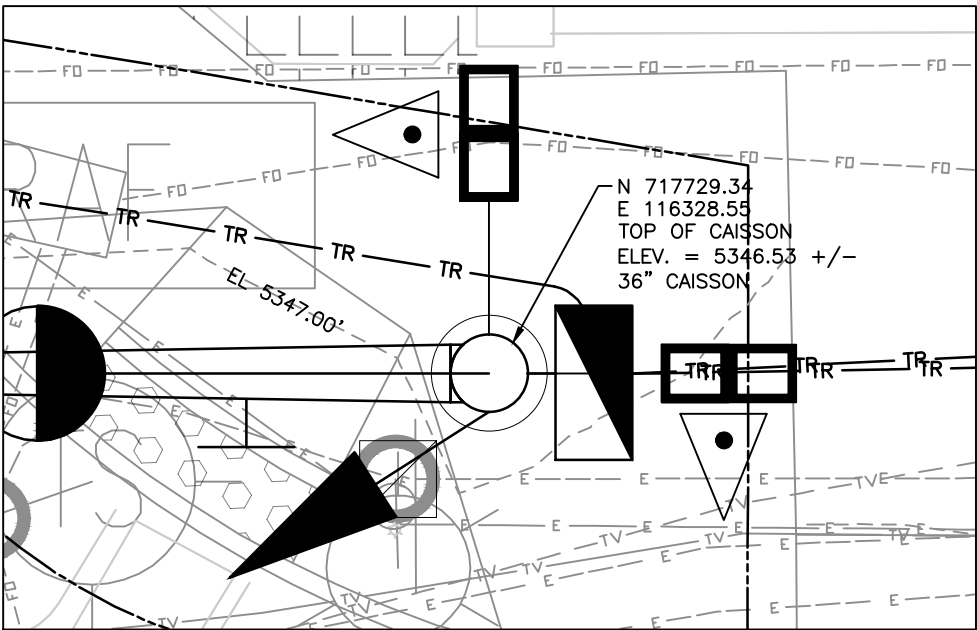
NW CORNER



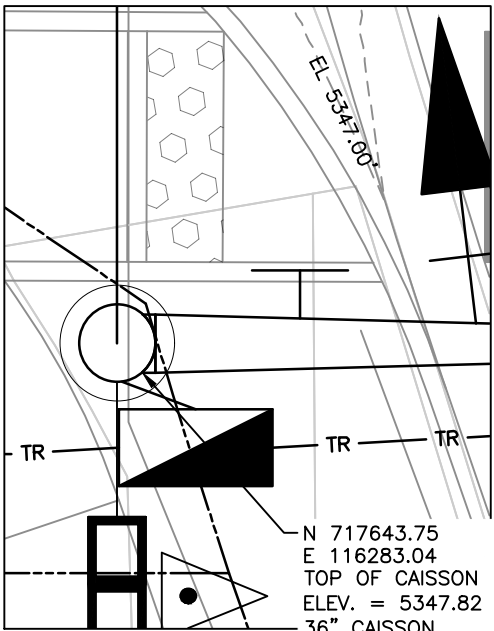
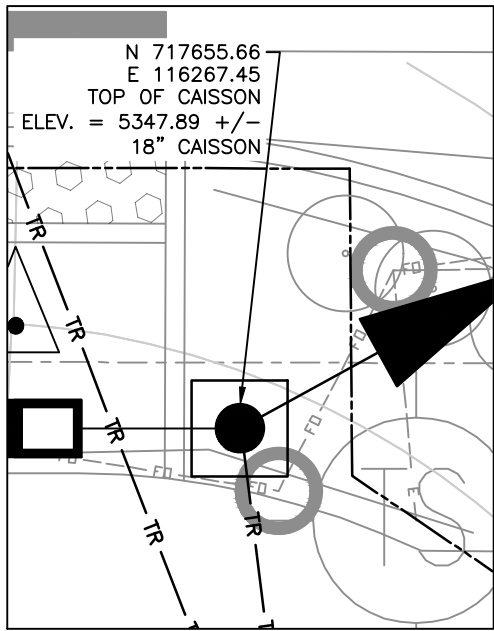
CITY OF ARVADA CONTROL POINT



NE CORNER



SW CORNER



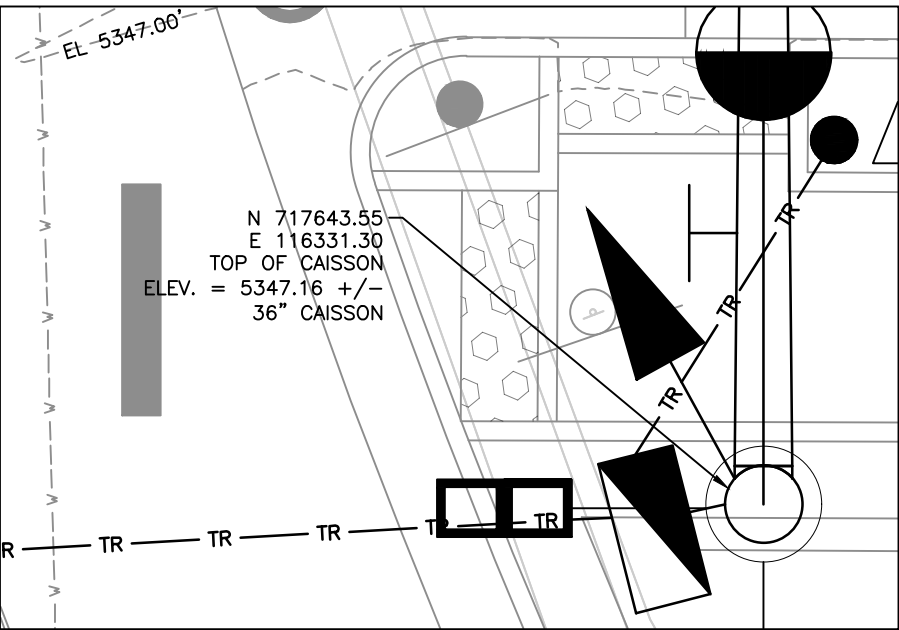
LEGEND

SYMBOL

DESCRIPTION

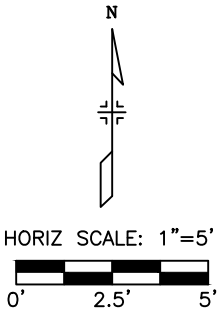
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	TRAFFIC SIGNAL PEDESTAL POLE
	PEDESTRIAN PUSH BUTTON POLE
	TRAFFIC SIGNAL HEAD & BACKPLATE
	TRAFFIC SIGNAL HEAD
	PEDESTRIAN SIGNAL HEAD
	PEDESTRIAN PUSH BUTTON STATION
	TRAFFIC SIGNAL CONTROLLER CABINET
	PULL BOX - TYPE LG (24"x36"x18")
	PULL BOX - TYPE M (13"x24"x12")
	SIGNAL CONDUIT (PVC SCH. 80)
	SIGN PANEL
	LUMINAIRE (LED)
	MICROWAVE RADAR DETECTOR
	SERVICE METER HOUSING

SE CORNER



NOTES:

- TOP OF CAISSON ELEVATIONS ARE APPROXIMATELY SIX (6) INCHES BELOW PAVED SURFACE AREAS AND APPROXIMATELY TWO (2) INCHES ABOVE GROUND LEVEL IN GRASS/LANDSCAPED AREAS.
- CAISSONS SHALL BE CONSTRUCTED USING CDOT CLASS BZ CONCRETE NON-AIR ENTRAINED.



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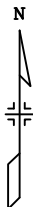
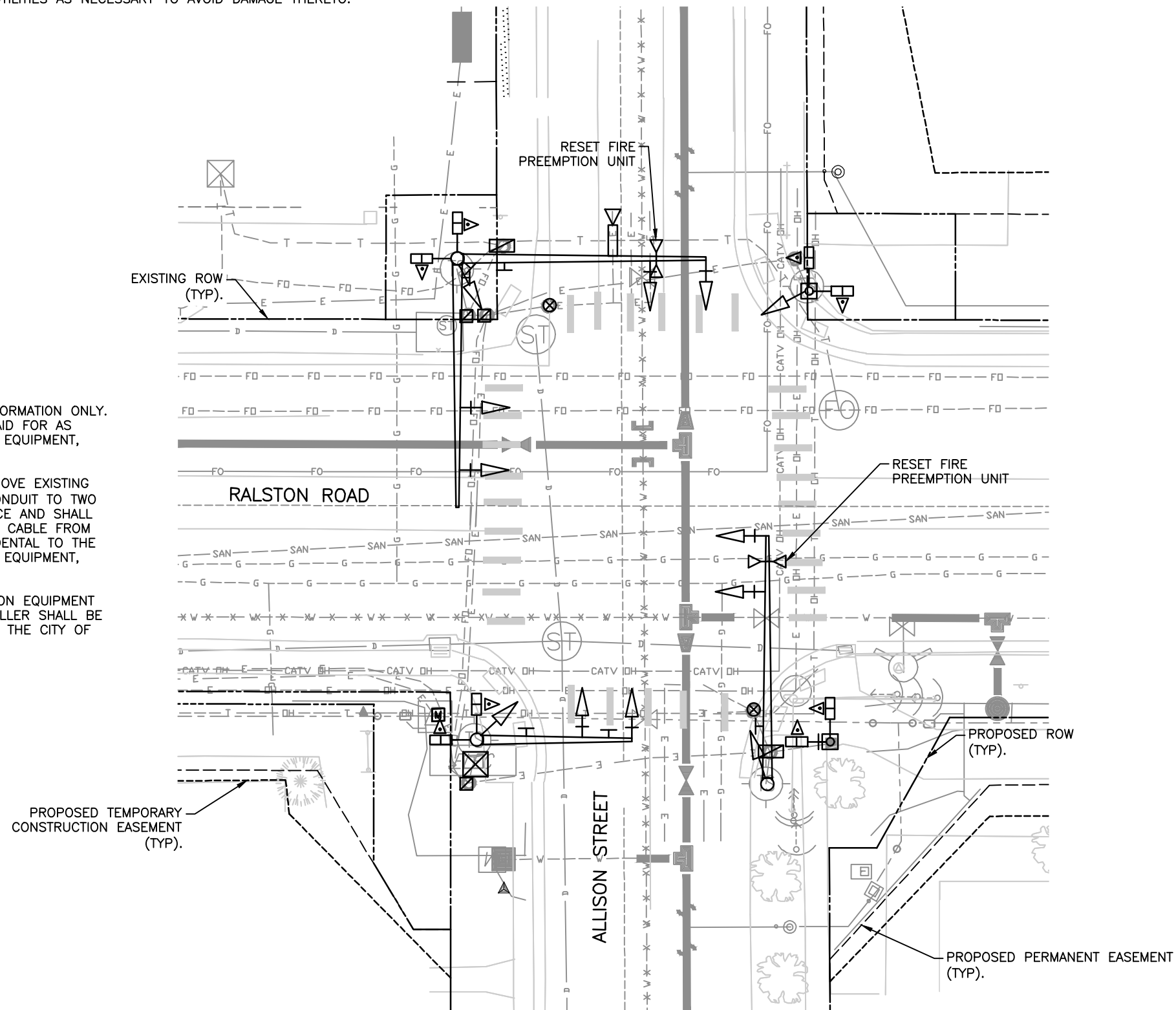
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Horizontal Scale: 1" = 20' Vertical Scale: N/A							Revised:	Detailer: DEM					
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NOTES:

1. REMOVAL ITEMS ARE FOR INFORMATION ONLY. REMOVAL ITEMS SHALL BE PAID FOR AS REMOVAL OF TRAFFIC SIGNAL EQUIPMENT, LUMP SUM.
2. THE CONTRACTOR SHALL REMOVE EXISTING CAISSONS/ANCHOR BOLTS/CONDUIT TO TWO FEET BELOW GROUND SURFACE AND SHALL REMOVE EXISTING ELECTRICAL CABLE FROM ABANDONED CONDUITS INCIDENTAL TO THE REMOVAL OF TRAFFIC SIGNAL EQUIPMENT, LUMP SUM.
3. ALL REMOVED VIDEO DETECTION EQUIPMENT AND TRAFFIC SIGNAL CONTROLLER SHALL BE SALVAGED AND RETURNED TO THE CITY OF ARVADA.



HORIZ SCALE: 1"=20'



A horizontal scale bar with alternating black and white segments. It is marked with 0', 10', and 20'.

LEGEND

DESCRIPTION

<u>EXISTING</u>	<u>DESCRIPTION</u>
	TRAFFIC SIGNAL POLE WITH MAST ARM
	TRAFFIC SIGNAL PEDESTAL POLE
	TRAFFIC SIGNAL HEAD WITH BACKPLATE
	TRAFFIC SIGNAL HEAD
	TRAFFIC SIGNAL CONTROLLER AND CABINET
	PULL BOXES
	PEDESTRIAN SIGNAL HEAD
	PEDESTRIAN PUSH BUTTON
	VIDEO DETECTION CAMERA
	FIRE PREEMPTION UNIT
	LUMINAIRE
	SERVICE METER HOUSING
	MAST ARM SIGN

REMOVAL ITEMS

TRAFFIC SIGNAL POLE/MAST ARM	3 EACH
TRAFFIC SIGNAL MAST ARM	4 EACH
TRAFFIC SIGNAL PEDESTAL POLE	2 EACH
TRAFFIC SIGNAL HEAD	12 EACH
PEDESTRIAN SIGNAL HEAD	8 EACH
PEDESTRIAN PUSH BUTTON AND SIGN	8 EACH
TRAFFIC SIGNAL CONTROLLER CABINET	1 EACH
PULL BOX	4 EACH
PULL BOX (SPECIAL)	2 EACH
SERVICE METER HOUSING	1 EACH
VIDEO DETECTION CAMERA	1 EACH
STREET NAME SIGN	4 EACH
SCHOOL CROSSING SIGN	2 EACH
DIAGONAL ARROW SIGN	1 EACH
LANE USE SIGN	1 EACH
ELECTRIC SERVICE METER	1 EACH
ITEMS TO BE RESET	
FIRE PREEMPTION UNIT AND TIMER	2 EACH



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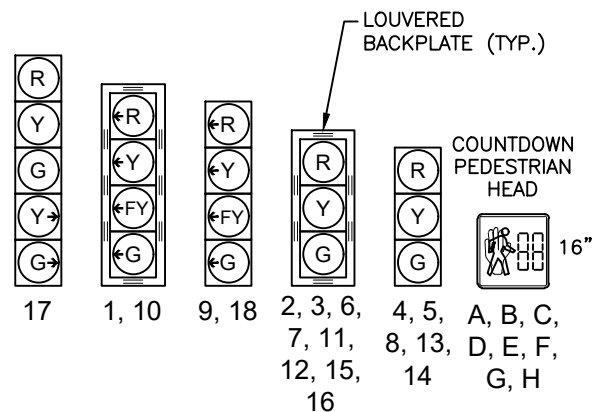
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R-X		Sheet Revisions									
		Date	Comments	Initials							



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SIGNAL HEADS



PEDESTRIAN PUSH BUTTON STATION



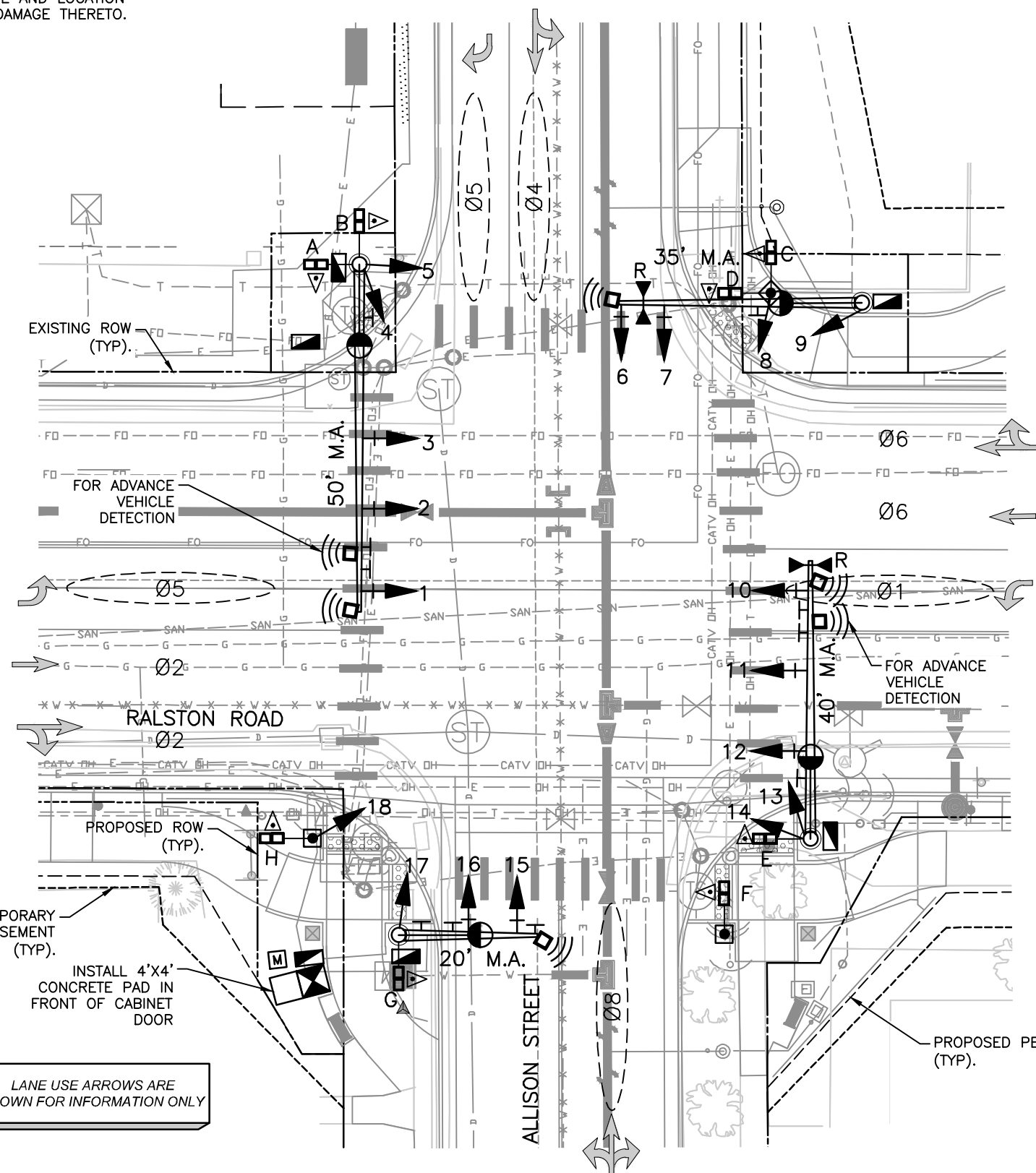
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- DESIGN CRITERIA: 2015 AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, FIRST EDITION" INCLUDING ALL SUBSEQUENT REVISIONS.

PROPOSED TEMPORARY CONSTRUCTION EASEMENT (TYP).

INSTALL 4'X4' CONCRETE PAD IN FRONT OF CABINET DOOR

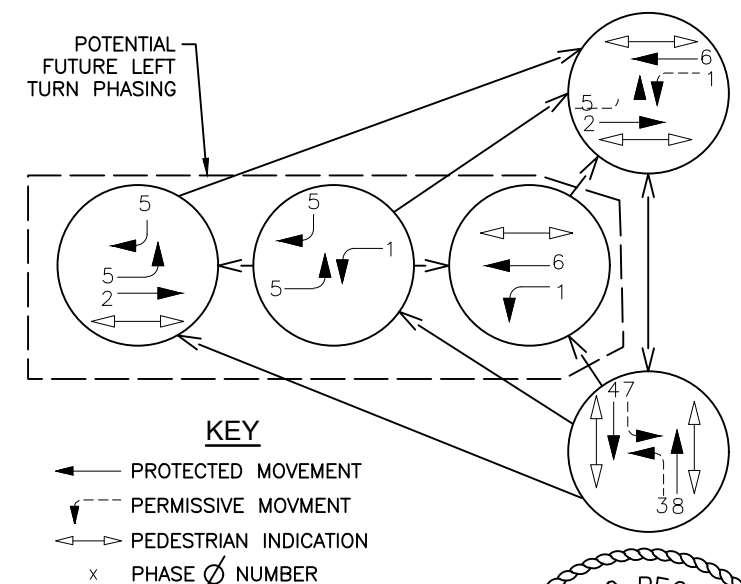
LANE USE ARROWS ARE SHOWN FOR INFORMATION ONLY

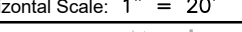


LEGEND

SYMBOL	DESCRIPTION
	TRAFFIC SIGNAL POLE AND MAST ARM
	TRAFFIC SIGNAL PEDESTAL POLE
	PEDESTRIAN PUSH BUTTON POLE
	TRAFFIC SIGNAL HEAD & BACKPLATE
	TRAFFIC SIGNAL HEAD
	PEDESTRIAN SIGNAL HEAD
	PEDESTRIAN PUSH BUTTON STATION
	TRAFFIC SIGNAL CONTROLLER CABINET
	PULL BOX - TYPE LG (24"x36"x18")
	PULL BOX - TYPE M (13"x24"x12")
	SIGNAL CONDUIT (PVC SCH. 80)
	SIGN PANEL
	LUMINAIRE (LED)
	FIRE PREEMPTION UNIT (RESET)
	MICROWAVE RADAR DETECTOR
	DETECTION ZONE & PHASE
	SERVICE METER HOUSING

SIGNAL PHASING DIAGRAM



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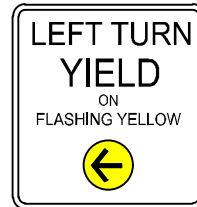
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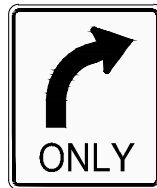
SIGNS



R3-5L
30"x36"
① ⑤



SPECIAL
30" X 36"
② ⑥



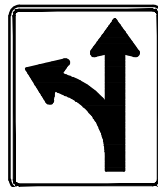
R3-5R
30"x36"
⑨



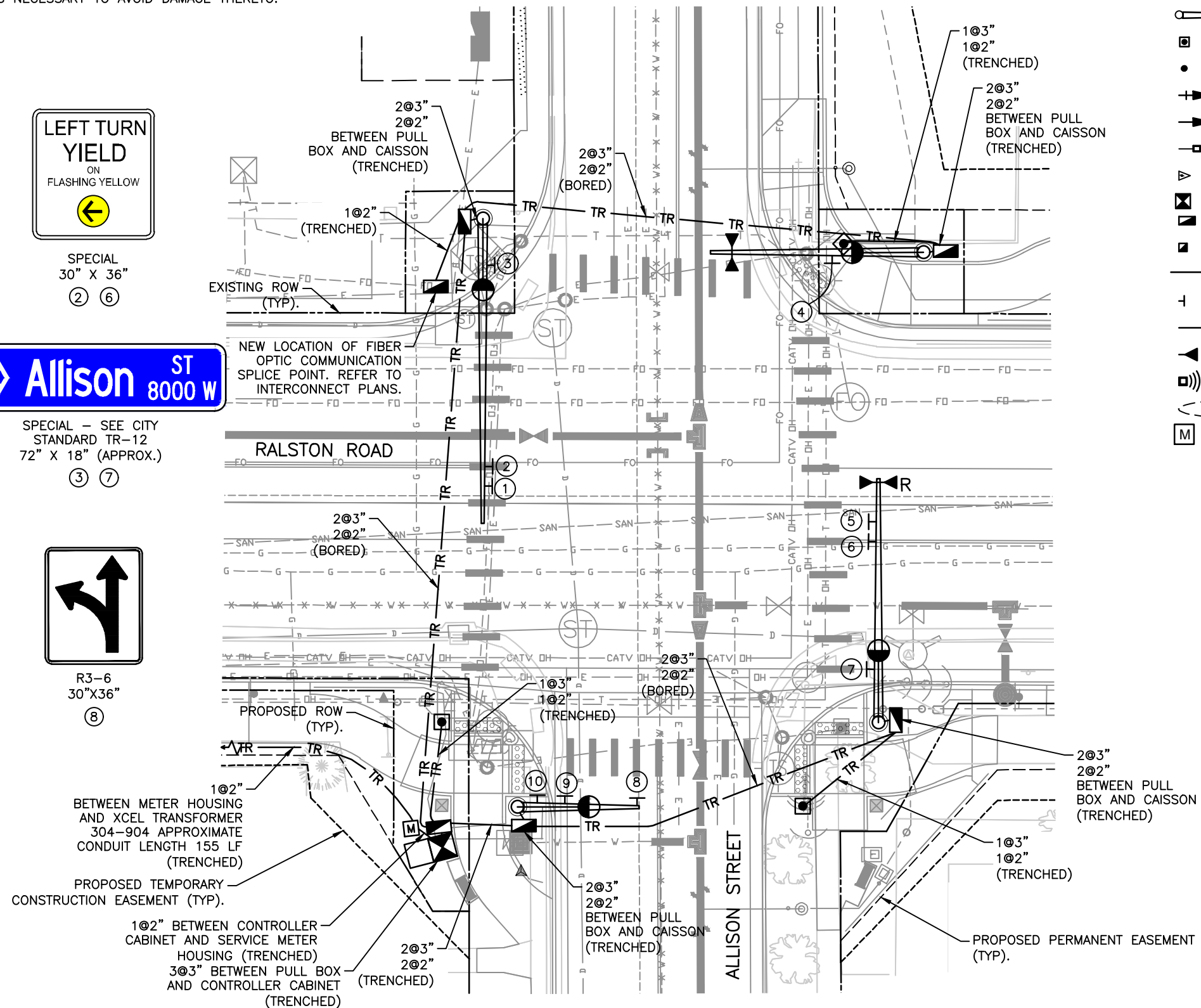
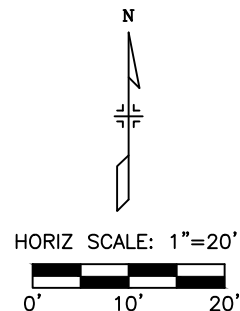
SPECIAL - SEE CITY
STANDARD TR-12
72" X 18" (APPROX.)
③ ⑦



SPECIAL - SEE CITY
STANDARD TR-12
72" X 18" (APPROX.)
④ ⑩



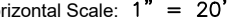
R3-6
30"x36"
⑧



LEGEND

SYMBOL	DESCRIPTION
	TRAFFIC SIGNAL POLE AND MAST ARM
	TRAFFIC SIGNAL PEDESTAL POLE
	PEDESTRIAN PUSH BUTTON POLE
	TRAFFIC SIGNAL HEAD & BACKPLATE
	TRAFFIC SIGNAL HEAD
	PEDESTRIAN SIGNAL HEAD
	PEDESTRIAN PUSH BUTTON STATION
	TRAFFIC SIGNAL CONTROLLER CABINET
	PULL BOX - TYPE LG (24"x36"x18")
	PULL BOX - TYPE M (13"x24"x12")
	SIGNAL CONDUIT (PVC SCH. 80)
	SIGN PANEL
	LUMINAIRE (LED)
	FIRE PREEMPTION UNIT
	MICROWAVE RADAR DETECTOR
	DETECTION ZONE & PHASE
	SERVICE METER HOUSING



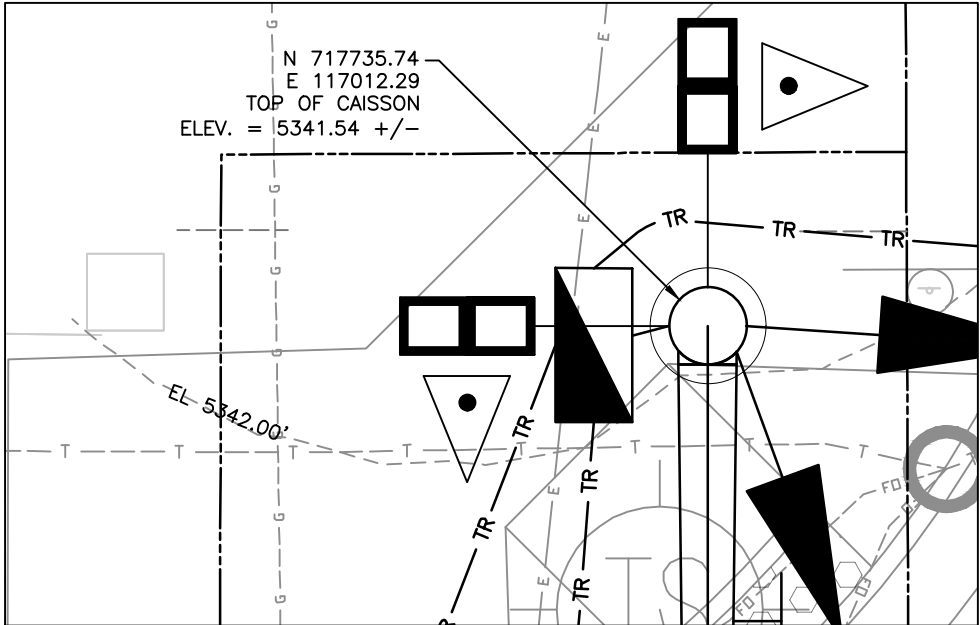
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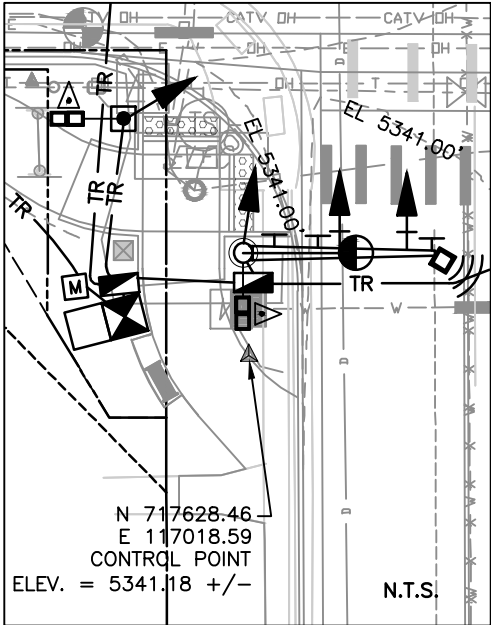
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PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

SIGNAL POLE FOOTING DETAILS
RALSTON RD. & ALLISON ST.

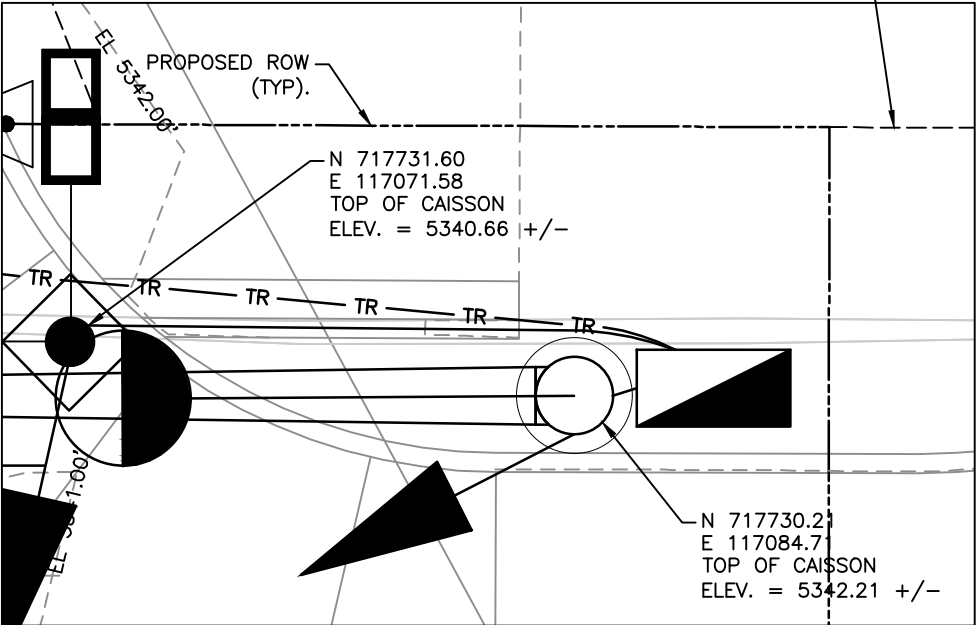
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CITY OF ARVADA CONTROL POINT
-SOUTHWEST CORNER-

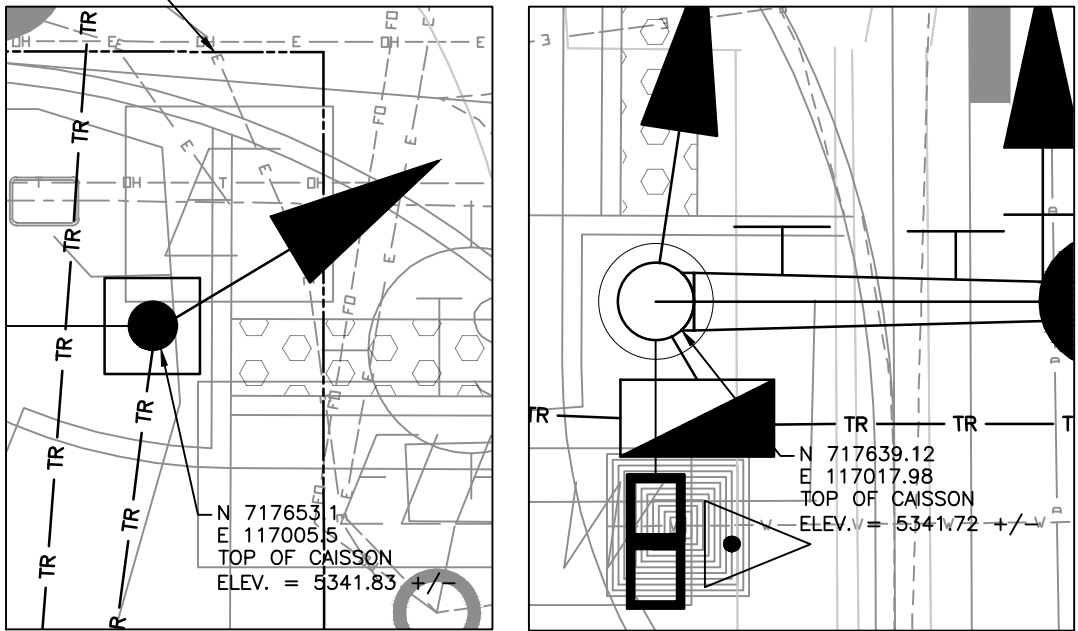


NE CORNER



PROPOSED TEMPORARY
CONSTRUCTION EASEMENT
(TYP).

SW CORNER



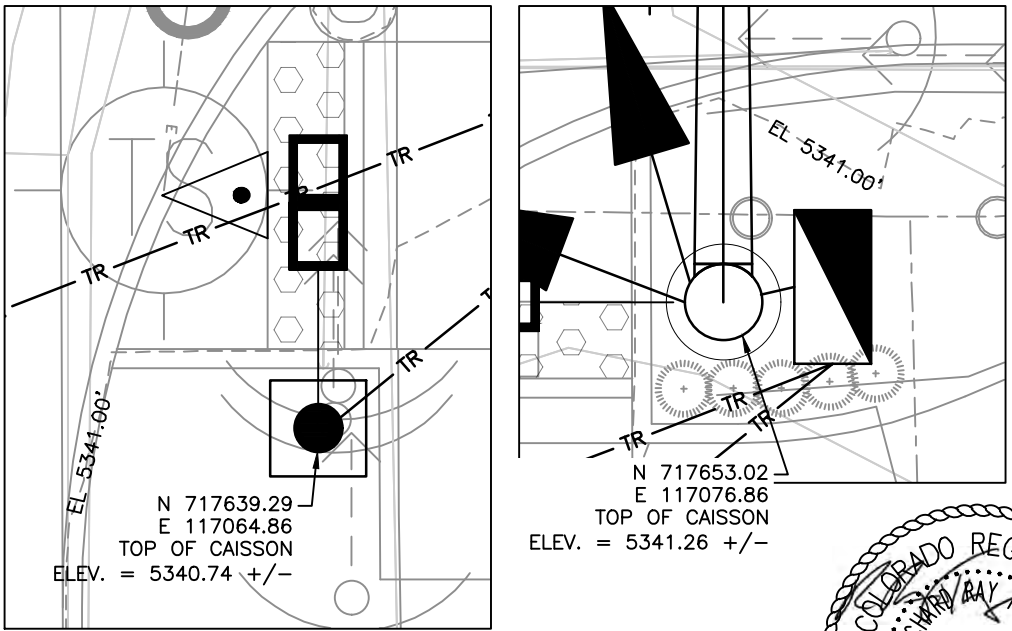
LEGEND

SYMBOL

DESCRIPTION

- TRAFFIC SIGNAL POLE AND MAST ARM
- TRAFFIC SIGNAL PEDESTAL POLE
- PEDESTRIAN PUSH BUTTON POLE
- TRAFFIC SIGNAL HEAD & BACKPLATE
- TRAFFIC SIGNAL HEAD
- PEDESTRIAN SIGNAL HEAD
- PEDESTRIAN PUSH BUTTON STATION
- TRAFFIC SIGNAL CONTROLLER CABINET
- PULL BOX - TYPE LG (24"x36"x18")
- PULL BOX - TYPE M (13"x24"x12")
- SIGNAL CONDUIT (PVC SCH. 80)
- SIGN PANEL
- LUMINAIRE (LED)
- FIRE PREEMPTION UNIT (RESET)
- MICROWAVE RADAR DETECTOR
- DETECTION ZONE & PHASE
- SERVICE METER HOUSING

SE CORNER



HORIZ SCALE: 1"=5'
0' 2.5' 5'

NOTES:

- TOP OF CAISSON ELEVATIONS ARE APPROXIMATELY SIX (6) INCHES BELOW PAVED SURFACE AREAS AND APPROXIMATELY TWO (2) INCHES ABOVE GROUND LEVEL IN GRASS/LANDSCAPED AREAS.
- CAISSONS SHALL BE CONSTRUCTED USING CDOT CLASS BZ CONCRETE NON-AIR ENTRAINED.



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Sheet Revisions			
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**CITY OF ARVADA
PUBLIC WORKS DEPARTMENT**

8101 RALSTON ROAD
ARVADA, CO, 80002

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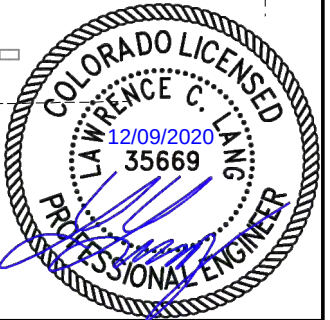
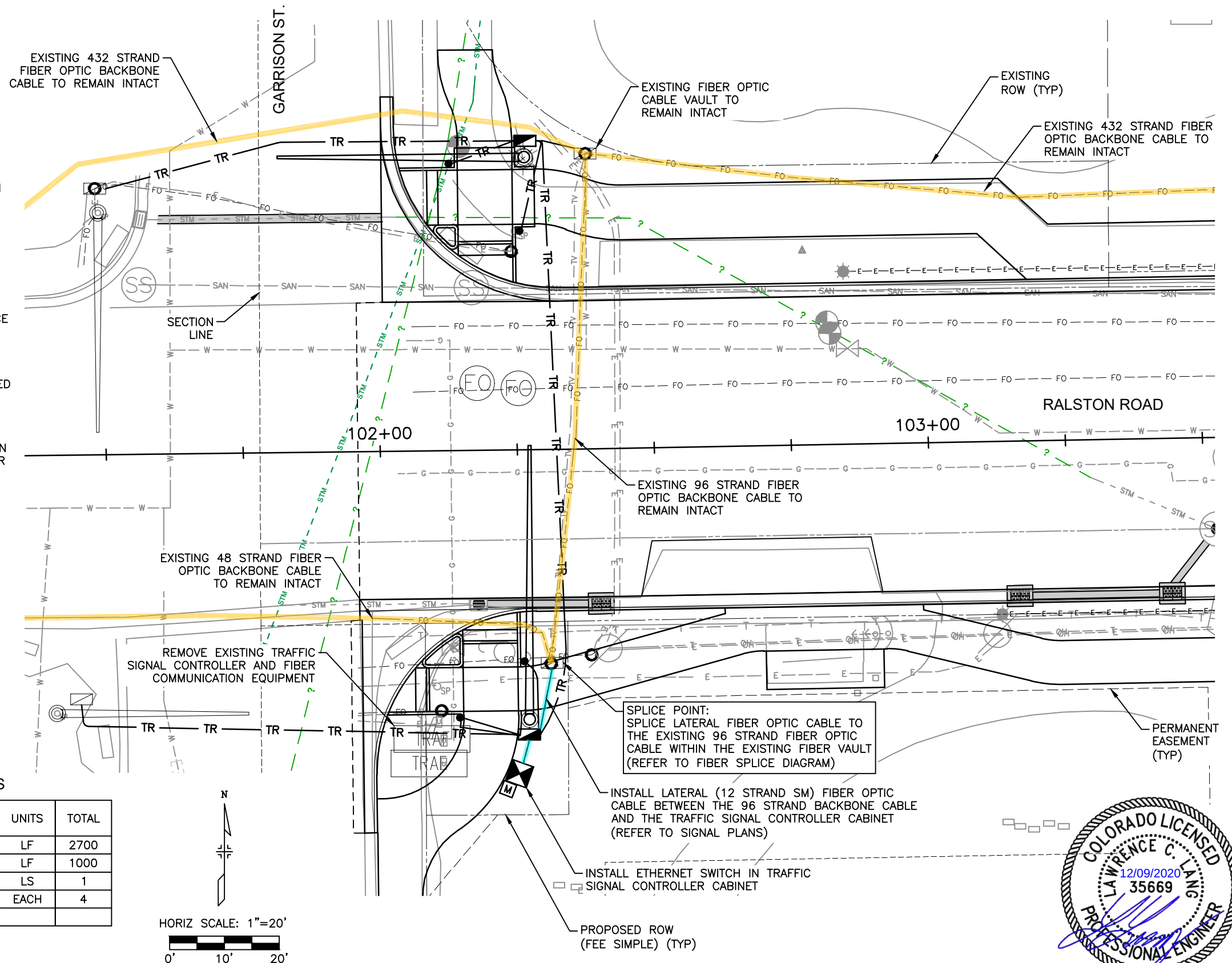
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INTERCONNECT NOTES:

1. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ROUTING OF ALL EXISTING FIBER COMMUNICATION CONDUITS.
2. THE CONTRACTOR SHALL CONTACT THE CITY OF ARVADA TRAFFIC ENGINEER IN ORDER TO SCHEDULE A FIBER SPLICING RECONSTRUCTION MEETING AT LEAST 30 CALENDAR DAYS PRIOR TO SPLICING.
3. THE CONTRACTOR SHALL ONLY SPLICE FIBER OPTIC CABLES AT THE SPLICE LOCATIONS SHOWN ON THE PLANS, OR AS APPROVED BY THE CITY. ALL BACKBONE FIBER OPTIC CABLES SHALL RUN CONTINUOUSLY AND UN-SPLICED FROM END TO END. INTERMEDIATE REEL TO REEL SPLICES SHALL BE AT THE LOCATIONS SHOWN ON THE PLANS. IT IS ESTIMATED THAT 26 FIBER OPTIC FUSION SPLICES (INCLUDING SPLICES FOR TERMINATION TO THE PATCH PANEL) AND FOUR (4) SPLICE CLOSURES WILL BE REQUIRED FOR THIS PROJECT. THE COST OF SPLICE CLOSURES AND SPLICING SHALL BE INCLUDED IN ITEM 614-87010 FIBER OPTIC CABLE (SINGLE MODE) (12 FIBER).
4. FOR NEW FIBER OPTIC CABLE INSTALLATION, THE CONTRACTOR SHALL COIL A MINIMUM OF 50 FEET OF CABLE IN EACH PULL BOX DESIGNATED AS A SPLICE LOCATION AND 25 FEET IN ALL OTHER PULL BOXES.
5. FIBER TESTING SHALL NOT COMMENCE UNTIL ALL FIBER WORK IS COMPLETE. ALL OTHER FIBER TESTING WILL BE COMPLETED BY THE CONTRACTOR. FIBER ACCEPTANCE TEST RESULTS SHALL BE PROVIDED IN PAPER AND ELECTRONIC FORMATS UPON COMPLETION. THE CONTRACTOR SHALL PROVIDE ANY SOFTWARE NECESSARY TO VIEW ELECTRONIC RESULTS. THIS SHALL BE INCLUDED IN THE COST OF ITEM 614-87350 TEST FIBER OPTIC CABLE.
6. ALL ETHERNET SWITCHES SHALL BE SIEMENS RUGGEDCOM RS900GP.

TABULATION OF SIGNAL INTERCONNECT PLAN SHEET ITEMS

ITEM NO.	ITEM DESCRIPTION	UNITS	TOTAL
202-00055	REMOVAL OF FIBER OPTIC CABLE	LF	2700
614-87010	FIBER OPTIC CABLE (SINGLE MODE) (12 FIBER)	LF	1000
614-87350	TEST FIBER OPTIC CABLE	LS	1
614-87690	ETHERNET SWITCH	EACH	4



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6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com	

Sheet Revisions			
Date	Comments	Initials	

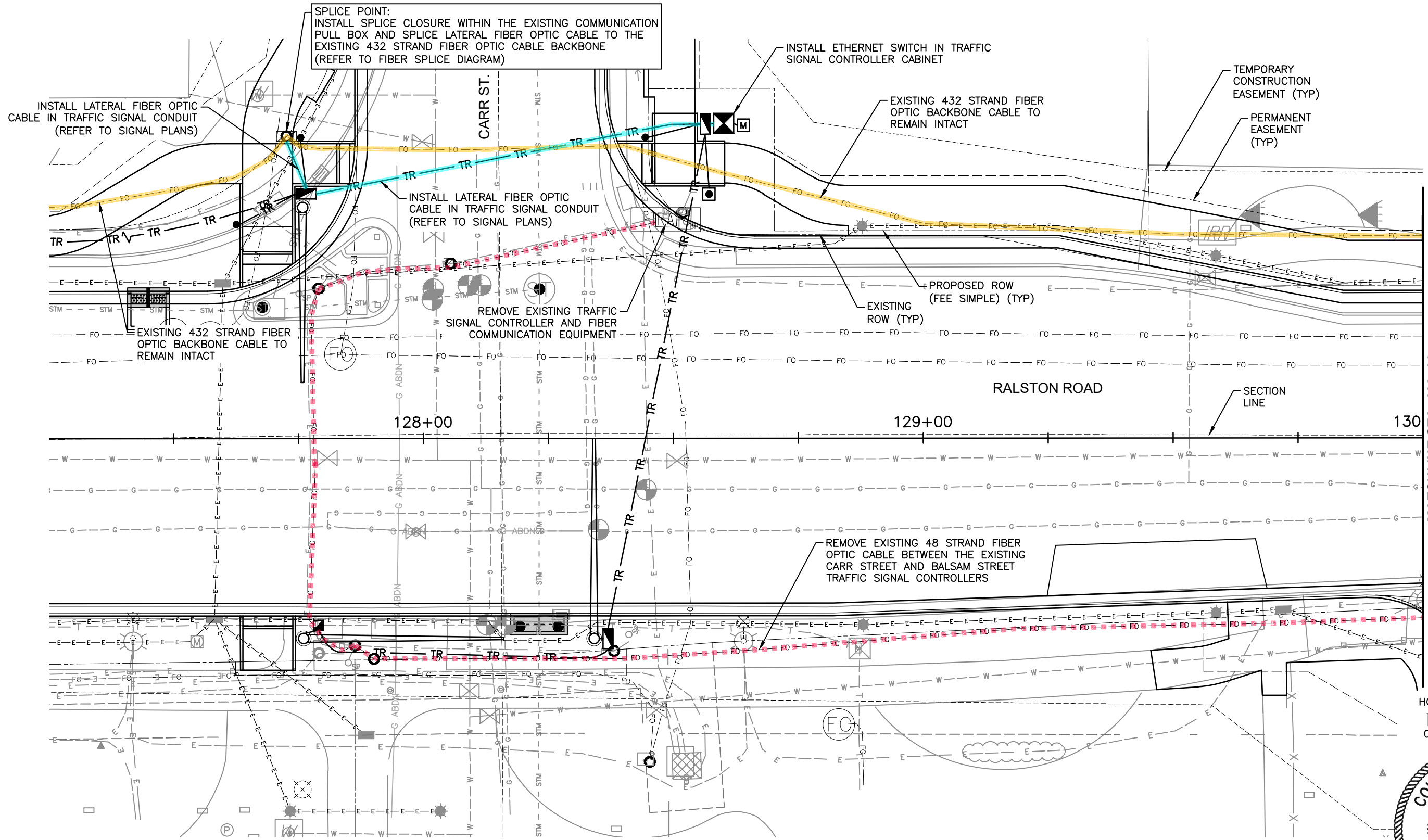


CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

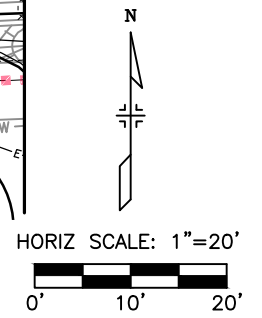
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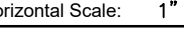
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Detailer:	LCL	Numbers	
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Project No./Code
18-ST-40
Sheet Number 286



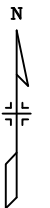
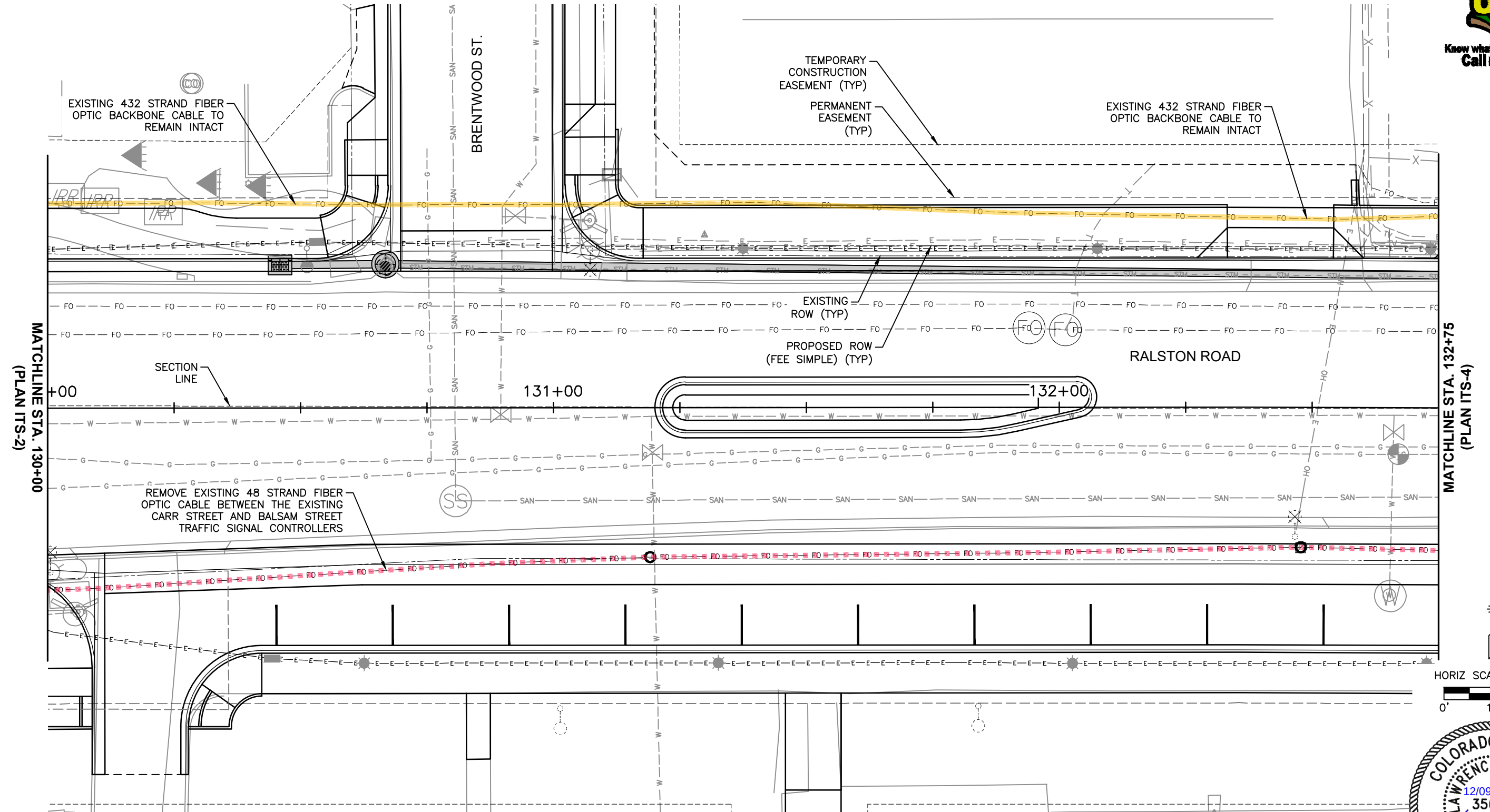
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1. REFER TO THE GENERAL NOTES ON PLAN SHEET ITS-1.



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CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002														

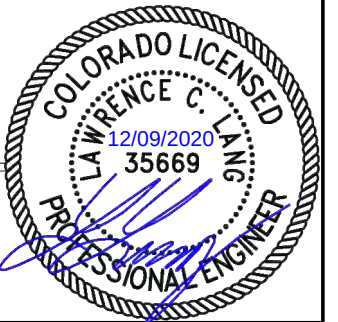


Know what's below.
Call before you dig.



HORIZ SCALE: 1"=20'
0' 10' 20'

- NOTE:
1. REFER TO THE GENERAL NOTES ON PLAN SHEET ITS-1.



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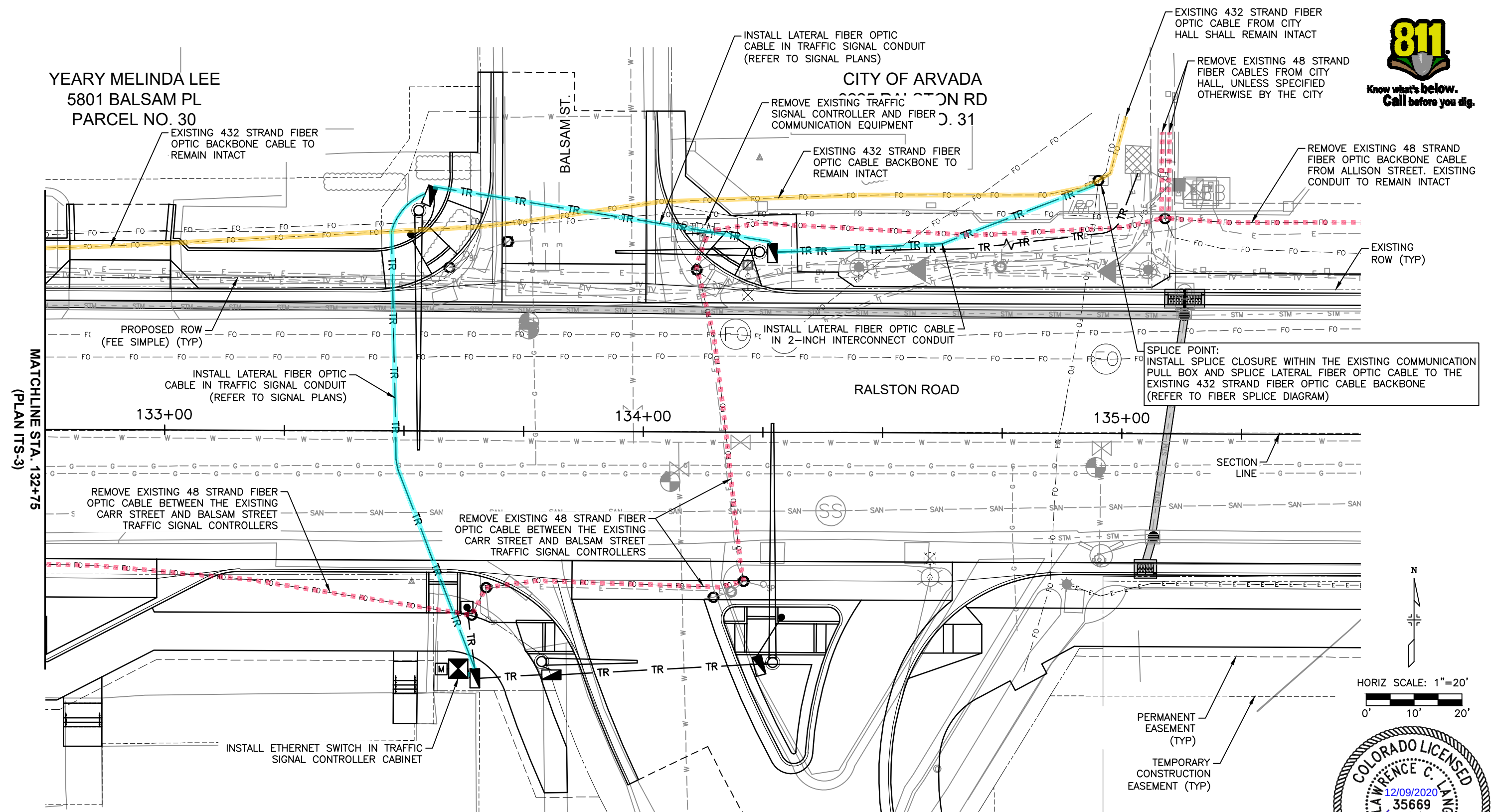


CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

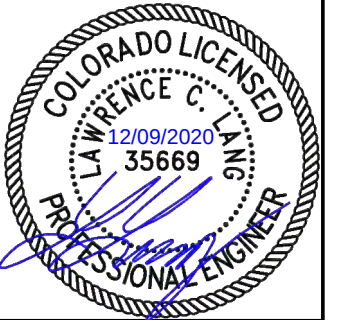
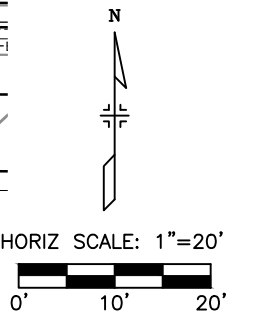
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Know what's below.
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- NOTE:
1. REFER TO THE GENERAL NOTES ON PLAN SHEET ITS-1.



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Sheet Revisions			
Date	Comments	Initials	

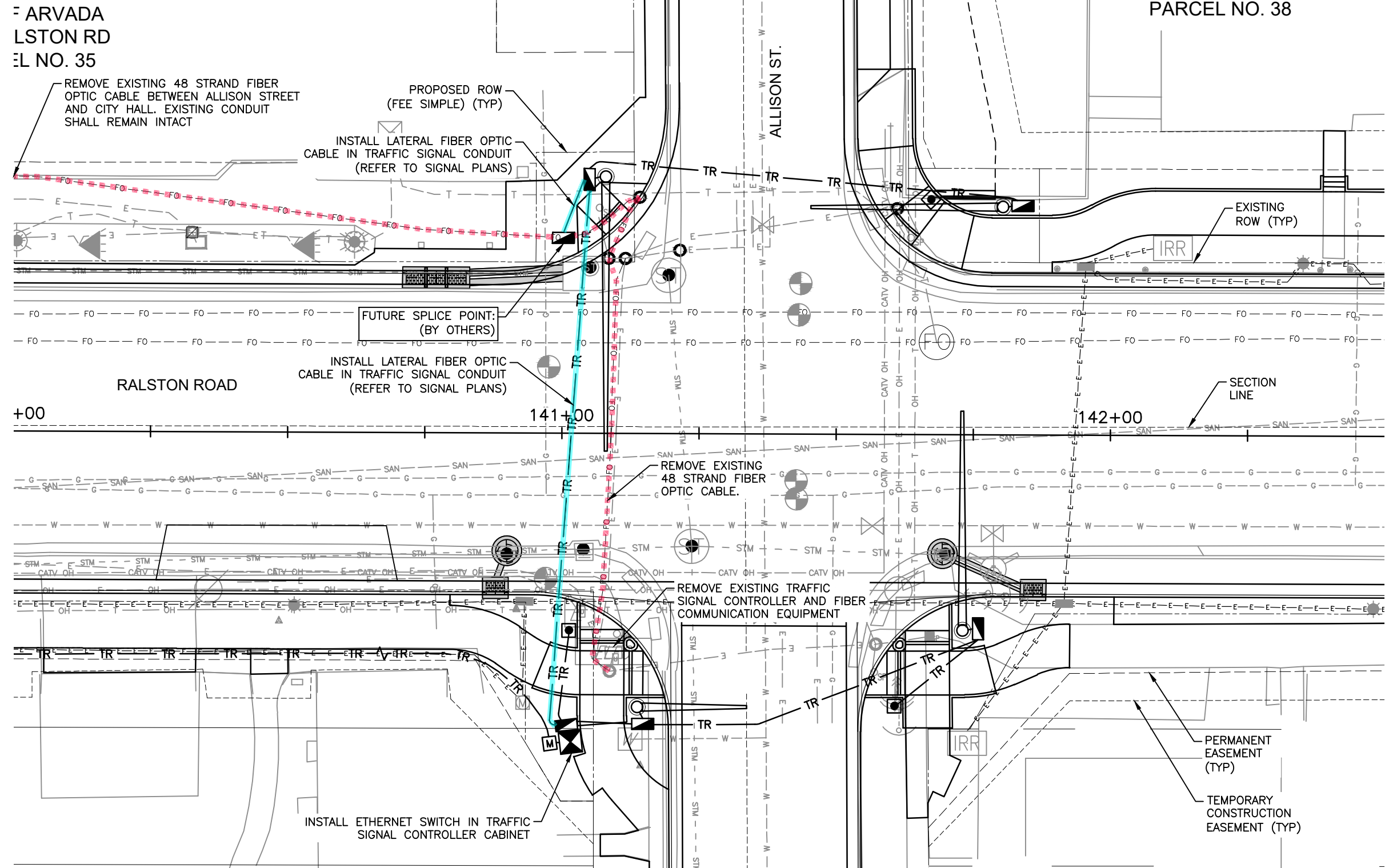
CITY OF ARVADA
PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD
ARVADA, CO, 80002

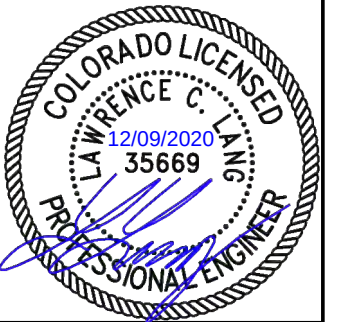
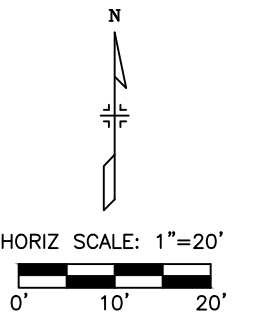
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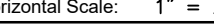
Know what's below.
Call before you dig.



- NOTE:
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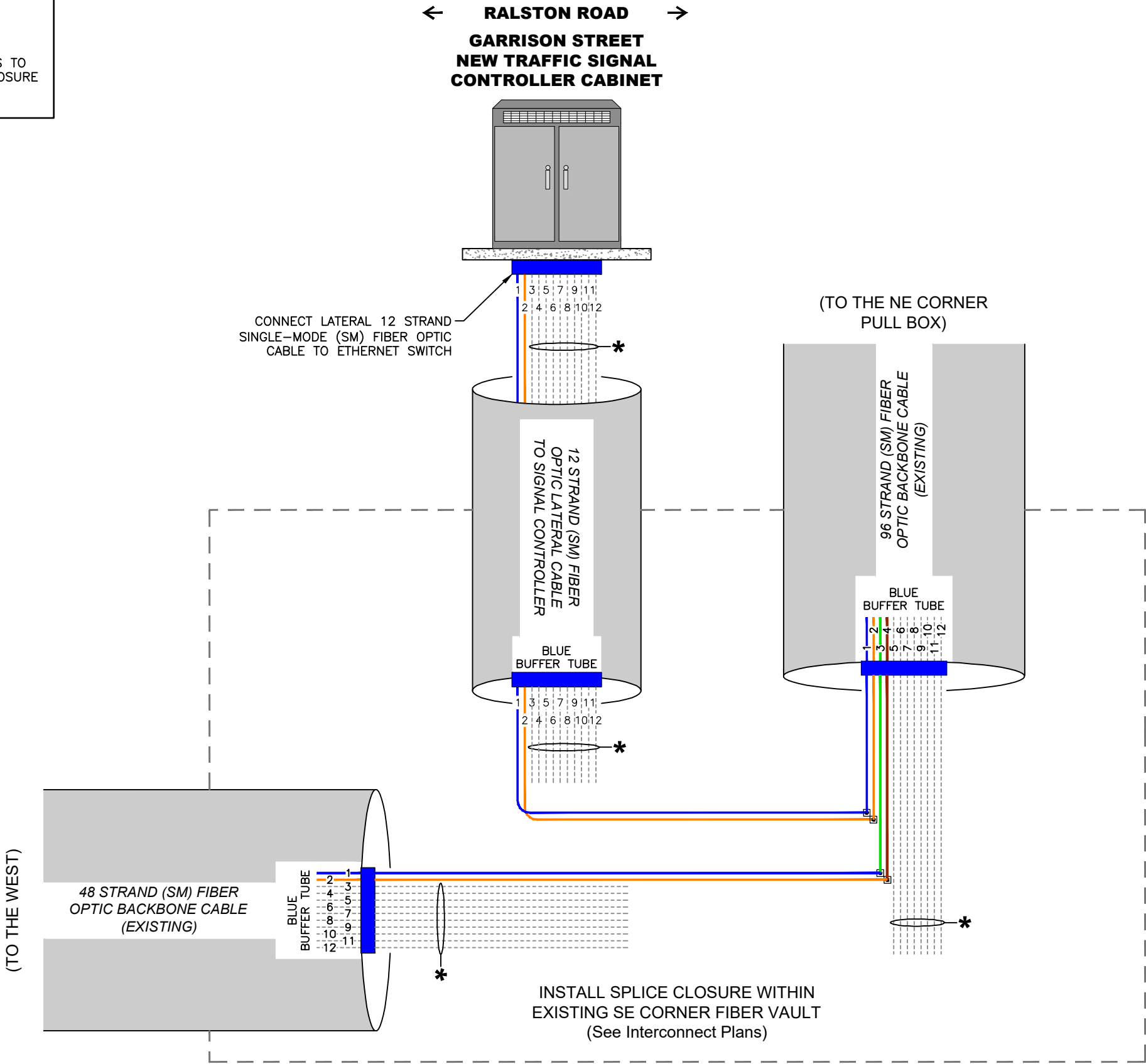


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 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Detailer: LCL		Numbers		
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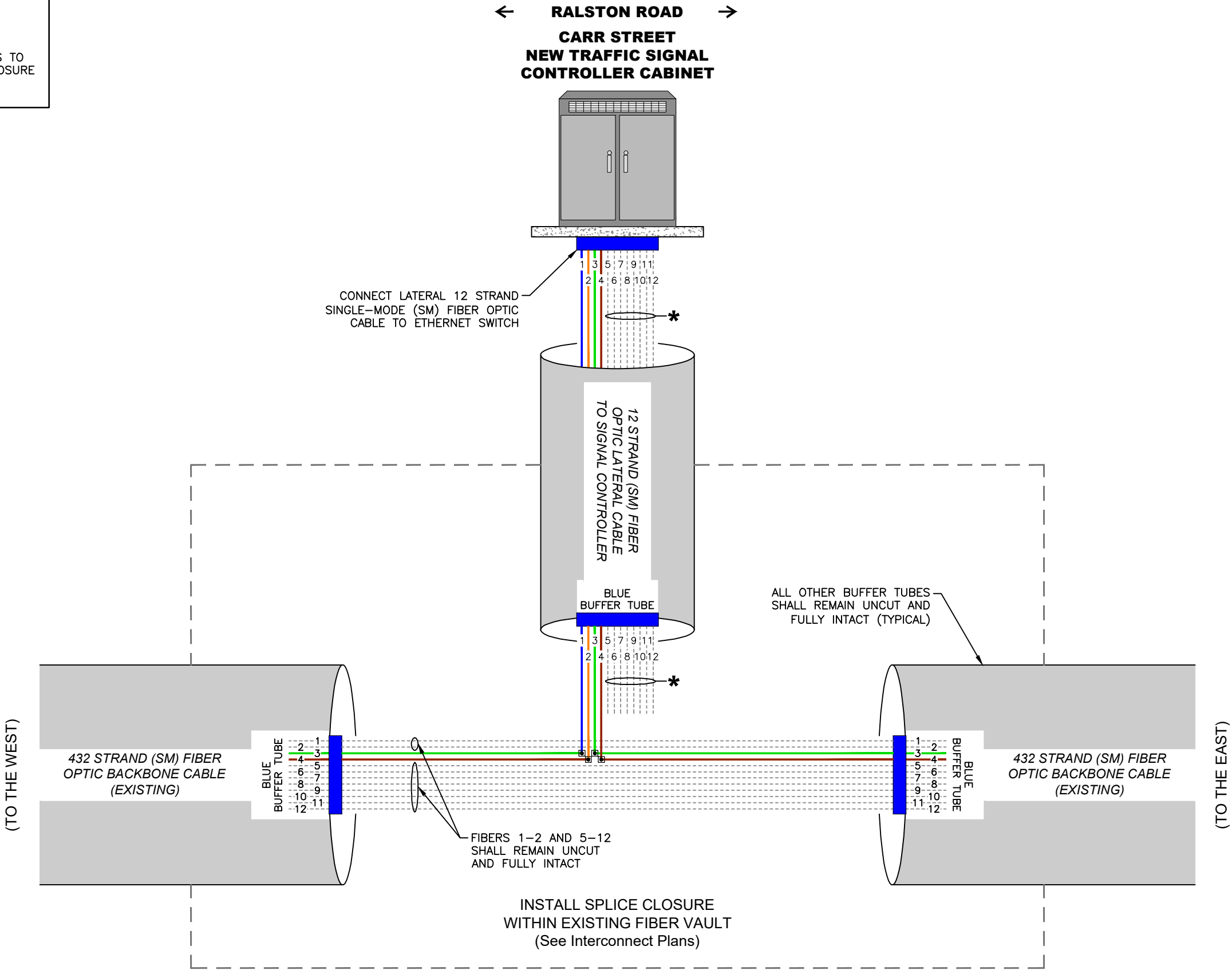
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- * BUFFER TUBES AND FIBER STRANDS TO BE NEATLY MANAGED IN SPLICE CLOSURE AND/OR CABINET SPLICE TRAY



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LEGEND

- NEW FUSION FIBER SPLICE
- * BUFFER TUBES AND FIBER STRANDS TO BE NEATLY MANAGED IN SPLICE CLOSURE AND/OR CABINET SPLICE TRAY



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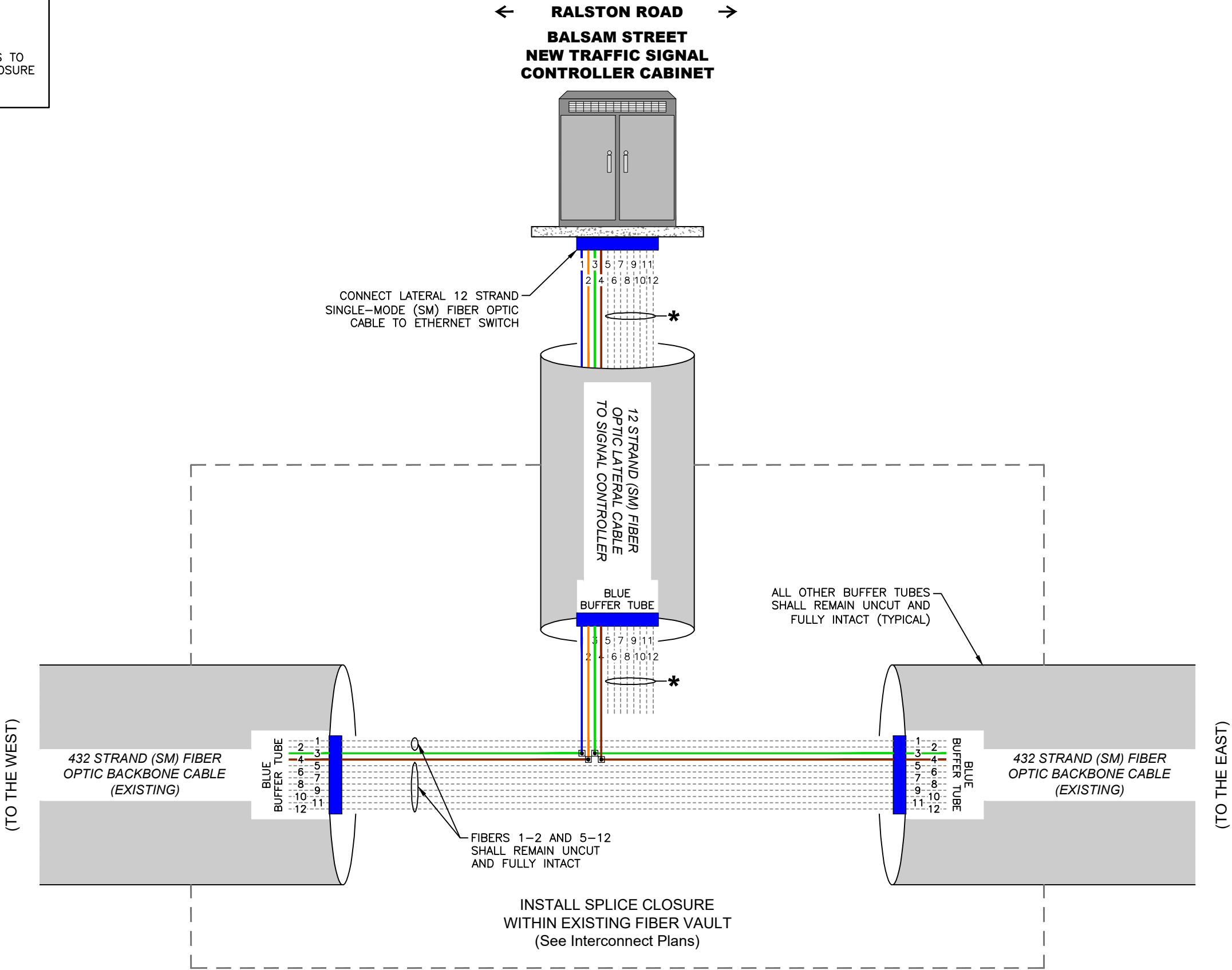
CITY OF ARVADA
PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD
ARVADA, CO, 80002

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LEGEND

- NEW FUSION FIBER SPLICE
- * BUFFER TUBES AND FIBER STRANDS TO BE NEATLY MANAGED IN SPLICE CLOSURE AND/OR CABINET SPLICE TRAY



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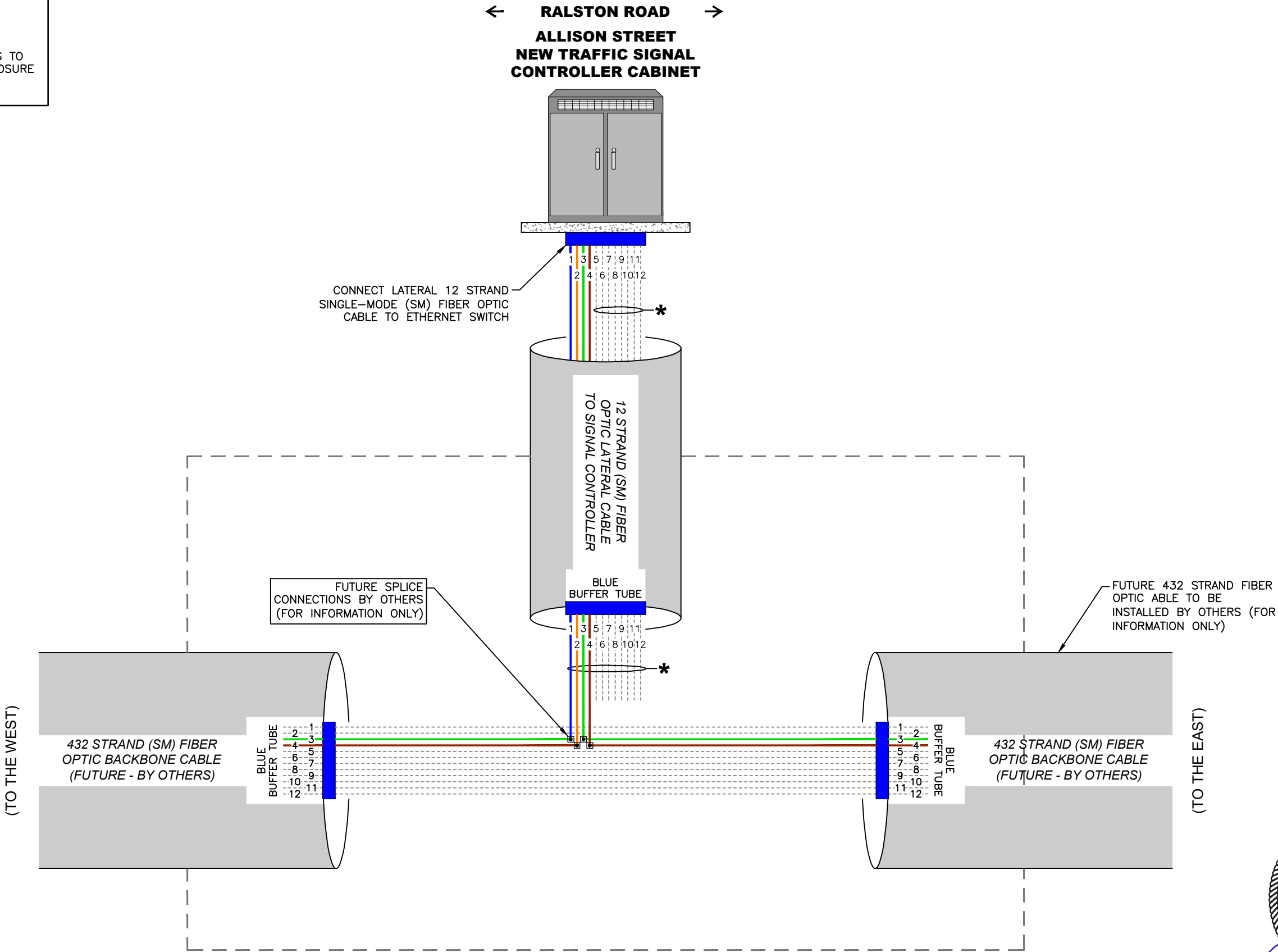
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PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD
ARVADA, CO, 80002

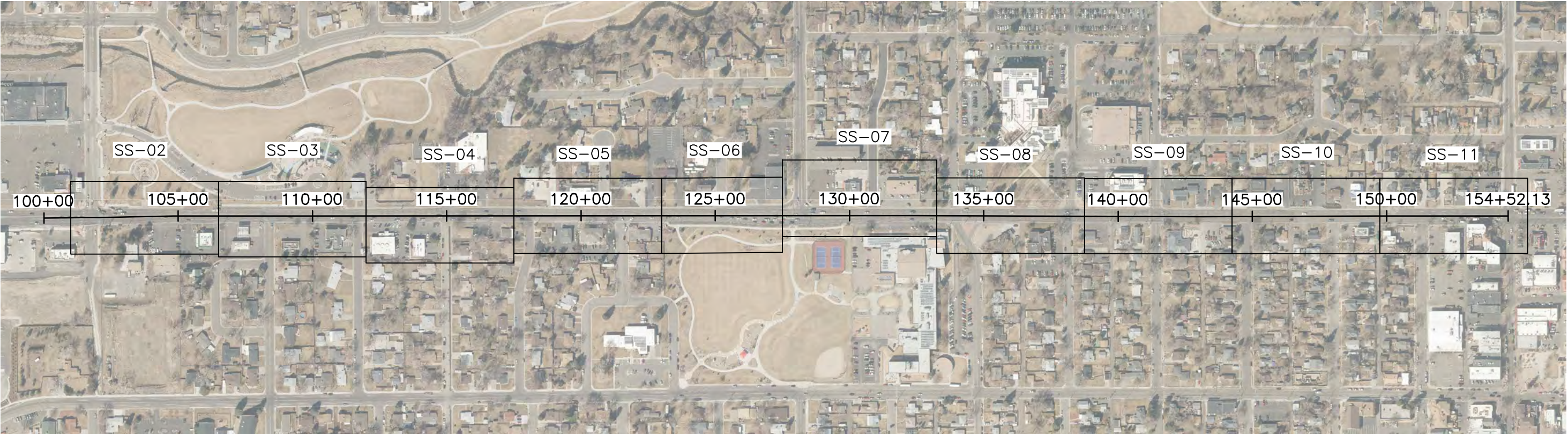
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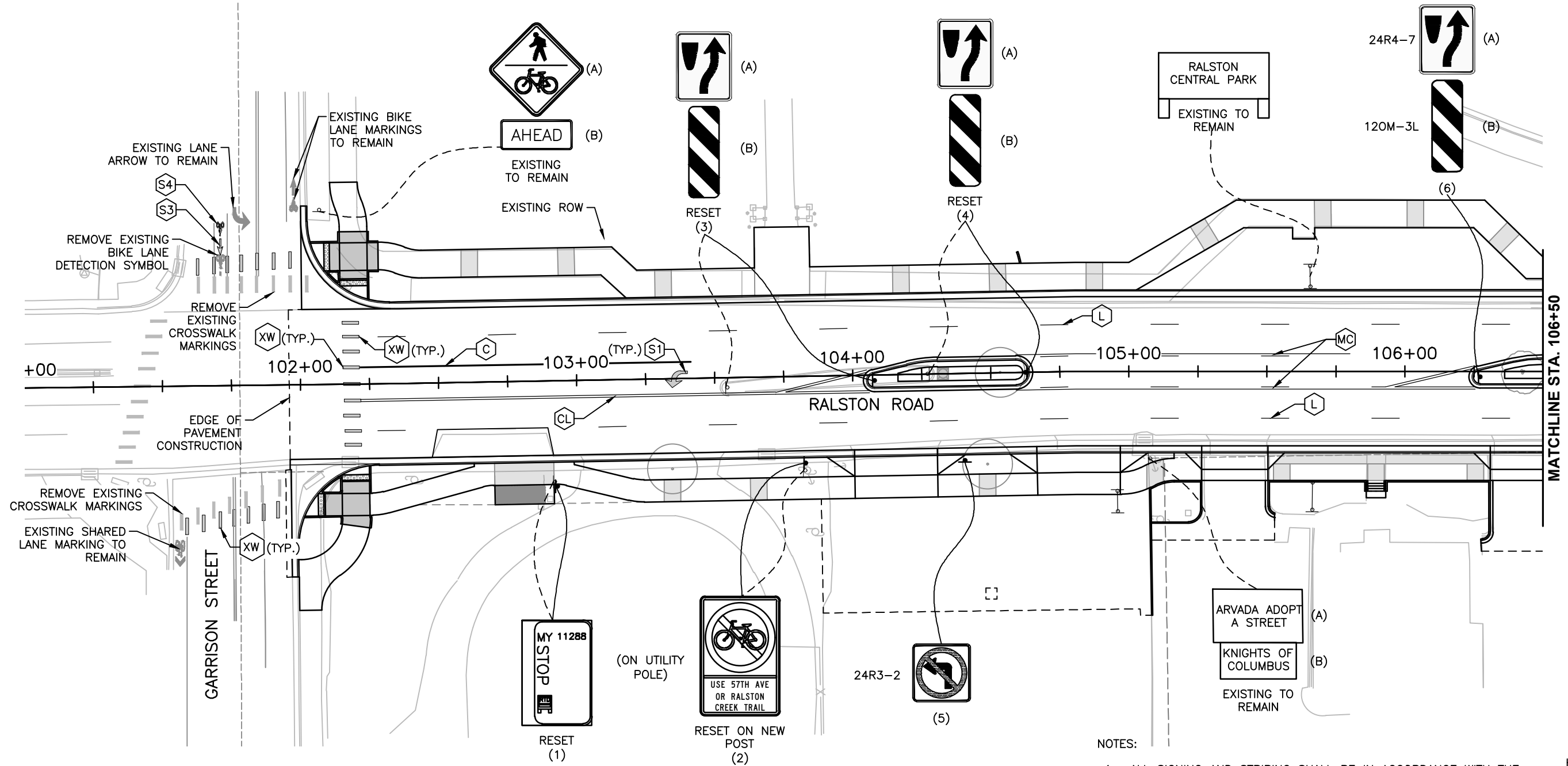


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PAVEMENT MARKING LEGEND		
 BIKE LANE: SOLID WHITE, 4" WIDE	 MEDIAN CENTERLINES: SOLID YELLOW, 4" WIDE & BROKEN YELLOW, 4" WIDE (10' SEGMENTS, 30' GAPS)	 SYMBOL 3: (2 PIECE ARROW), 4 SF SOLID WHITE
 CHANNELIZING LINE: SOLID WHITE, 6" WIDE	 PARKING LINE: SOLID YELLOW, 4" WIDE (8' SEGMENTS, 23' SEPARATION)	 SYMBOL 4: (BIKE LANE SYMBOL), 10.5 SF SOLID WHITE
 CENTERLINE (DOUBLE): SOLID YELLOW, 4" WIDE, 4" SEPARATION	 SYMBOL 1: (LEFT ARROW), 16.1 SF SOLID WHITE	 STOP LINE: SOLID WHITE, 24" WIDE
 DOTTED EXTENSION LINE: BROKEN WHITE, 4" WIDE (2' SEGMENTS, 4' GAPS)	 SYMBOL 2: (RIGHT ARROW), 16.1 SF SOLID WHITE	 CROSSWALK LINE: SOLID WHITE, 1'x6'
 LANE LINE: BROKEN WHITE, 4" WIDE (10' SEGMENTS, 30' GAPS)		

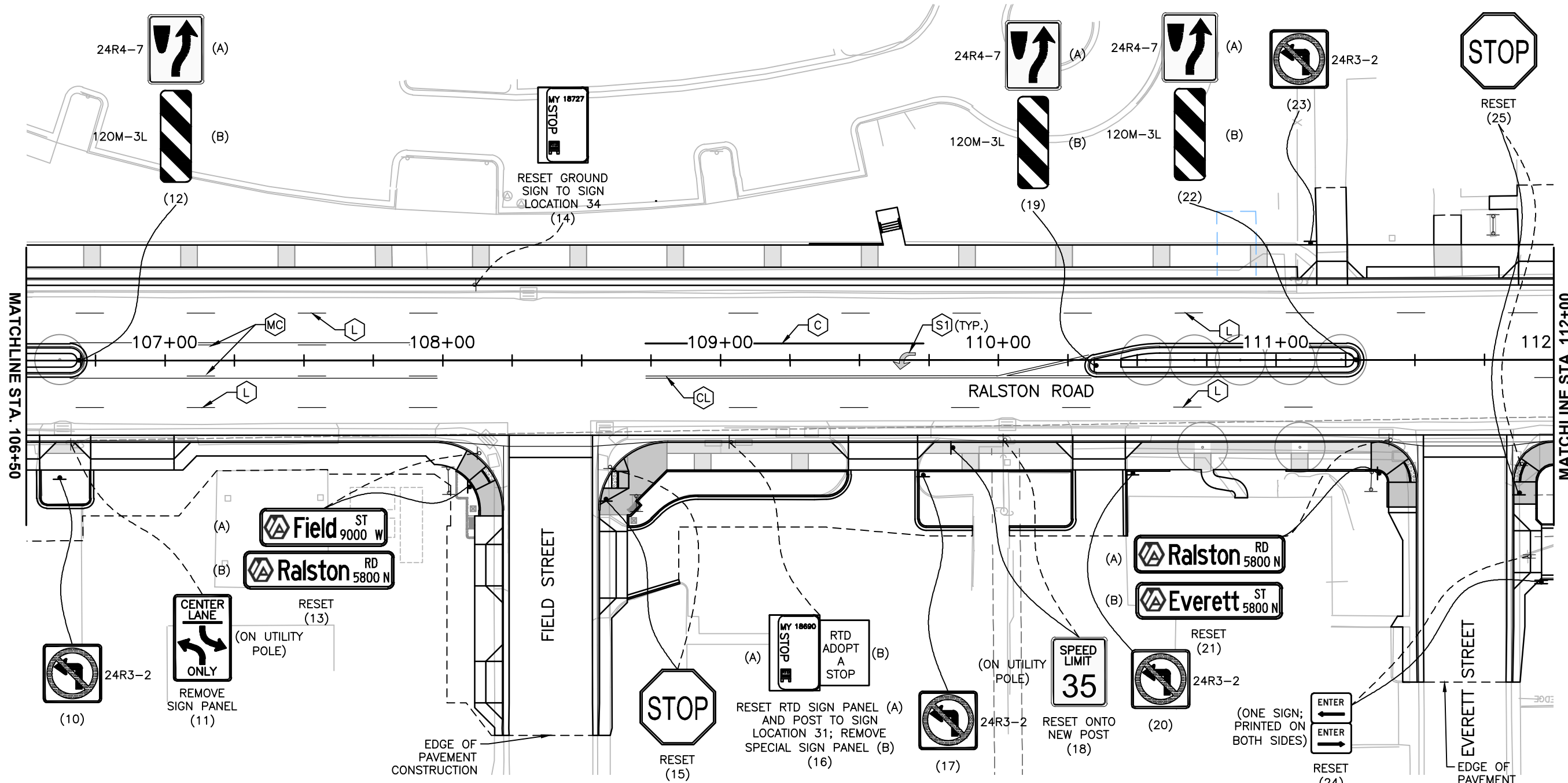
- NOTES:
1. ALL SIGNING AND STRIPING SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF THE M.U.T.C.D.
 2. SIGN POSTS AND INSTALLATION SHALL BE IN ACCORDANCE WITH CITY OF ARVADA STANDARD DETAIL TR-1.
 3. ALL SIGNS LOCATED IN CONCRETE OR PAVERS REQUIRE A PVC SLEEVE FOR THE SIGN POSTS PER CITY STANDARDS. NO SEPARATE PAYMENT SHALL BE MADE FOR SLEEVES, THEY SHALL BE INCLUDED IN THE COST OF SIGN POSTS.
 4. ALL BIKE LANE SYMBOLS SHALL BE IN ACCORDANCE WITH CITY OF ARVADA DETAIL TR-3.
 5. ALL CROSSWALK MARKINGS (XW1), PAVEMENT ARROWS (S1, S2, AND S3), AND BIKE LANE SYMBOLS (S4) ARE TO BE THERMOPLASTIC. ALL LANE LINES ARE TO BE EPOXY PAINT.
 6. EXISTING CROSSWALK AND BIKE LANE DETECTION SYMBOL MARKINGS THAT ARE IDENTIFIED ON THIS SHEET TO BE REMOVED SHALL BE REMOVED INCIDENTAL TO THE INSTALLATION OF THE NEW CROSSWALK AND BIKE LANE DETECTION SYMBOL MARKINGS.

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0' 20' 40'

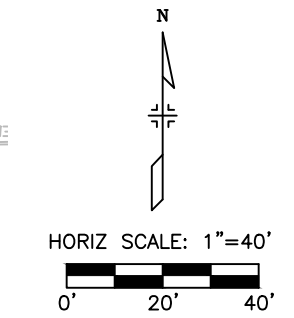
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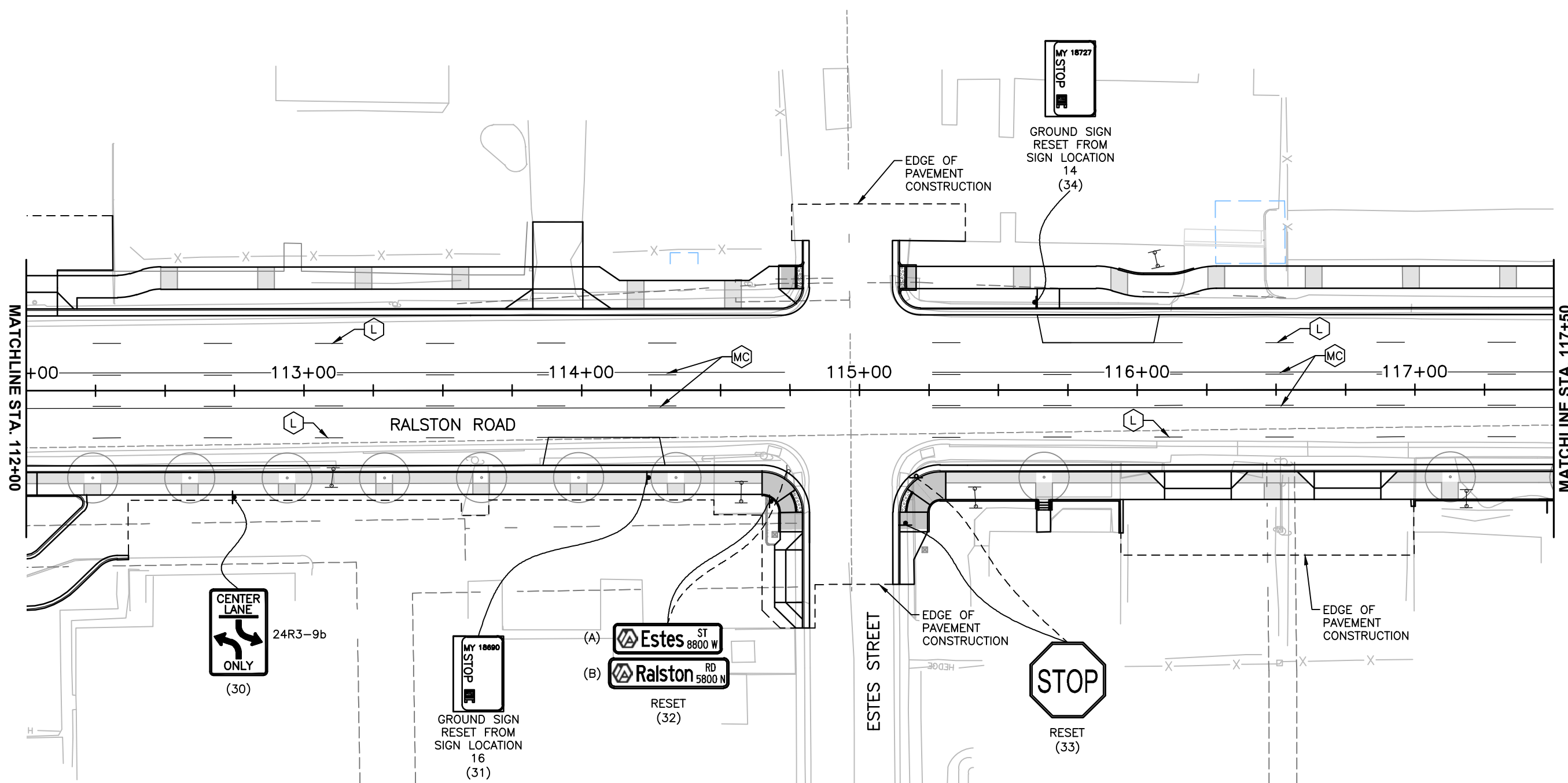
PAVEMENT MARKING LEGEND			
BIKE LANE: SOLID WHITE, 4" WIDE	MEDIAN CENTERLINES: SOLID YELLOW, 4" WIDE & BROKEN YELLOW, 4" WIDE (10' SEGMENTS, 30' GAPS)	SYMBOL 3: (2 PIECE ARROW), 4 SF SOLID WHITE	
CHANNELIZING LINE: SOLID WHITE, 6" WIDE	PARKING LINE: SOLID YELLOW, 4" WIDE (8' SEGMENTS, 23' SEPARATION)	SYMBOL 4: (BIKE LANE SYMBOL), 10.5 SF SOLID WHITE	
CENTERLINE (DOUBLE): SOLID YELLOW, 4" WIDE, 4" SEPARATION	SYMBOL 1: (LEFT ARROW), 16.1 SF SOLID WHITE	STOP LINE: SOLID WHITE, 24" WIDE	
DOTTED EXTENSION LINE: BROKEN WHITE, 4" WIDE (2' SEGMENTS, 4' GAPS)	SYMBOL 2: (RIGHT ARROW), 16.1 SF SOLID WHITE	CROSSWALK LINE: SOLID WHITE, 1'x6'	
LANE LINE: BROKEN WHITE, 4" WIDE (10' SEGMENTS, 30' GAPS)			

- NOTES:
- ALL SIGNING AND STRIPING SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF THE M.U.T.C.D.
 - SIGN POSTS AND INSTALLATION SHALL BE IN ACCORDANCE WITH CITY OF ARVADA STANDARD DETAIL TR-1.
 - ALL SIGNS LOCATED IN CONCRETE OR PAVERS REQUIRE A PVC SLEEVE FOR THE SIGN POSTS PER CITY STANDARDS. NO SEPARATE PAYMENT SHALL BE MADE FOR SLEEVES, THEY SHALL BE INCLUDED IN THE COST OF SIGN POSTS.
 - ALL BIKE LANE SYMBOLS SHALL BE IN ACCORDANCE WITH CITY OF ARVADA DETAIL TR-3.
 - ALL CROSSWALK MARKINGS (XW1), PAVEMENT ARROWS (S1, S2, AND S3), AND BIKE LANE SYMBOLS (S4) ARE TO BE THERMOPLASTIC. ALL LANE LINES ARE TO BE EPOXY PAINT.



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Date	Comments	Initials																		
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6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com			CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002			Sheet Number 297														

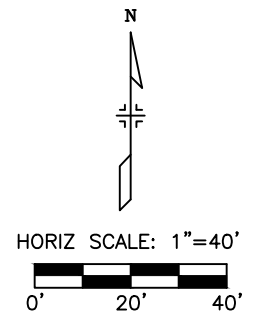


PAVEMENT MARKING LEGEND

BIKE LANE: SOLID WHITE, 4" WIDE	MEDIAN CENTERLINES: SOLID YELLOW, 4" WIDE & BROKEN YELLOW, 4" WIDE (10' SEGMENTS, 30' GAPS)	SYMBOL 3: (2 PIECE ARROW), 4 SF SOLID WHITE
CHANNELIZING LINE: SOLID WHITE, 6" WIDE	PARKING LINE: SOLID YELLOW, 4" WIDE (8' SEGMENTS, 23' SEPARATION)	SYMBOL 4: (BIKE LANE SYMBOL), 10.5 SF SOLID WHITE
CENTERLINE (DOUBLE): SOLID YELLOW, 4" WIDE, 4" SEPARATION	SYMBOL 1: (LEFT ARROW), 16.1 SF SOLID WHITE	STOP LINE: SOLID WHITE, 24" WIDE
DOTTED EXTENSION LINE: BROKEN WHITE, 4" WIDE (2' SEGMENTS, 4' GAPS)	SYMBOL 2: (RIGHT ARROW), 16.1 SF SOLID WHITE	CROSSWALK LINE: SOLID WHITE, 1'x6'
LANE LINE: BROKEN WHITE, 4" WIDE (10' SEGMENTS, 30' GAPS)		

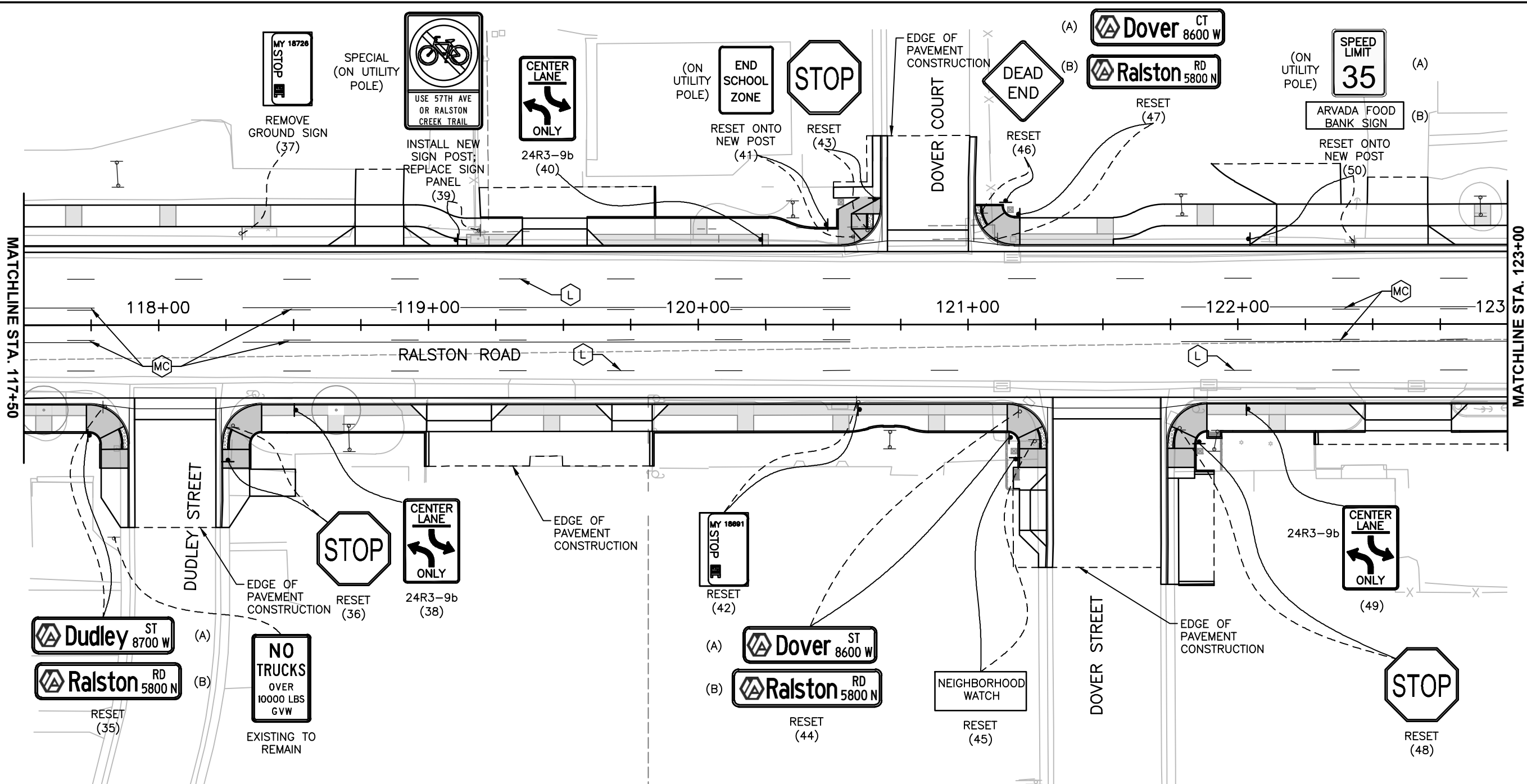
NOTES:

1. ALL SIGNING AND STRIPING SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF THE M.U.T.C.D.
2. SIGN POSTS AND INSTALLATION SHALL BE IN ACCORDANCE WITH CITY OF ARVADA STANDARD DETAIL TR-1.
3. ALL SIGNS LOCATED IN CONCRETE OR PAVERS REQUIRE A PVC SLEEVE FOR THE SIGN POSTS PER CITY STANDARDS. NO SEPARATE PAYMENT SHALL BE MADE FOR SLEEVES, THEY SHALL BE INCLUDED IN THE COST OF SIGN POSTS.
4. ALL BIKE LANE SYMBOLS SHALL BE IN ACCORDANCE WITH CITY OF ARVADA DETAIL TR-3.
5. ALL CROSSWALK MARKINGS (XW1), PAVEMENT ARROWS (S1, S2, AND S3), AND BIKE LANE SYMBOLS (S4) ARE TO BE THERMOPLASTIC. ALL LANE LINES ARE TO BE EPOXY PAINT.



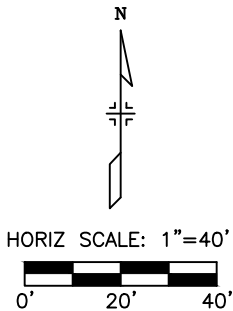
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Print Date: 12/7/2020 2:37:19 PM		Sheet Revisions			CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed	RALSTON RD - YUKON ST TO GARRISON ST SIGNING AND STRIPING PLANS RALSTON ROAD (STA. 112+00 - STA. 117+50)			Project No./Code 18-ST-40	
File Name: 118355_TRPL_SH01.DWG							No Revisions:			Designer: RRF Detailer: DEM	
Horizontal Scale: 1" = 40' Vertical Scale: N/A							Sheet Subset: TRAFFIC			Subset Sheets: SS-04 of 11	
		6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com									



PAVEMENT MARKING LEGEND					
	BIKE LANE:				
	SOLID WHITE, 4" WIDE				
	CHANNELIZING LINE:				
	SOLID WHITE, 6" WIDE				
	CENTERLINE (DOUBLE):				
	SOLID YELLOW, 4" WIDE, 4" SEPARATION				
	DOTTED EXTENSION LINE: BROKEN WHITE,				
	4" WIDE (2' SEGMENTS, 4' GAPS)				
	LANE LINE: BROKEN WHITE, 4" WIDE				
	(10' SEGMENTS, 30' GAPS)				
	MEDIAN CENTERLINES: SOLID YELLOW, 4" WIDE &				
	BROKEN YELLOW, 4" WIDE (10' SEGMENTS, 30' GAPS)				
	PARKING LINE: SOLID YELLOW,				
	4" WIDE (8' SEGMENTS, 23' SEPARATION)				
	SYMBOL 1: (LEFT ARROW), 16.1 SF				
	SOLID WHITE				
	SYMBOL 2: (RIGHT ARROW), 16.1 SF				
	SOLID WHITE				
	SYMBOL 3: (2 PIECE ARROW), 4 SF				
	SOLID WHITE				
	SYMBOL 4: (BIKE LANE SYMBOL), 10.5 SF				
	SOLID WHITE				
	STOP LINE:				
	SOLID WHITE, 24" WIDE				
	CROSSWALK LINE:				
	SOLID WHITE, 1'x6'				

- NOTES:
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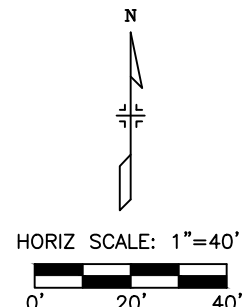
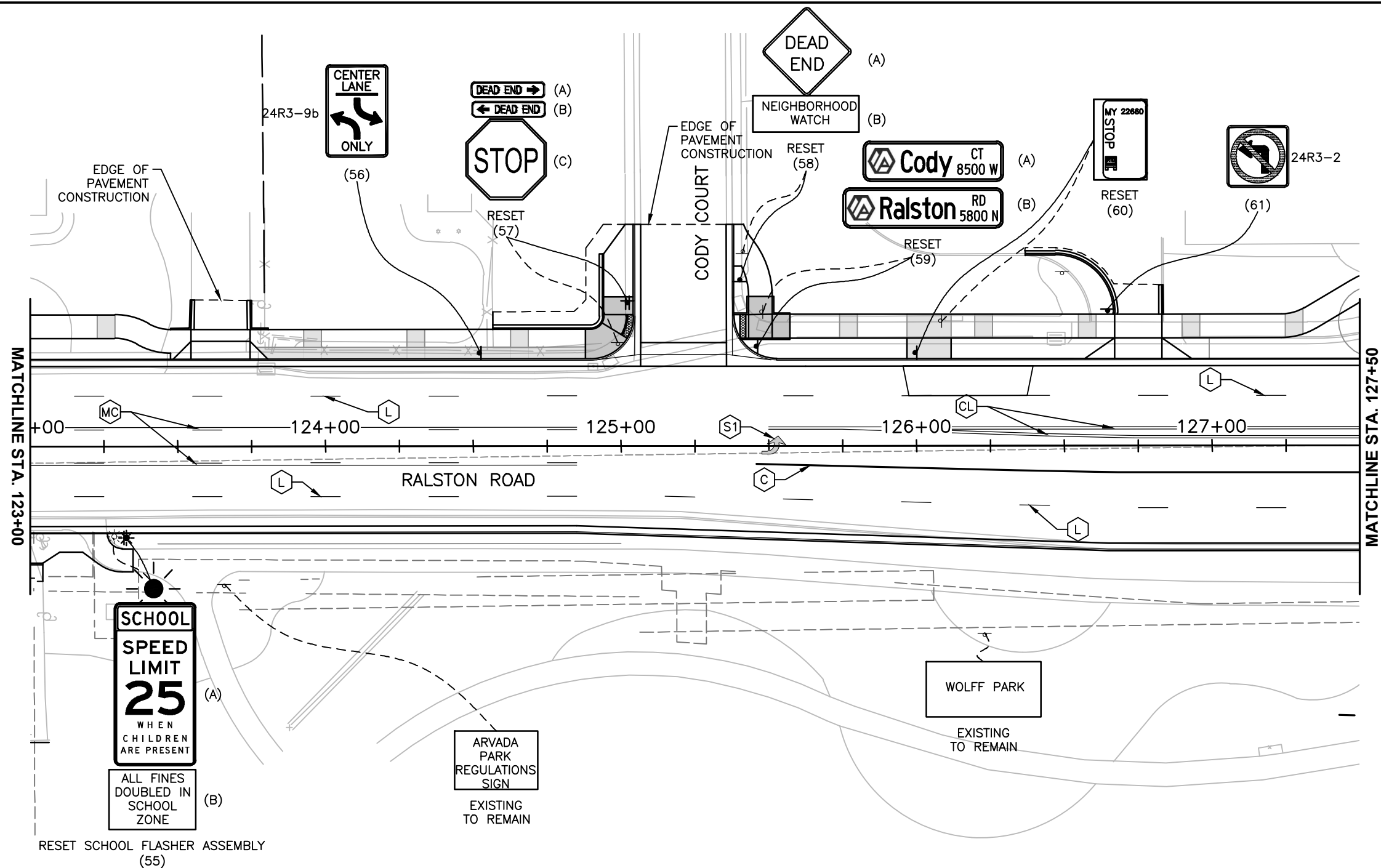
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Sheet Revisions			
R-X	Date	Comments	Initials

CITY OF ARVADA
PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST SIGNING AND STRIPING PLANS RALSTON ROAD (STA. 117+50 - STA. 123+00)			Project No./Code
No Revisions:					18-ST-40
Revised:		Designer: RRF	Structure		
		Detailer: DEM	Numbers		
Void:		Sheet Subset: TRAFFIC	Subset Sheets: SS-05 of 11		Sheet Number 299



PAVEMENT MARKING LEGEND					
	BIKE LANE:				
	SOLID WHITE, 4" WIDE				
	CHANNELIZING LINE:				
	SOLID WHITE, 6" WIDE				
	CENTERLINE (DOUBLE):				
	SOLID YELLOW, 4" WIDE, 4" SEPARATION				
	DOTTED EXTENSION LINE: BROKEN WHITE,				
	4" WIDE (2' SEGMENTS, 4' GAPS)				
	LANE LINE: BROKEN WHITE, 4" WIDE				
	(10' SEGMENTS, 30' GAPS)				
	MEDIAN CENTERLINES: SOLID YELLOW, 4" WIDE &				
	BROKEN YELLOW, 4" WIDE (10' SEGMENTS, 30' GAPS)				
	PARKING LINE: SOLID YELLOW,				
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	SYMBOL 1: (LEFT ARROW), 16.1 SF				
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	STOP LINE:				
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	CROSSWALK LINE:				
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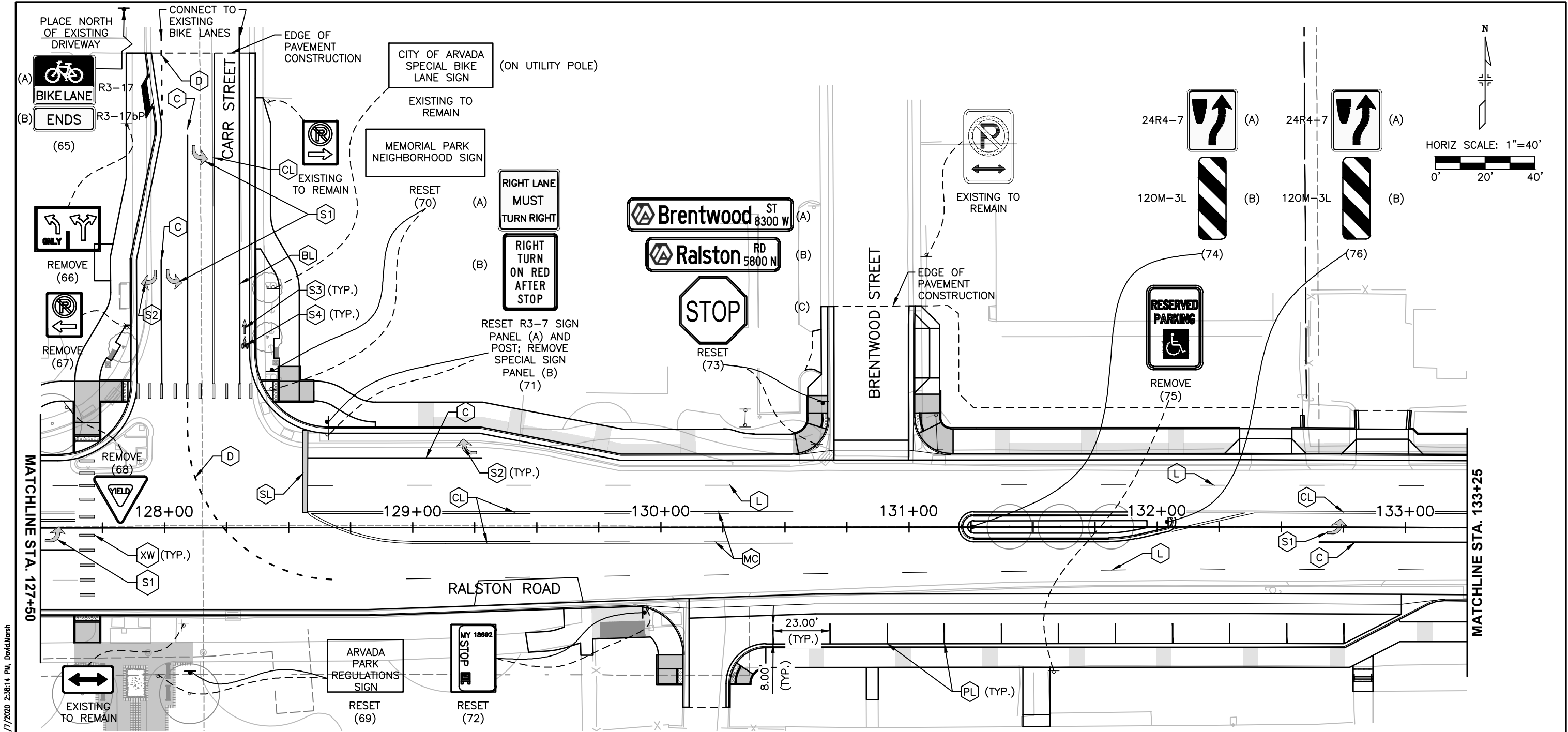
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Print Date: 12/7/2020 2:37:44 PM		Sheet Revisions <table><thead><tr><th>Date</th><th>Comments</th><th>Initials</th></tr></thead><tbody><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></tbody></table>	Date	Comments	Initials										CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed No Revisions: Revised: Void:	RALSTON RD - YUKON ST TO GARRISON ST SIGNING AND STRIPING PLANS RALSTON ROAD (STA. 123+00 - STA. 127+50) Designer: RRF Detailer: DEM Sheet Subset: TRAFFIC Structure Numbers Subset Sheets: SS-06 of 11	Project No./Code 18-ST-40 Sheet Number 300
Date	Comments	Initials																
File Name: 118355_TRPL_SH01.DWG																		
Horizontal Scale: 1" = 40' Vertical Scale: N/A																		

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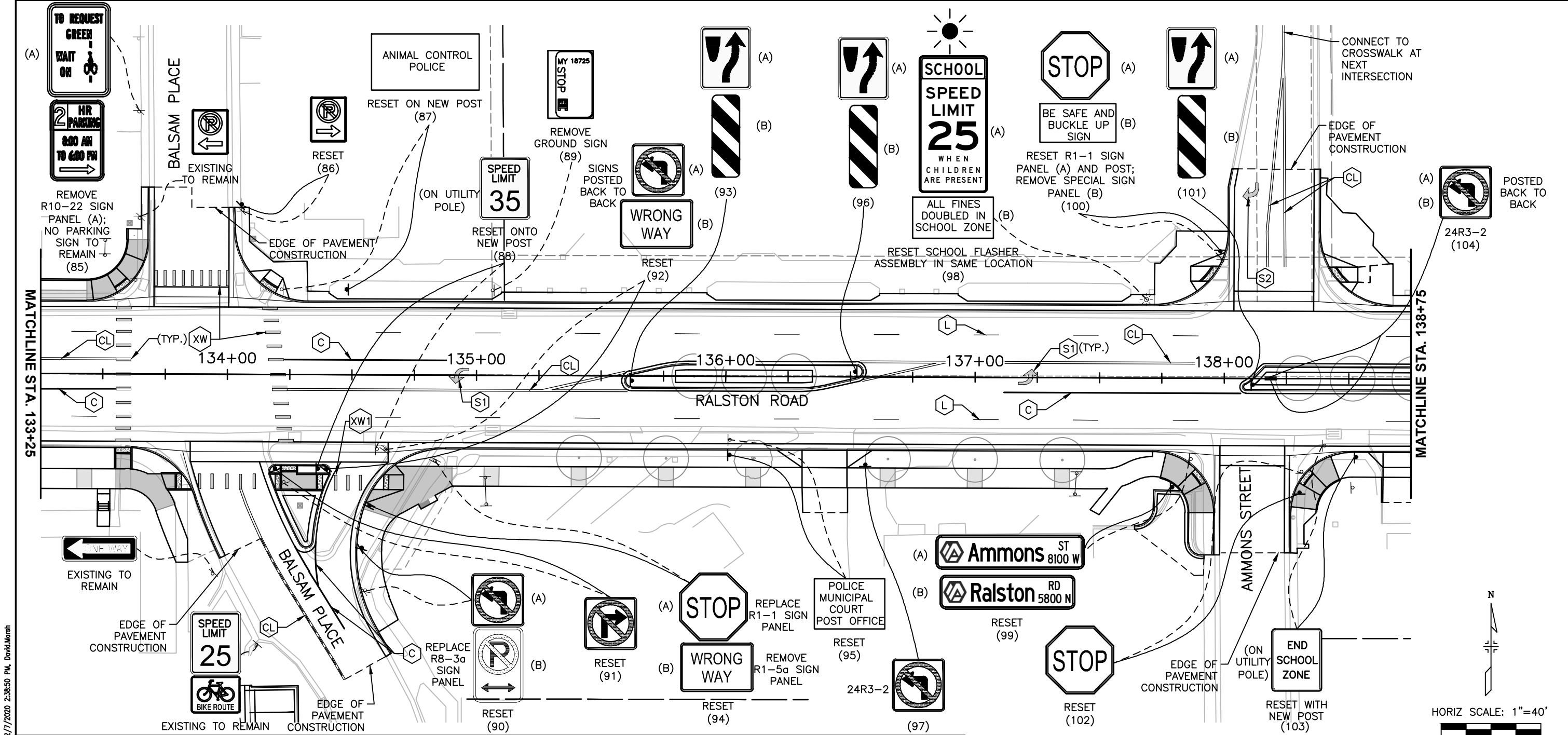
PAVEMENT MARKING LEGEND					
 BIKE LANE: SOLID WHITE, 4" WIDE	 MEDIAN CENTERLINES: SOLID YELLOW, 4" WIDE & BROKEN YELLOW, 4" WIDE (10' SEGMENTS, 30' GAPS)	 SYMBOL 3: (2 PIECE ARROW), 4 SF SOLID WHITE			
 CHANNELIZING LINE: SOLID WHITE, 6" WIDE	 PARKING LINE: SOLID YELLOW, 4" WIDE (8' SEGMENTS, 23' SEPARATION)	 SYMBOL 4: (BIKE LANE SYMBOL), 10.5 SF SOLID WHITE			
 CENTERLINE (DOUBLE): SOLID YELLOW, 4" WIDE, 4" SEPARATION	 SYMBOL 1: (LEFT ARROW), 16.1 SF SOLID WHITE	 STOP LINE: SOLID WHITE, 24" WIDE			
 DOTTED EXTENSION LINE: BROKEN WHITE, 4" WIDE (2' SEGMENTS, 4' GAPS)	 SYMBOL 2: (RIGHT ARROW), 16.1 SF SOLID WHITE	 CROSSWALK LINE: SOLID WHITE, 1'x6'			
 LANE LINE: BROKEN WHITE, 4" WIDE (10' SEGMENTS, 30' GAPS)					

- NOTES:
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Sheet Revisions																					
Date	Comments	Initials																			
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		6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com		8101 RALSTON ROAD ARVADA, CO, 80002		Designer: RRF Structure Detailer: DEM Numbers Sheet Subset: TRAFFIC Subset Sheets: SS-07 of 11		Sheet Number 301													

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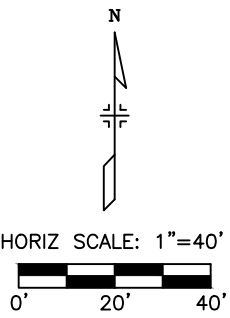
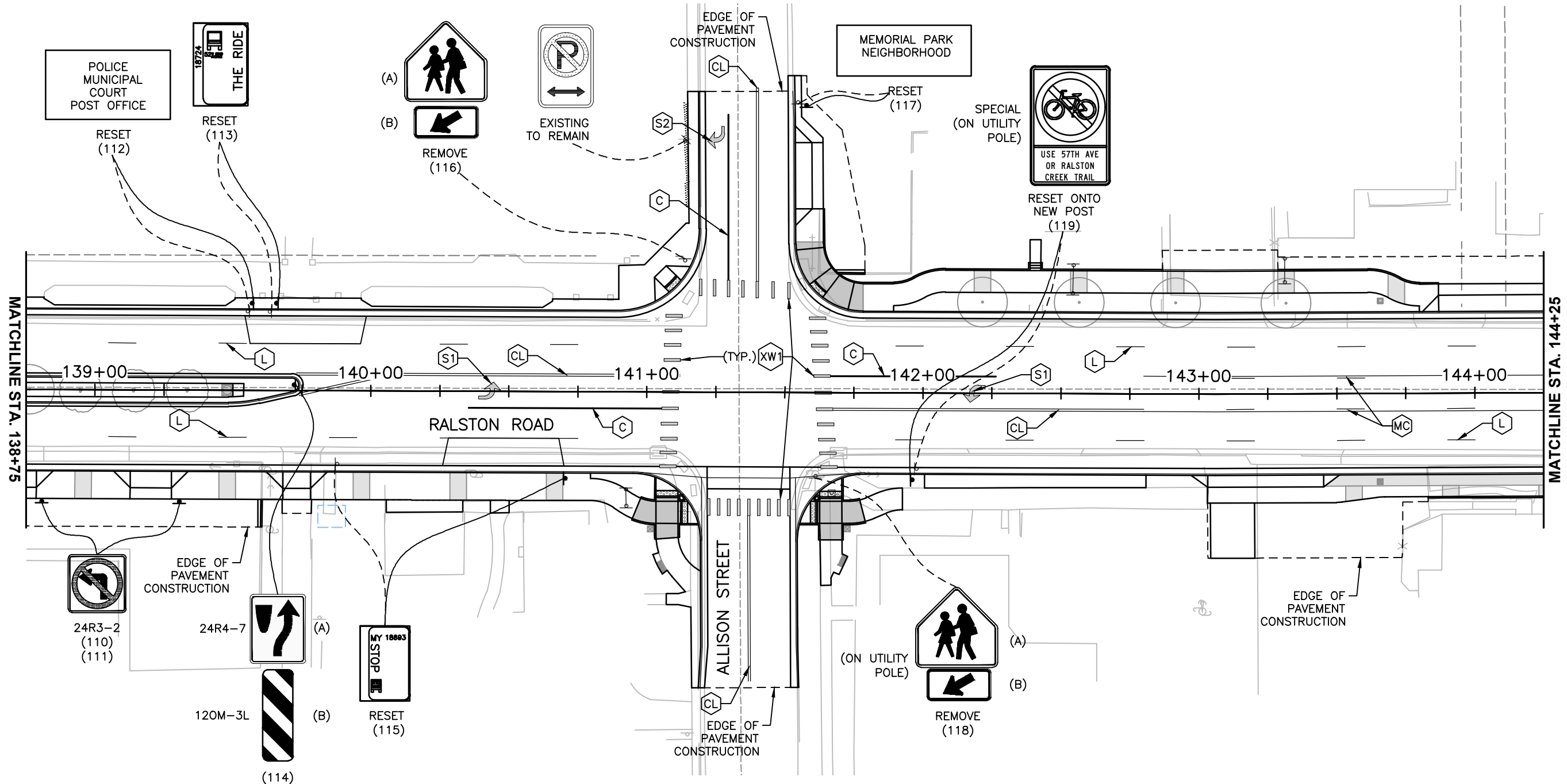
PAVEMENT MARKING LEGEND			
(BL) BIKE LANE: SOLID WHITE, 4" WIDE	(MC) MEDIAN CENTERLINES: SOLID YELLOW, 4" WIDE & BROKEN YELLOW, 4" WIDE (10' SEGMENTS, 30' GAPS)	(S3) SYMBOL 3: (2 PIECE ARROW), 4 SF SOLID WHITE	
(C) CHANNELIZING LINE: SOLID WHITE, 6" WIDE	(PL) PARKING LINE: SOLID YELLOW, 4" WIDE (8' SEGMENTS, 23' SEPARATION)	(S4) SYMBOL 4: (BIKE LANE SYMBOL), 10.5 SF SOLID WHITE	
(CL) CENTERLINE (DOUBLE): SOLID YELLOW, 4" WIDE, 4" SEPARATION	(S1) SYMBOL 1: (LEFT ARROW), 16.1 SF SOLID WHITE	(SL) STOP LINE: SOLID WHITE, 24" WIDE	
(D) DOTTED EXTENSION LINE: BROKEN WHITE, 4" WIDE (2' SEGMENTS, 4' GAPS)	(S2) SYMBOL 2: (RIGHT ARROW), 16.1 SF SOLID WHITE	(XW) CROSSWALK LINE: SOLID WHITE, 1"x6'	
(L) LANE LINE: BROKEN WHITE, 4" WIDE (10' SEGMENTS, 30' GAPS)			

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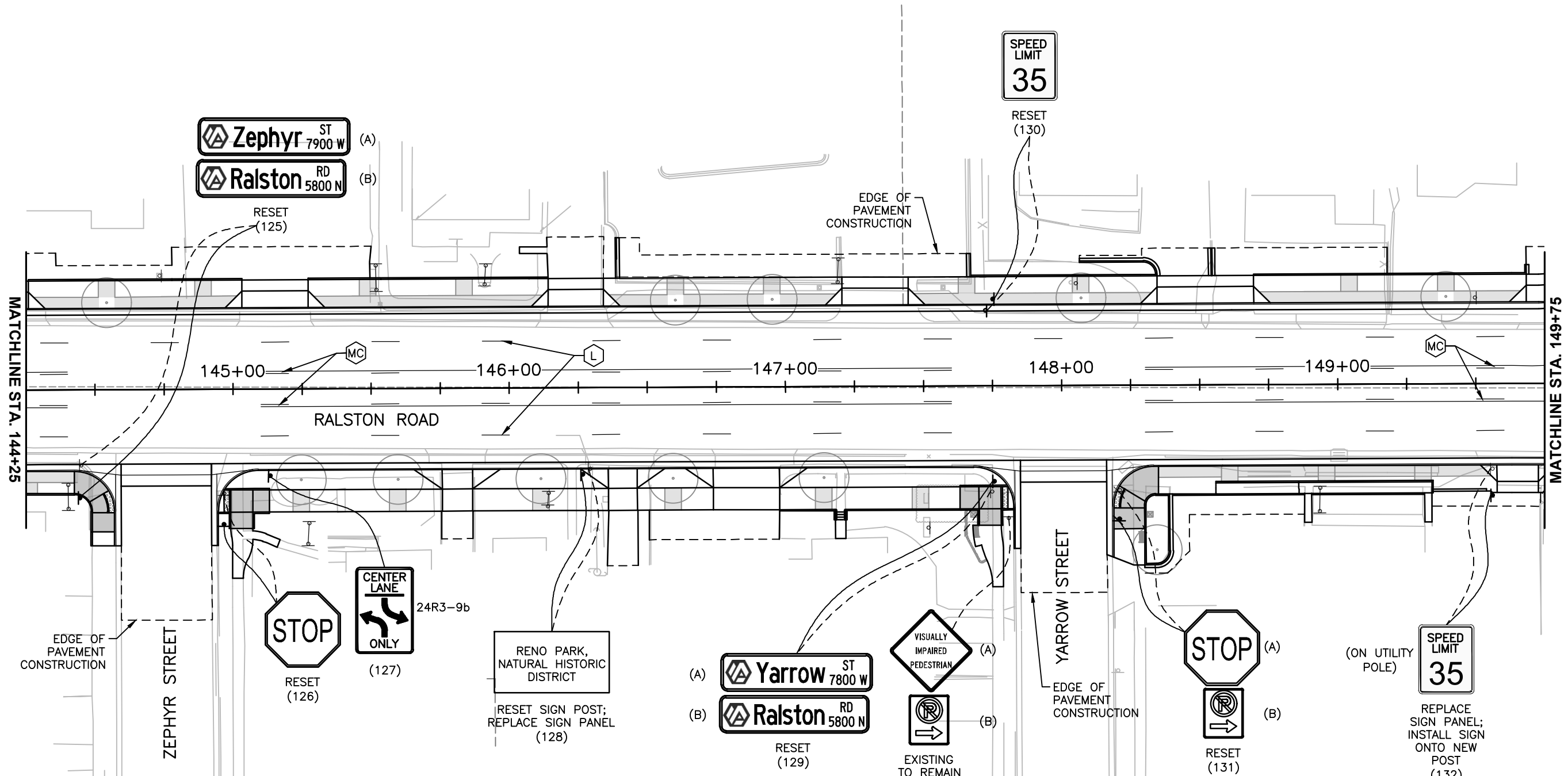
PAVEMENT MARKING LEGEND					
	BIKE LANE:				
	SOLID WHITE, 4" WIDE				
	CHANNELIZING LINE:				
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	CENTERLINE (DOUBLE):				
	SOLID YELLOW, 4" WIDE, 4" SEPARATION				
	DOTTED EXTENSION LINE:				
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	MEDIAN CENTERLINES:				
	SOLID YELLOW, 4" WIDE & BROKEN YELLOW, 4" WIDE (10' SEGMENTS, 30' GAPS)				
	PARKING LINE:				
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	SYMBOL 1: (LEFT ARROW), 16.1 SF				
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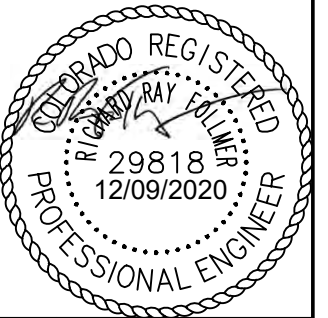
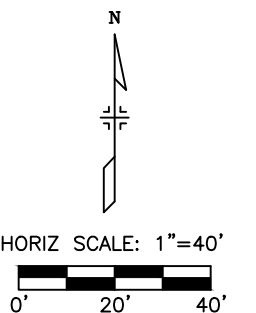


PAVEMENT MARKING LEGEND

BIKE LANE: SOLID WHITE, 4" WIDE	MEDIAN CENTERLINES: SOLID YELLOW, 4" WIDE & BROKEN YELLOW, 4" WIDE (10' SEGMENTS, 30' GAPS)	SYMBOL 3: (2 PIECE ARROW), 4 SF SOLID WHITE
CHANNELIZING LINE: SOLID WHITE, 6" WIDE	PARKING LINE: SOLID YELLOW, 4" WIDE (8' SEGMENTS, 23' SEPARATION)	SYMBOL 4: (BIKE LANE SYMBOL), 10.5 SF SOLID WHITE
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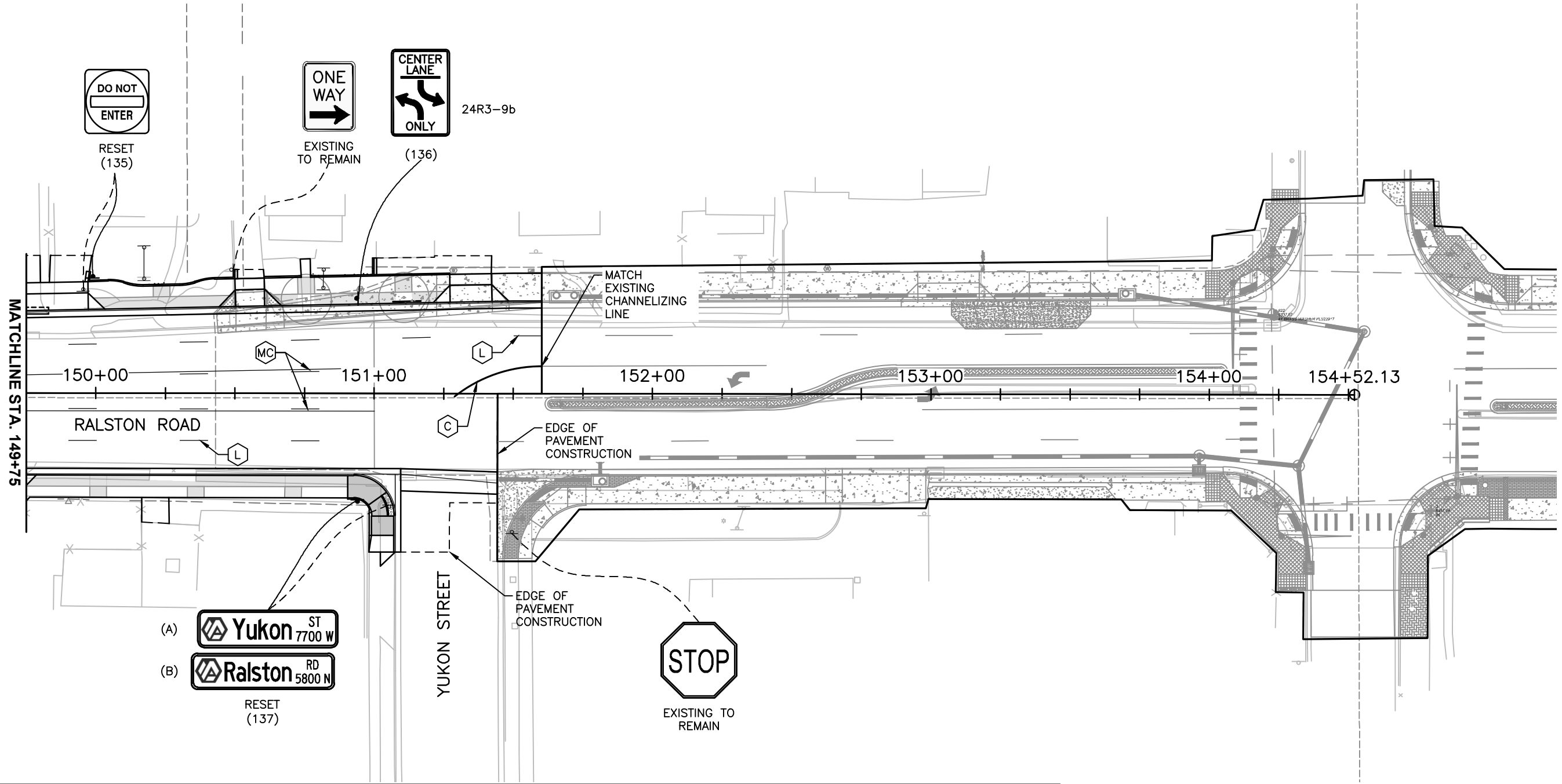
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R-X	Date	Comments	Initials



CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed	RALSTON RD - YUKON ST TO GARRISON ST SIGNING AND STRIPING PLANS RALSTON ROAD (STA. 144+25 - STA. 149+75)			Project No./Code
No Revisions:				18-ST-40
Revised:	Designer: RRF	Structure Numbers		
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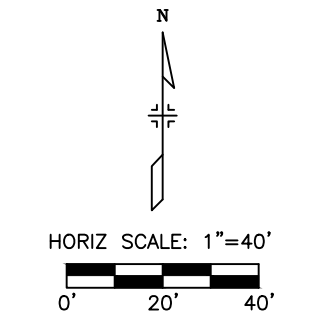


PAVEMENT MARKING LEGEND

BIKE LANE: SOLID WHITE, 4" WIDE	MEDIAN CENTERLINES: SOLID YELLOW, 4" WIDE & BROKEN YELLOW, 4" WIDE (10' SEGMENTS, 30' GAPS)	SYMBOL 3: (2 PIECE ARROW), 4 SF SOLID WHITE
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Sheet Revisions			
R-X	Date	Comments	Initials

CITY OF ARVADA
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8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed	RALSTON RD - YUKON ST TO GARRISON ST SIGNING AND STRIPING PLANS RALSTON ROAD (STA. 149+75 - END)			Project No./Code
No Revisions:				18-ST-40
Revised:	Designer: RRF	Structure Numbers		
	Detailer: DEM			
Void:	Sheet Subset: TRAFFIC	Subset Sheets: SS-11 of 11		Sheet Number 305

GENERAL NOTES:

1. UTILITY LINES ARE SHOWN FOR INFORMATION ONLY. SEE UTILITY AND DRAINAGE PLANS FOR ADDITIONAL INFORMATION.
2. ALL WORK PERFORMED UNDER THIS CONTRACT SHALL CONFORM TO THE CURRENT ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE, THE CITY OF ARVADA ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS, AND CURRENT XCEL ENERGY OUTDOOR LIGHTING CONSTRUCTION REQUIREMENTS.
3. CONDUITS ROUTING SHOWN IS SCHEMATIC AND SHALL NOT BE SCALED. WHERE CONDUIT CANNOT BE ROUTED AS SHOWN, THE CONTRACTOR SHALL USE THE SHORTEST POSSIBLE ROUTE TO ACHIEVE THE DESIGN INTENT AND AVOID CONFLICTS WITH TREES, UNDERGROUND UTILITIES, INLETS, VAULTS, AND OTHER ELEMENTS OF THE STREETScape.
4. ALL CONDUIT SHALL BE INSTALLED IN THE PUBLIC RIGHT OF WAY, A MINIMUM OF 24" BELOW GRADE AND 30" UNDER TRAVELED WAY. ALL CONDUIT ELBOWS SHALL BE PVC COATED GRC. ALL STREET LIGHTING CONDUIT SHALL BE PVC (SCH 80) UNLESS NOTED OTHERWISE.
5. CONTRACTOR SHALL COORDINATE ALL CONDUIT RUNS AND CONSTRUCTION SEQUENCE WITH ALL TRADES.
6. PROVIDE PULL BOXES AND JUNCTION BOXES AS NECESSARY ACCORDING TO THE NATIONAL ELECTRICAL CODE, AASHTO REQUIREMENTS, XCEL ENERGY, AND OTHER GOVERNING AUTHORITIES. PROVIDE PULL BOXES AND JUNCTION BOXES, SIZED AS REQUIRED, TO PROVIDE A WEATHER TIGHT RACEWAY SYSTEM.
7. PRIOR TO THE COMMENCEMENT OF DEMOLITION ASSOCIATED WITH THIS PROJECT, CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND THE SCOPE OF ELECTRICAL DEMOLITION WORK.

KEYED NOTES:



1. EXISTING LUMINAIRE AND ARM ON TIMBER ELECTRIC UTILITY POLE TO BE REMOVED BY XCEL PER THE FRANCHISE AGREEMENT.
2. CONTRACTOR TO REMOVE EXISTING POLE AND LUMINAIRE AND PROTECT IN PLACE EXISTING ELECTRICAL BRANCH FEEDER AT THIS LOCATION. INSTALL NEW PEDESTRIAN LIGHT AND FOUNDATION. CONNECT NEW LIGHT TO EXISTING ELECTRICAL FEED.
3. CONTRACTOR TO ROUTE UNDERGROUND CONDUIT ACROSS EVERETT ST. INTERSECTION TO AVOID CONFLICTS WITH, OR IMPACTS TO, EXISTING WATER VALVES.
4. EXTEND CIRCUIT 'LCC2-5' (2#8 CU THWN & 1#8 CU GND) IN SEPARATE 1" PVC CONDUIT TO PULL BOXES IN PEDESTAL PLANTER FOR FEED TO FUTURE LIGHTS ASSOCIATED WITH PUBLIC ART. THE FUTURE LIGHTS ARE NOT IN THIS SCOPE OF WORK.
5. EXTEND CIRCUIT LCC3-#(2#8 CU THWN & 1#8 CU GND) TO DISTRICT MARKER VIA PULL BOX. COORDINATE ALL CONNECTION REQUIREMENTS AND EXACT LOCATION WITH MARKER FABRICATOR PRIOR TO ROUGH-IN. FURNISH ALL MATERIALS INCIDENTAL TO THE FINAL TERMINATION AND OPERATION OF THE MARKER LIGHTING.
6. SET PULL BOX AT THIS LOCATION AND ROUTE PHASE 1 AND PHASE 2 CONDUITS INTO NEW PULLBOX.
7. INSTALL PEDESTRIAN LIGHTING METER PEDESTAL ADJACENT TO TRAFFIC METER PEDESTAL. INSTALL METER PEDESTAL IN THE SAME ORIENTATION AND FACING THE SAME DIRECTION AS THE TRAFFIC METER PEDESTAL TO PRESENT A "SIDE-BY-SIDE" APPEARANCE.
8. PROVIDE NEW PULLBOX TO INTERCEPT EXISTING CONDUIT. EXTEND CIRCUIT TO NEW PEDESTRIAN LIGHT IN NEW 2"C.
9. EXISTING PULL BOX AT THIS LOCATION INSTALLED IN PHASE 1 WORK.



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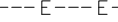
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LEGEND

 LS##	NEW LED ROADWAY LIGHT STANDARD TO BE INSTALLED BY XCEL PER FRANCHISE AGREEMENT	 T	UTILITY COMPANY PAD MOUNTED TRANSFORMER, 120/240V,1Ø,3W (TYPICAL U.N.O.)
 LR##	EXISTING LIGHT STANDARD TO BE REMOVED BY CONTRACTOR OR XCEL ENERGY. REFER TO TABULATIONS FOR ADDITIONAL INFORMATION.	 M	SELF CONTAINED UTILITY METER PEDESTAL (MP)
 -○-	EXISTING LIGHT STANDARD TO REMAIN	 SP	UTILITY SECONDARY SERVICE PEDESTAL
 LP##	NEW LED PEDESTRIAN LIGHT TO BE OWNED, MAINTAINED, AND METERED TO THE CITY OF ARVADA	 □	FUSED DISCONNECT SWITCH
 □	EXISTING DECORATIVE POLE MOUNTED PEDESTRIAN FIXTURE TO BE REMOVED	 ⊥	GROUND ROD
 ☼	EXISTING DECORATIVE POLE MOUNTED PEDESTRIAN FIXTURE TO REMAIN	 #	KEYED NOTE
 ■	NEW 13"W X 20"L (TYPE 1) STREET LIGHT PULLBOX, POLYMER CONCRETE, TIER 22 RATED COVER TO BE ENGRAVED "CITY LIGHTING"	 # LD-##	DETAIL REFERENCE DESIGNATION
 IRR	IRRIGATION CONTROLLER RE: IRRIGATION PLANS	R.O.W.	RIGHT OF WAY
 —E—E—	NEW CONDUIT UNDERGROUND (BOLD LINE WEIGHT)	MIN.	MINIMUM
 ---E---E-	EXISTING CONDUIT UNDERGROUND (LIGHT LINE WEIGHT) CONTRACTOR TO FURNISH AND INSTALL NEW FEEDERS, SIZE AS INDICATED	P.V.C.	POLYVINYL CHLORIDE CONDUIT
 ☒	TRAFFIC SIGNAL CABINET RE: SIGNAL PLANS	DIA.	DIAMETER
		U.N.O.	UNLESS NOTED OTHERWISE
		N.I.C.	NOT IN CONTRACT
		(RL)	RELOCATED
		G.R.C.	GALVANIZED RIGID CONDUIT
		(E)	EXISTING

SHEET INDEX

DWG NO.	DESCRIPTION
LG-01	GENERAL NOTES
LK-01	MAP KEY
LQ-01 TO LQ-04	TABULATIONS
LS-01 TO LS-04	SCHEDULES
LT-01 TO LT-12	LIGHTING PLANS
LD-01 TO LD-03	DETAILS



RALSTON RD - YUKON TO GARRISON		GENERAL NOTES		Project No./Code
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Revised:		Detailer: ART		
Void:		Sheet Subset: LIGHTING	Subset Sheets: LG-01 OF 01	Sheet Number 306

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RALSTON RD - YUKON TO GARRISON

MAP KEY

LIGHTING

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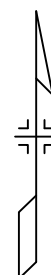
Structure Numbers

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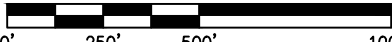
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RALSTON CORRIDOR ARTS DISTRICT - TABULATION OF ELECTRICAL QUANTITIES														
SHEET	KEY	BASELINE	STATION	OFFSET	REMOVAL LIGHT STANDARD	REMOVAL LIGHT STANDARD FOUNDATION	REMOVAL LUMINAIRE	LIGHTING CONTROL CENTER	LIGHT STANDARD AND LUMINAIRE PEDESTRIAN (TYPE B)	LIGHT STANDARD FOUNDATION	LIGHT STANDARD FOUNDATION (SPECIAL)	1" ELECTRICAL CONDUIT (PLASTIC) (SCH 40)	2" ELECTRICAL CONDUIT (PLASTIC) (SCH 80)	WIRING
					EACH	EACH	EACH	EACH	EACH	EACH	EACH	LIN. FT.	LIN. FT.	LUMP SUM
LT02	LCC1	RALSTON ROAD	111 + 29.4	64.2 R				1					100	
LT05	LCC2	RALSTON ROAD	127 + 42.1	40.7 R				1					100	
LT08	LCC3	RALSTON ROAD	140 + 29.5	48.2 R				1					125	
LT12	LCC4	RALSTON ROAD	163+70.6	40.4 R				1					125	
LT01	LR01	RALSTON ROAD	103 + 69.4	42.9 L	REMOVAL BY XCEL									
	LR02	RALSTON ROAD	105 + 07.9	32.1 R	REMOVAL BY XCEL									
LT02	LR03	RALSTON ROAD	106 + 73.4	28.1 R	REMOVAL BY XCEL									
	LR04	RALSTON ROAD	107 + 98.6	29.1 R	REMOVAL BY XCEL									
	LR05	RALSTON ROAD	109 + 85.9	28.1 L	REMOVAL BY XCEL									
	LR06	RALSTON ROAD	111 + 42.3	29.1 R	REMOVAL BY XCEL									
LT03	LR07	RALSTON ROAD	113 + 33.2	30.9 L	REMOVAL BY XCEL									
	LR08	RALSTON ROAD	114 + 64.9	23.4 R	REMOVAL BY XCEL									
	LR09	RALSTON ROAD	116 + 58.2	36.4 L	REMOVAL BY XCEL									
LT04	LR10	RALSTON ROAD	118 + 35.6	25.8 R	REMOVAL BY XCEL									
	LR11	RALSTON ROAD	120 + 58.1	32.3 R	REMOVAL BY XCEL									
	LR12	RALSTON ROAD	121 + 83.4	32.3 R	REMOVAL BY XCEL									
LT05	LR13	RALSTON ROAD	123 + 33.0	28.4 R	REMOVAL BY XCEL									
	LR14	RALSTON ROAD	125 + 60.3	32.3 R	REMOVAL BY XCEL									
	LR15	RALSTON ROAD	126 + 03.0	42.4 L	REMOVAL BY XCEL									
	LR16	RALSTON ROAD	127 + 42.1	40.7 R	REMOVAL BY XCEL									
LT06	LR17	RALSTON ROAD	128 + 63.9	40.9 R	REMOVAL BY XCEL									
	LR18	RALSTON ROAD	130 + 00.0	32.6 R	REMOVAL BY XCEL									
	LR19	RALSTON ROAD	131 + 07.2	31.0 L	REMOVAL BY XCEL									
	LR20	RALSTON ROAD	132 + 46.3	25.5 R	REMOVAL BY XCEL									
LT07	LR21	RALSTON ROAD	134 + 22.2	33.3 L	REMOVAL BY XCEL									
	LR22	RALSTON ROAD	134 + 45.2	34.5 L	1	1	1							
	LR23	RALSTON ROAD	134 + 60.0	36.3 R	REMOVAL BY XCEL									
	LR24	RALSTON ROAD	135 + 05.6	34.4 L	1	1	1							
	LR25	RALSTON ROAD	135 + 96.8	34.9 L	1	1	1							
	LR26	RALSTON ROAD	136 + 25.4	32.8 L	REMOVAL BY XCEL									
	LR27	RALSTON ROAD	136 + 57.2	34.5 L	1	1	1							
	LR28	RALSTON ROAD	136 + 97.3	24.6 L	1	1	1							
	LR29	RALSTON ROAD	137 + 58.0	34.5 L	1	1	1							
LT08	LR30	RALSTON ROAD	138 + 40.8	27.5 R	REMOVAL BY XCEL									
	LR31	RALSTON ROAD	138 + 86.4	34.8 L	1	1	1							
	LR32	RALSTON ROAD	139 + 47.3	34.9 L	1	1	1							
	LR33	RALSTON ROAD	139 + 63.1	28.3 R	REMOVAL BY XCEL									
	LR34	RALSTON ROAD	140 + 00.0	34.7 L	1	1	1							
	LR35	RALSTON ROAD	140 + 62.3	34.9 L	1	1	1							
	LR36	RALSTON ROAD	142 + 96.4	31.0 R	REMOVAL BY XCEL									
LT09	LR37	RALSTON ROAD	144 + 80.4	28.7 L	REMOVAL BY XCEL									
	LR38	RALSTON ROAD	145 + 96.8	31.9 R	REMOVAL BY XCEL									
	LR39	RALSTON ROAD	147 + 70.1	28.2 L	REMOVAL BY XCEL									
	LR40	RALSTON ROAD	149 + 56.4	32.0 R	REMOVAL BY XCEL									
	LR41	RALSTON ROAD	147+ 13.0	36.0L		1								
	LR42	RALSTON ROAD	147 + 60.0	36.0L	1	1	1							
LT10	LR43	RALSTON ROAD	152 + 44.0	29.0L	REMOVAL BY XCEL									
LT06	LR44	RALSTON ROAD	127 + 76.0	70.2R	1	1	1							
LT01	LR45	RALSTON ROAD	102 + 26.0	53.0L	1	1	1							



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				18-ST-40	
	Revised:	Designer: GJA	Structure Numbers		
Void:		Detailer: ART			
		Sheet Subset: LIGHTING	Subset Sheets: LQ-01 OF 04	Sheet Number	308

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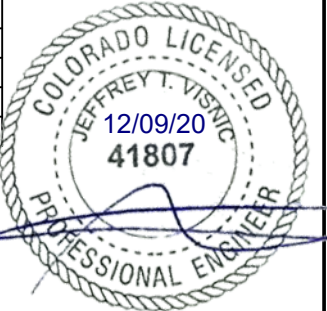
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RALSTON CORRIDOR ARTS DISTRICT - TABULATION OF ELECTRICAL QUANTITIES														
SHEET	KEY	BASELINE	STATION	OFFSET	REMOVAL LIGHT STANDARD	REMOVAL LIGHT STANDARD FOUNDATION	REMOVAL LUMINAIRE	LIGHTING CONTROL CENTER	LIGHT STANDARD AND LUMINAIRE PEDESTRIAN (TYPE B)	LIGHT STANDARD FOUNDATION	LIGHT STANDARD FOUNDATION (SPECIAL)	1" ELECTRICAL CONDUIT (PLASTIC) (SCH 40)	2" ELECTRICAL CONDUIT (PLASTIC) (SCH 80)	WIRING
					EACH	EACH	EACH	EACH	EACH	EACH	EACH	LIN. FT.	LIN. FT.	LUMP SUM
LT01	LS01	RALSTON ROAD	105 + 05.7	33.6 R	ALL NEW STREET LIGHTING TO BE INSTALLED AND POWERED BY XCEL ENERGY FORCES PER THE FRANCHISE AGREEMENT. STATION AND OFFSET LOCATIONS ARE FOR INFORMATION ONLY. LOCATION GIVEN MAY BE ADJUSTED NO MORE THAN 10-FT TO AVOID CONFLICTS WITH BELOW GRADE UTILITIES.									
LT02	LS02	RALSTON ROAD	106 + 51.7	33.7 L										
	LS23	RALSTON ROAD	107 + 98.0	39.0 R										
	LS03	RALSTON ROAD	109 + 63.2	31.5 L										
	LS04	RALSTON ROAD	111 + 29.2	33.5 R										
LT03	LS05	RALSTON ROAD	112 + 69.6	33.3 L										
	LS06	RALSTON ROAD	114 + 15.0	31.7 R										
	LS07	RALSTON ROAD	115 + 42.8	32.0 L										
	LS08	RALSTON ROAD	117 + 29.7	32.5 R										
LT04	LS09	RALSTON ROAD	119 + 11.0	41.5 L										
	LS10	RALSTON ROAD	121 + 74.6	33.4 R										
	LS11	RALSTON ROAD	122 + 00.0	31.9 R										
LT05	LS12	RALSTON ROAD	124 + 84.4	31.7 L										
	LS13	RALSTON ROAD	124 + 95.8	32.2 R										
LT06	LS14	RALSTON ROAD	130 + 51.4	34.1 L										
	LS15	RALSTON ROAD	130 + 43.6	50.6 R										
LT07	LS16	RALSTON ROAD	136 + 28.4	32.9 L										
	LS17	RALSTON ROAD	136 + 19.6	33.2 R										
	LS18	RALSTON ROAD	138 + 70.0	36.5 L										
LT01	LP01	RALSTON ROAD	102 + 85.0	31.5 L					1	1			125	
	LP02	RALSTON ROAD	103 + 12.9	31.5 R					1	1			100	
	LP03	RALSTON ROAD	103 + 86.9	31.5 L					1	1			100	
	LP04	RALSTON ROAD	103 + 93.0	31.5 R					1	1			200	
	LP05	RALSTON ROAD	104 + 77.0	31.5 L					1	1			110	
	LP06	RALSTON ROAD	105 + 73.0	31.5 L					1	1			200	
	LP07	RALSTON ROAD	105 + 73.0	31.5 R					1	1			180	
LT02	LP08	RALSTON ROAD	106 + 64.1	31.3 R					1	1			230	
	LP09	RALSTON ROAD	107 + 45.0	31.5 L					1	1			75	
	LP10	RALSTON ROAD	108 + 14.3	31.5 L					1	1			75	
	LP11	RALSTON ROAD	109 + 13.0	31.5 R					1	1			60	
	LP12	RALSTON ROAD	109 + 19.6	31.5 L					1	1			110	
	LP13	RALSTON ROAD	109 + 78.5	31.5 R					1	1			75	
	LP14	RALSTON ROAD	110 + 78.5	31.5 L					1	1			165	
	LP15	RALSTON ROAD	110 + 90.9	31.5 R					1	1			125	
LT03	LP16	RALSTON ROAD	111 + 41.0	31.5 L					1	1			70	
	LP17	RALSTON ROAD	112 + 23.9	31.5 L					1	1			95	
	LP18	RALSTON ROAD	112 + 41.3	31.5 R					1	1			170	
	LP19	RALSTON ROAD	113 + 11.4	31.5 R					1	1			80	
	LP20	RALSTON ROAD	113 + 30.9	31.5 L					1	1			120	
	LP21	RALSTON ROAD	114 + 19.4	31.5 L					1	1			95	
	LP22	RALSTON ROAD	115 + 76.0	31.5 L					1	1			175	
	LP23	RALSTON ROAD	115 + 93.2	31.5 R					1	1			295	
	LP24	RALSTON ROAD	117 + 00.0	31.5 R					1	1			115	
	LP25	RALSTON ROAD	117 + 16.0	42.5 L					1	1			165	

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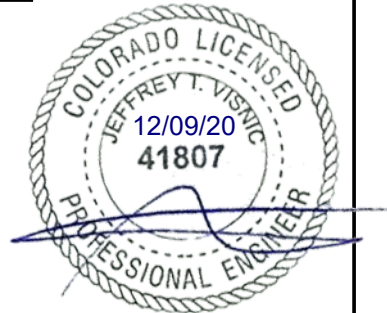
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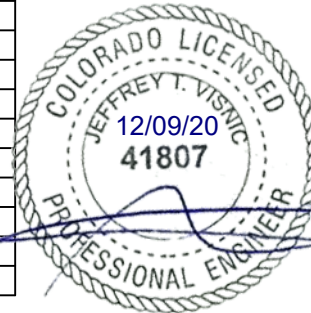
RALSTON CORRIDOR ARTS DISTRICT - TABULATION OF ELECTRICAL QUANTITIES														
SHEET	KEY	BASELINE	STATION	OFFSET	REMOVAL LIGHT STANDARD	REMOVAL LIGHT STANDARD FOUNDATION	REMOVAL LUMINAIRE	LIGHTING CONTROL CENTER	LIGHT STANDARD AND LUMINAIRE PEDESTRIAN (TYPE B)	LIGHT STANDARD FOUNDATION	LIGHT STANDARD FOUNDATION (SPECIAL)	1" ELECTRICAL CONDUIT (PLASTIC) (SCH 40)	2" ELECTRICAL CONDUIT (PLASTIC) (SCH 80)	WIRING
					EACH	EACH	EACH	EACH	EACH	EACH	EACH	LIN. FT.	LIN. FT.	LUMP SUM
LT04	LP26	RALSTON ROAD	117 + 86.0	42.5 L					1	1			80	
	LP27	RALSTON ROAD	118 + 91.3	31.5 R					1	1			205	
	LP28	RALSTON ROAD	119 + 84.4	38.0 L					1	1			210	
	LP29	RALSTON ROAD	120 + 00.0	31.5 R					1	1			115	
	LP30	RALSTON ROAD	121 + 05.1	31.5 R					1	1			115	
	LP31	RALSTON ROAD	122 + 37.1	31.5 R					1	1			160	
LT05	LP32	RALSTON ROAD	123 + 12.1	31.5 L					1	1			85	
	LP33	NOT USED												
	LP34	RALSTON ROAD	123 + 83.1	40.5 L					1	1			75	
	LP35	RALSTON ROAD	123 + 87.1	31.5 R					1	1			85	
	LP36	RALSTON ROAD	124 + 48.0	40.5 L					1	1			175	
	LP37	RALSTON ROAD	124 + 62.1	31.5 R					1	1			145	
	LP38	RALSTON ROAD	125 + 94.5	31.5 L					1	1			110	
	LP39	RALSTON ROAD	125 + 99.9	35.3 R					1	1			95	
	LP40	RALSTON ROAD	126 + 87.1	37.5 R					1	1			100	
	LP41	RALSTON ROAD	126 + 92.3	31.7 L					1	1			75	
	LP42	NOT USED												
LT06	LP42A	RALSTON ROAD	127 + 73.3	74.5 R					1	1			50	
	LP42B	RALSTON ROAD	128 + 03.3	74.5 R					1	1			40	
	LP43	RALSTON ROAD	128 + 87.8	42.5 L					1	1			220	
	LP44	RALSTON ROAD	128 + 87.9	37.3 R					1	1			155	
	LP45	RALSTON ROAD	129 + 58.5	36.4 L					1	1			80	
	LP46	RALSTON ROAD	129 + 58.5	34.9 R					1	1			85	
	LP47	RALSTON ROAD	130 + 62.5	50.5 R					1	1			130	
	LP48	RALSTON ROAD	131 + 32.5	50.5 R					1	1			80	
	LP49	RALSTON ROAD	131 + 37.5	31.4 L					1	1			195	
	LP50	RALSTON ROAD	132 + 02.5	50.6 R					1	1			80	
	LP51	RALSTON ROAD	132 + 07.5	31.3 L					1	1			80	
	LP52	RALSTON ROAD	132 + 72.7	50.5 R					1	1			80	
	LP53	RALSTON ROAD	132 + 73.2	31.4 L					1	1			75	
LT07	LP54	RALSTON ROAD	134 + 44.9	34.5 L					1	1				
	LP55	RALSTON ROAD	134 + 88.6	31.5 R					1	1			60	
	LP56	RALSTON ROAD	135 + 05.3	34.2 L					1	1				
	LP57	RALSTON ROAD	135 + 58.6	31.5 R					1	1			135	
	LP58	RALSTON ROAD	135 + 96.3	34.5 L					1	1				
	LP59	RALSTON ROAD	136 + 57.4	34.5 L					1	1				
	LP60	RALSTON ROAD	136 + 82.5	31.5 R					1	1			85	
	LP61	RALSTON ROAD	136 + 97.1	34.3 L					1	1				
	LP62	RALSTON ROAD	137 + 56.4	31.5 R					1	1			150	
	LP63	RALSTON ROAD	137 + 58.3	34.4 L					1	1				

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Know what's below.
Call before you dig.

RALSTON CORRIDOR ARTS DISTRICT - TABULATION OF ELECTRICAL QUANTITIES														
SHEET	KEY	BASELINE	STATION	OFFSET	REMOVAL LIGHT STANDARD	REMOVAL LIGHT STANDARD FOUNDATION	REMOVAL LUMINAIRE	LIGHTING CONTROL CENTER	LIGHT STANDARD AND LUMINAIRE PEDESTRIAN (TYPE B)	LIGHT STANDARD FOUNDATION	LIGHT STANDARD FOUNDATION (SPECIAL)	1" ELECTRICAL CONDUIT (PLASTIC) (SCH 40)	2" ELECTRICAL CONDUIT (PLASTIC) (SCH 80)	WIRING
					EACH	EACH	EACH	EACH	EACH	EACH	EACH	LIN. FT.	LIN. FT.	LUMP SUM
LT08	LP64	RALSTON ROAD	138 + 85.9	34.5 L					1	1				
	LP65	RALSTON ROAD	138 + 93.0	31.5 R					1	1			110	
	LP66	RALSTON ROAD	139 + 46.8	34.7 L					1	1				
	LP67	RALSTON ROAD	139 + 86.6	31.5 R					1	1			75	
	LP68	RALSTON ROAD	140 + 00.5	34.7 L					1	1				
	LP69	RALSTON ROAD	140 + 51.3	31.5 R					1	1			50	
	LP70	RALSTON ROAD	140 + 62.0	34.7 L					1	1				
	LP71	RALSTON ROAD	142 + 35.0	31.4 L					1	1			120	
	LP72	RALSTON ROAD	142 + 48.0	31.5 R					1	1			205	
	LP73	RALSTON ROAD	143 + 54.7	31.5 R					1	1			115	
LT09	LP74	RALSTON ROAD	143 + 55.0	31.4 L					1	1			130	
	LP75	RALSTON ROAD	144 + 84.6	31.4 L					1	1			140	
	LP76	RALSTON ROAD	145 + 12.8	31.5 R					1	1			170	
	LP77	RALSTON ROAD	146 + 03.0	31.5 R					1	1			100	
	LP78	RALSTON ROAD	147 + 12.6	31.5 L					1	1			135	
	LP79	RALSTON ROAD	147 + 31.2	31.5 R					1	1			140	
	LP80	RALSTON ROAD	147 + 79.2	31.5 L					1	1			80	
	LP81	RALSTON ROAD	149 + 07.8	31.4 L					1	1			140	
LT10	LP82	RALSTON ROAD	149 + 13.2	31.5 R					1	1			195	
	LP83	RALSTON ROAD	150 + 05.1	32.2 L					1	1			110	
	LP84	RALSTON ROAD	150 + 12.5	31.5 R					1	1			110	
	LP85	RALSTON ROAD	150 + 85.6	31.5 R					1	1			100	
	LP86	RALSTON ROAD	150 + 86.5	33.4 L					1	1			115	
	LP87	RALSTON ROAD	152 + 50.0	31.2 R					1		1		160	
	LP88	RALSTON ROAD	153 + 85.0	30.5 R					1		1		145	
LT11	LP89	RALSTON ROAD	155 + 09.43	43.6 R					1		1		85	
	LP90	RALSTON ROAD	155 + 49.42	34.5 L					1		1		565	
	LP91	RALSTON ROAD	155 + 83.24	43.5 R					1		1		205	
	LP92	RALSTON ROAD	156 + 85.16	34.2 L					1		1		160	
	LP93	RALSTON ROAD	157 + 74.67	44.2 R					1		1		205	
	LP94	RALSTON ROAD	158 + 85.18	44.7 L					1		1		210	
	LP95	RALSTON ROAD	159 + 66.66	35.4 R					1		1		240	
	LP96	RALSTON ROAD	160 + 21.02	44.4 L					1		1		150	
LT12	LP97	RALSTON ROAD	161 + 25.00	45.9 L					1		1		115	
	LP98	RALSTON ROAD	161 + 92.50	34.3 R					1		1		215	
	LP99	RALSTON ROAD	162 + 75.00	46.0 L					1		1		160	
LT06	PUBLIC ART	RALSTON ROAD	127 + 80.0	50.0R								60		
LT01	DIST. MARKER	RALSTON ROAD	104 + 33.0	0.0 R									35	
LT08	DIST. MARKER	RALSTON ROAD	139 + 48.0	0.0 R									35	
	DIST. MARKER	RALSTON ROAD	143 + 66.0	34.0 L									35	1
LT02	IRR.	RALSTON ROAD	108 + 75.0	52.0 R								20		
	IRR.	RALSTON ROAD	127 + 84.1	78.3 L								60		
LT08	IRR.	RALSTON ROAD	141 + 75.0	56.2 R								35		
LT08	IRR.	RALSTON ROAD	142 + 11.3	34.1 L								20		
			TOTALS		13	14	13	4	99	86	13	195	12465	1



Print Date:	12/8/2020 2:41:17 PM
File Name:	118355_LTQT_SH04_EN.DWG
Horizontal Scale:	1" = 1'
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	BCER ENGINEERING, INC. 5420 Ward Road Arvada, CO 80002 Phone: 303.422.7400

R-X	Sheet Revisions		
	Date	Comments	Initials

CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

No Revisions:	RALSTON RD - YUKON TO GARRISON TABULATIONS				Project No./Code 18-ST-40
	Revised:	Designer: GJA	Structure Numbers		
Void:		Detailer: ART			
		Sheet Subset: LIGHTING	Subset Sheets: LQ-04 OF 04		Sheet Number 311

SINGLE PHASE SHORT CIRCUIT SCHEDULE

PROJECT NAME: RALSTON CORRIDOR															
PROJECT NO: 21719009															
BY: BCER - KGW															
	DESCRIPTION	LENGTH/ PRIMARY VOLTAGE	VOLTAGE/ SECONDARY VOLTAGE	WIRE SIZE/ XFRMR KVA RATING	WIRE MATERIAL/ TRANSFORMER (C OR A) T=XFRMR	CONDUIT (S OR N)	VOLTAGE CLASS (V)	WIRES (S OR T)	C OR Z VALUE	# OF PARALLEL RUNS	Isc AVAILABLE UPSTREAM	f	M	I(sc Fault)	
X0	XCEL XFMR													14,800	X0
X1	PEDESTAL LCC1	106	240	3X	C	N	600	S	13923	1	14,800	0.9390	0.5157	7,633	X1
X2	PEDESTAL LCC2	55	240	3X	C	N	600	S	13923	1	14,800	0.4872	0.6724	9,952	X2
X3	PEDESTAL LCC3	145	240	3X	C	N	600	S	13923	1	14,800	1.2844	0.4377	6,479	X3
X4	PEDESTAL LCC4	105	240	3X	C	N	600	S	13923	1	14,800	0.9301	0.5181	7,668	X4

RALSTON CORRIDOR - SUMMARY OF QUANTITIES

ITEM #	DESCRIPTION	UNIT	QTY
202-00700	REMOVAL LIGHT STANDARD	EA	13
202-00705	REMOVAL LIGHT STANDARD FOUNDATION	EA	14
202-00750	REMOVAL LUMINAIRE	EA	13
613-00100	1 INCH ELECTRICAL CONDUIT (PLASTIC)	LF	195
613-01200	2 INCH ELECTRICAL CONDUIT(PLASTIC)	LF	12465
613-07026	PULL BOX 13"x20"x12"	EA	54
613-10000	WIRING	LS	1
613-30005	LIGHT STANDARD AND LUMINAIRE (PEDESTRIAN) (TYPE B)	EA	99
613-40010	LIGHT STANDARD FOUNDATION	EA	86
613-40012	LIGHT STANDARD FOUNDATION SPECIAL	EA	13
613-50100	LIGHTING CONTROL CENTER	EA	4

RALSTON CORRIDOR - VOLTAGE DROP CALCULATION

All conductors shall be copper (CU) THHN/THWN.							
Max. Allowable Voltage Drop = 3%							
Distances shown for voltage drop calculation purposes only. Do not use for cost estimating.							
Luminaire VA = 37							
CKT#	NO. OF LIGHTS	VA (TOTAL)	VOLTAGE (V)	LOAD (A)	DISTANCE (FEET)	CONDUCTORS, GROUND, AND CONDUIT SIZE	VOLTAGE DROP
LCC1-1	6	222	120	1.9	800	(2#6 CU THWN & 1#6 CU GND) 2"C	1.2%
LCC1-2	4	148	120	1.2	700	(2#8 CU THWN & 1#8 CU GND) 2"C	1.1%
LCC1-3	5	185	120	1.5	650	(2#6 CU THWN & 1#6 CU GND) 2"C	0.8%
LCC1-4	5	185	120	1.5	450	(2#8 CU THWN & 1#8 CU GND) 2"C	0.9%
LCC1-5	5	185	120	1.5	1,250	(2#6 CU THWN & 1#6 CU GND) 2"C	1.5%
LCC1-6	5	185	120	1.5	1,300	(2#6 CU THWN & 1#6 CU GND) 2"C	1.6%
LCC1-8	DIST. MARKER	600	120	5.0	550	(2#6 CU THWN & 1#6 CU GND) 2"C	2.3%
LCC1-10	IRRIG. CNTL	180	120	1.5	25	(2#10 CU THWN & 1#10 CU GND) 1"C	0.1%
LCC2-1	5	185	120	1.5	600	(2#8 CU THWN & 1#8 CU GND) 2"C	1.2%
LCC2-2	5	185	120	1.5	600	(2#8 CU THWN & 1#8 CU GND) 2"C	1.2%
LCC2-3	5	185	120	1.5	650	(2#8 CU THWN & 1#8 CU GND) 2"C	1.3%
LCC2-4	6	222	120	1.9	600	(2#8 CU THWN & 1#8 CU GND) 2"C	1.5%
LCC2-5	2	360	120	3.0	150	(2#10 CU THWN & 1#10 CU GND) 1"C	0.9%
LCC2-8	IRRIG. CNTL	180	120	1.5	200	(2#10 CU THWN & 1#10 CU GND) 1"C	0.6%
LCC3-1	6	222	120	1.9	700	(2#6 CU THWN & 1#6 CU GND) 2"C	1.1%
LCC3-2	8	296	120	2.5	1,100	(2#6 CU THWN & 1#6 CU GND) 2"C	2.3%
LCC3-3	7	259	120	2.2	1,000	(2#6 CU THWN & 1#6 CU GND) 2"C	1.8%
LCC3-4	IRRIG. CNTL	180	120	1.5	200	(2#10 CU THWN & 1#10 CU GND) 1"C	0.6%
LCC3-5	3	111	120	0.9	1,350	(2#6 CU THWN & 1#6 CU GND) 2"C	1.0%
LCC3-6	DIST. MARKER	600	120	5.0	300	(2#8 CU THWN & 1#8 CU GND) 2"C	2.0%
LCC3-8	DIST. MARKER	600	120	5.0	400	(2#8 CU THWN & 1#8 CU GND) 2"C	2.6%
LCC4-1	3	111	120	0.9	950	(2#6 CU THWN & 1#6 CU GND) 2"C	0.7%
LCC4-2	3	111	120	0.9	1,650	(2#6 CU THWN & 1#6 CU GND) 2"C	1.2%
LCC4-3	2	74	120	0.6	500	(2#6 CU THWN & 1#6 CU GND) 2"C	0.2%
LCC4-4	3	111	120	0.9	2,000	(2#6 CU THWN & 1#6 CU GND) 2"C	1.5%



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File Name: 118355_LTSX_SH01_EN.DWG		Date	Comments	Initials
Horizontal Scale: N/A Vertical Scale: N/A				
BCER ENGINEERING TECHNOLOGY LIFE SAFETY BCER ENGINEERING, INC. 5420 Ward Road Arvada, CO 80002 Phone: 303.422.7400				



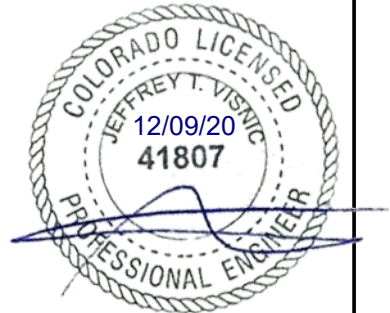
CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

No Revisions:	RALSTON RD - YUKON TO GARRISON SCHEDULES				Project No./Code	
					18-ST-40	
	Revised:	Designer: GJA	Structure Numbers			
	Void:	Detailer: ART	Sheet Subset: LIGHTING	Subset Sheets: LS-01 OF 04	Sheet Number	312



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Print Date: 12/8/2020 1:20:42 PM		R-X	Sheet Revisions				CITY OF ARVADA PUBLIC WORKS DEPARTMENT			RALSTON RD - YUKON TO GARRISON SCHEDULES			Project No./Code	
File Name: 118355_LTSX_SH02_EN.DWG			Date	Comments	Initials		8101 RALSTON ROAD ARVADA, CO, 80002			No Revisions:		18-ST-40		
Horizontal Scale: N/A Vertical Scale: N/A										Revised:		Sheet Number 313		
 BCER ENGINEERING, INC. 5420 Ward Road Arvada, CO 80002 Phone: 303.422.7400										Void:		Detailer: ART		
								Sheet Subset: LIGHTING		Subset Sheets: LS-02 OF 04				

FED FROM: XCEL XFMR
VOLTAGE: 240/120
AIC: 10000
ENCLOSURE: NEMA 3R

PANEL: **LCC1**
PHASE: 1
BUS AMPACITY: 200A
NEUTRAL: 100%
GROUND: STD

WIRE: 3
MAIN: MCB
MOUNTING: SURFACE

CKT NO	CKT DESCRIPTION	LOAD		CKT BREAKER			CKT BREAKER			LOAD		CKT DESCRIPTION	CKT NO	
		VA	TYPE	P	A	NOTE	NOTE	A	P	TYPE	VA			
1	LP01,03,05,07,09,10	222	L	1	20			20	1	L	148	LP02,04,06,08	2	
3	LP12,14,16,17,20	185	L	1	20			20	1	L	185	LP11,13,15,18,19	4	
5	LP21,22,25,26,28	185	L	1	20			20	1	L	185	LP23,24,27,29,30	6	
7	SPARE			1	20		1	20	1	L	600	DISTRICT MARKER (MEDIAN)	8	
9	SPACE			-	20			20	1	CL	180	IRRIG. CONTROL (FIELD ST)	10	
11	SPACE			-	20			20	-			SPACE	12	
		CONNECTED (KVA)			DEMAND FACTOR		DEMAND (KVA)			NOTES: ** Electrical contractor is responsible for balancing the panel loading. 1. ROUTE CIRCUIT THROUGH PHOTOCELL FOR DUSK-TO-DAWN OPERATION.				
LOAD TYPE		A	B	TOTAL				A	B					TOTAL
LIGHTING (L)		0.7	1.0	1.7	1.25			0.9	1.2					2.1
RECEPTACLE (R)		0.0	0.0	0.0	1.00			0.0	0.0					0.0
REC (>10000VA) (R)		0.0	0.0	0.0	0.50			0.0	0.0					0.0
HEATER (H)		0.0	0.0	0.0	1.00			0.0	0.0					0.0
LARGEST MOTOR (M)		0.0	0.0	0.0	1.25			0.0	0.0					0.0
REMAIN MOTOR (M)		0.0	0.0	0.0	1.00			0.0	0.0					0.0
CONTINUOUS LOAD (CL)		0.0	0.0	0.2	1.25			0.2	0.0					0.2
KITCHEN LOADS (K)		0.0	0.0	0.0	1.00			0.0	0.0					0.0
SPECIFIC LOADS (S)		0.0	0.0	0.0	1.00			0.0	0.0	0.0				
NONCOINCIDENTAL (N)		0.0	0.0	0.0	0.00			0.0	0.0	0.0				
DWELLING (D)		0.0	0.0	0.0	0.65			0.0	0.0	0.0				
TOTAL DEMAND (KVA)							1.2	1.2	2.4					
TOTAL (A/PH)							9.6	10.1	9.8					

Updated: 12/8/2020 13:21

NOTES:

** Electrical contractor is responsible for balancing the panel loading.

1. ROUTE CIRCUIT THROUGH PHOTOCELL FOR DUSK-TO-DAWN OPERATION.

FED FROM: XCEL SERVICE PEDESTAL
VOLTAGE: 240/120
AIC: 10000
ENCLOSURE: NEMA 3R

PANEL: **LCC2**
PHASE: 1
BUS AMPACITY: 200A
NEUTRAL: 100%
GROUND: STD

WIRE: 3
MAIN: MCB
MOUNTING: SURFACE

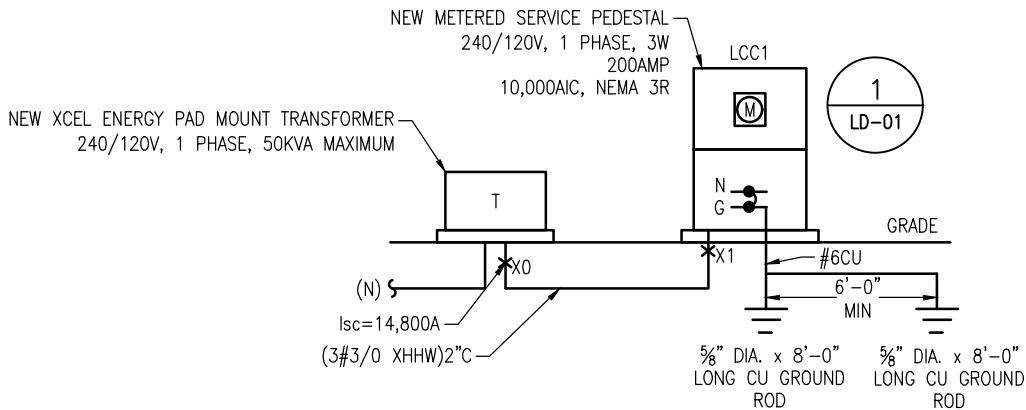
CKT NO	CKT DESCRIPTION	LOAD		CKT BREAKER			CKT BREAKER			LOAD		CKT DESCRIPTION	CKT NO
		VA	TYPE	P	A	NOTE	NOTE	A	P	TYPE	VA		
1	LP32,34,36,39,41	185	L	1	20			20	1	L	185	LP31,35,37,40,42	2
3	LP43,45,49,51,53	185	L	1	20			20	1	L	222	LP44,46,47,48,50,52	4
5	PUBLIC ART+LP42A,42B	360	L	1	20	1		20	1			SPARE	6
7	SPARE			1	20			20	1	CL	180	IRRIG. CONTROL (CARR ST.)	8
9	SPACE			1	20			20	1			SPACE	10
11	SPACE			1	20			20	1			SPACE	12
		CONNECTED (KVA)			DEMAND FACTOR		DEMAND (KVA)						
LOAD TYPE		A	B	TOTAL				A	B	TOTAL	NOTES: ** Electrical contractor is responsible for balancing the panel loading. 1. ROUTE CIRCUIT THROUGH PHOTOCELL FOR DUSK-TO-DAWN OPERATION.		
LIGHTING (L)		0.7	0.4	1.1	1.25			0.9	0.5	1.4			
RECEPTACLE (R)		0.0	0.0	0.0	1.00			0.0	0.0	0.0			
REC (>10000VA) (R)		0.0	0.0	0.0	0.50			0.0	0.0	0.0			
HEATER (H)		0.0	0.0	0.0	1.00			0.0	0.0	0.0			
LARGEST MOTOR (M)		0.0	0.0	0.0	1.25			0.0	0.0	0.0			
REMAIN MOTOR (M)		0.0	0.0	0.0	1.00			0.0	0.0	0.0			
CONTINUOUS LOAD (CL)		0.0	0.2	0.2	1.25			0.0	0.2	0.2			
KITCHEN LOADS (K)		0.0	0.0	0.0	1.00			0.0	0.0	0.0			
SPECIFIC LOADS (S)		0.0	0.0	0.0	1.00			0.0	0.0	0.0			
NONCOINCIDENTAL (N)		0.0	0.0	0.0	0.00			0.0	0.0	0.0			
DWELLING (D)		0.0	0.0	0.0	0.65			0.0	0.0	0.0			
		TOTAL DEMAND (KVA)						0.9	0.7	1.6			
		TOTAL (A/PH)						7.6	6.1	6.9			

Updated: 12/8/2020 13:21

NOTES:

** Electrical contractor is responsible for balancing the panel loading.

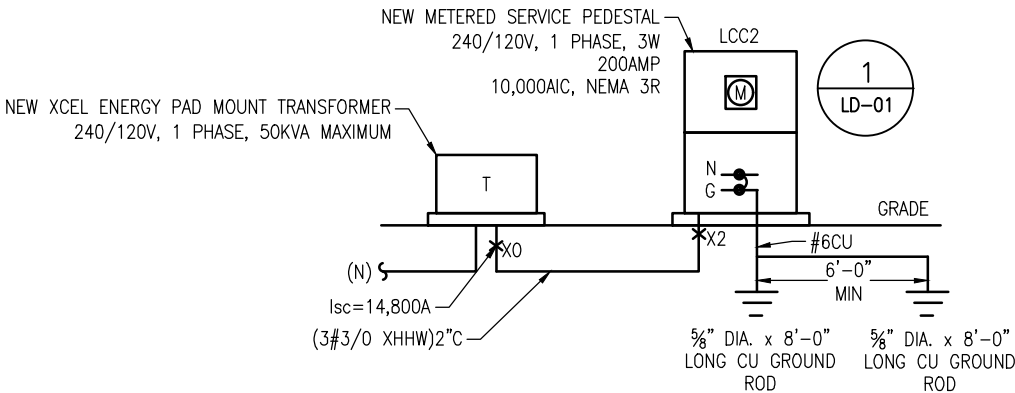
1. ROUTE CIRCUIT THROUGH PHOTOCELL FOR DUSK-TO-DAWN OPERATION.



LCC1 – METERED ONE-LINE DIAGRAM

(APPROX. STA 108+75, SHEET LT-02) NOT TO SCALE

NOTE: SERVICE SHALL BE A MINIMUM OF 55' AWAY FROM TRANSFORMER TO REDUCE THE AVAILABLE FAULT CURRENT BELOW 10,000 AIC.



LCC2 – METERED ONE-LINE DIAGRAM

(APPROX. STA 127+35, SHEET LT-05) NOT TO SCALE

NOTE: SERVICE SHALL BE A MINIMUM OF 55' AWAY FROM TRANSFORMER TO REDUCE THE AVAILABLE FAULT CURRENT BELOW 10,000 AIC.

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Sheet Revisions			
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CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

RALSTON RD - YUKON TO GARRISON SCHEDULES				Project No./Code
No Revisions:				18-ST-40
Revised:		Designer: GJA	Structure Numbers	
Void:		Detailer: ART		
		Sheet Subset: LIGHTING	Subset Sheets: LS-03 OF 04	Sheet Number 314

FED FROM: XCEL SERVICE PEDESTAL
VOLTAGE: 240/120
AIC: 10000
ENCLOSURE: NEMA 3R

PANEL: **LCC3**
PHASE: 1
BUS AMPACITY: 200A
NEUTRAL: 100%
GROUND: STD

WIRE: 3
MAIN: MCB
MOUNTING: SURFACE

CKT NO	CKT DESCRIPTION	LOAD		CKT BREAKER			CKT BREAKER			LOAD		CKT DESCRIPTION	CKT NO
		VA	TYPE	P	A	NOTE	NOTE	A	P	TYPE	VA		
1	LP55,57,60,62,65,67,69	222	L	1	20			20	1	L	296	LP71,73,75,78,80,81,83,85	2
3	LP72,74,76,77,79,82,84	259	L	1	20			20	1	CL	180	IRRIG. CONTROL (ALLISON ST)	4
5	LP86,87,88	111	L	1	20		1	20	1	L	600	DISTRICT MARKER (MEDIAN)	6
7	SPARE			1	20		1	20	1	L	600	DISTRICT MARKERS	8
9	SPACE			-	20			20	1			SPACE	10
11	SPACE			-	20			20	1			SPACE	12
		CONNECTED (KVA)			DEMAND FACTOR		DEMAND (KVA)						
LOAD TYPE		A	B	TOTAL				A	B	TOTAL	NOTES: ** Electrical contractor is responsible for balancing the panel loading. 1. ROUTE CIRCUIT VIA PHOTOCELL FOR DUSK-TO-DAWN OPERATION.		
LIGHTING (L)		1.2	0.9	2.1	1.25			1.5	1.1	2.6			
RECEPTACLE (R)		0.0	0.0	0.0	1.00			0.0	0.0	0.0			
REC (>10000VA) (R)		0.0	0.0	0.0	0.50			0.0	0.0	0.0			
HEATER (H)		0.0	0.0	0.0	1.00			0.0	0.0	0.0			
LARGEST MOTOR (M)		0.0	0.0	0.0	1.25			0.0	0.0	0.0			
REMAIN MOTOR (M)		0.0	0.0	0.0	1.00			0.0	0.0	0.0			
CONTINUOUS LOAD (CL)		0.0	0.2	0.2	1.25			0.0	0.2	0.2			
KITCHEN LOADS (K)		0.0	0.0	0.0	1.00			0.0	0.0	0.0			
SPECIFIC LOADS (S)		0.0	0.0	0.0	1.00			0.0	0.0	0.0			
NONCOINCIDENTAL (N)		0.0	0.0	0.0	0.00			0.0	0.0	0.0			
DWELLING (D)		0.0	0.0	0.0	0.65			0.0	0.0	0.0			
		TOTAL DEMAND (KVA)						1.5	1.3	2.8			
		TOTAL (A/PH)						12.8	10.8	11.8			

NOTES:

** Electrical contractor is responsible for balancing the panel loading.

1. ROUTE CIRCUIT VIA PHOTOCELL FOR DUSK-TO-DAWN OPERATION.

FED FROM: XCEL SERVICE PEDESTAL
VOLTAGE: 240/120
AIC: 10000
ENCLOSURE: NEMA 3R

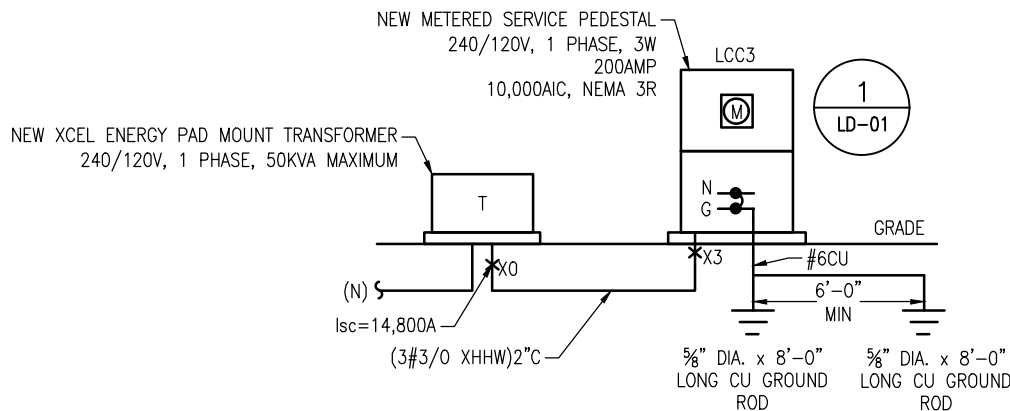
PANEL: **LCC4**
PHASE: 1
BUS AMPACITY: 200A
NEUTRAL: 100%
GROUND: STD

WIRE: 3
MAIN: MCB
MOUNTING: SURFACE

CKT NO	CKT DESCRIPTION	LOAD		CKT BREAKER			CKT BREAKER			LOAD		CKT DESCRIPTION	CKT NO
		VA	TYPE	P	A	NOTE	NOTE	A	P	TYPE	VA		
1	LP89,91,93	111	L	1	20			20	1	L	111	LP90,92,94	2
3	LP95,98	74	L	1	20			20	1	L	111	LP96,97,99	4
5	SPARE			1	20			20	-			SPACE	6
7	SPACE			-	20			20	-			SPACE	8
9	SPACE			-	20			20	-			SPACE	10
11	SPACE			-	20			20	-			SPACE	12
		CONNECTED (KVA)			DEMAND FACTOR		DEMAND (KVA)			NOTES: ** Electrical contractor is responsible for balancing the panel loading.			
LOAD TYPE		A	B	TOTAL			A	B	TOTAL				
LIGHTING (L)		0.2	0.2	0.4	1.25		0.3	0.2	0.5				
RECEPTACLE (R)		0.0	0.0	0.0	1.00		0.0	0.0	0.0				
REC (>10000VA) (R)		0.0	0.0	0.0	0.50		0.0	0.0	0.0				
HEATER (H)		0.0	0.0	0.0	1.00		0.0	0.0	0.0				
LARGEST MOTOR (M)		0.0	0.0	0.0	1.25		0.0	0.0	0.0				
REMAIN MOTOR (M)		0.0	0.0	0.0	1.00		0.0	0.0	0.0				
CONTINUOUS LOAD (CL)		0.0	0.0	0.0	1.25		0.0	0.0	0.0				
KITCHEN LOADS (K)		0.0	0.0	0.0	1.00		0.0	0.0	0.0				
SPECIFIC LOADS (S)		0.0	0.0	0.0	1.00		0.0	0.0	0.0				
NONCOINCIDENTAL (N)		0.0	0.0	0.0	0.00		0.0	0.0	0.0				
DWELLING (D)		0.0	0.0	0.0	0.65		0.0	0.0	0.0				
TOTAL DEMAND (KVA)							0.3	0.2	0.5				
TOTAL (A/PH)							2.3	1.9	2.1				

NOTES:

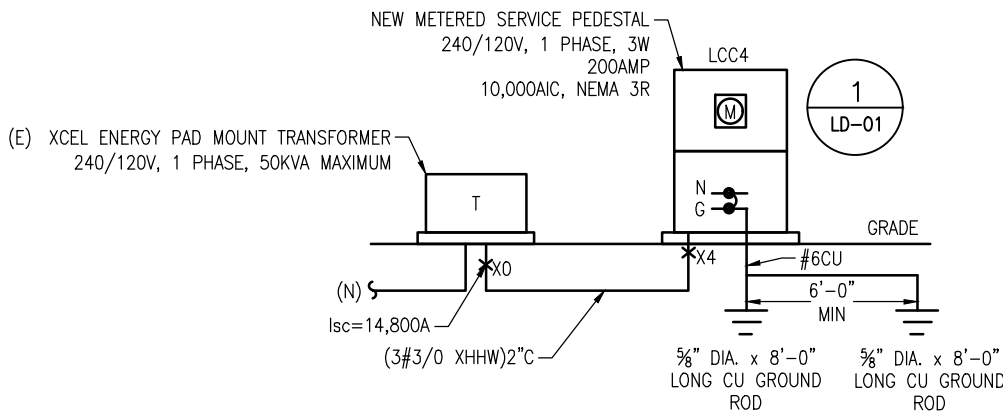
** Electrical contractor is responsible for balancing the panel loading.



LCC3 - METERED ONE-LINE DIAGRAM

(APPROX. STA 141+00, SHEET LT-08) NOT TO SCALE

NOTE: SERVICE SHALL BE A MINIMUM OF 55' AWAY FROM TRANSFORMER TO REDUCE THE AVAILABLE FAULT CURRENT BELOW 10,000 AIC.



LCC4 - METERED ONE-LINE DIAGRAM

(APPROX. STA 141+00, SHEET LT-08) NOT TO SCALE

NOTE: SERVICE SHALL BE A MINIMUM OF 55' AWAY FROM TRANSFORMER TO REDUCE THE AVAILABLE FAULT CURRENT BELOW 10,000 AIC.



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Print Date: 12/8/2020 1:21:58 PM

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Horizontal Scale: N/A Vertical Scale: N/A



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Sheet Revisions

Date	Comments	Initials



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No Revisions:

Revised:

Void:

RALSTON RD - YUKON TO GARRISON
SCHEDULES

Designer: GJA

Detailer: ART

Sheet Subset: LIGHTING

Structure

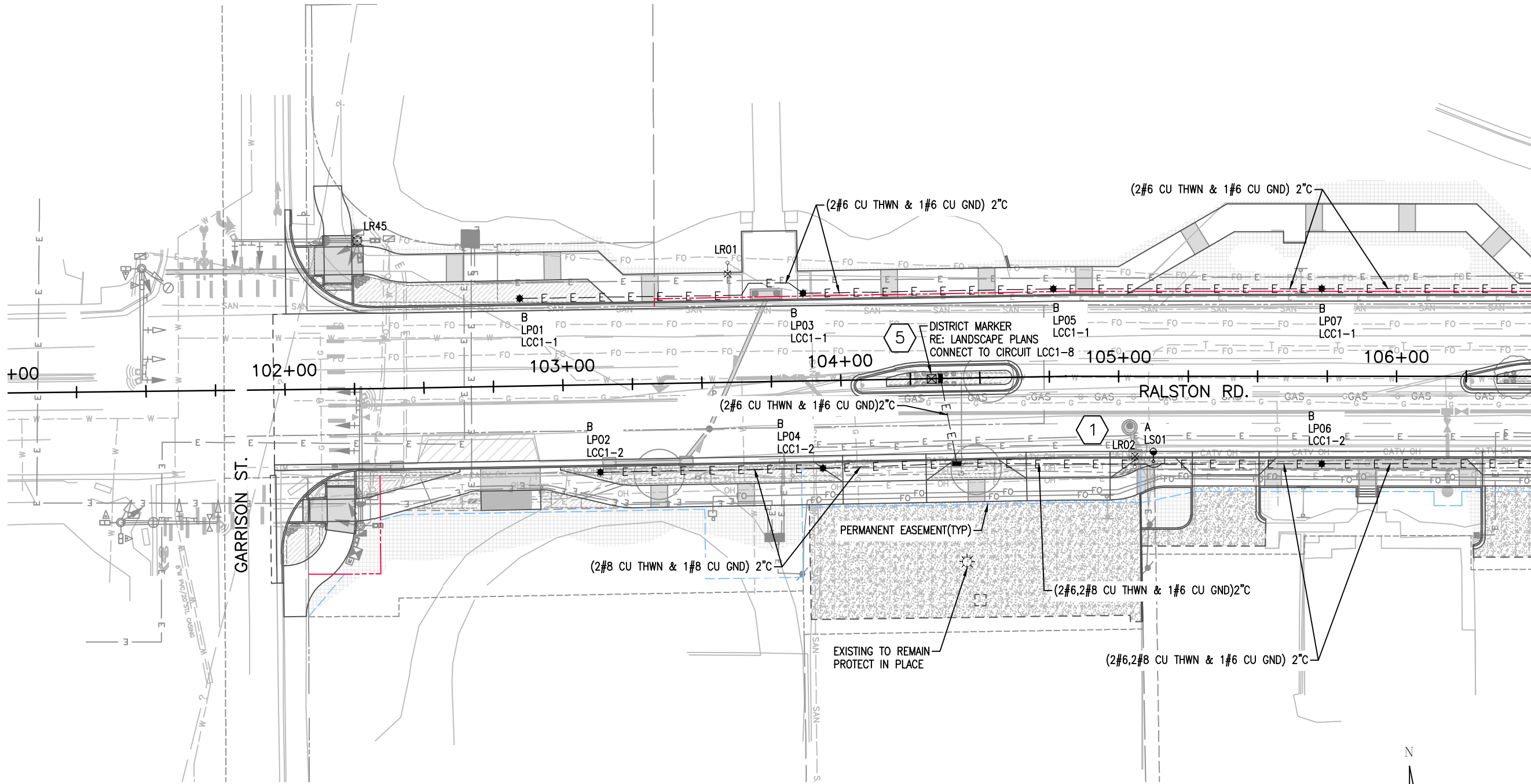
Numbers

Subset Sheets: LS-04 OF 04

Project No./Code

18-ST-40

Sheet Number 315



MATCHLINE - SHEET LT-02



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Vertical Scale:	N/A
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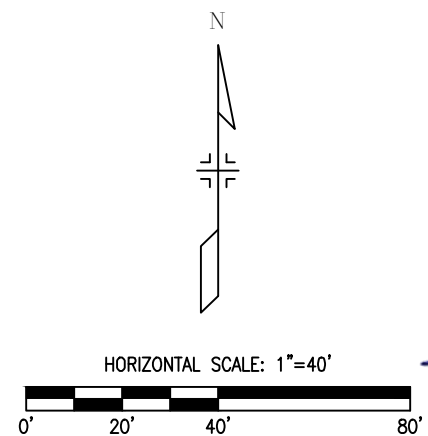
Sheet Revisions			
Date	Comments	Initials	



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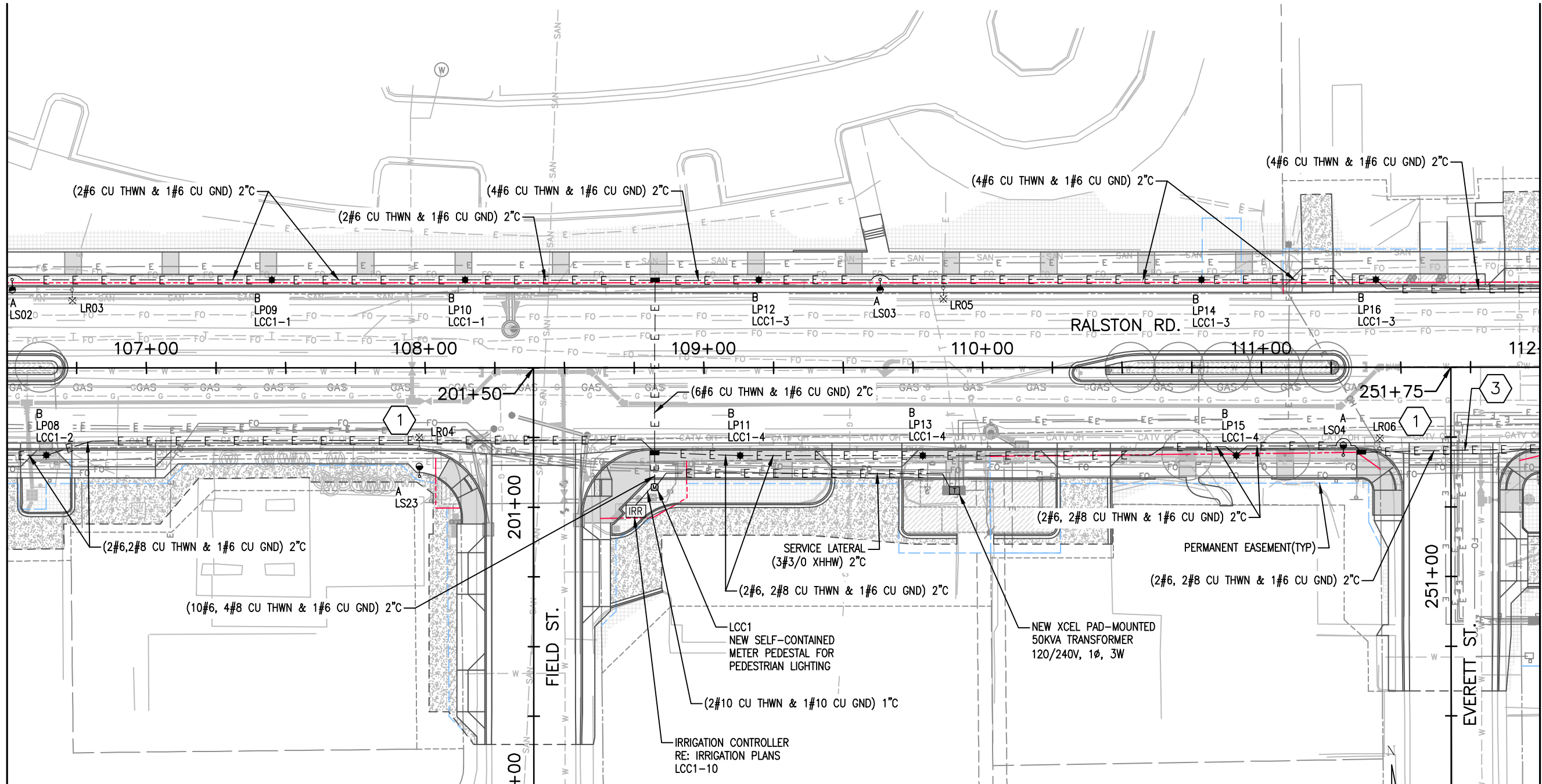
8101 RALSTON ROAD
ARVADA, CO, 80002

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No Revisions:	LIGHTING PLAN			18-ST-40
	STA. 101+00 TO STA. 106+50			
Revised:	Designer: GJA	Structure Numbers		
	Detailer: ART			
Void:	Sheet Subset: LIGHTING	Subset Sheets: LT-01 OF 12		Sheet Number 316



MATCHLINE - SEE SHEET LT-01

MATCHLINE - SEE SHEET LT-03



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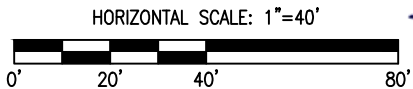
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Sheet Revisions			
Date	Comments	Initials	

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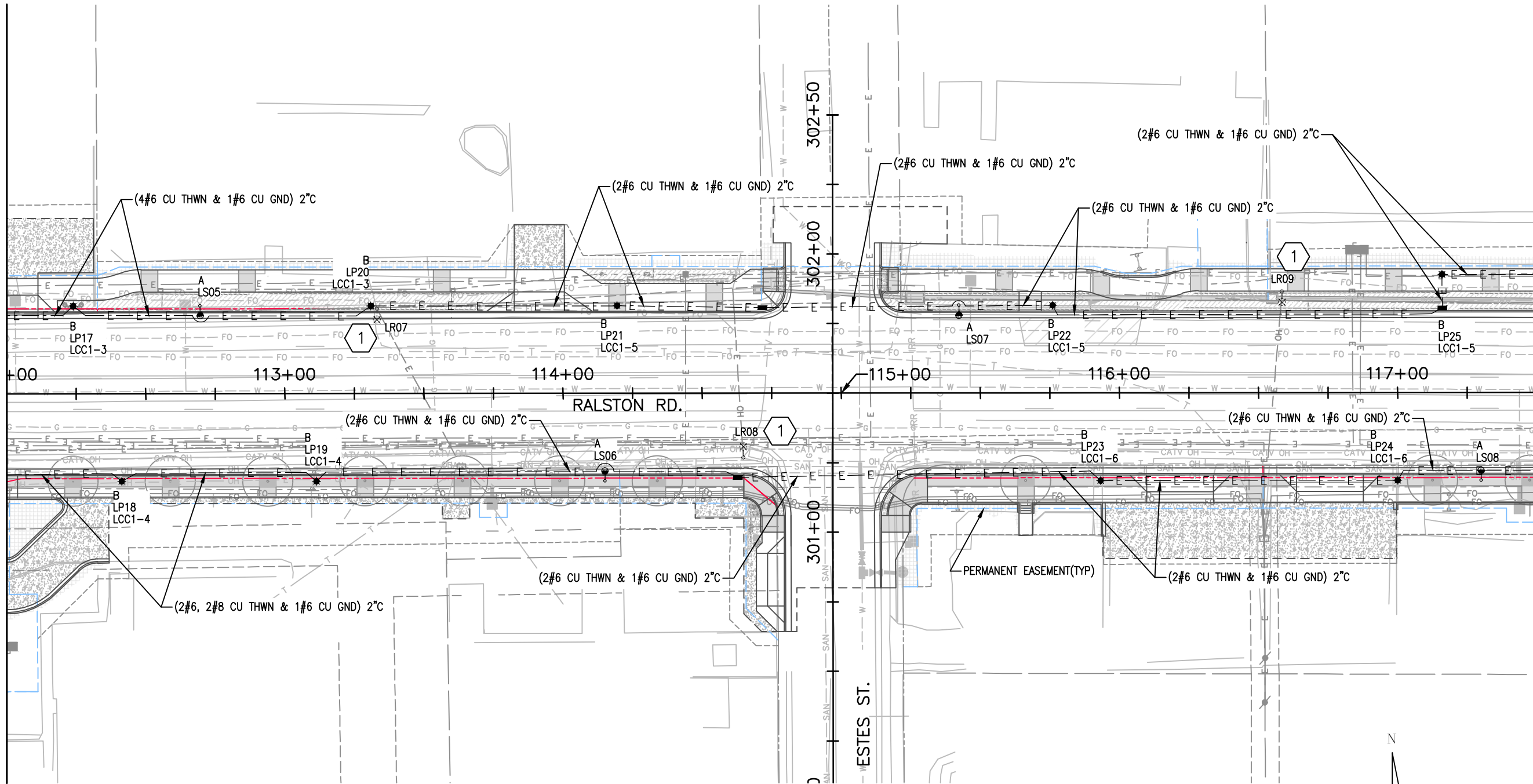
8101 RALSTON ROAD
ARVADA, CO, 80002

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No Revisions:	LIGHTING PLAN			18-ST-40
	STA. 106+50 TO STA. 112+00			
Revised:	Designer: GJA	Structure Numbers		
	Detailer: ART			
Void:	Sheet Subset: LIGHTING	Subset Sheets: LT-02 OF 12		Sheet Number 317



MATCHLINE - SEE SHEET LT-02

MATCHLINE - SEE SHEET LT-04



Print Date: 12/8/2020 1:30:47 PM

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Horizontal Scale: 1" = 40' Vertical Scale: N/A

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RALSTON RD - YUKON TO GARRISON LIGHTING PLAN STA. 112+00 TO STA. 117+50				Project No./Code
No Revisions:				18-ST-40
Revised:		Designer: GJA	Structure Numbers	Sheet Number 318
Void:		Detailer: ART	Subset Sheets: LT-03 OF 12	

HORIZONTAL SCALE: 1"=40'

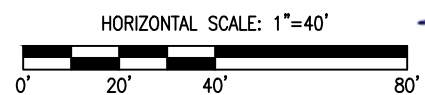
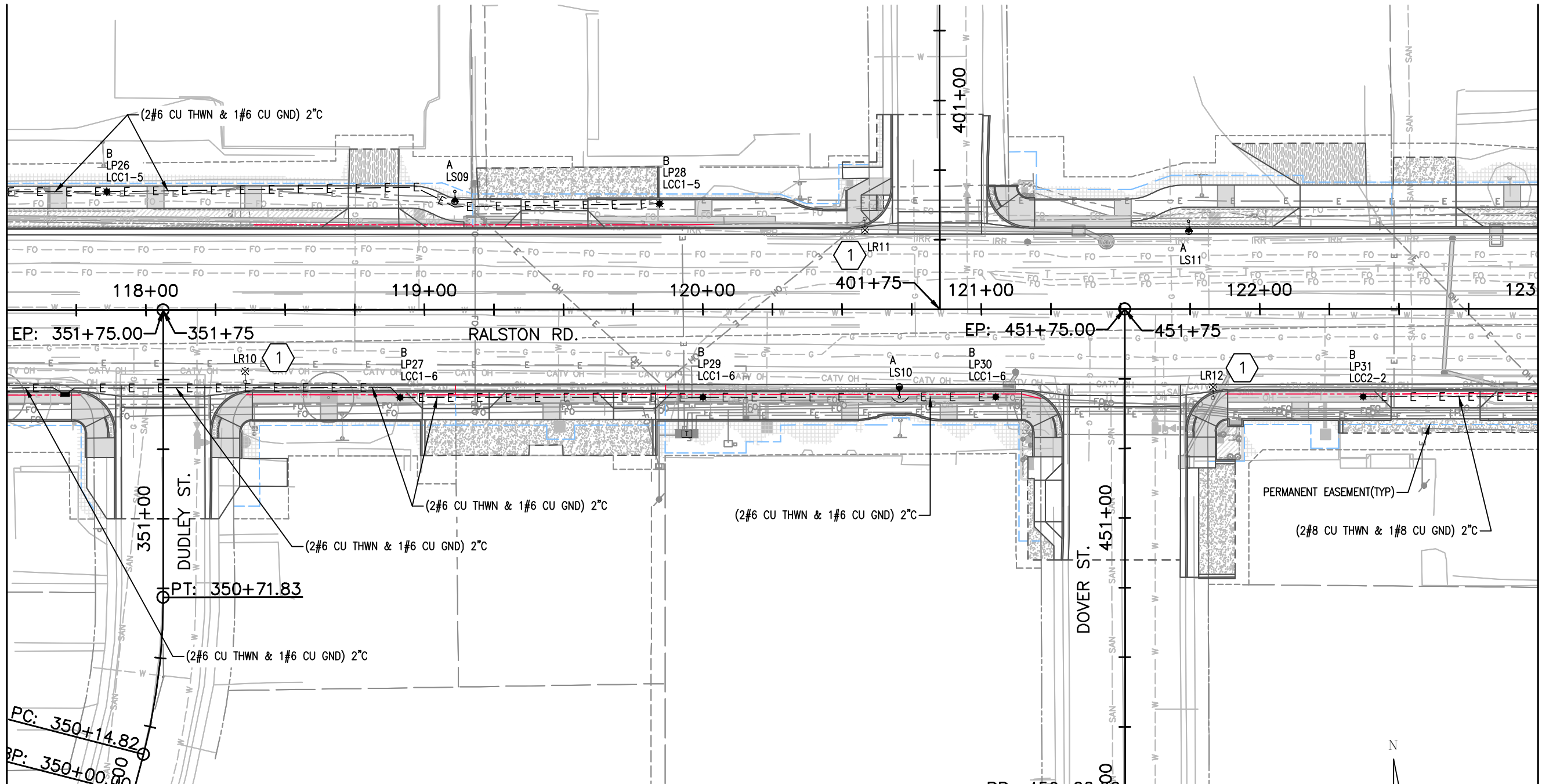
0' 20' 40' 80'

N



MATCHLINE - SEE SHEET LT-03

MATCHLINE - SEE SHEET LT-05



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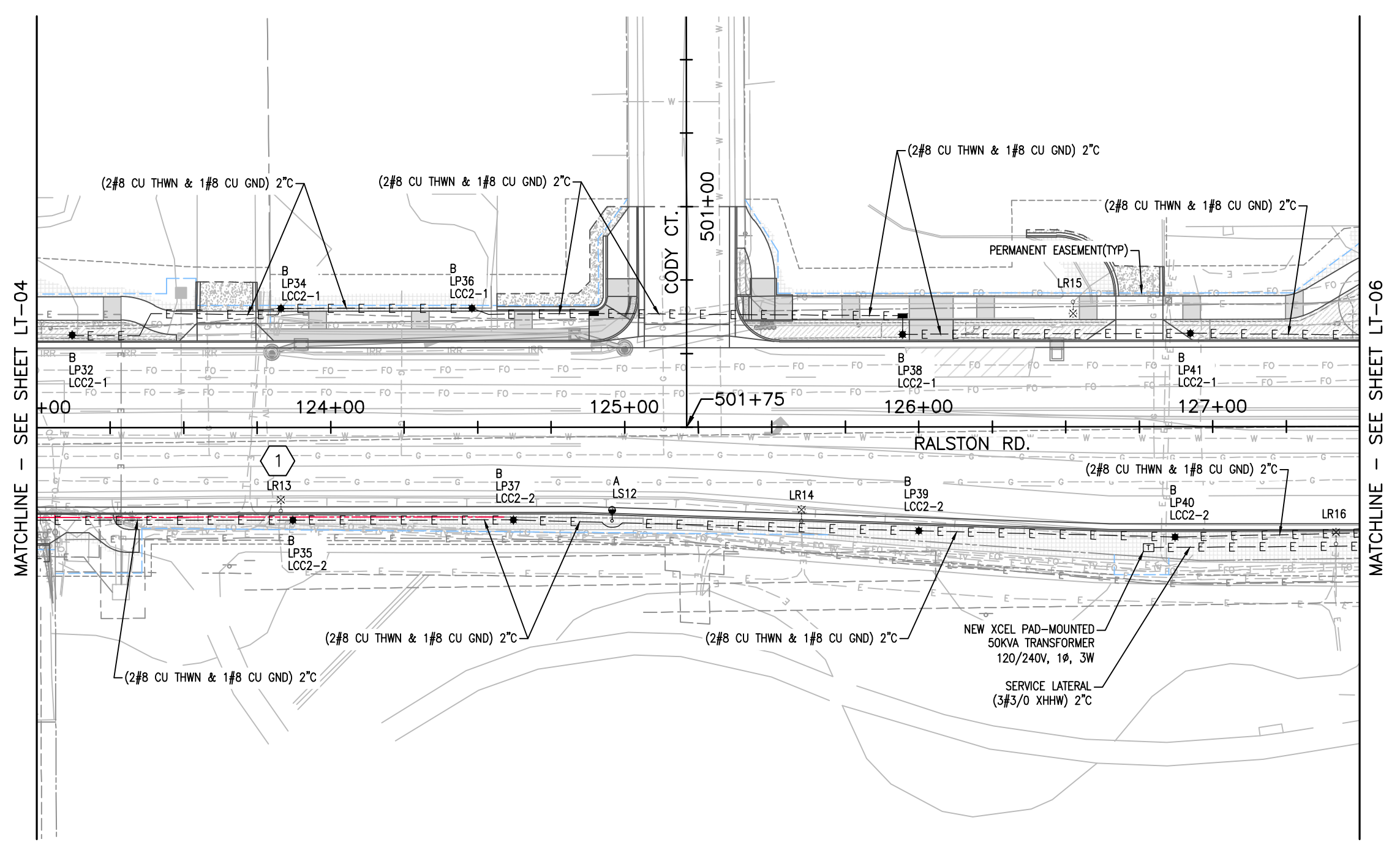
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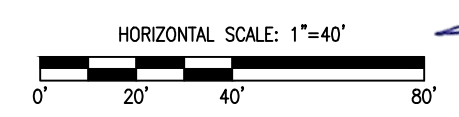
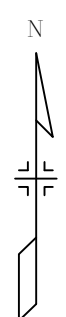
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	RALSTON RD - YUKON TO GARRISON			Project No./Code
No Revisions:	LIGHTING PLAN			18-ST-40
	STA. 117+50 TO STA. 123+00			
Revised:	Designer: GJA	Structure		
	Detailer: ART	Numbers		
Void:	Sheet Subset: LIGHTING	Subset Sheets:	LT-04 OF 12	Sheet Number 319



MATCHLINE - SEE SHEET LT-04

MATCHLINE - SEE SHEET LT-06



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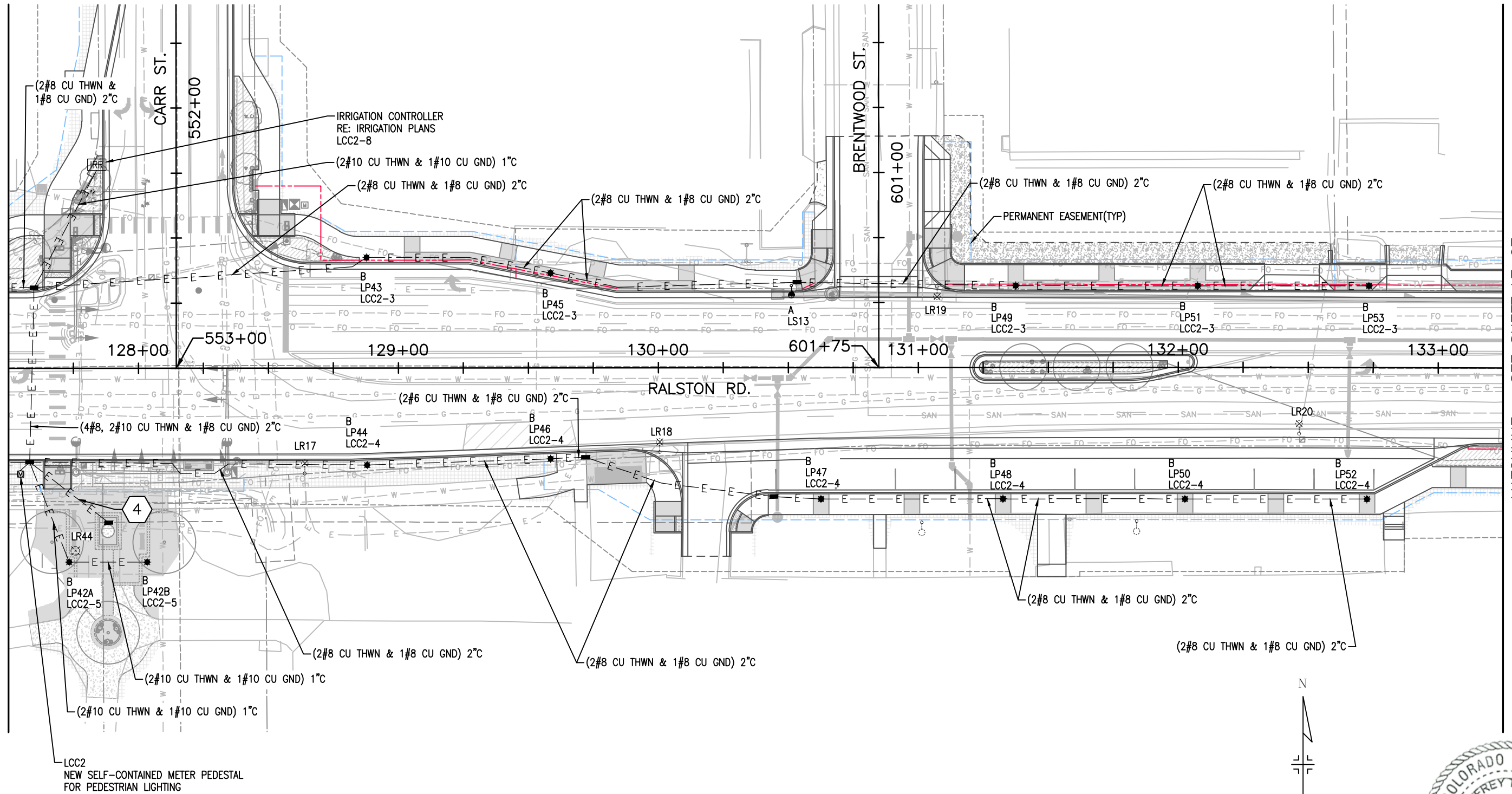
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Date	Comments	Initials	

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No Revisions:	LIGHTING PLAN			18-ST-40
	STA. 123+00 TO STA. 127+50			
Revised:	Designer: GJA	Structure Numbers		
	Detailer: ART			
Void:	Sheet Subset: LIGHTING	Subset Sheets: LT-05 OF 12		Sheet Number 320

MATCHLINE - SEE SHEET LT-05

MATCHLINE - SEE SHEET LT-07



Know what's below.
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Date	Comments	Initials	



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No Revisions: Revised: Void:	RALSTON RD - YUKON TO GARRISON LIGHTING PLAN STA. 127+50 TO STA. 133+25			Project No./Code 18-ST-40	
	Designer: GJA	Structure Numbers			
	Detailer: ART				
	Sheet Subset: LIGHTING	Subset Sheets: LT-06 OF 12		Sheet Number	321

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Print Date: 12/8/2020 1:42:10 PM

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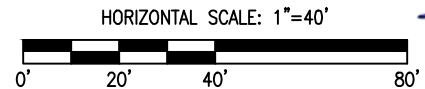
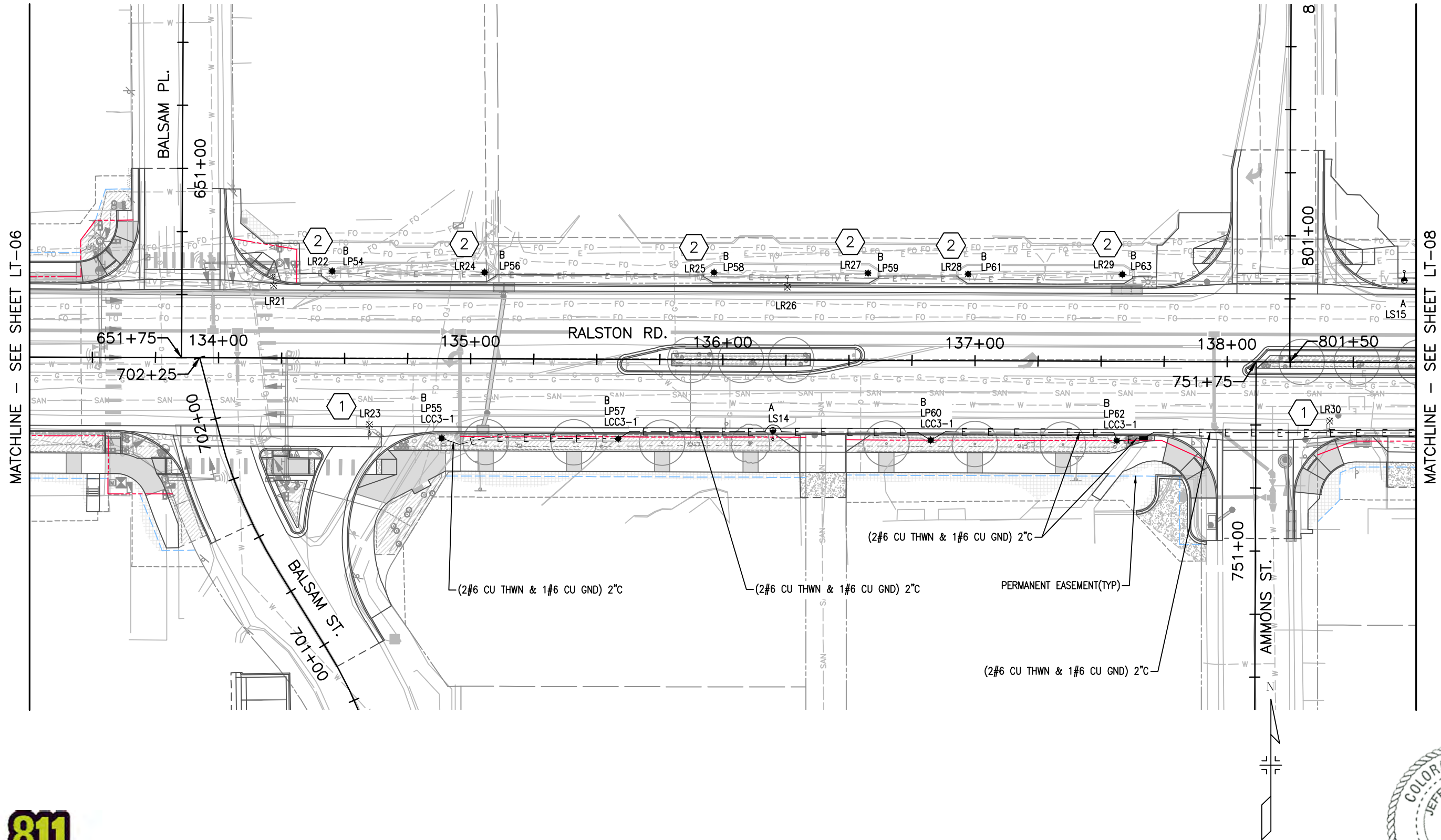
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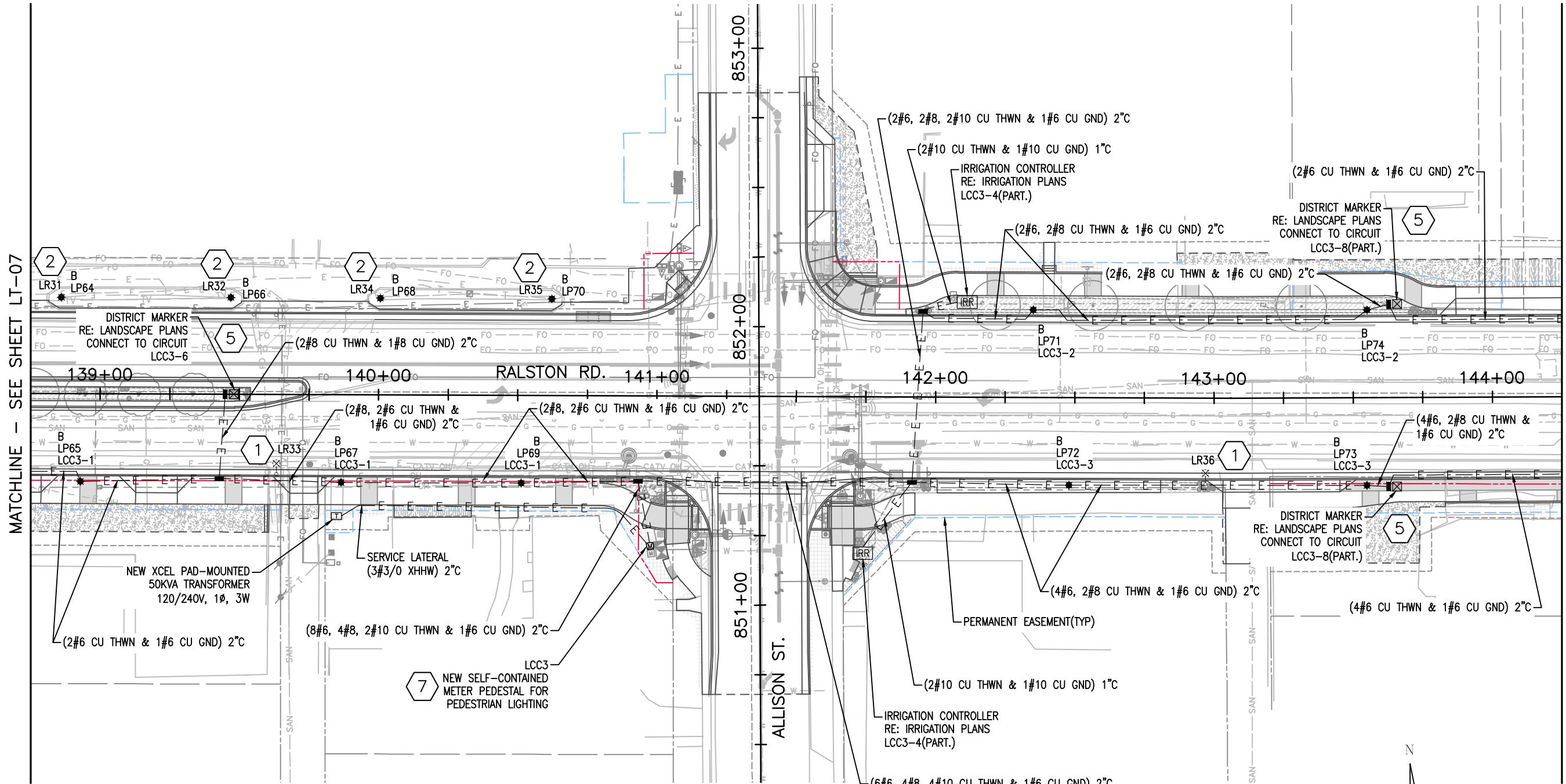
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Void:

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Designer: GJA	Structure	
Detailer: ART	Numbers	
Sheet Subset: LIGHTING	Subset Sheets:	LT-07 OF 12



MATCHLINE - SEE SHEET LT-07

MATCHLINE - SEE SHEET LT-09



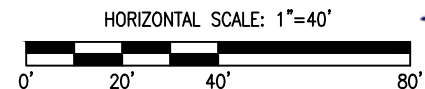
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Sheet Revisions			
Date	Comments	Initials	

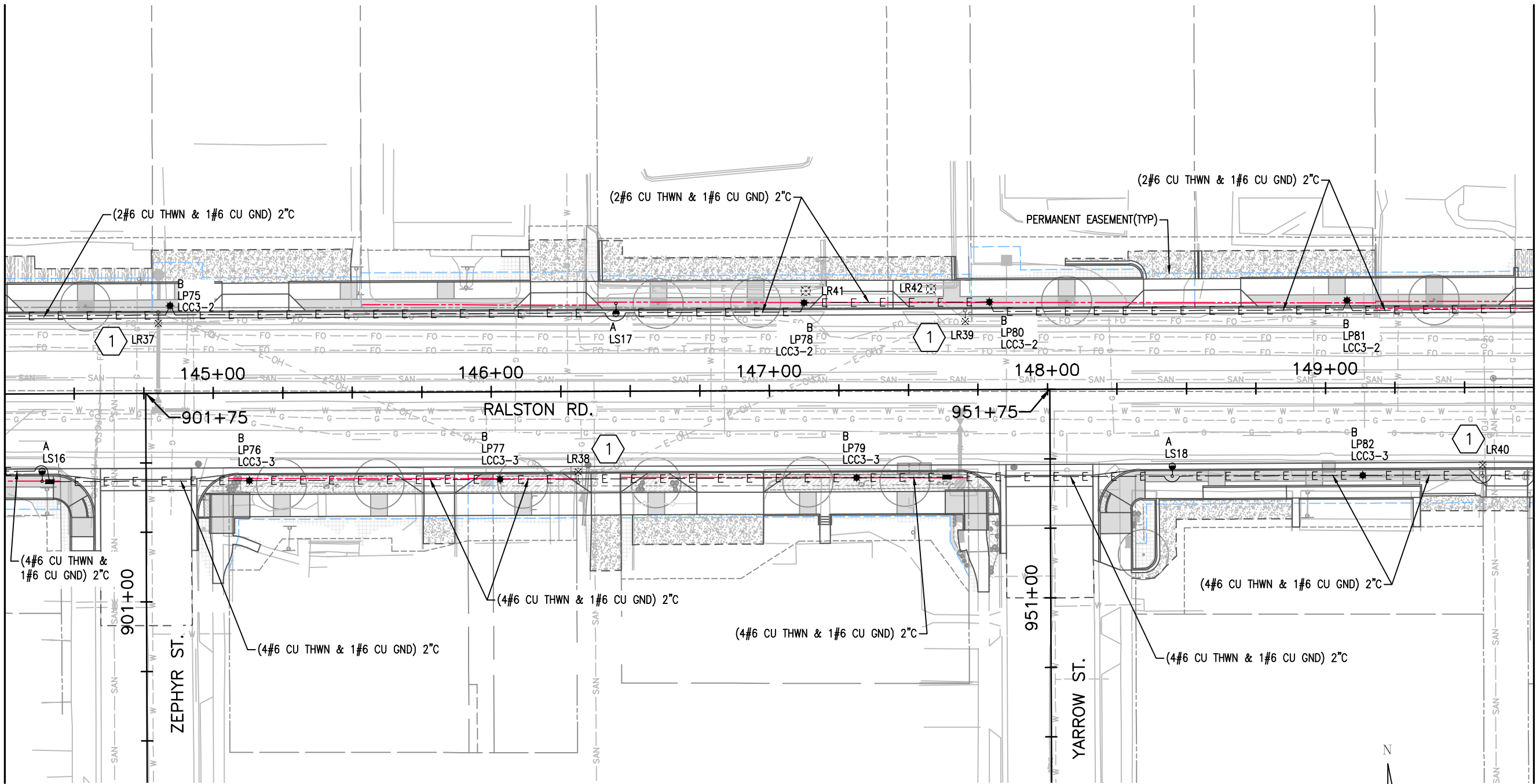
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RALSTON RD - YUKON TO GARRISON LIGHTING PLAN STA. 138+75 TO STA. 144+25				Project No./Code
No Revisions:				18-ST-40
Revised:	Designer: GJA	Structure Numbers		
Void:	Detailer: ART	Subset Sheets:	LT-08 OF 12	Sheet Number 323



MATCHLINE - SEE SHEET LT-08

MATCHLINE - SEE SHEET LT-10



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	RALSTON RD - YUKON TO GARRISON			Project No./Code
No Revisions:	LIGHTING PLAN			18-ST-40
	STA. 144+25 TO STA. 149+75			
Revised:	Designer: GJA	Structure Numbers		
	Detailer: ART			
Void:	Sheet Subset: LIGHTING	Subset Sheets: LT-09 OF 12		Sheet Number 324

N

HORIZONTAL SCALE: 1"=40'



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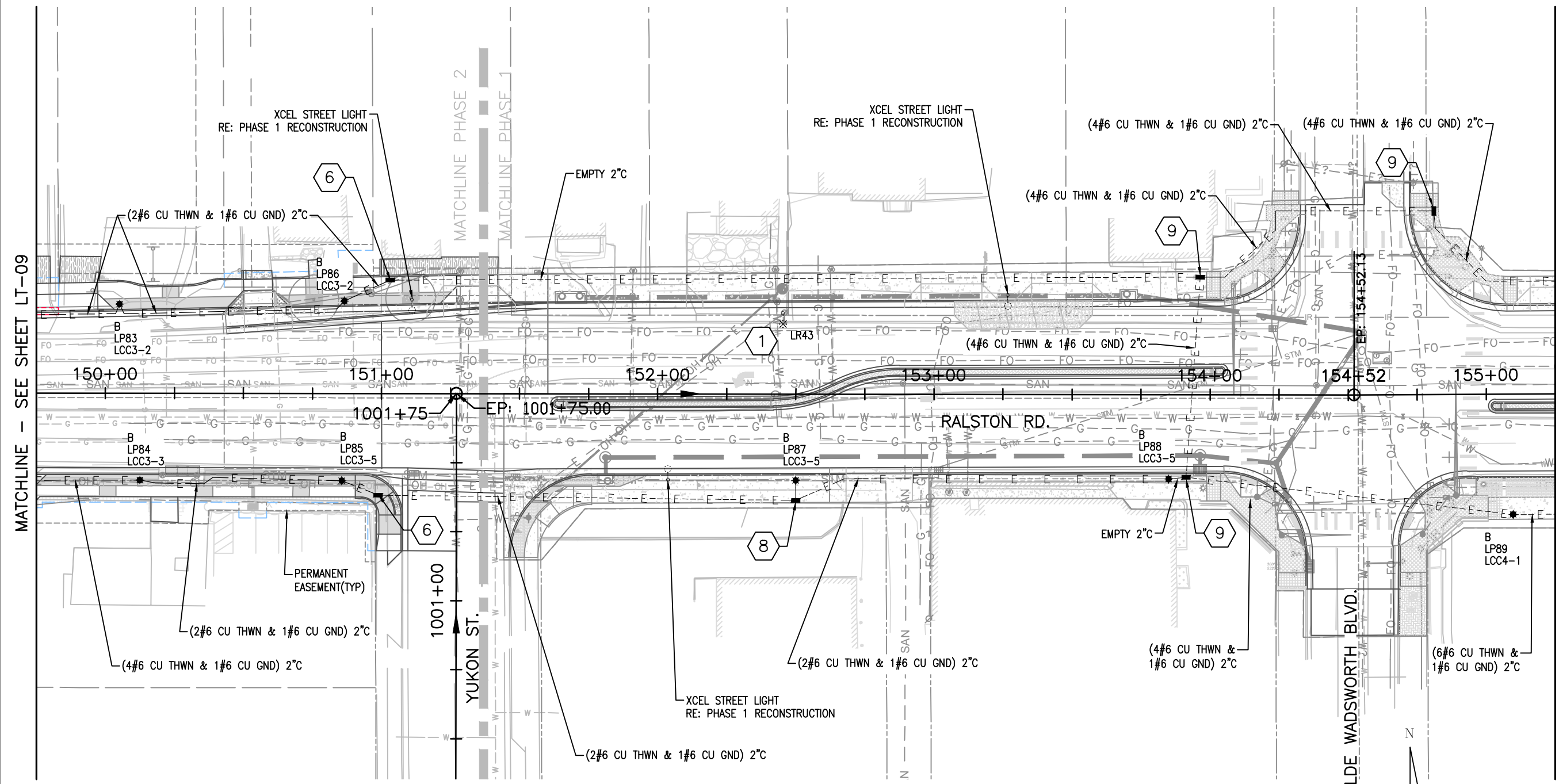
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R-X

000



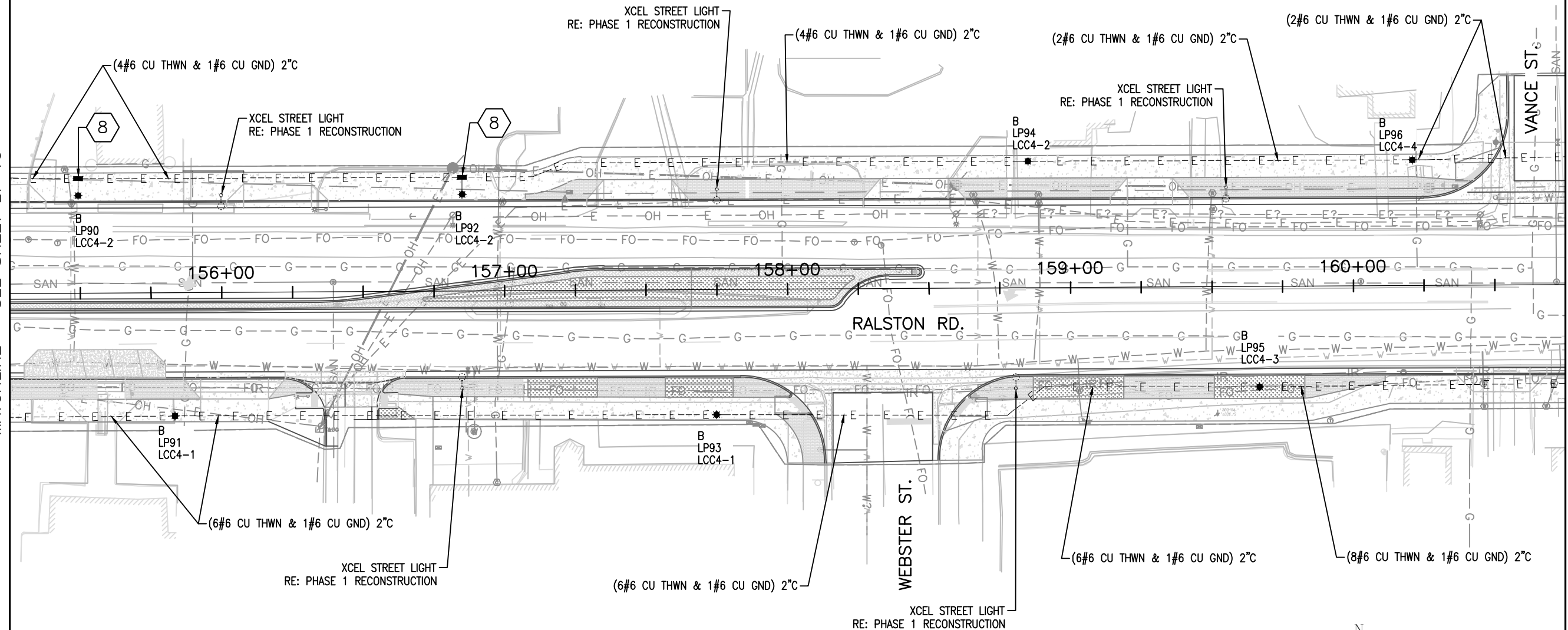
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Revised:	Designer: GJA	Structure Numbers	Sheet Number 325	
Void:	Detailer: ART	Subset Sheets: LT-10 OF 12		
		Sheet Subset: LIGHTING		



MATCHLINE - SEE SHEET LT-10

MATCHLINE - SEE SHEET LT-12



Know what's below.
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R-X

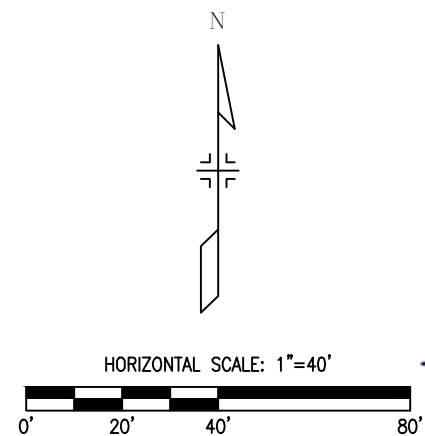
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Sheet Revisions			
Date	Comments	Initials	



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No Revisions: Revised: Void:	RALSTON RD - YUKON TO GARRISON LIGHTING PLAN STA. 155+25 TO STA. 160+75			Project No./Code 18-ST-40
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	Sheet Subset: LIGHTING	Subset Sheets: LT-11 OF 12		Sheet Number 326



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Sheet Revisions			
Date	Comments	Initials	

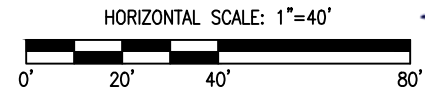
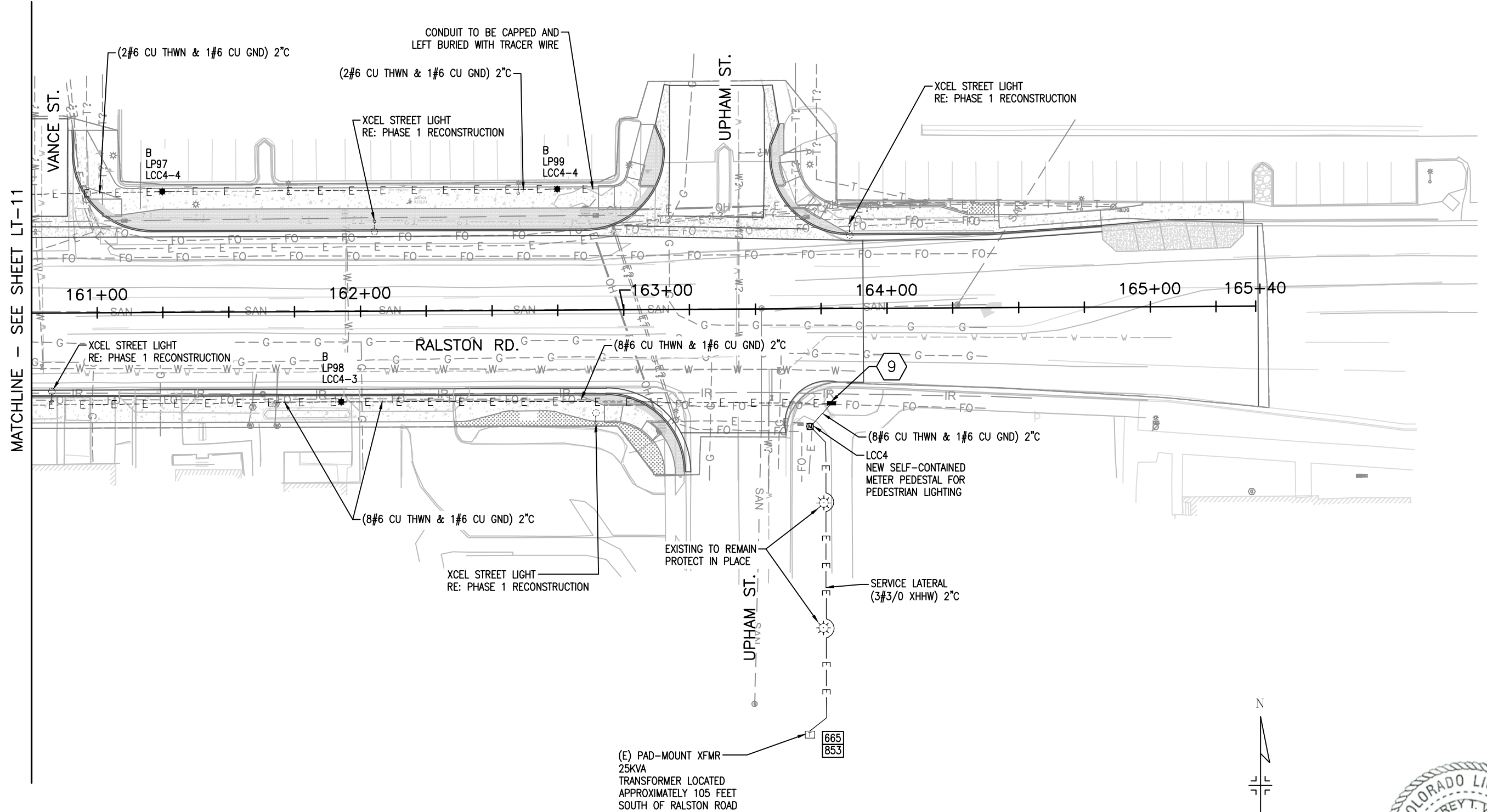


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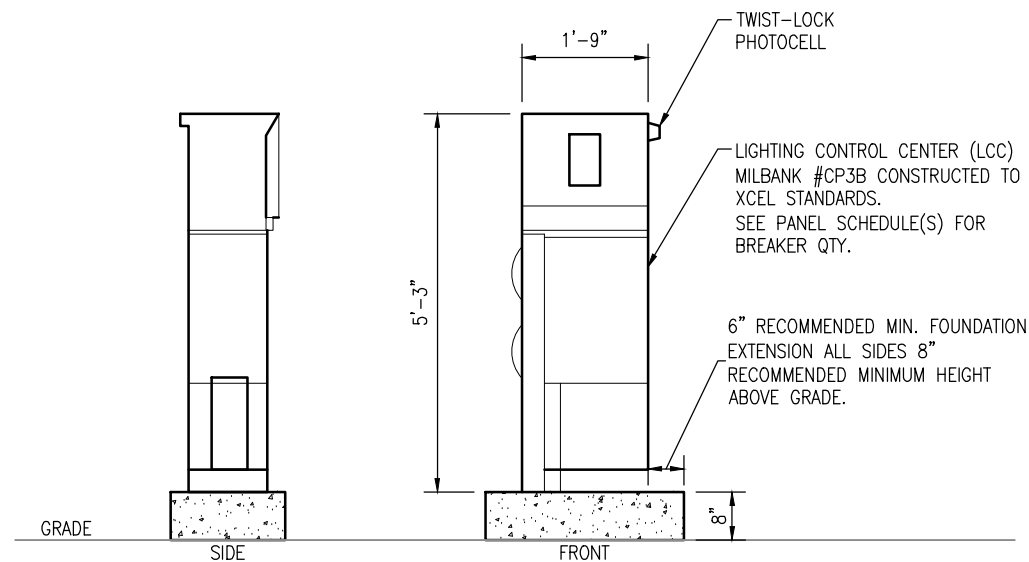
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Designer: GJA	Structure Numbers		
Detailer: ART	Sheet Subset: LIGHTING	Subset Sheets: LT-12 OF 12	

Project No./Code
18-ST-40
Sheet Number 327



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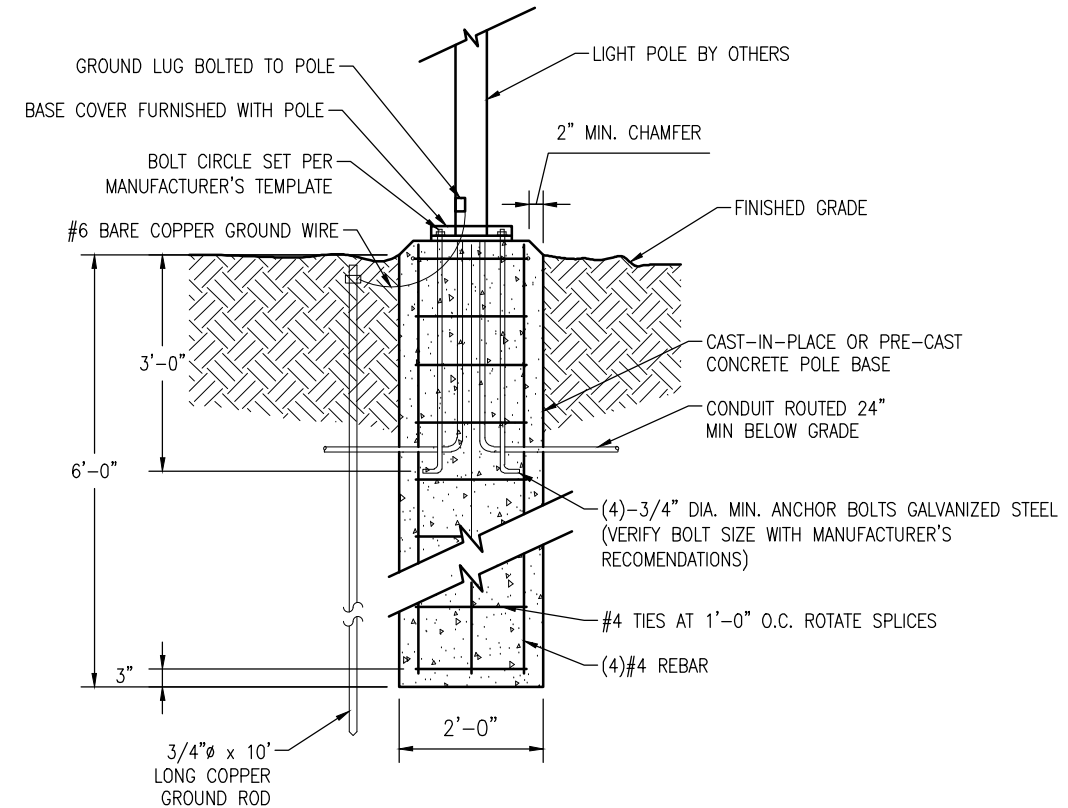


NOTE:
CONNECTION TO UTILITY WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.

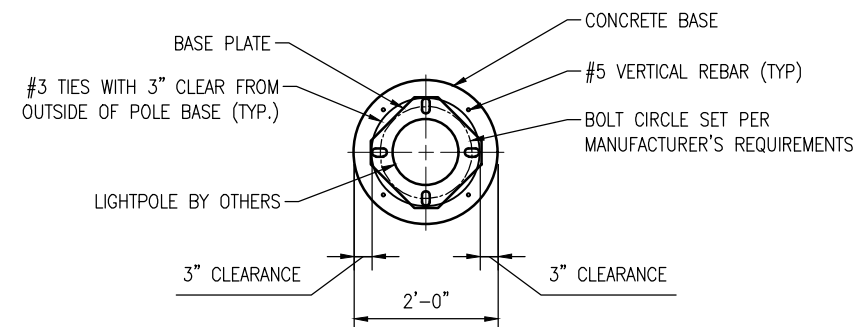
METERED PEDESTAL DETAIL

NOT TO SCALE

1



SIDE VIEW



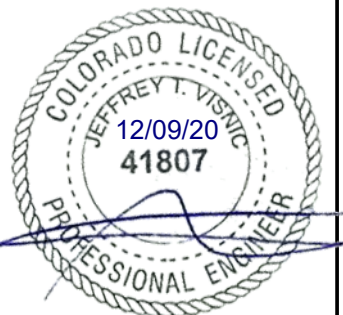
TOP VIEW

- NOTES:
1. VERIFY BOLT CIRCLE AND ANCHOR BOLT DIMENSIONS WITH POLE SHOP DRAWINGS.
 2. CONTRACTOR SHALL FURNISH AND INSTALL A FUSE AND WEATHERPROOF FUSEHOLDER IN EACH POLE BASE.

TYPICAL LIGHTPOLE FOUNDATION DETAIL

NOT TO SCALE

2



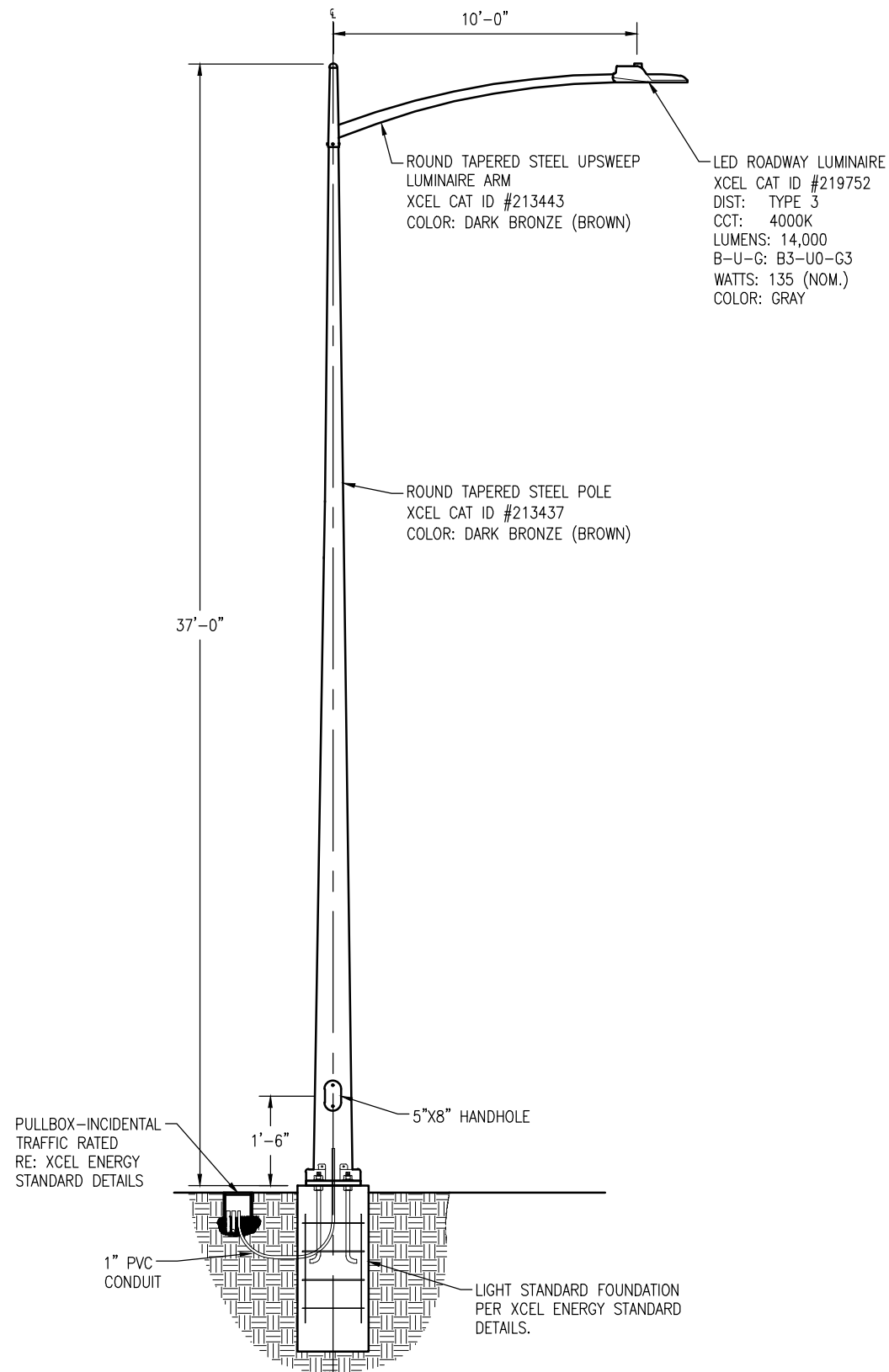
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5420 Ward Road Arvada, CO 80002 Phone: 303.422.7400	
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ARVADA, CO, 80002

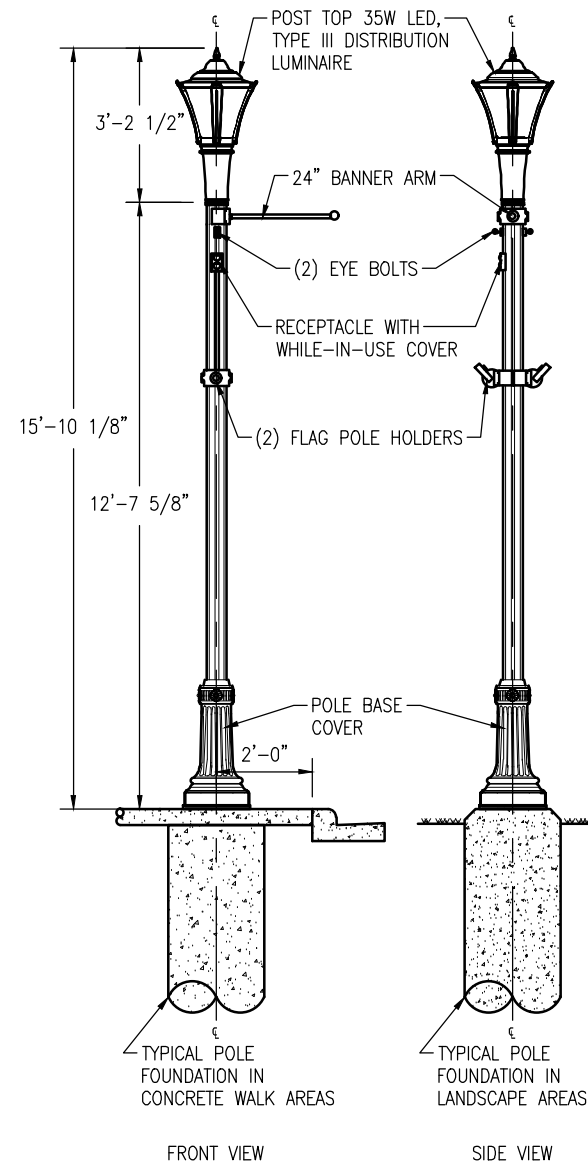
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Revised:	Designer: GJA	Structure Numbers		
Void:	Detailer: ART	Sheet Subset: LIGHTING	Subset Sheets: LD-01 OF 03	Sheet Number 328 328



TYPE 'A' STREET LIGHT

NOT TO SCALE

1



TYPE 'B' PED. LIGHT

NOT TO SCALE

2

NOTE: SEE SHEET LD-03 FOR ADDITIONAL INFORMATION.



F:\21719009\20-Production\20-RalstonRoad\3-Sheets\118355_LTDT_SH02_EN_12/8/2020 1:57:56 PM Alberto Rosario



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Sheet Revisions			
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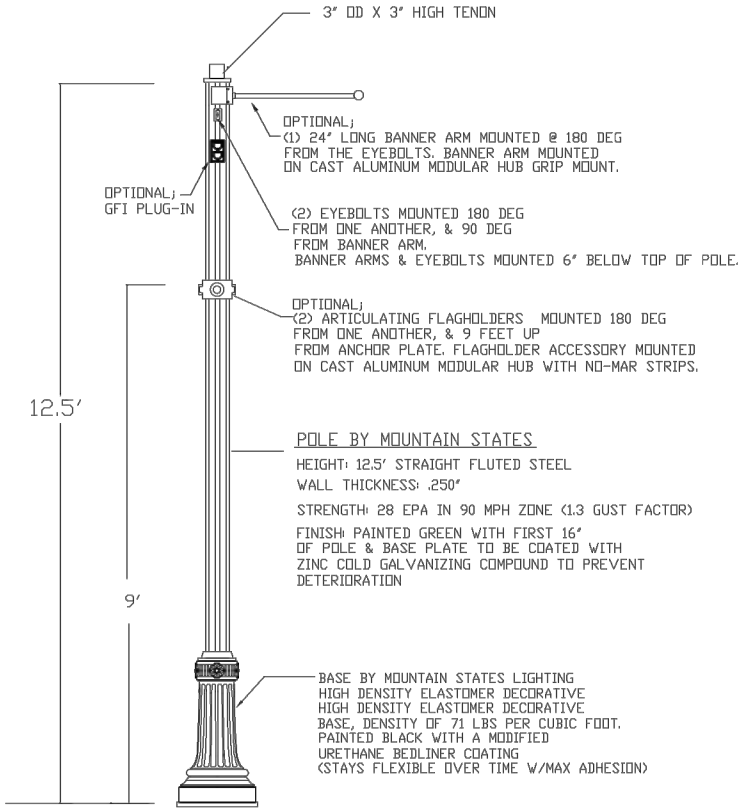
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8101 RALSTON ROAD
 ARVADA, CO, 80002

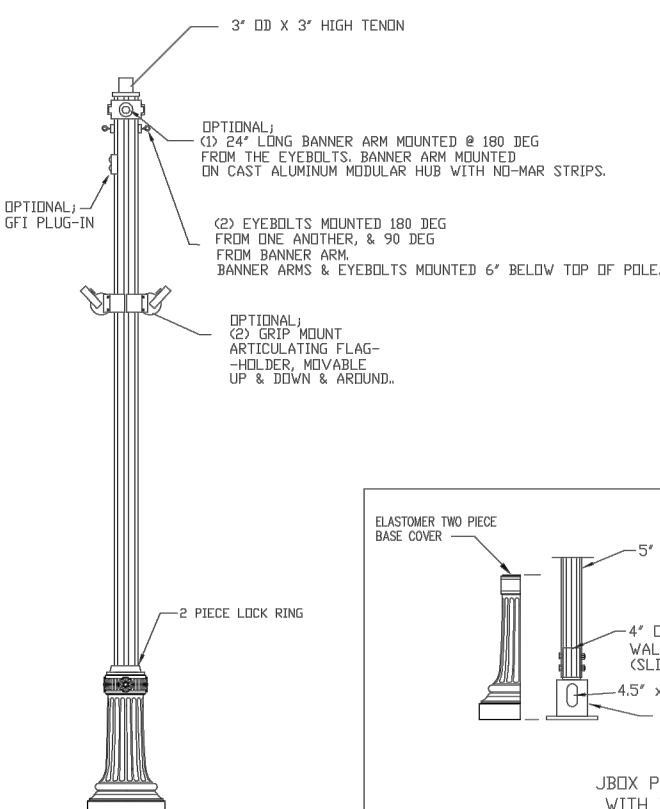
RALSTON RD - YUKON TO GARRISON				Project No./Code
DETAILS LIGHTING				18-ST-40
No Revisions:	Designer: GJA	Structure Numbers		
Revised:	Detailer: ART			
Void:	Sheet Subset: LIGHTING	Subset Sheets: LD-02 OF 03		Sheet Number 329 329

CITY OF ARVADA STREETLIGHT SINGLE FIXTURE STANDARD
USING STRAIGHT FLUTED POLES, AND MODULAR ACCESSORIES.
MOUNTAIN STATES LIGHTING PART NUMBER;
POLE ONLY WITH EYEHOOKS 12.5EFA-5-TT/3X3-ARV-17" MAD-(2)EH-JBOXAP-HOLD GREEN
~~HOLD GREEN~~
DARK BRONZE

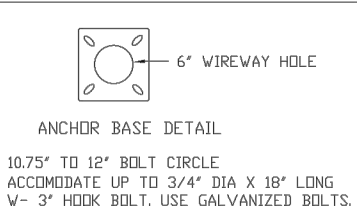
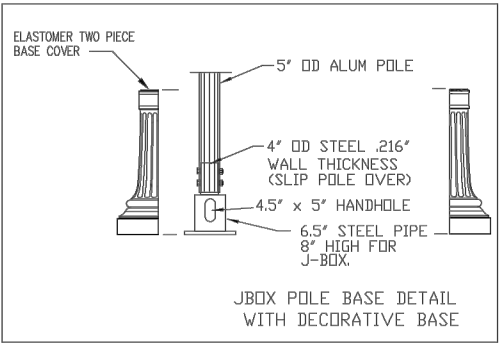
PART NUMBER SUFFIX ADDERS FOR ACCESSORIES;
BA = BANNER ARM
GFI = GFI DUPLEX RECEPTACLE
FH = FLAGHOLDER
DBLBA = DOUBLE BANNER ARMS
DBLFH = DOUBLE FLAGHOLDER
PH = PLANTHANGER
DBLPH = DOUBLE PLANTHANGER



FRONT VIEW



90 DEGREE VIEW



JOB NAME:
Arvada Olde Town Wadsworth Single Head jbox Pole W/Modular Accessories

REVISIONS:	SCALE:	DATE:	DRAWN BY:	DRAWING NUMBER:
	NTS	11-18-20	PMP	ARV-SGL-w/ACC10 JBOX
	REP:	QUOTE #:	DIST:	
	Mountain States			

PEDESTRIAN POLE (TYPE B)

N.T.S.

1



F:\21719009\20-Production\20-RalstonRoad\3-Sheets\118355_LTD_SH03_EN_12/8/2020 1:58:32 PM Alberto Rosario



Print Date:	12/8/2020 1:58:32 PM
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Vertical Scale:	N/A
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	5420 Ward Road
	Arvada, CO 80002
ENGINEERING TECHNOLOGY LIFE SAFETY	

Sheet Revisions			
Date	Comments	Initials	

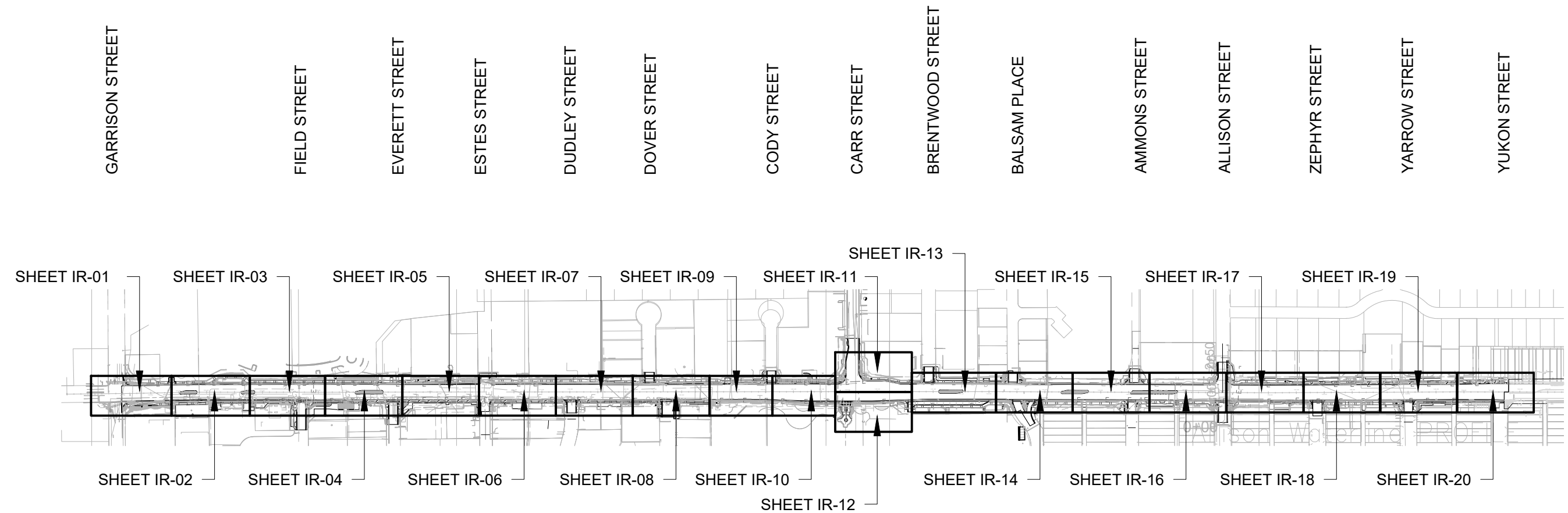


CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

	RALSTON RD - YUKON TO GARRISON			Project No./Code
No Revisions:	DETAILS LIGHTING			18-ST-40
Revised:	Designer: GJA	Structure Numbers		
Void:	Detailer: ART			
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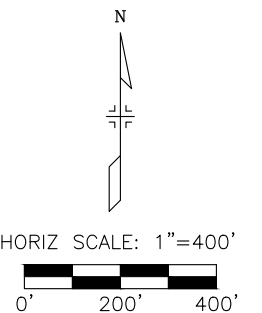


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UNDERGROUND MEMBER UTILITIES.



POINTS OF CONNECTION & CONTROLLER DATA

TAP NO.	TAP SIZE (INCH)	BACKFLOW PREVENTER SIZE (INCH)	ASSOCIATED CONTROLLER	CONTROLLER STATION COUNT	PEAK FLOW REQUIREMENT (GPM)	REQUIRED STATIC PRESSURE (PSI)	TAP LOCATION - SEE SHEET
1	1"	1"	A	12	18	82	IR-11
2	1"	1"	B	8	18	71	IR-16 & IR-17
3	1"	1"	C	20	18	79	IR-16 & IR-17
4	1"	1"	D	20	18	70	IR-3



**HydroSystems**

KDI

Irrigation Consulting & Water Management

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o: 303.980.5327

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Date	Comments	Initials



CITY OF ARVADA
PUBLIC WORKS DEPARTMENT

As Constructed	RALSTON RD - YUKON TO GARRISON IRRIGATION SET IRRIGATION KEYMAP			Project No./Code
No Revisions:				18-ST-40
Revised:	Designer: AMC	Structure		
	Detailer: AMC	Numbers		
Void:	Sheet Subset: IRRIGATION	Subset Sheets: IR-00	OF 29	Sheet Number 331

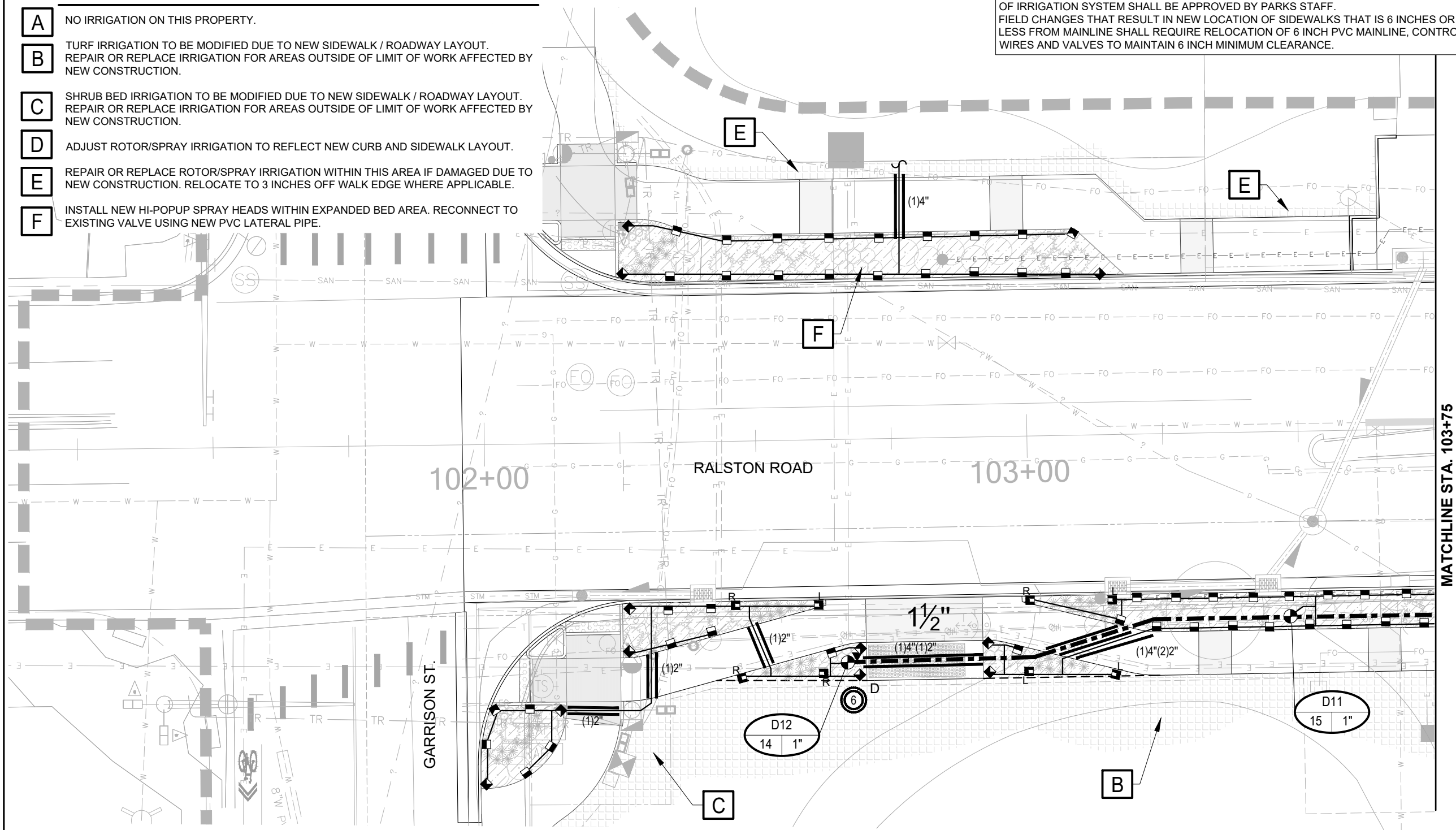
IRRIGATION MODIFICATION KEYNOTES

- A** NO IRRIGATION ON THIS PROPERTY.
- B** TURF IRRIGATION TO BE MODIFIED DUE TO NEW SIDEWALK / ROADWAY LAYOUT. REPAIR OR REPLACE IRRIGATION FOR AREAS OUTSIDE OF LIMIT OF WORK AFFECTED BY NEW CONSTRUCTION.
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- E** REPAIR OR REPLACE ROTOR/SPRAY IRRIGATION WITHIN THIS AREA IF DAMAGED DUE TO NEW CONSTRUCTION. RELOCATE TO 3 INCHES OFF WALK EDGE WHERE APPLICABLE.
- F** INSTALL NEW HI-POPOP SPRAY HEADS WITHIN EXPANDED BED AREA. RECONNECT TO EXISTING VALVE USING NEW PVC LATERAL PIPE.

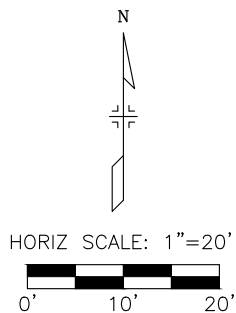
COORDINATE WITH ARVADA PARKS STAFF FOR ALL WORK IN THIS AREA. ANY SHUTDOWN OF IRRIGATION SYSTEM SHALL BE APPROVED BY PARKS STAFF. FIELD CHANGES THAT RESULT IN NEW LOCATION OF SIDEWALKS THAT IS 6 INCHES OR LESS FROM MAINLINE SHALL REQUIRE RELOCATION OF 6 INCH PVC MAINLINE, CONTROL WIRES AND VALVES TO MAINTAIN 6 INCH MINIMUM CLEARANCE.



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MATCHLINE STA. 103+75



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Horizontal Scale: 1" = 20' Vertical Scale: N/A		R-X	Date	Comments	Initials	No Revisions:			Designer: AMC Structure Numbers			Sheet Number 332	
FELSBURG HOLT & ULLEVIG 6300 South Syracuse Way, Suite 600 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com						Revised:							
						Detailer: AMC							
						Void:			Sheet Subset: IRRIGATION Subset Sheets: IR-01 OF 29				
			CITY OF ARVADA PUBLIC WORKS DEPARTMENT										

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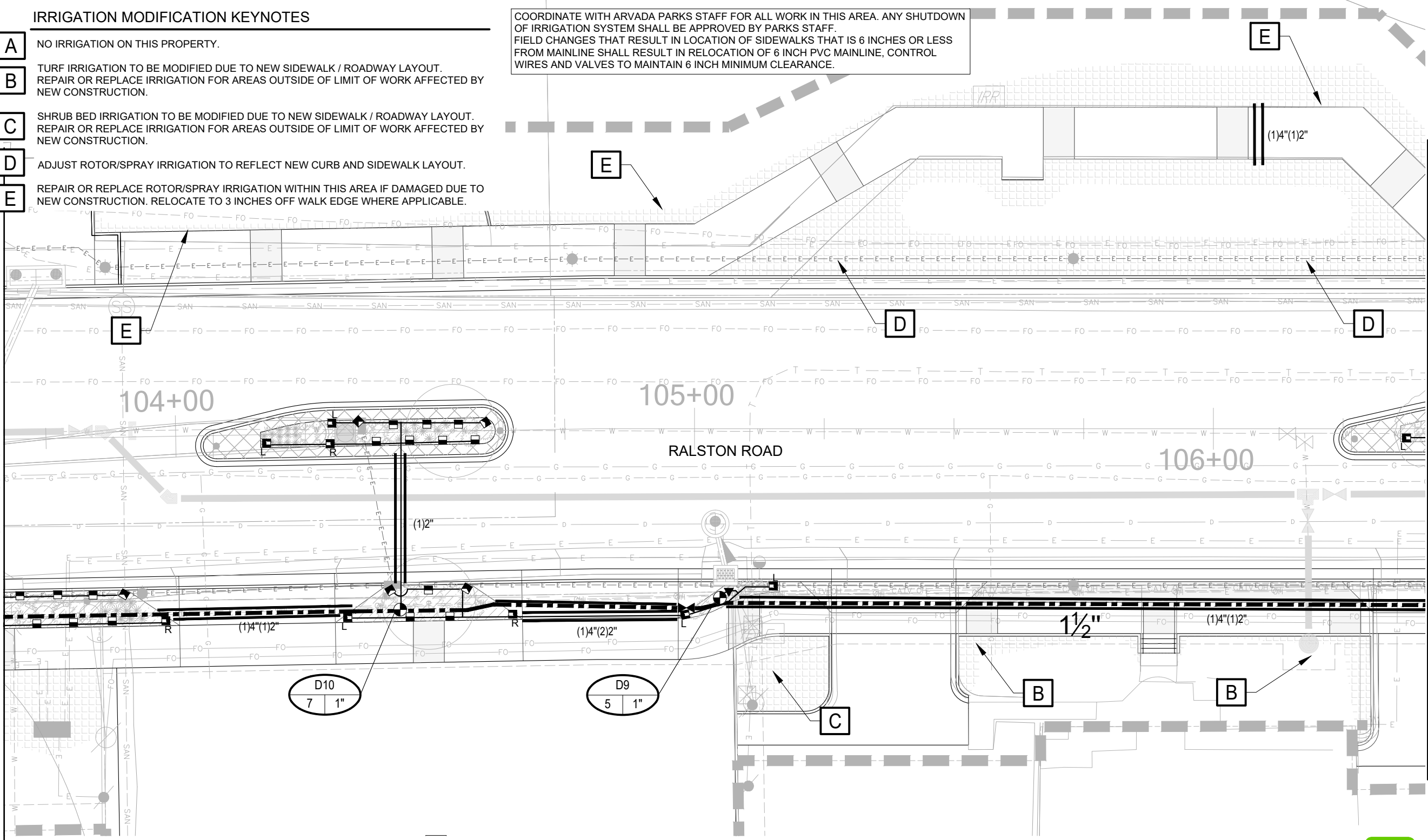
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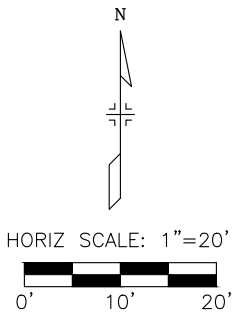
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MATCHLINE STA. 103+75

MATCHLINE STA. 106+50



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Detailer:	AMC	Numbers	
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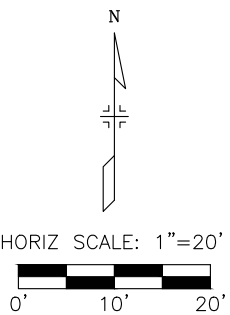
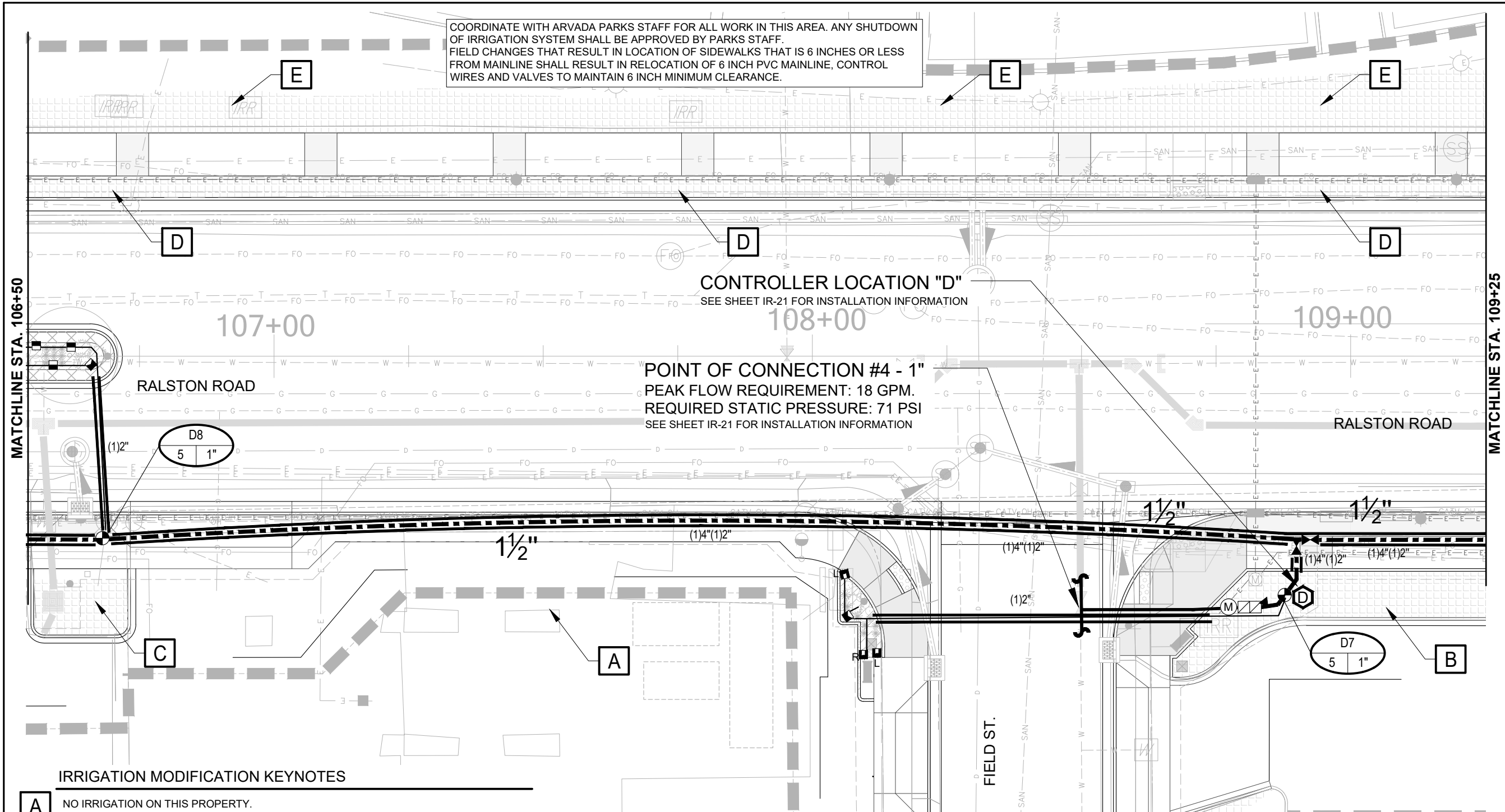
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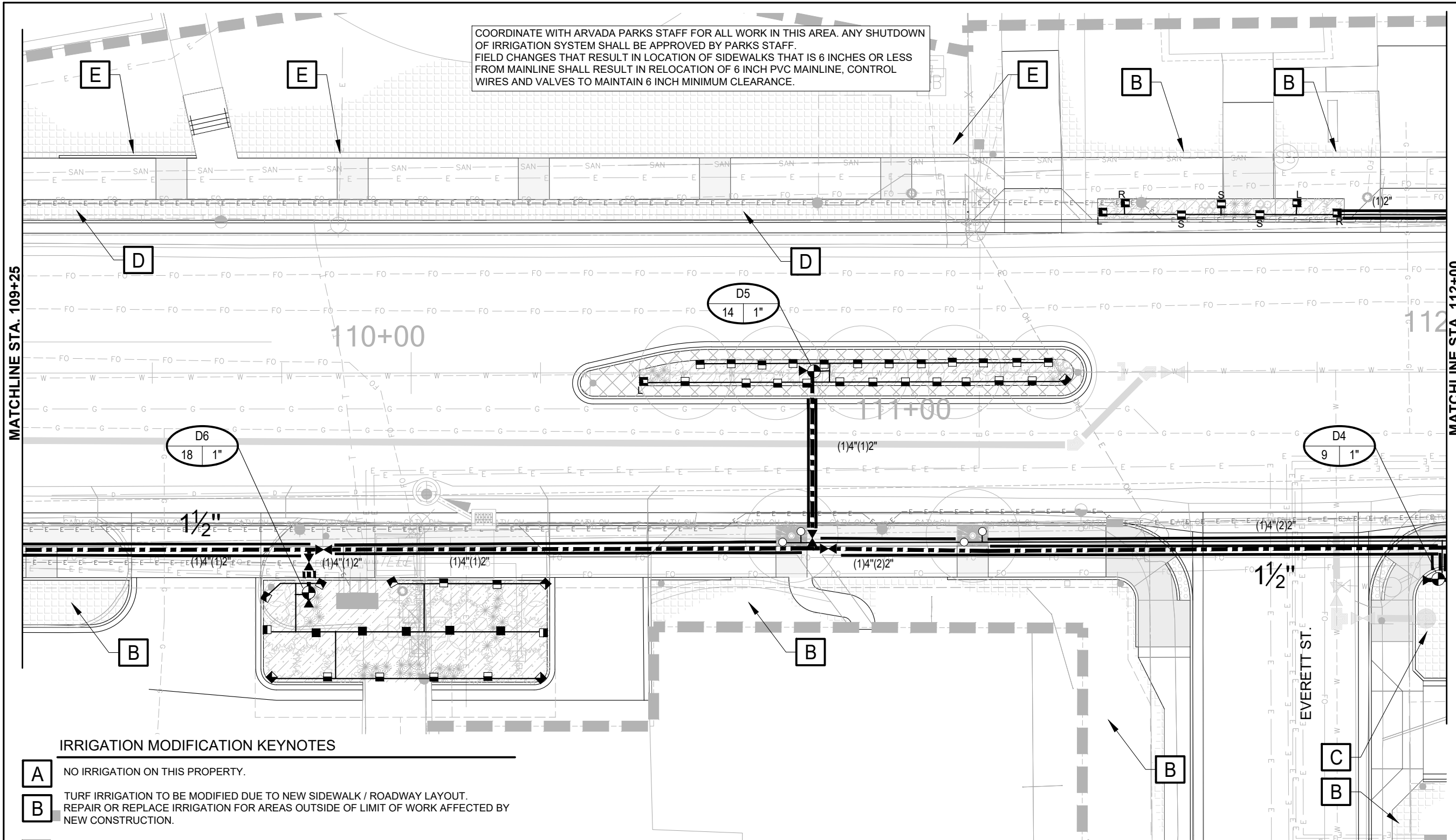


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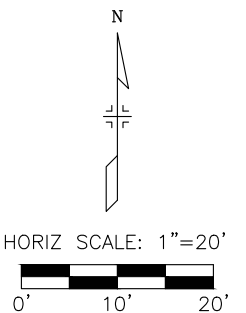
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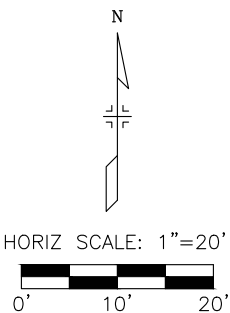
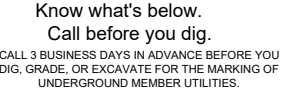
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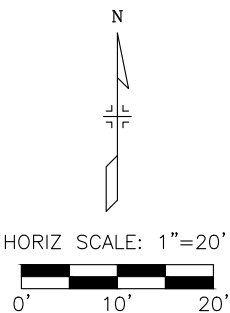
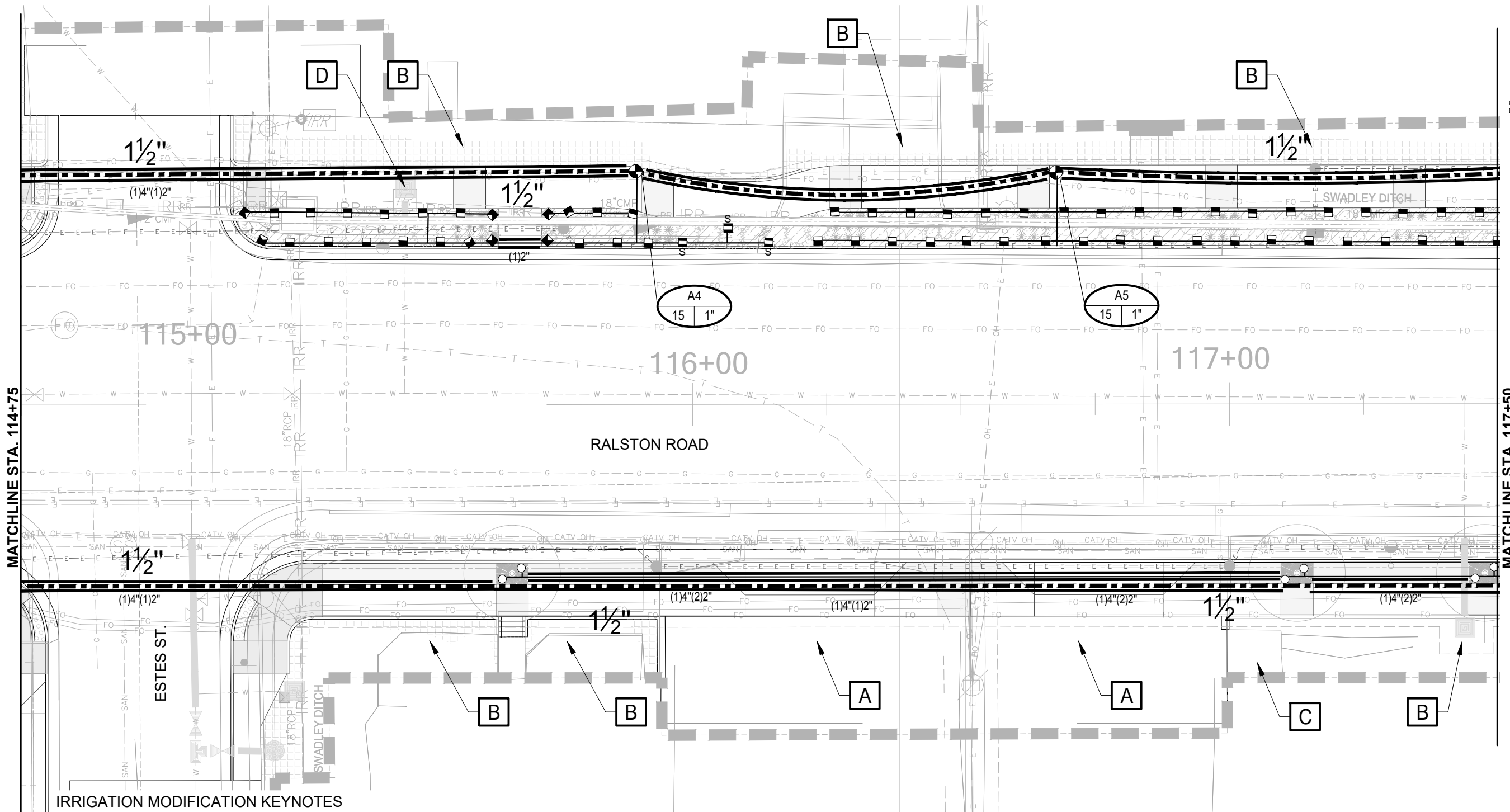
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File Name: 6667-RR-IRR-100%CD.DWG			Date	Comments	Initials		No Revisions:					18-ST-40	
Horizontal Scale: 1" = 20' Vertical Scale: N/A							Revised:		Designer: AMC	Structure			
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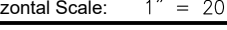


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- D** RELOCATE EXISTING BACKFLOW PREVENTION DEVICE TO BE DOWNSTREAM OF NEW METER LOCATION. INSTALL PER ARVADA WATER STANDARDS AND SPECIFICATIONS.

IRRIGATION WORK SHALL BE COORDINATED WITH INSTALLATION OF OTHER TRADES. UTILITIES AND LANDSCAPE SHALL TAKE PRECEDENT OVER IRRIGATION LOCATIONS SHOWN. MAINLINE CHANGES IN DIRECTION WITHIN CONCRETE AREAS SHALL BE INSTALLED WITHIN JUMBO CONCRETE POLYMER VALVE BOXES. COORDINATE LOCATION WITH FLATWORK TO ALIGN WITH SCORE JOINTS WHERE POSSIBLE.

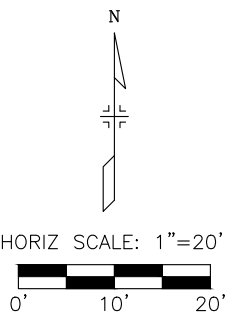
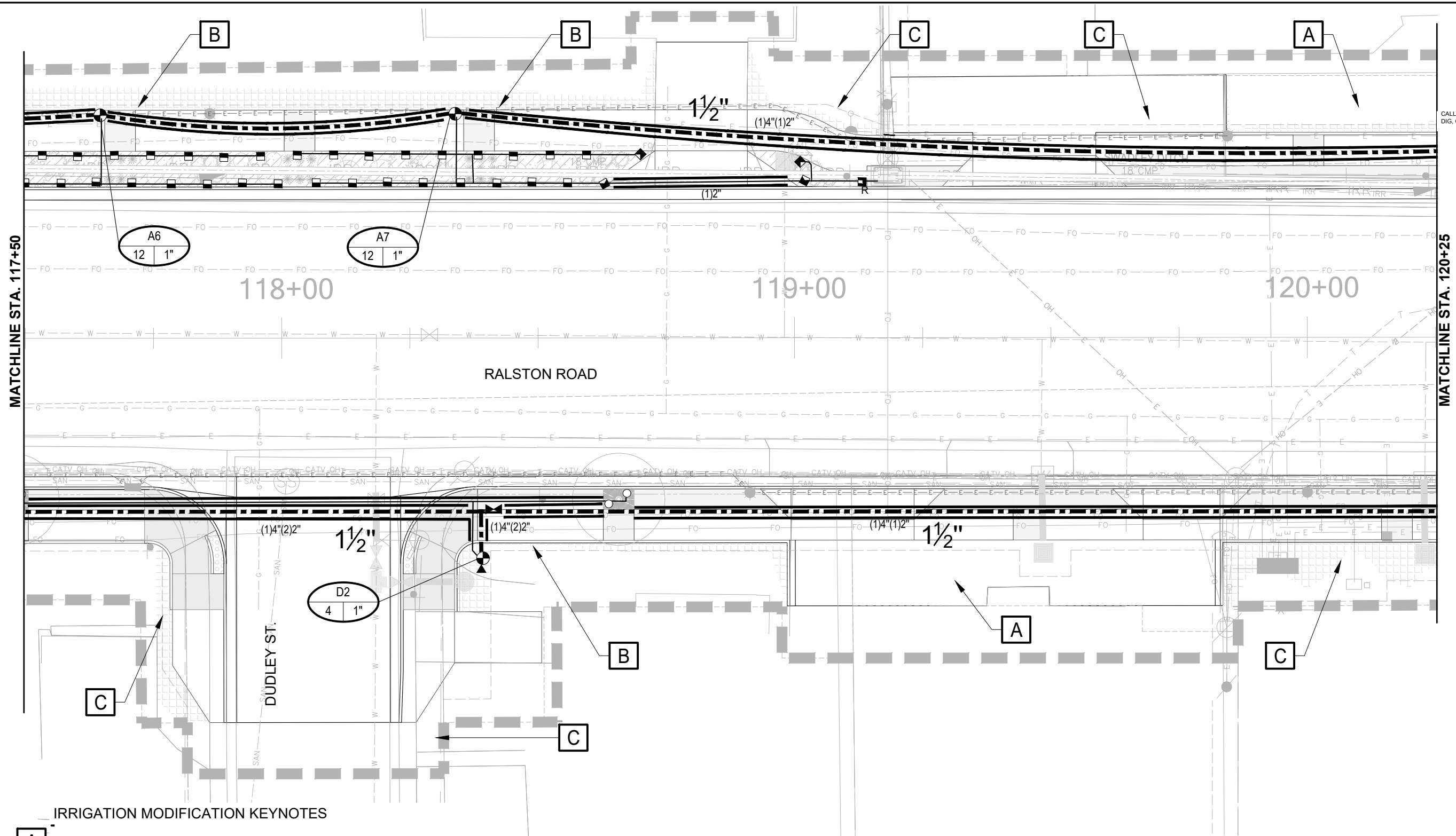
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TEL: 6600-6699, Joke's 6666	Print Date: 12/2/2020 4:22:38 PM		R-X	Sheet Revisions				CITY OF ARVADA		PUBLIC WORKS DEPARTMENT		As Constructed		RALSTON RD - YUKON TO GARRISON				Project No./Code	
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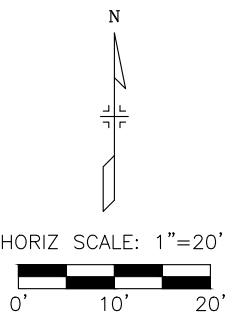
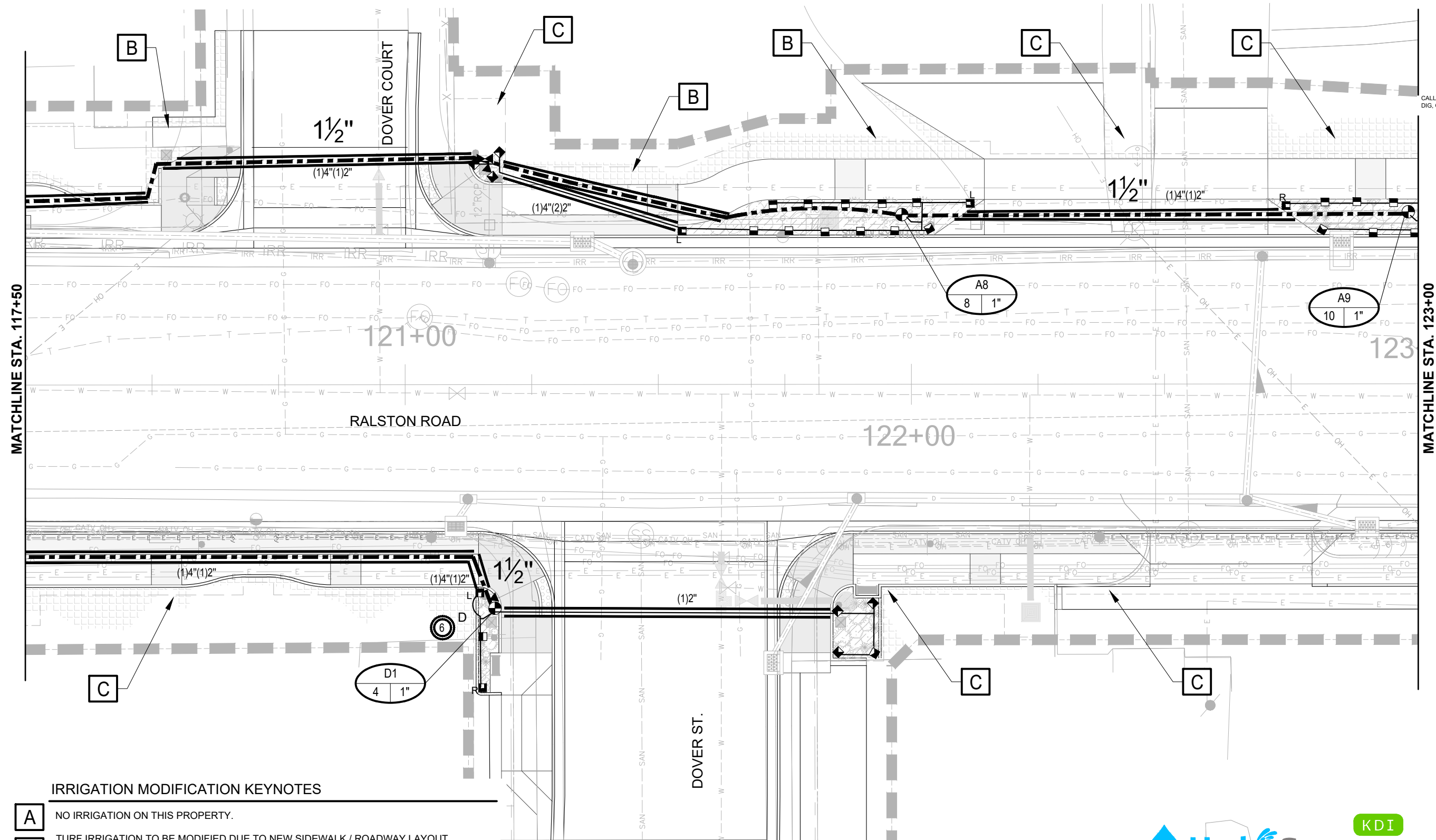


CITY OF ARVADA
PUBLIC WORKS DEPARTMENT

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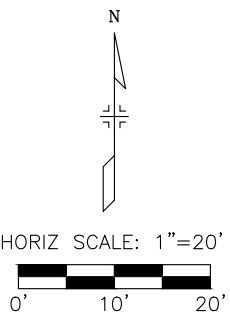
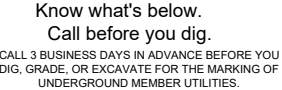
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o: 303.980.5327
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Print Date: 12/2/2020 4:22:59 PM		R-X	Sheet Revisions				As Constructed		RALSTON RD - YUKON TO GARRISON IRRIGATION SET IRRIGATION PLANS			Project No./Code	
File Name: 6667-RR-IRR-100%CD.DWG			Date	Comments	Initials		No Revisions:					18-ST-40	
Horizontal Scale: 1" = 20' Vertical Scale: N/A							Revised:		Designer: AMC	Structure			
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									Sheet Subset: IRRIGATION	Subset Sheets: IR-08	OF 29	Sheet Number	339



A	NO IRRIGATION ON THIS PROPERTY.
B	TURF IRRIGATION TO BE MODIFIED DUE TO NEW SIDEWALK / ROADWAY LAYOUT. REPAIR OR REPLACE IRRIGATION FOR AREAS OUTSIDE OF LIMIT OF WORK AFFECTED BY NEW CONSTRUCTION.
C	SHRUB BED IRRIGATION TO BE MODIFIED DUE TO NEW SIDEWALK / ROADWAY LAYOUT. REPAIR OR REPLACE IRRIGATION FOR AREAS OUTSIDE OF LIMIT OF WORK AFFECTED BY NEW CONSTRUCTION.
D	ADJUST ROTOR/SPRAY IRRIGATION TO REFLECT NEW CURB AND SIDEWALK LAYOUT.
E	REPAIR OR REPLACE ROTOR/SPRAY IRRIGATION WITHIN THIS AREA IF DAMAGED DUE TO NEW CONSTRUCTION. RELOCATE TO 3 INCHES OFF WALK EDGE WHERE APPLICABLE.
F	INSTALL NEW POPUP SPRAY HEADS WITHIN EXPANDED BED AREA. RECONNECT TO EXISTING VALVE USING NEW PVC LATERAL PIPE.

IRRIGATION WORK SHALL BE COORDINATED WITH INSTALLATION OF OTHER TRADES. UTILITIES AND LANDSCAPE SHALL TAKE PRECEDENT OVER IRRIGATION LOCATIONS SHOWN.

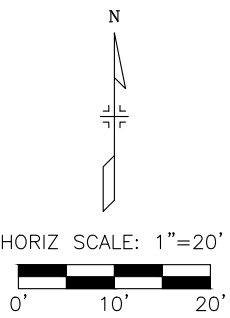
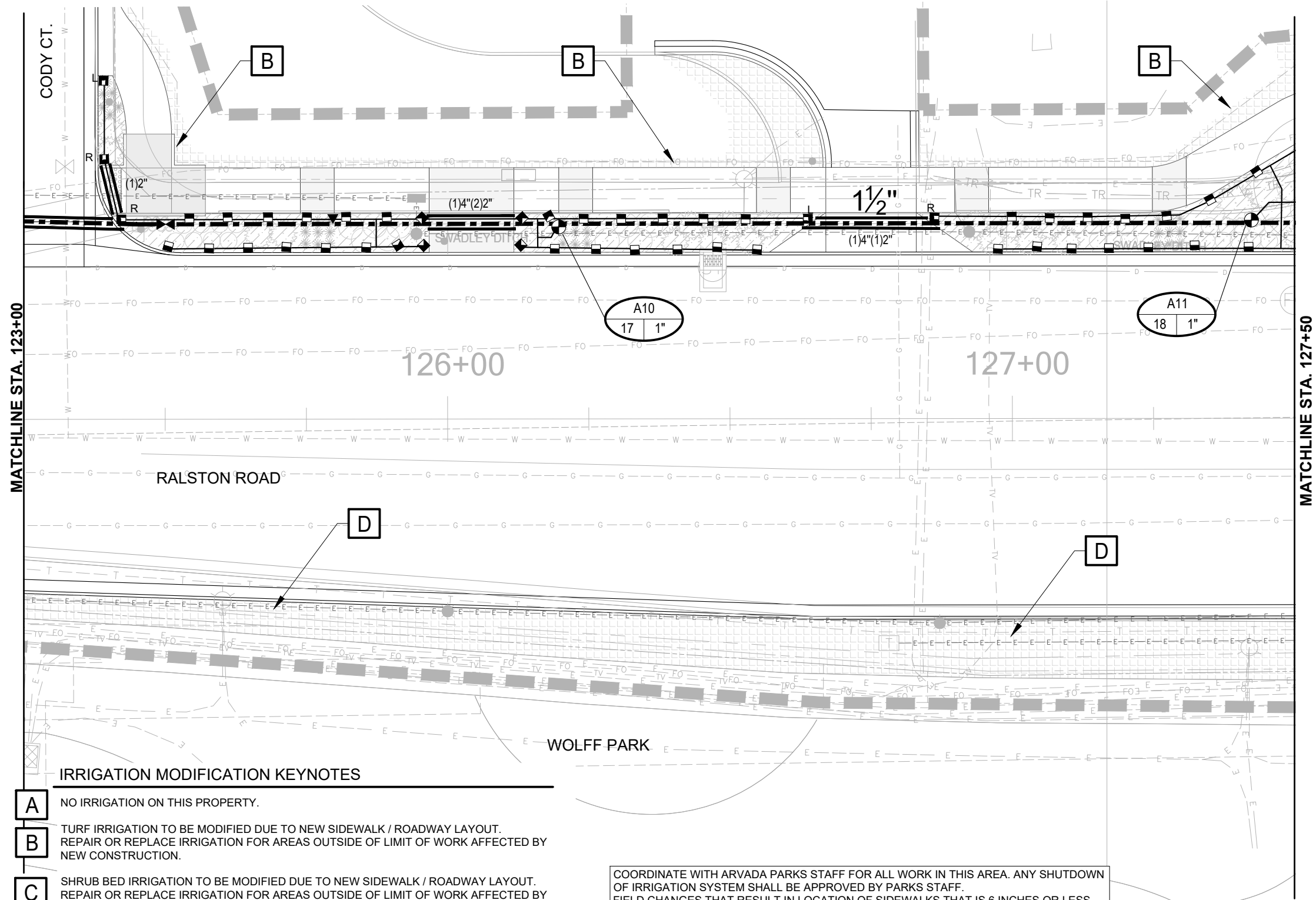
MAINLINE CHANGES IN DIRECTION WITHIN CONCRETE AREAS SHALL BE INSTALLED WITHIN JUMBO CONCRETE POLYMER VALVE BOXES. COORDINATE LOCATION WITH FLATWORK TO ALIGN WITH SCORE JOINTS WHERE POSSIBLE.



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File Name: 6667-RR-IRR-100%CD.DWG			Date	Comments	Initials		No Revisions:					18-ST-40	
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IRRIGATION MODIFICATION KEYNOTES

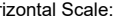
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- E** REPAIR OR REPLACE ROTOR/SPRAY IRRIGATION WITHIN THIS AREA IF DAMAGED DUE TO NEW CONSTRUCTION. RELOCATE TO 3 INCHES OFF WALK EDGE WHERE APPLICABLE.
- F** INSTALL NEW POPUP SPRAY HEADS WITHIN EXPANDED BED AREA. RECONNECT TO EXISTING VALVE USING NEW PVC LATERAL PIPE.

COORDINATE WITH ARVADA PARKS STAFF FOR ALL WORK IN THIS AREA. ANY SHUTDOWN OF IRRIGATION SYSTEM SHALL BE APPROVED BY PARKS STAFF. FIELD CHANGES THAT RESULT IN LOCATION OF SIDEWALKS THAT IS 6 INCHES OR LESS FROM MAINLINE SHALL RESULT IN RELOCATION OF PVC MAINLINE, CONTROL WIRES AND VALVES TO MAINTAIN 6 INCH MINIMUM CLEARANCE.

IRRIGATION WORK SHALL BE COORDINATED WITH INSTALLATION OF OTHER TRADES. UTILITIES AND LANDSCAPE SHALL TAKE PRECEDENT OVER IRRIGATION LOCATIONS SHOWN. MAINLINE CHANGES IN DIRECTION WITHIN CONCRETE AREAS SHALL BE INSTALLED WITHIN JUMBO CONCRETE POLYMER VALVE BOXES. COORDINATE LOCATION WITH FLATWORK TO ALIGN WITH SCORE JOINTS WHERE POSSIBLE.

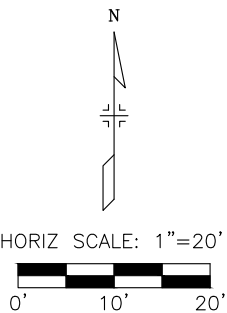
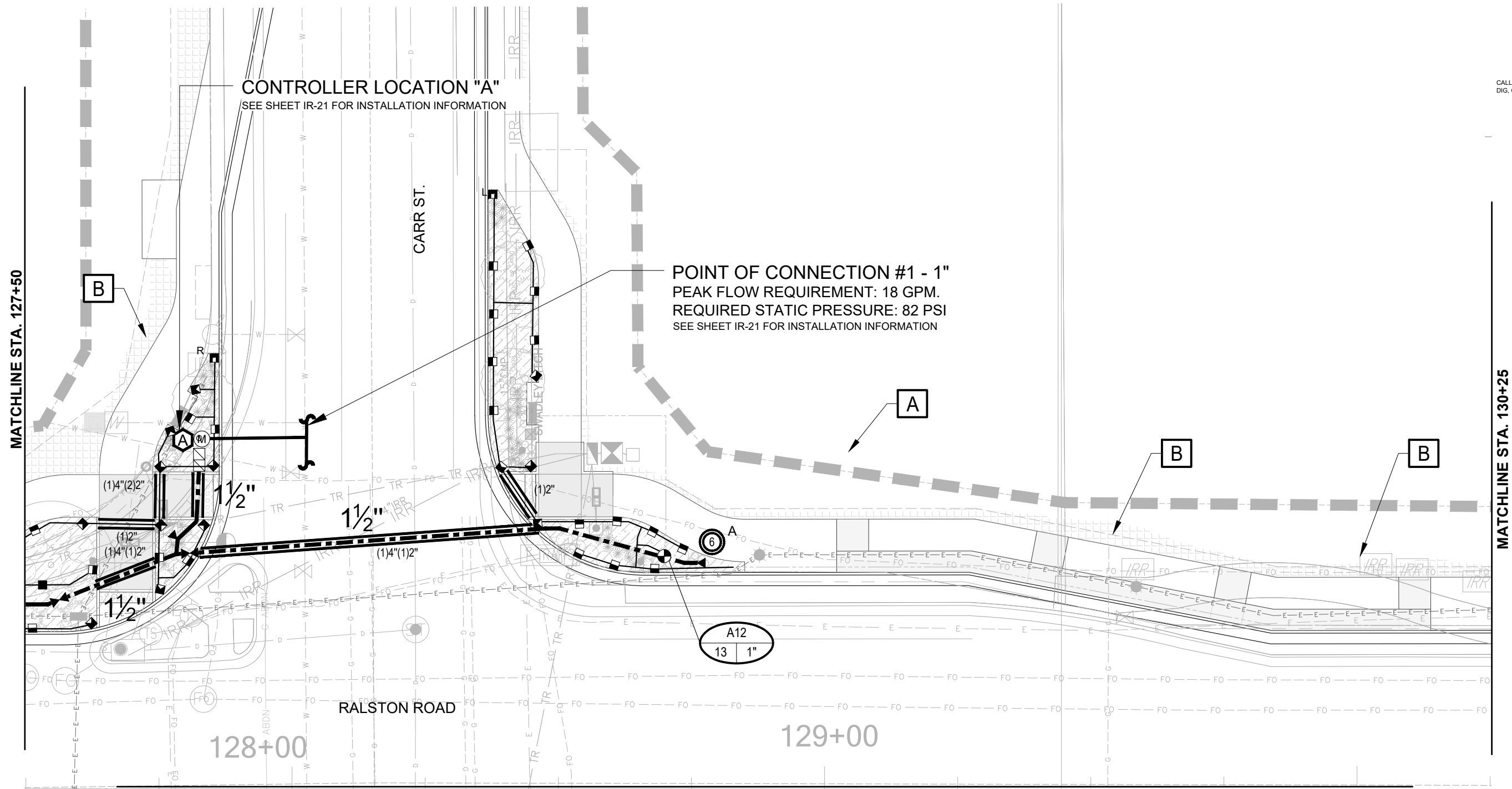
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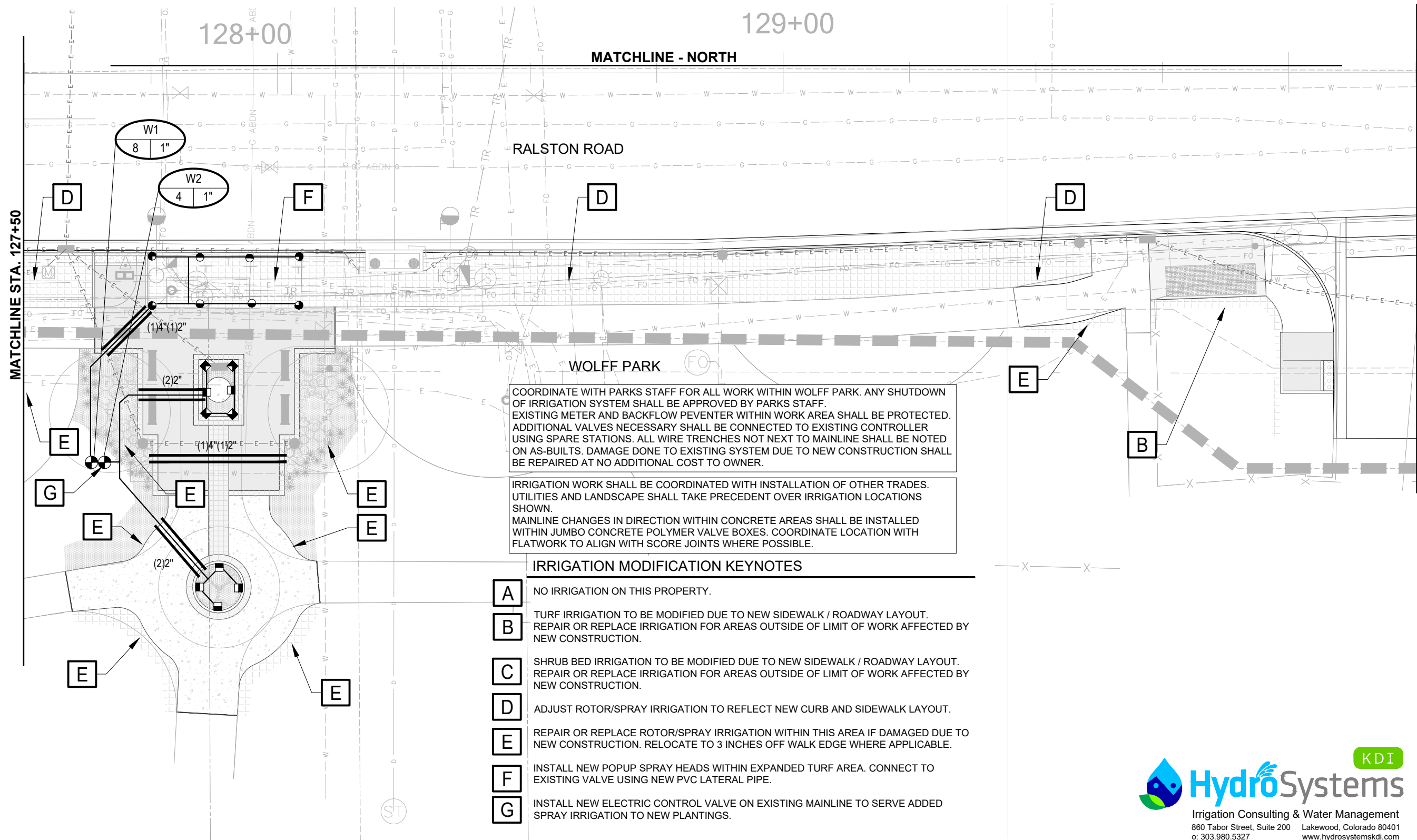
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R-X	Date	Comments	Initials

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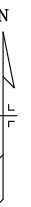


COORDINATE WITH PARKS STAFF FOR ALL WORK WITHIN WOLFF PARK. ANY SHUTDOWN OF IRRIGATION SYSTEM SHALL BE APPROVED BY PARKS STAFF. EXISTING METER AND BACKFLOW PEVENTER WITHIN WORK AREA SHALL BE PROTECTED. ADDITIONAL VALVES NECESSARY SHALL BE CONNECTED TO EXISTING CONTROLLER USING SPARE STATIONS. ALL WIRE TRENCHES NOT NEXT TO MAINLINE SHALL BE NOTED ON AS-BUILTS. DAMAGE DONE TO EXISTING SYSTEM DUE TO NEW CONSTRUCTION SHALL BE REPAIRED AT NO ADDITIONAL COST TO OWNER.

IRRIGATION WORK SHALL BE COORDINATED WITH INSTALLATION OF OTHER TRADES. UTILITIES AND LANDSCAPE SHALL TAKE PRECEDENT OVER IRRIGATION LOCATIONS SHOWN. MAINLINE CHANGES IN DIRECTION WITHIN CONCRETE AREAS SHALL BE INSTALLED WITHIN JUMBO CONCRETE POLYMER VALVE BOXES. COORDINATE LOCATION WITH FLATWORK TO ALIGN WITH SCORE JOINTS WHERE POSSIBLE.

IRRIGATION MODIFICATION KEYNOTES

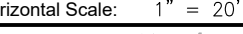
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- F** INSTALL NEW POPUP SPRAY HEADS WITHIN EXPANDED TURF AREA. CONNECT TO EXISTING VALVE USING NEW PVC LATERAL PIPE.
- G** INSTALL NEW ELECTRIC CONTROL VALVE ON EXISTING MAINLINE TO SERVE ADDED SPRAY IRRIGATION TO NEW PLANTINGS.



HORIZ SCALE: 1"=20'
0' 10' 20'

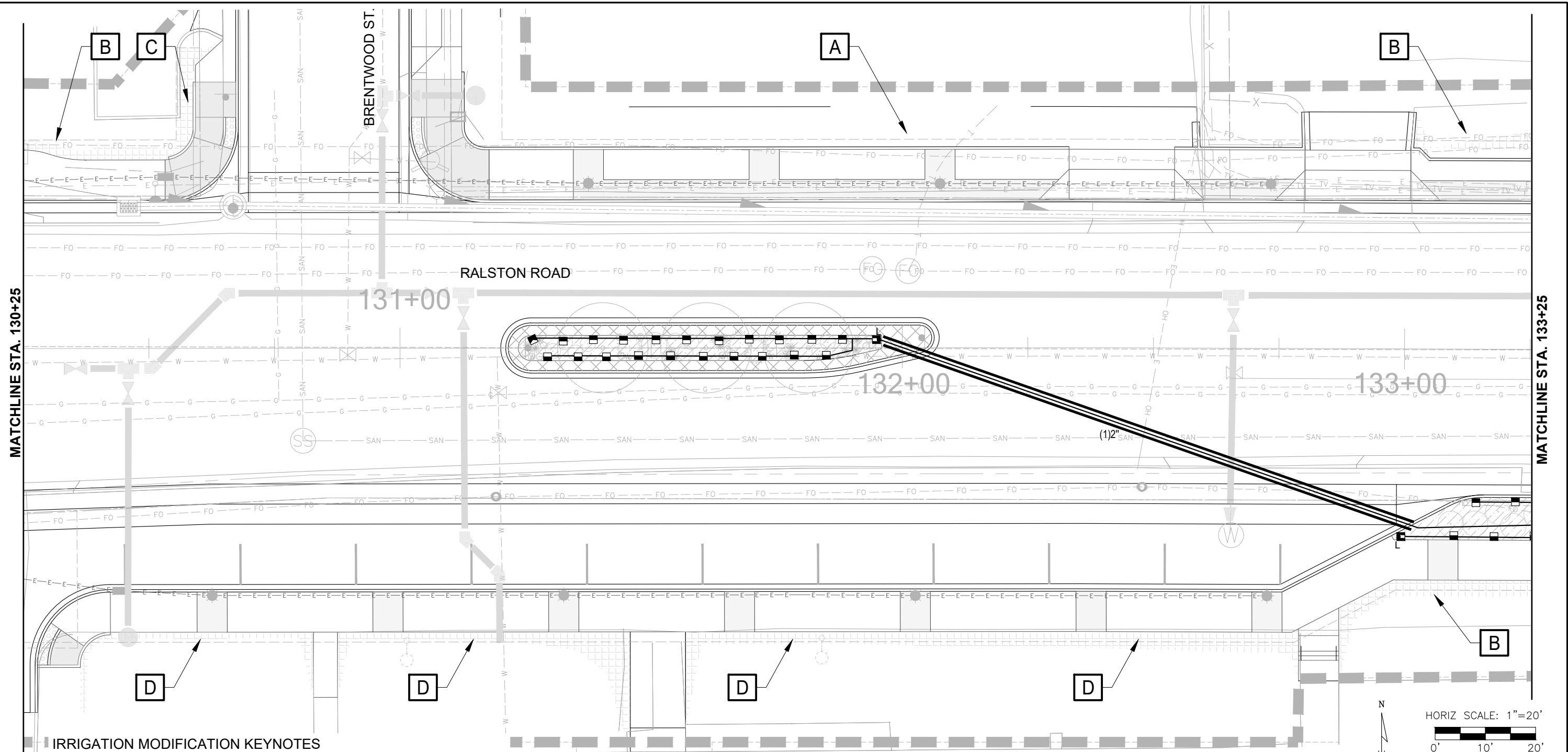
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IRRIGATION MODIFICATION KEYNOTES

ARVADA K-8



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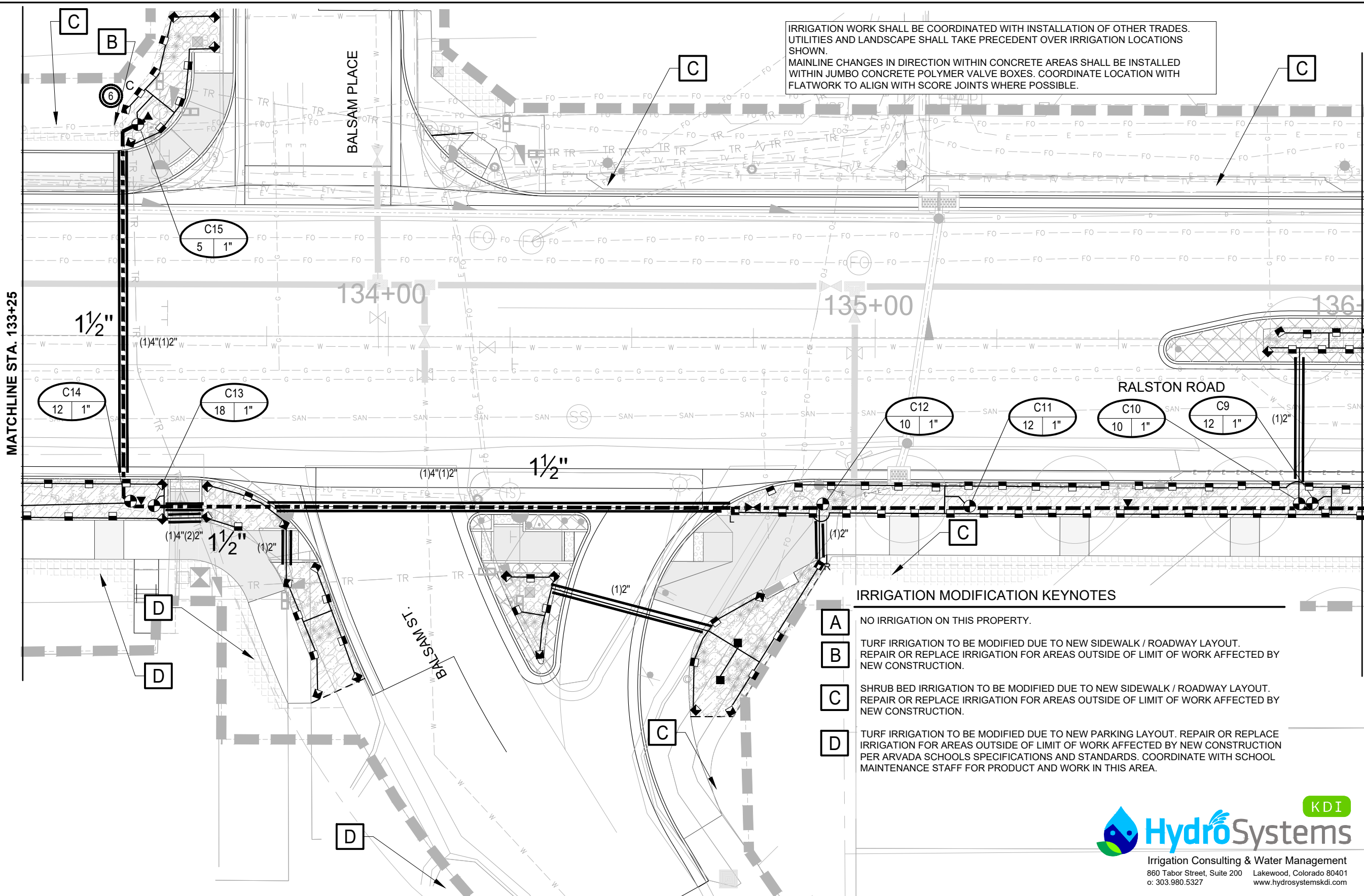


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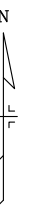
MATCHLINE STA. 133+25

MATCHLINE STA. 136+00



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- D** TURF IRRIGATION TO BE MODIFIED DUE TO NEW PARKING LAYOUT. REPAIR OR REPLACE IRRIGATION FOR AREAS OUTSIDE OF LIMIT OF WORK AFFECTED BY NEW CONSTRUCTION PER ARVADA SCHOOLS SPECIFICATIONS AND STANDARDS. COORDINATE WITH SCHOOL MAINTENANCE STAFF FOR PRODUCT AND WORK IN THIS AREA.



HORIZ SCALE: 1"=20'
0' 10' 20'

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T: 6600-6699 Jobs 6667-Ralston Road 6667-RR-IRR-100%CD, 12/2/2020 4:24:08 PM, Amber Clark

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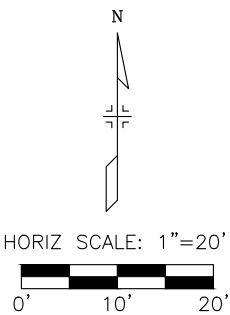
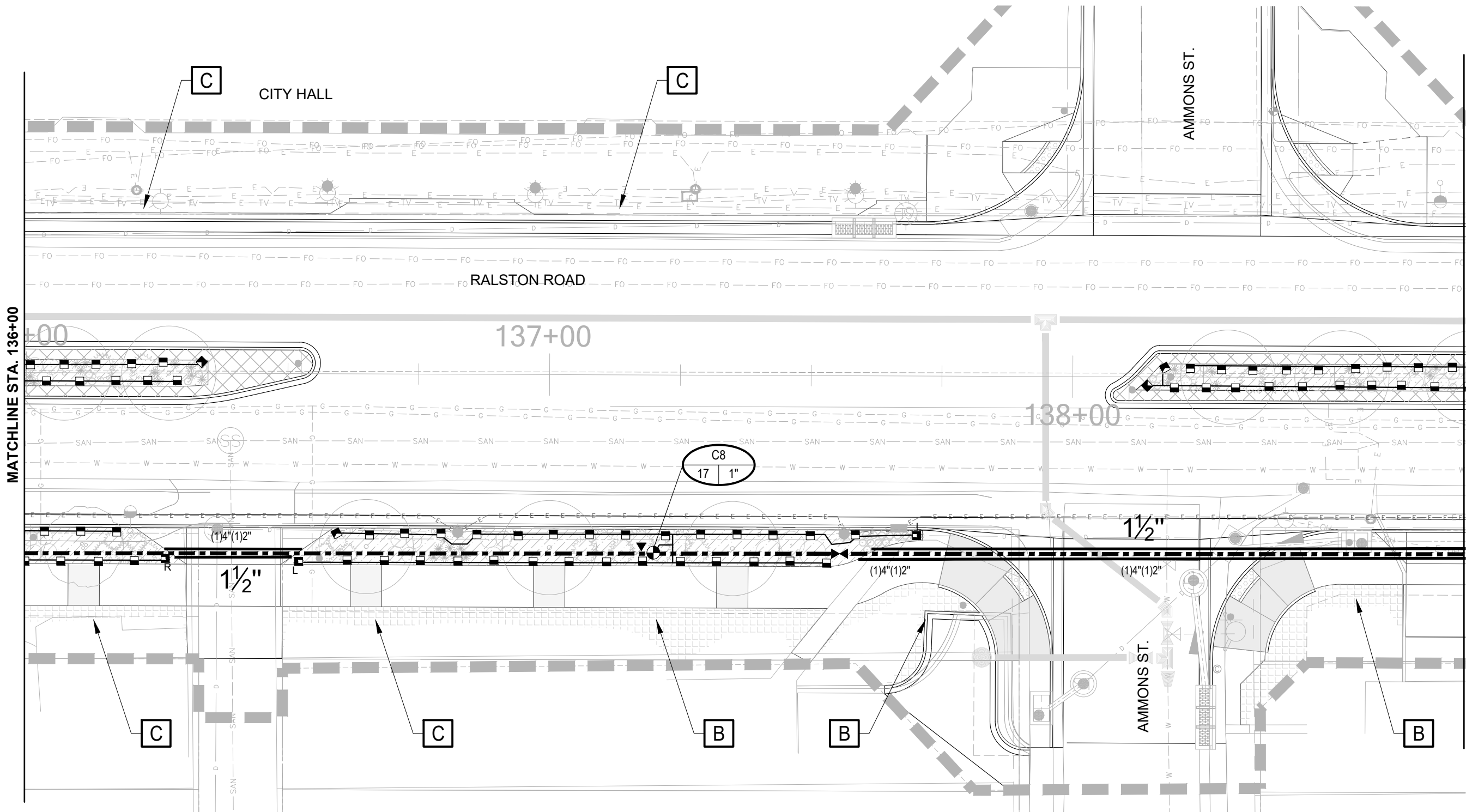
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MATCHLINE STA. 136+00

MATCHLINE STA. 138+75



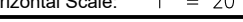
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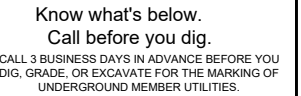
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T: 6600-6699 J: 6667-Ralston Road 6667-RR-IRR-100%CD, 12/2/2020 4:24:19 PM, Amber Clark

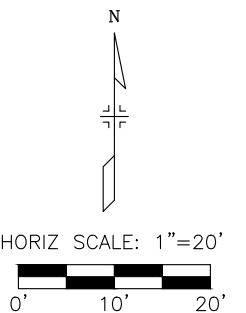
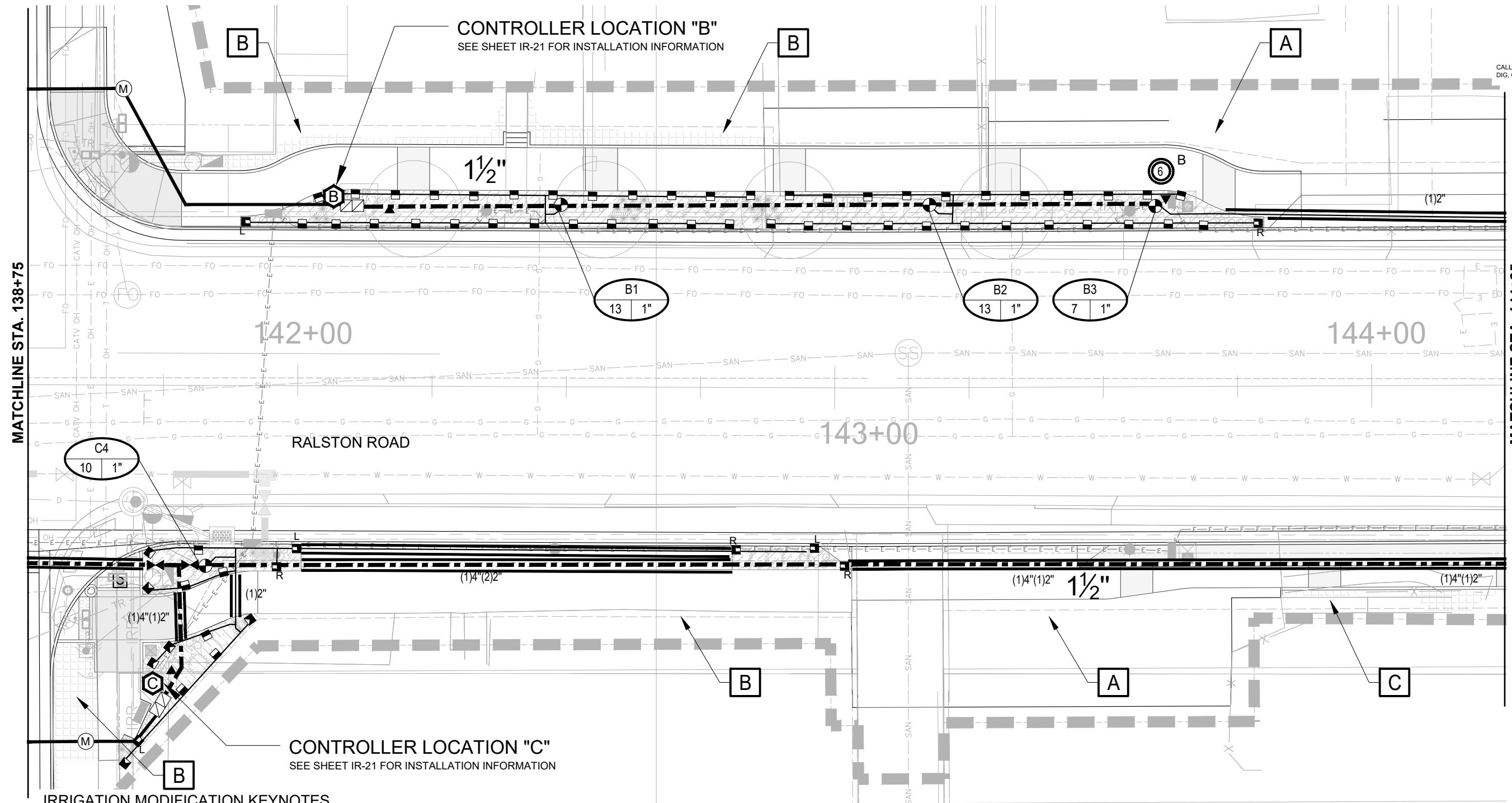
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18-ST-40	
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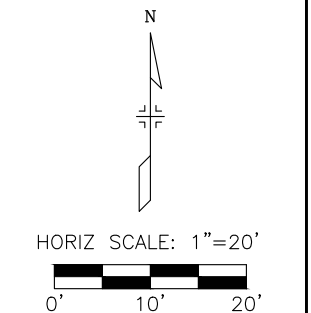
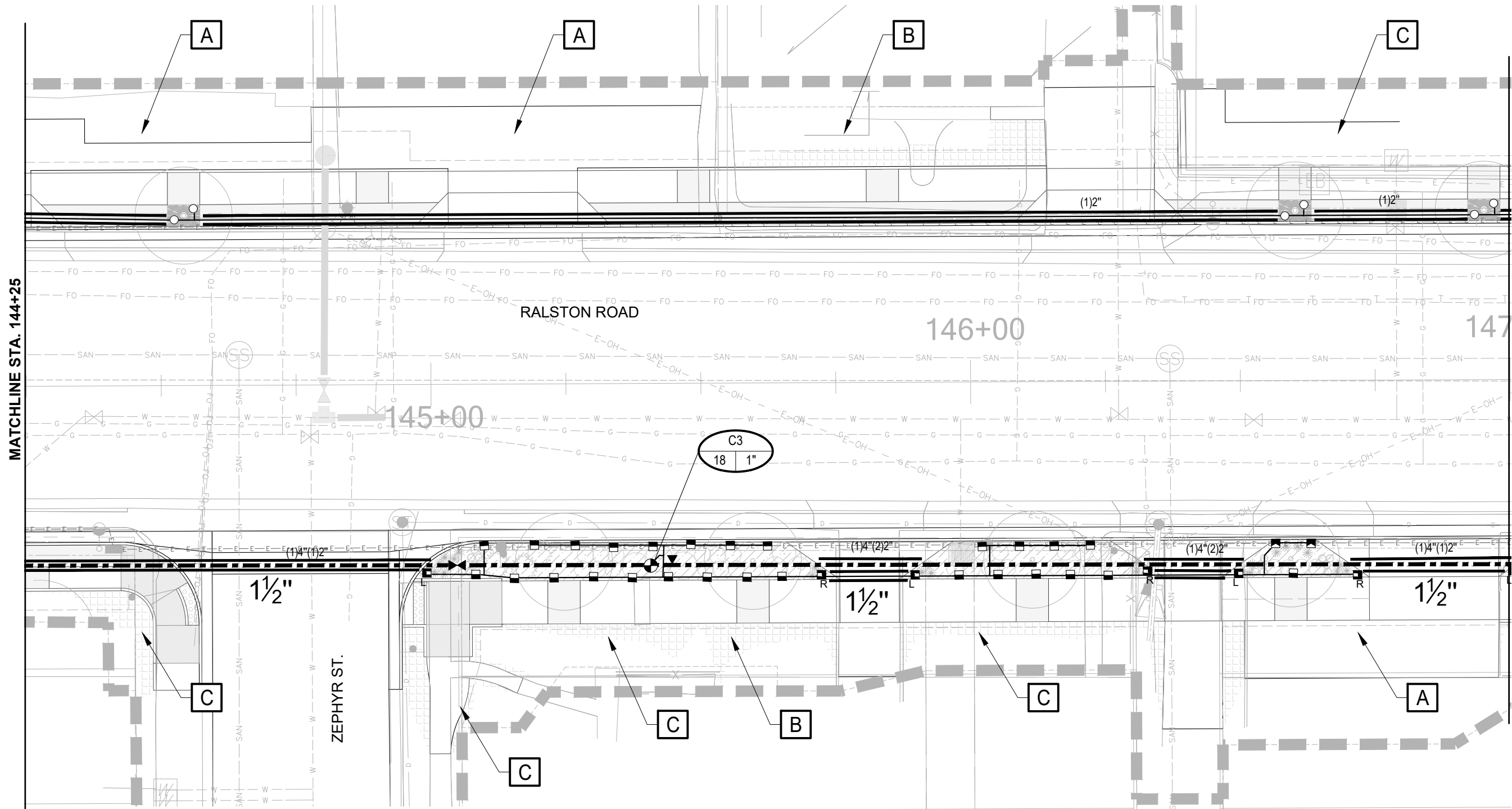
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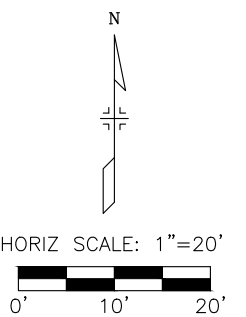
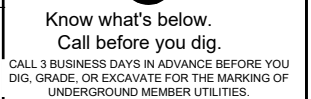
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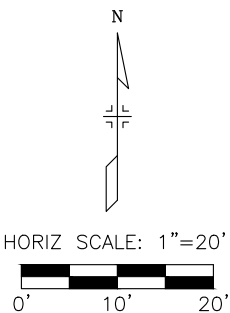
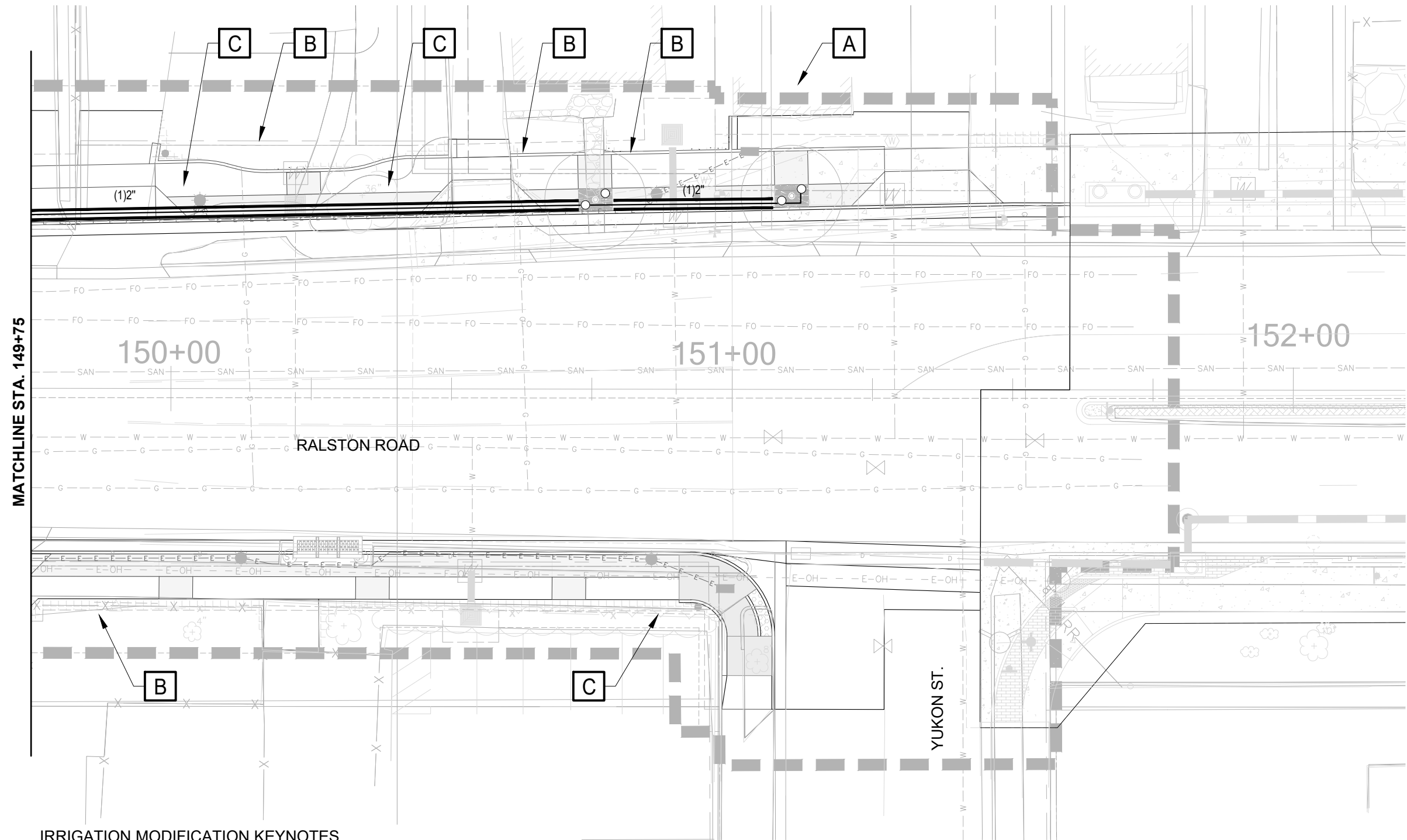
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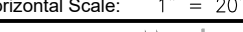
IRRIGATION MODIFICATION KEYNOTES

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IRRIGATION WORK SHALL BE COORDINATED WITH INSTALLATION OF OTHER TRADES. UTILITIES AND LANDSCAPE SHALL TAKE PRECEDENT OVER IRRIGATION LOCATIONS SHOWN. MAINLINE CHANGES IN DIRECTION WITHIN CONCRETE AREAS SHALL BE INSTALLED WITHIN JUMBO CONCRETE POLYMER VALVE BOXES. COORDINATE LOCATION WITH FLATWORK TO ALIGN WITH SCORE JOINTS WHERE POSSIBLE.



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IRRIGATION SCHEDULE				
SYMBOL	MANUFACTURER	MODEL NO.	DESCRIPTION	DETAIL NO.
	RAIN BIRD	1806-SAM-PRS WITH MPR SERIES NOZZLE	POPOP SPRAY HEAD	1
	RAIN BIRD	1806-SAM-PRS WITH SST, CORNER NOZZLE	POPOP SPRAY HEAD	1
	RAIN BIRD	5006-PL-PC-SAM-R-SS WITH #NOZZLE	GEAR DRIVEN ROTOR	2
	RAIN BIRD	1402 ON 1806-SAM-PRS POPUP	BUBBLER	3
	RAIN BIRD	EFB-CP-PRS-D	ELECTRIC CONTROL VALVE	4
	RAIN BIRD	44-LRC	QUICK COUPLING VALVE	5
	RAIN BIRD	ESP-LXME WITH LXMM AND LXMPED - TBD STATION MODEL	ELECTRIC CONTROLLER	6
	MOTOROLA	TO BE PURCHASED FROM CITY OF ARVADA AND INSTALLED AT ACCEPTANCE, REPLACING RAIN BIRD CONTROLLER	ELECTRIC CONTROLLER	N/D
	FEBCO	825YA	RP BACKFLOW PREVENTER	7
N/S	ARAD	TO BE PURCHASED BY CITY OF ARVADA AND INSTALLED WITH BACKFLOW	HYDROMETER	7
N/S	STRONG BOX	SBBC-22AL	BACKFLOW PREVENTER ENCLOSURE	8
N/S	OLDCASTLE / CARSON	REFER TO SPECIFICATIONS AND DETAILS	VALVE BOXES	VARIOUS
N/S	MACDONALD	AY 1/4 TURN - 1"	MANUAL DRAIN VALVE	9
	FORD	B-44 CURBSTOP BALL VALVE	GATE VALVE	10
		CLASS 200 BE - 2½" & SMALLER	PVC MAINLINE	11
		TYPE K COPPER	HARD COPPER PIPE	7
		CLASS 200 BE	PVC LATERAL	11
		CLASS 160	PVC SLEEVING	12
			WATER METER	RE: CIVIL
 CONTROLLER & STATION NO. CONTROL VALVE SIZE				
 A (controller)NUMBER OF SPARE WIRES - 2 CONTROL AND 1 SPARE WIRES TO WHICH CONTROLLER - SEE CONSTRUCTION NOTES				

POINT OF CONNECTION PROCEDURE

ALL MODEL NUMBERS PER IRRIGATION SCHEDULES.

CONTRACTOR SHALL TIE ONTO 1" COPPER STUB-OUT DOWNSTREAM OF METER PIT AT 54" DEPTH IN THIS APPROXIMATE LOCATION. INSTALLATION OF TAP, SERVICE LINE, METER PIT AND STUB TO THIS LOCATION IS BY OTHERS RE=CIVIL. INSTALL ONE 1" METER PER ARVADA CITY SPECIFICATIONS AND STANDARDS. CONNECT TO STUB AND EXTEND A" TYPE K SOFT COPPER AT 54" MINIMUM DEPTH TO BACKFLOW PREVENTER LOCATION. INSTALL ONE STOP AND WASTE VALVE, ONE REDUCED PRESSURE BACKFLOW PREVENTER WITH LINE SIZE HYDROMETER ON DOWNSTREAM LEG AND PROTECTIVE ENCLOSURE, ONE MANUAL DRAIN VALVE, ONE QUICK COUPLING VALVE, ONE GATE VALVE AND EXTEND PVC MAINLINE AS SHOWN. EXTEND 6 UFUL14# WIRE (SEE SPECS AND DETAILS) AND CONNECT 2 OF THE WIRES FROM THE HYDROMETER TO THE DATA RETRIEVAL BOARD IN ASSOCIATED CONTROLLER. WORK SHALL CONFORM TO LOCAL CODE. FEES, PERMITS AND INSPECTIONS ASSOCIATED WITH WORK ARE TO BE OBTAINED AND PAID FOR BY CONTRACTOR. FINAL BACKFLOW PREVENTER LOCATION SHALL BE REVIEWED AND APPROVED BY CONSULTANT PRIOR TO INSTALLATION. COORDINATE WITH PARKS STAFF TO PURCHASE HYDROMETER. ALLOW SUFFICIENT LEAD TIME FOR DELIVERY.

CONTROLLER LOCATIONS

PEDESTAL MOUNT ONE CONTROLLER (REFER TO SCHEDULE FOR MODEL, STATION COUNT PER CONTROLLER DATA SCHEDULE), REMOTE READY, AT INDICATED LOCATION. 120 VOLT POWER IS AVAILABLE WITHIN 40 LF. OF CONTROLLER LOCATION FROM TRANSFORMER/BUILDING/RESIDENTIAL PEDESTAL, BY OTHERS RE=ELECTRICAL. ELECTRICAL METER, WIRE/CONDUIT, STEP-DOWN TRANSFORMER (IF REQUIRED) AND POWER CONNECTION TO CONTROLLER IS BY CONTRACTOR WITH WORK CONFORMING TO LOCAL CODES. FEES AND PERMITS ASSOCIATED WITH WORK ARE TO BE OBTAINED AND PAID BY CONTRACTOR. LOCATE HYDROMETER WIRES WITH SPARES AND CONNECT 2 OF THE WIRES FROM THE MASTER VALVE TO THE DATA RETRIEVAL BOARD IN ASSOCIATED CONTROLLER. FINAL CONTROLLER LOCATION SHALL BE APPROVED BY OWNER OR OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. TEMPORARY CONTROLLER SHALL BE REPLACED AT ACCEPTANCE WITH PERMANENT MOTOROLA CONTROLLER, COORDINATE WITH PARKS STAFF FOR PURCHASE. ALLOW SUFFICIENT LEAD TIME FOR DELIVERY.



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IRRIGATION CONSTRUCTION NOTES

1. DRAWINGS AND BASE INFORMATION - ALL BASE AND PLANTING INFORMATION HAVE BEEN PROVIDED BY FELSBURG HOLT & ULLEVIG. THE CONTRACTOR IS RESPONSIBLE TO NOTIFY HYDROSYSTEMS*KDI OF ANY DISCREPANCIES BETWEEN THE UTILITY OR PLANTING PLANS AND THE IRRIGATION PLAN. IF CONTRACTOR FAILS TO NOTIFY HYDROSYSTEMS*KDI AND MAKES CHANGES TO THE IRRIGATION SYSTEM DESIGN, HE ASSUMES ALL COSTS AND LIABILITIES ASSOCIATED WITH THOSE FIELD CHANGES. REFER TO SPECIFICATIONS FOR ADDITIONAL PROJECT REQUIREMENTS. CONTACT IRRIGATION CONSULTANT FOR CURRENT SPECIFICATIONS IF NOT PROVIDED.
2. SYSTEM PRESSURE - HYDROSYSTEMS*KDI HAS CONTACTED THE LOCAL WATER DISTRICT THAT SERVES THIS SITE AND THEY HAVE BEEN TOLD THAT THE STATIC WATER PRESSURE IN THIS AREA SHOULD BE **90-95** PSI. THE CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY PRESSURE PRIOR TO COMMENCING ANY CONSTRUCTION AND NOTIFY HYDROSYSTEMS*KDI OF ANY VARIANCE FROM THE STATED PRESSURE IMMEDIATELY. WRITTEN DOCUMENTATION OF PRESSURE TEST AND RESULTS SHALL BE PROVIDED TO HYDROSYSTEMS*KDI AT CONSTRUCTION ONSET. IF CONTRACTOR FAILS TO FIELD VERIFY PRESSURE AND/OR NOTIFY HYDROSYSTEMS*KDI OR ANY VARIATIONS FROM THIS PRESSURE, THEN HE ASSUMES ALL CONSTRUCTION AND ENGINEERING COSTS ASSOCIATED WITH SYSTEM MODIFICATIONS REQUIRED TO ACCOMMODATE ACTUAL SITE PRESSURE. REFER TO POINT OF CONNECTION NOTES FOR PRESSURE REQUIRED AT THAT LOCATION.
3. IRRIGATION SYSTEM OPERATION INTENT - THIS IRRIGATION SYSTEM HAS BEEN DESIGNED TO IRRIGATE THE ESTABLISHED LANDSCAPE WITHIN A SIX NIGHT PER WEEK, SIX HOUR PER NIGHT WATERING WINDOW. ESTABLISHMENT WATERING WILL REQUIRE UP TO TWICE AS MUCH IRRIGATION FOR A FOUR TO SIX WEEK PERIOD. THE DESIGN IS BASED ON THE FOLLOWING PROJECTED WEEKLY APPLICATION RATES AFTER ESTABLISHMENT. THESE FIGURES ARE BASED ON A 30-YEAR AVERAGE WEATHER DATA AND WILL NEED TO BE ADJUSTED DUE TO SEASONAL CHANGES AND WEATHER CONDITIONS ABOVE AND BELOW THE AVERAGE VALUES UTILIZED.

BLUEGRASS TURF

2.23" PER WEEK PEAK SEASON

ORNAMENTAL PLANTINGS

1.24" PER WEEK PEAK SEASON
4. EQUIPMENT INSTALLATION - IT IS THE INTENT OF THIS DESIGN THAT ALL IRRIGATION EQUIPMENT BE INSTALLED WITHIN PROPERTY LIMITS AND WITHIN LANDSCAPED AREAS. ANY EQUIPMENT OTHER THAN VALVE BOXES OR SLEEVING THAT CONTAINS PIPE OR WIRES SHOWN OUTSIDE OF THESE LIMITS IS SHOWN IN THAT LOCATION FOR GRAPHICAL CLARITY ONLY. ALL VALVE BOXES SHALL BE INSTALLED A MINIMUM OF 2'-0" FROM EDGE OF ANY PAVED SURFACES UNLESS SPECIFICALLY INDICATED ON PLANS. BOXES INSTALLED IN OPEN TURF AREAS SHALL BE KEPT TO EDGES AND STAKED FOR REVIEW IF ALONG HIGH TRAFFIC AREAS. ALL VALVE BOXES SHALL BE PLACED A MINIMUM OF 3'-0" FROM THE CENTERLINE OF ANY DRAINAGE SWALE. ALL VALVE BOXES WITHIN PAVEMENT SHALL BE TIER 15 RATED BOXES FOR HEAVY DUTY NON-DELIBERATE TRAFFIC. BOX LID COLOR SHALL MATCH ADJACENT MATERIALS, I.E. GREEN IN TURF, TAN IN WOOD MULCH, GRAY IN STONE MULCH, PURPLE FOR RECLAIMED WATER SYSTEMS (IF REQUIRED). REFER TO LANDSCAPE PLANS FOR MATERIAL COLORS AND TYPES. ALL BOXES SHALL BE INSTALLED TO BE FLUSH WITH GRADE AND IN AN ORDERLY MANNER.
5. PIPING INSTALLATION - IRRIGATION PIPING SHALL MAINTAIN A MINIMUM DISTANCE FROM BUILDING FOUNDATIONS OF 5 FEET OR AS DESCRIBED IN SOILS REPORT, WHICHEVER IS GREATER. NO SPRAY IRRIGATION SHALL OCCUR WITHIN 10 FEET OF THE FOUNDATION. NO DRIP IRRIGATION SHALL OCCUR WITHIN 5 FEET OF THE FOUNDATION UNLESS SOIL MOISTURE SENSORS ARE INSTALLED ON VALVES SERVICING THESE AREAS. ALL IRRIGATION PIPING AND EMISSION DEVICES LOCATED ON TOP OF OR WITHIN BUILDING STRUCTURE SHALL CONFORM TO WATERPROOFING CONSULTANT REQUIREMENTS. PIPE ROUTING MAY BE SHOWN WITHIN THESE DISTANCES FOR GRAPHICAL CLARITY ONLY.
6. MANUAL DRAIN VALVES - CONTRACTOR TO INSTALL ONE MANUAL DRAIN VALVE ON PRESSURE SUPPLY LINE DIRECTLY DOWNSTREAM OF BACKFLOW PREVENTER AND AT ALL LOW POINTS AND DEAD ENDS OF PRESSURE SUPPLY PIPING TO ENSURE COMPLETE DRAINAGE OF SYSTEM. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THESE LOCATIONS IN-FIELD AND INSTALLATION LOCATIONS SHALL BE NOTED ON AS-BUILTS.
7. POP-UP SPRAY NOZZLES - CONTRACTOR TO INSTALL PLASTIC NOZZLES ON ALL POP-UP SPRAY HEADS. INSTALL 15 SERIES NOZZLES ON ALL HEADS SPACED AT 12' TO 14'. INSTALL 12 SERIES NOZZLES ON ALL HEADS SPACED 10' TO 11'. INSTALL 10 SERIES NOZZLES ON ALL HEADS SPACED AT 8' TO 9'. INSTALL 8 SERIES NOZZLES ON ALL HEADS SPACED AT 6' TO 7'. INSTALL 5' NOZZLES ON ALL HEADS SPACED AT 5'. INSTALL SIDE STRIP NOZZLES ON ALL HEADS WITH AN "S" DESIGNATION AND RIGHT AND LEFT CORNER STRIP NOZZLES ON ALL HEADS WITH AN "L" OR "R" DESIGNATION.
8. UNLABELED PIPING - ALL UNLABELED LATERAL PIPING SHALL BE 1" MINIMUM UNLESS OTHERWISE NOTED.

9. SLEEVING - ALL SLEEVING UNDER PAVED SURFACES SHOWN ON PLANS IS BY CONTRACTOR UNLESS OTHERWISE NOTED. SLEEVING SHALL BE INSTALLED IN THE SIZES AND QUANTITIES SHOWN ON PLANS OR BASED ON THE SCHEDULE BELOW. WHERE SLEEVES ARE SHOWN, BUT NOT LABELED, FOLLOW THE SCHEDULE BELOW. ALL MAINLINE, CONTROL WIRES AND DRIP LINES UNDER PAVED SURFACES ARE TO BE INSTALLED IN SLEEVING. ALL MAINLINE SLEEVE LOCATIONS TO INCLUDE A SEPARATE WIRE SLEEVE.

SLEEVED PIPE SIZE/WIRE QUANTITY

REQUIRED SLEEVE SIZE & (QUANTITY)

¾" - 1¼" PIPING

2" PVC (1)

1½" - 2" PIPING

4" PVC (1)

1-25 CONTROL WIRES

2" PVC (1)
10. SPARE CONTROL WIRES - CONTRACTOR SHALL EXTEND SIX SPARE WIRES (ONE COMMON AND FIVE CONTROL WIRES) FROM EACH CONTROLLER TO THE END OF THE MAINLINE SERVING THAT CONTROLLER OR AS SHOWN ON THE PLANS. INSTALL SPARE WIRES IN 10" ROUND VALVE BOX WITH QUICK COUPLING VALVE. REFER TO SPECIFICATIONS FOR WIRE COLOR. SEE IRRIGATION SCHEDULE FOR ADDITIONAL INFORMATION.
11. ADJUSTMENT - CONTRACTOR SHALL FINE TUNE/ADJUST THE IRRIGATION SYSTEM TO REDUCE/AVOID OVERSPRAY ONTO HARD SURFACES BY ADJUSTING NOZZLE DIRECTION AND NOZZLE RADIUS.
12. PLANS AND SPECIFICATIONS - CONTRACTOR RESPONSIBLE TO ENSURE WORK CONFORMS TO PLANS AND SPECIFICATIONS. AT ONSET OF CONSTRUCTION, VERIFY PLANS ARE CURRENT. WHERE REQUIRED BY CITY OR TOWN, CONTRACTOR SHALL CONSTRUCT ONLY OFF CITY OR TOWN STAMPED PLANS. REVISIONS TO CITY OR TOWN STAMPED PLANS SHALL CONFORM TO CITY OR TOWN FIELD CHANGE PROCEDURES AND DOCUMENTATION.
13. EXISTING IRRIGATION DAMAGE - CONTRACTOR SHALL REPAIR OR REPLACE ANY EXISTING IRRIGATION SYSTEMS DAMAGED DURING NEW INSTALLATION. REPAIR OR REPLACEMENT SHALL BE DETERMINED BY OWNER OR OWNER'S REPRESENTATIVE AND PAID FOR BY THE LANDSCAPE CONTRACTOR.
14. EXISTING IRRIGATION COORDINATION - EXISTING IRRIGATION SYSTEM SHALL NOT BE TURNED OFF FOR MORE THAN 24 HOURS MAXIMUM. CONTRACTOR SHALL COORDINATE TURN OFF OF SYSTEM WITH OWNER OR MAINTENANCE STAFF 72 HOURS PRIOR TO ANY NEW CONSTRUCTION.
15. SIMULTANEOUS ZONE OPERATION - THIS IRRIGATION SYSTEM HAS BEEN DESIGNED TO OPERATE MULTIPLE ZONES SIMULTANEOUSLY BASED ON INDIVIDUAL ZONE FLOW. THE DESIGN IS INTENDED TO OPERATE MULTIPLE VALVES, UP TO THE MAXIMUM FLOW IN THE POINT OF CONNECTION NOTE. REFER TO CONTROLLER SPECIFICATION FOR MAXIMUM SIMULTANEOUS VALVE COUNT.
16. WATER BUDGETS AND PROJECTIONS - HYDROSYSTEMS-KDI HAS BASED THE IRRIGATION DESIGN AND THE ASSOCIATED PROJECTED WATER USE UPON SUCH FACTORS AS CITY OR WATER DISTRICT IMPOSED REQUIREMENTS, PUBLISHED PLANT SPECIES WATER NEEDS, SELECTED IRRIGATION METHOD EFFICIENCIES AS REPORTED BY INDEPENDENT TESTING FACILITIES, HISTORICAL WEATHER DATA FOR THE PROJECT LOCATION, AND PROPER MAINTENANCE PROCEDURES. HYDROSYSTEMS*KDI IS NOT RESPONSIBLE, AND ACCEPTS NO RESPONSIBILITY, FOR THE ACTUAL WATER USAGE VARIATION THAT IS A RESULT OF FIELD MODIFICATIONS TO THE SYSTEM NOT MATCHING CONSTRUCTION DOCUMENTS, IMPROPER MAINTENANCE, WASTE DUE TO SYSTEM DAMAGE OR VANDALISM, OR WEATHER CONDITIONS THAT DEVIATE FROM PUBLISHED 30 YEAR HISTORICAL AVERAGES.
17. BORING - CONTRACTOR TO BORE UNDER ALL EXISTING ROADS AND DRIVEWAYS TO REMAIN USING HDPE SLEEVES.
18. EXISTING IRRIGATION - EXISTING IRRIGATION NOTES ARE BASED ON FIELD OBSERVATION OF PRIVATE SYSTEMS THAT WERE NOT IN OPERATION AT THE TIME OF OBSERVANCE AND BASED ON VISUAL EVIDENCE ONLY. CONTRACTOR SHALL CONFIRM OPERATION AND CONDITION PRIOR TO DEMOLITION. EXISTING SYSTEMS SHALL BE RETURNED TO ORIGINAL CONDITION, ALLOWING FOR REPAIR, REPLACEMENT OR MODIFICATION DUE TO NEW CONSTRUCTION. WHERE REPAIR OR REPLACEMENT IS INDICATED, BUT EXISTING SYSTEMS CANNOT BE LOCATED, NO IRRIGATION INSTALLATION IS REQUIRED. WHERE EXISTING SYSTEMS CAN BE LOCATED, BUT CAN BE CONFIRMED AS ABANDONED, NO IRRIGATION INSTALLATION IS REQUIRED.



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CITY OF ARVADA - CONSTRUCTION NOTES

1. INSTALL ALL MATERIALS AND EQUIPMENT AS SHOWN ON THE PLANS AND DETAILS. NO SUBSTITUTIONS WILL BE ACCEPTED WITHOUT PRIOR WRITTEN APPROVAL BY THE CONSULTANT AND/OR OWNER. THE IRRIGATION CONTRACTOR MAY BE REQUIRED TO REMOVED AND REPLACE ALL UNAPPROVED SUBSTITUTED EQUIPMENT AT HIS OWN COST IF SO DIRECTED BY THE CITY OF ARVADA.
2. UNLESS PROVIDED IN THESE PLANS OR SPECIAL CONDITIONS, THE CONTRACTOR SHALL COMPLY WITH THE MOST CURRENT CITY OF ARVADA STANDARDS.
3. FOR THE CITY OF ARVADA PORTION OF THE PROJECT, A CONTROLLER WILL BE SUPPLIED, INSTALLED AND OPERATED BY THE CONTRACTOR DURING CONSTRUCTION AND UNTIL ANY CONTRACT-RELATED TURF/LANDSCAPE IS ESTABLISHED AND APPROVED BY THE CITY. UPON COMPLETION AND CITY ACCEPTANCE OF A CITY OWNED PROJECT, THE CONTRACTOR WILL REMOVE THE INSTALLED CONTROLLER AND INSTALL THE CITY'S MOTOROLA CONTROLLER, UNLESS OTHERWISE SPECIFIED. THE MOTOROLA CONTROLLER WILL BE PURCHASED BY THE CITY, A COST FOR WHICH THE DEVELOPER WILL REIMBURSE THE CITY AS A CONDITION OF APPROVAL FOR THE IRRIGATION SYSTEM OR AS OTHERWISE APPROVED IN A DEVELOPMENT AGREEMENT BETWEEN THE CITY AND THE DEVELOPER.
4. CITY OF ARVADA APPROVAL PROCESS -

4.1. CONTRACTOR IS REQUIRED TO DO AND PASS THE CITY'S PRESSURE TEST.

4.2. CONTRACTOR IS REQUIRED TO DO AND PASS THE CITY'S COVERAGE TEST.

4.3. CONTRACTOR MUST NOTIFY CITY OF ARVADA PARKS DEPARTMENT FOR ANNUAL MAINTENANCE AND INSPECTIONS.

4.4. MAINTENANCE PRIOR TO FINAL ACCEPTANCE (TO MEET CAPITAL MAINTENANCE APPROVED PLANS).



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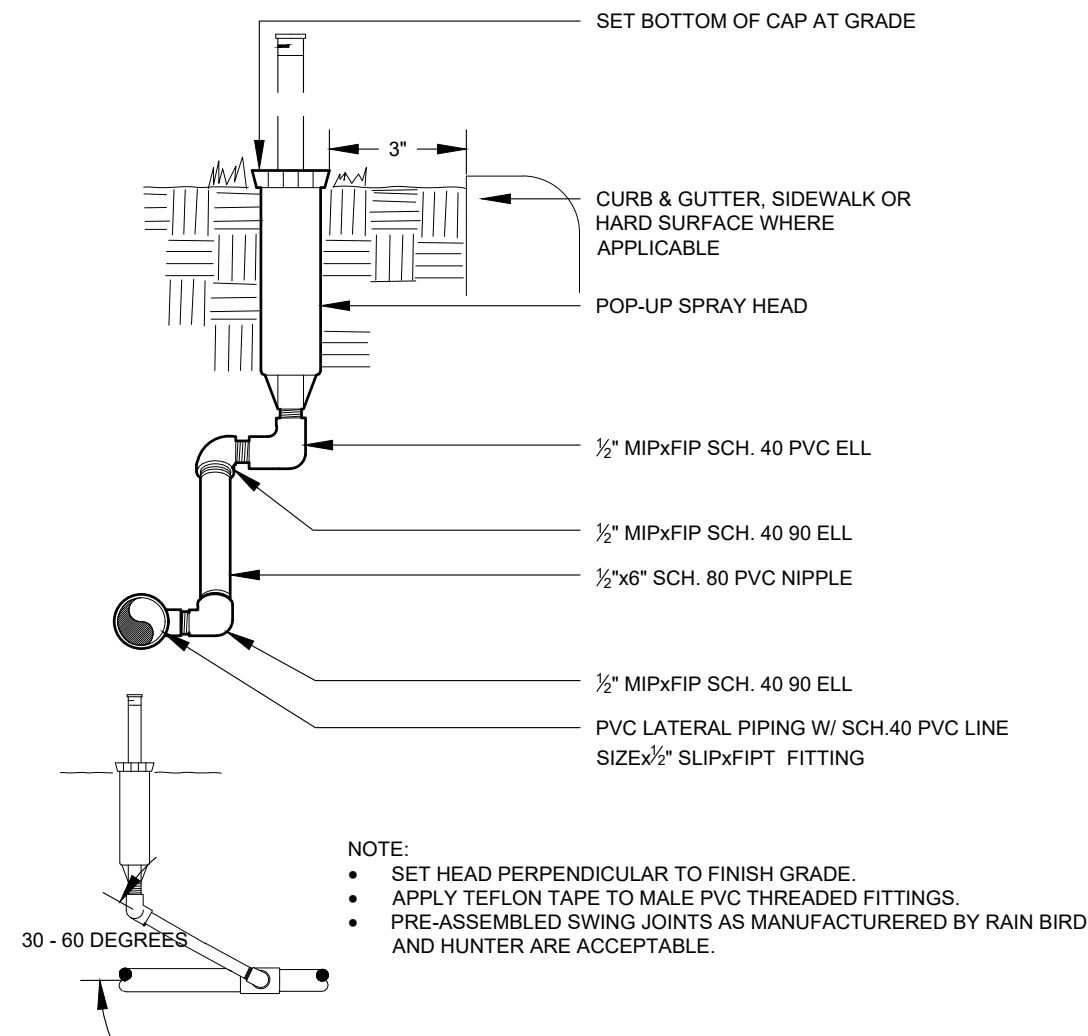
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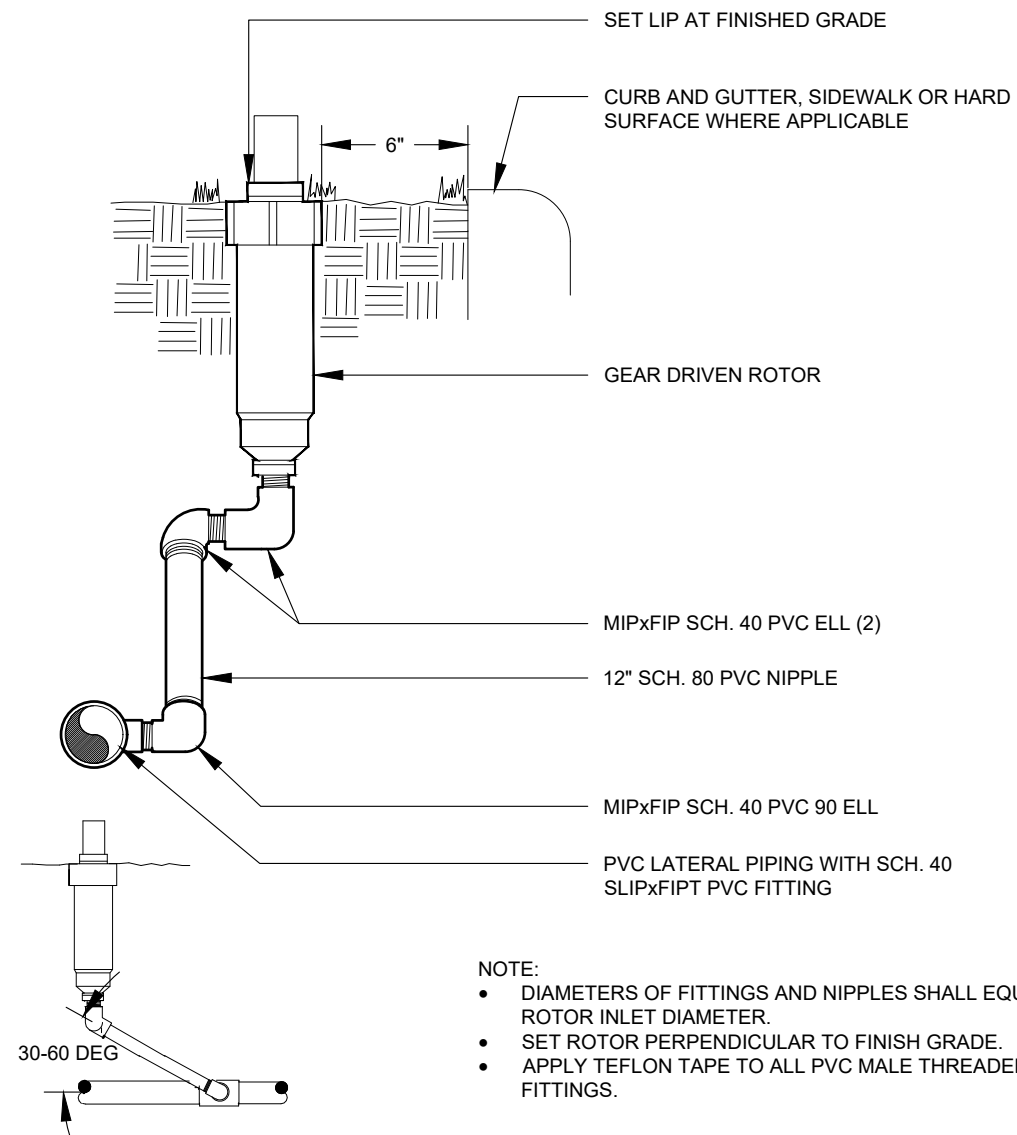


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POP-UP SPRAY HEAD
SWING JOINT - PVC

1



GEAR DRIVEN ROTOR
SWING JOINT - PVC

2

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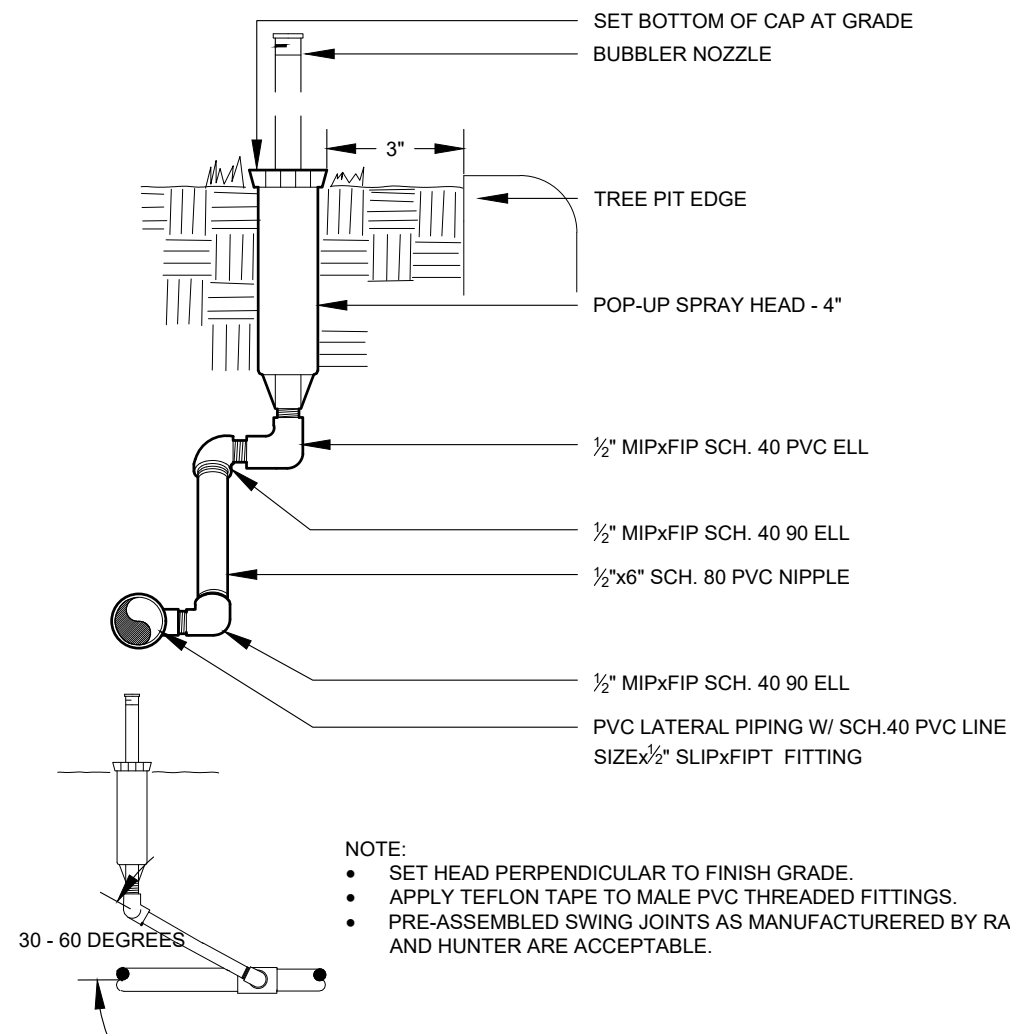


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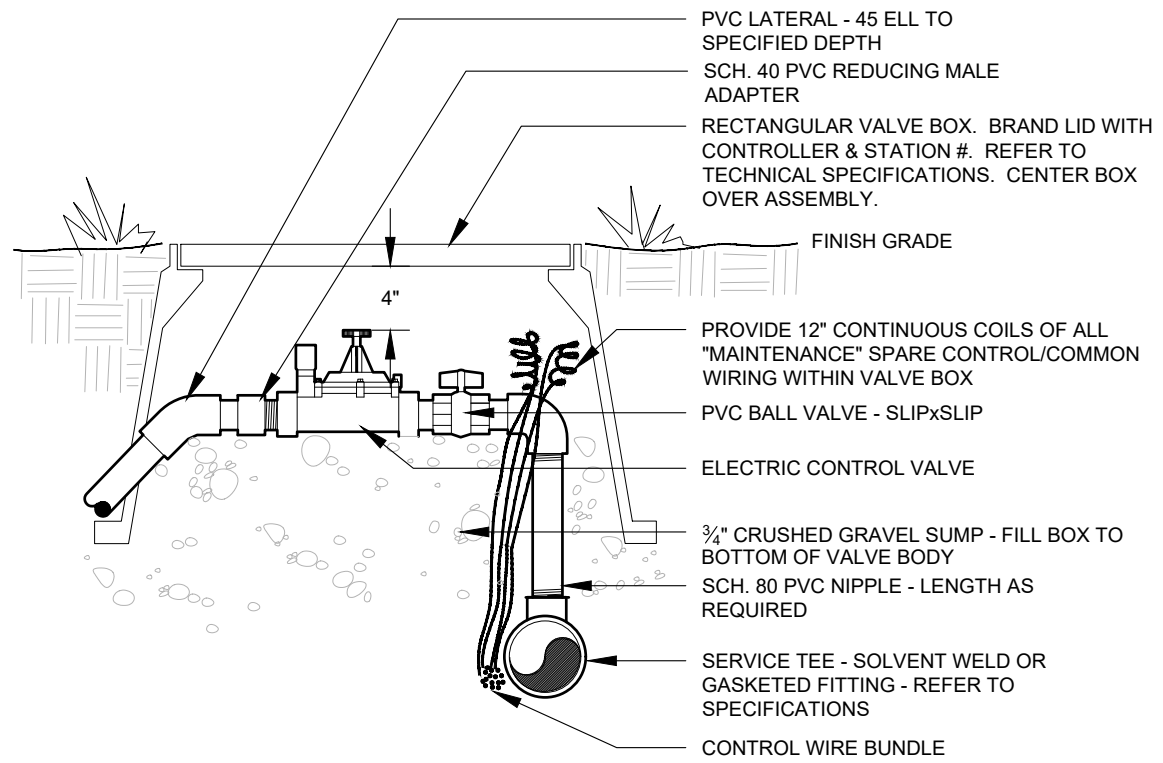


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BUBBLER

3



ELECTRIC CONTROL VALVE

24V - PVC Lateral

4



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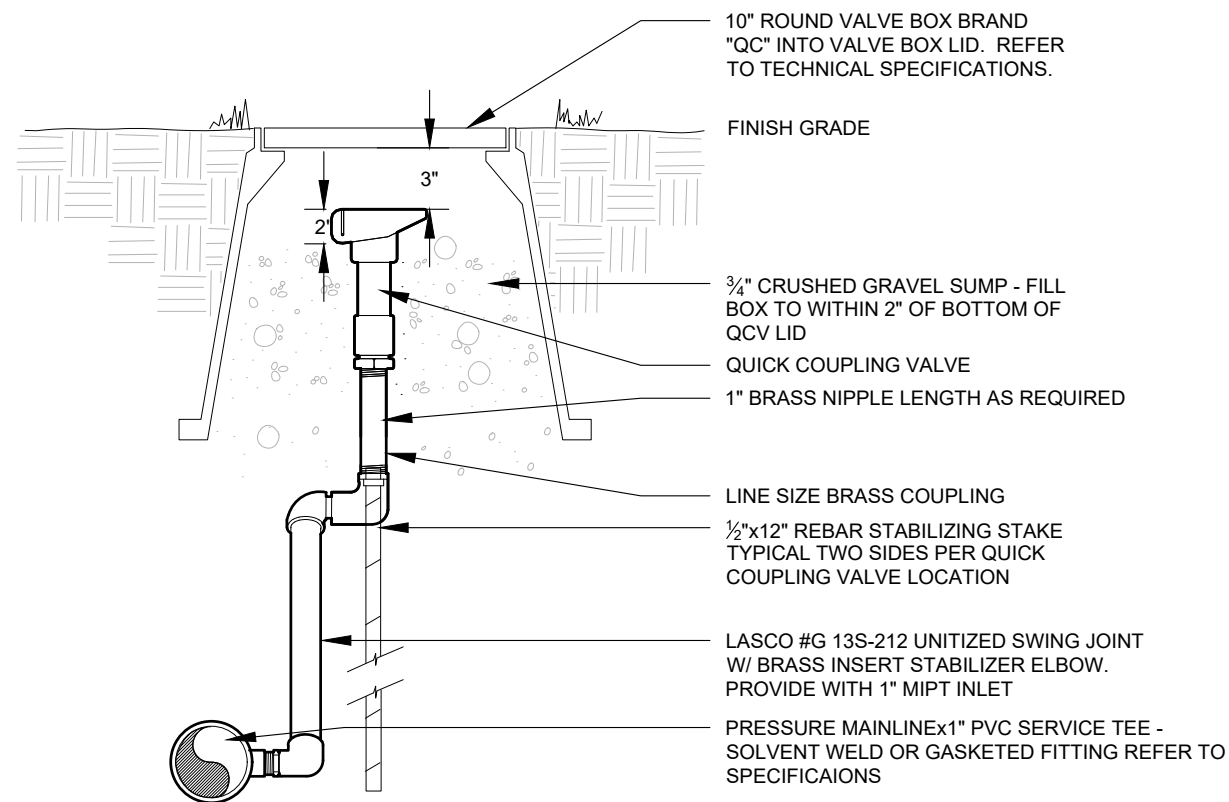
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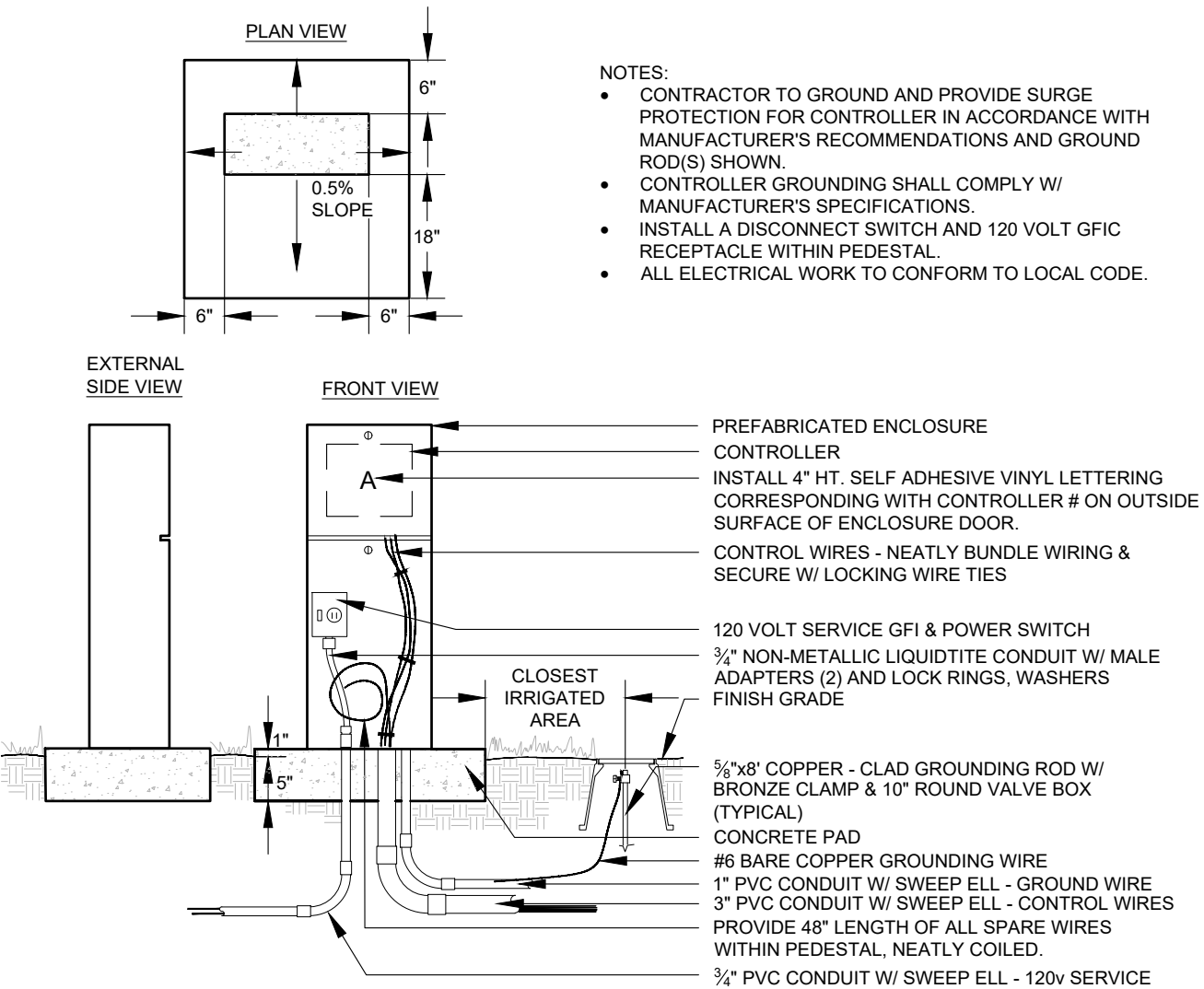


APPLY TEFLON TAPE TO ALL THREADED NIPPLES

QUICK COUPLING VALVE

LASCOSWING - TYPICAL

5



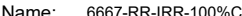
ELECTRIC CONTROLLER

PEDESTAL - FRONT OPENING - TYPICAL

6

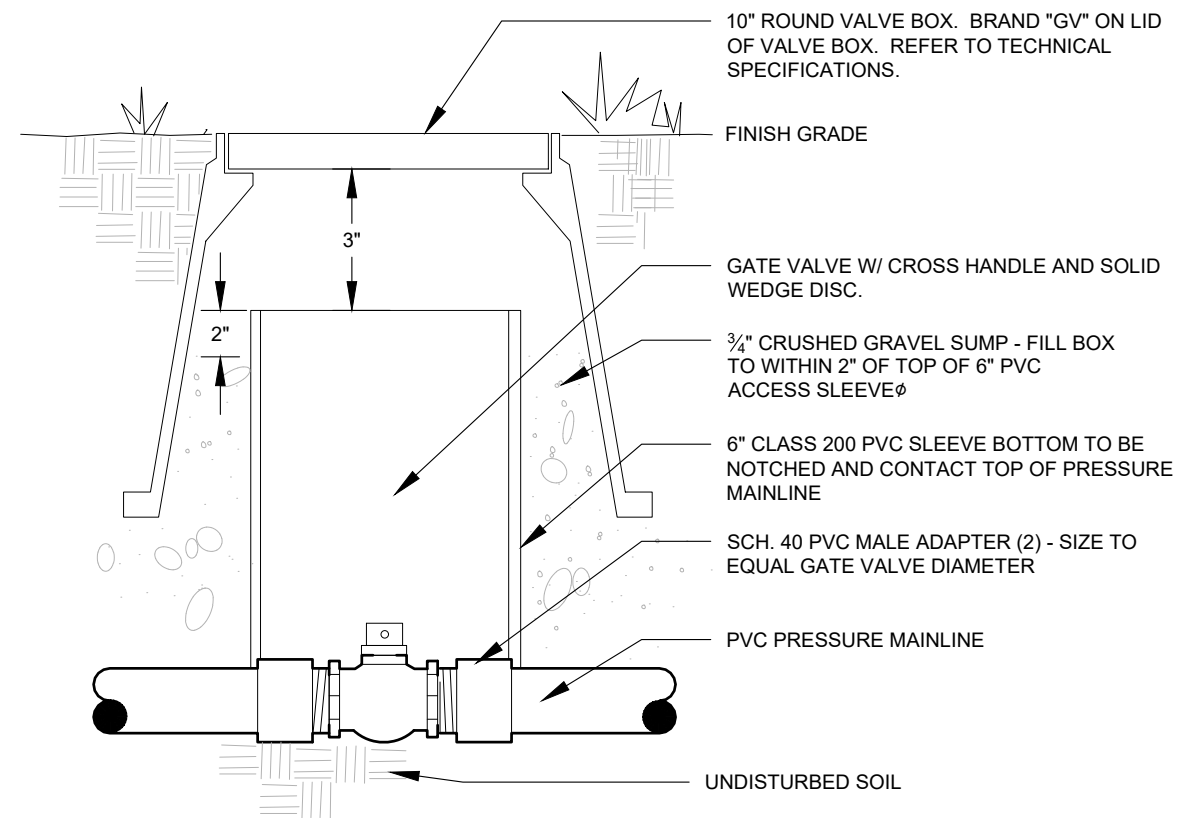
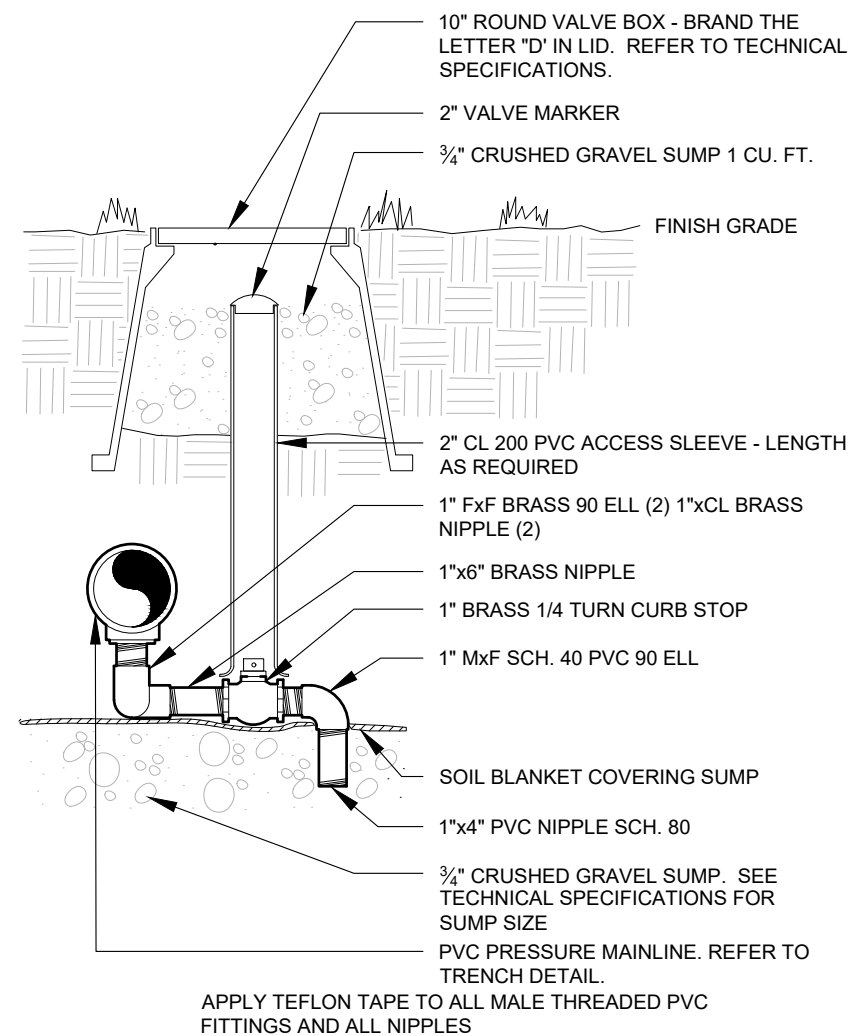


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										Sheet Subset: IRRIGATION		Subset Sheets: IR-25	OF 29	Sheet Number 356		



Know what's below.
Call before you dig.
CALL 3 BUSINESS DAYS IN ADVANCE BEFORE YOU
DIG, GRADE, OR EXCAVATE FOR THE MARKING OF
UNDERGROUND MEMBER UTILITIES.



MANUAL DRAIN VALVE TYPICAL

9

ISOLATION VALVE

10



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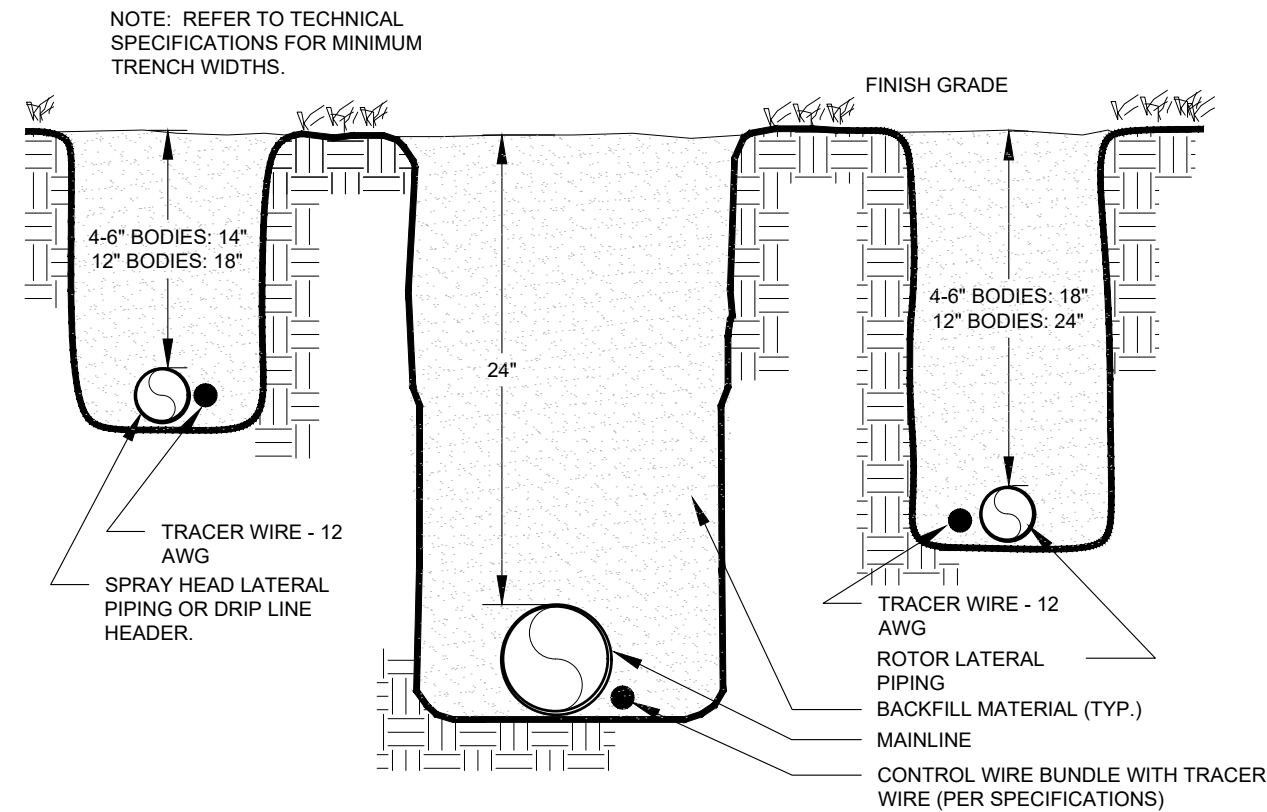
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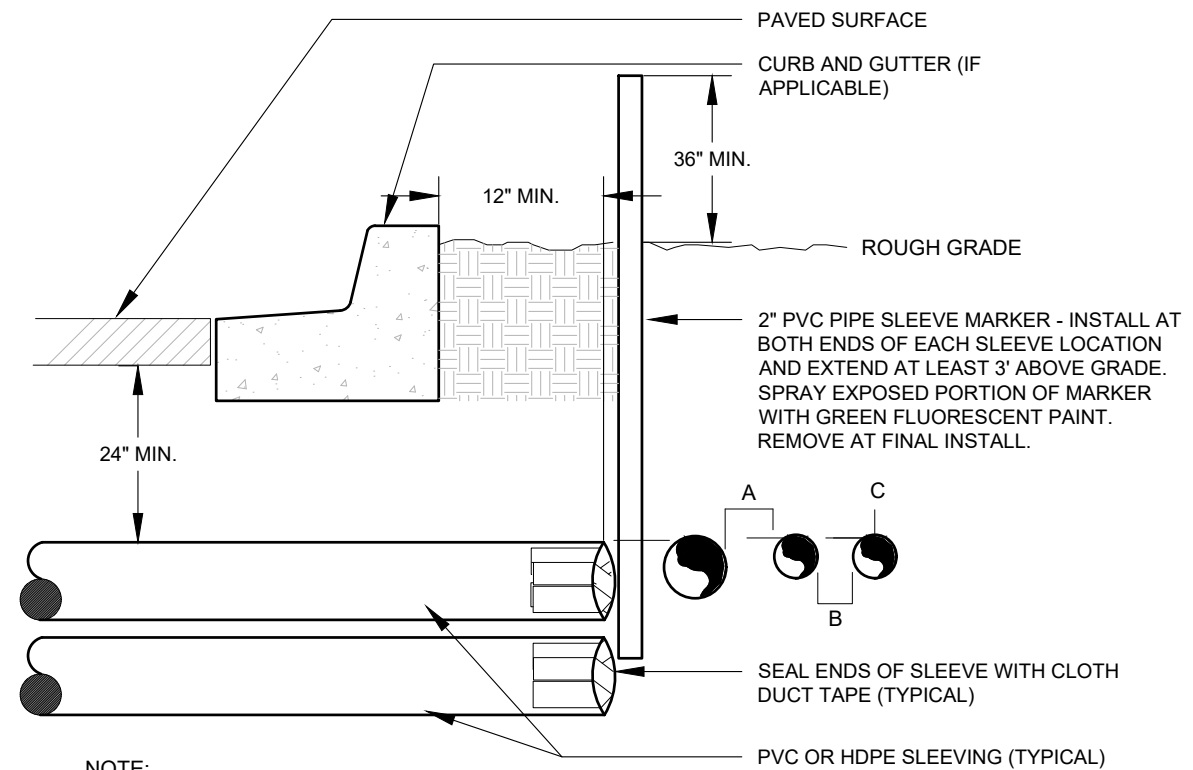


Know what's below.
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UNDERGROUND MEMBER UTILITIES.



TRENCH

11



NOTE:

- ALL SLEEVE MATERIAL PER IRRIGATION SCHEDULE, SIZE AS NOTED ON PLAN.
- INSTALL SLEEVES IN SIDE-BY-SIDE CONFIGURATION WHERE MULTIPLE SLEEVES ARE TO BE INSTALLED. SPACE SLEEVES 4" TO 6" APART. DO NOT STACK SLEEVES VERTICALLY.
- CONTRACTOR TO COORDINATE WITH FLATWORK INSTALLER TO BRAND A "V" IN SIDEWALK OR CURB AT BOTH ENDS OF SLEEVE CROSSING.
- SLEEVING THROUGH OR UNDER RETAINING WALLS, PLANTER WALLS, POND LINING, OR WATER QUALITY AREAS SHALL BE COORDINATED WITH CIVIL WORK AT APPROXIMATE LOCATIONS SHOWN.
- AN INDIVIDUAL SLEEVE SHALL CONTAIN NO MORE THAN ONE PIPE OR WIRE BUNDLE.

IRRIGATION SLEEVING TYPICAL

12



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CITY OF ARVADA
PUBLIC WORKS DEPARTMENT

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GENERAL LANDSCAPE NOTES

1.

THE LANDSCAPE DRAWINGS (LS-SHEETS) SHALL BE USED IN CONJUNCTION WITH CIVIL, IRRIGATION AND ELECTRICAL DRAWINGS TO PROVIDE COMPLETE INFORMATION REGARDING SITEWORK.
2.

THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE EXISTING CONDITIONS PRIOR TO COMMENCING ANY WORK. INSPECTING EXISTING SITE CONDITIONS AFFECTING WORK FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS. PRIOR TO COMMENCING LANDSCAPE WORK ADVISE THE PROJECT LANDSCAPE ARCHITECT OF ANY INCONSISTENCIES WITH SAID CONDITIONS FOR RESOLUTION.
3.

COORDINATE LANDSCAPE WORK WITH OTHER CONSTRUCTION TO ENSURE PROPER SEQUENCING OF WORK, TO MINIMIZE CONFLICTS, AND TO PROTECT IN-PLACE WORK FROM DAMAGE.
4.

MINIMIZE DISTURBANCE OUTSIDE APPROXIMATE LIMITS OF WORK. DAMAGED WORK SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR TO A LIKE NEW CONDITION. AT NO ADDITIONAL COST TO THE OWNER.
5.

THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
6.

THE CONTRACTOR MUST COORDINATE UTILITY CAPPING OR ABANDONMENT WITH UTILITY COMPANY AND OWNER.
7.

THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL APPLICABLE EROSION CONTROL STANDARDS.
8.

EXISTING AND NEW UTILITIES SHOWN FOR REFERENCE ONLY. REFER TO CIVIL FOR UTILITY PLANS.
9.

THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING IRRIGATION WATER SOURCE, ZONES, CONTROLS, COVERAGE, ETC. TO ENSURE THAT CONSTRUCTION DOES NOT IMPACT IRRIGATED LANDSCAPE AREAS THAT ARE TO REMAIN. ALL IRRIGATION AND LANDSCAPE DISTURBED BY THE WORK OF THIS PROJECT ARE TO BE RESTORED TO A LIKE NEW CONDITION ACCEPTABLE TO THE OWNER AND LANDSCAPE ARCHITECT.
10.

ANY MISCELLANEOUS ITEM OR MATERIALS NOT SPECIFICALLY NOTED, BUT REQUIRED FOR PROPER EXECUTION, INSTALLATION, OR PERFORMANCE OF THE WORK, SHALL BE PROVIDED BY THE CONTRACTOR.
11.

ALL CONSTRUCTION DEBRIS SHALL BE REMOVED EACH DAY AND THE SITE SHALL BE MAINTAINED IN A NEAR, CLEAN CONDITION. THE CONTRACTOR IS RESPONSIBLE FOR ALL PHASES OF SECURING, HANDLING, TRANSPORATION, AND DISPOSAL OF DEBRIS.
12.

CONTRACTOR SHALL PROVIDE PROTECTION FOR NEWLY INSTALLED WORK AND FINISHES.
13.

THE LIMIT OF WORK DESCRIBED IN THE DRAWINGS ARE APPROXIMATE. WORK REQUIRED OUTSIDE OF THESE LIMITS WHICH IS NEEDED TO MEET THE INTENT OF THE DRAWINGS IS THE RESPONSIBILITY OF THE CONTRACTOR.
14.

SEALED EXPANSION JOINTS SHALL BE INSTALLED WHERE NEW CONCRETE PAVING MEETS EXISTING PAVING, BUILDING WALL, SITE WALLS, COLORED CONCRETE, AND WHERE NOTED ON PLAN.
15.

ALL CONNECTIONS TO EXISTING WORK SHALL BE SMOOTH AND CONTINUOUS, AND MAINTAINED POSITIVE DRIANAGE, RE: CIVIL
16.

ALL CONTROL JOINTS ARE TO BE SAW CUT UNLESS OTHERWISE SPECIFIED.
17.

REFER TO CIVIL AND GEOTECHNICAL REPORT FOR CONCRETE PAVING THICKNESS.
18.

REFER TO ELECTRICAL DRAWINGS FOR LIGHT FIXTURE SPECIFICATIONS AND DETAILS.
19.

FOR TREE PROTECTION LOCATION (RE: REMOVAL AND RESET PLANS), FOR DETAILS (RE: LANDSCAPE DETAILS)

PLANTING NOTES

1.

THE CONTRACTOR SHALL LOCATE AND VERIFY THE EXISTENCE OF ALL UTILITIES PRIOR TO STARTING WORK.
2.

MINIMIZE DISTURBANCES OUTSIDE SCOPE OF WORK. ANY DAMAGE OUTSIDE SCOPE OF WORK INCURRED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR TO LIKE NEW CONDITION.
3.

CONTRACTOR SHALL COORDINATE IRRIGATION TO EXISTING SOD AND OTHER PLANT MATERIAL TO REMAIN.
4.

SITE PREPARATION: LANDSCAPE CONTRACTOR TO REMOVE ALL ROCK AND DEBRIS OVER 1" IN SIZE AND REMOVE OFF SITE. PROVIDE FINISH GRADES WHILE MAINTAINING POSITIVE DRAINAGE. CONTRACTOR TO NOTIFY THE PROJECT MANAGER OF ANY POORLY DRAINED AREAS PRIOR TO COMMENCING WORK.
5.

SOIL CONDITIONER: AMEND SOIL AT A RATE OF FOUR (4) CUBIC YARDS PER ONE THOUSAND (1,000) SQUARE FEET* WITH SOIL CONDITIONER CONSISTING OF AGED ORGANIC MATTER, FREE OF WEED OR OTHER NOXIOUS PLANT SEEDS, LUMPS, STONES, OR OTHER FOREIGN CONTAMINANTS HARMFUL TO PLANT LIFE, AND HAVING THE FOLLOWING CHARACTERISTICS BASED ON A NUTRIENT TEST PERFORMED NO LONGER THAN 3 MONTHS PRIOR TO ITS INCORPORATION INTO THE POJRECT:

ORGANIC MATTER: TWENTY FIVE PERCENT (25%) MAXIMUM.

SALT CONTENT: FIVE (5.0) MMHOS/CM MAXIMUM.

PH: 7.5 MAXIMUM.

CARBON TO NITROGEN RATIO SHALL BE LESS THAN 20:1
6.

PLANT MATERIAL: ALL PLANT MATERIAL SHALL MEET REQUIREMENTS OF ALL

6.1.

CONTRACT DOCUMENTS. ALL PLANT MATERIAL SHALL MEET OR EXCEED CURRENT AMERICAN STANDARD FOR NURSERY STOCK AND THE COLORADO NURSERY ACT AND ACCOMPANYING RULES AND REGULATIONS.

6.2.

ALL TREES, SHRUBS AND OTHER PLANT MATERIALS SHALL BE REVIEWED AND APPROVED AT NURSERIES BY THE LANDSCAPE ARCHITECT. CONTRACTOR SHALL PROVIDE A MAXIMUM OF 2 NURSERIES WHERE A SELECTION OF PLANT MATERIAL IS AVAILABLE TO CHOOSE FROM. CONTRACTOR SHALL VISUALLY INSPECT AND TAG THE BEST SPECIMENS OF PLANT MATERIAL PRIOR TO THE LANDSCAPE ARCHITECT REVIEW AND APPROVAL.

6.3.

THE DAY PRIOR TO PLANTING, ALL PLANT MATERIAL LOCATIONS ARE TO BE STAKED BY THE CONTRACTOR AND APPROVED BY THE LANDSCAPE ARCHITECT. ALL ADJUSTMENTS SHALL BE MADE BY THE CONTRACTOR. NOTIFY LANDSCAPE ARCHITECT ONE WEEK PRIOR TO DATE OF SITE VISIT.

6.4.

THE CONTRACTOR SHALL NOT DIG PLANT PITS UNTIL LOCATIONS ARE APPROVED. PRE-DIGGING OF PLANT PITS IS NOT ALLOWED. ALL TREE PITS ARE TO BE DUG AFTER TREE IS PLACED AT THE FINAL LOCATION TO ALLOW FOR PROPER TREE PIT DEPTH.

6.5.

CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING DURING INITIAL ESTABLISHMENT OF LANDSCAPE. ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24-HOURS AFTER PLANTING. ALL PLANTS SHALL BE WATERED WEEKLY OR MORE OFTEN IF NECESSARY, DURING THE FIRST GROWING SEASON.
7.

EDGER: SEE SPECS.

MULCH: HOLD MULCH A MINIMUM OF 1" BELOW EDGE OF WALK, EDGING, OR CURB
8.

IRRIGATION: SEE IRRIGATION SHEETS FOR GUIDANCE

SHEET INDEX

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LS-02	OF	35	LANDSCAPE PLANS
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LS-04	OF	35	LANDSCAPE PLANS
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LS-34	OF	35	LANDSCAPE DETAILS
LS-35	OF	35	PLANTING SCHEDULE

SEEDING NOTES:

1.

CONTRACTOR TO RESTORE LANDSCAPE OR HARDSCAPE PER IMPACTED LOCATION
2.

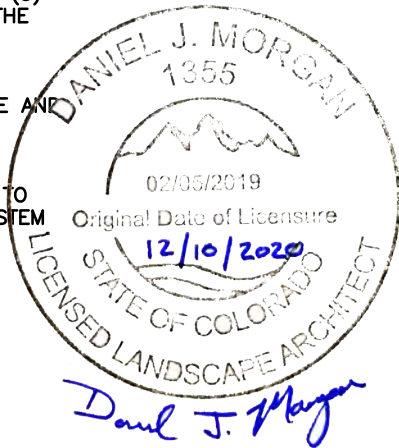
FOR THE SEEDING LOCATIONS AND PAY ITEMS, CONTRACTOR SHALL APPLY A BLUEGRASS BLEND SEED MIX TO ALL AREAS THAT WILL NOT BE PAVED. SEE SPECIFICATIONS SECTION 45 FOR MIXES, RATES AND TIMING. CONTRACTOR SHALL SUBMIT SEED MIX DESIGNS FOR APPROVAL.
3.

PAY ITEM FOR SEEDING WITHIN ALL CITY PARKS SHALL BE RESTORED WITH SOD. SEE CITY SPECIFICATION SECTION 45 (PLANT LANDSCAPING)
4.

CONTRACTOR SHALL COORDINATE WITH THE OWNER'S LANDSCAPE MAINTENANCE PERSONNEL AT LEAST FIVE (5) WORKING DAYS IN ADVANCE OF STARTING WORK IN THE AREA.
5.

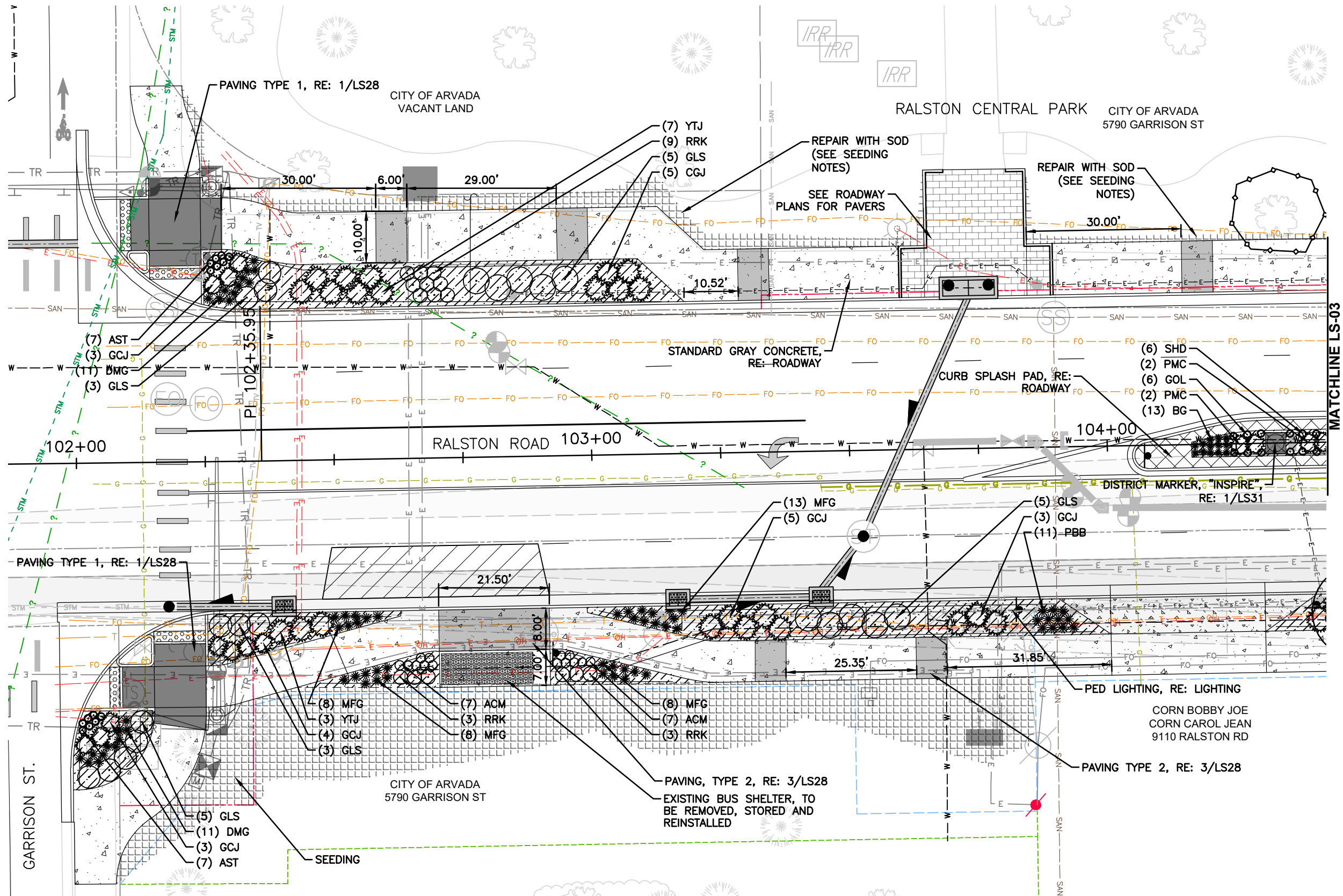
CONTRACTOR SHALL COORDINATE WITH ADJACENT LANDOWNER FOR DEMOLITION, REMOVAL, MAINTENANCE AND IRRIGATION.
6.

CONTRACTOR SHALL PROVIDE OWNER WITH ANY MAINTENANCE PRODUCT DATA AND TRAINING NEEDED TO TURN OVER REVISED LANDSCAPE AND IRRIGATION SYSTEM PRIOR TO SUBSTANTIAL COMPLETION.



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							Sheet Subset: LANDSCAPE		Subset Sheets: LS-01 of 35		Sheet Number 360		



1 SITE MATERIALS AND LAYOUT PLAN
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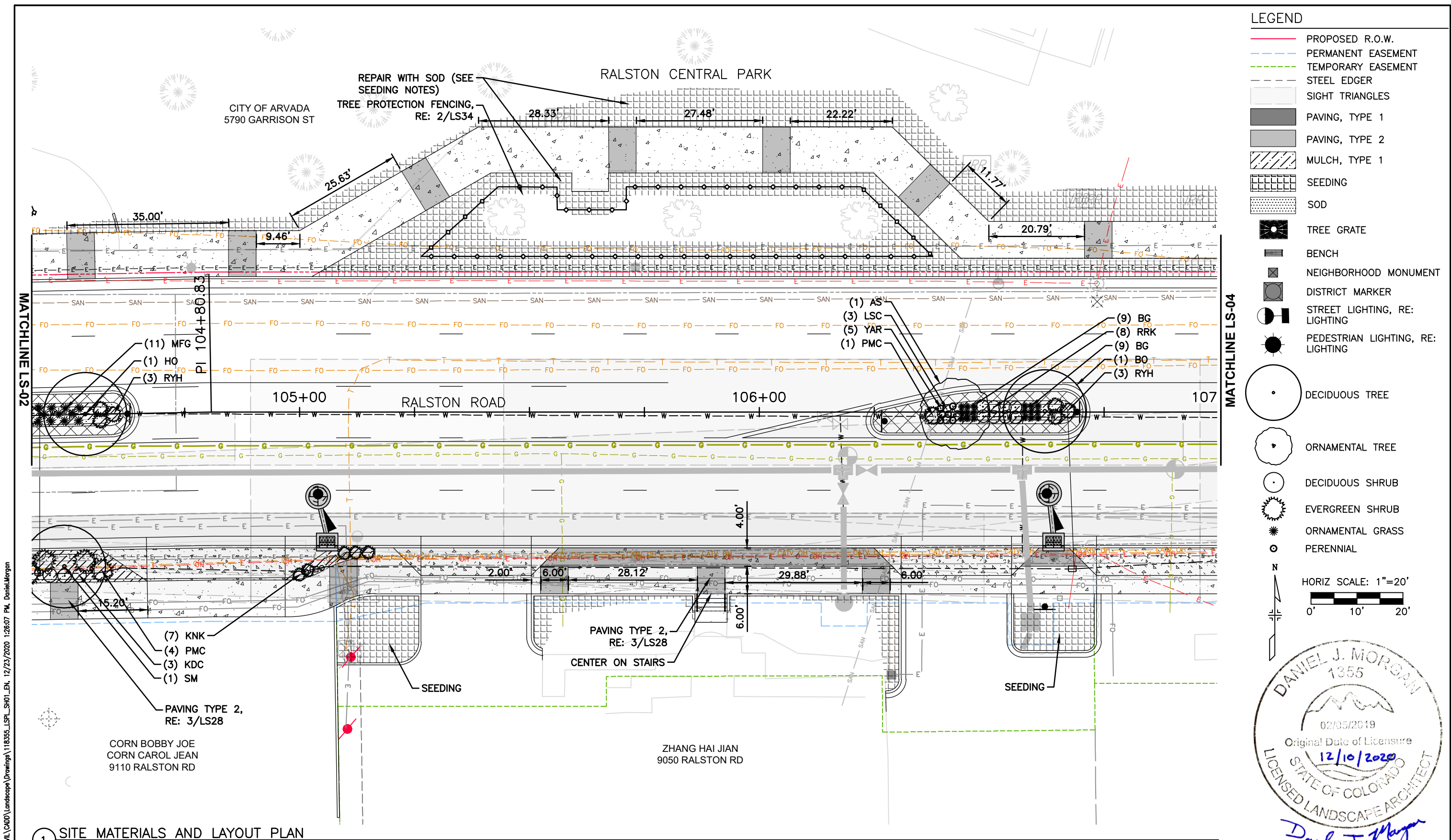
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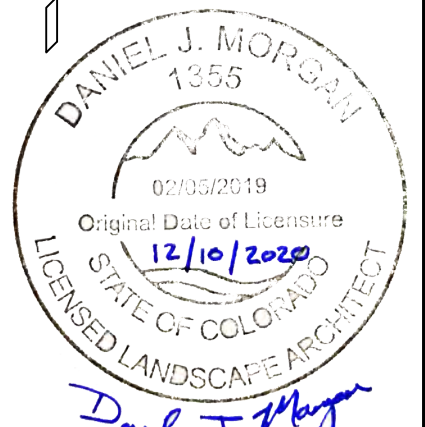


CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

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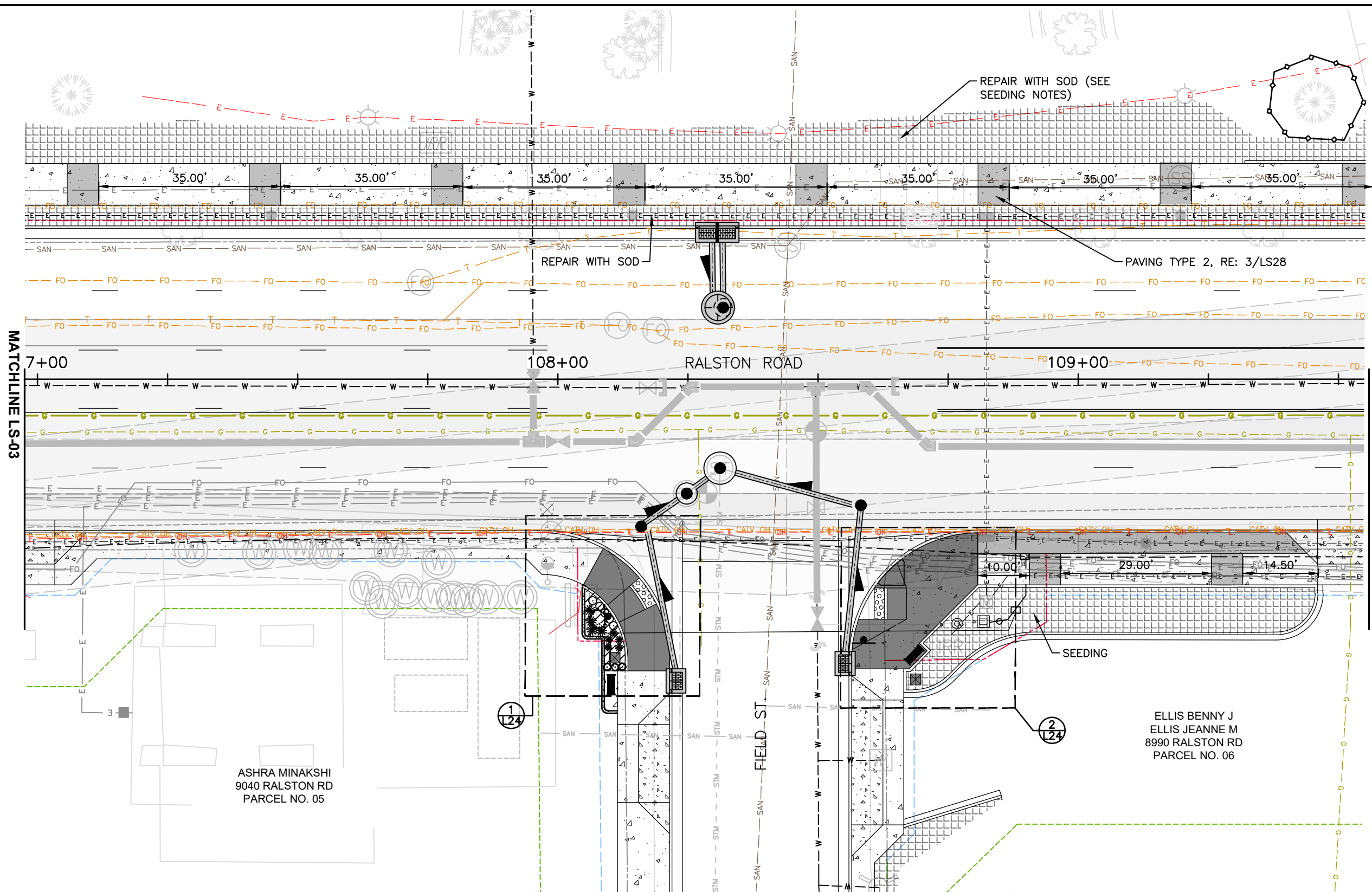


- LEGEND**
- PROPOSED R.O.W.
 - PERMANENT EASEMENT
 - TEMPORARY EASEMENT
 - STEEL EDGER
 - SIGHT TRIANGLES
 - PAVING, TYPE 1
 - PAVING, TYPE 2
 - MULCH, TYPE 1
 - SEEDING
 - SOD
 - TREE GRATE
 - BENCH
 - NEIGHBORHOOD MONUMENT
 - DISTRICT MARKER
 - STREET LIGHTING, RE: LIGHTING
 - PEDESTRIAN LIGHTING, RE: LIGHTING
 - DECIDUOUS TREE
 - ORNAMENTAL TREE
 - DECIDUOUS SHRUB
 - EVERGREEN SHRUB
 - ORNAMENTAL GRASS
 - PERENNIAL
- HORIZ SCALE: 1"=20'
- 0' 10' 20'



1 SITE MATERIALS AND LAYOUT PLAN
SCALE: 1"=20'-0"

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										Sheet Subset: LANDSCAPE		Subset Sheets: LS-03 of 35		Sheet Number 362	



LEGEND

WALL

PROPOSED R.O.W.

PERMANENT EASEMENT

TEMPORARY EASEMENT

STEEL EDGER

SIGHT TRIANGLES

PAVING, TYPE 1

PAVING, TYPE 2

MULCH, TYPE 1

SEEDING

SOD

TREE GRATE

BENCH

NEIGHBORHOOD MONUMENT

DISTRICT MARKER

STREET LIGHTING, RE: LIGHTING

PEDESTRIAN LIGHTING, RE: LIGHTING

DECIDUOUS TREE

ORNAMENTAL TREE

DECIDUOUS SHRUB

EVERGREEN SHRUB

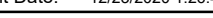
ORNAMENTAL GRASS

PERENNIAL

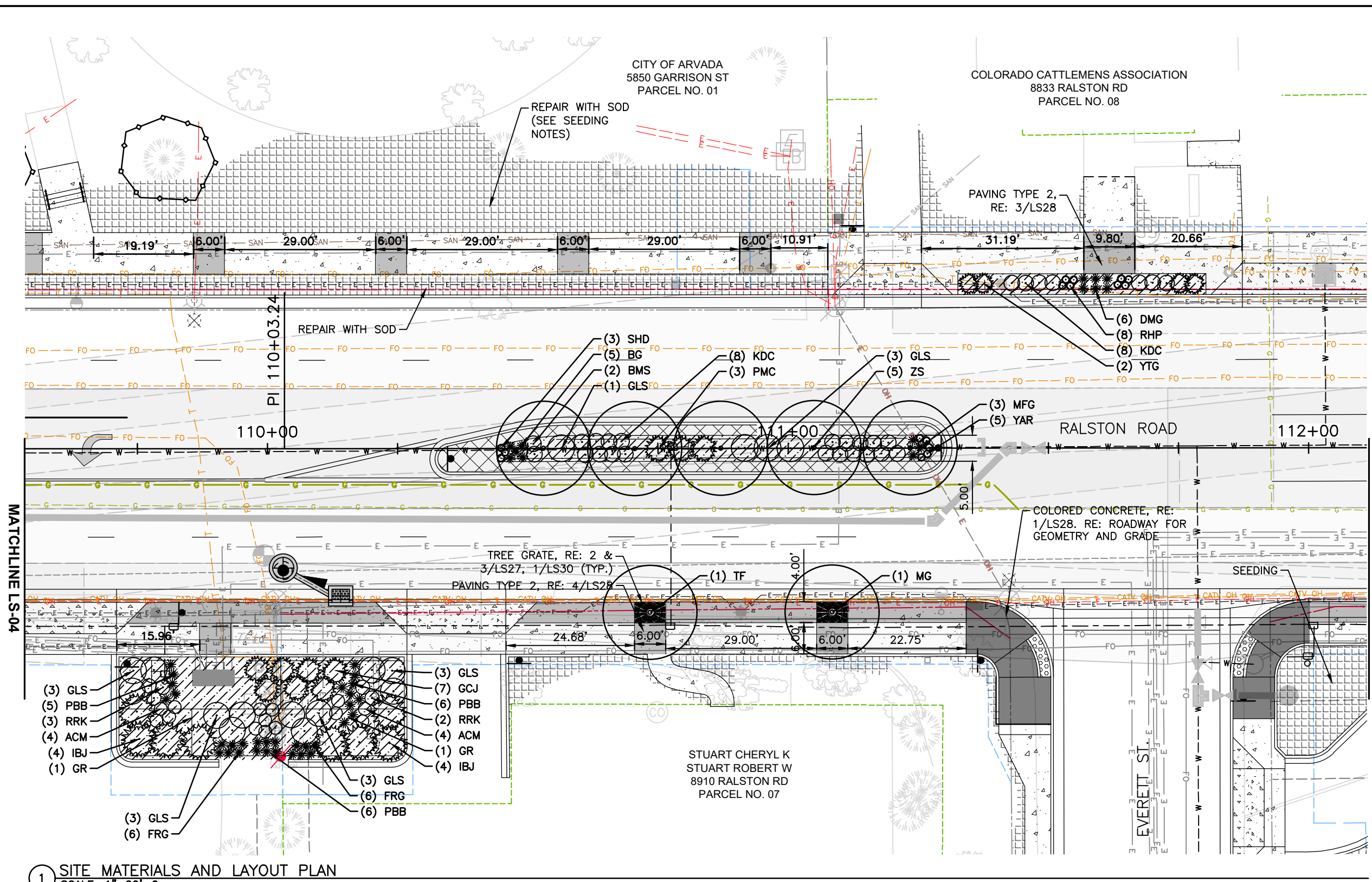
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1 SITE MATERIALS AND LAYOUT PLAN
SCALE: 1"=20'-0"

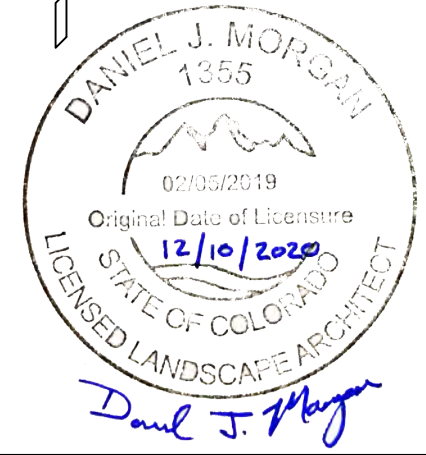
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DANIEL J. MORGAN
1355
02/05/2019
Original Date of Licensure
12/10/2020
STATE OF COLORADO
LICENSED LANDSCAPE ARCHITECT
Daniel J. Morgan



- LEGEND**
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1 SITE MATERIALS AND LAYOUT PLAN
SCALE: 1"=20'-0"

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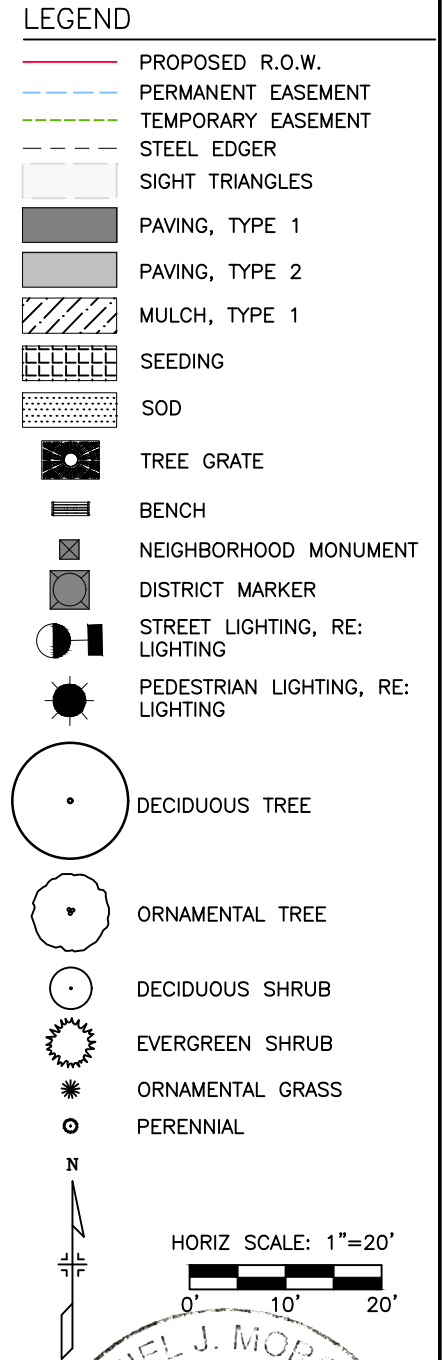
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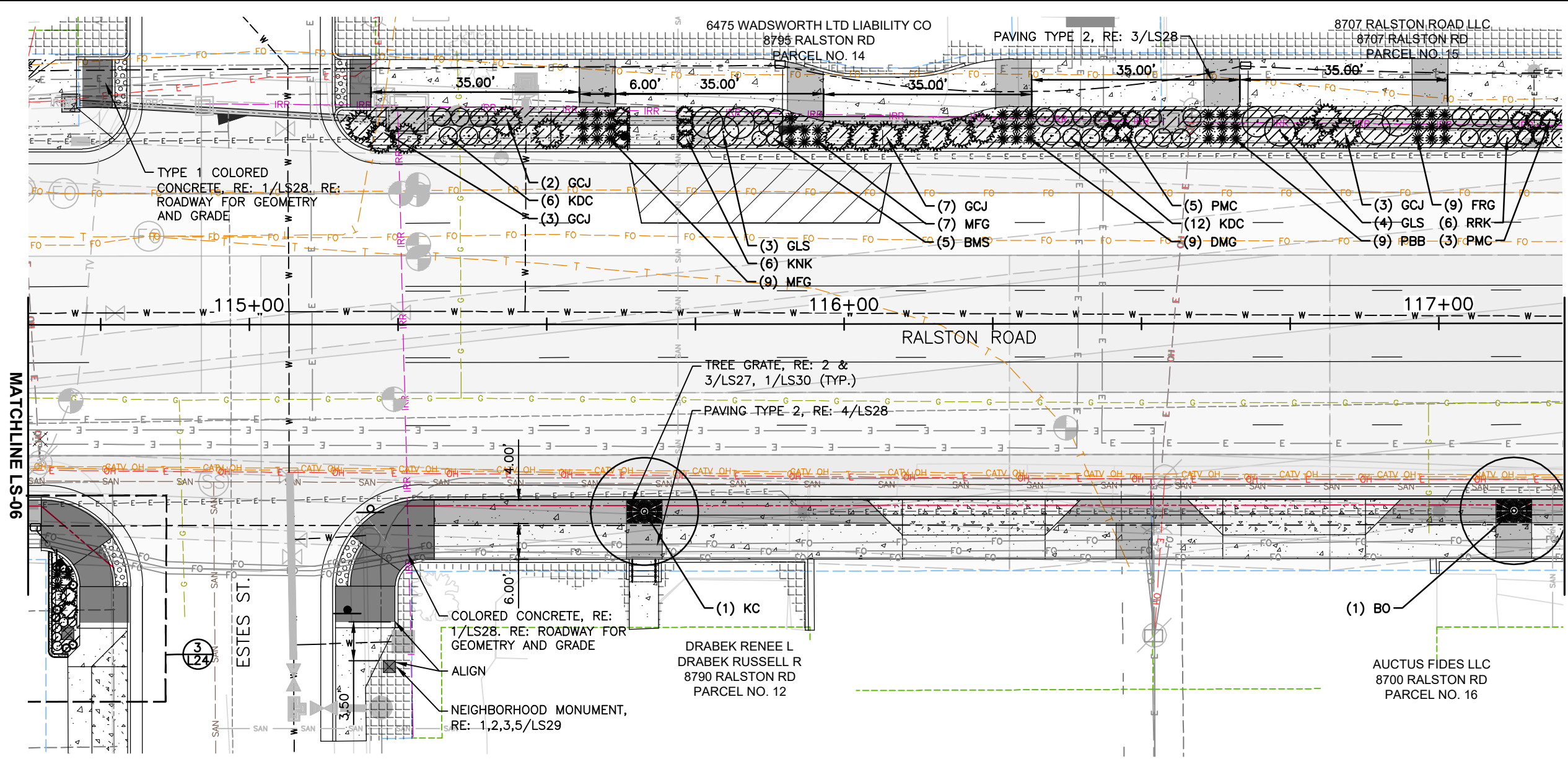
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CITY OF ARVADA
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8101 RALSTON ROAD
ARVADA, CO, 80002

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LEGEND

- PROPOSED R.O.W.
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0' 10' 20'

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STATE OF COLORADO
LICENSED LANDSCAPE ARCHITECT
Daniel J. Morgan

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HOLT &
ULLEVIG**

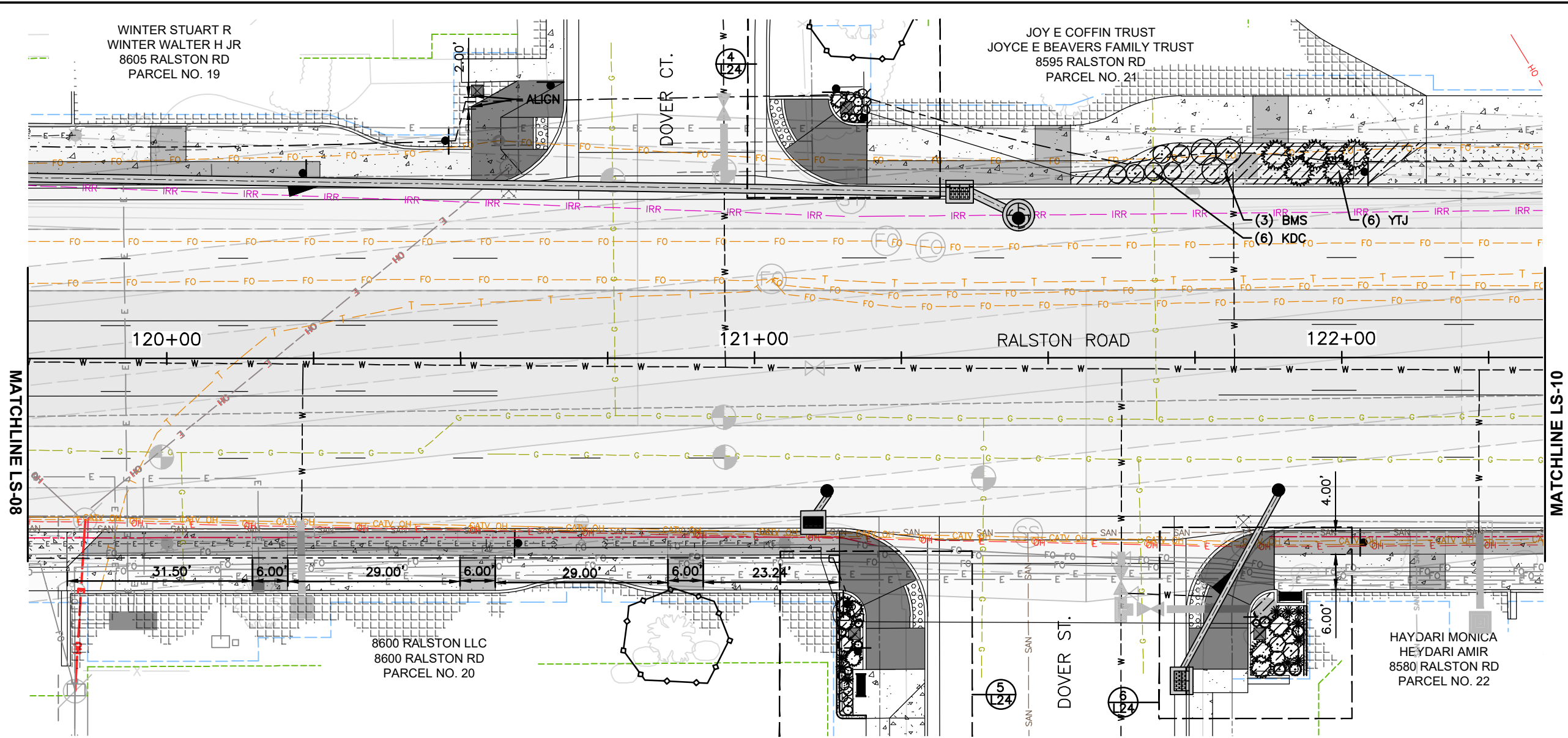
6400 South Fiddlers Green Circle, Suite 1500
Greenwood Village, CO 80111
Phone: 303.721.1440
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Sheet Revisions			
Date	Comments	Initials	

**CITY OF ARVADA
PUBLIC WORKS DEPARTMENT**

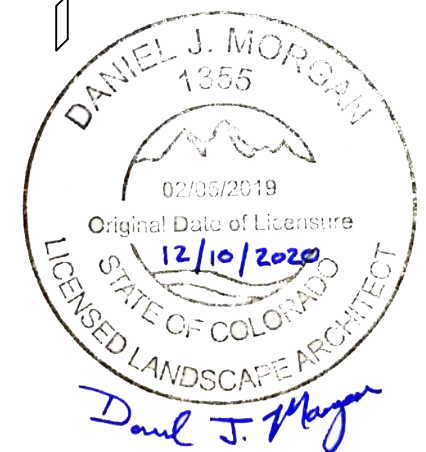
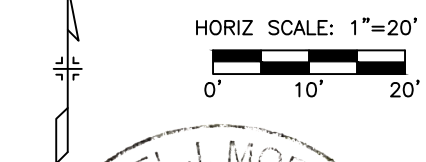
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST LANDSCAPE PLAN			Project No./Code
No Revisions:					18-ST-40
Revised:		Designer: DJM	Structure Numbers		
		Detailer: DJM			
Void:		Sheet Subset: LANDSCAPE	Subset Sheets: LS-07 of 35		Sheet Number 366



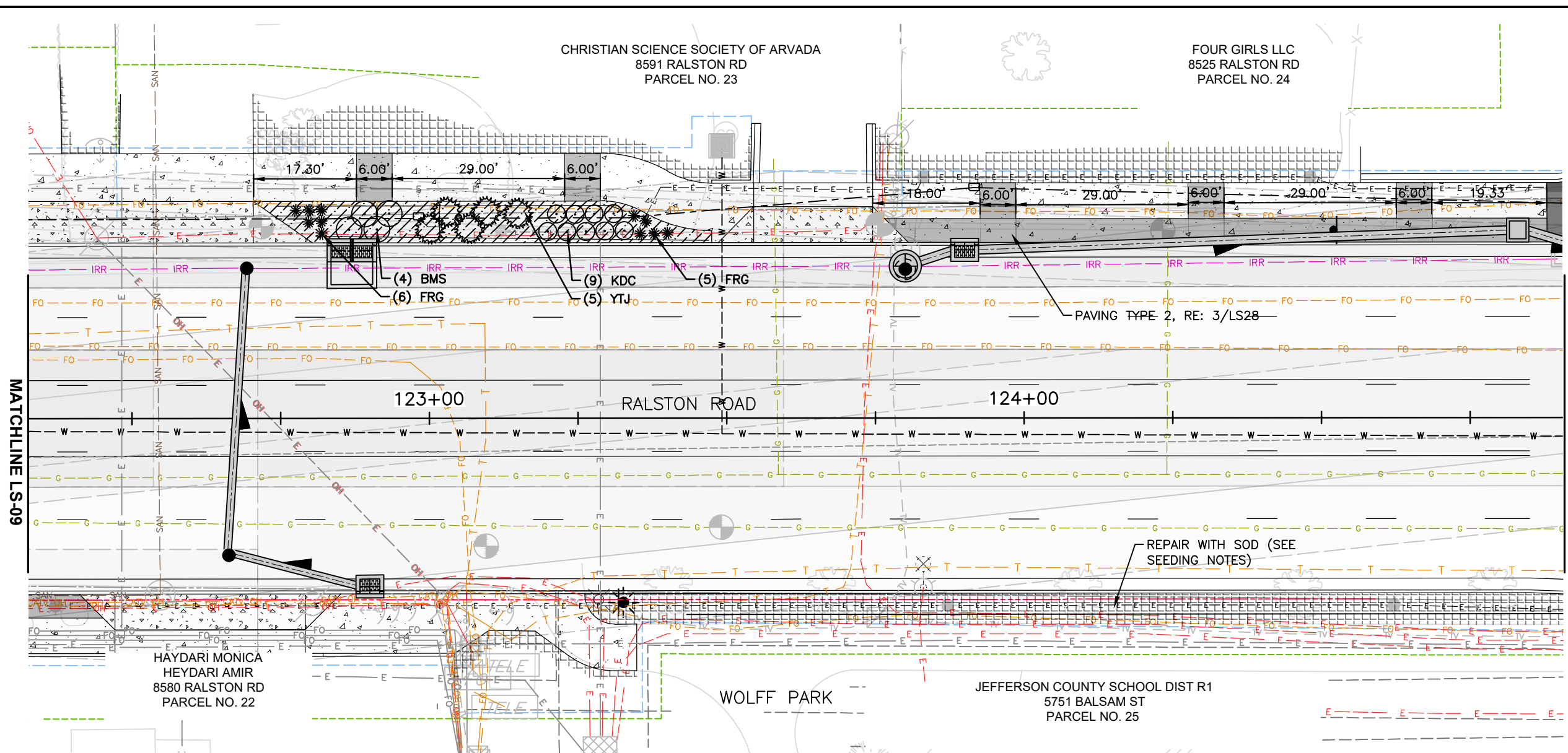
- LEGEND**
- PROPOSED R.O.W.
 - PERMANENT EASEMENT
 - TEMPORARY EASEMENT
 - STEEL EDGER
 - SIGHT TRIANGLES
 - PAVING, TYPE 1
 - PAVING, TYPE 2
 - MULCH, TYPE 1
 - SEEDING
 - SOD
 - TREE GRATE
 - BENCH
 - NEIGHBORHOOD MONUMENT
 - DISTRICT MARKER
 - STREET LIGHTING, RE: LIGHTING
 - PEDESTRIAN LIGHTING, RE: LIGHTING
 - DECIDUOUS TREE
 - ORNAMENTAL TREE
 - DECIDUOUS SHRUB
 - EVERGREEN SHRUB
 - ORNAMENTAL GRASS
 - PERENNIAL

1 SITE MATERIALS AND LAYOUT PLAN
SCALE: 1"=20'-0"



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File Name: 118355_LSPL_SH01_EN.DWG		Date	Comments	Initials			No Revisions:		Designer: DJM	Structure Numbers		18-ST-40	
Horizontal Scale: 1" = 20' Vertical Scale: N/A							Revised:		Detailer: DJM			Sheet Number 368	
6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Sheet Subset: LANDSCAPE	Subset Sheets: LS-09 of 35			



LEGEND

PROPOSED R.O.W.

PERMANENT EASEMENT

TEMPORARY EASEMENT

STEEL EDGER

SIGHT TRIANGLES

PAVING, TYPE 1

PAVING, TYPE 2

MULCH, TYPE 1

SEEDING

SOD

TREE GRATE

BENCH

NEIGHBORHOOD MONUMENT

DISTRICT MARKER

STREET LIGHTING, RE: LIGHTING

PEDESTRIAN LIGHTING, RE: LIGHTING

DECIDUOUS TREE

ORNAMENTAL TREE

DECIDUOUS SHRUB

EVERGREEN SHRUB

ORNAMENTAL GRASS

PERENNIAL

N

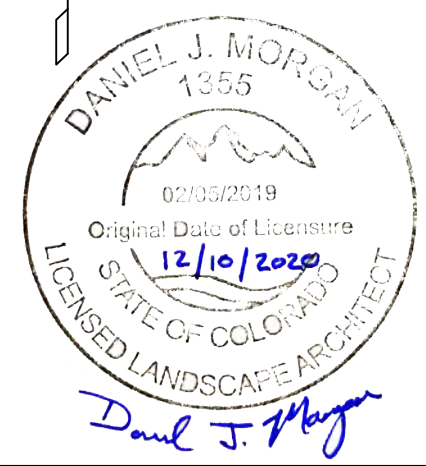
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0'

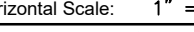
10'

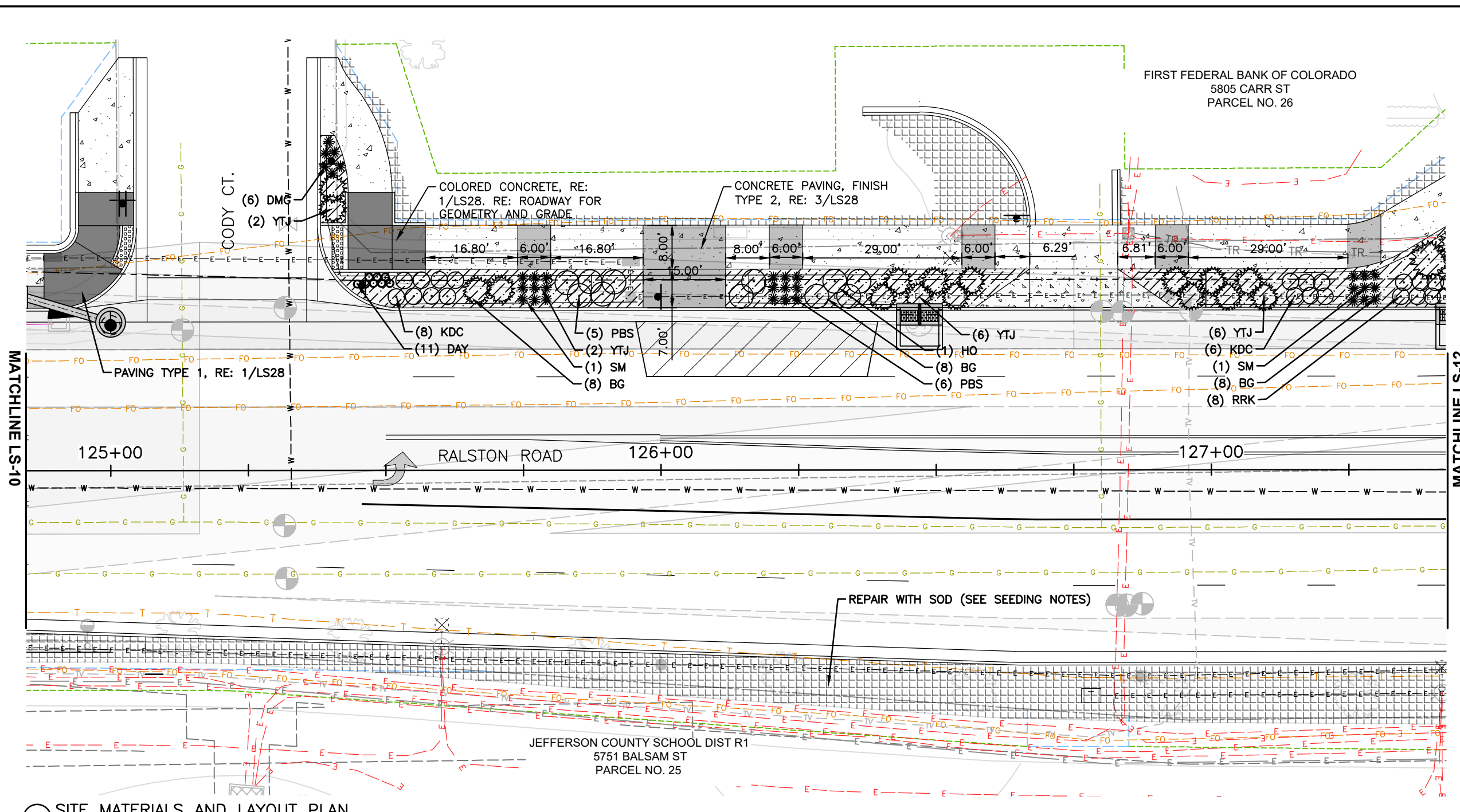
20'

1 SITE MATERIALS AND LAYOUT PLAN
SCALE: 1"=20'-0"



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 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com						Revised:		Designer: DJM		Structure						
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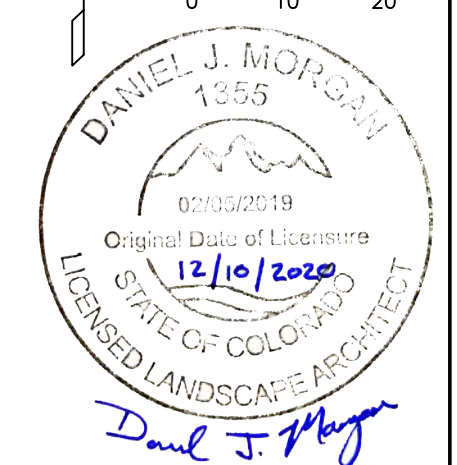
LEGEND

- PROPOSED R.O.W.
- PERMANENT EASEMENT
- TEMPORARY EASEMENT
- STEEL EDGER
- SIGHT TRIANGLES
- PAVING, TYPE 1
- PAVING, TYPE 2
- MULCH, TYPE 1
- SEEDING
- SOD
- TREE GRATE
- BENCH
- NEIGHBORHOOD MONUMENT
- DISTRICT MARKER
- STREET LIGHTING, RE: LIGHTING
- PEDESTRIAN LIGHTING, RE: LIGHTING
- DECIDUOUS TREE
- ORNAMENTAL TREE
- DECIDUOUS SHRUB
- EVERGREEN SHRUB
- ORNAMENTAL GRASS
- PERENNIAL

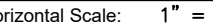
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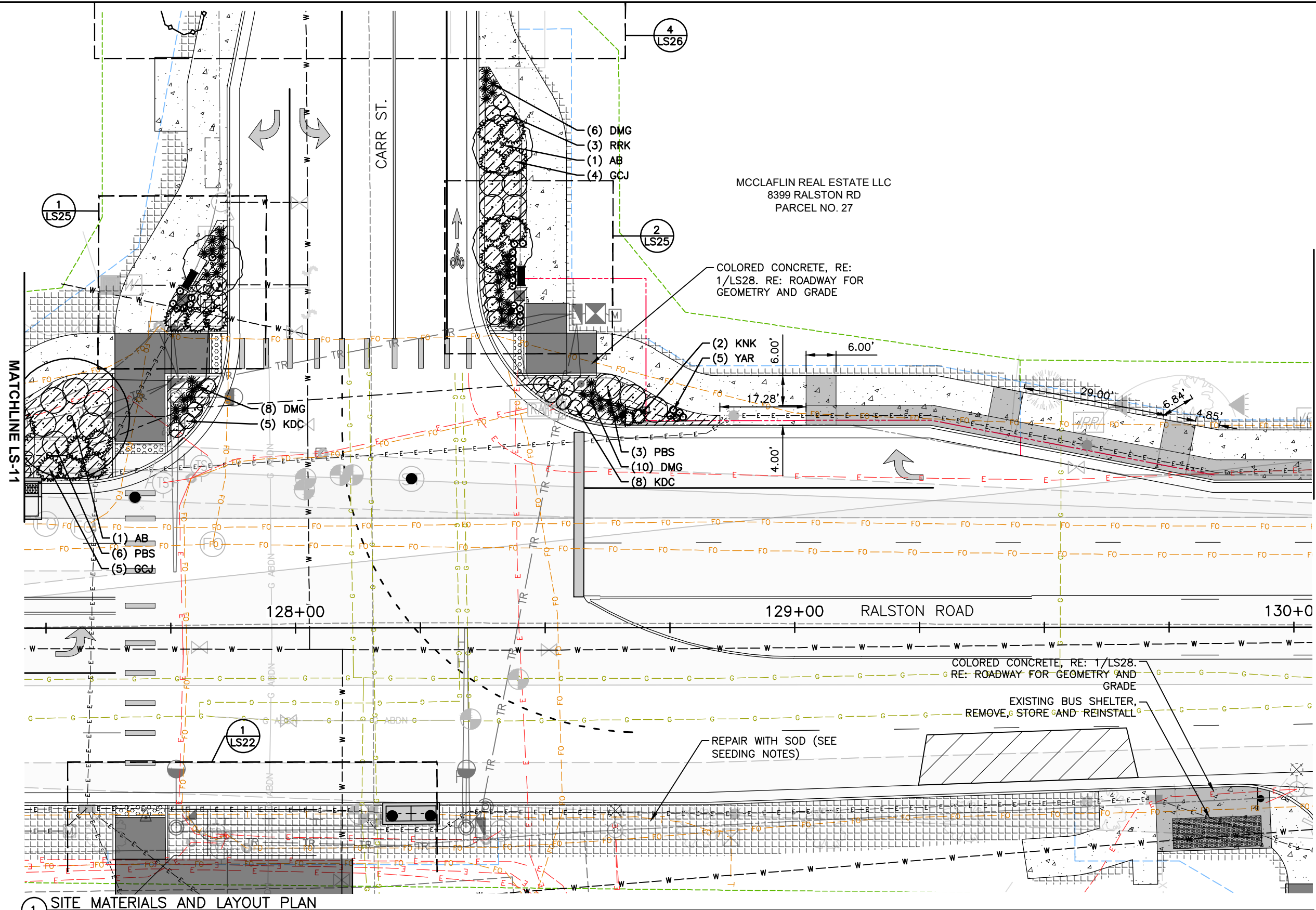
1 SITE MATERIALS AND LAYOUT PLAN
SCALE: 1"=20'-0"



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File Name: 118355_LSPL_SH01_EN.DWG			Date	Comments	Initials		No Revisions:						18-ST-40	
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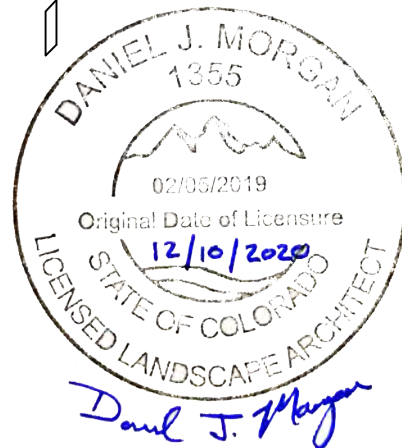
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LEGEND

- PROPOSED R.O.W.
- PERMANENT EASEMENT
- TEMPORARY EASEMENT
- STEEL EDGER
- SIGHT TRIANGLES
- PAVING, TYPE 1
- PAVING, TYPE 2
- MULCH, TYPE 1
- SEEDING
- SOD
- TREE GRATE
- BENCH
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- STREET LIGHTING, RE: LIGHTING
- PEDESTRIAN LIGHTING, RE: LIGHTING
- DECIDUOUS TREE
- ORNAMENTAL TREE
- DECIDUOUS SHRUB
- EVERGREEN SHRUB
- ORNAMENTAL GRASS
- PERENNIAL

HORIZ SCALE: 1"=20'



1 SITE MATERIALS AND LAYOUT PLAN
SCALE: 1"=20'-0"

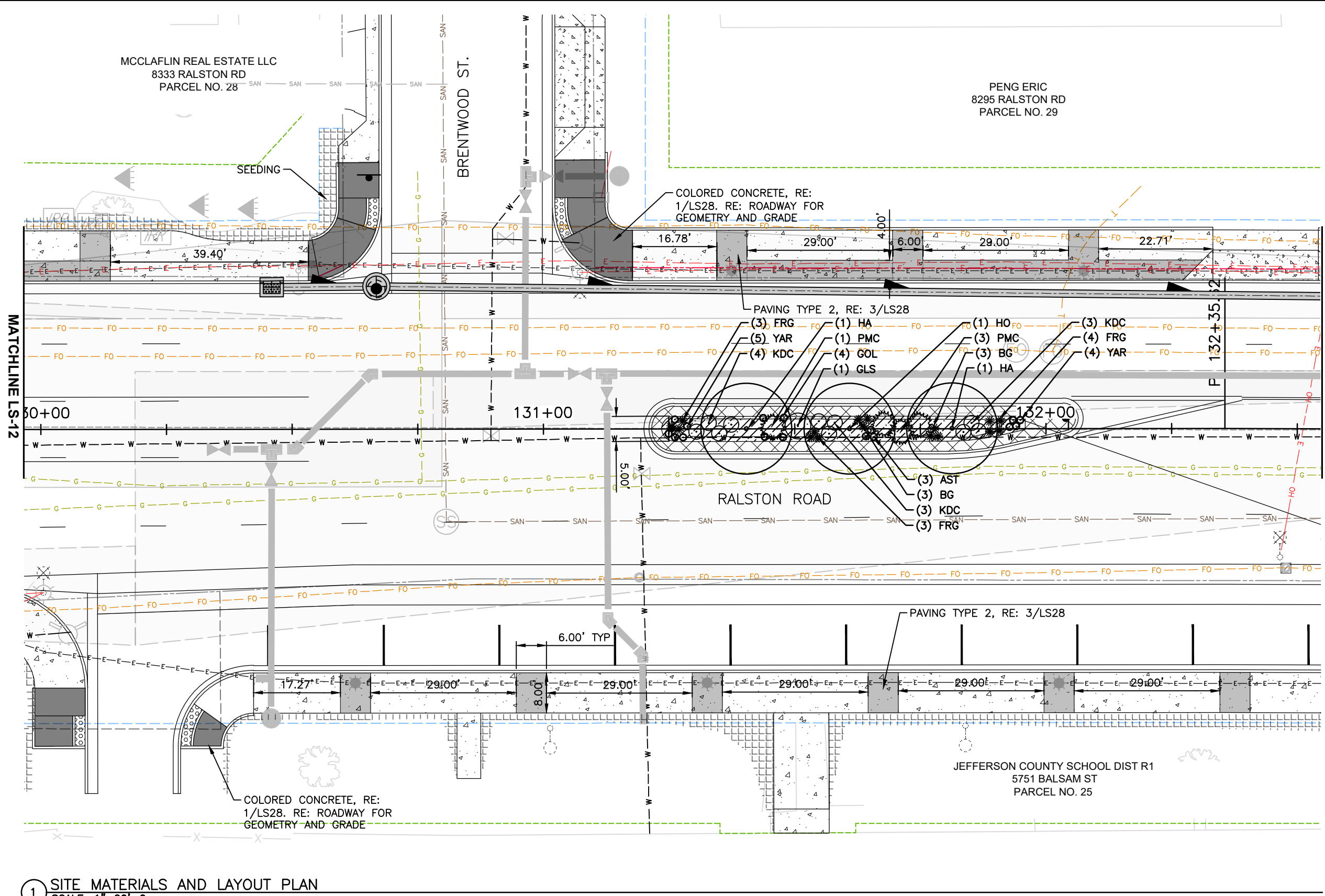
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Sheet Revisions		
Date	Comments	Initials



CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST LANDSCAPE PLAN			Project No./Code	
No Revisions:					18-ST-40	
Revised:		Designer:	DJM	Structure		
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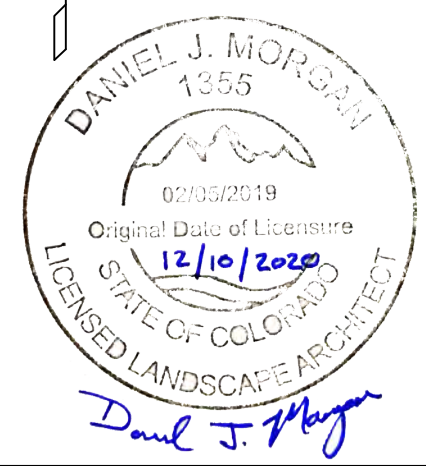


LEGEND

- PROPOSED R.O.W.
- PERMANENT EASEMENT
- TEMPORARY EASEMENT
- STEEL EDGER
- SIGHT TRIANGLES
- PAVING, TYPE 1
- PAVING, TYPE 2
- MULCH, TYPE 1
- SEEDING
- SOD
- TREE GRATE
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- STREET LIGHTING, RE: LIGHTING
- PEDESTRIAN LIGHTING, RE: LIGHTING
- DECIDUOUS TREE
- ORNAMENTAL TREE
- DECIDUOUS SHRUB
- EVERGREEN SHRUB
- ORNAMENTAL GRASS
- PERENNIAL

HORIZ SCALE: 1"=20'

0' 10' 20'

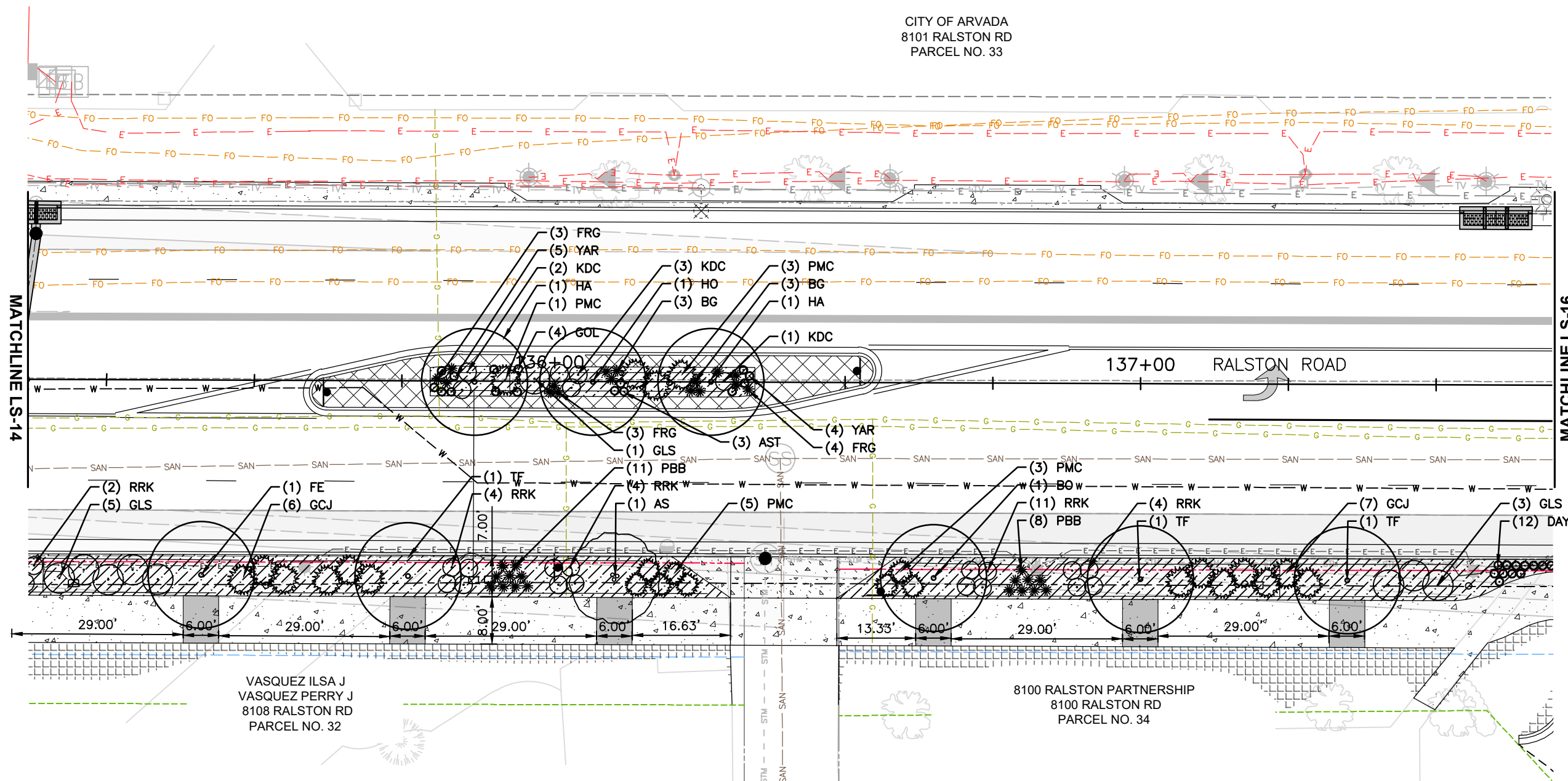


1 SITE MATERIALS AND LAYOUT PLAN
SCALE: 1"=20'-0"

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Horizontal Scale: 1" = 20'	Vertical Scale: N/A						Revised:		Designer: DJM	Structure Numbers		
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6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com									Sheet Subset: LANDSCAPE	Subset Sheets: LS-13 of 35	Sheet Number 372	

MATCHLINE LS-14

MATCHLINE LS-16



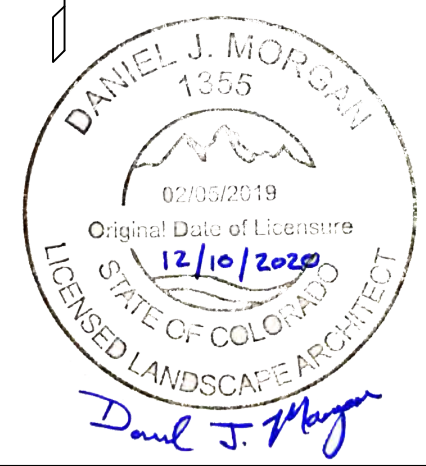
LEGEND

- PROPOSED R.O.W.
- PERMANENT EASEMENT
- TEMPORARY EASEMENT
- STEEL EDGER
- SIGHT TRIANGLES
- PAVING, TYPE 1
- PAVING, TYPE 2
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- STREET LIGHTING, RE: LIGHTING
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- DECIDUOUS TREE
- ORNAMENTAL TREE
- DECIDUOUS SHRUB
- EVERGREEN SHRUB
- ORNAMENTAL GRASS
- PERENNIAL

HORIZ SCALE: 1"=20'

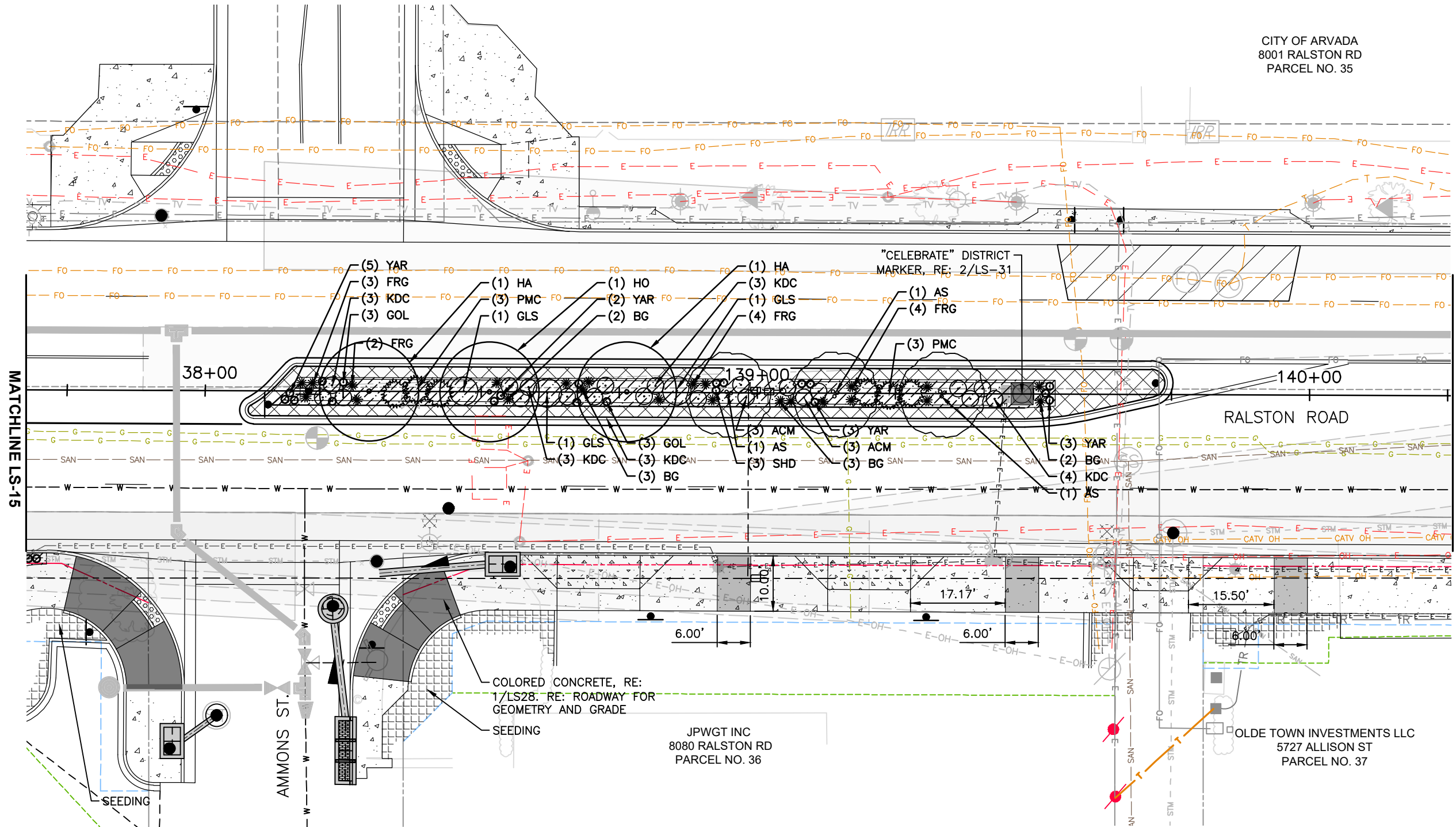
0' 10' 20'

1 SITE MATERIALS AND LAYOUT PLAN
SCALE: 1"=20'-0"



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Horizontal Scale: 1" = 20' Vertical Scale: N/A							Revised:		Designer: DJM		Structure		
FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Detailer: DJM		Numbers		
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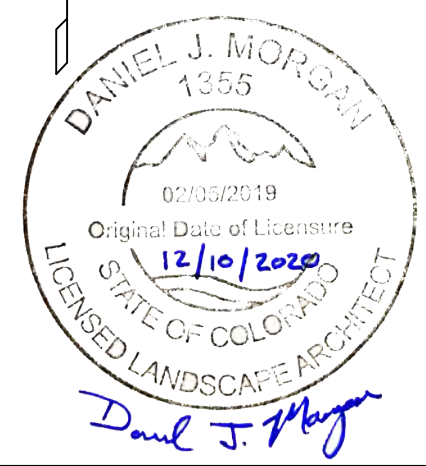


LEGEND

- PROPOSED R.O.W.
- PERMANENT EASEMENT
- TEMPORARY EASEMENT
- STEEL EDGER
- SIGHT TRIANGLES
- PAVING, TYPE 1
- PAVING, TYPE 2
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- DECIDUOUS SHRUB
- EVERGREEN SHRUB
- ORNAMENTAL GRASS
- PERENNIAL

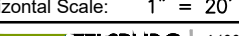
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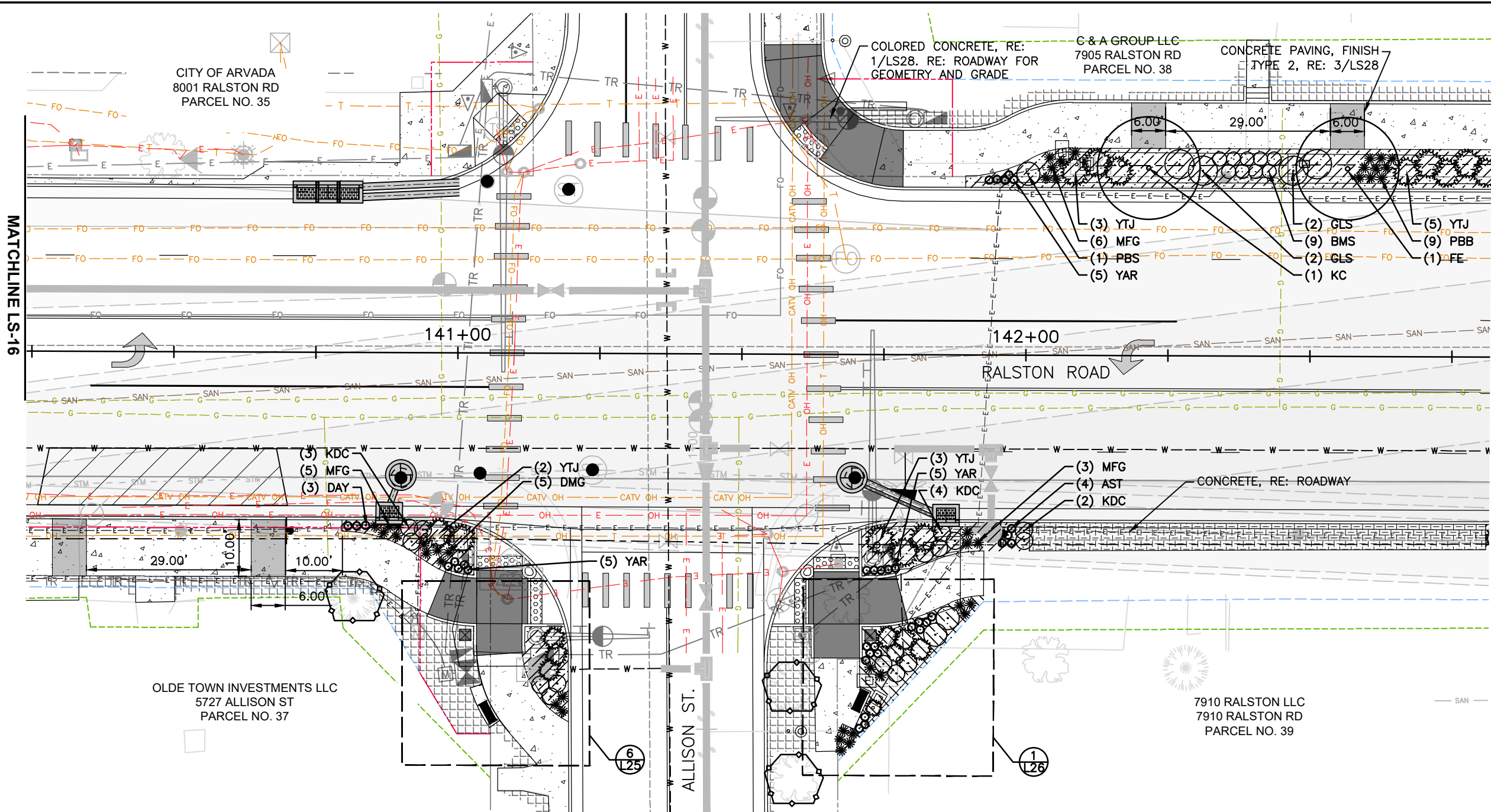
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1 SITE MATERIALS AND LAYOUT PLAN
SCALE: 1"=20'-0"

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 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com								DJM	Numbers			
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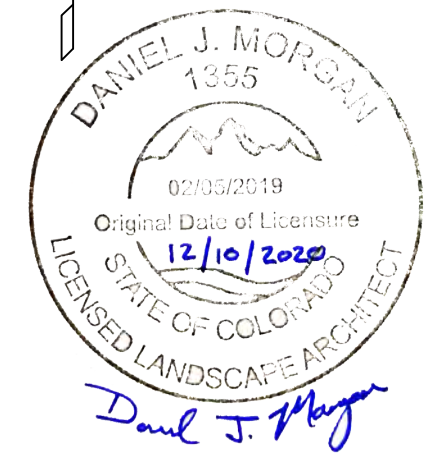
LEGEND

- PROPOSED R.O.W.
- PERMANENT EASEMENT
- TEMPORARY EASEMENT
- STEEL EDGER
- SIGHT TRIANGLES
- PAVING, TYPE 1
- PAVING, TYPE 2
- MULCH, TYPE 1
- SEEDING
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- STREET LIGHTING, RE: LIGHTING
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- ORNAMENTAL TREE
- DECIDUOUS SHRUB
- EVERGREEN SHRUB
- ORNAMENTAL GRASS
- PERENNIAL

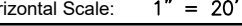
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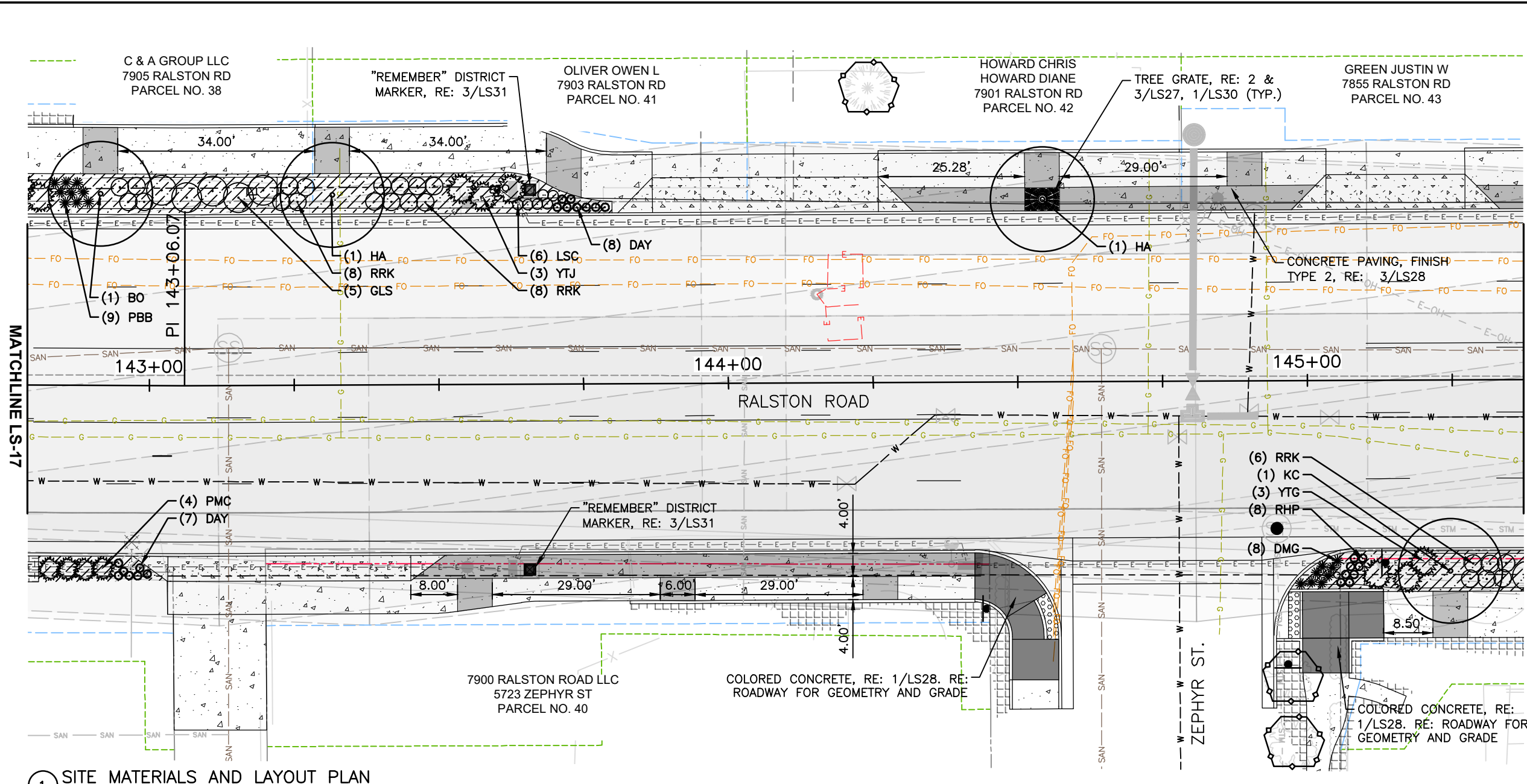
0' 10' 20'

1 SITE MATERIALS AND LAYOUT PLAN
SCALE: 1"=20'-0"



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File Name: 118355_LSPL_SH01_EN.DWG			Date	Comments	Initials		No Revisions:					18-ST-40		
Horizontal Scale: 1" = 20' Vertical Scale: N/A							Revised:		Designer: DJM Detailer: DJM		Structure Numbers			
 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Sheet Subset: LANDSCAPE		Subset Sheets: LS-17 of 35		Sheet Number 376	



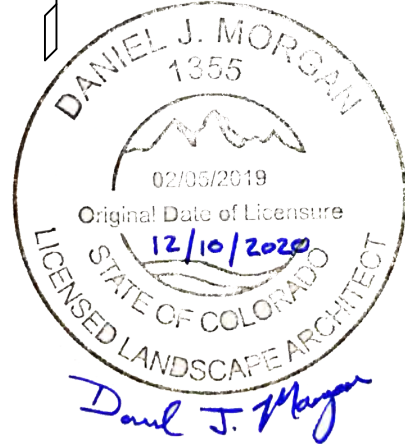
LEGEND

- PROPOSED R.O.W.
- PERMANENT EASEMENT
- TEMPORARY EASEMENT
- STEEL EDGER
- SIGHT TRIANGLES
- PAVING, TYPE 1
- PAVING, TYPE 2
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- STREET LIGHTING, RE: LIGHTING
- PEDESTRIAN LIGHTING, RE: LIGHTING
- DECIDUOUS TREE
- ORNAMENTAL TREE
- DECIDUOUS SHRUB
- EVERGREEN SHRUB
- ORNAMENTAL GRASS
- PERENNIAL

HORIZ SCALE: 1"=20'

0' 10' 20'

1 SITE MATERIALS AND LAYOUT PLAN
SCALE: 1"=20'-0"



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File Name: 118355_LSPL_SH01_EN.DWG			Date	Comments	Initials		No Revisions:					18-ST-40	
Horizontal Scale: 1" = 20' Vertical Scale: N/A							Revised:		Designer: DJM	Structure			
 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Detailer: DJM	Numbers			
							Sheet Subset: LANDSCAPE		Subset Sheets: LS-18 of 35		Sheet Number 377		

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MATCHLINE LS-18

MATCHLINE LS-20

LEGEND

- PROPOSED R.O.W.
- PERMANENT EASEMENT
- TEMPORARY EASEMENT
- STEEL EDGER
- SIGHT TRIANGLES
- PAVING, TYPE 1
- PAVING, TYPE 2
- MULCH, TYPE 1
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- DECIDUOUS TREE
- ORNAMENTAL TREE
- DECIDUOUS SHRUB
- EVERGREEN SHRUB
- ORNAMENTAL GRASS
- PERENNIAL

HORIZ SCALE: 1"=20'

0' 10' 20'

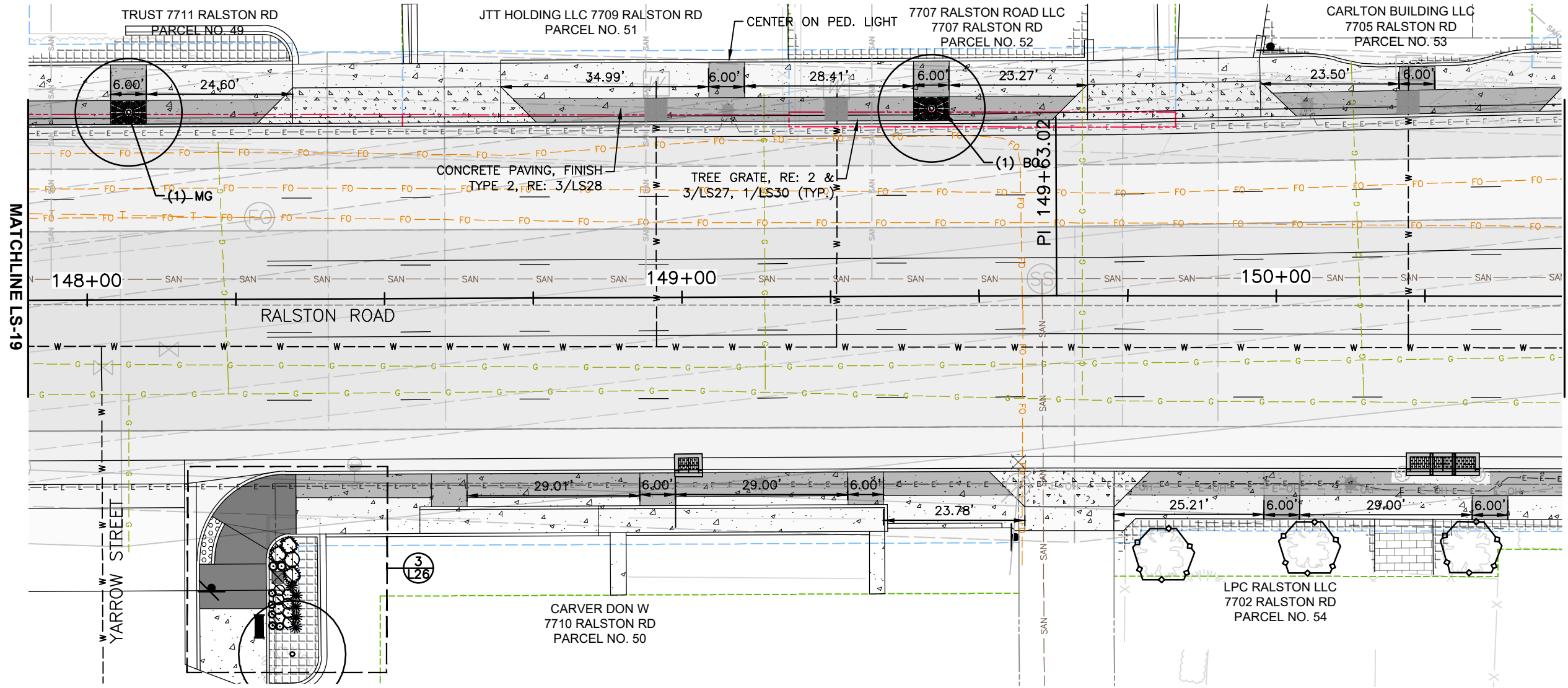
1 SITE MATERIALS AND LAYOUT PLAN
SCALE: 1"=20'-0"

DANIEL J. MORGAN
1355
02/05/2019
Original Date of Licensure
12/10/2020
STATE OF COLORADO
LICENSED LANDSCAPE ARCHITECT
Daniel J. Morgan

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File Name: 118355_LSPL_SH01_EN.DWG			Date	Comments	Initials		No Revisions:					18-ST-40		
Horizontal Scale: 1" = 20' Vertical Scale: N/A							Revised:		Designer: DJM Detailer: DJM		Structure Numbers			
FELSBERG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Sheet Subset: LANDSCAPE		Subset Sheets: LS- 19 of 35		Sheet Number 378	

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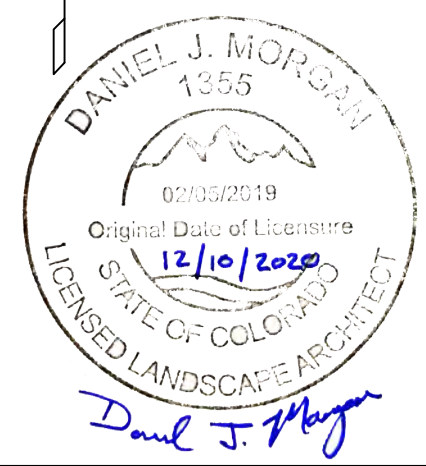
1 SITE MATERIALS AND LAYOUT PLAN
SCALE: 1"=20'-0"

LEGEND

- PROPOSED R.O.W.
- PERMANENT EASEMENT
- TEMPORARY EASEMENT
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- ORNAMENTAL TREE
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- EVERGREEN SHRUB
- ORNAMENTAL GRASS
- PERENNIAL

HORIZ SCALE: 1"=20'

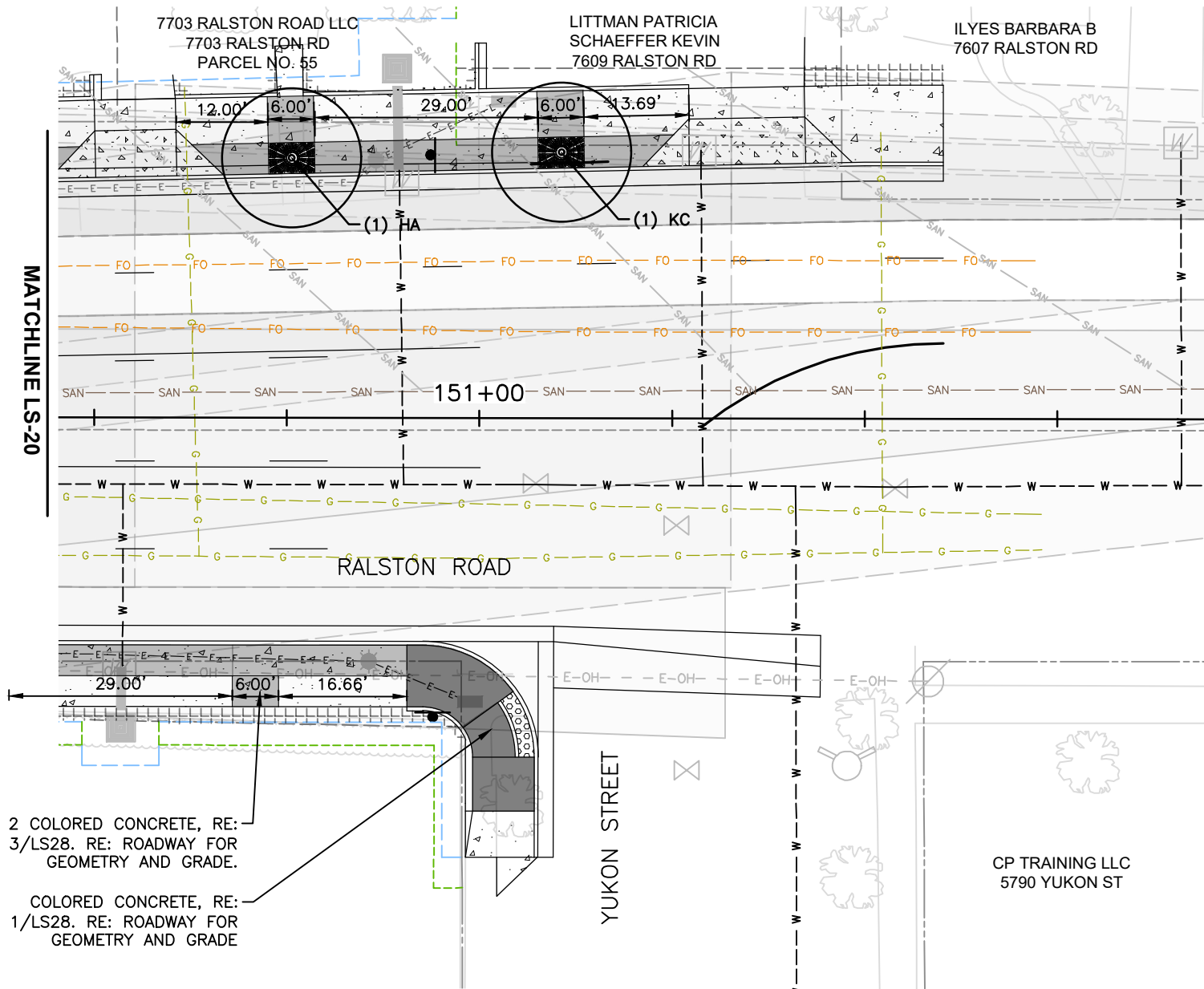
0' 10' 20'



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Print Date: 12/23/2020 1:36:35 PM			Sheet Revisions			CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed		RALSTON RD - YUKON ST TO GARRISON ST LANDSCAPE PLAN			Project No./Code		
File Name: 118355_LSPL_SH01_EN.DWG			R-X	Date	Comments		Initials	No Revisions:		Designer: DJM Detailer: DJM			18-ST-40	
Horizontal Scale: 1" = 20' Vertical Scale: N/A								Revised:					Structure Numbers	
FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com								Void:		Sheet Subset: LANDSCAPE		Subset Sheets: LS—20 of 35		Sheet Number 379

CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

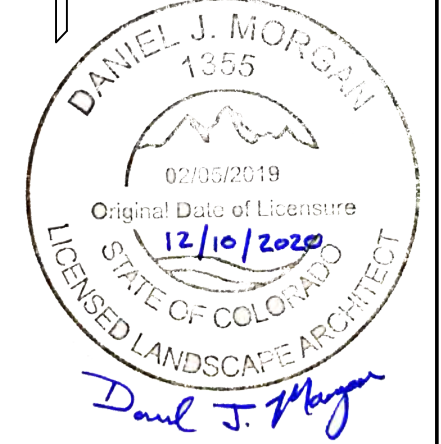


LEGEND

- PROPOSED R.O.W.
- PERMANENT EASEMENT
- TEMPORARY EASEMENT
- STEEL EDGER
- SIGHT TRIANGLES
- PAVING, TYPE 1
- PAVING, TYPE 2
- MULCH, TYPE 1
- SEEDING
- SOD
- TREE GRATE
- BENCH
- NEIGHBORHOOD MONUMENT
- DISTRICT MARKER
- STREET LIGHTING, RE: LIGHTING
- PEDESTRIAN LIGHTING, RE: LIGHTING
- DECIDUOUS TREE
- ORNAMENTAL TREE
- DECIDUOUS SHRUB
- EVERGREEN SHRUB
- ORNAMENTAL GRASS
- PERENNIAL

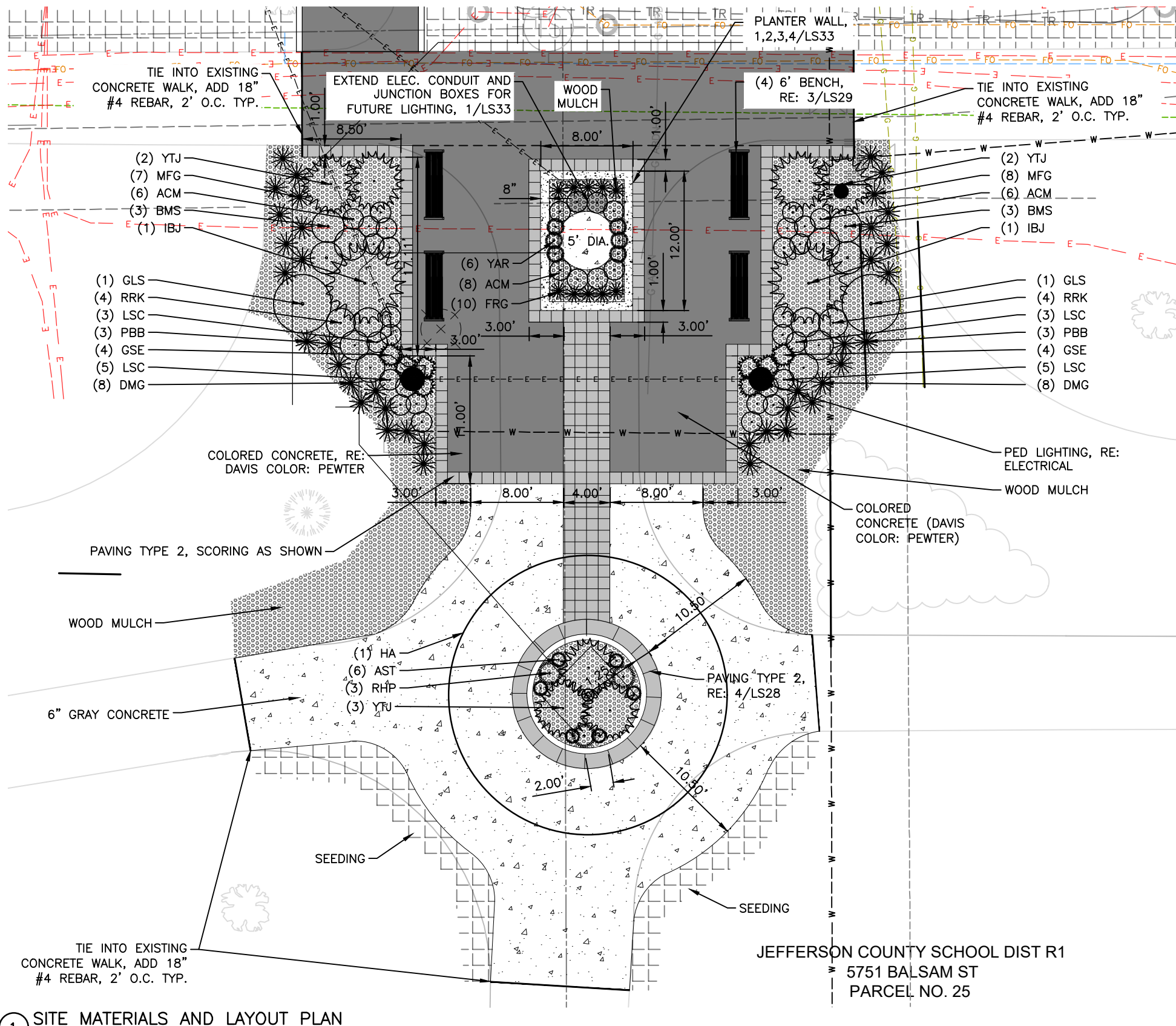
HORIZ SCALE: 1"=20'

0' 10' 20'



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File Name: 118355_LSPL_SH01_EN.DWG			Date	Comments	Initials		No Revisions:				18-ST-40	
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FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:	Detailer: DJM				
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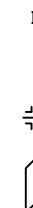
LEGEND

- PERMANENT EASEMENT
- TEMPORARY EASEMENT
- STEEL EDGER
- SIGHT TRIANGLES
- PAVING, TYPE 1
- PAVING, TYPE 2
- MULCH, TYPE 2
- SEEDING
- BENCH

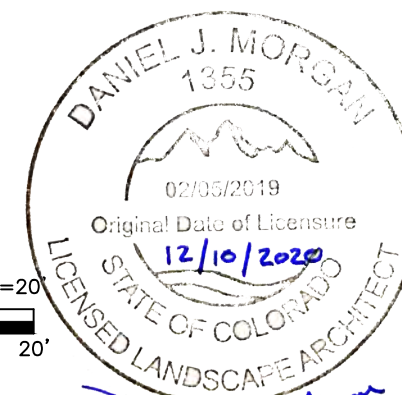
NOTES

- CONTRACTOR TO SUBMIT SCORING PLAN PRIOR TO CONSTRUCTION, SIMILAR TO RE: 4/LS28

1 SITE MATERIALS AND LAYOUT PLAN
SCALE: 1"=10'-0"



HORIZ SCALE: 1"=20'
0' 10' 20'



Daniel J. Morgan

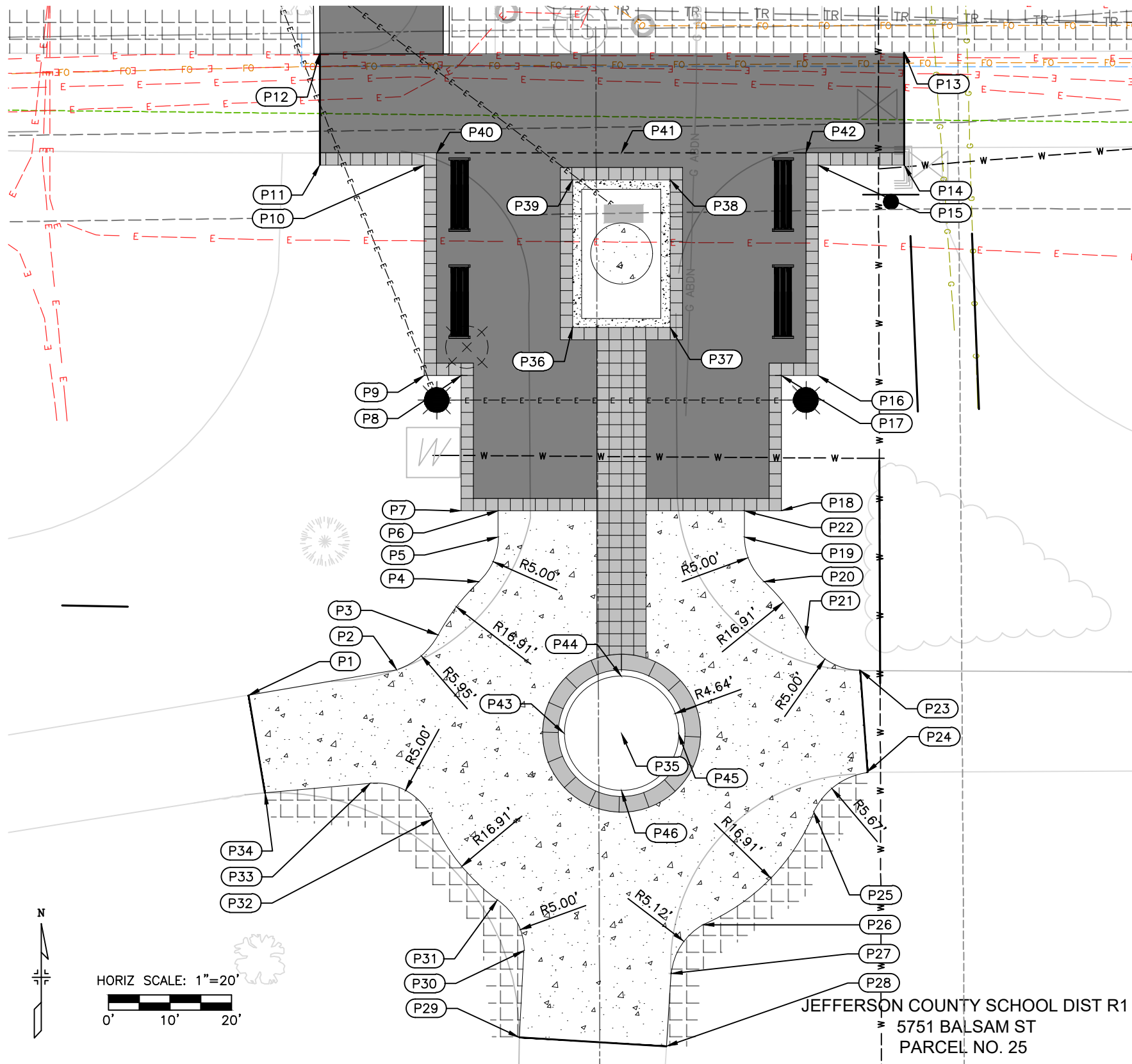
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Date	Comments	Initials	



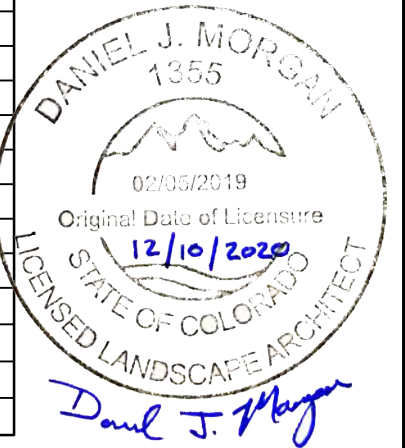
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PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST LANDSCAPE PLAN			Project No./Code
No Revisions:					18-ST-40
Revised:		Designer: DJM	Structure		
		Detailer: DJM	Numbers		
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1 SITE MATERIALS AND LAYOUT PLAN
SCALE: 1"=10'-0"

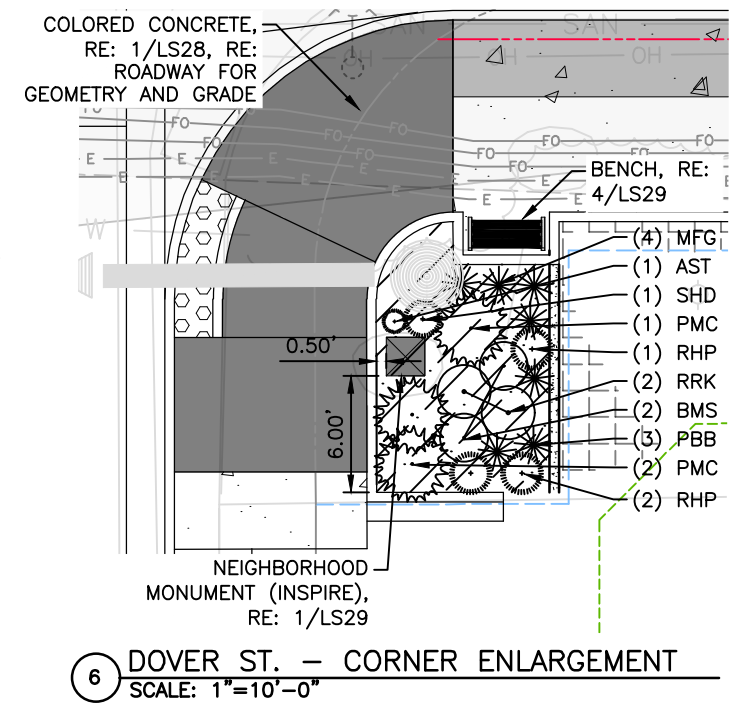
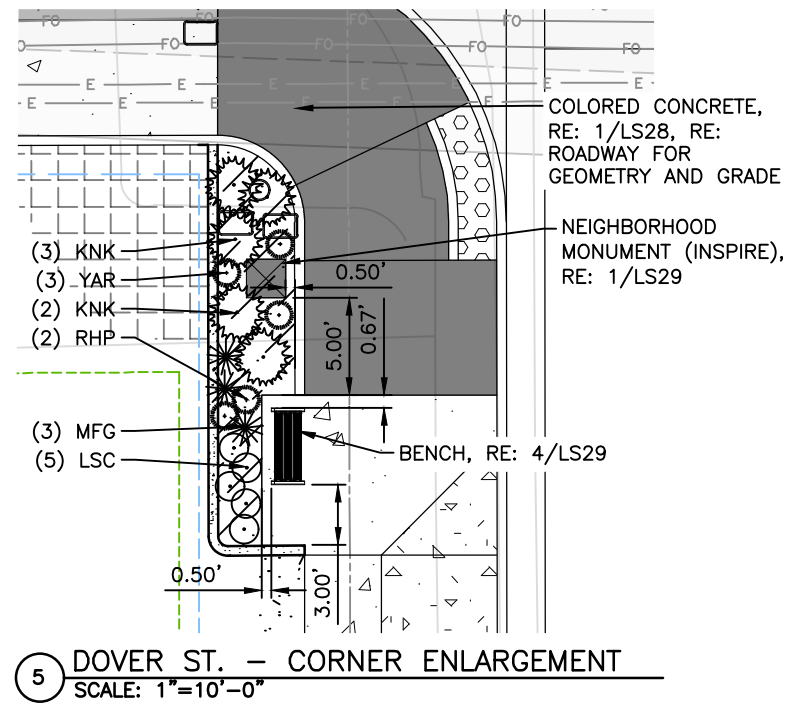
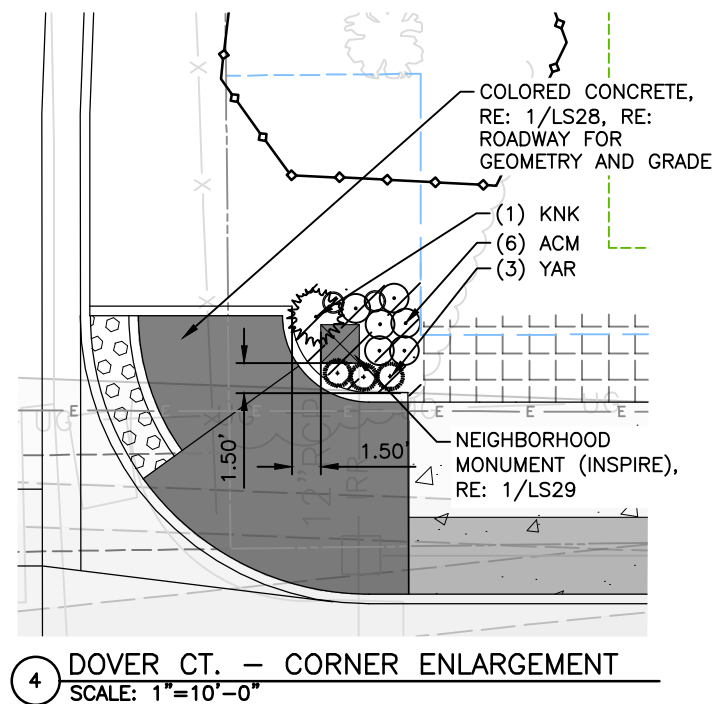
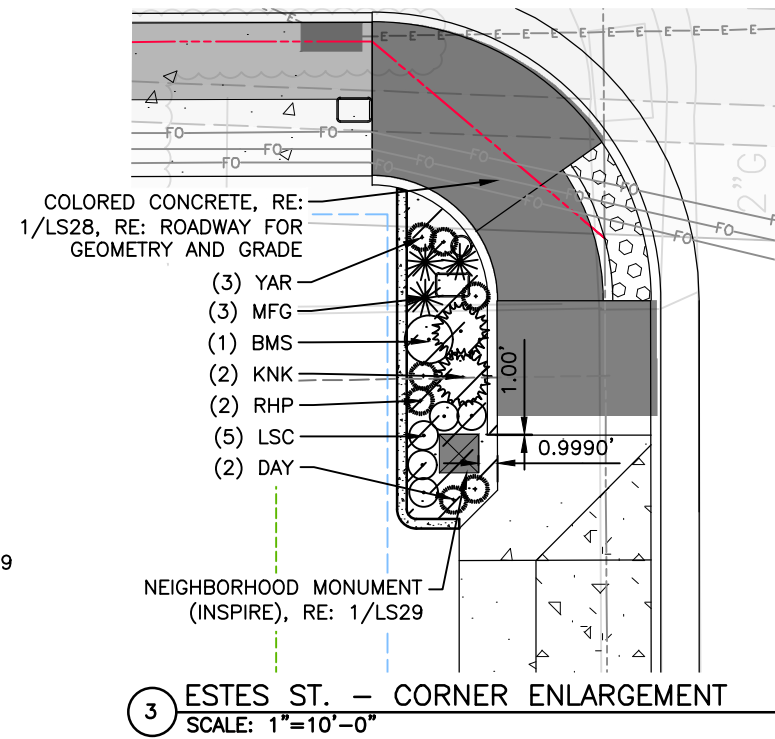
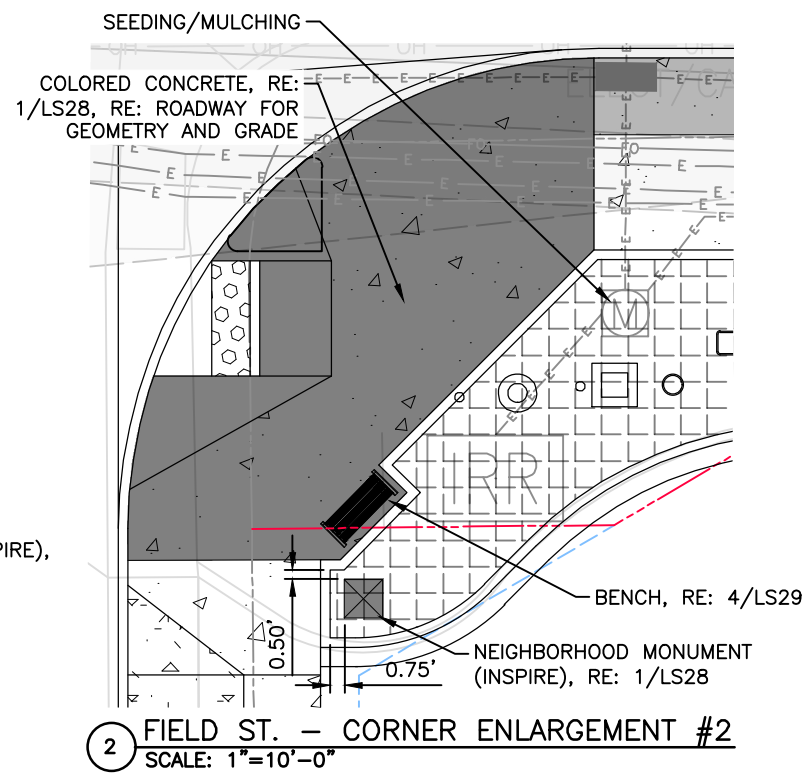
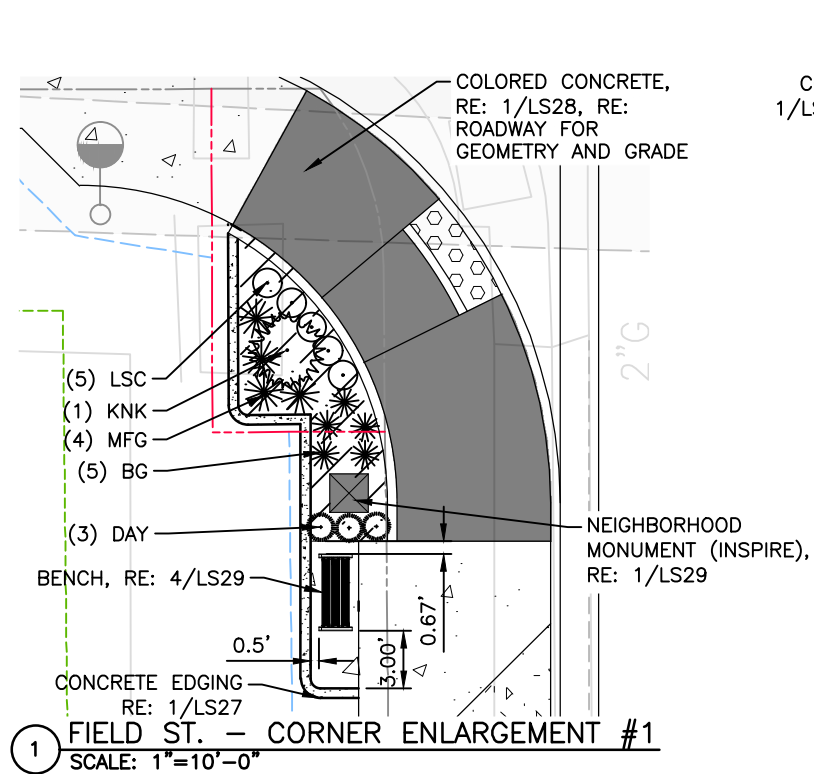
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P1	717593.54	115662.40	5351.69	EDGE OF WALK; MATCH EXISTING
P2	717595.61	115674.45	5351.86	EDGE OF WALK; P.C.
P3	717598.43	115677.79	5351.83	EDGE OF WALK; P.R.C.
P4	717602.75	115681.11	5351.79	EDGE OF WALK; P.R.C.
P5	717606.39	115682.68	5351.59	EDGE OF WALK; P.T.
P6	717608.52	115682.68	5351.52	EDGE OF WALK
P7	717608.52	115679.68	5351.46	CORNER OF WALK
P8	717619.52	115679.68	5351.31	CORNER OF WALK
P9	717619.52	115676.68	5351.43	CORNER OF WALK
P10	717636.62	115676.67	5351.27	CORNER OF WALK
P11	717636.62	115668.19	5351.32	EDGE OF WALK; MATCH EXISTING
P12	717645.76	115668.19	5351.18	CORNER OF WALK
P13	717645.81	115715.67	5350.86	EDGE OF WALK; MATCH EXISTING
P14	717636.62	115715.68	5351.00	EDGE OF WALK; MATCH EXISTING
P15	717636.62	115708.68	5351.05	CORNER OF WALK
P16	717619.52	115708.68	5351.54	CORNER OF WALK
P17	717619.52	115705.68	5351.55	CORNER OF WALK
P18	717608.52	115705.68	5351.79	CORNER OF WALK
P19	717606.39	115702.68	5351.82	EDGE OF WALK; P.C.
P20	717602.75	115704.26	5352.00	EDGE OF WALK; P.R.C.
P21	717598.24	115707.68	5352.03	EDGE OF WALK; P.R.C.
P22	717608.52	115702.68	5351.77	CORNER OF WALK
P23	717595.55	115712.09	5352.12	EDGE OF WALK; MATCH EXISTING
P24	717587.24	115712.63	5352.26	EDGE OF WALK; MATCH EXISTING
P25	717584.03	115708.33	5352.42	EDGE OF WALK; P.R.C.
P26	717574.87	115699.32	5352.51	EDGE OF WALK; P.R.C.
P27	717570.89	115696.74	5352.52	EDGE OF WALK; P.T.
P28	717564.98	115696.37	5352.54	EDGE OF WALK; MATCH EXISTING
P29	717565.69	115684.40	5352.46	EDGE OF WALK; MATCH EXISTING
P30	717572.75	115684.77	5352.32	EDGE OF WALK; P.C.
P31	717576.84	115682.61	5352.22	EDGE OF WALK; P.R.C.
P32	717583.44	115677.29	5352.04	EDGE OF WALK; P.R.C.
P33	717586.36	115672.28	5351.93	EDGE OF WALK; P.T.
P34	717585.58	115663.73	5351.75	EDGE OF WALK; MATCH EXISTING
P35	717590.43	115692.68	5352.24	CENTER OF CIRCLE
P36	717623.43	115688.72	5351.27	CORNER OF PLANTER
P37	717623.43	115696.65	5351.34	CORNER OF PLANTER
P38	717635.43	115696.65	5351.14	CORNER OF PLANTER
P39	717635.43	115688.72	5351.19	CORNER OF PLANTER
P40	717637.62	115677.69	5351.25	BREAK POINT
P41	717637.62	115692.69	5351.14	BREAK POINT
P42	717637.62	115707.68	5351.04	BREAK POINT
P43	717590.43	115688.04	5352.16	EDGE OF WALK; INNER
P44	717595.07	115692.68	5352.09	EDGE OF WALK; INNER
P45	717590.43	115697.33	5352.41	EDGE OF WALK; INNER
P46	717585.78	115692.68	5352.34	EDGE OF WALK; INNER



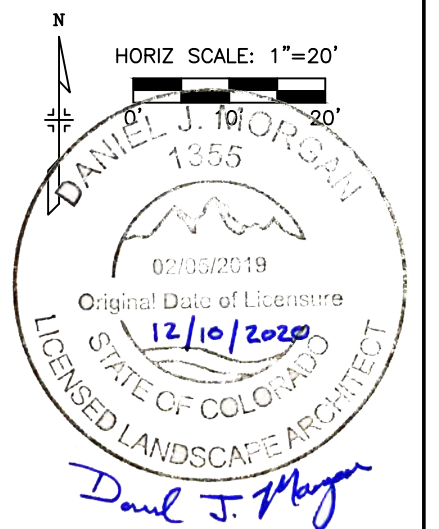
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File Name: 118355_LSPL_SH01_EN.DWG												18-ST-40
Horizontal Scale: 1" = 20' Vertical Scale: N/A												Sheet Number 382

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Greenwood Village, CO 80111
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- LEGEND**
- WALL
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ULLEVIG**

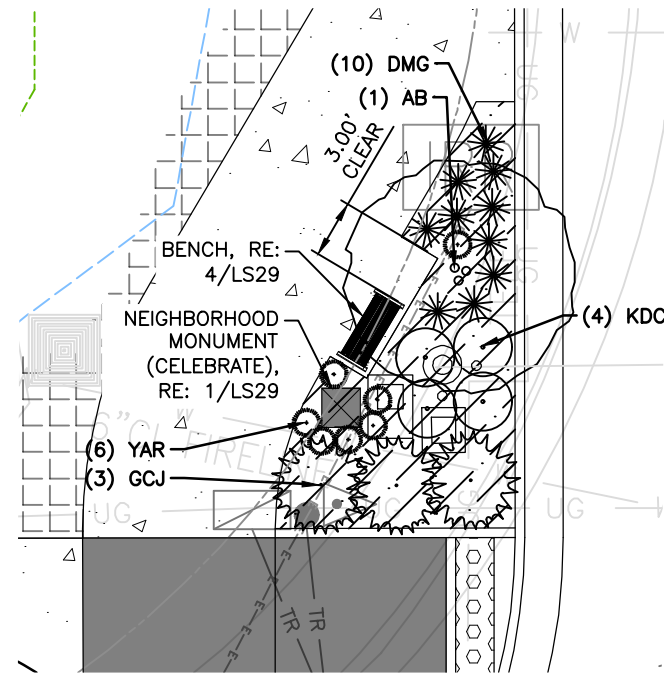
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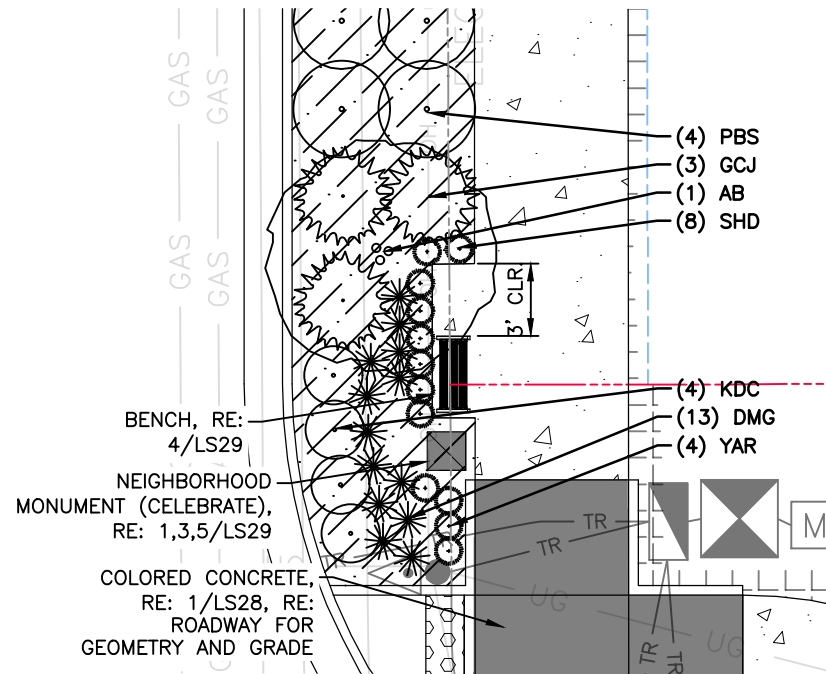
**CITY OF ARVADA
PUBLIC WORKS DEPARTMENT**

8101 RALSTON ROAD
ARVADA, CO, 80002

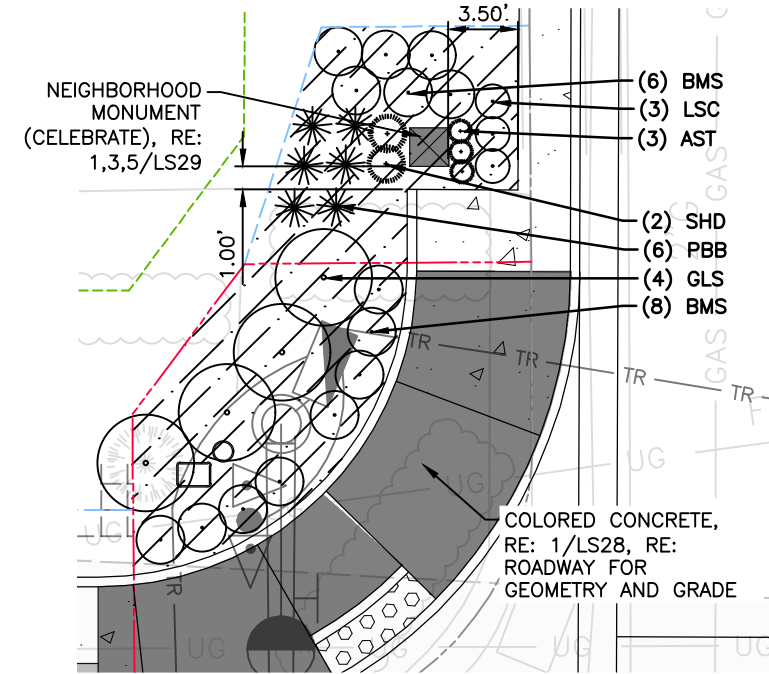
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Revised:	Detailer: DJM	Numbers		
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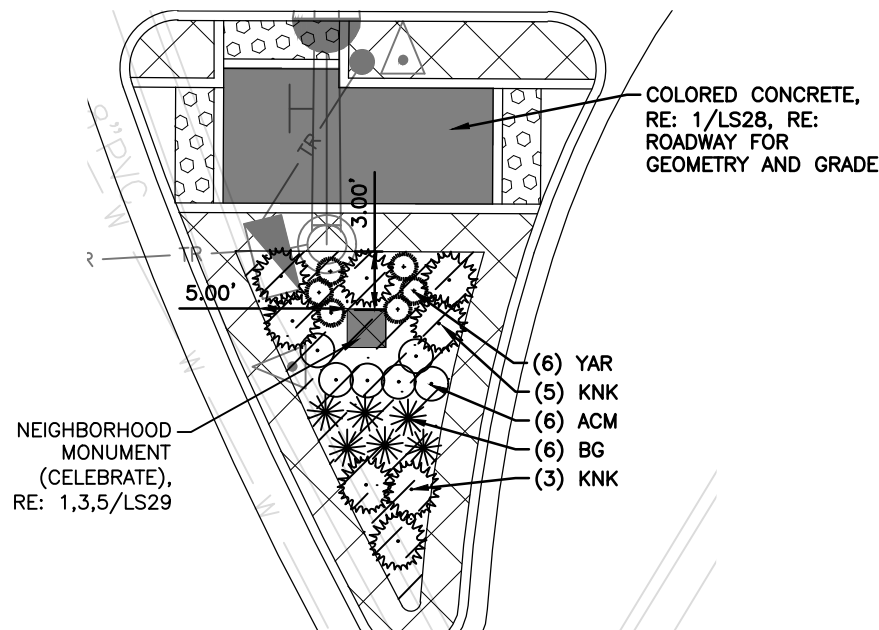
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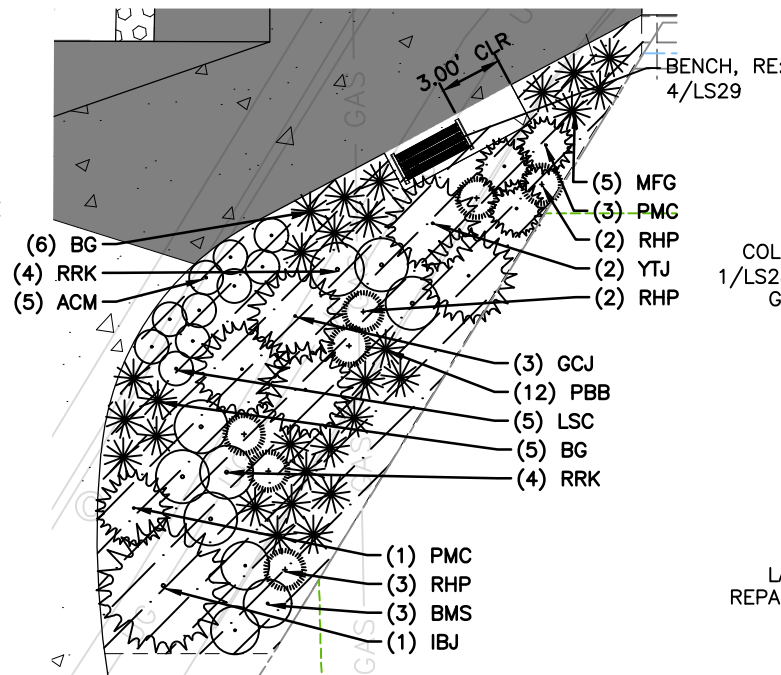
2 CARR ST. - CORNER ENLARGEMENT
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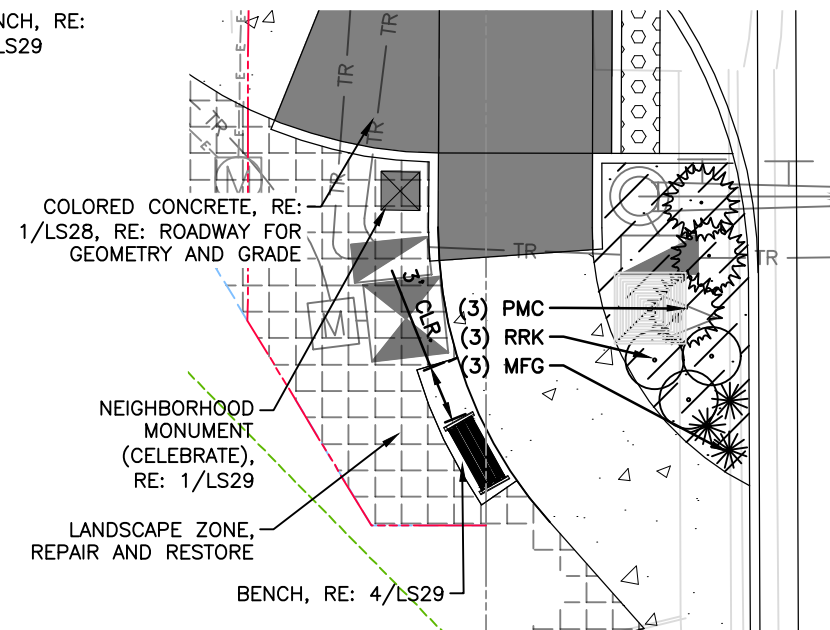
3 BALSAM PL. - CORNER ENLARGEMENT
SCALE: 1"=10'-0"



4 BALSAM ST. - CORNER ENLARGEMENT
SCALE: 1"=10'-0"

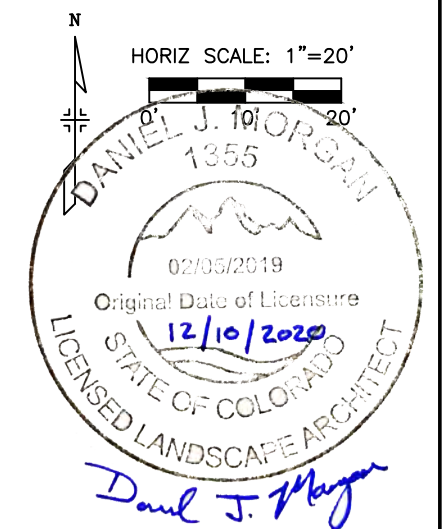


5 BALSAM ST. - CORNER ENLARGEMENT
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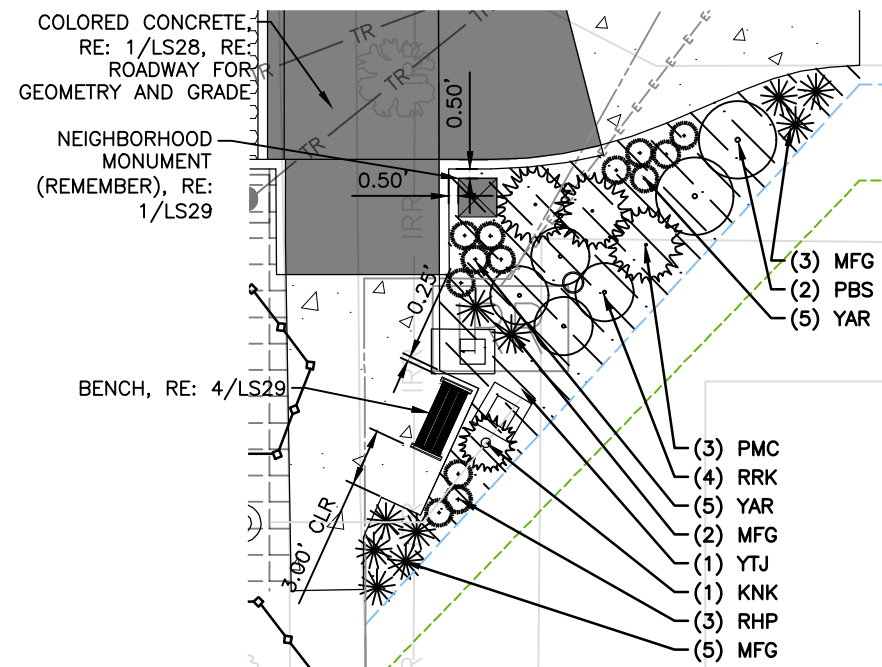
6 ALLISON ST. - CORNER ENLARGEMENT
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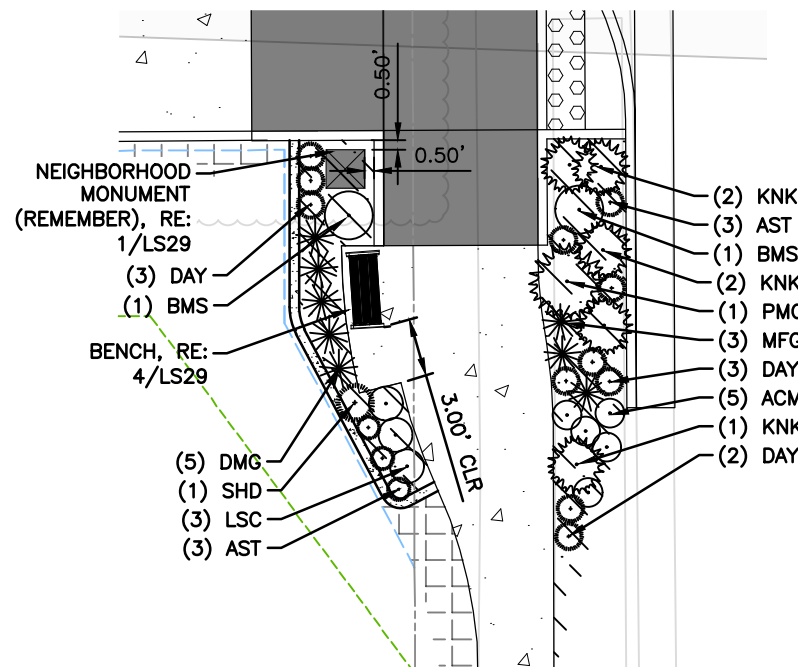


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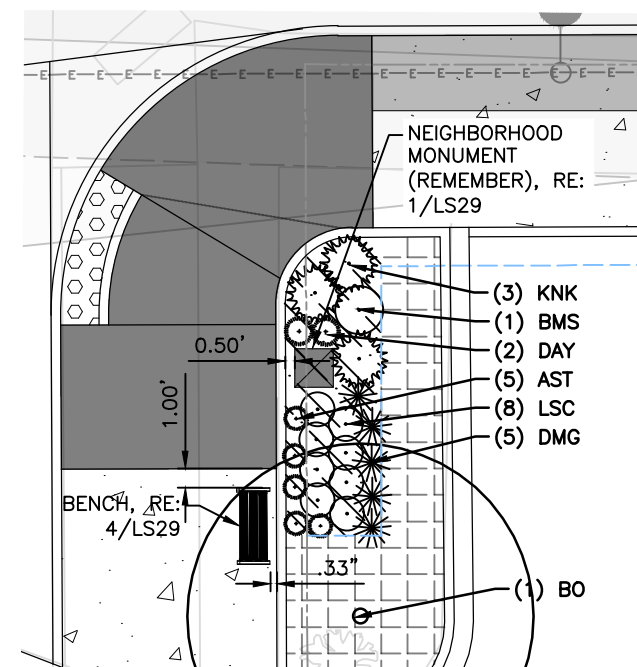
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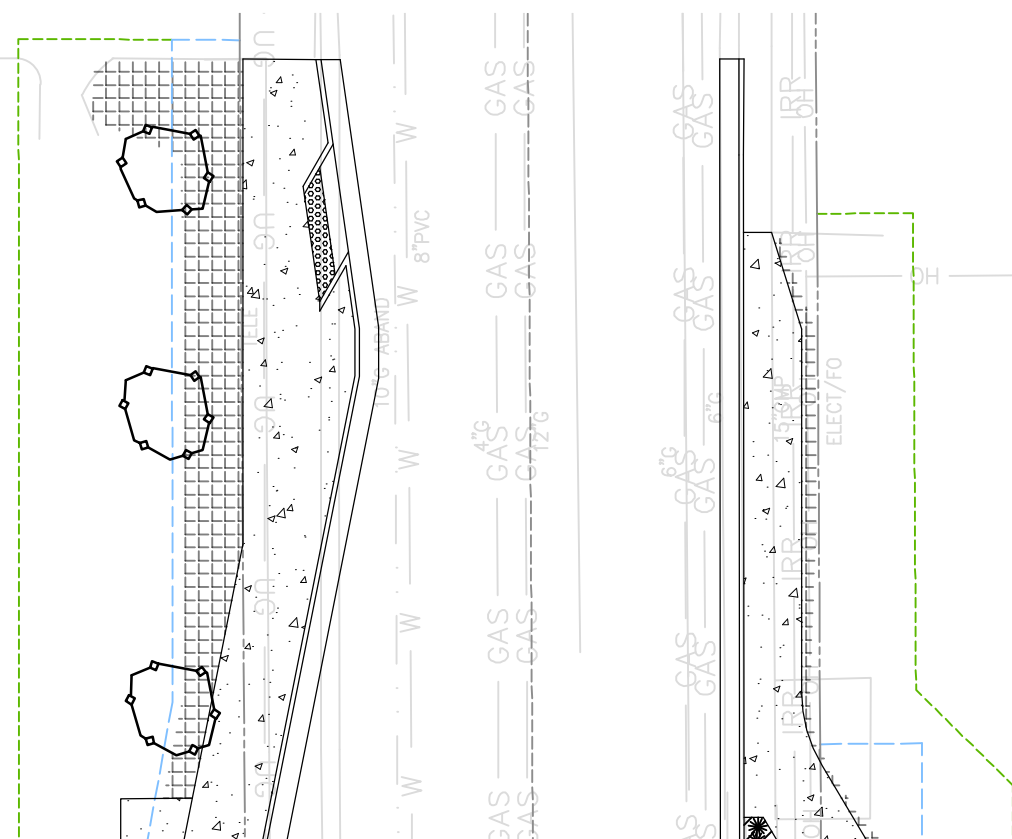
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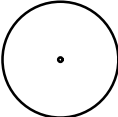


2 YARROW ST. - CORNER ENLARGEMENT
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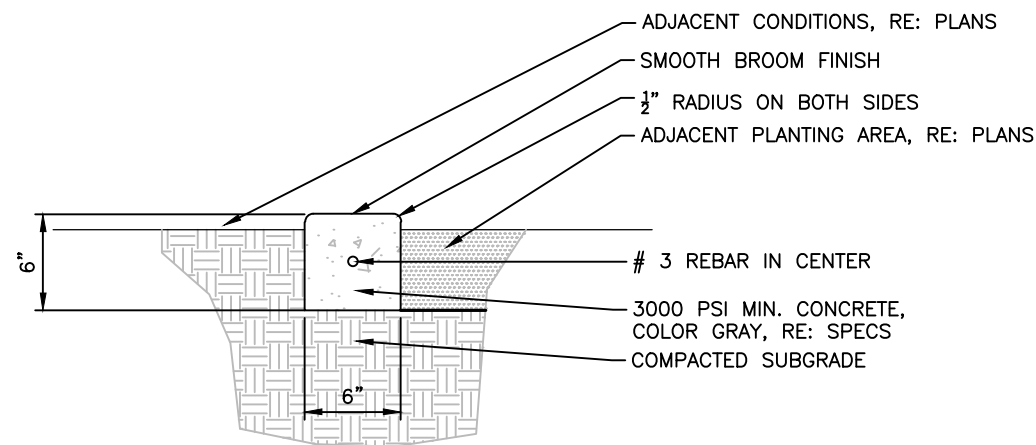
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- ## LEGEND
- | | |
|---|--------------------------------------|
|  | WALL |
|  | PROPOSED R.O.W. |
|  | PERMANENT EASEMENT |
|  | TEMPORARY EASEMENT |
|  | STEEL EDGER |
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|  | TREE GRATE |
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|  | NEIGHBORHOOD MONUMENT |
|  | DISTRICT MARKER |
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LIGHTING |
|  | PEDESTRIAN LIGHTING, RE:
LIGHTING |
|  | DECIDUOUS TREE |
|  | ORNAMENTAL TREE |
|  | DECIDUOUS SHRUB |
|  | EVERGREEN SHRUB |
|  | ORNAMENTAL GRASS |
|  | PERENNIAL |



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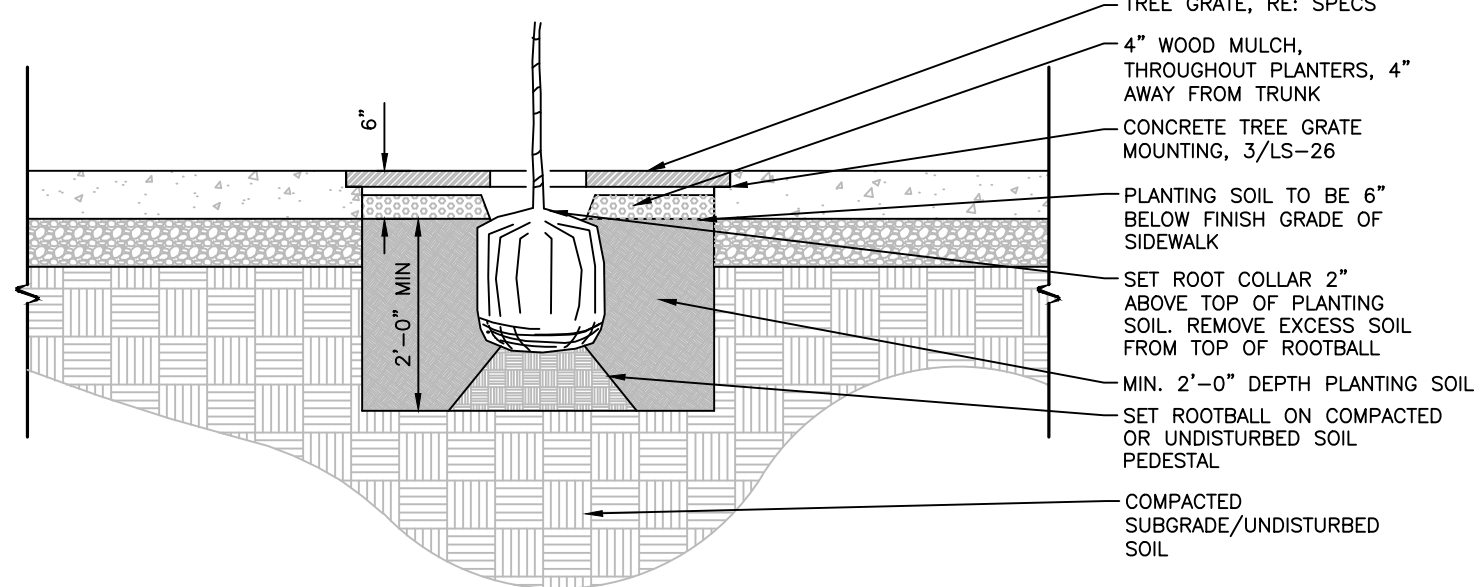


NOTES

1. PROVIDE CONTROL JOINTS 5' O.C.
2. PROVIDE SMOOTH BROOM FINISH TO ALL EXPOSED SURFACES

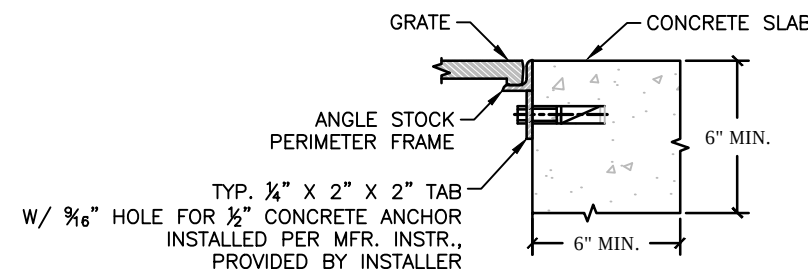
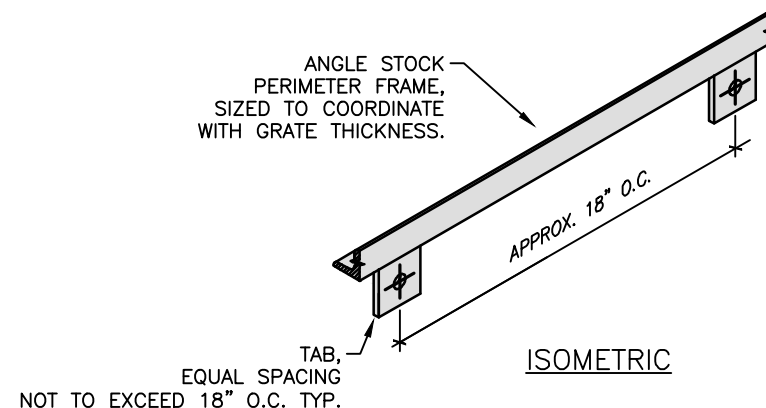
1 CONCRETE EDGING

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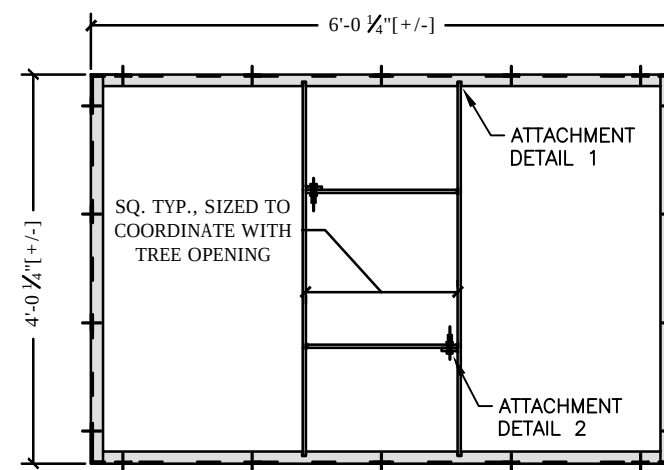


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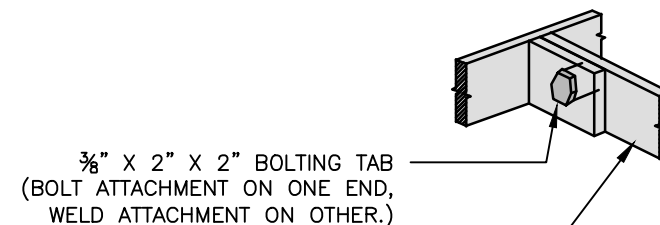
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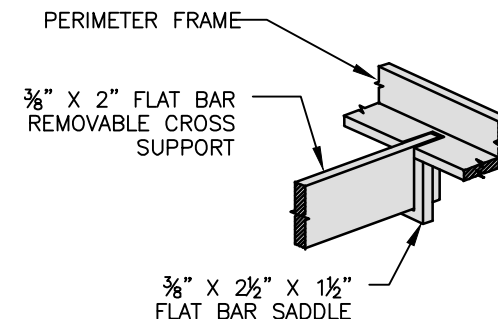
3 TREE GRATE FRAMING AND ATTACHMENT DETAIL



PLAN

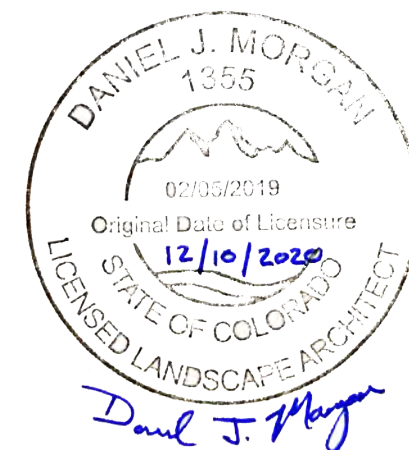


DETAIL 1



DETAIL 2

NTS



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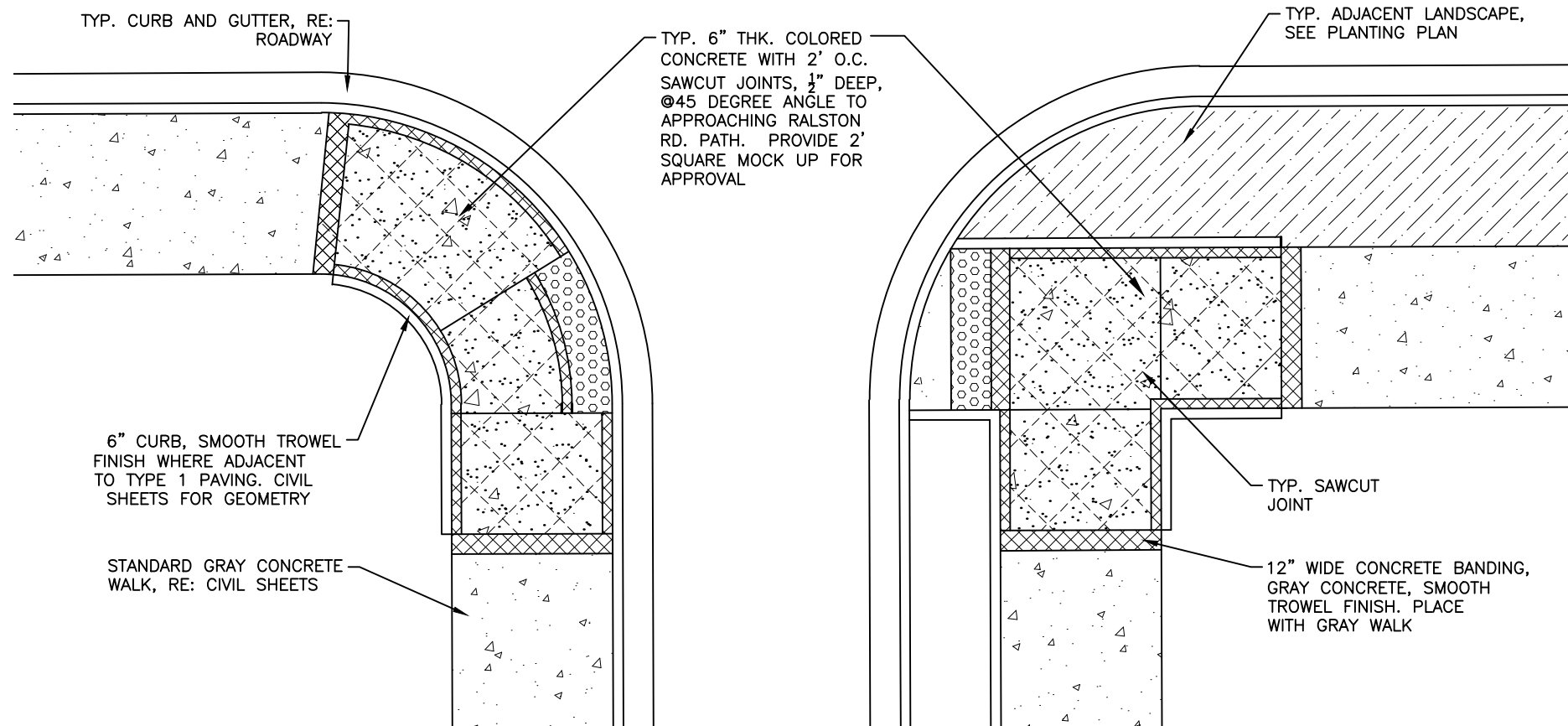
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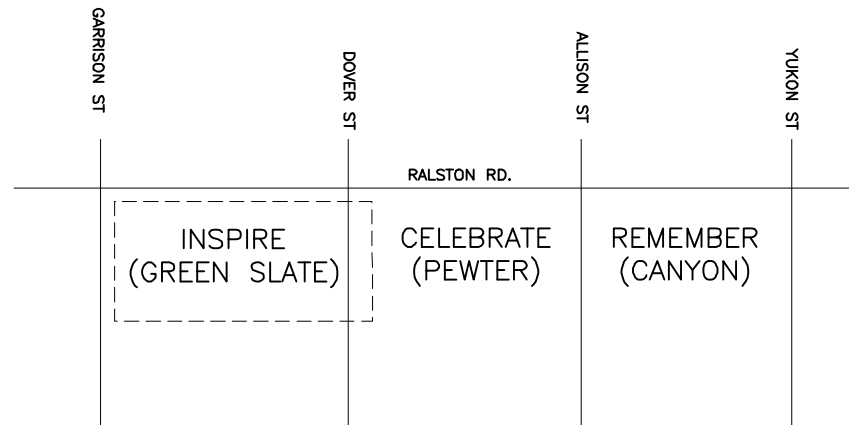
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8101 RALSTON ROAD
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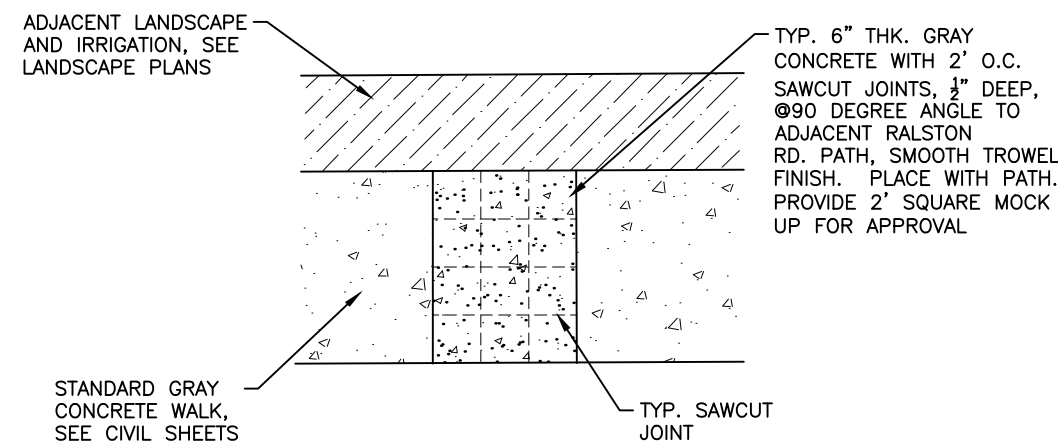


1 PAVING TYPE 1

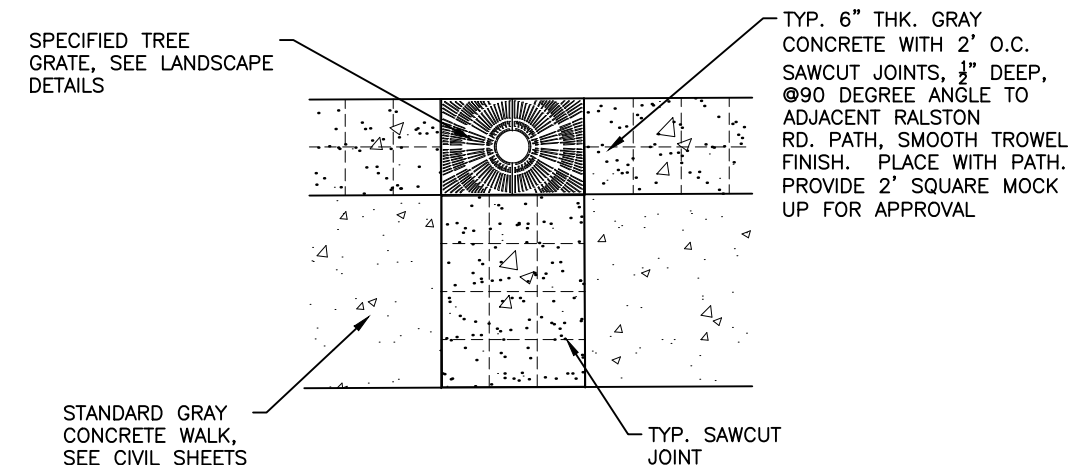
2 TYPE 1 PAVING COLOR LOCATIONS



- NOTES:
1. COLORS ARE DAVIS CONCRETE COLORS.
 2. SUBMIT SAMPLE COLOR MOCK UP FOR EACH TYPE FOR APPROVAL



3 PAVING TYPE 2 (WITH ADJACENT LANDSCAPE BED)

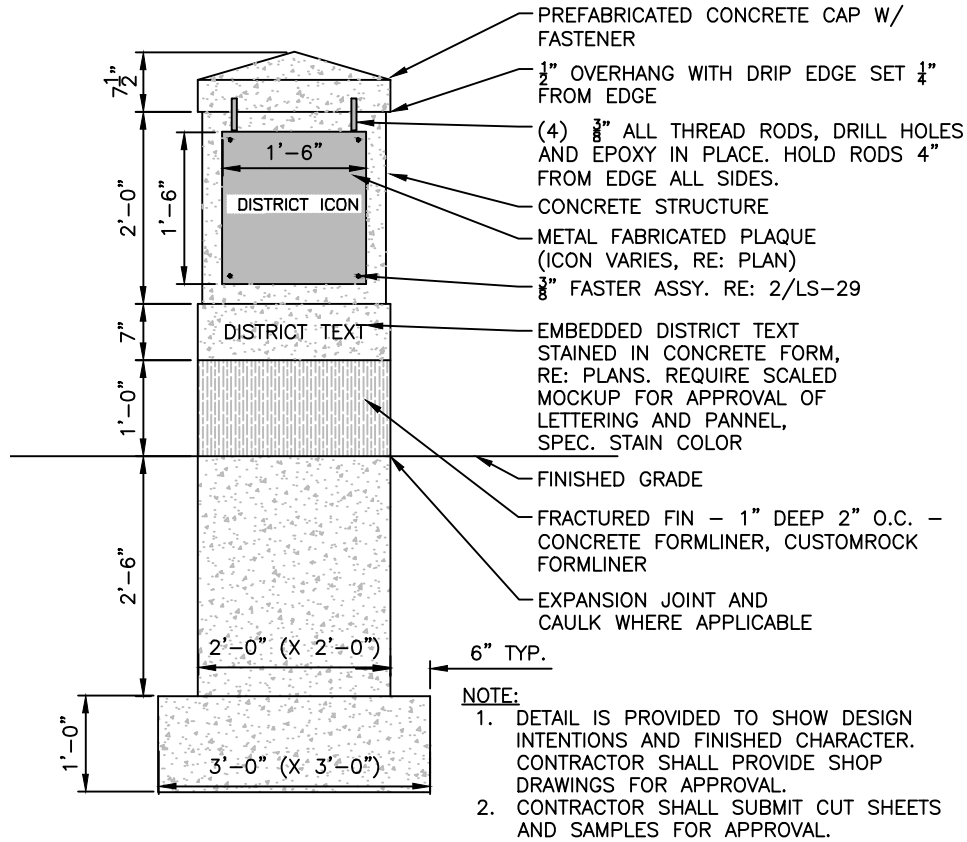


4 PAVING TYPE 2 (DETACHED WITH TREE GRATE)

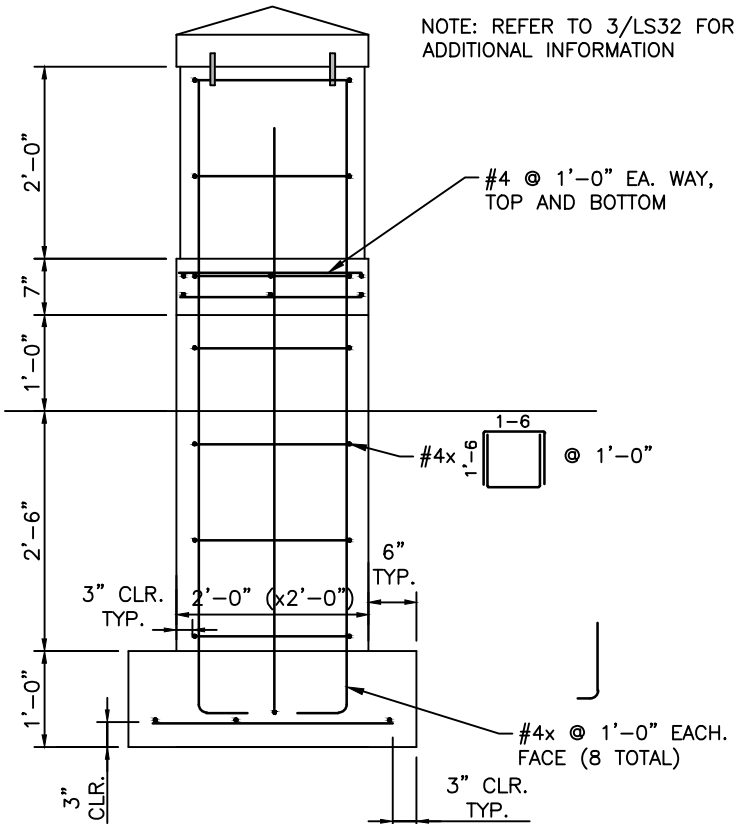


Sheet Revisions			
Date	Comments	Initials	

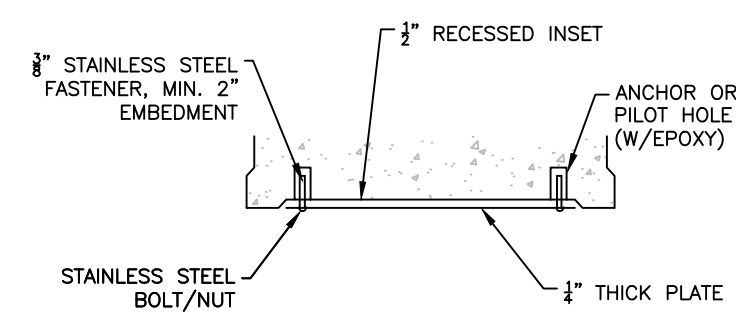
As Constructed	RALSTON RD - YUKON ST TO GARRISON ST LANDSCAPE DETAILS			Project No./Code
No Revisions:				18-ST-40
Revised:	Designer: DJM	Structure Numbers		
Void:	Detailer: DJM	Subset Sheets: LS-28 of 35		Sheet Number 387



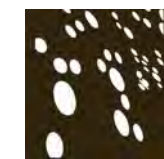
1 NEIGHBORHOOD MONUMENT



NOTE: REFER TO 3/LS32 FOR ADDITIONAL INFORMATION



2 METAL FABRICATED PLAQUE ATTACHMENT



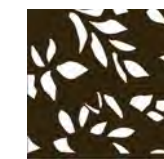
"INSPIRE" DISTRICT

MANUFACTURER: PARASOLEIL OR EQUAL
PATTERN: CONSTELLA



"CELEBRATE" DISTRICT

MANUFACTURER: PARASOLEIL OR EQUAL
PATTERN: GOTHAM



"REMEMBER" DISTRICT

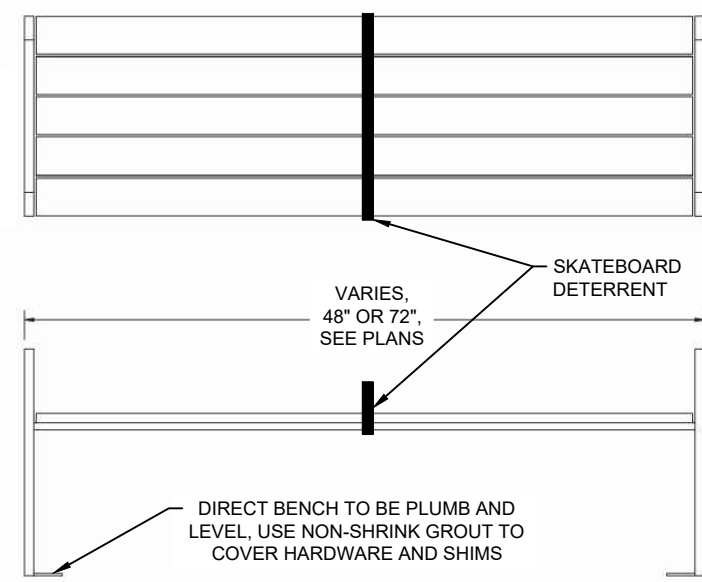
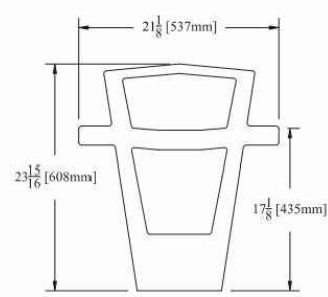
MANUFACTURER: PARASOLEIL OR EQUAL
PATTERN: BB LEAVES

NOTE: SUBMIT CUTSHEET FOR APPROVAL

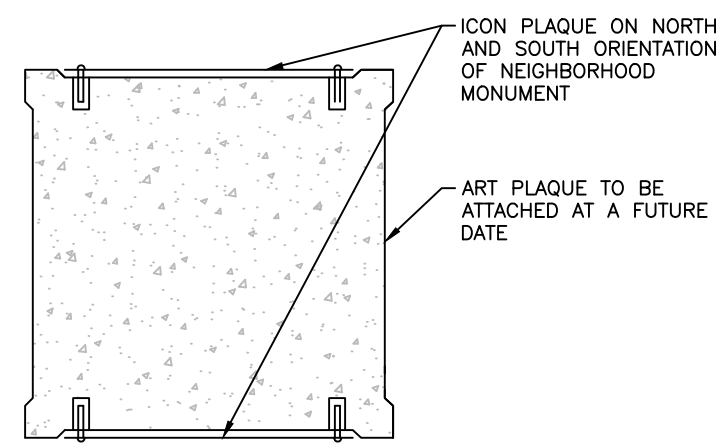
3 ICON PLAQUE IMAGE PER DISTRICT

NOTE: BENCH TO BE LEVEL AND PLUMB. SURFACE MOUNT PER MANUFACTURER RECOMMENDATION

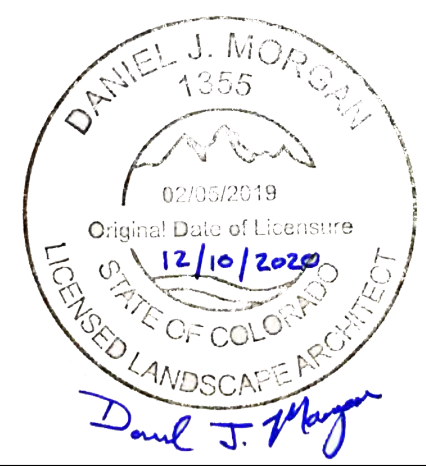
	CW14	CW16
LENGTH	4ft	6ft
WIDTH	21 1/8"	21 1/8"
HEIGHT	23 15/16"	23 15/16"
SEAT HEIGHT	17 1/8"	17 1/8"
WEIGHT	125 lbs.	135 lbs.

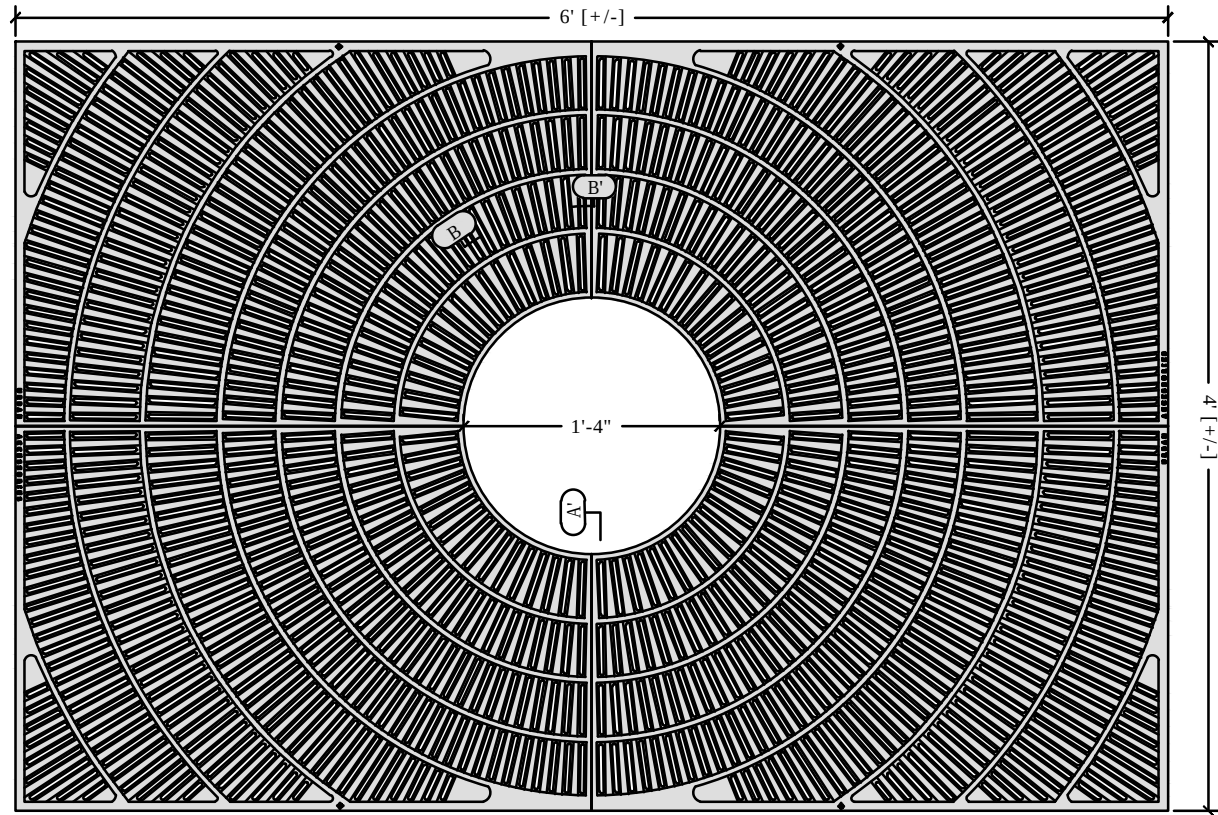


4 BENCH - CREEKVIEW FLAT BENCH - KEYSTONE RIDGE

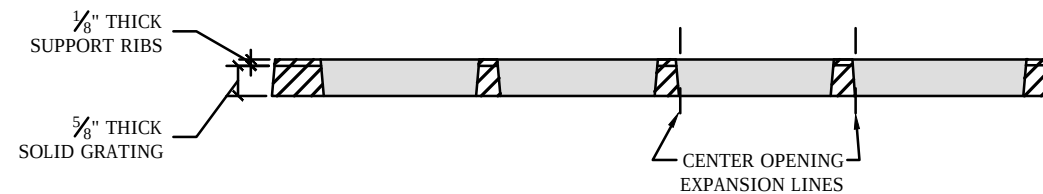


5 METAL FABRICATED PLAQUE ATTACHMENT

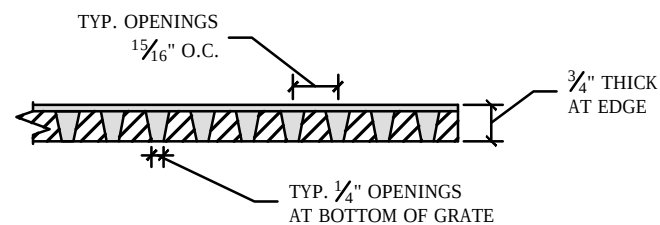




PLAN



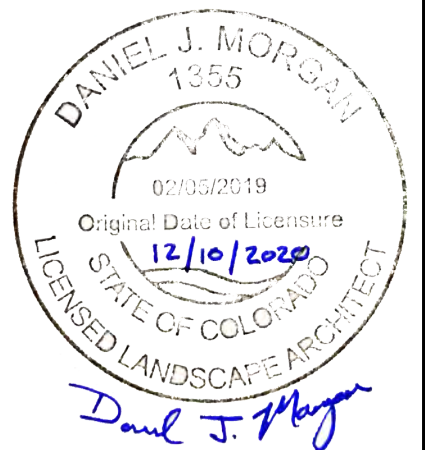
SECTION A-A



SECTION B-B

1 TREE GRATE

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Horizontal Scale: 1" = 20' Vertical Scale: N/A
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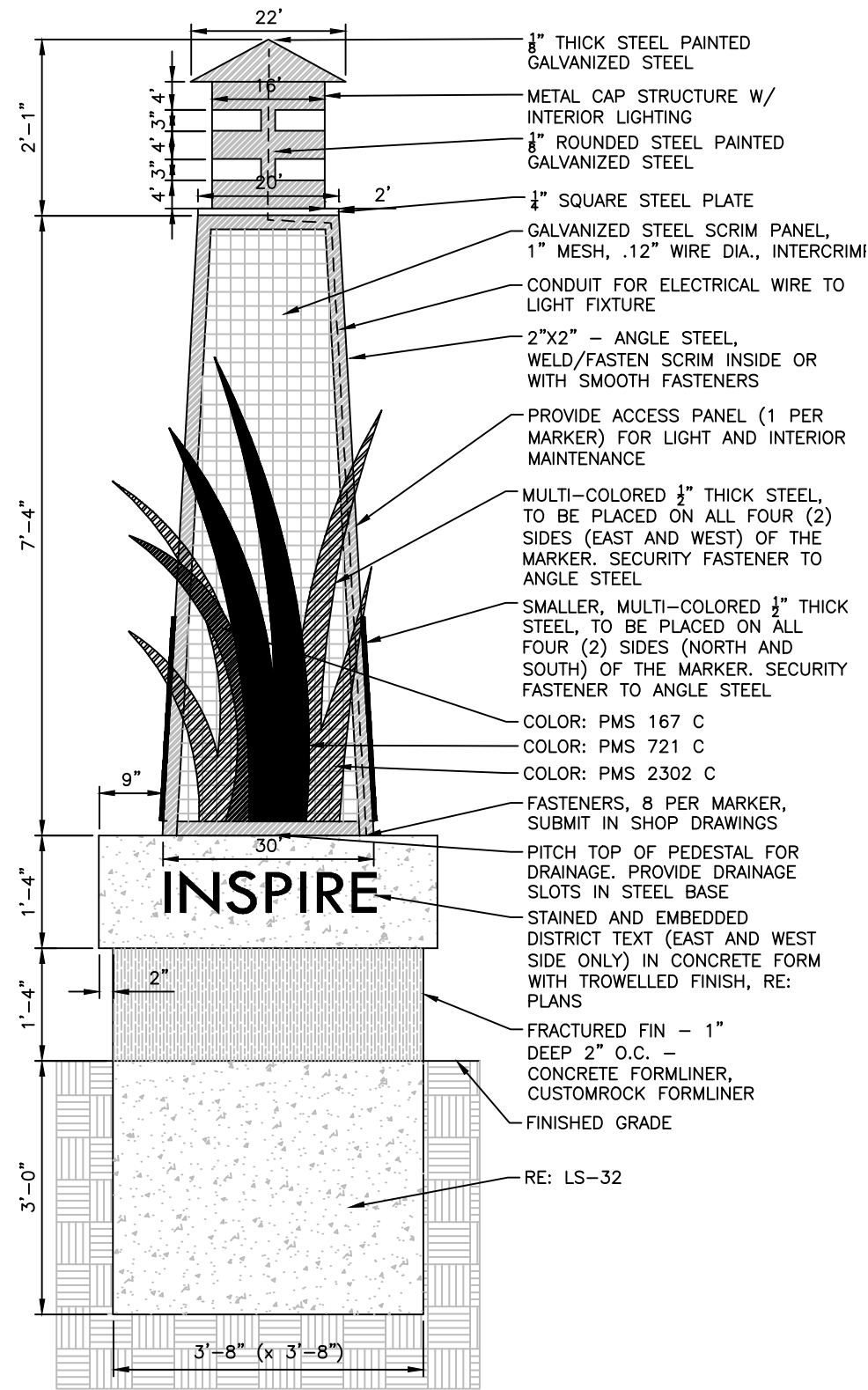
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R-X	Date	Comments	Initials



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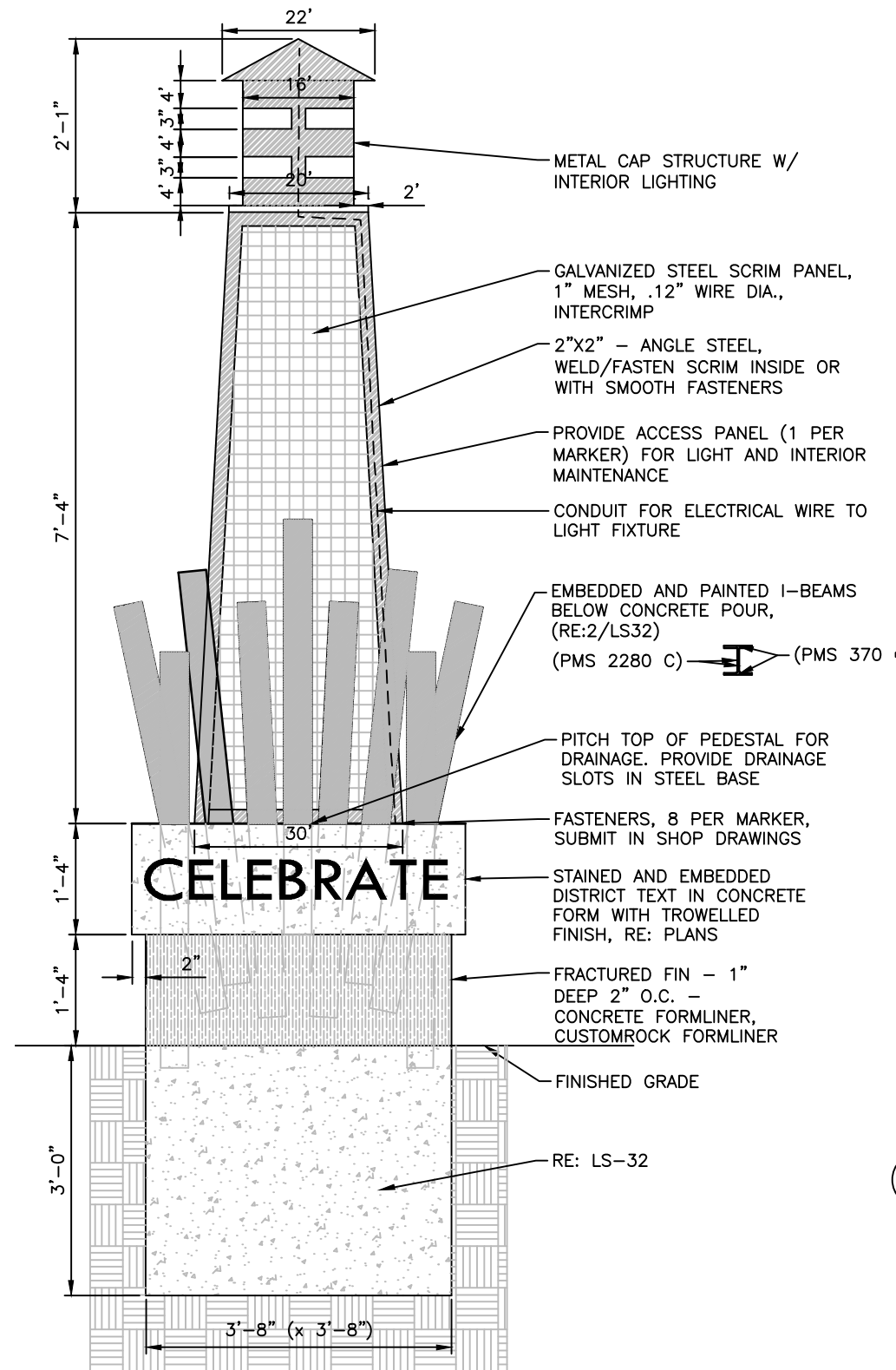
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed	RALSTON RD - YUKON ST TO GARRISON ST LANDSCAPE DETAILS			Project No./Code
No Revisions:				18-ST-40
Revised:	Designer: DJM	Structure Numbers		
Void:	Detailer: DJM			
	Sheet Subset: LANDSCAPE	Subset Sheets: LS-30 of 35		Sheet Number 389



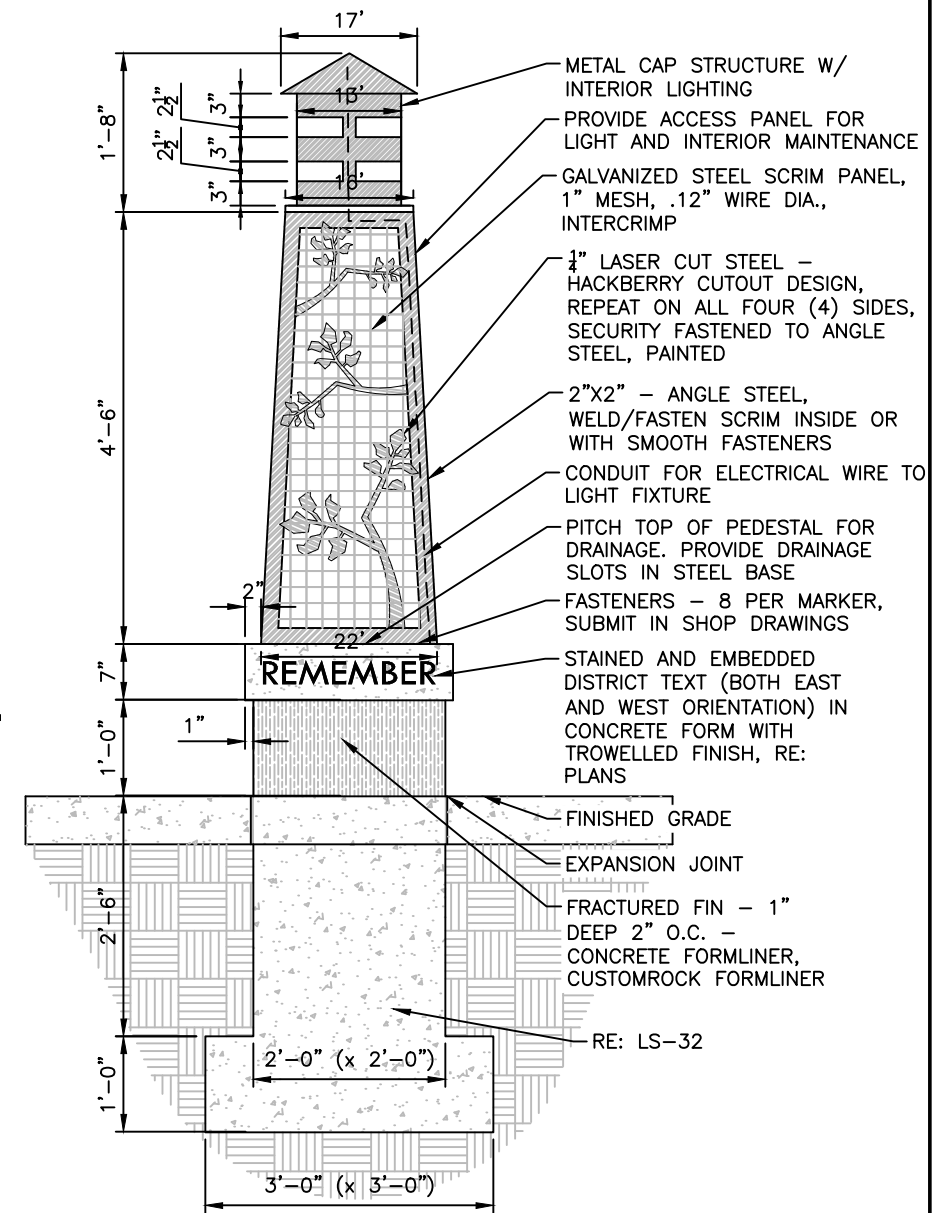
1 DISTRICT MARKER - "INSPIRE" - WEST ORIENTATION

1/2" = 1'-0"



2 DISTRICT MARKER - "CELEBRATE" - EAST ORIENTATION

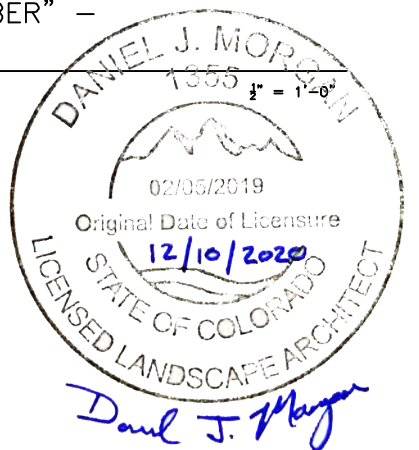
1/2" = 1'-0"

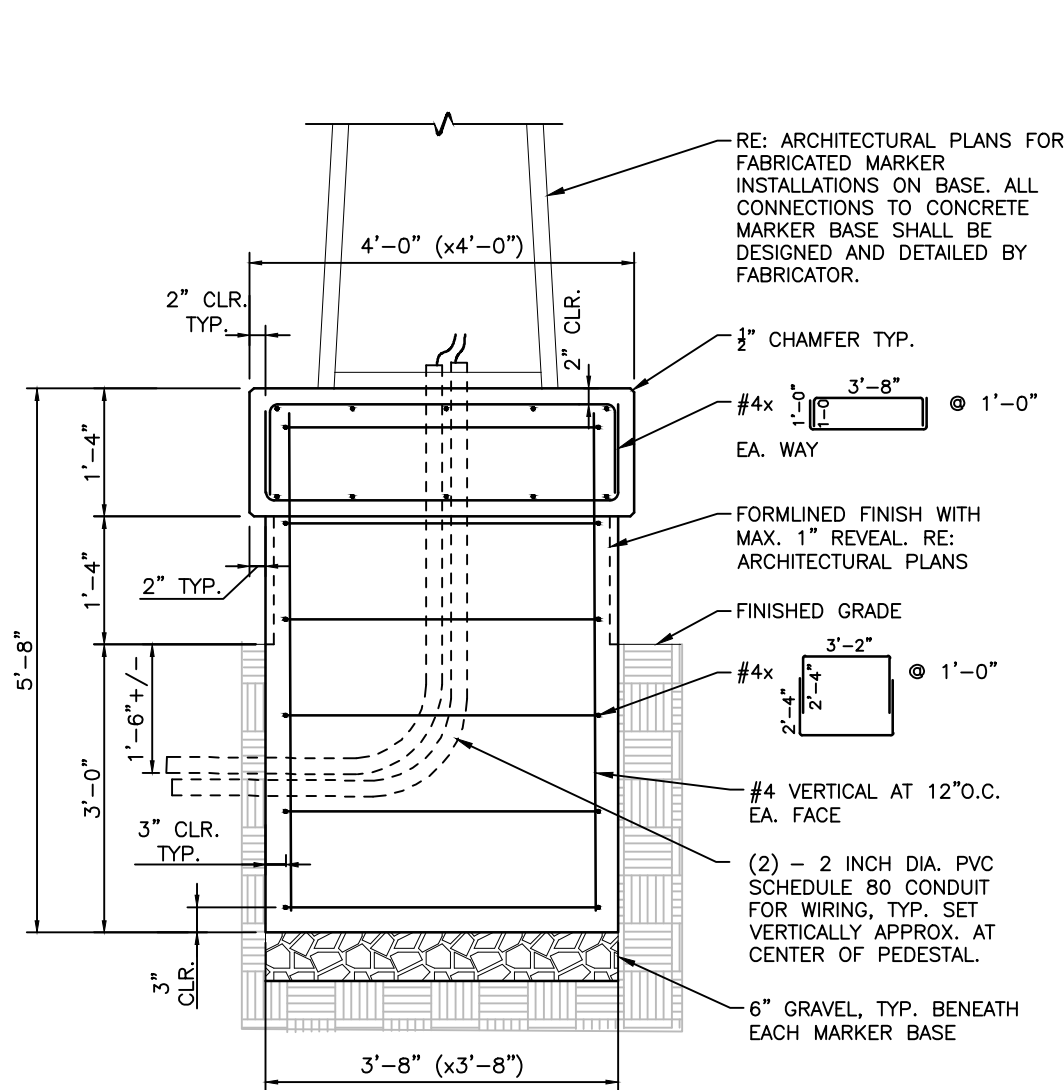


3 DISTRICT MARKER - "REMEMBER" - WEST & EAST ORIENTATION

NOTE:

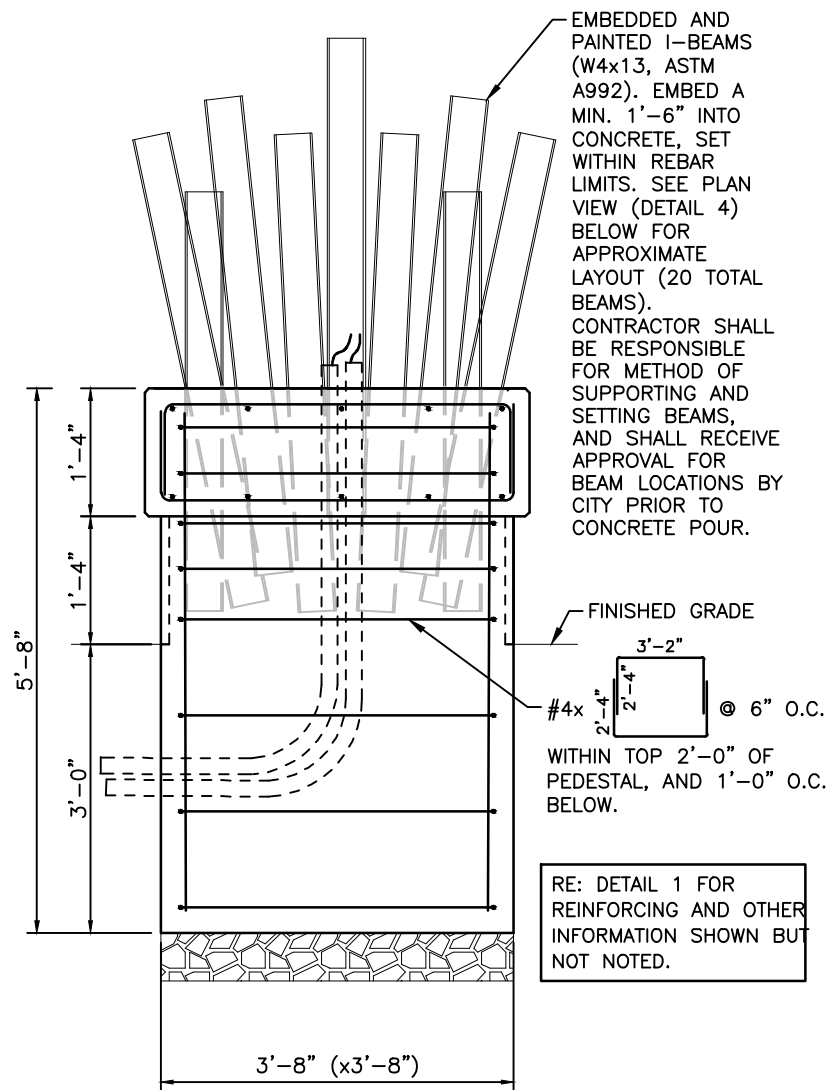
1. DETAIL IS PROVIDED TO SHOW DESIGN INTENTIONS AND FINISHED CHARACTER. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR APPROVAL.
2. CONTRACTOR SHALL SUBMIT CUT SHEETS AND SAMPLES FOR APPROVAL.
3. ALL METAL TO BE GALVANIZED UNLESS SPECIFIED OTHERWISE





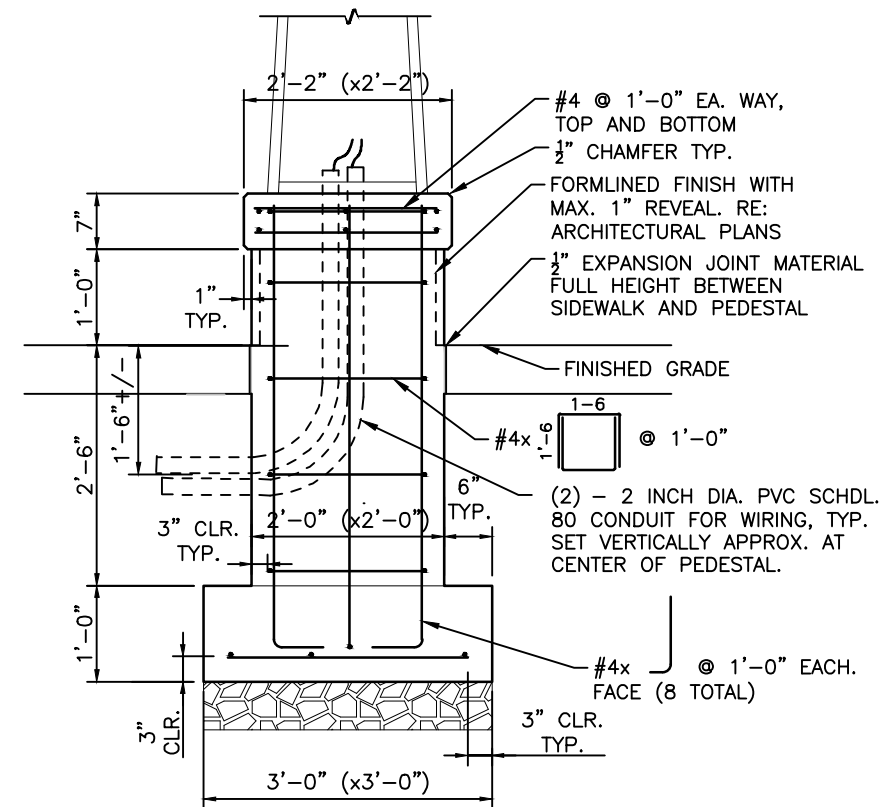
1 "INSPIRE" MARKER BASE SECTION

1/2" = 1'-0"



2 "CELEBRATE" MARKER BASE SECTION

1/2" = 1'-0"



3 "REMEMBER" MARKER BASE SECTION

1/2" = 1'-0"

STRUCTURAL NOTES

DESIGN DATA

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION

DESIGN METHOD:
SERVICE LOAD DESIGN FOR SLIDING, BEARING, AND OVERTURNING

DESIGN LOADS:
UNIT WEIGHT OF CONCRETE = 150 PCF
BACKFILL VERTICAL EARTH LOAD = 125 PCF
WIND LOAD = 120 MPH, EXPOSURE C

SOILS:
ALLOWABLE BEARING CAPACITY (NET) = 1,500 PSF
FRICTION COEFFICIENT FOR SLIDING = 0.30
ALLOWABLE PASSIVE RESISTING PRESSURE = 250 PCF

MARKER BASE CONCRETE NOTES

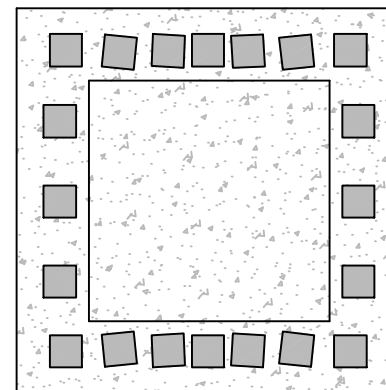
CONCRETE FOR CONSTRUCTION SHALL BE CLASS A (MIN. $f'_c = 4,000$ PSI AT 28 DAYS) IN ACCORDANCE WITH CITY OF ARVADA STANDARD SPECIFICATIONS.

REINFORCING BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615 GRADE 60 ($f_y = 60$ ksi). ALL REINFORCING SHALL BE EPOXY COATED PER AASHTO M284.

ALL REINFORCING STEEL SHALL HAVE 2" CONCRETE COVER UNLESS NOTED OTHERWISE.

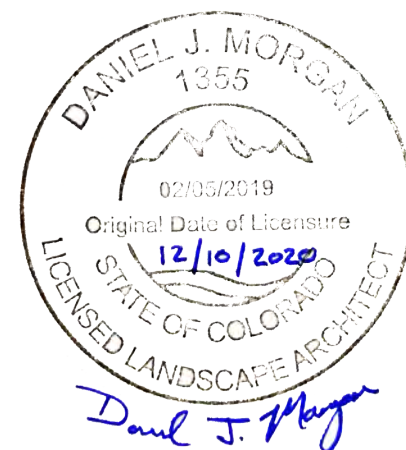
ALL CONCRETE CONSTRUCTION, INCLUDING PLACEMENT OF REINFORCING STEEL, SHALL BE CONDUCTED IN ACCORDANCE WITH THE CITY STANDARDS.

REFER TO ARCHITECTURAL PLANS FOR CONCRETE FINISHES, INCLUDING FORMLINED FINISHES, INSET LETTERING, AND OTHER DETAILS.



4 "CELEBRATE" MARKER PLAN VIEW

1/2" = 1'-0"



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File Name: 118355_LSPL_SH02_EN.DWG
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PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed

No Revisions:

Revised:

Void:

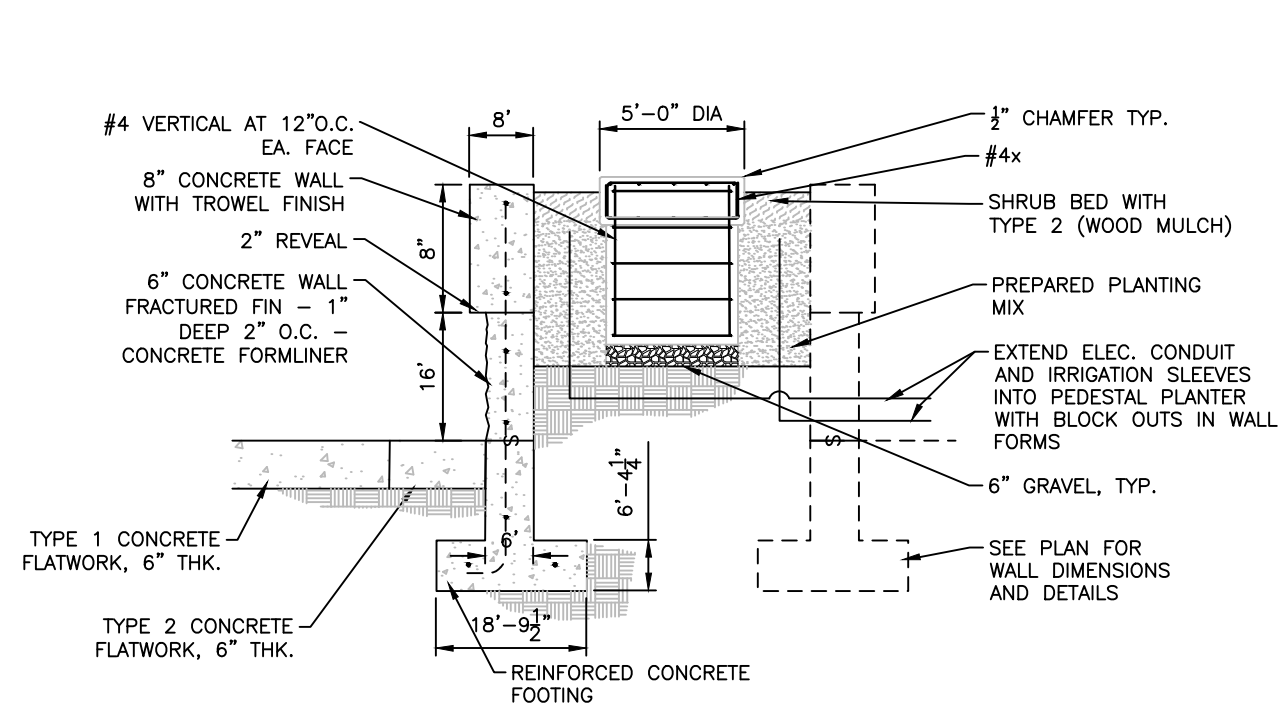
RALSTON RD - YUKON ST TO GARRISON ST LANDSCAPE DETAILS

Designer:	Structure
DJM	
Detailer:	Numbers
DJM	
Sheet Subset:	Subset Sheets:
LANDSCAPE	LS-32 of 35

Project No./Code

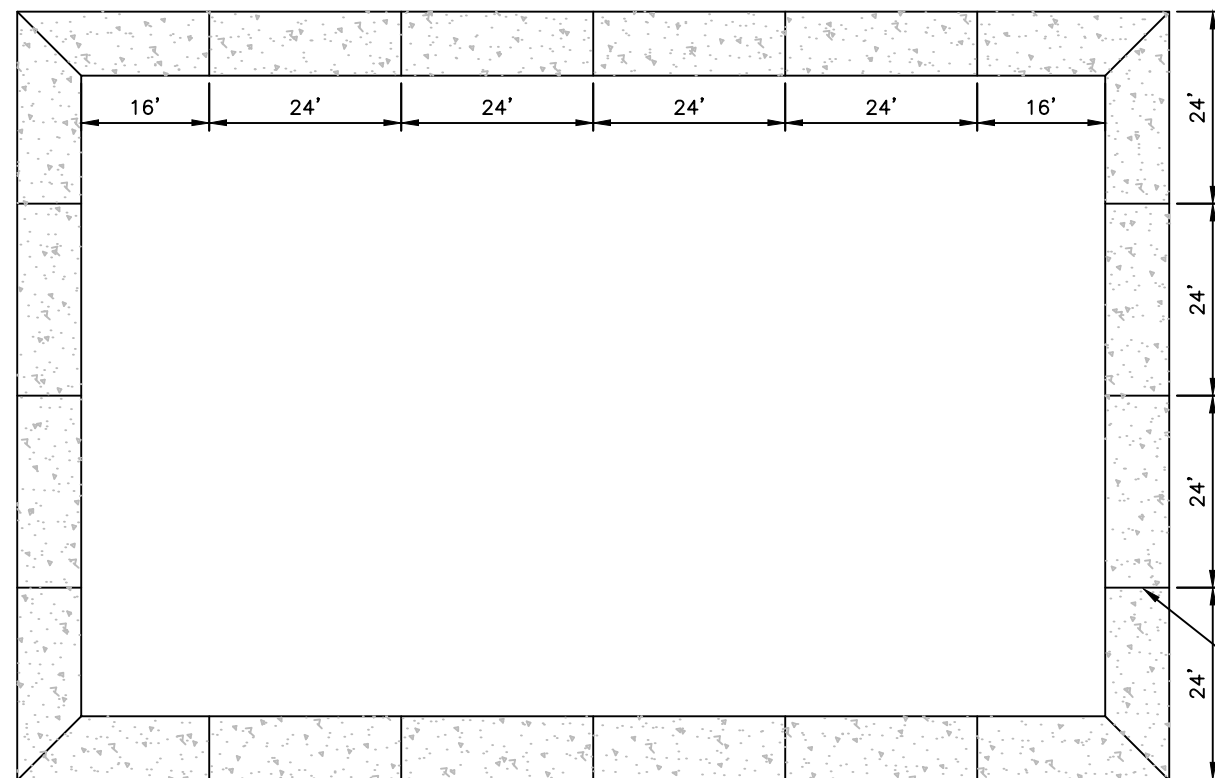
18-ST-40

Sheet Number 391



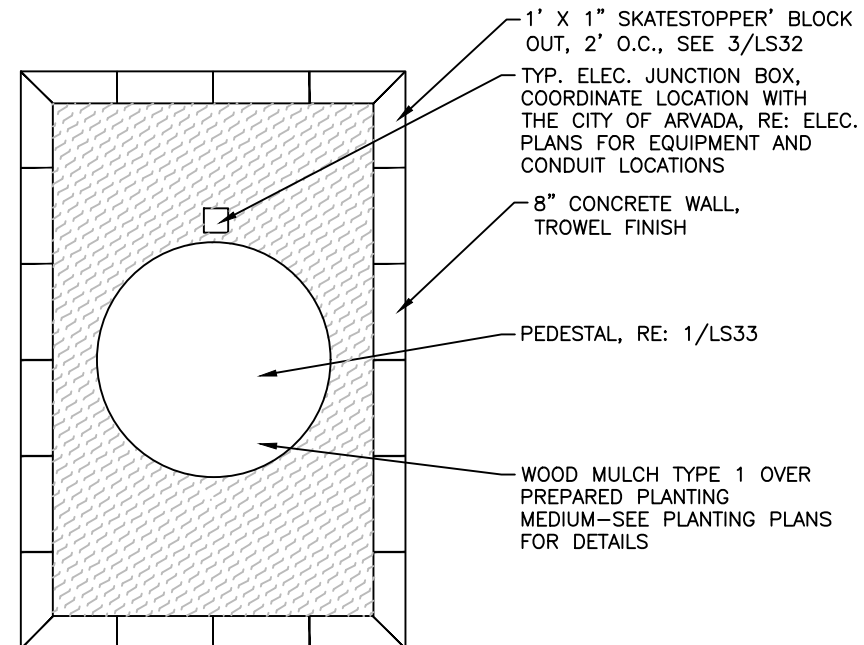
1 WOLFF PARK - PLANTER WALL - SECTION

1/2" = 1'-0"



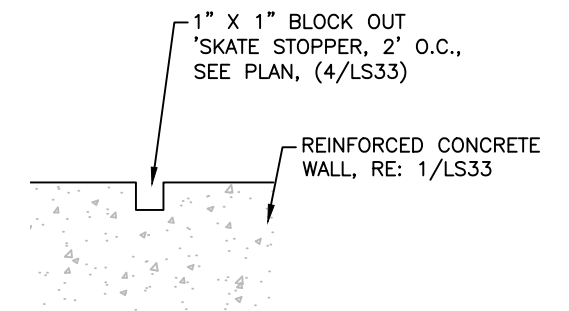
4 WOLFF PARK - PLANTER WALL - CAPSTONE JOINTING PLAN

1/2" = 1'-0"



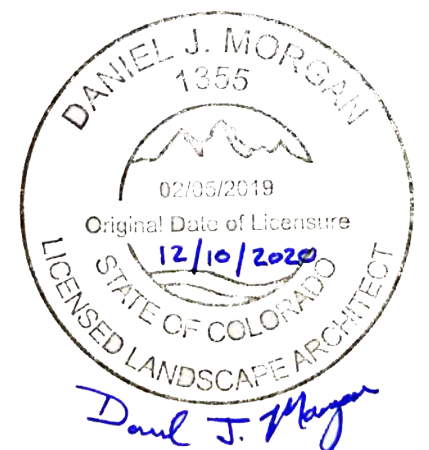
2 WOLFF PARK - PLANTER WALL - PLAN VIEW

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3 PLANTER WALL - SKATE STOPPER

1/2" = 1'-0"



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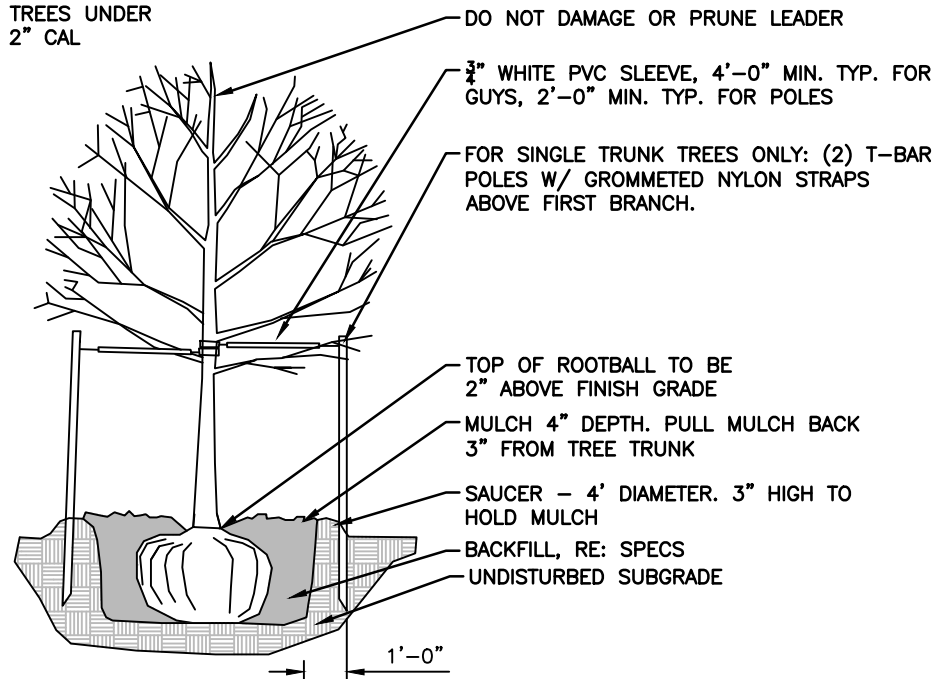
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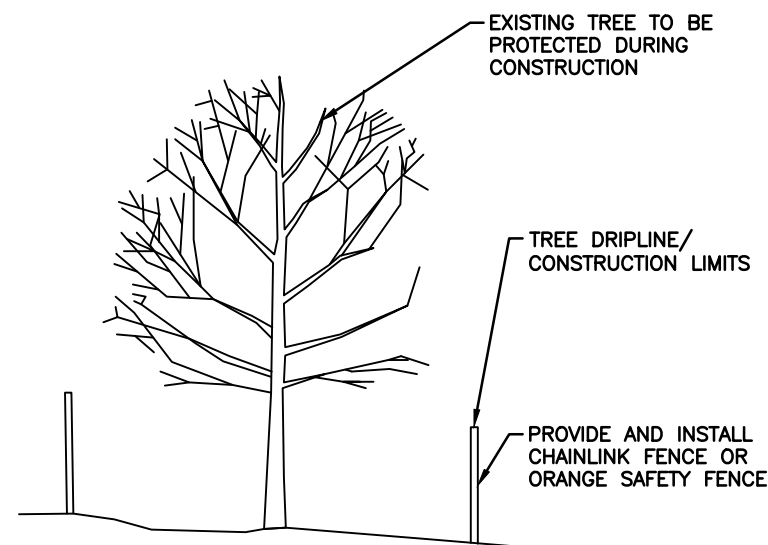
CITY OF ARVADA
 PUBLIC WORKS DEPARTMENT
 8101 RALSTON ROAD
 ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST LANDSCAPE DETAILS			Project No./Code
No Revisions:					18-ST-40
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		Detailer: DJM	Numbers		
Void:		Sheet Subset: LANDSCAPE	Subset Sheets: LS-33 of 35		Sheet Number 392

2 POLES – TREES UNDER 2" CAL

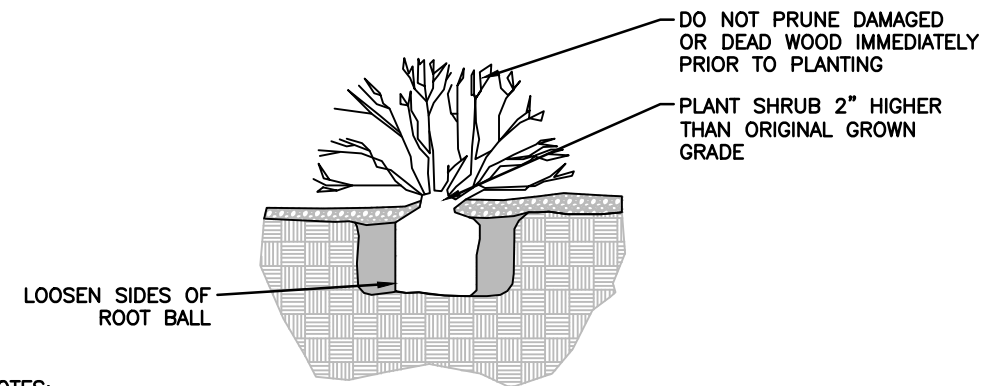


- NOTES:
1. SEE SPECS FOR ADDITIONAL PLANTING REQUIREMENTS
 2. AFTER PLANT IS SET IN PLANTING PIT, CUT AWAY AND REMOVE ALL WIRE AND OTHER RESTRIANING MATERIAL. CUT AND REMOVE 3/4 OF BURLAP FROM ROOTBALL. SECURE ROOTBALL AND PIT WALLS
 3. 18" IMPORTED AMENDED PLUS TOPSOIL FROM A-1 ORGANICS OR APPROVED EQUAL.
 4. APPLY 2 C.Y./1000 S.F. CLASS 1 AMENDMENT FOR LANDSCAPE REPAIR AREAS AND AT WOLFF PARK



CONSTRUCTION ACTIVITIES NOT ALLOWED WITHIN DRIPLINE UNLESS OTHERWISE NOTED ON DRAWINGS.

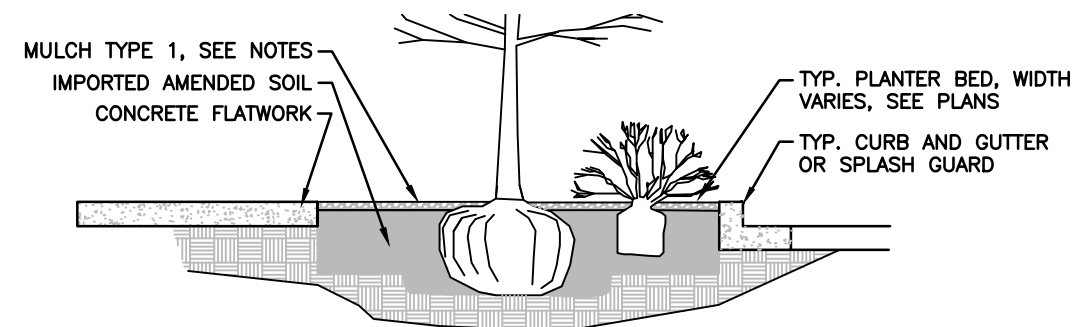
- NOTES:
1. IN AREAS WHERE GRADING EXTENDS INTO EXISTING TREE DRIPLINE CONTRACTOR SHALL HAND GRADE
 2. NOTIFY OWNER IF TREE REQUIRES PRUNING TO INSTALL FENCING
 3. MATERIALS, DEBRIS, EQUIPMENT AND SITE AMENITIES SHALL NOT BE STORED WITHIN THE TREE PROTECTION AREA, RE: EROSION CONTROL PLANS FOR LOCATIONS AND SPECS



- NOTES:
1. ALL PLANT CONTAINERS TO BE REMOVED PRIOR TO PLANTING
 2. BACKFILL AND WATER THOROUGHLY
 3. BROKEN ROOT BALLS WILL BE REJECTED
 4. 18" IMPORTED AMENDED PLUS TOPSOIL FROM A-1 ORGANICS OR APPROVED EQUAL.
 5. APPLY 2 C.Y./1000 S.F. CLASS 1 AMENDMENT FOR LANDSCAPE REPAIR AREAS AND AT WOLFF PARK.

1 TREE PLANTING (NON-TREE GRATES)

NTS



- NOTES:
1. 18" IMPORTED AMENDED PLUS TOPSOIL FROM A-1 ORGANICS OR APPROVED EQUAL IN ALL PLANTING BEDS.
 2. APPLY 2 C.Y./1000 S.F. CLASS 1 AMENDMENT FOR GRASS SEEDING AREAS AND AT WOLFF PARK
 3. MULCH TYPE 1 SHALL BE 4" THICK, 1-1/2" CHEYENNE GRAY FROM PIONEER LANDSCAPE OR APPROVED EQUAL.
 4. 24" IN MEDIAN AREAS

4 PLANTING BEDS (ROAD EDGE, CORNER LANDSCAPE AND MEDIAN)

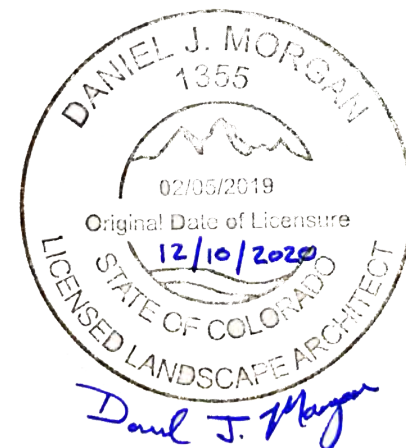
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2 TREE PROTECTION DETAIL

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3 SHRUB PLANTING

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8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST LANDSCAPE DETAILS			Project No./Code
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Revised:		Designer: DJM	Structure Numbers		
		Detailer: DJM			
Void:		Sheet Subset: LANDSCAPE	Subset Sheets: LS-34 of 35		Sheet Number 393

PLANTING SCHEDULE

NOTES

1. NO PLANT SUBSTITUTES WILL BE ALLOWED WITHOUT THE APPROVAL OF LANDSCAPE ARCHITECT OR OWNER DUE TO VISIBILITY REQUIREMENTS

Deciduous Trees

12	HA	Celtis occidentalis	Common Hackberry	2.5"
6	KC	Gymnocladus dioica	Kentucky Coffeetree	2.5"
7	BO	Quercus macrocarpa	Burr Oak	2.5"
7	HO	Quercus x macdanielii 'Heritage'	Heritage Oak	2.5"
5	SM	Gleditsia triacanthos inermis 'Shademaster'	Shademaster Honeylocust	2.5"
6	TF	Corylus columna	Turkish Filbert	2.5"
4	MG	Acer campestre 'Panacek'	Metro Gold Hedge Maple	2.5"
7	ZS	Zelkova serrata 'Green Vase'	Green Vase Zelkova	2.5"
3	FE	Ulmus 'Frontier'	Frontier Elm	2.5"

Ornamental Trees

5	AS	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	2"
4	AB	Pyrus calleryana 'Autumn Blaze'	Autumn Blaze Pear	2"
2	GR	Koelreuteria paniculata	Goldenraintree	2"

Decidious Shrubs

56	BMS	Caryopteris x clandonensis	Blue Mist Spirea	5 gal.
36	PBS	Prunus besseyi 'Pawnee Buttes'	Pawnee Buttes Sandcherry	5 gal.
101	GLS	Rhus aromatica 'Gro-Low'	Gro-Low Sumac	5 gal.
187	KDC	Cornus sericea 'Kelseyi'	Kelsey Dogwood	5 gal.
62	ACM	Spirea japonica 'Magic Carpet'	Magic Carpet spirea	5 gal.
149	RRK	Rosa 'Radrazz' PP11836	Knock Out Rose	5 gal.
59	LSC	Aronia melanocarpa 'Low Scape Mound'	Low Scape Chokeberry	5 gal.

Evergreen Shrubs

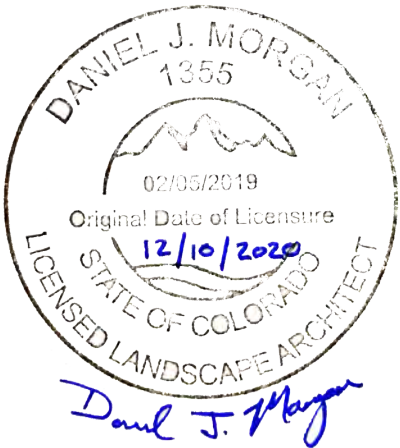
41	KNK	Arctostaphylos uva-ursi	Kinnikinnick	1 gal.
73	YTJ	Juniperus horizontalis 'Youngstown'	Andorra Youngstown Juniper	5 gal.
100	GCJ	Juniperus communis 'Green Carpet'	Green Carpet Juniper	5 gal.
11	IBJ	Juniperus horizontalis 'Icee Blue'	Icee Blue Juniper	5 gal.
70	PMC	Arctostaphylos x coloradoensis Panchito	Panchito Manzanita	5 gal.
8	GSE	Euonymus fortunei "Roemertwo"	Gold Splash Euonymus	5 gal.
6	RYH	Hesperaloe parviflora	Red yucca	5 gal.

Ornamental Grasses

63	FRG	Helictotrichon sempevirens	Blue Avena	1 gal.
127	PBB	Schizachyrium scoparium 'Prairie Blues'	Prairie Blues Little Bluestem	1 gal.
112	BG	Boutela gracilis	Blue Grama Grass	1 gal.
159	MFG	Nasella tenuissima	Mexican Feather Grass	1 gal.
179	DMG	Miscanthus sinensis 'Adagio'	Adagio' Dwarf Maiden Grass	1 gal.

Perennials

36	RHP	Kniphora uvaria	Red Hot Poker	1 gal.
83	DAY	Hemerocallis 'Stella D'Oro'	Stella D'Oro' Dwarf Daylily	1 gal.
45	AST	Aster sp.	Aster	1 gal.
24	SHD	Leucanthemum x superbum	Shasta Daisy	1 gal.
20	GOL	Aurinia saxatilis	Basket of Gold	1 gal.
104	YAR	Achillea millefolium "Summer pastels"	Pink Yarrow	1 gal.



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File Name: 118355_LSPL_SH02_EN.DWG			Date	Comments	Initials		No Revisions:					18-ST-40	
Horizontal Scale: N/A Vertical Scale: N/A							Revised:		Designer: DJM Structure				
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							Sheet Subset: LANDSCAPE		Subset Sheets: LS-35 of 35			Sheet Number 394	

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SUGGESTED PHASING

1. NOTICE-TO-PROCEED 1
- 1.1. PHASE 1
- 1.1.1. CONSTRUCT WATERLINE STARTING ON THE EAST END OF THE PROJECT.
- 1.1.2. ROUTE TRAFFIC AS NECESSARY FOR CONSTRUCTION OF MAINLINE AND LATERAL CONNECTIONS TO HYDRANTS AND WATER METERS.
- 1.2. PHASE 2A – CARR TO YUKON STREET
- 1.2.1. SHIFT TRAFFIC TO THE EASTBOUND LANES OF RALSTON ROAD.
- 1.2.2. CONSTRUCT NORTH SIDE IMPROVEMENTS. MEDIANS WILL BE CONSTRUCTED IN A LATER PHASE.
- 1.2.3. KEEP ONE LANE OPEN IN EACH DIRECTION.
- 1.2.4. MAINTAIN ACCESS TO ALL PROPERTIES DURING CONSTRUCTION. COORDINATE DRIVEWAY CONSTRUCTION WITH THE PROPERTY OWNERS.
- 1.2.5. TEMPORARY CLOSURES AND DETOURS OF SIDE STREETS TO BE INCLUDED IN CONTRACTOR MHT.
- 1.3. PHASE 2B – CARR TO YUKON STREET
- 1.3.1. SHIFT TRAFFIC TO THE WESTBOUND LANES OF RALSTON ROAD.
- 1.3.2. CONSTRUCT SOUTH SIDE IMPROVEMENTS. MEDIANS WILL BE CONSTRUCTED IN A LATER PHASE.
- 1.3.3. KEEP ONE LANE OPEN IN EACH DIRECTION.
- 1.3.4. MAINTAIN ACCESS TO ALL PROPERTIES DURING CONSTRUCTION. COORDINATE DRIVEWAY CONSTRUCTION WITH THE PROPERTY OWNERS.
- 1.3.5. TEMPORARY CLOSURES AND DETOURS OF SIDE STREETS TO BE INCLUDED IN CONTRACTOR MHT.
- 1.4. PHASE 2C – CARR TO YUKON STREET
- 1.4.1. SHIFT TRAFFIC TO WESTBOUND AND EASTBOUND OUTER LANES ON RALSTON ROAD.
- 1.4.2. CONSTRUCT RAISED MEDIANS.
2. NOTICE-TO-PROCEED 2
- 2.1. PHASE 3A – ESTES TO CARR STREET
- 2.1.1. SHIFT TRAFFIC TO THE WESTBOUND LANES OF RALSTON ROAD.
- 2.1.2. CONSTRUCT SOUTH SIDE IMPROVEMENTS. MEDIANS WILL BE CONSTRUCTED IN A LATER PHASE.
- 2.1.3. KEEP ONE LANE OPEN IN EACH DIRECTION.
- 2.1.4. MAINTAIN ACCESS TO ALL PROPERTIES DURING CONSTRUCTION. COORDINATE DRIVEWAY CONSTRUCTION WITH THE PROPERTY OWNERS.
- 2.1.5. TEMPORARY CLOSURES AND DETOURS OF SIDE STREETS TO BE INCLUDED IN CONTRACTOR MHT.
- 2.2. PHASE 3B – ESTES TO CARR STREET
- 2.2.1. SHIFT TRAFFIC TO THE EASTBOUND LANES OF RALSTON ROAD.
- 2.2.2. CONSTRUCT NORTH SIDE IMPROVEMENTS. MEDIANS WILL BE CONSTRUCTED IN A LATER PHASE.
- 2.2.3. KEEP ONE LANE OPEN IN EACH DIRECTION.
- 2.2.4. MAINTAIN ACCESS TO ALL PROPERTIES DURING CONSTRUCTION. COORDINATE DRIVEWAY CONSTRUCTION WITH THE PROPERTY OWNERS.
- 2.2.5. TEMPORARY CLOSURES AND DETOURS OF SIDE STREETS TO BE INCLUDED IN CONTRACTOR MHT.
3. NOTICE-TO-PROCEED 3
- 3.1. PHASE 4A – GARRISON TO ESTES STREET
- 3.1.1. SHIFT TRAFFIC TO THE WESTBOUND LANES OF RALSTON ROAD.
- 3.1.2. CONSTRUCT SOUTH SIDE IMPROVEMENTS. MEDIANS WILL BE CONSTRUCTED IN A LATER PHASE.
- 3.1.3. KEEP ONE LANE OPEN IN EACH DIRECTION.
- 3.1.4. MAINTAIN ACCESS TO ALL PROPERTIES DURING CONSTRUCTION. COORDINATE DRIVEWAY CONSTRUCTION WITH THE PROPERTY OWNERS.
- 3.1.5. TEMPORARY CLOSURES AND DETOURS OF SIDE STREETS TO BE INCLUDED IN CONTRACTOR MHT.
- 3.2. PHASE 4B – GARRISON TO ESTES STREET
- 3.2.1. SHIFT TRAFFIC TO THE EASTBOUND LANES OF RALSTON ROAD.
- 3.2.2. CONSTRUCT NORTH SIDE IMPROVEMENTS. MEDIANS WILL BE CONSTRUCTED IN A LATER PHASE.
- 3.2.3. KEEP ONE LANE OPEN IN EACH DIRECTION.
- 3.2.4. MAINTAIN ACCESS TO ALL PROPERTIES DURING CONSTRUCTION. COORDINATE DRIVEWAY CONSTRUCTION WITH THE PROPERTY OWNERS.
- 3.2.5. TEMPORARY CLOSURES AND DETOURS OF SIDE STREETS TO BE INCLUDED IN CONTRACTOR MHT.
- 3.3. PHASE 4C – GARRISON TO ESTES STREET
- 3.3.1. SHIFT TRAFFIC TO WESTBOUND AND EASTBOUND OUTER LANES ON RALSTON ROAD.
- 3.3.2. CONSTRUCT RAISED MEDIANS.

WORK ZONE TRAFFIC CONTROL PHASING NOTES

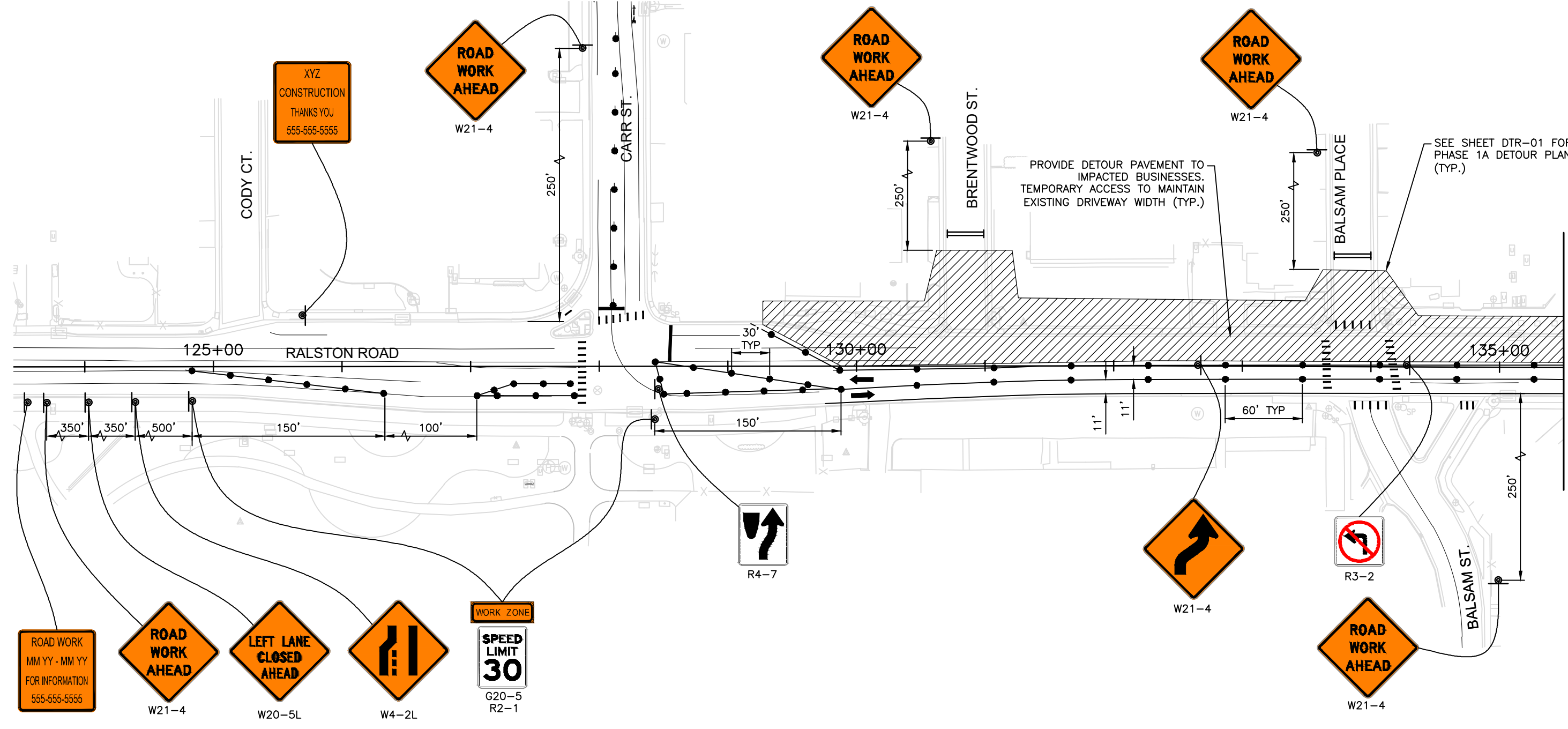
1. THE WORK ZONE TRAFFIC CONTROL PHASING NOTES AND PLANS ARE INTENDED TO BE A GUIDE AND SUGGESTION FOR THE CONTRACTOR TO FOLLOW. THEY ARE NOT ALL INCLUSIVE AND DO NOT REPRESENT ALL OF THE WORK ACTIVITY REQUIRED FOR THE PROJECT. THEY REPRESENT A SUGGESTED DELINEATION OF THE WORK ZONE BOTH DURING AND AFTER WORK HOURS. OTHER MINI-PHASES (NOT PROVIDED IN THE PLAN SET) USING TEMPORARY LANE CLOSURES OR TRAFFIC SHIFTS ARE ANTICIPATED TO BE NECESSARY TO CONSTRUCT THE PROPOSED IMPROVEMENTS. LANE CLOSURES OTHER THAN WHAT IS SHOWN ON THE TRAFFIC CONTROL PLANS SHALL BE LIMITED TO THE HOURS OF 8:30 AM TO 3:30 PM, UNLESS OTHERWISE APPROVED BY THE ENGINEER. CONTRACTORS ARE ENCOURAGED TO PROPOSE THEIR OWN TRAFFIC CONTROL PHASING TO INCREASE THEIR EFFICIENCY AND TIMING OF CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF ONE TRAVEL LANE IN EACH DIRECTION DURING CONSTRUCTION AND MEET THE CONDITIONS LISTED BELOW. THE CONTRACTOR IS ALSO ENCOURAGED TO MEET THE ENGINEER AND THE CITY OF ARVADA TRAFFIC CONTROL ENGINEER TO EXPLORE OPTIONS OF CONSTRUCTION, I.E., NIGHT WORK, TEMPORARY FULL CLOSURES, ETC. IN ALL CASES, WHETHER THE CONTRACTOR PLANS TO USE SUGGESTED TRAFFIC CONTROL IN THIS PLAN SET OR THEIR OWN PROPOSED PHASING, THE CONTRACTOR SHALL SUBMIT A METHOD OF HANDLING TRAFFIC (MHT) TO THE CITY OF ARVADA FOR REVIEW AND APPROVAL FOR ALL PHASES, MINI-PHASES AND PORTIONS OF WORK. CONSTRUCTION TRAFFIC CONTROL AND DEVICES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) CURRENT EDITION.
2. A MANDATORY PRE-CONSTRUCTION TRAFFIC CONTROL MEETING BETWEEN THE CONTRACTOR AND THE CITY OF ARVADA SHALL BE CONDUCTED PRIOR TO CONSTRUCTION ACTIVITIES.
3. IF STREETS ARE REQUIRED FOR PARTIAL OR COMPLETE CLOSURES, CONTRACTOR SHALL CONTACT THE CITY OF ARVADA PROJECT ENGINEER A MINIMUM OF 72 HOURS, PRIOR TO STARTING WORK. CONTRACTOR MUST ALSO CONTACT AND NOTIFY THE FIRE DISTRICT AT 303-425-0859, AND POLICE AT 720-898-6900.
4. CONTRACTOR SHALL MAINTAIN ONE HALF OF BUSINESS, RESIDENTIAL, SIDE STREET AND ALLEY ACCESS DURING REGULAR BUSINESS HOURS, MONDAY-FRIDAY, 8AM-5PM, EXCEPT IN EMERGENCIES OR WITH WRITTEN PERMISSION FROM THE CITY OF ARVADA. CONTRACTOR SHALL COORDINATE WITH THE LANDOWNER/TENANT/BUSINESS OWNER AND/OR THEIR REPRESENTATIVE A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION ACTIVITIES ON THE PROPERTY AND WILL NEED TO PROVIDE THE CITY OF ARVADA DOCUMENTATION OF APPROVAL/AGREEMENT BEFORE STARTING WORK ON THE PROPERTY.
5. LOOSE MATERIALS IN STORAGE AREAS MUST BE FENCED OR OTHERWISE SECURED TO PREVENT VANDALISM, THEFT, AND PROPERTY DAMAGE. IF FILL MATERIAL OR EQUIPMENT IS STORED ON A STREET, IT MUST BE DELINEATED WITH LIGHTED BARRICADES. SIDEWALKS SHALL NOT BE USED TO STORE EQUIPMENT OR FILL MATERIALS. SIGHT DISTANCE FROM INTERSECTIONS MUST BE MAINTAINED AROUND THE STORED MATERIALS.
6. ALL CHANNELIZING DEVICES SHALL HAVE WARNING LIGHTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD INSPECT THE WORK SITE AFTER DARK TO ENSURE THAT THE WARNING LIGHTS ARE OPERATING.
7. TEMPORARY BUSINESS ACCESS SIGNS SHALL BE PROVIDED FOR EACH BUSINESS TO IDENTIFY THAT THE BUSINESS IS OPEN DURING CONSTRUCTION. SIGN SHALL IDENTIFY BUSINESS NAME AND SHALL ALSO INDICATE "OPEN DURING CONSTRUCTION". SIGNS SHALL BE PAID FOR AS SQUARE FOOT OF CONSTRUCTION TRAFFIC SIGN (PANEL SIZE A)(SPECIAL).
8. TEMPORARY HMA PAVEMENT SHALL BE PROVIDED FOR EACH DRIVEWAY IN THE CONSTRUCTION AREA. TEMPORARY HMA PAVEMENT SHALL CONSIST OF 3 INCHES OF HMA (GRADING S)(50)(PG 58-28) ON COMPACTED SUBGRADE AND PAID FOR AS SQUARE YARD OF "TEMPORARY DRIVEWAY PAVING".
9. THE CONTRACTOR SHALL BEAR RESPONSIBILITY AND EXPENSE FOR MAINTAINING ADEQUATE DRAINAGE AND SAFE DRIVING CONDITIONS AT ALL TIMES. THIS WORK SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF RELATED WORK.
10. A MINIMUM LANE WIDTH OF 10 FEET SHALL BE MAINTAINED AT ALL TIMES UNLESS APPROVED BY THE ENGINEER. ANY PAVEMENT EDGE DROP-OFFS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM A TRAVEL LANE AND DELINEATED WITH PROPER TRAFFIC CONTROL DEVICES.

11. REMOVAL OF TEMPORARY PAVEMENT MARKINGS FOR TEMPORARY LANES WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF PAVEMENT MARKING PAINT. PAINT REMOVALS MUST BE DISPOSED OF PROPERLY OFF-SITE. CONTRACTOR SHALL REMOVE PHASING STRIPING FOLLOWING THE COMPLETION OF THE PHASE.
12. ANY EXISTING SIGHTS THAT CONFLICT WITH THE TEMPORARY TRAFFIC CONTROL LANEAGE SHALL BE COVERED OR RESET AS CONDITIONS REQUIRE FOR EACH CONSTRUCTION PHASE AND AS DIRECTED BY THE ENGINEER. MASKING OF EXISTING SIGNS, INCLUDING THE COVERING MATERIALS AND FASTENING DEVICES, WILL NOT BE MEASURED AND PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE WORK.
13. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER BEFORE STARTING PHASING AND SWITCHING TO A DIFFERENT PHASE.
14. RTD BUS STOPS ALONG BOTH DIRECTIONS OF RALSTON ROAD SHALL REMAIN OPEN AND ACCESSIBLE TO THE EXTENT POSSIBLE DURING EACH PHASE OF CONSTRUCTION, OR BE TEMPORARILY RELOCATED TO A NEARBY LOCATION. AT A MINIMUM, THE SPACING BETWEEN OPEN BUS STOPS SHALL NOT EXCEED A QUARTER-MILE. IN GENERAL, THIS WILL REQUIRE EVERY OTHER BUS STOP ALONG RALSTON ROAD TO REMAIN OPEN. ANY BUS STOP CLOSURES OR RELOCATIONS SHALL BE PRE-APPROVED BY RTD. ALL EXISTING BUS STOP SHELTERS, BENCHES, AND SIGNS SHALL BE PROTECTED IN PLACE DURING CONSTRUCTION.



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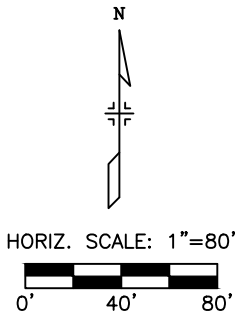
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LEGEND

	CHANNELIZING DEVICE
	CONSTRUCTION SIGN
	TYPE 3 BARRICADE
	WORK ZONE

- NOTES:
1. ARROW SEQUENCE BOARDS SHALL BE PROVIDED FOR ANY AND ALL LANE CLOSURES.
 2. TYPE 3 BARRICADES SHALL BE PROVIDED TO KEEP TRAFFIC FROM ENTERING A WORK ZONE VIA A PUBLIC STREET OR VIA A PRIVATE DRIVEWAY. A ROAD CLOSED SIGN WITH SUPPLEMENTAL W1-6 PANEL (AS APPROPRIATE) SHALL BE MOUNTED ON ANY BARRICADES FACING MAINLINE APPROACH TRAFFIC ALONG RALSTON ROAD.



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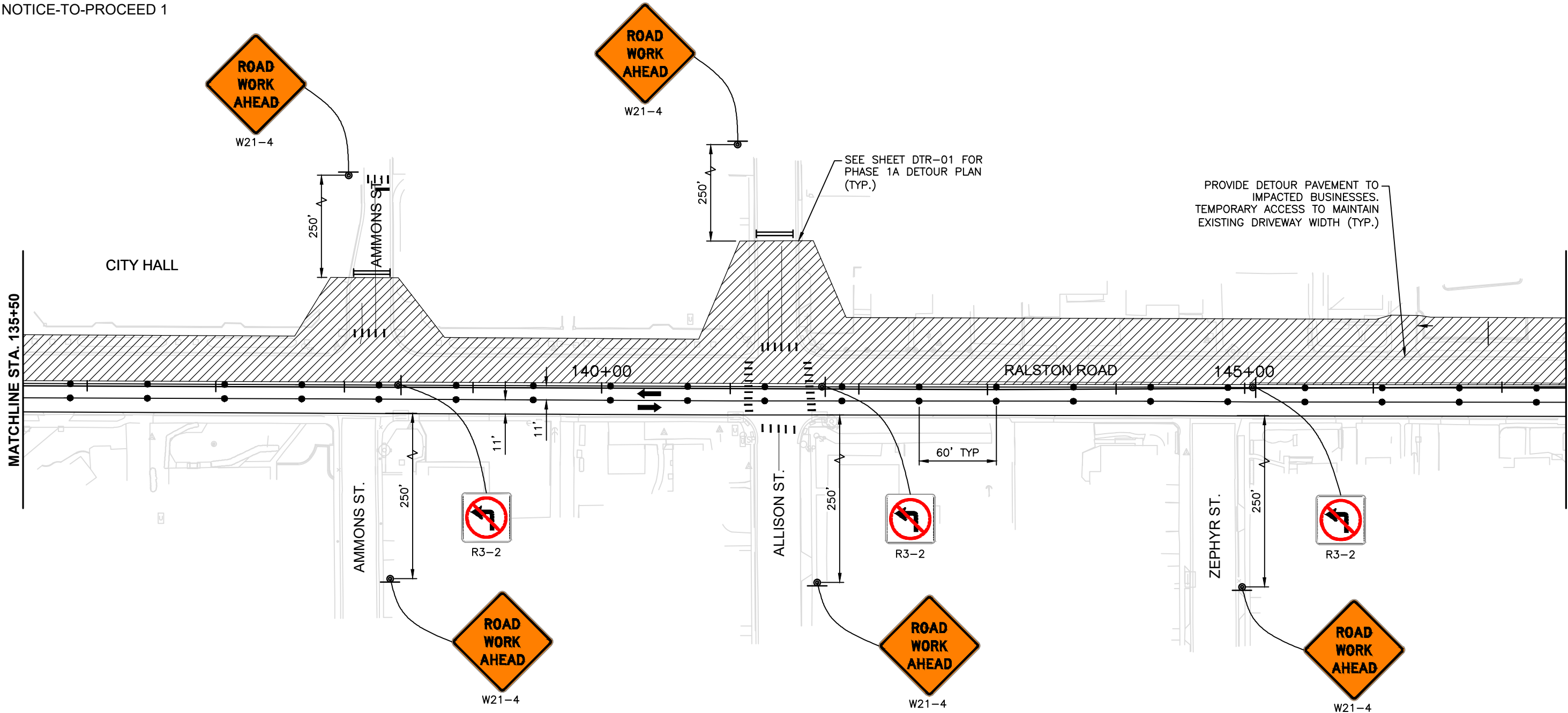
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8101 RALSTON ROAD
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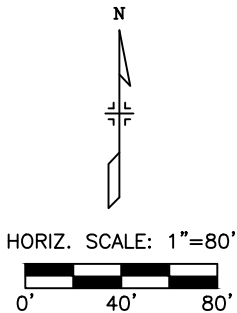
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LEGEND

	CHANNELIZING DEVICE
	CONSTRUCTION SIGN
	TYPE 3 BARRICADE
	WORK ZONE

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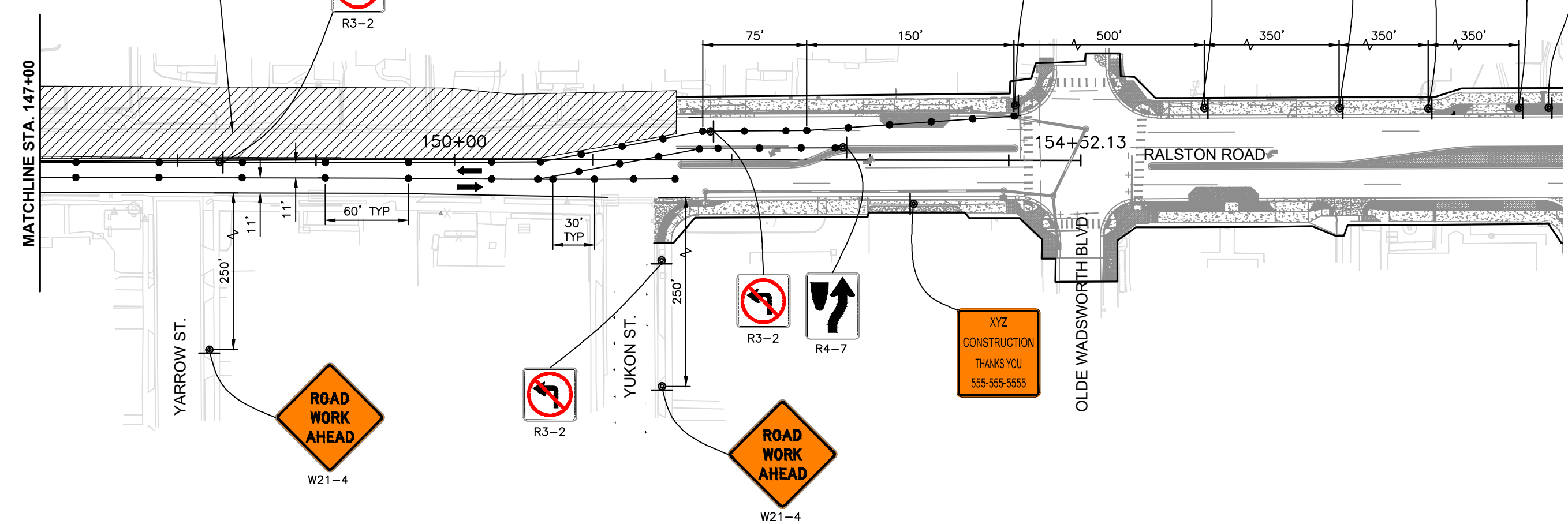
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CITY OF ARVADA
PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD
ARVADA, CO, 80002

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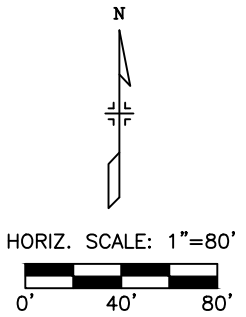
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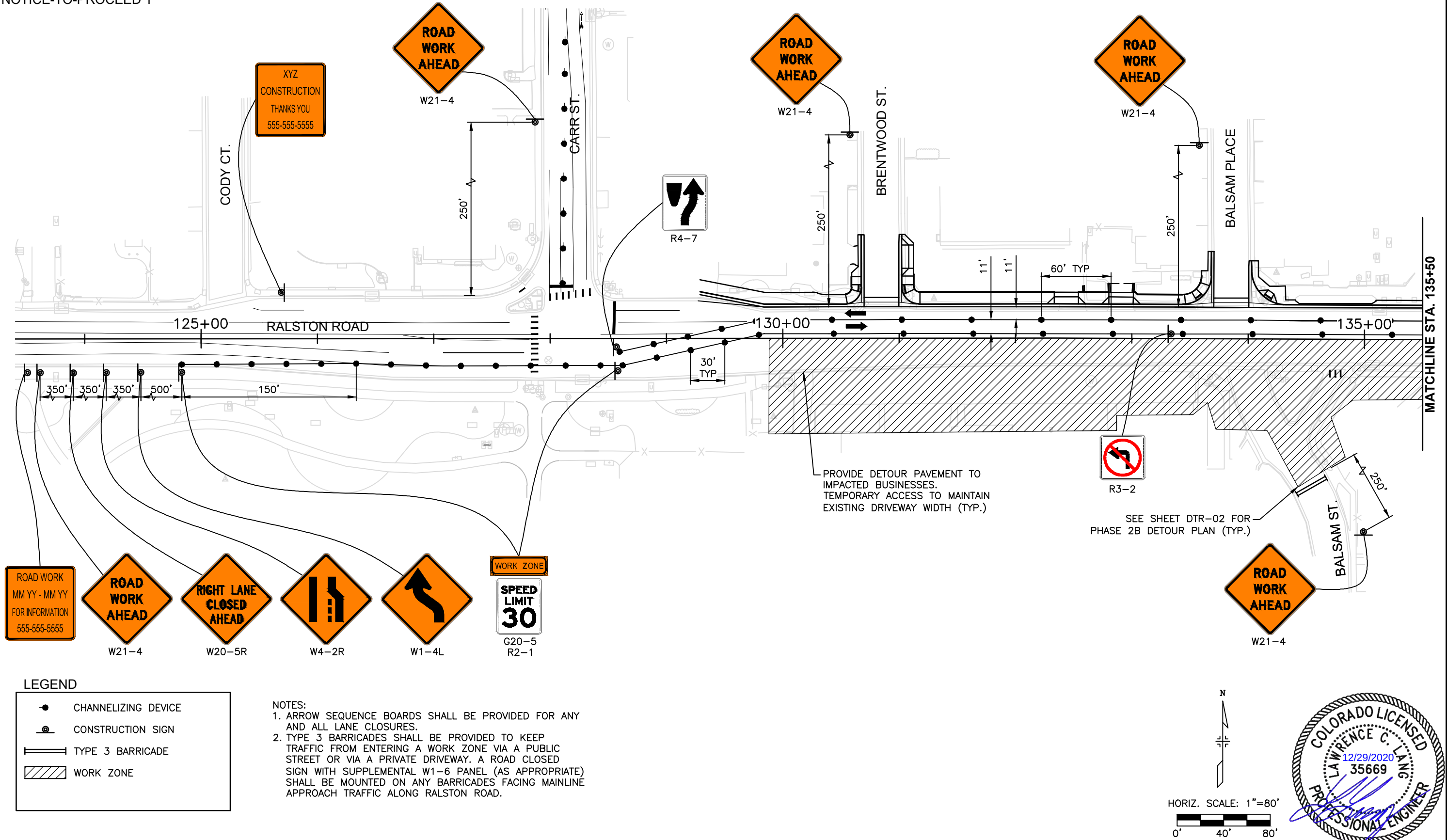
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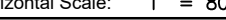
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⦿	CONSTRUCTION SIGN
▬▬▬	TYPE 3 BARRICADE
▨▨▨	WORK ZONE

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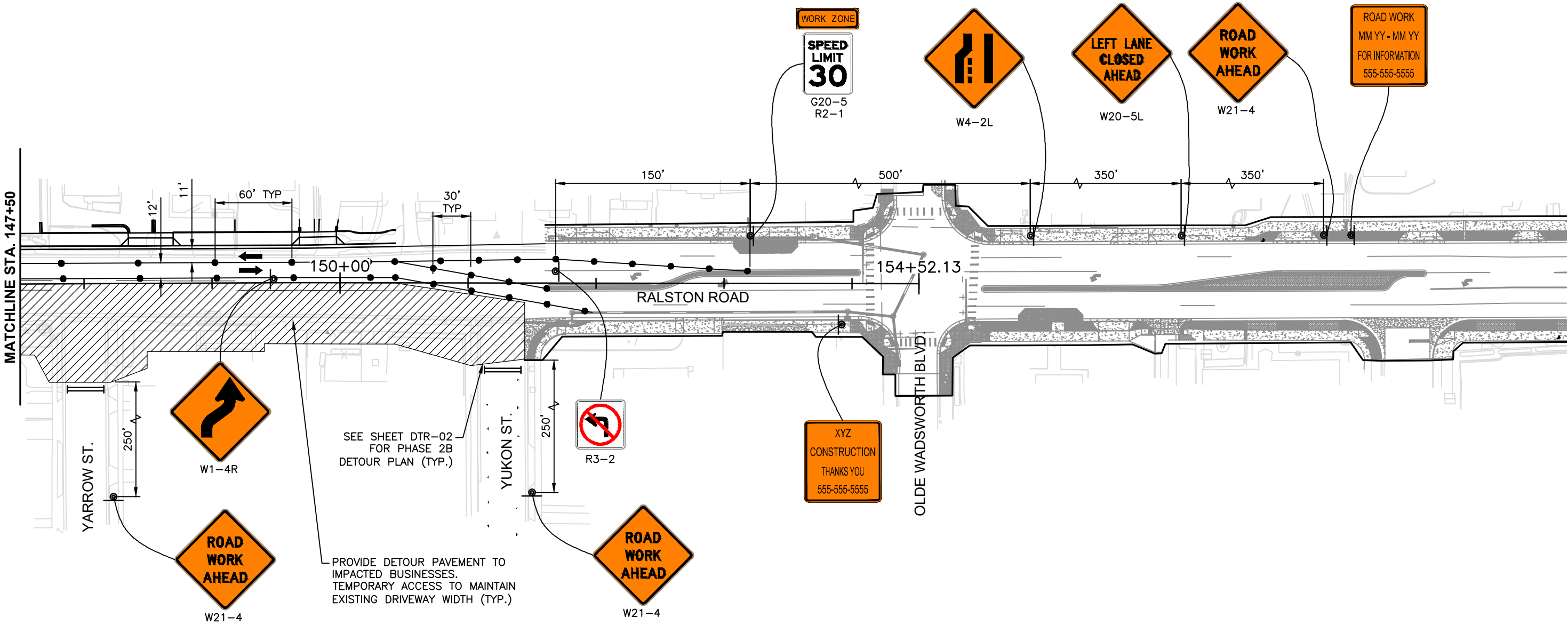
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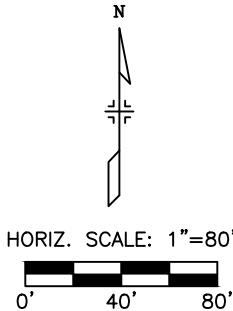
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LEGEND

●	CHANNELIZING DEVICE
⦿	CONSTRUCTION SIGN
▬	TYPE 3 BARRICADE
▨	WORK ZONE

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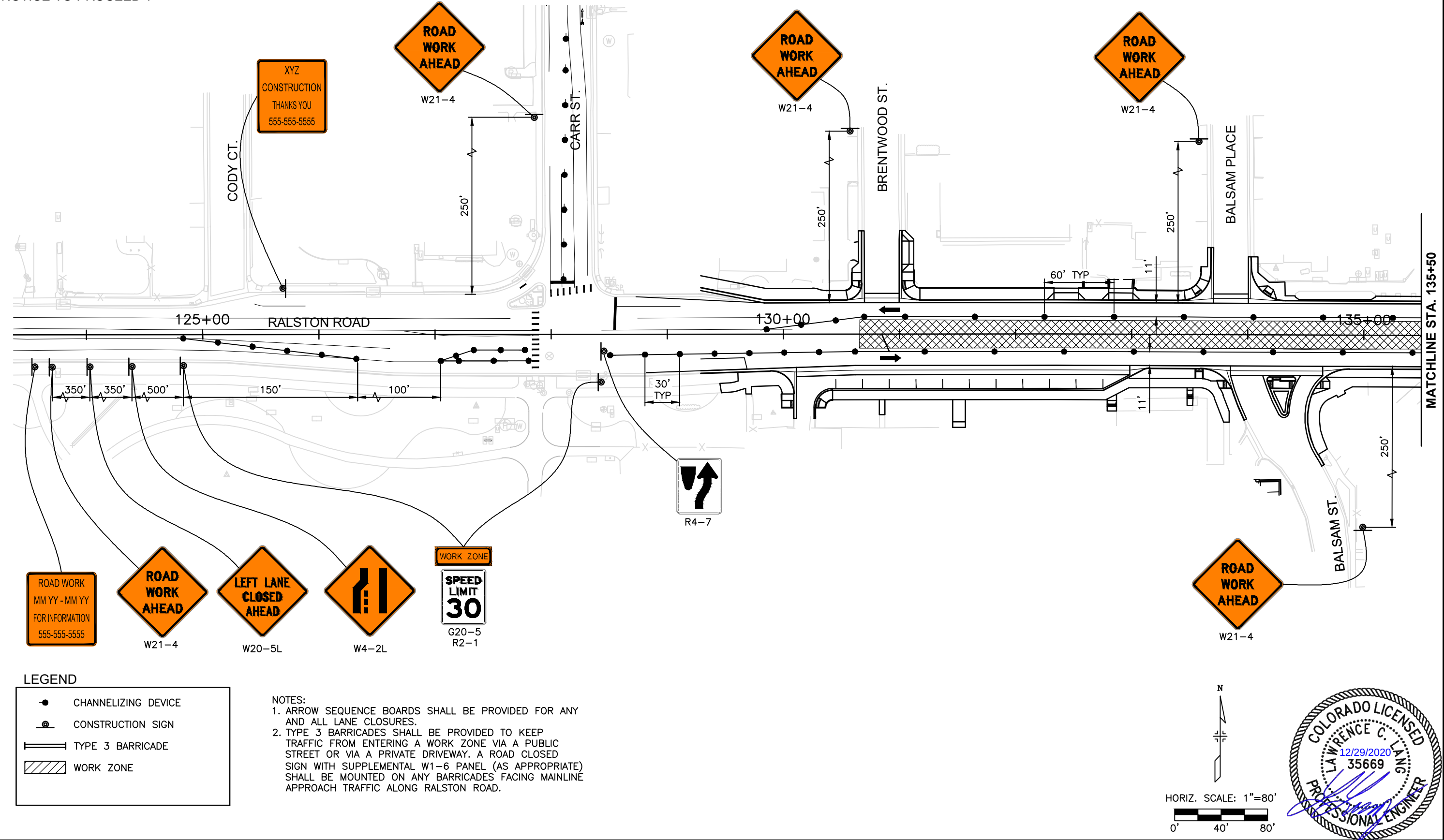


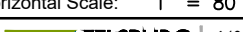
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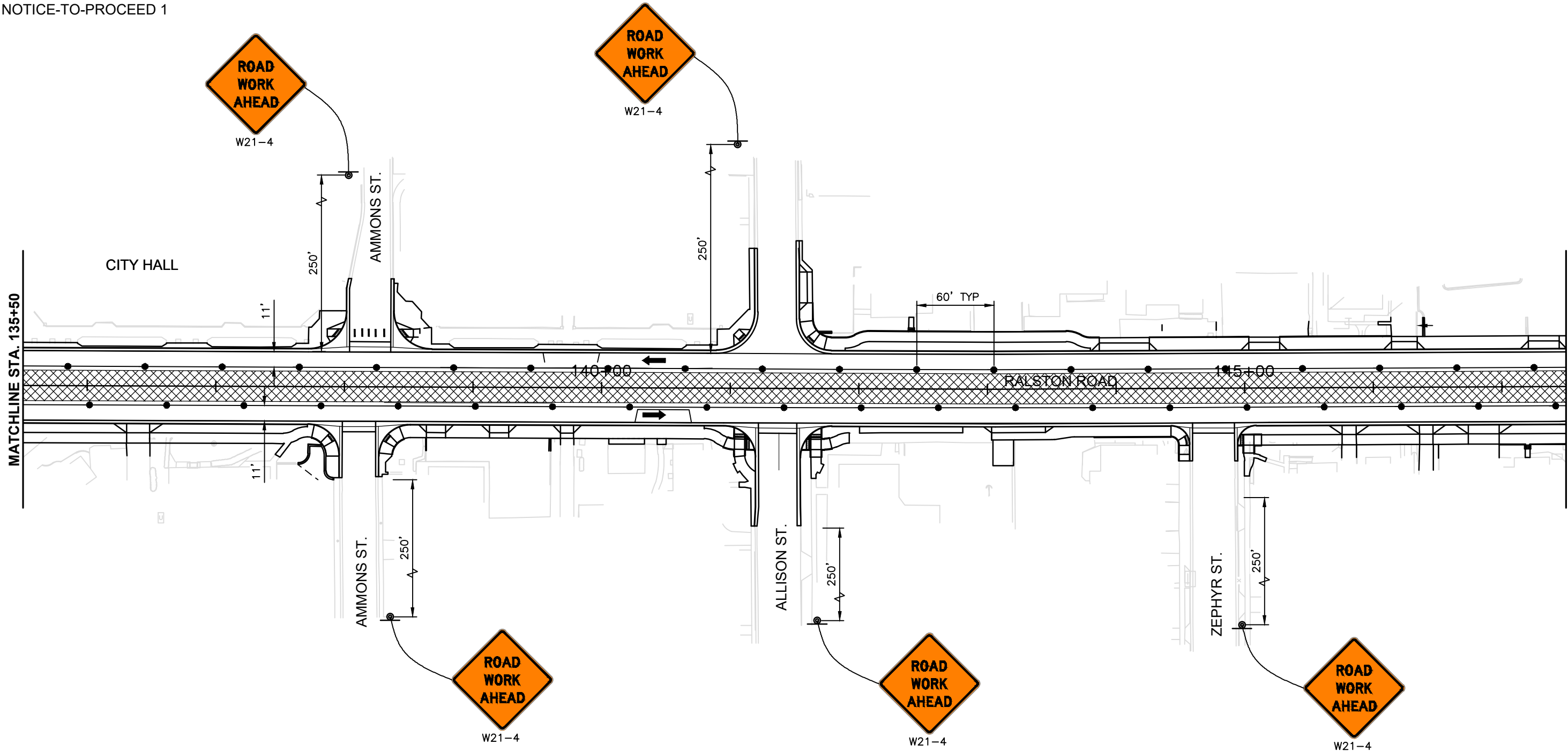
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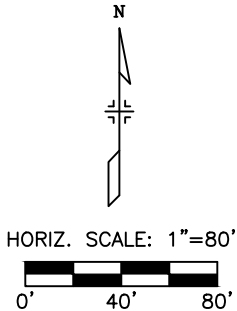
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LEGEND

	CHANNELIZING DEVICE
	CONSTRUCTION SIGN
	TYPE 3 BARRICADE
	WORK ZONE

- NOTES:
1. ARROW SEQUENCE BOARDS SHALL BE PROVIDED FOR ANY AND ALL LANE CLOSURES.
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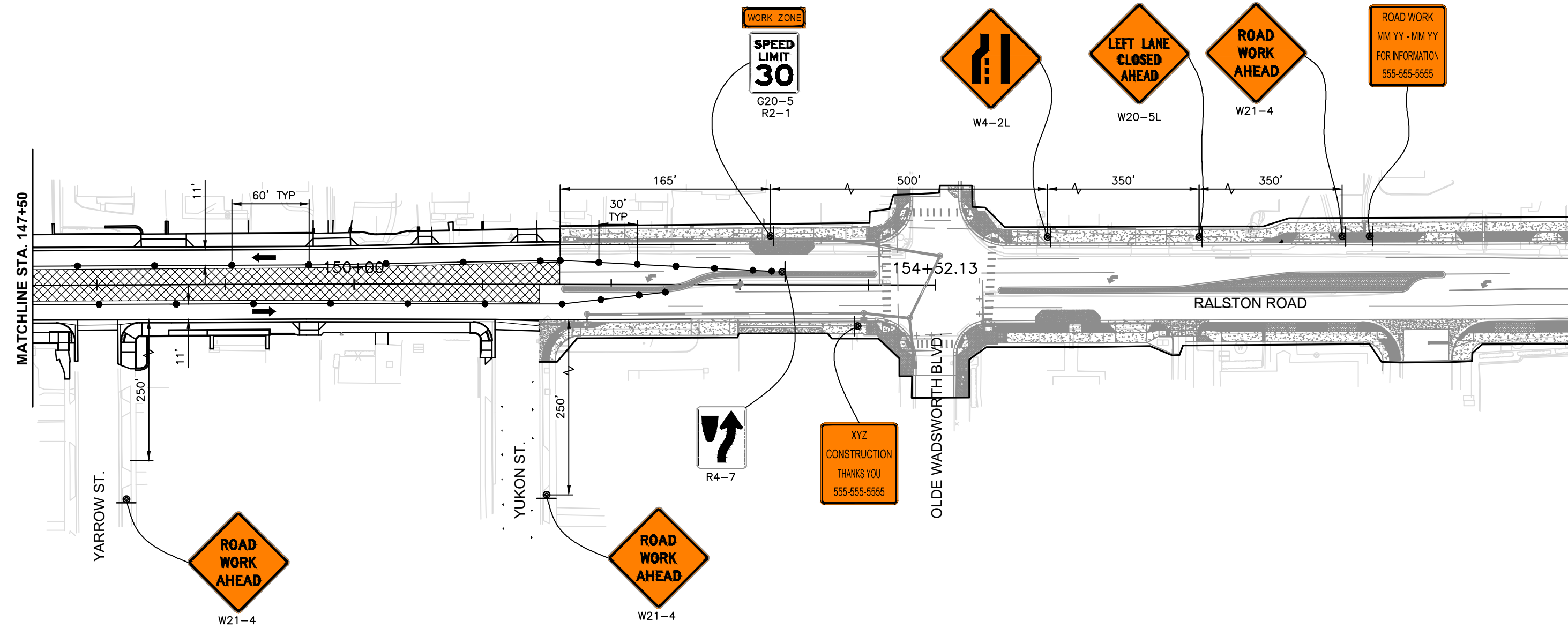
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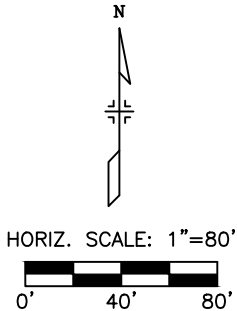
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LEGEND

	CHANNELIZING DEVICE
	CONSTRUCTION SIGN
	TYPE 3 BARRICADE
	WORK ZONE

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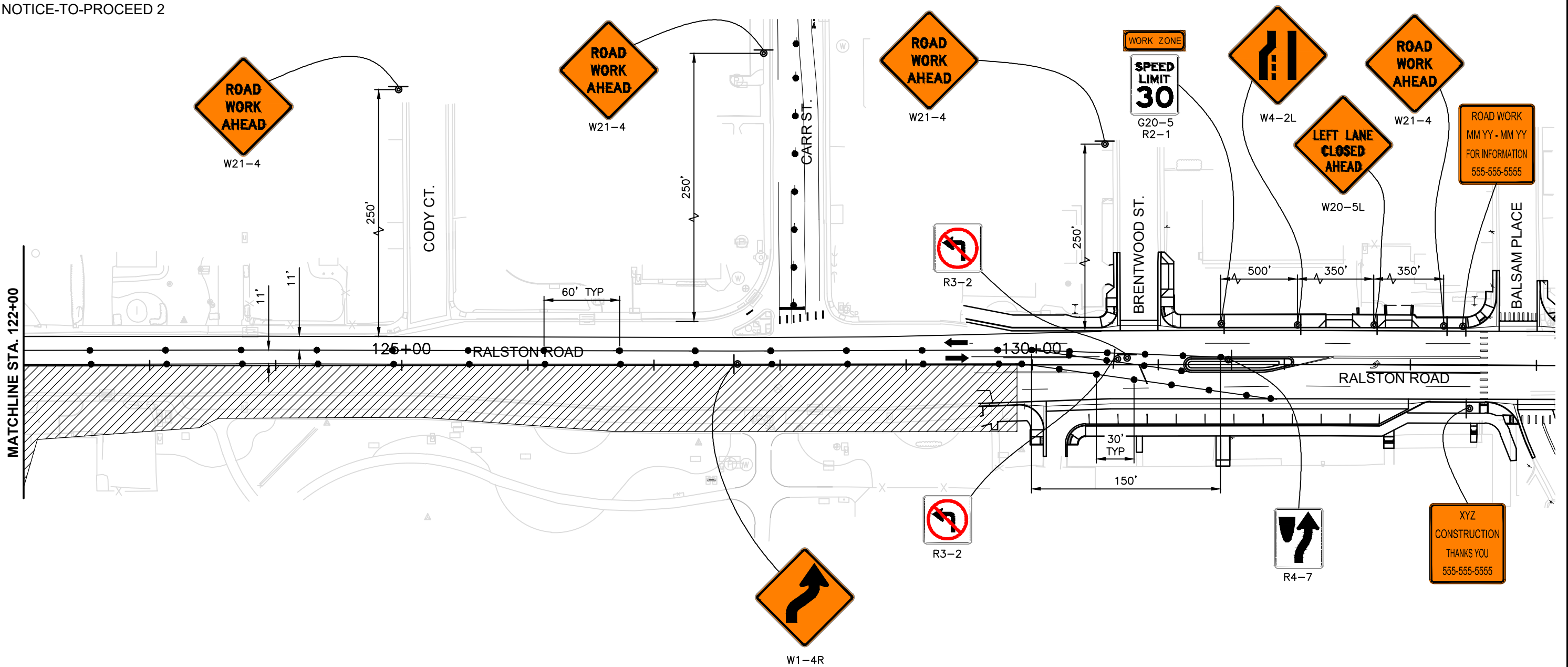
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ARVADA, CO, 80002

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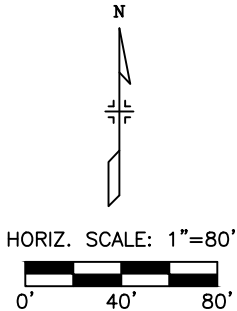
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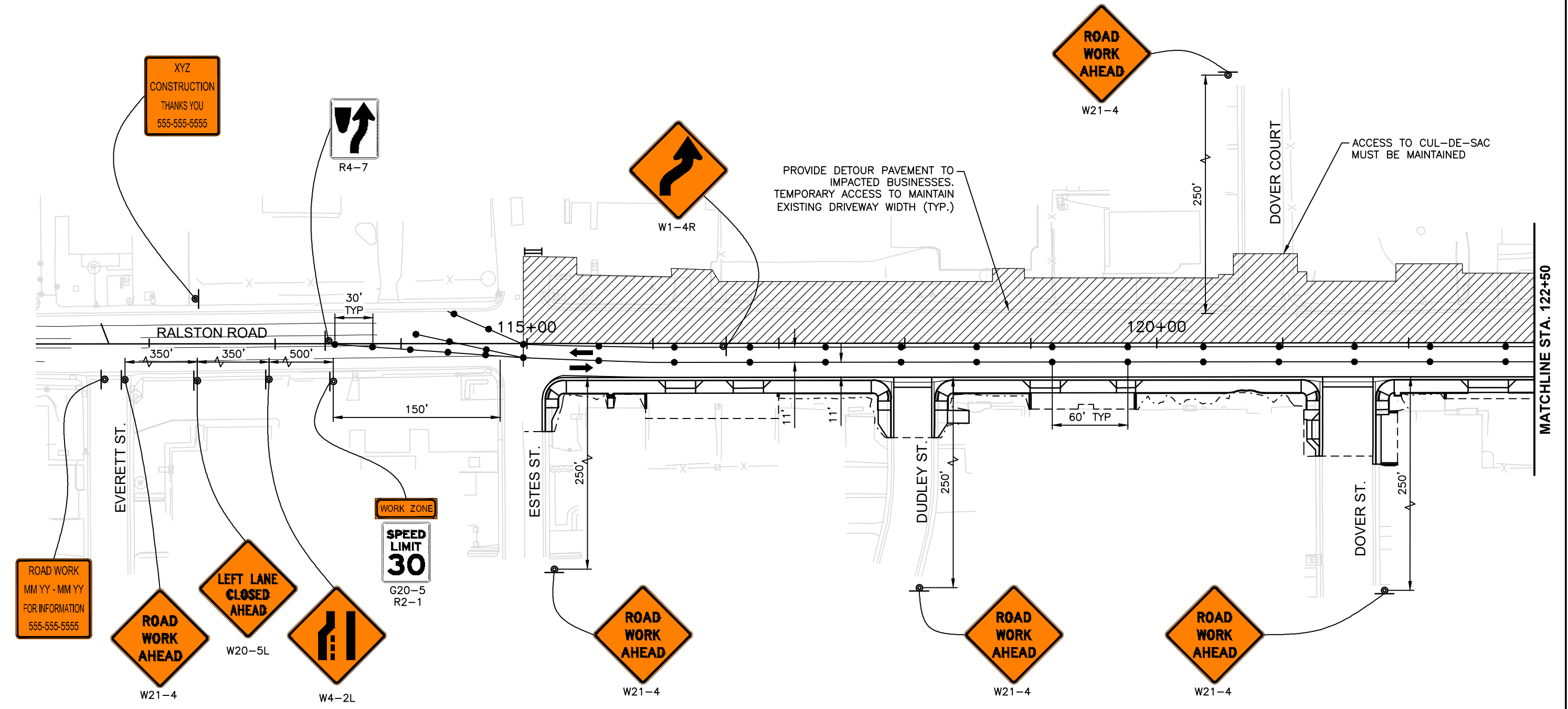
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	TYPE 3 BARRICADE
	WORK ZONE

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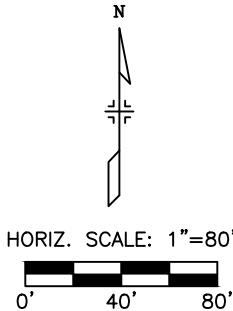
NOTICE-TO-PROCEED 2



LEGEND

	CHANNELIZING DEVICE
	CONSTRUCTION SIGN
	TYPE 3 BARRICADE
	WORK ZONE

- NOTES:
1. ARROW SEQUENCE BOARDS SHALL BE PROVIDED FOR ANY AND ALL LANE CLOSURES.
 2. TYPE 3 BARRICADES SHALL BE PROVIDED TO KEEP TRAFFIC FROM ENTERING A WORK ZONE VIA A PUBLIC STREET OR VIA A PRIVATE DRIVEWAY. A ROAD CLOSED SIGN WITH SUPPLEMENTAL W1-6 PANEL (AS APPROPRIATE) SHALL BE MOUNTED ON ANY BARRICADES FACING MAINLINE APPROACH TRAFFIC ALONG RALSTON ROAD.



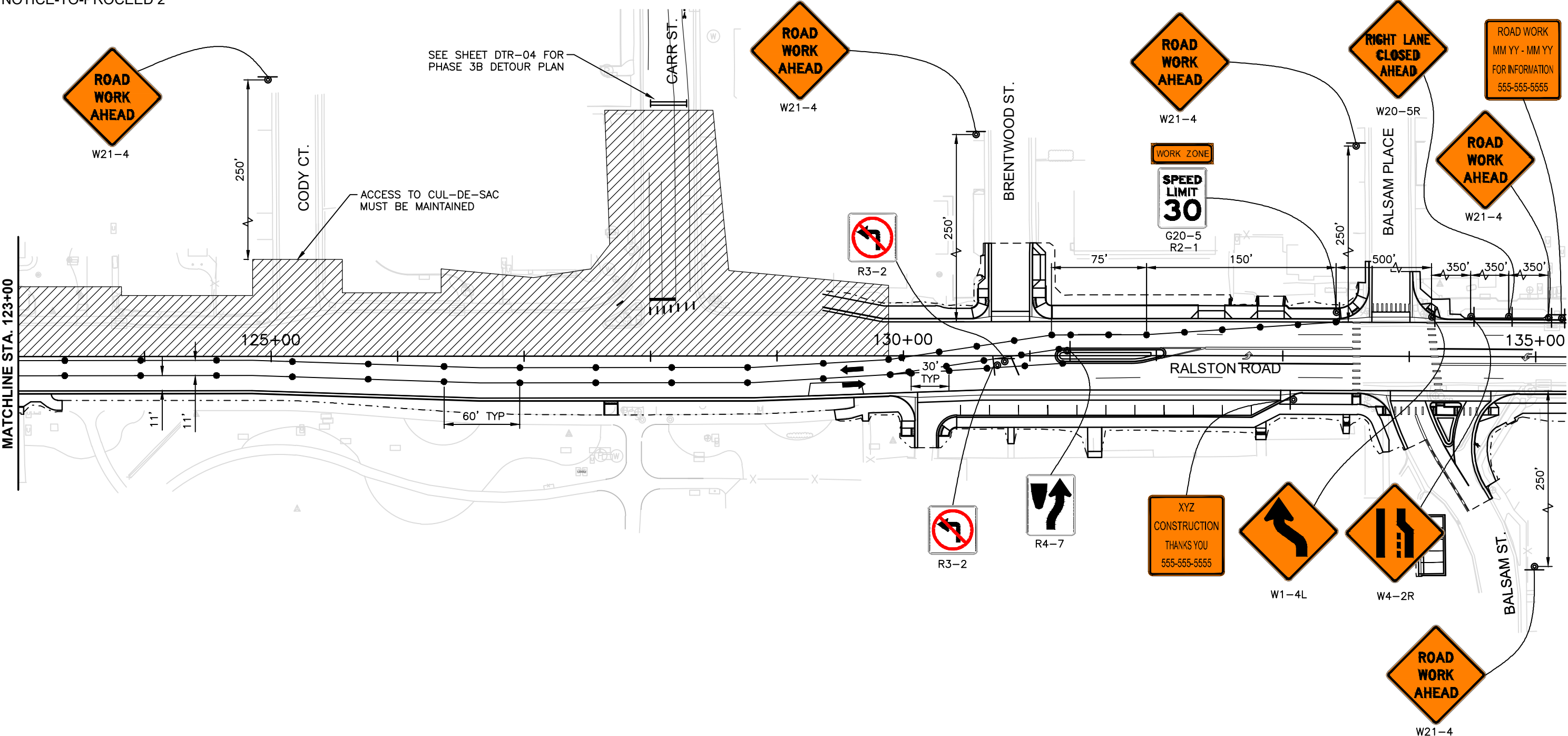
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R-X	Date	Comments	Initials

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8101 RALSTON ROAD
ARVADA, CO, 80002

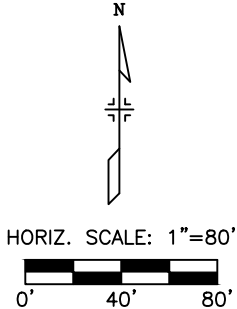
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No Revisions:	Designer: JHH	Structure Numbers		18-ST-40
Revised:	Detailer: BCN			
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LEGEND

	CHANNELIZING DEVICE
	CONSTRUCTION SIGN
	TYPE 3 BARRICADE
	WORK ZONE

- NOTES:
1. ARROW SEQUENCE BOARDS SHALL BE PROVIDED FOR ANY AND ALL LANE CLOSURES.
 2. TYPE 3 BARRICADES SHALL BE PROVIDED TO KEEP TRAFFIC FROM ENTERING A WORK ZONE VIA A PUBLIC STREET OR VIA A PRIVATE DRIVEWAY. A ROAD CLOSED SIGN WITH SUPPLEMENTAL W1-6 PANEL (AS APPROPRIATE) SHALL BE MOUNTED ON ANY BARRICADES FACING MAINLINE APPROACH TRAFFIC ALONG RALSTON ROAD.



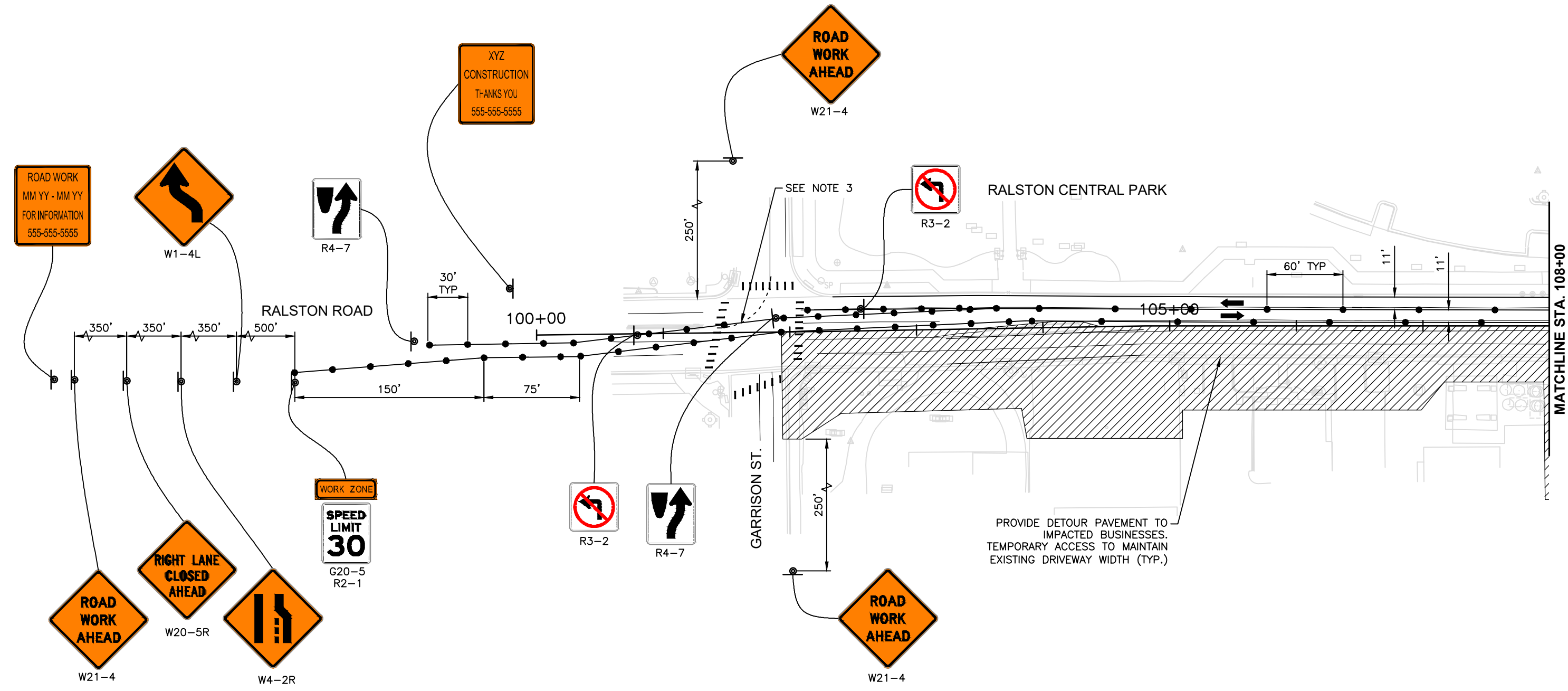
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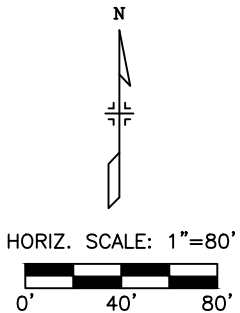
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Revised:	Designer: JHH	Structure Numbers		
	Detailer: BCN			
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LEGEND

●	CHANNELIZING DEVICE
●	CONSTRUCTION SIGN
	TYPE 3 BARRICADE
	WORK ZONE

- NOTES:
1. ARROW SEQUENCE BOARDS SHALL BE PROVIDED FOR ANY AND ALL LANE CLOSURES.
 2. TYPE 3 BARRICADES SHALL BE PROVIDED TO KEEP TRAFFIC FROM ENTERING A WORK ZONE VIA A PUBLIC STREET OR VIA A PRIVATE DRIVEWAY. A ROAD CLOSED SIGN WITH SUPPLEMENTAL W1-6 PANEL (AS APPROPRIATE) SHALL BE MOUNTED ON ANY BARRICADES FACING MAINLINE APPROACH TRAFFIC ALONG RALSTON ROAD.
 3. TRANSITION STRIPING SHOULD BE PROVIDED THROUGH GARRISON STREET INTERSECTION IN LIEU OF CHANNELIZING DEVICES.

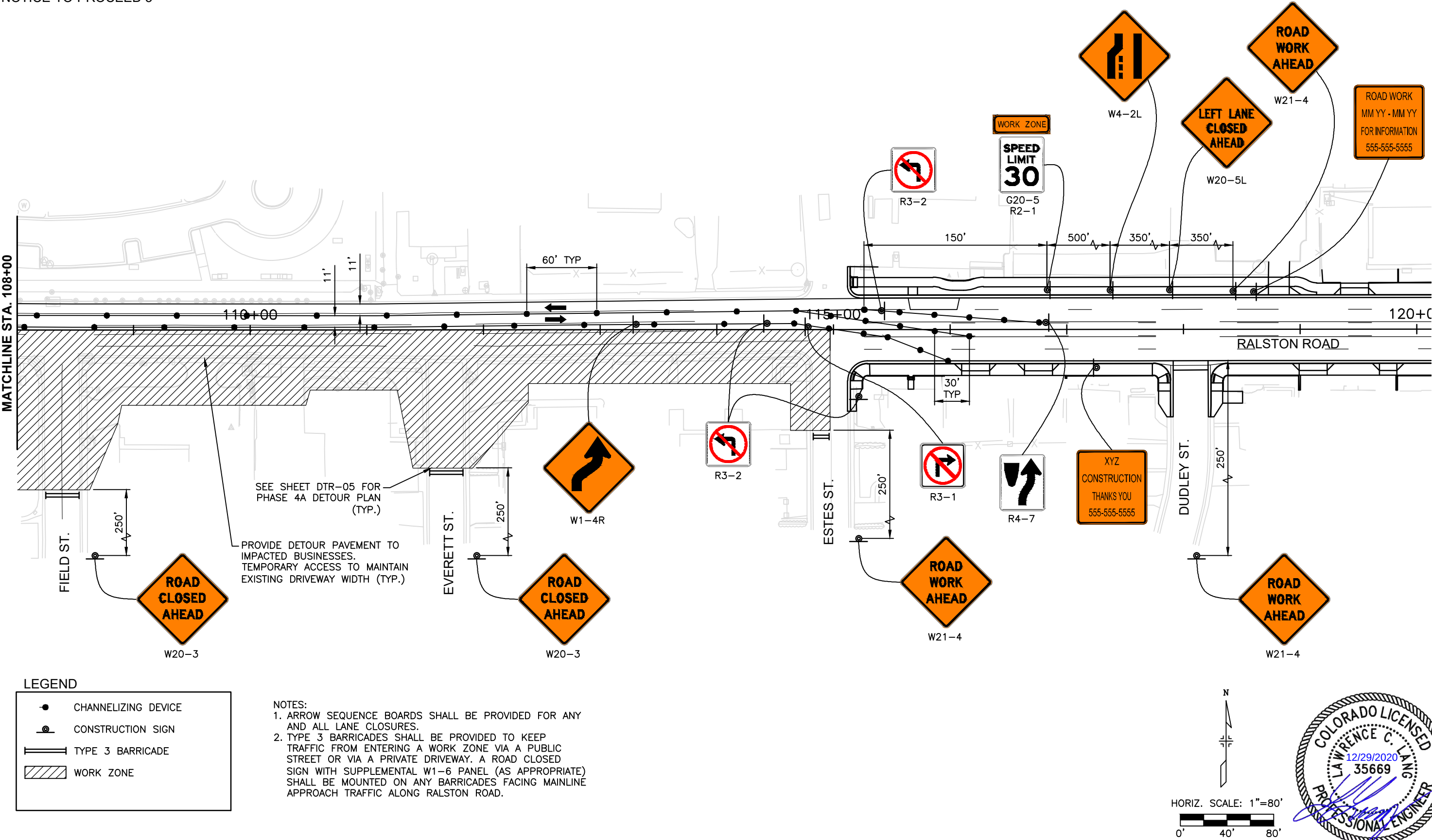


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As Constructed	RALSTON RD - YUKON ST TO GARRISON ST CONSTRUCTION TRAFFIC CONTROL PLAN PHASE 4A - GARRISON TO ESTES STREET (1 OF 2)			Project No./Code
No Revisions:				18-ST-40
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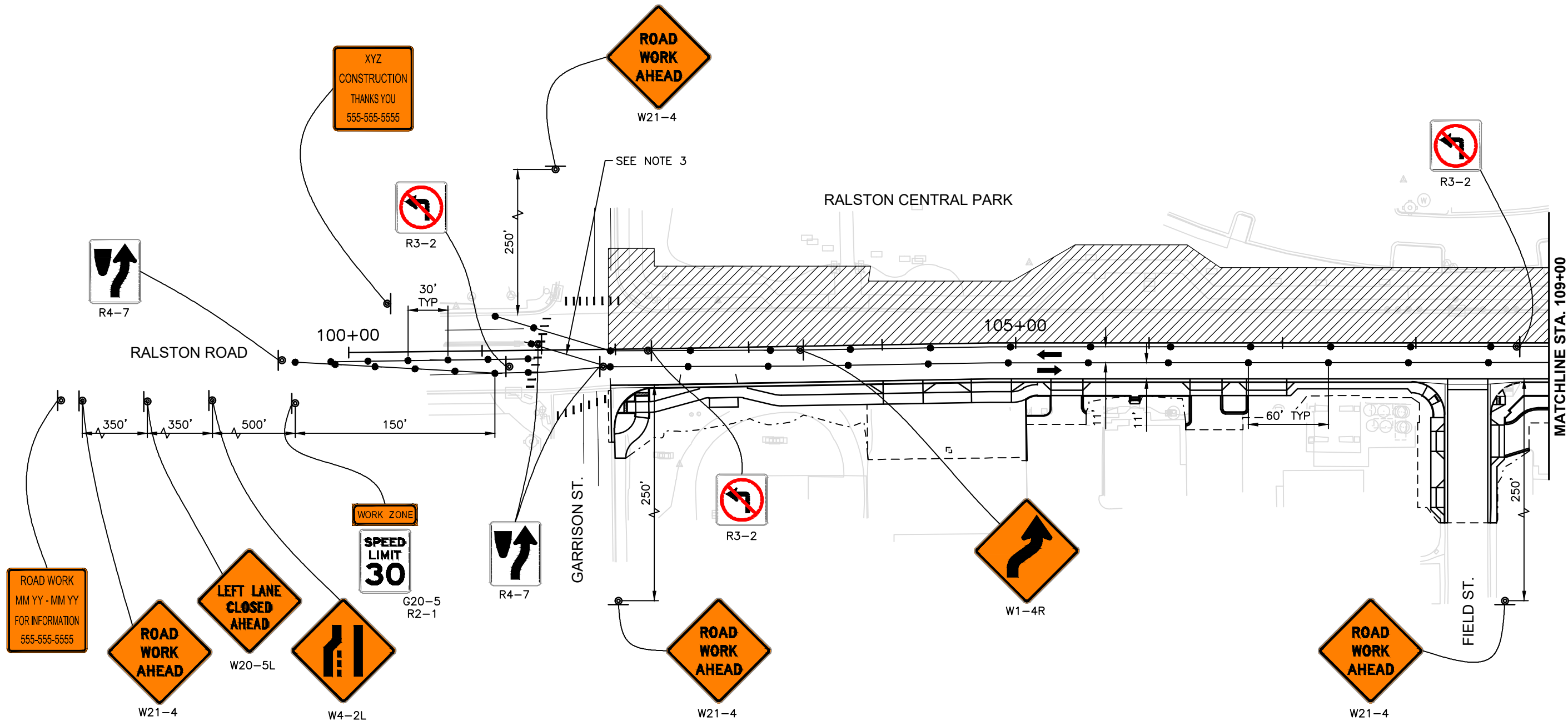
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8101 RALSTON ROAD
ARVADA, CO, 80002

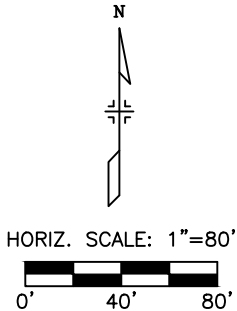
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LEGEND

	CHANNELIZING DEVICE
	CONSTRUCTION SIGN
	TYPE 3 BARRICADE
	WORK ZONE

- NOTES:
1. ARROW SEQUENCE BOARDS SHALL BE PROVIDED FOR ANY AND ALL LANE CLOSURES.
 2. TYPE 3 BARRICADES SHALL BE PROVIDED TO KEEP TRAFFIC FROM ENTERING A WORK ZONE VIA A PUBLIC STREET OR VIA A PRIVATE DRIVEWAY. A ROAD CLOSED SIGN WITH SUPPLEMENTAL W1-6 PANEL (AS APPROPRIATE) SHALL BE MOUNTED ON ANY BARRICADES FACING MAINLINE APPROACH TRAFFIC ALONG RALSTON ROAD.
 3. TRANSITION STRIPING SHOULD BE PROVIDED THROUGH GARRISON STREET INTERSECTION IN LIEU OF CHANNELIZING DEVICES.

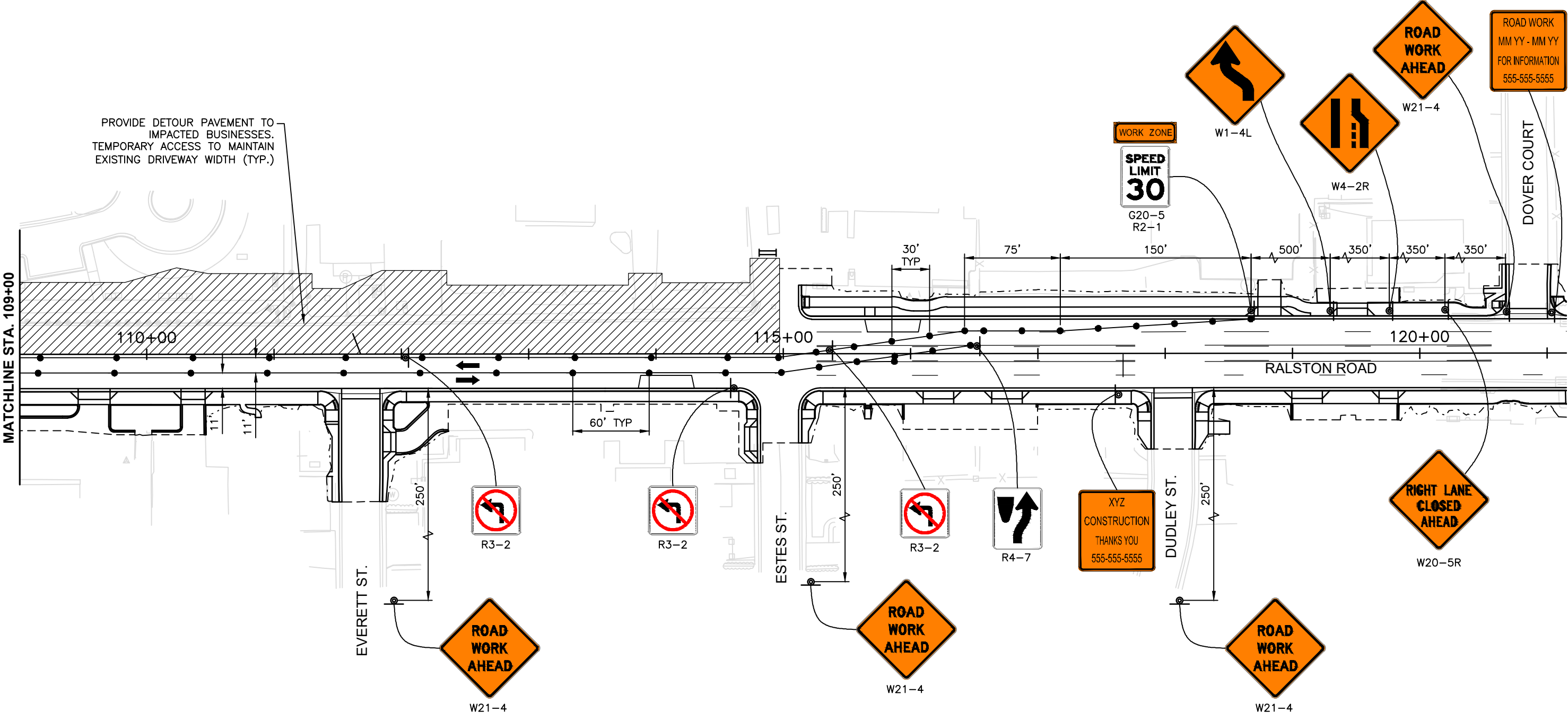


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R-X	Date	Comments	Initials

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8101 RALSTON ROAD
ARVADA, CO, 80002

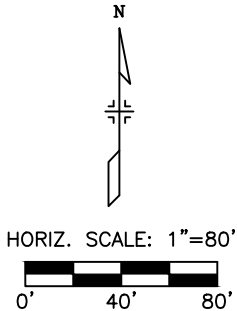
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Revised:	Detailer: BCN			
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LEGEND

	CHANNELIZING DEVICE
	CONSTRUCTION SIGN
	TYPE 3 BARRICADE
	WORK ZONE

- NOTES:
1. ARROW SEQUENCE BOARDS SHALL BE PROVIDED FOR ANY AND ALL LANE CLOSURES.
 2. TYPE 3 BARRICADES SHALL BE PROVIDED TO KEEP TRAFFIC FROM ENTERING A WORK ZONE VIA A PUBLIC STREET OR VIA A PRIVATE DRIVEWAY. A ROAD CLOSED SIGN WITH SUPPLEMENTAL W1-6 PANEL (AS APPROPRIATE) SHALL BE MOUNTED ON ANY BARRICADES FACING MAINLINE APPROACH TRAFFIC ALONG RALSTON ROAD.



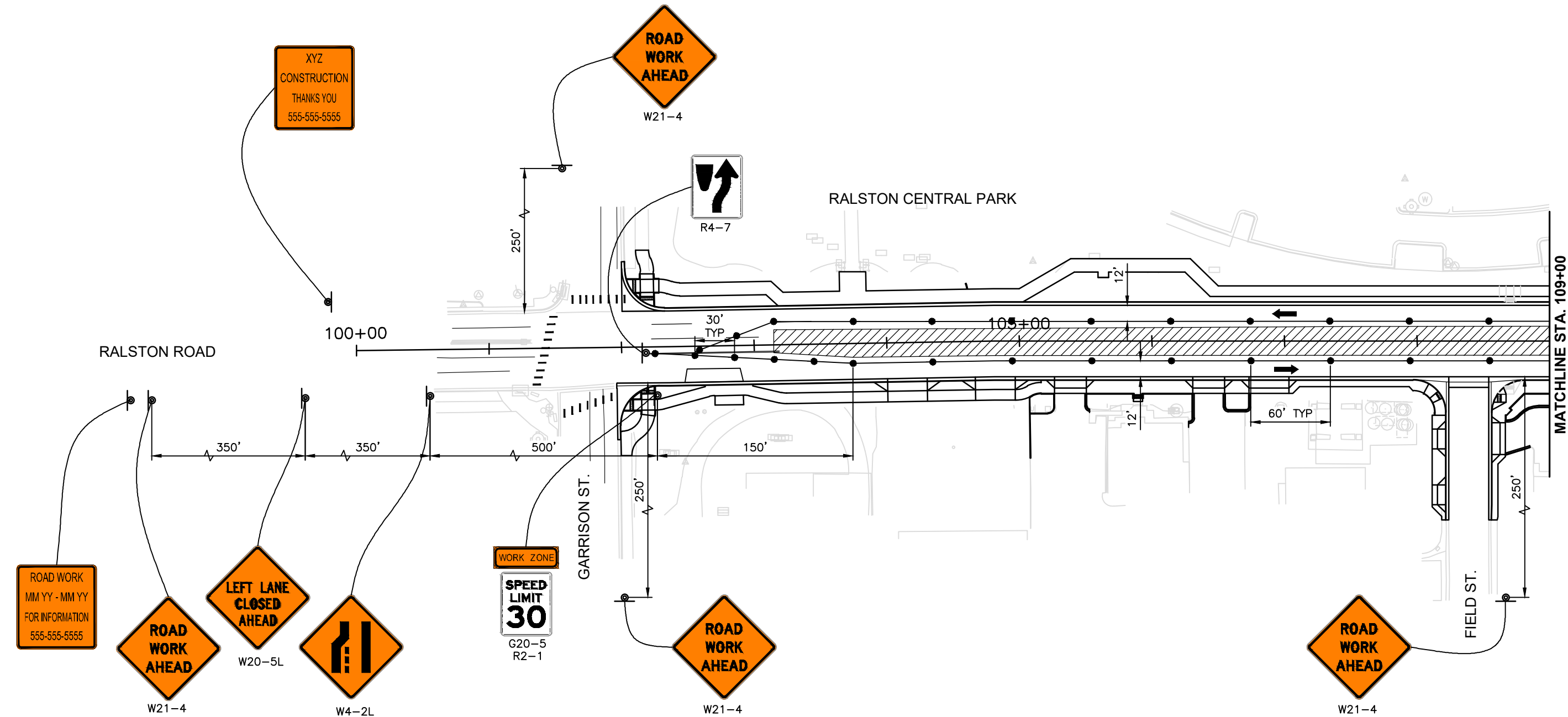
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R-X	Date	Comments	Initials

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8101 RALSTON ROAD
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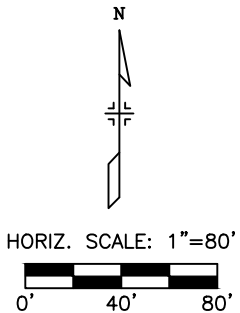
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LEGEND

	CHANNELIZING DEVICE
	CONSTRUCTION SIGN
	TYPE 3 BARRICADE
	WORK ZONE

- NOTES:
1. ARROW SEQUENCE BOARDS SHALL BE PROVIDED FOR ANY AND ALL LANE CLOSURES.
 2. TYPE 3 BARRICADES SHALL BE PROVIDED TO KEEP TRAFFIC FROM ENTERING A WORK ZONE VIA A PUBLIC STREET OR VIA A PRIVATE DRIVEWAY. A ROAD CLOSED SIGN WITH SUPPLEMENTAL W1-6 PANEL (AS APPROPRIATE) SHALL BE MOUNTED ON ANY BARRICADES FACING MAINLINE APPROACH TRAFFIC ALONG RALSTON ROAD.



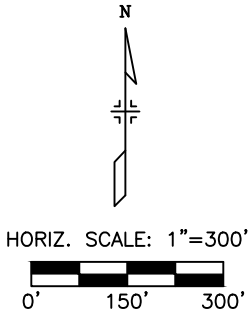
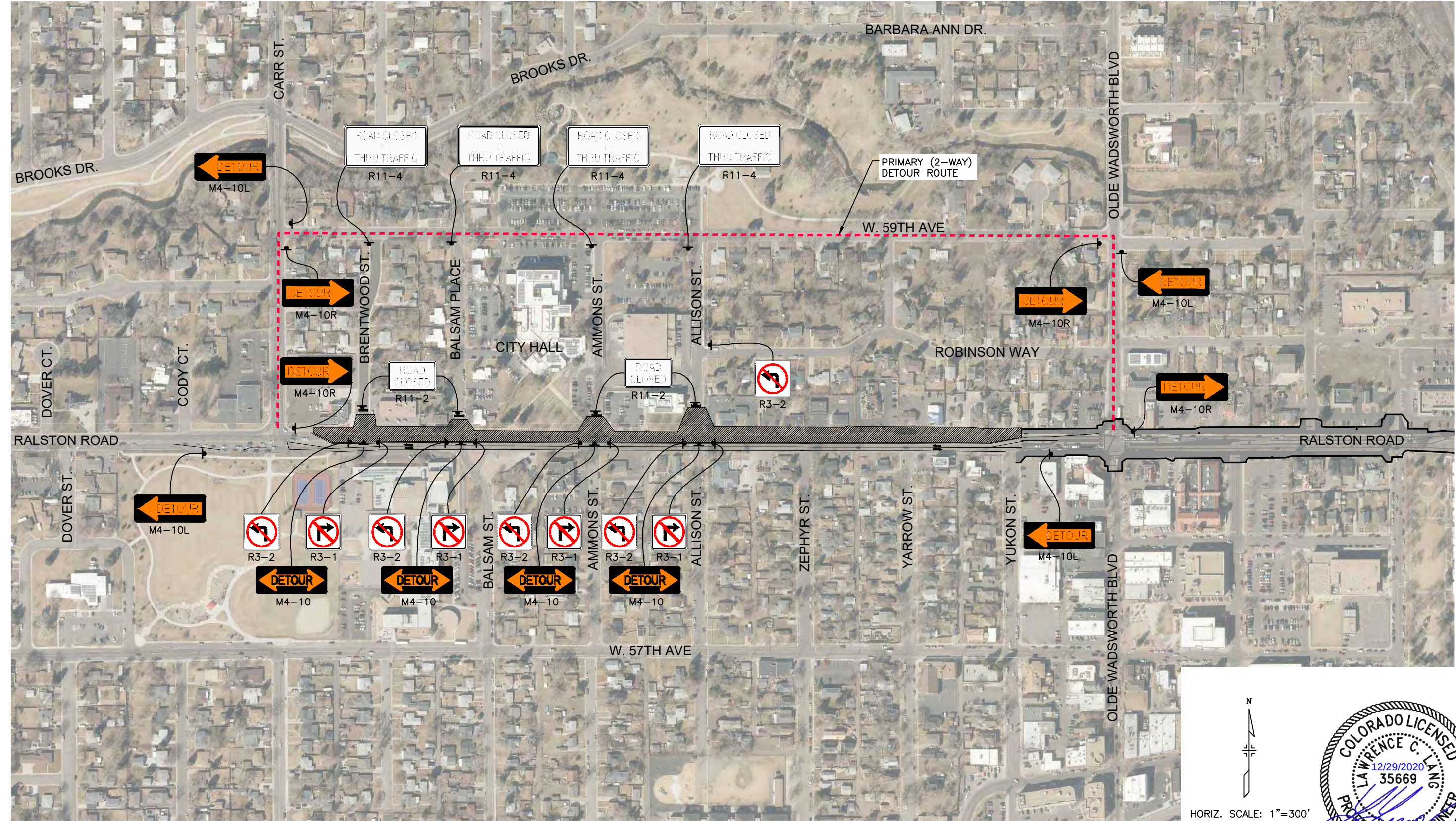
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- NOTES:



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FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Sheet Subset: TRAFFIC		Subset Sheets: PH-19 of 19		Sheet Number 414	



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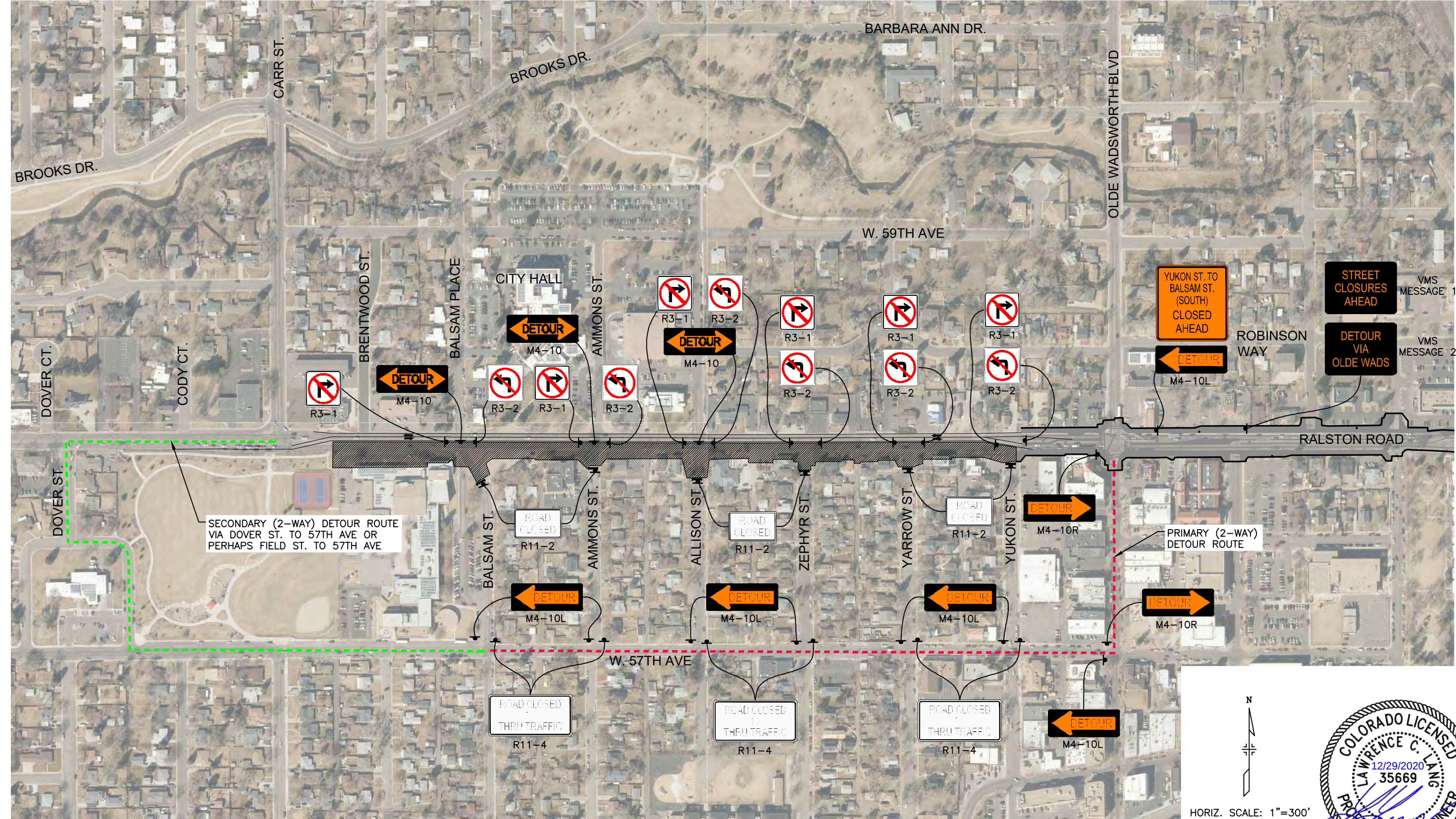
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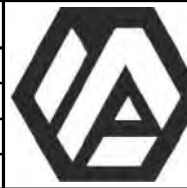
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PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

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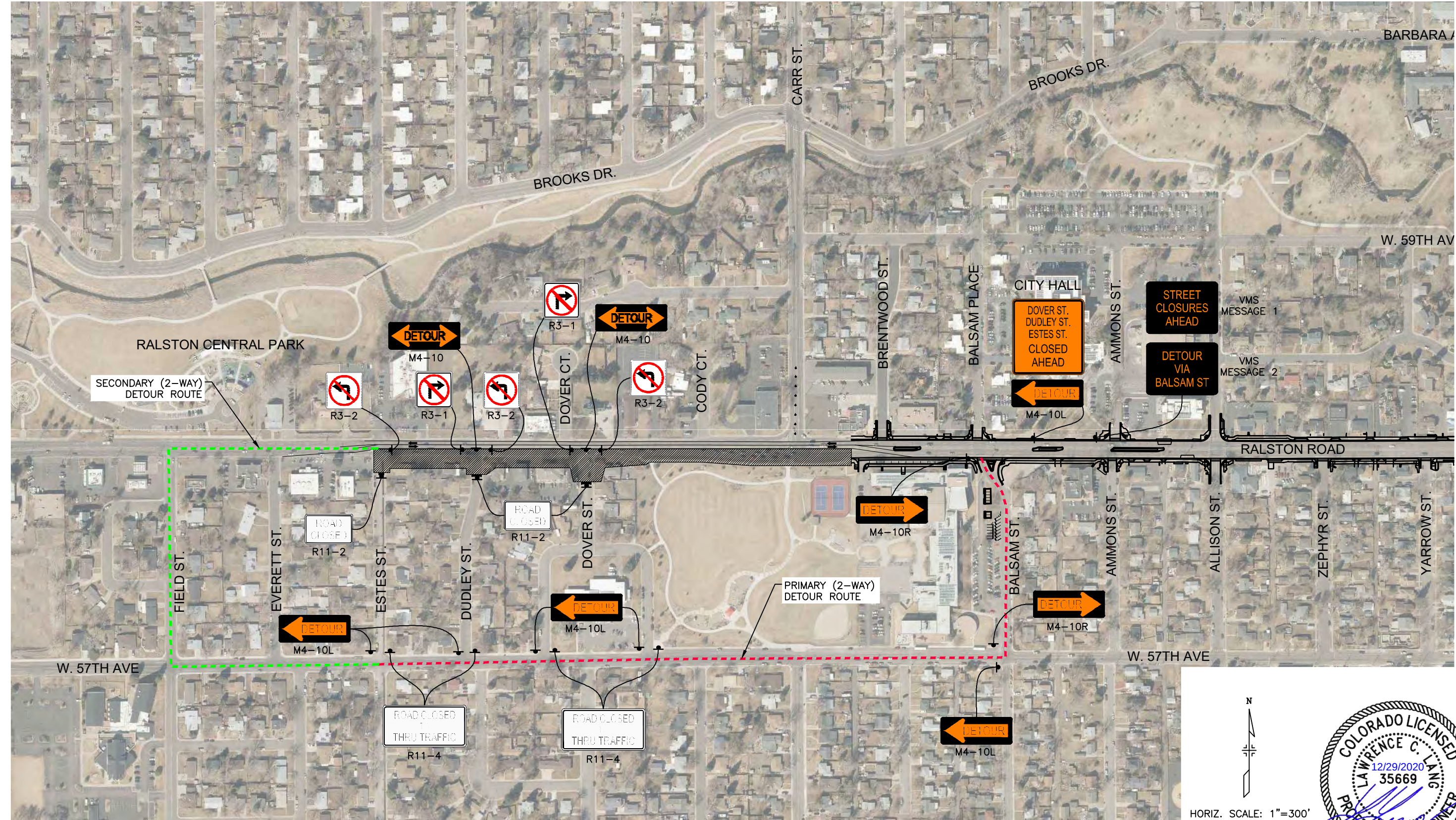
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8101 RALSTON ROAD
ARVADA, CO, 80002

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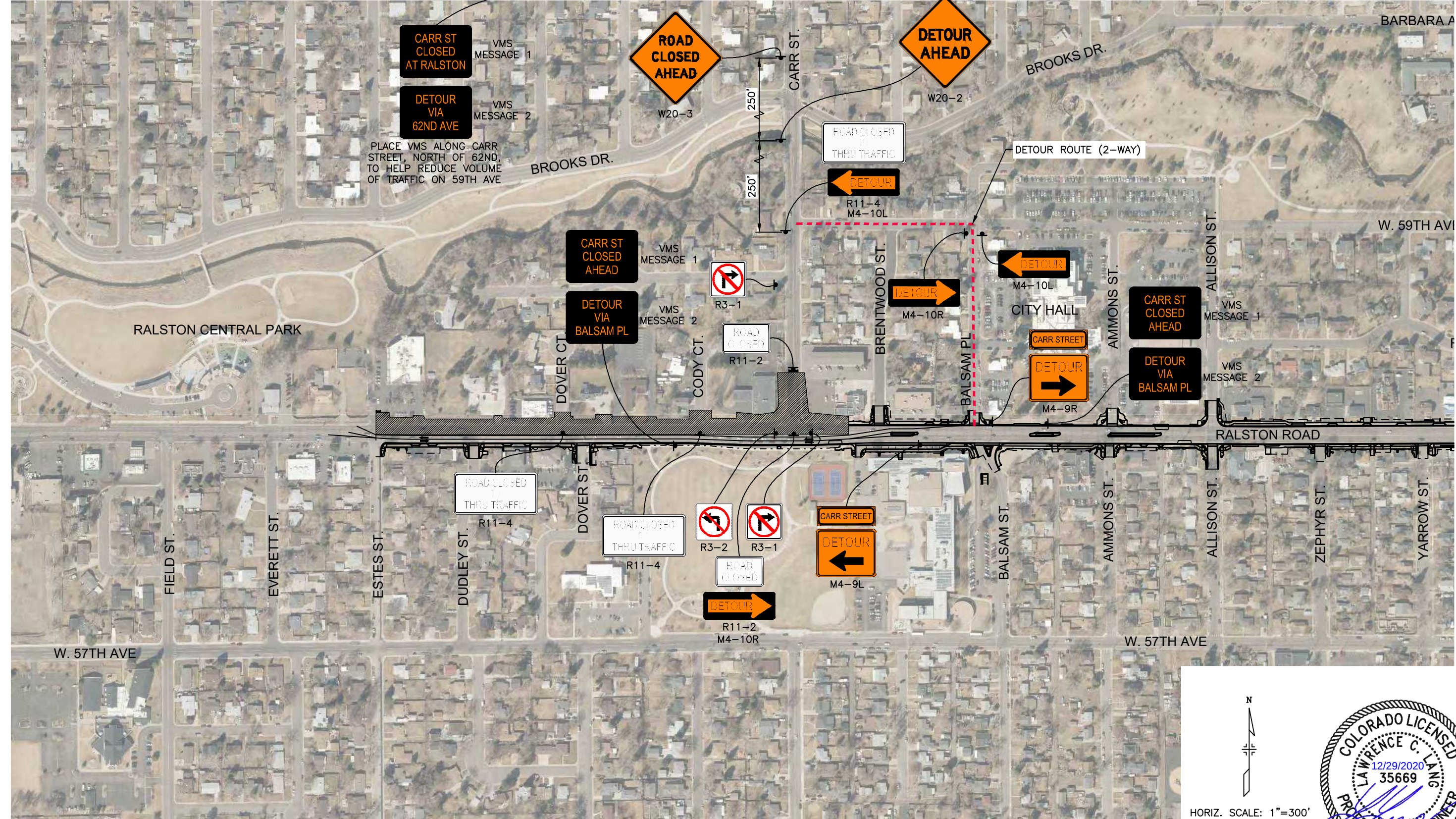
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CITY OF ARVADA
PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD
ARVADA, CO, 80002

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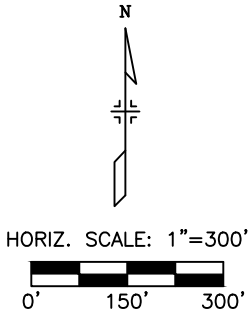
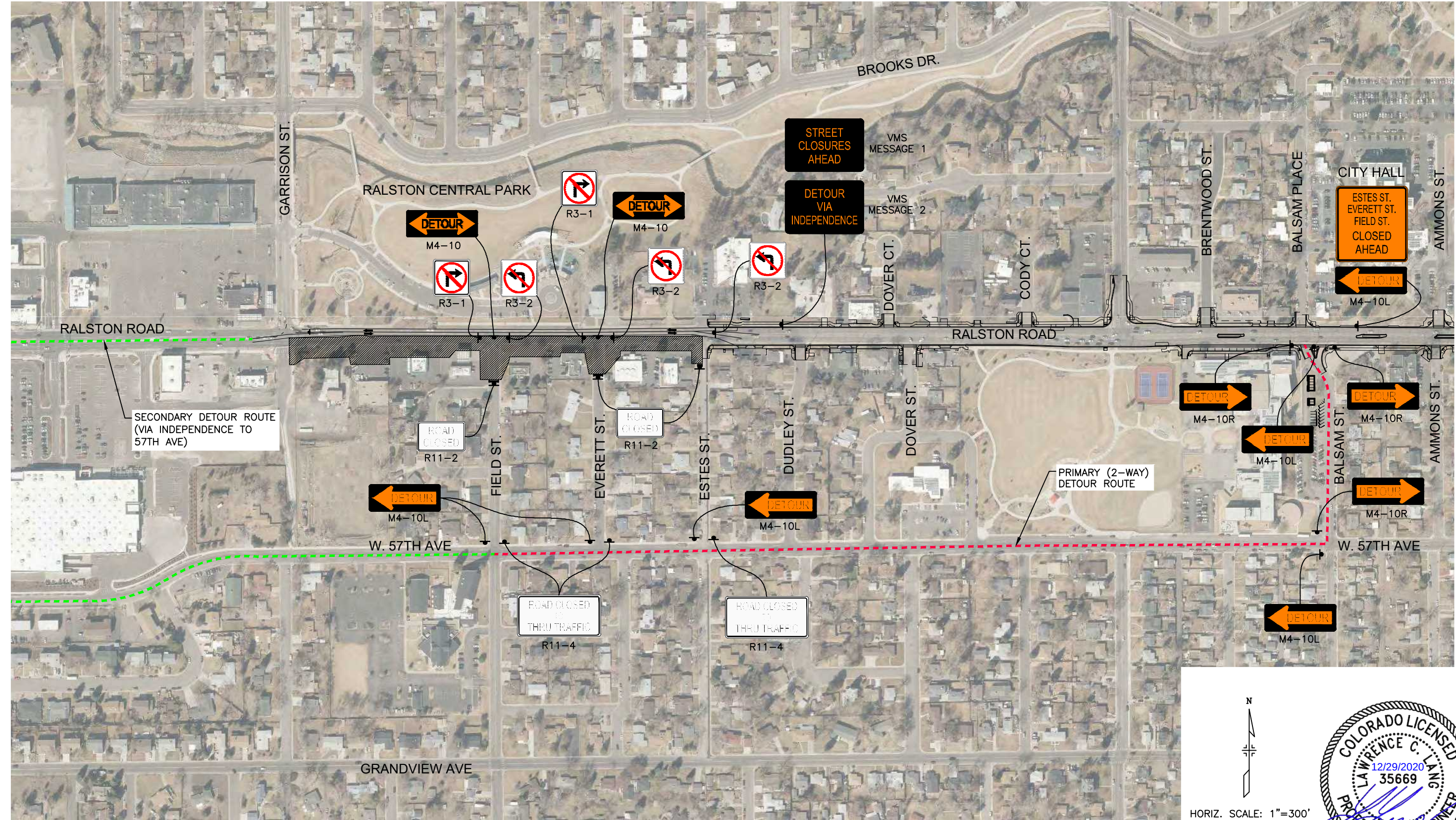
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CITY OF ARVADA
PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD
ARVADA, CO, 80002

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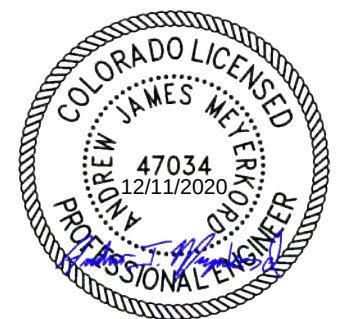
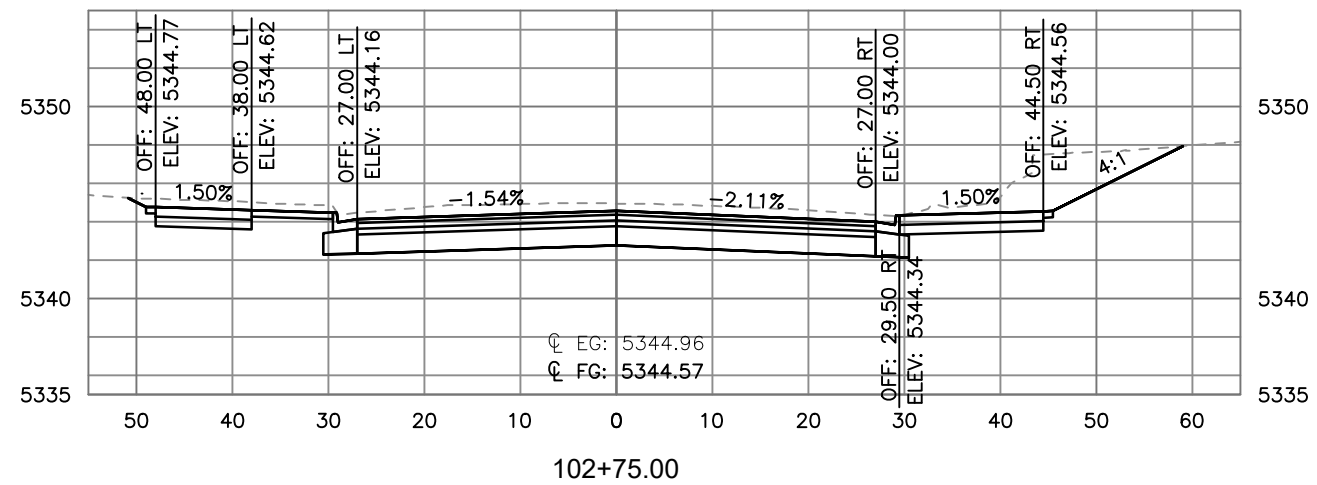
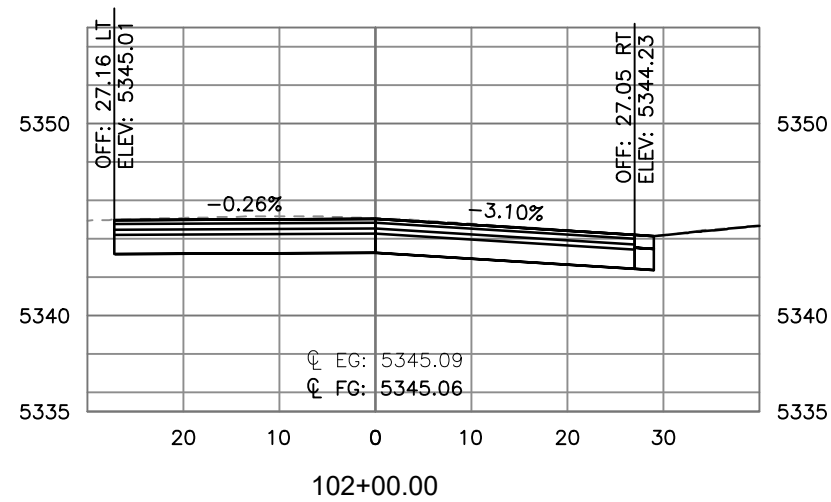
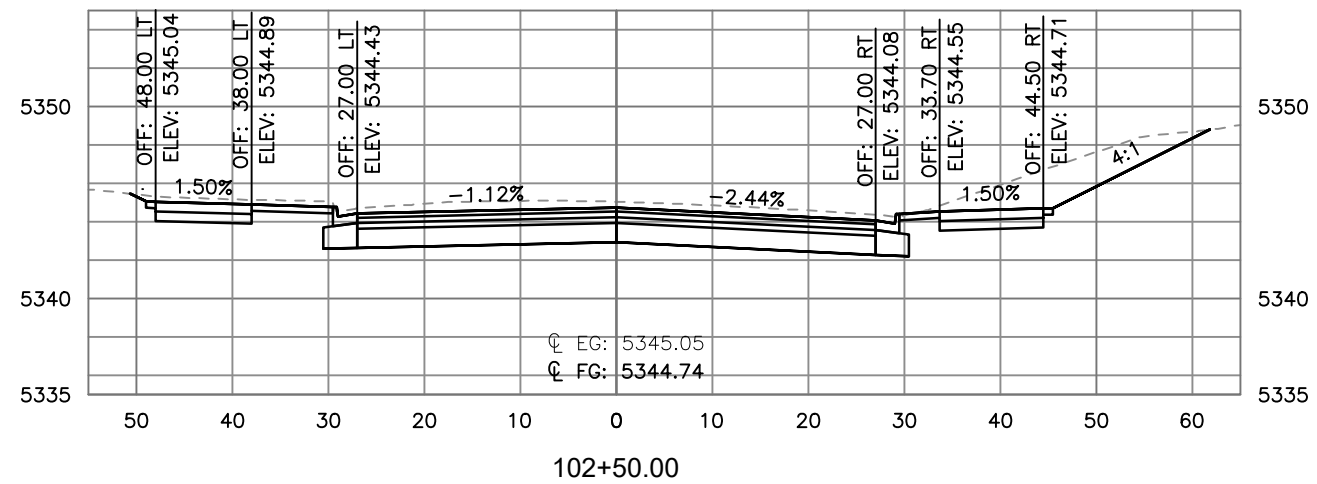
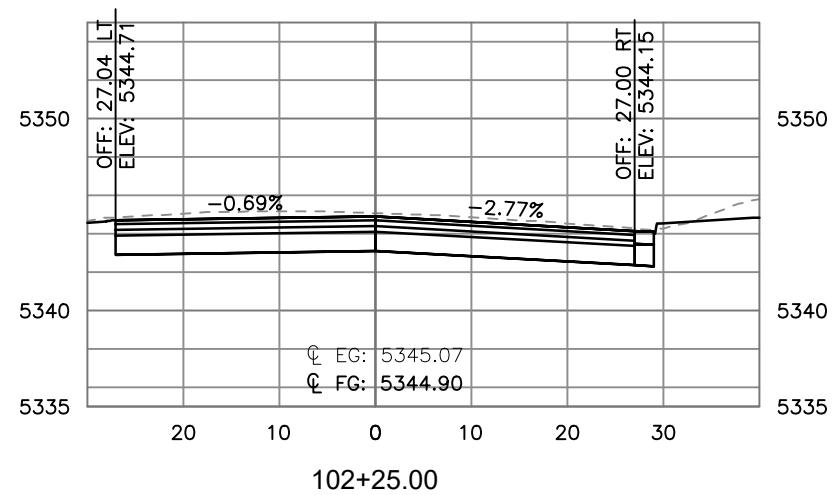
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8101 RALSTON ROAD
ARVADA, CO, 80002

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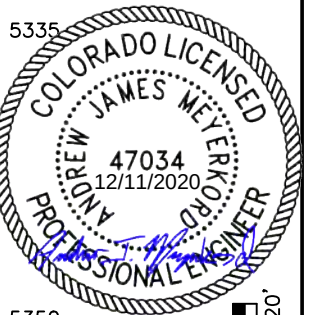
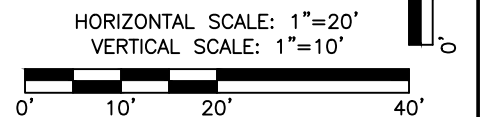
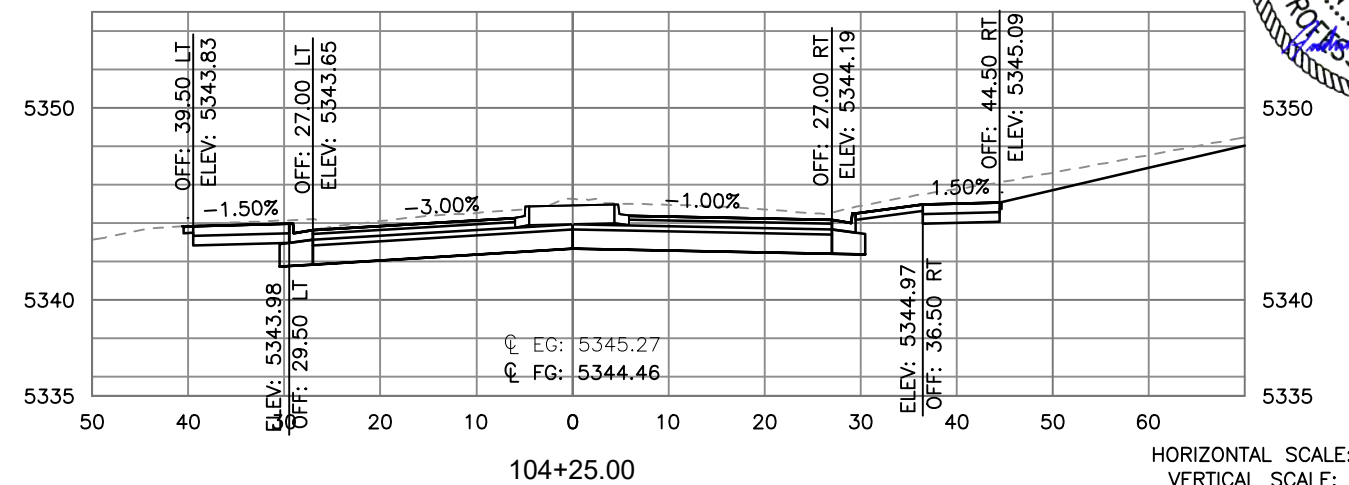
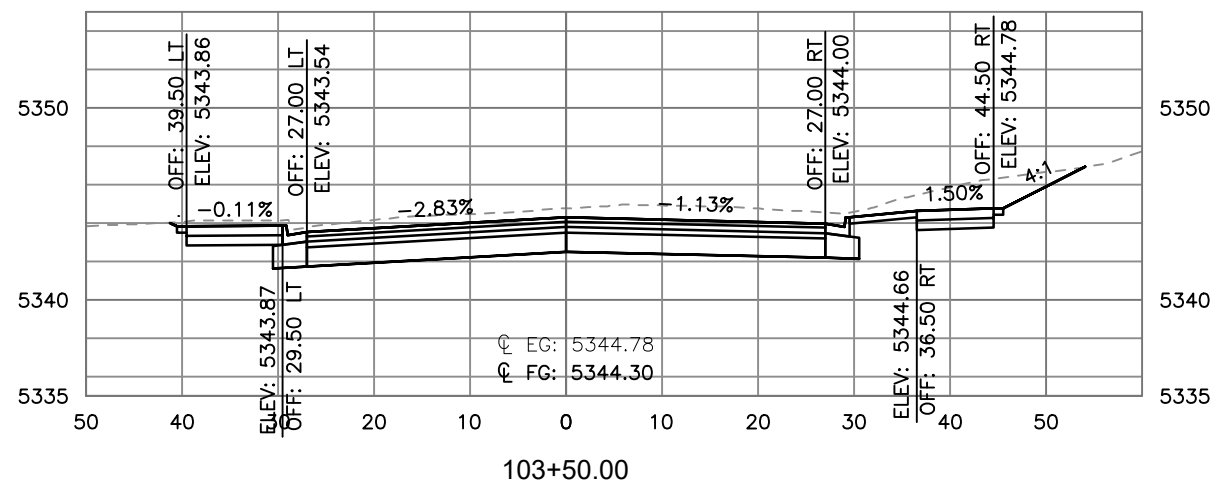
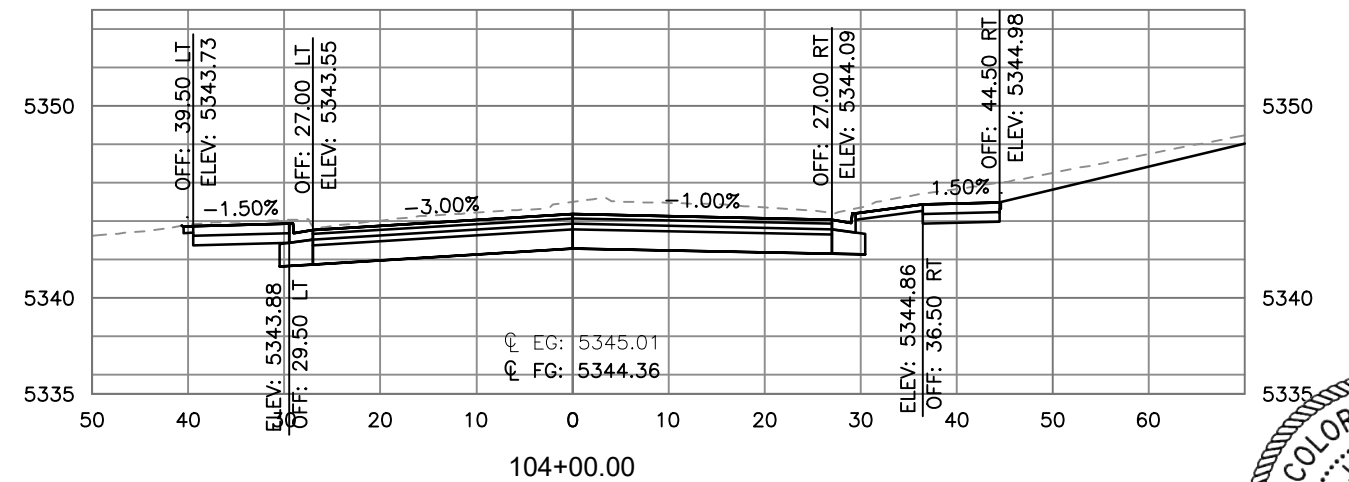
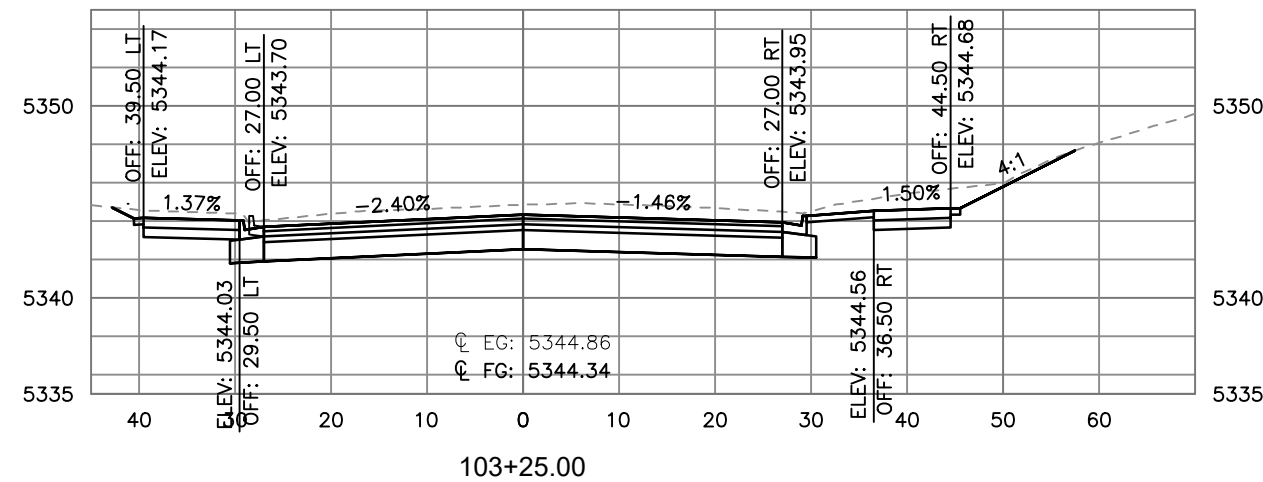
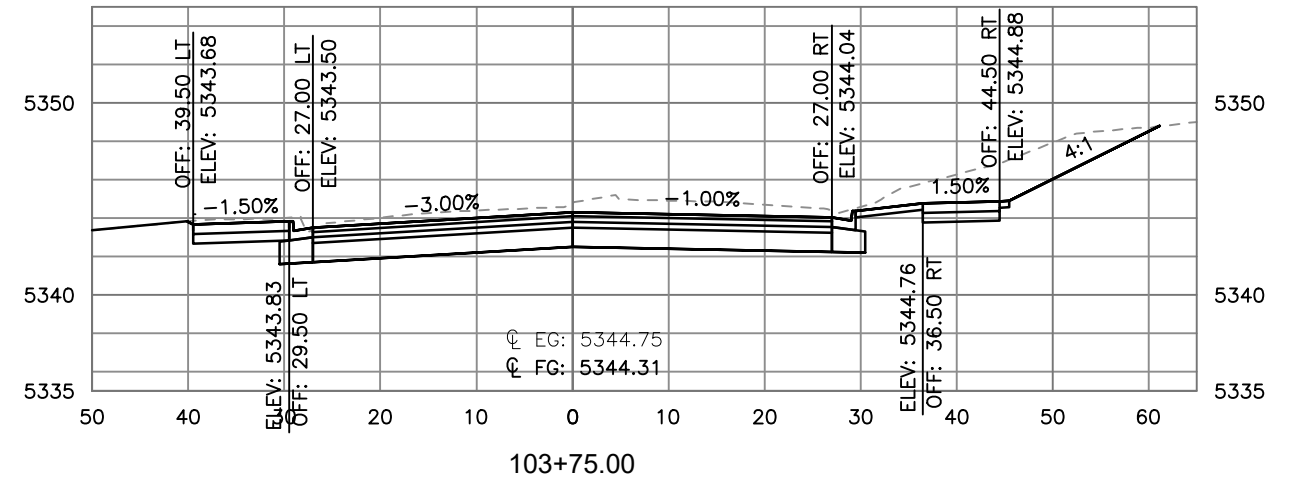
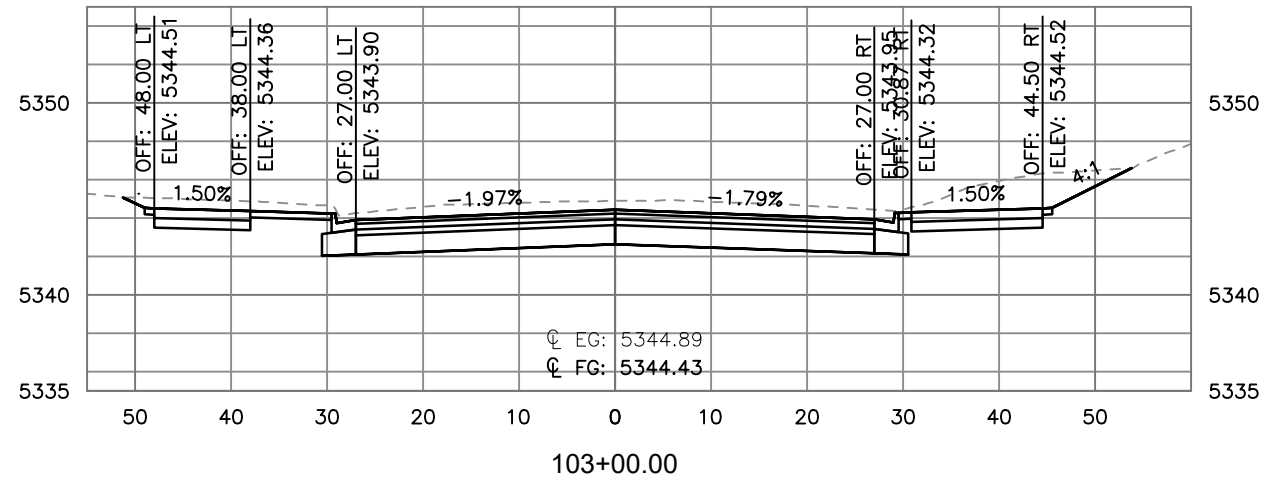
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8101 RALSTON ROAD
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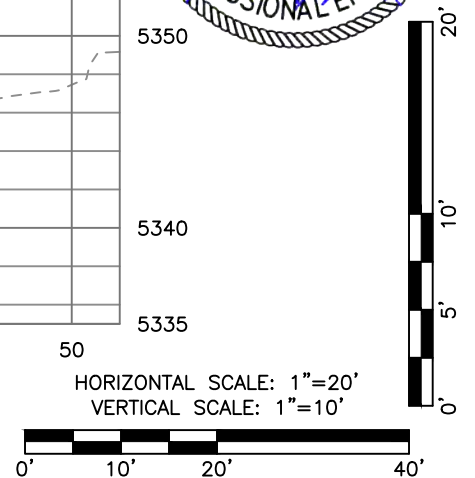
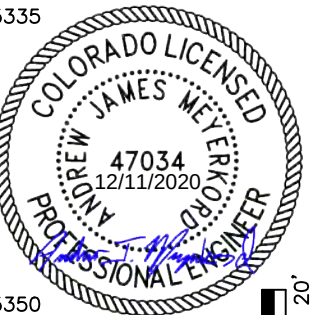
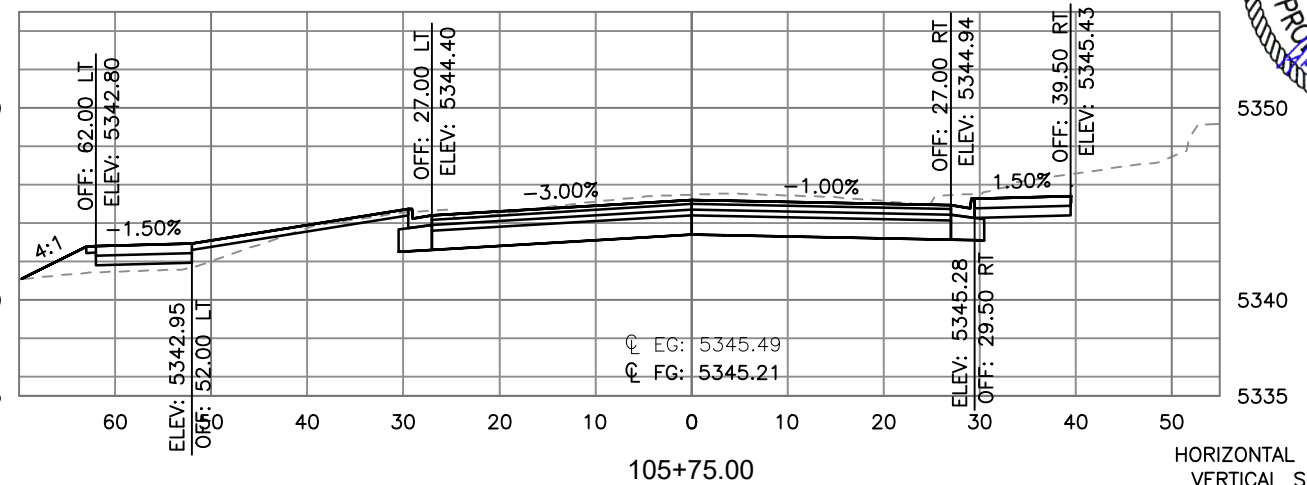
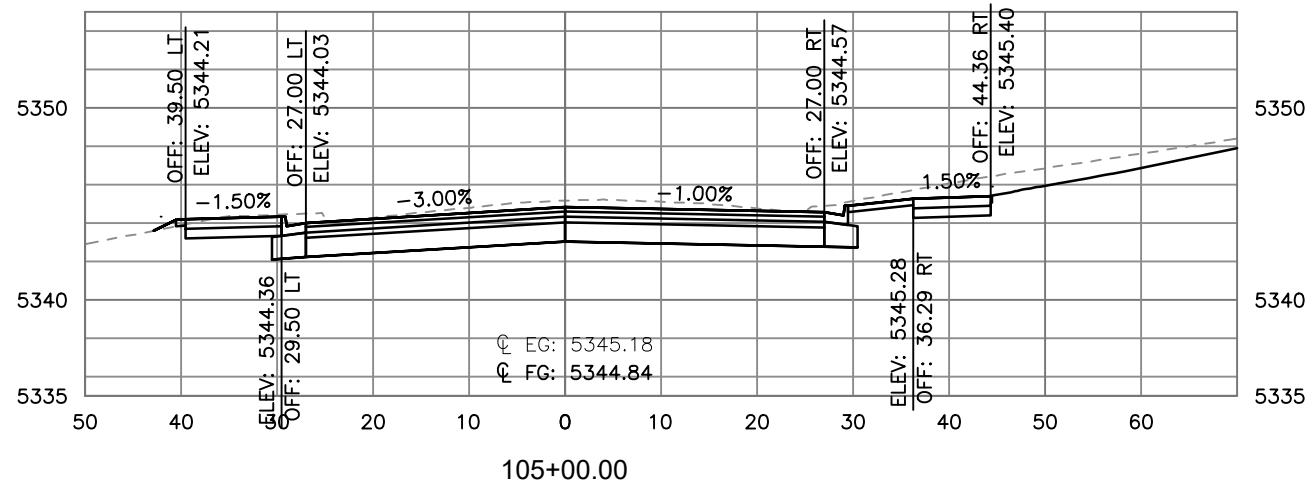
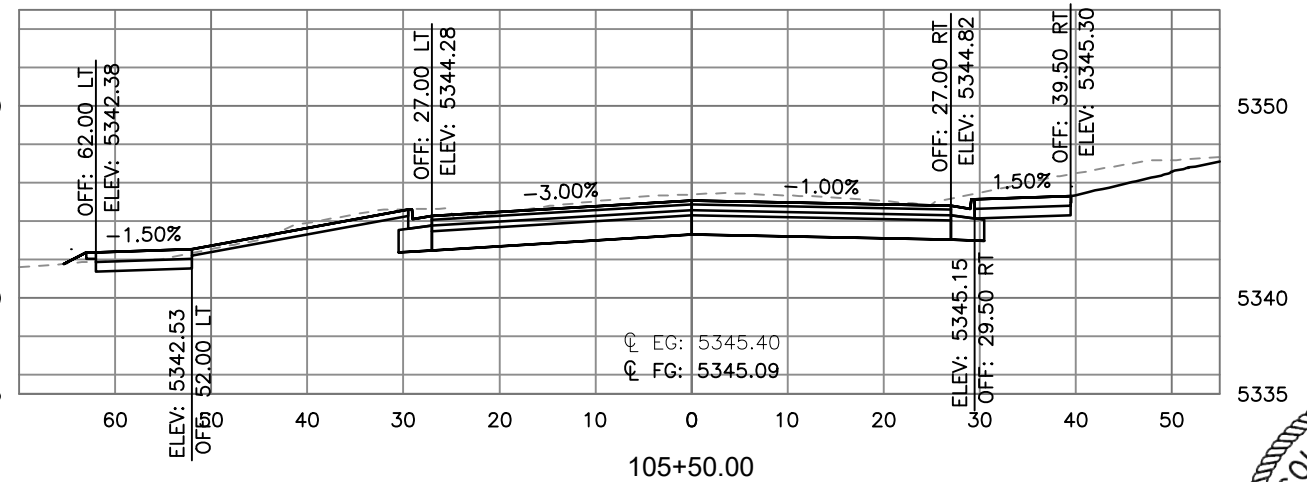
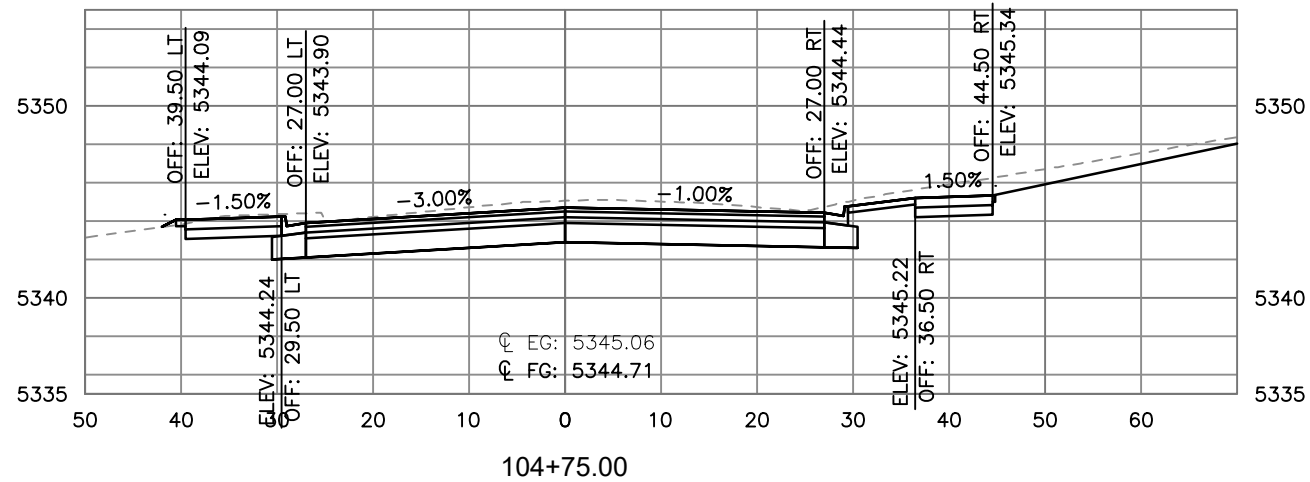
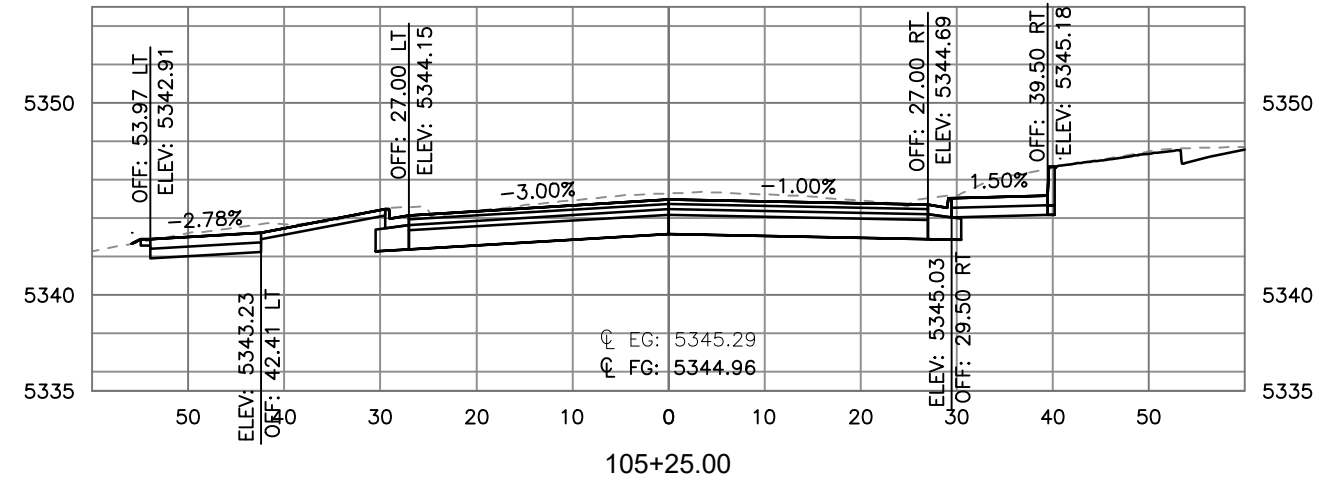
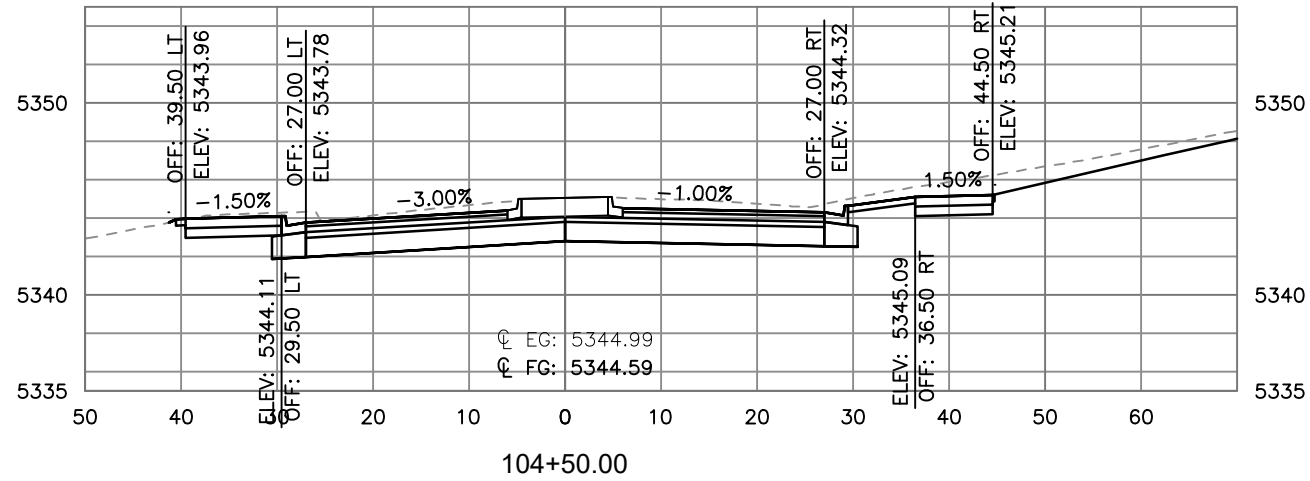
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Date	Comments	Initials	



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8101 RALSTON ROAD
ARVADA, CO, 80002

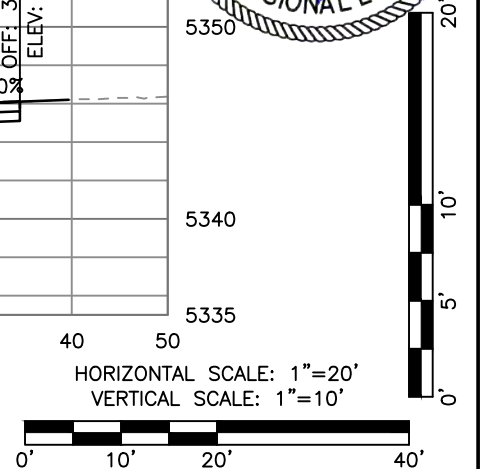
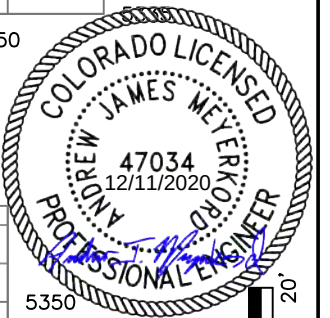
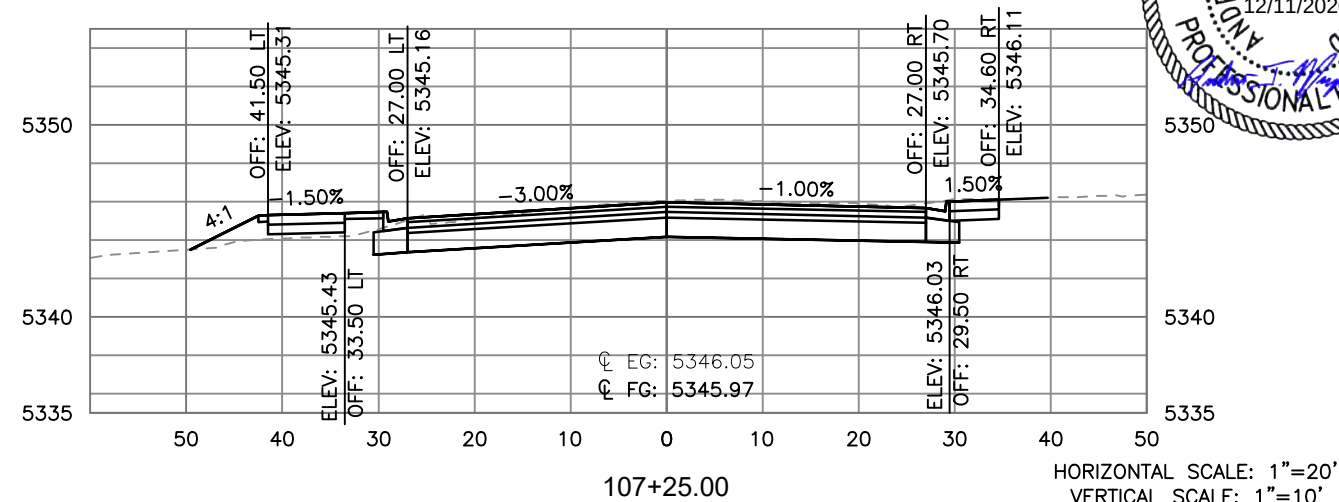
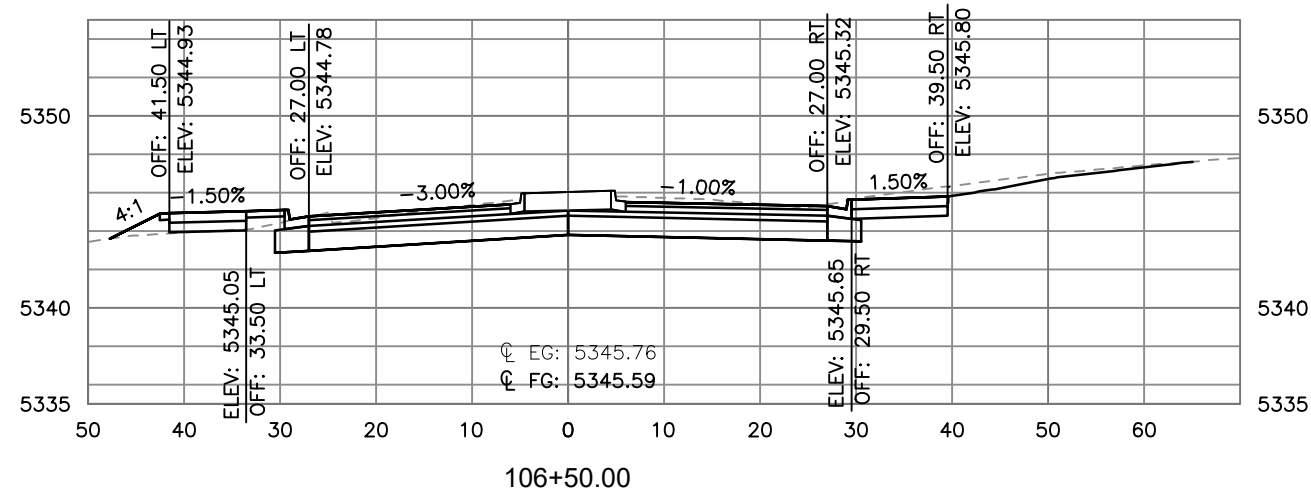
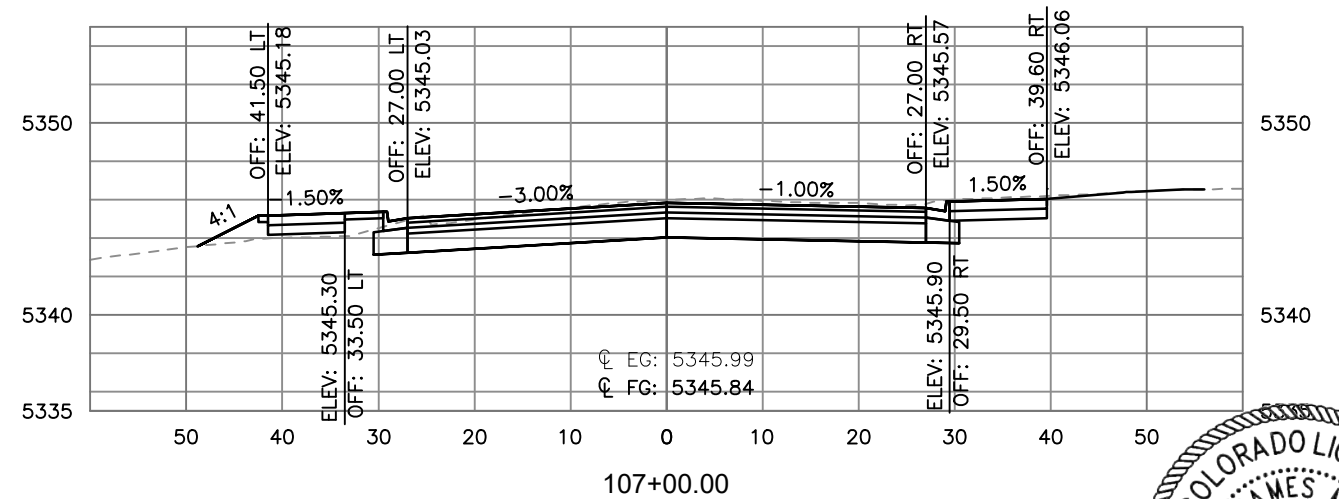
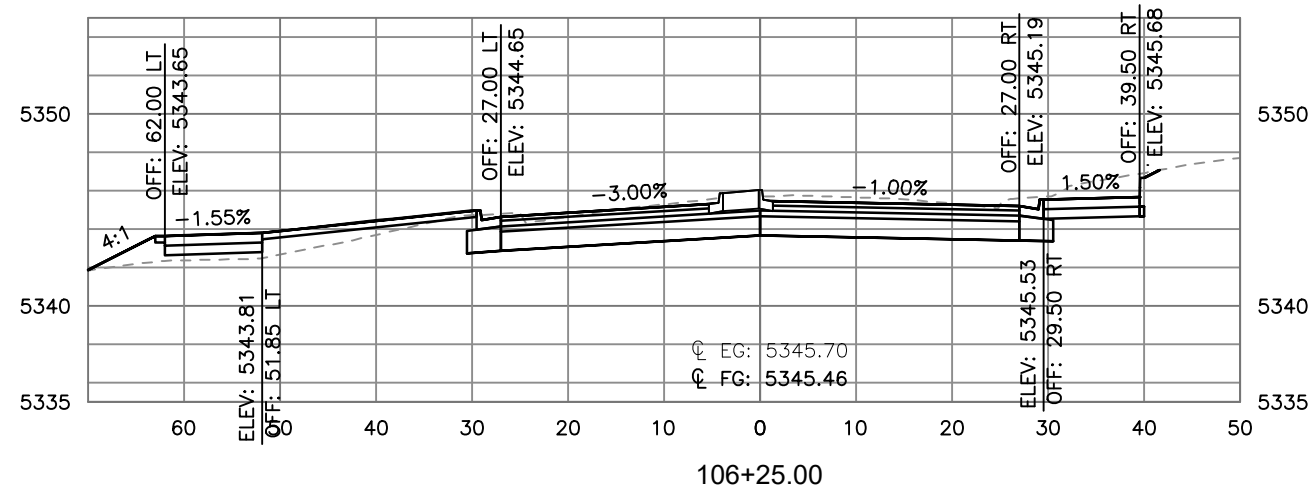
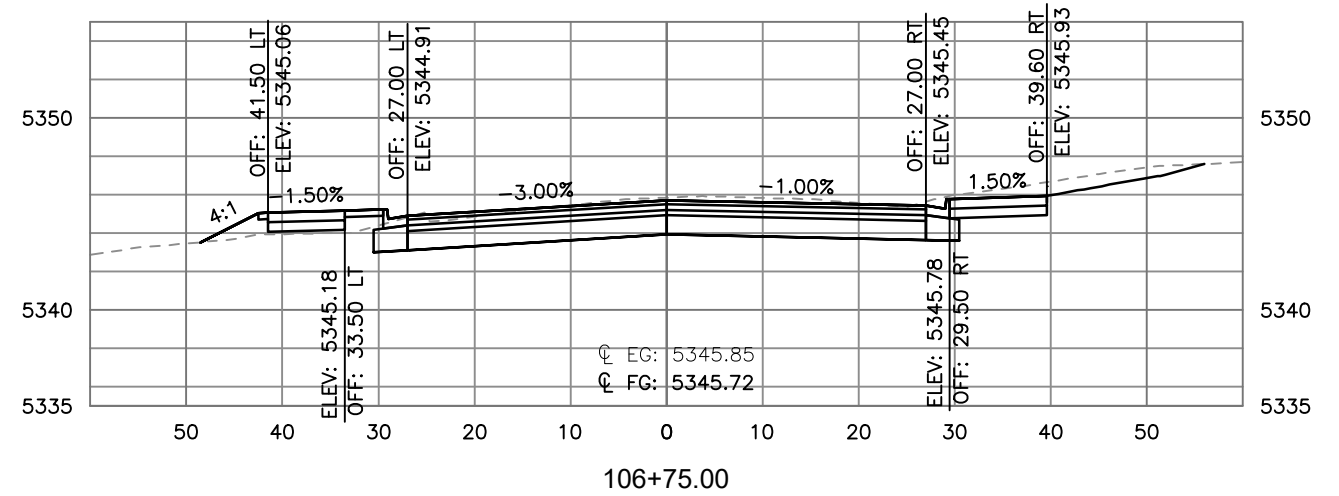
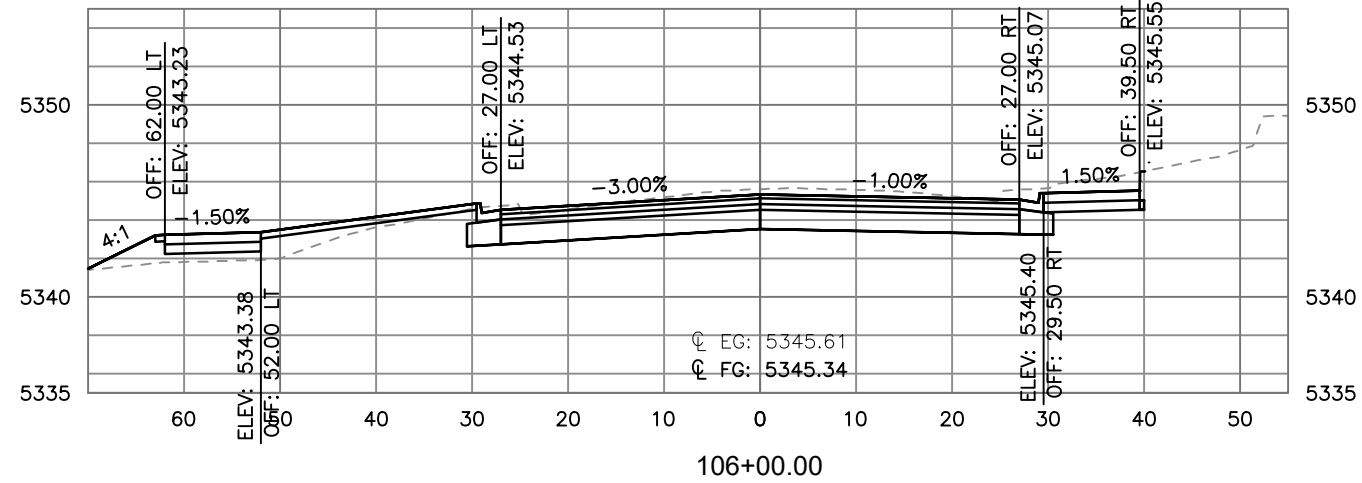
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Revised:		Designer: JHH	Structure Numbers		
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 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Detailer: DAL	Numbers				
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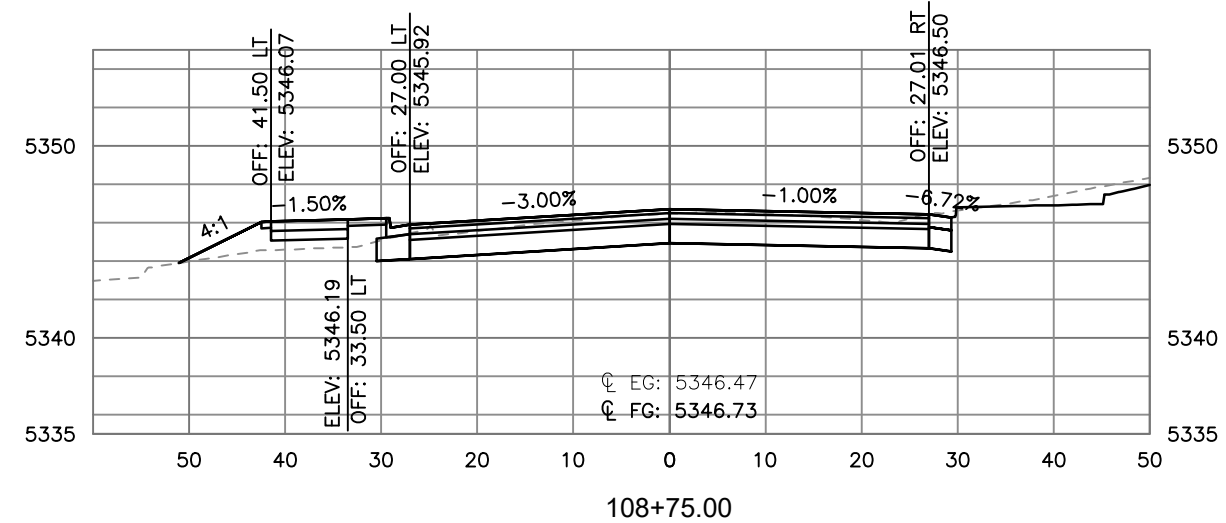
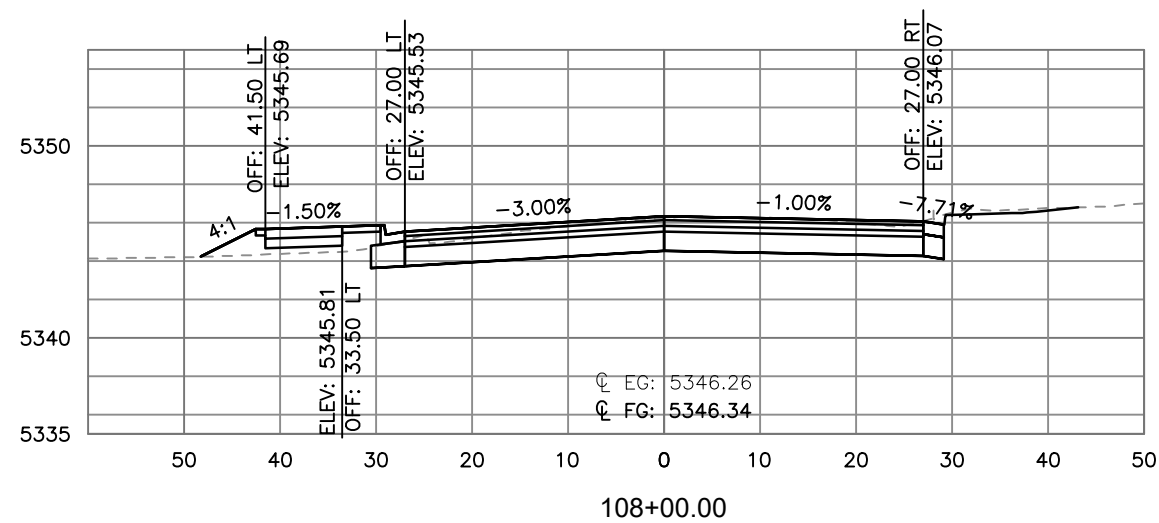
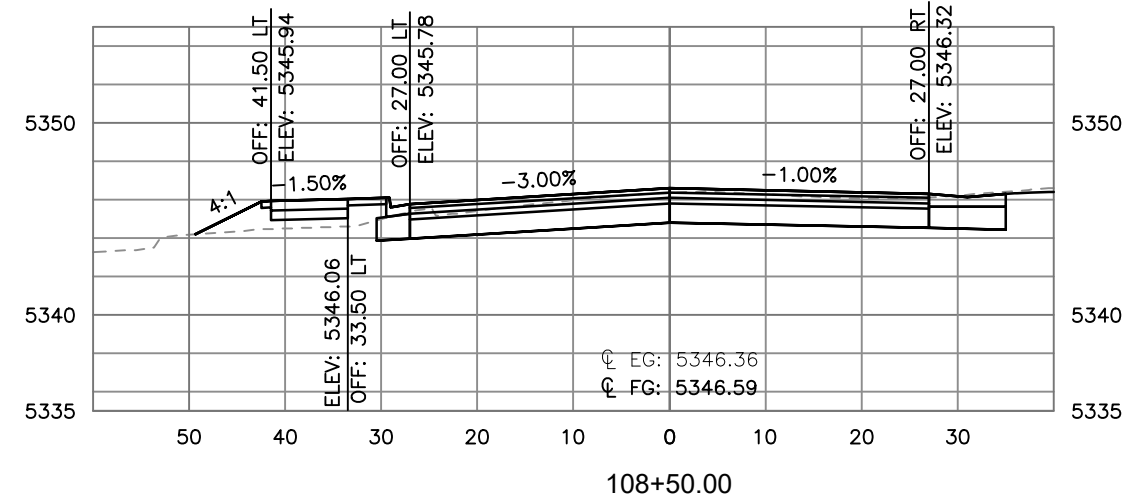
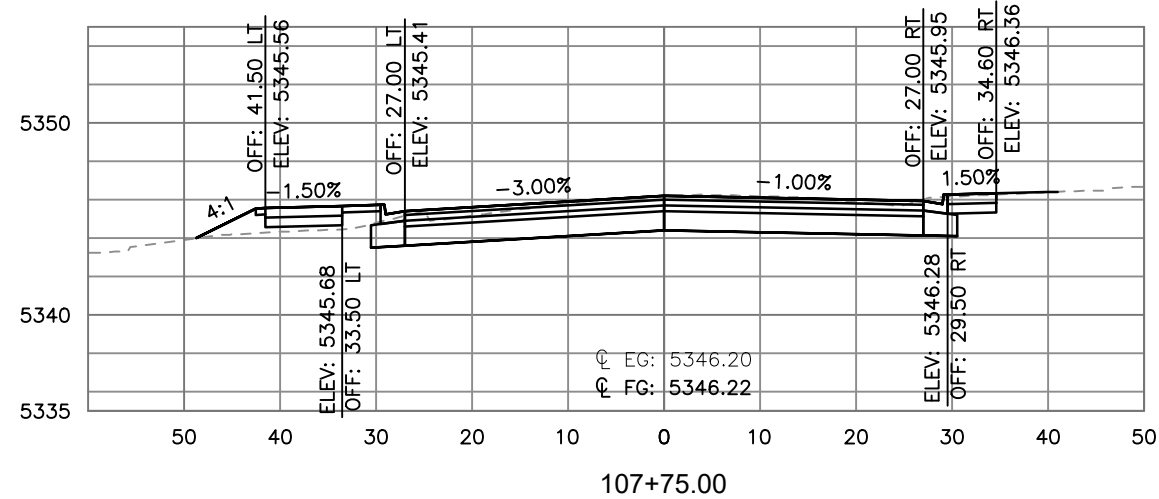
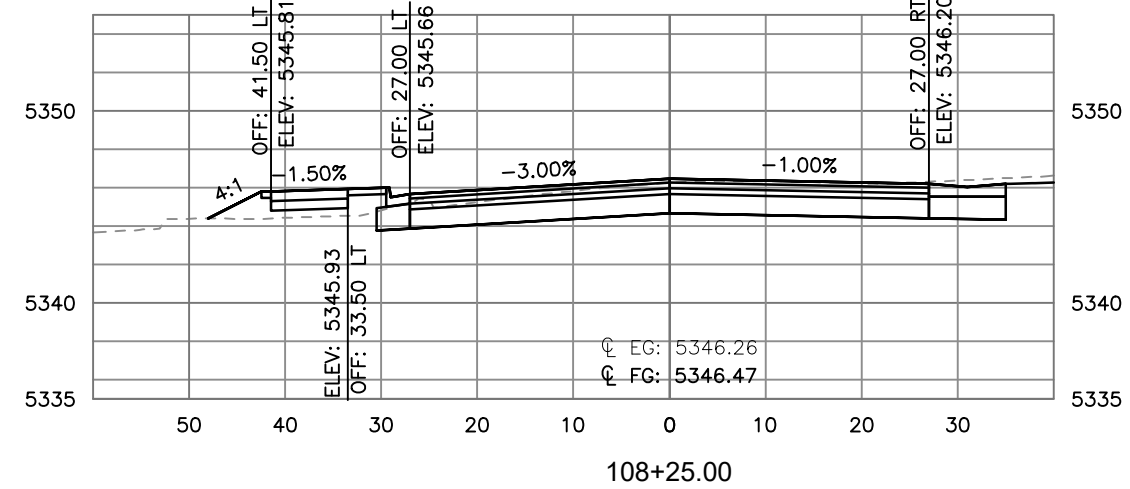
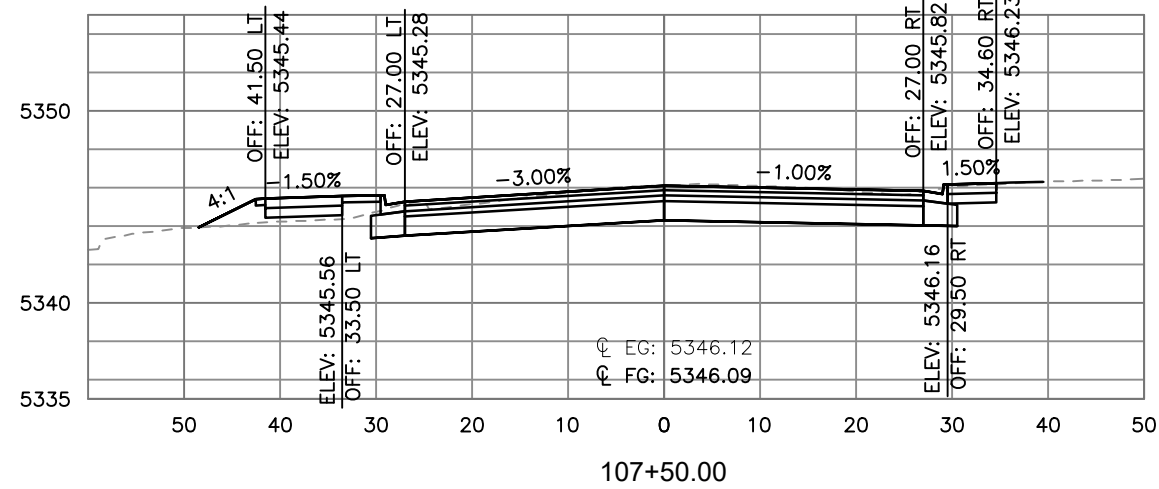
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Sheet Revisions			
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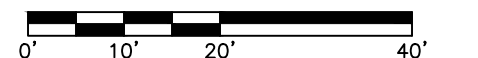


CITY OF ARVADA
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As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY CROSS SECTION RALSTON ROAD			Project No./Code
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Date	Comments	Initials



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8101 RALSTON ROAD
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RALSTON RD - YUKON ST TO GARRISON ST
ROADWAY CROSS SECTION
RALSTON ROAD

Designer:	JHH
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Detailer:	DAL
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Sheet Subset: CROSS SECTION

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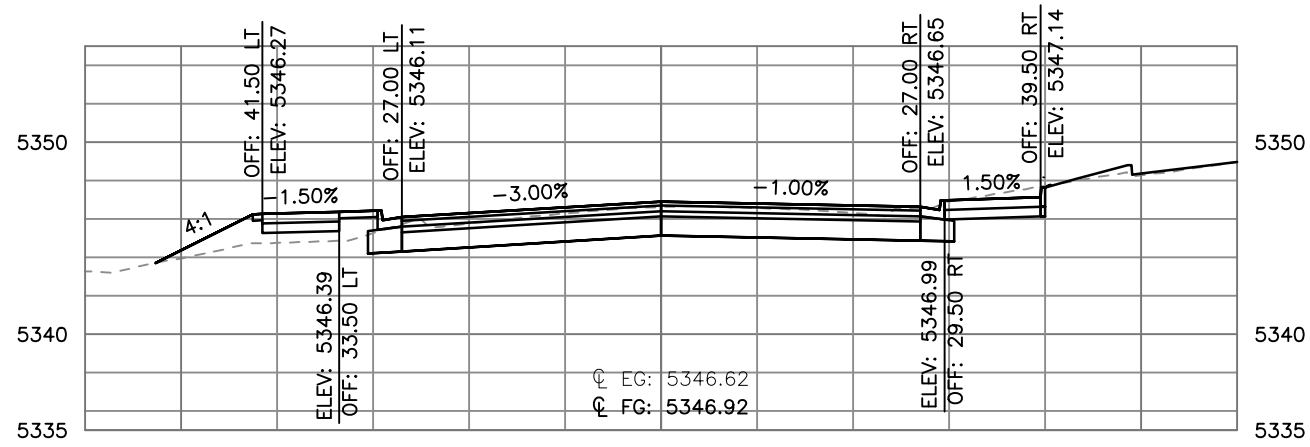
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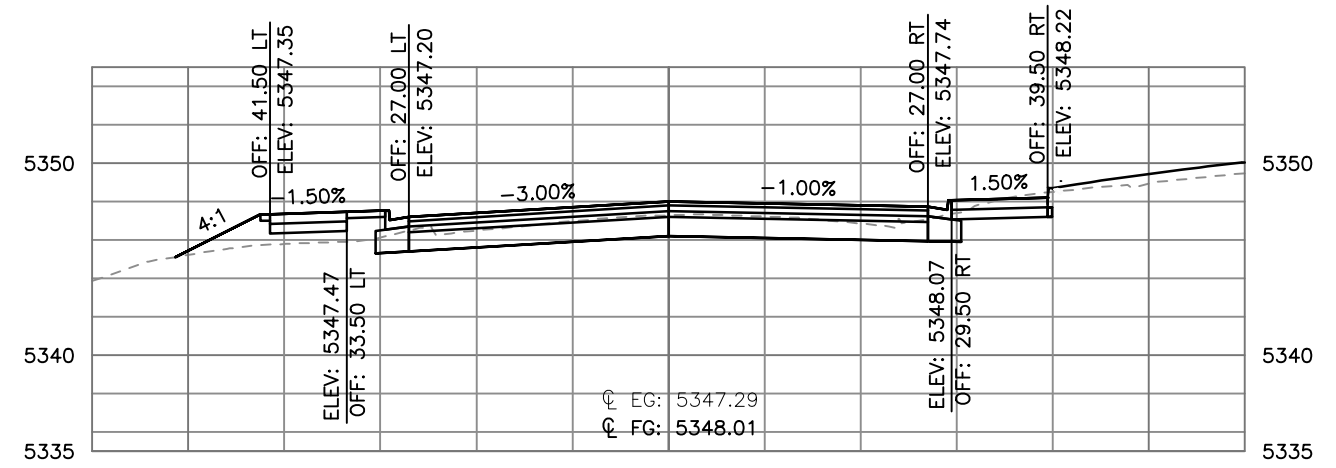
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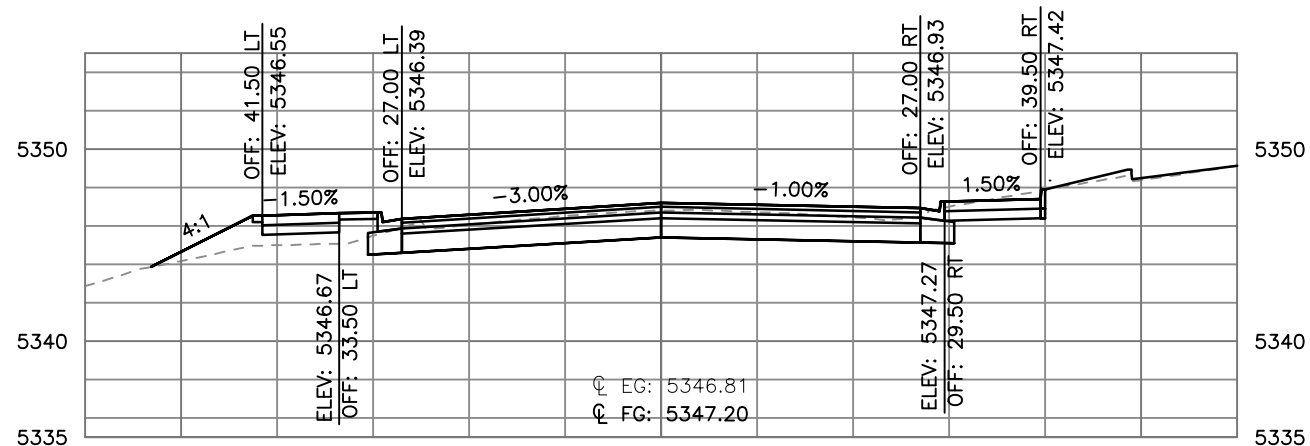
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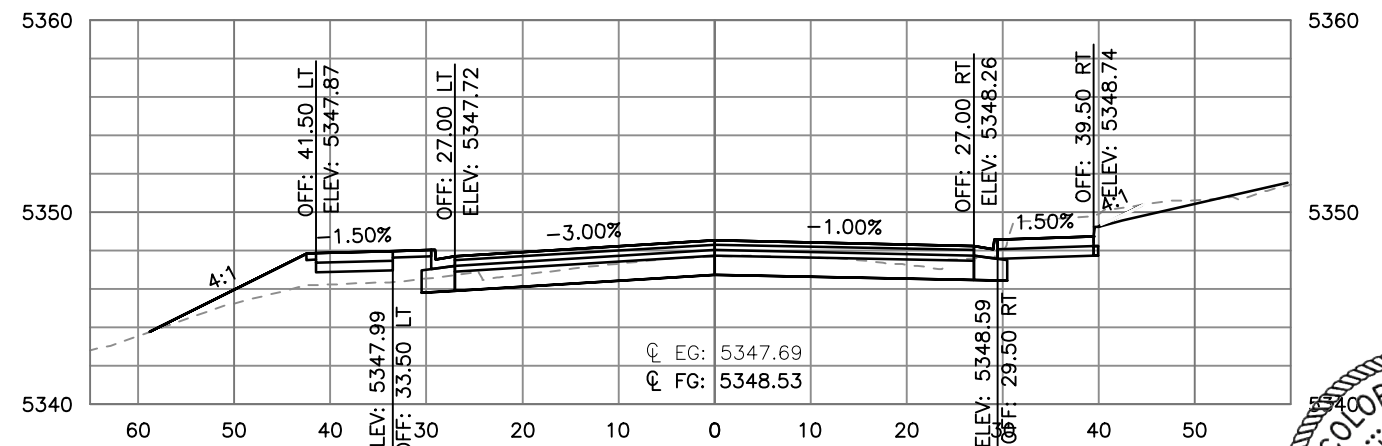
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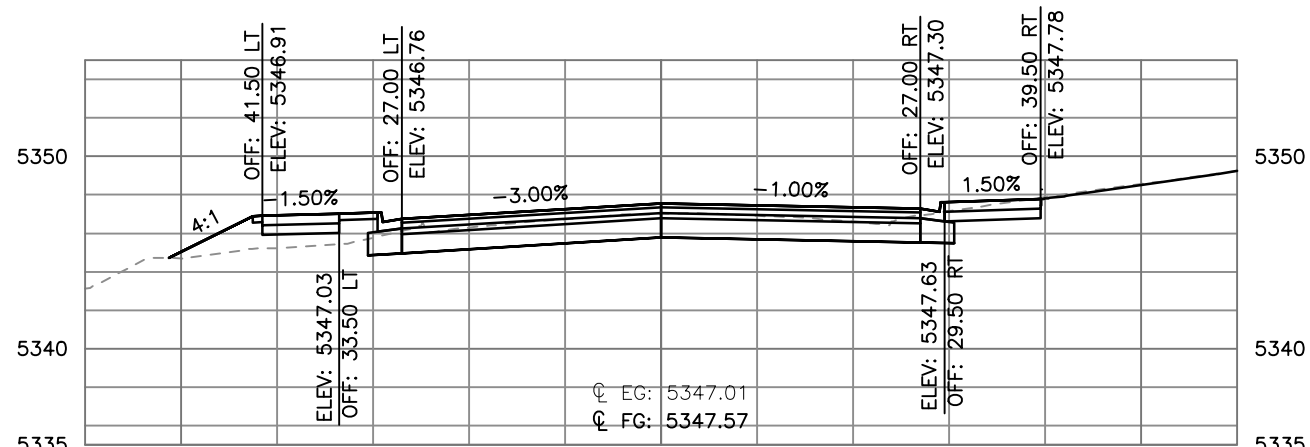
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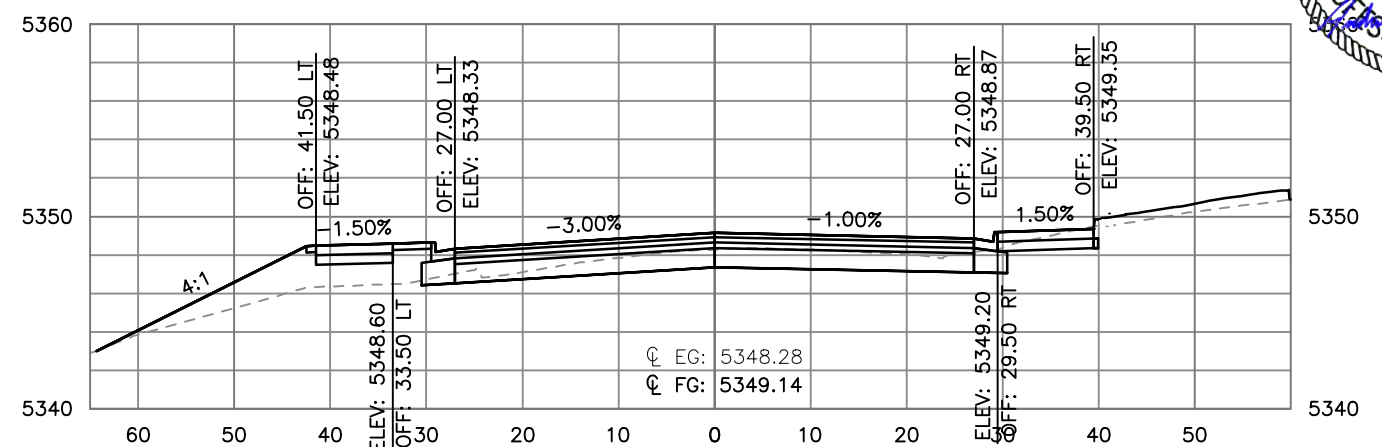
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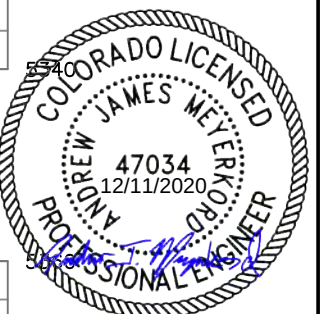
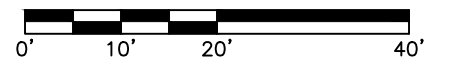


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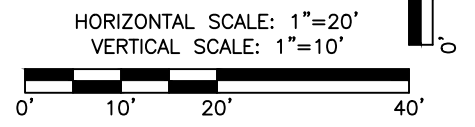
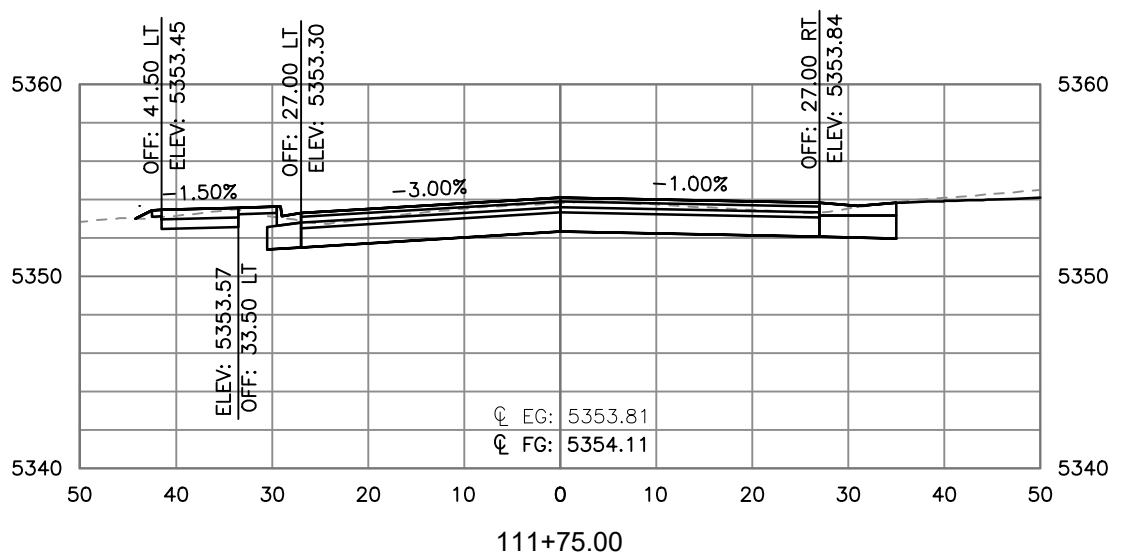
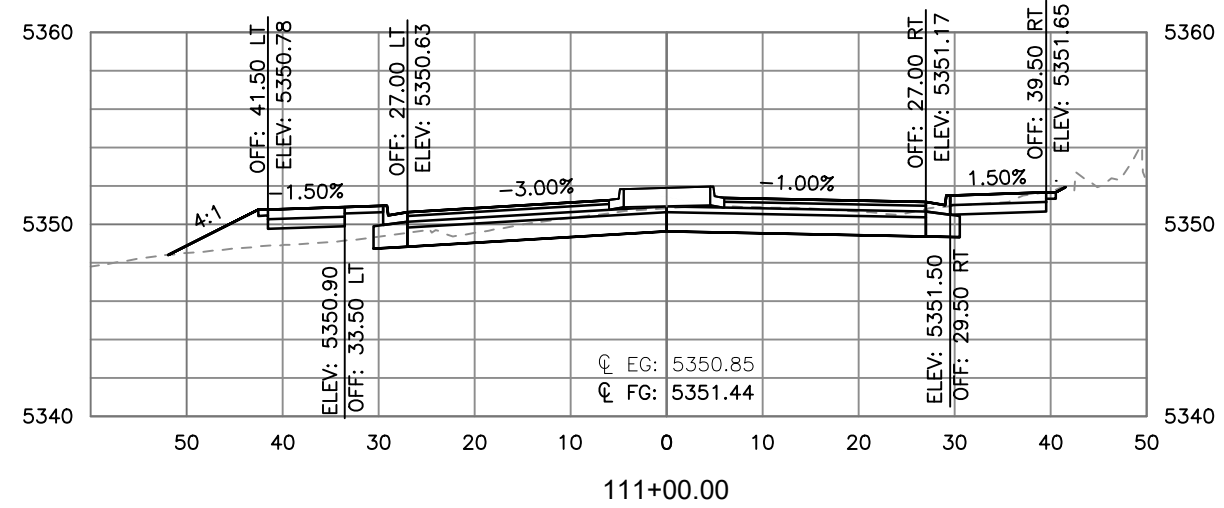
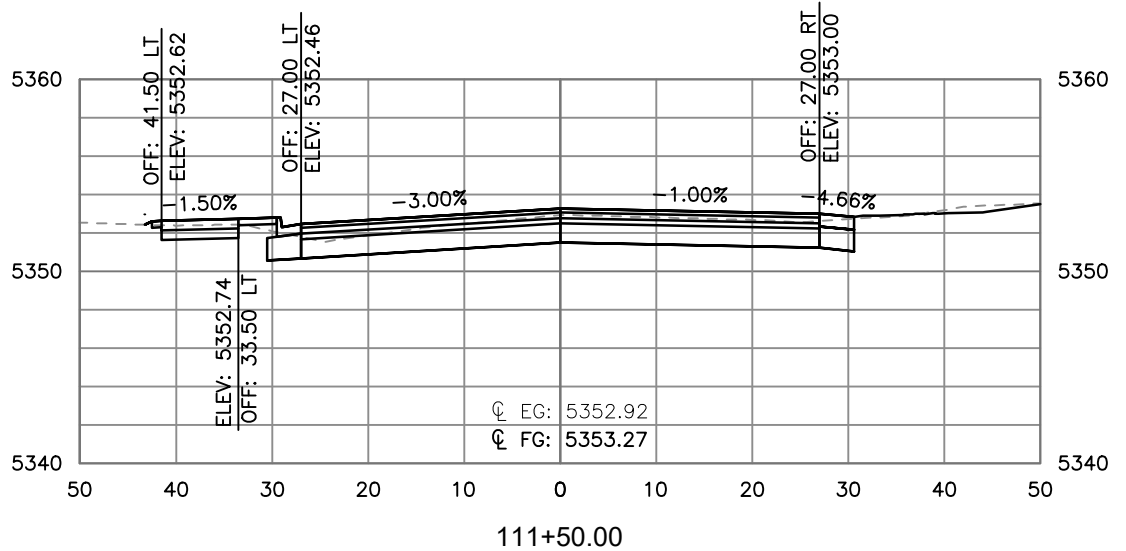
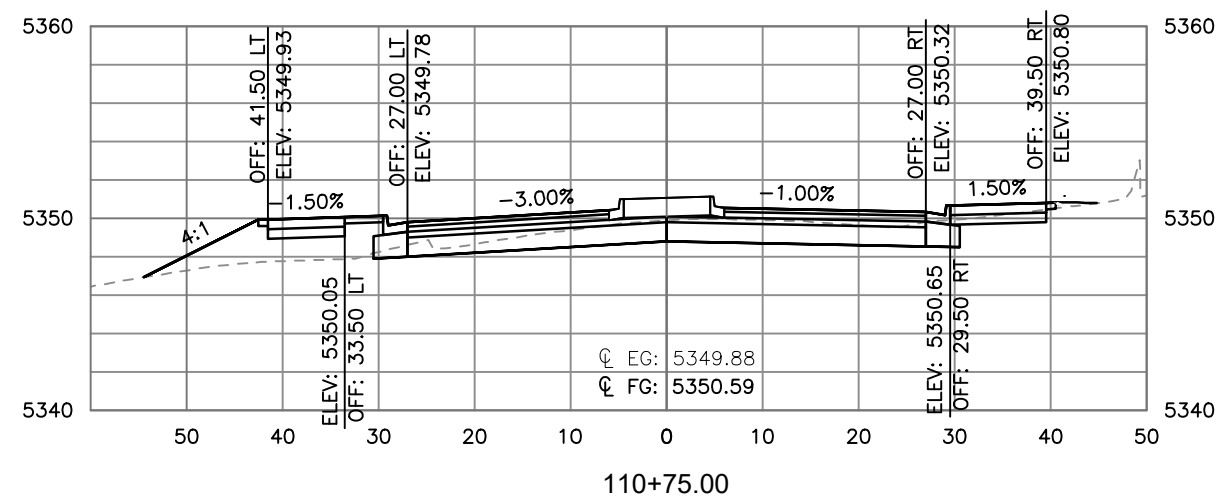
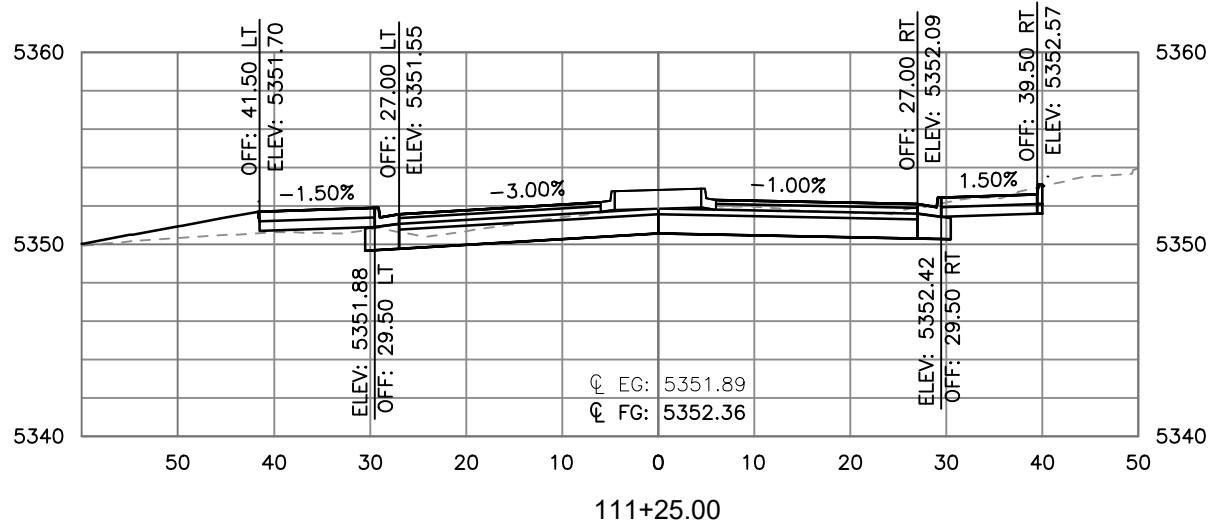
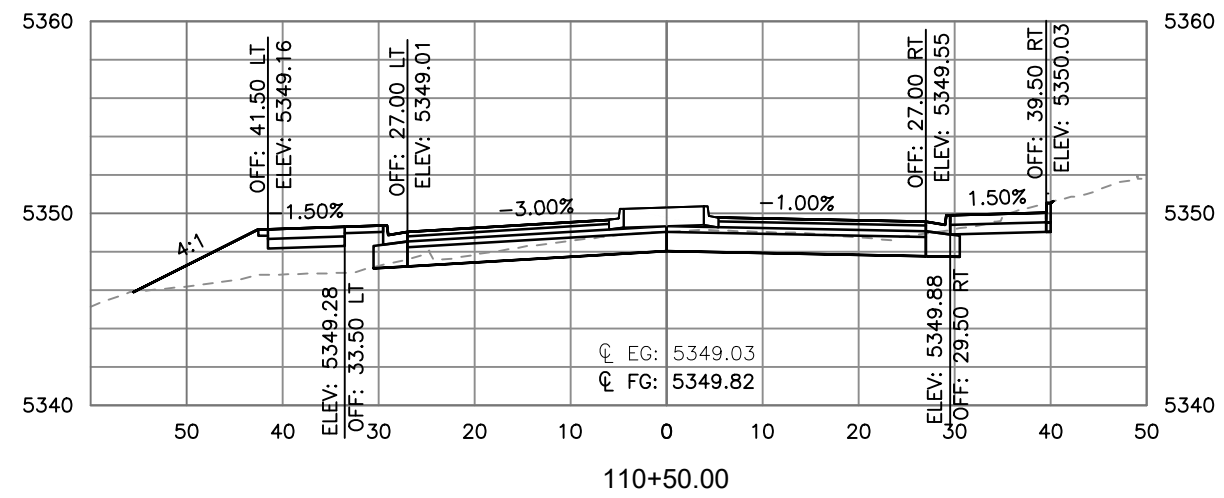


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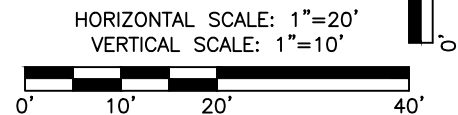
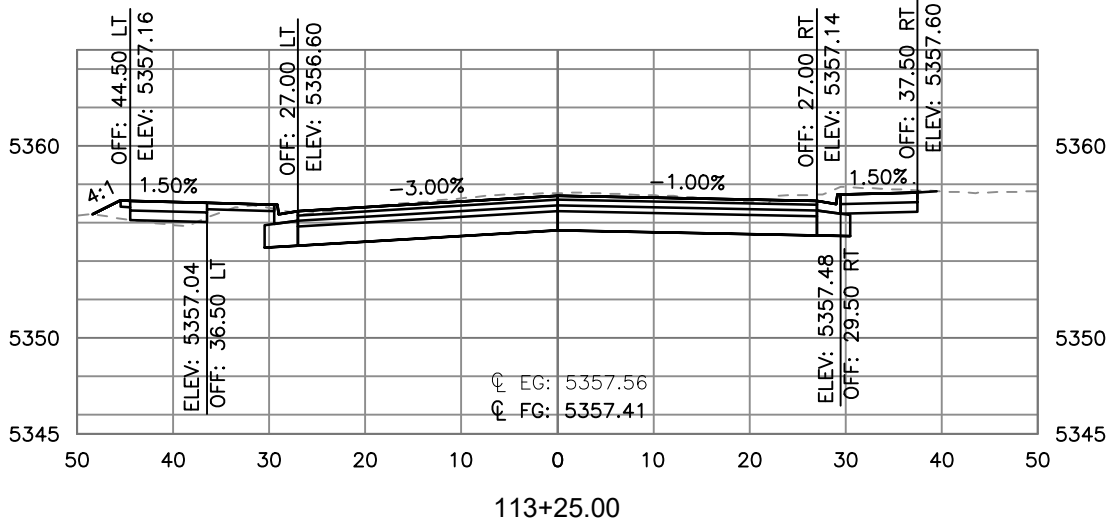
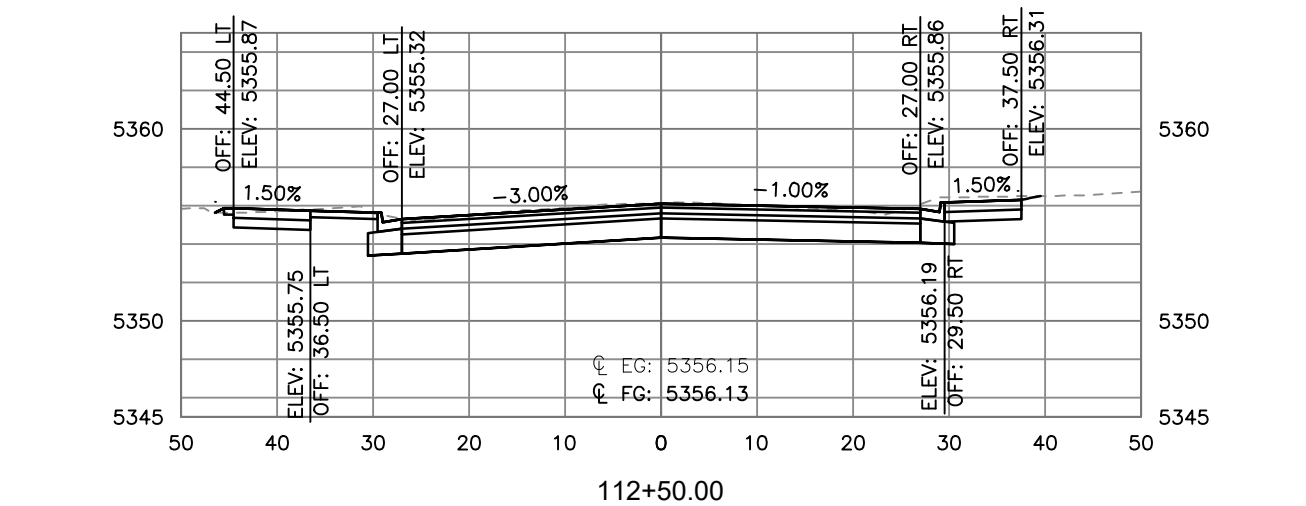
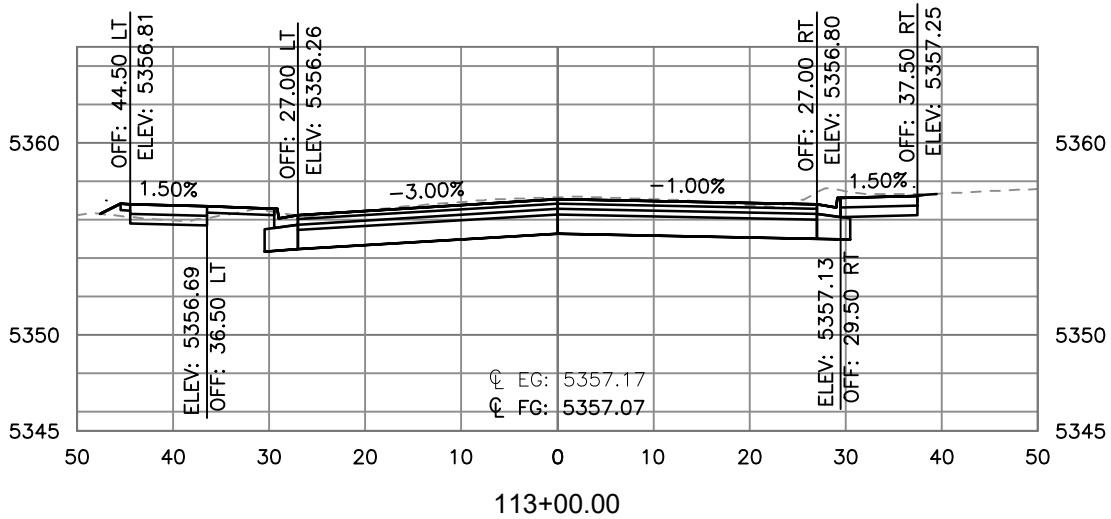
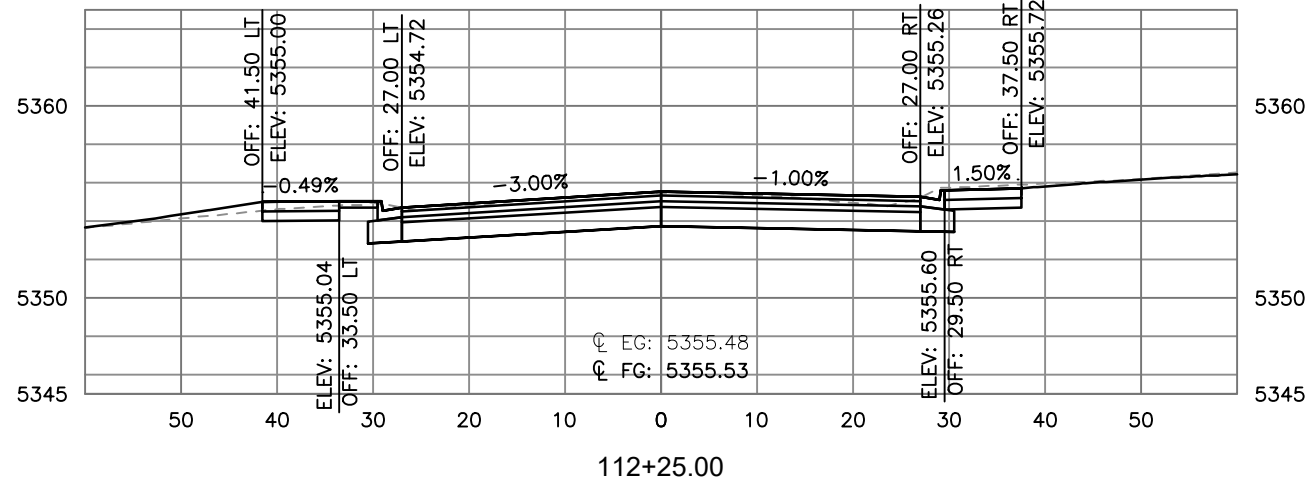
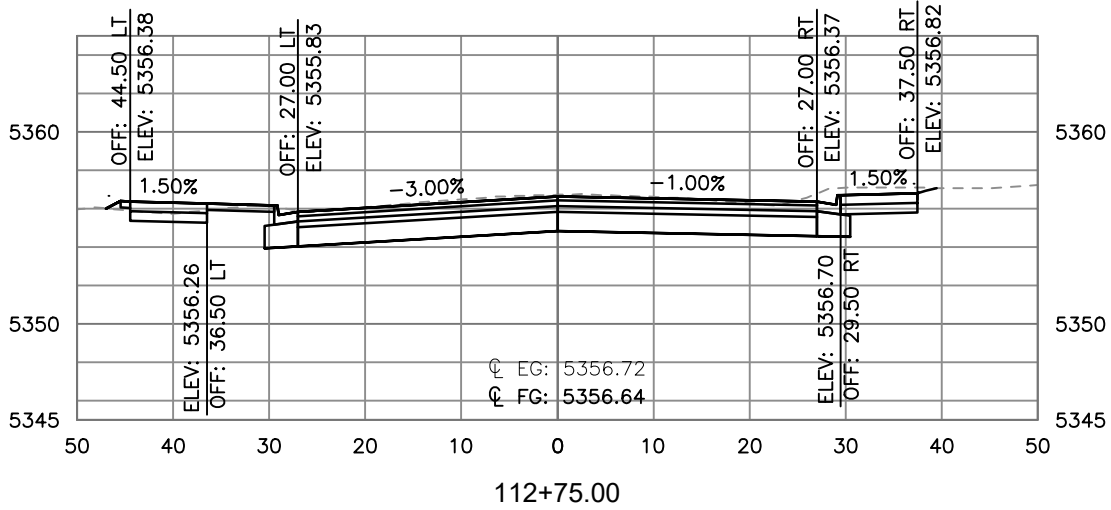
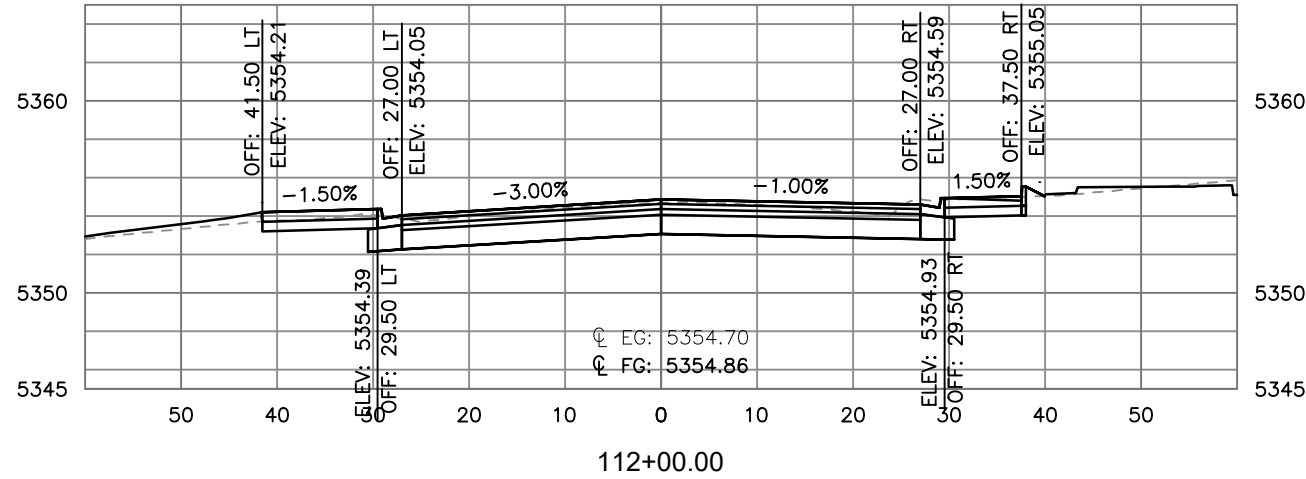
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 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com								Revised:		Detailer: DAL				
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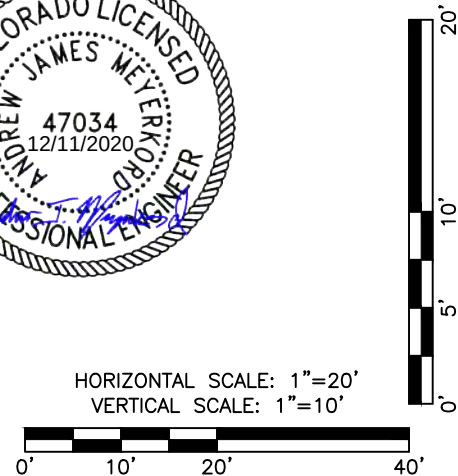
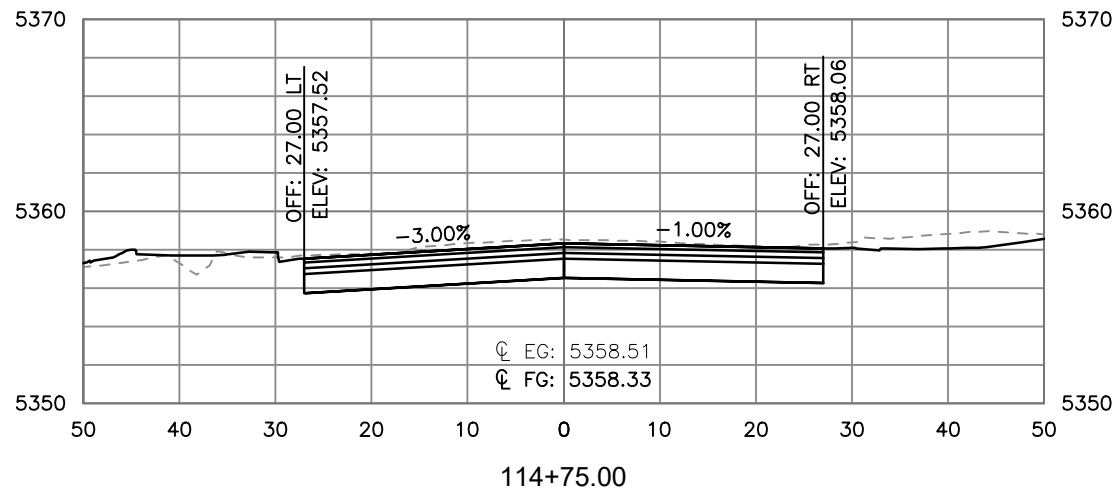
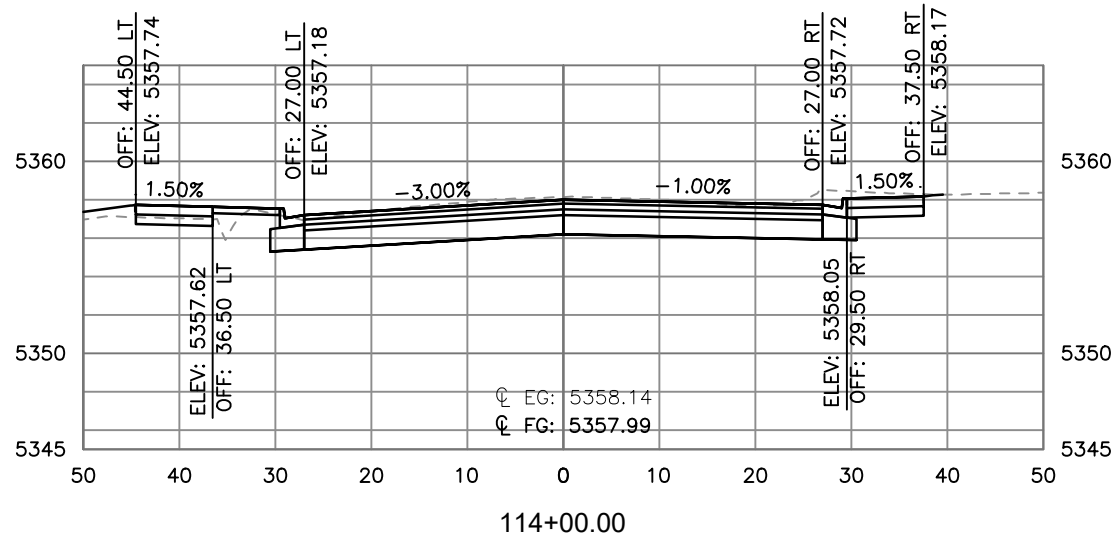
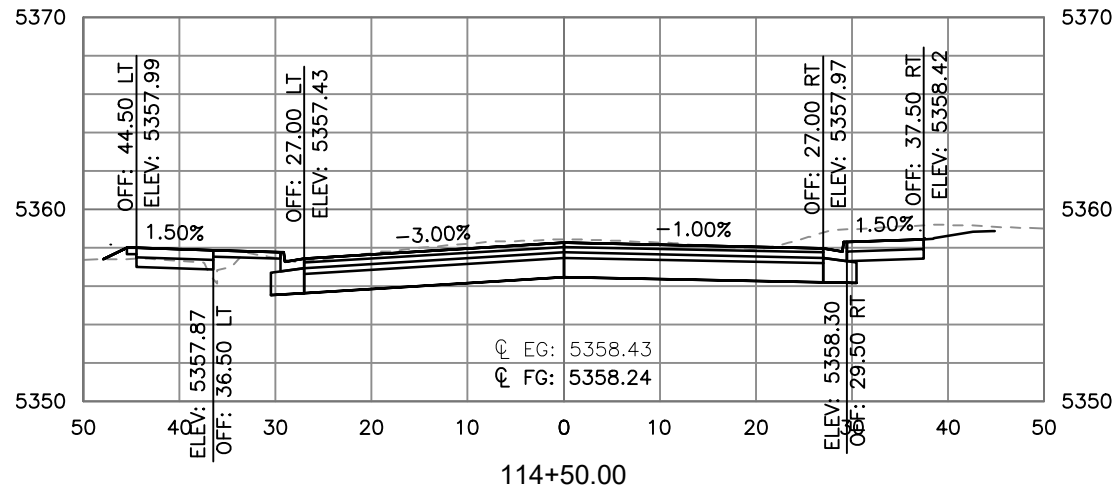
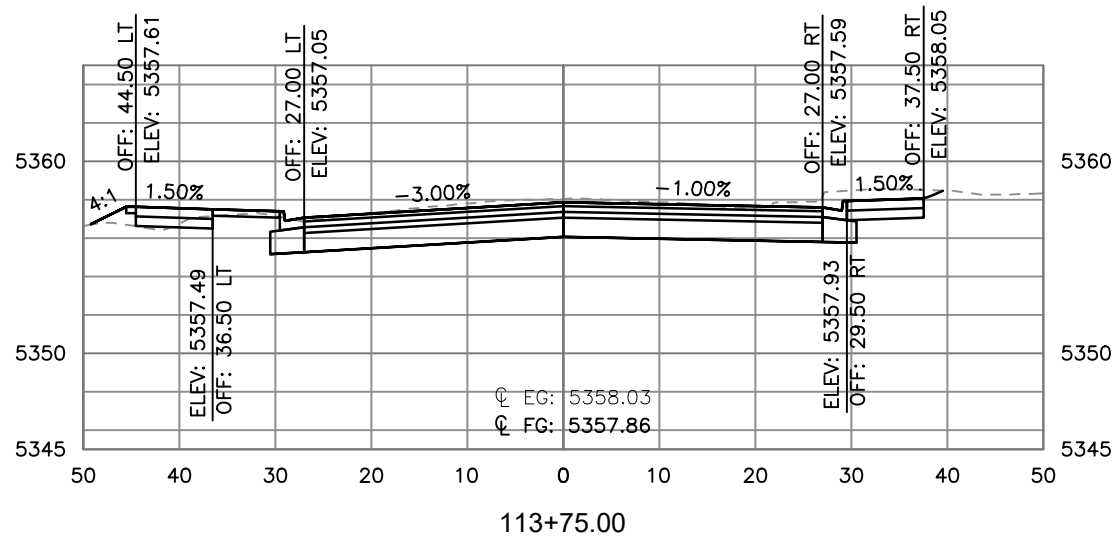
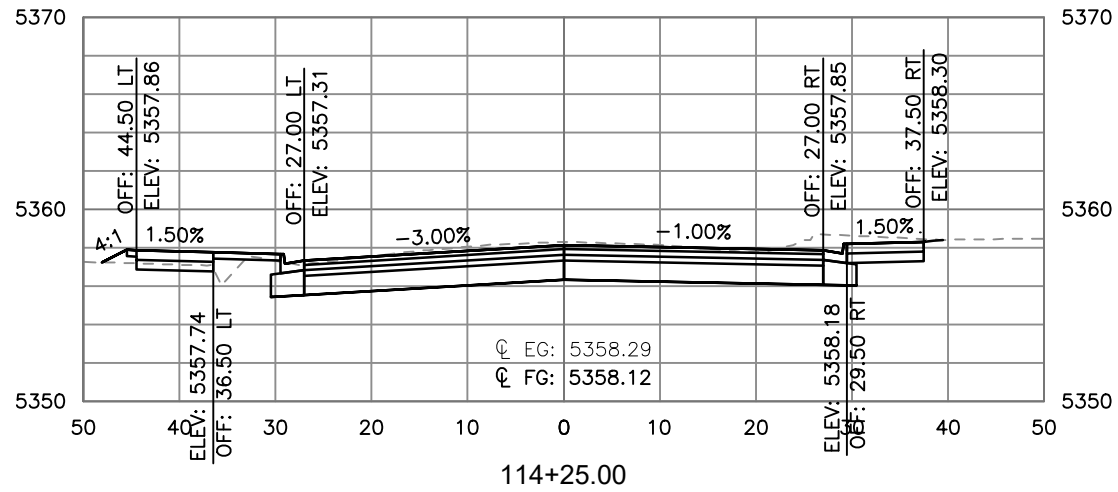
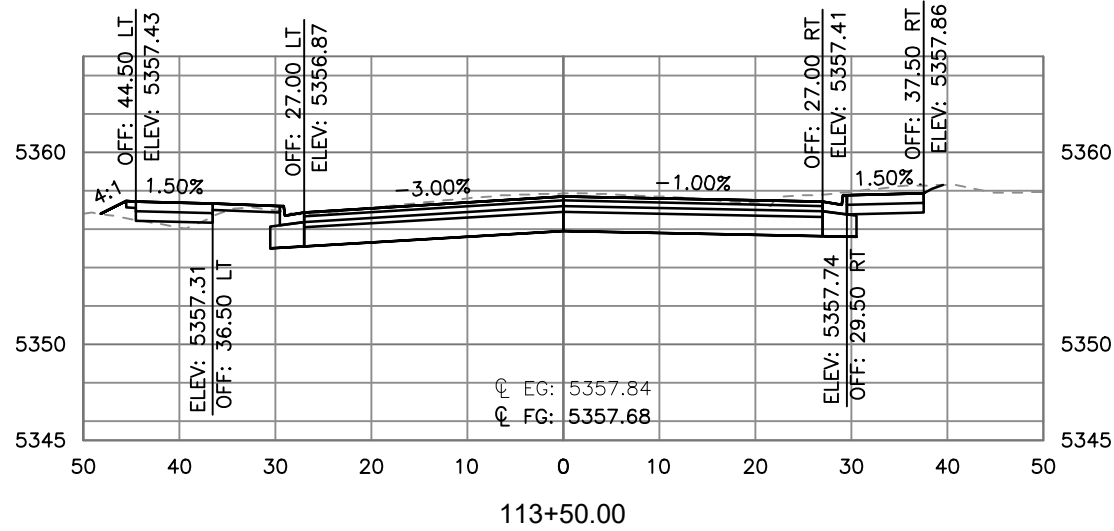
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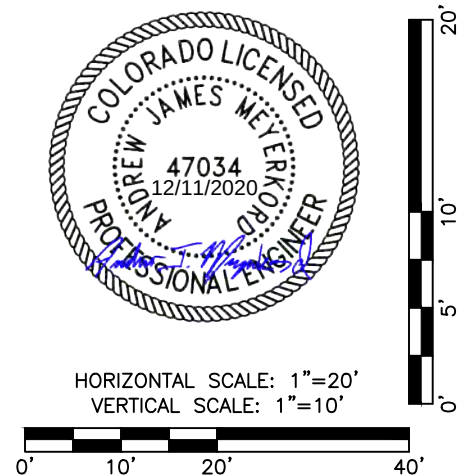
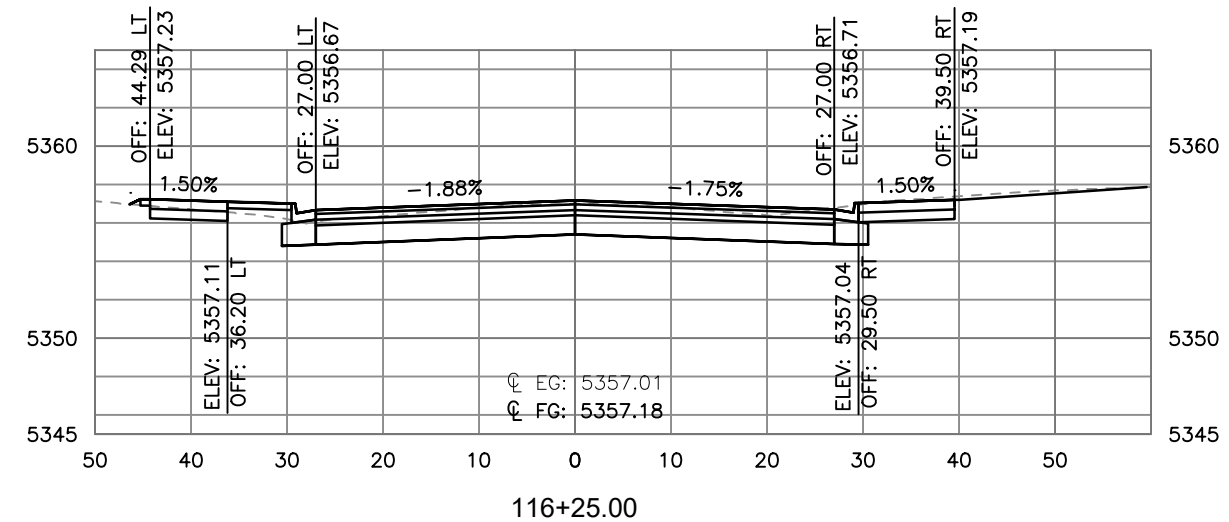
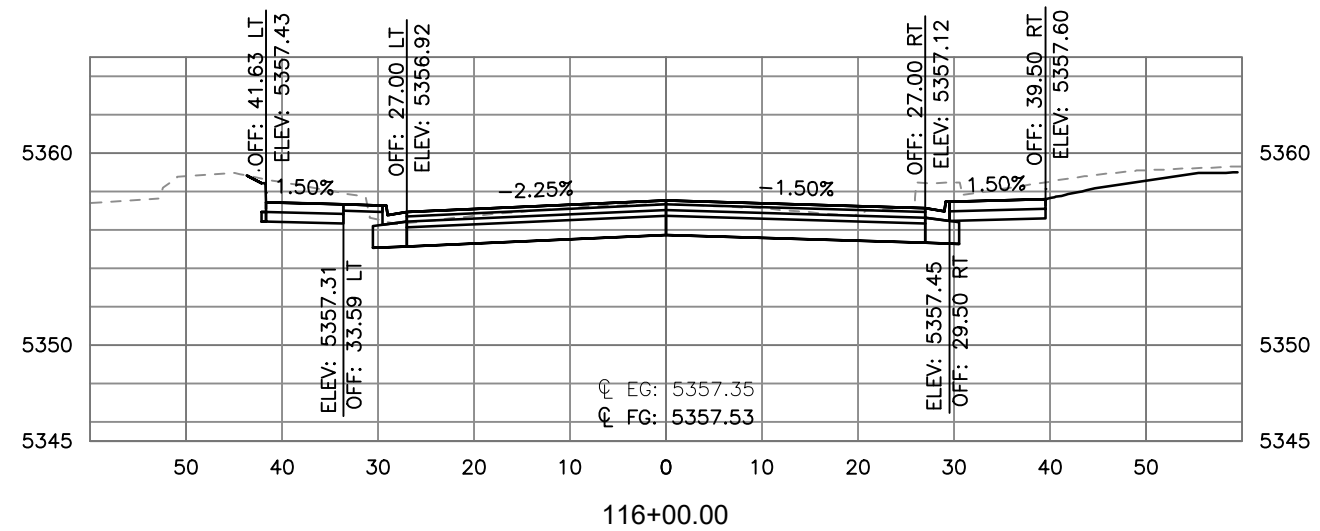
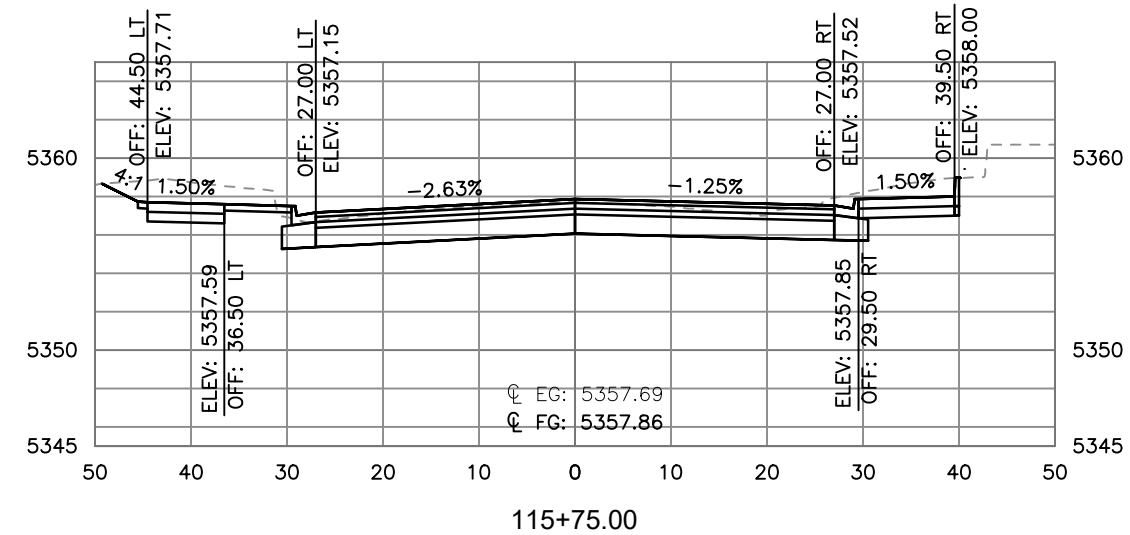
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PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD

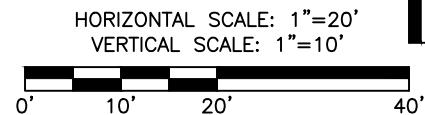
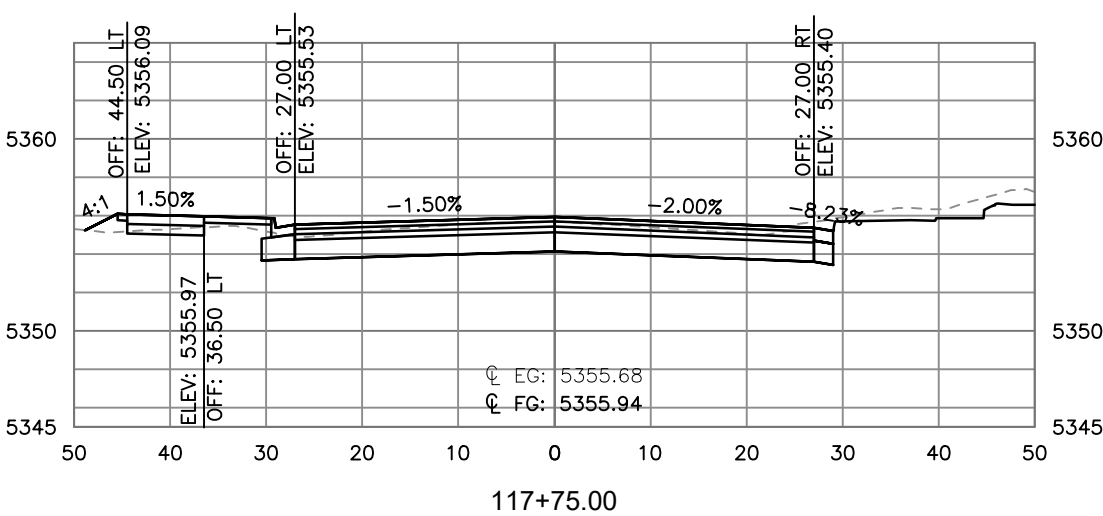
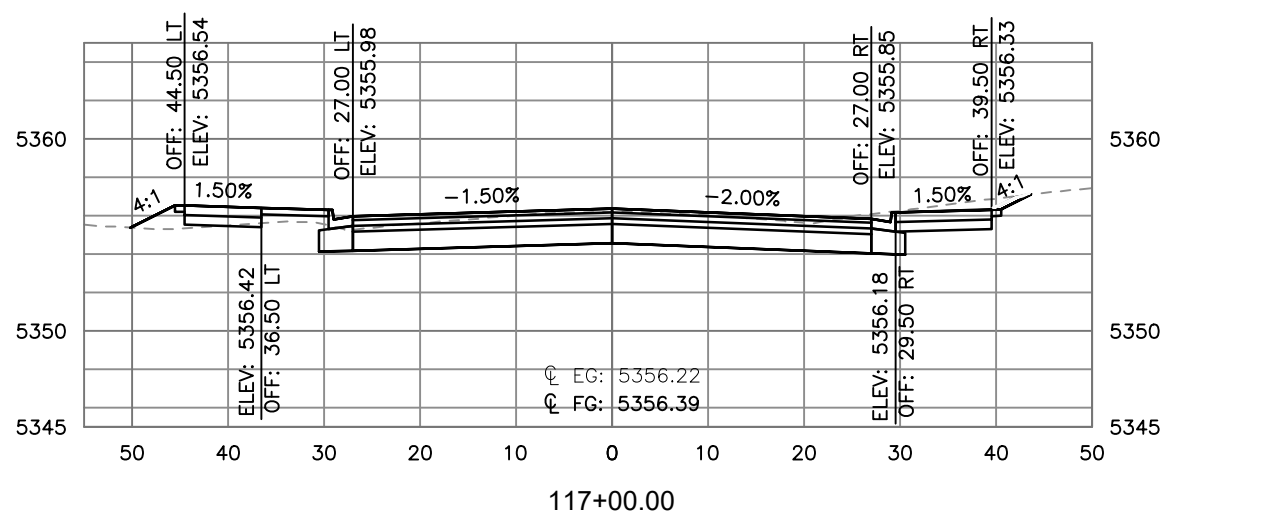
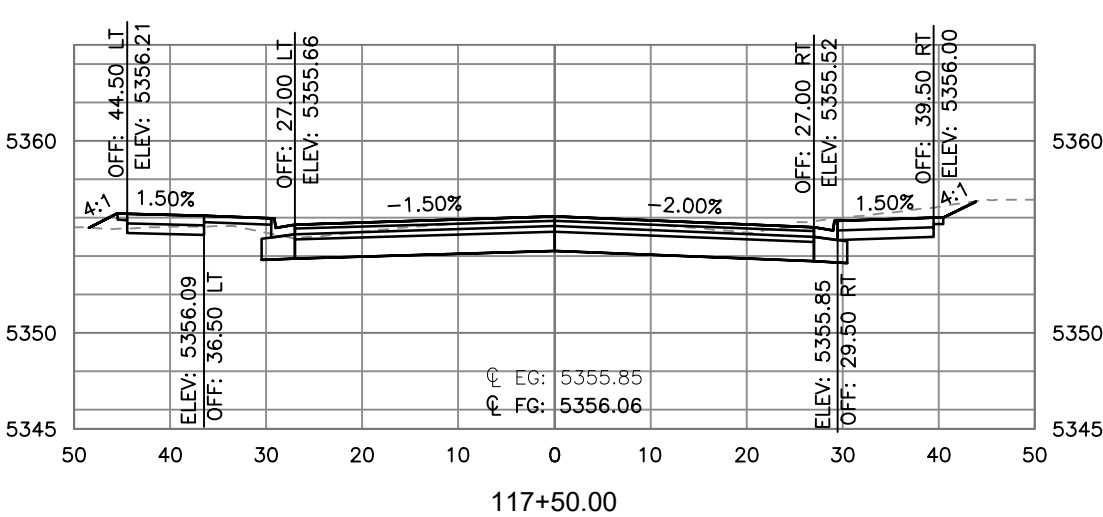
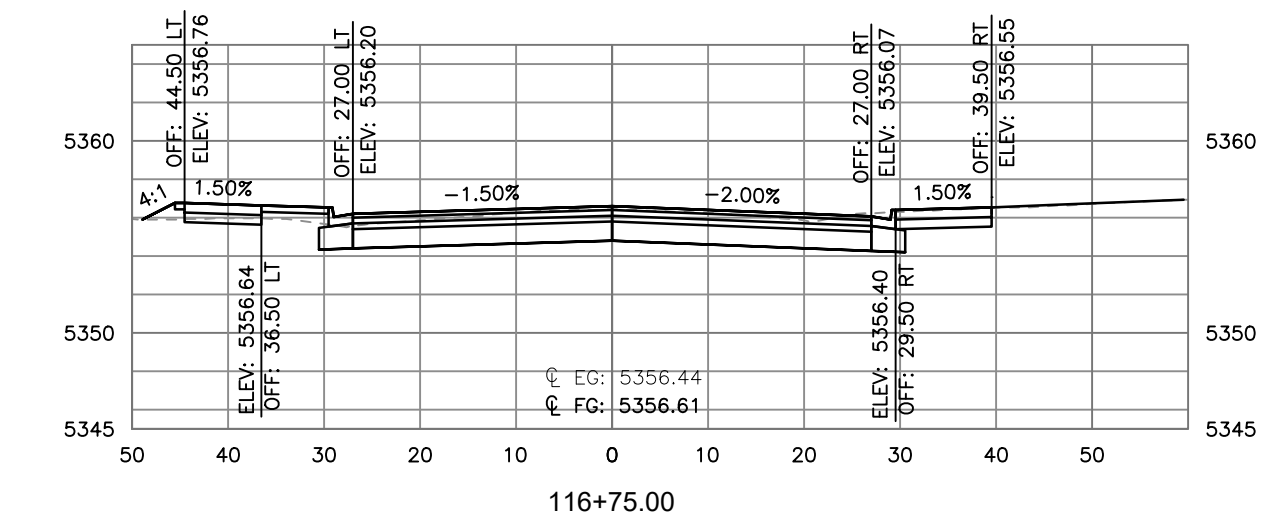
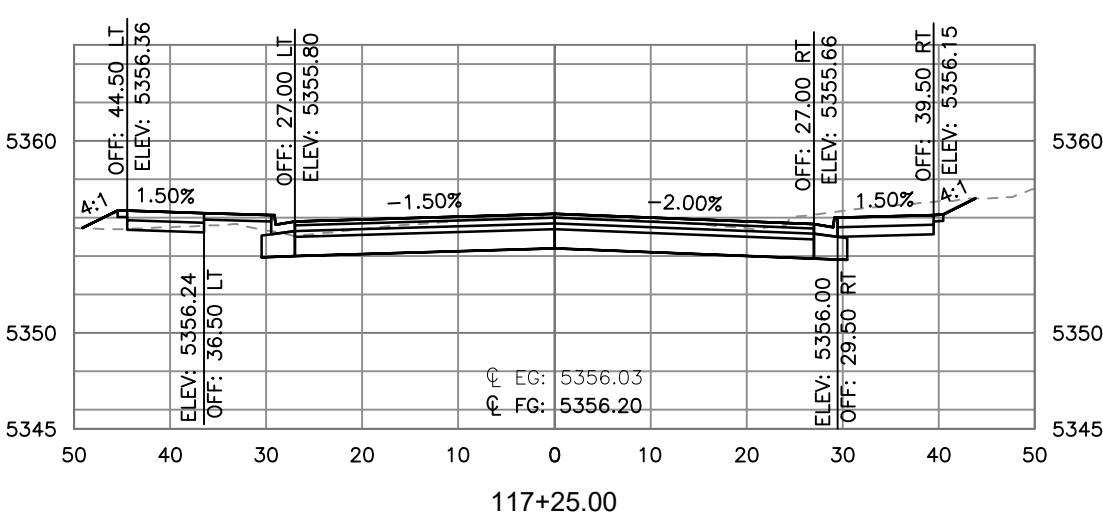
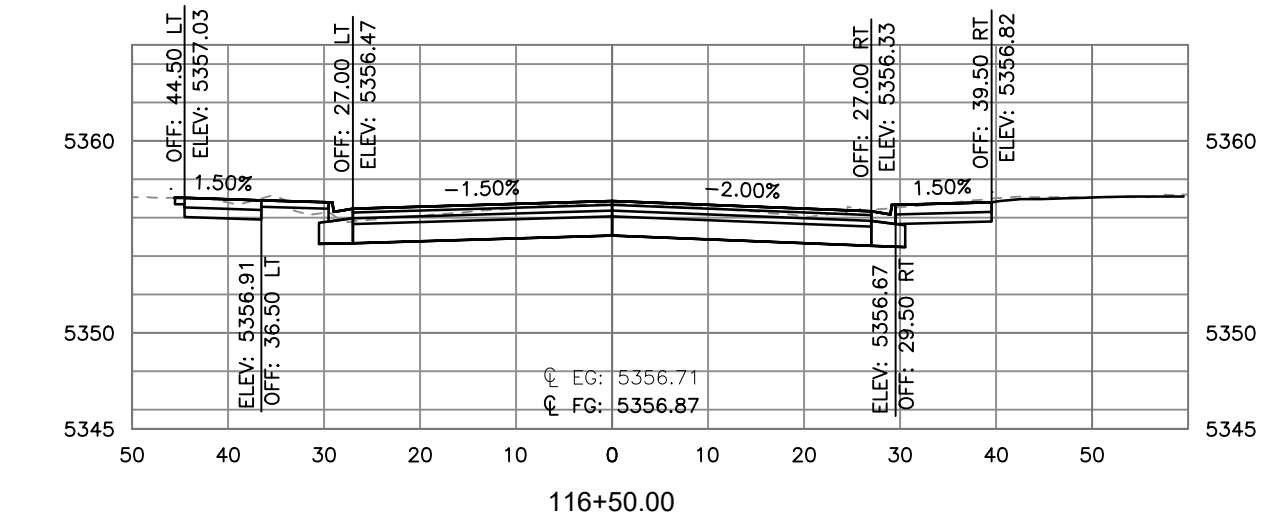
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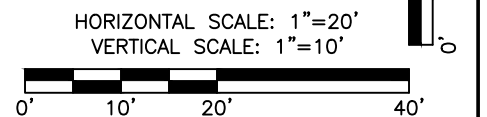
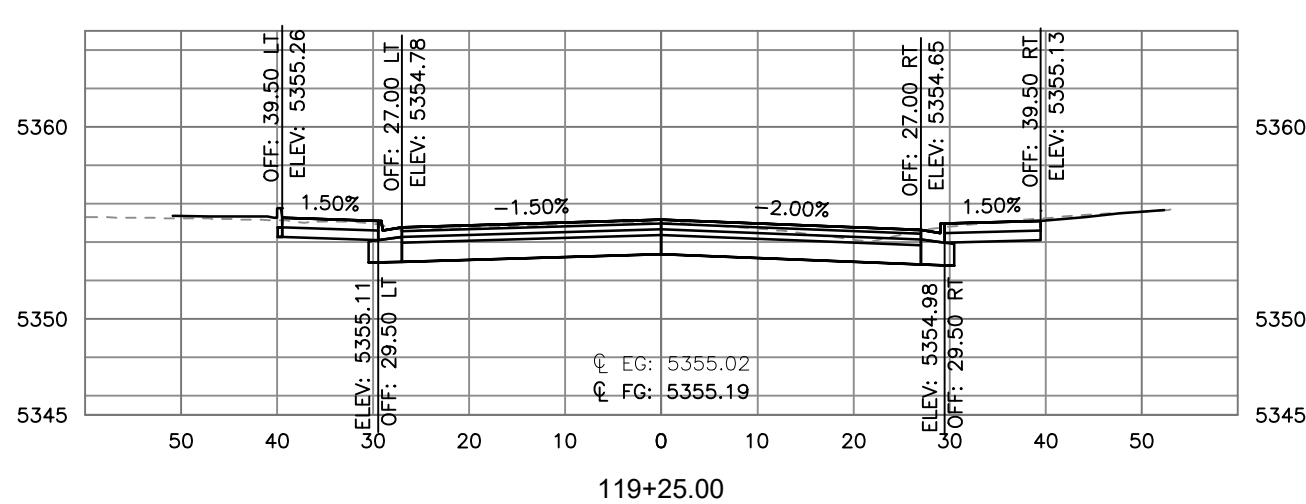
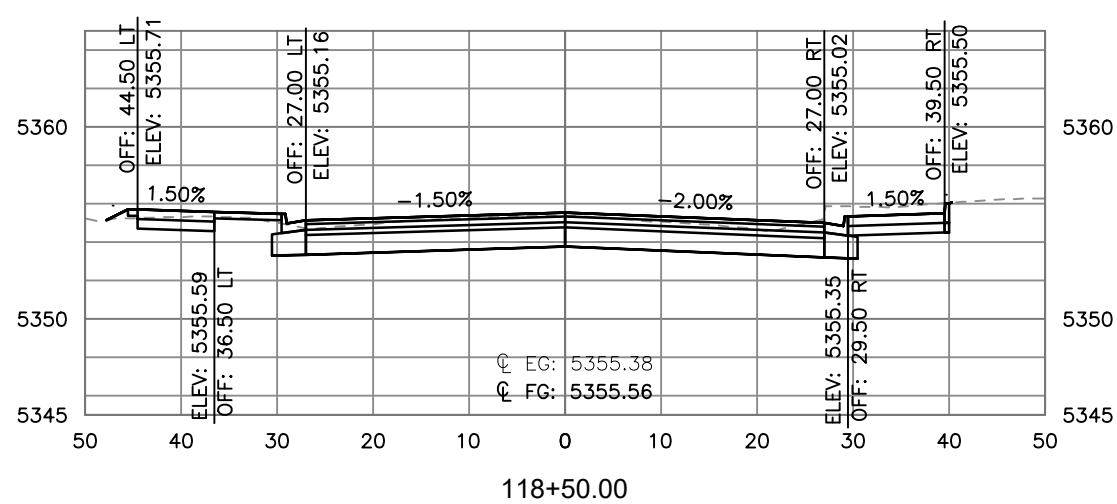
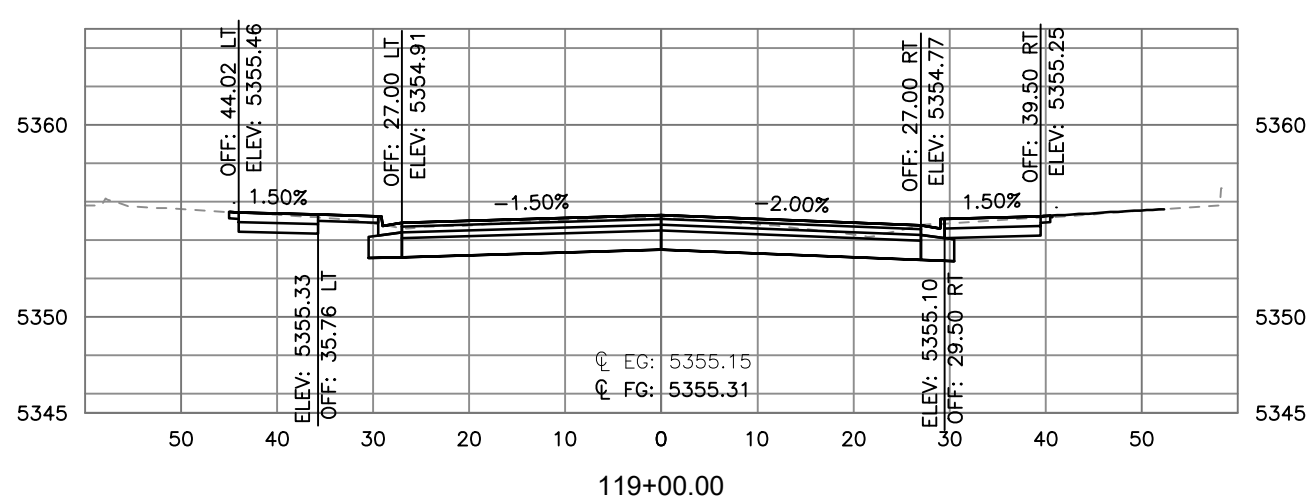
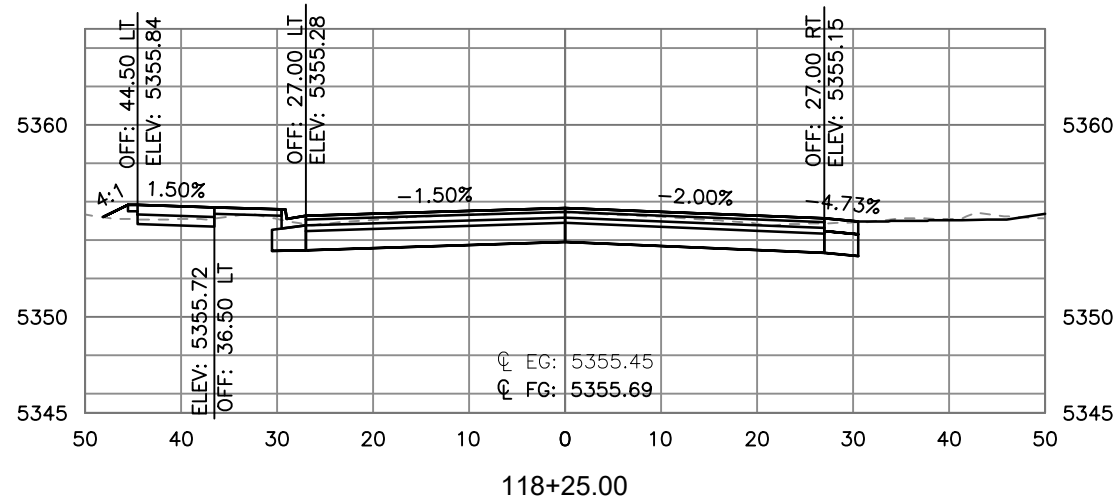
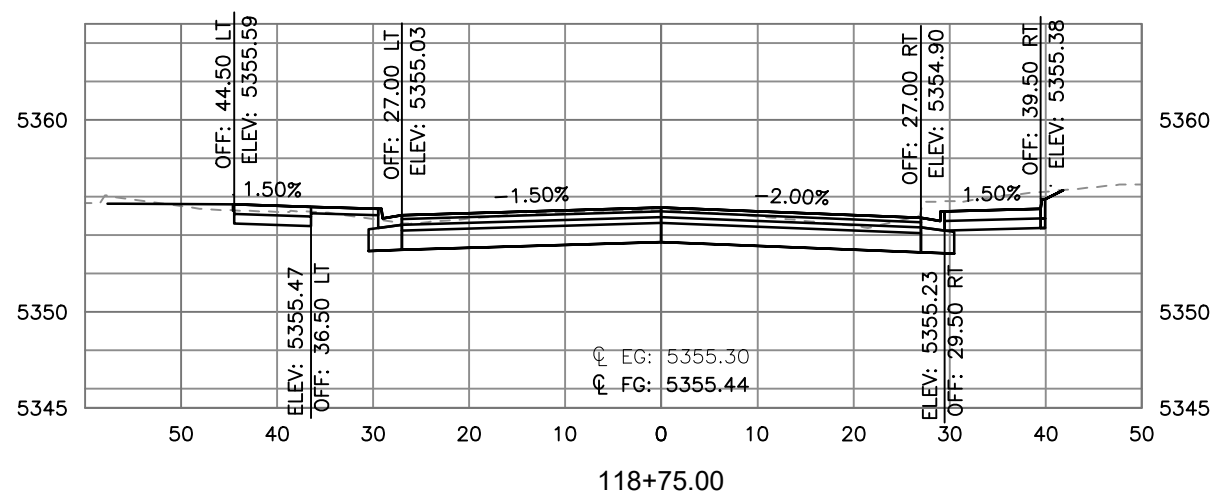
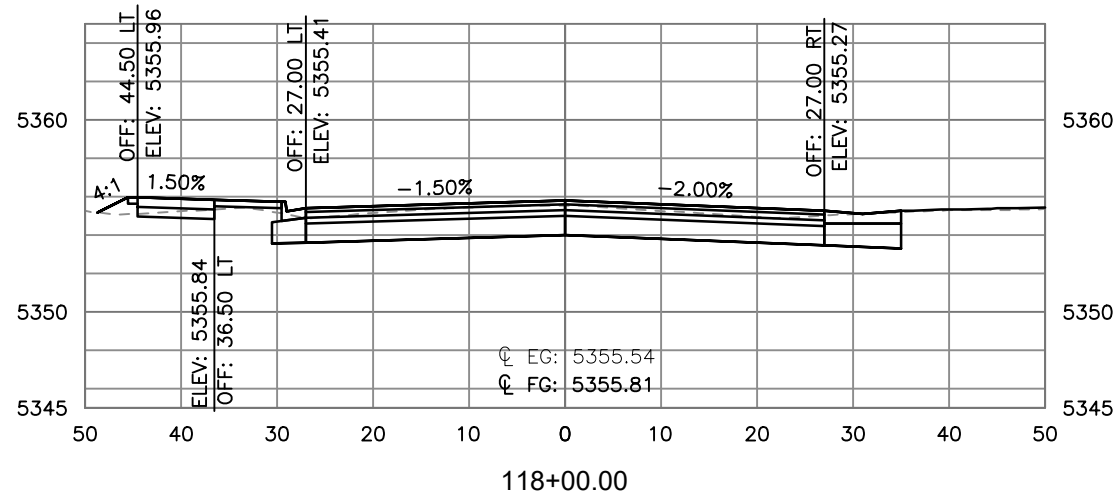
Sheet Revisions			
Date	Comments	Initials	



CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY CROSS SECTION RALSTON ROAD			Project No./Code
No Revisions:					18-ST-40
Revised:		Designer: JHH	Structure Numbers		
Void:		Detailer: DAL			
		Sheet Subset: CROSS SECTION	Subset Sheets: CS-11 of 33		Sheet Number 430

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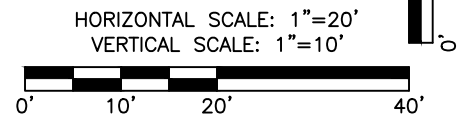
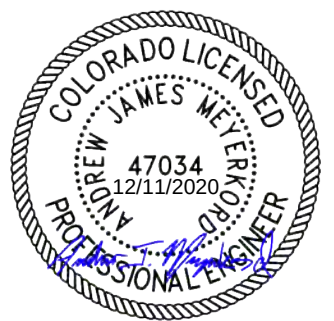
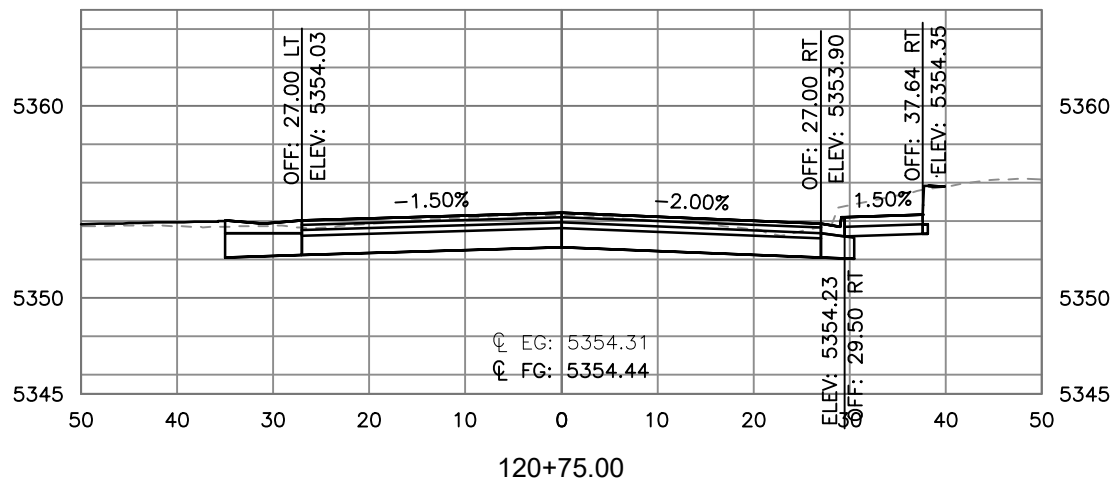
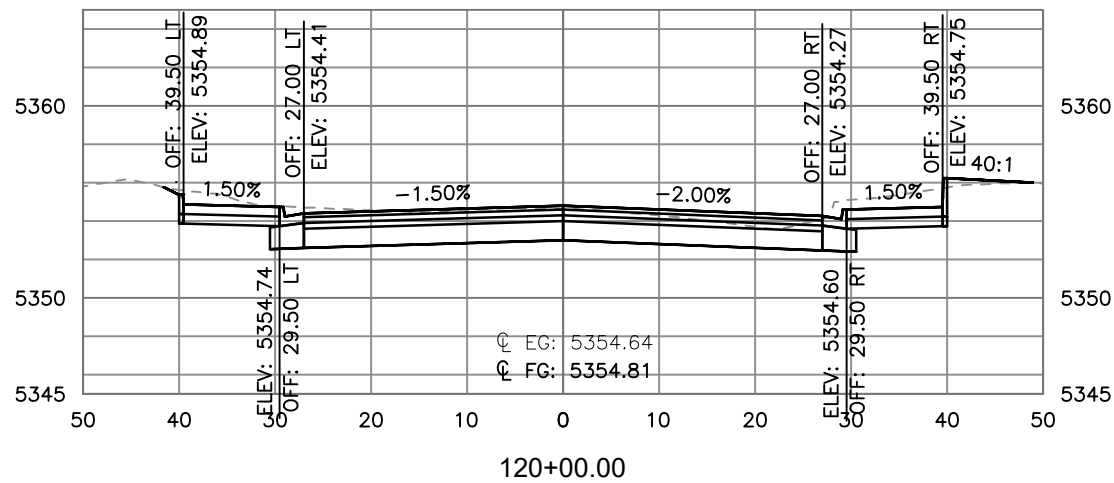
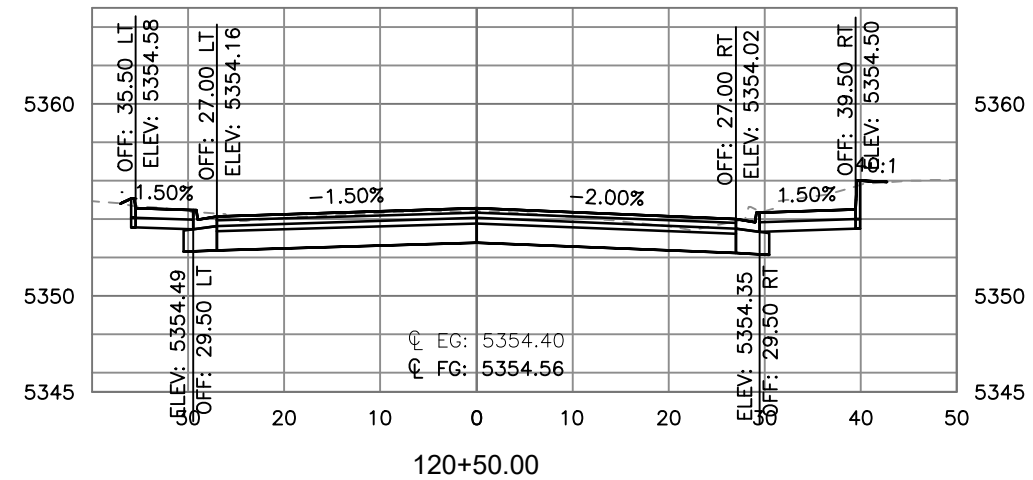
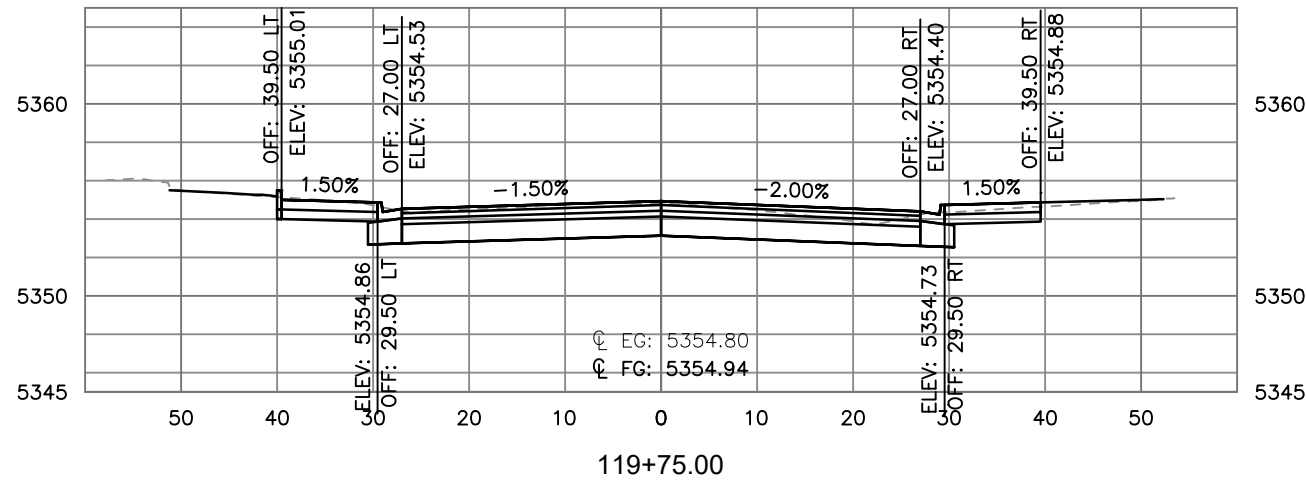
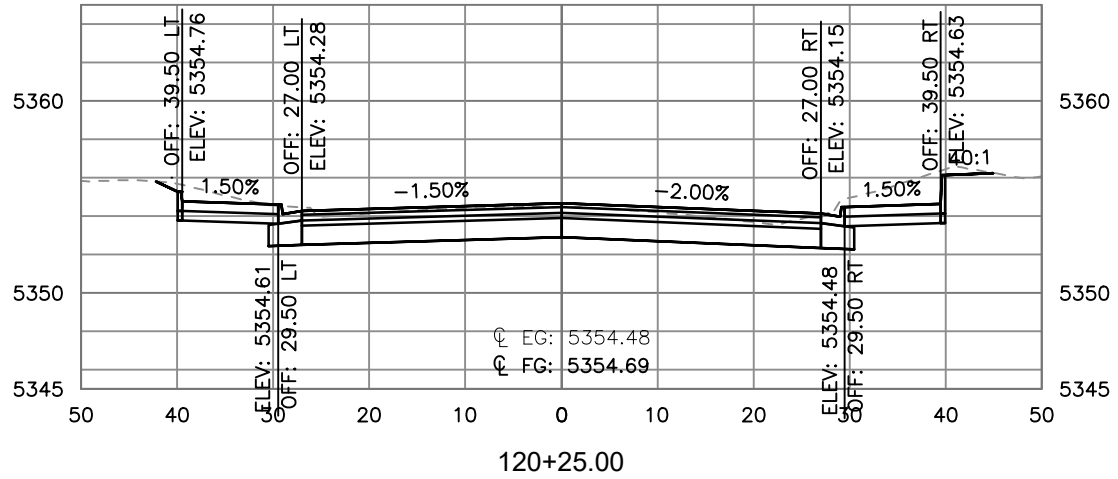
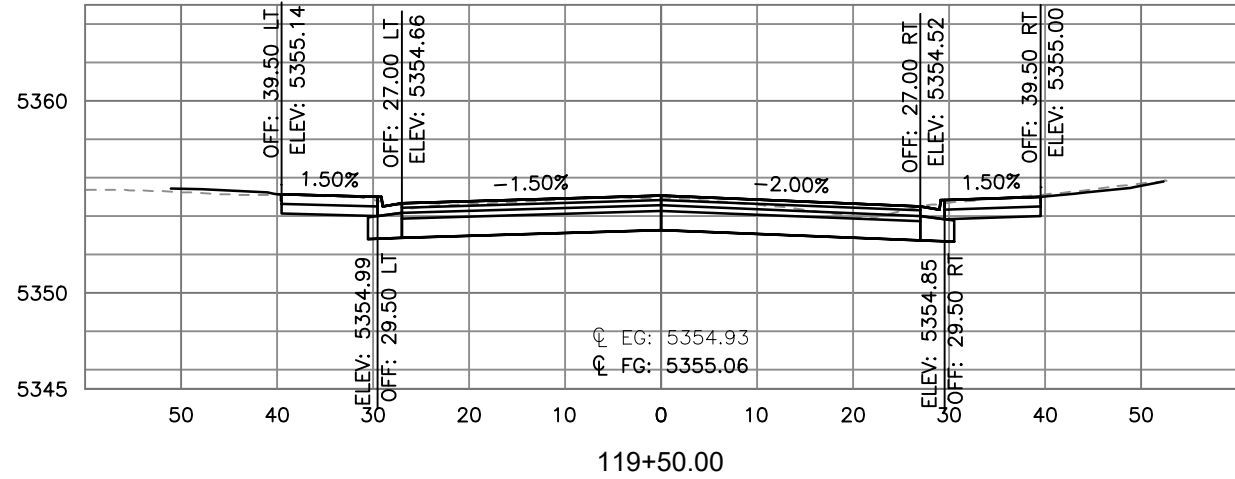


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Horizontal Scale: 1"=20' Vertical Scale: 1"=10'							Revised:		Designer: JHH	Structure Numbers			
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							Sheet Subset: CROSS SECTION		Subset Sheets: CS- 12 of 33		Sheet Number 431		



CITY OF ARVADA
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8101 RALSTON ROAD
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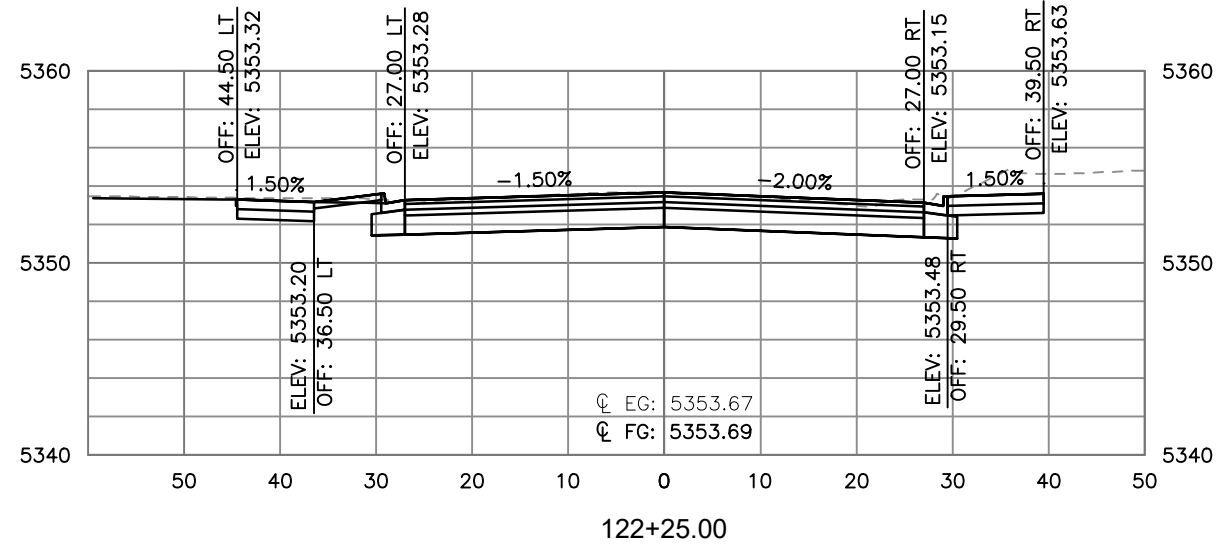
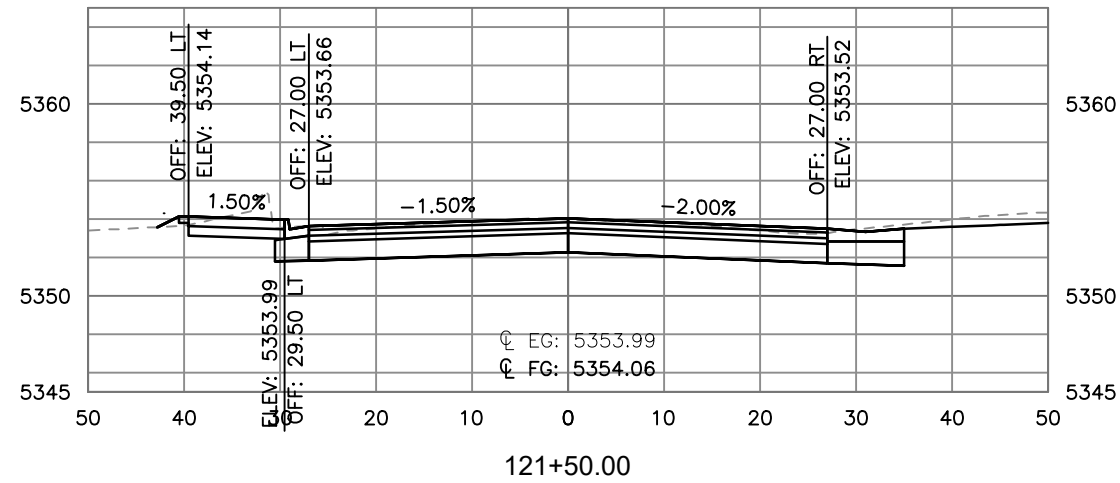
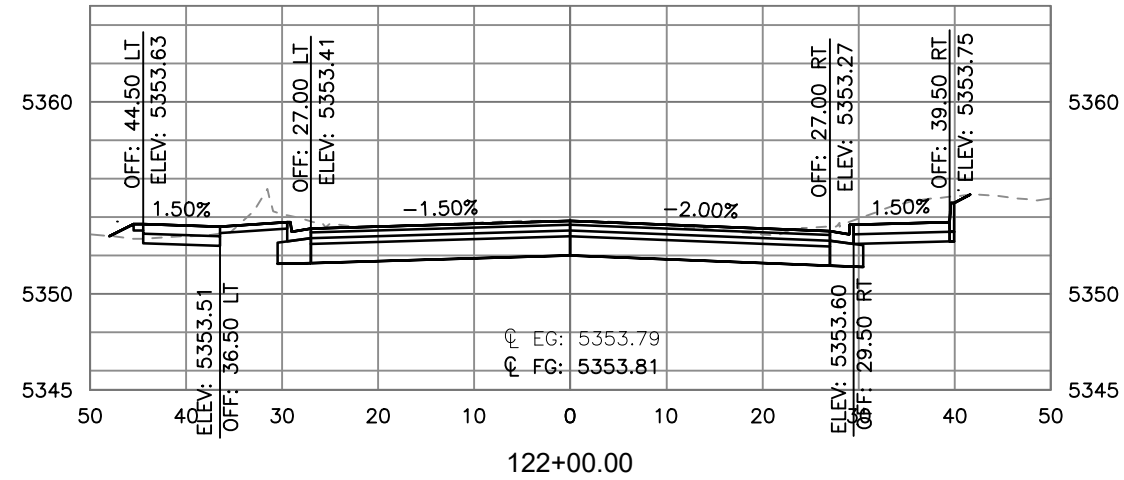
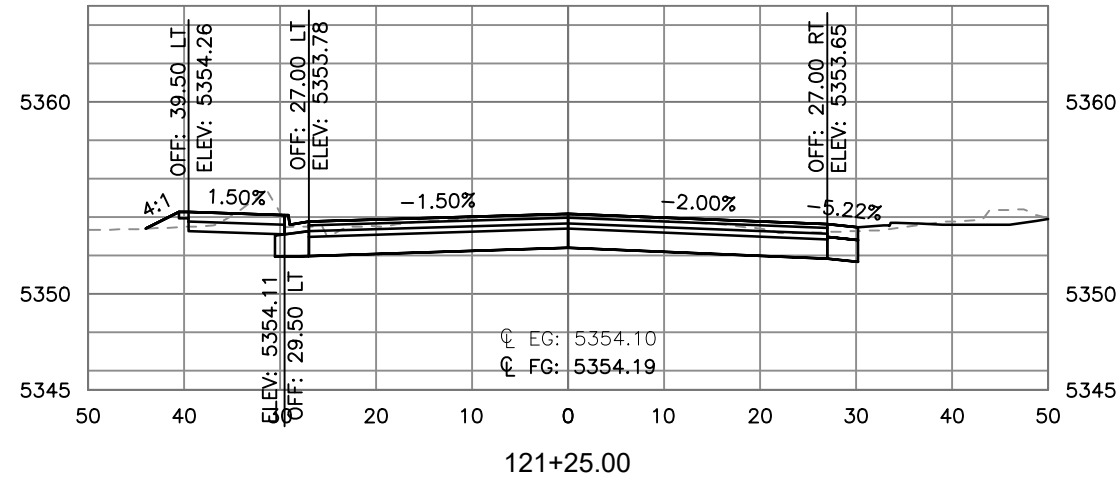
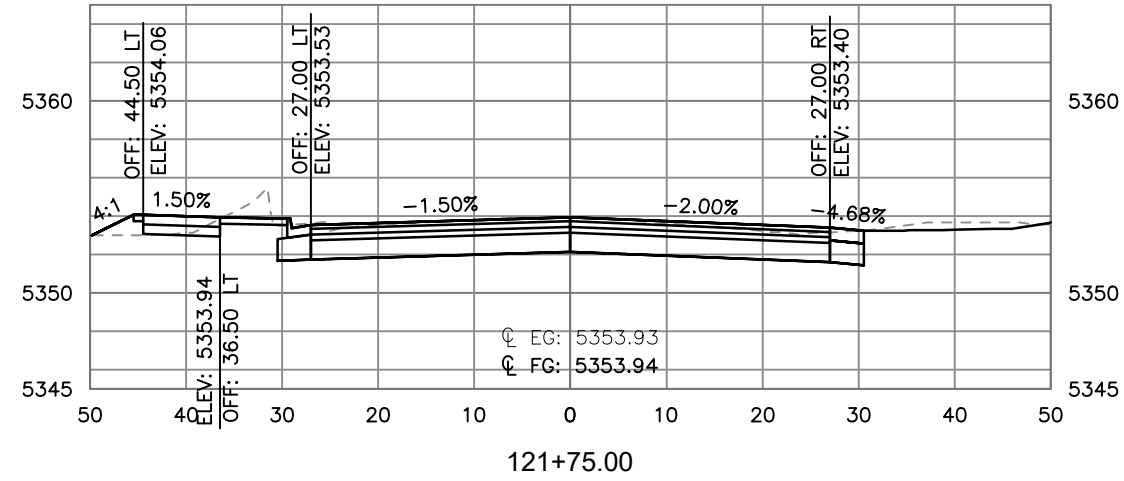
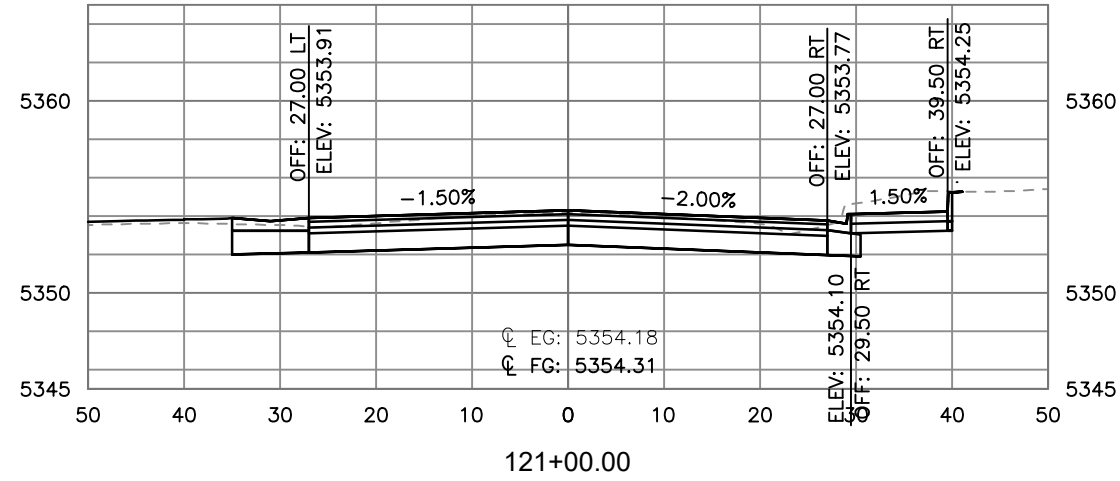
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CITY OF ARVADA
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8101 RALSTON ROAD
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As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY CROSS SECTION RALSTON ROAD			Project No./Code
No Revisions:					18-ST-40
Revised:		Designer: JHH	Structure Numbers		
Void:		Detailer: DAL			
		Sheet Subset: CROSS SECTION	Subset Sheets: CS-13 of 33		Sheet Number 432



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VERTICAL SCALE: 1"=10'

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Horizontal Scale: 1"=20' Vertical Scale: 1"=10'



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8101 RALSTON ROAD
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As Constructed

No Revisions:

Revised:

Void:

RALSTON RD - YUKON ST TO GARRISON ST ROADWAY CROSS SECTION RALSTON ROAD

Designer: JHH
Detailer: DAL
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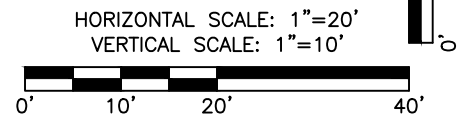
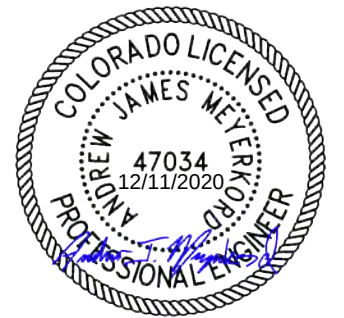
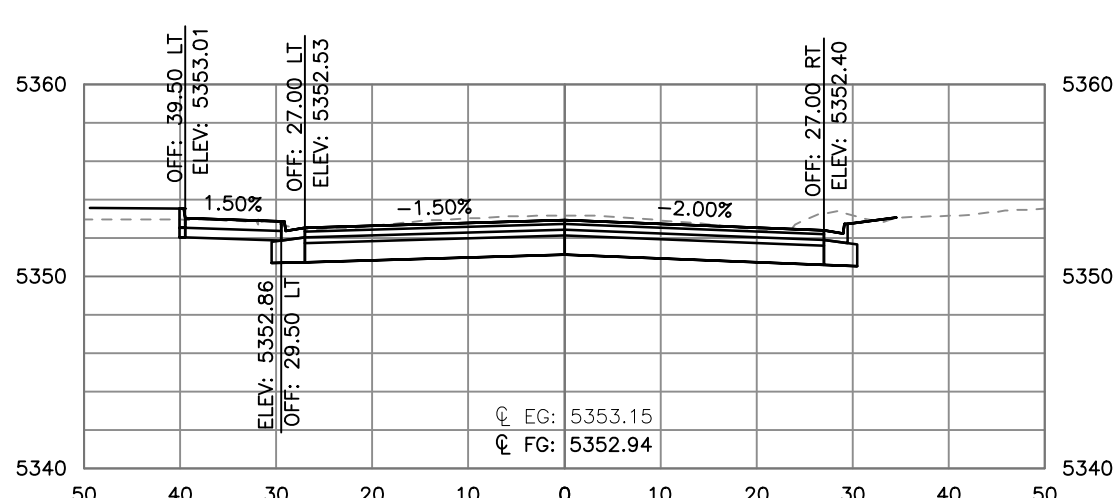
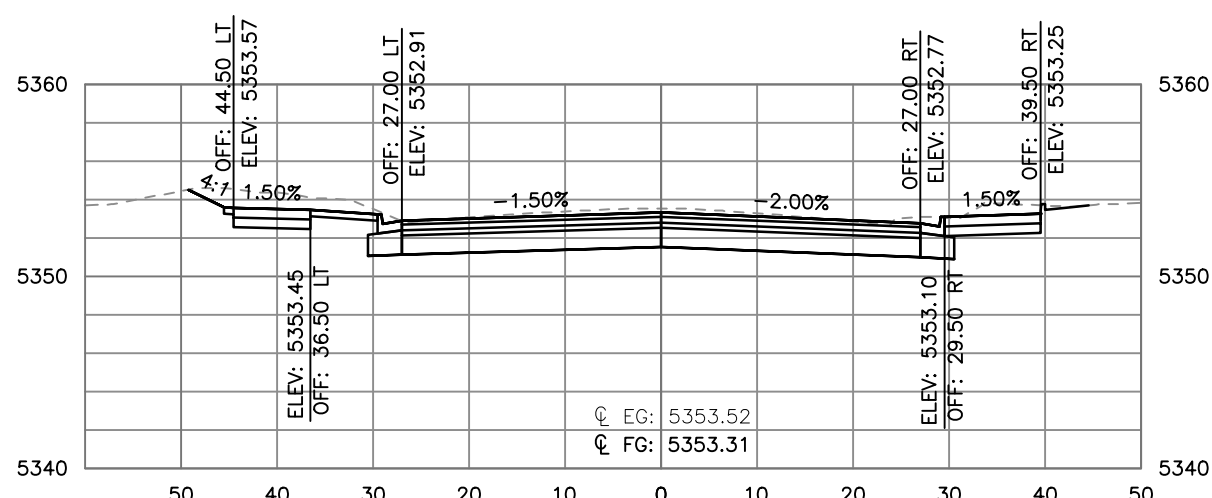
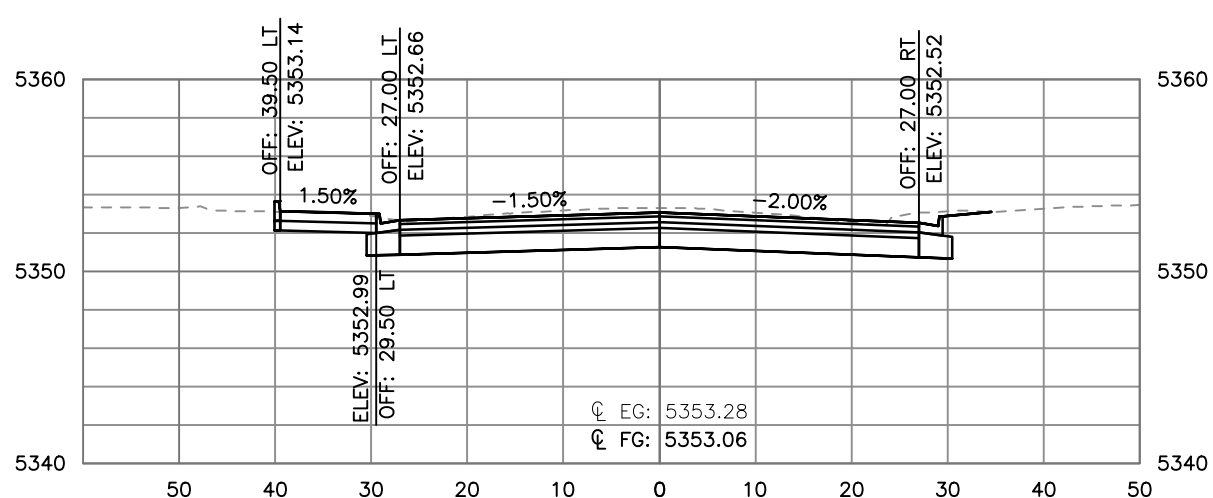
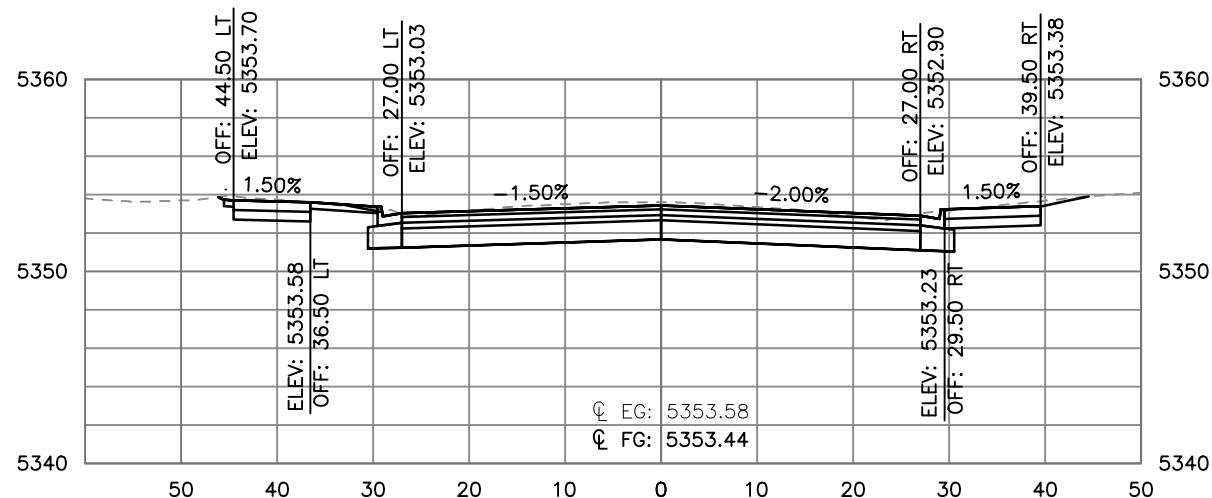
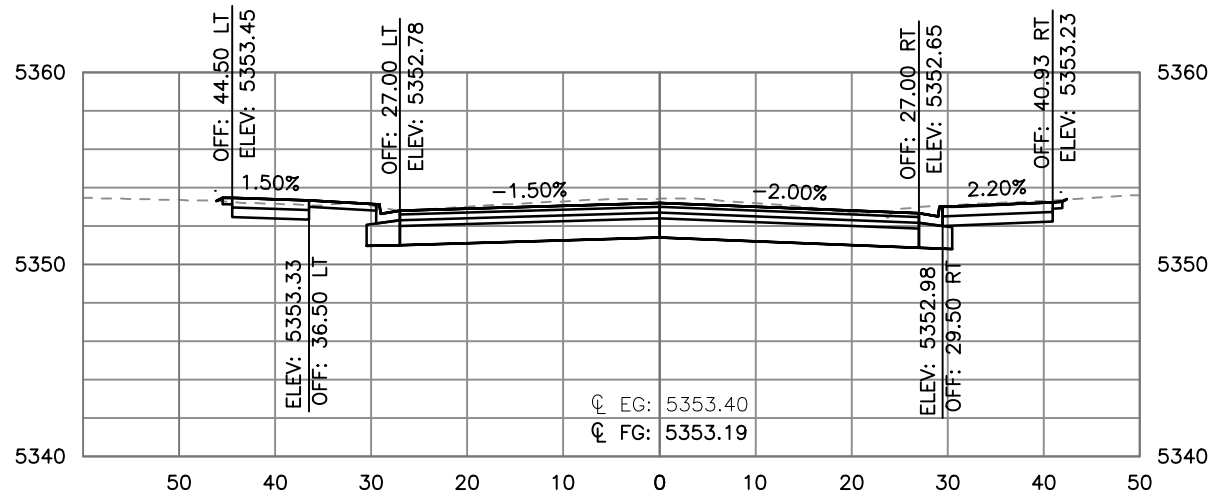
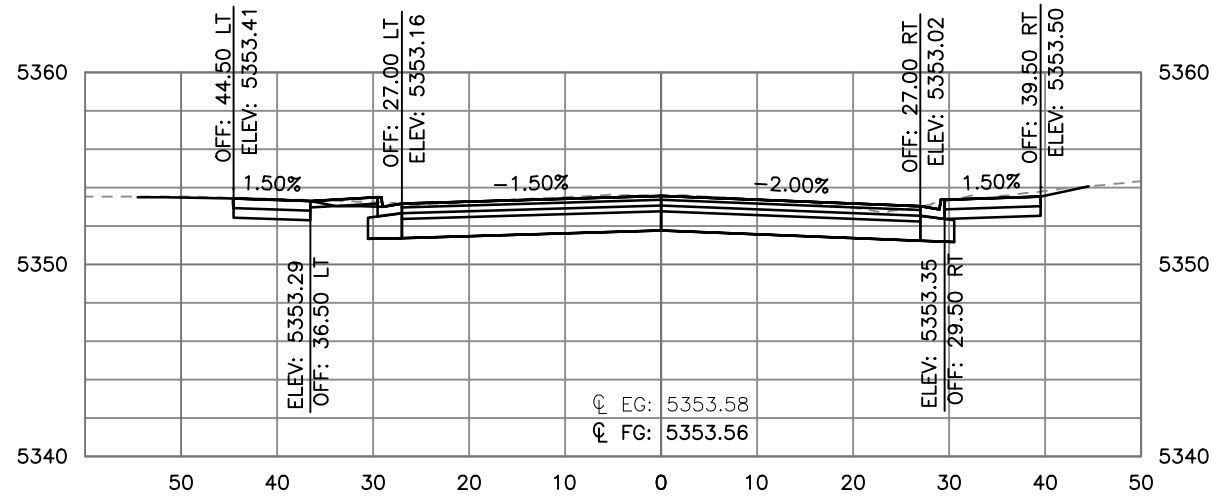
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Subset Sheets: CS-14 of 33

Project No./Code

18-ST-40

Sheet Number 433

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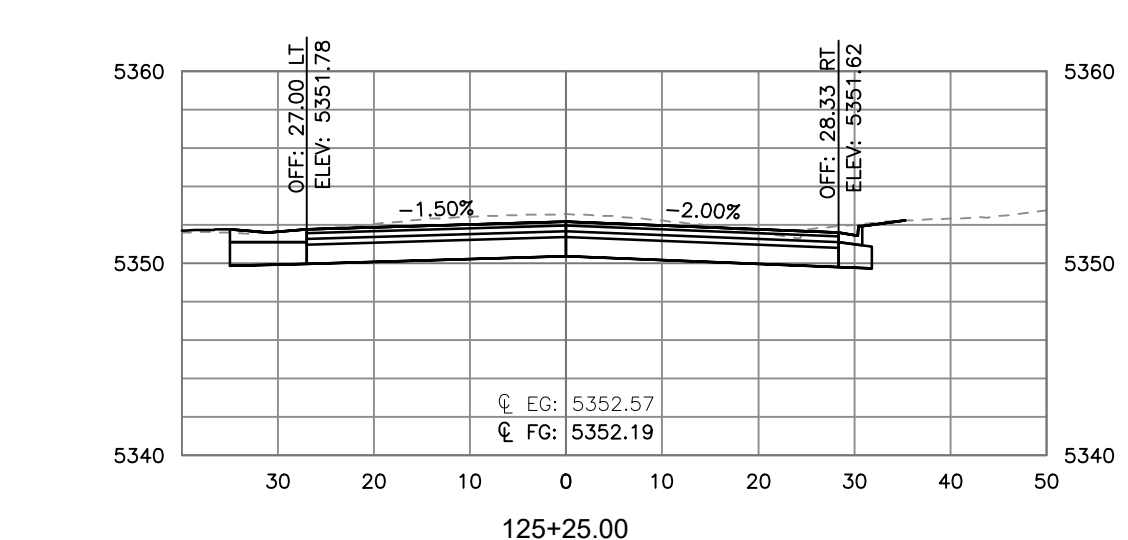
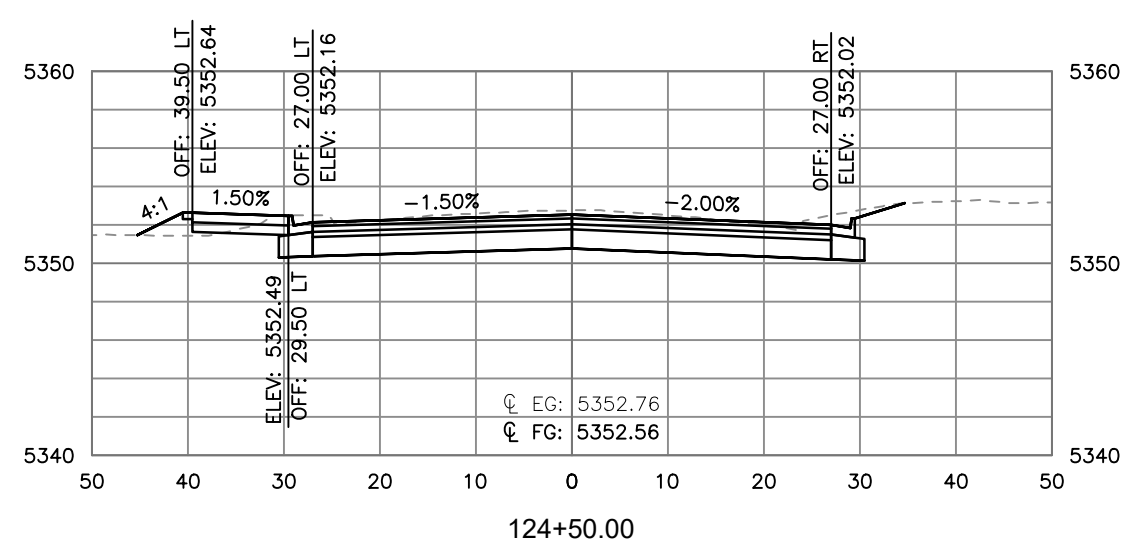
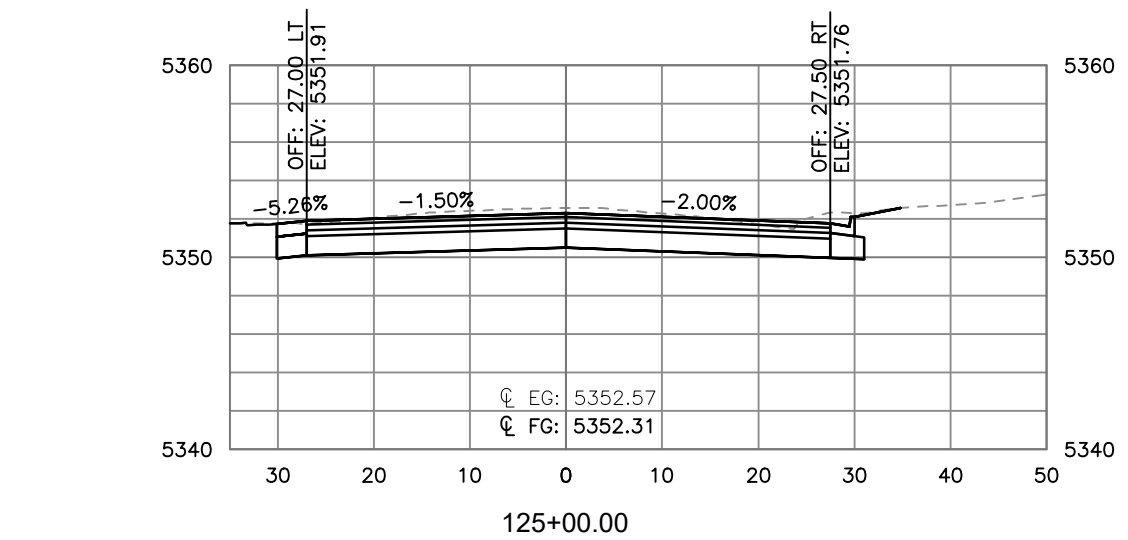
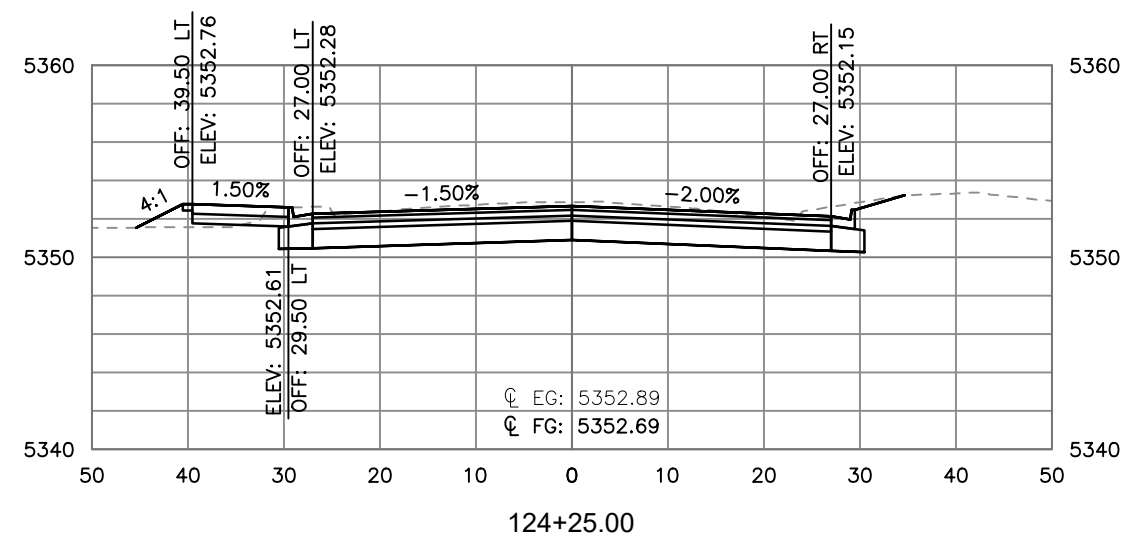
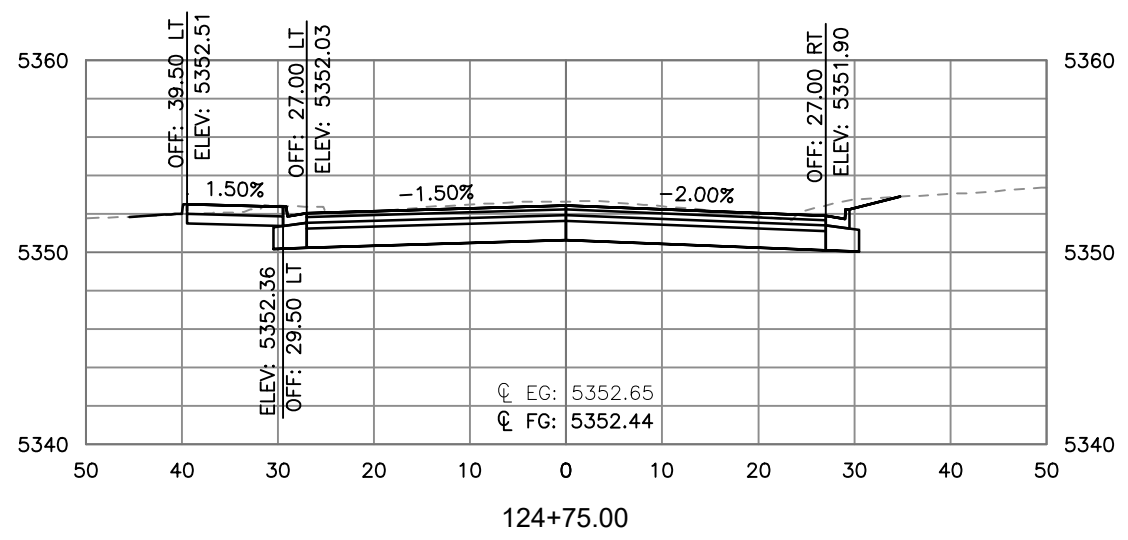
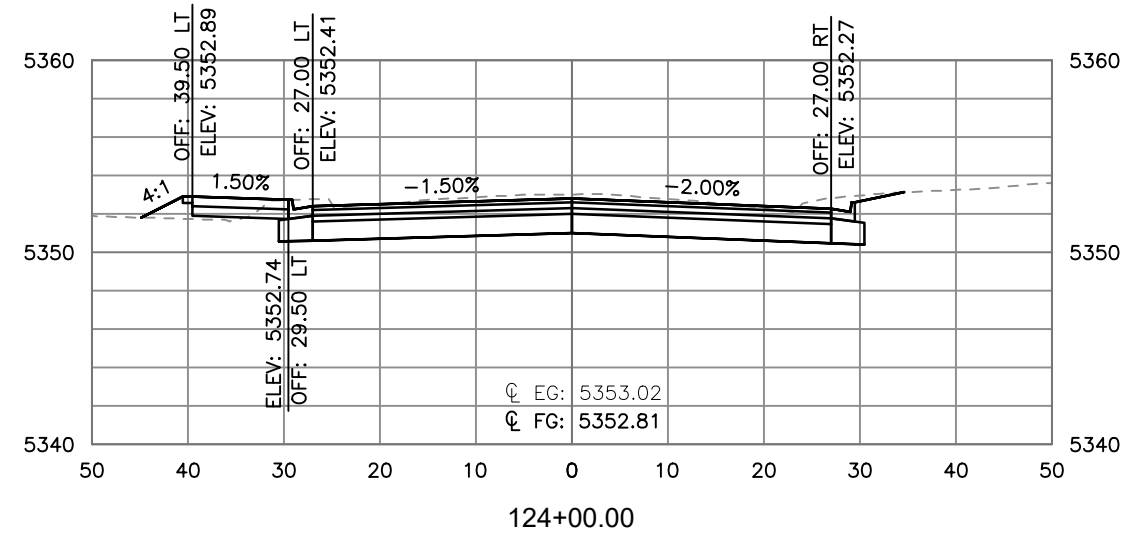
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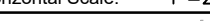
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PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY CROSS SECTION RALSTON ROAD			Project No./Code
No Revisions:					18-ST-40
Revised:		Designer: JHH	Structure Numbers		
Void:		Detailer: DAL			
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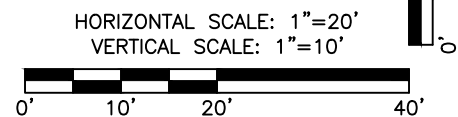
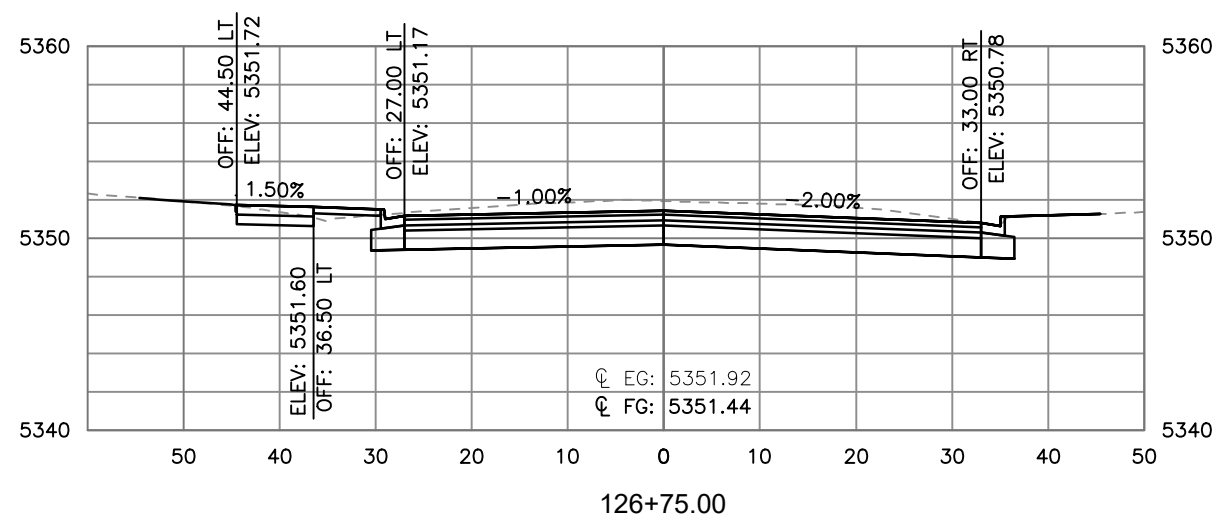
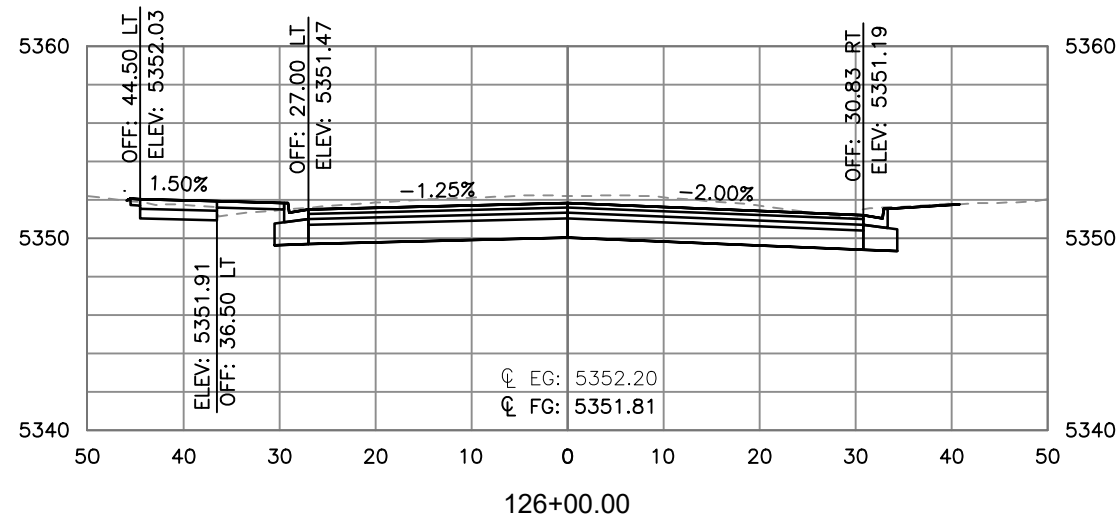
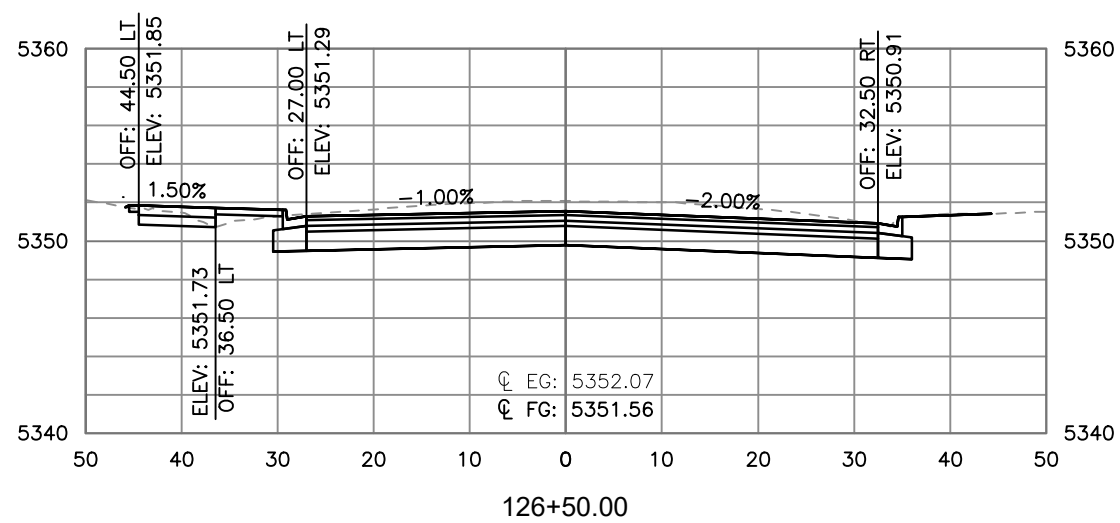
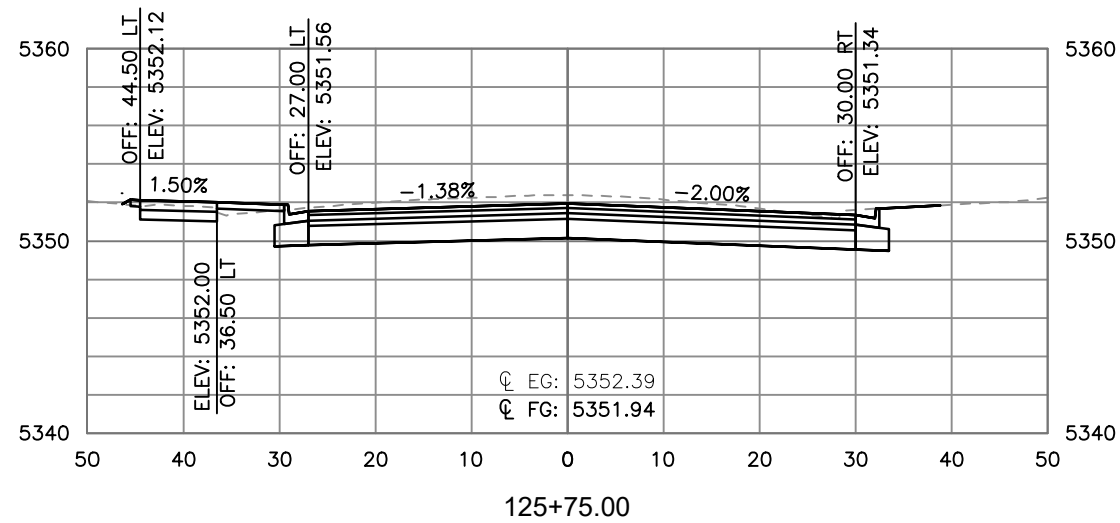
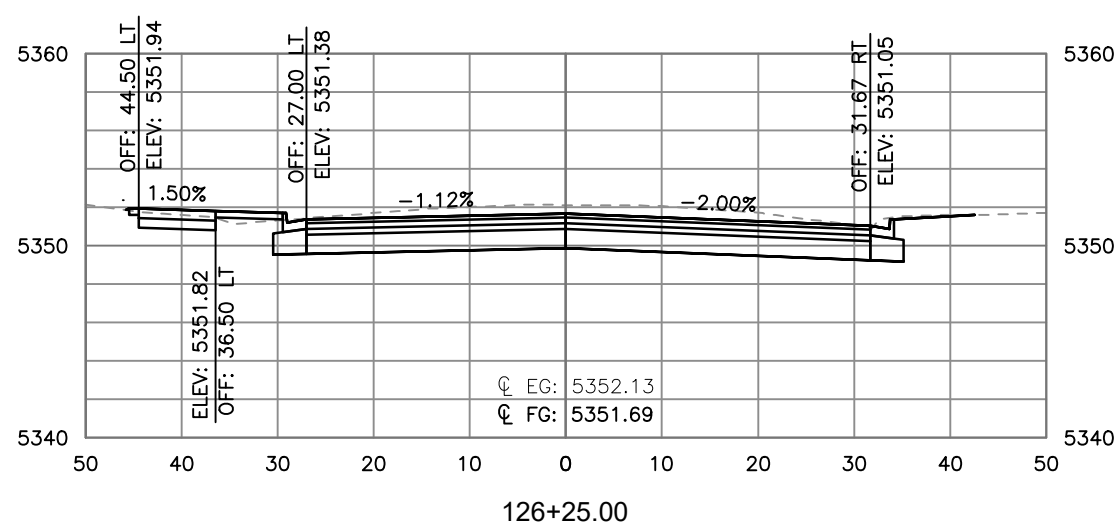
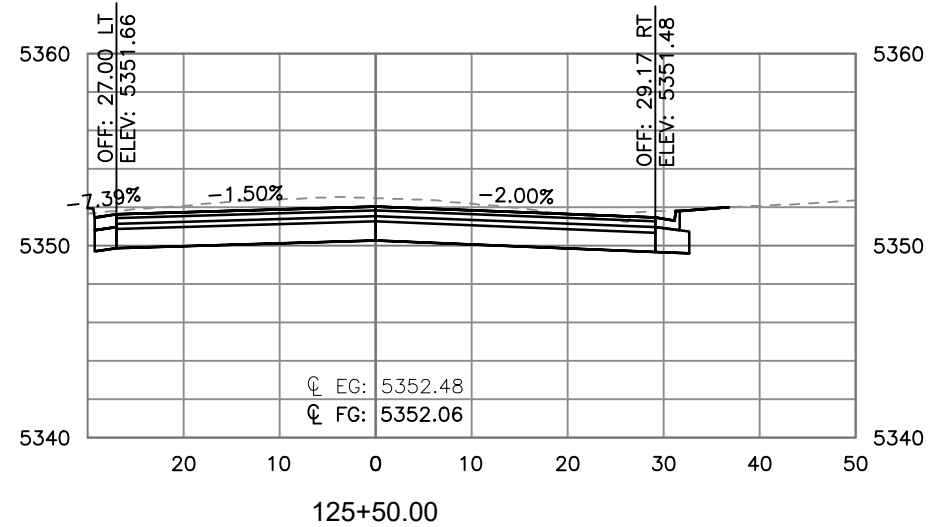


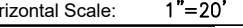
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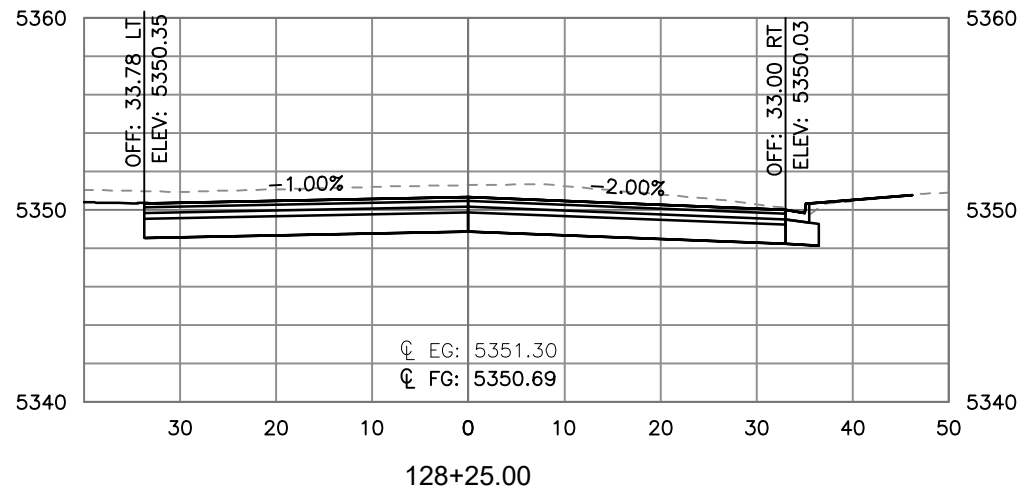
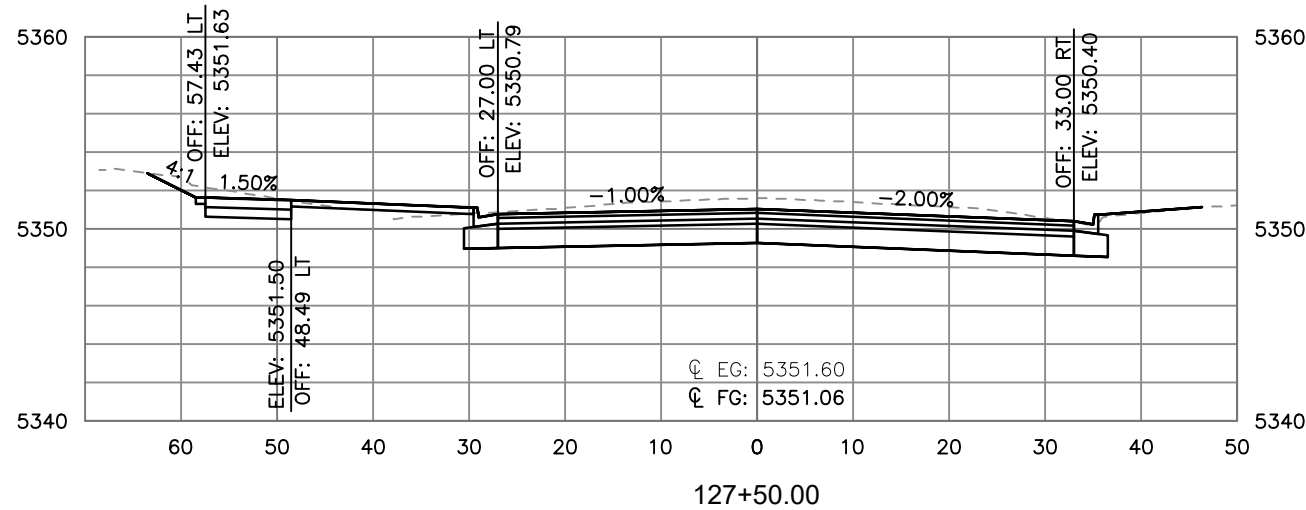
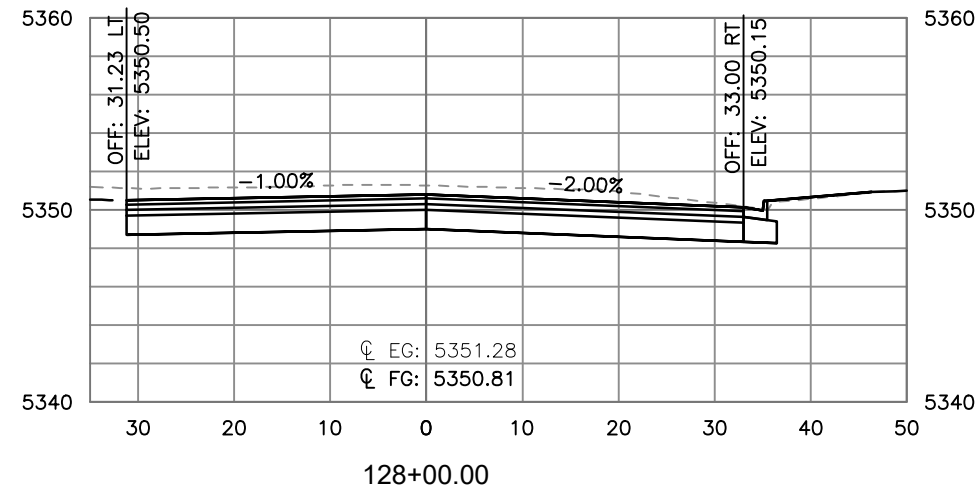
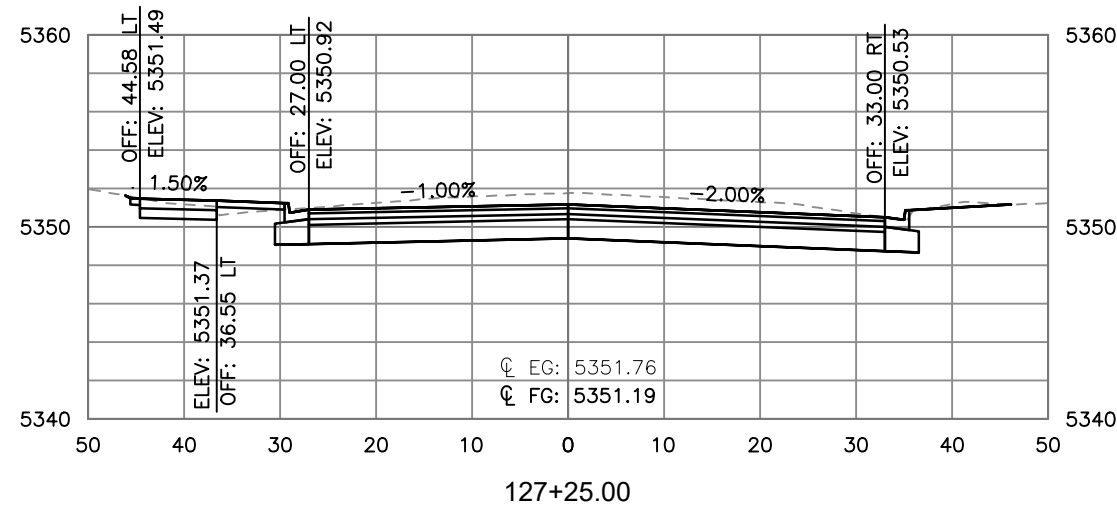
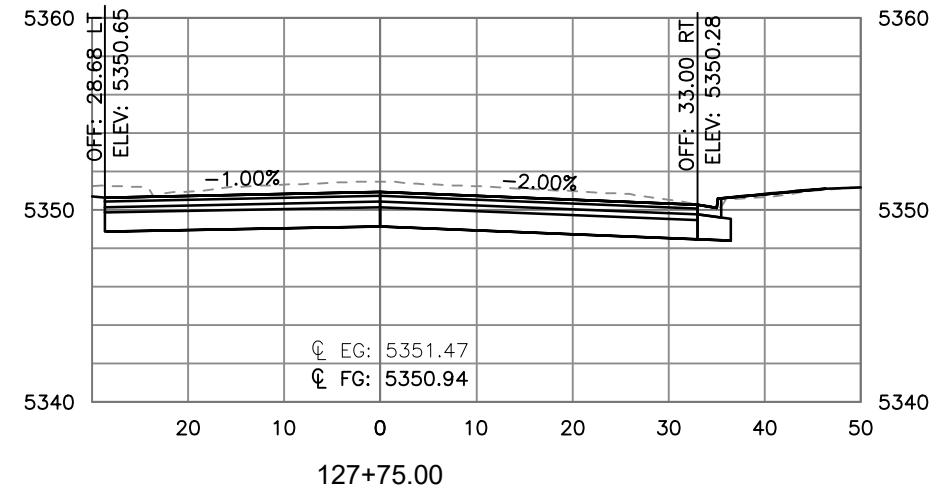
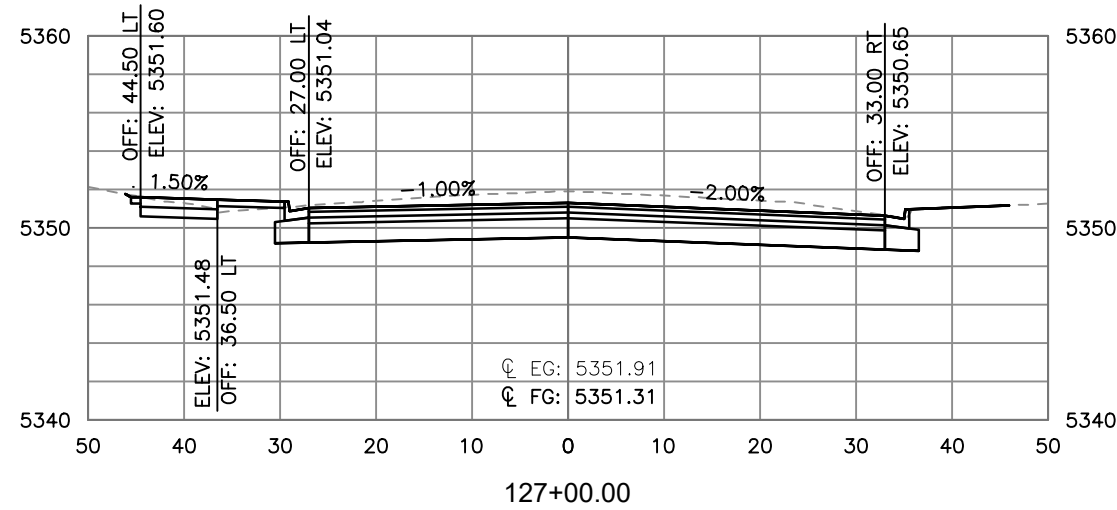
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File Name: 118355_RDCS_SH01_RALSTON.DWG			Date	Comments	Initials		No Revisions:					18-ST-40	
Horizontal Scale: 1"=20' Vertical Scale: 1"=10'							Revised:		Designer: JHH	Structure Numbers			
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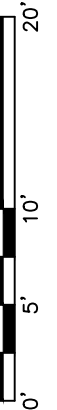


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File Name: 118355_RDOS_SH01_RALSTON.DWG			Date	Comments	Initials		No Revisions:					18-ST-40	
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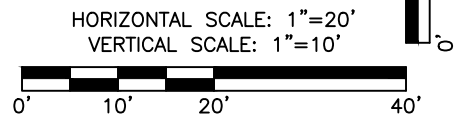
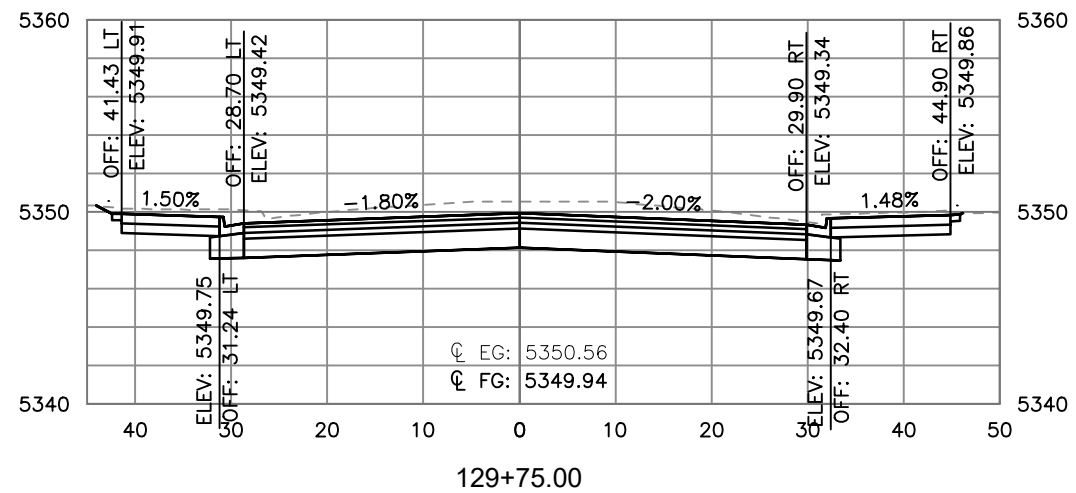
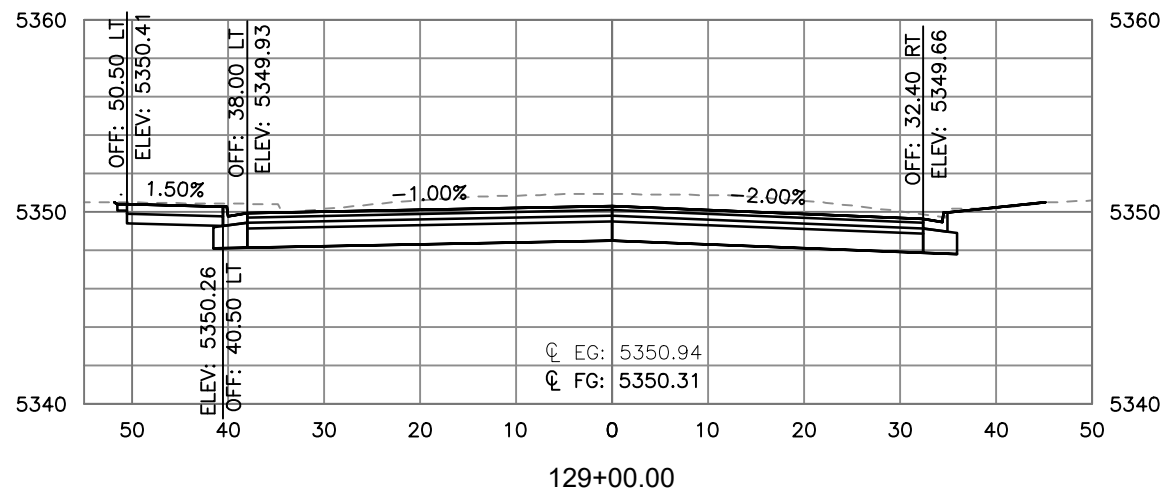
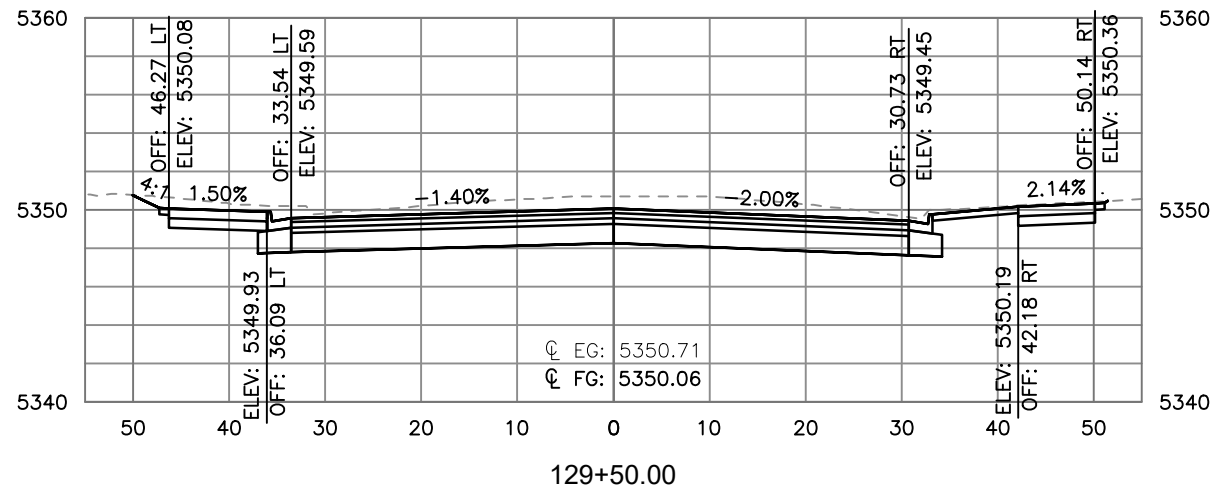
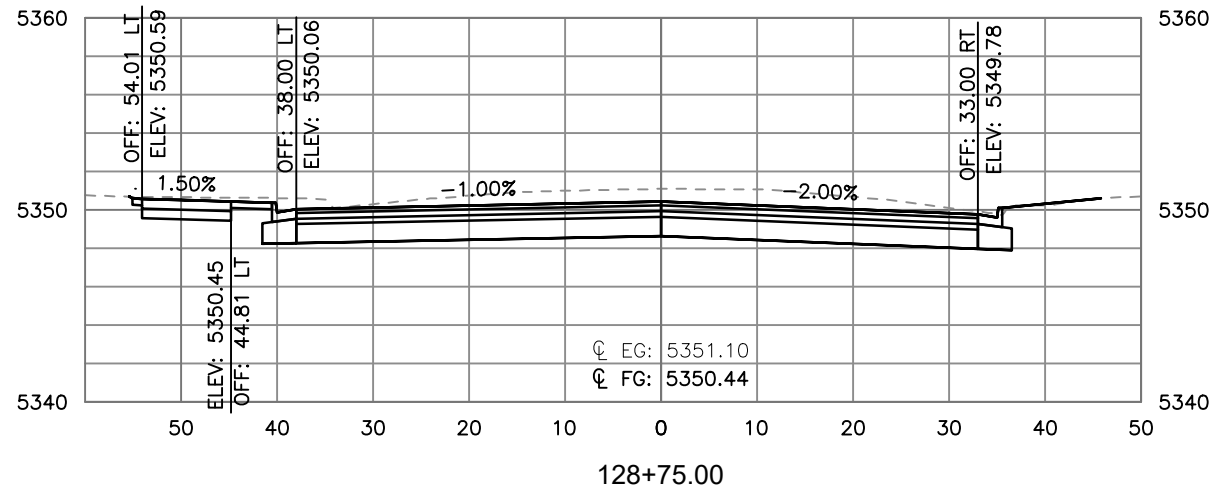
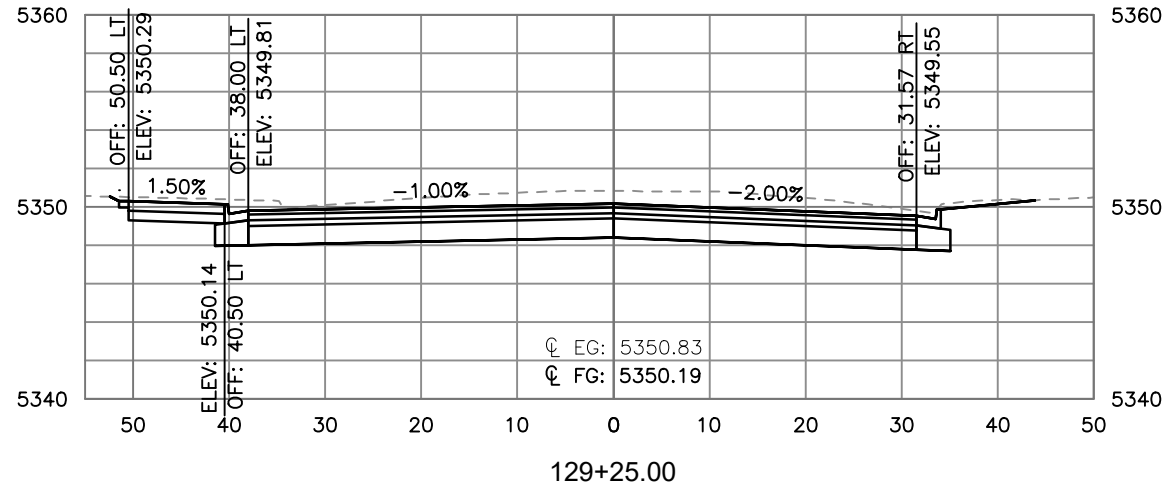
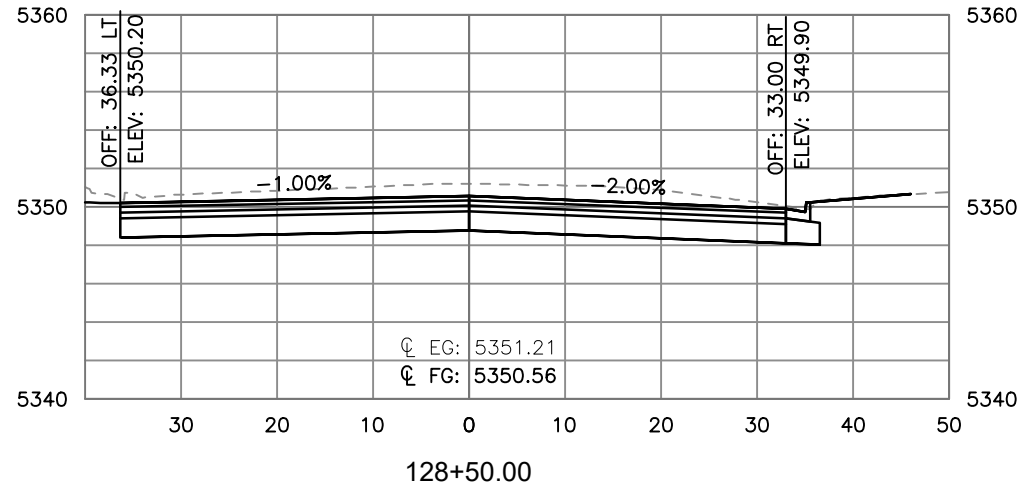
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No Revisions:					18-ST-40
Revised:		Designer: JHH	Structure Numbers		
Void:		Detailer: DAL			
		Sheet Subset: CROSS SECTION	Subset Sheets: CS-18 of 33		Sheet Number 437



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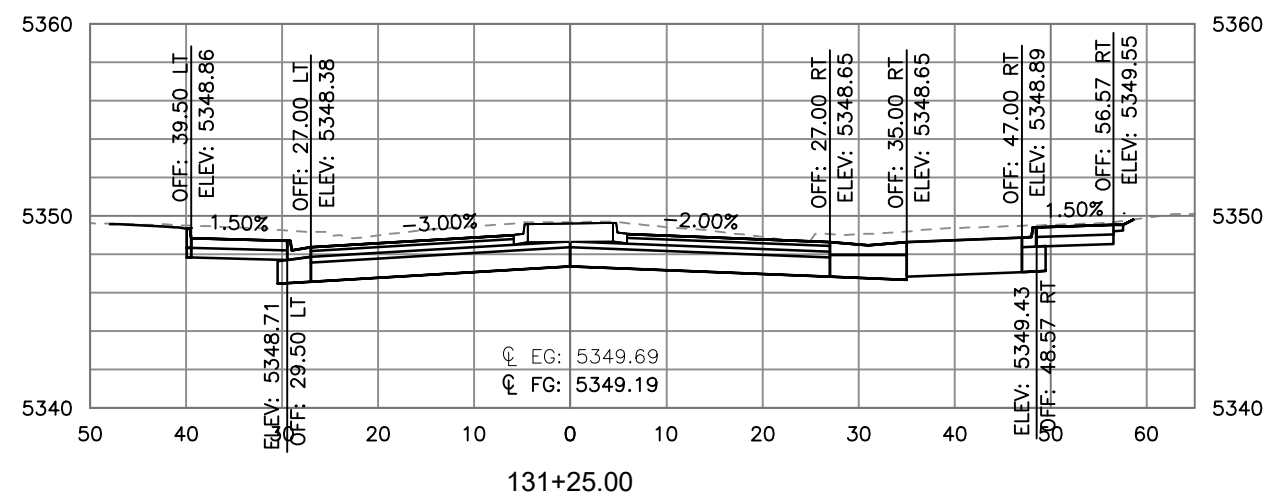
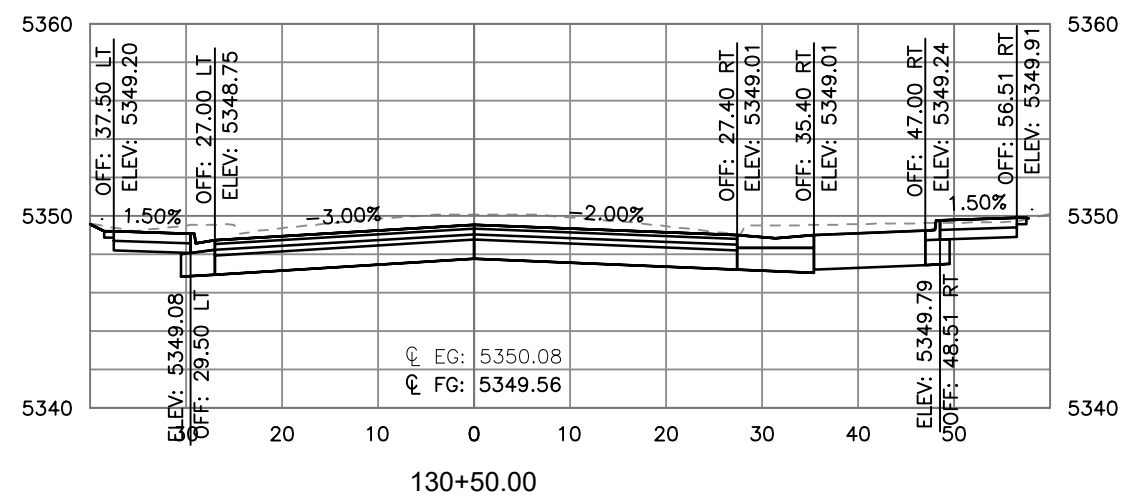
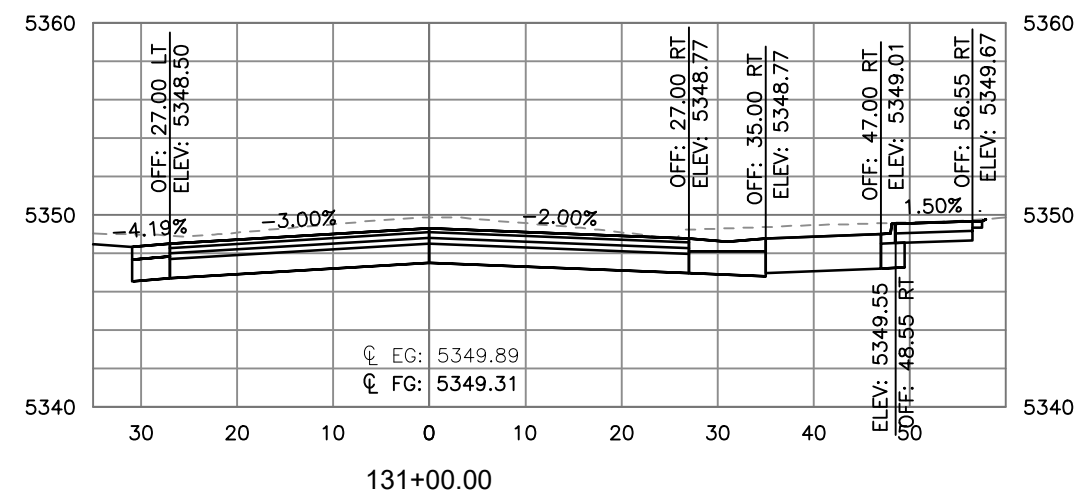
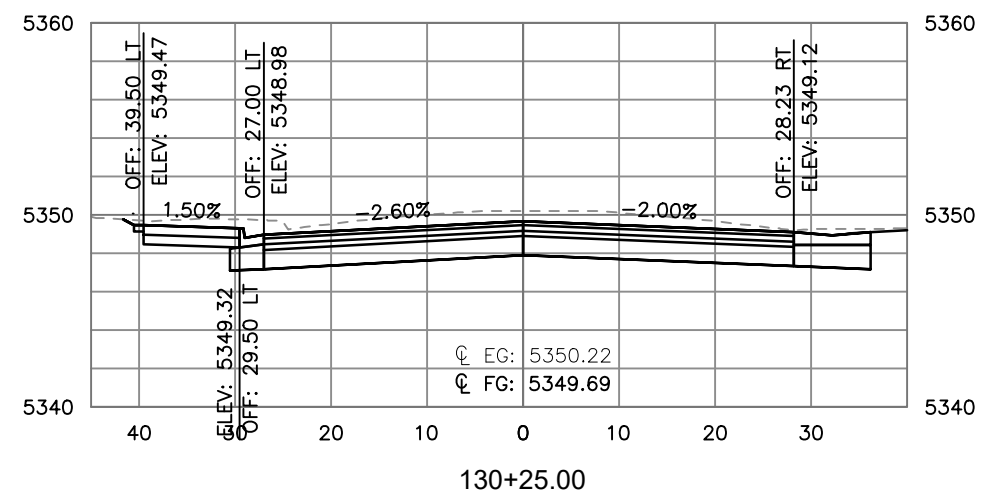
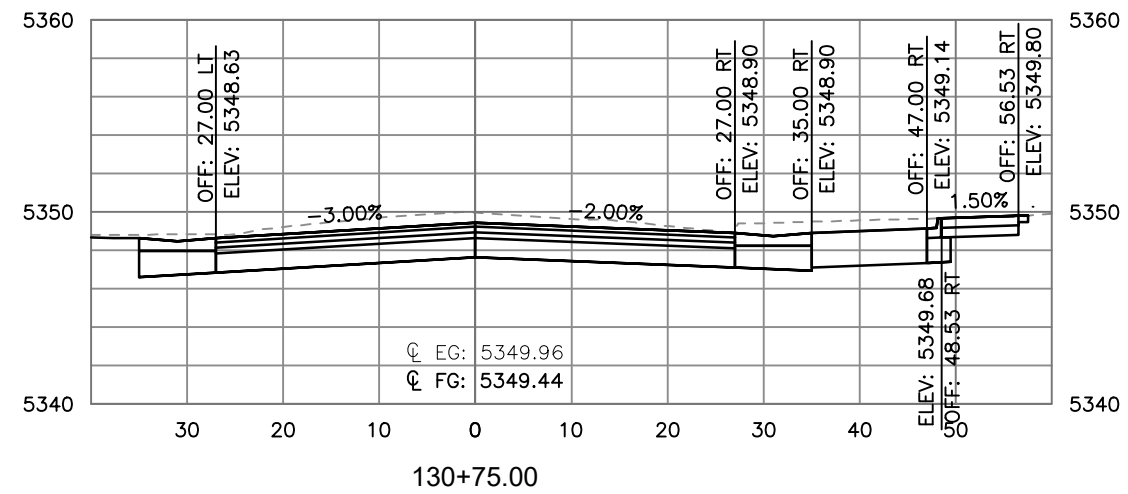
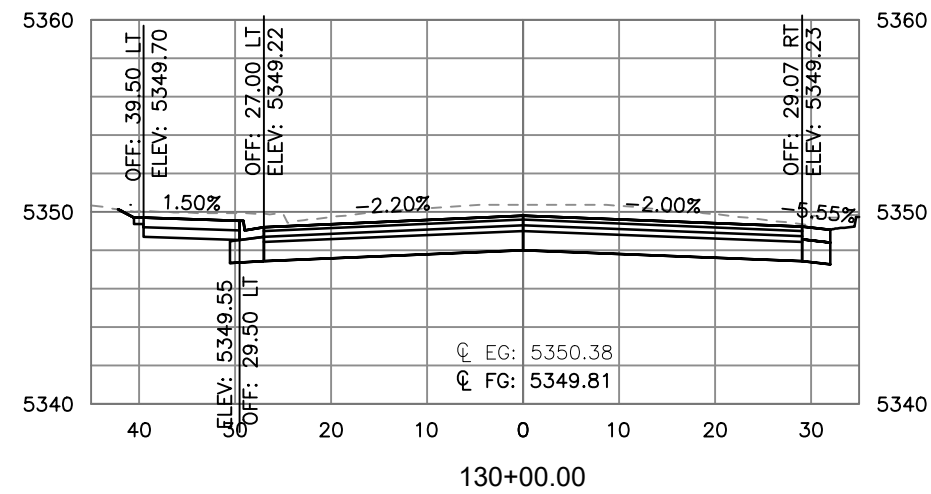
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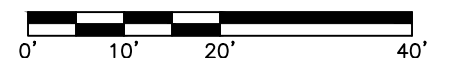
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CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY CROSS SECTION RALSTON ROAD			Project No./Code
No Revisions:					18-ST-40
Revised:		Designer: JHH	Structure Numbers		
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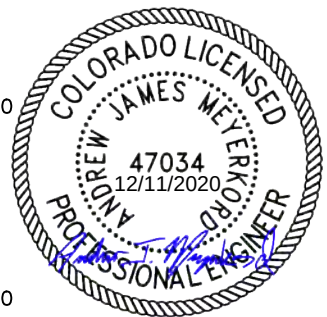
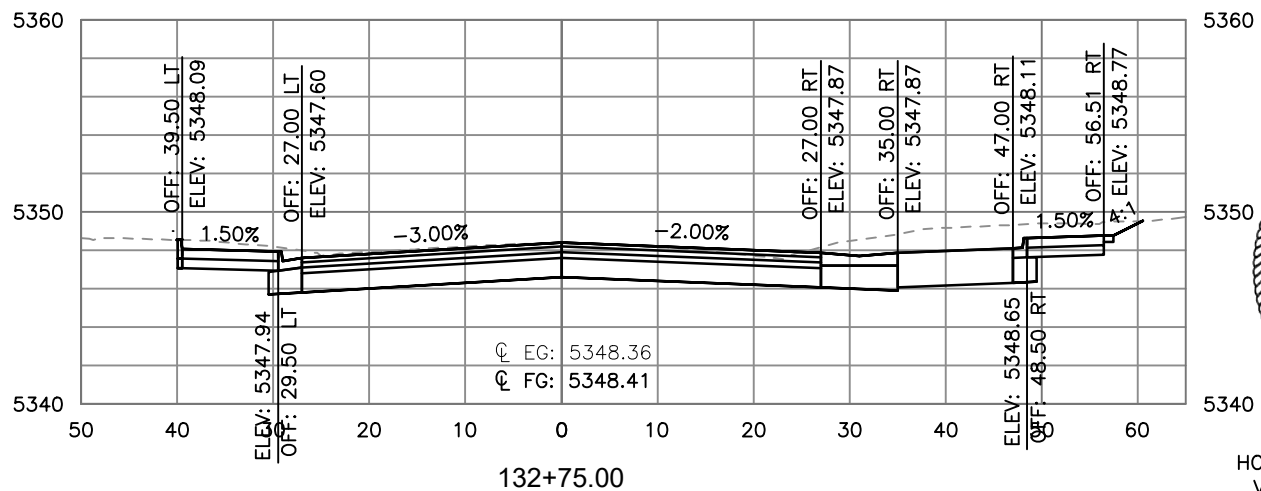
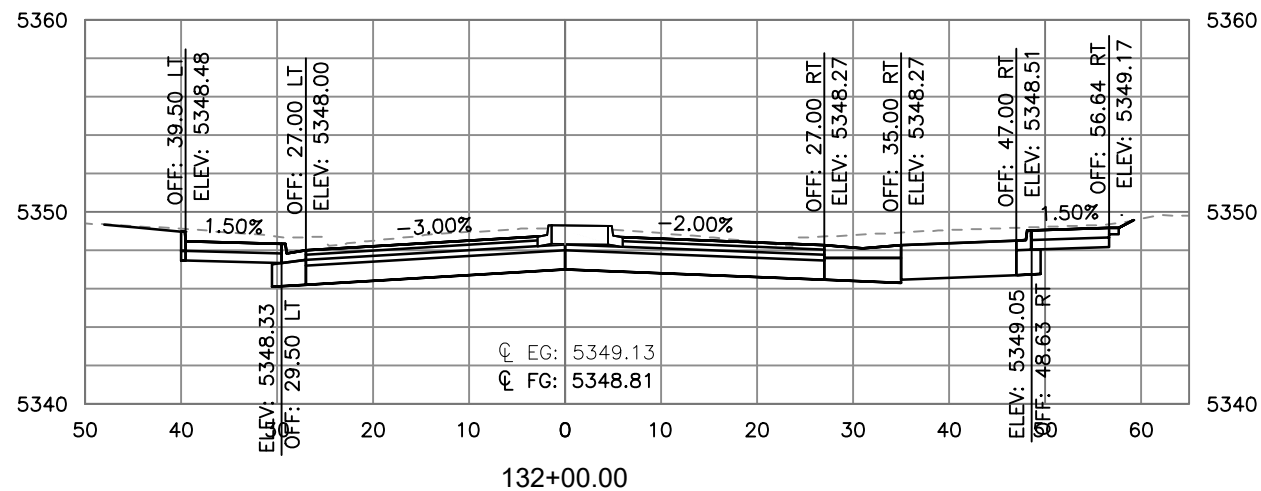
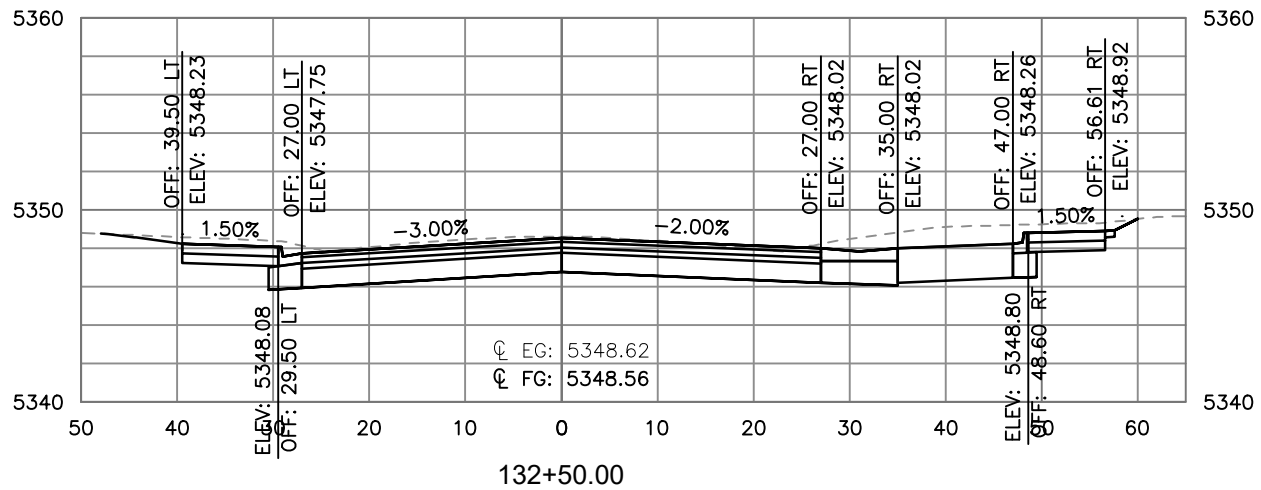
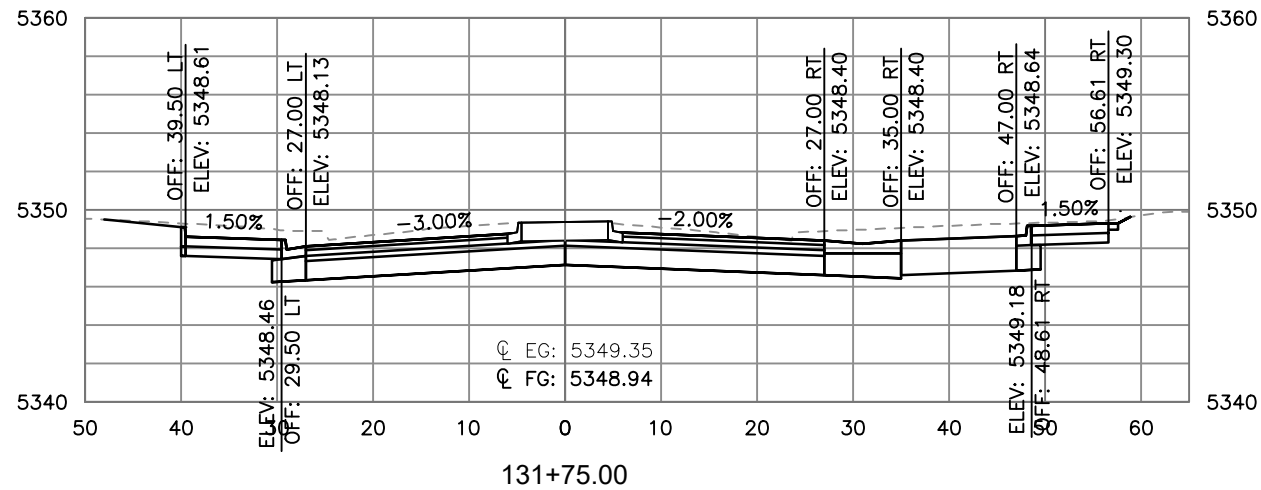
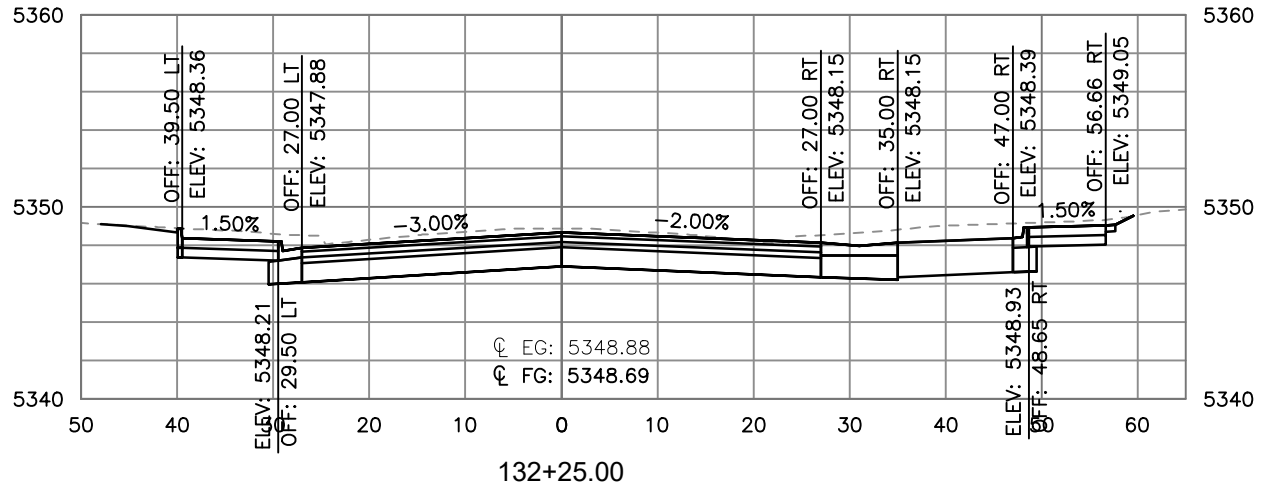
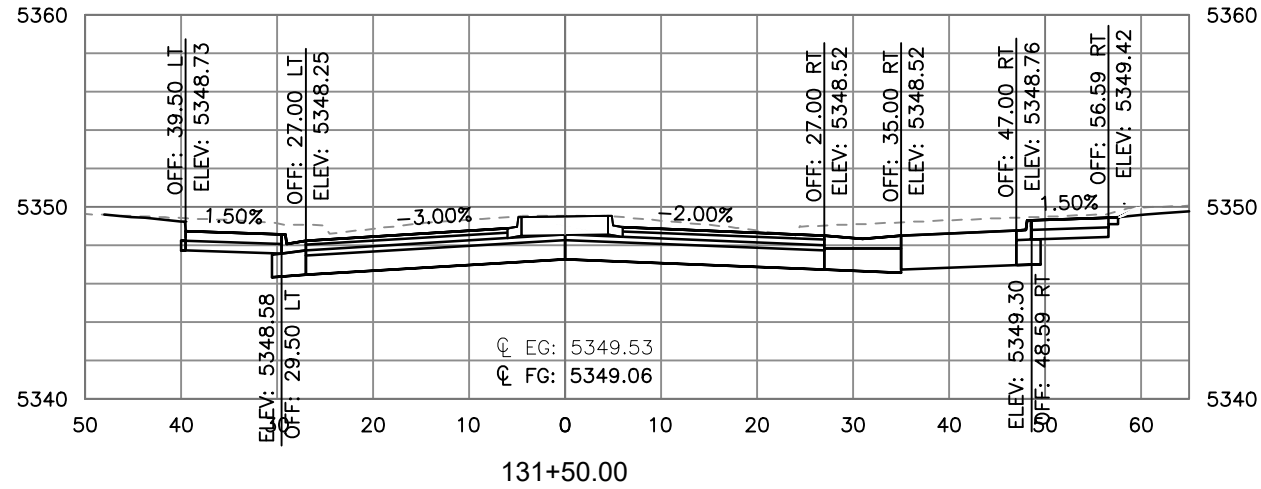


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FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com				Date		Comments		Initials		Sheet Number 439

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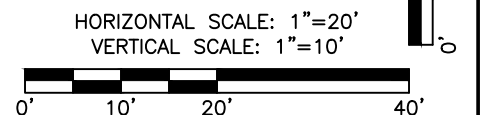
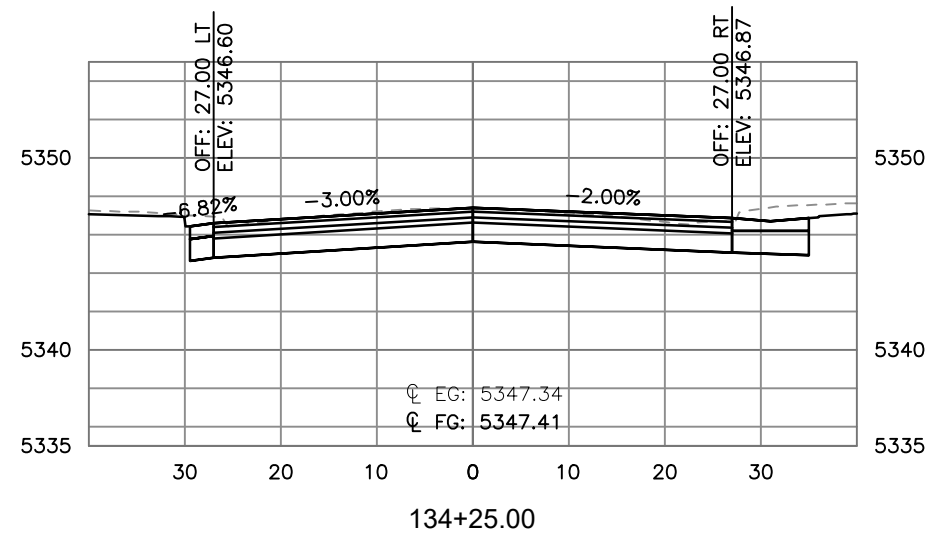
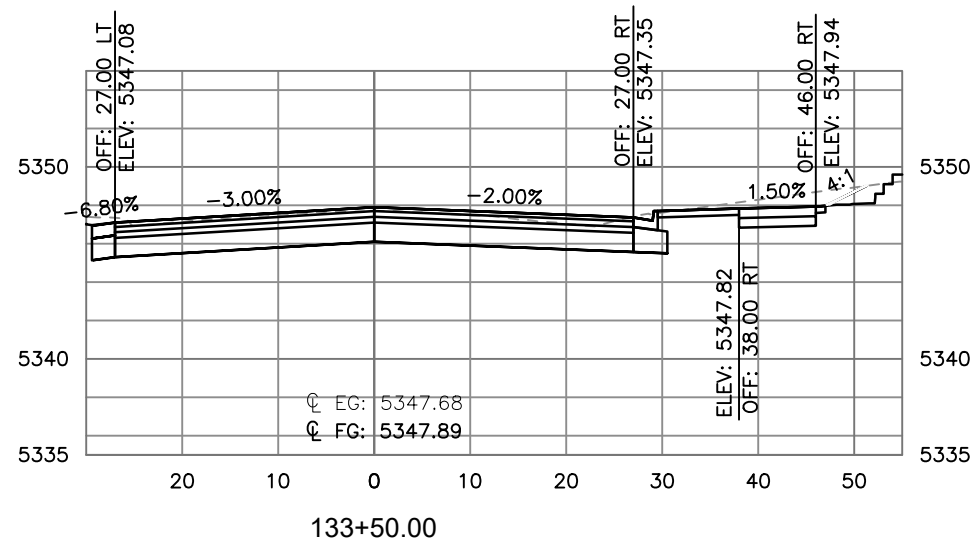
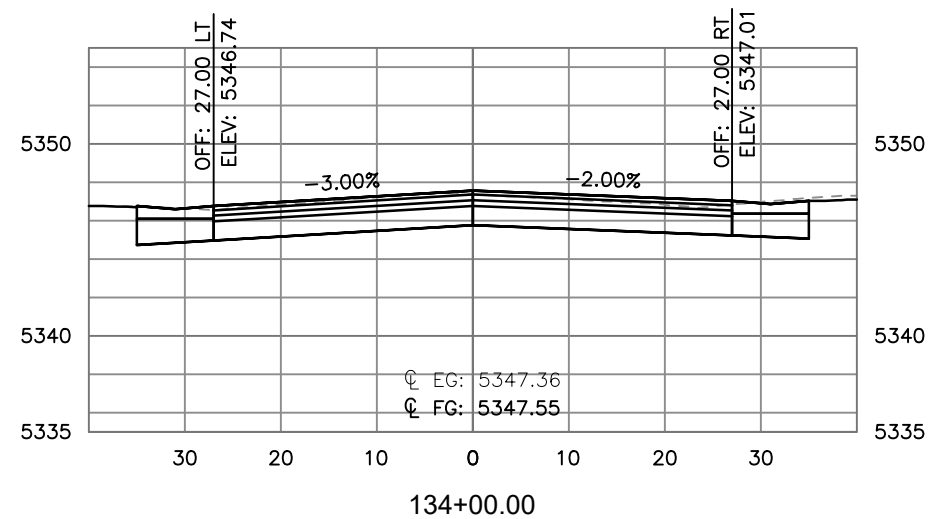
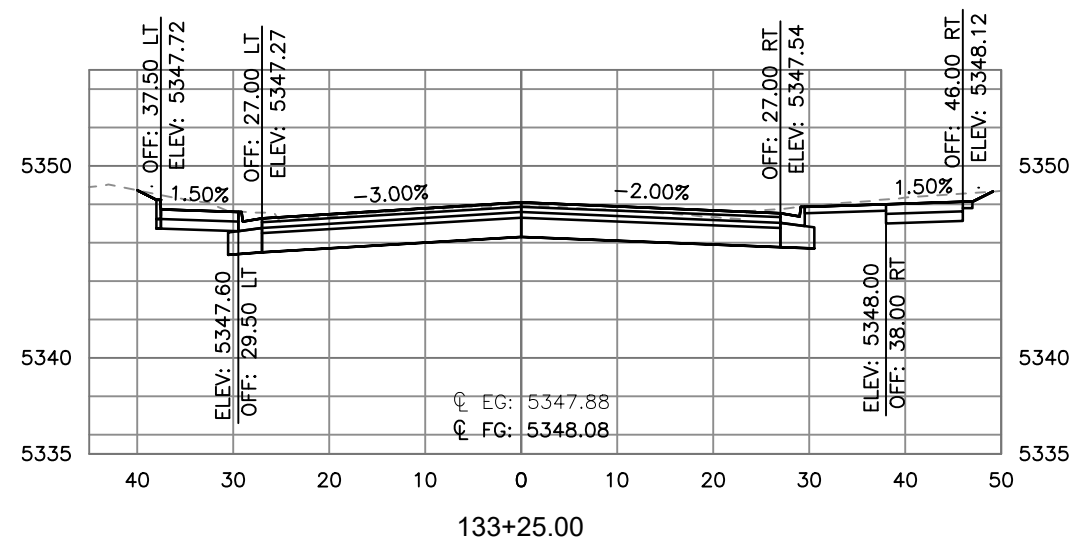
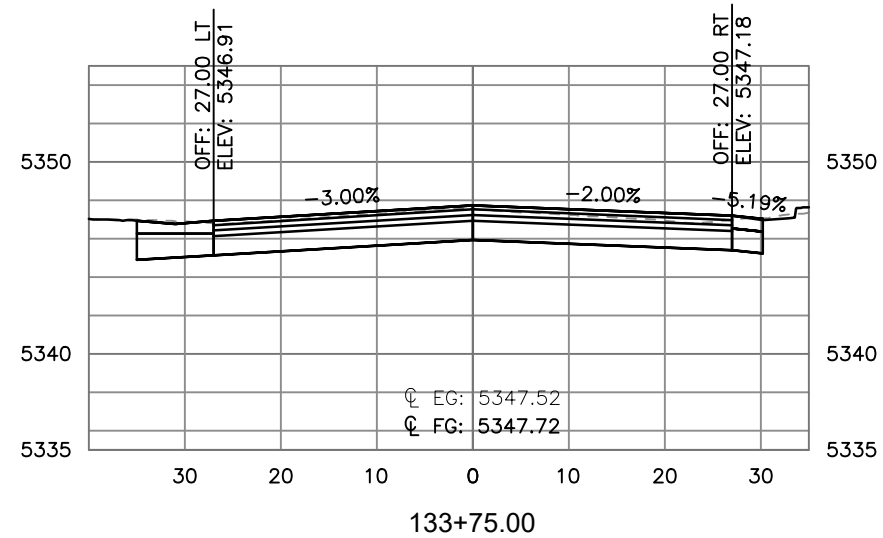
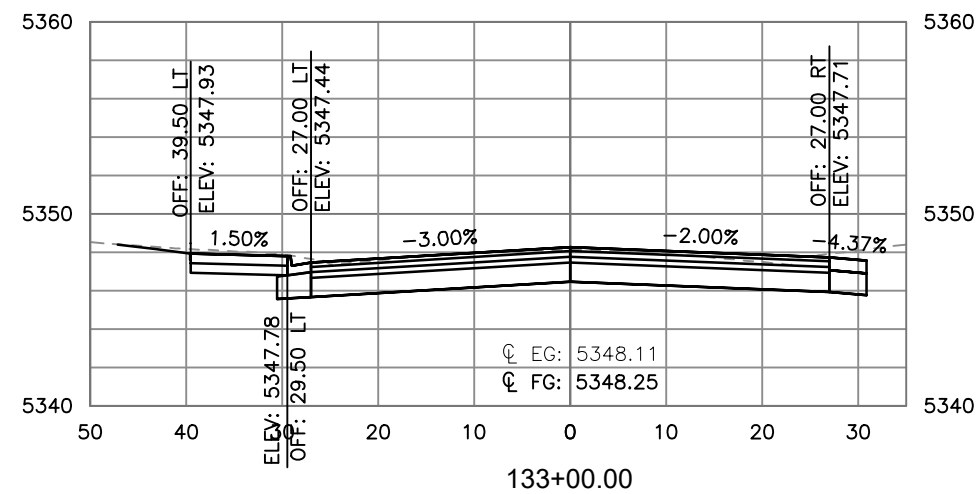
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File Name: 118355_RDCS_SH01_RALSTON.DWG											18-ST-40	
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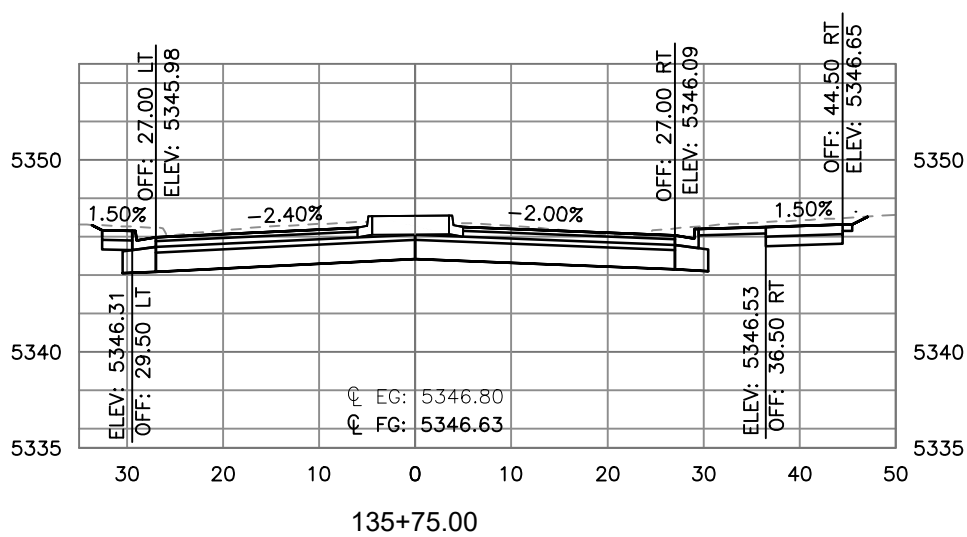
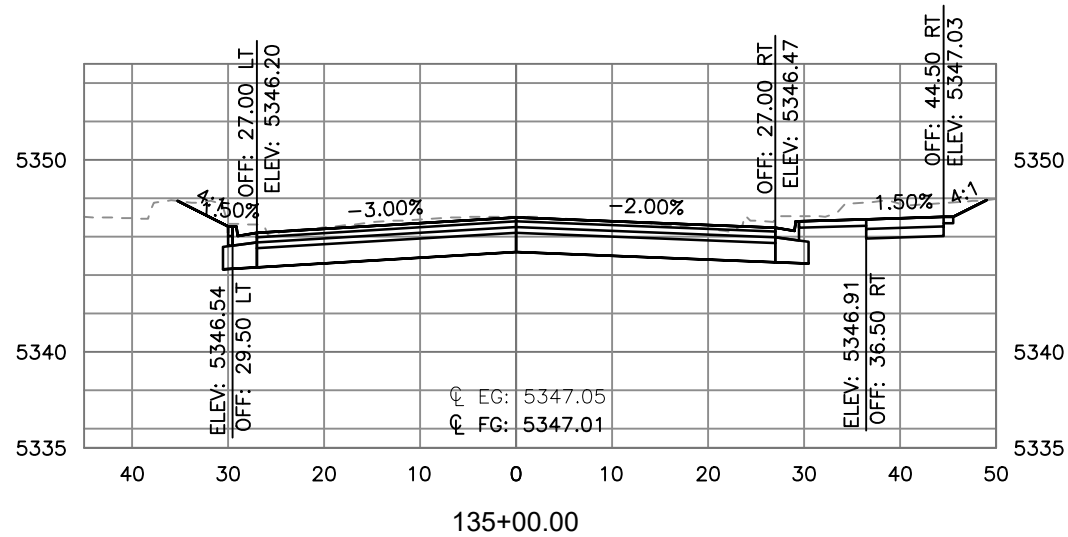
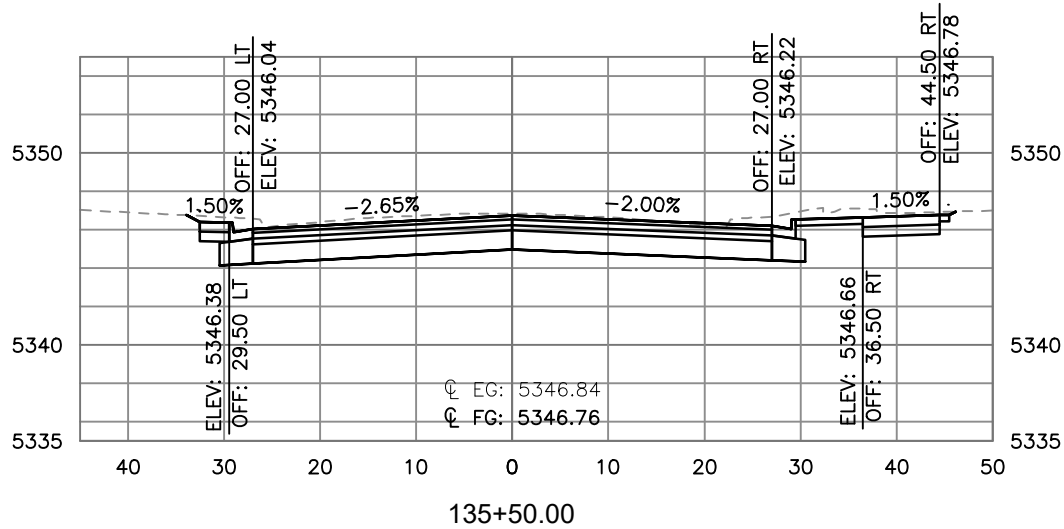
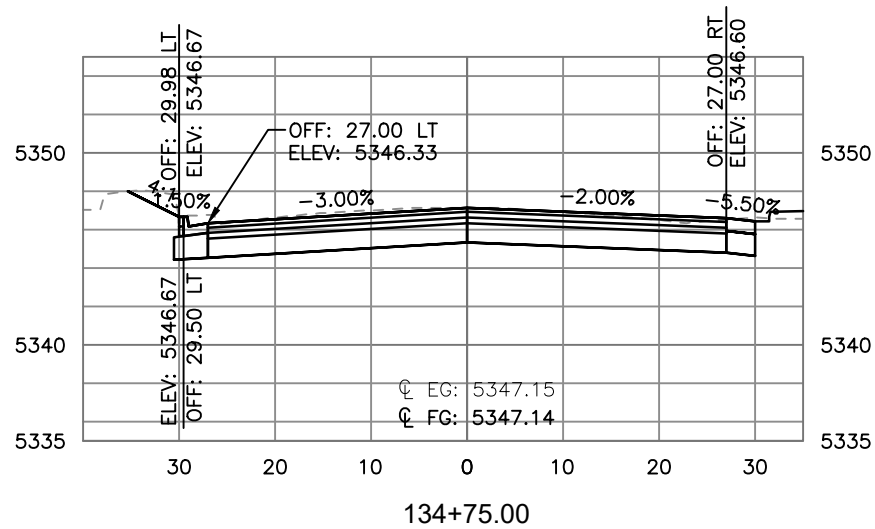
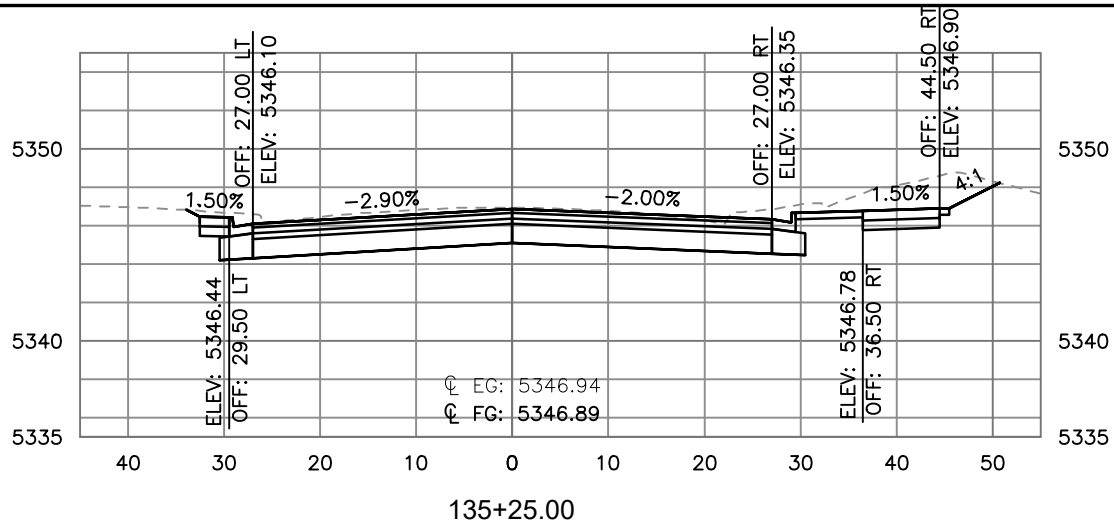
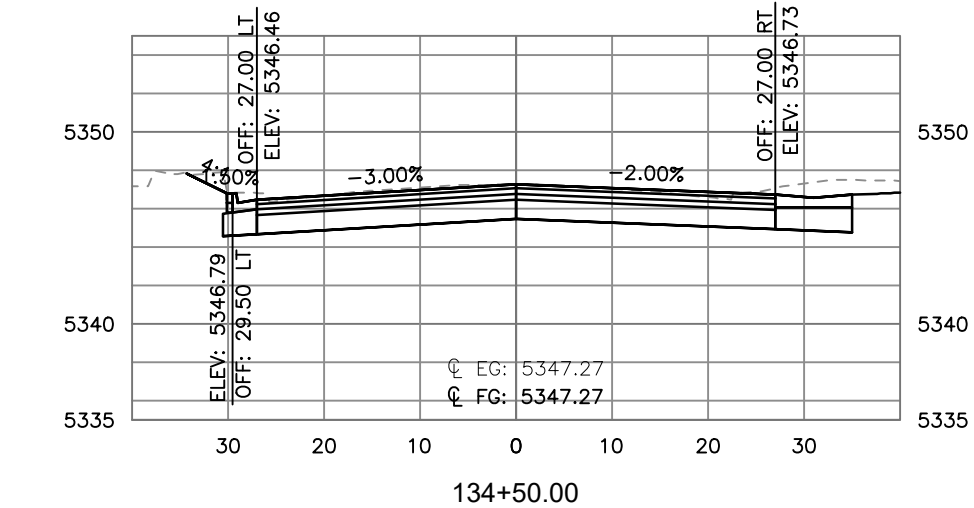
CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

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Horizontal Scale: 1"=20' Vertical Scale: 1"=10'							Revised:		Designer: JHH	Structure Numbers			
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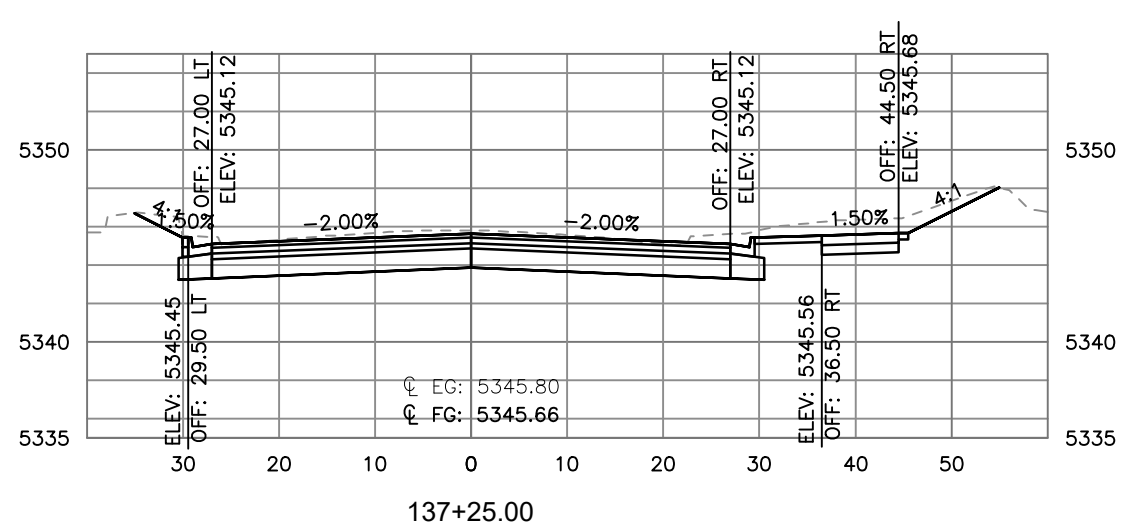
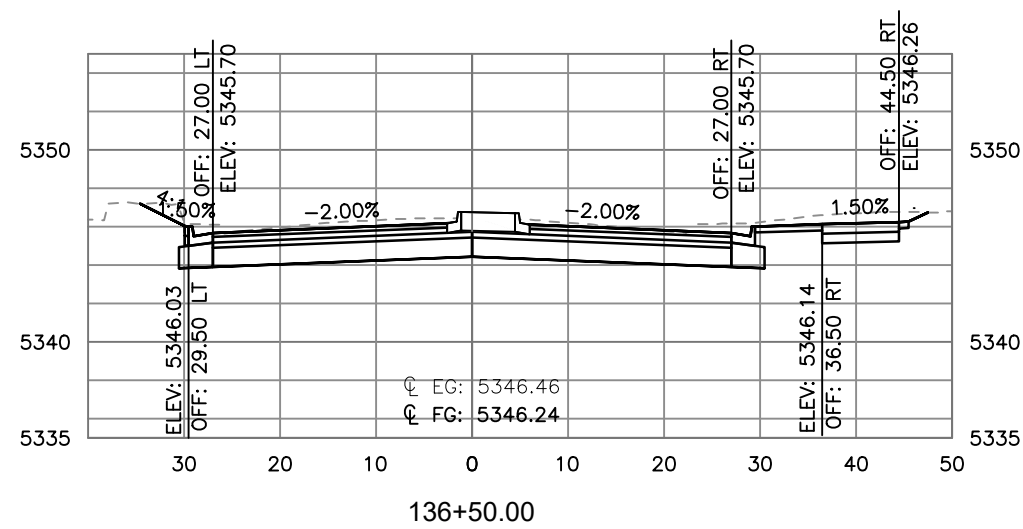
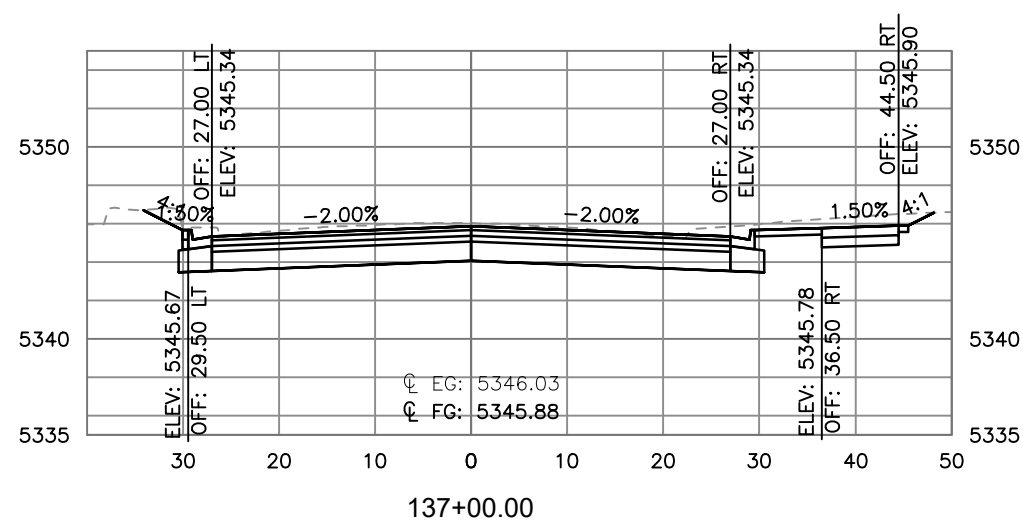
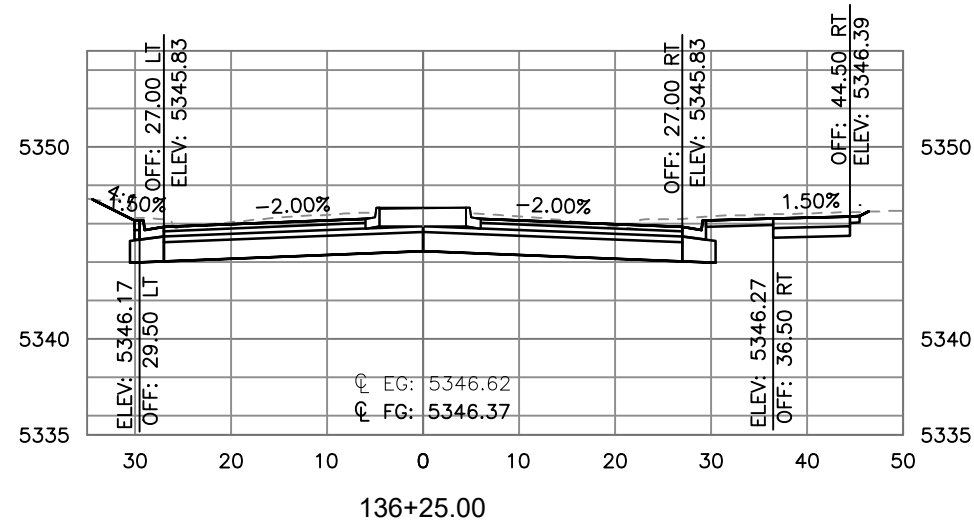
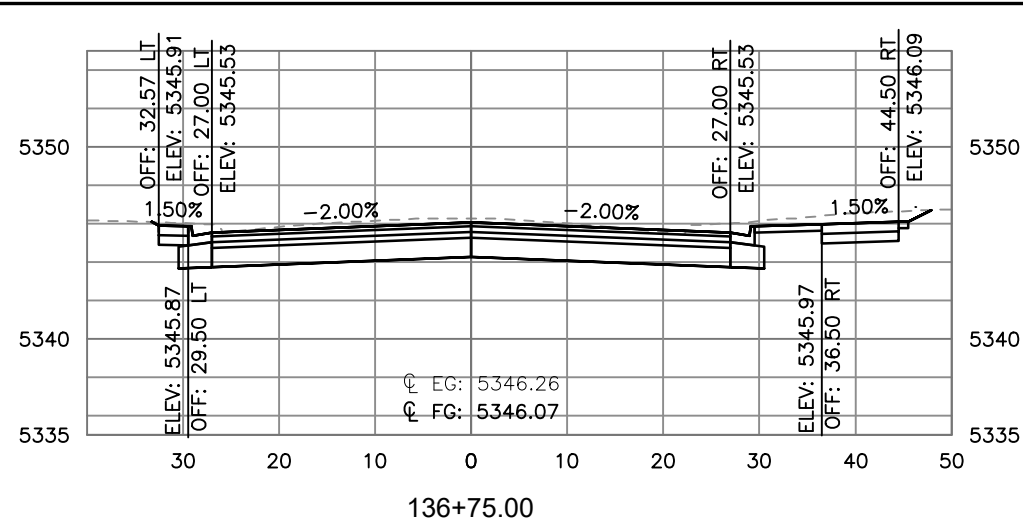
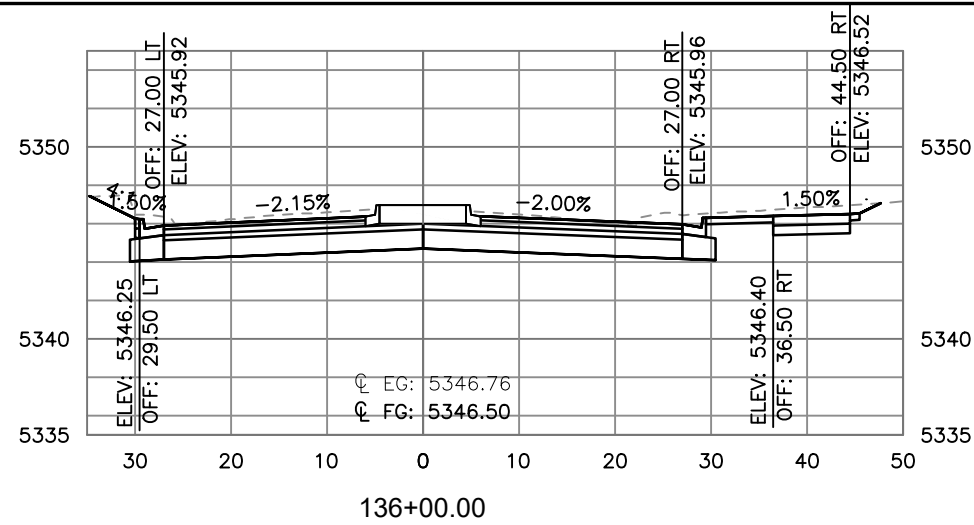
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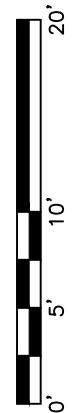
CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY CROSS SECTION RALSTON ROAD			Project No./Code
No Revisions:					18-ST-40
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Date	Comments	Initials



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PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed

No Revisions:
Revised:
Void:

RALSTON RD - YUKON ST TO GARRISON ST ROADWAY CROSS SECTION RALSTON ROAD

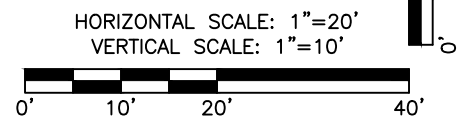
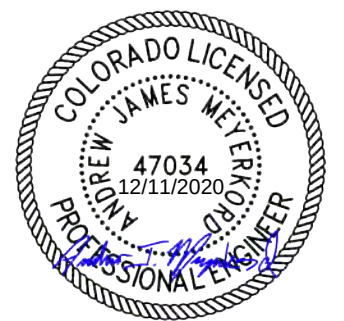
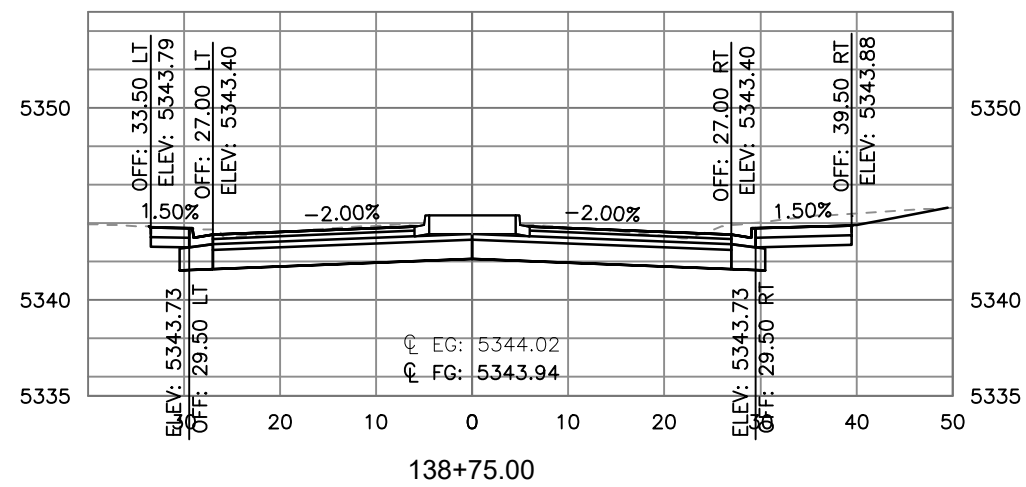
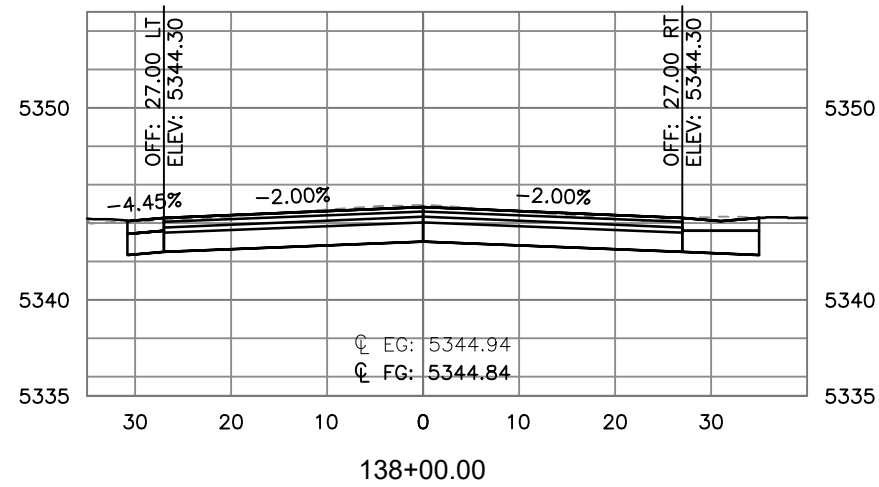
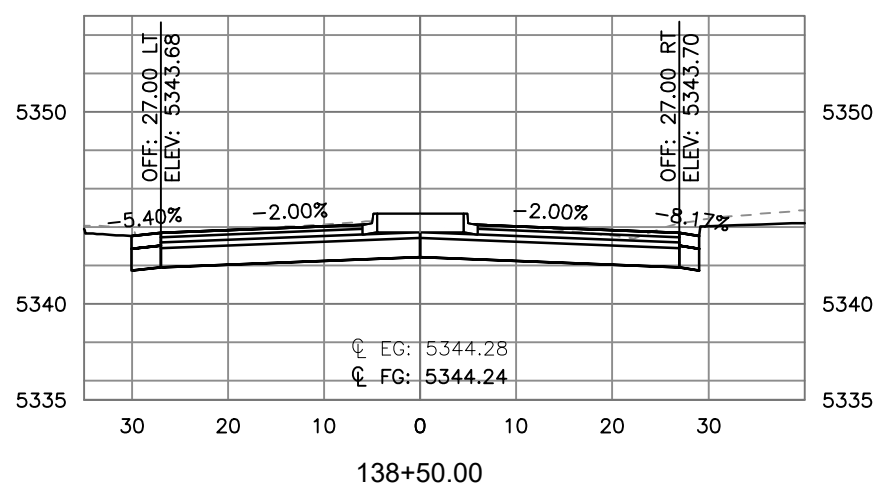
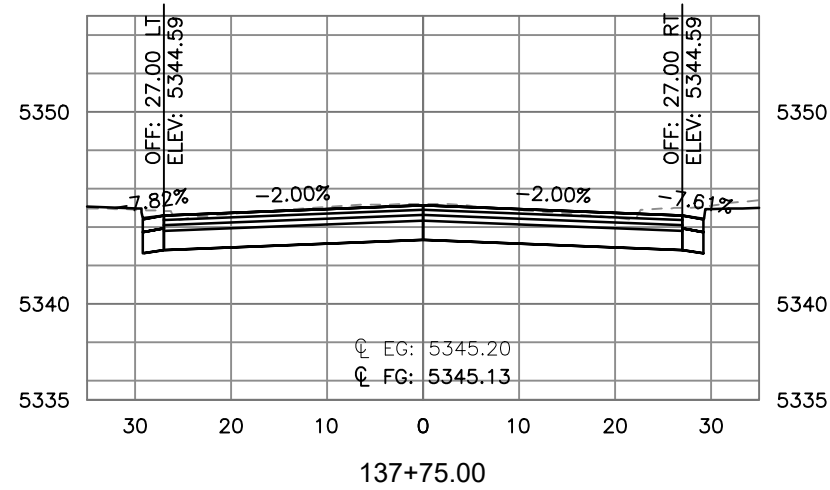
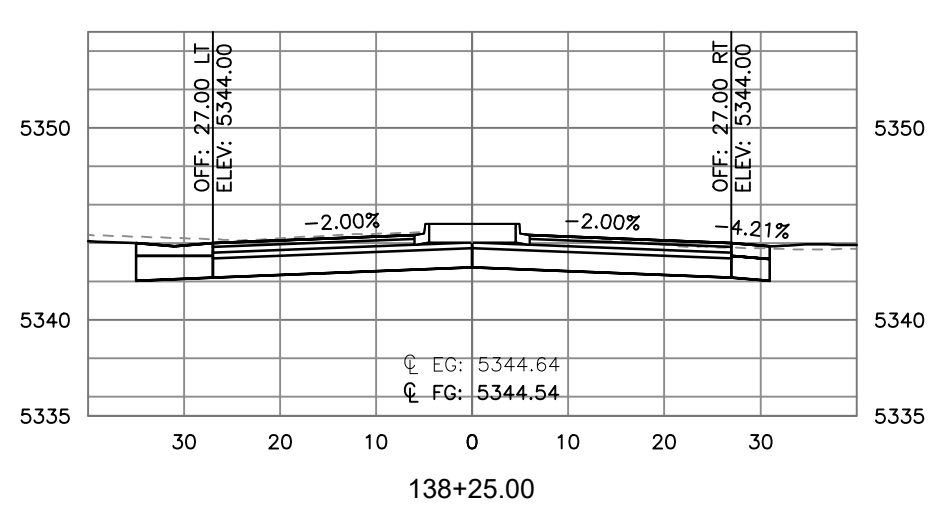
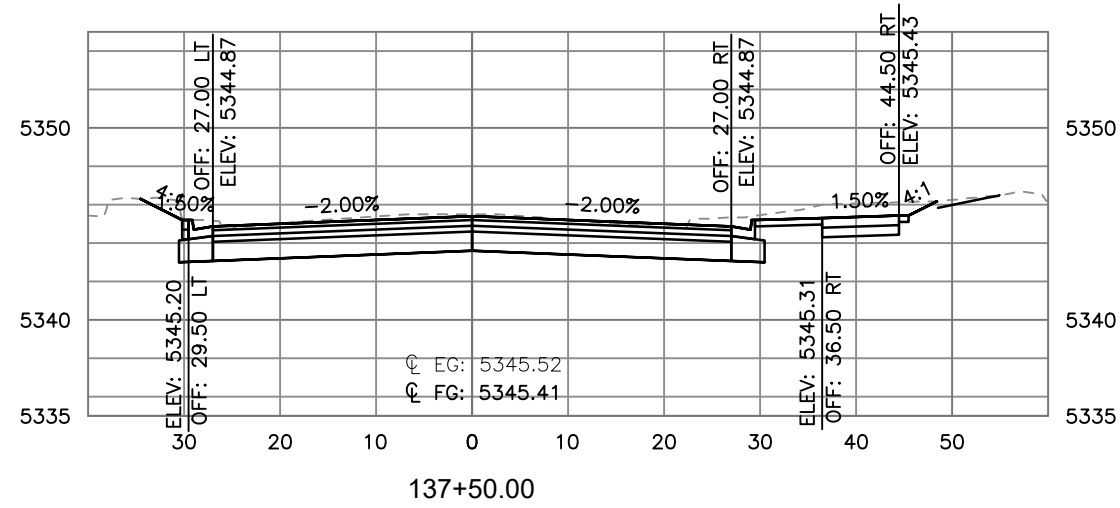
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Project No./Code

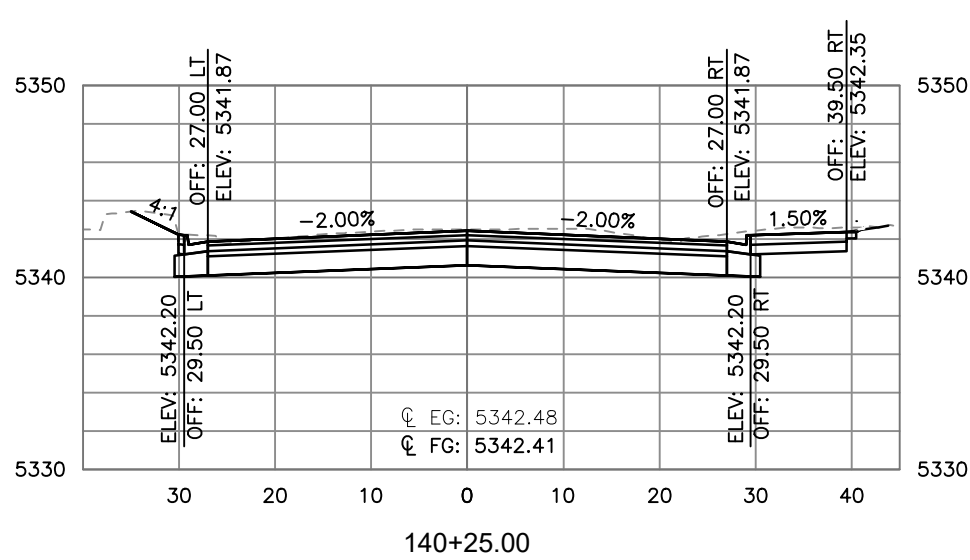
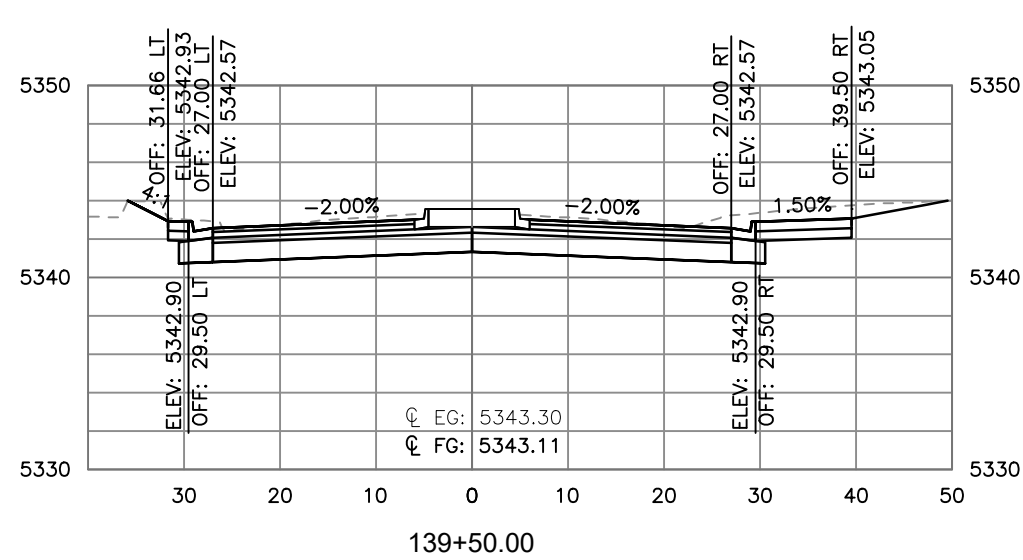
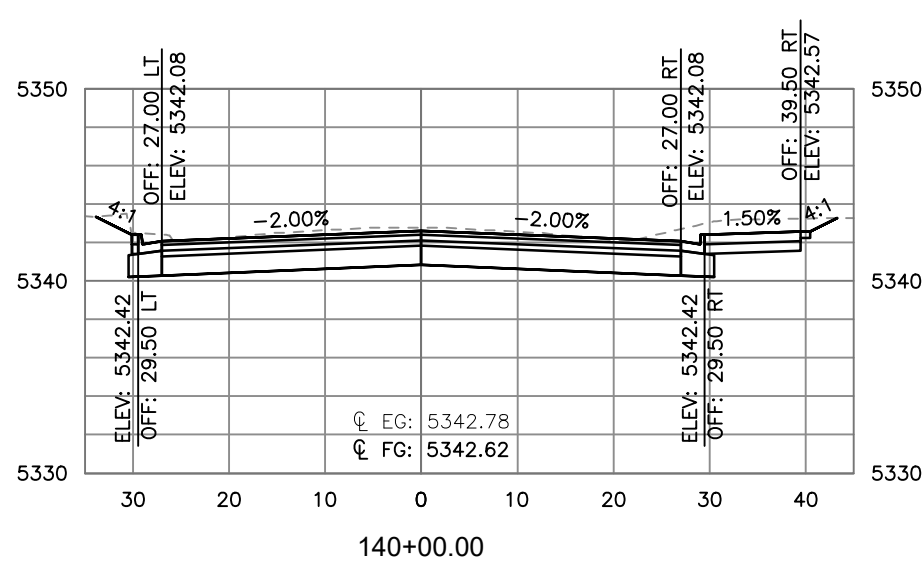
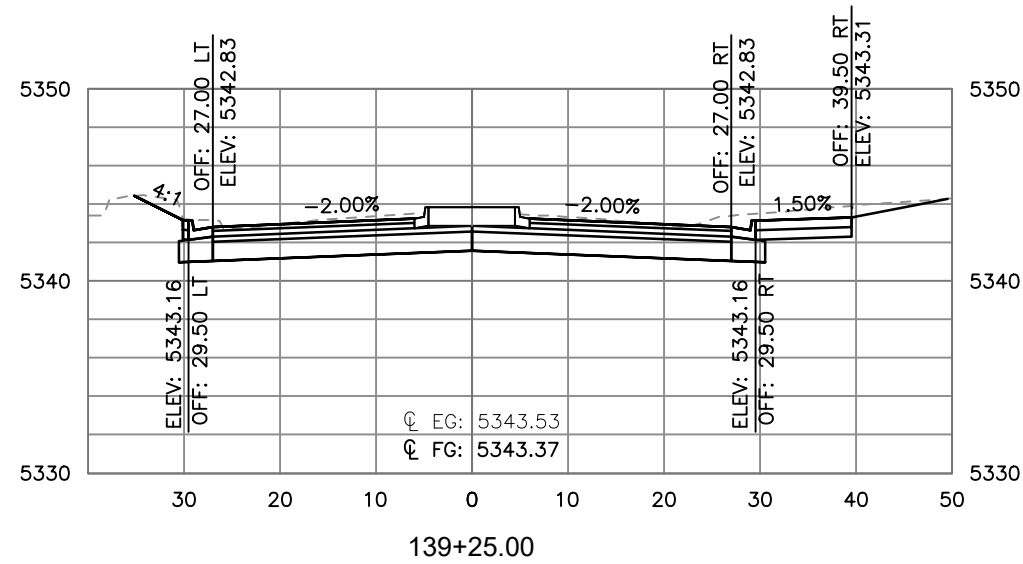
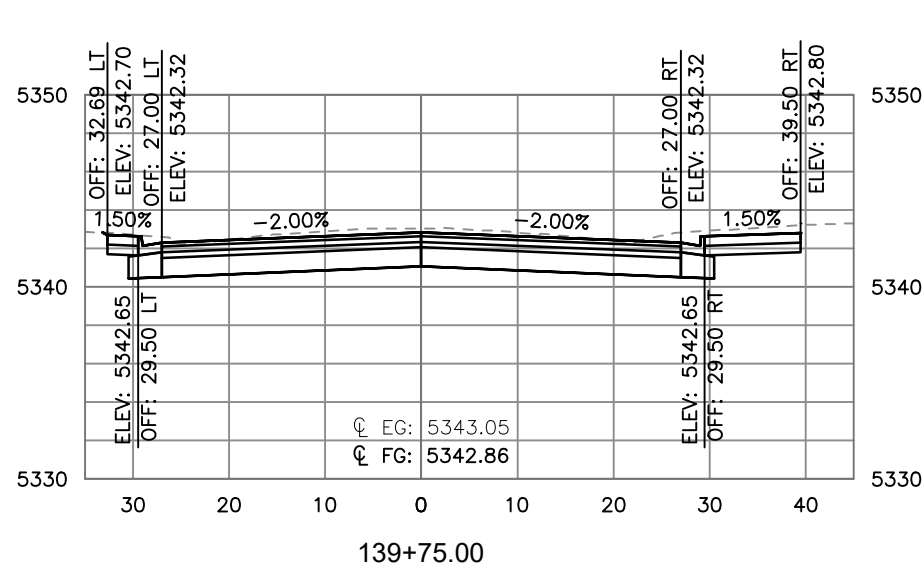
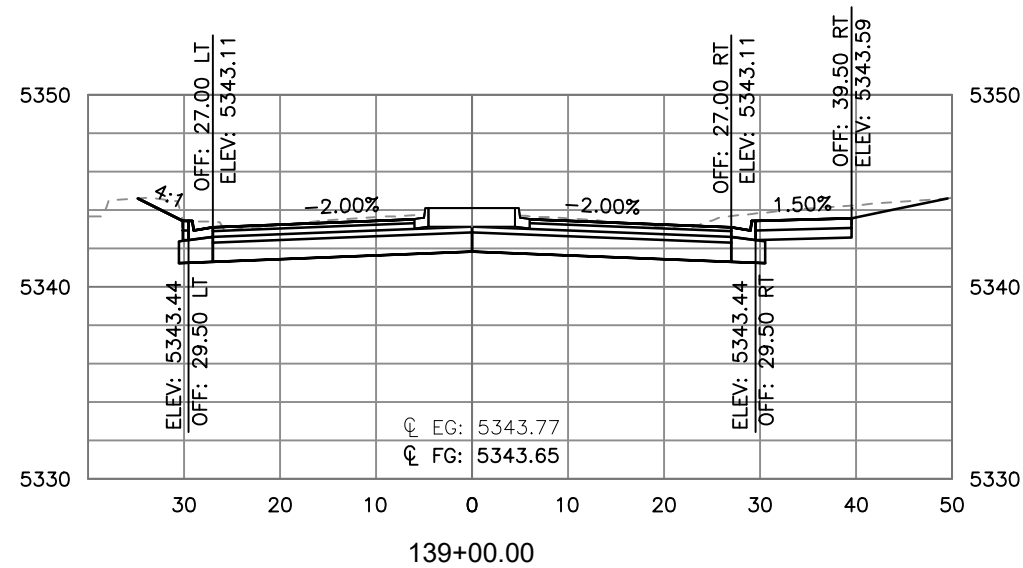
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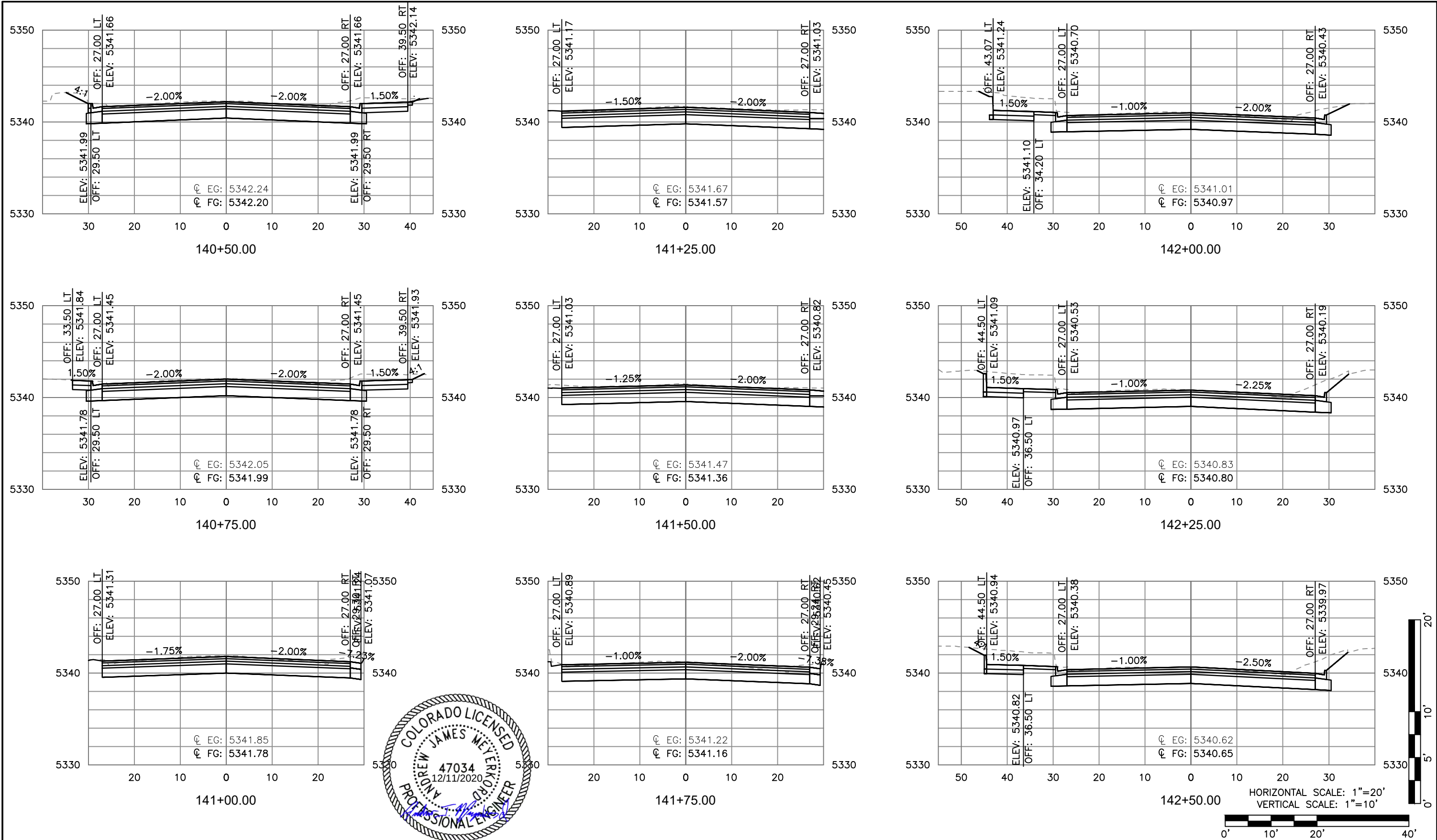
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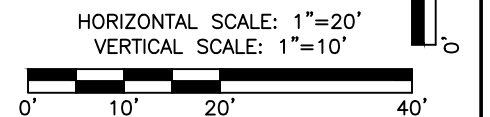
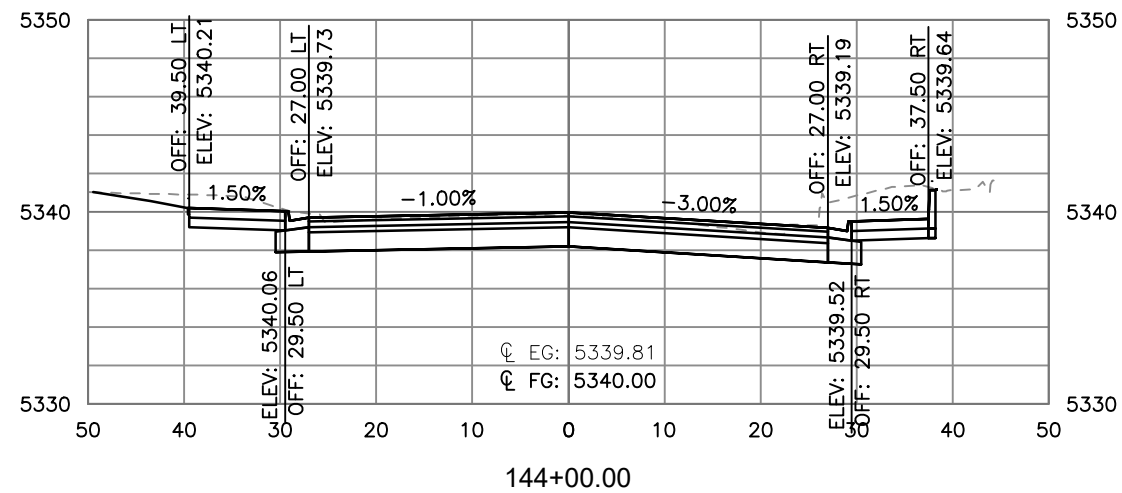
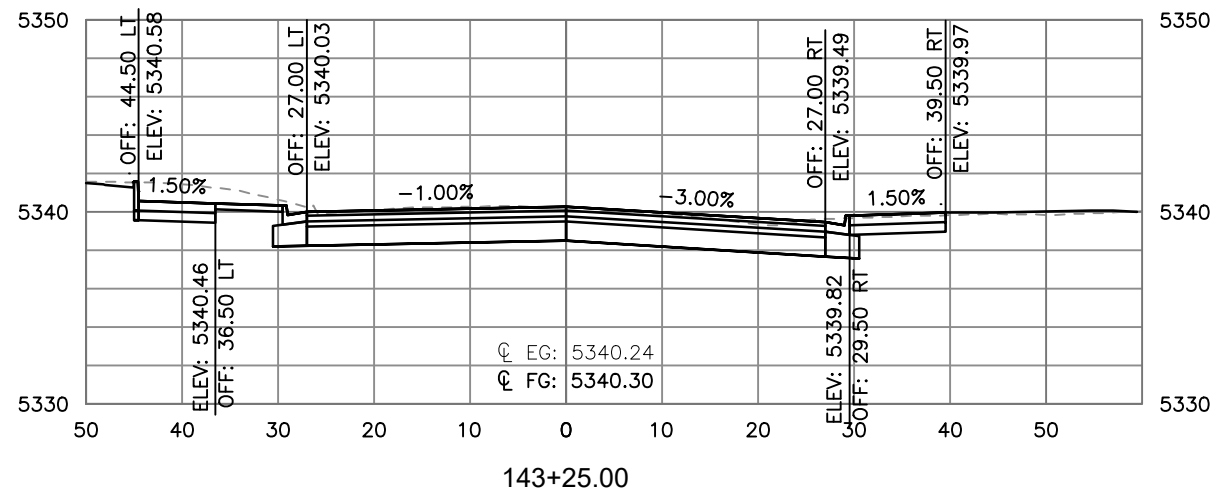
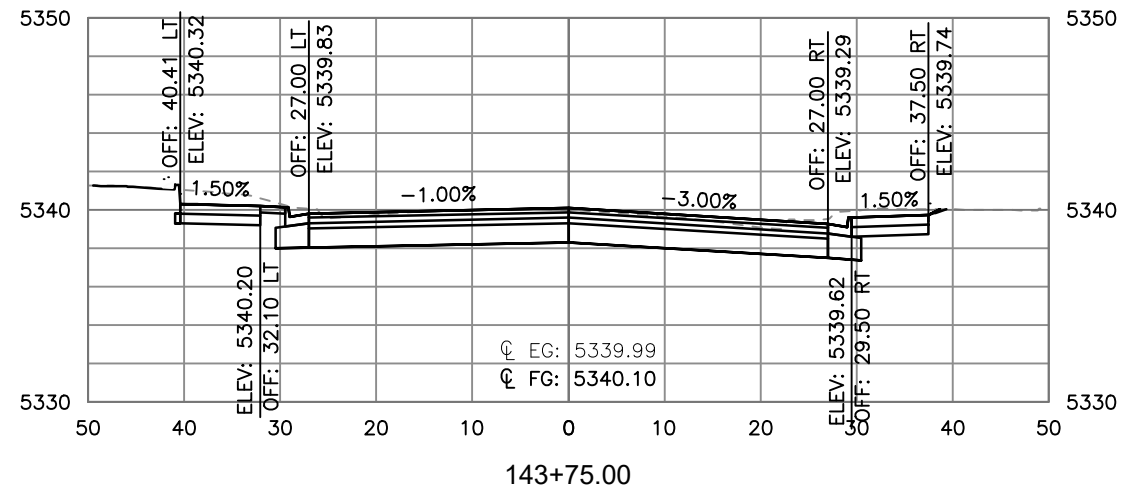
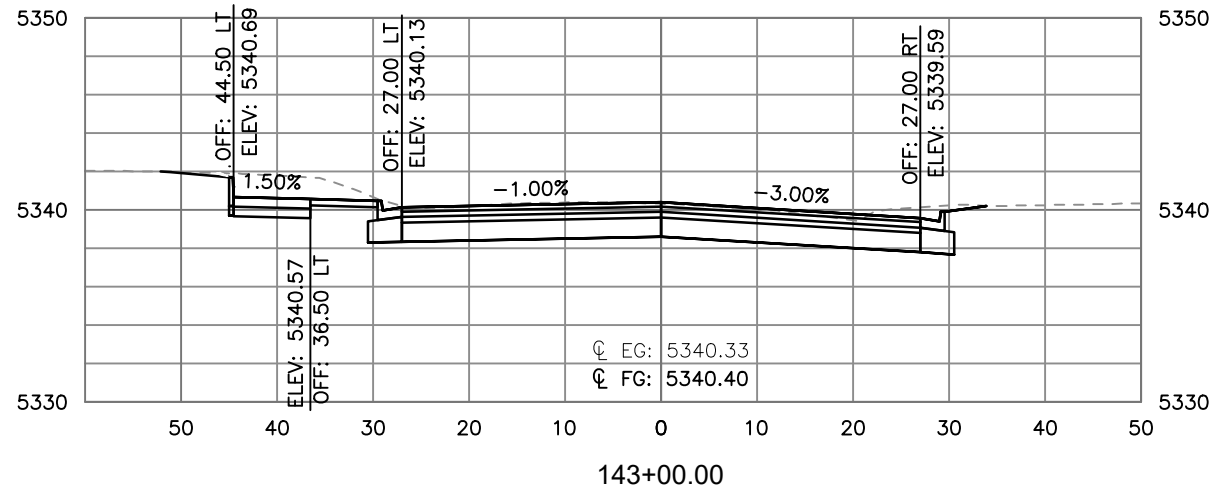
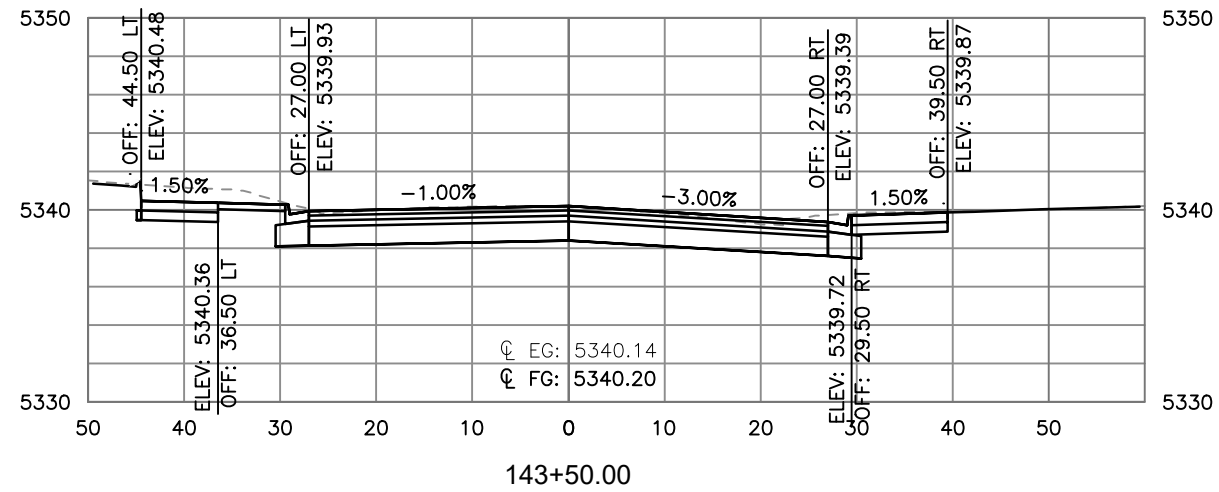
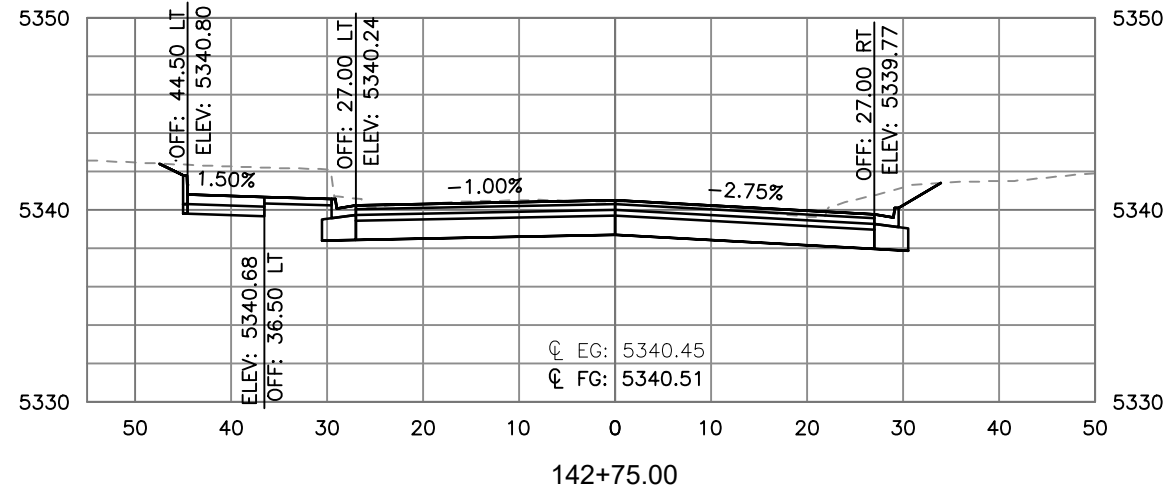
CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY CROSS SECTION RALSTON ROAD			Project No./Code
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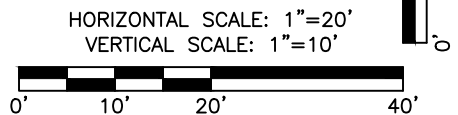
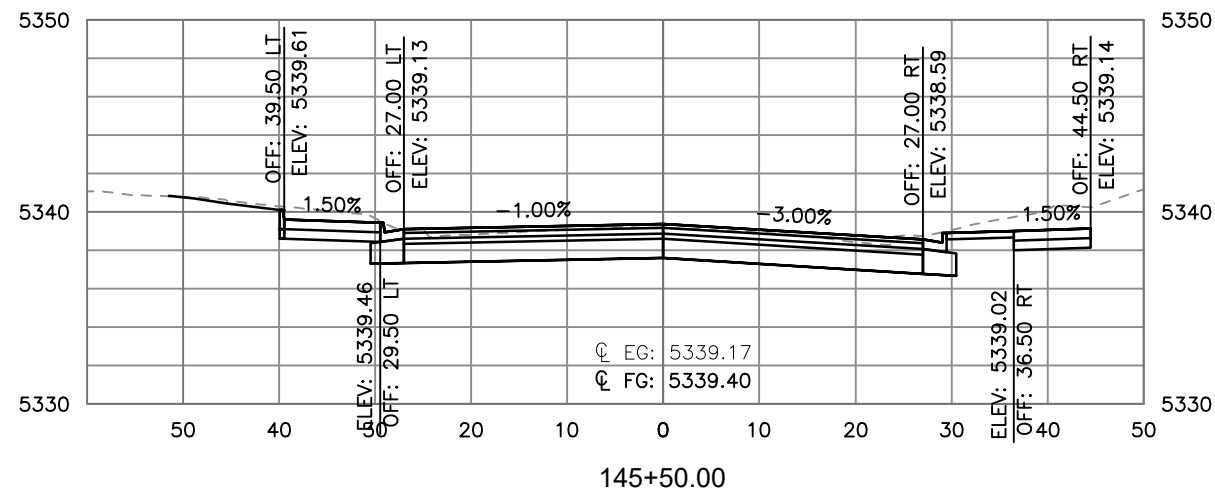
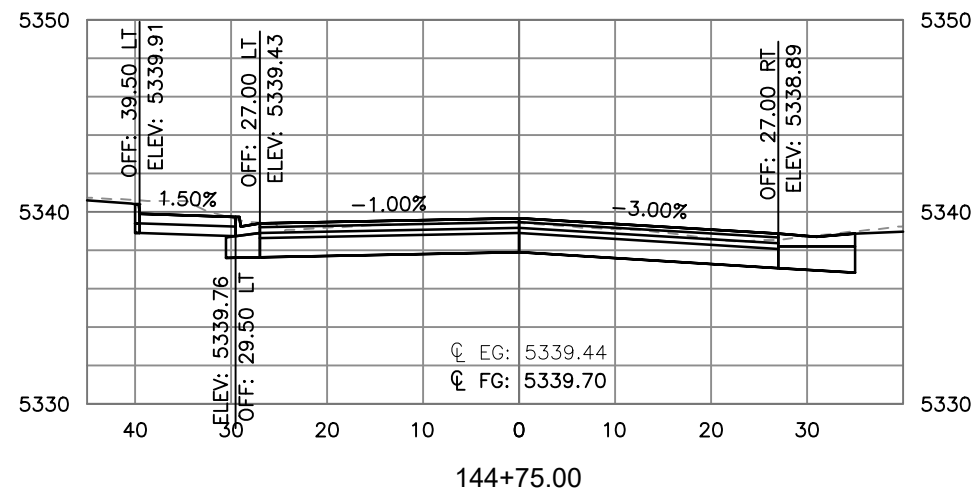
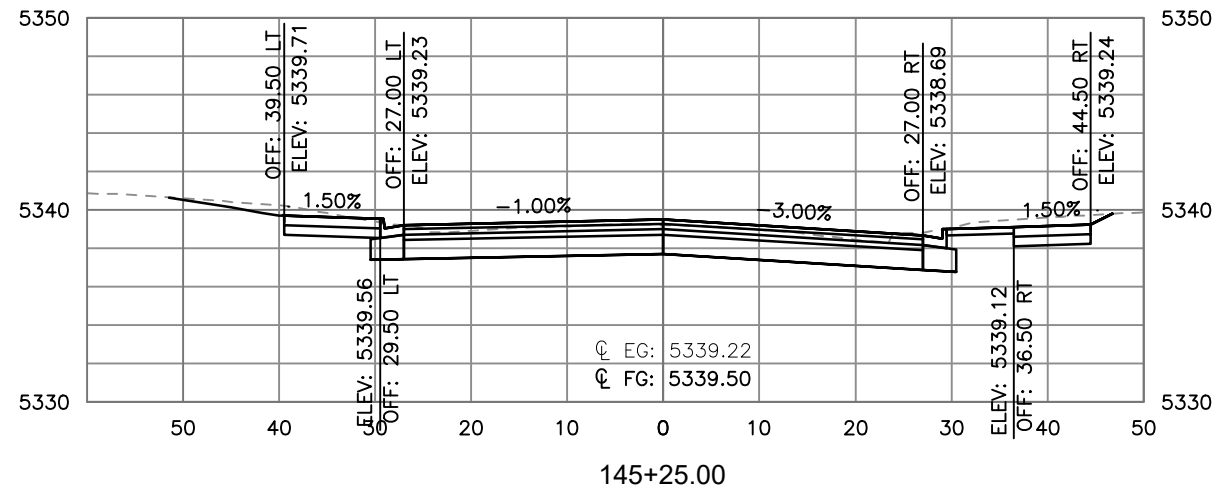
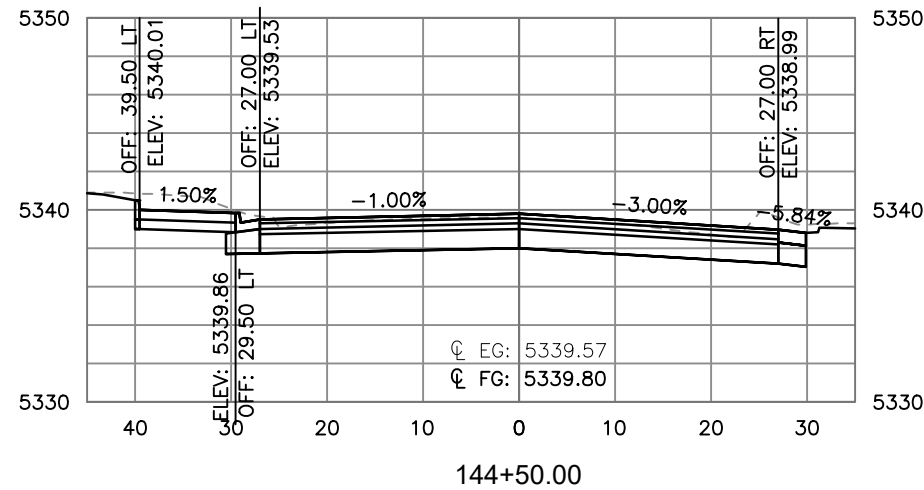
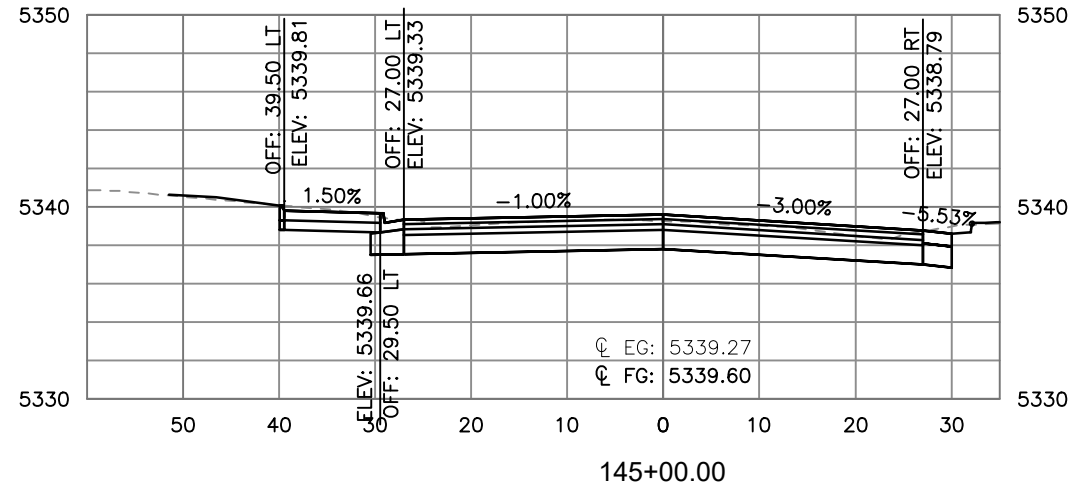
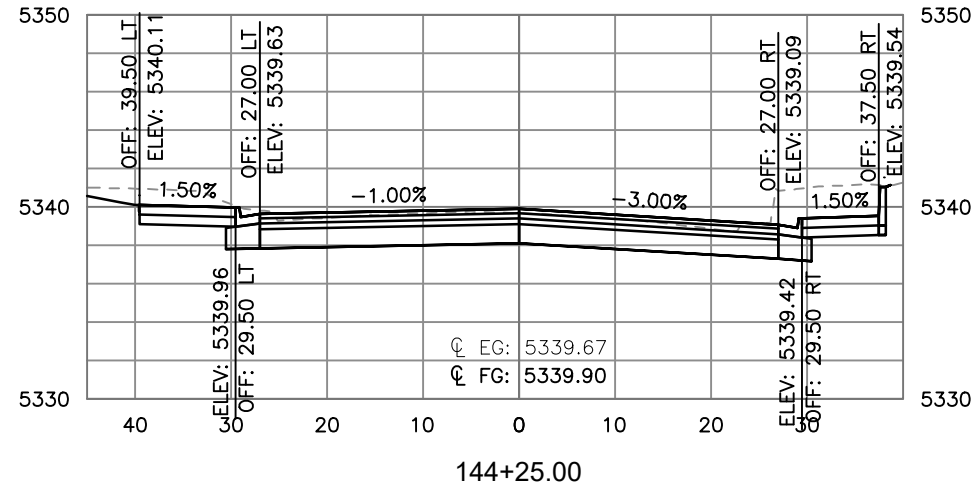


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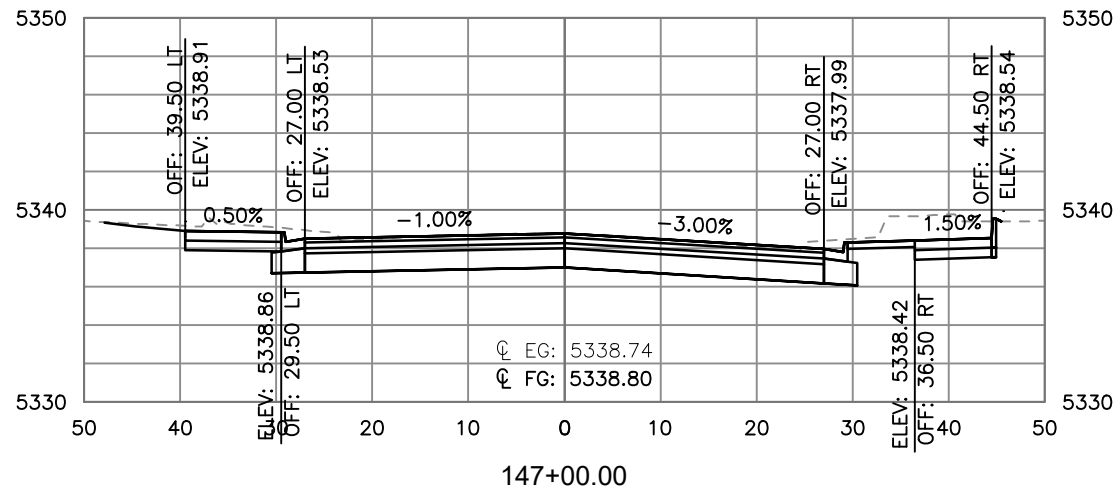
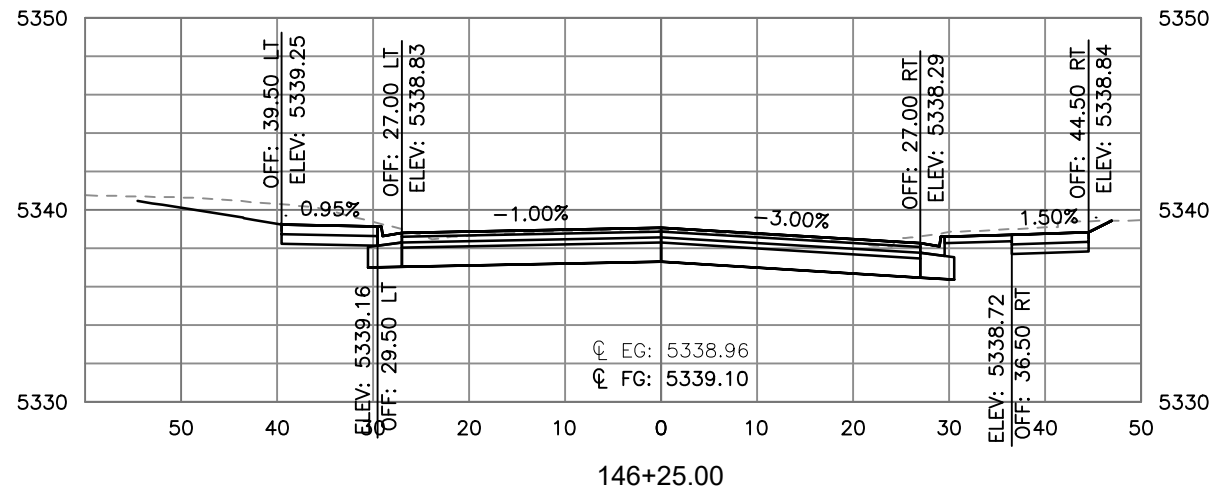
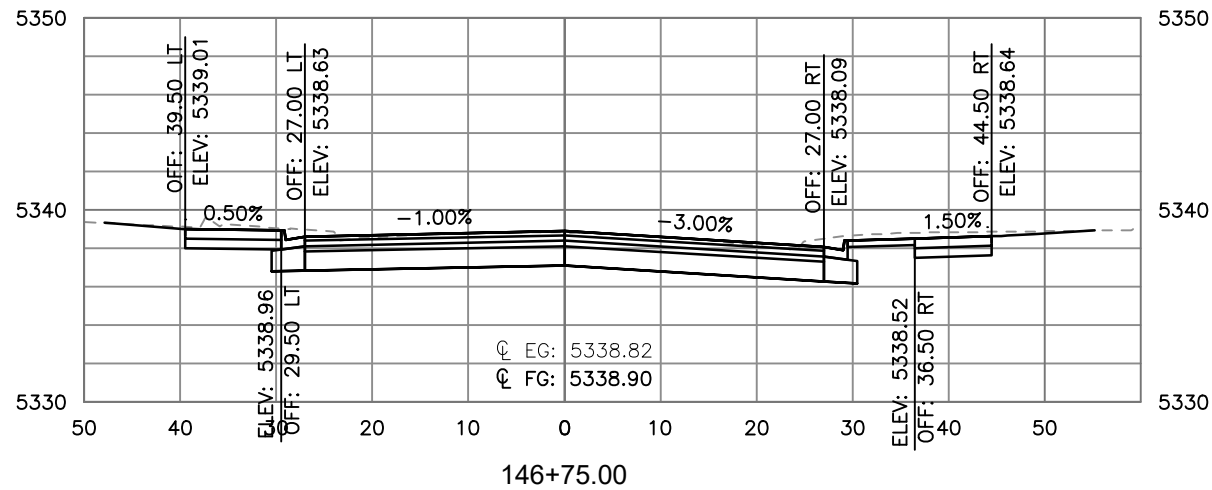
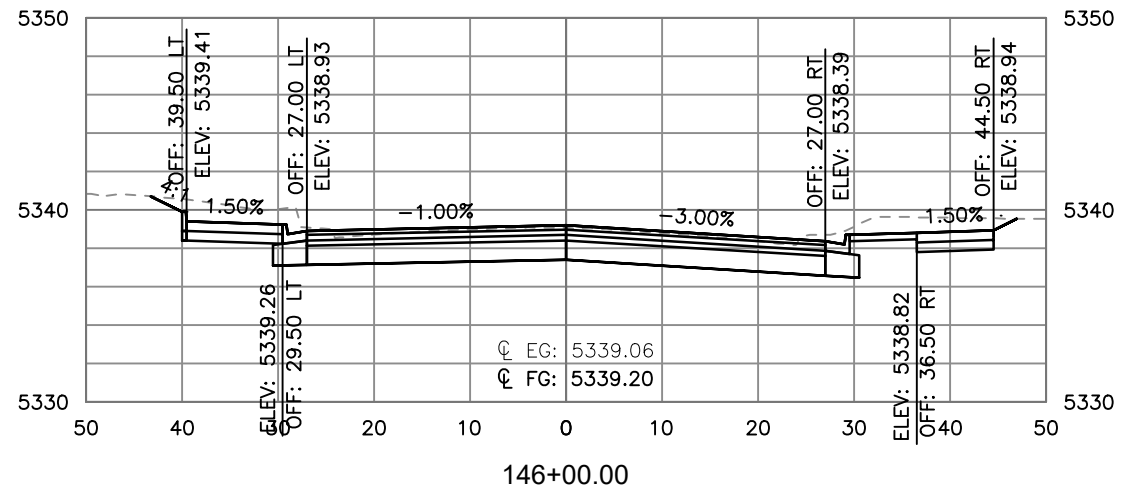
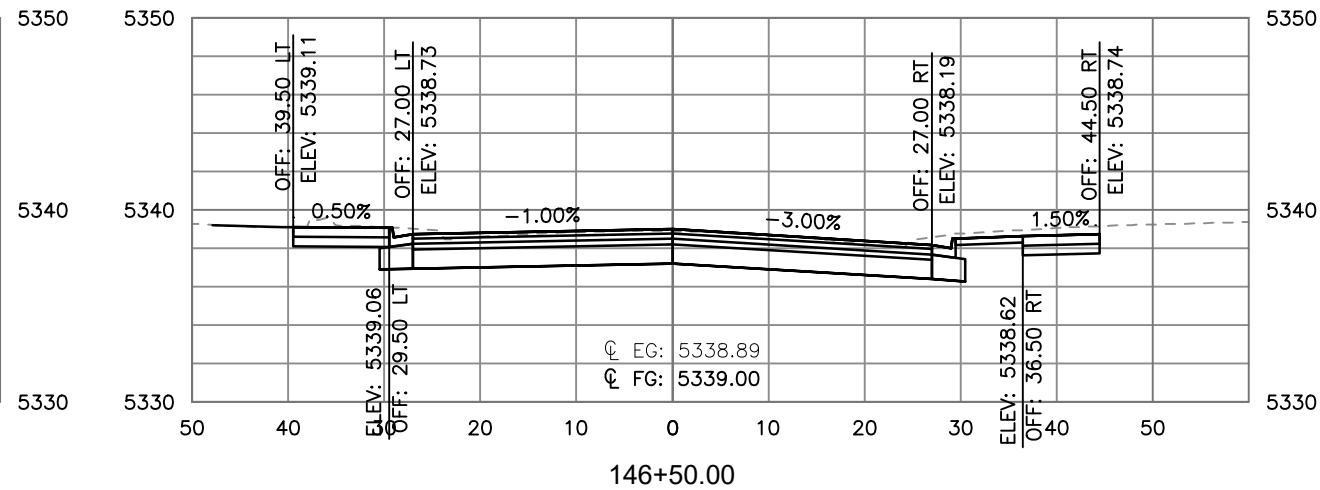
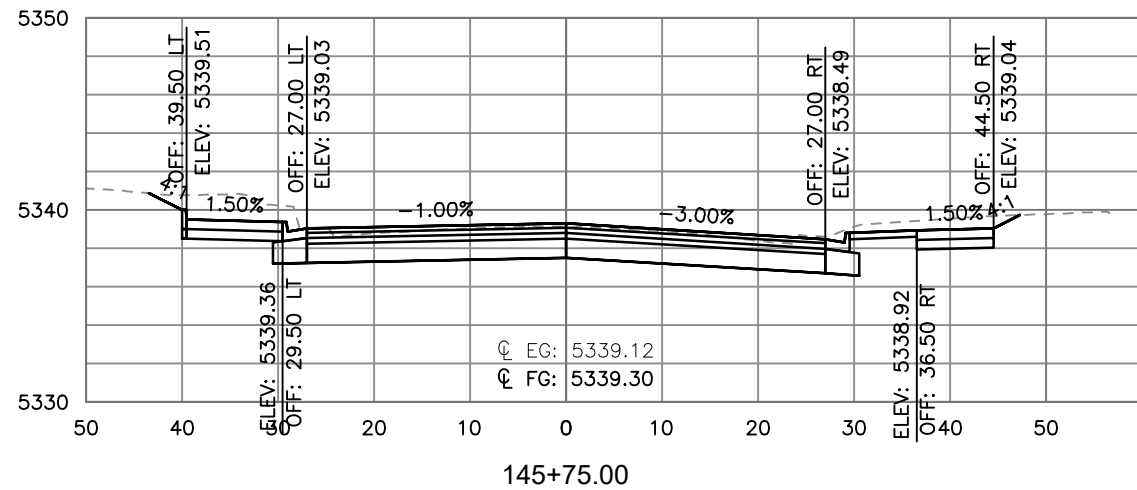
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File Name: 118355_RDCS_SH01_RALSTON.DWG			Date	Comments	Initials		No Revisions:		ROADWAY CROSS SECTION RALSTON ROAD			18-ST-40	
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 6400 South Fiddlers Green Circle, Suite 1500 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Detailer: DAL			Sheet Number 448	
									Sheet Subset: CROSS SECTION		Subset Sheets: CS-29 of 33		

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HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=10'



Print Date: 12/7/2020 1:46:15 PM
File Name: 118355_RDOS_SH01_RALSTON.DWG
Horizontal Scale: 1"=20' Vertical Scale: 1"=10'
FELSBURG HOLT & ULLEVIG
6400 South Fiddlers Green Circle, Suite 1500
Centennial, CO 80111
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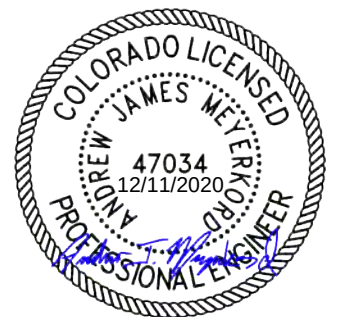
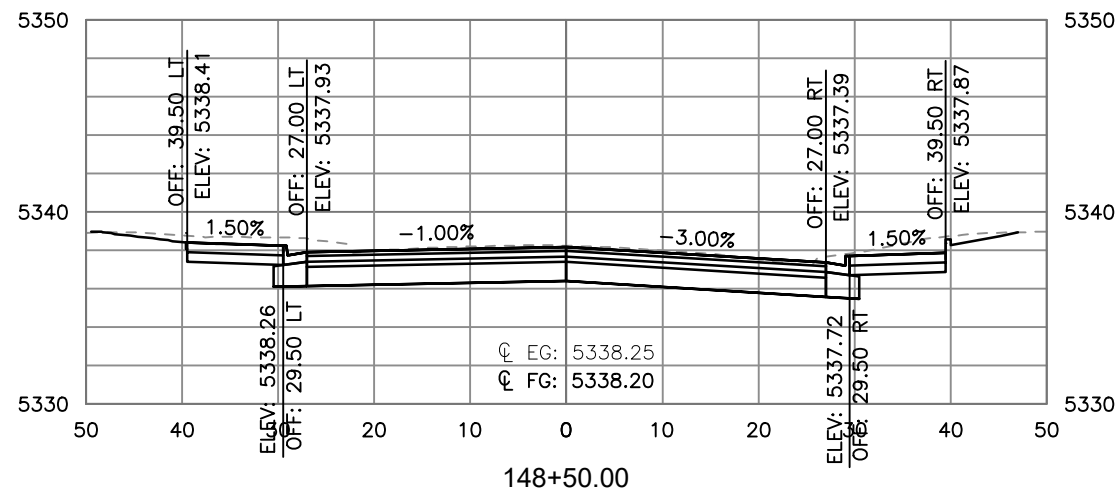
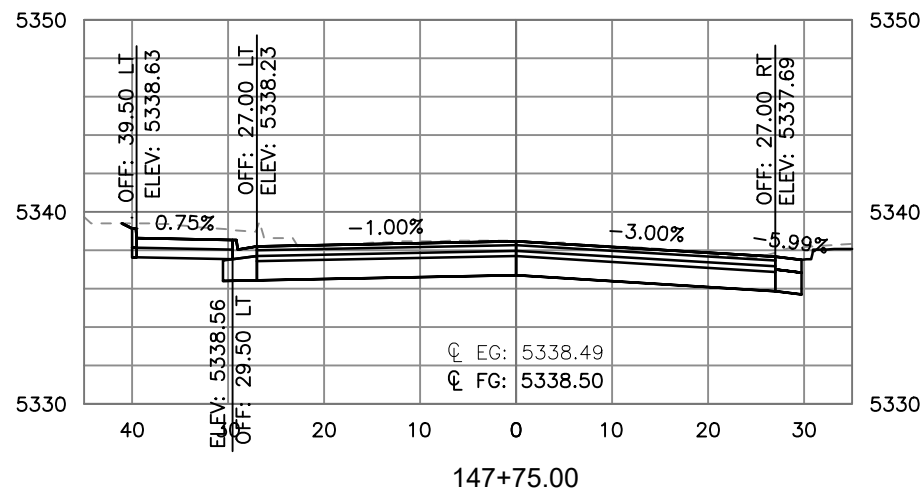
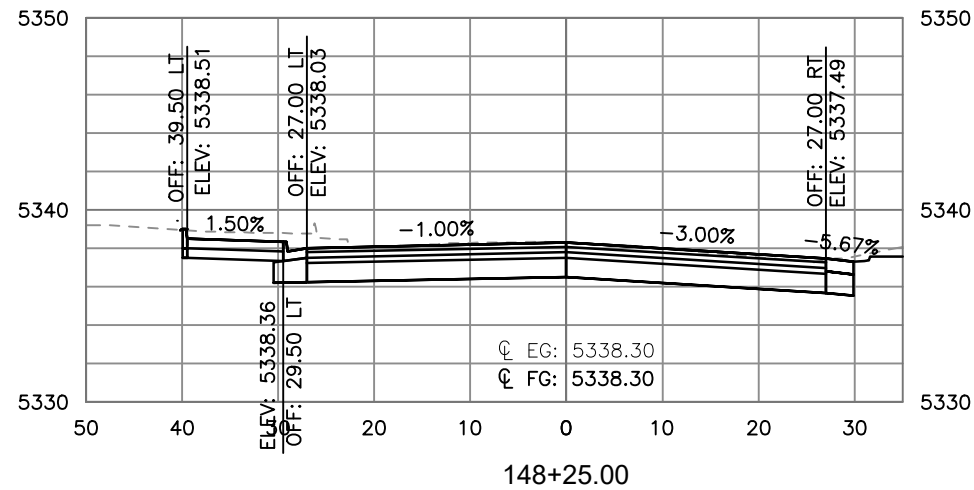
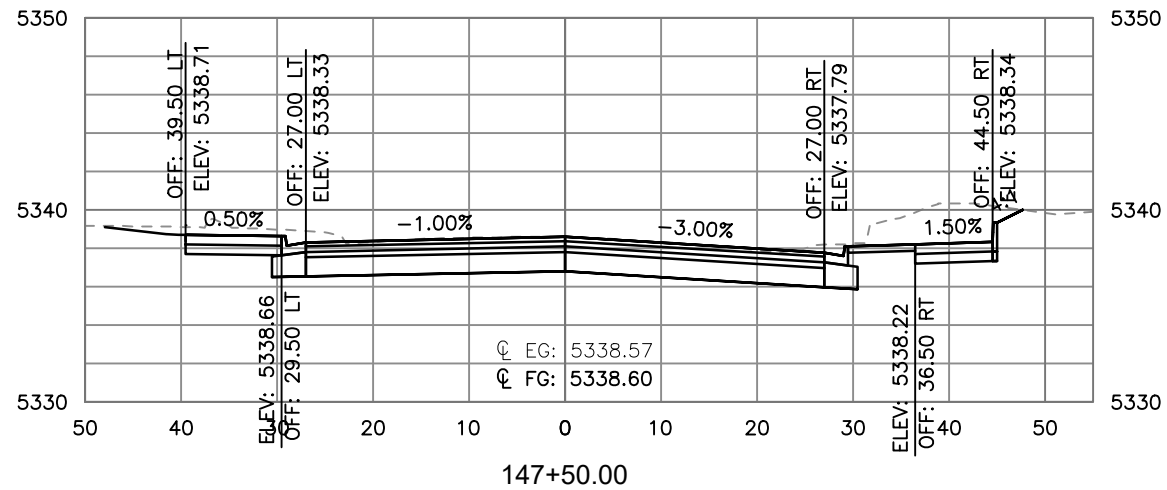
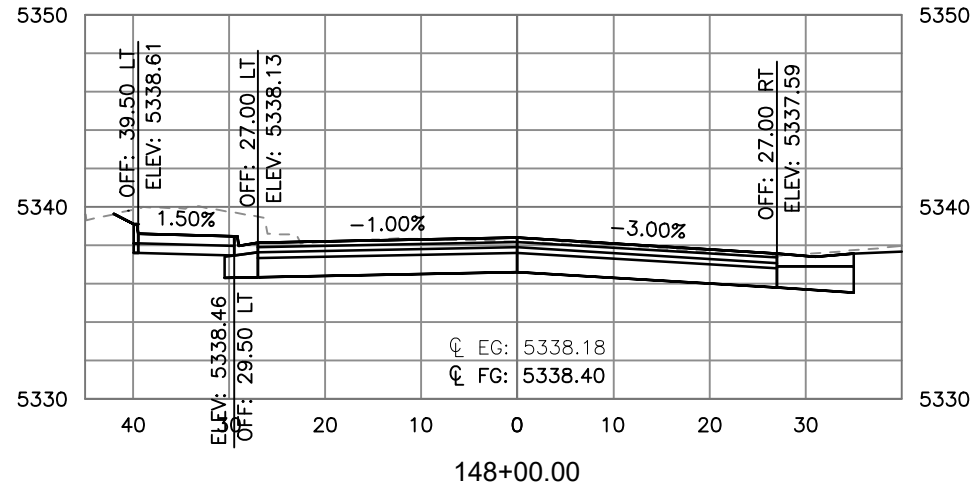
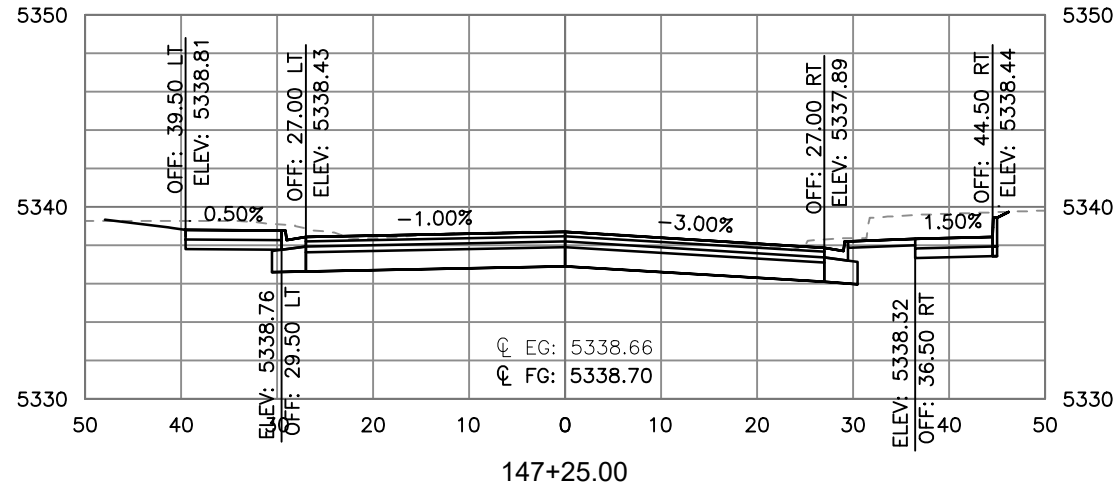
Sheet Revisions			
Date	Comments	Initials	



CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY CROSS SECTION RALSTON ROAD			Project No./Code
No Revisions:					18-ST-40
Revised:		Designer: JHH	Structure Numbers		
Void:		Detailer: DAL			
		Sheet Subset: CROSS SECTION	Subset Sheets: CS-30 of 33		Sheet Number 449

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VERTICAL SCALE: 1"=10'

Print Date: 12/7/2020 1:46:32 PM
File Name: 118355_RDOS_SH01_RALSTON.DWG
Horizontal Scale: 1"=20' Vertical Scale: 1"=10'



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Sheet Revisions

Date	Comments	Initials



CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed

No Revisions:
Revised:
Void:

RALSTON RD - YUKON ST TO GARRISON ST ROADWAY CROSS SECTION RALSTON ROAD

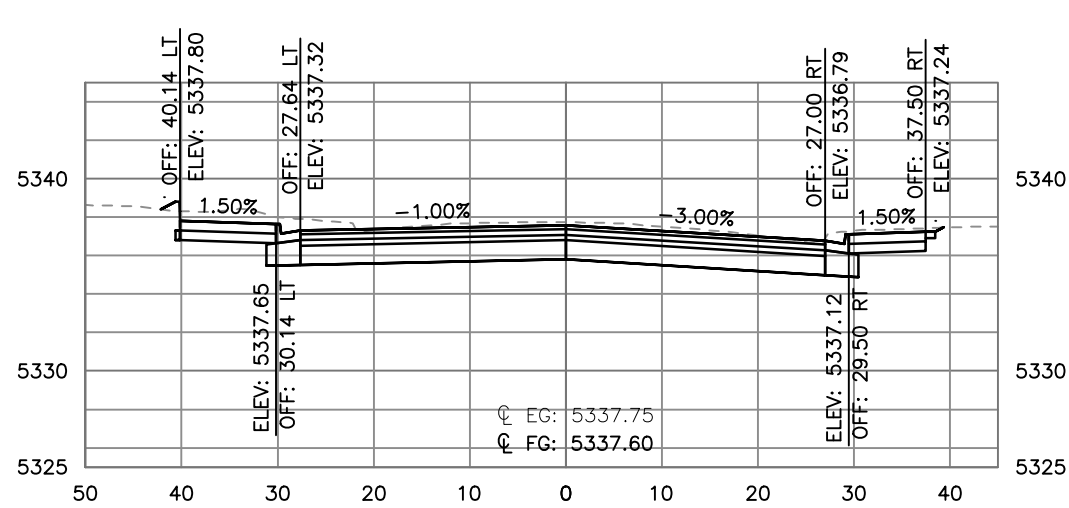
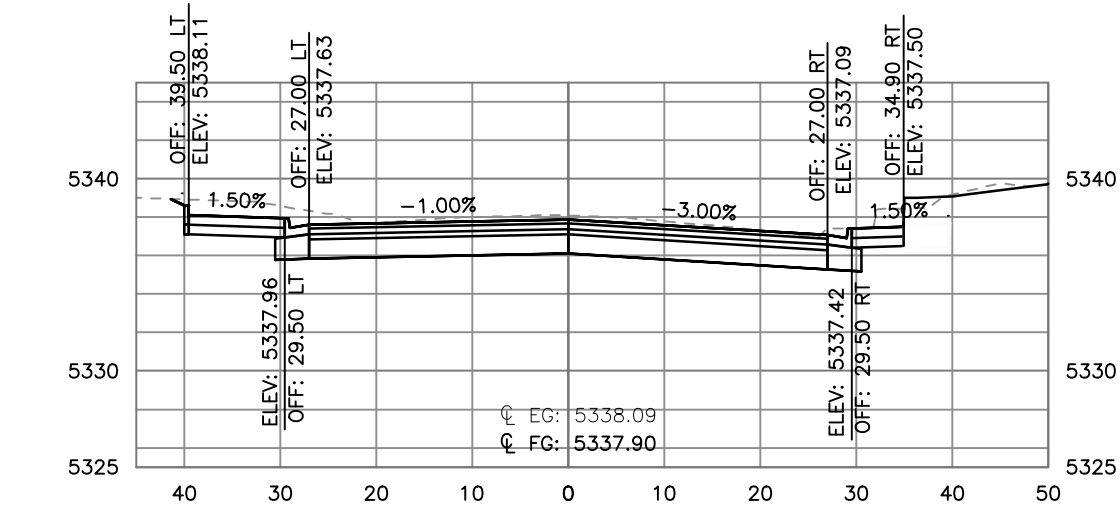
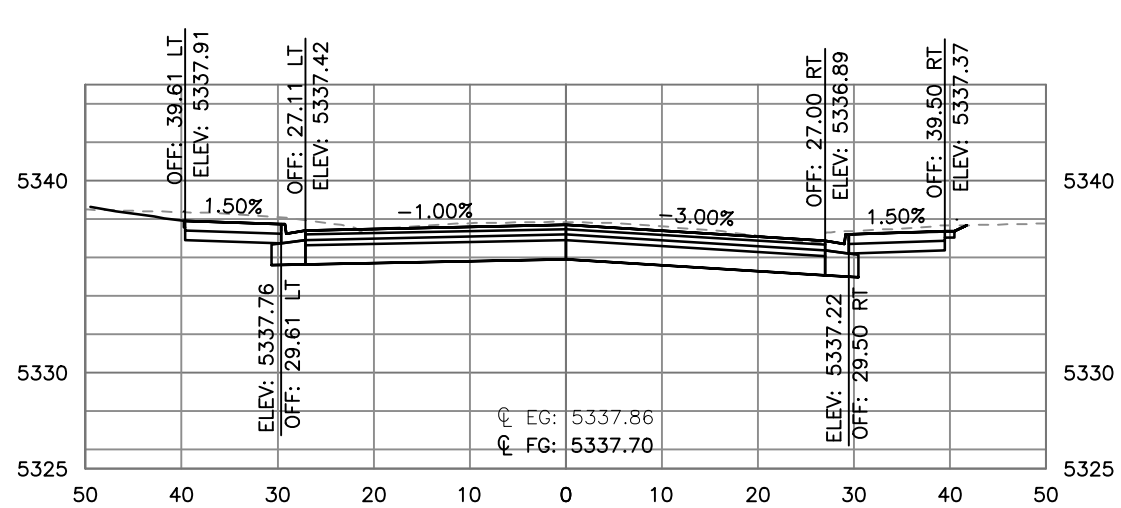
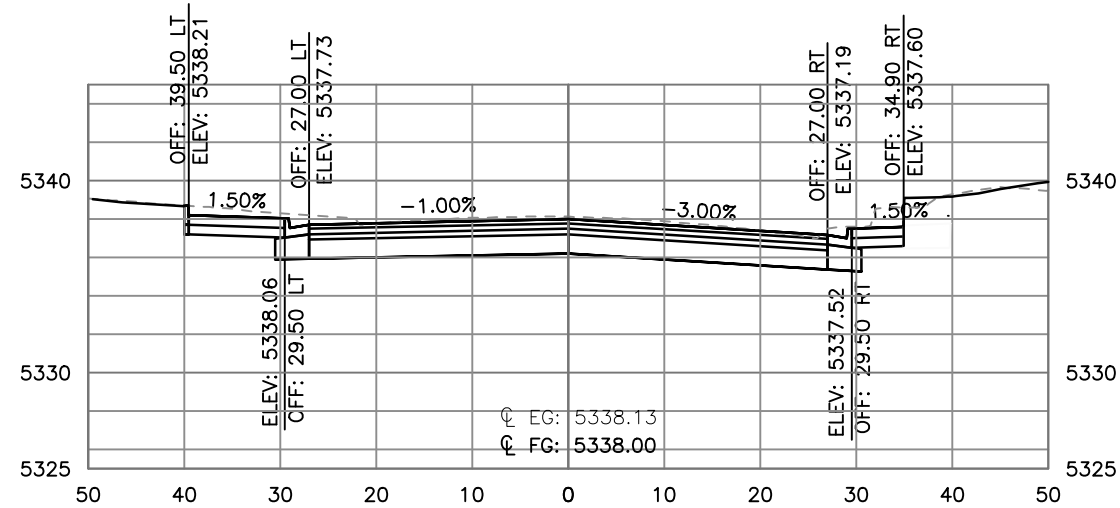
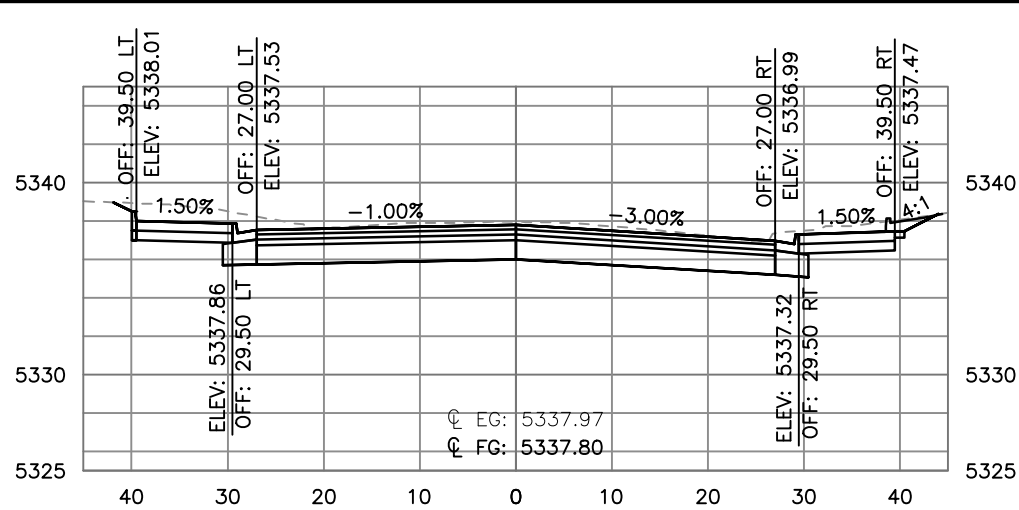
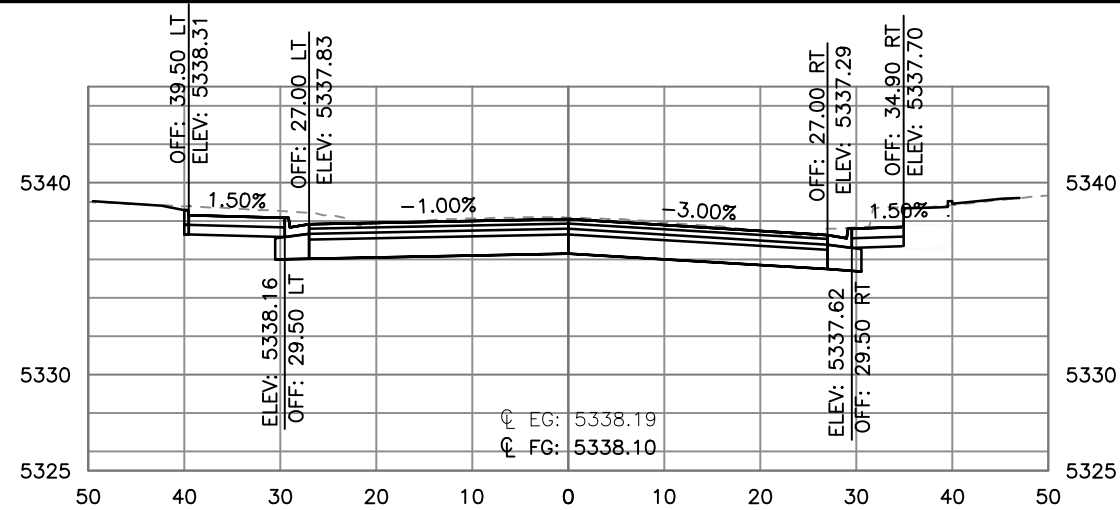
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Detailer:	DAL
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Structure Numbers	
Subset Sheets:	CS-31 of 33

Project No./Code

18-ST-40
Sheet Number 450

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VERTICAL SCALE: 1"=10'



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Horizontal Scale: 1"=20' Vertical Scale: 1"=10'
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6400 South Fiddlers Green Circle, Suite 1500
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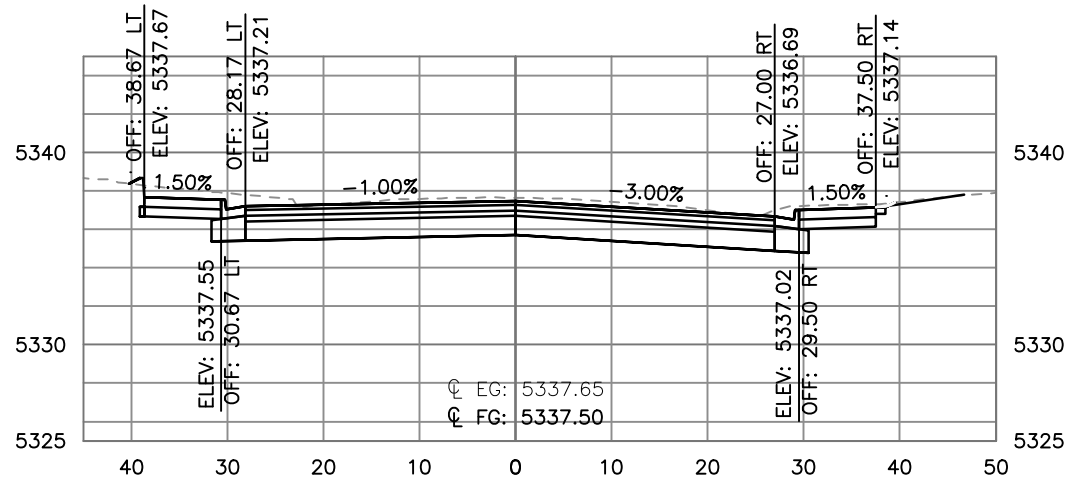
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Date	Comments	Initials	



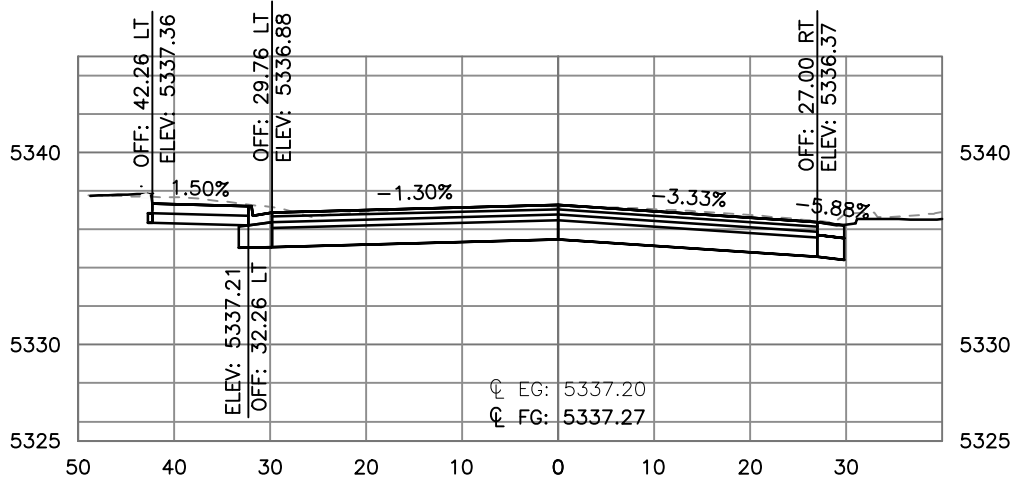
CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY CROSS SECTION RALSTON ROAD			Project No./Code
No Revisions:					18-ST-40
Revised:		Designer: JHH	Structure Numbers		
Void:		Detailer: DAL			
		Sheet Subset: CROSS SECTION	Subset Sheets: CS-32 of 33		Sheet Number 451

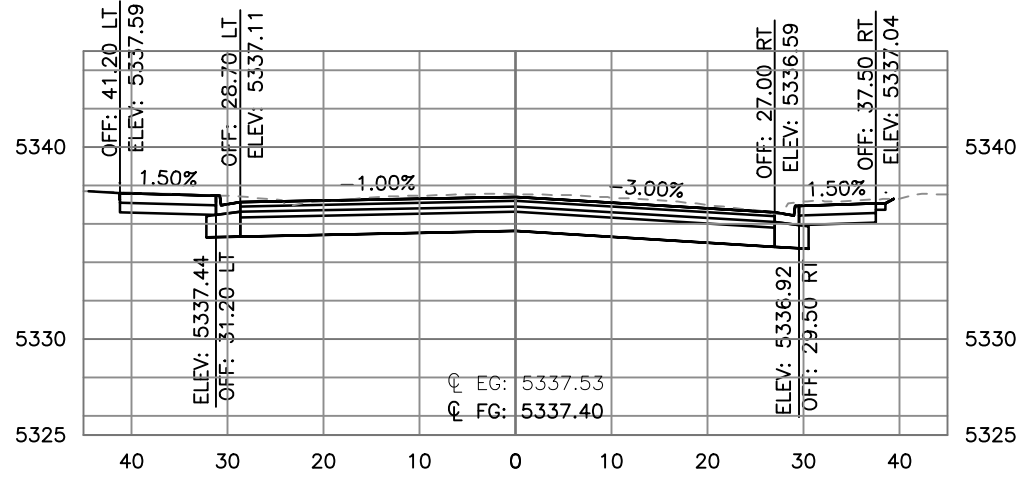
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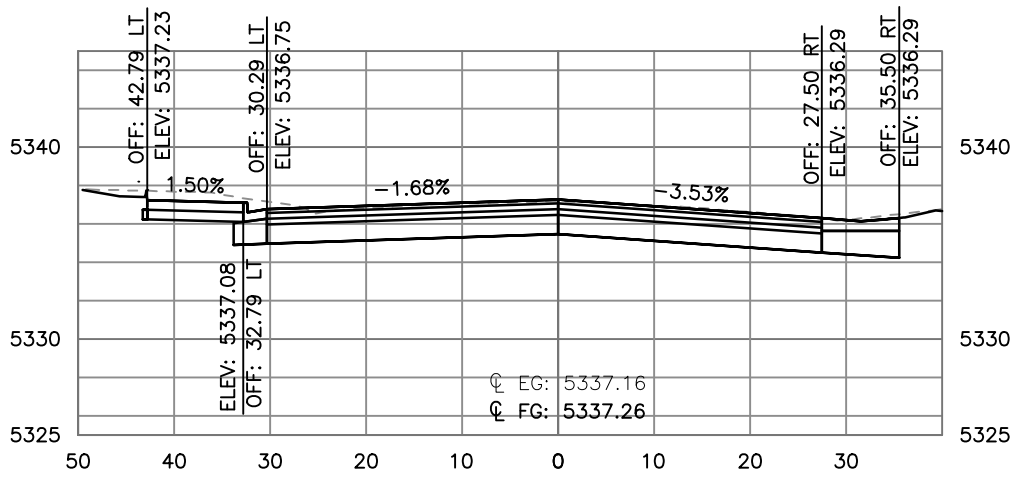
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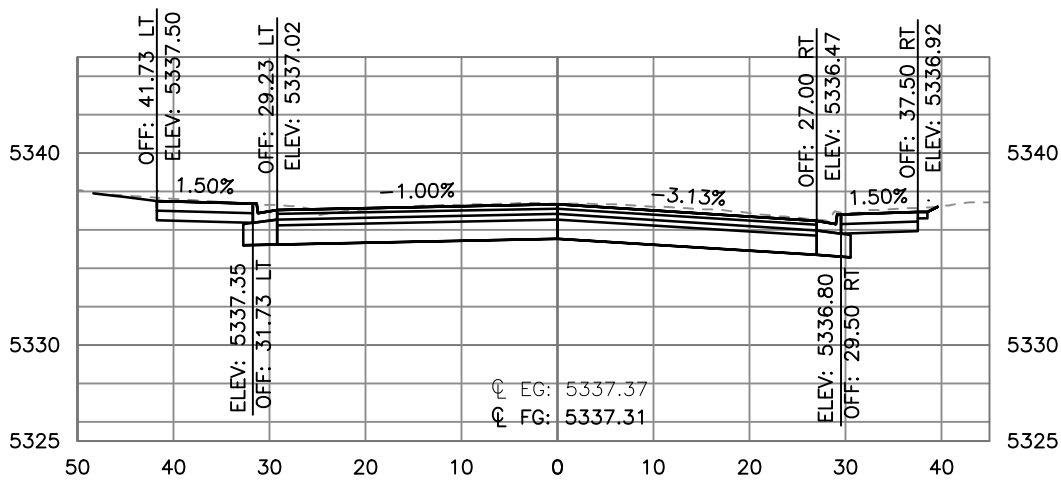
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150+50.00



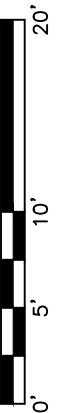
151+25.00



150+75.00



HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=10'



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File Name: 118355_RDCS_SH01_RALSTON.DWG
Horizontal Scale: 1"=20' Vertical Scale: 1"=10'

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Sheet Revisions			
Date	Comments	Initials	

CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY CROSS SECTION RALSTON ROAD			Project No./Code
No Revisions:					18-ST-40
Revised:		Designer: JHH	Structure Numbers		
Void:		Detailer: DAL			
		Sheet Subset: CROSS SECTION	Subset Sheets: CS-33 of 33		Sheet Number 452

FILING CERTIFICATION:
DEPOSITED THIS DAY OF , 20 , AT .M.,
IN BOOK OF THE JEFFERSON COUNTY LAND SURVEYS/RIGHT OF WAY
SURVEYS AT PAGE , RECEPTION NUMBER
SIGNED DEPT.



CITY OF ARVADA COLORADO
8101 Ralston Road, Arvada, CO 80002
Phone: 720-898-7640

Sheet Revisions		
Date	Description	Initials

Sheet Revisions		
Date	Description	Initials

Sheet Revisions		
Date	Description	Initials

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300 E. Mineral Ave, Suite 1
Littleton, Colorado 80122
Phone: (303)713-1898
Fax: (303)713-1897
www.aztecconsultants.com

Right of Way Plans			
Title Sheet			
City of Arvada Project Number: 18-ST-40			
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.			
CITY OF ARVADA, COLORADO			
Project Code	Last Mod. Date	Subset	Sheet No.
18-40	07-17-2020	1.01 of 1.01	1.01

SECTION CORNER

QUARTER, SIXTEENTH,
AND SECTION CORNERS

SET EASEMENT
MONUMENT

TEMPORARY
EASEMENT POINT

RIGHT OF WAY
MARKER

BLM MARKER

PROPERTY PIN

NOAA MARKER

QUARTER, SIXTEENTH,
AND SECTION CORNERS

FED
FEDERAL MONUMENT

WC
WITNESS CORNER

WC
BENCH MARK

USGS
USGS MARKER

LOCAL OR PLSS
MONUMENT

SECONDARY CONTROL
MONUMENT

RIGHT OF WAY
MARKER

PROJECT CONTROL
MONUMENT

DENSIFICATION
CONTROL MONUMENT

HIGH ACCURACY REFERENCE
NETWORK CONTROL MONUMENT

N 9.88
E 3.81
EL 0.00

N 10.13
E 3.81
EL 0.00

N 10.38
E 3.81
EL 0.00

PERMANENT, PROPERTY, SLOPE, & UTILITY EASEMENT LINE

TEMPORARY EASEMENT LINE (EXISTING)

PROPERTY BOUNDARY LINE (EXISTING AND PROPOSED)

ACCESS CONTROL LINE

BARRIER ACCESS CONTROL LINE

RIGHT OF WAY LINE

VIRGIN RIGHT OF WAY LINE (PROPOSED)

CITY LIMIT LINE (EXISTING)

COUNTY LINE (EXISTING)

QUARTER SECTION LINE

SECTION LINE

SIXTEENTH SECTION LINE

STATE LINE (EXISTING)

TOWNSHIP LINE (EXISTING)

SURVEY/ROW

TOP OF CUT

TOE OF FILL

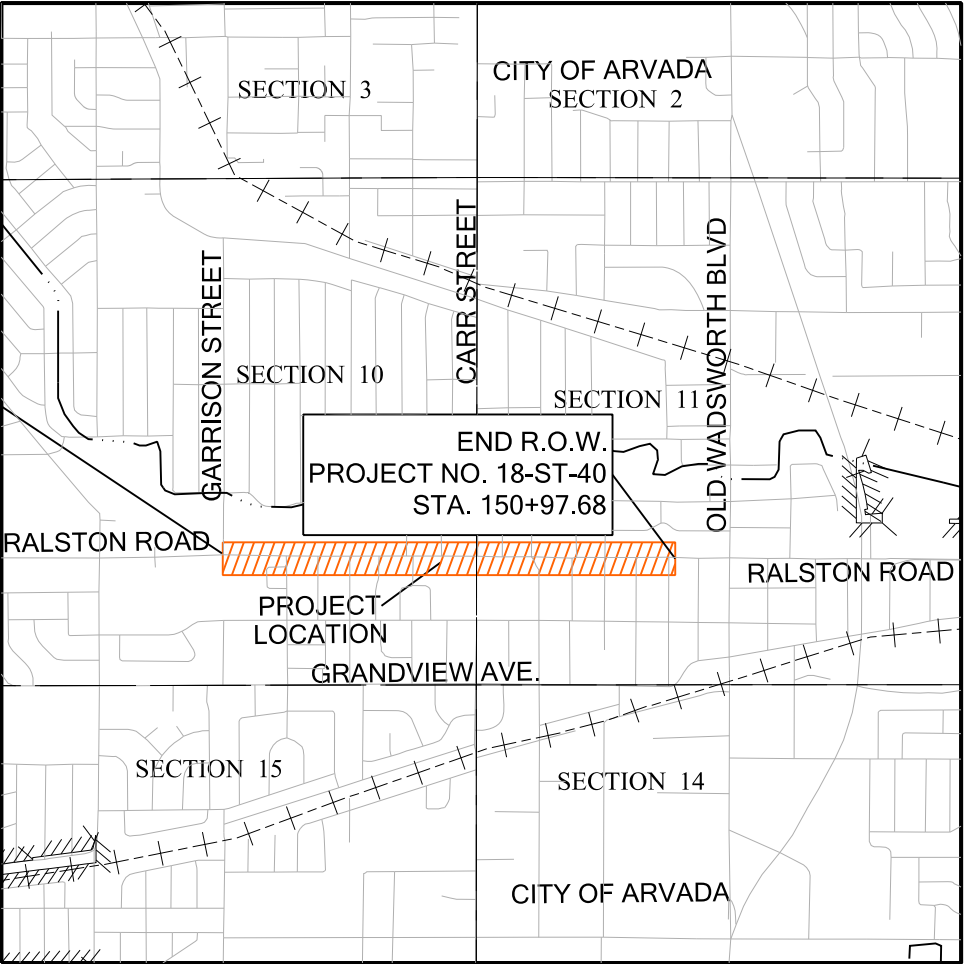
Note: For a complete listing of symbology used within this set of plans, please refer to the M-100-1 Standard Symbols of the Colorado Department of Transportation M&S Standards Publication dated July 2012.

NOTICE: According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years from the date of the certification shown hereon.

CITY OF ARVADA JEFFERSON COUNTY STATE OF COLORADO

CITY OF ARVADA PROJECT NO. 18-ST-40

RIGHT OF WAY PLANS
Ralston Road, Garrison Street to Yukon Street,
Being a part of the Southeast Quarter of Section 10
and the Southwest Quarter of Section 11,
Township 3 South, Range 69 West,
all being in the 6th Principal Meridian
City of Arvada, Jefferson County



PROJECT LOCATION MAP



Scales of Original 11"x17" Drawings
Plan Sheets 1" = 50'
Ownership Map 1" = 100'

SHEET NO.		INDEX OF SHEETS	
1.01	(1)	Title Sheet	
2.01-2.17	(17)	Tabulation of Properties	
3.0X	(NA)	Project Control Diagram	
4.01- 4.08	(8)	Land Survey Control Diagram	
5.01-5.08	(8)	Monumentation Sheet	
6.0X	(NA)	Tabulation of Road Approach Sheets	
7.01-7.10	(10)	Plan Sheets	
8.01-8.05	(5)	Ownership Maps	
(49)		Total Sheets	

Basis of Bearings: Bearings used in the calculations of coordinates are based on a grid bearing of N89°05'10"E and a distance of 1318.85 feet from the "Original 1973" Center-South Sixteenth Corner of Section 10, Township 3 South, Range 69 West of the 6th P.M., monumented by a 2" aluminum cap on flush in concrete pan, stamped in part "Original 1973 PLS 38359, 2017" to the South-East Sixteenth Corner of Section 10, Township 3 South, Range 69 West of the 6th P.M., monumented by a 2" aluminum cap down 0.5' in range box, Stamped "LS 5447 1995". The survey data was obtained from a Global Positioning System (GPS) survey based on the Colorado High Accuracy Reference Network (CHARN) NAD '83(2011).

Basis of Elevations: Project control elevations were established by differential leveling by Aztec Consultants based on The City of Arvada Control Point 120, being a 2.5" Aluminum Cap on the North Side of Ralston Road East of Garrison Street. Control Point 120 has a Published City of Arvada Datum Elevation of 5344.94 above sea level.

1. This Right-of-Way Plan is not a boundary survey of the adjoining property and is prepared for City of Arvada purposes only.
2. For title information, Aztec Consultants relied on title commitments prepared by H.C. Peck & Associates, Inc, records were produced on February 28, 2019. See Sheet 2.01 -2.17 for commitment numbers.
3. This plan set is subject to change and may not be the most current set. It is the user's responsibility to verify with the City of Arvada that this set is the most current. The information contained on the attached drawing is not valid unless this copy bears an original signature of the Professional Land Surveyor hereon named.
4. This project entire project is outside of the Flood Plain per FEMA Firm Map Number 08059C0212, Dated February 05, 2014. The project area has a "Zone X" designation. Therefore no flood plain is depicted on this set of plans. (Area of Minimal Flooding)

SURVEYOR STATEMENT (ROW PLAN)

I, Carl J. Gilbert a professional land surveyor licensed in the State of Colorado, do hereby state to the City of Arvada that based upon my knowledge, information and belief, research, calculations and evaluation of the survey evidence were performed and this Right-of-Way Plan was prepared under my responsible charge in accordance with applicable standards of practice defined by Colorado Department of Transportation publications. This statement is not a guaranty or warranty, either expressed or implied.

PLS No. 38287





CITY OF ARVADA COLORADO
8101 Ralston Road, Arvada, CO 80002
Phone: 720-898-7640

Sheet Revisions		
Date	Description	Initials

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Littleton, Colorado 80122
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Fax: (303)713-1897
www.aztecconsultants.com

Right of Way Plans				
Tabulation of Properties				
City of Arvada Project Number: 18-ST-40				
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.				
CITY OF ARVADA, COLORADO				
Project Code	Last Mod. Date	Subset	Sheet No.	
18-40	04-29-2020	2.01 of 2.17	2.01	

R.O.W.TABULATION OF PROPERTIES IN THE CITY OF ARVADA - RALSTON ROAD									Book and Page No. And/Or Reception No.	Title Commitment No.	Remarks
Parcel No.	Ownership Name and Mailing Address	Site Address	Location	Area In Square Feet (Acres)							
				Area Of Parcel	Existing ROW	Net Area	Remainder Left	Remainder Right			
			SECTION								
RW-1	CITY OF ARVADA	05790 GARRISON ST	N.W. 1/4 S.E. 1/4	3,140 sq. ft.		654,931 sq. ft.	651,791 sq. ft.		BOOK 954	NA	RIGHT OF WAY ACQUISITION
	08101 Ralston Road	ARVADA CO 80002	SECTION 10	(0.072 acres)		(15.035 acres)	(14.963 acres)		PAGE 33	City parcel	
	Arvada, CO 80002		T. 3 S., R. 69 W., 6th P.M.								
RW-2	CITY OF ARVADA	05790 GARRISON ST	S.W. 1/4 S.E. 1/4	914 sq. ft.		167,004 sq. ft.		166,090 sq. ft.	BOOK 887	NA	RIGHT OF WAY ACQUISITION
	08101 Ralston Road	ARVADA CO 80002	SECTION 10	(0.021 acres)		(3.834 acres)		(3.813 acres)	PAGE 76	City parcel	
	Arvada, CO 80002		T. 3 S., R. 69 W., 6th P.M.								
PE-2	CITY OF ARVADA	05790 GARRISON ST	S.W. 1/4 S.E. 1/4	3,003 sq. ft.					BOOK 887	NA	PERMANENT EASEMENT FOR THE PURPOSES OF
	08101 Ralston Road	ARVADA CO 80002	SECTION 10	(0.069 acres)					PAGE 76	City parcel	CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	Arvada, CO 80002		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
PE-2A	CITY OF ARVADA	05790 GARRISON ST	S.W. 1/4 S.E. 1/4	99 sq. ft.					BOOK 887	NA	PERMANENT EASEMENT FOR THE PURPOSES OF
	08101 Ralston Road	ARVADA CO 80002	SECTION 10	(0.002 acres)					PAGE 76	City parcel	CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	Arvada, CO 80002		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
TE-2	CITY OF ARVADA	05790 GARRISON ST	S.W. 1/4 S.E. 1/4	4,015 sq. ft.					BOOK 887	NA	TEMPORARY EASEMENT
	08101 Ralston Road	ARVADA CO 80002	SECTION 10	(0.092 acres)					PAGE 76	City parcel	FOR THE PURPOSES OF TEMPORARY
	Arvada, CO 80002		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
PE-3	BOBBY JOE & CAROL JEAN CORN	09110 RALSTON RD	S.W. 1/4 S.E. 1/4	1,680 sq. ft.					REC. NO.	07842A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	11765 West 80th	ARVADA CO 80002	SECTION 10	(0.039 acres)					2010076332		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	Arvada, CO 80002		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
TE-3	BOBBY JOE & CAROL JEAN CORN	09110 RALSTON RD	S.W. 1/4 S.E. 1/4	5,577 sq. ft.					REC. NO.	07842A2019	TEMPORARY EASEMENT
	11765 West 80th	ARVADA CO 80002	SECTION 10	(0.128 acres)					2010076332		FOR THE PURPOSES OF TEMPORARY
	Arvada, CO 80002		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
PE-4	ZHANG HAI JIAN	09050 RALSTON RD	S.W. 1/4 S.E. 1/4	1,555 sq. ft.					REC. NO.	07841A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	02484 South Kipling St.	ARVADA CO 80002	SECTION 10	(0.036 acres)					2006110761		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	Lakewood, CO 80227		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
TE-4	ZHANG HAI JIAN	09050 RALSTON RD	S.W. 1/4 S.E. 1/4	3,377 sq. ft.					REC. NO.	07841A2019	TEMPORARY EASEMENT
	02484 South Kipling St.	ARVADA CO 80002	SECTION 10	(0.078 acres)					2006110761		FOR THE PURPOSES OF TEMPORARY
	Lakewood, CO 80227		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
RW-5	ASHRA MINAKSHI	09040 RALSTON RD	S.W. 1/4 S.E. 1/4	150 sq. ft.		15,400 sq. ft.		15,250 sq. ft.	REC. NO.	07840A2019	RIGHT OF WAY ACQUISITION
	10840 Sundial Rim RD	ARVADA CO 80002	SECTION 10	(0.003 acres)		(0.354 acres)		(0.351 acres)	2015100012		
	Highlands Ranch, CO 80126		T. 3 S., R. 69 W., 6th P.M.								
PE-5	ASHRA MINAKSHI	09040 RALSTON RD	S.W. 1/4 S.E. 1/4	386 sq. ft.					REC. NO.	07840A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	10840 Sundial Rim RD	ARVADA CO 80002	SECTION 10	(0.009 acres)					2015100012		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	Highlands Ranch, CO 80126		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE



CITY OF ARVADA COLORADO
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Right of Way Plans				
Tabulation of Properties				
City of Arvada Project Number: 18-ST-40				
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.				
CITY OF ARVADA, COLORADO				
Project Code	Last Mod. Date	Subset	Sheet No.	
18-40	04-29-2020	2.02 of 2.17	2.02	

R.O.W.TABULATION OF PROPERTIES IN THE CITY OF ARVADA - RALSTON ROAD									Book and Page No. And/Or Reception No.	Title Commitment No.	Remarks
Parcel No.	Ownership Name and Mailing Address	Site Address	Location	Area In Square Feet (Acres)							
				Area Of Parcel	Existing ROW	Net Area	Remainder Left	Remainder Right			
			SECTION								
PE-5A	ASHRA MINAKSHI	09040 RALSTON RD	S.W. 1/4 S.E. 1/4	583 sq. ft.					REC.NO.	07840A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	10840 SUNDIAL RIM RD	ARVADA CO 80002	SECTION 10	(0.013 acres)					2015100012		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	HIGHLANDS RANCH CO 80126		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
TE-5	ASHRA MINAKSHI	09040 RALSTON RD	S.W. 1/4 S.E. 1/4	2,665 sq. ft.					REC.NO.	07840A2019	TEMPORARY EASEMENT
	10840 SUNDIAL RIM RD	ARVADA CO 80002	SECTION 10	(0.062 acres)					2015100012		FOR THE PURPOSES OF TEMPORARY
	HIGHLANDS RANCH CO 80126		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
RW-6	BENNY J ELLIS, JEANNE M ELLIS	08990 RALSTON RD	S.W. 1/4 S.E. 1/4	579 sq. ft.		17,816 sq. ft.		17,237 sq. ft.	REC. NO.	07839A2019	RIGHT OF WAY ACQUISITION
	AND CHRISTOPHER D VELTRIE	ARVADA CO 80002	SECTION 10	(0.013 acres)		(0.409 acres)		(0.396acres)	2018084318		
	06752 NAVAJO ST		T. 3 S., R. 69 W., 6th P.M.								
	DENVER CO 80221										
PE-6	BENNY J ELLIS, JEANNE M ELLIS	08990 RALSTON RD	S.W. 1/4 S.E. 1/4	244 sq. ft.					REC. NO.	07839A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	AND CHRISTOPHER D VELTRIE	ARVADA CO 80002	SECTION 10	(0.006 acres)					2018084318		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	06752 NAVAJO ST		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
	DENVER CO 80221										
PE-6A	BENNY J ELLIS, JEANNE M ELLIS	08990 RALSTON RD	S.W. 1/4 S.E. 1/4	1,785 sq. ft.					REC. NO.	07839A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	AND CHRISTOPHER D VELTRIE	ARVADA CO 80002	SECTION 10	(0.041 acres)					2018084318		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	06752 NAVAJO ST		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
	DENVER CO 80221										
TE-6	BENNY J ELLIS, JEANNE M ELLIS	08990 RALSTON RD	S.W. 1/4 S.E. 1/4	5,045 sq. ft.					REC. NO.	07839A2019	TEMPORARY EASEMENT
	AND CHRISTOPHER D VELTRIE	ARVADA CO 80002	SECTION 10	(0.12 acres)					2018084318		FOR THE PURPOSES OF TEMPORARY
	06752 NAVAJO ST		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
	DENVER CO 80221										
RW-7	ROBERT W STUART & CHERYL K STUART	08910 RALSTON RD	S.W. 1/4 S.E. 1/4	244 sq. ft.		14,723 sq. ft.		14,479 sq. ft.	REC. NO.	07838A2019	RIGHT OF WAY ACQUISITION
	06415 SAULSBURY CT	ARVADA CO 80002	SECTION 10	(0.006 acres)		(0.338 acres)		(0.332 acres)	F1218096		
	ARVADA CO 80003		T. 3 S., R. 69 W., 6th P.M.								
PE-7	ROBERT W STUART & CHERYL K STUART	08910 RALSTON RD	S.W. 1/4 S.E. 1/4	2,135 sq. ft.					REC. NO.	07838A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	06415 SAULSBURY CT	ARVADA CO 80002	SECTION 10	(0.049 acres)					F1218096		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	ARVADA CO 80003		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE

 CITY OF ARVADA COLORADO 8101 Ralston Road, Arvada, CO 80002 Phone: 720-898-7640	Sheet Revisions			Sheet Revisions			Sheet Revisions			 AzTec Consultants, inc. 300 E. Mineral Ave, Suite 1 Littleton, Colorado 80122 Phone: (303)713-1898 Fax: (303)713-1897 www.aztecconsultants.com	Right of Way Plans			
	Date	Description	Initials	Date	Description	Initials	Date	Description	Initials		Tabulation of Properties			
											City of Arvada Project Number: 18-ST-40			
											Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.			
											CITY OF ARVADA, COLORADO			
											Project Code	Last Mod. Date	Subset	Sheet No.
											18-40	03-20-2020	2.03 of 2.17	2.03
R.O.W.TABULATION OF PROPERTIES IN THE CITY OF ARVADA - RALSTON ROAD										Book and Page No. And/Or Reception No.	Title Commitment No.	Remarks		
Parcel No.	Ownership Name and Mailing Address	Site Address	Location	Area In Square Feet (Acres)										
				Area Of Parcel	Existing ROW	Net Area	Remainder Left	Remainder Right						
			SECTION											
TE-7	ROBERT W STUART & CHERYL K STUART	08910 RALSTON RD	S.W. 1/4 S.E. 1/4	1,918 sq. ft.					REC. NO.	07838A2019	TEMPORARY EASEMENT			
	06415 SAULSBURY CT	ARVADA CO 80002	SECTION 10	(0.044 acres)					F1218096		FOR THE PURPOSES OF TEMPORARY			
	ARVADA CO 80003		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING			
RW-8	COLORADO CATTLEMAN'S ASSOCIATION	08833 RALSTON RD	N.W. 1/4 S.E. 1/4	347 sq. ft.		28,314 sq. ft.	27,967 sq. ft.		REC. NO.	07852A2019	RIGHT OF WAY ACQUISITION			
	08833 RALSTON RD	ARVADA CO 80002	SECTION 10	(0.008 acres)		(0.650 acres)	(0.642acres)		91058309					
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.											
PE-8	COLORADO CATTLEMAN'S ASSOCIATION	08833 RALSTON RD	N.W. 1/4 S.E. 1/4	1,499 sq. ft.					REC. NO.	07852A2019	PERMANENT EASEMENT FOR THE PURPOSES OF			
	08833 RALSTON RD	ARVADA CO 80002	SECTION 10	(0.034 acres)					91058309		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,			
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE			
TE-8	COLORADO CATTLEMAN'S ASSOCIATION	08833 RALSTON RD	N.W. 1/4 S.E. 1/4	2,891 sq. ft.					REC. NO.	07852A2019	TEMPORARY EASEMENT			
	08833 RALSTON RD	ARVADA CO 80002	SECTION 10	(0.066 acres)					91058309		FOR THE PURPOSES OF TEMPORARY			
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING			
RW-9	MRM REAL ESTATE LLC	08850 RALSTON RD	S.W. 1/4 S.E. 1/4	17 sq. ft.		25,057 sq. ft.		25,040 sq. ft.	REC. NO.	07837A2019	RIGHT OF WAY ACQUISITION			
	01296 ASPEN ST	ARVADA CO 80002	SECTION 10	(0.000 acres)		(0.575 acres)		(0.575 acres)	2015026282					
	BROOMFIELD CO 80020		T. 3 S., R. 69 W., 6th P.M.											
RW-9A	MRM REAL ESTATE LLC	08850 RALSTON RD	S.W. 1/4 S.E. 1/4	349 sq. ft.		25,057 sq. ft.		23,815 sq. ft.	REC. NO.	07837A2019	RIGHT OF WAY ACQUISITION			
	01296 ASPEN ST	ARVADA CO 80002	SECTION 10	(0.008 acres)		(0.575 acres)		(0.567 acres)	2015026282					
	BROOMFIELD CO 80020		T. 3 S., R. 69 W., 6th P.M.											
PE-9	MRM REAL ESTATE LLC	08850 RALSTON RD	S.W. 1/4 S.E. 1/4	2,979 sq. ft.					REC. NO.	07837A2019	PERMANENT EASEMENT FOR THE PURPOSES OF			
	01296 ASPEN ST	ARVADA CO 80002	SECTION 10	(0.068 acres)					2015026282		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,			
	BROOMFIELD CO 80020		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE			
TE-9	MRM REAL ESTATE LLC	08850 RALSTON RD	S.W. 1/4 S.E. 1/4	4,021 sq. ft.					REC. NO.	07837A2019	TEMPORARY EASEMENT			
	01296 ASPEN ST	ARVADA CO 80002	SECTION 10	(0.092 acres)					2015026282		FOR THE PURPOSES OF TEMPORARY			
	BROOMFIELD CO 80020		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING			
RW-10	GREGORY L & STEFANIE R CANNON	08811 RALSTON RD	N.W. 1/4 S.E. 1/4	68 sq. ft.		51,228 sq. ft.	51,160 sq. ft.		REC. NO.	07849A2019	RIGHT OF WAY ACQUISITION			
	08811 RALSTON RD	ARVADA CO 80002	SECTION 10	(0.002 acres)		(1.176 acres)	(1.174 acres)		2012039474					
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.											
PE-10	GREGORY L & STEFANIE R CANNON	08811 RALSTON RD	N.W. 1/4 S.E. 1/4	3,344 sq. ft.					REC. NO.	07849A2019	PERMANENT EASEMENT FOR THE PURPOSES OF			
	08811 RALSTON RD	ARVADA CO 80002	SECTION 10	(0.077 acres)					2012039474		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,			
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE			
TE-10	GREGORY L & STEFANIE R CANNON	08811 RALSTON RD	N.W. 1/4 S.E. 1/4	972 sq. ft.					REC. NO.	07849A2019	TEMPORARY EASEMENT			
	08811 RALSTON RD	ARVADA CO 80002	SECTION 10	(0.022 acres)					2012039474		FOR THE PURPOSES OF TEMPORARY			
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING			

 CITY OF ARVADA COLORADO 8101 Ralston Road, Arvada, CO 80002 Phone: 720-898-7640				Sheet Revisions			Sheet Revisions			Sheet Revisions			 AzTec Consultants, Inc. 300 E. Mineral Ave, Suite 1 Littleton, Colorado 80122 Phone: (303)713-1898 Fax: (303)713-1897 www.aztecconsultants.com		Right of Way Plans			
				Date	Description	Initials	Date	Description	Initials	Date	Description	Initials			Tabulation of Properties			
															City of Arvada Project Number: 18-ST-40			
															Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.			
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												18-40	04-12-2020	2.04 of 2.17	2.04			

R.O.W.TABULATION OF PROPERTIES IN THE CITY OF ARVADA - RALSTON ROAD									Book and Page No. And/Or Reception No.	Title Commitment No.	Remarks
Parcel No.	Ownership Name and Mailing Address	Site Address	Location	Area In Square Feet (Acres)							
				Area Of Parcel	Existing ROW	Net Area	Remainder Left	Remainder Right			
			SECTION								
RW-11	BRAKE AND ASSOCIATES INC	08800 RALSTON RD	S.W. 1/4 S.E. 1/4	270 sq. ft.		14,530 sq. ft.	14,260 sq. ft.		REC. NO.	07836A2019	RIGHT OF WAY ACQUISITION
	08800 RALSTON RD SUITE 200	ARVADA CO 80002	SECTION 10	(0.006 acres)		(0.333 acres)	(0.327 acres)		89001332		
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								
PE-11	BRAKE AND ASSOCIATES INC	08800 RALSTON RD	S.W. 1/4 S.E. 1/4	945 sq. ft.					REC. NO.	07836A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	08800 RALSTON RD SUITE 200	ARVADA CO 80002	SECTION 10	(0.022 acres)					89001332		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETScape
TE-11	BRAKE AND ASSOCIATES INC	08800 RALSTON RD	S.W. 1/4 S.E. 1/4	716 sq. ft.					REC. NO.	07836A2019	TEMPORARY EASEMENT
	08800 RALSTON RD SUITE 200	ARVADA CO 80002	SECTION 10	(0.016 acres)					89001332		FOR THE PURPOSES OF TEMPORARY
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
RW-12	RUSSELL R DRABEK & RENEE L DRABEK	08790 RALSTON RD	S.E. 1/4 S.E. 1/4	559 sq. ft.		9,668 sq. ft.		9,109 sq. ft.	REC. NO.	07835A2019	RIGHT OF WAY ACQUISITION
	08790 RALSTON RD	ARVADA CO 80002	SECTION 10	(0.013 acres)		(0.222 acres)		(0.209 acres)	2005035085		
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								
PE-12	RUSSELL R DRABEK & RENEE L DRABEK	08790 RALSTON RD	S.E. 1/4 S.E. 1/4	1,556 sq. ft.					REC. NO.	07835A2019	TEMPORARY EASEMENT
	08790 RALSTON RD	ARVADA CO 80002	SECTION 10	(0.036 acres)					2005035085		FOR THE PURPOSES OF TEMPORARY
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
TE-12	RUSSELL R DRABEK & RENEE L DRABEK	08790 RALSTON RD	S.E. 1/4 S.E. 1/4	1,877 sq. ft.					REC. NO.	07835A2019	TEMPORARY EASEMENT
	08790 RALSTON RD	ARVADA CO 80002	SECTION 10	(0.043 acres)					2005035085		FOR THE PURPOSES OF TEMPORARY
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
PE-13	6475 WADSWORTH LTD LIABILITY CO	08801 RALSTON RD	N.E. 1/4 S.E. 1/4	97 sq. ft.					REC. NO.	07848A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	03845 TENNYSON ST Suite 153	ARVADA CO 80002	SECTION 10	(0.002 acres)					F0126098		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	DENVER CO 80212		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETScape
TE-13	6475 WADSWORTH LTD LIABILITY CO	08801 RALSTON RD	N.E. 1/4 S.E. 1/4	1,242 sq. ft.					REC. NO.	07848A2019	TEMPORARY EASEMENT
	03845 TENNYSON ST Suite 153	ARVADA CO 80002	SECTION 10	(0.028 acres)					F0126098		FOR THE PURPOSES OF TEMPORARY
	DENVER CO 80212		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
PE-14	6475 WADSWORTH LTD LIABILITY CO	08795 RALSTON RD	N.E. 1/4 S.E. 1/4	1,540 sq. ft.					REC. NO.	07848A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	03845 TENNYSON ST Suite 153	ARVADA CO 80002	SECTION 10	(0.035 acres)					F0126098		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	DENVER CO 80212		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETScape

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 CITY OF ARVADA COLORADO 8101 Ralston Road, Arvada, CO 80002 Phone: 720-898-7640	Sheet Revisions			Sheet Revisions			Sheet Revisions			 AzTec Consultants, Inc. 300 E. Mineral Ave, Suite 1 Littleton, Colorado 80122 Phone: (303)713-1898 Fax: (303)713-1897 www.aztecconsultants.com	Right of Way Plans			
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	CITY OF ARVADA, COLORADO													
	Project Code	Last Mod. Date	Subset	Sheet No.										
18-40	04-12-2020	2.05 of 2.17	2.05											

R.O.W.TABULATION OF PROPERTIES IN THE CITY OF ARVADA - RALSTON ROAD										Book and Page No. And/Or Reception No.	Title Commitment No.	Remarks
Parcel No.	Ownership Name and Mailing Address	Site Address	Location	Area In Square Feet (Acres)								
				Area Of Parcel	Existing ROW	Net Area	Remainder Left	Remainder Right				
			SECTION									
TE-14	6475 WADSWORTH LTD LIABILITY CO	08795 RALSTON RD	N.E. 1/4 S.E. 1/4	1,901 sq. ft.					REC. NO.	07848A2019	TEMPORARY EASEMENT	
	03845 TENNYSON ST Suite 153	ARVADA CO 80002	SECTION 10	(0.044 acres)					F0126098		FOR THE PURPOSES OF TEMPORARY	
	DENVER CO 80212		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING	
RW-15	8707 RALSTON ROAD LLC	08707 RALSTON RD	N.E. 1/4 S.E. 1/4	44 sq. ft.		77,972 sq. ft.	77,928 sq. ft.		REC. NO.	07851A2019	RIGHT OF WAY ACQUISITION	
	08707 RALSTON RD	ARVADA CO 80002	SECTION 10	(0.001 acres)		(1.790 acres)	(1.789 acres)		2015050379			
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.									
PE-15	8707 RALSTON ROAD LLC	08707 RALSTON RD	N.E. 1/4 S.E. 1/4	3,694 sq. ft.					REC. NO.	07851A2019	PERMANENT EASEMENT FOR THE PURPOSES OF	
	08707 RALSTON RD	ARVADA CO 80002	SECTION 10	(0.085 acres)					2015050379		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,	
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE	
TE-15	8707 RALSTON ROAD LLC	08707 RALSTON RD	N.E. 1/4 S.E. 1/4	2,212 sq. ft.					REC. NO.	07851A2019	TEMPORARY EASEMENT	
	08707 RALSTON RD	ARVADA CO 80002	SECTION 10	(0.051 acres)					2015050379		FOR THE PURPOSES OF TEMPORARY	
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING	
RW-16	AUCTUS FIDES LLC	08700 RALSTON RD	S.E. 1/4 S.E. 1/4	525 sq. ft.		9,065 sq. ft.		8,540 sq. ft.	REC. NO.	07834A2019	RIGHT OF WAY ACQUISITION	
	08700 RALSTON RD	ARVADA CO 80002	SECTION 10	(0.012 acres)		(0.208 acres)		(0.196 acres)	2012140965			
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.									
PE-16	AUCTUS FIDES LLC	08700 RALSTON RD	S.E. 1/4 S.E. 1/4	1,585 sq. ft.					REC. NO.	07834A2019	PERMANENT EASEMENT FOR THE PURPOSES OF	
	08700 RALSTON RD	ARVADA CO 80002	SECTION 10	(0.036 acres)					2012140965		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,	
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE	
TE-16	AUCTUS FIDES LLC	08700 RALSTON RD	S.E. 1/4 S.E. 1/4	1,764 sq. ft.					REC. NO.	07834A2019	TEMPORARY EASEMENT	
	08700 RALSTON RD	ARVADA CO 80002	SECTION 10	(0.040 acres)					2012140965		FOR THE PURPOSES OF TEMPORARY	
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING	
RW-17	ARLENE M. LEEPER	05780 DUDLEY ST	S.E. 1/4 S.E. 1/4	285 sq. ft.		8,640 sq. ft.		8,355 sq. ft.	REC. NO.	07833A2019	RIGHT OF WAY ACQUISITION	
	PO BOX 485	ARVADA CO 80002	SECTION 10	(0.007 acres)		(0.198 acres)		(0.191 acres)	24800137			
	ARVADA CO 80001		T. 3 S., R. 69 W., 6th P.M.									

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CITY OF ARVADA COLORADO
8101 Ralston Road, Arvada, CO 80002
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Right of Way Plans			
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CITY OF ARVADA, COLORADO			
Project Code	Last Mod. Date	Subset	Sheet No.
18-40	03-20-2020	2.06 of 2.17	2.06

R.O.W.TABULATION OF PROPERTIES IN THE CITY OF ARVADA - RALSTON ROAD

Parcel No.	Ownership Name and Mailing Address	Site Address	Location	Area In Square Feet (Acres)					Book and Page No. And/Or Reception No.	Title Commitment No.	Remarks
				Area Of Parcel	Existing ROW	Net Area	Remainder Left	Remainder Right			
			SECTION								
PE-17	ARLENE M. LEEPER	05780 DUDLEY ST	S.E. 1/4 S.E. 1/4	1,136 sq. ft.					REC. NO.	07833A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	PO BOX 485	ARVADA CO 80002	SECTION 10	(0.026 acres)					24800137		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	ARVADA CO 80001		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
TE-17	ARLENE M. LEEPER	05780 DUDLEY ST	S.E. 1/4 S.E. 1/4	1,189 sq. ft.					REC. NO.	07833A2019	TEMPORARY EASEMENT
	PO BOX 485	ARVADA CO 80002	SECTION 10	(0.027 acres)					24800137		FOR THE PURPOSES OF TEMPORARY
	ARVADA CO 80001		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
RW-18	ROBERT R POWERS	08660 RALSTON RD	S.E. 1/4 S.E. 1/4	286 sq. ft.		8,091 sq. ft.		7,805 sq. ft.	REC. NO.	07832A2019	RIGHT OF WAY ACQUISITION
	08660 RALSTON RD	ARVADA CO 80002	SECTION 10	(0.007 acres)		(0.186 acres)		(0.179 acres)	F0082446		
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								
PE-18	ROBERT R POWERS	08660 RALSTON RD	S.E. 1/4 S.E. 1/4	880 sq. ft.					REC. NO.	07832A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	08660 RALSTON RD	ARVADA CO 80002	SECTION 10	(0.020 acres)					F0082446		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
TE-18	ROBERT R POWERS	08660 RALSTON RD	S.E. 1/4 S.E. 1/4	859 sq. ft.					REC. NO.	07832A2019	TEMPORARY EASEMENT
	08660 RALSTON RD	ARVADA CO 80002	SECTION 10	(0.019 acres)					F0082446		FOR THE PURPOSES OF TEMPORARY
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
RW-19	WALTER H WINTER JR	08605 RALSTON RD	N.E. 1/4 S.E. 1/4	49 sq. ft.		12,540 sq. ft.	12,491 sq. ft.		REC. NO.	07868A2019	RIGHT OF WAY ACQUISITION
	& STUART R WINTER	ARVADA CO 80002	SECTION 10	(0.001 acres)		(0.288 acres)	(0.287 acres)		92096167		
	08605 RALSTON RD		T. 3 S., R. 69 W., 6th P.M.								
	ARVADA CO 80002										
PE-19	WALTER H WINTER JR	08605 RALSTON RD	N.E. 1/4 S.E. 1/4	1,604 sq. ft.					REC. NO.	07868A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	& STUART R WINTER	ARVADA CO 80002	SECTION 10	(0.037 acres)					92096167		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	08605 RALSTON RD		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
	ARVADA CO 80002										
TE-19	WALTER H WINTER JR	08605 RALSTON RD	N.E. 1/4 S.E. 1/4	1,508 sq. ft.					REC. NO.	07868A2019	TEMPORARY EASEMENT
	& STUART R WINTER	ARVADA CO 80002	SECTION 10	(0.035 acres)					92096167		FOR THE PURPOSES OF TEMPORARY
	08605 RALSTON RD		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
	ARVADA CO 80002										
RW-20	8600 RALSTON LLC	08600 RALSTON RD	S.E. 1/4 S.E. 1/4	487 sq. ft.		20,212 sq. ft.		19,725 sq. ft.	REC. NO.	07831A2019	RIGHT OF WAY ACQUISITION
	08600 RALSTON RD Suite 200	ARVADA CO 80002	SECTION 10	(0.011 acres)		(0.464 acres)		(0.453 acres)	2017092762		
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								



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Right of Way Plans				
Tabulation of Properties				
City of Arvada Project Number: 18-ST-40				
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.				
CITY OF ARVADA, COLORADO				
Project Code	Last Mod. Date	Subset	Sheet No.	
18-40	07-17-2020	2.07 of 2.17	2.07	

R.O.W.TABULATION OF PROPERTIES IN THE CITY OF ARVADA - RALSTON ROAD

Parcel No.	Ownership Name and Mailing Address	Site Address	Location	Area In Square Feet (Acres)					Book and Page No. And/Or Reception No.	Title Commitment No.	Remarks
				Area Of Parcel	Existing ROW	Net Area	Remainder Left	Remainder Right			
			SECTION								
PE-20	8600 RALSTON LLC	08600 RALSTON RD	S.E. 1/4 S.E. 1/4	2,155 sq. ft.					REC. NO.	07831A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	08600 RALSTON RD STE 200	ARVADA CO 80002	SECTION 10	(0.049 acres)					2017092762		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
TE-20	8600 RALSTON LLC	08600 RALSTON RD	S.E. 1/4 S.E. 1/4	1120 sq. ft.					REC. NO.	07831A2019	TEMPORARY EASEMENT
	08600 RALSTON RD STE 200	ARVADA CO 80002	SECTION 10	(0.026 acres)					2017092762		FOR THE PURPOSES OF TEMPORARY
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
PE-21	JOY E COFFIN TRUST JOYCE E BEAVERS	08595 RALSTON RD	N.E. 1/4 S.E. 1/4	1,896 sq. ft.					REC. NO.	07871A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	FAMILY TRUST	ARVADA CO 80002	SECTION 10	(0.044 acres)					2013023530		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	13837 W 76TH PL		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
	ARVADA CO 80005										
TE-21	JOY E COFFIN TRUST JOYCE E BEAVERS	08595 RALSTON RD	N.E. 1/4 S.E. 1/4	1,459 sq. ft.					REC. NO.	07871A2019	TEMPORARY EASEMENT
	FAMILY TRUST	ARVADA CO 80002	SECTION 10	(0.033 acres)					2013023530		FOR THE PURPOSES OF TEMPORARY
	13837 W 76TH PL		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
	ARVADA CO 80005										
RW-22	AMIR HEYDARI & MONICA HAYDARI	08580 RALSTON RD	S.E. 1/4 S.E. 1/4	248 sq. ft.		8,500 sq. ft.		8,252 sq. ft.	REC. NO.	07830A2019	RIGHT OF WAY ACQUISITION
	08025 W FORD DR	ARVADA CO 80002	SECTION 10	(0.006 acres)		(0.195 acres)		(0.189 acres)	2018069894		
	LAKEWOOD CO 80226		T. 3 S., R. 69 W., 6th P.M.								
PE-22	AMIR HEYDARI & MONICA HAYDARI	08580 RALSTON RD	S.E. 1/4 S.E. 1/4	1,610 sq. ft.					REC. NO.	07830A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	08025 W FORD DR	ARVADA CO 80002	SECTION 10	(0.037 acres)					2018069894		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	LAKEWOOD CO 80226		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
TE-22	AMIR HEYDARI & MONICA HAYDARI	08580 RALSTON RD	S.E. 1/4 S.E. 1/4	1,590 sq. ft.					REC. NO.	07830A2019	TEMPORARY EASEMENT
	08025 W FORD DR	ARVADA CO 80002	SECTION 10	(0.036 acres)					2018069894		FOR THE PURPOSES OF TEMPORARY
	LAKEWOOD CO 80226		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
PE-23	CHRISTIAN SCIENCE SOCIETY OF ARVADA	08591 RALSTON RD	N.E. 1/4 S.E. 1/4	1,401 sq. ft.					REC. NO.	07870A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	08591 RALSTON RD	ARVADA CO 80002	SECTION 10	(0.032 acres)					572393		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE



CITY OF ARVADA COLORADO
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City of Arvada Project Number: 18-ST-40			
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CITY OF ARVADA, COLORADO			
Project Code	Last Mod. Date	Subset	Sheet No.
18-40	03-20-2020	2.08 of 2.17	2.08

R.O.W.TABULATION OF PROPERTIES IN THE CITY OF ARVADA - RALSTON ROAD

Parcel No.	Ownership Name and Mailing Address	Site Address	Location	Area In Square Feet (Acres)					Book and Page No. And/Or Reception No.	Title Commitment No.	Remarks
				Area Of Parcel	Existing ROW	Net Area	Remainder Left	Remainder Right			
			SECTION								
TE-23	CHRISTIAN SCIENCE SOCIETY OF ARVADA	08591 RALSTON RD	N.E. 1/4 S.E. 1/4	1,563 sq. ft.					REC. NO.	07870A2019	TEMPORARY EASEMENT
	08591 RALSTON RD	ARVADA CO 80002	SECTION 10	(0.036 acres)					572393		FOR THE PURPOSES OF TEMPORARY
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
PE-24	FOUR GIRLS, LLC	08525 RALSTON RD	N.E. 1/4 S.E. 1/4	946 sq. ft.					REC. NO.	07869A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	08525 RALSTON RD	ARVADA CO 80002	SECTION 10	(0.022 acres)					F2080925		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
TE-24	FOUR GIRLS, LLC	08525 RALSTON RD	N.E. 1/4 S.E. 1/4	1,524 sq. ft.					REC. NO.	07869A2019	TEMPORARY EASEMENT
	08525 RALSTON RD	ARVADA CO 80002	SECTION 10	(0.035 acres)					F2080925		FOR THE PURPOSES OF TEMPORARY
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
RW-25	JEFFERSON COUNTY SCHOOL DIST R1	05751 BALSAM ST	S.E. 1/4 S.E. 1/4	119 sq. ft.		661,285 sq. ft.		661,166 sq. ft.	REC. NO.	07890A2019	RIGHT OF WAY ACQUISITION
	01829 DENVER WEST DR.	ARVADA CO 80002	SECTION 10	(0.003 acres)		(15.181 acres)		(15.178 acres)	576480		
	GOLDEN CO 80401		T. 3 S., R. 69 W., 6th P.M.								
RW-25A	JEFFERSON COUNTY SCHOOL DIST R1	05751 BALSAM ST	S.E. 1/4 S.E. 1/4	445 sq. ft.		661,285 sq. ft.		660,840 sq. ft.	REC. NO.	07890A2019	RIGHT OF WAY ACQUISITION
	01829 DENVER WEST DR.	ARVADA CO 80002	SECTION 10	(0.010 acres)		(15.181 acres)		(15.171 acres)	576480		
	GOLDEN CO 80401		T. 3 S., R. 69 W., 6th P.M.								
PE-25	JEFFERSON COUNTY SCHOOL DIST R1	05751 BALSAM ST	S.E. 1/4 S.E. 1/4	1,450 sq. ft.					REC. NO.	07890A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	01829 DENVER WEST DR.	ARVADA CO 80002	SECTION 10	(0.033 acres)					576480		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	GOLDEN CO 80401		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
PE-25A	JEFFERSON COUNTY SCHOOL DIST R1	05751 BALSAM ST	S.E. 1/4 S.E. 1/4	114 sq. ft.					REC. NO.	07890A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	01829 DENVER WEST DR.	ARVADA CO 80002	SECTION 10	(0.003 acres)					576480		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	GOLDEN CO 80401		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
PE-25B	JEFFERSON COUNTY SCHOOL DIST R1	05751 BALSAM ST	S.E. 1/4 S.E. 1/4	274 sq. ft.					REC. NO.	07890A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	01829 DENVER WEST DR.	ARVADA CO 80002	SECTION 10	(0.006 acres)					576480		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	GOLDEN CO 80401		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
PE-25C	JEFFERSON COUNTY SCHOOL DIST R1	05751 BALSAM ST	S.E. 1/4 S.E. 1/4	9,907 sq. ft.					REC. NO.	07890A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	01829 DENVER WEST DR.	ARVADA CO 80002	SECTION 10	(0.227 acres)					576480		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
			T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
PE-25D	JEFFERSON COUNTY SCHOOL DIST R1	05751 BALSAM ST	S.E. 1/4 S.E. 1/4	285 sq. ft.					REC. NO.	07890A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	01829 DENVER WEST DR.	ARVADA CO 80002	SECTION 10	(0.006 acres)					576480		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	GOLDEN CO 80401		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
TE-25	JEFFERSON COUNTY SCHOOL DIST R1	05751 BALSAM ST	S.E. 1/4 S.E. 1/4	1,834 sq. ft.					REC. NO.	07890A2019	TEMPORARY EASEMENT
	01829 DENVER WEST DR.	ARVADA CO 80002	SECTION 10	(0.042 acres)					576480		FOR THE PURPOSES OF TEMPORARY
			T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
TE-25A	JEFFERSON COUNTY SCHOOL DIST R1	05751 BALSAM ST	S.E. 1/4 S.E. 1/4	10,428 sq. ft.					REC. NO.	07890A2019	TEMPORARY EASEMENT
	01829 DENVER WEST DR.	ARVADA CO 80002	SECTION 10	(0.239 acres)					576480		FOR THE PURPOSES OF TEMPORARY
	GOLDEN CO 80401		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING



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Project Code	Last Mod. Date	Subset	Sheet No.	
18-40	11-08-2019	2.09 of 2.17	2.09	

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Parcel No.	Ownership Name and Mailing Address	Site Address	Location	Area In Square Feet (Acres)							
				Area Of Parcel	Existing ROW	Net Area	Remainder Left	Remainder Right			
			SECTION								
PE-26	FIRST FEDERAL BANK OF COLORADO	05805 CARR ST	N.E. 1/4 S.E. 1/4	2,966 sq. ft.					REC. NO.	07866A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	PO BOX 5155	ARVADA CO 80004	SECTION 10	(0.068 acres)					F0182307		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	SAN RAMON CA 94583		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREET SCAPE
TE-26	FIRST FEDERAL BANK OF COLORADO	05805 CARR ST	N.E. 1/4 S.E. 1/4	4,849 sq. ft.					REC. NO.	07866A2019	TEMPORARY EASEMENT
	PO BOX 5155	ARVADA CO 80004	SECTION 10	(0.111 acres)					F0182307		FOR THE PURPOSES OF
	SAN RAMON CA 94583		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION OF ROADWAY
RW-27	MCCLAFLIN REAL ESTATE LLC	08399 RALSTON RD	N.W. 1/4 S.W. 1/4	819 sq. ft.		10,500 sq. ft.	9,681 sq. ft.		REC. NO.	07853A2019	RIGHT OF WAY ACQUISITION
	08333 RALSTON RD SUITE 2	ARVADA CO 80002	SECTION 11	(0.019 acres)		(0.241 acres)	(0.222 acres)		2017018713		
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								
PE-27	MCCLAFLIN REAL ESTATE LLC	08399 RALSTON RD	N.W. 1/4 S.W. 1/4	854 sq. ft.					REC. NO.	07853A2019	PERMANENT EASEMENT
	08333 RALSTON RD SUITE 2	ARVADA CO 80002	SECTION 11	(0.020 acres)					2017018713		FOR SIDEWALK AND
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								ROADWAY
PE-27A	MCCLAFLIN REAL ESTATE LLC	08399 RALSTON RD	N.W. 1/4 S.W. 1/4	521 sq. ft.					REC. NO.	07853A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	08333 RALSTON RD SUITE 2	ARVADA CO 80002	SECTION 11	(0.012 acres)					2017018713		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREET SCAPE
TE-27	MCCLAFLIN REAL ESTATE LLC	08399 RALSTON RD	N.W. 1/4 S.W. 1/4	1,587 sq. ft.					REC. NO.	07853A2019	TEMPORARY EASEMENT
	08333 RALSTON RD SUITE 2	ARVADA CO 80002	SECTION 11	(0.036 acres)					2017018713		FOR THE PURPOSES OF
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION OF ROADWAY
RW-28	MCCLAFLIN REAL ESTATE LLC	08333 RALSTON RD	N.W. 1/4 S.W. 1/4	104 sq. ft.		17,205 sq. ft.	17,101 sq. ft.		REC. NO.	07855A2019	RIGHT OF WAY ACQUISITION
	08333 RALSTON RD SUITE 2	ARVADA CO 80002	SECTION 11	(0.002 acres)		(0.395 acres)	(0.393 acres)		2016013357		
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								
RW-28A	MCCLAFLIN REAL ESTATE LLC	08333 RALSTON RD	N.W. 1/4 S.W. 1/4	6 sq. ft.		17,195 sq. ft.	17,189 sq. ft.		REC. NO.	07855A2019	RIGHT OF WAY ACQUISITION
	08333 RALSTON RD SUITE 2	ARVADA CO 80002	SECTION 11	(0.00 acres)		(0.395 acres)	(0.395 acres)		2016013357		
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								
PE-28	MCCLAFLIN REAL ESTATE LLC	08333 RALSTON RD	N.W. 1/4 S.W. 1/4	1,361 sq. ft.					REC. NO.	07855A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	08333 RALSTON RD SUITE 2	ARVADA CO 80002	SECTION 11	(0.031 acres)					2016013357		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREET SCAPE
TE-28	MCCLAFLIN REAL ESTATE LLC	08333 RALSTON RD	N.W. 1/4 S.W. 1/4	1,241 sq. ft.					REC. NO.	07855A2019	TEMPORARY EASEMENT
	08333 RALSTON RD SUITE 2	ARVADA CO 80002	SECTION 11	(0.028 acres)					2016013357		FOR THE PURPOSES OF TEMPORARY
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING



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18-40	11-08-2019	2.10 of 2.17	2.10	

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Parcel No.	Ownership Name and Mailing Address	Site Address	Location	Area In Square Feet (Acres)							
				Area Of Parcel	Existing ROW	Net Area	Remainder Left	Remainder Right			
			SECTION								
RW-29	ERIC PENG	08295 RALSTON RD	N.W. 1/4 S.W. 1/4	300 sq. ft.		18,730 sq. ft.	18,430 sq. ft.		REC. NO.	07867A2019	RIGHT OF WAY ACQUISITION
	06392 S RIFLE ST	ARVADA CO 80002	SECTION 11	(0.007 acres)		(0.430 acres)	(0.423 acres)		F1477294		
	AURORA CO 80016		T. 3 S., R. 69 W., 6th P.M.								
PE-29	ERIC PENG	08295 RALSTON RD	N.W. 1/4 S.W. 1/4	1,903 sq. ft.					REC. NO.	07867A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	06392 S RIFLE ST	ARVADA CO 80002	SECTION 11	(0.044 acres)					F1477294		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	AURORA CO 80016		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
TE-29	ERIC PENG	08295 RALSTON RD	N.W. 1/4 S.W. 1/4	1,780 sq. ft.					REC. NO.	07867A2019	TEMPORARY EASEMENT
	06392 S RIFLE ST	ARVADA CO 80002	SECTION 11	(0.041 acres)					F1477294		FOR THE PURPOSES OF TEMPORARY
	AURORA CO 80016		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
RW-30	MELINDA LEE YEARY	05801 BALSAM PL	N.W. 1/4 S.W. 1/4	607 sq. ft.		6,436 sq. ft.	5,829 sq. ft.		REC. NO.	07850A2019	RIGHT OF WAY ACQUISITION
	11305 BENTHAVEN DR	ARVADA CO 80004	SECTION 11	(0.013 acres)		(0.147 acres)	(0.133 acres)		2016085657		
	LAKEWOOD CO 80215		T. 3 S., R. 69 W., 6th P.M.								
PE-30	MELINDA LEE YEARY	05801 BALSAM PL	N.W. 1/4 S.W. 1/4	822 sq. ft.					REC. NO.	07850A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	11305 BENTHAVEN DR	ARVADA CO 80004	SECTION 11	(0.019 acres)					2016085657		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	LAKEWOOD CO 80215		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
PE-30A	MELINDA LEE YEARY	05801 BALSAM PL	N.W. 1/4 S.W. 1/4	158 sq. ft.					REC. NO.	07850A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	11305 BENTHAVEN DR	ARVADA CO 80004	SECTION 11	(0.004 acres)					2016085657		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	LAKEWOOD CO 80215		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
TE-30	MELINDA LEE YEARY	05801 BALSAM PL	N.W. 1/4 S.W. 1/4	1,076 sq. ft.					REC. NO.	07850A2019	TEMPORARY EASEMENT
	11305 BENTHAVEN DR	ARVADA CO 80004	SECTION 11	(0.025 acres)					2016085657		FOR THE PURPOSES OF TEMPORARY
	LAKEWOOD CO 80215		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
RW-31	CITY OF ARVADA	08100 RALSTON RD	N.W. 1/4 S.W. 1/4	327 sq. ft.		24,105 sq. ft.	23,778 sq. ft.		REC. NO.	CITY PROPERTY	RIGHT OF WAY ACQUISITION
	08101 RALSTON RD	ARVADA CO 80002	SECTION 11	(0.007 acres)		(0.553 acres)	(0.546 acres)		F1268966	NA	
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								
RW-32	PERRY J VASQUEZ & ILSA J VASQUEZ	08108 RALSTON RD	S.W. 1/4 S.W. 1/4	137 sq. ft.		8,115 sq. ft.	7,978 sq. ft.		REC. NO.	07829A2019	RIGHT OF WAY ACQUISITION
	08108 RALSTON RD	ARVADA CO 80002	SECTION 11	(0.003 acres)		(0.186 acres)	(0.183 acres)		F0133112		
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								
PE-32	PERRY J VASQUEZ & ILSA J VASQUEZ	08108 RALSTON RD	S.W. 1/4 S.W. 1/4	2,171 sq. ft.					REC. NO.	07829A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	08108 RALSTON RD	ARVADA CO 80002	SECTION 11	(0.050 acres)					F0133112		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE



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				Area Of Parcel	Existing ROW	Net Area	Remainder Left	Remainder Right			
			SECTION								
TE-32	PERRY J VASQUEZ & ILSA J VASQUEZ	08108 RALSTON RD	S.W. 1/4 S.W. 1/4	1,194 sq. ft.					REC. NO.	07829A2019	TEMPORARY EASEMENT
	08108 RALSTON RD	ARVADA CO 80002	SECTION 11	(0.027 acres)					F0133112		FOR THE PURPOSES OF TEMPORARY
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
TE-32A	PERRY J VASQUEZ & ILSA J VASQUEZ	08108 RALSTON RD	S.W. 1/4 S.W. 1/4	148 sq. ft.					REC. NO.	07829A2019	TEMPORARY EASEMENT
	08108 RALSTON RD	ARVADA CO 80002	SECTION 11	(0.003 acres)					F0133112		FOR THE PURPOSES OF TEMPORARY
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
RW-34	8100 RALSTON PARTNERSHIP	08100 RALSTON RD	S.W. 1/4 S.W. 1/4	337 sq. ft.		28,160 sq. ft.	27,823 sq. ft.		REC. NO.	07828A2019	RIGHT OF WAY ACQUISITION
	06038 UNION ST	ARVADA CO 80002	SECTION 11	(0.008 acres)		(0.647 acres)	(0.639 acres)		842132		
	ARVADA CO 80004		T. 3 S., R. 69 W., 6th P.M.								
PE-34	8100 RALSTON PARTNERSHIP	08100 RALSTON RD	S.W. 1/4 S.W. 1/4	2,156 sq. ft.					REC. NO.	07828A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	06038 UNION ST	ARVADA CO 80002	SECTION 11	(0.049 acres)					842132		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	ARVADA CO 80004		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
TE-34	8100 RALSTON PARTNERSHIP	08100 RALSTON RD	S.W. 1/4 S.W. 1/4	1,661 sq. ft.					REC. NO.	07828A2019	TEMPORARY EASEMENT
	06038 UNION ST	ARVADA CO 80002	SECTION 11	(0.038 acres)					842132		FOR THE PURPOSES OF TEMPORARY
	ARVADA CO 80004		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
RW-35	CITY OF ARVADA	08100 RALSTON RD	N.W. 1/4 S.W. 1/4	358 sq. ft.		39,825 sq. ft.	39,467 sq. ft.		REC. NO.	CITY PROPERTY	RIGHT OF WAY ACQUISITION
	08101 RALSTON RD	ARVADA CO 80002	SECTION 11	(0.008 acres)		(0.914 acres)	(0.906 acres)		2005055934	NA	
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								
PE-35	CITY OF ARVADA	08101 RALSTON RD	N.W. 1/4 S.W. 1/4	835 sq. ft.					REC. NO.	CITY PROPERTY	PERMANENT EASEMENT FOR THE PURPOSES OF
	08101 RALSTON RD	ARVADA CO 80002	SECTION 11	(0.019 acres)					2005055934	NA	CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
RW-36	JPWGT INC.	08080 RALSTON RD	S.W. 1/4 S.W. 1/4	297 sq. ft.		9,069 sq. ft.	8,772 sq. ft.		REC. NO.	07827A2019	RIGHT OF WAY ACQUISITION
	08080 RALSTON RD	ARVADA CO 80002	SECTION 11	(0.007 acres)		(0.207 acres)	(0.200 acres)		90054923		
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								
PE-36	JPWGT INC.	08080 RALSTON RD	S.W. 1/4 S.W. 1/4	1,457 sq. ft.					REC. NO.	07827A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	08080 RALSTON RD	ARVADA CO 80002	SECTION 11	(0.033 acres)					90054923		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE



CITY OF ARVADA COLORADO
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Right of Way Plans				
Tabulation of Properties				
City of Arvada Project Number: 18-ST-40				
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.				
CITY OF ARVADA, COLORADO				
Project Code	Last Mod. Date	Subset	Sheet No.	
18-40	11-08-2019	2,12 of 2,17	2,12	

R.O.W.TABULATION OF PROPERTIES IN THE CITY OF ARVADA - RALSTON ROAD

Parcel No.	Ownership Name and Mailing Address	Site Address	Location	Area In Square Feet (Acres)					Book and Page No. And/Or Reception No.	Title Commitment No.	Remarks
				Area Of Parcel	Existing ROW	Net Area	Remainder Left	Remainder Right			
			SECTION								
TE-36	JPWGT INC.	08080 RALSTON RD	S.W. 1/4 S.W. 1/4	1,553 sq. ft.					REC. NO.	07827A2019	TEMPORARY EASEMENT
	08080 RALSTON RD	ARVADA CO 80002	SECTION 11	(0.036 acres)					90054923		FOR THE PURPOSES OF TEMPORARY
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
RW-37	OLDE TOWN INVESTMENTS LLC	05727 ALLISON ST	S.W. 1/4 S.W. 1/4	664 sq. ft.		12,500 sq. ft.		18,836sq. ft.	REC. NO.	07826A2019	RIGHT OF WAY ACQUISITION
	05727 ALLISON ST	ARVADA CO 80002	SECTION 11	(0.015 acres)		(0.287 acres)		(0.272 acres)	2014033151		
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								
PE-37	OLDE TOWN INVESTMENTS LLC	05727 ALLISON ST	S.W. 1/4 S.W. 1/4	1,260 sq. ft.					REC. NO.	07826A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	05727 ALLISON ST	ARVADA CO 80002	SECTION 11	(0.029 acres)					2014033151		CONSTRUCTION AND MAINTENANCE OF SIDEWALK,
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
TE-37	OLDE TOWN INVESTMENTS LLC	05727 ALLISON ST	S.W. 1/4 S.W. 1/4	578 sq. ft.					REC. NO.	07826A2019	TEMPORARY EASEMENT
	05727 ALLISON ST	ARVADA CO 80002	SECTION 11	(0.013 acres)					2014033151		FOR THE PURPOSES OF TEMPORARY
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
RW-38	C & A GROUP LLC	07905 RALSTON RD	N.E. 1/4 S.W. 1/4	408 sq. ft.		19,385 sq. ft.	18,977 sq. ft.		REC. NO.	07865A2019	RIGHT OF WAY ACQUISITION
	07905 RALSTON RD Suite 103	ARVADA CO 80002	SECTION 11	(0.009 acres)		(0.445 acres)	(0.436 acres)		2014002260		
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								
PE-38	C & A GROUP LLC	07905 RALSTON RD	N.E. 1/4 S.W. 1/4	129 sq. ft.					REC. NO.	07865A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	07905 RALSTON RD Suite 103	ARVADA CO 80002	SECTION 11	(0.003 acres)					2014002260		CONSTRUCTION AND MAINTENANCE OF SIDEWALK,
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREET SCAPE
PE-38A	C & A GROUP LLC	07905 RALSTON RD	N.E. 1/4 S.W. 1/4	2,265 sq. ft.					REC. NO.	07865A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	07905 RALSTON RD Suite 103	ARVADA CO 80002	SECTION 11	(0.052 acres)					2014002260		CONSTRUCTION AND MAINTENANCE OF SIDEWALK,
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREET SCAPE
TE-38	C & A GROUP LLC	07905 RALSTON RD	N.E. 1/4 S.W. 1/4	1,948 sq. ft.					REC. NO.	07865A2019	TEMPORARY EASEMENT
	07905 RALSTON RD Suite 103	ARVADA CO 80002	SECTION 11	(0.045 acres)					2014002260		FOR THE PURPOSES OF TEMPORARY
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
PE-39	7910 RALSTON LLC	07910 RALSTON RD	S.E. 1/4 S.W. 1/4	1,534 sq. ft.					REC. NO.	07825A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	07910 RALSTON RD #7	ARVADA CO 80002	SECTION 11	(0.035 acres)					2017024593		CONSTRUCTION AND MAINTENANCE OF SIDEWALK,
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
TE-39	7910 RALSTON LLC	07910 RALSTON RD	S.E. 1/4 S.W. 1/4	755 sq. ft.					REC. NO.	07825A2019	TEMPORARY EASEMENT
	07910 RALSTON RD #7	ARVADA CO 80002	SECTION 11	(0.017 acres)					2017024593		FOR THE PURPOSES OF TEMPORARY
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING



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Right of Way Plans				
Tabulation of Properties				
City of Arvada Project Number: 18-ST-40				
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.				
CITY OF ARVADA, COLORADO				
Project Code	Last Mod. Date	Subset	Sheet No.	
18-40	11-08-2019	2.13 of 2.17	2.13	

R.O.W.TABULATION OF PROPERTIES IN THE CITY OF ARVADA - RALSTON ROAD

Parcel No.	Ownership Name and Mailing Address	Site Address	Location	Area In Square Feet (Acres)					Book and Page No. And/Or Reception No.	Title Commitment No.	Remarks
				Area Of Parcel	Existing ROW	Net Area	Remainder Left	Remainder Right			
			SECTION								
RW-40	7900 RALSTON ROAD LLC	05723 ZEPHYR ST	S.E. 1/4 S.W. 1/4	313 sq. ft.		6,250 sq. ft.		5,937 sq. ft.	REC. NO.	07824A2019	RIGHT OF WAY ACQUISITION
	PO BOX 1500	ARVADA CO 80002	SECTION 11	(0.007 acres)		(0.143 acres)		(0.136 acres)	F2023597		
	ARVADA CO 80001		T. 3 S., R. 69 W., 6th P.M.								
PE-40	7900 RALSTON ROAD LLC	05723 ZEPHYR ST	S.E. 1/4 S.W. 1/4	1,299 sq. ft.					REC. NO.	07824A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	PO BOX 1500	ARVADA CO 80002	SECTION 11	(0.030 acres)					F2023597		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	ARVADA CO 80001		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
TE-40	7900 RALSTON ROAD LLC	05723 ZEPHYR ST	S.E. 1/4 S.W. 1/4	1,409 sq. ft.					REC. NO.	07824A2019	TEMPORARY EASEMENT
	PO BOX 1500	ARVADA CO 80002	SECTION 11	(0.032 acres)					F2023597		FOR THE PURPOSES OF TEMPORARY
	ARVADA CO 80001		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
PE-41	OWEN L. OLIVER	07903 RALSTON RD	N.E. 1/4 S.W. 1/4	939 sq. ft.					REC. NO.	07864A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	02777 BERRY TURN	ARVADA CO 80002	SECTION 11	(0.022 acres)					2016039513		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	GOLDEN CO 80401		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
TE-41	OWEN L. OLIVER	07903 RALSTON RD	N.E. 1/4 S.W. 1/4	912 sq. ft.					REC. NO.	07864A2019	TEMPORARY EASEMENT
	02777 BERRY TURN	ARVADA CO 80002	SECTION 11	(0.021 acres)					2016039513		FOR THE PURPOSES OF TEMPORARY
	GOLDEN CO 80401		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
PE-42	DIANE HOWARD & CHRIS HOWARD	07901 RALSTON RD	N.E. 1/4 S.W. 1/4	781 sq. ft.					REC. NO.	07863A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	07088 ESTES DR	ARVADA CO 80002	SECTION 11	(0.018 acres)					2018084969		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	ARVADA CO 80004		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
TE-42	DIANE HOWARD & CHRIS HOWARD	07901 RALSTON RD	N.E. 1/4 S.W. 1/4	1,090 sq. ft.					REC. NO.	07863A2019	TEMPORARY EASEMENT
	07088 ESTES DR	ARVADA CO 80002	SECTION 11	(0.025 acres)					2018084969		FOR THE PURPOSES OF TEMPORARY
	ARVADA CO 80004		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
PE-43	JUSTIN W. GREEN	07855 RALSTON RD	N.E. 1/4 S.W. 1/4	909 sq. ft.					REC. NO.	07862A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	07855 RALSTON RD	ARVADA CO 80004	SECTION 11	(0.021 acres)					2007131598		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	ARVADA CO 80004		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
TE-43	JUSTIN W. GREEN	07855 RALSTON RD	N.E. 1/4 S.W. 1/4	983 sq. ft.					REC. NO.	07862A2019	TEMPORARY EASEMENT
	07855 RALSTON RD	ARVADA CO 80004	SECTION 11	(0.023 acres)					2007131598		FOR THE PURPOSES OF TEMPORARY
	ARVADA CO 80004		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING



CITY OF ARVADA COLORADO
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Right of Way Plans				
Tabulation of Properties				
City of Arvada Project Number: 18-ST-40				
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.				
CITY OF ARVADA, COLORADO				
Project Code	Last Mod. Date	Subset	Sheet No.	
18-40	05-15-2020	2.14 of 2.17	2.14	

R.O.W.TABULATION OF PROPERTIES IN THE CITY OF ARVADA - RALSTON ROAD									Book and Page No. And/Or Reception No.	Title Commitment No.	Remarks
Parcel No.	Ownership Name and Mailing Address	Site Address	Location	Area In Square Feet (Acres)							
				Area Of Parcel	Existing ROW	Net Area	Remainder Left	Remainder Right			
			SECTION								
RW-44	MARKELLIOTT	07884 RALSTON RD	S.E. 1/4 S.W. 1/4	143 sq. ft.		8,600 sq. ft.		8,457 sq. ft.	REC. NO.	07823A2019	RIGHT OF WAY ACQUISITION
	07884 RALSTON RD	ARVADA CO 80002	SECTION 11	(0.003 acres)		(0.198 acres)		(0.194 acres)	F2023597		
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								
PE-44	MARKELLIOTT	07884 RALSTON RD	S.E. 1/4 S.W. 1/4	1,419 sq. ft.					REC. NO.	07823A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	07884 RALSTON RD	ARVADA CO 80002	SECTION 11	(0.033 acres)					F2023597		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
TE-44	MARKELLIOTT	07884 RALSTON RD	S.E. 1/4 S.W. 1/4	901 sq. ft.					REC. NO.	07823A2019	TEMPORARY EASEMENT
	07884 RALSTON RD	ARVADA CO 80002	SECTION 11	(0.021 acres)					F2023597		FOR THE PURPOSES OF TEMPORARY
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
RW-45	RALSTON 7805 LLC	07805 RALSTON RD	N.E. 1/4 S.W. 1/4	85 sq. ft.		8,451 sq. ft.	8,366 sq. ft.		REC. NO.	07861A2019	RIGHT OF WAY ACQUISITION
	07805 RALSTON RD	ARVADA CO 80002	SECTION 11	(0.002 acres)		(0.194 acres)	(0.192 acres)		2014083528		
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								
PE-45	RALSTON 7805 LLC	07805 RALSTON RD	N.E. 1/4 S.W. 1/4	999 sq. ft.					REC. NO.	07861A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	07805 RALSTON RD	ARVADA CO 80002	SECTION 11	(0.023 acres)					2014083528		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
TE-45	RALSTON 7805 LLC	07805 RALSTON RD	N.E. 1/4 S.W. 1/4	896 sq. ft.					REC. NO.	07861A2019	TEMPORARY EASEMENT
	07805 RALSTON RD	ARVADA CO 80002	SECTION 11	(0.021 acres)					2014083528		FOR THE PURPOSES OF TEMPORARY
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
RW-46	YAK & YETI LLC	07803 RALSTON RD	N.E. 1/4 S.W. 1/4	268 sq. ft.		24,652 sq. ft.	24,384 sq. ft.		REC. NO.	07860A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	07803 RALSTON RD	ARVADA CO 80002	SECTION 11	(0.006 acres)		(0.566 acres)	(0.560 acres)		2008060014		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
PE-46	YAK & YETI LLC	07803 RALSTON RD	N.E. 1/4 S.W. 1/4	1,316 sq. ft.					REC. NO.	07860A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	07803 RALSTON RD	ARVADA CO 80002	SECTION 11	(0.030 acres)					2008060014		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
TE-46	YAK & YETI LLC	07803 RALSTON RD	N.E. 1/4 S.W. 1/4	1,812 sq. ft.					REC. NO.	07860A2019	TEMPORARY EASEMENT
	07803 RALSTON RD	ARVADA CO 80002	SECTION 11	(0.042 acres)					2008060014		FOR THE PURPOSES OF TEMPORARY
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING



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18-40	11-08-2019	2.15 of 2.17	2.15

R.O.W.TABULATION OF PROPERTIES IN THE CITY OF ARVADA - RALSTON ROAD

Parcel No.	Ownership Name and Mailing Address	Site Address	Location	Area In Square Feet (Acres)					Book and Page No. And/Or Reception No.	Title Commitment No.	Remarks
				Area Of Parcel	Existing ROW	Net Area	Remainder Left	Remainder Right			
			SECTION								
RW-47	OCHO CINCO LLC	07804 RALSTON RD	S.E. 1/4 S.W. 1/4	59 sq. ft.		3,913 sq. ft.		3,854 sq. ft.	REC. NO.	07822A2019	RIGHT OF WAY ACQUISITION
	08062 AMMONS WAY	ARVADA CO 80002	SECTION 11	(0.001 acres)		(0.090 acres)		(0.089 acres)	2016097765		
	ARVADA CO 80005		T. 3 S., R. 69 W., 6th P.M.								
PE-47	OCHO CINCO LLC	07804 RALSTON RD	S.E. 1/4 S.W. 1/4	553 sq. ft.					REC. NO.	07822A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	08062 AMMONS WAY	ARVADA CO 80002	SECTION 11	(0.013 acres)					2016097765		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	ARVADA CO 80005		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
TE-47	OCHO CINCO LLC	07804 RALSTON RD	S.E. 1/4 S.W. 1/4	312 sq. ft.					REC. NO.	07822A2019	TEMPORARY EASEMENT
	08062 AMMONS WAY	ARVADA CO 80002	SECTION 11	(0.007 acres)					2016097765		FOR THE PURPOSES OF TEMPORARY
	ARVADA CO 80005		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
RW-48	STARRY HOLDINGS LLC	07800 RALSTON RD	S.E. 1/4 S.W. 1/4	125 sq. ft.		9,375 sq. ft.		9,250 sq. ft.	REC. NO.	07821A2019	RIGHT OF WAY ACQUISITION
	07800 RALSTON RD	ARVADA CO 80002	SECTION 11	(0.003 acres)		(0.215 acres)		(0.212 acres)	2017118438		
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								
PE-48	STARRY HOLDINGS LLC	07800 RALSTON RD	S.E. 1/4 S.W. 1/4	1,875 sq. ft.					REC. NO.	07821A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	07800 RALSTON RD	ARVADA CO 80002	SECTION 11	(0.043 acres)					2017118438		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
TE-48	STARRY HOLDINGS LLC	07800 RALSTON RD	S.E. 1/4 S.W. 1/4	1,821 sq. ft.					REC. NO.	07821A2019	TEMPORARY EASEMENT
	07800 RALSTON RD	ARVADA CO 80002	SECTION 11	(0.042 acres)					2017118438		FOR THE PURPOSES OF TEMPORARY
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING
RW-49	7711 RALSTON ROAD TRUST	07711 RALSTON RD	N.E. 1/4 S.W. 1/4	161 sq. ft.		12,080 sq. ft.	11,919 sq. ft.		REC. NO.	07859A2019	RIGHT OF WAY ACQUISITION
	00090 W 84TH AVE	ARVADA CO 80002	SECTION 11	(0.004 acres)		(0.277 acres)	(0.273 acres)		2018059239		
	THORNTON CO 80260		T. 3 S., R. 69 W., 6th P.M.								
PE-49	7711 RALSTON ROAD TRUST	07711 RALSTON RD	N.E. 1/4 S.W. 1/4	1,076 sq. ft.					REC. NO.	07859A2019	PERMANENT EASEMENT FOR THE PURPOSES OF
	00090 W 84TH AVE	ARVADA CO 80002	SECTION 11	(0.025 acres)					2018059239		CONSTRUCTION AND MAINTENANCE OF SIDEWALK ,
	THORNTON CO 80260		T. 3 S., R. 69 W., 6th P.M.								UTILITIES AND STREETSCAPE
TE-49	7711 RALSTON ROAD TRUST	07711 RALSTON RD	N.E. 1/4 S.W. 1/4	825 sq. ft.					REC. NO.	07859A2019	TEMPORARY EASEMENT
	00090 W 84TH AVE	ARVADA CO 80002	SECTION 11	(0.019 acres)					2018059239		FOR THE PURPOSES OF TEMPORARY
	THORNTON CO 80260		T. 3 S., R. 69 W., 6th P.M.								CONSTRUCTION ACCESS AND GRADING



CITY OF ARVADA COLORADO
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Date	Description	Initials

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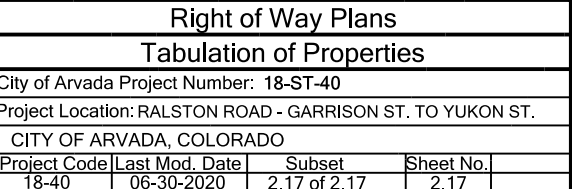
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Right of Way Plans			
Tabulation of Properties			
City of Arvada Project Number: 18-ST-40			
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.			
CITY OF ARVADA, COLORADO			
Project Code	Last Mod. Date	Subset	Sheet No.
18-40	11-08-2019	2.16 of 2.17	2.16

R.O.W.TABULATION OF PROPERTIES IN THE CITY OF ARVADA - RALSTON ROAD									Book and Page No. And/Or Reception No.	Title Commitment No.	Remarks
Parcel No.	Ownership Name and Mailing Address	Site Address	Location	Area In Square Feet (Acres)							
				Area Of Parcel	Existing ROW	Net Area	Remainder Left	Remainder Right			
			SECTION								
PE-50	DON W CARVER	07710 RALSTON RD	S.E. 1/4 S.W. 1/4	1,329 sq. ft.					REC. NO.	07820A2019	PERMANENT EASEMENT FOR THE PURPOSES OF CONSTRUCTION AND MAINTENANCE OF SIDEWALK , UTILITIES AND STREETSCAPE
	PO BOX 2261	ARVADA CO 80002	SECTION 11	(0.031 acres)					2016033174		
	ARVADA CO 80001		T. 3 S., R. 69 W., 6th P.M.								
TE-50	DON W CARVER	07710 RALSTON RD	S.E. 1/4 S.W. 1/4	1,551 sq. ft.					REC. NO.	07820A2019	TEMPORARY EASEMENT FOR THE PURPOSES OF TEMPORARY CONSTRUCTION ACCESS AND GRADING
	PO BOX 2261	ARVADA CO 80002	SECTION 11	(0.036 acres)					2016033174		
	ARVADA CO 80001		T. 3 S., R. 69 W., 6th P.M.								
RW-51	JTT HOLDING LLC	07709 RALSTON RD	N.E. 1/4 S.W. 1/4	130 sq. ft.		8,775 sq. ft.	8,645 sq. ft.		REC. NO.	07858A2019	RIGHT OF WAY ACQUISITION
	07709 RALSTON RD	ARVADA CO 80002	SECTION 11	(0.003 acres)		(0.201 acres)	(0.198 acres)		2015016307		
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								
PE-51	JTT HOLDING LLC	07709 RALSTON RD	N.E. 1/4 S.W. 1/4	699 sq. ft.					REC. NO.	07858A2019	PERMANENT EASEMENT FOR THE PURPOSES OF CONSTRUCTION AND MAINTENANCE OF SIDEWALK , UTILITIES AND STREETSCAPE
	07709 RALSTON RD	ARVADA CO 80002	SECTION 11	(0.016 acres)					2015016307		
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								
TE-51	JTT HOLDING LLC	07709 RALSTON RD	N.E. 1/4 S.W. 1/4	834 sq. ft.					REC. NO.	07858A2019	TEMPORARY EASEMENT FOR THE PURPOSES OF TEMPORARY CONSTRUCTION ACCESS AND GRADING
	07709 RALSTON RD	ARVADA CO 80002	SECTION 11	(0.019 acres)					2015016307		
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								
RW-52	7707 RALSTON ROAD LLC	07707 RALSTON RD	N.E. 1/4 S.W. 1/4	163 sq. ft.		8,125 sq. ft.	7,963 sq. ft.		REC. NO.	07857A2019	RIGHT OF WAY ACQUISITION
	07707 RALSTON RD	ARVADA CO 80002	SECTION 11	(0.004 acres)		(0.187 acres)	(0.183 acres)		F1718237		
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								
PE-52	7707 RALSTON ROAD LLC	07707 RALSTON RD	N.E. 1/4 S.W. 1/4	694 sq. ft.					REC. NO.	07857A2019	PERMANENT EASEMENT FOR THE PURPOSES OF CONSTRUCTION AND MAINTENANCE OF SIDEWALK , UTILITIES AND STREETSCAPE
	07707 RALSTON RD	ARVADA CO 80002	SECTION 11	(0.016 acres)					F1718237		
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								
TE-52	7707 RALSTON ROAD LLC	07707 RALSTON RD	N.E. 1/4 S.W. 1/4	806 sq. ft.					REC. NO.	07857A2019	TEMPORARY EASEMENT FOR THE PURPOSES OF TEMPORARY CONSTRUCTION ACCESS AND GRADING
	07707 RALSTON RD	ARVADA CO 80002	SECTION 11	(0.019 acres)					F1718237		
	ARVADA CO 80002		T. 3 S., R. 69 W., 6th P.M.								
TE-53	CARLTON BUILDING LLC	07705 RALSTON RD	N.E. 1/4 S.W. 1/4	634 sq. ft.					REC. NO.	07856A2019	TEMPORARY EASEMENT FOR THE PURPOSES OF TEMPORARY CONSTRUCTION ACCESS AND GRADING
	PO BOX 969	ARVADA CO 80002	SECTION 11	(0.015 acres)					2017087012		
	ARVADA CO 80001		T. 3 S., R. 69 W., 6th P.M.								

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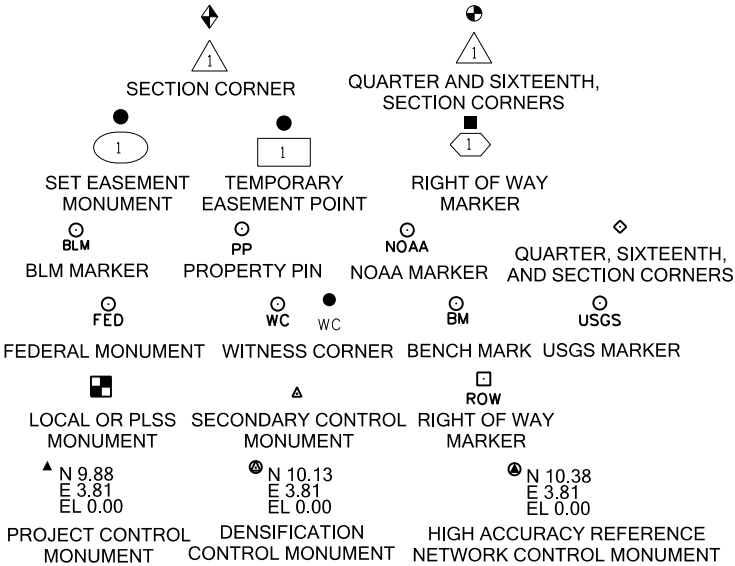
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Land Survey Control Diagram				
Title Sheet				
City of Arvada Project Number: 18-ST-40				
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.				
CITY OF ARVADA, COLORADO				
Project Code	Last Mod. Date	Subset	Sheet No.	
18-40	11-08-2019	4.01 of 4.08	4.01	

CITY OF ARVADA
JEFFERSON COUNTY
STATE OF COLORADO
CITY OF ARVADA PROJECT NO. 18-ST-40

LAND SURVEY CONTROL DIAGRAM
Ralston Road, Garrison Street to Yukon Street,
Being a part of the Southeast Quarter of Section 10
and the Southwest Quarter of Section 11,
Township 3 South, Range 69 West,
all being in the 6th Principal Meridian
City of Arvada, Jefferson County

SHEET NO.	INDEX OF SHEETS
4.01	(1) Title Sheet
4.02-4.04	(3) Monument Coordinate Tables
4.05-4.08	(5) Plan Sheets
	(8) Total Sheets



Note: For a complete listing of symbology used within this set of plans, please refer to the M-100-1 Standard Symbols of the Colorado Department of Transportation M&S Standards Publication dated July 2012.

General Notes:

1.

This Land Survey Control Diagram is not a boundary survey of the adjoining property and is prepared for the City of Arvada purposes only. No determination has been made to determine if the found monuments as shown are in their proper position or if they are at the corners they are intended to monument.
2.

Title policy, title commitment, and title research are not part of this survey, therefore easements, rights, and restrictions of record were not researched and are not shown on this diagram. The verification of the physical evidence with relation to easements, rights of ways, property boundaries, and restrictions, as described in the instruments of record, were not included in this control survey.
3.

This plan set is subject to change and may not be the most current set. It is the user's responsibility to verify with Aztec Consultants that this set is the most current. The information contained on the attached drawing is not valid unless this copy bears an original signature of the Professional Land Surveyor hereon named.
4.

Refer to the M-629-1 Survey Monuments of the Standard Plans dated July, 2012 found in The Colorado Department of Transportation, M & S Standards for typical survey monument descriptions.



PROJECT LOCATION MAP



Basis of Bearings: Bearings used in the calculations of coordinates are based on a grid bearing of N89°05'10"E and a distance of 1318.85 feet from the "Original 1973" Center-South Sixteenth Corner of Section 10, Township 3 South, Range 69 West of the 6th P.M., monumented by a 2" aluminum cap on flush in concrete pan, stamped in part "Original 1973 PLS 38359, 2017" to the South-East Sixteenth Corner of Section 10, Township 3 South, Range 69 West of the 6th P.M., monumented by a 2" aluminum cap down 0.5' in range box, Stamped "LS 5447 1995". The survey data was obtained from a Global Positioning System (GPS) survey based on the Colorado High Accuracy Reference Network (CHARN) NAD '83(2011).

Basis of Elevations: Project control elevations were established by differential leveling by Aztec Consultants based on The City of Arvada Control Point 120, being a 2.5" Aluminum Cap on the North Side of Ralston Road East of Garrison Street. Control Point 120 has a Published City of Arvada Datum Elevation of 5344.94 above sea level.

COORDINATE DATUM: Project coordinates are modified Colorado State Plane Central Zone (502) NAD '83/(2011) coordinates. The combined elevation/scale factor used to modify the coordinates from state plane to project coordinates is 1.0002423410. The resulting project coordinates are truncated by 1,000,000 sft in the Northing and 3,000,000 sft in the Easting after converting from state plane coordinates to project coordinates. The CHARN is based on the NAD '83(2011) datum.
Project Coordinates Northing US Survey Feet =
(State Plane Coordinate Northing * 1.0002423410 - 1,000,000 sft)
Project Coordinates Easting US Survey Feet =
(State Plane Coordinate Easting * 1.0002423410 - 3,000,000 sft)

NOTICE: According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years from the date of the certification shown hereon.

SURVEYOR STATEMENT (LAND SURVEY CONTROL DIAGRAM)

I, Carl J. Gilbert, a professional land surveyor licensed in the State of Colorado, do hereby state to the City of Arvada Colorado this Land Survey Control Diagram was prepared and the field survey it represents was performed under my responsible charge and, based upon my knowledge, information and belief is in accordance with applicable standards of practice defined by Colorado Department of Transportation publications. This statement is not a guaranty or warranty, either expressed or implied.

PLS No. 38287





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Land Survey Control Diagram				
Monument Coordinate Tables				
City of Arvada Project Number: 18-ST-40				
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.				
CITY OF ARVADA, COLORADO				
Project Code	Last Mod. Date	Subset	Sheet No.	
18-40	11-08-2019	4.02 of 4.08	4.02	



GEODETIC COORDINATE SUMMARY TABLE

Point No.	Geodetic Coordinates NAD-83(2011) (CHARN)		Elipsoid Height (sft)	Colorado State Plane Central (ZONE 502)		City of Arvada Elevation (sft)	Description
	Latitude(N)	Longitude(W)		Northing (sft)	Easting (sft)		
1	N39°48'03.82373"	W105°06'00.41330"	5312.02	1716915.36	3112358.30	5366.55	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
2	N39°48'07.03431"	W105°05'52.64582"	5291.89	1717242.90	3112963.10	5346.46	BRASS CAP, FLUSH IN TOP BACK OF CURB, STAMPED "CITY OF ARVADA BM 781"
3	N39°48'06.97969"	W105°05'40.67812"	5301.84	1717241.53	3113897.17	5356.47	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
4	N39°48'06.66602"	W105°05'28.02404"	5296.91	1717214.21	3114884.93	5351.61	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
5	N39°48'07.78052"	W105°05'16.23334"	5293.63	1717331.14	3115804.66	5348.40	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
6	N39°48'06.86895"	W105°05'10.65032"	5287.56	1717240.89	3116240.82	5342.36	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
7	N39°48'06.80212"	W105°05'02.15918"	5284.94	1717237.15	3116903.56	5339.78	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
8	N39°48'07.54663"	W105°04'55.87338"	5282.40	1717314.74	3117393.81	5337.28	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
9	N39°48'06.72130"	W105°04'52.87926"	5280.73	1717232.30	3117627.87	5335.62	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
107	N39°48'07.70927"	W105°05'13.89032"	5290.07	1717324.76	3115987.56	5344.85	BENCH MARK- CHISELED SQUARE, NORTHEAST CORNER OF AMMONS ST. AND RALSTON RD.
120	N39°48'07.68235"	W105°05'59.51104"	5290.41	1717306.11	3112427.00	5344.93	18" #5 REBAR W-2 1/2" ALUMINUM CAP STAMPED: "CITY OF ARVADA, 120, CP-SPLISH, DO NOT DISTURB"
130	N39°48'07.69216"	W105°05'49.02704"	5293.98	1717310.72	3113245.24	5348.57	18" #5 REBAR W-2 1/2" ALUMINUM CAP STAMPED: "CITY OF ARVADA, 130, CP-SPLASH, DO NOT DISTURB"
140	N39°48'07.64118"	W105°05'33.24844"	5298.31	1717311.05	3114476.74	5352.99	18" #5 REBAR W-2 1/2" ALUMINUM CAP STAMPED: "CITY OF ARVADA, 140, CP-CHURCH, DO NOT DISTURB"
150	N39°48'06.60213"	W105°05'24.74036"	5295.64	1717208.90	3115141.25	5350.36	18" #5 REBAR W-2 1/2" ALUMINUM CAP STAMPED: "CITY OF ARVADA, 150, CP-WOOLF, DO NOT DISTURB"
160	N39°48'07.52428"	W105°05'08.45891"	5287.55	1717307.98	3116411.55	5342.36	18" #5 REBAR W-2 1/2" ALUMINUM CAP STAMPED: "CITY OF ARVADA, 160, CP-SUN, DO NOT DISTURB"
170	N39°48'06.85537"	W105°04'57.97188"	5281.84	1717244.04	3117230.34	5336.70	18" #5 REBAR W-2 1/2" ALUMINUM CAP STAMPED: "CITY OF ARVADA, 170, CP-BELLA, DO NOT DISTURB"
180	N39°48'07.45591"	W105°04'50.70116"	5281.49	1717307.42	3117797.53	5336.39	18" #5 REBAR W-2 1/2" ALUMINUM CAP STAMPED: "CITY OF ARVADA, 180, CP-ARBY, DO NOT DISTURB"
F 412	N39°45'42.33486"	W105°06'33.72428"	5508.64	1702587.28	3109819.99	5560.56	NGS PID KK1457 1/2" STAINLESS STEEL ROD IN RANGE BOX

PROJECT COORDINATE TABLE

Point No.	Project Coordinates		City of Arvda Elevation (ft)	Description
	Northing(ft)	Easting(ft)		
1	717331.44	113112.55	5366.55	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
2	717659.06	113717.50	5346.46	2" BRASS CAP, FLUSH IN TOP BACK OF CURB, STAMPED "CITY OF ARVADA BM 781"
3	717657.68	114651.80	5356.47	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
4	717630.36	115639.80	5351.61	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
5	717747.32	116559.75	5348.40	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
6	717657.04	116996.01	5342.36	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
7	717653.31	117658.91	5339.78	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
8	717730.91	118149.28	5337.28	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
9	717648.45	118383.40	5335.62	1-5/16" YELLOW PLASTIC CAP ON 5/8" REBAR, FLUSH WITH SURFACE, STAMPED "CONTROL POINT"
107	717740.94	116742.69	5344.85	BENCH MARK- CHISELED SQUARE, NORTHEAST CORNER OF AMMONS ST. AND RALSTON RD.
120	717722.28	113181.27	5344.93	18" #5 REBAR W-2 1/2" ALUMINUM CAP STAMPED: "CITY OF ARVADA, 120, CP-SPLISH, DO NOT DISTURB"
130	717726.89	113999.71	5348.57	18" #5 REBAR W-2 1/2" ALUMINUM CAP STAMPED: "CITY OF ARVADA, 130, CP-SPLASH, DO NOT DISTURB"
140	717727.23	115231.51	5352.99	18" #5 REBAR W-2 1/2" ALUMINUM CAP STAMPED: "CITY OF ARVADA, 140, CP-CHURCH, DO NOT DISTURB"
150	717625.05	115896.17	5350.36	18" #5 REBAR W-2 1/2" ALUMINUM CAP STAMPED: "CITY OF ARVADA, 150, CP-WOOLF, DO NOT DISTURB"
160	717724.15	117166.78	5342.36	18" #5 REBAR W-2 1/2" ALUMINUM CAP STAMPED: "CITY OF ARVADA, 160, CP-SUN, DO NOT DISTURB"
170	717660.19	117985.78	5336.70	18" #5 REBAR W-2 1/2" ALUMINUM CAP STAMPED: "CITY OF ARVADA, 170, CP-BELLA, DO NOT DISTURB"
180	717723.59	118553.10	5336.39	18" #5 REBAR W-2 1/2" ALUMINUM CAP STAMPED: "CITY OF ARVADA, 180, CP-ARBY, DO NOT DISTURB"
F 412	702999.89	110573.62	5560.56	NGS PID KK1457 1/2" STAINLESS STEEL ROD IN RANGE BOX

* DENOTES LOCATION TO BE OUTSIDE PROJECT AREA AND OFF OF SHEETS 4.05 - 4.08 AND NOT SHOW HEREON.



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CITY OF ARVADA, COLORADO				
Project Code	Last Mod. Date	Subset	Sheet No.	
18-40	11-08-2019	4.03 of 4.08	4.03	



FOUND ALIQUOT MONUMENT COORDINATE TABLE

Point No.	Northing(ft)	Easting(ft)	Monument Location	Description
204	717656.91	113082.91	1994 RESET CENTER-SOUTH SIXTEENTH CORNER SECTION 10, T. 3 S, R. 69 W., 6TH P.M.	2" ALUMINUM CAP, FLUSH IN CONCRETE PAN, STAMPED IN PART "1994 RESET, 2017 PLS 38359"
205	717653.79	113082.56	ORIGINAL 1973 CENTER-SOUTH SIXTEENTH CORNER SECTION 10, T. 3 S, R. 69 W., 6TH P.M.	2" ALUMINUM CAP, FLUSH IN CONCRETE PAN, STAMPED IN PART "ORIGINAL 1973, 2017 PLS 38359"
206	717674.83	114401.25	SOUTHEAST SIXTEENTH CORNER SECTION 10, T. 3 S, R. 69 W., 6TH P.M.	5/8" DIAMETER REBAR, MISSING CAP 0.3' BELOW SURFACE, BENT EAST, SHOT AT BASE.
207	717693.10	115719.75	SOUTH SIXTEENTH CORNER SECTION 10 & 11, T. 3 S, R. 69 W., 6TH P.M.	2" ALUMINUM CAP, 0.5' BELOW SURFACE IN RANGE BOX, STAMPED "CONTRA LTD 1995 PLS 5447"
208	717689.24	118357.82	SOUTH SIXTEENTH CORNER SECTION 11, T. 3 S, R. 69 W., 6TH P.M	NOT FOUND, DESTROYED IN 2004 BY CONSTRUCTION, ESTABLISHED POSITION FROM TIES & ADJOINING CORNERS
* 209	716369.36	115728.04	SOUTHEAST CORNER SECTION 10, T. 3 S, R. 69 W., 6TH P.M.	2.5" ALUMINUM CAP, 0.4' BELOW SURFACE IN RANGE BOX, STAMPED IN PART "CHARLES H. RUSSELL, PLS 23519"
* 210	716335.23	113089.37	SOUTH QUARTER CORNER SECTION 10, T. 3 S, R. 69 W., 6TH P.M.	3.25" BRASS CAP, 0.3' BELOW SURFACE IN RANGE BOX, STAMPED IN PART "1984, PLS 13212"
* 211	718978.79	113075.98	CENTER QUARTER CORNER SECTION 10, T. 3 S, R. 69 W., 6TH P.M.	3.25" ALUMINUM CAP, 0.3' BELOW SURFACE IN RANGE BOX, STAMPED IN PART "CITY OF ARVADA ,2016, PLS 23496"
* 212	719019.05	118353.53	CENTER QUARTER CORNER SECTION 11, T. 3 S, R. 69 W., 6TH P.M.	3.25" ALUMINUM CAP, 0.3' BELOW SURFACE IN RANGE BOX, STAMPED IN PART "CITY OF ARVADA ,2012, PLS 23496"
* 213	719016.74	115711.26	WEST QUARTER CORNER SECTION 11, T. 3 S, R. 69 W., 6TH P.M.	2" ALUMINUM CAP, 0.6' BELOW SURFACE IN RANGE BOX, STAMPED IN PART "1995, PLS 27258"
* 215	716367.65	117045.06	WEST SIXTEENTH CORNER SECTION 11 & 14, T. 3 S, R. 69 W., 6TH P.M.	2.5" ALUMINUM CAP, 0.8' BELOW SURFACE IN RANGE BOX, STAMPED IN PART "2015, PLS 34580"
* 216	716365.64	118362.59	SOUTH QUARTER CORNER SECTION 11, T. 3 S, R. 69 W., 6TH P.M.	2" ALUMINUM CAP, 0.5' BELOW SURFACE IN RANGE BOX, STAMPED IN PART "PLS 36053"
220	717744.90	118332.04	REFERENCE MONUMENT SOUTH SIXTEENTH CORNER SECTION 11, T. 3 S, R. 69 W., 6TH P.M	2.5" ALUMINUM CAP, 0.8' BELOW SURFACE IN RANGE BOX, STAMPED IN PART "2005, R.M. 61.25' PLS 36561"
221	717627.74	118323.62	REFERENCE MONUMENT SOUTH SIXTEENTH CORNER SECTION 11, T. 3 S, R. 69 W., 6TH P.M	2.5" ALUMINUM CAP, FLUSH WITH SURFACE IN LANDSCAPE BOX, STAMPED IN PART "2005, R.M. 70.33' PLS 36561"

* DENOTES LOCATION TO BE OUTSIDE PROJECT AREA AND OFF OF SHEETS 4.05 - 4.08 AND NOT SHOW HEREON.



FOUND BOUNDARY MONUMENT COORDINATE TABLE

Point No.	Northing(ft)	Easting(ft)	Description
300	717747.98	118387.48	1-1/2" ALUMINUM CAP, FLUSH IN ASPHALT PARKING LOT, STAMPED "PLS 38390"
301	717717.90	118407.22	1-1/2" ALUMINUM CAP, FLUSH IN ASPHALT PARKING LOT, STAMPED "PLS 38390"
310	717719.44	118327.65	NAIL & 3/4" DIA. BRASS TAG, FLUSH IN CONCRETE WALK, ILLEGIBLE STAMPING
311	717719.36	118151.56	NAIL & 3/4" DIA. BRASS TAG, FLUSH IN CONCRETE WALK,STAMPED "PLS 22917"
312	717719.29	118001.32	CHISELED "X" IN CONCRETE WALK
314	717719.92	117457.51	2" DIA. IRON PIPE, WITH RUSTED 1/2" REBAR, NO CAP. UP 0.6' ABOVE SURFACE
315	717510.21	117350.84	BROKEN 1" YELLOW PLASTIC CAP, ON 1/2" REBAR, 0.3' BELOW SURFACE, STAMPING ILLEGIBLE
325	717854.30	117757.85	1-1/4" YELLOW PLASTIC CAP, ON 5/8" REBAR, 0.1' ABOVE SURFACE, STAMPED "PLS 38138 HUFFMAN"
326	717734.41	115637.27	1/2" REBAR, 0.3' BELOW SURFACE, 1.0 FEET BEHIND WALK, NO CAP
327	717921.81	115444.82	1-1/4" YELLOW PLASTIC CAP, ON 5/8" REBAR, 0.1' ABOVE SURFACE, STAMPING ILLEGIBLE, REBAR- THROUGH CAP
328	717719.36	114136.95	CHISELED "X" IN CONCRETE
329	717719.66	114011.97	1-1/4" YELLOW PLASTIC CAP, ON 5/8" REBAR, 0.4' ABOVE SURFACE, STAMPED "PLS 13213" - OFFSET DUE TO POWERPOLE
330	717724.69	114425.77	NAIL & 3/4" DIA. BRASS TAG, FLUSH IN CONCRETE WALK,STAMPED "PLS 3??17"
335	717632.26	114325.11	NAIL & 1" DIA. BRASS TAG, FLUSH IN ASPHALT PARKING LOT, STAMPING ILLEGIBLE
336	717631.35	114262.45	NAIL & 1" DIA. BRASS TAG, FLUSH IN ASPHALT PARKING LOT, STAMPING ILLEGIBLE
337	717520.97	114098.16	1" RED PLASTIC CAP, ON 1/2" REBAR, 0.1' ABOVE SURFACE, STAMPED "PLS 26296 CCS"
338	717512.59	115031.14	CHISELED "X" IN CONCRETE WALK
339	717664.41	115024.86	NAIL & 1" DIA. BRASS TAG, FLUSH IN HANDICAP RAMP, STAMPED "PLS 33202"
340	717511.84	114890.72	5/8" REBAR, UP 0.2' IN FENCE LINE, NO CAP
341	717664.56	114890.84	NAIL & 1" DIA. BRASS TAG, FLUSH IN HANDICAP RAMP, STAMPED "PLS 33202"
342	717527.68	115081.08	CHISELED "X" IN CONCRETE WALK
343	717592.73	115080.82	CHISELED "X" IN CONCRETE WALK
344	717995.20	117016.68	1" YELLOW PLASTIC CAP, IN TOP OF CONCRETE RETAINING WALL, STAMPING ILLEGIBLE
345	717660.97	117208.34	NAIL & 1" DIA. BRASS TAG, FLUSH IN CONCRETE, STAMPED "PLS 36062"
346	717536.02	117209.34	NAIL & 1" DIA. BRASS TAG, FLUSH IN CONCRETE, STAMPED "PLS 36062"
347	717661.14	117070.95	NAIL & 1" DIA. BRASS TAG, FLUSH IN CONCRETE, STAMPED "PLS 36062"
348	717534.32	118002.73	1" RED PLASTIC CAP, ON 1/2" REBAR, 0.5' BELOW SURFACE, STAMPING ILLEGIBLE
349	717546.60	113718.98	BROKE OFF MAG NAIL IN ASPHALT PARKING LOT, NO TAG
350	717554.34	113718.04	MAG NAIL IN ASPHALT PARKING LOT, NO TAG
351	717549.26	113907.27	5/8" REBAR DOWN 0.1, NO CAP BENT WEST, MEASURE FROM BASE OF MONUMENT



CITY OF ARVADA COLORADO
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Sheet Revisions		
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Land Survey Control Diagram				
Monument Coordinate Tables				
City of Arvada Project Number: 18-ST-40				
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.				
CITY OF ARVADA, COLORADO				
Project Code	Last Mod. Date	Subset	Sheet No.	
18-40	11-08-2019	4.04 of 4.08	4.04	

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FOUND BOUNDARY MONUMENT COORDINATE TABLE			
Point No.	Northing(ft)	Easting(ft)	Description
352	717660.09	114096.89	1" RED PLASTIC CAP, ON 1/2" REBAR, 0.5' BELOW SURFACE, STAMPING ILLEGIBLE
353	717523.67	114264.26	1" RED PLASTIC CAP, ON 1/2" REBAR, 0.1' ABOVE SURFACE, STAMPED "PLS 26296 CCS"
354	717663.82	114324.62	NAIL & 3/4" DIA. BRASS TAG, FLUSH IN ASPHALT, ILLEGIBLE STAMPING
355	717900.28	114374.20	1.5" ALUMINUM CAP, ON 5/8" REBAR, FLUSH IN ASPHALT, ILLEGIBLE STAMPING
356	717979.52	114398.36	1.5" ALUMINUM CAP, ON 5/8" REBAR, FLUSH WITH SURFACE,STAMPED "CONTRA, PLS 5447"
357	717953.89	114135.65	1/2" REBAR, 0.1' ABOVE SURFACE, NO CAP
358	717910.12	114963.31	3/8" REBAR, NO CAP, DOWN 0.3' BELOW SURFACE
359	717732.50	114821.12	1/2" REBAR, NO CAP, UP 0.3' BELOW SURFACE, WITH OLD SURVEY LATH
360	717459.22	114664.32	CHISELED "X" IN CONCRETE WALK
361	717514.15	115031.69	CHISELED "X" WITH MAG NAIL, IN CONCRETE WALK
362	717462.67	115081.57	CHISELED "X" IN CONCRETE WALK
363	717393.98	115178.34	CHISELED "X" IN CONCRETE WALK
364	717641.68	115697.64	NAIL & 1" DIA. BRASS TAG, FLUSH IN CONCRETE, STAMPED "ESC, PLS 33202"
365	717641.85	115719.86	NAIL & 1" DIA. BRASS TAG, FLUSH IN CONCRETE, STAMPED "ESC, PLS 33202"
366	717642.06	115742.20	NAIL & 1" DIA. BRASS TAG, FLUSH IN CONCRETE, STAMPED "ESC, PLS 33202"
367	717872.68	115748.73	1.5" ALUMINUM CAP, ON 5/8" REBAR, 0.2' BELOW ASPHALT, ILLEGIBLE STAMPING
368	717732.24	115815.61	BROKEN 1" YELLOW PLASTIC CAP, ON 1/2" REBAR, 0.2' BELOW SURFACE, STAMPING ILLEGIBLE
369	717872.47	115963.77	1.5" ALUMINUM CAP, ON 5/8" REBAR, 0.2' BELOW ASPHALT, ILLEGIBLE STAMPING
370	717972.40	115968.18	CHISELED "X" IN CONCRETE WALK
371	717789.19	116270.31	CHISELED "X" IN CONCRETE WALK
372	717721.60	116415.48	1" YELLOW PLASTIC CAP, IN TOP OF CONCRETE INLET, STAMPING ILLEGIBLE
373	717993.12	116413.67	1" YELLOW PLASTIC CAP, FLUSH BEHIND BACK OF WALK, STAMPING ILLEGIBLE
374	717863.25	117675.25	1/2" REBAR, FLUSH WITH SURFACE, NO CAP
375	717863.16	117680.18	1-1/4" YELLOW PLASTIC CAP, ON 1/2" REBAR, FLUSH WITH SURFACE, STAMPED "PLS 2432?"
376	717729.34	117676.07	1/2" REBAR, 0.5' ABOVE SURFACE, NO CAP, IN FENCE LINE
377	717719.88	118220.75	CHISELED "X" IN CONCRETE WALK
378	717460.17	117351.09	1/2" REBAR, 0.3' DOWN SURFACE, NO CAP
379	717310.83	117353.23	1/2" DIA. IRON PIPE, DOWN 0.3' BELOW SURFACE, NO CAP
380	717436.18	117010.13	3/4" DIA. REBAR, NO CAP, DOWN 0.3 BELOW SURFACE
381	717486.27	117010.10	1" DIA. IRON PIPE, DOWN 0.3' BELOW SURFACE, NO CAP
383	717649.03	118384.19	CHISELED "X" IN CONCRETE CURB
384	717649.29	118326.58	CHISELED "X" IN CONCRETE CURB
385	717459.99	117676.44	1/2" DIA. IRON PIPE, DOWN 0.3' BELOW SURFACE, NO CAP
386	717584.08	118002.28	1/2" DIA. IRON PIPE, DOWN 0.2' BELOW SURFACE, NO CAP



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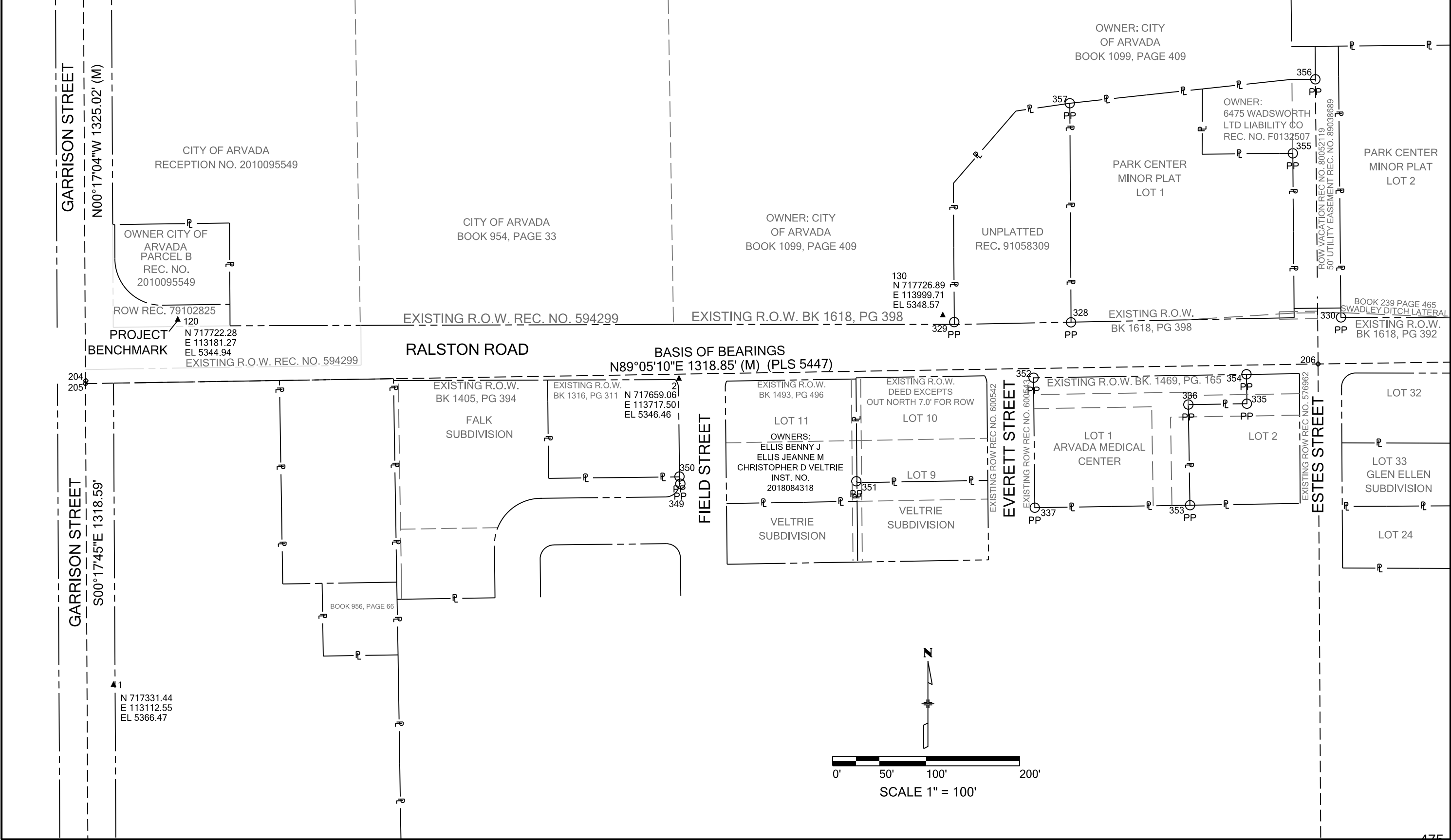
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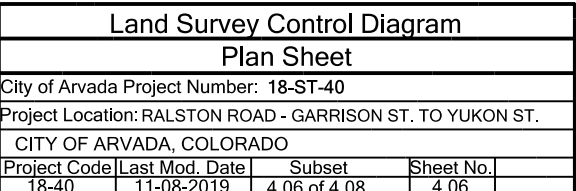
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Land Survey Control Diagram				
Plan Sheet				
City of Arvada Project Number: 18-ST-40				
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.				
CITY OF ARVADA, COLORADO				
Project Code	Last Mod. Date	Subset	Sheet No.	
18-40	11-08-2019	4.05 of 4.08	4.05	



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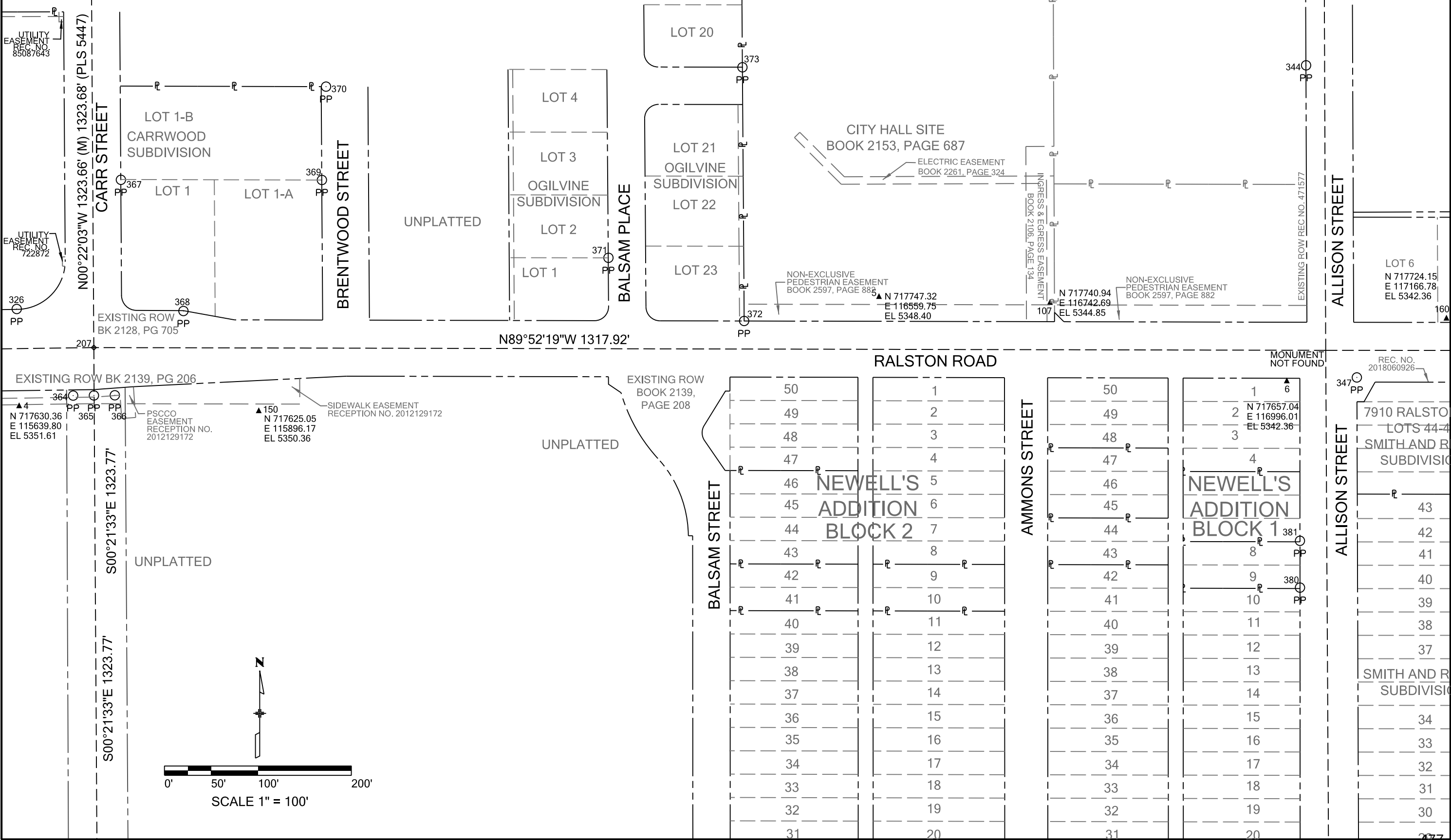
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Project Code	Last Mod. Date	Subset	Sheet No.	
18-40	11-08-2019	4.07 of 4.08	4.07	





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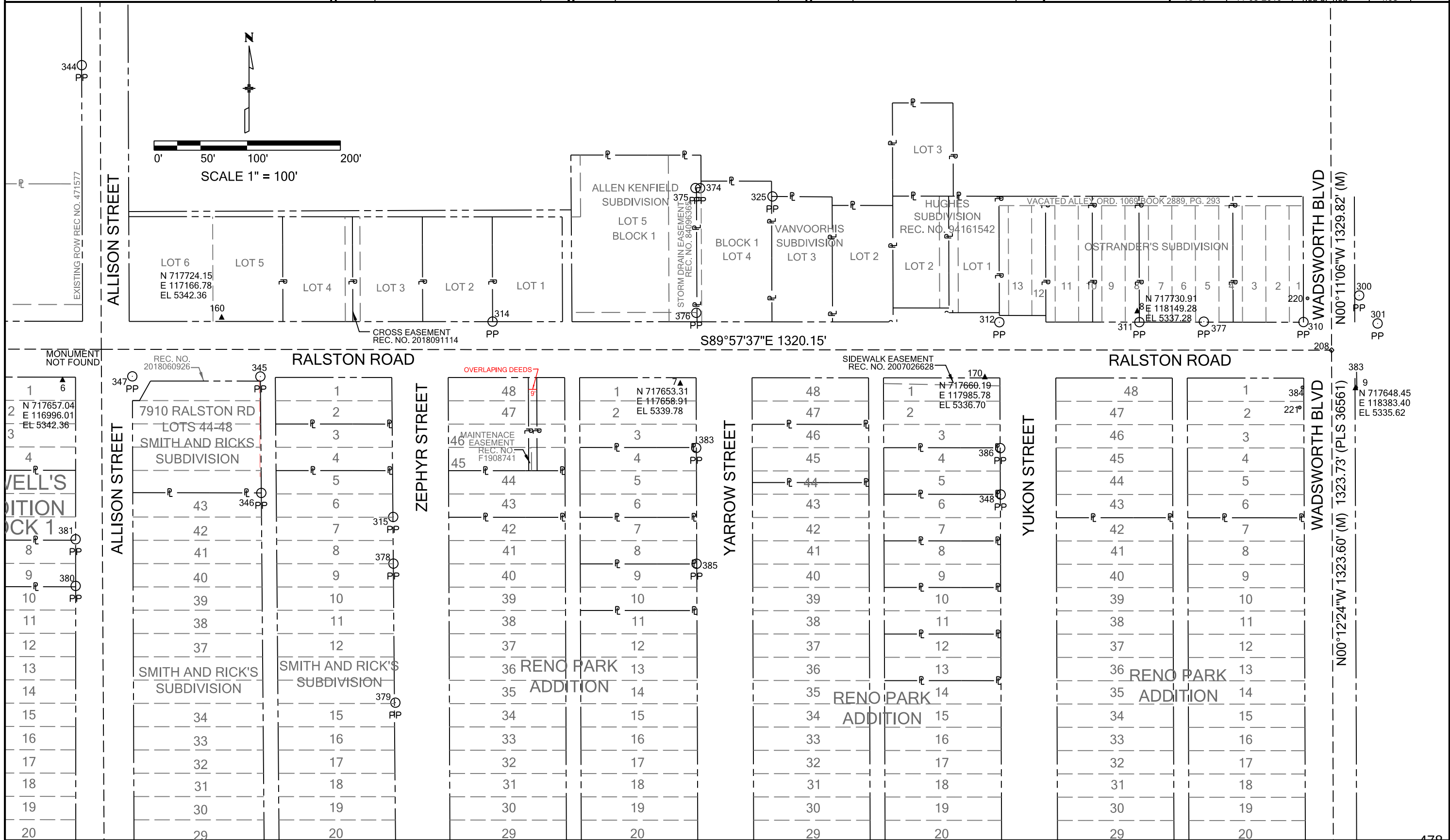
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Date	Description	Initials

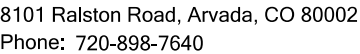
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Land Survey Control Diagram			
Plan Sheet			
City of Arvada Project Number: 18-ST-40			
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.			
CITY OF ARVADA, COLORADO			
Project Code	Last Mod. Date	Subset	Sheet No.
18-40	11-08-2019	4.08 of 4.08	4.08





Right of Way Plans Monumentation Sheet			
City of Arvada Project Number: 18-ST-40			
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST. CITY OF ARVADA, COLORADO			
Project Code	Last Mod. Date	Subset	Sheet No.
18-40	05-15-2020	5.01 of 5.08	5.01

A TYPE 6 CDOT MONUMENT SHOWN HEREON CONSISTS OF A 2" DIAMETER ALUMINUM CAP, SET FLUSH IN GROUND ON A 3/4" DIAMETER REBAR, 30" LONG.

[illegible]

PLS No. _____



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Right of Way Plans				
Monumentation Sheet				
City of Arvada Project Number: 18-ST-40				
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.				
CITY OF ARVADA, COLORADO				
Project Code	Last Mod. Date	Subset	Sheet No.	
18-40	05-15-2020	5.02 of 5.08	5.02	

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TABULATION OF PERMANENT EASEMENT POINTS					
Point No.	Northing(ft)	Easting(ft)	Description	Alignment Stationing	Alignment Offset
500	717643.27	113290.35	NOT SET, FOR INFORMATION ONLY	103+85.22	45.50' RT.
501	717640.70	113146.45	NOT SET, FOR INFORMATION ONLY	102+41.30	45.50' RT.
502	717638.80	113138.64	NOT SET, FOR INFORMATION ONLY	102+33.73	47.28' RT.
503	717618.21	113290.75	NOT SET, FOR INFORMATION ONLY	103+85.17	70.57' RT.
504	717619.34	113125.74	NOT SET, FOR INFORMATION ONLY	102+20.60	66.58' RT.
505	717603.99	113112.82	NOT SET, FOR INFORMATION ONLY	102+07.50	81.78' RT.
506	717617.65	113255.76	NOT SET, FOR INFORMATION ONLY	103+50.18	70.50' RT.
507	717642.65	113255.35	NOT SET, FOR INFORMATION ONLY	103+50.22	45.50' RT.
508	717644.97	113412.34	NOT SET, FOR INFORMATION ONLY	105+08.03	45.50' RT.
509	717648.98	113431.71	NOT SET, FOR INFORMATION ONLY	105+27.41	41.50' RT.
510	717648.98	113517.73	NOT SET, FOR INFORMATION ONLY	106+13.43	41.50' RT.
511	717643.98	113517.73	NOT SET, FOR INFORMATION ONLY	106+13.43	46.50' RT.
512	717643.98	113527.73	NOT SET, FOR INFORMATION ONLY	106+23.43	46.50' RT.
513	717648.98	113527.73	NOT SET, FOR INFORMATION ONLY	106+23.43	41.50' RT.
514	717648.98	113558.33	NOT SET, FOR INFORMATION ONLY	106+54.03	41.50' RT.
515	717639.84	113558.33	NOT SET, FOR INFORMATION ONLY	106+54.03	50.64' RT.
516	717639.84	113568.33	NOT SET, FOR INFORMATION ONLY	106+64.03	50.64' RT.
517	717648.98	113568.33	NOT SET, FOR INFORMATION ONLY	106+64.03	41.50' RT.
518	717648.98	113577.02	NOT SET, FOR INFORMATION ONLY	106+72.72	41.50' RT.
519	717565.42	113712.93	NOT SET, FOR INFORMATION ONLY	108+08.63	125.07' RT.
520	717640.17	113712.13	NOT SET, FOR INFORMATION ONLY	108+07.82	50.31' RT.
521	717649.25	113708.11	NOT SET, FOR INFORMATION ONLY	108+03.81	41.24' RT.
522	717650.41	113700.98	NOT SET, FOR INFORMATION ONLY	107+96.68	40.08' RT.
523	717655.98	113618.52	NOT SET, FOR INFORMATION ONLY	107+14.22	34.50' RT.
524	717648.98	113611.52	NOT SET, FOR INFORMATION ONLY	107+07.22	41.50' RT.
525	717598.00	113767.58	NOT SET, FOR INFORMATION ONLY	108+63.28	92.49' RT.
526	717648.99	113798.16	NOT SET, FOR INFORMATION ONLY	108+93.85	41.50' RT.
527	717649.00	113874.17	NOT SET, FOR INFORMATION ONLY	109+69.87	41.50' RT.
528	717624.02	113874.18	NOT SET, FOR INFORMATION ONLY	109+69.88	66.47' RT.
529	717649.04	113906.99	NOT SET, FOR INFORMATION ONLY	110+02.69	41.46' RT.
530	717628.82	113772.73	NOT SET, FOR INFORMATION ONLY	108+68.43	61.67' RT.
531	717603.16	113772.74	NOT SET, FOR INFORMATION ONLY	108+68.43	87.34' RT.
532	717733.28	115395.32	NOT SET, FOR INFORMATION ONLY	124+91.06	41.50' LT.
533	717626.34	114047.20	NOT SET, FOR INFORMATION ONLY	111+42.84	64.28' RT.
534	717635.14	114042.79	NOT SET, FOR INFORMATION ONLY	111+38.44	55.47' RT.
535	717649.11	114042.77	NOT SET, FOR INFORMATION ONLY	111+38.44	41.50' RT.
536	717649.02	113932.17	NOT SET, FOR INFORMATION ONLY	110+27.84	41.50' RT.
537	717624.04	113932.18	NOT SET, FOR INFORMATION ONLY	110+27.82	66.47' RT.
538	717624.04	113907.21	NOT SET, FOR INFORMATION ONLY	110+02.91	66.46' RT.
539	717736.53	114526.71	NOT SET, FOR INFORMATION ONLY	116+22.45	45.50' LT.
540	717733.09	114011.98	NOT SET, FOR INFORMATION ONLY	111+07.71	42.50' LT.
541	717733.19	114136.89	NOT SET, FOR INFORMATION ONLY	112+32.63	42.50' LT.
542	717736.20	114144.86	NOT SET, FOR INFORMATION ONLY	11+240.60	45.50' LT.
543	717736.40	114375.55	NOT SET, FOR INFORMATION ONLY	114+71.29	45.50' LT.
544	717734.25	114375.57	NOT SET, FOR INFORMATION ONLY	114+71.30	43.35' LT.
545	717724.32	114375.65	NOT SET, FOR INFORMATION ONLY	114+71.38	33.42' LT.
546	717736.44	114425.55	NOT SET, FOR INFORMATION ONLY	115+21.29	45.50' LT.
547	717734.72	114425.56	NOT SET, FOR INFORMATION ONLY	115+21.30	43.77' LT.
548	717736.56	114557.55	NOT SET, FOR INFORMATION ONLY	116+53.29	45.50' LT.
549	717724.19	114557.67	NOT SET, FOR INFORMATION ONLY	116+53.40	33.14' LT.
550	717724.72	114425.66	NOT SET, FOR INFORMATION ONLY	115+21.39	33.77' LT.

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TABULATION OF PERMANENT EASEMENT POINTS					
Point No.	Northing(ft)	Easting(ft)	Description	Alignment Stationing	Alignment Offset
551	717736.78	114810.65	NOT SET, FOR INFORMATION ONLY	119+06.39	45.50' LT.
552	717732.79	114821.60	NOT SET, FOR INFORMATION ONLY	119+17.33	41.50' LT.
553	717743.38	114964.00	NOT SET, FOR INFORMATION ONLY	120+59.75	51.97' LT.
554	717722.63	114964.20	NOT SET, FOR INFORMATION ONLY	120+59.93	31.23' LT.
555	717729.40	114953.14	NOT SET, FOR INFORMATION ONLY	120+48.87	38.00' LT.
556	717743.38	114953.14	NOT SET, FOR INFORMATION ONLY	120+48.88	51.98' LT.
557	717747.93	115013.96	NOT SET, FOR INFORMATION ONLY	121+09.71	56.48' LT.
558	717748.03	115024.10	NOT SET, FOR INFORMATION ONLY	121+19.85	56.57' LT.
559	717734.46	115024.10	NOT SET, FOR INFORMATION ONLY	121+19.83	43.00' LT.
560	717734.49	115058.16	NOT SET, FOR INFORMATION ONLY	121+53.90	43.00' LT.
561	717739.50	115072.49	NOT SET, FOR INFORMATION ONLY	121+68.23	48.00' LT.
562	717739.54	115119.89	NOT SET, FOR INFORMATION ONLY	122+15.63	48.00' LT.
563	717737.04	115119.89	NOT SET, FOR INFORMATION ONLY	122+15.63	45.50' LT.
564	717737.07	115151.67	NOT SET, FOR INFORMATION ONLY	122+47.41	45.50' LT.
565	717725.23	115151.79	NOT SET, FOR INFORMATION ONLY	122+47.52	33.66' LT.
566	717723.33	115014.19	NOT SET, FOR INFORMATION ONLY	121+09.92	31.87' LT.
567	717737.15	115248.44	NOT SET, FOR INFORMATION ONLY	123+44.18	45.50' LT.
568	717742.41	115248.44	NOT SET, FOR INFORMATION ONLY	123+44.18	50.76' LT.
569	717742.42	115258.44	NOT SET, FOR INFORMATION ONLY	123+54.18	50.76' LT.
570	717733.16	115258.45	NOT SET, FOR INFORMATION ONLY	123+54.18	41.50' LT.
571	717733.18	115283.71	NOT SET, FOR INFORMATION ONLY	123+79.45	41.50' LT.
572	717727.06	115283.77	NOT SET, FOR INFORMATION ONLY	123+79.51	35.38' LT.
573	717755.93	115395.31	NOT SET, FOR INFORMATION ONLY	124+91.06	64.15' LT.
574	717769.52	115405.26	NOT SET, FOR INFORMATION ONLY	125+01.03	77.73' LT.
575	717728.75	115405.52	NOT SET, FOR INFORMATION ONLY	125+01.25	36.96' LT.
576	717769.27	115445.26	NOT SET, FOR INFORMATION ONLY	125+41.03	77.44' LT.
577	717751.58	115456.40	NOT SET, FOR INFORMATION ONLY	125+52.15	59.75' LT.
578	717737.33	115456.41	NOT SET, FOR INFORMATION ONLY	125+52.15	45.50' LT.
579	717737.49	115631.59	NOT SET, FOR INFORMATION ONLY	127+27.33	45.50' LT.
580	717768.30	115672.81	NOT SET, FOR INFORMATION ONLY	127+68.58	76.28' LT.
581	717816.36	115681.52	NOT SET, FOR INFORMATION ONLY	127+77.32	124.34' LT.
582	717885.34	115681.46	NOT SET, FOR INFORMATION ONLY	127+77.32	193.31' LT.
583	717885.29	115688.51	NOT SET, FOR INFORMATION ONLY	127+84.38	193.26' LT.
584	717786.30	115689.15	NOT SET, FOR INFORMATION ONLY	127+84.93	94.26' LT.
585	717733.97	115637.87	NOT SET, FOR INFORMATION ONLY	127+33.61	41.98' LT.
586	717731.39	115451.49	NOT SET, FOR INFORMATION ONLY	125+47.23	39.56' LT.
587	717737.34	115445.47	NOT SET, FOR INFORMATION ONLY	125+41.21	45.51' LT.
588	717812.03	115748.98	NOT SET, FOR INFORMATION ONLY	128+44.79	119.94' LT.
589	717812.09	115759.55	NOT SET, FOR INFORMATION ONLY	128+55.35	120.00' LT.
590	717762.07	115759.59	NOT SET, FOR INFORMATION ONLY	128+55.35	69.98' LT.
592	717750.11	115774.49	NOT SET, FOR INFORMATION ONLY	128+70.24	58.00' LT.
593	717744.62	115783.76	NOT SET, FOR INFORMATION ONLY	128+79.51	52.50' LT.
594	717744.66	115832.65	NOT SET, FOR INFORMATION ONLY	129+28.39	52.50' LT.
595	717741.42	115849.44	NOT SET, FOR INFORMATION ONLY	129+45.19	49.24' LT.
596	717733.71	115889.41	NOT SET, FOR INFORMATION ONLY	129+85.15	41.50' LT.
597	717733.77	115959.75	NOT SET, FOR INFORMATION ONLY	130+55.48	41.50' LT.
598	717752.09	115959.73	NOT SET, FOR INFORMATION ONLY	130+55.48	59.82' LT.
599	717752.09	115964.37	NOT SET, FOR INFORMATION ONLY	130+60.13	59.82' LT.



CITY OF ARVADA COLORADO
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Sheet Revisions		
Date	Description	Initials

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Right of Way Plans				
Monumentation Sheet				
City of Arvada Project Number: 18-ST-40				
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.				
CITY OF ARVADA, COLORADO				
Project Code	Last Mod. Date	Subset	Sheet No.	
18-40	06-30-2020	5.03 of 5.08	5.03	

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TABULATION OF PERMANENT EASEMENT POINTS					
Point No.	Northing(ft)	Easting(ft)	Description	Alignment Stationing	Alignment Offset
600	717779.15	116014.20	NOT SET, FOR INFORMATION ONLY	131+09.98	86.84' LT.
601	717779.16	116024.55	NOT SET, FOR INFORMATION ONLY	131+20.33	86.84' LT.
602	717733.83	116024.59	NOT SET, FOR INFORMATION ONLY	131+20.33	41.51' LT.
603	717733.83	116164.49	NOT SET, FOR INFORMATION ONLY	132+60.03	41.50' LT.
604	717758.71	116270.28	NOT SET, FOR INFORMATION ONLY	133+65.72	66.80' LT.
605	717733.49	116249.67	NOT SET, FOR INFORMATION ONLY	133+45.21	41.50' LT.
607	717758.63	116259.46	NOT SET, FOR INFORMATION ONLY	133+54.90	66.68' LT.
608	717781.79	117067.31	NOT SET, FOR INFORMATION ONLY	141+62.65	92.99' LT.
609	717780.23	117070.14	NOT SET, FOR INFORMATION ONLY	141+65.49	91.45' LT.
610	717742.68	117070.23	NOT SET, FOR INFORMATION ONLY	141+65.72	53.90' LT.
611	717737.27	117072.38	NOT SET, FOR INFORMATION ONLY	141+67.90	48.50' LT.
612	717736.80	117192.83	NOT SET, FOR INFORMATION ONLY	142+88.35	48.50' LT.
613	717733.81	117192.83	NOT SET, FOR INFORMATION ONLY	142+88.36	45.51' LT.
614	717733.84	117232.50	NOT SET, FOR INFORMATION ONLY	143+28.41	45.50' LT.
615	717734.00	117267.58	NOT SET, FOR INFORMATION ONLY	143+63.50	45.50' LT.
616	717730.10	117291.13	NOT SET, FOR INFORMATION ONLY	143+87.03	41.50' LT.
617	717730.18	117307.51	NOT SET, FOR INFORMATION ONLY	144+03.41	41.50' LT.
618	717730.52	117382.51	NOT SET, FOR INFORMATION ONLY	144+78.41	41.50' LT.
619	717736.02	117382.49	NOT SET, FOR INFORMATION ONLY	144+78.41	47.00' LT.
620	717736.10	117400.37	NOT SET, FOR INFORMATION ONLY	144+96.30	47.00' LT.
621	717730.61	117400.40	NOT SET, FOR INFORMATION ONLY	144+96.30	41.50' LT.
622	717730.87	117457.51	NOT SET, FOR INFORMATION ONLY	145+53.41	41.50' LT.
623	717732.37	117457.50	NOT SET, FOR INFORMATION ONLY	145+53.41	43.00' LT.
624	717732.76	117542.61	NOT SET, FOR INFORMATION ONLY	146+38.52	43.00' LT.
625	717731.26	117542.62	NOT SET, FOR INFORMATION ONLY	146+38.53	41.50' LT.
626	717731.87	117676.84	NOT SET, FOR INFORMATION ONLY	147+72.74	41.50' LT.
627	717741.73	117676.79	NOT SET, FOR INFORMATION ONLY	147+72.74	51.36' LT.
628	717741.81	117694.52	NOT SET, FOR INFORMATION ONLY	14+790.47	51.36' LT.
629	717733.45	117694.56	NOT SET, FOR INFORMATION ONLY	147+90.47	43.00' LT.
630	717733.65	117738.79	NOT SET, FOR INFORMATION ONLY	148+34.70	43.00' LT.
631	717732.15	117738.80	NOT SET, FOR INFORMATION ONLY	148+34.70	41.50' LT.
632	717732.24	117757.28	NOT SET, FOR INFORMATION ONLY	148+53.18	41.50' LT.
633	717732.54	117822.28	NOT SET, FOR INFORMATION ONLY	149+18.18	41.50' LT.
634	717732.99	117887.27	NOT SET, FOR INFORMATION ONLY	149+82.93	41.78' LT.
635	717735.49	117988.69	NOT SET, FOR INFORMATION ONLY	150+84.34	44.43' LT.
636	717742.92	117988.53	NOT SET, FOR INFORMATION ONLY	150+84.17	51.85' LT.
637	717742.90	118001.24	NOT SET, FOR INFORMATION ONLY	150+96.88	51.85' LT.
638	717651.55	117999.39	NOT SET, FOR INFORMATION ONLY	150+95.16	39.50' RT.
639	717651.60	117962.70	NOT SET, FOR INFORMATION ONLY	150+58.47	39.50' RT.
640	717645.97	117962.69	NOT SET, FOR INFORMATION ONLY	150+58.47	45.13' RT.
641	717645.99	117952.69	NOT SET, FOR INFORMATION ONLY	150+48.47	45.13' RT.
642	717651.62	117952.70	NOT SET, FOR INFORMATION ONLY	150+58.47	39.50 RT.
643	717651.72	117881.45	NOT SET, FOR INFORMATION ONLY	149+77.23	39.50' RT.
644	717649.72	117881.45	NOT SET, FOR INFORMATION ONLY	149+77.23	41.50' RT.
645	717649.73	117876.96	NOT SET, FOR INFORMATION ONLY	149+72.73	41.50' RT.
646	717649.71	117860.96	NOT SET, FOR INFORMATION ONLY	149+56.48	41.50' RT.
647	717649.16	117739.86	NOT SET, FOR INFORMATION ONLY	148+35.39	41.50' RT.
648	717635.13	117739.86	NOT SET, FOR INFORMATION ONLY	148+35.32	55.53' RT.
649	717635.13	117736.01	NOT SET, FOR INFORMATION ONLY	148+31.47	55.51' RT.
650	717623.11	117676.05	NOT SET, FOR INFORMATION ONLY	147+71.46	67.26' RT.
651	717635.84	117669.28	NOT SET, FOR INFORMATION ONLY	147+64.75	54.50' RT.
652	717644.84	117669.28	NOT SET, FOR INFORMATION ONLY	147+64.79	45.50' RT.

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TABULATION OF PERMANENT EASEMENT POINTS					
Point No.	Northing(ft)	Easting(ft)	Description	Alignment Stationing	Alignment Offset
653	717644.29	117550.97	NOT SET, FOR INFORMATION ONLY	146+46.48	45.50' RT.
654	717644.22	117534.97	NOT SET, FOR INFORMATION ONLY	146+30.48	45.50' RT.
655	717644.08	117504.97	NOT SET, FOR INFORMATION ONLY	146+00.48	45.50' RT.
656	717644.04	117495.97	NOT SET, FOR INFORMATION ONLY	145+91.48	45.50' RT.
657	717643.66	117413.45	NOT SET, FOR INFORMATION ONLY	145+08.95	45.50' RT.
658	717637.78	117413.47	NOT SET, FOR INFORMATION ONLY	145+08.94	51.38' RT.
659	717625.47	117410.04	NOT SET, FOR INFORMATION ONLY	145+05.46	63.68' RT.
660	717647.37	117349.45	NOT SET, FOR INFORMATION ONLY	144+44.97	41.50' RT.
661	717646.80	117224.45	NOT SET, FOR INFORMATION ONLY	143+19.97	41.50' RT.
662	717645.54	117208.46	NOT SET, FOR INFORMATION ONLY	143+04.34	42.71' RT.
663	717645.23	117096.83	NOT SET, FOR INFORMATION ONLY	141+92.71	43.45' RT.
664	717617.13	117071.11	NOT SET, FOR INFORMATION ONLY	141+67.10	71.65' RT.
665	717602.10	114381.65	NOT SET, FOR INFORMATION ONLY	114+77.27	88.81' RT.
666	717583.51	114097.59	NOT SET, FOR INFORMATION ONLY	111+93.20	107.15' RT.
667	717647.60	116988.60	NOT SET, FOR INFORMATION ONLY	140+84.47	41.50' RT.
668	717648.01	116885.01	NOT SET, FOR INFORMATION ONLY	139+80.88	41.50' RT.
669	717649.56	114556.03	NOT SET, FOR INFORMATION ONLY	116+51.69	41.50' RT.
670	717648.52	116755.19	NOT SET, FOR INFORMATION ONLY	138+51.05	41.50' RT.
671	717646.25	116749.04	NOT SET, FOR INFORMATION ONLY	138+44.92	43.79' RT.
672	717635.54	116749.00	NOT SET, FOR INFORMATION ONLY	138+44.92	54.50' RT.
673	717626.74	116740.14	NOT SET, FOR INFORMATION ONLY	138+36.09	63.33' RT.
674	717617.82	116694.04	NOT SET, FOR INFORMATION ONLY	137+90.03	72.44' RT.
675	717617.81	116685.35	NOT SET, FOR INFORMATION ONLY	137+81.34	72.48' RT.
676	717644.79	116685.45	NOT SET, FOR INFORMATION ONLY	137+81.34	45.50' RT.
677	717645.31	116553.23	NOT SET, FOR INFORMATION ONLY	136+49.11	45.50' RT.
678	717644.37	116537.23	NOT SET, FOR INFORMATION ONLY	136+33.11	46.50' RT.
679	717644.93	116394.45	NOT SET, FOR INFORMATION ONLY	134+90.34	46.50' RT.
680	717651.36	114324.80	NOT SET, FOR INFORMATION ONLY	114+20.47	39.50' RT.
681	717651.32	114284.18	NOT SET, FOR INFORMATION ONLY	113+79.84	39.50' RT.
682	717646.25	114284.18	NOT SET, FOR INFORMATION ONLY	113+79.84	44.57' RT.
683	717646.24	114274.18	NOT SET, FOR INFORMATION ONLY	113+69.84	44.57' RT.
684	717651.31	114274.18	NOT SET, FOR INFORMATION ONLY	113+69.84	39.50' RT.
685	717618.58	114105.30	NOT SET, FOR INFORMATION ONLY	112+00.94	72.09' RT.
686	717618.67	114115.27	NOT SET, FOR INFORMATION ONLY	112+10.91	72.00' RT.
687	717602.58	114115.42	NOT SET, FOR INFORMATION ONLY	112+11.04	88.10' RT.
688	717583.67	114115.59	NOT SET, FOR INFORMATION ONLY	112+11.20	107.00' RT.
689	717651.17	114105.27	NOT SET, FOR INFORMATION ONLY	112+00.94	39.50' RT.
690	717758.49	117017.40	NOT SET, FOR INFORMATION ONLY	141+12.83	69.50' LT.
691	717758.40	116992.40	NOT SET, FOR INFORMATION ONLY	140+87.83	69.31' LT.
692	717613.65	114370.08	NOT SET, FOR INFORMATION ONLY	114+65.71	77.25' RT.
693	717651.40	114370.08	NOT SET, FOR INFORMATION ONLY	114+65.74	39.50' RT.
694	717621.41	114431.67	NOT SET, FOR INFORMATION ONLY	115+27.31	69.54' RT.
695	717649.45	114431.51	NOT SET, FOR INFORMATION ONLY	115+27.18	41.50' RT.
696	717649.54	114540.54	NOT SET, FOR INFORMATION ONLY	116+36.20	41.50' RT.
697	717736.53	114526.71	NOT SET, FOR INFORMATION ONLY	116+22.45	45.50' LT.
698	717649.78	114815.54	NOT SET, FOR INFORMATION ONLY	119+11.20	41.50' RT.
699	717649.56	114556.03	NOT SET, FOR INFORMATION ONLY	116+51.69	41.50' RT.
1500	717736.50	114495.48	NOT SET, FOR INFORMATION ONLY	115+91.22	45.50' RT.
1501	717734.01	114506.53	NOT SET, FOR INFORMATION ONLY	116+02.27	43.00' RT.

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TABULATION OF PERMANENT EASEMENT POINTS					
Point No.	Northing(ft)	Easting(ft)	Description	Alignment Stationing	Alignment Offset
1502	717734.02	114515.66	NOT SET, FOR INFORMATION ONLY	116+11.40	43.00' RT.
1503	717649.63	114643.40	NOT SET, FOR INFORMATION ONLY	117+39.07	41.50' RT.
1504	717644.53	114643.41	NOT SET, FOR INFORMATION ONLY	117+39.07	46.60' RT.
1505	717644.54	114653.41	NOT SET, FOR INFORMATION ONLY	117+49.07	46.60' RT.
1506	717649.64	114653.40	NOT SET, FOR INFORMATION ONLY	117+49.07	41.50' RT.
1507	717649.66	114681.00	NOT SET, FOR INFORMATION ONLY	117+76.66	41.50' RT.
1508	717626.71	114681.01	NOT SET, FOR INFORMATION ONLY	117+76.66	64.46' RT.
1509	717649.72	114745.08	NOT SET, FOR INFORMATION ONLY	118+40.75	41.50' RT.
1510	717620.80	114745.11	NOT SET, FOR INFORMATION ONLY	118+40.75	70.42' RT.
1511	717649.85	114890.83	NOT SET, FOR INFORMATION ONLY	119+86.49	41.50' RT.
1512	717649.82	114858.20	NOT SET, FOR INFORMATION ONLY	119+53.86	41.50' RT.
1513	717644.71	114858.20	NOT SET, FOR INFORMATION ONLY	119+53.86	46.61' RT.
1514	717644.70	114848.20	NOT SET, FOR INFORMATION ONLY	119+43.86	46.61' RT.
1515	717649.81	114848.20	NOT SET, FOR INFORMATION ONLY	119+43.86	41.50' RT.
1516	717608.20	115017.82	NOT SET, FOR INFORMATION ONLY	121+13.45	83.25' RT.
1517	717649.96	115017.82	NOT SET, FOR INFORMATION ONLY	121+13.48	41.50' RT.
1518	717649.87	114919.83	NOT SET, FOR INFORMATION ONLY	120+15.49	41.50' RT.
1519	717639.87	114919.84	NOT SET, FOR INFORMATION ONLY	120+15.49	51.50' RT.
1520	717639.85	114890.82	NOT SET, FOR INFORMATION ONLY	119+86.48	51.50' RT.
1521	717642.09	115210.63	NOT SET, FOR INFORMATION ONLY	123+06.28	49.53' RT.
1522	717650.05	115132.65	NOT SET, FOR INFORMATION ONLY	122+28.32	41.50' RT.
1523	717641.60	115132.66	NOT SET, FOR INFORMATION ONLY	122+28.32	49.96' RT.
1524	717641.59	115122.66	NOT SET, FOR INFORMATION ONLY	122+18.32	49.96' RT.
1525	717650.05	115122.65	NOT SET, FOR INFORMATION ONLY	122+18.32	41.50' RT.
1526	717783.40	116992.30	NOT SET, FOR INFORMATION ONLY	140+87.64	84.94' LT.
1527	717783.45	117007.30	NOT SET, FOR INFORMATION ONLY	141+02.64	94.42' LT.
1528	717804.45	117007.22	NOT SET, FOR INFORMATION ONLY	141+02.47	115.42' LT.
1529	717804.49	117017.22	NOT SET, FOR INFORMATION ONLY	141+12.47	115.50' LT.
1530	717657.40	115240.09	NOT SET, FOR INFORMATION ONLY	123+35.77	34.24' RT.
1531	717641.67	115589.27	NOT SET, FOR INFORMATION ONLY	126+84.93	50.27' RT.
1532	717644.67	115666.69	NOT SET, FOR INFORMATION ONLY	127+62.35	47.34' RT.
1533	717644.64	115744.93	NOT SET, FOR INFORMATION ONLY	128+40.59	47.44' RT.
1534	717645.34	115860.41	NOT SET, FOR INFORMATION ONLY	129+56.07	46.84' RT.
1535	717645.36	115881.35	NOT SET, FOR INFORMATION ONLY	129+77.01	46.84' RT.
1536	717633.72	115901.14	NOT SET, FOR INFORMATION ONLY	129+96.79	58.50' RT.
1537	717633.76	116182.30	NOT SET, FOR INFORMATION ONLY	132+78.23	58.50' RT.
1538	717644.18	116202.53	NOT SET, FOR INFORMATION ONLY	132+98.42	48.00' RT.
1539	717643.95	116260.49	NOT SET, FOR INFORMATION ONLY	133+56.38	48.00' RT.
1540	717637.78	116260.47	NOT SET, FOR INFORMATION ONLY	133+56.38	54.17' RT.
1541	717637.78	116273.10	NOT SET, FOR INFORMATION ONLY	133+69.02	54.12' RT.
1542	717615.37	116281.90	NOT SET, FOR INFORMATION ONLY	133+77.90	76.50' RT.
1543	717641.66	115570.85	NOT SET, FOR INFORMATION ONLY	12+666.51	50.27' RT.
1544	717733.92	116139.99	NOT SET, FOR INFORMATION ONLY	132+35.62	41.50' LT.
1545	717645.62	117178.79	NOT SET, FOR INFORMATION ONLY	142+74.67	42.74' RT.
1550	717761.03	114375.35	NOT SET, FOR INFORMATION ONLY	114+71.11	70.13' LT.
1551	717751.09	115174.63	NOT SET, FOR INFORMATION ONLY	122+70.38	59.50' LT.
1580	717650.12	115210.59	NOT SET, FOR INFORMATION ONLY	123+06.26	41.50' RT.
1581	717650.03	115098.83	NOT SET, FOR INFORMATION ONLY	121+94.49	41.50' RT.
1582	717636.86	115098.83	NOT SET, FOR INFORMATION ONLY	121+94.48	54.67' RT.
1583	717644.97	113385.55	NOT SET, FOR INFORMATION ONLY	104+81.25	45.50' R.T.
1584	717644.97	113385.55	NOT SET, FOR INFORMATION ONLY	104+81.25	45.50' R.T.
1585	717732.88	114931.85	NOT SET, FOR INFORMATION ONLY	120+27.59	41.50' LT.
1586	717729.39	114941.54	NOT SET, FOR INFORMATION ONLY	120+37.27	38.00' LT.
1587	717649.88	114932.21	NOT SET, FOR INFORMATION ONLY	120+27.88	41.50' LT.

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TABULATION OF PERMANENT EASEMENT POINTS					
Point No.	Northing(ft)	Easting(ft)	Description	Alignment Stationing	Alignment Offset
1588	717643.87	114932.22	NOT SET, FOR INFORMATION ONLY	120+27.88	47.51' LT.
1589	717655.99	113662.82	NOT SET, FOR INFORMATION ONLY	107+58.52	34.50' RT.
1590	717655.49	113662.82	NOT SET, FOR INFORMATION ONLY	107+58.52	35.00' RT.
1591	717655.49	113695.90	NOT SET, FOR INFORMATION ONLY	107+91.60	35.00' RT.
1592	717634.05	117999.36	NOT SET, FOR INFORMATION ONLY	150+95.16	57.00' RT.
1593	717634.04	118002.01	NOT SET, FOR INFORMATION ONLY	150+97.81	57.00' RT.
1594	717649.92	114978.32	NOT SET, FOR INFORMATION ONLY	120+73.99	41.50' RT.
1595	717652.42	114978.32	NOT SET, FOR INFORMATION ONLY	120+73.99	39.00' RT.
1596	717652.42	114972.32	NOT SET, FOR INFORMATION ONLY	120+67.99	39.00' RT.
1597	717649.92	114972.32	NOT SET, FOR INFORMATION ONLY	120+67.99	41.50' RT.

● 4**



CITY OF ARVADA COLORADO

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Sheet Revisions		
Date	Description	Initials

Sheet Revisions		
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Date	Description	Initials



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Right of Way Plans			
Monumentation Sheet			
City of Arvada Project Number: 18-ST-40			
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.			
CITY OF ARVADA, COLORADO			
Project Code	Last Mod. Date	Subset	Sheet No.
18-40	06-30-2020	5.05 of 5.08	5.05

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TABULATION OF TEMPORARY EASEMENT POINTS					
Point No.	Northing(ft)	Easting(ft)	Description	Alignment Stationing	Alignment Offset
451	717738.99	115058.15	NOT SET, FOR INFORMATION ONLY	121+53.89	47.50' LT.
452	717744.01	115077.00	NOT SET, FOR INFORMATION ONLY	121+72.74	52.50' LT.
453	717744.02	115088.40	NOT SET, FOR INFORMATION ONLY	121+84.15	52.50' LT.
454	717753.71	115088.39	NOT SET, FOR INFORMATION ONLY	121+84.15	62.20' LT.
455	717754.01	115151.50	NOT SET, FOR INFORMATION ONLY	122+47.26	62.44' LT.
456	717751.07	115151.53	NOT SET, FOR INFORMATION ONLY	122+47.29	59.50' LT.
457	717746.21	115258.53	NOT SET, FOR INFORMATION ONLY	123+54.28	54.55' LT.
458	717746.08	115283.59	NOT SET, FOR INFORMATION ONLY	123+79.34	54.39' LT.
459	717743.73	115283.61	NOT SET, FOR INFORMATION ONLY	123+79.36	52.05' LT.
460	717743.76	115384.43	NOT SET, FOR INFORMATION ONLY	124+80.18	51.99' LT.
461	717769.38	115384.15	NOT SET, FOR INFORMATION ONLY	124+79.92	77.61' LT.
462	717769.34	115456.16	NOT SET, FOR INFORMATION ONLY	125+51.92	77.50' LT.
463	717745.79	115463.63	NOT SET, FOR INFORMATION ONLY	125+59.37	53.95' LT.
464	717746.25	115536.06	NOT SET, FOR INFORMATION ONLY	126+31.81	54.35' LT.
465	717768.85	115535.92	NOT SET, FOR INFORMATION ONLY	126+31.68	76.95' LT.
466	717769.01	115588.42	NOT SET, FOR INFORMATION ONLY	126+84.19	77.06' LT.
467	717746.59	115588.56	NOT SET, FOR INFORMATION ONLY	126+84.31	54.64' LT.
468	717746.89	115635.16	NOT SET, FOR INFORMATION ONLY	127+30.91	54.90' LT.
469	717759.34	115648.95	NOT SET, FOR INFORMATION ONLY	127+44.71	67.34' LT.
470	717885.43	115665.49	NOT SET, FOR INFORMATION ONLY	127+61.35	193.41' LT.
471	717867.22	115748.63	NOT SET, FOR INFORMATION ONLY	128+44.48	175.14' LT.
472	717867.29	115758.63	NOT SET, FOR INFORMATION ONLY	128+54.48	175.19' LT.
473	717817.68	115758.95	NOT SET, FOR INFORMATION ONLY	128+54.76	125.58' LT.
474	717807.74	115769.01	NOT SET, FOR INFORMATION ONLY	128+64.81	115.64' LT.
475	717771.27	115769.25	NOT SET, FOR INFORMATION ONLY	128+65.02	79.16' LT.
476	717755.32	115782.33	NOT SET, FOR INFORMATION ONLY	128+78.09	63.21' LT.
477	717774.36	115665.58	NOT SET, FOR INFORMATION ONLY	127+61.35	82.35' LT.
478	717745.75	115849.42	NOT SET, FOR INFORMATION ONLY	129+45.16	53.58' LT.
479	717744.84	115947.42	NOT SET, FOR INFORMATION ONLY	130+43.17	52.59' LT.
480	717763.47	115964.30	NOT SET, FOR INFORMATION ONLY	130+60.06	71.20' LT.
481	717789.31	116014.14	NOT SET, FOR INFORMATION ONLY	131+09.92	97.00' LT.
482	717789.34	116029.23	NOT SET, FOR INFORMATION ONLY	131+25.02	97.01' LT.
483	717744.33	116164.43	NOT SET, FOR INFORMATION ONLY	132+59.93	52.01' LT.
484	717744.94	116249.45	NOT SET, FOR INFORMATION ONLY	133+44.94	52.94' LT.
485	717744.94	116249.45	NOT SET, FOR INFORMATION ONLY	133+44.94	52.94' LT.
486	717763.83	116255.48	NOT SET, FOR INFORMATION ONLY	133+50.90	71.85' LT.
487	717763.93	116270.25	NOT SET, FOR INFORMATION ONLY	133+65.67	72.02' LT.
488	717744.33	116029.30	NOT SET, FOR INFORMATION ONLY	131+25.05	52.00' LT.
489	717798.75	117067.24	NOT SET, FOR INFORMATION ONLY	141+62.52	109.96' LT.
490	717786.44	117079.66	NOT SET, FOR INFORMATION ONLY	141+74.98	97.70' LT.
491	717743.81	117088.08	NOT SET, FOR INFORMATION ONLY	141+83.58	55.10' LT.
492	717744.55	117232.45	NOT SET, FOR INFORMATION ONLY	143+28.42	56.22' LT.
493	717744.77	117307.45	NOT SET, FOR INFORMATION ONLY	144+03.42	56.10' LT.
494	717745.00	117382.45	NOT SET, FOR INFORMATION ONLY	144+78.42	55.97' LT.
495	717745.22	117457.45	NOT SET, FOR INFORMATION ONLY	145+53.42	55.85' LT.
496	717740.69	117517.87	NOT SET, FOR INFORMATION ONLY	146+13.82	51.05' LT.
497	717749.14	117517.85	NOT SET, FOR INFORMATION ONLY	146+13.83	59.50' LT.
498	717749.26	117542.50	NOT SET, FOR INFORMATION ONLY	146+38.49	59.50' LT.
499	717744.76	117542.53	NOT SET, FOR INFORMATION ONLY	146+38.50	55.00' LT.

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TABULATION OF TEMPORARY EASEMENT POINTS					
Point No.	Northing(ft)	Easting(ft)	Description	Alignment Stationing	Alignment Offset
1000	717745.37	117676.78	NOT SET, FOR INFORMATION ONLY	147+72.74	55.00' LT.
1001	717745.25	117757.23	NOT SET, FOR INFORMATION ONLY	148+53.20	54.51' LT.
1002	717745.19	117822.23	NOT SET, FOR INFORMATION ONLY	149+18.20	54.16' LT.
1003	717745.14	117887.23	NOT SET, FOR INFORMATION ONLY	149+82.87	53.92' LT.
1004	717745.09	117947.23	NOT SET, FOR INFORMATION ONLY	150+42.87	53.96' LT.
1005	717745.04	118001.23	NOT SET, FOR INFORMATION ONLY	150+96.87	53.99' LT.
1006	717613.89	116191.24	NOT SET, FOR INFORMATION ONLY	132+87.25	78.34' RT.
1007	717630.07	118002.03	NOT SET, FOR INFORMATION ONLY	150+97.83	60.98' RT.
1008	717630.04	117998.36	NOT SET, FOR INFORMATION ONLY	150+94.16	61.01' RT.
1009	717648.55	117998.38	NOT SET, FOR INFORMATION ONLY	150+94.16	42.50' RT.
1010	717644.10	117876.98	NOT SET, FOR INFORMATION ONLY	149+72.76	47.13' RT.
1011	717641.21	117860.99	NOT SET, FOR INFORMATION ONLY	149+56.47	50.00' RT.
1012	717640.72	117753.56	NOT SET, FOR INFORMATION ONLY	148+49.04	50.00' RT.
1013	717609.65	117753.53	NOT SET, FOR INFORMATION ONLY	148+48.88	81.07' RT.
1014	717609.67	117736.10	NOT SET, FOR INFORMATION ONLY	148+31.44	80.97' RT.
1015	717617.57	117676.07	NOT SET, FOR INFORMATION ONLY	147+71.45	72.80' RT.
1016	717636.19	117662.30	NOT SET, FOR INFORMATION ONLY	147+57.76	54.11' RT.
1017	717635.87	117614.93	NOT SET, FOR INFORMATION ONLY	147+10.39	54.21' RT.
1018	717622.48	117594.08	NOT SET, FOR INFORMATION ONLY	146+89.48	67.51' RT.
1019	717622.29	117551.05	NOT SET, FOR INFORMATION ONLY	146+46.46	67.50' RT.
1020	717636.21	117535.00	NOT SET, FOR INFORMATION ONLY	146+30.47	53.52' RT.
1021	717636.08	117505.00	NOT SET, FOR INFORMATION ONLY	146+00.47	53.50' RT.
1022	717636.04	117496.00	NOT SET, FOR INFORMATION ONLY	145+91.47	53.50' RT.
1023	717632.32	117480.34	NOT SET, FOR INFORMATION ONLY	145+75.79	57.15' RT.
1024	717636.72	117429.18	NOT SET, FOR INFORMATION ONLY	145+24.65	52.52' RT.
1025	717625.51	117420.99	NOT SET, FOR INFORMATION ONLY	145+16.41	63.69' RT.
1026	717632.37	117349.57	NOT SET, FOR INFORMATION ONLY	144+45.02	56.51' RT.
1027	717632.33	117344.57	NOT SET, FOR INFORMATION ONLY	144+40.02	56.52' RT.
1028	717644.99	117344.45	NOT SET, FOR INFORMATION ONLY	144+39.96	43.86' RT.
1029	717645.41	117282.35	NOT SET, FOR INFORMATION ONLY	143+77.86	43.16' RT.
1030	717626.15	117282.43	NOT SET, FOR INFORMATION ONLY	143+77.85	62.41' RT.
1031	717625.92	117224.62	NOT SET, FOR INFORMATION ONLY	143+20.04	62.38' RT.
1032	717625.40	117208.62	NOT SET, FOR INFORMATION ONLY	143+04.58	62.84' RT.
1033	717625.36	117203.62	NOT SET, FOR INFORMATION ONLY	142+99.58	62.90' RT.
1034	717640.66	117203.50	NOT SET, FOR INFORMATION ONLY	142+99.40	47.60' RT.
1035	717640.23	117096.85	NOT SET, FOR INFORMATION ONLY	141+92.75	48.45' RT.
1036	717613.63	117071.12	NOT SET, FOR INFORMATION ONLY	141+67.13	75.14' RT.
1037	717614.19	117010.03	NOT SET, FOR INFORMATION ONLY	141+06.03	74.83' RT.
1038	717640.62	116984.05	NOT SET, FOR INFORMATION ONLY	140+79.95	48.50' RT.
1039	717646.07	116983.46	NOT SET, FOR INFORMATION ONLY	140+79.33	43.06' RT.
1040	717635.07	116869.03	NOT SET, FOR INFORMATION ONLY	139+64.95	54.50' RT.
1041	717641.86	114324.95	NOT SET, FOR INFORMATION ONLY	114+20.61	49.00' RT.
1043	717611.17	116694.04	NOT SET, FOR INFORMATION ONLY	137+90.06	79.09' RT.
1044	717611.16	116685.32	NOT SET, FOR INFORMATION ONLY	137+81.33	79.13' RT.
1045	717635.35	116662.85	NOT SET, FOR INFORMATION ONLY	137+58.77	55.03' RT.
1046	717634.46	116553.23	NOT SET, FOR INFORMATION ONLY	136+49.16	56.34' RT.
1047	717636.27	116537.23	NOT SET, FOR INFORMATION ONLY	136+33.15	54.59' RT.
1048	717636.61	116389.31	NOT SET, FOR INFORMATION ONLY	134+85.23	54.84' RT.
1049	717617.56	116377.56	NOT SET, FOR INFORMATION ONLY	134+73.55	73.94' RT.
1050	717585.85	116378.37	NOT SET, FOR INFORMATION ONLY	134+74.49	105.64' RT.

 CITY OF ARVADA COLORADO 8101 Ralston Road, Arvada, CO 80002 Phone: 720-898-7640	Sheet Revisions			Sheet Revisions			Sheet Revisions			 AzTec Consultants, Inc. 300 E. Mineral Ave, Suite 1 Littleton, Colorado 80122 Phone: (303)713-1898 Fax: (303)713-1897 www.aztecconsultants.com	Right of Way Plans					
	Date			Date			Date				Monumentation Sheet					
	Description			Description			Description				City of Arvada Project Number: 18-ST-40					
	Initials			Initials			Initials				Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.					
											CITY OF ARVADA, COLORADO					
											Project Code		Last Mod. Date		Subset	
									18-40		06-30-2020		5.06 of 5.08		5.06	

TABULATION OF TEMPORARY EASEMENT POINTS					
Point No.	Northing(ft)	Easting(ft)	Description	Alignment Stationing	Alignment Offset
1051	717637.59	114325.02	NOT SET, FOR INFORMATION ONLY	114+20.68	53.27' RT.
1052	717641.15	115243.27	NOT SET, FOR INFORMATION ONLY	123+38.93	50.50' RT.
1053	717652.02	115243.26	NOT SET, FOR INFORMATION ONLY	123+38.92	39.63' RT.
1054	717651.82	115425.80	NOT SET, FOR INFORMATION ONLY	125+21.46	39.99' RT.
1055	717638.77	115861.90	NOT SET, FOR INFORMATION ONLY	129+57.55	53.42' RT.
1056	717635.30	114148.15	NOT SET, FOR INFORMATION ONLY	112+43.81	55.41' RT.
1057	717624.29	114148.30	NOT SET, FOR INFORMATION ONLY	112+43.94	66.42' RT.
1058	717624.14	114136.99	NOT SET, FOR INFORMATION ONLY	112+32.63	66.56' RT.
1059	717613.89	115894.24	NOT SET, FOR INFORMATION ONLY	129+89.88	78.33' RT.
1060	717600.23	114381.66	NOT SET, FOR INFORMATION ONLY	114+77.28	90.68' RT.
1061	717600.19	114373.66	NOT SET, FOR INFORMATION ONLY	114+69.28	90.71' RT.
1062	717609.56	114364.26	NOT SET, FOR INFORMATION ONLY	114+59.89	81.33' RT.
1063	717641.89	114364.31	NOT SET, FOR INFORMATION ONLY	114+59.97	49.00' RT.
1064	717621.44	114436.67	NOT SET, FOR INFORMATION ONLY	115+32.31	69.52' RT.
1065	717616.06	114677.01	NOT SET, FOR INFORMATION ONLY	117+72.64	75.10' RT.
1066	717640.12	114676.76	NOT SET, FOR INFORMATION ONLY	117+72.41	51.04' RT.
1067	717640.10	114603.93	NOT SET, FOR INFORMATION ONLY	116+99.59	51.00' RT.
1068	717629.82	114603.94	NOT SET, FOR INFORMATION ONLY	116+99.58	61.28' RT.
1069	717628.77	114815.76	NOT SET, FOR INFORMATION ONLY	119+11.41	62.51' RT.
1070	717628.77	114801.87	NOT SET, FOR INFORMATION ONLY	118+97.51	62.50' RT.
1071	717638.77	114801.87	NOT SET, FOR INFORMATION ONLY	118+97.52	52.50' RT.
1072	717638.73	114755.43	NOT SET, FOR INFORMATION ONLY	118+51.08	52.50' RT.
1073	717616.28	114755.50	NOT SET, FOR INFORMATION ONLY	118+51.14	74.95' RT.
1074	717633.96	114890.82	NOT SET, FOR INFORMATION ONLY	119+86.47	57.39' RT.
1075	717598.45	115016.84	NOT SET, FOR INFORMATION ONLY	121+12.46	93.00' RT.
1076	717639.65	115016.80	NOT SET, FOR INFORMATION ONLY	121+12.46	51.80' RT.
1077	717638.87	114890.82	NOT SET, FOR INFORMATION ONLY	119+86.47	52.48' RT.
1078	717592.55	115100.41	NOT SET, FOR INFORMATION ONLY	121+96.03	98.98' RT.
1079	717641.12	115210.63	NOT SET, FOR INFORMATION ONLY	123+06.29	50.50' RT.
1080	717641.03	115105.42	NOT SET, FOR INFORMATION ONLY	122+01.07	50.50' RT.
1081	717636.03	115100.42	NOT SET, FOR INFORMATION ONLY	121+96.07	55.50' RT.
1082	717760.19	115657.46	NOT SET, FOR INFORMATION ONLY	127+53.22	68.18' LT.
1083	717645.87	116958.55	NOT SET, FOR INFORMATION ONLY	140+54.43	43.35' RT.
1084	717640.72	116958.54	NOT SET, FOR INFORMATION ONLY	140+54.43	48.50' RT.
1085	717640.79	116939.64	NOT SET, FOR INFORMATION ONLY	140+35.54	48.50' RT.
1086	717646.02	116938.87	NOT SET, FOR INFORMATION ONLY	140+34.74	43.28' RT.
1087	717645.57	116907.75	NOT SET, FOR INFORMATION ONLY	140+03.63	43.85' RT.
1088	717640.92	116907.72	NOT SET, FOR INFORMATION ONLY	140+03.62	48.50' RT.
1089	717641.01	116885.02	NOT SET, FOR INFORMATION ONLY	139+80.91	48.50' RT.
1090	717629.63	114556.24	NOT SET, FOR INFORMATION ONLY	116+51.89	61.43' RT.
1091	717629.40	114498.58	NOT SET, FOR INFORMATION ONLY	115+94.23	61.61' RT.
1092	717609.02	116269.96	NOT SET, FOR INFORMATION ONLY	13+365.99	82.90' RT.
1093	717637.43	116270.08	NOT SET, FOR INFORMATION ONLY	13+365.99	54.49' RT.
1094	717637.45	116260.53	NOT SET, FOR INFORMATION ONLY	13+356.45	54.50' RT.
1095	717630.75	116260.53	NOT SET, FOR INFORMATION ONLY	13+356.47	61.20' RT.
1096	717630.75	116256.45	NOT SET, FOR INFORMATION ONLY	13+352.39	61.21' RT.
1097	717627.29	116256.45	NOT SET, FOR INFORMATION ONLY	13+352.40	64.67' RT.
1098	717626.61	116191.24	NOT SET, FOR INFORMATION ONLY	132+87.20	65.61' LT.
1099	717750.71	114049.37	NOT SET, FOR INFORMATION ONLY	111+45.12	60.09' LT.
1100	717751.19	114082.40	NOT SET, FOR INFORMATION ONLY	111+78.16	60.55' LT.
1101	717758.23	114081.86	NOT SET, FOR INFORMATION ONLY	111+77.62	67.58' LT.
1220	717633.96	114872.15	NOT SET, FOR INFORMATION ONLY	119+67.80	57.37' RT.
1221	717638.96	114872.15	NOT SET, FOR INFORMATION ONLY	119+67.81	52.37' RT.

TABULATION OF TEMPORARY EASEMENT POINTS					
Point No.	Northing(ft)	Easting(ft)	Description	Alignment Stationing	Alignment Offset
1222	717638.96	114815.65	NOT SET, FOR INFORMATION ONLY	119+11.31	52.32' RT.
1223	717613.89	116066.42	NOT SET, FOR INFORMATION ONLY	131+62.05	78.47' RT.
1224	717611.99	116066.42	NOT SET, FOR INFORMATION ONLY	131+62.05	80.37' RT.
1225	717611.86	116039.42	NOT SET, FOR INFORMATION ONLY	131+35.05	80.47' RT.
1226	717613.89	116039.42	NOT SET, FOR INFORMATION ONLY	131+35.05	78.45' RT.
1227	717740.51	117457.47	NOT SET, FOR INFORMATION ONLY	145+53.42	51.14' LT.
1228	717746.34	114857.39	NOT SET, FOR INFORMATION ONLY	119+53.14	55.02' LT.
1229	717742.39	114857.40	NOT SET, FOR INFORMATION ONLY	119+53.15	51.08' LT.
1230	717742.47	114949.43	NOT SET, FOR INFORMATION ONLY	120+45.17	51.08' LT.
1231	717746.50	114949.42	NOT SET, FOR INFORMATION ONLY	120+45.17	55.10' LT.
1232	717632.27	117468.50	NOT SET, FOR INFORMATION ONLY	145+63.95	57.15' RT.
1233	717636.88	117468.48	NOT SET, FOR INFORMATION ONLY	145+63.95	52.54' RT.
1234	717648.60	117962.69	NOT SET, FOR INFORMATION ONLY	150+58.47	42.50' RT.
1235	717648.62	117952.69	NOT SET, FOR INFORMATION ONLY	150+48.47	42.50' RT.
1236	717648.63	117941.55	NOT SET, FOR INFORMATION ONLY	150+37.33	42.50' RT.
1237	717644.00	117941.55	NOT SET, FOR INFORMATION ONLY	150+37.33	47.13' RT.

TABULATION OF CALCULATED POINTS					
Point No.	Northing(ft)	Easting(ft)	Description	Alignment Stationing	Alignment Offset
900	717715.67	113237.23	NOT SET, FOR INFORMATION ONLY	103+33.41	27.83' LT.
901	717717.14	113711.63	NOT SET, FOR INFORMATION ONLY	108+07.33	26.66' LT.
902	717654.27	113112.56	NOT SET, FOR INFORMATION ONLY	102+07.84	31.50' RT.
903	717657.10	113290.13	NOT SET, FOR INFORMATION ONLY	103+85.25	31.67' RT.
904	717659.05	113412.11	NOT SET, FOR INFORMATION ONLY	105+07.81	31.43' RT.
905	717657.05	113412.14	NOT SET, FOR INFORMATION ONLY	105+07.84	33.42' RT.
906	717657.60	113576.93	NOT SET, FOR INFORMATION ONLY	106+72.63	32.88' RT.
907	717658.06	113713.74	NOT SET, FOR INFORMATION ONLY	108+09.43	32.43' RT.
908	717648.84	113717.03	NOT SET, FOR INFORMATION ONLY	108+12.73	41.65' RT.
909	717560.37	113717.99	NOT SET, FOR INFORMATION ONLY	108+13.68	130.12' RT.
910	717553.92	113718.06	NOT SET, FOR INFORMATION ONLY	108+13.75	136.57' RT.
911	717649.79	113767.03	NOT SET, FOR INFORMATION ONLY	108+62.73	40.70' RT.
912	717656.50	113768.53	NOT SET, FOR INFORMATION ONLY	108+64.23	33.99' RT.
913	717662.14	114044.51	NOT SET, FOR INFORMATION ONLY	111+40.18	28.48' RT.
914	717654.13	114046.95	NOT SET, FOR INFORMATION ONLY	111+42.61	36.49' RT.
915	717719.59	114136.97	NOT SET, FOR INFORMATION ONLY	112+32.69	28.90' LT.
916	717720.66	114821.71	NOT SET, FOR INFORMATION ONLY	119+17.44	29.37' LT.
917	717722.77	115870.40	NOT SET, FOR INFORMATION ONLY	129+66.13	30.57' LT.
918	717726.53	115849.54	NOT SET, FOR INFORMATION ONLY	129+45.27	34.36' LT.
919	717732.68	115815.49	NOT SET, FOR INFORMATION ONLY	129+11.23	40.54' LT.
920	717732.90	115765.49	NOT SET, FOR INFORMATION ONLY	128+61.23	40.80' LT.
921	717722.11	116164.57	NOT SET, FOR INFORMATION ONLY	132+60.15	29.78' LT.
922	717721.90	116255.40	NOT SET, FOR INFORMATION ONLY	133+50.99	29.93' LT.
923	717737.01	116270.44	NOT SET, FOR INFORMATION ONLY	133+65.96	45.09' LT.
924	717721.75	116325.42	NOT SET, FOR INFORMATION ONLY	134+21.00	30.05' LT.
925	717736.67	116310.44	NOT SET, FOR INFORMATION ONLY	134+05.97	44.91' LT.
926	717720.20	117017.55	NOT SET, FOR INFORMATION ONLY	141+13.13	31.21' LT.
927	717720.13	117067.55	NOT SET, FOR INFORMATION ONLY	141+63.13	31.34' LT.
928	717720.02	117232.55	NOT SET, FOR INFORMATION ONLY	143+28.40	31.68' LT.
929	717719.97	117307.55	NOT SET, FOR INFORMATION ONLY	144+03.40	31.29' LT.
930	717719.91	117382.55	NOT SET, FOR INFORMATION ONLY	144+78.40	30.89' LT.
931	717719.86	117457.55	NOT SET, FOR INFORMATION ONLY		



CITY OF ARVADA COLORADO
8101 Ralston Road, Arvada, CO 80002
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Sheet Revisions		
Date	Description	Initials

Sheet Revisions		
Date	Description	Initials

Sheet Revisions		
Date	Description	Initials



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Right of Way Plans				
Monumentation Sheet				
City of Arvada Project Number: 18-ST-40				
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.				
CITY OF ARVADA, COLORADO				
Project Code	Last Mod. Date	Subset	Sheet No.	
18-40	06-30-2020	5.07 of 5.08	5.07	

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TABULATION OF CALCULATED POINTS					
Point No.	Northing(ft)	Easting(ft)	Description	Alignment Stationing	Alignment Offset
951	717659.83	117495.92	NOT SET, FOR INFORMATION ONLY	145+91.49	29.71' RT.
952	717659.83	117504.92	NOT SET, FOR INFORMATION ONLY	146+00.49	29.75' RT.
953	717659.89	117409.92	NOT SET, FOR INFORMATION ONLY	145+05.49	29.25' RT.
954	717659.94	117349.35	NOT SET, FOR INFORMATION ONLY	144+44.93	28.93' RT.
955	717660.02	117224.34	NOT SET, FOR INFORMATION ONLY	143+19.92	28.27' RT.
956	717656.04	117208.38	NOT SET, FOR INFORMATION ONLY	143+04.21	32.21' RT.
957	717660.22	117010.01	NOT SET, FOR INFORMATION ONLY	141+05.83	28.80' RT.
958	717660.50	116885.01	NOT SET, FOR INFORMATION ONLY	139+80.83	29.01' RT.
959	717660.53	116869.01	NOT SET, FOR INFORMATION ONLY	139+64.83	29.04' RT.
960	717660.82	116740.12	NOT SET, FOR INFORMATION ONLY	138+35.94	29.25' RT.
961	717660.92	116694.02	NOT SET, FOR INFORMATION ONLY	137+89.84	29.33' RT.
962	717661.24	116553.22	NOT SET, FOR INFORMATION ONLY	136+49.04	29.57' RT.
963	717661.27	116537.22	NOT SET, FOR INFORMATION ONLY	136+33.04	29.59' RT.
964	717661.58	116400.32	NOT SET, FOR INFORMATION ONLY	134+96.14	29.82' RT.
965	717646.58	116400.33	NOT SET, FOR INFORMATION ONLY	134+96.20	44.82' RT.
966	717646.54	116395.45	NOT SET, FOR INFORMATION ONLY	134+91.32	44.88' RT.
967	717593.38	116373.18	NOT SET, FOR INFORMATION ONLY	134+69.26	98.13' RT.
968	717609.78	116372.75	NOT SET, FOR INFORMATION ONLY	134+68.78	81.73' RT.
969	717656.12	117090.45	NOT SET, FOR INFORMATION ONLY	141+86.28	32.59' RT.
970	717608.90	116298.53	NOT SET, FOR INFORMATION ONLY	133+94.56	82.90' RT.
971	717644.79	116283.80	NOT SET, FOR INFORMATION ONLY	133+79.69	47.08' RT.
972	717653.88	116270.38	NOT SET, FOR INFORMATION ONLY	133+66.23	38.04' RT.
973	717661.87	116270.31	NOT SET, FOR INFORMATION ONLY	133+66.13	30.04' RT.
974	717659.97	114096.90	NOT SET, FOR INFORMATION ONLY	111+92.57	30.69' RT.
975	717663.60	114324.61	NOT SET, FOR INFORMATION ONLY	114+20.28	27.25' RT.
976	717664.51	114381.30	NOT SET, FOR INFORMATION ONLY	114+76.98	26.4' RT.
977	717621.38	114426.54	NOT SET, FOR INFORMATION ONLY	115+22.18	69.57' RT.
978	717650.07	114426.38	NOT SET, FOR INFORMATION ONLY	115+22.05	40.87' RT.
979	717665.15	114441.40	NOT SET, FOR INFORMATION ONLY	115+37.08	25.80' RT.
980	717665.00	114555.86	NOT SET, FOR INFORMATION ONLY	116+51.54	26.05' RT.
981	717664.85	114670.55	NOT SET, FOR INFORMATION ONLY	117+66.23	26.30' RT.
982	717650.01	114685.53	NOT SET, FOR INFORMATION ONLY	117+81.19	41.16' RT.
983	717619.27	114685.86	NOT SET, FOR INFORMATION ONLY	117+81.50	71.90' RT.
984	717616.16	114685.89	NOT SET, FOR INFORMATION ONLY	117+81.53	75.01' RT.
985	717616.21	114735.89	NOT SET, FOR INFORMATION ONLY	118+31.53	75.00' RT.
986	717620.70	114735.85	NOT SET, FOR INFORMATION ONLY	118+31.49	70.51' RT.
987	717649.58	114735.54	NOT SET, FOR INFORMATION ONLY	118+31.20	41.63' RT.
988	717664.75	114750.55	NOT SET, FOR INFORMATION ONLY	118+46.23	26.48' RT.
989	717664.66	114815.38	NOT SET, FOR INFORMATION ONLY	119+11.05	26.62' RT.
990	717664.56	114890.84	NOT SET, FOR INFORMATION ONLY	119+86.52	26.78' RT.
991	717664.40	115025.54	NOT SET, FOR INFORMATION ONLY	121+21.21	27.06' RT.
992	717608.23	115025.76	NOT SET, FOR INFORMATION ONLY	121+21.39	83.23' RT.
993	717598.46	115025.80	NOT SET, FOR INFORMATION ONLY	121+21.42	93.00' RT.
994	717592.69	115085.82	NOT SET, FOR INFORMATION ONLY	121+81.44	98.83' RT.
995	717636.81	115085.65	NOT SET, FOR INFORMATION ONLY	121+81.30	54.70' RT.
996	717648.64	115085.60	NOT SET, FOR INFORMATION ONLY	121+81.26	42.87' RT.
997	717663.70	115100.74	NOT SET, FOR INFORMATION ONLY	121+96.42	27.82' RT.
998	717662.68	115210.54	NOT SET, FOR INFORMATION ONLY	123+06.22	28.94' RT.
999	717717.12	114012.09	NOT SET, FOR INFORMATION ONLY	111+07.82	26.54' LT.

1***

TABULATION OF CALCULATED POINTS					
Point No.	Northing(ft)	Easting(ft)	Description	Alignment Stationing	Alignment Offset
1200	717748.97	115749.39	NOT SET, FOR INFORMATION ONLY	128+45.14	56.88' LT.
1201	717722.56	115964.56	NOT SET, FOR INFORMATION ONLY	130+60.29	30.28' LT.
1202	717722.44	116014.56	NOT SET, FOR INFORMATION ONLY	131+10.29	30.13' LT.
1203	717635.13	117078.65	NOT SET, FOR INFORMATION ONLY	141+74.57	53.62' RT.
1204	717635.13	117071.05	NOT SET, FOR INFORMATION ONLY	141+66.96	53.65' RT.
1205	717615.53	116295.09	NOT SET, FOR INFORMATION ONLY	133+91.09	76.29' RT.
1206	717662.50	717662.50	NOT SET, FOR INFORMATION ONLY	130+85.61	29.79' RT.
1207	717656.09	717656.09	NOT SET, FOR INFORMATION ONLY	129+56.07	36.09' RT.
1208	717649.96	717649.96	NOT SET, FOR INFORMATION ONLY	128+40.59	42.13' RT.
1209	717648.11	717648.11	NOT SET, FOR INFORMATION ONLY	128+15.71	43.95' RT.
1210	717647.37	717647.37	NOT SET, FOR INFORMATION ONLY	127+62.35	44.64' RT.
1211	717646.45	717646.45	NOT SET, FOR INFORMATION ONLY	126+95.72	45.51' RT.
1212	717647.20	717647.20	NOT SET, FOR INFORMATION ONLY	126+84.93	44.75' RT.
1213	717648.47	717648.47	NOT SET, FOR INFORMATION ONLY	126+66.51	43.46' RT.
1214	717655.23	717655.23	NOT SET, FOR INFORMATION ONLY	125+68.96	36.62' RT.
1215	717658.94	717658.94	NOT SET, FOR INFORMATION ONLY	125+15.37	32.86' RT.
1216	717658.82	125+06.23	NOT SET, FOR INFORMATION ONLY	125+06.23	32.98' RT.
1217	717660.81	717660.81	NOT SET, FOR INFORMATION ONLY	125+06.23	30.98' RT.
1218	717637.78	717637.78	NOT SET, FOR INFORMATION ONLY	133+81.88	54.07' RT.
1219	717659.94	113906.89	NOT SET, FOR INFORMATION ONLY	110+02.59	30.56' RT.
1220	717651.23	115762.08	NOT SET, FOR INFORMATION ONLY	128+57.74	40.87' RT.



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Right of Way Plans				
Monumentation Sheet				
City of Arvada Project Number: 18-ST-40				
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.				
CITY OF ARVADA, COLORADO				
Project Code	Last Mod. Date	Subset	Sheet No.	
18-40	04-12-2020	5.08 of 5.08	5.08	

RALSTON ROAD PROJECT CONTROL LINE
DESCRIPTION: PROPOSED ALIGNMENT

STATION	NORTHING	EASTING
ELEMENT: LINEAR		
POB () 100+00.00	717683.27	112904.36
PI () 102+35.95	717686.10	113140.28
TANGENT DIRECTION: N 89°18'42.91" E		
TANGENT LENGTH: 235.945		
ELEMENT: LINEAR		
PI () 102+35.95	717686.10	113140.28
PI () 104+80.83	717690.47	113385.13
TANGENT DIRECTION: N 88°58'37.66" E		
TANGENT LENGTH: 244.887		
ELEMENT: LINEAR		
PI () 104+80.83	717690.47	113385.13
PI () 110+03.24	717690.50	113907.54
TANGENT DIRECTION: N 89°59'50.77" E		
TANGENT LENGTH: 522.407		
ELEMENT: LINEAR		
PI () 110+03.24	717690.50	113907.54
PI () 132+35.62	717692.42	116139.92
TANGENT DIRECTION: N 89°57'01.93" E		
TANGENT LENGTH: 2232.384		
ELEMENT: LINEAR		
PI () 132+35.62	717692.42	116139.92
PI () 143+06.07	717688.23	117210.36
TANGENT DIRECTION: S 89°46'32.69" E		
TANGENT LENGTH: 1070.446		
ELEMENT: LINEAR		
PI () 143+06.07	717688.23	117210.36
PI () 149+63.02	717691.24	117867.31
TANGENT DIRECTION: N 89°44'15.50" E		
TANGENT LENGTH: 656.955		
ELEMENT: LINEAR		
PI () 149+63.02	717691.24	117867.31
POE () 154+52.13	717690.52	118356.41
TANGENT DIRECTION: S 89°54'56.81" E		
TANGENT LENGTH: 489.106		

TABULATION OF ALIQUOT MONUMENTS TO BE SET AFTER CONSTRUCTION					
Point No.	Northing(ft)	Easting(ft)	Description	Alignment Stationing	Alignment Offset
205	717653.79	113082.56	CENTER - SOUTH 1/16, SECTION 10, T. 3 S., R. 69 W., 6TH P.M.	101+77.84	31.61 RT.
206	717674.83	114401.25	SOUTHEAST 1/16, SECTION 10, T. 3 S., R. 69 W., 6TH P.M.	114+96.93	16.09 RT.
207	717693.10	115719.75	SOUTH 1/16, SECTION 10, T. 3 S., R. 69 W., 6TH P.M.	128+15.45	1.04 LT.
250	717690.16	117037.66	SOUTHWEST 1/16, SECTION 11, T. 3 S., R. 69 W., 6TH P.M.	141+33.36	1.24 LT.



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Date	Description	Initials

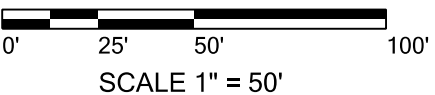
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Right of Way Plans			
Plan Sheet			
City of Arvada Project Number: 18-ST-40			
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.			
CITY OF ARVADA, COLORADO			
Project Code	Last Mod. Date	Subset	Sheet No.
18-40	04-29-2020	7.01 of 7.10	7.01

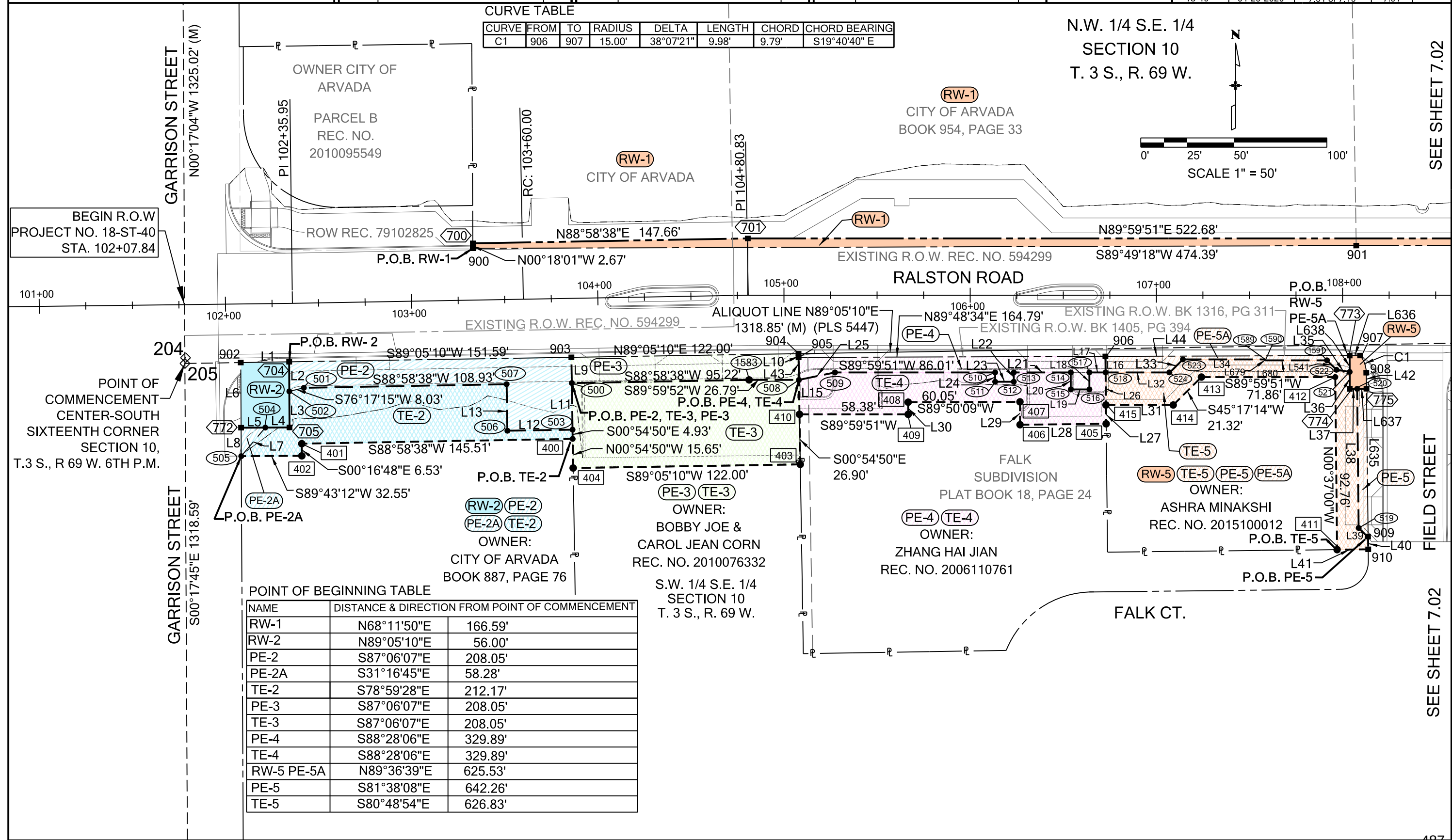
CURVE TABLE

CURVE	FROM	TO	RADIUS	DELTA	LENGTH	CHORD	CHORD BEARING
C1	906	907	15.00'	38°07'21"	9.98'	9.79'	S19°40'40" E

N.W. 1/4 S.E. 1/4
SECTION 10
T. 3 S., R. 69 W.



SEE SHEET 7.02



POINT OF BEGINNING TABLE

NAME	DISTANCE & DIRECTION FROM POINT OF COMMENCEMENT	
RW-1	N68°11'50"E	166.59'
RW-2	N89°05'10"E	56.00'
PE-2	S87°06'07"E	208.05'
PE-2A	S31°16'45"E	58.28'
TE-2	S78°59'28"E	212.17'
PE-3	S87°06'07"E	208.05'
TE-3	S87°06'07"E	208.05'
PE-4	S88°28'06"E	329.89'
TE-4	S88°28'06"E	329.89'
RW-5 PE-5A	N89°36'39"E	625.53'
PE-5	S81°38'08"E	642.26'
TE-5	S80°48'54"E	626.83'

SEE SHEET 7.02



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Right of Way Plans

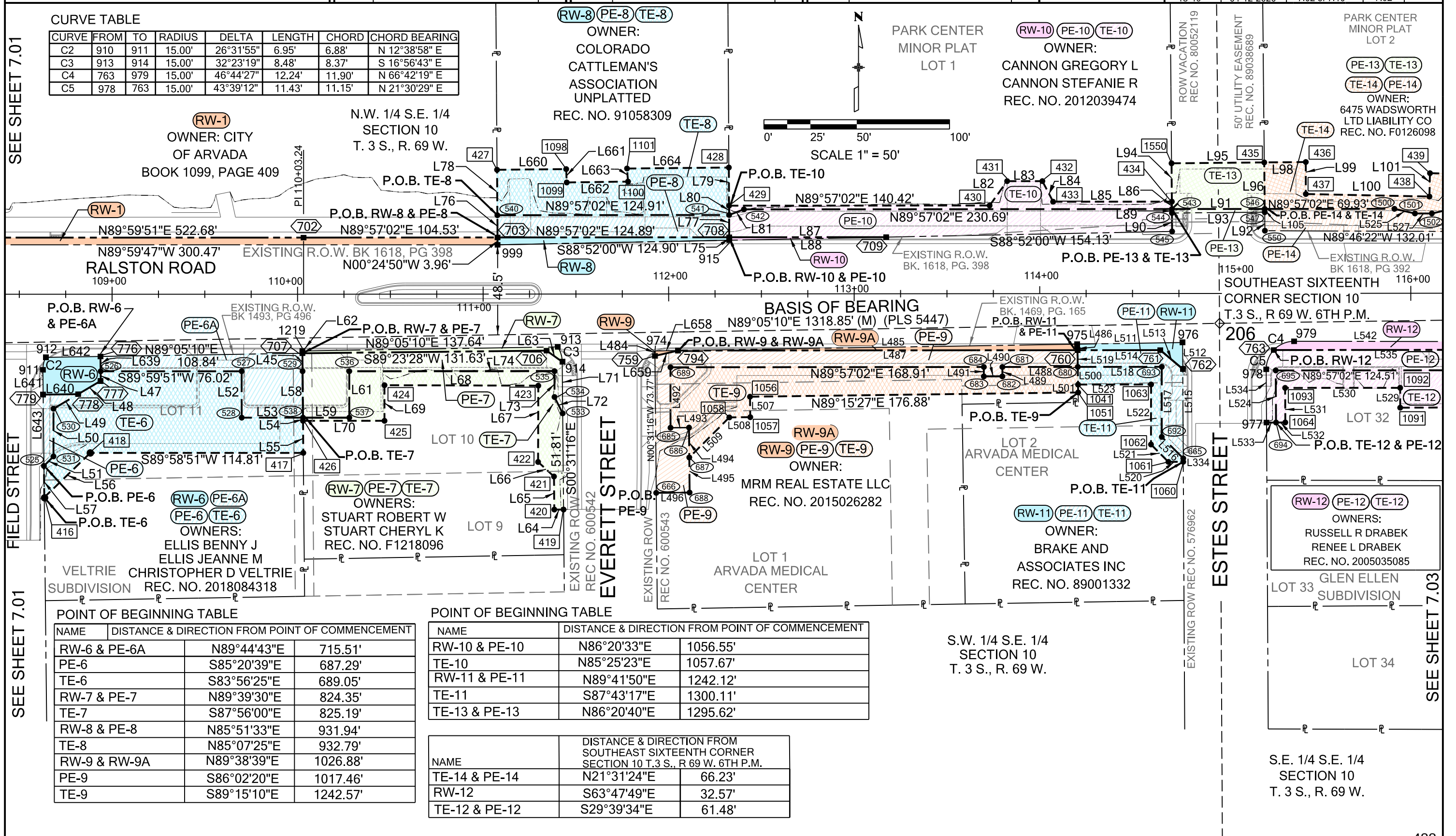
Plan Sheet

City of Arvada Project Number: 18-ST-40			
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.			
CITY OF ARVADA, COLORADO			
Project Code	Last Mod. Date	Subset	Sheet No.
18-40	04-12-2020	7.02 of 7.10	7.02

CURVE TABLE

CURVE	FROM	TO	RADIUS	DELTA	LENGTH	CHORD	CHORD BEARING
C2	910	911	15.00'	26°31'55"	6.95'	6.88'	N 12°38'58" E
C3	913	914	15.00'	32°23'19"	8.48'	8.37'	S 16°56'43" E
C4	763	979	15.00'	46°44'27"	12.24'	11.90'	N 66°42'19" E
C5	978	763	15.00'	43°39'12"	11.43'	11.15'	N 21°30'29" E

SEE SHEET 7.01





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Date	Description	Initials



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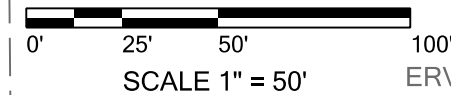
Right of Way Plans

Plan Sheet

City of Arvada Project Number: 18-ST-40			
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.			
CITY OF ARVADA, COLORADO			
Project Code	Last Mod. Date	Subset	Sheet No.
18-40	07-17-2020	7.03 of 7.10	7.03

CURVE TABLE

CURVE	FROM	TO	RADIUS	DELTA	LENGTH	CHORD	CHORD BEARING
C4	763	979	15.00'	46°44'27"	12.24'	11.90'	N 66°42'19" E
C5	978	763	15.00'	43°39'12"	11.43'	11.15'	N 21°30'29" E
C6	981	765	15.00'	43°47'58"	11.47'	11.19'	N 68°01'29" E
C7	765	982	15.00'	45°30'30"	11.91'	11.60'	S 23°22'15" E
C8	765	988	15.00'	43°04'45"	11.28'	11.01'	N 68°32'10" E
C9	987	765	15.00'	47°36'48"	12.47'	12.11'	N 23°11'24" E
C10	770	997	15.00'	35°20'43"	9.25'	9.11'	N 72°05'42" E
C11	996	770	15.00'	55°25'04"	14.51'	13.95'	N 27°28'48" E



LOT 2
ERVIN
SUBDIVISION

OWNER:
WINTER WALTER H JR
WINTER STUART R
REC. NO. 92096167

LOT 1
P.O.B. PE-21 & TE-21

LOT 21
OWNER:
ARLENE M. LEEPER
REC. NO. 24800137

LOT 22
OWNER:
POWERS ROBERT R
REC. NO. F0082446

LOT 23
OWNER:
AUCTUS FIDES LLC
REC. NO. 2012140965

LOT 24
OWNER:
8600 RALSTON LLC
REC. NO. 2017092762

LOT 25
OWNER:
HEYDARI AMIR
HAYDARI MONICA
REC. NO. 2018069894

LOT 26
OWNER:
JOYCE E BEAVERS
FAMILY TRUST
REC. NO. 2013023530

LOT 27
OWNER:
JOYCE E BEAVERS
FAMILY TRUST
REC. NO. 2013023530

LOT 28
OWNER:
JOYCE E BEAVERS
FAMILY TRUST
REC. NO. 2013023530

LOT 29
OWNER:
JOYCE E BEAVERS
FAMILY TRUST
REC. NO. 2013023530

LOT 30
OWNER:
JOYCE E BEAVERS
FAMILY TRUST
REC. NO. 2013023530

LOT 31
OWNER:
JOYCE E BEAVERS
FAMILY TRUST
REC. NO. 2013023530

LOT 32
OWNER:
JOYCE E BEAVERS
FAMILY TRUST
REC. NO. 2013023530

POINT OF BEGINNING TABLE

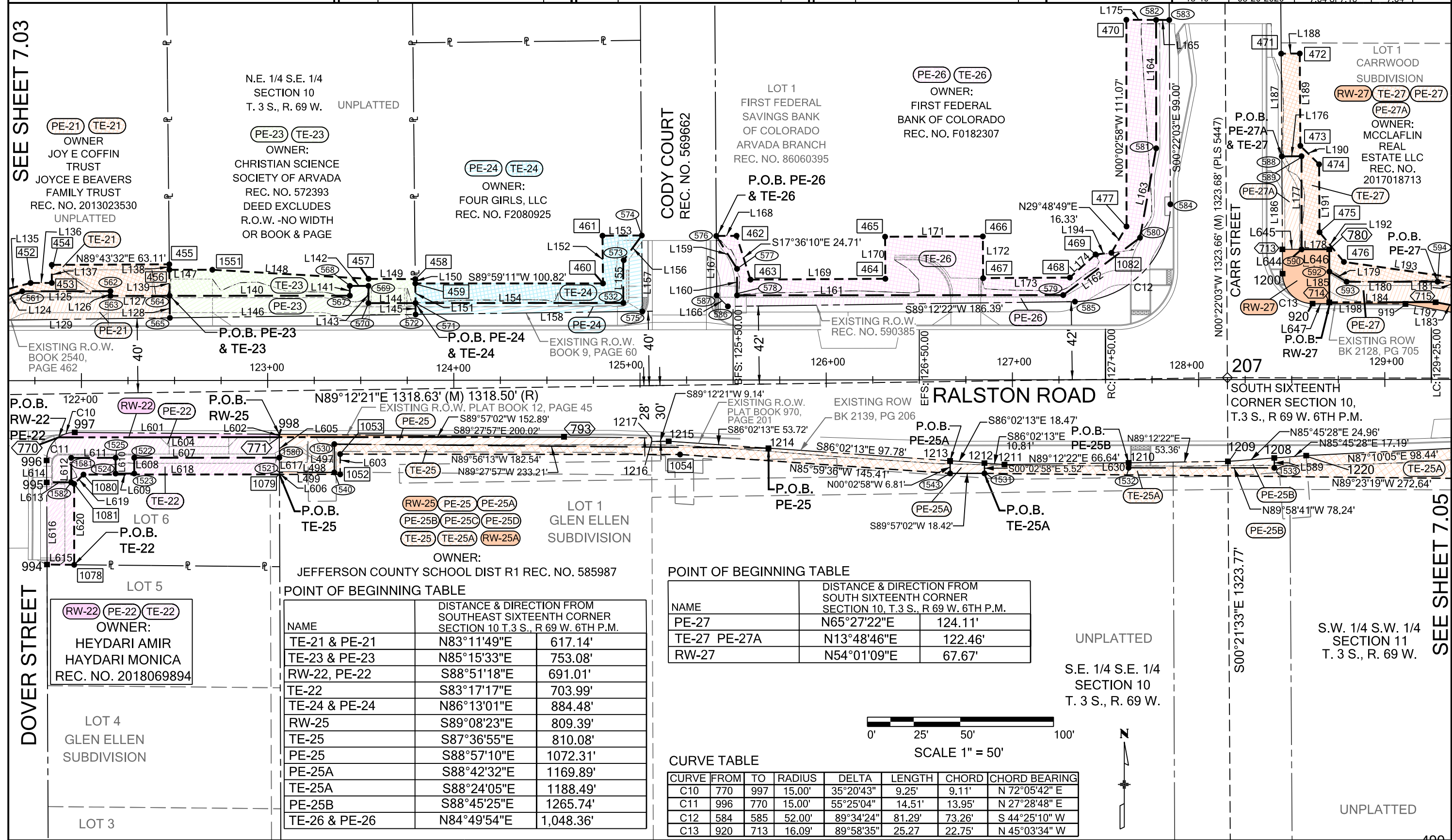
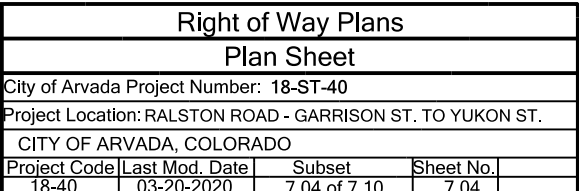
NAME	DISTANCE & DIRECTION FROM SOUTHEAST SIXTEENTH CORNER SECTION 10 T.3 S., R.69 W. 6TH P.M.
TE-14 & PE-14	N21°31'24"E 66.23'
TE-15 & PE-15	N68°26'59"E 168.05'
RW-15	N82°11'04"E 344.81'
RW-19	N84°42'07"E 509.35'
TE-19 & PE-19	N83°03'17"E 566.92'
TE-21 & PE-21	N83°11'49"E 617.14'
TE-23 & PE-23	N85°15'33"E 753.08'
RW-16	S86°22'06"E 155.12'
TE-16 & PE-16	S78°57'14"E 289.98'

POINT OF BEGINNING TABLE

NAME	DISTANCE & DIRECTION FROM SOUTHEAST SIXTEENTH CORNER SECTION 10 T.3 S., R.69 W. 6TH P.M.
RW-17 & PE 17	S87°37'01"E 339.43'
TE-17	S80°04'02"E 339.82'
RW-18, PE-18,	S88°21'51"E 489.87'
TE-18	S85°13'43"E 491.35'
RW-20, PE-20	S88°21'51"E 489.87'
TE-20	S83°01'47"E 629.29'
RW-22, PE-22	S88°51'18"E 691.01'
TE-22	S83°17'17"E 703.99'

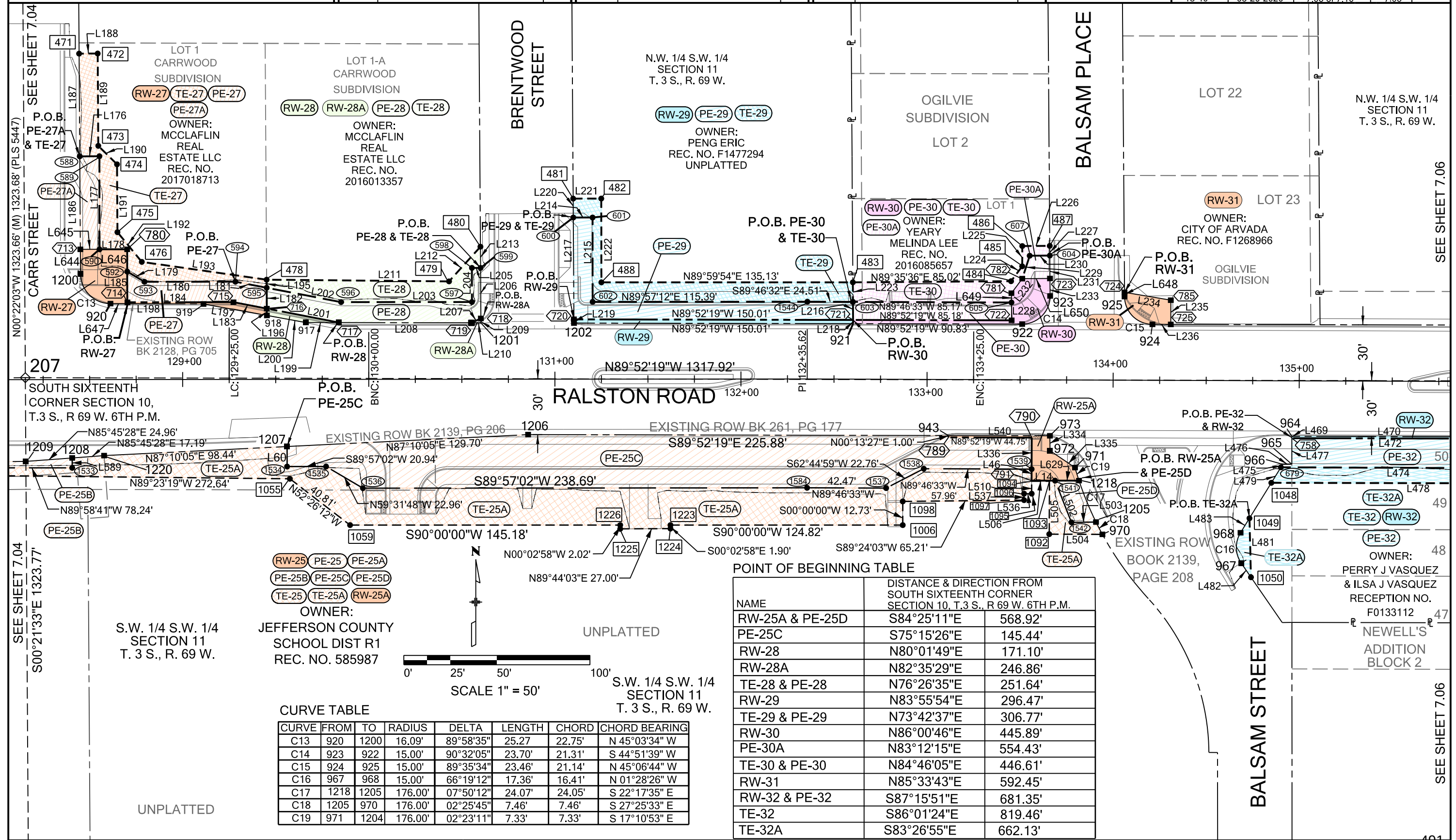
SEE SHHET 7.04

SEE SHHET 7.04

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Right of Way Plans Plan Sheet			
City of Arvada Project Number: 18-ST-40			
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST. CITY OF ARVADA, COLORADO			
Project Code	Last Mod. Date	Subset	Sheet No.
18-40	03-20-2020	7 05 of 7 10	7 05





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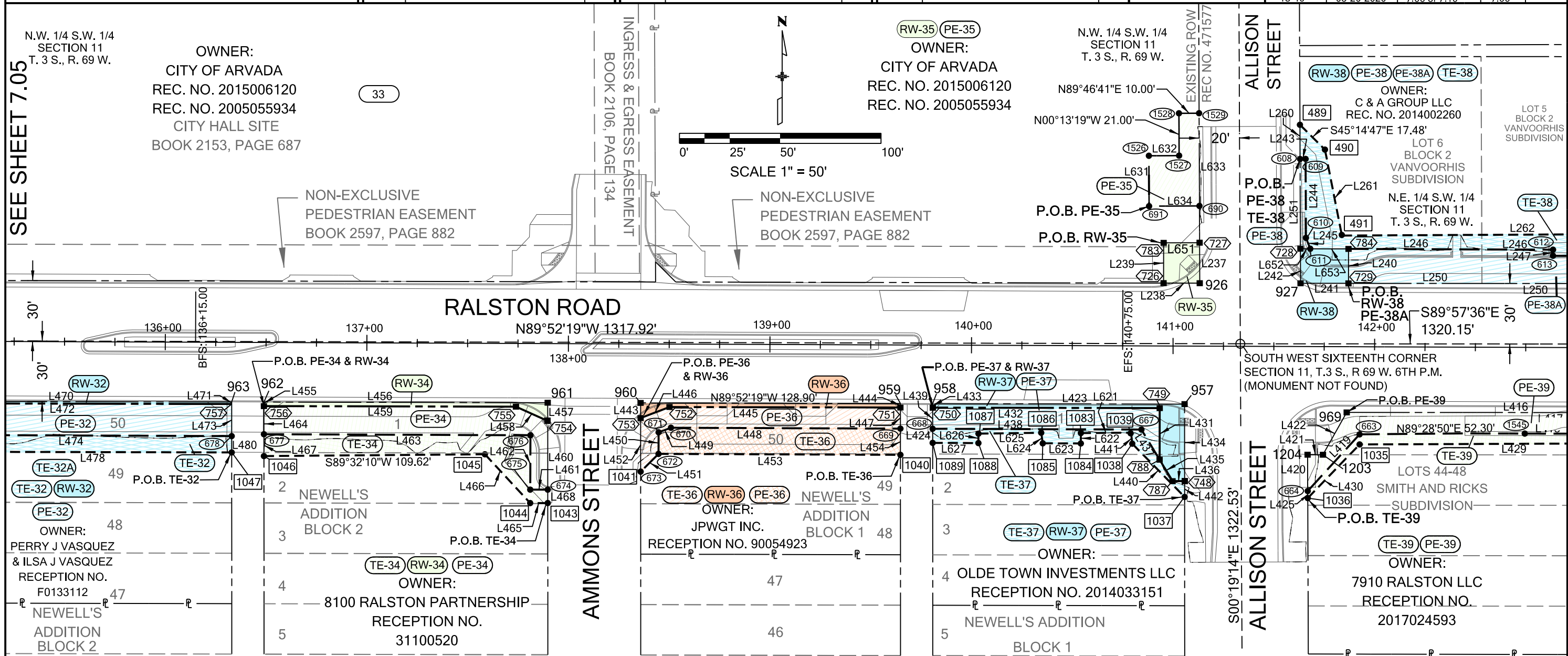
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Date	Description	Initials

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Date	Description	Initials

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Right of Way Plans				
Plan Sheet				
City of Arvada Project Number: 18-ST-40				
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.				
CITY OF ARVADA, COLORADO				
Project Code	Last Mod. Date	Subset	Sheet No.	
18-40	03-20-2020	7.06 of 7.10	7.06	



S.W. 1/4 S.W. 1/4
SECTION 11
T. 3 S., R. 69 W.

POINT OF BEGINNING TABLE

NAME	DISTANCE & DIRECTION FROM SOUTH SIXTEENTH CORNER SECTION 10, T.3 S., R 69 W. 6TH P.M.	
RW-32 & PE-32	S87°15'51"E	681.35'
TE-32	S86°01'24"E	819.46'
TE-32A	S83°26'55"E	662.13'
RW-35	N87°53'33"E	1280.75'
PE-35	N87°03'47"E	1274.32'
RW-34 & PE-34	S87°40'24"E	834.16'
TE-34	S85°11'34"E	977.74'
RW-36 & PE-36	S87°46'01"E	1021.15'
TE-36	S87°06'33"E	1150.75'
RW-37 & PE-37	S88°17'56"E	1165.78'
TE-37	S86°30'01"E	1292.70'

POINT OF BEGINNING TABLE

NAME	DISTANCE & DIRECTION FROM SOUTH WEST SIXTEENTH CORNER SECTION 11, T.3 S., R 69 W. 6TH P.M.	
TE-38 & PE-38	N17°55'42"E	96.31'
RW-38 & PE-38A	N60°49'52"E	61.47'
PE-39	S57°11'04"E	62.81'
TE-39	S23°37'10"E	83.52'

SEE SHEET 7.05

SEE SHEET 7.05

SEE SHEET 7.07



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Date	Description	Initials

Sheet Revisions

Date	Description	Initials

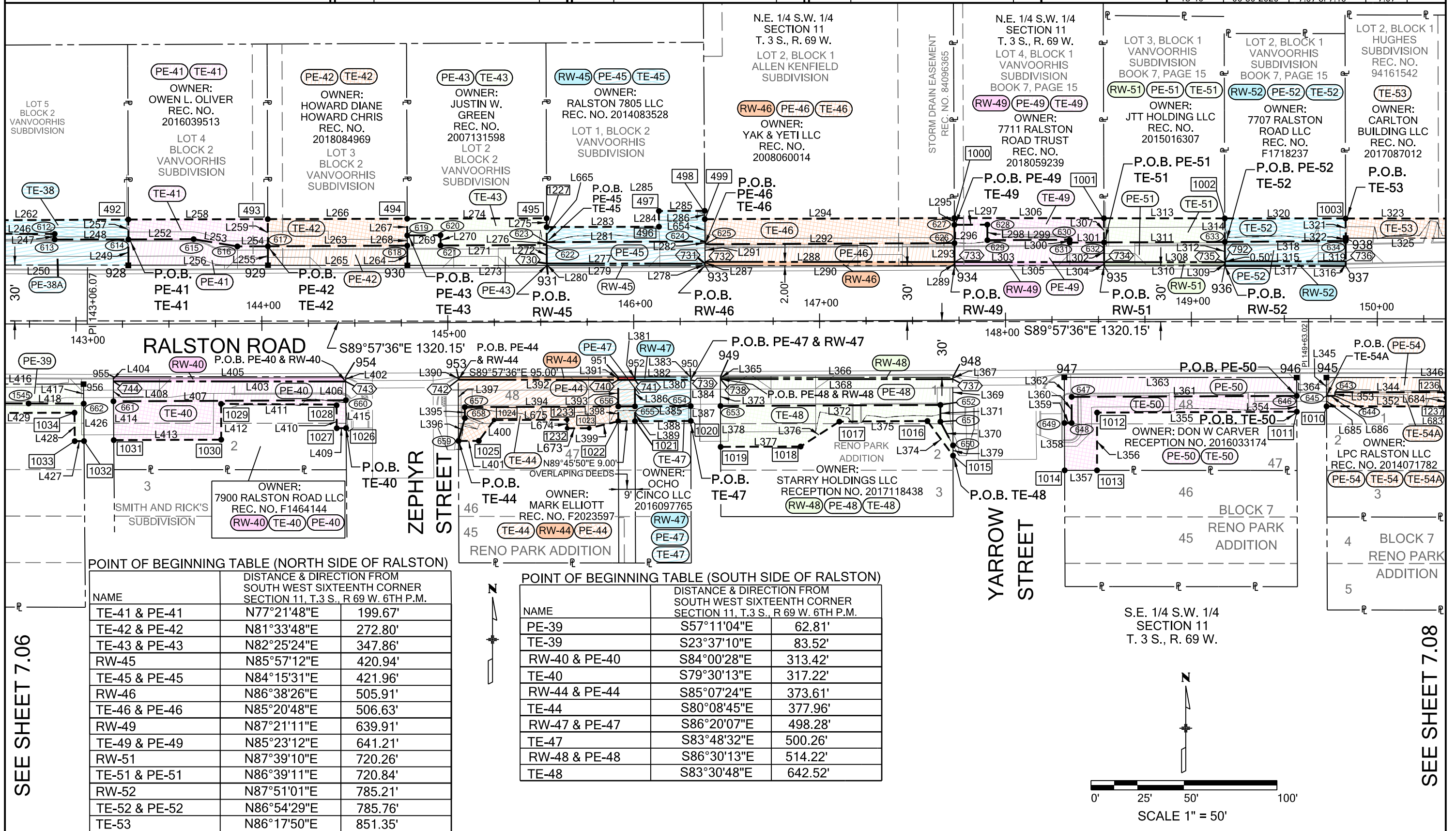


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Right of Way Plans

Plan Sheet

City of Arvada Project Number: 18-ST-40			
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.			
CITY OF ARVADA, COLORADO			
Project Code	Last Mod. Date	Subset	Sheet No.
18-40	06-30-2020	7.07 of 7.10	7.07





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Date	Description	Initials

Sheet Revisions

Date	Description	Initials

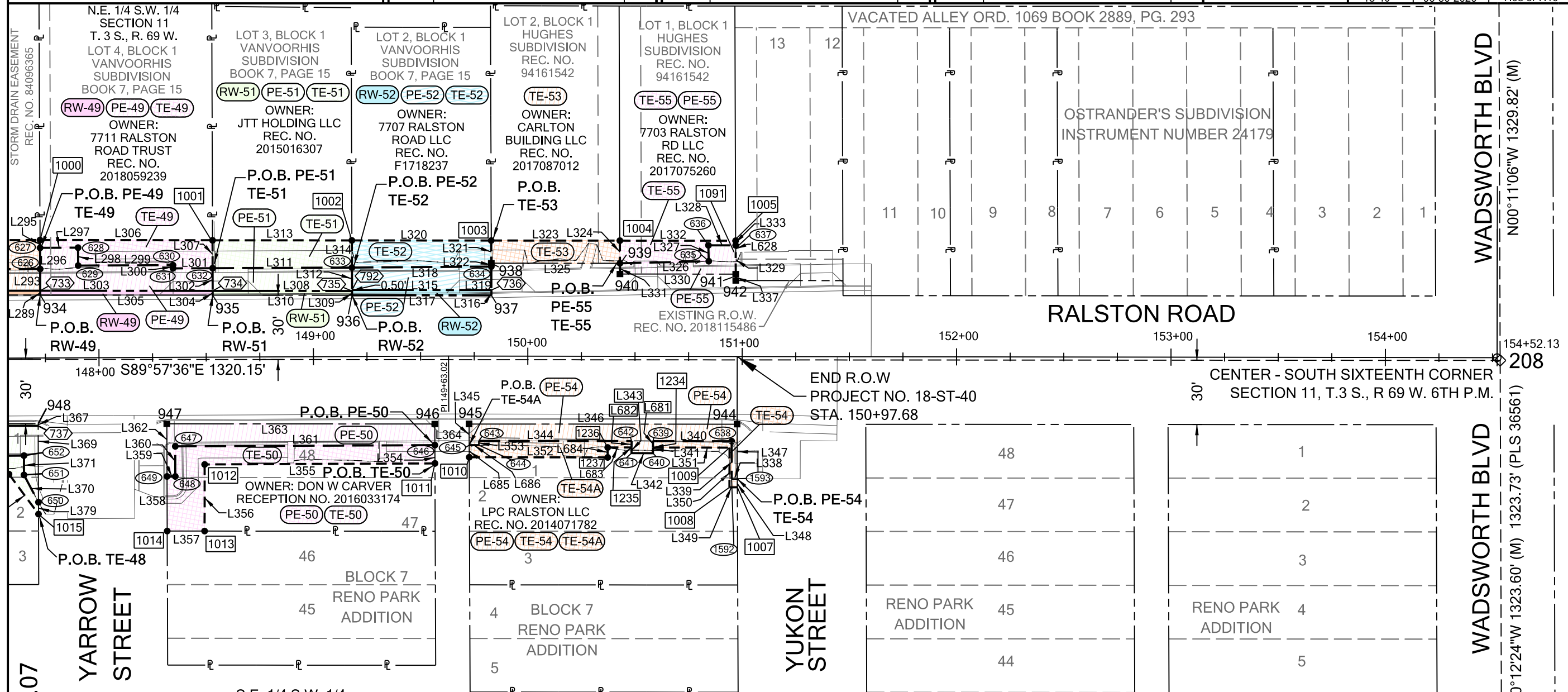


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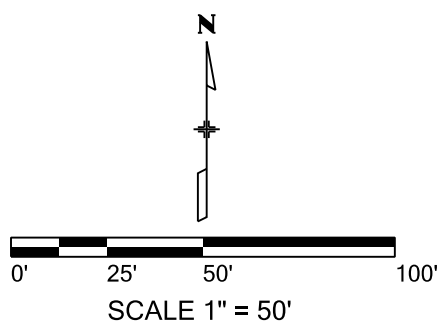
Right of Way Plans

Plan Sheet

City of Arvada Project Number: 18-ST-40			
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.			
CITY OF ARVADA, COLORADO			
Project Code	Last Mod. Date	Subset	Sheet No.
18-40	06-30-2020	7.08 of 7.10	7.08



S.E. 1/4 S.W. 1/4
SECTION 11
T. 3 S., R. 69 W.



POINT OF BEGINNING TABLE (NORTH SIDE OF RALSTON)

NAME	DISTANCE & DIRECTION FROM SOUTH WEST SIXTEENTH CORNER SECTION 11, T.3 S., R 69 W. 6TH P.M.
RW-49	N87°21'11"E 639.91'
TE-49 & PE-49	N85°23'12"E 641.21'
RW-51	N87°39'10"E 720.26'
TE-51 & PE-51	N86°39'11"E 720.84'
RW-52	N87°51'01"E 785.21'
TE-52 & PE-52	N86°54'29"E 785.76'
TE-53	N86°17'50"E 851.35'
TE-55 & PE-55	N87°12'28"E 910.69'
TE-56	N87°01'31"E 1014.89'

POINT OF BEGINNING TABLE (SOUTH SIDE OF RALSTON)

NAME	DISTANCE & DIRECTION FROM SOUTH WEST SIXTEENTH CORNER SECTION 11, T.3 S., R 69 W. 6TH P.M.
PE-50	S87°11'16"E 824.29'
TE-50	S86°35'53"E 824.78'
PE-54 & TE-54	S86°40'12"E 965.98'
TE-54A	S86°51'32"E 840.58'



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Right of Way Plans				
Plan Sheet				
City of Arvada Project Number: 18-ST-40				
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.				
CITY OF ARVADA, COLORADO				
Project Code	Last Mod. Date	Subset	Sheet No.	
18-40	07-17-2020	7.09 of 7.10	7.09	

LINE TABLE

L1	N89°05'10"E	26.00'
L2	S00°17'45"E	15.89'
L3	S00°17'45"E	19.39'
L4	S89°42'15"W	13.00'
L5	S89°42'15"W	13.00'
L6	N00°17'45"W	35.00'
L7	S40°05'12"W	20.07'
L8	N00°17'45"W	15.28'
L9	S00°54'50"E	13.83'
L10	S00°54'50"E	2.00'
L11	S00°54'50"E	25.07'
L12	S89°05'10"W	34.99'
L13	N00°55'52"W	25.00'
L14	N90°00'00"E	12.63'
L15	N00°54'50"W	18.50'
L16	S00°37'00"E	8.62'
L17	S89°59'51"W	8.70'
L18	S00°00'00"W	9.14'
L19	N90°00'00"E	10.00'
L20	N00°00'00"E	9.14'
L21	S89°59'51"W	30.60'
L22	S00°00'09"E	5.00'
L23	S89°59'51"W	10.00'
L24	S00°00'09"E	5.00'
L25	N78°20'06"E	19.79'
L26	S00°37'00"E	17.50'
L27	S00°37'00"E	10.11'
L28	S89°23'00"W	46.25'
L29	N00°09'51"W	12.29'
L30	S00°09'51"E	6.52'
L31	S89°59'51"W	36.13'
L32	S89°59'51"W	34.49'
L33	N44°59'51"E	9.90'
L34	N89°59'51"E	44.30'
L35	S80°46'09"E	10.81'
L36	N00°11'37"W	9.09'
L37	S89°48'23"E	3.98'
L38	S00°37'00"E	74.76'
L39	S45°00'09"E	7.15'
L40	S00°37'00"E	6.45'
L41	S89°23'00"W	16.70'
L42	S00°37'00"E	8.64'
L43	S00°54'50"E	12.08'
L44	N89°48'23"E	131.15'
L45	S00°31'16"E	9.68'
L46	S00°13'27"W	6.17'
L47	S00°37'00"E	5.14'
L48	S59°27'03"W	14.14'
L49	N59°27'03"E	15.44'

LINE TABLE

L50	N00°00'09"W	25.66'
L51	N44°59'51"E	7.29'
L52	N00°01'11"W	24.97'
L53	S89°58'49"W	33.03'
L54	N00°31'16"W	1.73'
L55	S00°31'16"E	17.26'
L56	S46°00'40"W	34.49'
L57	N00°37'00"W	16.95'
L58	S00°31'16"E	25.00'
L59	S89°58'49"W	24.97'
L60	N00°02'58"W	10.75'
L61	S00°01'11"E	24.97'
L62	N00°31'16"W	1.23'
L63	N54°38'30"W	10.33'
L64	S89°57'33"W	5.00'
L65	S00°34'26"E	17.80'
L66	N47°34'47"W	11.61'
L67	N00°10'22"E	41.09'
L68	N89°49'38"W	82.90'
L69	S00°00'00"W	19.19'
L70	N90°00'00"W	43.92'
L71	S00°31'16"E	27.80'
L72	S26°36'52"E	9.85'
L73	S00°02'58"E	13.97'
L74	S89°57'02"W	110.60'
L75	S00°19'19"E	1.60'
L76	N00°24'50"W	12.00'
L77	S00°19'19"E	12.00'
L78	N00°24'50"W	24.47'
L79	S00°19'19"E	20.56'
L80	S00°19'19"E	5.00'
L81	S69°19'39"W	8.52'
L82	N35°48'51"E	16.15'
L83	N89°57'02"E	19.00'
L84	S27°33'17"E	12.50'
L85	N89°57'02"E	64.00'
L86	S00°28'18"E	4.00'
L87	N89°57'02"E	84.59'
L88	S88°52'00"W	84.60'
L89	S00°28'18"E	2.15'
L90	S00°28'18"E	9.93'
L91	N89°57'02"E	50.00'
L92	N00°32'19"W	10.00'
L93	S89°27'41"W	50.00'
L94	N00°28'18"W	20.63'
L95	N89°27'09"E	49.97'
L96	N00°32'20"W	25.07'
L97	S00°32'19"E	12.37'
L98	N89°27'40"E	22.39'
L99	S00°02'58"E	17.23'

LINE TABLE

L100	S88°49'34"E	66.64'
L101	N01°20'03"E	12.59'
L102	S88°39'57"E	42.75'
L103	S00°32'19"E	12.04'
L104	S00°32'19"E	6.11'
L105	N00°32'20"W	1.73'
L106	S89°57'02"W	78.85'
L107	S00°32'19"E	1.13'
L108	N89°13'49"W	78.86'
L109	N69°57'50"W	11.65'
L110	S00°32'19"E	11.00'
L111	N00°32'19"W	9.26'
L112	N89°57'26"E	27.85'
L113	S00°32'19"E	7.73'
L114	N89°54'01"E	21.18'
L115	S00°32'19"E	13.49'
L116	S00°32'19"E	20.75'
L117	S89°12'21"W	55.79'
L118	N00°00'00"W	10.48'
L119	N90°00'00"E	10.87'
L120	S00°32'19"E	3.14'
L121	N89°27'41"E	10.13'
L122	S00°00'00"W	13.57'
L123	S89°57'02"W	34.06'
L124	S70°43'24"W	15.18'
L125	N89°57'02"E	47.40'
L126	S00°02'58"E	2.50'
L127	N89°57'02"E	31.78'
L128	S00°33'40"E	11.84'
L129	S89°12'21"W	137.60'
L130	S00°32'19"E	24.61'
L131	N00°32'19"W	5.42'
L132	N89°43'32"E	19.98'
L133	S00°02'58"E	14.48'
L134	N89°57'02"E	24.24'
L135	N75°05'57"E	19.51'
L136	N89°57'02"E	11.40'
L137	N00°02'58"W	9.70'
L138	S00°33'40"E	2.94'
L139	S00°33'40"E	14.00'
L140	N89°57'02"E	96.77'
L141	N00°02'58"W	5.26'
L142	N89°57'02"E	10.00'
L143	S00°02'58"E	9.26'
L144	N89°57'02"E	25.27'
L145	S00°33'40"E	6.12'
L146	S89°12'21"W	132.00'
L147	N89°57'02"E	23.09'
L148	S86°40'21"W	84.04'
L149	S89°41'10"E	25.06'

LINE TABLE

L150	S00°33'40"E	2.34'
L151	S00°33'40"E	10.55'
L152	N00°37'14"W	25.62'
L153	N89°37'57"E	21.11'
L154	S89°57'02"W	111.61'
L155	S00°02'58"E	22.65'
L156	N36°13'55"E	16.84'
L157	S00°22'03"E	40.77'
L158	S89°12'21"W	121.76'
L159	S32°12'17"E	20.90'
L160	S00°02'58"E	14.25'
L161	N89°57'02"E	175.18'
L162	N53°13'03"E	51.46'
L163	N10°16'00"E	48.85'
L164	N00°02'58"W	68.97'
L165	S89°39'57"E	7.06'
L166	N45°23'11"W	8.47'
L167	N00°22'03"W	31.93'
L168	N89°37'57"E	10.89'
L169	N89°37'57"E	72.44'
L170	N00°22'03"W	22.60'
L171	N89°49'39"E	52.50'
L172	S00°22'03"E	22.42'
L173	N89°37'57"E	46.60'
L174	N47°54'40"E	18.58'
L175	S89°39'57"E	15.97'
L176	N89°37'57"E	10.56'
L177	S00°02'58"E	50.02'
L178	N89°57'02"E	14.89'
L179	S59°21'58"E	10.78'
L180	N89°57'02"E	48.88'
L181	N79°04'51"W	17.11'
L182	S00°22'03"E	11.22'
L183	N79°04'51"W	18.25'
L184	N89°57'02"E	57.09'
L185	N00°02'58"W	16.50'
L186	N00°22'03"W	49.96'
L187	N00°22'03"W	55.20'
L188	N89°37'57"E	10.00'
L189	S00°22'03"E	49.61'
L190	S45°22'03"E	14.14'
L191	S00°22'03"E	36.47'
L192	S39°22'19"E	20.63'
L193	S81°52'53"E	67.76'
L194	N84°17'12"E	8.55'
L195	S00°22'03"E	4.33'
L196	S00°22'03"E	3.67'
L197	S79°45'44"E	34.60'
L198	N89°45'04"W	40.98'
L199	N89°52'19"W	17.86'

LINE TABLE

L200	N79°45'44"W	21.20'
L201	N79°04'51"W	39.46'
L202	S79°04'51"E	40.70'
L203	N89°57'02"E	70.34'
L204	S00°02'58"E	18.32'
L205	N89°57'02"E	4.64'
L206	N00°22'03"W	27.16'
L207	N64°58'42"E	5.60'
L208	N89°52'19"W	71.21'
L209	S00°22'03"E	2.38'
L210	N89°52'19"W	5.09'
L211	S89°28'14"E	98.01'
L212	N42°10'40"E	25.14'
L213	S00°22'03"E	11.38'
L214	N89°57'02"E	10.35'
L215	S00°02'58"E	45.33'
L216	S00°22'03"E	9.72'
L217	N00°22'03"W	54.71'
L218	S00°22'03"E	2.00'
L219	N00°22'03"W	2.00'
L220	N00°22'03"W	10.16'
L221	N89°54'47"E	15.10'
L222	S00°05'13"E	45.01'
L223	S00°22'03"E	10.51'
L224	N36°46'01"E	10.00'
L225	N00°13'27"E	10.88'
L226	N89°35'36"E	14.77'
L227	S00°24'24"E	5.22'
L228	N00°24'24"W	9.58'
L229	N17°56'47"E	12.96'
L230	N89°35'36"E	10.83'
L231	S00°24'24"E	12.30'
L232	N36°46'01"E	9.75'
L233	S00°24'24"E	9.41'
L234	S80°24'51"E	25.23'
L235	S00°05'54"W	13.02'
L236	N89°52'19"W	9.87'
L237	S00°13'19"E	20.07'
L238	N89°52'19"W	17.96'
L239	N00°07'41"E	19.96'
L240	S00°02'24"W	17.08'
L241	N89°57'36"W	23.79'
L242	N00°13'19"W	17.16'
L243	N89°45'13"E	2.75'
L244	S00°14'47"E	39.12'
L245	S21°41'44"E	5.82'
L246	S89°46'33"E	101.48'
L247	S00°02'12"E	2.99'
L248	N89°57'48"E	39.66'
L249	S00°13'19"E	13.82'

LINE TABLE

L250	N89°57'36"W	141.21'
L251	N00°13'19"W	44.50'
L252	N89°44'16"E	35.09'
L253	S80°36'44"E	23.86'
L254	N89°44'15"E	16.38'
L255	S00°13'19"E	10.21'
L256	N89°57'36"W	75.00'
L257	S00°13'19"E	10.72'
L258	N89°49'49"E	75.00'
L259	S00°13'19"E	14.60'
L260	N00°13'19"W	16.96'
L261	S11°10'51"E	43.46'
L262	N89°42'22"E	144.37'
L263	N89°44'15"E	75.00'
L264	S00°13'19"E	10.61'
L265	N89°57'36"W	75.00'
L266	N89°49'49"E	75.00'
L267	N00°13'19"W	8.97'
L268	S00°13'19"E	5.50'
L269	N89°44'15"E	17.88'
L270	S00°15'45"E	5.50'
L271	N89°44'15"E	57.11'
L272	S00°13'19"E	10.01'
L273	N89°57'36"W	75.00'
L274	N89°49'49"E	75.00'
L275	S00°13'19"E	4.71'
L276	S00°13'19"E	1.50'
L277	S89°57'36"E	85.14'
L278	N00°22'36"W	1.00'
L279	N89°57'36"W	85.15'
L280	N00°13'19"W	1.00'
L281	N89°44'16"E	85.11'
L282	S00°22'36"E	1.50'
L283	N89°49'49"E	60.40'
L284	N00°10'11"W	8.45'
L285	N89°44'16"E	24.66'
L286	S00°22'36"E	4.50'
L287	N00°22'36"W	1.00'
L288	S89°57'36"E	134.20'
L289	S00°15'36"E	2.00'
L290	N89°57'36"W	134.20'
L291	N00°22'36"W	9.45'
L292	N89°44'16"E	134.22'
L293	S00°15'36"E	10.16'
L294	N89°44'16"E	134.24'
L295	S00°15'36"E	3.64'
L296	S00°15'36"E	9.86'
L297	N89°44'16"E	17.73'
L298	S00°15'45"E	8.36'
L299	N89°44'16"E	44.23'

LINE TABLE



CITY OF ARVADA COLORADO
8101 Ralston Road, Arvada, CO 80002
Phone: 720-898-7640

Sheet Revisions		
Date	Description	Initials

Sheet Revisions		
Date	Description	Initials

Sheet Revisions		
Date	Description	Initials



AzTec
Consultants, Inc.
300 E. Mineral Ave, Suite 1
Littleton, Colorado 80122
Phone: (303)713-1898
Fax: (303)713-1897
www.aztecconsultants.com

Right of Way Plans				
Plan Sheet				
City of Arvada Project Number: 18-ST-40				
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.				
CITY OF ARVADA, COLORADO				
Project Code	Last Mod. Date	Subset	Sheet No.	
18-40	07-17-2020	7.10 of 7.10	7.10	

LINE TABLE

L350	N00°05'03"E	18.51'
L351	N89°54'57"W	35.69'
L352	N89°54'57"W	64.57'
L353	N00°12'24"W	5.63'
L354	N00°12'24"W	8.50'
L355	S89°44'16"W	107.43'
L356	S00°02'24"W	31.07'
L357	N89°57'36"W	17.43'
L358	N00°12'24"W	25.46'
L359	N90°00'00"E	3.86'
L360	N00°00'00"E	14.03'
L361	N89°44'16"E	121.09'
L362	N00°12'24"W	24.54'
L363	S89°57'36"E	125.00'
L364	N00°12'24"W	9.87'
L365	N00°12'24"W	1.00'
L366	S89°57'36"E	125.00'
L367	N00°12'24"W	1.00'
L368	S89°57'36"E	125.00'
L369	S00°12'24"E	35.60'
L370	N28°00'20"W	14.42'
L371	N00°00'00"W	9.00'
L372	S89°44'16"W	118.31'
L373	N00°12'24"W	14.50'
L374	N36°29'00"W	23.16'
L375	S89°36'46"W	47.37'
L376	S57°16'33"W	24.78'
L377	S89°45'12"W	43.03'
L378	N00°12'24"W	22.00'
L379	S00°12'24"E	5.54'
L380	S89°57'36"E	39.00'
L381	N00°12'24"W	1.50'
L382	S89°57'36"E	39.00'
L383	S00°12'24"E	1.50'
L384	S00°12'24"E	14.09'
L385	S89°44'16"W	39.00'
L386	N00°12'24"W	14.25'
L387	N00°12'24"W	8.02'
L388	S89°45'50"W	30.00'
L389	N00°12'24"W	8.00'
L390	N00°12'24"W	1.50'
L391	S00°12'24"E	1.50'
L392	N89°57'36"W	95.00'
L393	S00°12'24"E	14.29'
L394	S89°44'16"W	91.53'
L395	S00°12'28"E	5.88'
L396	S15°33'15"W	12.78'
L397	N00°12'24"W	32.92'
L398	S00°12'24"E	8.00'
L399	S76°37'34"W	16.10'

LINE TABLE

L400	S36°09'37"W	8.16'
L401	S89°47'36"W	10.95'
L402	S00°27'39"E	2.50'
L403	N89°57'36"W	125.00'
L404	N00°27'39"W	2.50'
L405	S89°57'36"E	125.00'
L406	S00°27'39"E	10.07'
L407	S89°44'16"W	125.00'
L408	N00°27'39"W	10.73'
L409	S89°32'21"W	5.00'
L410	N00°33'54"W	12.67'
L411	N89°37'10"W	62.10'
L412	S00°14'10"E	19.25'
L413	S89°45'50"W	57.81'
L414	S00°27'39"E	20.88'
L415	S00°27'39"E	15.01'
L416	S89°57'36"E	117.93'
L417	S00°27'39"E	10.49'
L418	S89°50'09"E	59.34'
L419	S42°27'58"W	38.10'
L420	N00°12'16"W	18.00'
L421	S89°57'37"E	7.61'
L422	N29°19'37"E	24.08'
L423	S89°52'19"E	125.00'
L424	N00°01'51"W	7.00'
L425	N00°12'16"W	3.49'
L426	S00°27'39"E	20.14'
L427	S89°32'21"W	5.00'
L428	S00°27'39"E	15.30'
L429	S89°46'10"W	106.65'
L430	S44°02'56"W	37.00'
L431	N00°07'41"E	25.58'
L432	N89°52'19"W	112.67'
L433	N00°01'51"W	2.00'
L434	S00°01'51"E	38.20'
L435	N31°07'19"W	12.45'
L436	S89°58'09"W	5.97'
L437	N31°07'19"W	17.45'
L438	N89°46'33"W	103.59'
L439	N00°01'51"W	10.49'
L440	N44°30'49"W	37.06'
L441	N06°13'03"W	5.48'
L442	S00°01'51"E	7.83'
L443	N00°01'51"W	7.51'
L444	S00°01'51"E	2.00'
L445	N89°52'19"W	114.56'
L446	S69°05'38"W	15.34'
L447	S00°01'51"E	10.46'
L448	N89°46'33"W	113.84'
L449	S69°47'00"W	6.54'

LINE TABLE

L450	S00°13'27"W	10.71'
L451	S45°13'27"W	12.49'
L452	N00°01'51"W	26.57'
L453	N89°46'33"W	120.03'
L454	S00°01'51"E	13.00'
L455	N00°01'51"W	2.00'
L456	S89°52'19"E	140.80'
L457	N00°01'51"W	9.03'
L458	N65°49'30"W	17.26'
L459	N89°52'19"W	125.05'
L460	S00°01'51"E	34.07'
L461	S89°58'09"W	8.69'
L462	N00°13'27"E	26.98'
L463	S89°46'33"E	132.23'
L464	N00°01'51"W	13.93'
L465	S89°58'09"W	8.73'
L466	N42°52'59"W	33.01'
L467	N00°01'51"W	10.84'
L468	S00°01'51"E	6.65'
L469	N00°01'51"W	1.00'
L470	S89°52'19"E	136.90'
L471	S00°01'51"E	1.00'
L472	N89°52'19"W	136.90'
L473	S00°01'51"E	15.91'
L474	N89°46'33"W	142.78'
L475	N31°41'10"E	1.90'
L476	N89°30'41"E	4.88'
L477	N00°01'51"W	14.00'
L478	N89°52'19"W	147.92'
L479	N31°41'10"E	9.78'
L480	S00°01'51"E	8.09'
L481	S01°28'26"E	31.71'
L482	N34°38'02"W	9.14'
L483	N31°41'10"E	9.14'
L484	N00°31'16"W	2.69'
L485	N89°05'10"E	227.74'
L486	S00°54'50"E	3.25'
L487	S89°57'02"W	215.24'
L488	S89°57'02"W	40.63'
L489	S00°02'58"E	5.07'
L490	S89°57'02"W	10.00'
L491	N00°02'58"W	5.07'
L492	S00°02'58"E	32.59'
L493	S89°28'44"W	9.97'
L494	S00°31'16"E	16.10'
L495	S00°31'16"E	18.90'
L496	S89°28'44"W	18.00'
L497	S00°07'13"E	15.20'
L498	S89°46'15"W	29.50'

LINE TABLE

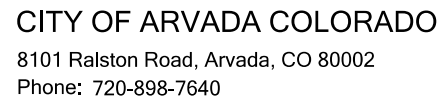
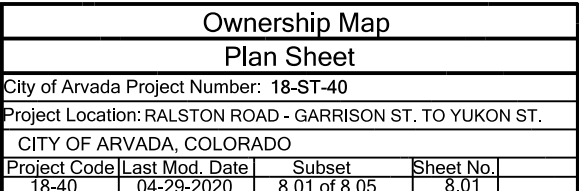
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L502	N21°26'05"W	24.08'
L503	S89°19'07"W	13.19'
L504	S89°46'33"E	28.57'
L505	S00°13'27"W	28.41'
L506	N89°52'19"W	9.54'
L507	S00°44'33"E	11.01'
L508	S89°15'27"W	11.31'
L509	S45°00'56"W	30.50'
L510	S00°00'00"W	6.70'
L511	S89°05'10"W	56.70'
L512	S00°19'07"E	14.33'
L513	N49°50'31"W	15.84'
L514	S89°57'02"W	44.62'
L515	S00°19'07"E	48.08'
L516	N45°02'58"W	16.35'
L517	S00°00'00"E	37.75'
L518	S89°57'02"W	45.27'
L519	N00°54'50"W	9.00'
L520	S89°40'53"W	8.00'
L521	S45°02'58"E	13.27'
L522	S00°04'57"W	32.33'
L523	S89°57'02"W	39.36'
L524	N00°19'07"W	28.04'
L525	S77°17'59"E	11.33'
L526	N00°37'00"W	19.93'
L527	N89°57'02"E	9.13'
L528	S89°46'15"W	57.66'
L529	N00°01'05"W	10.67'
L530	S89°58'55"W	62.01'
L531	S00°19'07"E	18.61'
L532	S89°40'53"W	5.00'
L533	S89°40'53"W	5.13'
L534	N00°19'07"W	28.69'
L535	N89°57'02"E	125.44'
L536	S90°00'00"W	4.09'
L537	S00°00'00"W	3.46'
L538	N00°37'00"W	11.00'
L539	N77°12'03"E	11.33'
L540	S89°52'19"E	54.50'
L541	S45°00'09"E	7.18'
L542	S89°55'28"E	114.46'
L543	N00°37'00"W	4.45'
L544	S89°55'28"E	114.69'
L545	S00°37'00"E	30.75'
L546	S00°37'00"E	3.11'
L547	S33°04'12"E	8.88'

LINE TABLE

L548	N00°02'58"W	22.96'
L549	N89°57'02"E	27.59'
L550	S00°02'58"E	5.10'
L551	S89°57'02"W	10.00'
L552	N00°02'58"W	5.10'
L553	N89°57'02"E	87.38'
L554	N89°57'02"E	125.02'
L555	S89°23'00"W	8.88'
L556	N00°35'42"W	24.06'
L557	S89°58'55"W	72.83'
L558	S00°01'05"E	10.28'
L559	S89°46'15"W	47.70'
L560	S89°55'28"E	64.82'
L561	S00°37'00"E	3.88'
L562	S89°57'02"W	75.12'
L563	N00°37'00"W	11.00'
L564	S89°57'02"W	70.46'
L565	S00°02'58"E	28.92'
L566	S89°23'00"W	9.26'
L567	N00°37'00"W	28.89'
L568	S00°37'00"E	10.82'
L569	N90°00'00"W	13.90'
L570	N00°00'00"E	10.00'
L571	S89°57'02"W	46.44'
L572	S00°11'31"E	22.45'
L573	S89°48'29"W	19.61'
L574	N00°37'00"W	4.49'
L575	S89°55'28"E	75.46'
L576	S00°02'33"W	3.72'
L577	S89°57'02"W	75.42'
L578	S00°02'33"W	11.00'
L579	S89°57'02"W	32.63'
L580	S00°02'58"E	5.11'
L581	S89°57'02"W	10.00'
L582	S00°02'58"E	5.11'
L583	N89°57'02"E	32.66'
L584	S00°02'33"W	0.98'
L585	S00°02'33"W	4.91'
L586	S90°00'00"W	75.05'
L587	S89°57'02"W	29.02'
L588	N00°02'33"E	10.00'
L589	S00°02'58"E	5.31'
L590	S00°02'58"E	3.99'
L591	S00°13'45"E	4.97'
L592	N77°17'23"W	6.93'
L593	S89°57'02"W	127.96'
L594	S00°13'45"E	51.20'
L595	S89°46'15"W	7.94'
L596	N00°00'00"E	41.75'
L597	S89°57'02"W	40.11'

LINE TABLE

L598	S89°57'02"W	8.96'
L599	N00°02'58"W	41.20'
L600	S00°13'45"E	9.77'
L601	S89°27'57"E	109.81'
L602	S00°13'45"E	1.56'
L603	N00°02'59"W	10.87'
L604	S89°57'02"W	118.51'
L605	S00°13'45"E	11.00'
L606	S00°13'45"E	0.97'
L607	S89°57'02"W	77.94'
L608	S00°02'58"E	8.46'
L609	S89°57'02"W	10.00'
L610	N00°02'58"W	8.46'
L611	S89°57'02"W	23.83'
L612	S00°00'00"W	13.17'
L613	S89°46'58"W	13.18'
L614	N00°13'45"W	11.38'
L615	N89°27'57"W	14.59'
L616	N00°13'45"W	44.12'
L617	N00°13'45"W	8.03'
L618	S89°57'02"W	105.21'
L619	S44°58'37"W	7.07'
L620	S00°00'12"W	43.48'
L621	S89°33'04"W	24.91'
L622	S00°09'42"W	5.15'
L623	N89°46'25"W	18.89'
L624	N08°25'59"W	5.29'
L625	S89°10'14"W	31.12'
L626	S00°23'03"W	4.65'
L627	N89°46'25"W	22.70'
L628	S00°11'09"E	3.15'
L629	N90°00'00"E	12.87'
L630	N00°02'58"W	2.70'
L631	N00°13'19"W	25.00'
L632	N89°46'41"E	15.00'
L633	S00°13'19"E	46.00'
L634	S89°46'41"W	25.00'
L635	S00°37'00"E	79.83'
L636	N89°48'23"E	5.65'
L637	S89°48'23"W	5.00'
L638	N00°11'37"W	8.79'
L639	S00°37'00"E	7.98'
L640	S89°23'00"W	18.86'
L641	N00°37'00"W	13.33'
L642	N89°05'10"E	29.54'
L643	N00°37'00"W	38.46'
L644	N00°22'03"W	13.09'
L645	N89°57'02"E	10.29'
L646	S00°02'58"E	11.98'
L647	N89°45'04"W	9.02'</

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CITY OF ARVADA COLORADO

8101 Ralston Road, Arvada, CO 80002
Phone: 720-898-7640

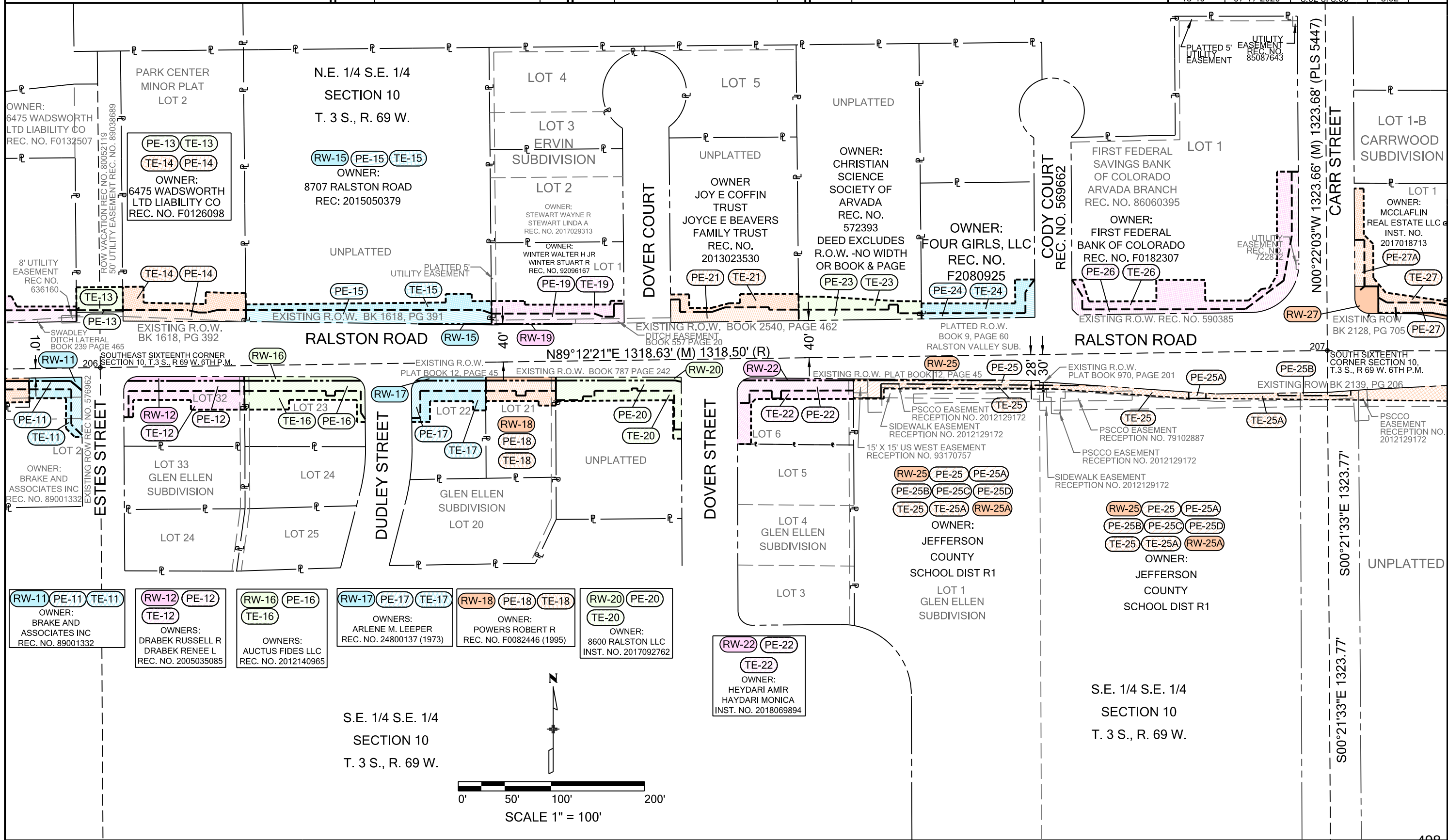
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Date	Description	Initials

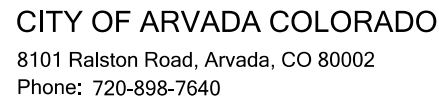
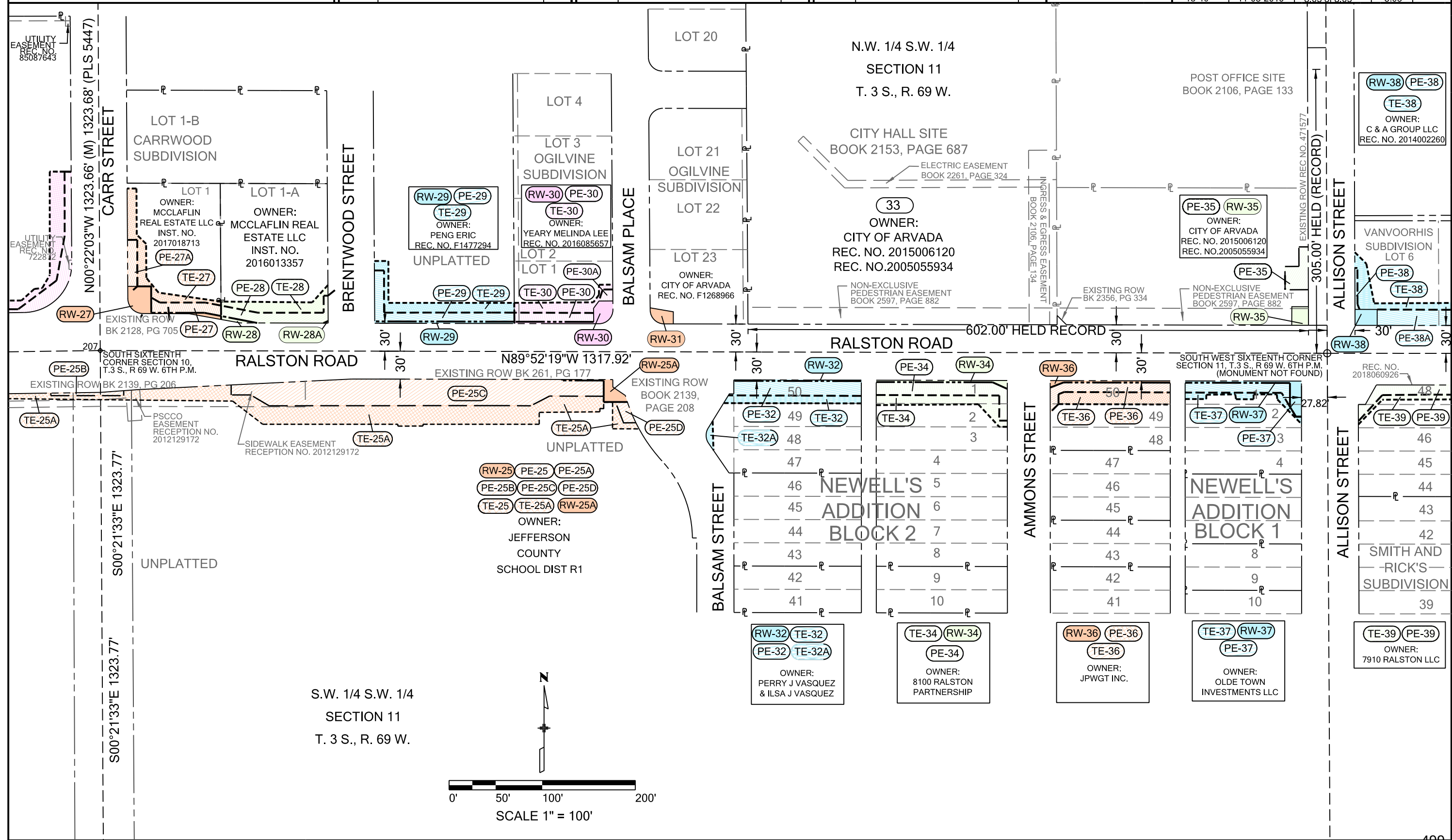
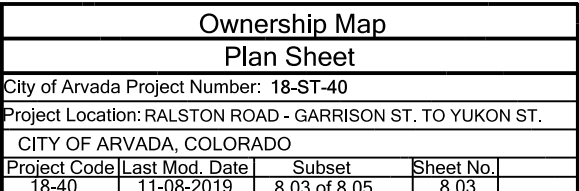
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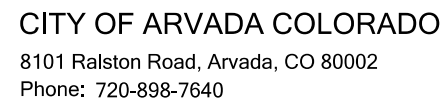
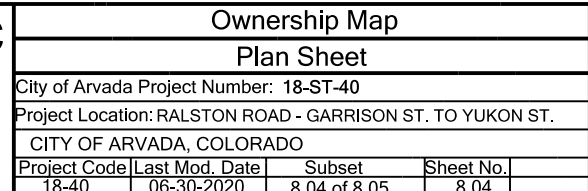
Sheet Revisions		
Date	Description	Initials

AzTec
Consultants, Inc.
300 E. Mineral Ave, Suite 1
Littleton, Colorado 80122
Phone: (303)713-1898
Fax: (303)713-1897
www.aztecconsultants.com

Ownership Map			
Plan Sheet			
City of Arvada Project Number: 18-ST-40			
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.			
CITY OF ARVADA, COLORADO			
Project Code	Last Mod. Date	Subset	Sheet No.
18-40	07-17-2020	8.02 of 8.05	8.02



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CITY OF ARVADA COLORADO

8101 Ralston Road, Arvada, CO 80002
Phone: 720-898-7640

Sheet Revisions		
Date	Description	Initials

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Ownership Map				
Plan Sheet				
City of Arvada Project Number: 18-ST-40				
Project Location: RALSTON ROAD - GARRISON ST. TO YUKON ST.				
CITY OF ARVADA, COLORADO				
Project Code	Last Mod. Date	Subset	Sheet No.	
18-40	11-08-2019	8.05 of 8.05	8.05	

Parcel Numbers	Owner	Owner Address	Property Address	Parcel No.
RW-1	CITY OF ARVADA	08101 RALSTON RD, ARVADA CO 80002	05790 GARRISON ST ARVADA CO	39-104-99-001
RW-2, PE-2, PE-2A, TE-2,	CITY OF ARVADA	08101 RALSTON RD, ARVADA CO 80002	05790 GARRISON ST ARVADA CO	39-104-99-001
PE-3, TE-3	CORN BOBBY JOE, CORN CAROL JEAN	11765 W 80TH AVE ARVADA CO 80005	09110 RALSTON RD ARVADA CO 80002	39-104-00-013
PE-4, TE-4	ZHANG HAI JIAN	02484 S KIPLING ST LAKEWOOD CO 80227	09050 RALSTON RD ARVADA CO 80002	39-104-18-002
RW-5, PE-5, PE-5A, TE-5	ASHRA MINAKSHI	10840 SUNDIAL RIM RD HIGHLANDS RANCH CO 80126	09040 RALSTON RD ARVADA CO 80002	39-104-18-001
RW-6, PE-6, PE-6A, TE-6	ELLIS BENNY ,J ELLIS JEANNE M, VELTRIE CHRISTOPHER D	06752 NAVAJO ST DENVER CO 80221	08990 RALSTON RD ARVADA CO 80002	39-104-17-015
RW-7, PE-7, TE-7	STUART ROBERT W STUART CHERYL K	06415 SAULSBURY CT ARVADA CO 80003	08910 RALSTON RD ARVADA CO 80002	39-104-17-001
RW-8, PE-8, TE-8	COLORADO CATTLEMENS ASSOCIATION	08833 RALSTON RD ARVADA CO 80002	08833 RALSTON RD ARVADA CO 80002	39-104-00-003
RW-9, RW-9A, PE-9, TE-9	MRM REAL ESTATE LLC	01296 ASPEN ST BROOMFIELD CO 80020	08850 RALSTON RD ARVADA CO 80002	39-104-16-016
RW-10, PE-10	CANNON GREGORY L , CANNON STEFANIE R	08811 RALSTON RD ARVADA CO 80002	08811 RALSTON RD ARVADA CO 80002	39-104-11-034
RW-11, PE-11, TE-11	BRAKE AND ASSOCIATES INC	08800 RALSTON RD STE 200 ARVADA CO 80002	08800 RALSTON RD STE 200 ARVADA CO 80002	39-104-16-001
RW-12, PE-12, TE-12	DRABEK RUSSELL R DRABEK RENEE L	08790 RALSTON RD ARVADA CO 80002	08790 RALSTON RD ARVADA CO 80002	39-104-15-018
PE-13, TE-13	6475 WADSWORTH LTD LIABILITY CO	03845 TENNYSON ST STE 153 DENVER CO 80212	08801 RALSTON RD ARVADA CO 80002	39-104-11-033
PE-14, TE-14	6475 WADSWORTH LIMITED LIABILITY CO	PO BOX 350248 WESTMINSTER CO 80035	08795 RALSTON RD ARVADA CO 80002	39-104-11-032
RW-15, PE-15, TE-15	8707 RALSTON ROAD LLC	08707 RALSTON RD ARVADA CO 80002	08707 RALSTON RD ARVADA CO 80002	39-104-00-006
RW-16, PE-16, TE-16	AUCTUS FIDES LLC	08700 RALSTON RD ARVADA CO 80002	08700 RALSTON RD ARVADA CO 80002	39-104-15-001
RW-17, PE-17, TE-17	LEEPER ARLENE M	PO BOX 485, ARVADA CO 80001	05780 DUDLEY ST ARVADA CO 80002	39-104-14-016
RW-18, PE-18, TE-18	POWERS ROBERT R	08660 RALSTON RD ARVADA CO 80002	08660 RALSTON RD ARVADA CO 80002	39-104-14-015
RW-19, PE-19, TE-19	WINTER WALTER H JR, WINTER STUART R	08605 RALSTON RD ARVADA CO 80002	08605 RALSTON RD ARVADA CO 80002	39-104-11-020
RW-20, PE-20, TE-20	8600 RALSTON LLC	08600 RALSTON RD STE 200 ARVADA CO 80002	08600 RALSTON RD ARVADA CO 80002	39-104-00-012
PE-21, TE-21	JOY E COFFIN TRUST JOYCE E BEAVERS FAMILY TRUST	13837 W 76TH PL ARVADA CO 80005	08595 RALSTON RD ARVADA CO 80002	39-104-00-007
RW-22, PE-22, TE-22	HEYDARI AMIR HAYDARI MONICA	08025 W FORD DR LAKEWOOD CO 80226	08580 RALSTON RD ARVADA CO 80002	39-104-12-001
PE-23, TE-23	CHRISTIAN SCIENCE SOCIETY OF ARVADA	08591 RALSTON RD ARVADA CO 80002	08591 RALSTON RD ARVADA CO 80002	39-104-00-008
PE-24, TE-24	FOUR GIRLS LLC	08525 RALSTON RD ARVADA CO 80002	08525 RALSTON RD ARVADA CO 80002	39-104-00-011
RW-25, RW-25A, PE-25, PE-25A, PE-25B, PE-25-C, PE-25D, TE-25, TE-25A	JEFFERSON COUNTY SCHOOL DISTRICT R1	01829 DENVER WEST DR. GOLDEN CO 80401	05751 BALSAM ST ARVADA CO 80002	39-113-99-003
PE-26, TE-26	FIRST FEDERAL BANK OF COLORADO	PO BOX 5155 SAN RAMON CA 94583	05805 CARR ST ARVADA CO 80004	39-104-11-031
RW-27, PE-27, PE-27A, TE-27	MCCLAFLIN REAL ESTATE LLC	08333 RALSTON RD STE 2 ARVADA CO 80002	08399 RALSTON RD ARVADA CO 80002	39-113-09-015
RW-28, RW-28A, PE-28, TE-28	MCCLAFLIN REAL ESTATE LLC	08333 RALSTON RD STE 2 ARVADA CO 80002	08333 RALSTON RD ARVADA CO 80002	39-113-09-014
RW-29, PE-29, TE-29	PENG ERIC	06392 S RIFLE ST AURORA CO 80016	08295 RALSTON RD ARVADA CO 80002	39-113-00-010
RW-30, PE-30, PE-30A, TE-30	YEARY MELINDA LEE	11305 BENTHAVEN DR LAKEWOOD CO 80215	05801 BALSAM PL ARVADA CO 80004	39-113-08-001
RW-31	CITY OF ARVADA	08101 RALSTON RD, ARVADA CO 80002	08100 RALSTON RD, ARVADA CO 80002	39-113-28-001
RW-32, PE-32, TE-32, TE-32A	VASQUEZ PERRY J, VASQUEZ ILSA J	08108 RALSTON RD ARVADA CO 80002	08108 RALSTON RD ARVADA CO 80002	39-113-18-016
33	CITY OF ARVADA	08101 RALSTON RD, ARVADA CO 80002	08101 RALSTON RD, ARVADA CO 80002	39-113-00-017
RW-34, PE-34, TE-34	8100 RALSTON PARTNERSHIP	06038 UNION ST ARVADA CO 80004	08100 RALSTON RD ARVADA CO 80002	39-113-18-001
RW-35, PE-35	CITY OF ARVADA	08101 RALSTON RD, ARVADA CO 80002	08001 RALSTON RD, ARVADA CO 80002	39-113-00-008
RW-36, PE-36, TE-36	JPWGT INC	08080 RALSTON RD ARVADA CO 80002	08080 RALSTON RD ARVADA CO 80002	39-113-17-020
RW-37, PE-37, TE-37	OLDE TOWN INVESTMENTS LLC	05727 ALLISON ST ARVADA CO 80002	05727 ALLISON ST ARVADA CO 80002	39-113-17-001
RW-38, PE-38, PE38A, TE-38	C & A GROUP LLC	07905 RALSTON RD STE 103 ARVADA CO 80002	07905 RALSTON RD STE 103 ARVADA CO 80002	39-113-12-019
PE-39, TE-39	7910 RALSTON LLC	07910 RALSTON RD ARVADA CO 80002	07910 RALSTON RD #7 ARVADA CO 80002	39-113-16-022
RW-40, PE-40, TE-40	7900 RALSTON ROAD LLC	PO BOX 1500 ARVADA CO 80001	05723 ZEPHYR ST ARVADA CO 80002	39-113-16-001
PE-41, TE-41	OLIVER OWEN L	02777 BERRY TURN GOLDEN CO 80401	07903 RALSTON RD ARVADA CO 80002	39-113-12-020
PE-42, TE-42	HOWARD DIANE HOWARD CHRIS	07088 ESTES DR ARVADA CO 80004	07901 RALSTON RD ARVADA CO 80002	39-113-12-021
PE-43, TE-43	GREEN JUSTIN W	07855 RALSTON RD ARVADA CO 80004	07855 RALSTON RD ARVADA CO 80004	39-113-12-022
RW-44, PE-44, TE-44	ELLIOTT MARK	07884 RALSTON RD ARVADA CO 80002	07884 RALSTON RD ARVADA CO 80002	39-113-15-023
RW-45, PE-45, TE-45	RALSTON 7805 LLC	07805 RALSTON RD ARVADA CO 80002	07805 RALSTON RD ARVADA CO 80002	39-113-12-039
RW-46, PE-46, TE-46	YAK & YETI LLC	07803 RALSTON RD ARVADA CO 80002	07803 RALSTON RD ARVADA CO 80002	39-113-12-024
RW-47, PE-47, TE-47	OCHO CINCO LLC	08062 AMMONS WAY ARVADA CO 80005	07804 RALSTON RD ARVADA CO 80002	39-113-15-024
RW-48, PE-48, TE-48	STARRY HOLDINGS LLC	07800 RALSTON RD ARVADA CO 80002	07800 RALSTON RD ARVADA CO 80002	39-113-15-001
RW-49, PE-49, TE-49	7711 RALSTON ROAD TRUST	00090 W 84TH AVE THORNTON CO 80260	07711 RALSTON RD ARVADA CO 80002	39-113-12-025
PE-50, TE-50	CARVER DON W	PO BOX 2261 ARVADA CO 80001	07710 RALSTON RD ARVADA CO 80002	39-113-14-023
RW-51, PE-51, TE-51	JTT HOLDING LLC	07709 RALSTON RD ARVADA CO 80002	07709 RALSTON RD ARVADA CO 80002	39-113-12-026
RW-52, PE-52, TE-52	7707 RALSTON ROAD LLC	07707 RALSTON RD ARVADA CO 80002	07707 RALSTON RD ARVADA CO 80002	39-113-12-027
TE-53, TE-53	CARLTON BUILDING LLC	PO BOX 969 ARVADA CO 80001	07705 RALSTON RD ARVADA CO 80002	39-113-12-035
PE-54, TE-54, TE-54A	LPC RALSTON LLC	00496 S BROADWAY DENVER CO 80209	07702 RALSTON RD ARVADA CO 80002	39-113-14-001
PE-55, TE-55	7703 RALSTON RD LLC	16685 W 74TH PLACE ARVADA CO 80007	07703 RALSTON RD ARVADA CO 80002	39-113-12-034

ADDENDUM

NO. 2

January 22, 2021

City of Arvada Project No. 18-ST-40, Ralston Road – Yukon Street to Garrison Street

Project Engineer: Trang Tran, E.I.

The Bid Documents, previously prepared and issued for the above Project, are hereby modified as herein below described.

Bidders shall acknowledge receipt of this Addendum, by number, in the space provided on the Bid Proposal form.

Responses to Questions posted on BidNet:

1. Plan Sheet 389 provides a detail of the proposed tree grates however, no manufacturer or manufacturer's model number is provided. Can you please furnish this information?

Response: 4'x6' Ductile Iron 'Fan' Tree grate, with Rust Conditioner as provided by Urban Accessories, or approved equal.

2. Will you please make the Electronic Design Files available to bidding Contractors?

Response: No, only to the awarded contractor; however, existing and proposed surfaces are provided to help with earthwork calculations. This information is provided for reference only.

3. Contract Agreement Article 1.2.1.2 & 1.2.1.3 Temporary Easements. Please clarify, "Any failure to complete the Phase One Construction located within the bounds of the Temporary Easements within this time period shall result in the assessment of \$2,000 liquidated damages for each calendar day delay in addition to the indemnification for any claims arising from such delay as provided in Section ____ of this Agreement." Please provide the referenced Section number for each Phase of construction Article 1.2.1.2 and 1.2.1.3.

Response: The City is going to limit damages related to TCE delays to liquidated damages as the sole and exclusive remedy for such delays. See Revised Construction Agreement in RFP Addendum No. 2.

4. Contract Agreement Article 1.2.1.2 & 1.2.1.3 Temporary Easements. Please clarify, "Any failure to complete the Phase One Construction located within the bounds of the Temporary Easements within this time period shall result in the assessment of \$2,000 liquidated damages for each calendar day delay in addition to the indemnification for any claims arising from such delay as provided in Section ____ of this Agreement." Who is the Contractor required to indemnify the City from? Will the liquidated damages be held per delay day and will the amounts be applied to any claims from Third Parties? Is the Contractor required to pay for any claims related to loss of business associated with Temporary Easements? Please clarify "claims"?

Response: The City is going to limit damages related to TCE delays to liquidated damages as the sole and exclusive remedy for such delays. See Revised Construction Agreement in RFP Addendum No.2. The liquidated damages will be assessed on a calendar day basis and they will not offset any claims from Third Parties unrelated to the extension or renegotiation of temporary construction easement agreements. Loss of business amounts are not included as part of the reasonable compensation to property owners for temporary

construction easements.

5. The Contract Agreement in several Articles (1.2.1.2) references a "model schedule". "While the Request for Proposal contains a model schedule, Contractor agrees that it shall revise, amend and supplement the schedule so as to complete Phase One of the Work within the Contract Time provided herein." Please provide a copy of the "model schedule" so that we can evaluate the schedule's requirements.

Response: The model schedule referenced in the Contract refers to the three phase schedule shown in the Plans as well as the deadlines related to each phase as well as the deadline for completing the project. The City will rely on the selected contractor to devise a detailed schedule of work to conform to the general schedule provided by the plans and applicable deadlines, and provide updated and revised schedules throughout construction to keep Arvada apprised of construction progress.

6. Article 4.3 Field Engineered Changes. Please define "Reasonable time" as it relates to delays to construction that may be required for Arvada or its Consultant to design field engineered changes? As this duration of "Reasonable time" is not compensable, at what point does the duration become unreasonable and then compensable?

Response: Given the unique circumstances that occasion Field Engineered Changes, "reasonable time" will be determined based upon the unique circumstances surrounding any given Field Engineered Change and industry standards related to the same.

7. Revision of Section 203 Potholing states, "All potholing activities shall be completed immediately after Notice to Proceed and issuance of the GESC Permit prior to any additional Work being started." This specification references one NTP and does not acknowledge the multiple NTP dates included in Article 1.2 Project Schedules. Does this Specification require that ALL potholing be completed after the first NTP through the project limits or are potholing locations restricted to the individual NTP dates in accordance with Article 1.2 Project Schedule?

Response: The language in the Revision of Section 203 has been revised and attached to Addendum No. 2. The intent is not to pothole the whole project right away but for the potholing to occur, after NTP, within the Construction Phase that it is required for the work that will be performed.

8. Revision of Section 630 Traffic Control Price Reduction Schedule Page 46. The price reduction schedule does not accurately depict the Total Price Reduction $250+500+750 = \$1,500$. The amount shown is \$1,750. Please then confirm the Etc. incident beyond the 5th incident as the calculation seems variable.

Response: The total price reduction for the 4th incident should be \$1,500 and the total for the 5th incident is \$2,500.

9. Existing Overhead Power Poles. Please confirm who is responsible for the removal and disposal of existing creosote timber poles following relocation of overhead power and or lighting by Xcel? Will the contractor be responsible for the removal and disposal?

Response: Relocation of facilities, including power poles, is governed by Chapter 78 of the Arvada City Code and the Franchise Agreement between the City and Xcel. The selected contractor, in cooperation with the City, will coordinate with Xcel and the appropriate utility owner(s) for the disposal of the power poles. Therefore, it will not be the responsibility of the contractor to remove and dispose the power poles.

10. Utilities Part 1 requires that the Contractor "Perform each utility work element for every utility owner listed in Part 1. Notify each utility owner in advance of any work being done by the Contractor to its facility, so that the utility owner can coordinate its inspections for final acceptance of the work with the Engineer. Obtain written acceptance from the utility owner for work performed by Contractor. The Contractor shall provide the

utility owner written notice at least thirty days immediately prior to each utility work element expected to be coordinated with construction.” Part 1 required the Contractor to perform the work for the Utility Owner. Part 1 includes work that can only be performed by the Utility Owner (this would should be included in Part 2). Please confirm the work that is to be the cost responsibility and performed by the Contractor for each Utility Owner. COMCAST. Is the Contractor responsible for raising and lowering conduits? Is the Contractor responsible for Comcasts costs to raise lower conduits and manholes? Please confirm that Comcast is responsible for all removals, excavation, adjustment materials, vaults, lids, backfill, and Hot Mix Pavement replacement associated with their work to adjust manholes or vaults. The language conflicts with Utilities Part 1 Contractor performance requirements. LUMEN. Part 1 requires that Lumen adjust 24 manholes before the final lift of HBP is placed. Please confirm that Lumen is responsible for all removals, excavation, adjustment rings, MH castings, backfill, and Hot Mix Pavement replacement associated with their work to adjust manholes. This language conflicts with the above performance specification.

Response: Xcel, Lumen and Comcast will relocate, reset, adjust, etc. their facilities at their own cost per Arvada City Code and the applicable franchise agreements with the City. The selected contractor will be responsible for coordinating relocations, adjustment, resets, etc., along with the help of the City.

11. SWADLEY DITCH COMPANY. The requirements listed under Part 1 for Swadley Ditch require only that the Contractor coordinate with Swadley Ditch Company regarding the removal and replacement of the irrigation pipe and associated appurtenances. Please confirm who is responsible for the costs and performance of “removal and replacement of the irrigation pipe and associated appurtenances.” XCEL ENERGY Electric Power Source Connections – Part 1 includes a requirement for the Contractor to submit an Xcel Builders Call Line Application for the temporary lighting electric meter, and for any new unforeseen work that has not been identified during the design phase. Please confirm that the design is complete? XCEL ENERGY Electric Distribution – Part 1 requires the Contractor to perform the work elements included for Electric Distribution. This work is shown to be performed by Xcel. Is the Contractor responsible for the costs beyond coordination with Xcel? This section further states, “Any unforeseen work that has not been identified during the design phase shall be coordinated with construction and will require a forty-five-day lead time, thirty days to design, and three months for construction by Xcel Energy forces.” Please confirm that design is complete or provide the Contractor with the anticipated durations of design and the project locations that are impacted by this incomplete design.

Response: The contractor is responsible for the removal and replacement of the irrigation pipe and associate appurtenances and the cost of such work shall be included in the total cost of work for the project (these estimated costs are included in the bid schedule). The design by Xcel for the overhead conversions to underground has been completed. Work by Xcel's contractor Sturgeon is scheduled to begin by the end of January/beginning of February. However, if unforeseen conflicts are discovered during construction, the contractor will need to complete the required paperwork and coordinate with Xcel to address such issues.

12. XCEL ENERGY Gas Distribution - Part 1 requires the Contractor to perform the work elements included for Gas Distribution. This work is shown to be performed by Xcel. Is the Contractor responsible for the costs beyond coordination with Xcel? “Any unforeseen work that has not been identified during the design phase shall be coordinated with construction, and will require a forty-five-day lead time, thirty days to design, and three months for construction by Xcel Energy forces.” Please confirm that design is complete or provide the Contractor with the anticipated durations of design and the project locations that are impacted by this incomplete design.”

Response: A 2" gas line is to be relocated by Xcel as shown on the plans. A design by Xcel has been completed and a work order is scheduled in the next few weeks to advertise for construction. The selected contractor will be responsible for coordination.

13. Article 4.4 Pre-Bid and Pre-Construction Meetings. Please clarify why the Consultant is part of this agreement. This section should not be included in the final Agreement between the City and the Contractor.

Article 4.5 Construction Plan Set. Please clarify why the preparation of a Construction Plan Set is included in this Agreement. Article 5.3 Consultants Administration of the Contract and Testing. Should this read "Contractor". Please correct throughout the Agreement. Article 6.4 Retainage Requirements. "Consultant agrees to submit". Please correct the Agreement. Article 7.3 Strict Compliance. Use of "Consultant" Article 7.4 Successors and Assigns. Use of "Consultant" in this Agreement. Article 7.5 Third Party Beneficiaries. Use of "Consultant" in this Agreement. Article 1.1 The Services. Please advise who the "Consultant" is in this Agreement? "Consultant" is not defined. Article 1.12 Interpretation of Contract Documents provides a list of documents incorporated by reference. Please review the list and provide those documents not included in the Competitive Sealed Bid Document Package. (4. Consultant's Response to Arvada's Request for Proposals) Article 1.2.1.1 Temporary Easements. Please provide a list of Temporary Easements that have been acquired and a list with anticipated dates of easements that have not been acquired. Article 1.4 Cooperation. Please confirm that it is Arvada's Consultant that is required to develop, implement and maintain, a spirit of cooperation....Should this be Contractor? Please review the Agreement and provisions of this Agreement to clarify the Contractors responsibilities and remove "Consultant" where terms conflict.

Response: With regard to Contract Documents (Article 1.12): the City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements is available on the City of Arvada's website. The selected contractor's response to the RFP will become a contract document upon award of the contract. Any Change Orders and any RFIs that are completed during the pendency of the project will also become contract documents when they are created. With regard to the Temporary Easements - all temporary easements have been obtained with exception of three. The three remaining temporary easements (5805 Carr Street, 7805 Ralston Road, 7705 Ralston Road) are anticipated to be acquired by March 15, 2021. All other issues have been addressed in the Revised Agreement contained in Addendum No. 2.

14. Waterline work on Ralston Road and as noted in the Traffic Control Phasing drawings NTP1 Phase 1 includes waterline work through the entire project limits. Please confirm that the 12" Water Main Replacement (Shown in the NTP 1 and NTP3 Area) is to be completed from Garrison to Yukon under NTP 1 Phase 1 as shown or is the water main work restricted to the areas constrained by NTP 1, 2, & 3?

Response: The intent is to have the waterline start with NTP 1 and finish with NTP 3. However, Contractor may request authority from Arvada for such overlapping work. Any overlapping work that is approved in writing by Arvada will not subject Contractor to delay claims so long as the overlapping work does not cause the Contractor to exceed the overall project deadline. Overlapping work will only be allowed if it is located within City right of way or within the City's permanent easements.

15. Can you please provide the Bid Form in Excel format?

Response: This has been provided as Addendum No. 1 and No. 2. This is posted for convenience; however, the City will not be responsible for changes for the file to any errors that may occur as a result of its use.

16. Please confirm the limits of each Phase of construction to achieve completion and to avoid liquidated damages. Agreement Section 1.2 Project Schedule / Time of the Essence, does not describe the physical station limits for construction. Phase 1 is listed as Carr to Yukon. Is the signal required to be completed as part of Phase 1 at the intersection of Carr and Ralston? Phase 2 is listed as Estes St to Carr. Please confirm the limits of work that must be completed in Phase 2, is work to be complete to the Centerline of Carr, when is the signal required to be installed?

Response: The Station limits for the phases are as follows on sheet 395 of the Plan Set:
Phase 2: Sta 129+88.0 to POE
Phase 3: Sta 114+97.0 to Sta 129+88.0
Phase 4: POB to Sta 114+97.0

17. Please confirm when the final Overlay of SMA is to be completed. Will SMA Overlay be required in each of the 3 Phases or only following completion of Phase 3?

Response: The intent is to place the final lift in each of the three NTP's.

18. Agreement Section 1.2.1.2, 1.2.1.3 States, "The Contractor shall complete all of the Phase One Construction that is located within the bounds of the Temporary Easements within 365 calendar days from the date of the Initial Notice to Proceed. Any failure to complete the Phase One Construction located within the bounds of the Temporary Easements within this time period shall result in the assessment of \$2,000 liquidated damages for each calendar day delay in addition to the indemnification for any claims arising from such delay as provided in Section ____ of this Agreement." Please confirm that the contractor is only required to complete work within the Temporary Easements during Phase 1 and 2 time periods to avoid the assessment of liquidated damages. Please also confirm that liquidated damages will not apply to work within the City's Right Of Way.

Response: Sections 1.2.1.2 and 1.2.1.3 include liquidated damages associated with delays within temporary construction easement areas. Liquidated damages related to other project delays are addressed in the City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements.

19. What is the estimate and/or budget?

Response: The engineer's cost estimate will be posted on BidNet once the bids are submitted after Jan. 28, 2021.

20. On the summary of approximate quantities, and in section 11 of the specs, the patching is referred to as being for the "utility work" which I would assume would be the waterline replacement but on plan sheet 252 note 20 states that the replacement of the asphalt "will be replaced under separate contract". If this is the case then what is the 388 tons of patching for? 2. The plans show 4" parking lot HMA for tying into all of the existing parking lots but I don't find it tabulated anywhere in the plans. Is it safe to assume this will be paid as patching utilizing the grade S and SX PG 64-22 mixes specified in section 11 of the specifications? If it is not paid as patching then could you please clarify how is it paid? I would assume it is not the intent to put grade SX PG 76-28 on the parking lots.

Response: On plan sheet 252, note 20, please delete the first sentence. The parking lots shall be 4 inches of HMA grade S. Please see attached revision to the Typical Section plan sheet.

21. Will the engineer provide a breakdown of what materials compiles the unclassified excavation and quantities?

Response: Unclassified excavation includes net excavation required on the project minus the existing asphalt pavement section on Ralston and the side streets. The existing asphalt pavement volume was calculated utilizing the existing edge of pavement at an assumed depth of 8.5".

22. Will the engineer provide a CAD/AGTEK digitized file, so the bid quantities can be broken into phases?

Response: Please see provided CAD file to include the surveyed existing ground surface, the proposed finished grade top surface, and match lines depicting the limits of the construction phases. This information is provided for reference only.

23. The current question period extends to 1/18/2020 and a subsequent addendum is to be issued 1/22/2020 – 1/25/2020. Will the engineer extend the bid one week to allow all responses to be reviewed and subcontractors adequate time to modify their proposals as required?

Response: No, the City cannot extend the deadline due to the City needing to meet a specific City Council date to award the contract so that the first NTP could potentially start on 3/15/2021.

24. Is it the intent of the engineer to lay the whole waterline main & laterals to hydrants and meters in phase 1 for the entire length of the project?

Response: The intent is to have the waterline start with NTP 1 and finish with NTP 3.

25. Please provide sanitary wye locations, pipe type and elevations.

Response: Wye locations were not located as part of the design contract. Any information the City has on the service lines shall be provided in the issued Construction Set to the awarded contractor.

26. Can the engineer provide the License Agreement between the City of Arvada and the Swadley Ditch Company?

Response: The City doesn't have an existing agreement with the Swadley Ditch to provide.

27. Where can we locate the attendees list for the pre-bid meeting.

Response: Refer to Addendum No. 2.

28. What permits will the contractor need to get? Will any of the Arvada permit fees be waived/reimbursed?

Response: The City will require a ROW permit, MS-4 permit per City requirements and any other permits required by State and Federal. The permits approved by the City will be waived but contractor must reference project no. 18-ST-40 in the application.

29. At STA 10+25 of the water line plans, we are to abandon in place the 6" water line to the south by placing concrete 6" into the pipe. Will there be water running into the 6" pipe from another connection point? Do we have to abandon in place this pipe farther down?

Response: The 6" is to remain in place because it serves 5790 Garrison and 9110 Ralston. This has been corrected in Addendum No. 2

30. At roughly STA 9+50 of the water line plans, it calls out to remove old abandoned water meter, is there any lines running to this at the moment?

Response: Based on available information, the water meter in question at 5790 Garrison St doesn't connect to any active lines.

31. Is a field office required for the owner?

Response: No. Weekly meetings could take place at City Hall.

32. There are 4 line items on the bid schedule (99-102) that call for "High Performance Polypropylene Pipe (HPPE). The issue is "HPPE" typically signifies High performance Polyethylene, not polypropylene. I've combed through the plans and specs a couple times and there isn't anything that corrects the mistake. My question is are you looking to install polypropylene or polyethylene pipe and do you have any spec the pipe has to meet?

Response: High Performance Polypropylene pipe is to be installed. Refer to the revised Project Specs. All
Page 6 of 10

references to HPPE in the plans shall hereby be replaced with HPPP.

Responses to Questions from pre-bid meeting:

2. Will there be any consideration for providing CAD files during the estimating phase?

Response: Please see provided CAD file to include the surveyed existing ground surface, the proposed finished grade top surface, and match lines depicting the limits of the construction phases. This information is provided for reference only.

5. The plans reference unclassified infrastructure is from existing grade. Does that include existing pavement, or start top of base?

Response: Unclassified excavation includes net excavation required on the project minus the existing asphalt pavement section on Ralston and the side streets. The existing asphalt pavement volume was calculated utilizing the existing edge of pavement at an assumed depth of 8.5".

6. What is the intent of pedestrian access during removal existing sidewalks?

Response: Pedestrians will not be allowed in the construction areas; however, pedestrian access is required on the opposite side of the street.

7. The project specifications titles Ralston as an arterial. Can you please provide the classification of all intersecting side streets within the project area?

Response: Collector streets are Garrison St and Carr St; minor collector streets are Balsam St and Allison St; and the rest are local streets within the project limits.

Plan sheets:

Sheet 4 - Typical Section Ralston Road

Sheet 7 - Typical Section Ralston Road - (Sheet 4)

Sheet 10 - Summary of Approximate Quantities

Sheet 11 - Summary of Approximate Quantities

Sheet 12 - Summary of Approximate Quantities

Sheet 13 - Summary of Approximate Quantities

Sheet 14 - Summary of Approximate Quantities

Sheet 15 - Summary of Approximate Quantities

Sheet 36 - Tabulation Roadway Quantities

Sheet 37 - Tabulation Earthwork Quantities

Sheet 51 - Roadway Detail Wall and Curb Ramp

Sheet 67 - Roadway Plan Ralston Road (Sta. 117+50 - Sta. 123+00)

Sheet 75 - Roadway Plan Ralston Road (Sta. 138+75 - Sta. 144+25)

Sheet 114 - Roadway Geometric Details Ralston Road (Sta. 138+75 - Sta. 144+25)

Sheet 115 - Roadway Geometric Details Point Table (Sta. 138+75 - Sta. 144+25)

Sheet 143 - Intersection Detail Allison Street - Northeast Corner
Sheet 154 - Property Access Details Ralston Road (Sta. 117+50 - Sta. 123+00)
Sheet 155 - Property Access Details Point Table (Sta. 117+50 - Sta. 123+00)
Sheet 162 - Property Access Details Ralston Road (Sta. 138+75 - Sta. 144+25)
Sheet 163 - Property Access Details Point Table (Sta. 138+75 - Sta. 144+25)
Sheet 237 - Utility Contacts, General Notes, Legend
Sheet 238 - Test Hole Table
Sheet 243 - Utility Plan
Sheet 244 - Utility Plan
Sheet 246 - Utility Plan
Sheet 248 - Utility Plan
Sheet 253 - Water Plan
Sheet 267 - Signing and Striping Tabulation of Quantities
Sheet 268 - Signing and Striping Tabulation of Quantities
Sheet 283 - Traffic Signal Plans Ralston Road & Allison Street
Sheet 284 - Traffic Signal Plans Ralston Road & Allison Street
Sheet 285 - Traffic Signal Plans Ralston Road & Allison Street
Sheet 299 - Signing and Striping Plans Ralston Road (Sta. 117+50 - Sta. 123+00)
Sheet 303 - Signing and Striping Plans Ralston Road (Sta. 138+75 - Sta. 144+25)
Sheet 311 - Tabulations
Sheet 312 - Schedules
Sheet 315 - Schedules
Sheet 323 - Lighting Plan Sta. 138+75 to Sta. 144+25
Sheet 348 - Irrigation Set Irrigation Plans
Sheet 352 - Irrigation Set Irrigation Schedule
Sheet 377 - Landscape Plan
Sheet 390 - Landscape Details
Sheet 391 - Landscape Details
Sheet 394 - Landscape Planting Schedule
Sheet 447 - Roadway Cross Section Ralston Road
Sheet C-1 - Fiber Conduit
Sheet C-2 - Fiber Conduit

The following quantities changed as shown in Bid Schedule – Addendum No. 2:

Item 89 -Aggregate Base Course (Class 6)
Item 90 - Hot Mix Asphalt (Grading S)(100)(PG64-22)

Item 91 - Hot Mix Asphalt (Grading SX)(100)(PG76-28)
Item 93 - Emulsified Asphalt (Slow-Setting)
Item 98 - Concrete Slope and Ditch Paving (4 Inch)
Item 133 - Concrete Sidewalk (6 Inch)
Item 134 - Concrete Sidewalk (Special)(Type 1)
Item 135 - Concrete Sidewalk (Special)(Type 2)
Item 137 - Concrete Curb Ramp (Special)
Item 138 - Driveway (6 Inch Concrete)
Item 141 - COA 6" Vertical Curb and 1' Gutter
Item 142 - COA 6" Vertical Curb and 2' Gutter
Item 143 - Valley Gutter
Item 147 - Concrete Splash Pan (14 Inch)
Item 37 - Unclassified Excavation (Complete In Place)
Item 220 - Modified Epoxy Pavement Marking
Item 164 - Sign Panel (Class I)
Item 165 - Steel Sign Post (1.75 x 1.75 Inch Tubing)
Item 152 - 2 Inch Electrical Conduit (Plastic)
Item 74 - Mulch Type 1, 1-1/2" Angular Decorative Rock
Item 76 - Tree (Deciduous)
Item 77 - Tree (Ornamental)
Item 78 - Deciduous Shrub (5 Gallon)
Item 79 - Evergreen Shrub (1 Gallon)
Item 80 - Evergreen Shrub (5 Gallon)
Item 81 - Ornamental Grasses (1 Gallon)
Item 82 - Perennials (1 Gallon)
Item 83 - Amended Topsoil Shrub Beds (18")
Item 84 - Amended Topsoil Shrub Beds (24")
Item 199 - District Marker (Inspire, Celebrate, Remember)
Item 200 - District Marker Foundation (Inspire, Celebrate, Remember)
Item 206 - Irrigation Within Beds and Corner Planters
Item 212 - Irrigation Lateral for Beds and Corner Treatments

Items that were deleted from Bid Schedule – Addendum No. 2:

District Marker (Remember)
District Marker Foundation (Remember)

Material Testing Services

Other:

1. All bids shall be submitted on the attached revised 18-ST-40 Bid Schedule – Addendum No. 2. Please note Material Testing Services has been excluded from the Bid Schedule – Addendum No. 2 because testing will be done by the City's material testing consultant and will be paid for by the City.
2. Only plan sheets of design changes are attached. Awarded contractor will receive new plan sheets "For Construction" plan set and specifications after Council award of contract, which is anticipated to be on 3/1/2021.
3. The following attachment shall be considered a part of this addendum:
 - i. Meeting Minutes from the Pre-Bid meeting held on 1/13/2021
 - ii. Sign-in sheet from the Pre-Bid meeting held on 1/13/2021



Jacqueline Rhoades, P.E.
City Engineer

BID SCHEDULE - ADDENDUM NO. 2

Ralston Road - Yukon Street to Garrison Street
Project No. 18-ST-40



Contractor: _____

Address, City, Zip: _____

Telephone: _____

Bid Prepared By: _____

No.	Spec*	Item	Unit	Unit Cost	Quantity	Extended Cost
1	COA 3.2	CLEARING AND GRUBBING	LS		1	
2	COA 3.5	REMOVAL OF TREE	EA		41	
3	COA 3.5	REMOVAL OF INLET	EA		17	
4	COA 3.5	REMOVAL OF MANHOLE	EA		4	
5	COA 3.5	REMOVAL OF FIRE HYDRANT	EA		14	
6	COA 3.5	REMOVAL OF VALVE	EA		17	
7	COA 3.5	REMOVAL OF PIPE (STORM SEWERS)	EA		34	
8	COA 3.5	REMOVAL OF FIBER OPTIC CABLE	LF		2,700	
9	COA 3.5	REMOVAL OF WALL	LF		1,297	
10	COA 3.5	REMOVAL OF CONCRETE MEDIAN COVER MATERIAL	SY		200	
11	COA 3.5	REMOVAL OF SIDEWALK	SY		5,452	
12	COA 3.5	REMOVAL OF CURB	LF		952	
13	COA 3.5	REMOVAL OF GUTTER	LF		404	
14	COA 3.5	REMOVAL OF CURB AND GUTTER	LF		12,063	
15	COA 3.5	REMOVAL OF CONCRETE CURB RAMP	SY		436	
16	COA 3.5	REMOVAL OF BRICK PAVERS	SY		650	
17	COA 3.5	REMOVAL OF CONCRETE PAVEMENT	SY		1,019	
18	COA 3.5	REMOVAL OF ASPHALT MAT	SY		37,839	
19	COA 3.5	REMOVAL OF PAVEMENT MARKING	SF		92	
20	COA 3.5	REMOVAL OF LIGHT STANDARD	EA		13	
21	COA 3.5	REMOVAL OF LIGHT STANDARD FOUNDATION	EA		14	
22	COA 3.5	REMOVAL OF LUMINAIRE	EA		13	
23	COA 3.5	REMOVAL OF SIGN	EA		30	
24	COA 3.5	REMOVAL OF GROUND SIGN	EA		7	
25	COA 3.5	REMOVAL OF SIGN PANEL	EA		9	
26	COA 3.5	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	LS		1	
27	COA 3.5	REMOVAL OF FENCE	LF		391	
28	COA 3.5	REMOVAL OF BENCH	EA		1	
29	COA 3.5	REPLACE 6" VCP SEWER WITH 6" PVC PIPE	LF		8	
30	COA 3.5	REMOVE 4 INCH CI ABANDONED MAIN	LF		198	
31	COA 3.55	REMOVE 4 INCH AC MAIN	LF		30	
32	COA 3.55	REMOVE 6 INCH AC MAIN	LF		15	
33	COA 3.5	REMOVE 6 INCH PVC MAIN	LF		15	
34	COA 3.5	REMOVE 8 INCH PVC MAIN	LF		165	
35	COA 3.5	REMOVE 12 INCH PVC MAIN	LF		119	
36	COA 3.5	ABANDON VALVE BOX	EA		12	
37	COA 3.33	UNCLASSIFIED EXCAVATION (COMPLETE IN PLACE)	CY		20,930	
38	CDOT 203	POTHOLING (ROADWAY)	EA		200	
39	CDOT 203	POTHOLING (STREETSCAPE)	EA		50	
40	CDOT 203	POTHOLING (WATER)	EA		50	
41	COA 3.20	SELECT BACKFILL	CY		1,450	
42	CDOT 206	STRUCTURE BACKFILL (FLOW-FILL)	CY		115	
43	COA 3.52	TOPSOIL	CY		627	
44	COA 5.7.2	STABILIZED STAGING AREA	EA		3	
45	COA 5.7.2	EROSION LOG (12 INCH)	LF		3,690	
46	COA 5.7.2	AGGREGATE BAG	LF		290	
47	COA 5.7.2	PRE-FABRICATED CONCRETE WASHOUT STRUCTURE (TYPE 1)	EA		12	
48	COA 5.7.2	STORM DRAIN INLET PROTECTION (ON GRADE)	LF		1,509	
49	COA 5.7.2	STORM DRAIN INLET PROTECTION (SUMP)	LF		78	
50	COA 5.7.2	STORM DRAIN INLET PROTECTION (AREA)	LF		174	

BID SCHEDULE - ADDENDUM NO. 2

Ralston Road - Yukon Street to Garrison Street
Project No. 18-ST-40



Contractor: _____

Address, City, Zip: _____

Telephone: _____

Bid Prepared By: _____

No.	Spec*	Item	Unit	Unit Cost	Quantity	Extended Cost
51	COA 5.7.2	PRE-FABRICATED VEHICLE TRACKING PAD	EA		2	
52	COA 5.7	EROSION CONTROL MANAGEMENT (ECM)	DY		730	
53	COA 3.6	RESET BRICK PAVERS	SY		86	
54	COA 3.6	RESET VALVE BOX TO FINISHED GRADE	EA		60	
55	COA 3.6	RESET METER BOX TO FINISHED GRADE	EA		2	
56	COA 3.6	RESET GROUND SIGN	EA		51	
57	COA 3.6	RESET SIGN PANEL	EA		9	
58	COA 3.6	RESET FLASHING BEACON ASSEMBLY	EA		2	
59	COA 3.6	RESET SIGNAL HEAD	EA		2	
60	COA 3.6	RESET FIRE PREEMPTION UNIT AND TIMER	EA		7	
61	COA 3.6	ADJUST MANHOLE	EA		32	
62	COA 3.6	MODIFY MANHOLE	EA		13	
63	COA 3.6	MODIFY INLET	EA		2	
64	COA 3.6	MODIFY STRUCTURE (SPECIAL)	EA		15	
65	COA 3.15	CLEAN CULVERT	EA		30	
66	COA 3.6	RESET RTD SHELTER	EA		2	
67	COA 3.6	RESET BENCH	EA		2	
68	CDOT 629	RESET SURVEY MONUMENT	EA		4	
69	CDOT 629	RESET PROPERTY PIN	EA		95	
70	COA 5.2.2	TREE RETENTION AND PROTECTION	EA		25	
71	COA 3.53	SEEDING ON PRIVATE PROPERTY	AC		0.39	
72	COA 3.53	SOD ON CITY PROPERTY	SY		1,623	
73	COA 3.57	WOOD MULCH (WOLFF PARK)	SF		910	
74	COA 3.58	MULCH TYPE 1, 1-1/2" ANGULAR DECORATIVE ROCK	TON		270	
75	COA 3.50	TREE GRATE	EA		20	
76	COA 3.54	TREE (DECIDUOUS)	EA		55	
77	COA 3.54	TREE (ORNAMENTAL)	EA		11	
78	COA 3.54	DECIDUOUS SHRUB (5 GALLON)	EA		718	
79	COA 3.54	EVERGREEN SHRUB (1 GALLON)	EA		41	
80	COA 3.54	EVERGREEN SHRUB (5 GALLON)	EA		271	
81	COA 3.54	ORNAMENTAL GRASSES (1 GALLON)	EA		661	
82	COA 3.54	PERENNIALS (1 GALLON)	EA		312	
83	COA 3.52	AMENDED TOPSOIL SHRUB BEDS (18")	CY		936	
84	COA 3.52	AMENDED TOPSOIL SHRUB BEDS (24")	CY		197	
85	CDOT 240	WILDLIFE BIOLOGIST	HR		40	
86	CDOT 240	REMOVAL OF NESTS	HR		10	
87	CDOT 240	NETTING (MIGRATORY BIRDS)	SY		20	
88	CDOT 250	ENVIRONMENTAL HEALTH AND SAFETY	LS		1	
89	COA 3.37	AGGREGATE BASE COURSE (CLASS 6)	CY		11,319	
90	COA 3.37	HOT MIX ASPHALT (GRADING S)(100)(PG 64-22)	TON		13,091	
91	COA 3.37	HOT MIX ASPHALT (GRADING SX)(100)(PG 76-28)	TON		4,707	
92	COA 11.8	HOT MIX ASPHALT (PATCHING)	TON		388	
93	COA 3.38	EMULSIFIED ASPHALT (SLOW-SETTING)	GAL		3,215	
94	COA 3.21	CONCRETE PAVEMENT (6 INCH)	SY		223	
95	COA 3.21	CONCRETE BUS PAD (11 INCH)	SY		327	
96	COA 3.29	DRILLED CAISSON (18 INCH)	LF		20	
97	COA 3.29	DRILLED CAISSON (36 INCH)	LF		194	
98	COA 3.40	CONCRETE SLOPE AND DITCH PAVING (4 INCH)	CY		6	
99	COA 3.11	HIGH PERFORMANCE POLYPROPYLENE PIPE (COMPLETE IN PLACE) (6 INCH)	LF		83	
100	COA 3.11	HIGH PERFORMANCE POLYPROPYLENE PIPE (COMPLETE IN PLACE) (12 INCH)	LF		247	

BID SCHEDULE - ADDENDUM NO. 2

Ralston Road - Yukon Street to Garrison Street
 Project No. 18-ST-40



Contractor: _____

Address, City, Zip: _____

Telephone: _____

Bid Prepared By: _____

No.	Spec*	Item	Unit	Unit Cost	Quantity	Extended Cost
101	COA 3.11	HIGH PERFORMANCE POLYPROPYLENE PIPE (COMPLETE IN PLACE) (15 INCH)	LF		210	
102	COA 3.11	HIGH PERFORMANCE POLYPROPYLENE PIPE (COMPLETE IN PLACE) (18 INCH)	LF		1,276	
103	COA 3.22	INLET TYPE 13 (5 FOOT)	EA		1	
104	COA 3.22	INLET TYPE C (5 FOOT)	EA		1	
105	COA 3.22	INLET TYPE 16 (5 FOOT)	EA		16	
106	COA 3.22	INLET TYPE 16 (10 FOOT)	EA		1	
107	COA 3.22	INLET TYPE 16 (DOUBLE) (5 FOOT)	EA		2	
108	COA 3.22	INLET TYPE 16 (TRIPLE) (5 FOOT)	EA		5	
109	COA 3.22	INLET TYPE 16 (DOUBLE) (SPECIAL) (5 FOOT)	EA		3	
110	COA 3.22	INLET TYPE R L 5 (5 FOOT)	EA		2	
111	COA 3.22	INLET TYPE R L 10 (5 FOOT)	EA		1	
112	COA 3.22	INLET TYPE R L 10 (10 FOOT)	EA		1	
113	COA 25.2.6	MANHOLE SLAB BASE (5 FOOT)	EA		10	
114	COA 25.2.6	MANHOLE SLAB BASE (10 FOOT)	EA		1	
115	COA 25.2.6	MANHOLE BOX BASE (5 FOOT)	EA		5	
116	COA 3.11	4 INCH PVC PIPE	LF		45	
117	COA 3.11	6 INCH PVC PIPE	LF		86	
118	COA 3.11	8 INCH PVC PIPE	LF		502	
119	COA 3.11	12 INCH PVC PIPE	LF		1,576	
120	COA 3.11	12 INCH FUSIBLE C900 PVC PIPE	LF		416	
121	COA 3.7	PERMANENT PLUG	EA		1	
122	COA 3.13	CONNECT TO EXISTING	EA		21	
123	COA 3.14	CHLORINATION AND PRESSURE TEST	EA		2	
124	COA 3.28	INSTALL WATER METER (3/4 INCH)	EA		19	
125	COA 3.13	TAP MAIN & INSTALL CORP STOP (3/4 INCH)	EA		2	
126	COA 3.13	RECONNECT WATER SERVICE (3/4 INCH)	EA		18	
127	COA 3.28	INSTALL WATER METER (1 INCH)	EA		5	
128	COA 3.13	RECONNECT WATER SERVICE (1 INCH)	EA		5	
129	COA 3.28	INSTALL WATER METER (1.5 INCH)	EA		1	
130	COA 3.13	RECONNECT WATER SERVICE (1.5 INCH)	EA		1	
131	COA 115	FIRE SPRINKLER FLOW TEST	EA		1	
132	COA 3.32	FENCE (PLASTIC)	LF		15,000	
133	COA 3.21	CONCRETE SIDEWALK (6 INCH)	SY		6,207	
134	COA 3.21	CONCRETE SIDEWALK (SPECIAL)(TYPE 1)	SY		1,274	
135	COA 3.21	CONCRETE SIDEWALK (SPECIAL)(TYPE 2)	SY		760	
136	COA 3.21	CONCRETE CURB RAMP	SY		856	
137	COA 3.21	CONCRETE CURB RAMP (SPECIAL)	SY		498	
138	COA 3.21	DRIVEWAY (6 INCH CONCRETE)	SY		916	
139	COA 3.21	MOUNTABLE CURB AND SIDEWALK	SY		27	
140	COA 3.21	CURB AND GUTTER (SPECIAL)	LF		895	
141	COA 3.21	COA 6" VERTICAL CURB AND 1' GUTTER	LF		1,438	
142	COA 3.21	COA 6" VERTICAL CURB AND 2' GUTTER	LF		10,136	
143	COA 3.21	VALLEY GUTTER	SY		995	
144	COA 3.22	BI-LEVEL SIDEWALK	LS		1	
145	COA 3.22	WALL (TYPE 1)	LF		97	
146	COA 3.22	WALL (TYPE 2)	LF		25	
147	COA 3.21	CONCRETE SPLASH PAN (14 INCH)	LF		1,380	
148	COA 3.21	CONCRETE EDGING	LF		120	
149	CDOT 613	2 INCH ELECTRICAL CONDUIT (BORED)	LF		4,485	
150	CDOT 613	3 INCH ELECTRICAL CONDUIT (BORED)	LF		2,190	

BID SCHEDULE - ADDENDUM NO. 2

Ralston Road - Yukon Street to Garrison Street
Project No. 18-ST-40



Contractor: _____

Address, City, Zip: _____

Telephone: _____

Bid Prepared By: _____

No.	Spec*	Item	Unit	Unit Cost	Quantity	Extended Cost
151	CDOT 613	1 INCH ELECTRICAL CONDUIT (PLASTIC)	LF		195	
152	CDOT 613	2 INCH ELECTRICAL CONDUIT (PLASTIC)	LF		15,740	
153	CDOT 613	3 INCH ELECTRICAL CONDUIT (PLASTIC)	LF		740	
154	CDOT 613	PULL BOX (TYPE M)	EA		1	
155	CDOT 613	PULL BOX (TYPE LG)	EA		16	
156	CDOT 613	PULL BOX (13"X20"X18")	EA		54	
157	CDOT 613	WIRING	LS		1	
158	CDOT 613	LUMINAIRE (LED)	EA		13	
159	CDOT 613	LIGHT STANDARD AND LUMINAIRE (PEDESTRIAN) (TYPE B)	EA		99	
160	CDOT 613	LIGHT STANDARD FOUNDATION	EA		86	
161	CDOT 613	LIGHT STANDARD FOUNDATION (SPECIAL)	EA		13	
162	CDOT 613	LIGHTING CONTROL CENTER	EA		4	
163	CDOT 613	SERVICE METER CABINET	EA		4	
164	COA 3.47	SIGN PANEL (CLASS I)	SF		525.3	
165	COA 3.48	STEEL SIGN POST (1.75 x 1.75 INCH TUBING)	LF		421	
166	COA 3.47	SIGNAL HEAD BACKPLATES	EA		34	
167	COA 3.47	PEDESTRIAN SIGNAL FACE (16) (COUNTDOWN)	EA		24	
168	COA 3.47	TRAFFIC SIGNAL FACE (12-12-12)	EA		39	
169	COA 3.47	TRAFFIC SIGNAL FACE (12-12-12-12)	EA		17	
170	COA 3.47	TRAFFIC SIGNAL FACE (12-12-12-12-12)	EA		1	
171	COA 3.47	TRAFFIC SIGNAL CONTROLLER	EA		4	
172	COA 3.47	PEDESTRIAN PUSH BUTTON POST ASSEMBLY	EA		9	
173	COA 3.47	PEDESTRIAN PUSH BUTTON STATION AND SIGN	EA		28	
174	COA 3.47	MICROWAVE VEHICLE RADAR DETECTOR	EA		22	
175	COA 3.47	TRAFFIC SIGNAL CONTROLLER (INSTALL ONLY)	EA		4	
176	COA 3.47	TRAFFIC SIGNAL-LIGHT POLE (1-20 FOOT MAST ARM)	EA		2	
177	COA 3.47	TRAFFIC SIGNAL-LIGHT POLE (1-30 FOOT MAST ARM)	EA		1	
178	COA 3.47	TRAFFIC SIGNAL-LIGHT POLE (1-35 FOOT MAST ARM)	EA		2	
179	COA 3.47	TRAFFIC SIGNAL-LIGHT POLE (1-40 FOOT MAST ARM)	EA		3	
180	COA 3.47	TRAFFIC SIGNAL-LIGHT POLE (1-45 FOOT MAST ARM)	EA		1	
181	COA 3.47	TRAFFIC SIGNAL-LIGHT POLE (1-50 FOOT MAST ARM)	EA		4	
182	COA 3.47	TRAFFIC SIGNAL PEDESTAL POLE STEEL	EA		5	
183	CDOT 630.09	TEMPORARY SIGNAL (PORTABLE)	EA		4	
184	COA 50.2.10	UNINTERRUPTED POWER SUPPLY	EA		4	
185	COA 3.47	CLOSED CIRCUIT TELEVISION CAMERA (TRAFFIC SURVEILLANCE)	EA		1	
186	CDOT 614	FIBER OPTIC CABLE (SINGLE MODE) (12 FIBER)	LF		1,000	
187	CDOT 614	TEST FIBER OPTIC CABLE	LS		1	
188	CDOT 614	TERMINATE FIBER OPTIC CABLE (12 STRAND)	EA		4	
189	CDOT 614	ETHERNET SWITCH	EA		4	
190	COA 3.28	4 INCH GATE VALVE & BOX	EA		1	
191	COA 3.28	6 INCH GATE VALVE & BOX	EA		2	
192	COA 3.28	8 INCH GATE VALVE & BOX	EA		11	
193	COA 3.28	12 INCH GATE VALVE & BOX	EA		9	
194	COA 3.8	FIRE HYDRANT (ASSEMBLY)	EA		25	
195	COA 3.22	STAIR	EA		7	
196	COA 3.37	TEMPORARY DRIVEWAY PAVING	SY		3,500	
197	COA 3.50	6' BENCH	EA		4	
198	COA 3.50	4' BENCH	EA		11	
199	COA 3.59	DISTRICT MARKER (INSPIRE, CELEBRATE, REMEMBER)	EA		3	

BID SCHEDULE - ADDENDUM NO. 2

Ralston Road - Yukon Street to Garrison Street
Project No. 18-ST-40



Contractor: _____

Address, City, Zip: _____

Telephone: _____

Bid Prepared By: _____

No.	Spec*	Item	Unit	Unit Cost	Quantity	Extended Cost
200	COA 3.60	DISTRICT MARKER FOUNDATION (INSPIRE, CELEBRATE, REMEMBER)	CY		9	
201	COA 3.61	NEIGHBORHOOD MONUMENT	EA		17	
202	COA 3.62	NEIGHBORHOOD MONUMENT FOUNDATION	CY		11	
203	COA 3.63	WOLFF PARK PLANTER WALL	LF		40	
204	CDOT 623	IRRIGATION POINT OF CONNECTION	EA		4	
205	CDOT 623	IRRIGATION TAP FEES	SF		21,129	
206	CDOT 623	IRRIGATION WITHIN BEDS AND CORNER PLANTERS	SF		20,608	
207	CDOT 623	IRRIGATION FOR TREE PITS	EA		20	
208	COA 3.11	IRRIGATION MAINLINE	LF		5,800	
209	COA 3.11	IRRIGATION SLEEVES FOR MAINLINE	LF		3,850	
210	COA 3.11	IRRIGATION SLEEVES FOR LATERALS - BEDS AND CORNER TREATMENTS	LF		4,600	
211	COA 3.11	IRRIGATION SLEEVES FOR LATERALS - TREE PITS	LF		1,550	
212	COA 3.11	IRRIGATION LATERAL FOR BEDS AND CORNER TREATMENTS	LF		6,775	
213	COA 3.11	IRRIGATION LATERAL FOR TREE PITS	LF		1,700	
214	CDOT 623	IRRIGATION MODIFICATION FOR ADJACENT OWNERS	LS		38	
215	CDOT 623	IRRIGATION MODIFICATION FOR RALSTON CENTRAL PARK	LS		1	
216	CDOT 623	IRRIGATION MODIFICATION FOR WOLFF PARK	LS		1	
217	COA 3.11	IRRIGATION PIPING BORE ALLOWANCE	LF		963	
218	CDOT 625	CONSTRUCTION SURVEYING	LS		1	
219	COA 3.49	MOBILIZATION	LS		1	
220	COA 50.4.7	MODIFIED EPOXY PAVEMENT MARKING	GAL		64	
221	COA 3.45	PREFORMED THERMOPLASTIC PVMNT MRKNG (WORD-SYMBOL)	SF		316	
222	COA 3.45	PREFORMED THERMOPLASTIC PVMNT MRKNG (XWALK-STOPLINE)	SF		786	
223	CDOT 630	UNIFORMED TRAFFIC CONTROL	HR		200	
224	CDOT 630	TRAFFIC CONTROL	LS		1	
225	CDOT 626	PUBLIC INFORMATION SERVICES (TIER III)	LS		1	
226	COA 3.48 & CDOT 620	SANITARY FACILITY	EA		5	
227		F/A 01 MINOR CONTRACT REVISIONS TO INCLUDE RFIs (ROADWAY)	FA	\$350,000.00	1	\$350,000
228		F/A 02 EROSION CONTROL	FA	\$15,000.00	1	\$15,000
229		F/A 03 ENVIRONMENTAL HEALTH AND SAFETY MANAGEMENT	FA	\$75,000.00	1	\$75,000
230		F/A 04 IRRIGATION SYSTEM REPAIR	FA	\$25,000.00	1	\$25,000
231		F/A 05 UTILITY ADJUSTMENT	FA	\$75,000.00	1	\$75,000
232		F/A 06 HIGH EARLY STRENGTH CONCRETE (CLASS E)	FA	\$40,000.00	1	\$40,000
233		F/A 07 FURNISH AND INSTALL ELECTRICAL SERVICE	FA	\$20,000.00	1	\$20,000
234		F/A 08 MINOR CONTRACT REVISIONS TO INCLUDE RFIs (STREETSCAPE)	FA	\$100,000.00	1	\$100,000
235		F/A 09 MINOR CONTRACT REVISIONS TO INCLUDE RFIs (WATER)	FA	\$100,000.00	1	\$100,000

TOTAL BID \$ _____

*City of Arvada (COA) Engineering Code of Standards and Specifications and/or CDOT Standard Specifications

**AN AGREEMENT BY AND BETWEEN THE CITY OF ARVADA AND

FOR CONSTRUCTION OF 18-ST-40
RALSTON ROAD – YUKON STREET TO GARRISON STREET
IN AN AMOUNT NOT TO EXCEED \$_____.00**

This Agreement made this _____ day of _____, 2021, by and between the City of Arvada, a home rule municipal corporation (“Arvada” and/or “City”) and _____, a _____ (“Contractor”).

WITNESSETH: That for and in consideration of the covenants, promises, and payments hereinafter mentioned:

WITNESSETH:

WHEREAS, Arvada solicited proposals from interested construction professionals for the provision of construction services related to the expansion of Ralston Road from Yukon Street to Garrison Street as described in the Contract Documents (the “Project”); and

WHEREAS, based on Contractor’s submissions, Arvada has selected Contractor for the Project; and

WHEREAS, Arvada and Contractor desire to enter into this Agreement regarding the construction of the Project.

NOW, THEREFORE, for and in consideration of the covenants, promises, and payments hereinafter mentioned, the parties agree as follows:

ARTICLE 1. GENERAL DESCRIPTION OF SERVICES

- 1.1. **The Services.** The Contractor agrees to furnish or arrange for the construction services set forth in the Contract Documents and required for the completion of the Project within the timeframe provided in the Contract Documents. Contractor represents that it is thoroughly familiar with and understands the requirements of the Project scope and is experienced in the construction of projects of the type and scope contemplated by the Contract Documents. Contractor represents to Arvada that Contractor has all necessary education, skill, knowledge, expertise and experience required for construction of the Project, and will maintain at all times during the term of this Agreement such personnel on its staff to provide the services contemplated hereby within the time periods required hereby. In addition, Contractor represents that it or Arvada-approved subcontractors or subconsultants performing services under this Agreement have all applicable licenses required by the State of Colorado to perform such services and all required insurance coverage as required by this contract and by law.
- 1.2. **Project Schedule / Time of the Essence.** The Contractors shall commence the Work after March 15, 2021 but in no event after May 3, 2021 unless such time for beginning the Work is changed by Arvada in writing. The Contract Documents contain a Project Design that contemplates completion of the Work in three (3) phases. All work shall be completed within 730 calendar days from the date of the initial Notice to Proceed (“Project Schedule”). The Contractor shall at all times carry out its duties and responsibilities as expeditiously as possible and in accordance with the Project Schedule. Arvada will issue the Notices to Proceed with respect to each phase in accordance with the Project Schedule, with the Phase Two Notice Proceed being issued on or around the 244th calendar day after the Initial Notice to Proceed and with the Phase Three Notice to Proceed being issued on or

around the 488th calendar day after the Initial Notice to Proceed. Time is of the essence in the performance of this Agreement.

1.2.1.1. **Temporary Easements.** Arvada, through its Consultant, has obtained or will obtain temporary easements from property owners along the project site to enable the Contractor to complete the Work (“Temporary Easements”). The terms and conditions of those Temporary Easements are incorporated herein by reference. The Contractor shall coordinate with Arvada and its Consultant prior to entering another’s property to ensure that the Temporary Easements have been obtained and that Contractor will understand and comply with any and all terms and conditions of those Temporary Easements.

1.2.1.2. **Phase One Construction.** The Contractor shall complete the first phase of work as defined in the Contract Documents within 243 calendar days (“Phase One Contract Time”) from receipt of the Initial Notice to Proceed. While the Request for Proposal contains a model schedule, Contractor agrees that it shall revise, amend and supplement the schedule so as to complete Phase One of the Work within the Contract Time provided herein. The Contractor shall complete all of the Phase One Construction that is located within the bounds of the Temporary Easements within 365 calendar days from the date of the Initial Notice to Proceed. Any failure to complete the Phase One Construction located within the bounds of the Temporary Easements within this time period shall result in the assessment of \$2,000 liquidated damages for each calendar day delay.

1.2.1.3. **Phase Two Construction.** The Contractor shall complete the second phase of work as defined in the Contract Documents within 243 calendar days (“Phase One Contract Time”) from receipt of the Second Notice to Proceed. While the Request for Proposal contains a suggested phasing plan, Contractor agrees that it shall revise, amend and supplement the schedule so as to complete Phase Two of the Work within the Contract Time provided herein). The Contractor shall complete all of the Phase Two Construction that is located within the bounds of the Temporary Easements within 365 calendar days from the date of the Second Notice to Proceed. Any failure to complete the Phase Two Construction located within the bounds of the Temporary Easements within this time period shall result in the assessment of \$2,000 liquidated damages for each calendar day.

1.2.1.4. **Phase Three Construction.** The Contractor shall complete the third phase of work as defined in the Contract Documents within 242 calendar days (“Phase One Contract Time”) from receipt of the Third Notice to Proceed. While the Request for Proposal contains a model schedule, Contractor agrees that it shall revise, amend and supplement the schedule so as to complete Phase Three of the Work within the Contract Time provided herein).

1.2.1.5. **Work Overlapping Phases.** In the event that certain work will overlap from one phase to another, or through all three phases, Contractor may request authority from Arvada for such overlapping work. Any overlapping work that is approved in writing by Arvada will not subject Contractor to delay claims so long as the overlapping work does not cause the Contractor to exceed the overall project deadline. Overlapping work will only be allowed if it is located within City right of way or within the City’s permanent easements.

1.3. **Construction Staking.** Salient features to be shown on the Contractor’s Progress Schedule are:

- 1.3.1. Signing and Mobilization
- 1.3.2. Clearing and Grubbing
- 1.3.3. Utilities

- 1.3.4. Fence
- 1.3.5. Earthwork
- 1.3.6. Curb, Gutter and Sidewalk/Trails
- 1.3.7. Pipes, Inlets and Manholes
- 1.3.8. Signalization
- 1.3.9. Hot Bituminous Pavement
- 1.3.10. Final Signing and Striping
- 1.3.11. Landscaping and Irrigation
- 1.3.12. Cleanup

- 1.4. **Cooperation.** The Contractor shall endeavor to develop, implement and maintain, a spirit of cooperation, collegiality, and open communication with Arvada, Arvada's Consultants, and Arvada's residents so that the goals and objectives of each are clearly understood, potential problems are resolved promptly, and upon completion, the Project is deemed a success by all interested parties.
- 1.5. **Cooperation and Coordination with Utilities.** Xcel Energy, Comcast, and Lumen will be relocating their overhead utilities underground from Garrison Street to Allison Street and along Allison Street during construction of the Project. The Contractor shall cooperate with the utility owners in their removal and relocation operations so that progress is expedited, duplication of work is minimized and service interruptions are avoided. It shall be the contractor's responsibility to make all arrangements with the utility owner(s) for utility relocations or adjustments if required to install the curbs and to coordinate the sequence of such work to eliminate possible conflict with construction progress. The contractor shall provide any advance notice required by the utility owner(s) and all applicable franchise agreements prior to commencing any work affecting said utility(ies). Work involving changes in, or interference with, utility service shall be done at such times and in such a manner that it will cause the least interference with the proper handling and delivery of the utility service to the receiving customers.
- 1.6. **Unidentified Utilities.** Attention is directed to the possible existence of underground facilities not known to the City and therefore not shown on the plans or in a location different from that which is indicated on the plans or in the special provisions. The contractor shall take reasonable steps to ascertain the exact location of all underground facilities prior to doing work that may damage such facilities or interfere with their service. If the contractor discovers underground facilities not indicated on the plans, he shall immediately give the Engineer and the utility owner written notification of the existence of such facilities and coordinate the rearrangement/relocation of the facility as necessary.
- 1.7. **Repair or Delay Due to Utility Relocations or Repair.** Approximate utility locations are shown on the plans. The contractor shall be responsible for prompt repair of any damage caused to utilities whether or not such utilities are shown or not shown on the plans. In no way will additional payment be made for time for the repair or relocation of utilities that are damaged during construction whether properly marked or unmarked in the field. Absent extraordinary circumstances, Contract Time will not be adjusted to account for delays due to utility repair or relocation. Should a delay in utility repair or relocation be significant enough that the contractor decides to demobilize from the project site; no additional payment shall be made for remobilization to the project site once the utility has been repaired and/or relocated. Should the contractor desire to have any rearrangement made in any utility facility for his convenience in order to facilitate his construction operations, which rearrangement is in addition to, or different from the rearrangements indicated on the plans or in the special provisions, he shall make whatever arrangements are necessary with the owners of such utility for such rearrangement and bear all expenses in connection therewith.

- 1.8. **Extra Excavation Work.** Should the Contractor desire and/or choose to perform any additional excavation work required for utility adjustments and/or repairs on behalf of the utility owner in order to expedite construction and minimize delays and down time, the City shall in no way be responsible for costs associated with this additional work done for the utility owner.
- 1.9. **No Additional Payments for Utility Relocation/Repair Work.** No additional payment will be made for field verifying all utility locations whether shown or not shown on the plans, except as shown in the bid schedule and this is the maximum allowance or number of testholes, whichever is greater, coordination with utility companies, utility relocations or down time due to utility relocations or repairs, but shall be considered a subsidiary obligation of the contract.
- 1.10. **Preparation/Sufficiency of Site.** Before commencing the Work, the Contractor shall (i) visit and thoroughly inspect the Project Site and any structure(s) or other man-made features to be modified and become familiar with local conditions under which the Project will be constructed and operated; (ii) familiarize itself with the survey, including the location of all existing buildings, utilities, conditions, streets, equipment, components and other attributes having or likely to have an impact on the Project; (iii) familiarize itself with Arvada's engineering and design requirements, design objectives, and budget for the Project; (iv) familiarize itself with pertinent Project dates and programming needs, including the Project schedule; (v) review and analyze all Project geotechnical, environmental, and construction materials tests, investigations and recommendations, (vi) review all as-built and record drawings, plans and specifications; and (vi) gather any other information necessary for a thorough understanding of the Project. Claims by Contractor resulting from Contractor's failure to familiarize itself with the Site or pertinent documents shall be deemed waived.
- 1.11. **Contract Documents.** The Contract Documents are incorporated herein by reference. The term "Contract Documents" means and includes the following:
- A. Arvada's Request for Proposal, CSB-_____ ("CSB"), including all exhibits and/or addenda;
 - B. Contractor's Response to CSB-_____, Advertisement for Bid, Bid Proposal, Bid Schedule, Bid Bond;
 - C. Notice of Award;
 - D. Performance and Payment Bond;
 - E. Notice(s) to Proceed;
 - F. Change Orders (if any);
 - G. City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements;
 - H. Terms and Conditions of the Temporary Easements;
 - I. Requests for Information and Responses (if any);
 - I. All supplementary requirements regarding wage rates, E.E.O., affirmative action and all other Federal-State requirements as outlined in the specifications.
- 1.12. **Interpretation of Contract Documents.** In the event of conflicts or discrepancies among the Contract Documents, the documents shall govern in the following order: (1) the Agreement; (2) Arvada's Request for Proposal; (3) City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements; (4) Contractor's Response to Arvada's Request for Proposals; (5) Change Orders; (6) Requests for Information and Response.

ARTICLE 2. ARVADA'S DUTIES, OBLIGATIONS AND RESONSIBILITIES

- 2.1. **Project Information.** Contractor acknowledges that Arvada has provided Contractor with information regarding Arvada's requirements for the Project as set forth in the Contract Documents, including Project Plans, Specifications and Budget.
- 2.2. **Arvada's Budget.** Arvada has established and will update an overall budget for the Project, including amounts allocated for construction, Arvada's other costs, and reasonable contingencies related to these costs as appropriate.
- 2.3. **Arvada's Representative.** Arvada will designate a representative authorized to act on Arvada's behalf with respect to the Project.
- 2.4. **Purpose of Arvada's Review.** Arvada's review, inspection, or approval of any Work, Design Documents, Applications for Payment, or other submittals shall be solely for the purpose of determining whether the same are generally consistent with Arvada's standards, policies and requirements. No review, inspection, or approval by Arvada of such Work or documents shall relieve Contractor of its responsibility for the performance of its obligations under the Agreement or the accuracy, adequacy, fitness, suitability, or coordination of its Construction Services. Approval by any governmental or other regulatory agency or other governing body of any Work, Design Document, or the Construction Documents shall not relieve Contractor of responsibility for the performance of its obligations under this Agreement. Payment by Arvada pursuant to the Agreement shall not constitute waiver of any of Arvada's rights under the Agreement or at law, and Contractor expressly accepts the risk that defects in its performance, if any, may not be discovered until after payment, including final payment, is made by Arvada. Notwithstanding the foregoing, reasonable notice shall be given by Arvada to the Contractor if Arvada becomes aware of any fault or defect in the Project or non-conformance with the Contract Documents.

ARTICLE 3. CONSTRUCTION SERVICES REQUIREMENTS AND STANDARDS

- 3.1. **Quality of Construction Services.** Contractor shall be responsible for the quality, completeness, accuracy, and coordination of the Work. Contractor shall provide Construction Services that meet all industry standards, including all environmental and regulatory requirements. Contractor shall provide for all testing and inspections required by sound construction practices and by governmental authorities having jurisdiction over the Project.
- 3.2. **Pre- and Post- Construction Photographs.** Contractor shall document via photograph each property before the commencement of any disturbance or construction, and Contractor shall document each property after construction is completed. Copies of the photographs shall be promptly provided to Arvada.
- 3.3. **Arvada's Right to Carry Out the Work.** If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a seven day period after written notice from Arvada to commence and continue correction of such default or neglect with diligence and promptness, Arvada may after such seven-day period, without prejudice to other remedies Arvada may have, correct such deficiencies. In such case, an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for any Consultant's additional services and expenses made necessary by such default, neglect or failure. Such action by Arvada and amounts charged to the Contractor are both subject to prior review and confirmation by the Consultant. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to Arvada within ten days of receipt of an invoice for such amounts from Arvada.

- 3.4. **Legal Standard.** Consultant shall furnish construction services in accordance with design standards currently practiced by construction professionals on projects similar in size, complexity and cost to the Project.
- 3.5. **Construction Standards.** Contractor shall perform all services in accordance with requirements of governmental agencies having jurisdiction over the Project, City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements, and the requirements set forth in the Contract Documents. In addition, the Contractor's work shall comply with all applicable building codes, accessibility laws and regulations, environmental regulations, and other applicable legal requirements in effect at the time of the work. To the extent Arvada's standards exceed applicable legal requirements, such standards shall be met unless Contractor obtains a variance from Arvada in writing.
- 3.6. **Permits.** Contractor shall be responsible for obtaining all necessary permits and other governmental approvals necessary for the development of the Project and shall obtain the same at the times necessary to meet the Project schedule. Contractor's responsibility includes providing environmental services and permitting coordination as further described in the Contract Documents.
- 3.7. **Notice of Non-Compliance.** The Contractor shall carefully study and compare the Contract Documents with each other and with information furnished by Arvada, and shall at once report to Arvada any design errors, inconsistencies or omissions discovered as well as any foreseeable constructability issues arising from the design. If the Contractor performs any construction activity knowing or should have known it involves an error, inconsistent, omission or constructability issue in the Contract Documents without such notice to Arvada, the Contractor shall assume full responsibility for such performance and shall bear the full costs for correction, including reimbursement for any delay caused to the Project.

ARTICLE 4. CHANGES TO THE WORK

- 4.1. **Minor Contract Revisions.** Miscellaneous modifications in the Work, ordered by Arvada in the form of a Field Order, will be considered a Minor Contract Revision. Payment for accepted work performed under this pay item "Minor Contract Revision" will be made in accordance with General condition 2.17 of the Arvada Engineering Code of Standards and Specifications.
- 4.2. **Field Orders.** An authorized representative of the Contractor shall acknowledge receipt of Field Orders by promptly signing all written field orders delivered to the job site. Verbal field orders given by Arvada will be recorded in writing in the municipal inspector's daily report that is to be signed by the Contractor's authorized representative.
- 4.3. **Field Engineered Changes.** Arvada may modify the construction plans including changing the slope and alignment of flow lines and appurtenances or modifying other improvements as necessary to accommodate construction around existing utilities or other field conditions. No additional compensation shall be made for minor costs and inconveniences incurred while performing field engineering changes as directed by Arvada or its Consultant. No additional compensation shall be made for any down time encountered while Arvada determines what field engineered changes would be appropriate to accommodate construction around existing utilities or other field conditions. Reasonable time must be allowed for Arvada or its Consultant to design field engineered changes. Any additional costs for performing field engineered construction changes to accommodate existing utilities or other field conditions and for also allowing Arvada reasonable time to design field engineered changes as necessary to complete the work shall be considered a subsidiary obligation of the contract.

- 4.4. **Pre-Construction Meetings.** Contractor agrees to assist in the preparation for and to participate in any pre-construction meetings with Arvada and its Consultant.
- 4.5. **Arvada Change Orders.** Arvada may, by written order signed by Arvada, at any time, and without notice to any surety, and subject to all appropriate adjustments, make changes within the general scope of this Contract in any one or more of the following: (a) changes in scope of services; (b) completion date; (c) contract amount; (d) any applicable material modifications; and, (e) any other matters that the parties deem necessary.
- 4.6. **Contractor Requested Change Orders.** The Contractor may request a Change in the Work ("Requested Change Order"), including one or more of the following: (a) changes in scope of services; (b) completion date; (c) contract amount; (d) any applicable material modifications; and, (e) any other matters that the parties deem necessary.
- 4.7. **Change Order Contents.** Any Requested Change Order shall include (a) a detailed description of the requested change to the original contract; (b) itemized documentation of any subcontractor costs; (c) the total costs associated with the proposed change; (d) the impact on the project completion date, if any, associated with the proposed change; and (e) a statement of the contractual basis for the requested change.
- 4.8. **Basis for Change Order Requests.** The following may be considered a valid basis for requesting a Change Order: (a) Contract Document error or omission; (b) Arvada induced enhancement; (c) unforeseeable constructability issue; (d) unforeseeable geotechnical issue. The following will not be considered a valid basis for requesting a Change Order absent extraordinary circumstances: (a) utility relocation; (b) utility conflicts; (c) foreseeable geotechnical issue; (d) foreseeable constructability issue; (e) defective construction.
- 4.9. **Written Authorization Required.** The Contractor shall not proceed with any change in the Work without the appropriate written authorization.

ARTICLE 5. SUPERVISION AND CONSTRUCTION PROCEDURES

- 5.1. **Supervision.** The Contractor shall supervise and direct the Work using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the Work under this Contract, unless Contract Documents give other specific instructions concerning these matters.
- 5.2. **Acts and Omissions of Subcontractors and Agents.** The Contractor shall be responsible to Arvada for acts and omission of the Contractor's employees, Subcontractors, and their agents and employees, and other persons performing portions of the Work under a contract with the Contractor
- 5.3. **Inspection and Subsequent Work.** The Contractor shall be responsible for inspection or portions of Work already performed under this Contract to determine that such portions are in proper condition to receive subsequent Work.

ARTICLE 6. COMPENSATION.

- 6.1. **Completion of Services.** Contractor will furnish all material, supplies, tools, equipment, labor, and other services necessary for the completion of the Work within Arvada's timeframe and monetary limitations.

- 6.2. **Payment for Services.** At least twenty (20) days before the date established for each monthly progress payment, the Contractor shall submit to Arvada an itemized Application for Payment for construction completed in accordance with the Bid Schedule. Such application shall be support by such data substantiating the Contractor's right to payment as Arvada may require, such as copies of invoices or requisitions from subcontractors and material supplies and reflecting retainage. Arvada shall pay NET 30 for services performed in accordance with the Bid Schedule and with this Agreement, but in no event shall the total Contract Amount exceed \$_____ absent a properly executed Change Order. Measurement of the work performed and monthly payment shall be made in accordance with requirements of the Measurement and Payment Section in the Contract Documents unless otherwise specifically provided herein.
- 6.3. **Non-Conforming Materials or Construction.** Where materials installed or the finished product fails to meet minimum requirements of the Contract Documents, the basis of determining final payment to the Contractor shall be determined in accordance with the current revised Section 105.30 of the Colorado Department of Transportation Standard Specifications.
- 6.4. **Retainage Requirements.** Contractor agrees to submit monthly invoices together with any retainage requirements as prescribed by Colorado state statutes (*see e.g.*, C.R.S. § 24-91-101 et seq). Payment from Arvada will be paid NET 30 days. Invoices will accurately reflect actual work completed by Contractor and its subconsultants or subcontractors.

ARTICLE 7. MISCELLANEOUS.

- 7.1. **Governing Law and Venue.** This Agreement shall be governed by and construed in accordance with the laws of the State of Colorado without regard to its choice of law provisions and venue shall lie in the courts in Jefferson County, Colorado.
- 7.2. **Waiver.** No provision of this Agreement may be waived except by written agreement of the parties. A waiver of any provision on one occasion shall not be deemed a waiver of that provision on any subsequent occasion, unless specifically stated in writing. A waiver of any provision shall not affect or alter the remaining provisions of this Agreement.
- 7.3. **Strict Compliance.** No failure of Arvada to insist upon strict compliance by the Contractor with any provision of the Contract Documents shall operate to release, discharge, modify, change or affect any of the Contractor's obligations.
- 7.4. **Successors and Assigns.** Arvada and Contractor, respectively, bind themselves, their partners, successors, assigns and legal representatives to the other party to this Agreement and to the partners, successors and assigns of such other part with respect to all covenants of this Agreement. Contractor shall not assign (whether partially or wholly) this Agreement whether by operation of law or otherwise, without the written consent of Arvada. If Contractor makes an assignment in accordance with this provision, Contractor shall nevertheless remain legally responsible for all obligations arising under the Agreement, unless other agreed in writing by Arvada.
- 7.5. **Third Party Beneficiaries.** This Agreement shall inure solely to the benefit of the parties hereto and their successors and assigns, and, except as otherwise specifically provided in this Agreement, nothing contained in this Agreement is intended to or shall create a contractual relationship with, or any rights or cause of action in favor of, any third party against either Arvada or the Contractor.
- 7.6. **Additional Documents.** The parties agree to execute any additional documents and to take any additional action that is necessary to carry out this Agreement.

- 7.7. **Binding Effect.** This Agreement shall inure to the benefit of, and be binding upon, the parties, their respective legal representatives, successors, heirs, and assigns; provided, however, that nothing in this paragraph shall be construed to permit the assignment of this Agreement except as otherwise expressly authorized herein. All provisions of this Agreement which contain continuing obligations shall survive its expiration or termination.
- 7.8. **Paragraph Captions.** The paragraph captions in this Agreement are set forth only for the convenience and reference of the parties and are not intended in any way to define, limit, or describe the scope or intent of this Agreement.
- 7.9. **Integration, Amendment, and Severability.** This Agreement represents the entire agreement between the parties, and there are no oral or collateral agreements or understandings. This Agreement may be amended only by an instrument in writing signed by the parties. If any other provision of this Agreement is held invalid or unenforceable, no other provision shall be affected by such holding, and all of the remaining provisions of this Agreement shall continue in full force and effect if the essential terms and conditions of this Agreement for both parties remain valid, legal, and enforceable.
- 7.10. **Notices.** Any notice or notification required or permitted by the Agreement shall be in writing and shall be deemed to have been sufficiently given for all purposes if sent by certified mail or registered mail, postage and fees prepaid, addressed to the party to whom such notice is to be given at the address set forth on the signature page below, or at such other address as has been previously furnished in writing, to the other party or parties. Such notice or notification shall be deemed to have been given when deposited in the United States mail.
- 7.11. **Binding Authority.** Contractor represents and affirms that the signature page hereof accurately states the full legal name of Contractor (whether as a corporation, partnership, limited liability company, sole proprietorship, or other), contains all requisite signature(s) on behalf of Contractor, has been properly acknowledged by attestation, notary acknowledgment, or both, and in all other respects is effective to bind Contractor, in accordance with all applicable statutes, regulations, resolutions, rules, bylaws, agreements, or similar sources of authority or limitation. This Agreement may be executed in counterpart(s), each of which shall be deemed to be an original, and all of which, taken together, shall constitute one instrument.
- 7.12. **Preferences in Employment of Colorado Labor.** To the extent that obligations and responsibilities may be established by C.R.S. § 8-17-101 *et seq.*, as amended, with respect to certain public entities and those contracting therewith as to the procurement of services:
- a. Colorado labor shall be employed to perform eighty percent (80%) of the work.
 - b. Any waiver of this requirement must comply with C.R.S. § 8-17-101 *et seq.*, as amended.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement which shall be deemed an original on the date first above written.

CITY OF ARVADA, COLORADO

8101 Ralston Road
Arvada, CO 80002

ATTEST/WITNESS:

City Clerk

APPROVED AS TO FORM:

For Rachel A. Morris, City Attorney

By: _____

CONTRACTOR

Name:

Title:

Addendum No. 2

Replace Page 16 of the Project Special Provisions with the following:

REVISION OF SECTION 25 SANITARY SEWER AND DRAINAGE LINES

Section 25 of the City Standard Specifications is hereby revised for this project as follows:

Subsection 25.2.1 shall include the following:

Storm sewer shall include "ASTM D2321, Underground Installation for Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications", "ASTM F477, Elastomeric Seals (Gaskets) for Joining Plastic Pipe", and "ASTM F2881, 12 to 60 in. Polypropylene (PP) Dual Wall Pipe and Fittings for Non-Pressure Storm Sewer Applications" and "AASHTO M330, Polypropylene Pipe 12 to 60 in. Diameter".

Pipe diameters 12-inch and up to and including 60-inch diameter will be allowed.

A Class 1, 2, or 3 backfill materials per ASTM D2331 may be used for bedding, haunch, and initial backfill zones. The material shall be installed per the manufacturer's specifications. Backfill material will not be paid for separately and will be inclusive of the pipe material and installation.

Watertight joints shall be joined with a gasketed bell and spigot joint meeting the requirements of ASTM F2764. 12- through 60-inch shall be watertight per the requirements of ASTM D3212. Spigots shall have gaskets meeting the requirements of ASTM F477. Gaskets shall be installed by the pipe manufacturer and installed with a removable, protective wrap to ensure the gasket is free from debris. A joint lubricant available from the manufacturer shall be used on the bell and gasket during assembly.

Subsection 25.2.6 shall include the following:

Manhole lids for storm sewer manhole box base structures as identified in the construction plans as "J5", "J7", "J9", "J11" and "M3" shall consist of fiberglass or an approved composite lid that is lightweight, lockable, traffic rated, pedestrian safe and hinged. These manhole lids are specific for access required for the Swadley Ditch irrigation system located along westbound Ralston Rd in between Estes St. and Cody Ct. Prior to ordering fiberglass or composite lids, the Contractor shall provide product data sheets for approval by COA and Swadley Ditch irrigation representative. Product examples include; VPC Fiberglass Manhole Cover Series distributed by Virtual Polymer Compounds, LLC., and Sewer Cover HD Composite Manhole Ring and Cover distributed by BlueGreen Municipal Solutions.

Approved fiberglass or composite manhole lids will not be measured and paid for separately but shall be included in the cost of the Manhole Box Base (Each) pay item. All incidental items required for installation and connection to manhole box base storm sewer structures shall be included in the work.

Addendum No. 2

Replace Page 23 of the Project Special Provisions with the following:

REVISION OF SECTION 203 POTHOLING

Sections 203 of the Standard Specifications are hereby revised for this project as follows:

Subsection 203.05 is hereby revised to include the following:

The contractor shall take reasonable steps to ascertain the exact location of all underground facilities prior to doing work that may damage such facilities or interfere with their service. Potholing shall be paid for under the following bid items:

- a. Potholing (Roadway) – Shall be used to pay for each pothole necessary to locate utilities required to construct the roadway, storm drainage system, and traffic signals.
- b. Potholing (Streetscape) – Shall be used to pay for each pothole necessary to locate utilities required to construct the decorative streetscape items, landscape items, and decorative pedestrian lighting.
- c. Potholing (Water) – Shall be used to pay for each pothole necessary to locate utilities required to construct the proposed waterline, valves, meter boxes, and fire hydrants.

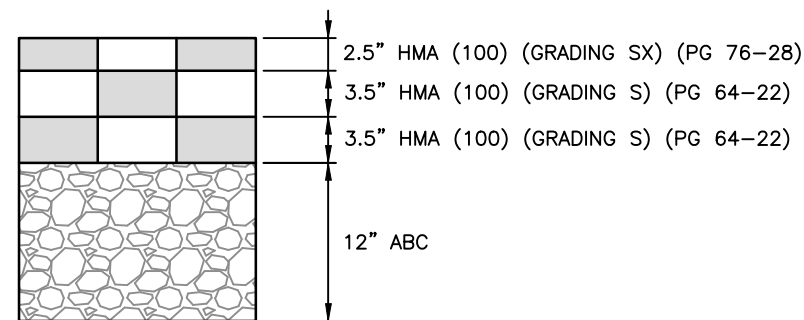
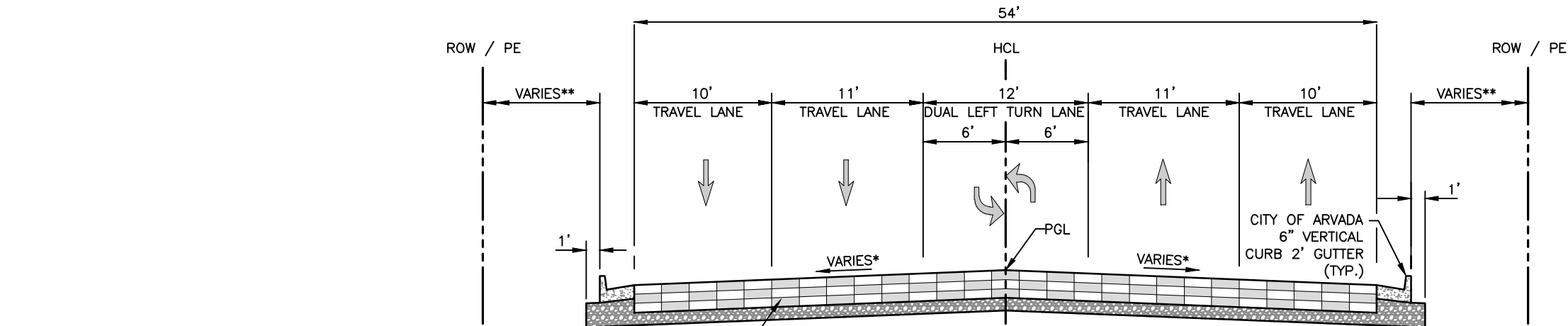
All potholing activities shall be completed after Notice to Proceed and issuance of the GESC Permit prior to any Work requiring utility potholing being started. In the event there are utilities that cannot be accessed immediately at the beginning of Construction of a particular Phase, the Contractor shall notify the Engineer, in writing, within two (2) business days of discovery of the constraint and pothole those utilities as soon thereafter as possible and no less than 21 days prior to any Work that may be in conflict. Failure to complete potholing in the time frames stated above will result in waiver of any claims by the Contractor related to the subject utilities. The Contractor shall prepare and updated a Pothole Log throughout the Project. The Contractor shall provide an updated Pothole Log to the City at each weekly progress meeting, failure to submit the updated Pothole Log may result in delayed or non-payment. The Contractor will waive time extensions for Project delays and associated financial impacts to the Contractor if the Contractor does not make the necessary effort to identify pothole conflicts.

As part of the potholing Work the Contractor shall survey the potholed utilities and identify conflicts or issues of concern with the design, in writing, to the City within 3 business days of completing the survey. The potholing line items shall be inclusive of all potholing needed for the Contractor and their Subcontractors

Subsection 203.12 Shall include the following items:

<u>Pay Item</u>	<u>Pay Unit</u>
Potholing (Roadway)	Each
Potholing (Streetscape)	Each
Potholing (Water)	Each

- * RE: PLAN AND PROFILE SHEETS FOR ADDITIONAL INFORMATION
- ** RE: SIDEWALK TYPICAL SECTIONS, ROADWAY GEOMETRIC DETAILS, AND PROPERTY ACCESS DETAILS FOR ADDITIONAL INFORMATION

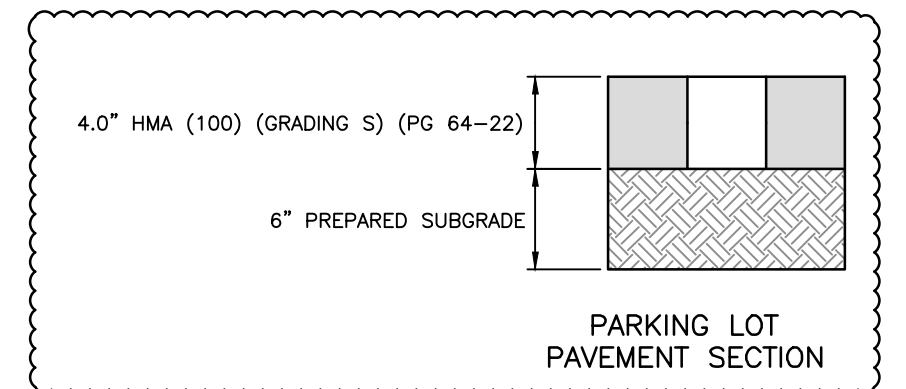


RALSTON ROAD
AND CARR STREET
PAVEMENT SECTION

(R-1)

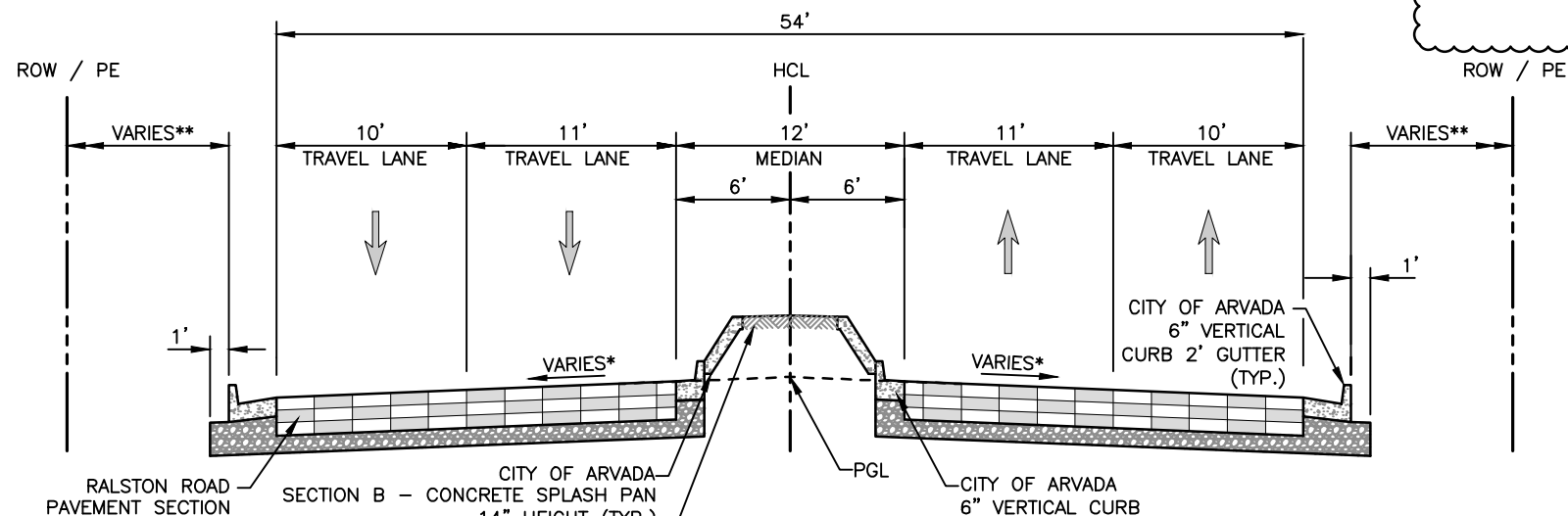
RALSTON ROAD DUAL LEFT TURN LANE TYPICAL SECTION

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STA. 106+77.32 TO STA. 107+03.32
STA. 108+05.00 TO STA. 108+74.58
STA. 133+15.85 TO STA. 135+33.46
STA. 136+86.51 TO STA. 151+42.53



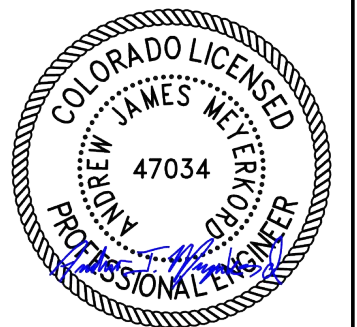
PARKING LOT
PAVEMENT SECTION

(R-1)



RALSTON ROAD CENTER MEDIAN TYPICAL SECTION

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STA. 110+58.03 TO STA. 111+25.46
STA. 135+85.14 TO STA. 136+29.33
STA. 138+67.82 TO STA. 139+48.40



1-21-2021

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6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com	

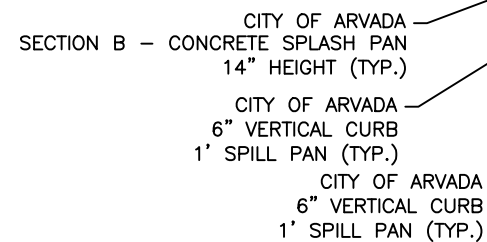
Sheet Revisions		
Date	Comments	Initials
1/22/21	ADDENDUM 2	JHH



CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed	RALSTON RD - YUKON ST TO GARRISON ST TYPICAL SECTION RALSTON ROAD			Project No./Code
No Revisions:				18-ST-40
Revised:	Designer:	JHH	Structure	
	Detailer:	BCN	Numbers	
Void:	Sheet Subset:	TYPICAL	Subset Sheets:	TY-01 of 6
				Sheet Number 4

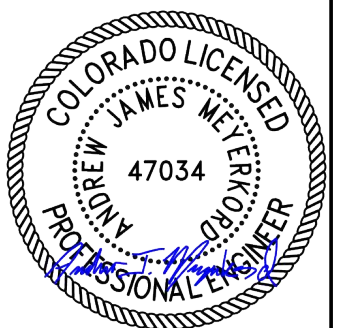
** RE: SIDEWALK TYPICAL SECTIONS,
ROADWAY GEOMETRIC DETAILS,
AND PROPERTY ACCESS DETAILS
FOR ADDITIONAL INFORMATION



R-1



FIELD STREET
EVERETT STREET
ESTES STREET
DUDLEY STREET
DOVER COURT
DOVER STREET
CODY COURT
BRENTWOOD STREET
BALSAM STREET
BALSAM PLACE
AMMONS STREET
ALLISON STREET
ZEPHYR STREET
YARROW STREET
YUKON STREET



Project No./Code

Sheet Number	7
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Designer:	JHH	Structure Numbers	
Detailer:	BCN		
Sheet Subset:	TYPICAL	Subset Sheets: TY-04 of 6	

Project No./Code

18-ST-40

Sheet Number	7
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Index			Contract Item No.	Contract Item	Unit	Roadway		Streetscape		Utilities		Drainage		Erosion Control		Traffic		Project Totals	
Book	Page	Sheet				Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.
			1	CLEARING AND GRUBBING	LS	1												1	
			2	REMOVAL OF TREE	EA	41												41	
			3	REMOVAL OF INLET	EA							17						17	
			4	REMOVAL OF MANHOLE	EA							4						4	
			5	REMOVAL OF FIRE HYDRANT	EA					14								14	
			6	REMOVAL OF VALVE	EA					17								17	
			7	REMOVAL OF PIPE (STORM SEWERS)	EA							34						34	
			8	REMOVAL OF FIBER OPTIC CABLE	LF											2700		2700	
			9	REMOVAL OF WALL	LF	1297												1297	
			10	REMOVAL OF CONCRETE MEDIAN COVER MATERIAL	SY	200												200	
			11	REMOVAL OF SIDEWALK	SY	5452												5452	
			12	REMOVAL OF CURB	LF	952												952	
			13	REMOVAL OF GUTTER	LF	404												404	
			14	REMOVAL OF CURB AND GUTTER	LF	12063												12063	
			15	REMOVAL OF CONCRETE CURB RAMP	SY	436												436	
			16	REMOVAL OF BRICK PAVERS	SY	650												650	
			17	REMOVAL OF CONCRETE PAVEMENT	SY	1,019												1019	
			18	REMOVAL OF ASPHALT MAT	SY	37839												37839	
			19	REMOVAL OF PAVEMENT MARKING	SF	55												55	
			20	REMOVAL OF LIGHT STANDARD	EA			13										13	
			21	REMOVAL OF LIGHT STANDARD FOUNDATION	EA			14										14	
			22	REMOVAL OF LUMINAIRE	EA			13										13	
			23	REMOVAL OF SIGN	EA	30												30	
			24	REMOVAL OF GROUND SIGN	EA											7		7	
			25	REMOVAL OF SIGN PANEL	EA											9		9	
			26	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	LS											1		1	
			27	REMOVAL OF FENCE	LF	391												391	
			28	REMOVAL OF BENCH	EA	1												1	
			29	REPLACE 6" VCP SEWER WITH 6" PVC PIPE	LF					8								8	
			30	REMOVE 4 INCH CI ABANDONED MAIN	LF					198								198	
			31	REMOVE 4 INCH AC MAIN	LF					30								30	
			32	REMOVE 6 INCH AC MAIN	LF					15								15	
			33	REMOVE 6 INCH PVC MAIN	LF					15								15	
			34	REMOVE 8 INCH PVC MAIN	LF					165								165	
			35	REMOVE 12 INCH PVC MAIN	LF					119								119	
			36	ABANDON VALVE BOX	EA					12								12	
			37	UNCLASSIFIED EXCAVATION (COMPLETE IN PLACE)	CY	20,930												20930	
			38	POTHOLING (ROADWAY)	EA	200												200	
			39	POTHOLING (STREETSCAPE)	EA			50										50	
			40	POTHOLING (WATER)	EA					50								50	
			41	SELECT BACKFILL	CY					1450								1450	
			42	STRUCTURE BACKFILL (FLOW-FILL)	CY							115						115	
			43	TOPSOIL	CY	627												627	



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Sheet Revisions		
Date	Comments	Initials
01/22/2021	ADDENDUM 2	JVS

CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed

No Revisions:

Revised:

Void:

RALSTON RD - YUKON ST TO GARRISON ST
SUMMARY OF APPROXIMATE QUANTITIES

Designer: JHH
Detailer: DAL
Sheet Subset: GENERAL

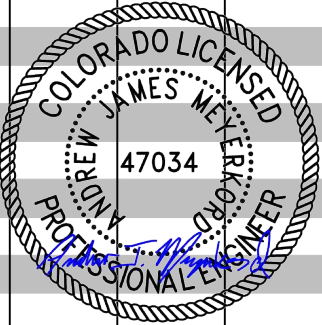
Structure Numbers
Subset Sheets: SQ-01 of 6

Project No./Code

18-ST-40

Sheet Number 10

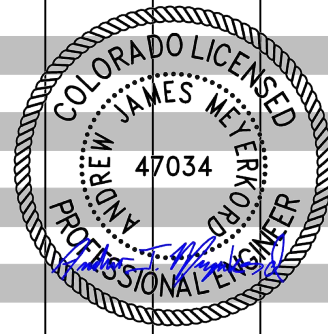
Index			Contract Item No.	Contract Item	Unit	Roadway		Streetscape		Utilities		Drainage		Erosion Control		Traffic		Project Totals	
Book	Page	Sheet				Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.
			44	STABILIZED STAGING AREA	EA									3				3	
			45	EROSION LOG (12 INCH)	LF									3690				3690	
			46	AGGREGATE BAG	LF									290				290	
			47	PRE-FABRICATED CONCRETE WASHOUT STRUCTURE (TYPE 1)	EA									12				12	
			48	STORM DRAIN INLET PROTECTION (ON GRADE)	LF									1509				1509	
			49	STORM DRAIN INLET PROTECTION (SUMP)	LF									78				78	
			50	STORM DRAIN INLET PROTECTION (SUMP)	LF									174				174	
			51	PRE-FABRICATED VEHICLE TRACKING PAD	EA									2				2	
			52	EROSION CONTROL MANAGEMENT (ECM)	DAY									730				730	
			53	RESET BRICK PAVERS	SY	86												86	
			54	RESET VALVE BOX TO FINISHED GRADE	EA					60								60	
			55	RESET METER BOX TO FINISHED GRADE	EA					2								2	
			56	RESET GROUND SIGN	EA											51		51	
			57	RESET SIGN PANEL	EA											9		9	
			58	RESET FLASHING BEACON ASSEMBLY	EA											2		2	
			59	RESET SIGNAL HEAD	EA											2		2	
			60	RESET FIRE PREEMPTION UNIT AND TIMER	EA											7		7	
			61	ADJUST MANHOLE	EA					32								32	
			62	MODIFY MANHOLE	EA							13						13	
			63	MODIFY INLET	EA							2						2	
			64	MODIFY STRUCTURE (SPECIAL)	EA							15						15	
			65	CLEAN CULVERT	EA							30						30	
			66	RESET RTD SHELTER	EA	2												2	
			67	RESET BENCH	EA	2												2	
			68	RESET SURVEY MONUMENT	EA	4												4	
			69	RESET PROPERTY PIN	EA	95												95	
			70	TREE RETENTION AND PROTECTION	EA	25												25	
			71	SEEDING ON PRIVATE PROPERTY	AC			0.39										0.39	
			72	SOD ON CITY PROPERTY	SY			1623										1623	
			73	WOOD MULCH (WOLFF PARK)	SF			910										910	
			74	MULCH TYPE 1, 1-1/2" ANGULAR DECORATIVE ROCK	TON			270										270	
			75	TREE GRATE	EA			20										20	
			76	TREE (DECIDUOUS)	EA			55										55	
			77	TREE (ORNAMENTAL)	EA			11										11	
			78	DECIDUOUS SHRUB (5 GALLON)	EA			718										718	
			79	EVERGREEN SHRUB (1 GALLON)	EA			41										41	
			80	EVERGREEN SHRUB (5 GALLON)	EA			271										271	
			81	ORNAMENTAL GRASSES (1 GALLON)	EA			661										661	
			82	PERENNIALS (1 GALLON)	EA			312										312	
			83	AMENDED TOPSOIL SHRUB BEDS (18")	CY			936										936	
			84	AMENDED TOPSOIL SHRUB BEDS (24")	CY			197										197	
			85	WILDLIFE BIOLOGIST	HR	10												10	
			86	REMOVAL OF NESTS	HR	10												10	
			87	NETTING (MIGRATORY BIRDS)	SY	20												20	



Print Date: 1/22/2021 11:22:12 AM File Name: 118355_GNSQ_SH01.DWG Horizontal Scale: N/A Vertical Scale: N/A		Sheet Revisions <table> <tr><th>Date</th><th>Comments</th><th>Initials</th></tr> <tr><td>01/22/2021</td><td>ADDENDUM 2</td><td>JVS</td></tr> </table>		Date	Comments	Initials	01/22/2021	ADDENDUM 2	JVS	CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed No Revisions: Revised: Void:		RALSTON RD - YUKON ST TO GARRISON ST SUMMARY OF APPROXIMATE QUANTITIES Designer: JHH Structure Numbers: Detailer: DAL Sheet Subset: GENERAL Subset Sheets: SQ-02 of 6				Project No./Code 18-ST-40 Sheet Number 11	
Date	Comments	Initials																
01/22/2021	ADDENDUM 2	JVS																
6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com		<table> <tr><td>R-X</td></tr> <tr><td>R-1</td></tr> <tr><td></td></tr> <tr><td></td></tr> </table>		R-X	R-1													
R-X																		
R-1																		

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Index			Contract Item No.	Contract Item	Unit	Roadway		Streetscape		Utilities		Drainage		Erosion Control		Traffic		Project Totals	
Book	Page	Sheet				Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.
			88	ENVIRONMENTAL HEALTH AND SAFETY	LS	1												1	
			89	AGGREGATE BASE COURSE (CLASS 6)	CY	11319												11319	
			90	HOT MIX ASPHALT (GRADING S) (100) (PG 64-22)	TON	13,091												13091	
			91	HOT MIX ASPHALT (GRADING SX) (100) (PG 76-28)	TON	4707												4707	
			92	HOT MIX ASPHALT (PATCHING)	TON					388								388	
			93	EMULSIFIED ASPHALT (SLOW-SETTING)	GAL	3215												3215	
			94	CONCRETE PAVEMENT (6 INCH)	SY	223												223	
			95	CONCRETE BUS PAD (11 INCH)	SY	327												327	
			96	DRILLED CAISSON (18 INCH)	LF											20		20	
			97	DRILLED CAISSON (36 INCH)	LF											194		194	
			98	CONCRETE SLOPE AND DITCH PAVING (4 INCH)	CY	6												6	
			99	HIGH PERFORMANCE POLYPROPYLENE PIPE (HPPE) (COMPLETE IN PLACE) (6 INCH)	LF							83						83	
			100	HIGH PERFORMANCE POLYPROPYLENE PIPE (HPPE) (COMPLETE IN PLACE) (12 INCH)	LF							247						247	
			101	HIGH PERFORMANCE POLYPROPYLENE PIPE (HPPE) (COMPLETE IN PLACE) (15 INCH)	LF							210						210	
			102	HIGH PERFORMANCE POLYPROPYLENE PIPE (HPPE) (COMPLETE IN PLACE) (18 INCH)	LF							1276						1276	
			103	INLET TYPE 13 (5 FOOT)	EA							1						1	
			104	INLET TYPE C (5 FOOT)	EA							1						1	
			105	INLET TYPE 16 (5 FOOT)	EA							16						16	
			106	INLET TYPE 16 (10 FOOT)	EA							1						1	
			107	INLET TYPE 16 (DOUBLE) (5 FOOT)	EA							2						2	
			108	INLET TYPE 16 (TRIPLE) (5 FOOT)	EA							5						5	
			109	INLET TYPE 16 (DOUBLE) (SPECIAL) (5 FOOT)	EA							3						3	
			110	INLET TYPE R L 5 (5 FOOT)	EA							2						2	
			111	INLET TYPE R L 10 (5 FOOT)	EA							1						1	
			112	INLET TYPE R L 10 (10 FOOT)	EA							1						1	
			113	MANHOLE SLAB BASE (5 FOOT)	EA							10						10	
			114	MANHOLE SLAB BASE (10 FOOT)	EA							1						1	
			115	MANHOLE BOX BASE (5 FOOT)	EA							5						5	
			116	4 INCH PVC PIPE	LF					45								45	
			117	6 INCH PVC PIPE	LF					86								86	
			118	8 INCH PVC PIPE	LF					502								502	
			119	12 INCH PVC PIPE	LF					1576								1576	
			120	12 INCH FUSIBLE C900 PVC PIPE	LF					416								416	
			121	PERMANENT PLUG	EA					1								1	
			122	CONNECT TO EXISTING	EA					21								21	
			123	CHLORINATION AND PRESSURE TEST	EA					2								2	
			124	INSTALL WATER METER (3/4 INCH)	EA					19								19	
			125	TAP MAIN & INSTALL CORP STOP (3/4 INCH)	EA					2								2	
			126	RECONNECT WATER SERVICE (3/4 INCH)	EA					18								18	
			127	INSTALL WATER METER (1 INCH)	EA					5								5	
			128	RECONNECT WATER SERVICE (1 INCH)	EA					5								5	
			129	INSTALL WATER METER (1.5 INCH)	EA					1								1	
			130	RECONNECT WATER SERVICE (1.5 INCH)	EA					1								1	
			131	FIRE SPRINKLER FLOW TEST	EA					1								1	



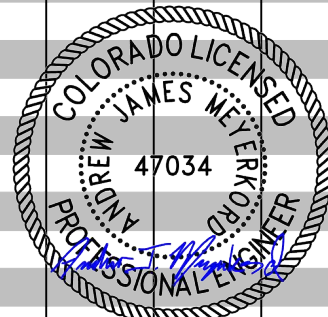
Print Date: 1/22/2021 11:22:13 AM			Sheet Revisions			CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed		RALSTON RD - YUKON ST TO GARRISON ST SUMMARY OF APPROXIMATE QUANTITIES			Project No./Code	
File Name: 118355_GNSQ_SH01.DWG							No Revisions:					18-ST-40	
Horizontal Scale: N/A Vertical Scale: N/A							Revised:		Designer: JHH		Structure		
FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com			R-X				01/22/2021		ADDENDUM 2		JVS		
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								Detailer: DAL		Numbers			
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CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

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Index			Contract Item No.	Contract Item	Unit	Roadway		Streetscape		Utilities		Drainage		Erosion Control		Traffic		Project Totals	
Book	Page	Sheet				Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.
			132	FENCE (PLASTIC)	LF									15000				15000	
			133	CONCRETE SIDEWALK (6 INCH)	SY	6207										8		6215	
			134	CONCRETE SIDEWALK (SPECIAL) (TYPE 1)	SY	1274												1274	
			135	CONCRETE SIDEWALK (SPECIAL) (TYPE 2)	SY	760												760	
			136	CONCRETE CURB RAMP	SY	856												856	
			137	CONCRETE CURB RAMP (SPECIAL)	SY	498												498	
			138	DRIVEWAY (6 INCH CONCRETE)	SY	916												916	
			139	MOUNTABLE CURB AND SIDEWALK	SY	27												27	
			140	CURB AND GUTTER (SPECIAL)	LF	895												895	
			141	COA 6" VERTICAL CURB & 1' GUTTER	LF	1,438												1438	
			142	COA 6" VERTICAL CURB & 2' GUTTER	LF	10136												10136	
			143	VALLEY GUTTER	SY	995												995	
			144	BI-LEVEL SIDEWALK	LS	1												1	
			145	WALL (TYPE 1)	LF	97												97	
			146	WALL (TYPE 2)	LF	25												25	
			147	CONCRETE SPLASH PAN (14 INCH)	LF	1,380												1380	
			148	CONCRETE EDGING	LF			120										120	
			149	2 INCH ELECTRICAL CONDUIT (BORED)	LF											2375		2375	
			150	3 INCH ELECTRICAL CONDUIT (BORED)	LF											2190		2190	
			151	1 INCH ELECTRICAL CONDUIT (PLASTIC)	LF			195										195	
			152	2 INCH ELECTRICAL CONDUIT (PLASTIC)	LF			12430								1165		13595	
			153	3 INCH ELECTRICAL CONDUIT (PLASTIC)	LF											740		740	
			154	PULL BOX (TYPE M)	EA											1		1	
			155	PULL BOX (TYPE LG)	EA											16		16	
			156	PULL BOX (13"X20"X18")	EA			54										54	
			157	WIRING	LS			1								1		2	
			158	LUMINAIRE (LED)	EA											13		13	
			159	LIGHT STANDARD AND LUMINAIRE (PEDESTRIAN) (TYPE B)	EA			99										99	
			160	LIGHT STANDARD FOUNDATION	EA			86										86	
			161	LIGHT STANDARD FOUNDATION (SPECIAL)	EA			13										13	
			162	LIGHTING CONTROL CENTER	EA			4										4	
			163	SERVICE METER CABINET	EA											4		4	
			164	SIGN PANEL (CLASS I)	SF											525.3		525.3	
			165	STEEL SIGN POST (1.75X1.75 INCH TUBING)	LF											421		421	
			166	SIGNAL HEAD BACKPLATES	EA											34		34	
			167	PEDESTRIAN SIGNAL FACE (16) (COUNTDOWN)	EA											24		24	
			168	TRAFFIC SIGNAL FACE (12-12-12)	EA											39		39	
			169	TRAFFIC SIGNAL FACE (12-12-12-12)	EA											17		17	
			170	TRAFFIC SIGNAL FACE (12-12-12-12-12)	EA											1		1	
			171	TRAFFIC SIGNAL CONTROLLER	EA											4		4	
			172	PEDESTRIAN PUSH BUTTON POST ASSEMBLY	EA											9		9	
			173	PEDESTRIAN PUSH BUTTON STATION AND SIGN	EA											28		28	
			174	MICROWAVE VEHICLE RADAR DETECTOR	EA											22		22	
			175	TRAFFIC SIGNAL CONTROLLER (INSTALL ONLY)	EA											4		4	

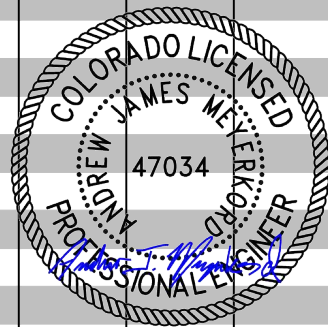


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Print Date: 1/22/2021 11:22:14 AM		Sheet Revisions			 CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002			As Constructed		RALSTON RD - YUKON ST TO GARRISON ST SUMMARY OF APPROXIMATE QUANTITIES			Project No./Code	
File Name: 118355_GNSQ_SH01.DWG								No Revisions:					18-ST-40	
Horizontal Scale: N/A Vertical Scale: N/A		R-X	Date	Comments	Initials	Revised:		Designer: JHH	Structure					
 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com		R-1	01/22/2021	ADDENDUM 2	JVS			Detailer: DAL	Numbers					
								Void:	Sheet Subset: GENERAL	Subset Sheets: SQ-04 of 6		Sheet Number 13		

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Index			Contract Item No.	Contract Item	Unit	Roadway		Streetscape		Utilities		Drainage		Erosion Control		Traffic		Project Totals	
Book	Page	Sheet				Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.
			176	TRAFFIC SIGNAL-LIGHT POLE (1-20 FOOT MAST ARM)	EA											2		2	
			177	TRAFFIC SIGNAL-LIGHT POLE (1-30 FOOT MAST ARM)	EA											1		1	
			178	TRAFFIC SIGNAL-LIGHT POLE (1-35 FOOT MAST ARM)	EA											2		2	
			179	TRAFFIC SIGNAL-LIGHT POLE (1-40 FOOT MAST ARM)	EA											3		3	
			180	TRAFFIC SIGNAL-LIGHT POLE (1-45 FOOT MAST ARM)	EA											1		1	
			181	TRAFFIC SIGNAL-LIGHT POLE (1-50 FOOT MAST ARM)	EA											4		4	
			182	TRAFFIC SIGNAL PEDESTAL POLE STEEL	EA											5		5	
			183	TEMPORARY SIGNAL (PORTABLE)	EA											4		4	
			184	UNINTERRUPTED POWER SUPPLY	EA											4		4	
			185	CLOSED CIRCUIT TELEVISION CAMERA (TRAFFIC SURVEILLANCE)	EA											1		1	
			186	FIBER OPTIC CABLE (SINGLE MODE) (12 FIBER)	LF											1000		1000	
			187	TEST FIBER OPTIC CABLE	LS											1		1	
			188	TERMINATE FIBER OPTIC CABLE (12 STRAND)	EA											4		4	
			189	ETHERNET SWITCH	EA											4		4	
			190	4 INCH GATE VALVE & BOX	EA					1								1	
			191	6 INCH GATE VALVE & BOX	EA					2								2	
			192	8 INCH GATE VALVE & BOX	EA					11								11	
			193	12 INCH GATE VALVE & BOX	EA					9								9	
			194	FIRE HYDRANT (ASSEMBLY)	EA					13						12		25	
			195	STAIR	EA	7												7	
			196	TEMPORARY DRIVEWAY PAVING	SY											3500		3500	
			197	6' BENCH	EA			4										4	
			198	4' BENCH	EA			11										11	
			199	DISTRICT MARKER (INSPIRE, CELEBRATE, REMEMBER)	EA			3										3	
			200	DISTRICT MARKER FOUNDATION (INSPIRE, CELEBRATE, REMEMBER)	CY			9										9	
			201	NEIGHBORHOOD MONUMENT	EA			17										17	
			202	NEIGHBORHOOD MONUMENT FOUNDATION	CY			11										11	
			203	WOLFF PARK PLANTER WALL	LF			40										40	
			204	IRRIGATION POINT OF CONNECTION	EA			4										4	
			205	IRRIGATION TAP FEES	SF			21129										21129	
			206	IRRIGATION WITHIN BEDS AND CORNER PLANTERS	SF			20608										20608	
			207	IRRIGATION FOR TREE PITS	EA			20										20	
			208	IRRIGATION MAINLINE	LF			5800										5800	
			209	IRRIGATION SLEEVES FOR MAINLINE	LF			3850										3850	
			210	IRRIGATION SLEEVES FOR LATERALS - BEDS AND CORNER TREATMENTS	LF			4600										4600	
			211	IRRIGATION SLEEVES FOR LATERALS - TREE PITS	LF			1550										1550	
			212	IRRIGATION LATERAL FOR BEDS AND CORNER TREATMENTS	LF			6775										6775	
			213	IRRIGATION LATERAL FOR TREE PITS	LF			1700										1700	
			214	IRRIGATION MODIFICATION FOR ADJACENT OWNERS	LS			38										38	
			215	IRRIGATION MODIFICATION FOR RALSTON CENTRAL PARK	LS			1										1	
			216	IRRIGATION MODIFICATION FOR WOLFF PARK	LS			1										1	
			217	IRRIGATION PIPING BORE ALLOWANCE	LF			963										963	
			218	CONSTRUCTION SURVEYING	LS	1								1-22-2021				1	
			219	MATERIALS TESTING SERVICES	LS	1												1	



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Horizontal Scale: N/A Vertical Scale: N/A		R-X	Date	Comments	Initials	No Revisions:		Designer: JHH		Structure	18-ST-40
FELSBURG HOLT & ULLEVIG 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com		R-1	01/22/2021	ADDENDUM 2	JVS	Revised:		Detailer: DAL		Numbers	
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Book	Page	Sheet				Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.	Plan	As Const.
			220	MOBILIZATION	LS	1												1	
			221	MODIFIED EPOXY PAVEMENT MARKING	GAL											64		64	
			222	PREFORMED THERMOPLASTIC PVMNT MRKNG (WORD-SYMBOL)	SF											328		328	
			223	PREFORMED THERMOPLASTIC PVMNT MRKNG (XWALK-STOPLINE)	SF											786		786	
			224	UNIFORMED TRAFFIC CONTROL	HR											200		200	
			225	TRAFFIC CONTROL	LS											1		1	
			226	PUBLIC INFORMATION SERVICES (TIER III)	LS	1												1	
			227	SANITARY FACILITY	EA	5												5	
			228	F/A 01 MINOR CONTRACT REVISIONS TO INCLUDE RFI'S (ROADWAY)	FA	1												1	
			229	F/A 02 EROSION CONTROL	FA	1												1	
			230	F/A 03 ENVIRONMENTAL HEALTH AND SAFETY MANAGEMENT	FA	1												1	
			231	F/A 04 IRRIGATION SYSTEM REPAIR	FA	1												1	
			232	F/A 05 UTILITY ADJUSTMENT	FA	1												1	
			233	F/A 06 HIGH EARLY STRENGTH CONCRETE (CLASS E)	FA	1												1	
			234	F/A 07 FURNISH AND INSTALL ELECTRICAL SERVICE	FA	1												1	
			235	F/A 08 MINOR CONTRACT REVISIONS TO INCLUDE RFI'S (STREETSCAPE)	FA	1												1	
			236	F/A 09 MINOR CONTRACT REVISIONS TO INCLUDE RFI'S (WATER)	FA	1												1	

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CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed	RALSTON RD - YUKON ST TO GARRISON ST SUMMARY OF APPROXIMATE QUANTITIES			Project No./Code
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TABULATION OF ROADWAY QUANTITIES

LOCATION / SHEET	AGGREGATE BASE COURSE (CLASS 6)	HOT MIX ASPHALT (GRADING S) (100) (PG 64-22)	HOT MIX ASPHALT (GRADING SX) (100) (PG 76-28)	EMULSIFIED ASPHALT (SLOW-SETTING)	CONCRETE PAVEMENT (6 INCH)	CONCRETE BUS PAD (11 INCH)	CONCRETE SLOPE AND DITCH PAVING (4 INCH)	CONCRETE SIDEWALK (6 INCH)	CONCRETE SIDEWALK (SPECIAL)(TYPE 1)	CONCRETE SIDEWALK (SPECIAL)(TYPE 2)	CONCRETE CURB RAMP
	CY	TON	TON	GAL	SY	SY	CY	SY	SY	SY	SY
Ralston Road	11,319	13,091	4,707	3,215	223	327	6	6,207	1,274	760	856
PP-02	971	1,140	354	258	0	47	0	834	0	90	95
PP-04	1,241	1,432	532	345	0	0	0	832	234	0	47
PP-06	1,231	1,438	471	336	0	93	0	778	73	102	55
PP-08	1,239	1,427	535	355	60	0	0	528	252	205	44
PP-10	958	1,105	402	283	0	47	0	428	16	0	72
PP-12	1,670	1,929	693	492	0	47	0	900	182	0	186
PP-14	1,162	1,324	541	345	0	0	0	754	30	0	141
PP-16	1,209	1,396	511	343	73	93	6	491	30	249	95
PP-18	1,237	1,434	506	346	42	0	0	506	414	62	53
PP-20	378	435	160	113	48	0	0	156	43	52	34
PP-39	22	30	0	0	0	0	0	0	0	0	34
PROJECT TOTALS	11,319	13,091	4,707	3,215	223	327	6	6,207	1,274	760	856

TABULATION OF ROADWAY QUANTITIES

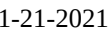
CONCRETE CURB RAMP (SPECIAL)	DRIVEWAY (6 INCH CONCRETE)	MOUNTABLE CURB AND SIDEWALK	CURB AND GUTTER (SPECIAL)	COA 6" VERTICAL CURB AND 1' GUTTER	COA 6" VERTICAL CURB AND 2' GUTTER	VALLEY GUTTER	WALL (TYPE 1)	WALL (TYPE 2)	CONCRETE SPLASH PAN	STAIR
SY	SY	SY	LF	LF	LF	SY	LF	SY	LF	EA
498	916	27	895	1,438	10,136	995	97	25	1,380	7
0	97	0	37	184	885	24	97	0	179	1
76	136	0	255	253	1,260	61	0	25	249	1
37	88	0	91	0	1,071	0	0	0	0	1
148	193	27	50	0	1,084	130	0	0	0	0
0	38	0	132	0	905	40	0	0	0	0
39	61	0	20	180	1,336	314	0	0	177	1
69	31	0	60	415	1,069	204	0	0	425	1
34	80	0	10	406	1,176	70	0	0	351	1
95	150	0	87	0	1,042	84	0	0	0	1
0	43	0	13	0	308	38	0	0	0	0
0	0	0	140	0	0	30	0	0	0	0
498	916	27	895	1,438	10,136	995	97	25	1,380	7

R-1

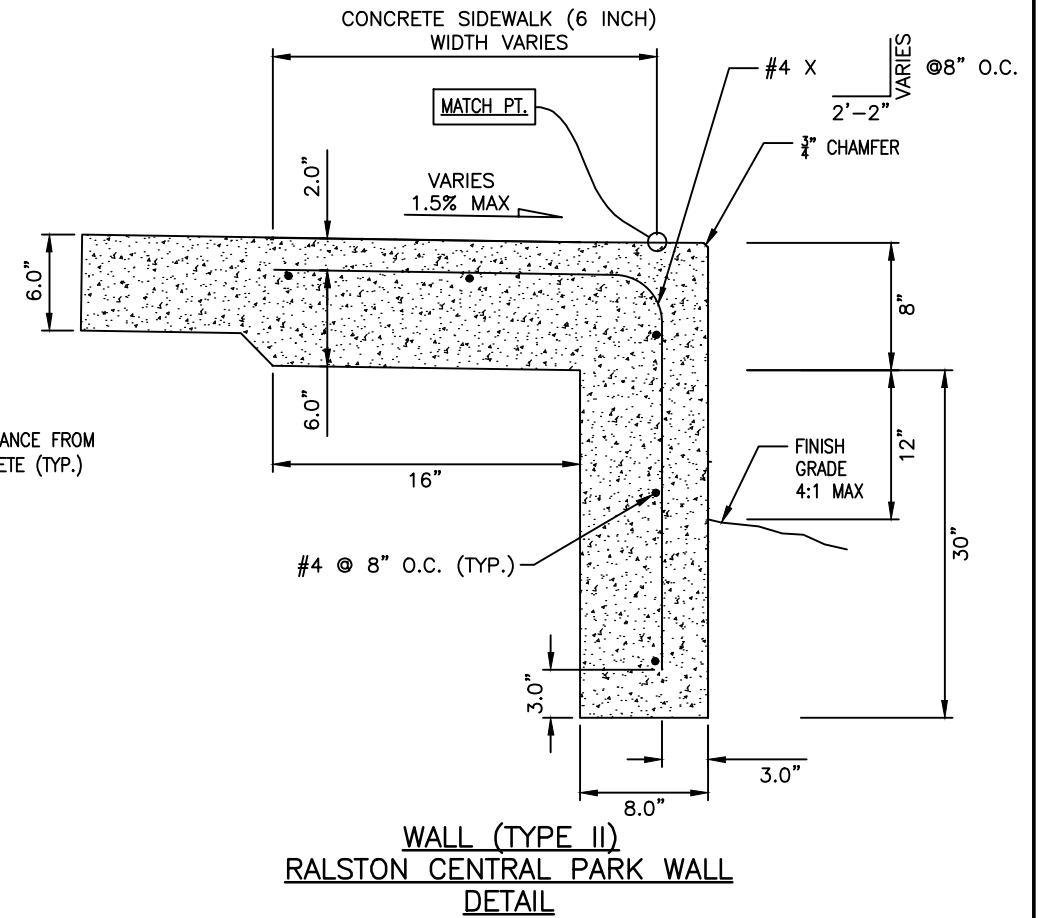
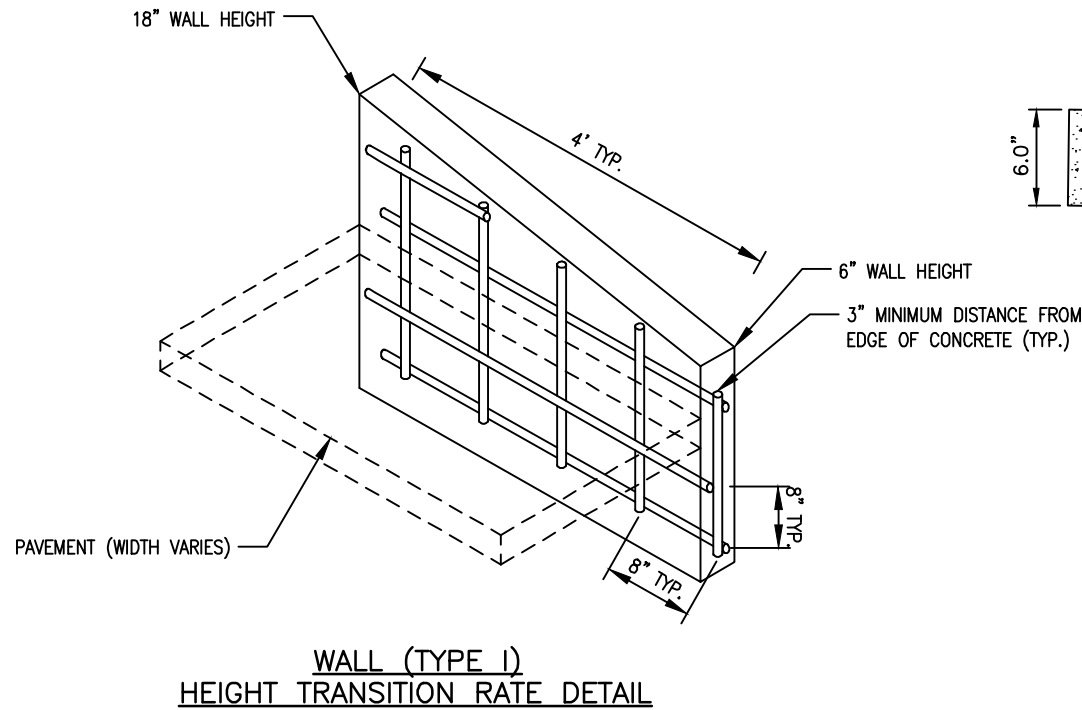
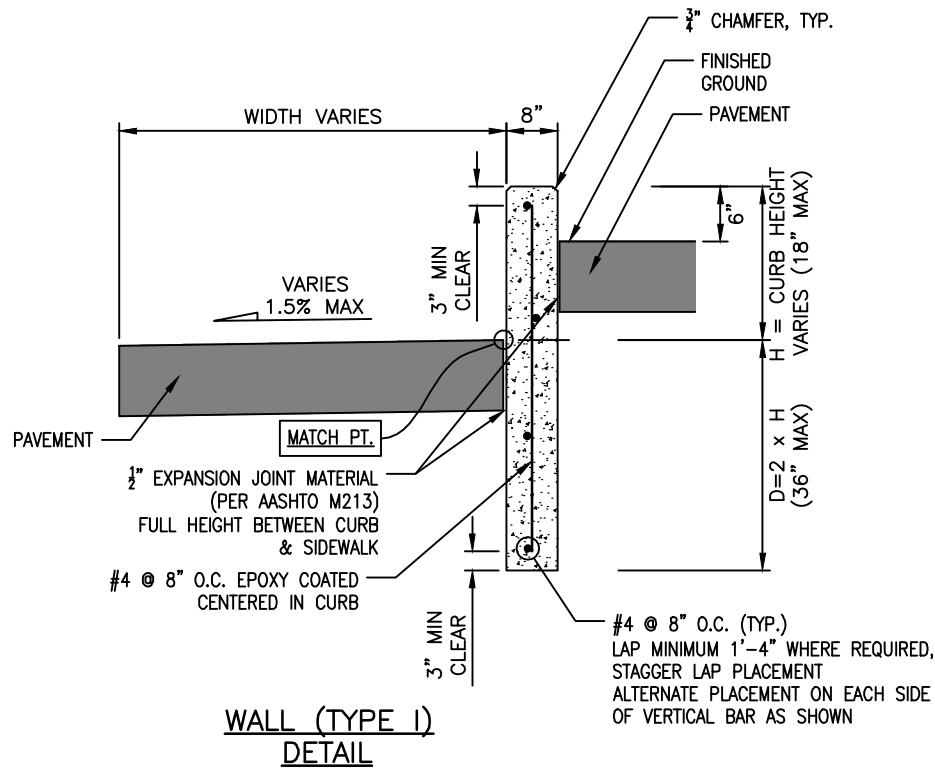


1-21-2021

E:\118355-01 Ralston Rd	Print Date: 1/21/2021 11:47:14 AM		R-X R-1	Sheet Revisions			 CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed		RALSTON RD - YUKON ST TO GARRISON ST TABULATION ROADWAY QUANTITIES			Project No./Code	
	File Name: 118355_RDTB_SH01.DWG			Date	Comments	Initials		No Revisions:					18-ST-40	
	Horizontal Scale: N/A Vertical Scale: N/A			01/22/2021	ADDENDUM 2	JVS		Revised:		Designer: JHH	Structure Numbers			
	 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Detailer: DAL				
								Sheet Subset: TABULATIONS		Subset Sheets: TB-02 of 3		Sheet Number 36		

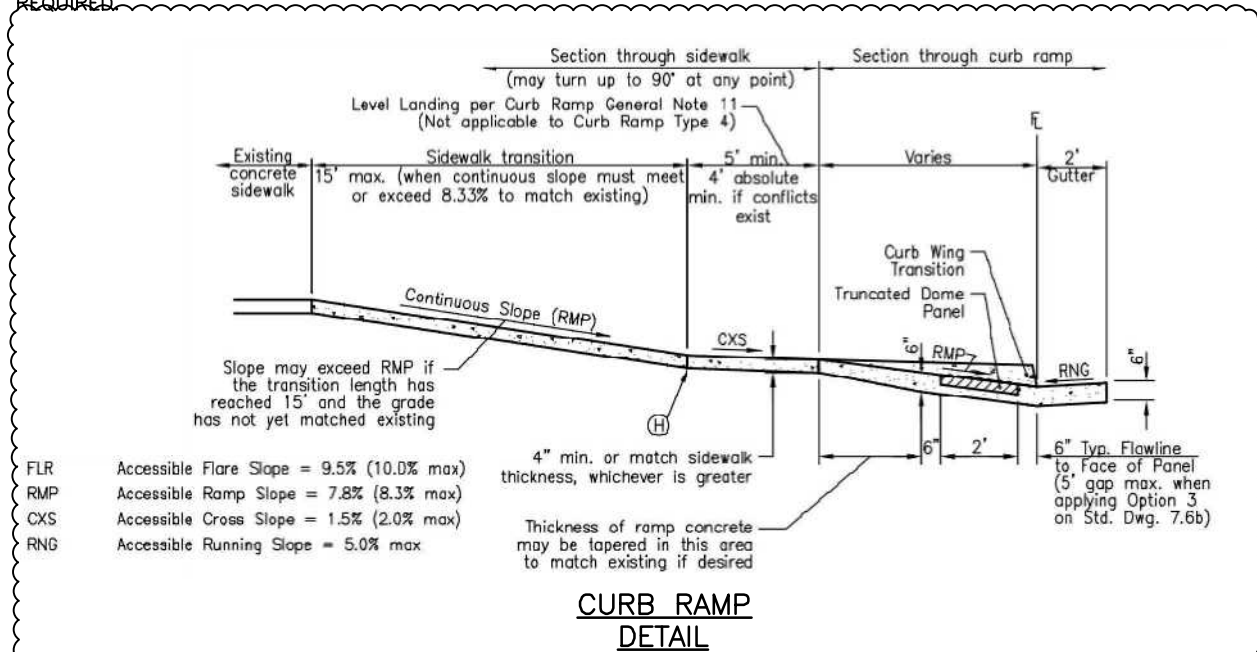
R-1

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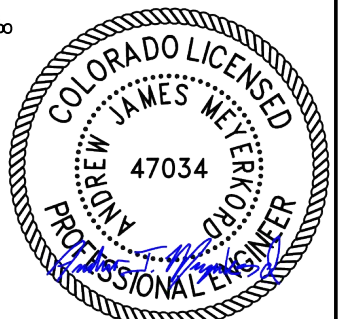
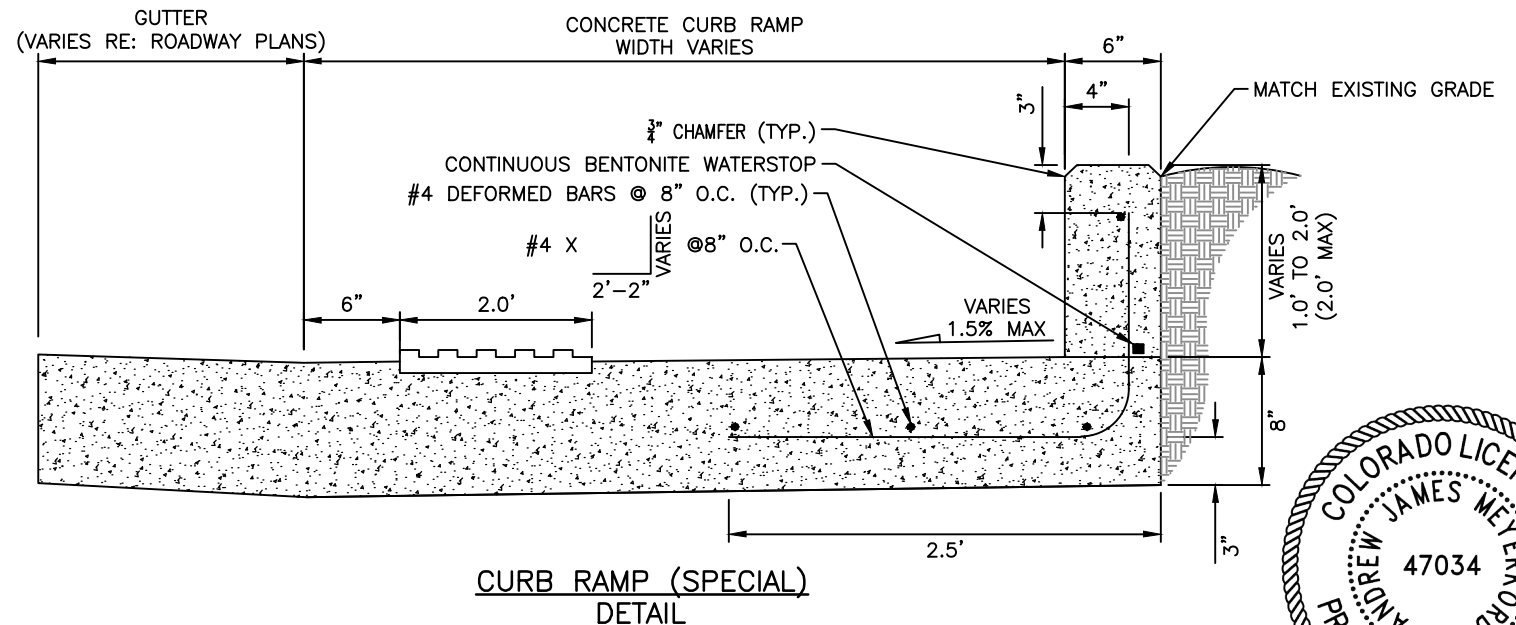
REINFORCING NOTES

1. ALL REINFORCING STEEL ON THIS SHEET SHALL BE GRADE 60 (FY = 60 KSI) AND SHALL BE EPOXY COATED IN ACCORDANCE WITH ASTM A775.
2. MINIMUM LAP SPLICES FOR THE CONT. #4 REINFORCING BARS SHALL BE 1'-6" WHERE REQUIRED.



CURB RAMP NOTES

1. 8" MINIMUM REPLACEMENT THICKNESS IN GUTTER IN ADA RAMP SECTION.
2. FIBER MESH REINFORCED CONCRETE 1.5 LBS/CY.
3. ALL WORK IN ACCORDANCE WITH FED. REGISTER 1, VOL. 59, NO. 117, 6/20/94



1-21-2021

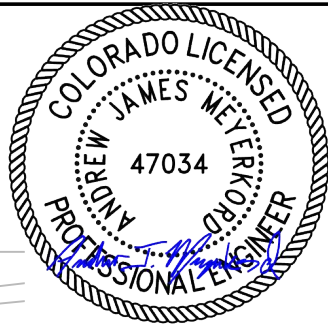
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6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com	

Sheet Revisions			
Date	Comments	Initials	
01/22/2021	ADDENDUM 2	JVS	

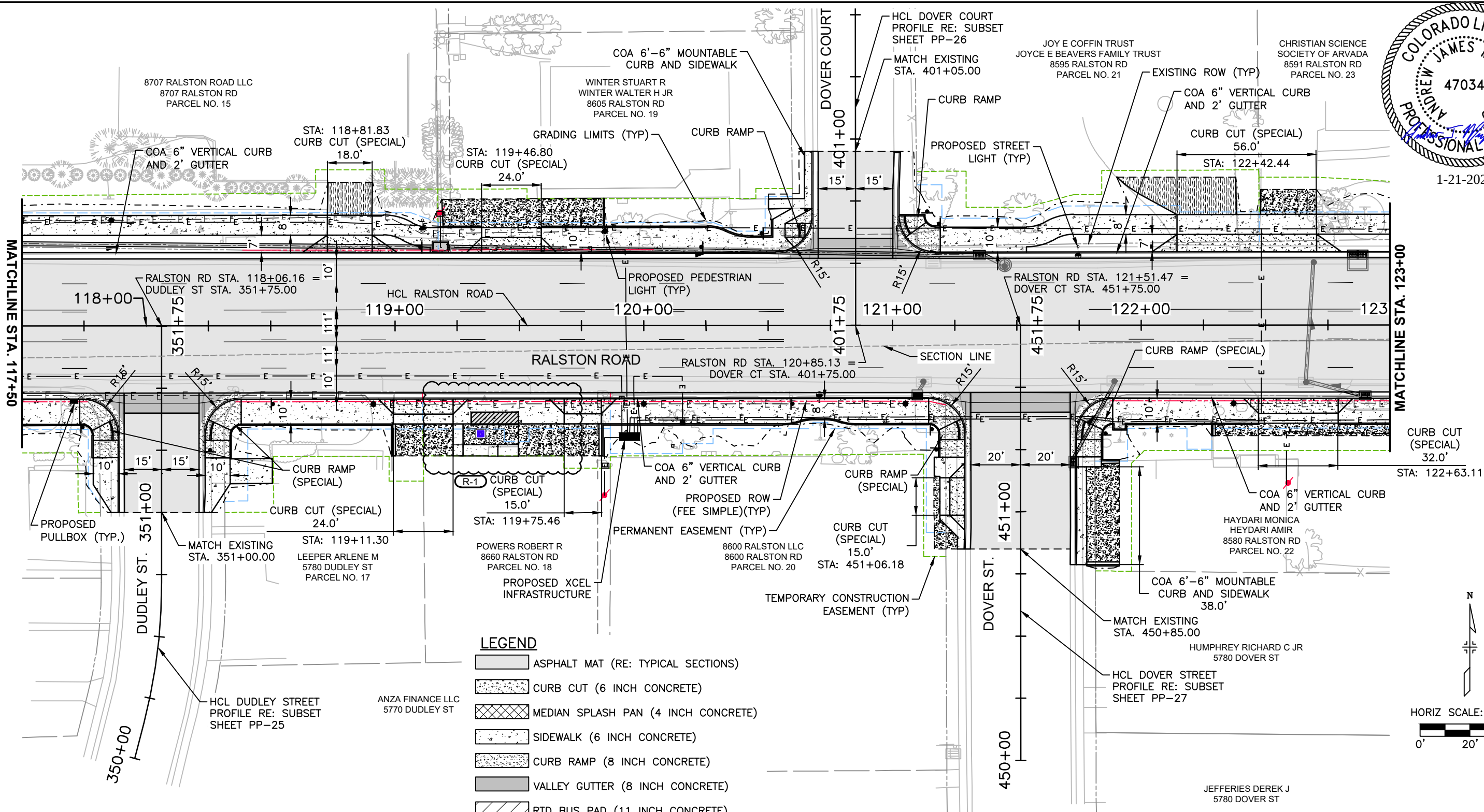


CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY DETAIL WALL AND CURB RAMP			Project No./Code
No Revisions:					18-ST-40
Revised:		Designer:	JHH	Structure	
		Detailer:	JVS	Numbers	
Void:		Sheet Subset:	ROADWAY	Subset Sheets:	DT-02 of 10
					Sheet Number 51



1-21-2021

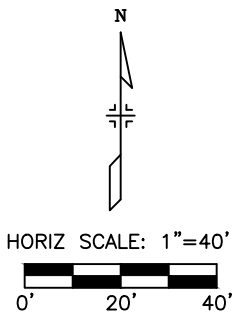


LEGEND

- ASPHALT MAT (RE: TYPICAL SECTIONS)
- CURB CUT (6 INCH CONCRETE)
- MEDIAN SPLASH PAN (4 INCH CONCRETE)
- SIDEWALK (6 INCH CONCRETE)
- CURB RAMP (8 INCH CONCRETE)
- VALLEY GUTTER (8 INCH CONCRETE)
- RTD BUS PAD (11 INCH CONCRETE)
- SLOPE PAVING (4 INCH CONCRETE)
- BRICK PAVERS (REMOVE AND RESET)
- PARKING LOT (4 INCH HMA)
- PARKING LOT (6 INCH CONCRETE)

NOTES CONTINUED:

- FOR CURB CUT DETAILS RE: ROADWAY DETAILS.
- FOR RTD BUS PAD DETAILS RE: ROADWAY DETAILS.
- FOR STAIR DETAIL RE: ROADWAY DETAILS.
- ALL STRIPING DIMENSIONS MEASURED TO EDGE OF PAVEMENT AND CENTER OF STRIPE.
- ALL RADII MEASURED TO FLOWLINE OF CURB.



- NOTES:
- FOR ADDITIONAL ROADWAY AND PROPERTY GRADING RE: ROADWAY GEOMETRIC DETAILS, INTERSECTION DETAILS AND PROPERTY ACCESS DETAILS.
 - FOR ALL NON-ROADWAY CURBS AT THE BACK OF SIDEWALK AND ON PRIVATE PROPERTY RE: ROADWAY DETAILS, ROADWAY GEOMETRIC DETAILS AND PROPERTY ACCESS DETAILS.
 - FOR DECORATIVE PAVEMENT DETAILS REQUIRED IN THE SIDEWALK AND CURB RAMPS RE: LANDSCAPE PLANS AND LANDSCAPE DETAILS.

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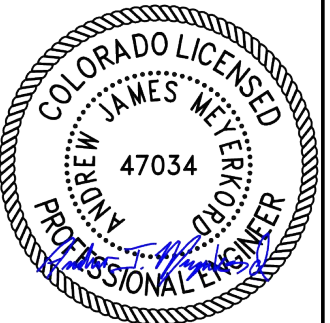
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6400 South Fiddlers Green Circle, Suite 1500
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Sheet Revisions			
Date	Comments	Initials	
01/22/2021	ADDENDUM 2	JVS	

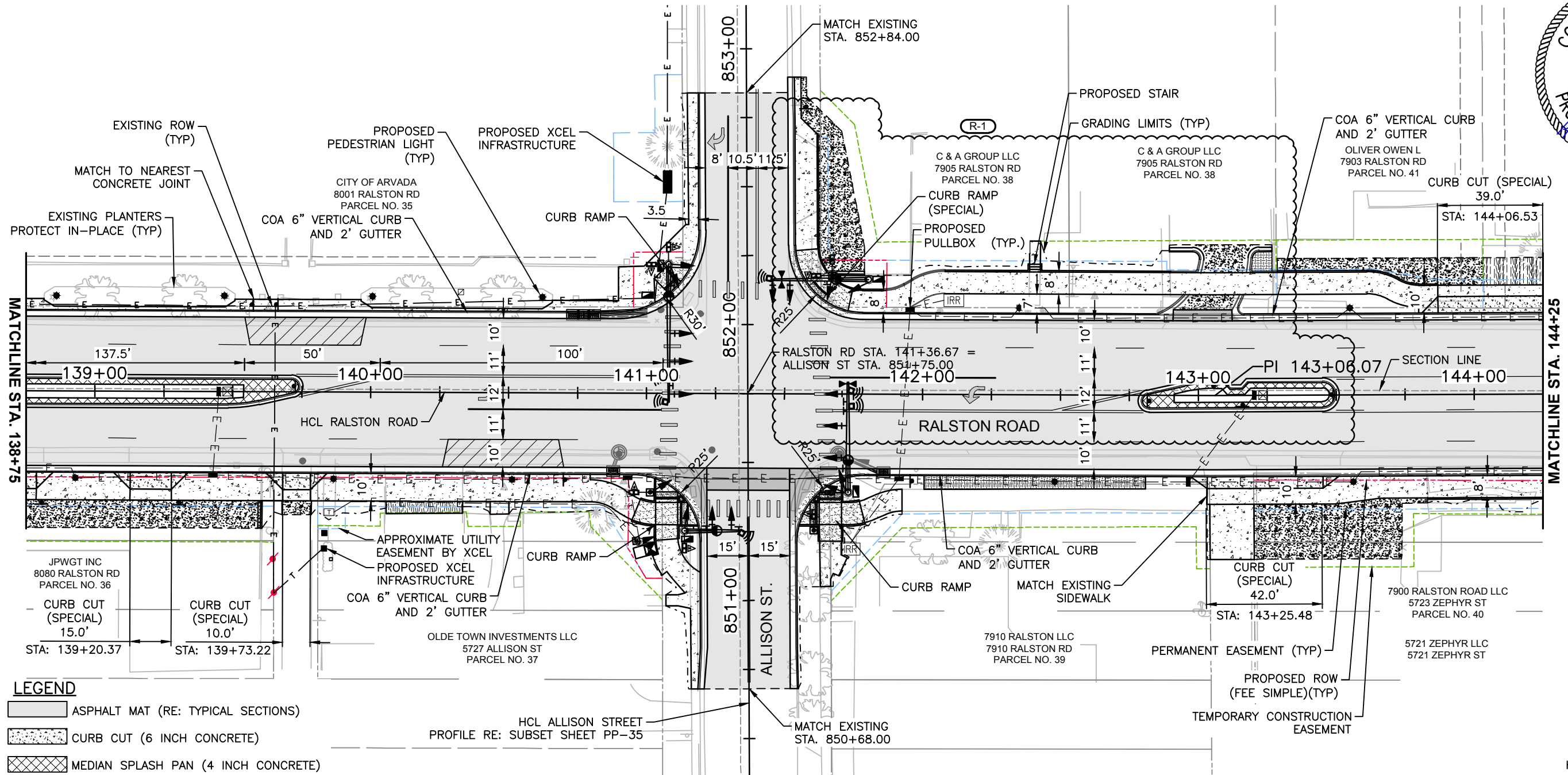
CITY OF ARVADA
PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY PLAN RALSTON ROAD (STA. 117+50 - STA. 123+00)			Project No./Code
No Revisions:		Designer: JHH	Structure		18-ST-40
Revised:		Detailer: BCN	Numbers		
Void:		Sheet Subset: ROADWAY	Subset Sheets: PP-08 of 40	Sheet Number	67



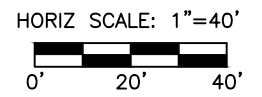
1-21-2021



LEGEND

- ASPHALT MAT (RE: TYPICAL SECTIONS)
- CURB CUT (6 INCH CONCRETE)
- MEDIAN SPLASH PAN (4 INCH CONCRETE)
- SIDEWALK (6 INCH CONCRETE)
- CURB RAMP (8 INCH CONCRETE)
- VALLEY GUTTER (8 INCH CONCRETE)
- RTD BUS PAD (11 INCH CONCRETE)
- SLOPE PAVING (4 INCH CONCRETE)
- BRICK PAVERS (REMOVE AND RESET)
- PARKING LOT (4 INCH HMA)
- PARKING LOT (6 INCH CONCRETE)

- NOTES:
- FOR ADDITIONAL ROADWAY AND PROPERTY GRADING RE: ROADWAY GEOMETRIC DETAILS, INTERSECTION DETAILS AND PROPERTY ACCESS DETAILS.
 - FOR ALL NON-ROADWAY CURBS AT THE BACK OF SIDEWALK AND ON PRIVATE PROPERTY RE: ROADWAY DETAILS, ROADWAY GEOMETRIC DETAILS AND PROPERTY ACCESS DETAILS.
 - FOR DECORATIVE PAVEMENT DETAILS REQUIRED IN THE SIDEWALK AND CURB RAMPS RE: LANDSCAPE PLANS AND LANDSCAPE DETAILS.
 - FOR CURB CUT DETAILS RE: ROADWAY DETAILS.
 - FOR RTD BUS PAD DETAILS RE: ROADWAY DETAILS.
 - FOR STAIR DETAIL RE: ROADWAY DETAILS.
 - ALL STRIPING DIMENSIONS MEASURED TO EDGE OF PAVEMENT AND CENTER OF STRIPE.
 - ALL RADII MEASURED TO FLOWLINE OF CURB.



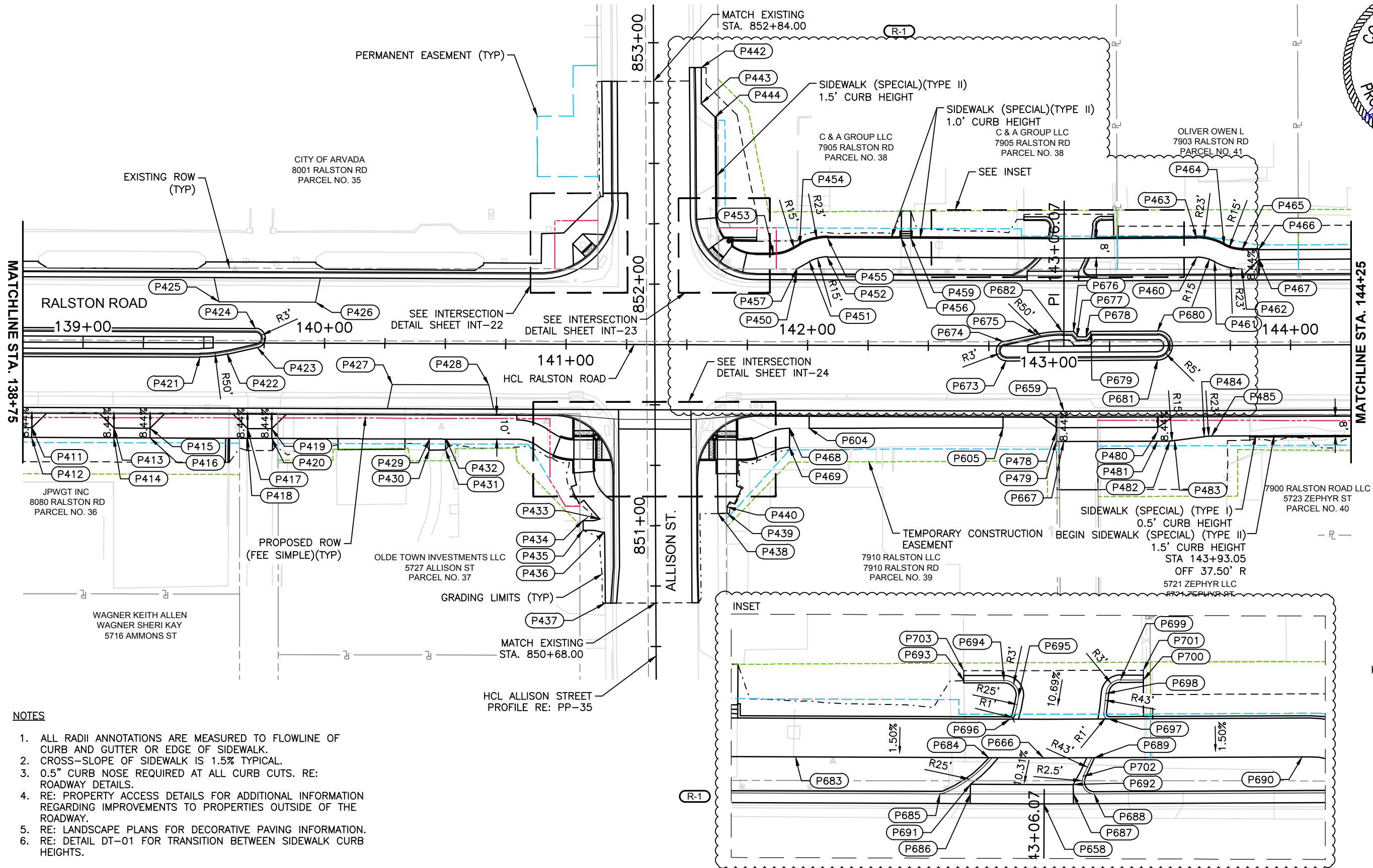
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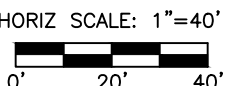
Sheet Revisions			
Date	Comments	Initials	
01/22/2021	ADDENDUM 2	JVS	

CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY PLAN RALSTON ROAD (STA. 138+75 - STA. 144+25)			Project No./Code
No Revisions:		Designer: JHH	Structure		18-ST-40
Revised:		Detailer: BCN	Numbers		
Void:		Sheet Subset: ROADWAY	Subset Sheets: PP-16 of 40		Sheet Number 75



- NOTES**
1. ALL RADII ANNOTATIONS ARE MEASURED TO FLOWLINE OF CURB AND GUTTER OR EDGE OF SIDEWALK.
 2. CROSS-SLOPE OF SIDEWALK IS 1.5% TYPICAL.
 3. 0.5" CURB NOSE REQUIRED AT ALL CURB CUTS. RE: ROADWAY DETAILS.
 4. RE: PROPERTY ACCESS DETAILS FOR ADDITIONAL INFORMATION REGARDING IMPROVEMENTS TO PROPERTIES OUTSIDE OF THE ROADWAY.
 5. RE: LANDSCAPE PLANS FOR DECORATIVE PAVING INFORMATION.
 6. RE: DETAIL DT-01 FOR TRANSITION BETWEEN SIDEWALK CURB HEIGHTS.



Print Date: 1/21/2021 8:09:05 PM
File Name: 118355_RDGM_DT_SH01.DWG
Horizontal Scale: 1" = 40' Vertical Scale: N/A

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Date	Comments	Initials	
01/22/2021	ADDENDUM 2	JVS	

CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY GEOMETRIC DETAILS RALSTON ROAD (STA. 138+75 - STA. 144+25)		Project No./Code
No Revisions:		Designer: JHH Detailer: JVS		18-ST-40
Revised:		Sheet Subset: ROADWAY		Sheet Number 114
Void:		Subset Sheets: GD-15 of 20		

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RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
411	138+78.88	35.50R	5343.78	FOW, DRIVEWAY
412	138+78.88	39.50R	5343.84	BOW, DRIVEWAY
413	139+12.87	35.50R	5343.39	FOW, DRIVEWAY
414	139+12.87	39.50R	5343.45	BOW, DRIVEWAY
415	139+27.87	35.50R	5343.22	FOW, DRIVEWAY
416	139+27.87	39.50R	5343.28	BOW, DRIVEWAY
417	139+68.22	35.50R	5342.81	FOW, DRIVEWAY
418	139+68.22	39.50R	5342.87	BOW, DRIVEWAY
419	139+78.22	35.50R	5342.71	FOW, DRIVEWAY
420	139+78.22	39.50R	5342.77	BOW, DRIVEWAY
421	139+48.40	6.00R	5343.00	MEDIAN, P.C.
422	139+59.70	4.73R	5342.91	MEDIAN, P.T.
423	139+72.16	1.90R	5342.85	MEDIAN, P.C.
424	139+71.27	6.00L	5342.77	MEDIAN, P.T.
425	139+56.22	17.00L	5342.70	BUS PAD
426	139+96.22	17.00L	5342.32	BUS PAD
427	140+28.11	17.00R	5342.04	BUS PAD
428	140+68.11	17.00R	5341.71	BUS PAD
429	140+43.65	39.50R	5342.19	BOW
430	140+43.44	44.12R	5342.60	MATCH EXISTING
431	140+50.27	43.96R	5342.56	MATCH EXISTING
432	140+50.50	39.50R	5342.14	BOW
433	851+02.98	23.15L	5341.58	BOW
434	851+02.28	29.96L	5341.60	MATCH EXISTING
435	850+98.30	29.99L	5341.59	MATCH EXISTING
436	850+97.43	21.20L	5341.57	BOW
437	850+68.00	20.90L	5341.49	BOW, MATCH EXISTING
438	851+04.88	25.98R	5341.30	FOW, MATCH EXISTING
439	851+04.94	29.74R	5341.36	BOW, MATCH EXISTING
440	851+07.64	29.75R	5341.36	BOW
442	852+89.60	19.82R	5342.22	BOW, MATCH EXISTING
443	852+74.73	19.80R	5342.42	BOW
444	852+69.03	25.50R	5342.52	BOW

R-1

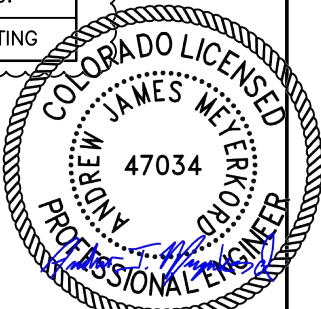
RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
450	141+95.39	29.50L	5341.07	FOW, P.C.
451	142+00.59	34.53L	5341.10	FOW, P.R.C.
452	142+08.03	36.50L	5341.08	FOW, P.T.
453	141+85.75	37.50L	5341.26	BOW, P.C.
454	141+96.62	41.47L	5341.24	BOW, P.R.C.
455	142+08.03	44.50L	5341.20	BOW, P.T.
456	142+38.61	44.50L	5341.00	BOW
457	141+95.39	29.50L	5341.07	FOW, P.C.
459	142+42.57	44.50L	5340.98	BOW
460	143+61.29	36.50L	5340.32	FOW, P.C.
461	143+68.73	34.53L	5340.26	FOW, P.R.C.
462	143+80.03	31.50L	5340.17	FOW, P.T.
463	143+61.29	44.50L	5340.44	BOW, P.C.
464	143+72.69	41.47L	5340.35	BOW, P.R.C.
465	143+80.06	39.50L	5340.29	BOW, P.T.
466	143+87.03	39.50L	5340.26	BOW, DRIVEWAY
467	143+87.03	35.50L	5340.20	FOW, DRIVEWAY
468	141+92.70	34.52R	5341.69	FOW, MATCH EXISTING
469	141+92.70	42.45R	5341.79	BOW, MATCH EXISTING
478	143+03.06	35.50R	5340.06	FOW, DRIVEWAY
479	143+03.06	39.50R	5340.10	BOW, DRIVEWAY
480	143+44.76	35.50R	5339.83	FOW, DRIVEWAY
481	143+44.76	39.50R	5339.89	BOW, DRIVEWAY
482	143+49.76	39.50R	5339.87	BOW, P.C.
483	143+51.76	39.37R	5339.86	BOW, P.T.
484	143+64.11	37.71R	5339.79	BOW, P.C.
485	143+67.18	37.50R	5339.77	BOW, P.T.
604	142+00.75	34.47R	5341.98	SLOPE PAVEMENT, MATCH EXISTING
605	142+81.02	33.94R	5341.14	SLOPE PAVEMENT, MATCH EXISTING
658	143+06.18	27.00L	5340.10	EOP, RALSTON P.I.
659	143+06.07	27.00R	5339.56	EOP, RALSTON P.I.
666	143+05.91	36.50L	5340.70	FOW, RALSTON P.I.
667	143+06.07	39.50R	5340.04	BOW, RALSTON P.I.

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
673	142+82.16	6.20R	5340.30	MEDIAN P.C.
674	142+81.24	1.70L	5340.47	MEDIAN P.T.
675	142+94.58	4.73L	5340.37	MEDIAN P.C.
676	143+10.13	6.00L	5340.29	MEDIAN CUTOUT
677	143+11.51	3.75L	5340.31	MEDIAN CUTOUT
678	143+15.32	3.74L	5340.30	MEDIAN CUTOUT
679	143+17.35	6.00L	5340.27	MEDIAN CUTOUT
680	143+44.92	6.00L	5340.16	MEDIAN P.C.
681	143+44.92	6.00R	5340.04	MEDIAN P.T.
682	143+05.45	5.99L	5340.31	MEDIAN P.T.
683	142+54.60	36.50L	5340.79	FOW
684	142+94.60	36.50L	5340.72	FOW
685	142+84.46	29.00L	5340.03	FLOWLINE, P.C.
686	142+90.79	29.02L	5340.00	FLOWLINE; VALLEY GUTTER
687	143+12.36	29.02L	5339.91	FLOWLINE; VALLEY GUTTER
688	143+16.65	29.00L	5340.04	FLOWLINE, P.C.
689	143+16.74	36.50L	5340.63	FOW
690	143+59.74	36.50L	5340.33	FOW
691	142+90.79	31.00L	5340.17	VALLEY GUTTER
692	143+12.36	31.00L	5340.07	VALLEY GUTTER
693	142+89.35	52.46L	5342.15	FLOWLINE; MATCH EXISTING
694	142+97.67	52.49L	5342.04	FLOWLINE; P.T.
695	143+00.66	49.11L	5341.41	FLOWLINE; P.C.
696	142+98.88	44.50L	5340.83	BOW, P.C.
697	143+19.74	44.50L	5340.73	BOW, P.C.
698	143+19.22	49.74L	5341.24	FLOWLINE; P.C.
699	143+22.21	52.54L	5341.67	FLOWLINE; P.T.
700	143+26.94	52.54L	5341.59	FLOWLINE; MATCH EXISTING
701	143+26.94	54.54L	5341.61	EOP, MATCH EXISTING
702	143+14.43	32.66L	5340.36	FLOWLINE; P.R.C.
703	142+89.34	54.46L	5342.17	EOP, MATCH EXISTING

R-1

LEGEND

FOW: FRONT OF WALK
BOW: BACK OF WALK
TBOC: TOP BACK OF CURB
FOC: FACE OF CURB



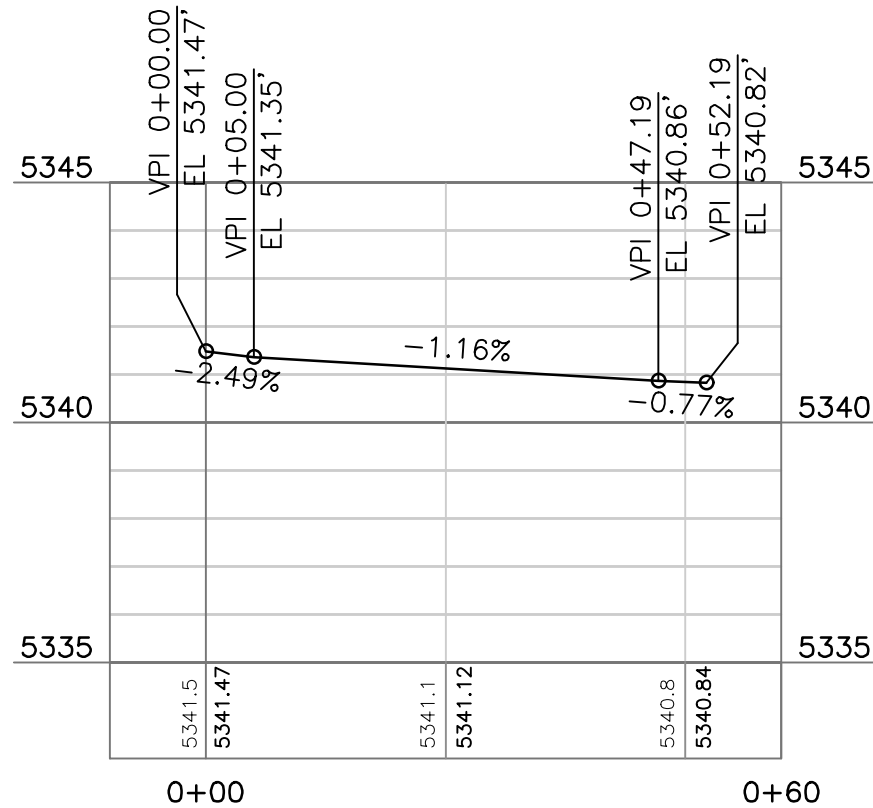
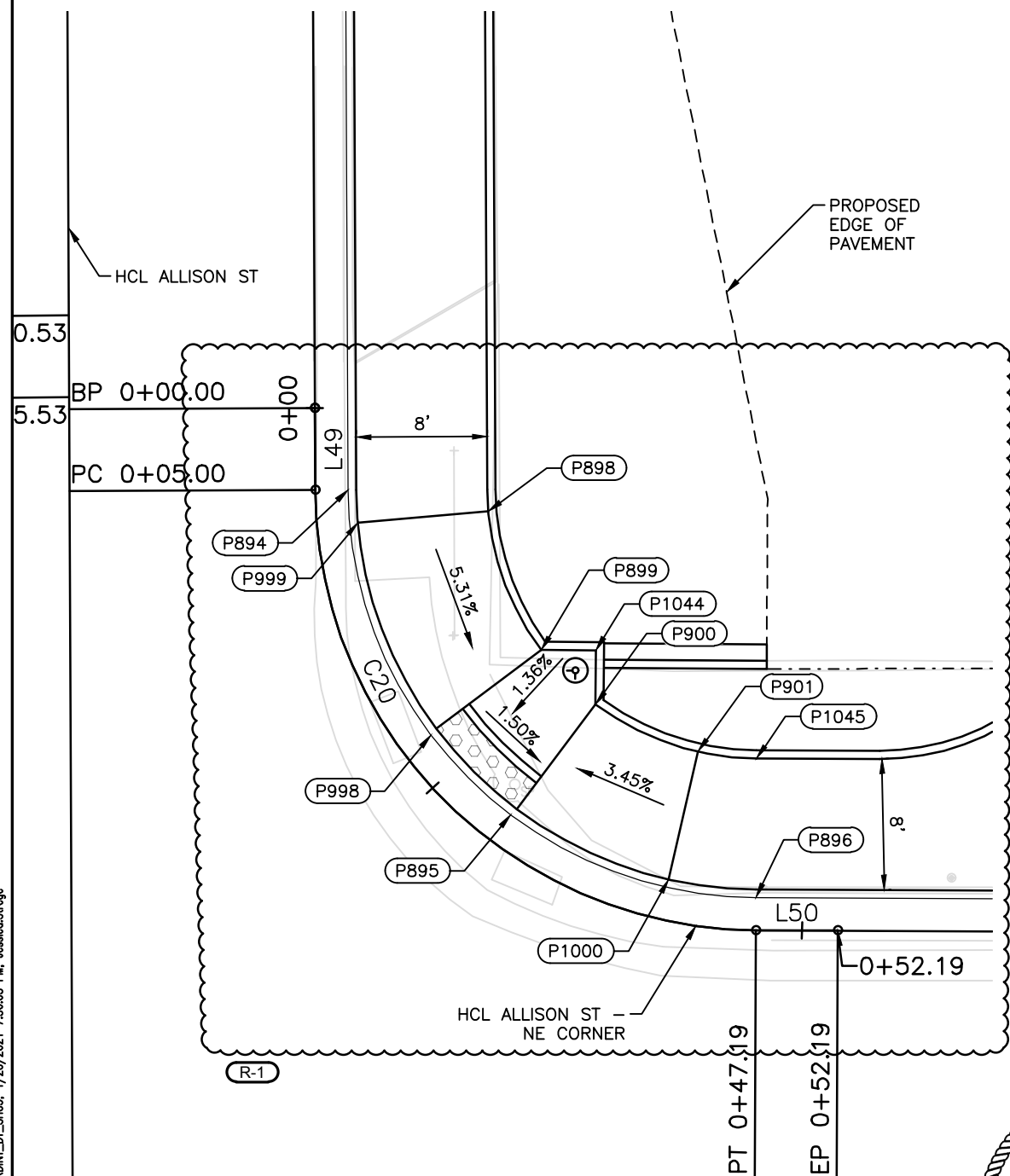
1-21-2021

Print Date: 1/21/2021 8:09:10 PM			Sheet Revisions			CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO, 80002	As Constructed		RALSTON RD - YUKON ST TO GARRISON ST ROADWAY GEOMETRIC DETAILS POINT TABLE (STA. 138+75 - STA. 144+25)			Project No./Code	
File Name: 118355_RDGM_DT_SH01.DWG			R-X	Date	Comments		Initials	No Revisions:				18-ST-40	
Horizontal Scale: 1" = 40' Vertical Scale: N/A			R-1	01/22/2021	ADDENDUM 2		JVS	Revised:		Designer: JHH Detailer: JVS			
FELSBURG HOLT & ULLEVIG	6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com							Void:		Sheet Subset: ROADWAY Subset Sheets: GD-16 of 20		Sheet Number 115	



CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

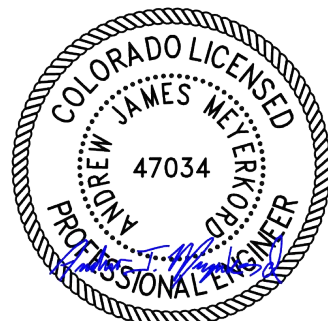
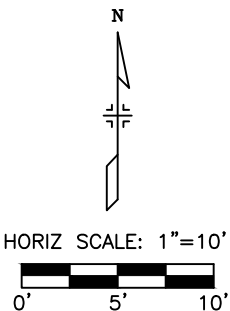
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ALLISON ST NE CORNER				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
894	852+28.66	17.00R	5341.18	FLOWLINE; P.C.
895	852+08.78	26.84R	5340.98	CURB RAMP LANDING; FLOWLINE
896	852+03.66	41.79R	5340.70	FLOWLINE; P.T.
898	852+27.31	25.55R	5341.75	TOP OF RAMP
899	852+18.83	28.74R	5341.20	CURB RAMP LANDING
900	852+15.50	32.05R	5341.11	CURB RAMP LANDING
901	852+12.58	38.27R	5341.38	TOP OF RAMP
998	852+13.66	22.00R	5341.07	CURB RAMP LANDING; FLOWLINE
999	852+26.66	17.58R	5341.66	TOP OF RAMP
1000	852+04.79	36.47R	5341.27	TOP OF RAMP
1044	852+15.50	32.05R	5341.11	CURB RAMP LANDING
1045	852+15.50	32.05R	5341.11	BACK OF WALK; P.T.

(R-1)

ALLISON ST - NE CORNER - EDGE OF PAVEMENT								
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT
L49		0+00.00 0+05.00	717747.6183 717742.6183	117055.7065 117055.7280	5.00'	S0°14'47"E		
C20	PC= PI= PT=	0+05.00 0+31.78 0+47.19	717742.6183 717715.8395 717715.7347	117055.7280 117055.8432 117082.6221	42.19'	S45°00'40"E	89°31'46"	26.78'
L50		0+47.19 0+52.19	717715.7347 717715.7151	117082.6221 117087.6221	5.00'	S89°46'33"E		



1-21-2021

Print Date: 1/20/2021 7:56:03 PM		Sheet Revisions				As Constructed		RALSTON RD - YUKON ST TO GARRISON ST INTERSECTION DETAIL			Project No./Code	
File Name: 118355_RDINT_DT_SH03.DWG						No Revisions:		ALLISON STREET - NORTHEAST CORNER			18-ST-40	
Horizontal Scale: 1"=10' Vertical Scale: 1"=8'		R-X	Date	Comments	Initials	Revised:		Designer: JHH	Structure Numbers			
 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com		R-1	01/22/2021	ADDENDUM 2	JVS	Detailer: JVS						
						Void:		Sheet Subset: ROADWAY	Subset Sheets: INT-23 of 27		Sheet Number 143	



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CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST INTERSECTION DETAIL ALLISON STREET - NORTHEAST CORNER			Project No./Code 18-ST-40	
No Revisions:		Designer:	JHH	Structure		
Revised:		Detailer:	JVS	Numbers		
Void:		Sheet Subset:	ROADWAY	Subset Sheets:	INT-23 of 27	Sheet Number 143



1-21-2021

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
687	351+11.60	27.50R	5355.71	WALKWAY
688	351+11.60	44.50R	5356.26	WALKWAY, MATCH EXISTING
689	351+21.60	27.50R	5355.72	WALKWAY
690	118+50.66	53.40R	5356.20	WALKWAY, MATCH EXISTING
691	118+99.05	39.50R	5355.26	FOC
692	118+99.05	52.32R	5355.61	FOC, MATCH EXISTING
693	119+27.30	52.32R	5355.31	ACCESS RAMP
694	119+41.30	52.46R	5355.94	ACCESS RAMP; MEET EXISTING
695	119+49.59	47.84R	5355.80	ACCESS RAMP
696	119+49.59	52.44R	5355.87	ACCESS RAMP; MEET EXISTING
697	119+83.02	39.50R	5354.84	FOC
698	119+83.00	52.34R	5354.88	FOC, MATCH EXISTING
699	451+24.77	36.29L	5354.57	EOP, MATCH EXISTING
700	450+85.00	34.75L	5354.84	EOP, MATCH EXISTING
701	450+78.72	26.50R	5353.94	FOC
702	450+78.72	39.56R	5354.40	FOC, MATCH EXISTING
703	451+20.43	32.50R	5354.03	FOC
704	451+20.43	39.60R	5354.38	FOC, MATCH EXISTING
705	122+28.70	40.00R	5354.61	FOC
706	122+28.73	44.50R	5354.20	FOC, MATCH EXISTING

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
819	118+73.12	57.70L	5355.65	EOP, MATCH EXISTING
820	118+90.97	57.70L	5355.61	EOP, MATCH EXISTING
821	119+19.40	39.50L	5355.29	FOC
822	119+18.81	50.84L	5355.36	EOP, MATCH EXISTING
823	119+83.73	51.24L	5355.95	FOC, MATCH EXISTING
824	119+83.79	40.00L	5355.47	BOC
825	119+84.29	40.00L	5355.47	BOC
826	401+28.08	34.93R	5355.01	EOP, MATCH EXISTING
827	401+24.11	34.97R	5355.09	EOP, MATCH EXISTING
828	121+90.16	59.50L	5353.10	EOP, MATCH EXISTING
829	122+37.95	59.50L	5353.31	EOP, MATCH EXISTING
830	122+38.25	44.50L	5353.24	EOP
831	122+47.99	44.50L	5353.38	EOP
832	122+48.11	54.50L	5353.47	EOP, MATCH EXISTING
833	122+70.38	54.50L	5353.69	EOP, MATCH EXISTING
958	119+23.30	52.34R	5355.31	ACCESS RAMP
959	119+41.30	47.84R	5355.87	ACCESS RAMP
960	119+27.30	47.84R	5355.24	ACCESS RAMP
961	119+27.30	39.50R	5355.12	BOW; ACCESS RAMP

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Print Date: 1/20/2021 9:48:21 PM

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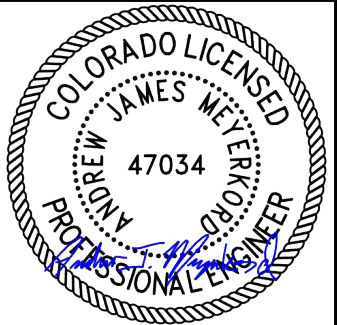
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R-X R-1 	Sheet Revisions		
	Date	Comments	Initials
	01/22/2021	ADDENDUM 2	JVS

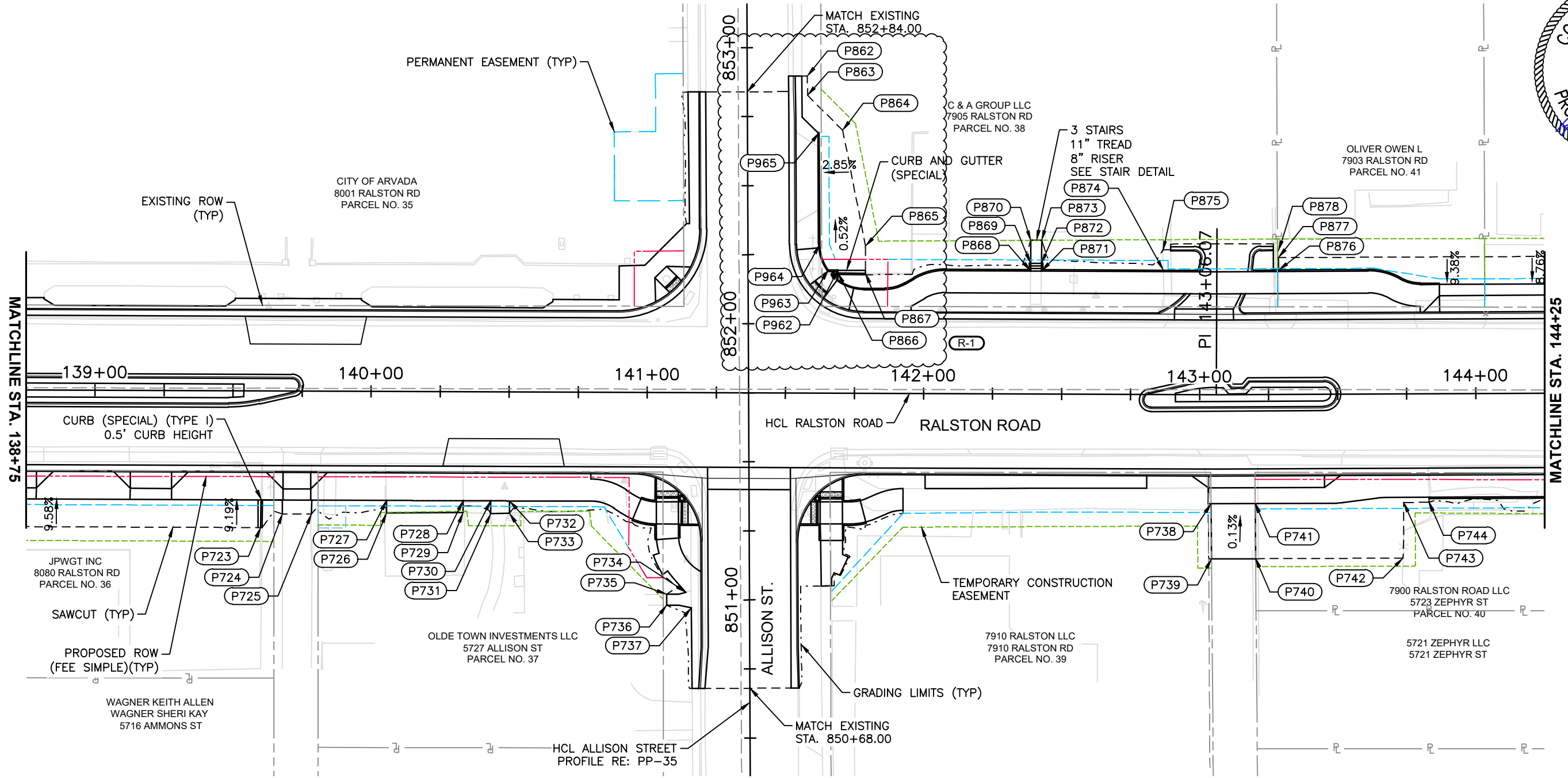


CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed	RALSTON RD - YUKON ST TO GARRISON ST PROPERTY ACCESS DETAILS POINT TABLE (STA. 117+50 - STA. 123+00)			Project No./Code
	No Revisions:			18-ST-40
	Revised:	Designer: JHH	Structure Numbers	
	Void:	Detailer: JVS		
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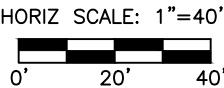


1-21-2021



NOTES

- 1. ALL RADII ANNOTATIONS ARE MEASURED TO FLOWLINE OF CURB AND GUTTER OR EDGE OF SIDEWALK.
- 2. RE: ROADWAY GEOMETRIC DETAILS AND INTERSECTION DETAILS FOR SIDEWALK AND ROADWAY GEOMETRIC INFORMATION.



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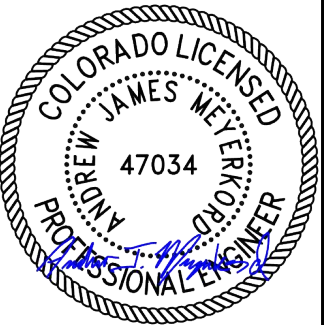
Sheet Revisions			
	Date	Comments	Initials
R-X	01/22/2021	ADDENDUM 2	JVS
R-1			



CITY OF ARVADA
PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST PROPERTY ACCESS DETAILS RALSTON ROAD (STA. 138+75 - STA. 144+25)			Project No./Code
No Revisions:		Designer:	JHH	Structure	18-ST-40
Revised:		Detailer:	JVS	Numbers	
Void:		Sheet Subset:	ROADWAY	Subset Sheets:	AC-15 of 20
					Sheet Number 162



1-21-2021

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
723	139+60.18	49.50R	5343.72	FOC, MATCH EXISTING
724	139+68.07	44.50R	5343.28	EOP, MATCH EXISTING
725	139+78.53	44.50R	5343.25	EOP, MATCH EXISTING
726	140+05.75	44.02R	5342.76	EOP, MATCH EXISTING
727	140+05.75	39.50R	5342.52	EOP
728	140+33.42	39.50R	5342.28	EOP
729	140+33.42	43.77R	5342.44	EOP, MATCH EXISTING
730	140+43.44	39.50R	5342.20	WALKWAY
731	140+43.44	44.12R	5342.60	WALKWAY, MATCH EXISTING
732	140+50.27	39.50R	5342.14	WALKWAY
733	140+50.27	43.96R	5342.56	WALKWAY, MATCH EXISTING
734	851+02.84	23.03L	5341.58	WALKWAY
735	851+02.15	29.96L	5341.82	WALKWAY, MATCH EXISTING
736	850+98.18	29.99L	5341.81	WALKWAY, MATCH EXISTING
737	850+97.20	21.10L	5341.57	WALKWAY
738	143+04.30	39.50R	5340.05	EDGE OF CONCRETE
739	143+04.54	59.49R	5340.22	EDGE OF CONCRETE, MATCH EXISTING
740	143+20.03	59.48R	5340.05	EDGE OF CONCRETE, MATCH EXISTING
741	143+19.96	39.50R	5339.99	EDGE OF CONCRETE
742	143+73.40	59.52R	5340.04	EOP, MATCH EXISTING
743	143+73.71	39.36R	5340.02	EOP, MATCH EXISTING
744	143+82.88	39.36R	5340.00	EOP, MATCH EXISTING
862	852+89.59	21.82R	5342.34	EOP, MATCH EXISTING
863	852+82.63	21.80R	5342.44	EOP, MATCH EXISTING
864	852+69.93	34.50R	5342.95	EOP, MATCH EXISTING

RALSTON ROAD POINT TABLE				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
865	852+27.99	42.60R	5342.96	EOP, MATCH EXISTING
866	852+18.21	32.57R	5342.82	FOC
867	852+18.11	42.50R	5342.90	FOC, MATCH EXISTING
868	142+38.61	44.50L	5341.00	FOC
869	142+38.61	47.25L	5343.01	FOC, TOP OF STAIR
870	142+38.61	55.53L	5343.00	WALKWAY, MATCH EXISTING
871	142+42.57	44.50L	5340.98	FOC
872	142+42.57	47.25L	5342.99	FOC, TOP OF STAIR
873	142+42.57	55.62L	5343.18	WALKWAY, MATCH EXISTING
874	142+86.71	45.00L	5341.86	EOP
875	142+86.52	52.00L		EOP, MATCH EXISTING
876	143+28.83	45.00L	5341.22	EOP
877	143+28.84	49.50L		EOP, MATCH EXISTING
878	143+28.84	52.09L		EOP, MATCH EXISTING
962	852+19.29	32.59R	5342.81	FOC
963	852+19.33	29.00R	5342.79	FOC
964	852+28.66	26.00R	5342.73	FOC
965	852+69.03	26.00R	5342.53	FOC

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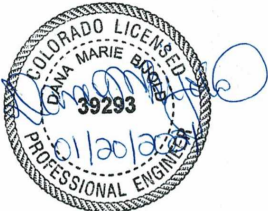
R-1

TESTHOLE TABLE

TH #	UTILITY OWNER	UTILITY TYPE	LOCATION	GROUND ELEV (FT)	SIZE (IN)	MATERIAL	GA DEPTH TO TOP (IN)	GA DEPTH TO BOP (IN)	TOP ELEV (FT)	BOP ELEV (FT)	DATE POTHOLED
TH-01	CITY OF ARVADA	STORM	NORTH OF RALSTON ROAD / EAST SIDE OF GARRISON	5345.075	72	STEEL	51	123	5340.83	5334.83	3/30/2020
TH-02	XCEL	GAS	WEST OF FIELD ST / SOUTH SIDE OF RALSTON ROAD	5346.388	2	STEEL	47	86	5342.47	5339.22	3/30/2020
TH-03	LUMEN	FIBER OPTIC	EAST OF FIELD ST / SOUTH SIDE OF RALSTON ROAD	5347.222	1.25	PLASTIC	28	30	5344.89	5344.72	4/2/2020
TH-04	XCEL	GAS SERVICE	EAST OF ESTES ST / NORTH SIDE OF RALSTON ROAD	5358.938	2	STEEL	38	40	5355.77	5355.60	3/31/2020
TH-05	SWADLEY DITCH	IRRIGATION	EAST OF ESTES ST / NORTH SIDE OF RALSTON ROAD	5357.704	18	CONCRETE	8	26	5357.04	5355.54	3/31/2020
TH-05.1	LUMEN	FIBER OPTIC	EAST OF ESTES ST / NORTH SIDE OF RALSTON ROAD	5357.677	23" THICK	CONCRETE	35	58	5354.76	5352.84	3/31/2020
TH-05.2	LUMEN	FIBER OPTIC	EAST OF ESTES ST / NORTH SIDE OF RALSTON ROAD	5357.738	12	CLAY	33	45	5354.99	5353.99	3/31/2020
TH-06	LUMEN	FIBER OPTIC	EAST OF ESTES ST / NORTH SIDE OF RALSTON ROAD	5358.05	3" THICK	CONCRETE CAP	57	60	5353.30	5353.05	3/31/2020
TH-07	LUMEN	TELEPHONE	EAST OF ESTES ST / NORTH SIDE OF RALSTON ROAD	5358.124	1	CABLE	44	45	5354.46	5354.37	3/31/2020
TH-08	XCEL	GAS	EAST OF ESTES ST / SOUTH SIDE OF RALSTON ROAD	5358.065	2	STEEL	41	43	5354.65	5354.48	3/31/2020
TH-09	XCEL	GAS	WEST OF DOVER CT / NORTH SIDE OF RALSTON ROAD	5353.832	2	STEEL	45	47	5350.08	5349.92	4/2/2020
TH-10	CITY OF ARVADA	WATER	EAST SIDE OF DOVER CT / NORTH SIDE OF RALSTON ROAD	5353.669	10	PVC	39	49	5350.42	5349.59	4/2/2020
TH-11	XCEL	ELECTRIC	EAST OF DOVER CT / NORTH SIDE OF RALSTON ROAD	5353.248	3-1"	CABLE	28	31	5350.91	5350.66	4/1/2020
TH-12	XCEL/LUMEN	ELECTRIC	WEST OF CODY CT / NORTH SIDE OF RALSTON ROAD	5352.409	1	CABLE	37	38	5349.33	5349.24	4/1/2020
TH-12A	XCEL/LUMEN	TELEPHONE	WEST OF CODY CT / NORTH SIDE OF RALSTON ROAD	5344.67	2-1"	CABLE	35	37	5341.75	5341.59	4/1/2020
TH-13	COMCAST	CABLE TV	WEST OF CODY CT / NORTH SIDE OF RALSTON ROAD	5352.405	1	CABLE	38	39	5349.24	5349.16	4/1/2020
TH-14	XCEL	GAS SERVICE	WEST OF CODY CT / NORTH SIDE OF RALSTON ROAD	5351.749	1	STEEL	31	32	5349.17	5349.08	4/1/2020
TH-15	XCEL	GAS	WEST SIDE OF CODY CT / NORTH SIDE OF RALSTON ROAD	5351.795	2	STEEL	40	42	5348.46	5348.30	4/1/2020
TH-16	CITY OF ARVADA	WATER	EAST SIDE OF CODY CT / NORTH SIDE OF RALSTON ROAD	5351.642	8	PVC	64	72	5346.31	5345.64	4/1/2020
TH-17	XCEL	GAS SERVICE	EAST OF CODY CT / NORTH SIDE OF RALSTON ROAD	5351.198	1.25	STEEL	38	40	5348.03	5347.86	4/1/2020
TH-18	XCEL	ELECTRIC	EAST OF CODY CT / NORTH SIDE OF RALSTON ROAD	5351.173	8	PLASTIC	70	78	5345.34	5344.67	4/1/2020
TH-19	COMCAST	TELEVISION	EAST OF CODY CT / NORTH SIDE OF RALSTON ROAD	5351.086	2	PLASTIC	65	67	5345.67	5345.50	4/1/2020
TH-20	CITY OF ARVADA	STORM	CARR ST / RALSTON ROAD INTERSECTION, NORTH SIDE	5351.185	18	CONCRETE	17	35	5349.77	5348.27	4/17/2020
TH-20.1	CITY OF ARVADA	WATER	CARR ST / RALSTON ROAD INTERSECTION, NORTH SIDE	5351.187	10	PVC	43	53	5347.60	5346.77	4/17/2020
TH-21	XCEL	GAS	CARR ST / RALSTON ROAD INTERSECTION, NORTH SIDE	5351.18	4	PLASTIC	45	49	5347.43	5347.10	4/17/2020
TH-23	XCEL	GAS	CARR ST / RALSTON ROAD INTERSECTION, SOUTH SIDE	5350.413	6	PLASTIC	48	54	5346.41	5345.91	4/15/2020
TH-24	XCEL	DNF	CARR ST / RALSTON ROAD INTERSECTION, SOUTH SIDE	5350.373	DNF	DNF	DNF	DNF	DNF	DNF	4/15/2020
TH-25.1	XCEL	GAS	CENTER OF BALSAM PL / NORTH SIDE OF RALSTON ROAD	5346.921	2	STEEL	34	36	5344.09	5343.92	4/20/2020
TH-26	XCEL	ELECTRIC	SW CORNER OF ALLISON AND RALSTON	5346.959	1	PVC	6	7	5346.46	5346.38	4/21/2020
TH-102	LUMEN	FIBER OPTIC	EAST OF GARRISON ST / NORTH SIDE OF RALSTON ROAD	5344.67	3" THICK	CONCRETE	43	46	5341.09	5340.84	3/30/2020
TH-103	XCEL	GAS	WEST OF FIELD ST / SOUTH SIDE OF RALSTON ROAD	5345.638	2	STEEL	44	46	5341.97	5341.80	3/30/2020
TH-104	XCEL	GAS	EAST SIDE OF FIELD ST / SOUTH SIDE OF RALSTON ROAD	5346.379	2	STEEL	38	40	5343.21	5343.05	3/30/2020
TH-201	XCEL	UNK	9110 RALSTON RD / CENTER OF RALSTON ROAD	5344.89	8	STEEL	60	68	5339.89	5339.22	4/2/2020
TH-201.1	XCEL	GAS SERVICE	9110 RALSTON RD / CENTER OF RALSTON ROAD	5344.874	2	STEEL	44	46	5341.21	5341.04	4/2/2020
TH-202	XCEL	GAS SERVICE	9110 RALSTON RD / CENTER OF RALSTON ROAD	5344.794	1.25	STEEL	40	42	5341.46	5341.29	4/2/2020
TH-202.1	XCEL	GAS SERVICE	9110 RALSTON RD / CENTER OF RALSTON ROAD	5344.85	1 1/4	STEEL	40	42	5341.52	5341.35	4/2/2020
TH-203	XCEL	GAS	9040 RALSTON RD / SOUTH SIDE OF RALSTON ROAD	5345.855	1.25	STEEL	41	42	5342.44	5342.36	4/2/2020
TH-204	XCEL	GAS	SW CORNER OF ESTES ST AND RALSTON RD	5358.331	2	STEEL	41	43	5354.91	5354.75	3/31/2020
TH-204A	COMCAST	CABLE TV	SW CORNER OF ESTES ST AND RALSTON RD	5358.331	2	PVC	20	22	5356.66	5356.50	3/31/2020
TH-205	LUMEN	TELEPHONE	SOUTH SIDE OF RALSTON RD NEAR 8790 RALSTON RD	5356.394	1	CABLE	57	58	5351.64	5351.56	3/31/2020
TH-206	XCEL	GAS	RALSTON RD/DUDLEY ST, SW CORNER	5355.066	2	STEEL	38	40	5351.90	5351.73	4/14/2020
TH-207	LUMEN	DNF	SOUTH SIDE OF RALSTON RD, 8600 RALSTON RD	5353.942	DNF	DNF	DNF	DNF	DNF	DNF	4/14/2020
TH-208	XCEL	GAS	SOUTH SIDE OF RALSTON RD, 8600 RALSTON RD	5353.966	2	STEEL	48	50	5349.97	5349.80	4/14/2020
TH-209	XCEL	GAS	SOUTH SIDE OF RALSTON RD, 8600 RALSTON RD	5353.586	8	STEEL	42	50	5350.09	5349.42	4/14/2020
TH-210	XCEL	GAS	DOVER ST/RALSTON RD, SW CORNER	5353.416	2	STEEL	39	41	5350.17	5350.00	4/14/2020
TH-211	LUMEN	UGFO	SOUTH SIDE OF RALSTON, WOLFF PARK	5352.713	4	PVC	26	30	5350.55	5350.21	4/14/2020
TH-212	XCEL	ELEC	EAST OF CODY CT AND RALSTON TD	5351.313	6	PLASTIC	93	99	5343.56	5343.06	4/15/2020
TH-212.1	XCEL	ELEC	EAST OF CODY CT AND RALSTON TD	5351.319	18" W X 10" T	CONC ENC	27	37	5349.07	5348.24	4/15/2020
TH-212.2	XCEL	ELEC	EAST OF CODY CT AND RALSTON TD	5351.295	18" W X 10" T	CONC ENC	27	37	5349.05	5348.21	4/15/2020
TH-213	XCEL	GAS	EAST OF CARR ST AND RALSTON RD	5350.899	6	STEEL	55	61	5346.32	5345.82	4/17/2020
TH-214	XCEL	GAS	EAST OF CARR ST AND RALSTON RD	5351.226	2	STEEL	48	50	5347.23	5347.06	4/17/2020
TH-215	XCEL	GAS	CENTER OF RALSTON RD/ 5201 BLASALM PL	5348.273	2	STEEL	46	48	5344.44	5344.27	4/17/2020
TH-216	XCEL	GAS	INTERSECTION OF BALSALM ST AND RALSTON RD	5347.196	2	STEEL	48	50	5343.20	5343.03	4/21/2020
TH-217	XCEL	GAS	WEST OF BALSALM ST AND RALSTON RD	5346.943	6	STEEL	58	64	5342.11	5341.61	4/21/2020
TH-218	XCEL	GAS	INTERSECTION OF AMMONS ST AND RALSTON RD	5344.54	6	STEEL	53	59	5340.12	5339.62	4/21/2020
TH-219	LUMEN	FIBER OPTIC	CENTER OF RALSTON RD/8060 RALSTON RD	5343.149	2-2"	PLASTIC	26	30	5340.98	5340.65	4/20/2020
TH-220	XCEL	DNF	CENTER OF RALSTON RD/8060 RALSTON RD	5343.099	DNF	DNF	DNF	DNF	DNF	DNF	4/20/2020
TH-221	XCEL	GAS	WEST OF ALLISONT ST AND RALSTON RD	5341.765	1 1/4"	STEEL	53	54 1/4"	5337.35	5337.35	4/20/2020
TH-222	LUMEN	DNF	NORTH OF ALLISON ST AND RALSTON RD	5341.346	DNF	DNF	DNF	DNF	DNF	DNF	4/20/2020
TH-223	LUMEN	FIBER OPTIC	NORTH OF ALLISON ST AND RALSTON RD	5341.359	DNF	CONC ENCASED	37	58	5338.28	5336.53	4/20/2020
TH-224	XCEL	GAS	SOUTH OF THE INTERSECTION OF ALLISON ST AND RALSTON RD	5341.399	6	STEEL	53	59	5336.98	5336.48	4/21/2020
TH-225	XCEL	GAS	SOUTH OF INTERSECTION OF ALLISON ST AND RALSTON RD	5341.37	2	STEEL	46	48	5337.54	5337.37	4/21/2020
TH-226	XCEL	GAS	SOUTH SIDE OF RALSTON, WOLFF PARK	5352.652	8	STEEL	45	53	5348.90	5348.24	4/14/2020
TH-227	XCEL	GAS	S OF CODY CT AND RALSTON RD	5352.176	2	STEEL	44	46	5348.51	5348.34	4/15/2020
TH-228	XCEL	GAS	S OF CODY CT AND RALSTON RD	5351.693	6	STEEL	40	46	5348.36	5347.86	4/15/2020



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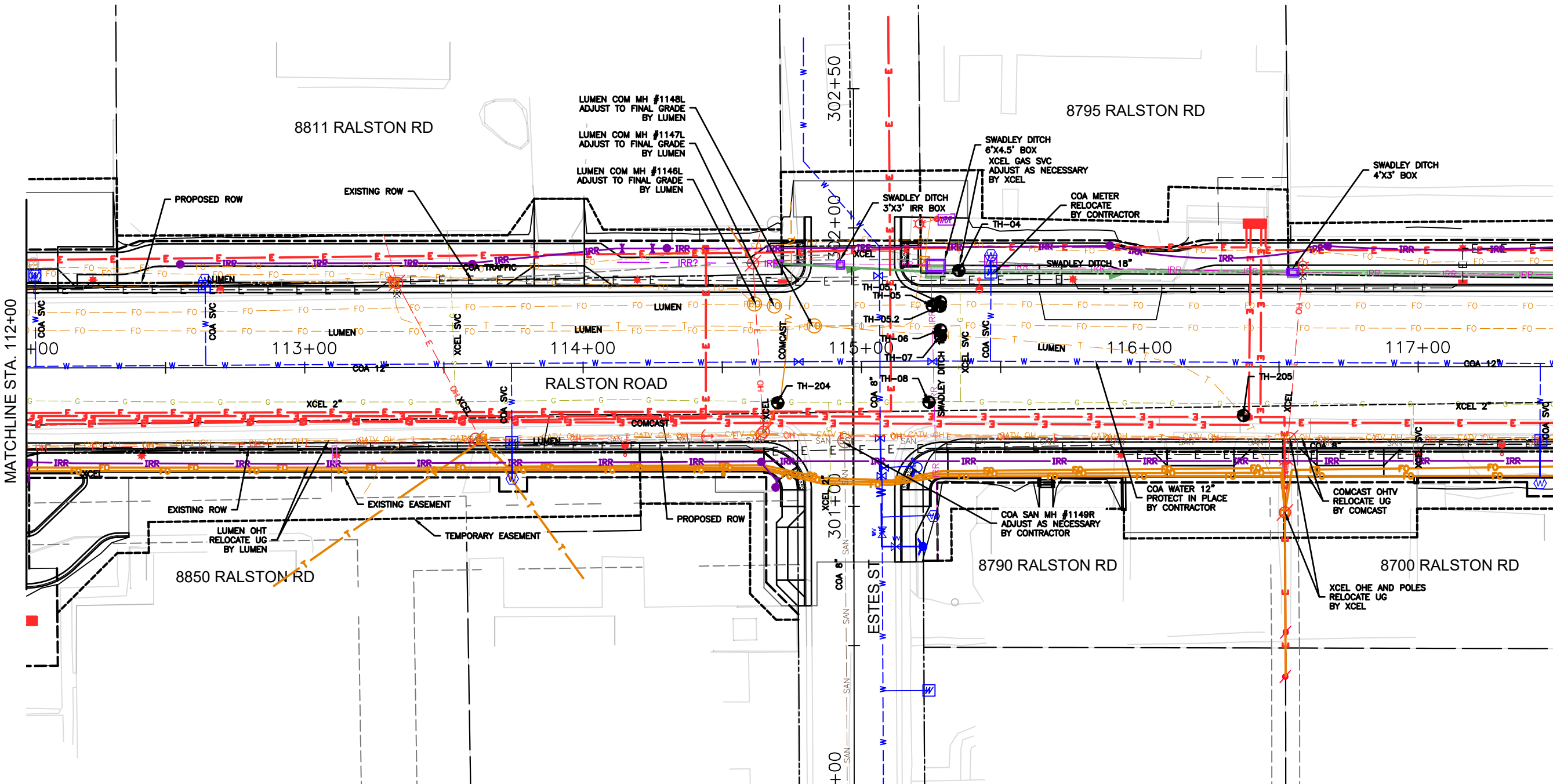


Print Date: 1/20/2021 5:05:59 PM		R-X R-1	Sheet Revisions			 CITY OF ARVADA PUBLIC WORKS DEPARTMENT 8101 RALSTON ROAD ARVADA, CO 80002	As Constructed		RALSTON RD - YUKON TO GARRISON TEST HOLE TABLE				Project No./Code	
File Name: 118355_UTPL_CD01_EN_DWG			Date	Comments	Initials		No Revisions:						18-ST-40	
Horizontal Scale: Vertical Scale:			01/20/2021	ADDENDUM 2			Revised:		Designer: DB		Structure		Sheet Number 238	
GOODBEE & ASSOCIATES, INC. 							Void:		Detailer: ML		Numbers			
									Sheet Subset: UTILITIES		Subset Sheets: UPH01 OF 1			

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MATCHLINE STA. 112+00

MATCHLINE STA. 117+50



- NOTE:
1. SEE DRAINAGE PLANS FOR STORM SEWER DETAILS.
 2. SEE TRAFFIC PLANS FOR TRAFFIC SIGNAL DETAILS.
 3. SEE LIGHTING PLANS FOR LIGHTING DETAILS.
 4. SEE IRRIGATION PLANS FOR IRRIGATION DETAILS.
 5. SEE WATER PLANS FOR WATER MAIN RELOCATION DETAILS.
 6. ALL UTILITIES ARE TO BE PROTECTED IN PLACE DURING CONSTRUCTION UNLESS OTHERWISE IDENTIFIED ON THESE PLANS.



R-1

**RALSTON RD - YUKON TO GARRISON
UTILITY PLAN**

Print Date: 1/20/2021 5:08:22 PM
File Name: 118355_UTPL_CD01_EN_DWG
Horizontal Scale: Vertical Scale:
GOODBEE
& ASSOCIATES, INC.

Sheet Revisions			
R-X	Date	Comments	Initials
R-1	01/20/2021	ADDENDUM 2	



CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO 80002

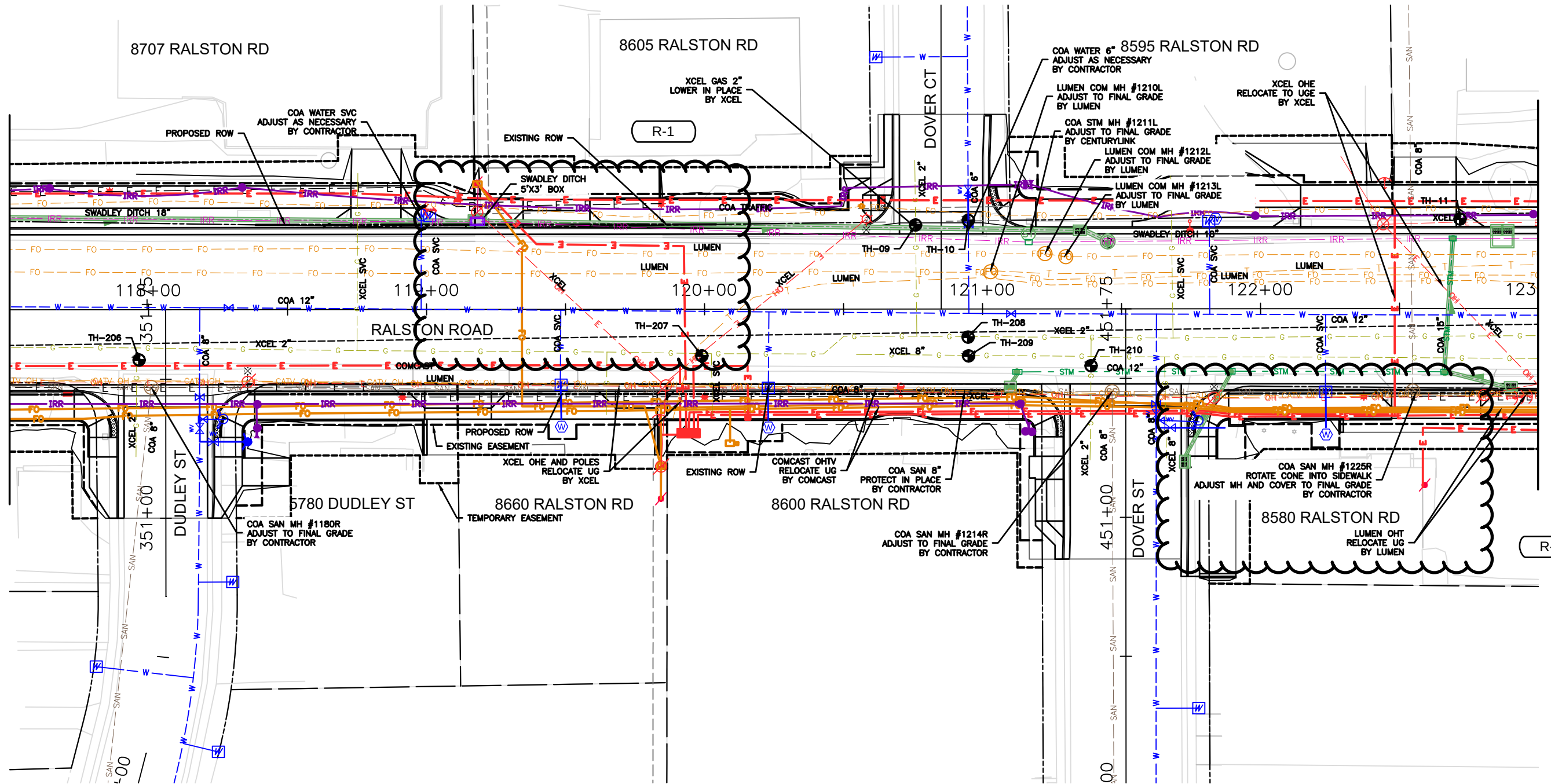
As Constructed
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Revised:
Void:

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Detailer:	ML	Numbers	
Sheet Subset:	UTILITIES	Subset Sheets:	UT04 OF 11

Project No./Code
18-ST-40
Sheet Number 243

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MATCHLINE STA. 117+50



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- NOTE:
- 1. SEE DRAINAGE PLANS FOR STORM SEWER DETAILS.
 - 2. SEE TRAFFIC PLANS FOR TRAFFIC SIGNAL DETAILS.
 - 3. SEE LIGHTING PLANS FOR LIGHTING DETAILS.
 - 4. SEE IRRIGATION PLANS FOR IRRIGATION DETAILS.
 - 5. SEE WATER PLANS FOR WATER MAIN RELOCATION DETAILS.
 - 6. ALL UTILITIES ARE TO BE PROTECTED IN PLACE DURING CONSTRUCTION UNLESS OTHERWISE IDENTIFIED ON THESE PLANS.

GOODBEE
& ASSOCIATES, INC.

R-X
R-1

Sheet Revisions			
Date	Comments	Initials	
01/20/2021	ADDENDUM 2		

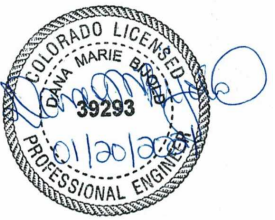
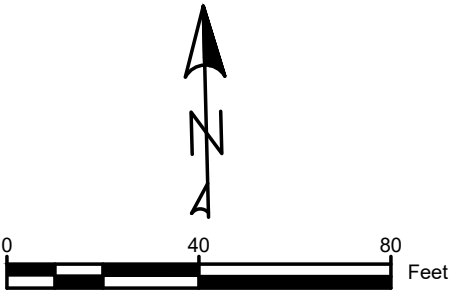
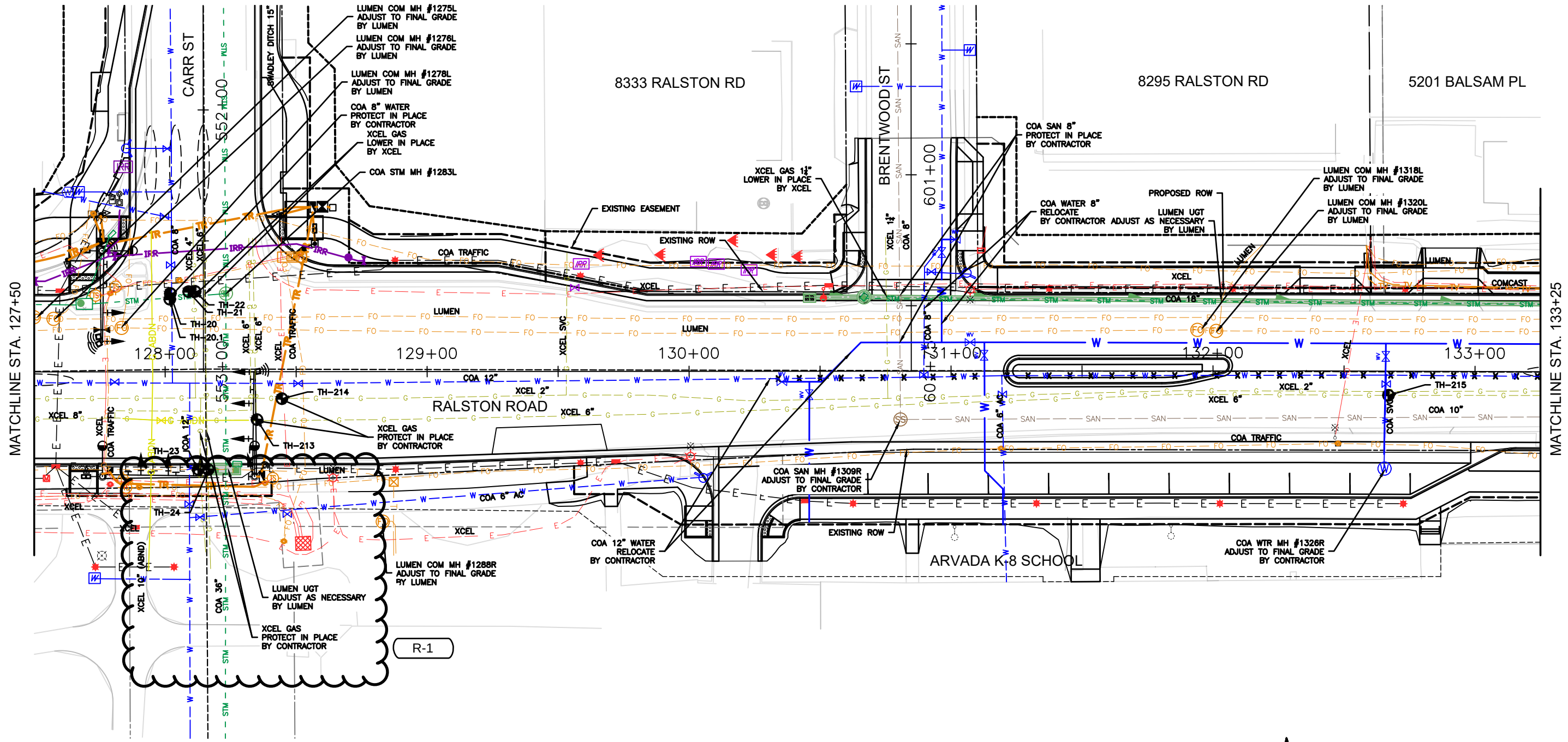


CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO 80002

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RALSTON RD - YUKON TO GARRISON UTILITY PLAN			
Designer:	DB	Structure	
Detailer:	ML	Numbers	
Sheet Subset:	UTILITIES	Subset Sheets:	UT07 OF 11

Project No./Code
18-ST-40
Sheet Number 246





TABULATION OF SIGNING QUANTITIES (TABLE 3 OF 3)

SIGN NO.	PLAN SHEET	EXISTING STATION	PROPOSED STATION	SIGN DESIGNATION	SIGN PANEL SIZE	BACKGROUND COLOR	SIGN LEGEND / DESCRIPTION	SIGN PANEL (SF)	SIGN BACKING TYPE(S)	REMOVAL OF GROUND SIGN	REMOVAL OF SIGN PANEL	RESET GROUND SIGN	RESET SIGN PANEL	RESET FLASHING BEACON ASSEMBLY	STEEL SIGN POST (1.75 x 1.75 IN TUBING) (SEE NOTE 1)
								CLASS 1 614-00011							
					W" x H"					EACH	EACH	EACH	EACH	EACH	LF
94A	SS-08	134+83	134+56	R1-1		RED	STOP								
94B				R5-1a		RED	WRONG WAY				1	1			
95	SS-08	136+01	136+01	SPECIAL		BLUE	POLICE, MUNICIPAL COURT, POST OFFICE SIGN					1			
96A	SS-08		136+52	R4-7	24 x 30	WHITE	KEEP RIGHT	5.0							10
96B				OM-3L	12 x 36	YELLOW	OBJECT MARKER	3.0							
97	SS-08		136+56	R3-2	24 x 24	WHITE	NO LEFT TURNS	4.0							9.5
98A	SS-08	137+69	137+69	S5-1		WHITE	SCHOOL SPEED LIMIT 25 MPH							1	
98B				SPECIAL		WHITE	ALL FINES DOUBLE IN SCHOOL ZONE								
99A	SS-08	137+87	137+79	D3-1		BLUE	AMMONS ST STREET NAME SIGN					1			
99B				D3-1		BLUE	RALSTON RD STREET NAME SIGN								
100A	SS-08	137+99	137+98	R1-1		RED	STOP					1			
100B				SPECIAL		BLUE	BE SAFE AND BUCKLE UP			1					
101A	SS-08		138+11	R4-7	24 x 30	WHITE	KEEP RIGHT	5.0							10
101B				OM-3L	12 x 36	YELLOW	OBJECT MARKER	3.0							
102	SS-08	138+31	138+30	R1-1		RED	STOP					1			
103	SS-08	138+53	138+49	S5-2		WHITE	END SCHOOL ZONE						1		10
104A	SS-08		138+19	R3-2	24 x 24	WHITE	NO LEFT TURNS	4.0							9.5
104B				R3-2	24 x 24	WHITE	NO LEFT TURNS	4.0							
105-109						NOT USED									
110	SS-09		138+81	R3-2	24 x 24	WHITE	NO LEFT TURNS	4.0							9.5
111	SS-09		139+31	R3-2	24 x 24	WHITE	NO LEFT TURNS	4.0							9.5
112	SS-09	139+55	139+57	SPECIAL		BLUE	POLICE, MUNICIPAL COURT, POST OFFICE SIGN					1			
113	SS-09	139+63	139+66	SPECIAL		RED	RTD BUS STOP SIGN					1			
114A	SS-09		139+72	R4-7	24 x 30	WHITE	KEEP RIGHT	5.0							10
114B				OM-3L	12 x 36	YELLOW	OBJECT MARKER	3.0							
115	SS-09	139+88	140+70	SPECIAL		RED	RTD BUS STOP SIGN					1			
116A	SS-09	131+14		S1-1		FLUORESCENT YELLOW-GREEN	SCHOOL CROSSING			1					
116B				W16-7P		FLUORESCENT YELLOW-GREEN	DIAGONAL ARROW								
117	SS-09	141+55	141+58	SPECIAL		BLUE	MEMORIAL PARK NEIGHBORHOOD					1			
118A	SS-09	141+61		S1-1		FLUORESCENT YELLOW-GREEN	SCHOOL CROSSING			1					
118B				W16-7P		FLUORESCENT YELLOW-GREEN	DIAGONAL ARROW			1					
119	SS-09	141+97	141+96	R5-6 SPECIAL		WHITE	NO BIKES WITH SPECIAL MESSAGE						1		10.5
120A	SS-09		139+72	R4-7	24 x 30	WHITE	KEEP RIGHT	5.0							10
120B				OM-3L	12 x 36	YELLOW	OBJECT MARKER	3.0							
121	SS-09		138+81	R3-2	24 x 24	WHITE	NO LEFT TURNS	4.0							9.5
122	SS-09		138+81	R3-2	24 x 24	WHITE	NO LEFT TURNS	4.0							9.5
123A	SS-09		139+72	R4-7	24 x 30	WHITE	KEEP RIGHT	5.0							10
123B				OM-3L	12 x 36	YELLOW	OBJECT MARKER	3.0							
124						NOT USED									
125A	SS-10	144+45	144+45	D3-1		BLUE	ZEPHYR ST STREET NAME SIGN					1			
125B				D3-1		BLUE	RALSTON RD STREET NAME SIGN								
126	SS-10	144+97	144+97	R1-1		RED	STOP					1			
127	SS-10		145+13	R3-9b	24 x 36	WHITE	TWO-WAY LEFT TURN ONLY	6.0							10.5
128	SS-10	146+29	146+27	SPECIAL	24 x 24	BROWN	RENO PARK, NATURAL HISTORIC DISTRICT	4.0				1			
129A	SS-10	147+75	147+76	D3-1		BLUE	YARROW ST STREET NAME SIGN					1			
129B				D3-1		BLUE	RALSTON RD STREET NAME SIGN								
130	SS-10	147+72	147+75	R2-1		WHITE	SPEED LIMIT 35 MPH					1			
131A	SS-10	148+21	148+21	R1-1		RED	STOP					1			
131B				R8-3a		WHITE	NO PARKING WITH RIGHT ARROW								
132	SS-10		149+56	R2-1	30 x 36	WHITE	SPEED LIMIT 35 MPH	7.5							10.5
133-134						NOT USED									
135	SS-11	149+95	149+99	R5-1		RED	DO NOT ENTER					1			
136	SS-11		150+94	R3-9b	24 x 36	WHITE	TWO-WAY LEFT TURN ONLY	6.0							10.5
137A	SS-11	151+05	150+94	D3-1		BLUE	YUKON ST STREET NAME SIGN					1			
137B				D3-1		BLUE	RALSTON RD STREET NAME SIGN								
TOTAL								91.5		1	4	17	2	1	159

*RESET EXISTING SIGN POST; REPLACE SIGN PANEL.

R-1

PROJECT TOTAL 216.8 7 9 51 9 2 421

NOTES:

1. STEEL SIGN POST PAY ITEM SHALL INCLUDE 2" X 2" X 3' SIGN BASES AND PVC SLEEVES PER ARVADA CITY STANDARD TR-1.



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Sheet Revisions		
Date	Comments	Initials
1/22/21	ADDENDUM 2	RRF



CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST SIGNING AND STRIPING TABULATION OF QUANTITIES			Project No./Code
No Revisions:					18-ST-40
Revised:		Designer:	RRF	Structure	
		Detailer:	DEM	Numbers	
Void:		Sheet Subset:	TRAFFIC	Subset Sheets:	TAB-04 of 05
					Sheet Number 267

TABULATION OF STRIPING QUANTITIES

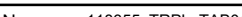
STATION/LOCATION (PLAN SHEET)	PAVEMENT MARKING DESCRIPTION		REMOVAL OF PAVEMENT MARKINGS		MODIFIED EPOXY PAVEMENT MARKING (LF)								PREFORMED THERMOPLASTIC PAVEMENT MARKING (WORD-SYMBOL) (SF)					PREFORMED THERMOPLASTIC PAVEMENT MARKING (XWALK-STOPLINE) (SF)		
			BIKE DETECTION SYMBOL	XWALK (1'x6')	LANE	BIKE LANE LINE	CHANNEL	CENTER			DOTTED	PARKING LINE	LEFT ARROW	RIGHT ARROW	2 PIECE ARROW	BIKE LANE SYMBOL	HANDICAP SYMBOL	24" STOP LINE	XWALK (1'x6')	
			WHITE SOLID	WHITE SOLID	WHITE BROKEN	SOLID WHITE	WHITE SOLID	DBL. YELLOW SOLID	YELLOW SOLID	YELLOW BROKEN	WHITE BROKEN	YELLOW SOLID	WHITE SOLID	WHITE SOLID	WHITE SOLID	WHITE SOLID	WHITE SOLID	WHITE SOLID	WHITE SOLID	WHITE SOLID
			SF (2 EA)	SF	4 INCH	4 INCH	6 INCH	4 INCH	4 INCH	4 INCH	4 INCH	4 INCH	SF (16.1 EA)	SF (16.1 EA)	SF (4 EA)	SF (10.5 EA)	SF (12 EA)	SF	SF	
BEGIN TO STA. 106+50 (SHEET SS-02)	REMOVAL OF BIKE DETECTION SYMBOL	1	2																	
	REMOVAL OF XWALK (1'x6')	15	90																	
	LANE LINE			860																
	CHANNELIZING LINE					120														
	DOUBLE YELLOW						295													
	YELLOW SOLID							250												
	YELLOW BROKEN								250											
	LEFT ARROW	1										16.1								
2 PIECE ARROW	1												4							
BIKE LANE SYMBOL	1													10.5						
XWALK (1'x6')	23																	138		
STA. 106+50 TO STA. 112+00 (SHEET SS-03)	LANE LINE			905																
	CHANNELIZING LINE					100														
	DOUBLE YELLOW						195													
	YELLOW SOLID							280												
STA. 112+00 TO STA. 117+50 (SHEET SS-04)	YELLOW BROKEN								280											
	LEFT ARROW	1										16.1								
	LANE LINE			995																
	YELLOW SOLID								995											
STA. 117+50 TO STA. 123+00 (SHEET SS-05)	YELLOW BROKEN									995										
	LANE LINE			925																
	YELLOW SOLID								745											
	YELLOW BROKEN									745										
STA. 123+00 TO STA. 127+50 (SHEET SS-06)	PARKING LINE	1	R-1								85						12	R-1		
	HANDICAP SYMBOL																			
	LANE LINE			835																
	CHANNELIZING LINE					205														
STA. 127+50 TO STA. 133+25 (SHEET SS-07)	DOUBLE YELLOW						305													
	YELLOW SOLID							370												
	YELLOW BROKEN								370											
	LEFT ARROW	1										48.3								
	LANE LINE			890																
	BIKE LANE LINE				150															
	CHANNELIZING LINE					235														
	DOUBLE YELLOW						495													
	YELLOW SOLID							215												
	YELLOW BROKEN								215											
DOTTED EXTENSION LINE									150											
PARKING LINE										90										
LEFT ARROW	4										64.4									
RIGHT ARROW	2											32.2								
2 PIECE ARROW	1												4							
BIKE LANE SYMBOL	1													10.5						
STOP LINE	1																66			
XWALK (1'x6')	20																		120	
STA. 133+25 TO STA. 138+75 (SHEET SS-08)	LANE LINE			855																
	CHANNELIZING LINE					225														
	DOUBLE YELLOW						645													
	LEFT ARROW	2										32.2								
RIGHT ARROW	1											16.1								
XWALK (1'x6')	39																		234	
STA. 138+75 TO STA. 144+25 (SHEET SS-09)	LANE LINE			1005																
	CHANNELIZING LINE					190														
	DOUBLE YELLOW						445													
	YELLOW SOLID							160												
	YELLOW BROKEN								160											
	LEFT ARROW	2										32.2								
RIGHT ARROW	1											16.1								
XWALK (1'x6')	38																	228		
STA. 144+25 TO STA. 149+75 (SHEET SS-10)	LANE LINE			975																
	YELLOW SOLID							820												
	YELLOW BROKEN								820											
STA. 149+75 TO END (SHEET SS-11)	LANE LINE			305																
	YELLOW SOLID							250												
	YELLOW BROKEN								250											
ROADWAY PLAN (SHEET PP-39)	PARKING LINE										969									
	HANDICAP SYMBOL	1														12				
TOTAL SEGMENT LENGTH (LF)		-	-	8,550	150	1,075	2,380	4,085	4,085	150	1,144	-	-	-	-	-	-	-	-	
ACTUAL MARKING LENGTH (LF)		-	-	2,138	150	1,075	4,760	4,085	1,021	50	1,144	-	-	-	-	-	-	-	-	
SUBTOTAL (SQ. FT.)		2	90	713	50	538	1,587	1,362	341	17	382	210	65	8	21	24	66	720		
SUBTOTAL (GALS)		-	-	9	1	7	19	17	5	1	5	-	-	-	-	-	-	-	-	
TOTAL GALS		-	-	-	-	-	64	17	5	5	-	-	-	-	-	-	-	-	-	
TOTAL SQ.FT.		-	92	-	-	-	4,990	-	-	-	-	-	-	328	-	-	-	786	-	

NOTES:

- 1) 85 SF/GAL USED FOR EPOXY PAINT QUANTITY ESTIMATE



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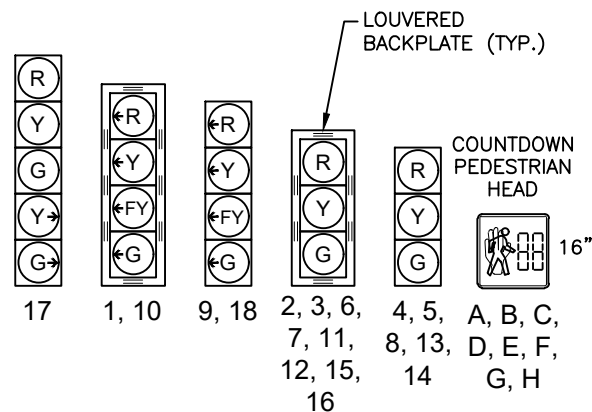
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	File Name: 118355_TRPL_TAB01.DWG							No Revisions:		Designer: RRF Detailer: DEM Structure Numbers			18-ST-40	
	Horizontal Scale: N/A Vertical Scale: N/A		Revised:		Sheet Number 268									
	 6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com		R-X	Date	Comments			Initials	Void:	Sheet Subset: TRAFFIC Subset Sheets: TAB—05 of 05				
			R-1	1/22/21	ADDENDUM #2			RRF						



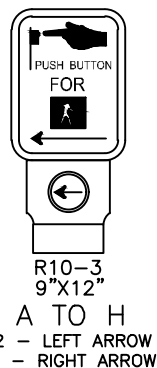
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THE INFORMATION SHOWN ON THIS DRAWING, CONCERNING THE TYPE AND LOCATION OF UTILITIES, IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE TYPE AND LOCATION OF ALL UTILITIES AS NECESSARY TO AVOID DAMAGE THERETO.

SIGNAL HEADS



PEDESTRIAN PUSH BUTTON STATION



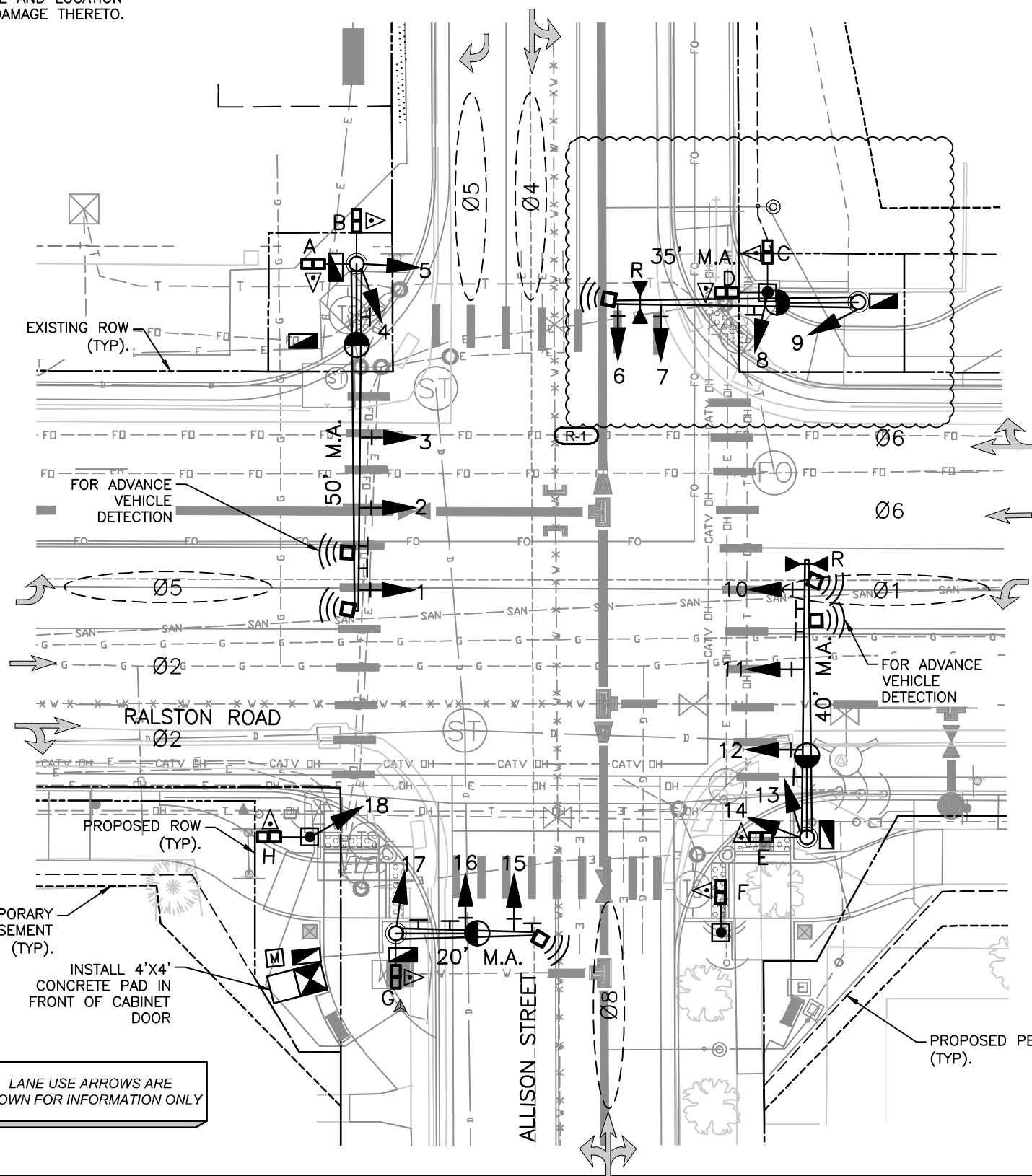
NOTES:

- DESIGN CRITERIA: 2015 AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, FIRST EDITION" INCLUDING ALL SUBSEQUENT REVISIONS.

PROPOSED TEMPORARY CONSTRUCTION EASEMENT (TYP.).

INSTALL 4'X4' CONCRETE PAD IN FRONT OF CABINET DOOR

LANE USE ARROWS ARE SHOWN FOR INFORMATION ONLY



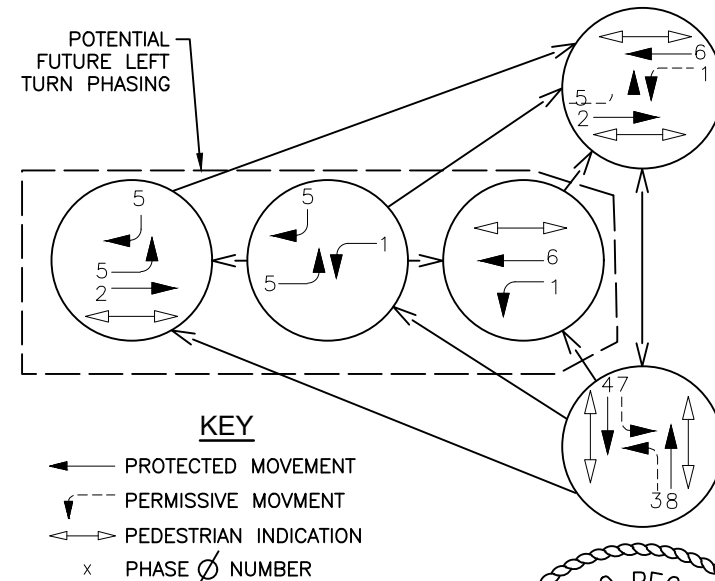
LEGEND

SYMBOL

DESCRIPTION

- TRAFFIC SIGNAL POLE AND MAST ARM
- TRAFFIC SIGNAL PEDESTAL POLE
- PEDESTRIAN PUSH BUTTON POLE
- TRAFFIC SIGNAL HEAD & BACKPLATE
- TRAFFIC SIGNAL HEAD
- PEDESTRIAN SIGNAL HEAD
- PEDESTRIAN PUSH BUTTON STATION
- TRAFFIC SIGNAL CONTROLLER CABINET
- PULL BOX - TYPE LG (24"x36"x18")
- PULL BOX - TYPE M (13"x24"x12")
- SIGNAL CONDUIT (PVC SCH. 80)
- SIGN PANEL
- LUMINAIRE (LED)
- FIRE PREEMPTION UNIT (RESET)
- MICROWAVE RADAR DETECTOR
- DETECTION ZONE & PHASE
- SERVICE METER HOUSING

SIGNAL PHASING DIAGRAM



I:\18355-01 Ralston Rd\04_CADD\Traffic\Drawings\18355_TRPL_SH02_1/19/2021 12:08:51 PM David Morrah

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CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST TRAFFIC SIGNAL PLANS RALSTON ROAD & ALLISON STREET			Project No./Code
No Revisions:					18-ST-40
Revised:		Designer: RRF	Structure Numbers		
Void:		Detailer: DEM			
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Know what's below.
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THE INFORMATION SHOWN ON THIS DRAWING, CONCERNING THE TYPE AND LOCATION OF UTILITIES, IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE TYPE AND LOCATION OF ALL UTILITIES AS NECESSARY TO AVOID DAMAGE THERETO.

SIGNS



R3-5L
30"x36"
① ⑤



SPECIAL
30" X 36"
② ⑥



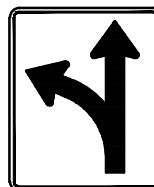
R3-5R
30"x36"
⑨



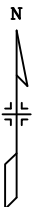
SPECIAL - SEE CITY
STANDARD TR-12
72" X 18" (APPROX.)
③ ⑦



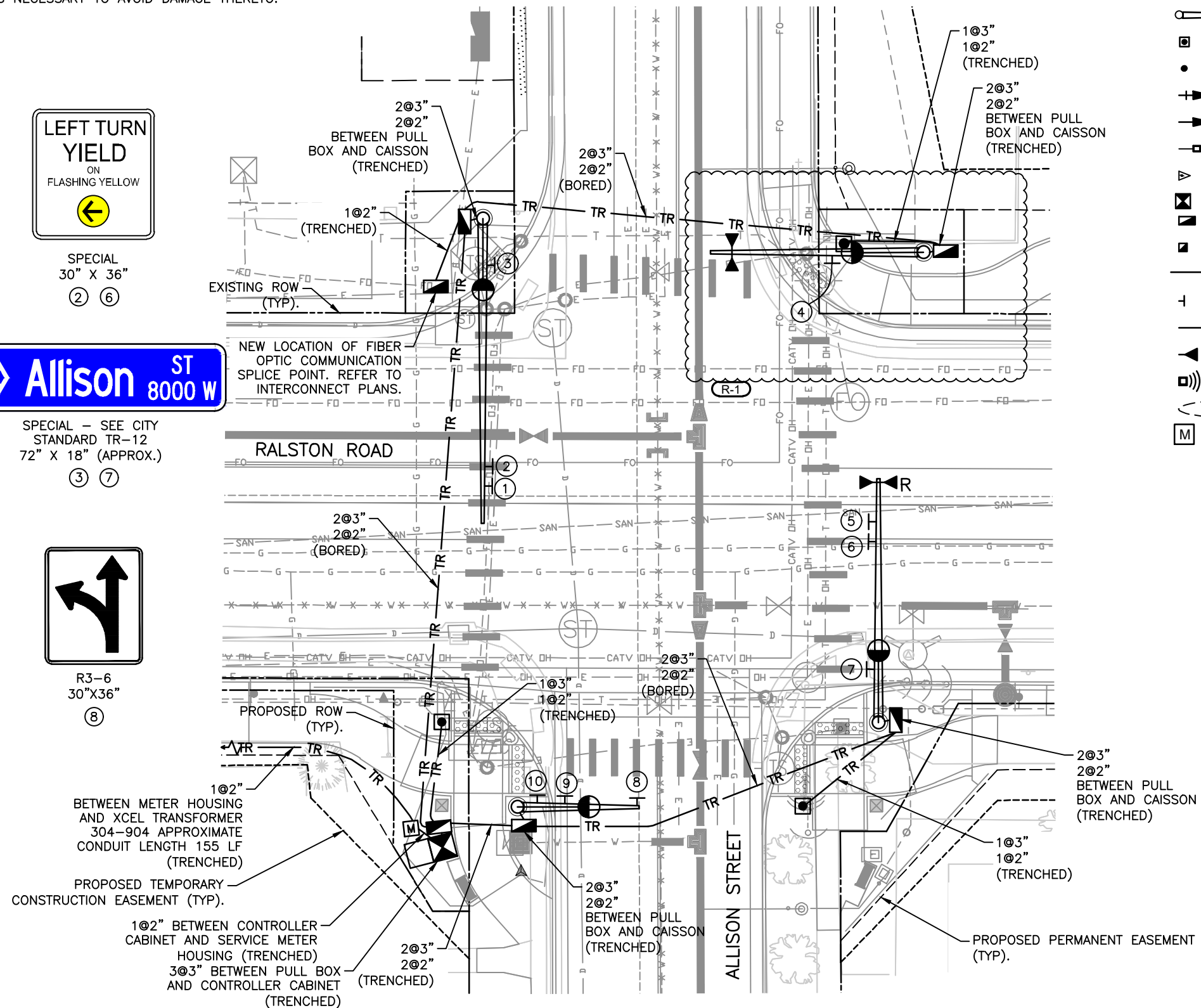
SPECIAL - SEE CITY
STANDARD TR-12
72" X 18" (APPROX.)
④ ⑩



R3-6
30"x36"
⑧



HORIZ SCALE: 1"=20'
0' 10' 20'



LEGEND

SYMBOL

DESCRIPTION

	TRAFFIC SIGNAL POLE AND MAST ARM
	TRAFFIC SIGNAL PEDESTAL POLE
	PEDESTRIAN PUSH BUTTON POLE
	TRAFFIC SIGNAL HEAD & BACKPLATE
	TRAFFIC SIGNAL HEAD
	PEDESTRIAN SIGNAL HEAD
	PEDESTRIAN PUSH BUTTON STATION
	TRAFFIC SIGNAL CONTROLLER CABINET
	PULL BOX - TYPE LG (24"x36"x18")
	PULL BOX - TYPE M (13"x24"x12")
	SIGNAL CONDUIT (PVC SCH. 80)
	SIGN PANEL
	LUMINAIRE (LED)
	FIRE PREEMPTION UNIT
	MICROWAVE RADAR DETECTOR
	DETECTION ZONE & PHASE
	SERVICE METER HOUSING



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Sheet Revisions			
R-X	Date	Comments	Initials
R-1	1/22/21	ADDENDUM 2	RRF

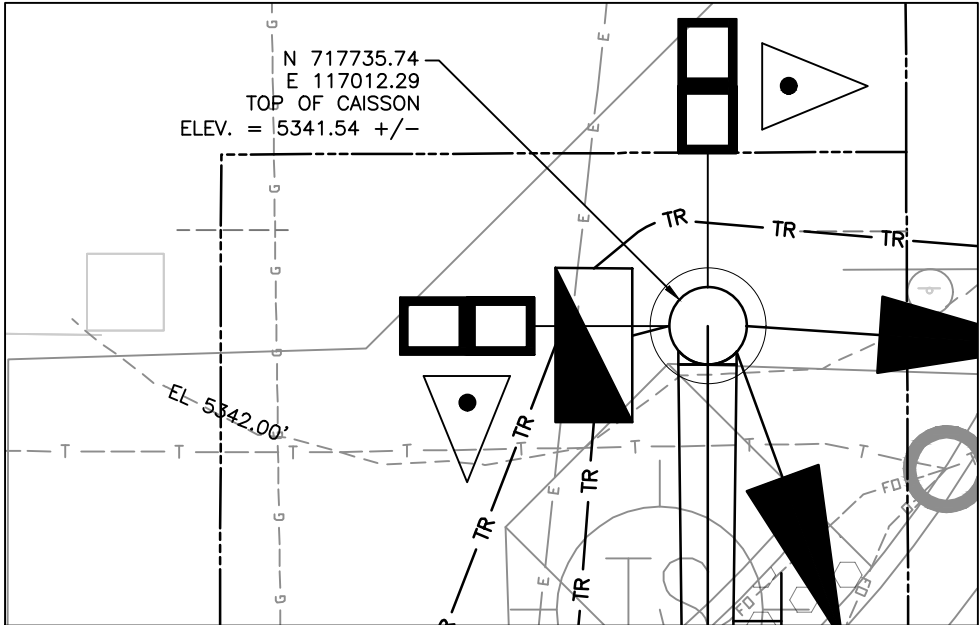


CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST TRAFFIC SIGNAL PLANS RALSTON ROAD & ALLISON STREET			Project No./Code
No Revisions:					18-ST-40
Revised:		Designer: RRF	Structure Numbers		
		Detailer: DEM			
Void:		Sheet Subset: TRAFFIC	Subset Sheets: TR-16 of 17		Sheet Number 284

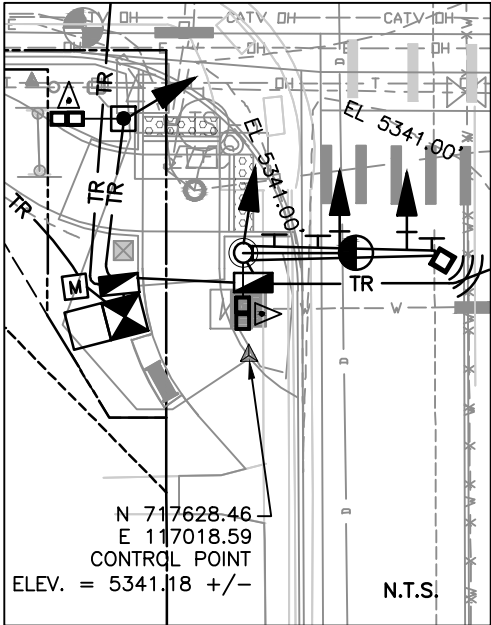
SIGNAL POLE FOOTING DETAILS
RALSTON RD. & ALLISON ST.

NW CORNER

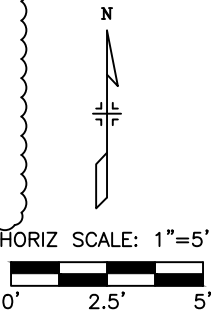
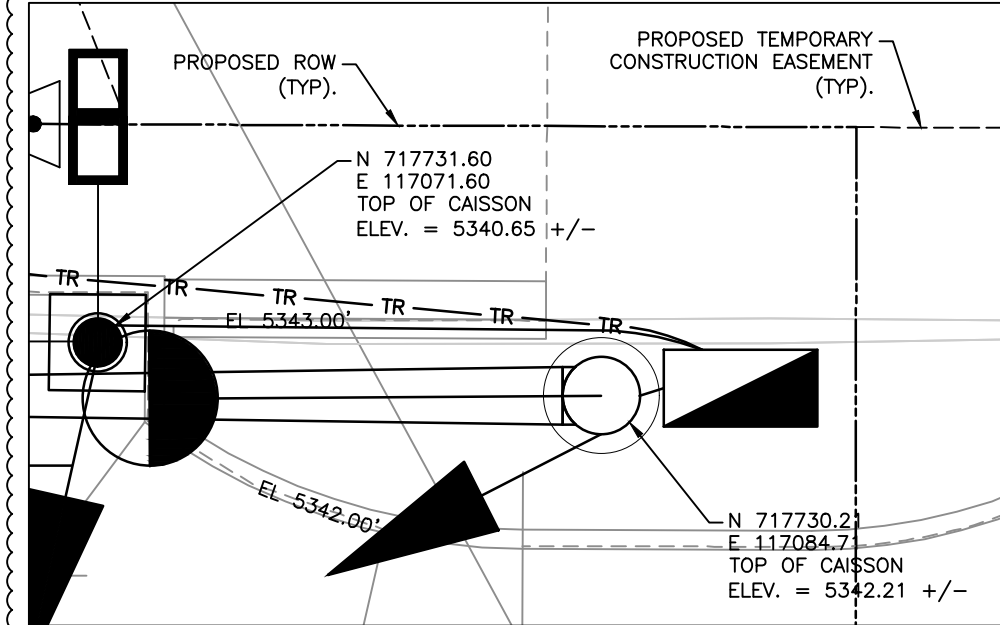


CITY OF ARVADA CONTROL POINT

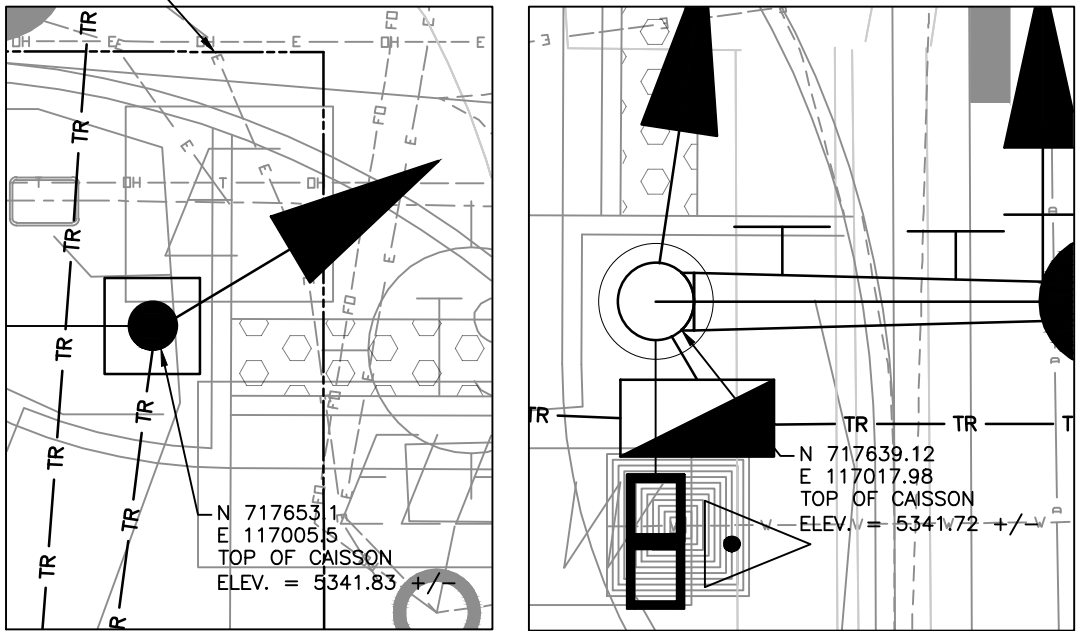
-SOUTHWEST CORNER-



NE CORNER



SW CORNER

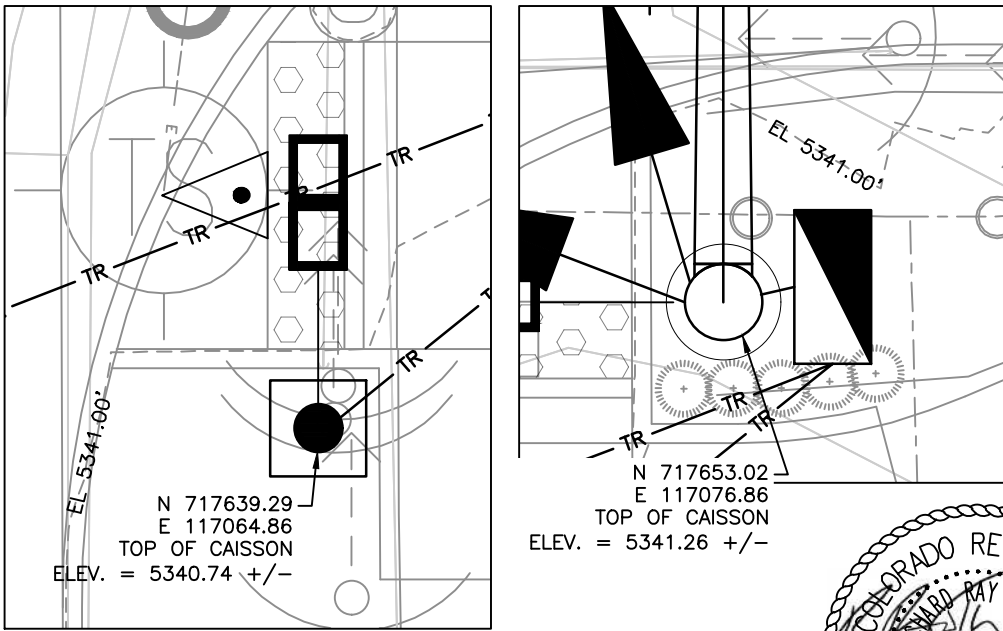


SYMBOL

DESCRIPTION

- TRAFFIC SIGNAL POLE AND MAST ARM
- TRAFFIC SIGNAL PEDESTAL POLE
- PEDESTRIAN PUSH BUTTON POLE
- TRAFFIC SIGNAL HEAD & BACKPLATE
- TRAFFIC SIGNAL HEAD
- PEDESTRIAN SIGNAL HEAD
- PEDESTRIAN PUSH BUTTON STATION
- TRAFFIC SIGNAL CONTROLLER CABINET
- PULL BOX - TYPE LG (24"x36"x18")
- PULL BOX - TYPE M (13"x24"x12")
- SIGNAL CONDUIT (PVC SCH. 80)
- SIGN PANEL
- LUMINAIRE (LED)
- FIRE PREEMPTION UNIT (RESET)
- MICROWAVE RADAR DETECTOR
- DETECTION ZONE & PHASE
- SERVICE METER HOUSING

SE CORNER



NOTES:

- TOP OF CAISSON ELEVATIONS ARE APPROXIMATELY SIX (6) INCHES BELOW PAVED SURFACE AREAS AND APPROXIMATELY TWO (2) INCHES ABOVE GROUND LEVEL IN GRASS/LANDSCAPED AREAS.
- CAISSONS SHALL BE CONSTRUCTED USING CDOT CLASS BZ CONCRETE NON-AIR ENTRAINED.



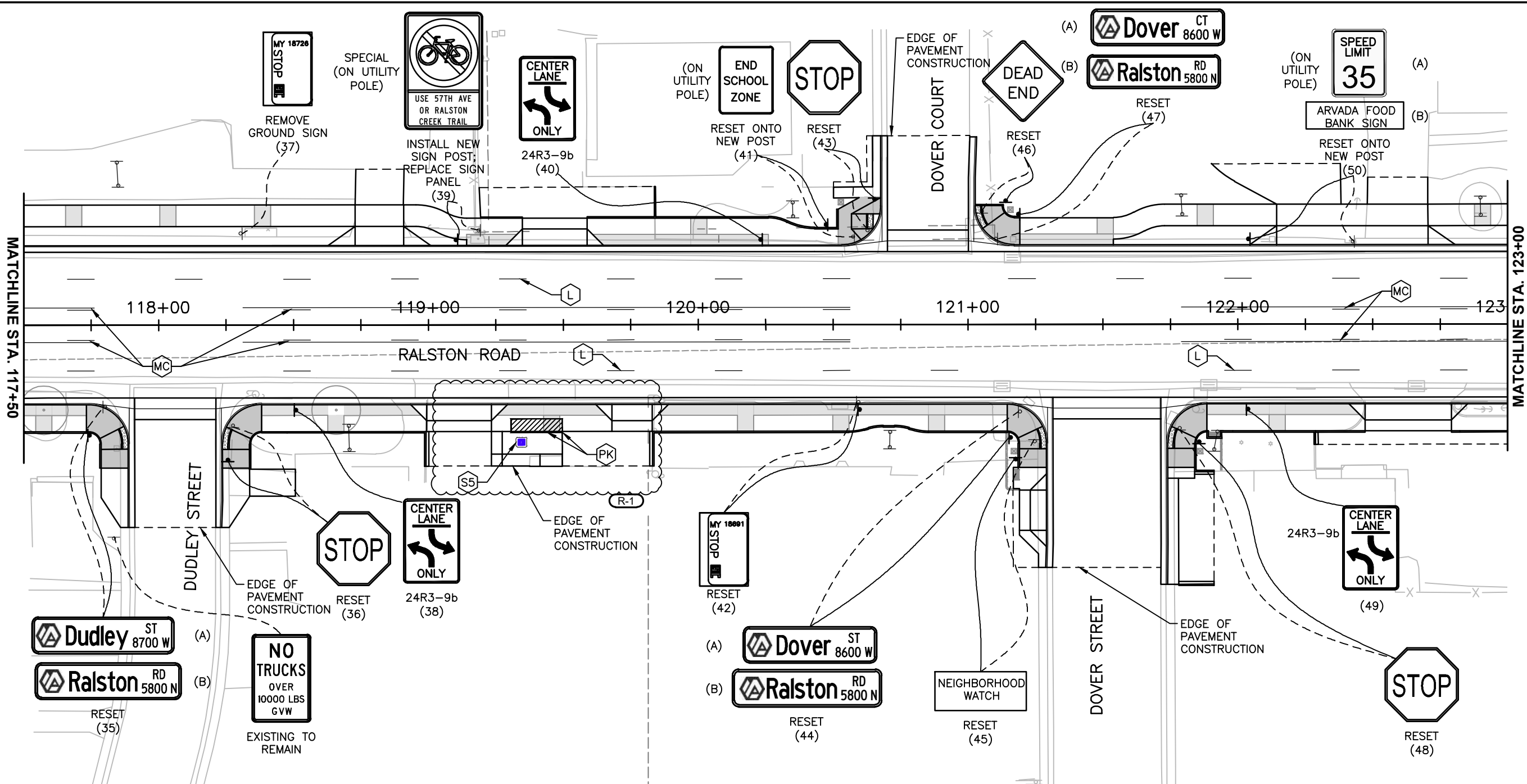
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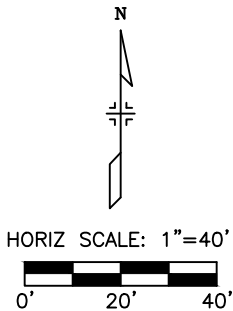
CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST TRAFFIC SIGNAL PLANS RALSTON ROAD & ALLISON STREET			Project No./Code
No Revisions:		Designer: RRF	Structure Numbers		18-ST-40
Revised:		Detailer: DEM			
Void:		Sheet Subset: TRAFFIC	Subset Sheets: TR-17 of 17		Sheet Number 285



PAVEMENT MARKING LEGEND			
BIKE LANE: SOLID WHITE, 4" WIDE	MEDIAN CENTERLINES: SOLID YELLOW, 4" WIDE & BROKEN YELLOW, 4" WIDE (10' SEGMENTS, 30' GAPS)	SYMBOL 3: (2 PIECE ARROW), 4 SF SOLID WHITE	
CHANNELIZING LINE: SOLID WHITE, 6" WIDE	PARKING LINE: SOLID YELLOW, 4" WIDE (8' SEGMENTS, 23' SEPARATION)	SYMBOL 4: (BIKE LANE SYMBOL), 10.5 SF SOLID WHITE	
CENTERLINE (DOUBLE): SOLID YELLOW, 4" WIDE, 4" SEPARATION	PARKING LINE: SOLID YELLOW, 4" WIDE	SYMBOL 5: (HANDICAP SYMBOL), 12 SF SOLID BLUE	
DOTTED EXTENSION LINE: BROKEN WHITE, 4" WIDE (2' SEGMENTS, 4' GAPS)	SYMBOL 1: (LEFT ARROW), 16.1 SF SOLID WHITE	STOP LINE: SOLID WHITE, 24" WIDE	
LANE LINE: BROKEN WHITE, 4" WIDE (10' SEGMENTS, 30' GAPS)	SYMBOL 2: (RIGHT ARROW), 16.1 SF SOLID WHITE	CROSSWALK LINE: SOLID WHITE, 1'x6'	

- NOTES:
- ALL SIGNING AND STRIPING SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF THE M.U.T.C.D.
 - SIGN POSTS AND INSTALLATION SHALL BE IN ACCORDANCE WITH CITY OF ARVADA STANDARD DETAIL TR-1.
 - ALL SIGNS LOCATED IN CONCRETE OR PAVERS REQUIRE A PVC SLEEVE FOR THE SIGN POSTS PER CITY STANDARDS. NO SEPARATE PAYMENT SHALL BE MADE FOR SLEEVES, THEY SHALL BE INCLUDED IN THE COST OF SIGN POSTS.
 - ALL BIKE LANE SYMBOLS SHALL BE IN ACCORDANCE WITH CITY OF ARVADA DETAIL TR-3.
 - ALL CROSSWALK MARKINGS (XW1), PAVEMENT ARROWS (S1, S2, AND S3), AND BIKE LANE SYMBOLS (S4) ARE TO BE THERMOPLASTIC. ALL LANE LINES ARE TO BE EPOXY PAINT.



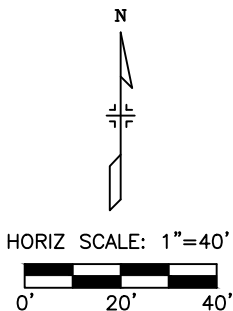
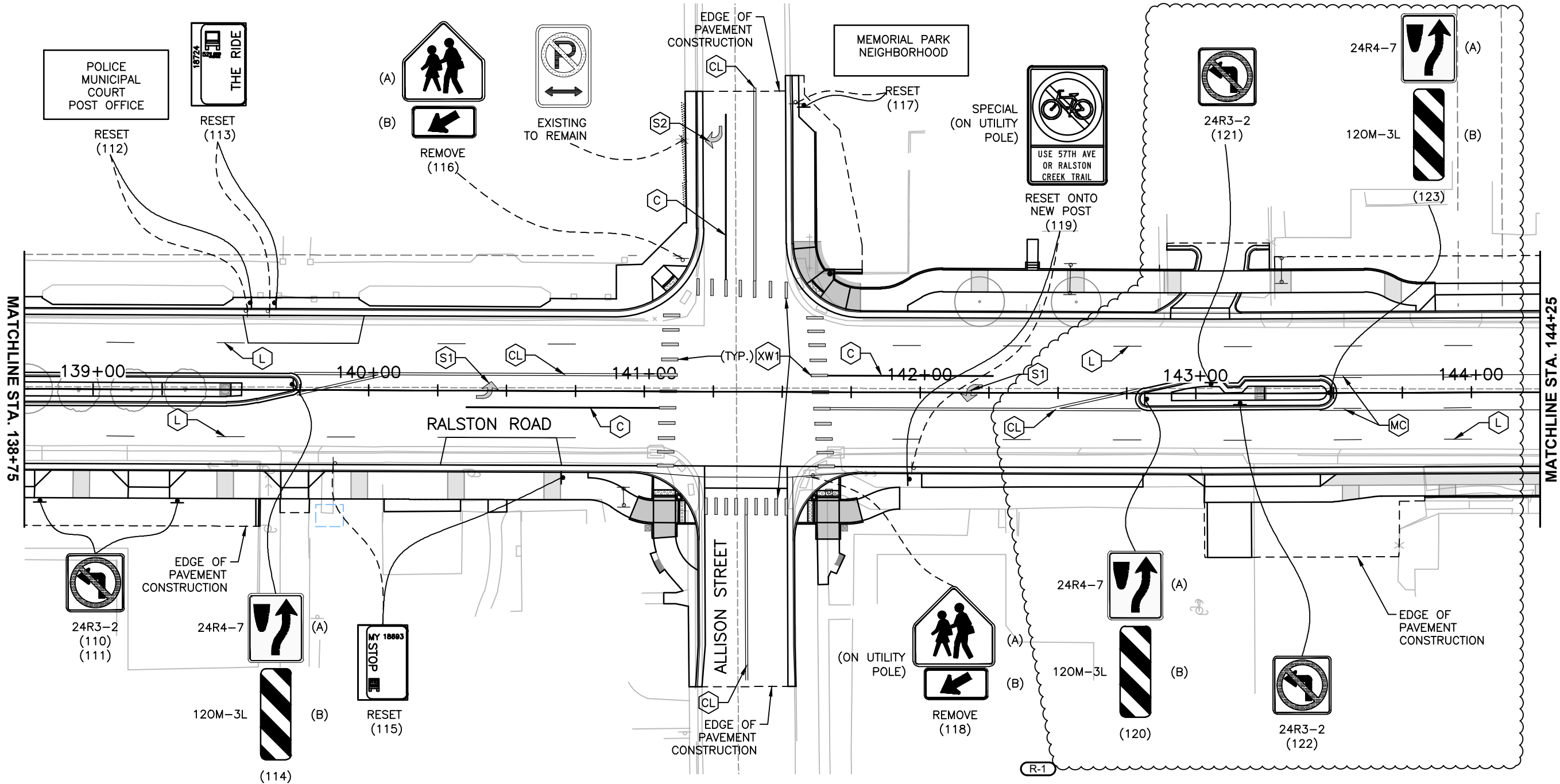
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Sheet Revisions			
R-X	Date	Comments	Initials
R-1	1/22/21	ADDENDUM #2	RRF

CITY OF ARVADA
PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST SIGNING AND STRIPING PLANS RALSTON ROAD (STA. 117+50 - STA. 123+00)			Project No./Code
No Revisions:		Designer:	RRF	Structure	18-ST-40
Revised:		Detailer:	DEM	Numbers	
Void:		Sheet Subset:	TRAFFIC	Subset Sheets:	SS-05 of 11
					Sheet Number 299



PAVEMENT MARKING LEGEND					
	BIKE LANE: SOLID WHITE, 4" WIDE		MEDIAN CENTERLINES: SOLID YELLOW, 4" WIDE & BROKEN YELLOW, 4" WIDE (10' SEGMENTS, 30' GAPS)		SYMBOL 3: (2 PIECE ARROW), 4 SF SOLID WHITE
	CHANNELIZING LINE: SOLID WHITE, 6" WIDE		PARKING LINE: SOLID YELLOW, 4" WIDE (8' SEGMENTS, 23' SEPARATION)		SYMBOL 4: (BIKE LANE SYMBOL), 10.5 SF SOLID WHITE
	CENTERLINE (DOUBLE): SOLID YELLOW, 4" WIDE, 4" SEPARATION		SYMBOL 1: (LEFT ARROW), 16.1 SF SOLID WHITE		STOP LINE: SOLID WHITE, 24" WIDE
	DOTTED EXTENSION LINE: BROKEN WHITE, 4" WIDE (2' SEGMENTS, 4' GAPS)		SYMBOL 2: (RIGHT ARROW), 16.1 SF SOLID WHITE		CROSSWALK LINE: SOLID WHITE, 1'x6'
	LANE LINE: BROKEN WHITE, 4" WIDE (10' SEGMENTS, 30' GAPS)				

NOTES:

1. ALL SIGNING AND STRIPING SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF THE M.U.T.C.D.
2. SIGN POSTS AND INSTALLATION SHALL BE IN ACCORDANCE WITH CITY OF ARVADA STANDARD DETAIL TR-1.
3. ALL SIGNS LOCATED IN CONCRETE OR PAVERS REQUIRE A PVC SLEEVE FOR THE SIGN POSTS PER CITY STANDARDS. NO SEPARATE PAYMENT SHALL BE MADE FOR SLEEVES, THEY SHALL BE INCLUDED IN THE COST OF SIGN POSTS.
4. ALL BIKE LANE SYMBOLS SHALL BE IN ACCORDANCE WITH CITY OF ARVADA DETAIL TR-3.
5. ALL CROSSWALK MARKINGS (XW1), PAVEMENT ARROWS (S1, S2, AND S3), AND BIKE LANE SYMBOLS (S4) ARE TO BE THERMOPLASTIC. ALL LANE LINES ARE TO BE EPOXY PAINT.



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R-1	1/22/21	ADDENDUM 2	RRF

CITY OF ARVADA
PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed	RALSTON RD - YUKON ST TO GARRISON ST SIGNING AND STRIPING PLANS RALSTON ROAD (STA. 138+75 - STA. 144+25)			Project No./Code
No Revisions:	Designer:	RRF	Structure	18-ST-40
Revised:	Detailer:	DEM	Numbers	
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				Sheet Number 303

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5420 Ward Road
Arvada, CO 80002
Phone: 303.422.7400

R-X

R-1

Date

Comments

Initials

01/22/2021

ADDENDUM 2

GJA



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PUBLIC WORKS DEPARTMENT

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Void:

RALSTON RD - YUKON TO GARRISON
TABULATIONS

Designer: GJA

Detailer: ART

Sheet Subset: LIGHTING

Structure Numbers

Subset Sheets: LQ-04 OF 04

Project No./Code

18-ST-40

Sheet Number **311**



RALSTON CORRIDOR ARTS DISTRICT - TABULATION OF ELECTRICAL QUANTITIES														
SHEET	KEY	BASELINE	STATION	OFFSET	REMOVAL LIGHT STANDARD	REMOVAL LIGHT STANDARD FOUNDATION	REMOVAL LUMINAIRE	LIGHTING CONTROL CENTER	LIGHT STANDARD AND LUMINAIRE PEDESTRIAN (TYPE B)	LIGHT STANDARD FOUNDATION	LIGHT STANDARD FOUNDATION (SPECIAL)	1" ELECTRICAL CONDUIT (PLASTIC) (SCH 40)	2" ELECTRICAL CONDUIT (PLASTIC) (SCH 80)	WIRING
					EACH	EACH	EACH	EACH	EACH	EACH	EACH	LIN. FT.	LIN. FT.	LUMP SUM
LT08	LP64	RALSTON ROAD	138 + 85.9	34.5 L					1	1				
	LP65	RALSTON ROAD	138 + 93.0	31.5 R					1	1			110	
	LP66	RALSTON ROAD	139 + 46.8	34.7 L					1	1				
	LP67	RALSTON ROAD	139 + 86.6	31.5 R					1	1			75	
	LP68	RALSTON ROAD	140 + 00.5	34.7 L					1	1				
	LP69	RALSTON ROAD	140 + 51.3	31.5 R					1	1			50	
	LP70	RALSTON ROAD	140 + 62.0	34.7 L					1	1				
	LP71	RALSTON ROAD	142 + 35.0	31.4 L					1	1			120	
	LP72	RALSTON ROAD	142 + 48.0	31.5 R					1	1			205	
	LP73	RALSTON ROAD	143 + 56.1	31.5 R					1	1			115	
LT09	LP74	RALSTON ROAD	143 + 55.0	31.4 L					1	1			130	
	LP75	RALSTON ROAD	144 + 84.6	31.4 L					1	1			140	
	LP76	RALSTON ROAD	145 + 12.8	31.5 R					1	1			170	
	LP77	RALSTON ROAD	146 + 03.0	31.5 R					1	1			100	
	LP78	RALSTON ROAD	147 + 12.6	31.5 L					1	1			135	
	LP79	RALSTON ROAD	147 + 31.2	31.5 R					1	1			140	
	LP80	RALSTON ROAD	147 + 79.2	31.5 L					1	1			80	
LT10	LP81	RALSTON ROAD	149 + 07.8	31.4 L					1	1			140	
	LP82	RALSTON ROAD	149 + 13.2	31.5 R					1	1			195	
	LP83	RALSTON ROAD	150 + 05.1	32.2 L					1	1			110	
	LP84	RALSTON ROAD	150 + 12.5	31.5 R					1	1			110	
	LP85	RALSTON ROAD	150 + 85.6	31.5 R					1	1			100	
	LP86	RALSTON ROAD	150 + 86.5	33.4 L					1	1			115	
	LP87	RALSTON ROAD	152 + 50.0	31.2 R					1		1		160	
LT11	LP88	RALSTON ROAD	153 + 85.0	30.5 R					1		1		145	
	LP89	RALSTON ROAD	155 + 09.43	43.6 R					1		1		85	
	LP90	RALSTON ROAD	155 + 49.42	34.5 L					1		1		565	
	LP91	RALSTON ROAD	155 + 83.24	43.5 R					1		1		205	
	LP92	RALSTON ROAD	156 + 85.16	34.2 L					1		1		160	
	LP93	RALSTON ROAD	157 + 74.67	44.2 R					1		1		205	
	LP94	RALSTON ROAD	158 + 85.18	44.7 L					1		1		210	
LT12	LP95	RALSTON ROAD	159 + 66.66	35.4 R					1		1		240	
	LP96	RALSTON ROAD	160 + 21.02	44.4 L					1		1		150	
	LP97	RALSTON ROAD	161 + 25.00	45.9 L					1		1		115	
	LP98	RALSTON ROAD	161 + 92.50	34.3 R					1		1		215	
	LP99	RALSTON ROAD	162 + 75.00	46.0 L					1		1		160	
LT06	PUBLIC ART	RALSTON ROAD	127 + 80.0	50.0R								60		
LT01	DIST. MARKER	RALSTON ROAD	104 + 33.0	0.0 R									35	
LT08	DIST. MARKER	RALSTON ROAD	139 + 48.0	0.0 R									35	
	DIST. MARKER	RALSTON ROAD	143 + 24.0	0.0 R									35	
LT02	IRR.	RALSTON ROAD	108 + 75.0	52.0 R								20		
LT06	IRR.	RALSTON ROAD	127 + 84.1	78.3 L								60		
LT08	IRR.	RALSTON ROAD	141 + 75.0	56.2 R								35		
LT08	IRR.	RALSTON ROAD	142 + 11.3	34.1 L								20		
			TOTALS		13	14	13	4	99	86	13	195	12430	1

(R-1)

(R-1)

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Phone: 303.422.7400

Sheet Revisions			
	Date	Comments	Initials
R-X	01/22/2021	ADDENDUM 2	GJA
R-1			

CITY OF ARVADA
PUBLIC WORKS DEPARTMENT

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RALSTON RD - YUKON TO GARRISON
SCHEDULES

Designer: GJA

Detailer: ART

Sheet Subset: LIGHTING

Structure Numbers

Subset Sheets: LS-01 OF 04

Project No./Code

18-ST-40

Sheet Number 312

SINGLE PHASE SHORT CIRCUIT SCHEDULE

PROJECT NAME: RALSTON CORRIDOR					PROJECT NO: 21719009			BY: BCER - KGW							
	DESCRIPTION	LENGTH/ PRIMARY VOLTAGE	VOLTAGE/ SECONDARY VOLTAGE	WIRE SIZE/ XFRMR KVA RATING	WIRE MATERIAL/ TRANSFORMER (C OR A) T=XFRMR	CONDUIT (S OR N)	VOLTAGE CLASS (V)	WIRES (S OR T)	C OR Z VALUE	# OF PARALLEL RUNS	Isc AVAILABLE UPSTREAM	f	M	I(sc Fault)	
X0	XCEL XFMR													14,800	X0
X1	PEDESTAL LCC1	106	240	3X	C	N	600	S	13923	1	14,800	0.9390	0.5157	7,633	X1
X2	PEDESTAL LCC2	55	240	3X	C	N	600	S	13923	1	14,800	0.4872	0.6724	9,952	X2
X3	PEDESTAL LCC3	145	240	3X	C	N	600	S	13923	1	14,800	1.2844	0.4377	6,479	X3
X4	PEDESTAL LCC4	105	240	3X	C	N	600	S	13923	1	14,800	0.9301	0.5181	7,668	X4

RALSTON CORRIDOR - SUMMARY OF QUANTITIES

ITEM #	DESCRIPTION	UNIT	QTY
202-00700	REMOVAL LIGHT STANDARD	EA	13
202-00705	REMOVAL LIGHT STANDARD FOUNDATION	EA	14
202-00750	REMOVAL LUMINAIRE	EA	13
613-00100	1 INCH ELECTRICAL CONDUIT (PLASTIC)	LF	195
613-01200	2 INCH ELECTRICAL CONDUIT(PLASTIC)	LF	12430
613-07026	PULL BOX 13"x20"x12"	EA	54
613-10000	WIRING	LS	1
613-30005	LIGHT STANDARD AND LUMINAIRE (PEDESTRIAN) (TYPE B)	EA	99
613-40010	LIGHT STANDARD FOUNDATION	EA	86
613-40012	LIGHT STANDARD FOUNDATION SPECIAL	EA	13
613-50100	LIGHTING CONTROL CENTER	EA	4

RALSTON CORRIDOR - VOLTAGE DROP CALCULATION

All conductors shall be copper (CU) THHN/THWN.

Max. Allowable Voltage Drop = 3%

Distances shown for voltage drop calculation purposes only. Do not use for cost estimating.

Luminaire VA = 37

CKT#	NO. OF LIGHTS	VA (TOTAL)	VOLTAGE (V)	LOAD (A)	DISTANCE (FEET)	CONDUCTORS, GROUND, AND CONDUIT SIZE	VOLTAGE DROP
LCC1-1	6	222	120	1.9	800	(2#6 CU THWN & 1#6 CU GND) 2"C	1.2%
LCC1-2	4	148	120	1.2	700	(2#8 CU THWN & 1#8 CU GND) 2"C	1.1%
LCC1-3	5	185	120	1.5	650	(2#6 CU THWN & 1#6 CU GND) 2"C	0.8%
LCC1-4	5	185	120	1.5	450	(2#8 CU THWN & 1#8 CU GND) 2"C	0.9%
LCC1-5	5	185	120	1.5	1,250	(2#6 CU THWN & 1#6 CU GND) 2"C	1.5%
LCC1-6	5	185	120	1.5	1,300	(2#6 CU THWN & 1#6 CU GND) 2"C	1.6%
LCC1-8	DIST. MARKER	600	120	5.0	550	(2#6 CU THWN & 1#6 CU GND) 2"C	2.3%
LCC1-10	IRRIG. CNTL	180	120	1.5	25	(2#10 CU THWN & 1#10 CU GND) 1"C	0.1%
LCC2-1	5	185	120	1.5	600	(2#8 CU THWN & 1#8 CU GND) 2"C	1.2%
LCC2-2	5	185	120	1.5	600	(2#8 CU THWN & 1#8 CU GND) 2"C	1.2%
LCC2-3	5	185	120	1.5	650	(2#8 CU THWN & 1#8 CU GND) 2"C	1.3%
LCC2-4	6	222	120	1.9	600	(2#8 CU THWN & 1#8 CU GND) 2"C	1.5%
LCC2-5	2	360	120	3.0	150	(2#10 CU THWN & 1#10 CU GND) 1"C	0.9%
LCC2-8	IRRIG. CNTL	180	120	1.5	200	(2#10 CU THWN & 1#10 CU GND) 1"C	0.6%
LCC3-1	6	222	120	1.9	700	(2#6 CU THWN & 1#6 CU GND) 2"C	1.1%
LCC3-2	8	296	120	2.5	1,100	(2#6 CU THWN & 1#6 CU GND) 2"C	2.3%
LCC3-3	7	259	120	2.2	1,000	(2#6 CU THWN & 1#6 CU GND) 2"C	1.8%
LCC3-4	IRRIG. CNTL	180	120	1.5	200	(2#10 CU THWN & 1#10 CU GND) 1"C	0.6%
LCC3-5	3	111	120	0.9	1,350	(2#6 CU THWN & 1#6 CU GND) 2"C	1.0%
LCC3-6	DIST. MARKER	600	120	5.0	300	(2#8 CU THWN & 1#8 CU GND) 2"C	2.0%
LCC3-8	DIST. MARKER	600	120	5.0	400	(2#8 CU THWN & 1#8 CU GND) 2"C	2.6%
LCC4-1	3	111	120	0.9	950	(2#6 CU THWN & 1#6 CU GND) 2"C	0.7%
LCC4-2	3	111	120	0.9	1,650	(2#6 CU THWN & 1#6 CU GND) 2"C	1.2%
LCC4-3	2	74	120	0.6	500	(2#6 CU THWN & 1#6 CU GND) 2"C	0.2%
LCC4-4	3	111	120	0.9	2,000	(2#6 CU THWN & 1#6 CU GND) 2"C	1.5%



FED FROM: XCEL SERVICE PEDESTAL
VOLTAGE: 240/120
AIC: 10000
ENCLOSURE: NEMA 3R

PANEL: **LCC3**
PHASE: 1
BUS AMPACITY: 200A
NEUTRAL: 100%
GROUND: STD

WIRE: 3
MAIN: MCB
MOUNTING: SURFACE

CKT NO	CKT DESCRIPTION	LOAD		CKT BREAKER			CKT BREAKER			LOAD		CKT DESCRIPTION	CKT NO
		VA	TYPE	P	A	NOTE	NOTE	A	P	TYPE	VA		
1	LP55,57,60,62,65,67,69	222	L	1	20			20	1	L	296	LP71,73,75,78,80,81,83,85	2
3	LP72,74,76,77,79,82,84	259	L	1	20			20	1	CL	180	IRRIG. CONTROL (ALLISON S	4
5	LP86,87,88	111	L	1	20		1	20	1	L	600	DISTRICT MARKER (MEDIAN)	6
7	SPARE			1	20		1	20	1	L	600	DISTRICT MARKER (MEDIAN)	8
9	SPACE			-	20			20	1			SPACE	10
11	SPACE			-	20			20	1			SPACE	12
		CONNECTED (KVA)			DEMAND FACTOR		DEMAND (KVA)			NOTES: ** Electrical contractor is responsible for balancing the panel loading. 1. ROUTE CIRCUIT VIA PHOTOCELL FOR DUSK-TO-DAWN OPERATION.			
LOAD TYPE		A	B	TOTAL			A	B	TOTAL				
LIGHTING (L)		1.2	0.9	2.1	1.25		1.5	1.1	2.6				
RECEPTACLE (R)		0.0	0.0	0.0	1.00		0.0	0.0	0.0				
REC (>10000VA) (R)		0.0	0.0	0.0	0.50		0.0	0.0	0.0				
HEATER (H)		0.0	0.0	0.0	1.00		0.0	0.0	0.0				
LARGEST MOTOR (M)		0.0	0.0	0.0	1.25		0.0	0.0	0.0				
REMAIN MOTOR (M)		0.0	0.0	0.0	1.00		0.0	0.0	0.0				
CONTINUOUS LOAD (CL)		0.0	0.2	0.2	1.25		0.0	0.2	0.2				
KITCHEN LOADS (K)		0.0	0.0	0.0	1.00		0.0	0.0	0.0				
SPECIFIC LOADS (S)		0.0	0.0	0.0	1.00		0.0	0.0	0.0				
NONCOINCIDENTAL (N)		0.0	0.0	0.0	0.00		0.0	0.0	0.0				
DWELLING (D)		0.0	0.0	0.0	0.65		0.0	0.0	0.0				
TOTAL DEMAND (KVA)							1.5	1.3	2.8				
TOTAL (A/PH)							12.8	10.8	11.8				

NOTES:

** Electrical contractor is responsible for balancing the panel loading.

1. ROUTE CIRCUIT VIA PHOTOCELL FOR DUSK-TO-DAWN OPERATION.

FED FROM: XCEL SERVICE PEDESTAL
VOLTAGE: 240/120
AIC: 10000
ENCLOSURE: NEMA 3R

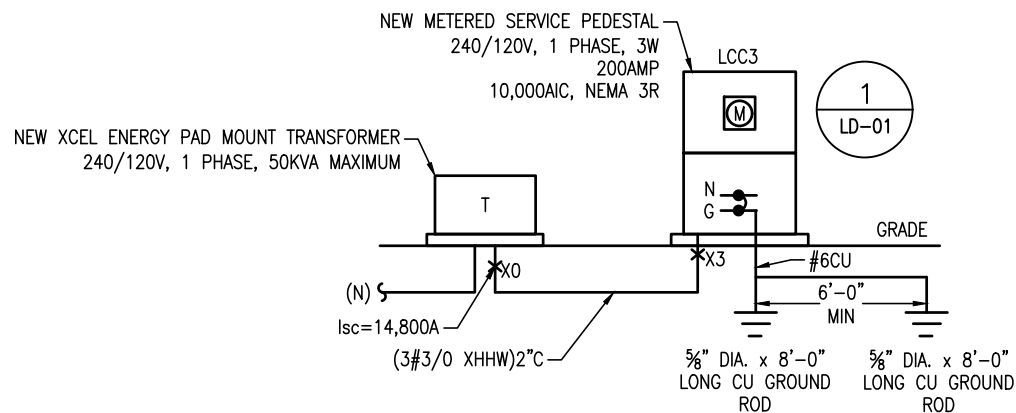
PANEL: **LCC4**
PHASE: 1
BUS AMPACITY: 200A
NEUTRAL: 100%
GROUND: STD

WIRE: 3
MAIN: MCB
MOUNTING: SURFACE

CKT NO	CKT DESCRIPTION	LOAD		CKT BREAKER			CKT BREAKER			LOAD		CKT DESCRIPTION	CKT NO
		VA	TYPE	P	A	NOTE	NOTE	A	P	TYPE	VA		
1	LP89,91,93	111	L	1	20			20	1	L	111	LP90,92,94	2
3	LP95,98	74	L	1	20			20	1	L	111	LP96,97,99	4
5	SPARE			1	20			20	-			SPACE	6
7	SPACE			-	20			20	-			SPACE	8
9	SPACE			-	20			20	-			SPACE	10
11	SPACE			-	20			20	-			SPACE	12
		CONNECTED (KVA)			DEMAND FACTOR		DEMAND (KVA)			NOTES: ** Electrical contractor is responsible for balancing the panel loading.			
LOAD TYPE		A	B	TOTAL			A	B	TOTAL				
LIGHTING (L)		0.2	0.2	0.4	1.25		0.3	0.2	0.5				
RECEPTACLE (R)		0.0	0.0	0.0	1.00		0.0	0.0	0.0				
REC (>10000VA) (R)		0.0	0.0	0.0	0.50		0.0	0.0	0.0				
HEATER (H)		0.0	0.0	0.0	1.00		0.0	0.0	0.0				
LARGEST MOTOR (M)		0.0	0.0	0.0	1.25		0.0	0.0	0.0				
REMAIN MOTOR (M)		0.0	0.0	0.0	1.00		0.0	0.0	0.0				
CONTINUOUS LOAD (CL)		0.0	0.0	0.0	1.25		0.0	0.0	0.0				
KITCHEN LOADS (K)		0.0	0.0	0.0	1.00		0.0	0.0	0.0				
SPECIFIC LOADS (S)		0.0	0.0	0.0	1.00		0.0	0.0	0.0				
NONCOINCIDENTAL (N)		0.0	0.0	0.0	0.00		0.0	0.0	0.0				
DWELLING (D)		0.0	0.0	0.0	0.65		0.0	0.0	0.0				
TOTAL DEMAND (KVA)							0.3	0.2	0.5				
TOTAL (A/PH)							2.3	1.9	2.1				

NOTES:

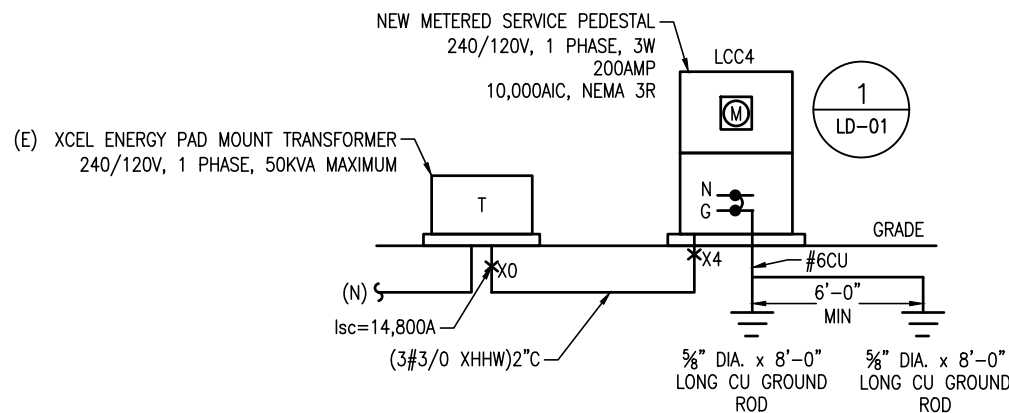
** Electrical contractor is responsible for balancing the panel loading.



LCC3 - METERED ONE-LINE DIAGRAM

(APPROX. STA 141+00, SHEET LT-08) NOT TO SCALE

NOTE: SERVICE SHALL BE A MINIMUM OF 55' AWAY FROM TRANSFORMER TO REDUCE THE AVAILABLE FAULT CURRENT BELOW 10,000 AIC.



LCC4 - METERED ONE-LINE DIAGRAM

(APPROX. STA 141+00, SHEET LT-08) NOT TO SCALE

NOTE: SERVICE SHALL BE A MINIMUM OF 55' AWAY FROM TRANSFORMER TO REDUCE THE AVAILABLE FAULT CURRENT BELOW 10,000 AIC.



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Horizontal Scale:	N/A
Vertical Scale:	N/A
BCER ENGINEERING, INC. 5420 Ward Road Arvada, CO 80002 Phone: 303.422.7400	

Sheet Revisions			
R-X	Date	Comments	Initials
R-1	01/22/2021	ADDENDUM 2	GJA

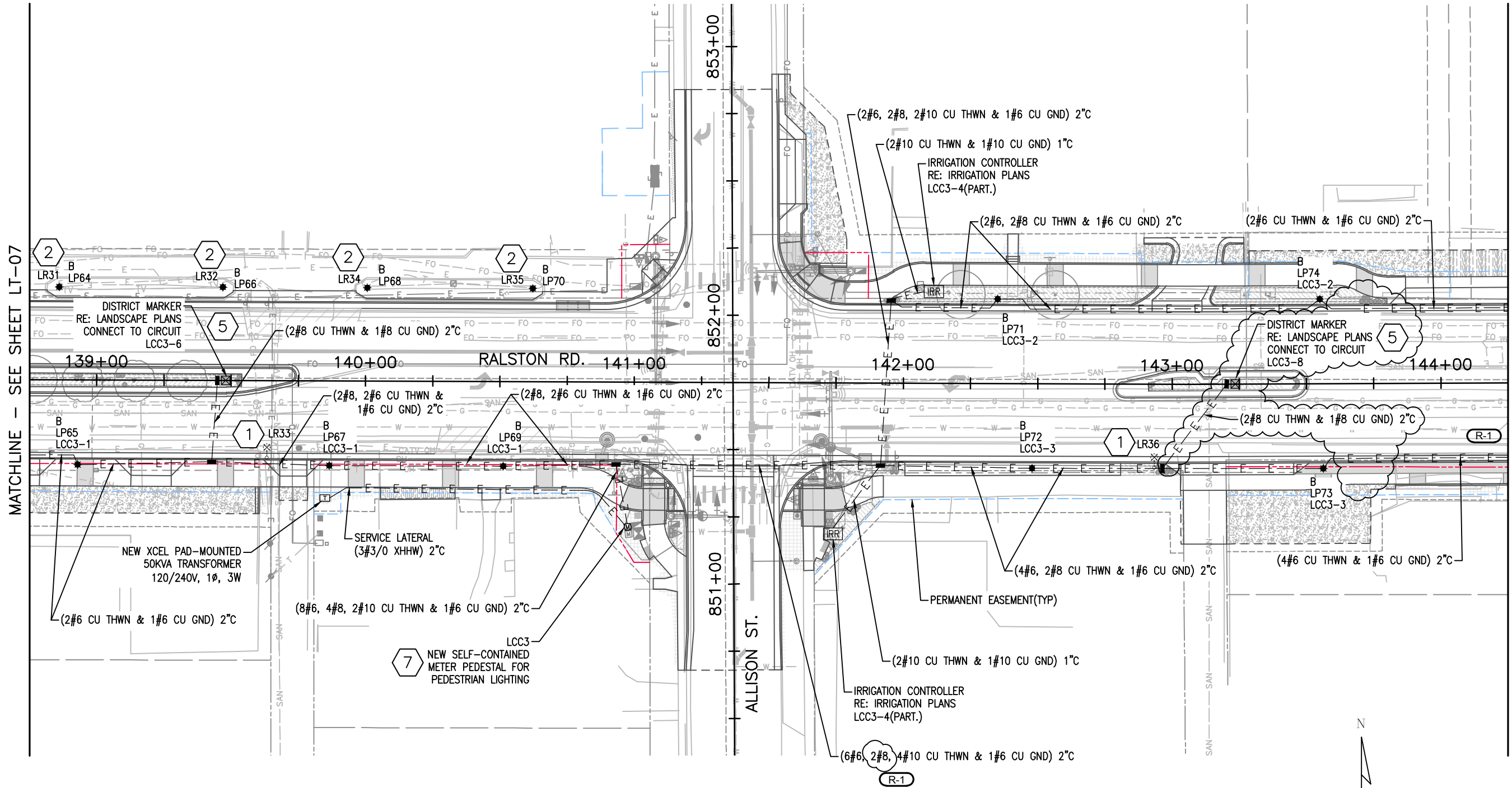


CITY OF ARVADA
PUBLIC WORKS DEPARTMENT

RALSTON RD - YUKON TO GARRISON SCHEDULES				Project No./Code	
No Revisions:				18-ST-40	
Revised:				Designer: GJA	Structure Numbers
Void:				Detailer: ART	
				Sheet Subset: LIGHTING	Subset Sheets: LS-04 OF 04
				Sheet Number 315	

MATCHLINE - SEE SHEET LT-07

MATCHLINE - SEE SHEET LT-09



Print Date: 1/20/2021 12:27:50 PM

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Horizontal Scale: 1" = 40' Vertical Scale: N/A



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Arvada, CO 80002
Phone: 303.422.7400

R-X

R-1

Sheet Revisions			
Date	Comments	Initials	
01/22/2021	ADDENDUM 2	GJA	

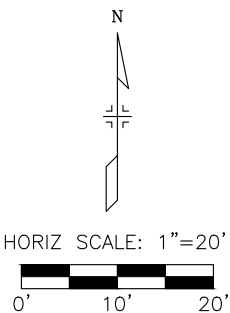
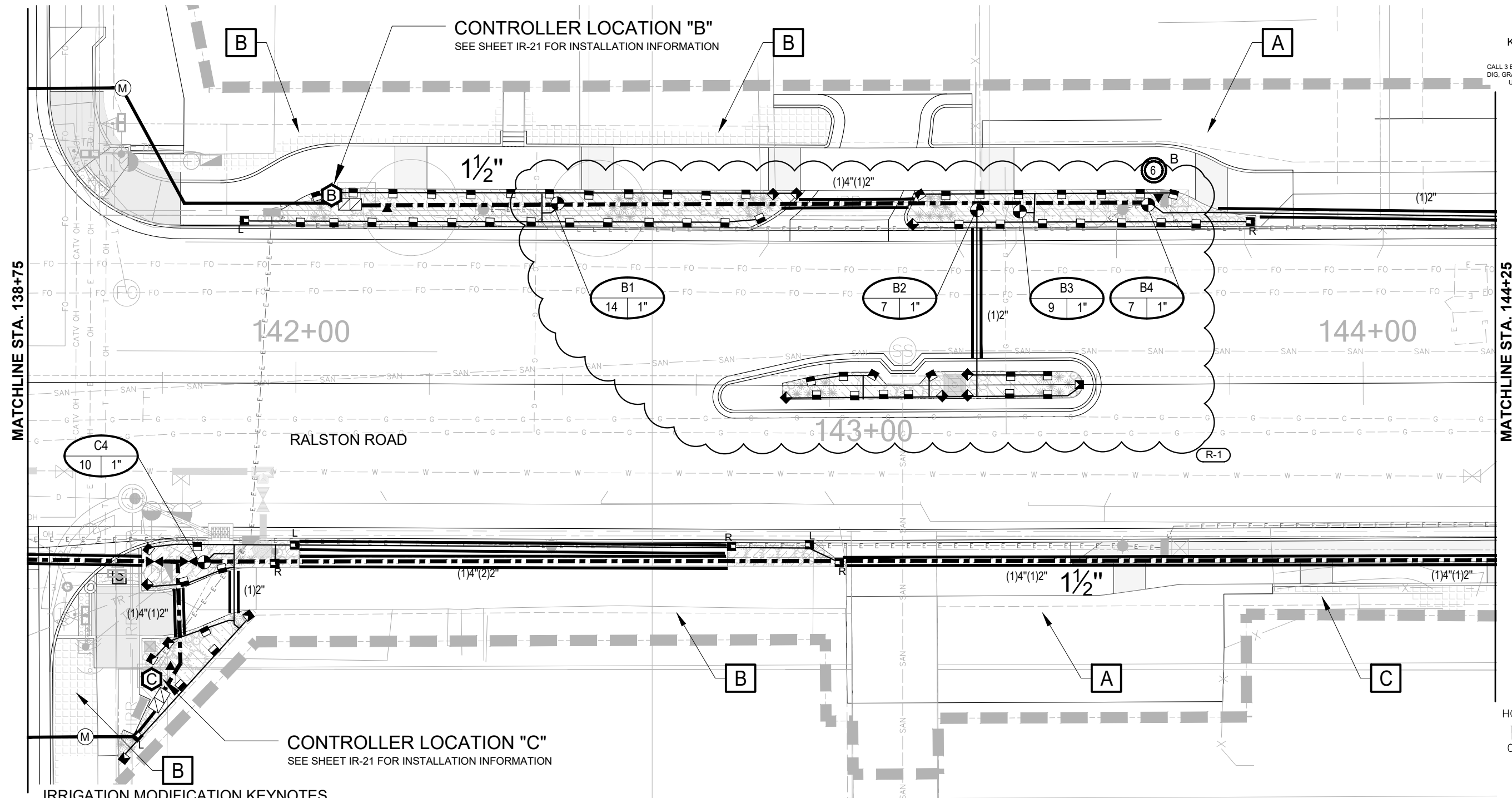


CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

RALSTON RD - YUKON TO GARRISON LIGHTING PLAN STA. 138+75 TO STA. 144+25				Project No./Code
No Revisions:				18-ST-40
Revised:				
Void:				
Designer: GJA	Detailer: ART	Structure Numbers	Sheet Subset: LIGHTING	Sheet Number 323
Subset Sheets: LT-08 OF 12				



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UNDERGROUND MEMBER UTILITIES.



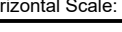
IRRIGATION MODIFICATION KEYNOTES

- A** NO IRRIGATION ON THIS PROPERTY.
- B** TURF IRRIGATION TO BE MODIFIED DUE TO NEW SIDEWALK / ROADWAY LAYOUT. REPAIR OR REPLACE IRRIGATION FOR AREAS OUTSIDE OF LIMIT OF WORK AFFECTED BY NEW CONSTRUCTION.
- C** SHRUB BED IRRIGATION TO BE MODIFIED DUE TO NEW SIDEWALK / ROADWAY LAYOUT. REPAIR OR REPLACE IRRIGATION FOR AREAS OUTSIDE OF LIMIT OF WORK AFFECTED BY NEW CONSTRUCTION.

IRRIGATION WORK SHALL BE COORDINATED WITH INSTALLATION OF OTHER TRADES. UTILITIES AND LANDSCAPE SHALL TAKE PRECEDENT OVER IRRIGATION LOCATIONS SHOWN. MAINLINE CHANGES IN DIRECTION WITHIN CONCRETE AREAS SHALL BE INSTALLED WITHIN JUMBO CONCRETE POLYMER VALVE BOXES. COORDINATE LOCATION WITH FLATWORK TO ALIGN WITH SCORE JOINTS WHERE POSSIBLE.



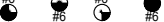
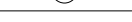
HydroSystems
Irrigation Consulting & Water Management
860 Tabor Street, Suite 200 Lakewood, Colorado 80401
o: 303.980.5327
www.hydrosystemsksdi.com

Print Date: 1/19/2021 5:39:25 PM		R-X R-1	Sheet Revisions			 CITY OF ARVADA PUBLIC WORKS DEPARTMENT	As Constructed		RALSTON RD - YUKON TO GARRISON IRRIGATION SET IRRIGATION PLANS			Project No./Code		
File Name: 6667-RR-IRR-ADDENDUM.DWG							No Revisions:					18-ST-40		
Horizontal Scale: 1" = 20' Vertical Scale: N/A							Revised:		Designer: AMC		Structure			
							Void:		Detailer: AMC		Numbers			
 FELSBURG HOLT & ULLEVIG 6300 South Syracuse Way, Suite 600 Centennial, CO 80111 Phone: 303.721.1440 www.FHUENG.com			01.22.2021	ADDENDUM 2	AMC			Sheet Subset: IRRIGATION		Subset Sheets: IR – 17 OF 29		Sheet Number 348		



**FELSBURG
HOLT &
ULLEVIG**

6300 South Syracuse Way, Suite 600
Centennial, CO 80111
Phone: 303.721.1440
www.FHUENG.com

IRRIGATION SCHEDULE				
SYMBOL	MANUFACTURER	MODEL NO.	DESCRIPTION	DETAIL NO.
	RAIN BIRD	1806-SAM-PRS WITH MPR SERIES NOZZLE	POPUP SPRAY HEAD - TURF	1
	RAIN BIRD	1806-SAM-PRS WITH MPR SERIES NOZZLE	POPUP SPRAY HEAD - BED	1
	RAIN BIRD	1806-SAM-PRS WITH SST, CORNER NOZZLE	POPUP SPRAY HEAD - BED	1
	RAIN BIRD	5006-PL-PC-SAM-R-SS WITH #NOZZLE	GEAR DRIVEN ROTOR	2
	RAIN BIRD	1402 ON 1806-SAM-PRS POPUP	BUBBLER	3
	RAIN BIRD	EFB-CP-PRS-D	ELECTRIC CONTROL VALVE	4
	RAIN BIRD	44-LRC	QUICK COUPLING VALVE	5
	RAIN BIRD	ESP-LXME WITH LXMM AND LXMPED - TBD STATION MODEL	ELECTRIC CONTROLLER	6
	MOTOROLA	TO BE PURCHASED FROM CITY OF ARVADA AND INSTALLED AT ACCEPTANCE, REPLACING RAIN BIRD CONTROLLER	ELECTRIC CONTROLLER	N/D
	FEBCO	825YA	RP BACKFLOW PREVENTER	7
N/S	ARAD	TO BE PURCHASED BY CITY OF ARVADA AND INSTALLED WITH BACKFLOW	HYDROMETER	7
N/S	STRONG BOX	SBBC-22AL	BACKFLOW PREVENTER ENCLOSURE	8
N/S	OLDCASTLE / CARSON	REFER TO SPECIFICATIONS AND DETAILS	VALVE BOXES	VARIOUS
N/S	MACDONALD	AY 1/4 TURN - 1"	MANUAL DRAIN VALVE	9
	FORD	B-44 CURBSTOP BALL VALVE	GATE VALVE	10
		CLASS 200 BE - 2½" & SMALLER	PVC MAINLINE	11
		TYPE K COPPER	HARD COPPER PIPE	7
		CLASS 200 BE	PVC LATERAL	11
		CLASS 160	PVC SLEEVING	12
			WATER METER	RE: CIVIL
 CONTROLLER & STATION NO. CONTROL VALVE SIZE				
 A (controller) NUMBER OF SPARE WIRES - 2 CONTROL AND 1 SPARE WIRES TO WHICH CONTROLLER - SEE CONSTRUCTION NOTES				

POINT OF CONNECTION PROCEDURE

ALL MODEL NUMBERS PER IRRIGATION SCHEDULES.

CONTRACTOR SHALL TIE ONTO 1" COPPER STUB-OUT DOWNSTREAM OF METER PIT AT 54" DEPTH IN THIS APPROXIMATE LOCATION. INSTALLATION OF TAP, SERVICE LINE, METER PIT AND STUB TO THIS LOCATION IS BY OTHERS RE=CIVIL. INSTALL ONE 1" METER PER ARVADA CITY SPECIFICATIONS AND STANDARDS. CONNECT TO STUB AND EXTEND A" TYPE K SOFT COPPER AT 54" MINIMUM DEPTH TO BACKFLOW PREVENTER LOCATION. INSTALL ONE STOP AND WASTE VALVE, ONE REDUCED PRESSURE BACKFLOW PREVENTER WITH LINE SIZE HYDROMETER ON DOWNSTREAM LEG AND PROTECTIVE ENCLOSURE, ONE MANUAL DRAIN VALVE, ONE QUICK COUPLING VALVE, ONE GATE VALVE AND EXTEND PVC MAINLINE AS SHOWN. EXTEND 6 UFUL14# WIRE (SEE SPECS AND DETAILS) AND CONNECT 2 OF THE WIRES FROM THE HYDROMETER TO THE DATA RETRIEVAL BOARD IN ASSOCIATED CONTROLLER. WORK SHALL CONFORM TO LOCAL CODE. FEES, PERMITS AND INSPECTIONS ASSOCIATED WITH WORK ARE TO BE OBTAINED AND PAID FOR BY CONTRACTOR. FINAL BACKFLOW PREVENTER LOCATION SHALL BE REVIEWED AND APPROVED BY CONSULTANT PRIOR TO INSTALLATION. COORDINATE WITH PARKS STAFF TO PURCHASE HYDROMETER. ALLOW SUFFICIENT LEAD TIME FOR DELIVERY.

CONTROLLER LOCATIONS

PEDESTAL MOUNT ONE CONTROLLER (REFER TO SCHEDULE FOR MODEL, STATION COUNT PER CONTROLLER DATA SCHEDULE), REMOTE READY, AT INDICATED LOCATION. 120 VOLT POWER IS AVAILABLE WITHIN 40 LF. OF CONTROLLER LOCATION FROM TRANSFORMER/BUILDING/RESIDENTIAL PEDESTAL, BY OTHERS RE=ELECTRICAL. ELECTRICAL METER, WIRE/CONDUIT, STEP-DOWN TRANSFORMER (IF REQUIRED) AND POWER CONNECTION TO CONTROLLER IS BY CONTRACTOR WITH WORK CONFORMING TO LOCAL CODES. FEES AND PERMITS ASSOCIATED WITH WORK ARE TO BE OBTAINED AND PAID BY CONTRACTOR. LOCATE HYDROMETER WIRES WITH SPARES AND CONNECT 2 OF THE WIRES FROM THE MASTER VALVE TO THE DATA RETRIEVAL BOARD IN ASSOCIATED CONTROLLER. FINAL CONTROLLER LOCATION SHALL BE APPROVED BY OWNER OR OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. TEMPORARY CONTROLLER SHALL BE REPLACED AT ACCEPTANCE WITH PERMANENT MOTOROLA CONTROLLER, COORDINATE WITH PARKS STAFF FOR PURCHASE. ALLOW SUFFICIENT LEAD TIME FOR DELIVERY.



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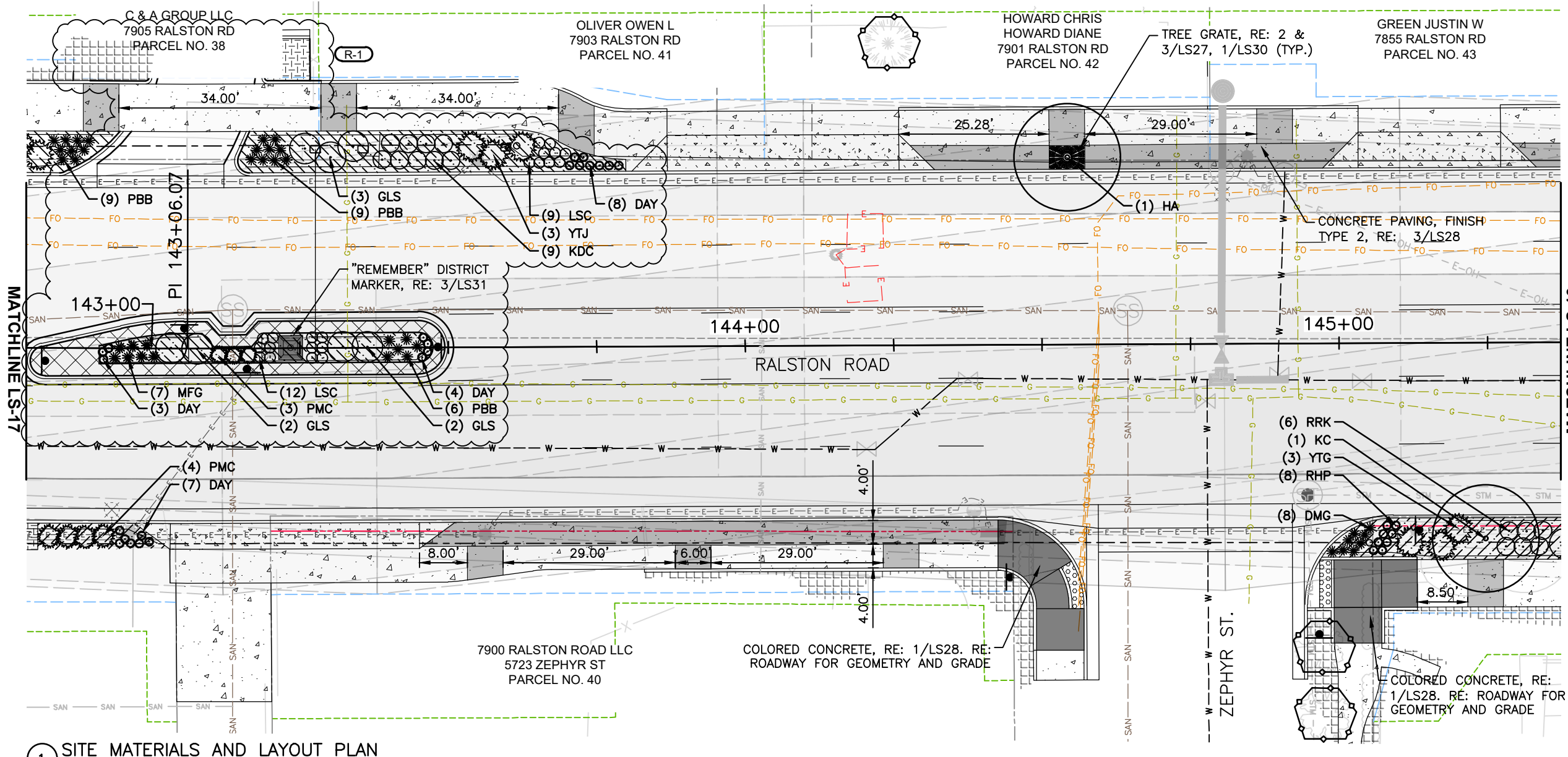


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T:\6600-6699 Jobs\6667-Ralston Road\6667-RR-IRR-Addendum, 1/19/2021 5:39:26 PM, Amber Clark

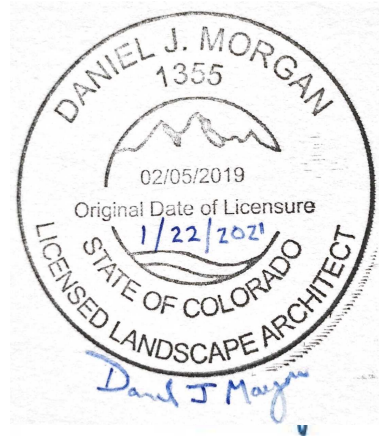
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Date	Comments		Initials																			
01.22.2021	ADDENDUM 2		AMC																			
File Name: 6667-RR-IRR-ADDENDUM.DWG		No Revisions:					18-ST-40															
Horizontal Scale: N/A Vertical Scale: N/A		Revised:		Designer: AMC		Structure																
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			Sheet Subset: IRRIGATION		Subset Sheets: IR-21 OF 29		Sheet Number 352															



1 SITE MATERIALS AND LAYOUT PLAN
SCALE: 1"=20'-0"

LEGEND

- PROPOSED R.O.W.
 - PERMANENT EASEMENT
 - TEMPORARY EASEMENT
 - STEEL EDGER
 - SIGHT TRIANGLES
 - PAVING, TYPE 1
 - PAVING, TYPE 2
 - MULCH, TYPE 1
 - SEEDING
 - SOD
 - TREE GRATE
 - BENCH
 - NEIGHBORHOOD MONUMENT
 - DISTRICT MARKER
 - STREET LIGHTING, RE: LIGHTING
 - PEDESTRIAN LIGHTING, RE: LIGHTING
 - DECIDUOUS TREE
 - ORNAMENTAL TREE
 - DECIDUOUS SHRUB
 - EVERGREEN SHRUB
 - ORNAMENTAL GRASS
 - PERENNIAL
- HORIZ SCALE: 1"=20'
- 0' 10' 20'



I:\18355-01 Ralston Rd\04_Civil\CAUD\Landscape\Drawings\18355_LSPL_SH01_EN_1/20/2021 12:51:05 PM Daniel Morgan

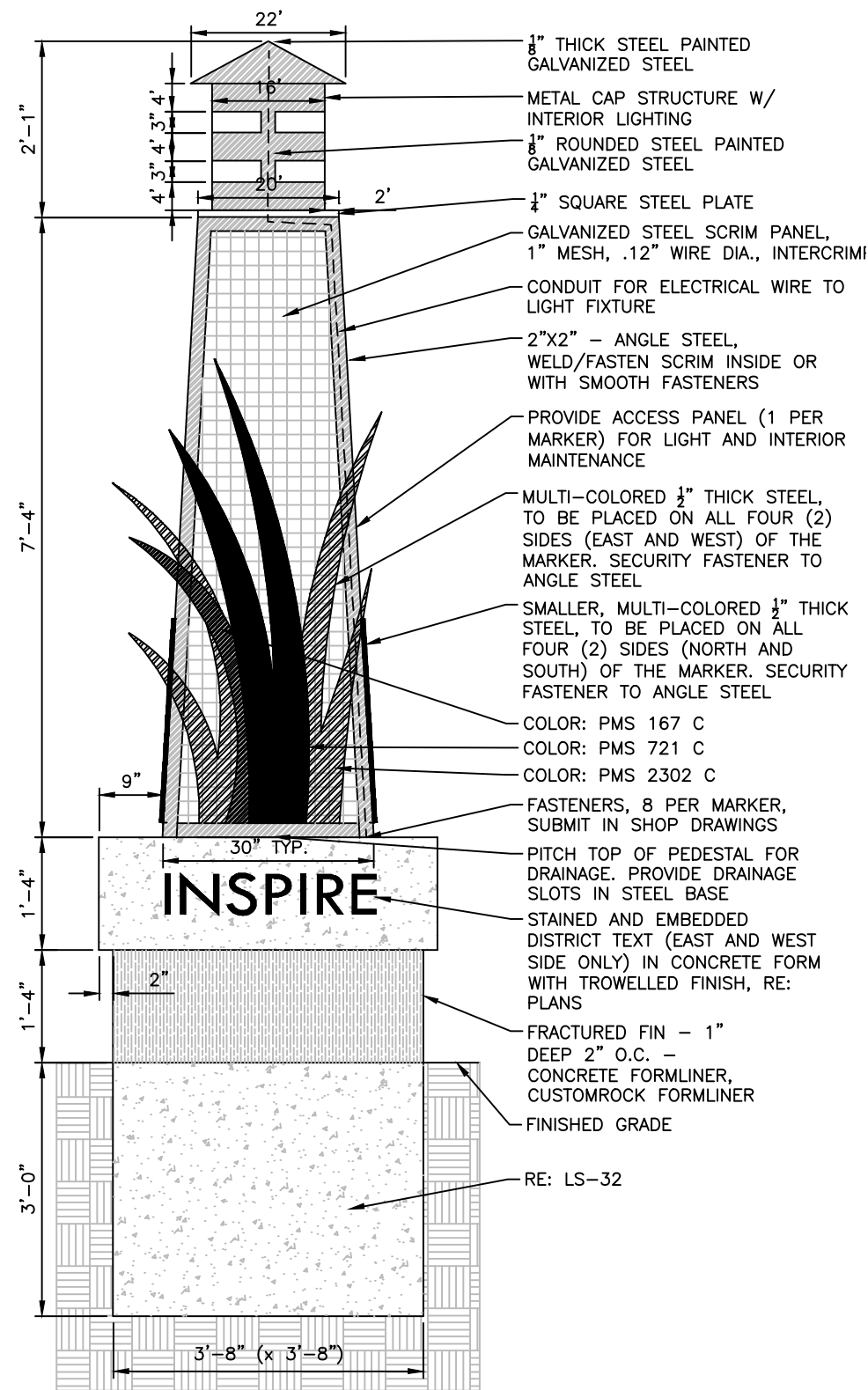
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Sheet Revisions			
Date	Comments	Initials	
1/22/21	ADDENDUM 2	DJM	



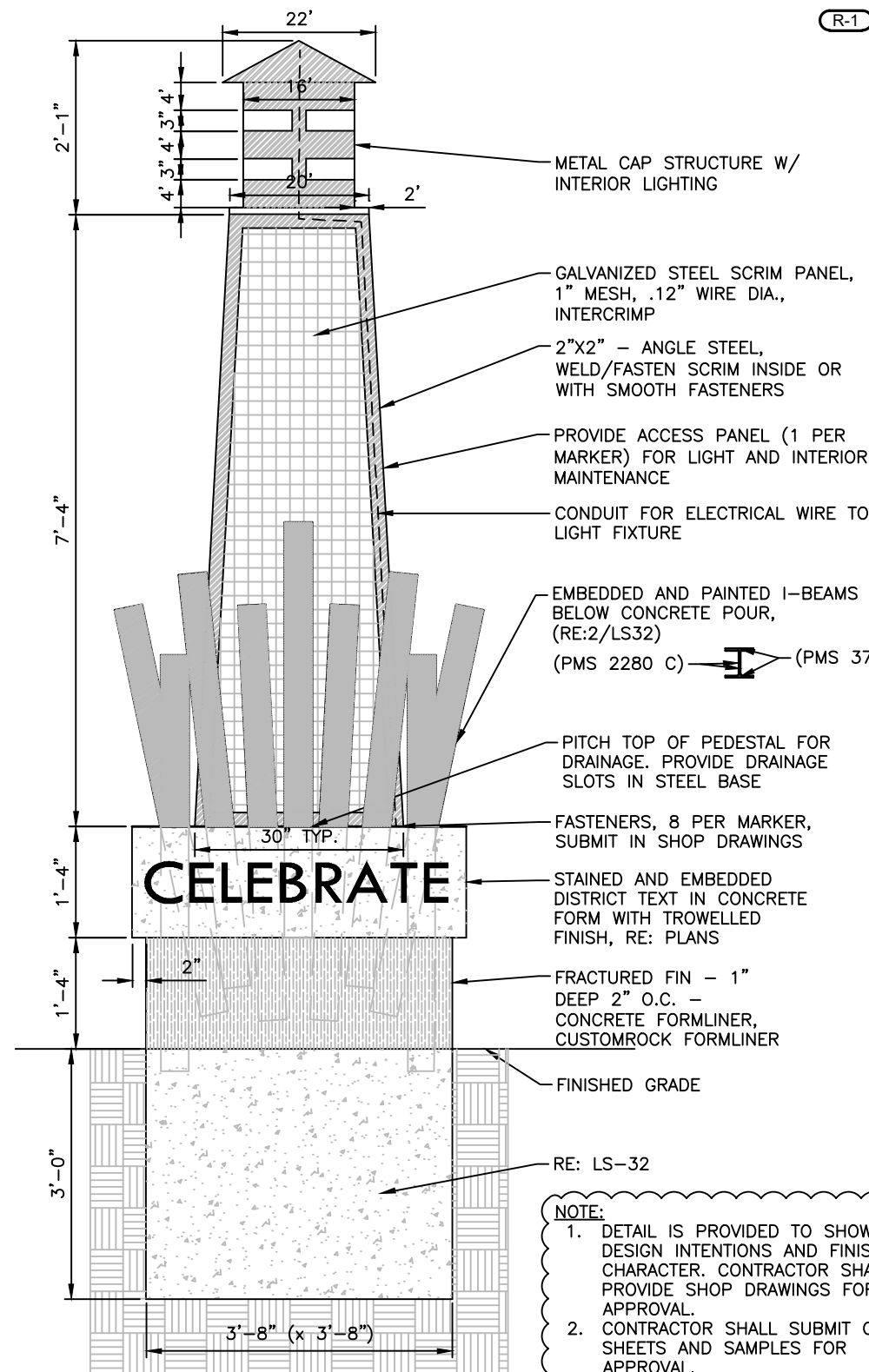
CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST LANDSCAPE PLAN				Project No./Code	
No Revisions:						18-ST-40	
Revised:		Designer:	DJM	Structure			
		Detailer:	DJM	Numbers			
Void:		Sheet Subset:	LANDSCAPE	Subset Sheets:	LS-18 of 35	Sheet Number	377



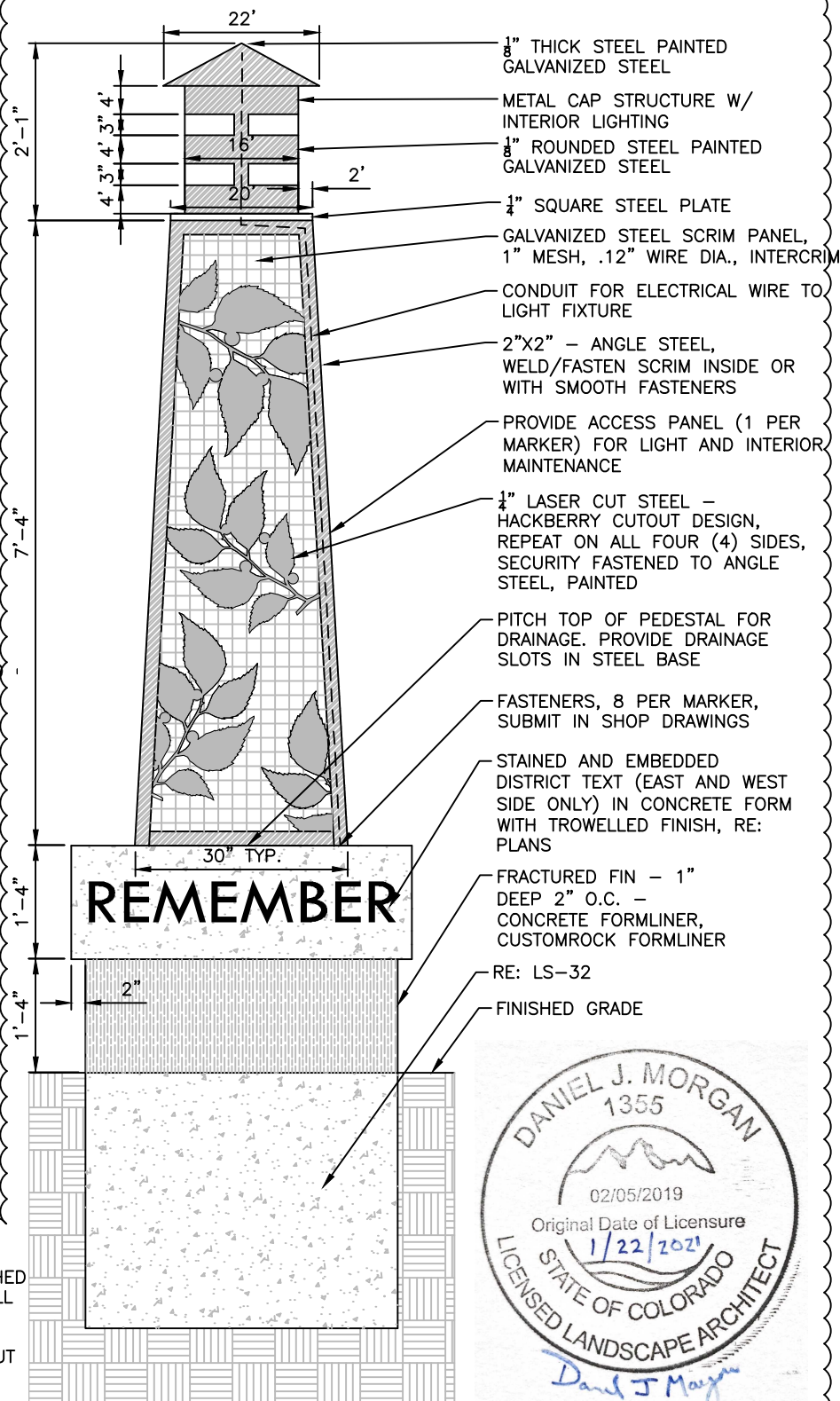
1 DISTRICT MARKER - "INSPIRE" - WEST ORIENTATION

1/2" = 1'-0"



2 DISTRICT MARKER - "CELEBRATE" - EAST ORIENTATION

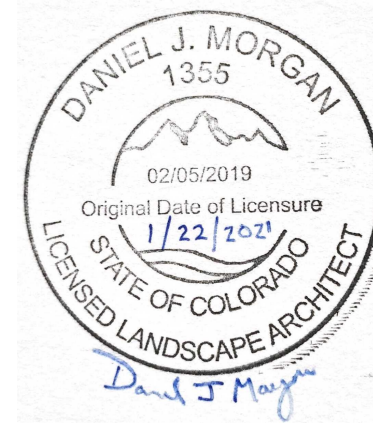
1/2" = 1'-0"



DISTRICT MARKER - "REMEMBER" - WEST & EAST ORIENTATION

1/2" = 1'-0"

- NOTE:**
1. DETAIL IS PROVIDED TO SHOW DESIGN INTENTIONS AND FINISHED CHARACTER. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR APPROVAL.
 2. CONTRACTOR SHALL SUBMIT CUT SHEETS AND SAMPLES FOR APPROVAL.
 3. ALL METAL TO BE GALVANIZED UNLESS SPECIFIED OTHERWISE



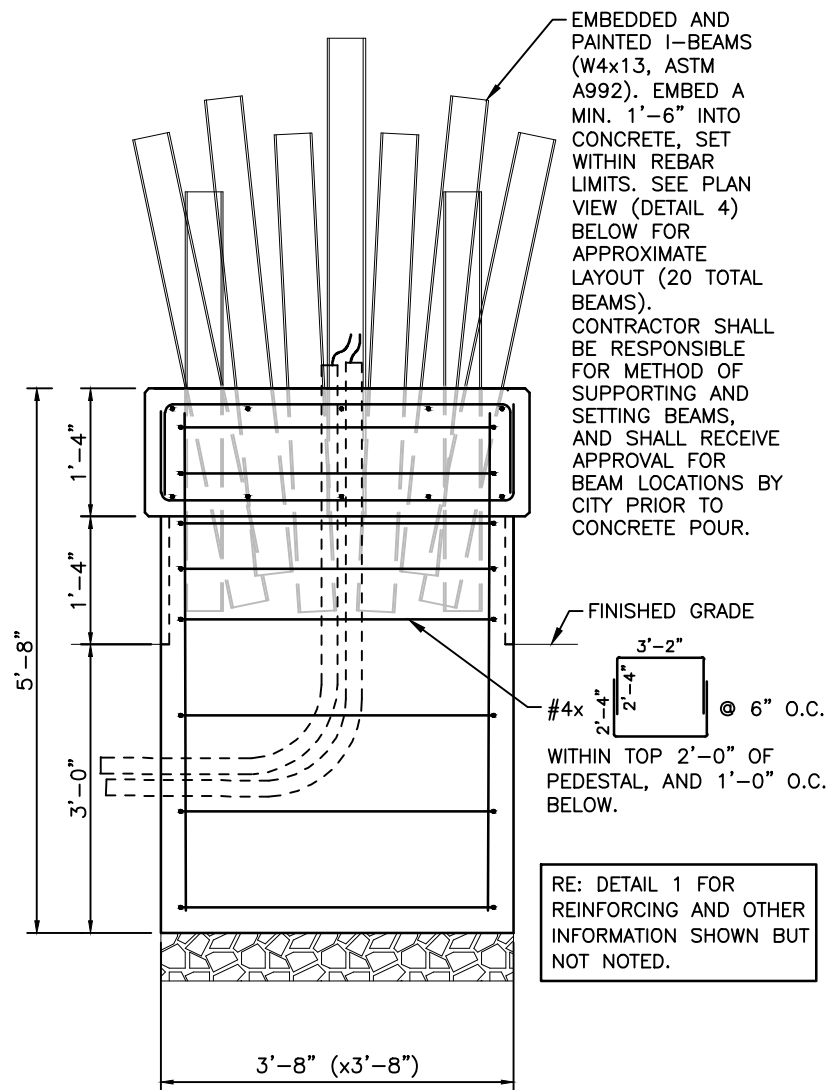
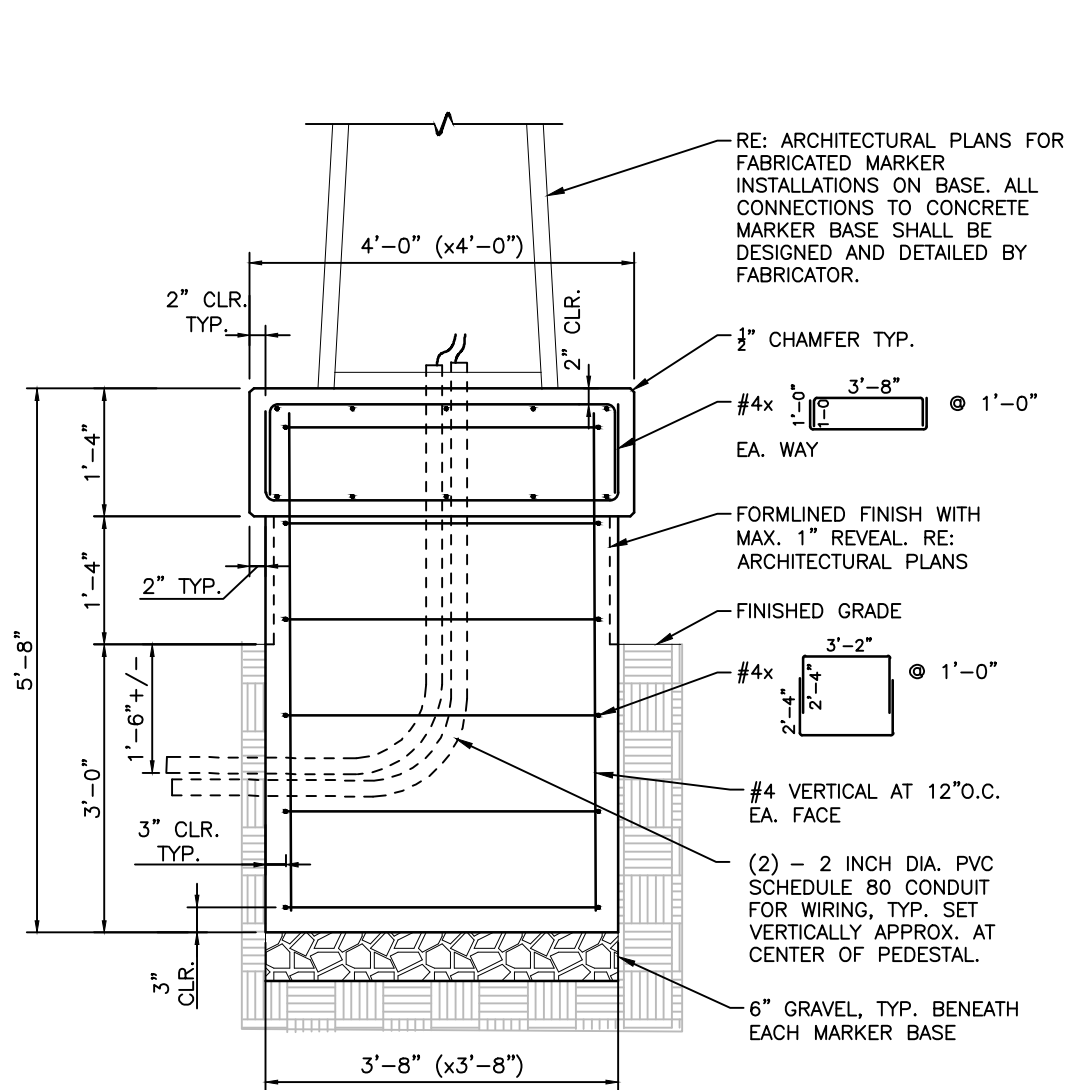
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CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST LANDSCAPE DETAILS		Project No./Code	
No Revisions:				18-ST-40	
Revised:		Designer: DJM	Structure		
		Detailer: DJM	Numbers		
Void:		Sheet Subset: LANDSCAPE	Subset Sheets: LS-31 of 35	Sheet Number	390



R-1 1 "INSPIRE" & "REMEMBER" MARKER BASE SECTION

2 "CELEBRATE" MARKER BASE SECTION

STRUCTURAL NOTES DESIGN DATA

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION

DESIGN METHOD:
SERVICE LOAD DESIGN FOR SLIDING, BEARING, AND OVERTURNING

DESIGN LOADS:
UNIT WEIGHT OF CONCRETE = 150 PCF
BACKFILL VERTICAL EARTH LOAD = 125 PCF
WIND LOAD = 120 MPH, EXPOSURE C

SOILS:
ALLOWABLE BEARING CAPACITY (NET) = 1,500 PSF
FRICTION COEFFICIENT FOR SLIDING = 0.30
ALLOWABLE PASSIVE RESISTING PRESSURE = 250 PCF

MARKER BASE CONCRETE NOTES

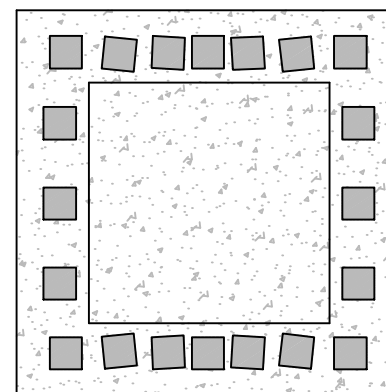
CONCRETE FOR CONSTRUCTION SHALL BE CLASS A (MIN. f'_c = 4,000 PSI AT 28 DAYS) IN ACCORDANCE WITH CITY OF ARVADA STANDARD SPECIFICATIONS.

REINFORCING BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615 GRADE 60 (f_y = 60 ksi). ALL REINFORCING SHALL BE EPOXY COATED PER AASHTO M284.

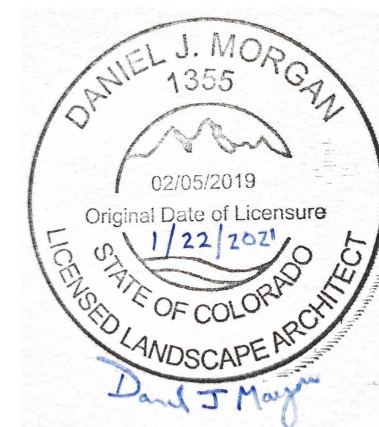
ALL REINFORCING STEEL SHALL HAVE 2" CONCRETE COVER UNLESS NOTED OTHERWISE.

ALL CONCRETE CONSTRUCTION, INCLUDING PLACEMENT OF REINFORCING STEEL, SHALL BE CONDUCTED IN ACCORDANCE WITH THE CITY STANDARDS.

REFER TO ARCHITECTURAL PLANS FOR CONCRETE FINISHES, INCLUDING FORMLINED FINISHES, INSET LETTERING, AND OTHER DETAILS.



4 "CELEBRATE" MARKER PLAN VIEW



PLANTING SCHEDULE

NOTES

1. NO PLANT SUBSTITUTES WILL BE ALLOWED WITHOUT THE APPROVAL OF LANDSCAPE ARCHITECT OR OWNER DUE TO VISIBILITY REQUIREMENTS

Deciduous Trees

R-1	11	HA	Celtis occidentalis	Common Hackberry	2.5"
	6	KC	Gymnocladus dioica	Kentucky Coffeetree	2.5"
R-1	6	BO	Quercus macrocarpa	Burr Oak	2.5"
	7	HO	Quercus x macdanielii 'Heritage'	Heritage Oak	2.5"
	5	SM	Gleditsia triacanthos inermis 'Shademaster'	Shademaster Honeylocust	2.5"
	6	TF	Corylus colurna	Turkish Filbert	2.5"
	4	MG	Acer campestre 'Panacek'	Metro Gold Hedge Maple	2.5"
	7	ZS	Zelkova serrata 'Green Vase'	Green Vase Zelkova	2.5"
	3	FE	Ulmus 'Frontier'	Frontier Elm	2.5"

Ornamental Trees

	5	AS	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	2"
	4	AB	Pyrus calleryana 'Autumn Blaze'	Autumn Blaze Pear	2"
	2	GR	Koelreuteria paniculata	Goldenraintree	2"

Decidious Shrubs

	56	BMS	Caryopteris x clandonensis	Blue Mist Spirea	5 gal.
	36	PBS	Prunus besseyi 'Pawnee Buttes'	Pawnee Buttes Sandcherry	5 gal.
R-1	101	GLS	Rhus aromatica 'Gro-Low'	Gro-Low Sumac	5 gal.
R-1	193	KDC	Cornus sericea 'Kelsey'	Kelsey Dogwood	5 gal.
	62	ACM	Spirea japonica 'Magic Carpet'	Magic Carpet spirea	5 gal.
R-1	202	RRK	Rosa 'Radrazz' PP11836	Knock Out Rose	5 gal.
R-1	68	LSC	Aronia melanocarpa 'Low Scape Mound'	Low Scape Chokeberry	5 gal.

Evergreen Shrubs

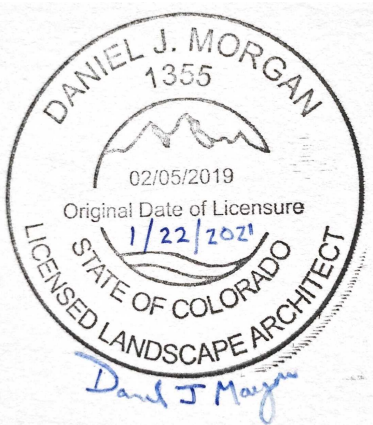
	41	KNK	Arctostaphylos uva-ursi	Kinnikinnick	1 gal.
	73	YTJ	Juniperus horizontalis 'Youngstown'	Andorra Youngstown Juniper	5 gal.
	100	GCJ	Juniperus communis 'Green Carpet'	Green Carpet Juniper	5 gal.
	11	IBJ	Juniperus horizontalis 'Icee Blue'	Icee Blue Juniper	5 gal.
R-1	73	PMC	Arctostaphylos x coloradoensis Panchito	Panchito Manzanita	5 gal.
	8	GSE	Euonymus fortunei "Roemertwo"	Gold Splash Euonymus	5 gal.
	6	RYH	Hesperaloe parviflora	Red yucca	5 gal.

Ornamental Grasses

	63	FRG	Helictotrichon sempevirens	Blue Avena	1 gal.
R-1	141	PBB	Schizachyrium scoparium 'Prairie Blues'	Prairie Blues Little Bluestem	1 gal.
	112	BG	Boutela gracilis	Blue Grama Grass	1 gal.
R-1	166	MFG	Nasella tenuissima	Mexican Feather Grass	1 gal.
	179	DMG	Miscanthus sinensis 'Adagio'	Adagio' Dwarf Maiden Grass	1 gal.

Perennials

	36	RHP	Kniphora uvaria	Red Hot Poker	1 gal.
R-1	90	DAY	Hemerocallis 'Stella D'Oro'	Stella D'Oro' Dwarf Daylily	1 gal.
	45	AST	Aster sp.	Aster	1 gal.
	24	SHD	Leucanthemum x superbum	Shasta Daisy	1 gal.
	20	GOL	Aurinia saxatilis	Basket of Gold	1 gal.
R-1	106	YAR	Achillea millefolium "Summer pastels"	Pink Yarrow	1 gal.



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File Name: 118355_LSPL_SH02_EN.DWG

Horizontal Scale: N/A Vertical Scale: N/A

R-X

Sheet Revisions		
Date	Comments	Initials
1/22/21	ADDENDUM 2	DJM



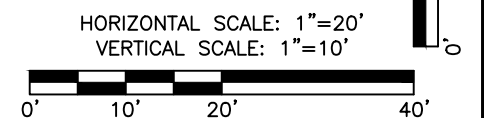
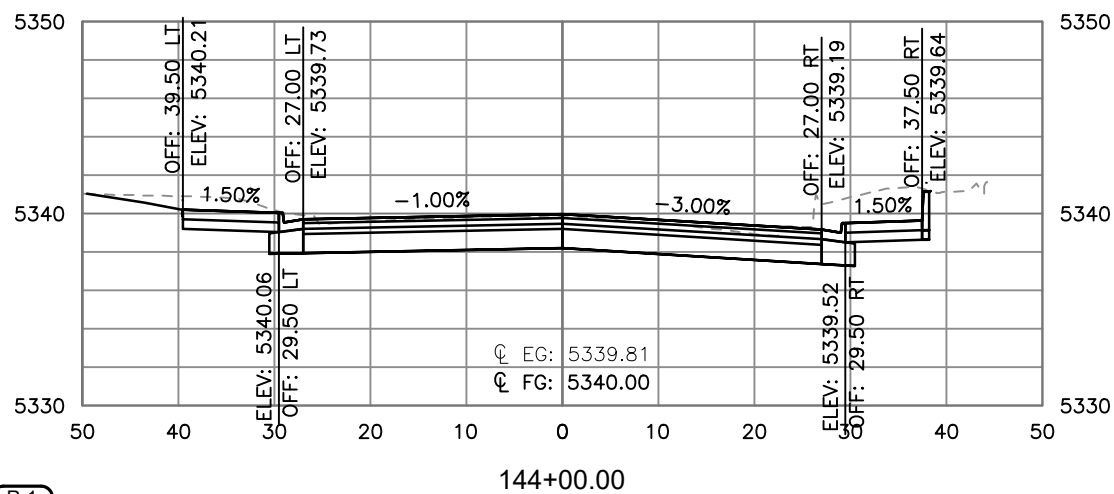
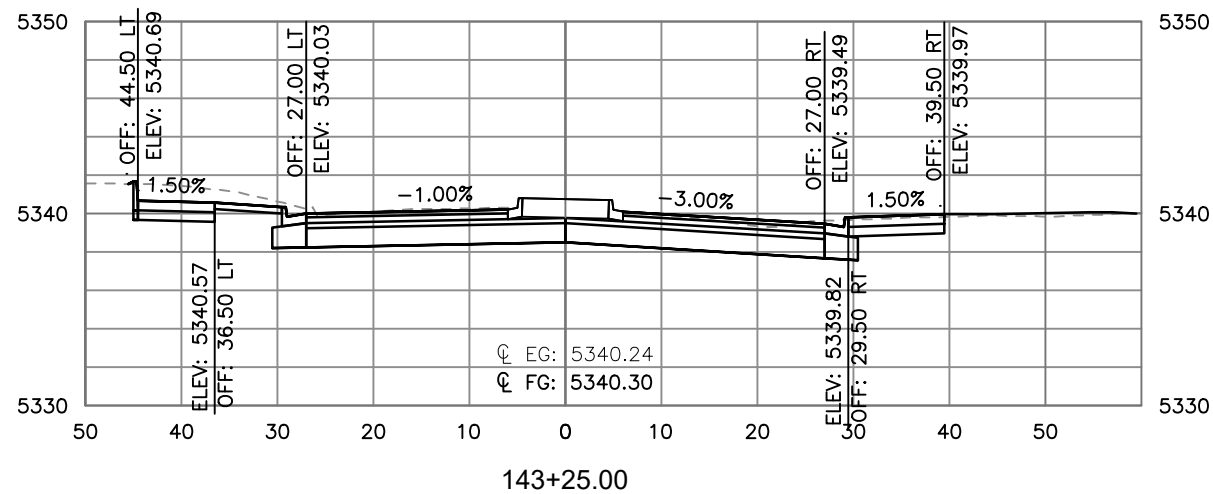
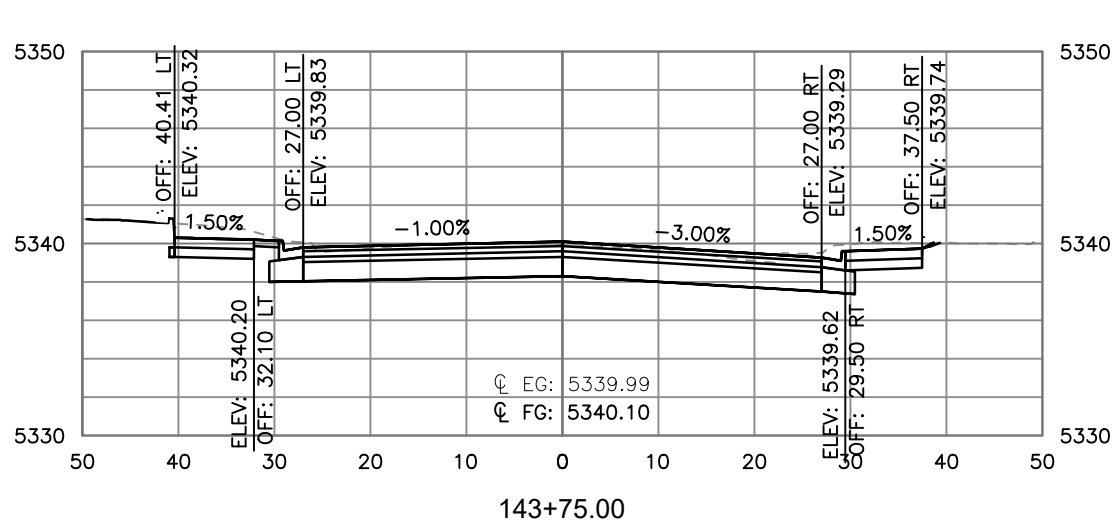
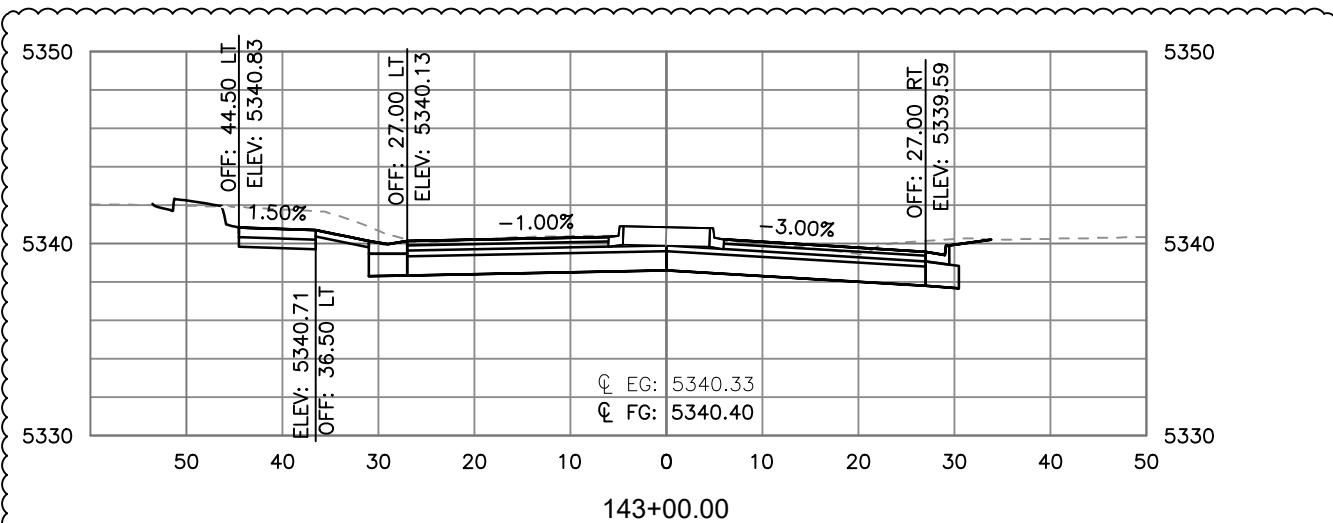
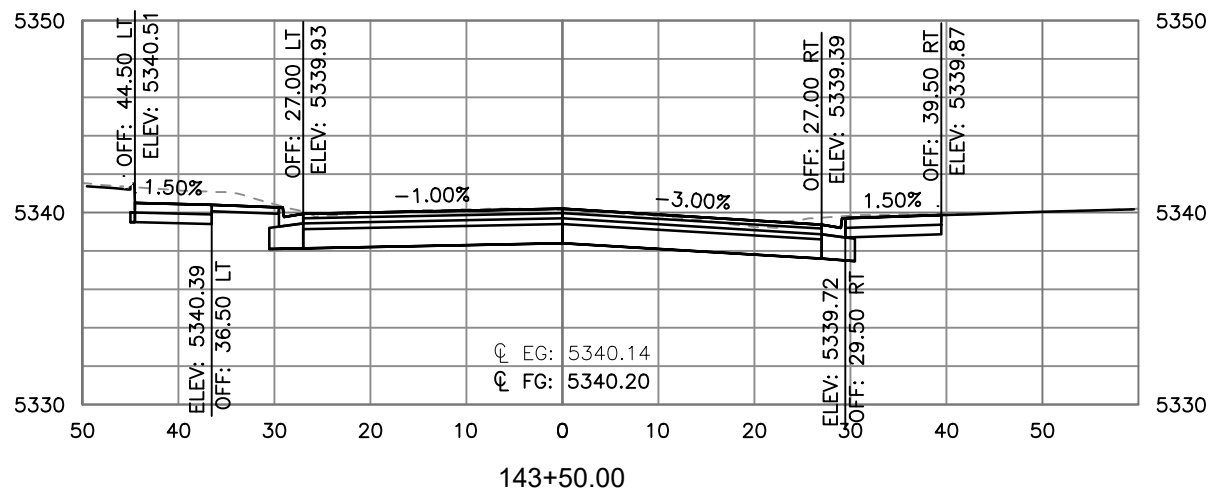
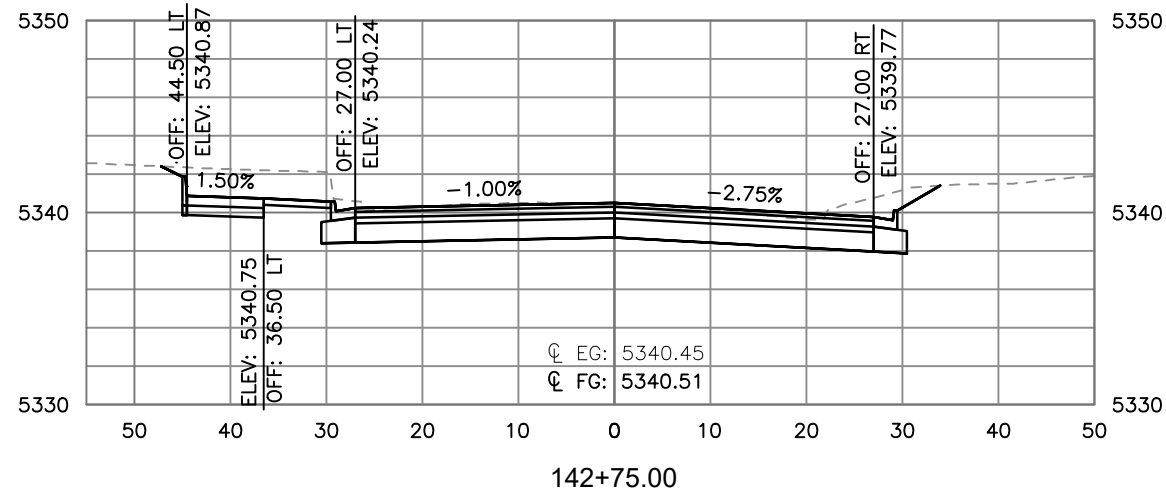
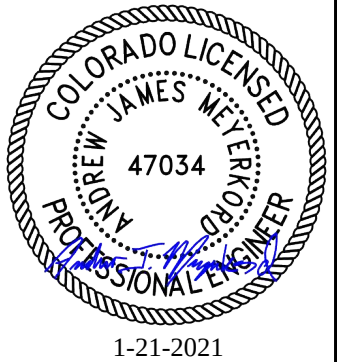
6400 South Fiddlers Green Circle, Suite 1500
Greenwood Village, CO 80111
Phone: 303.721.1440
www.FHUENG.com



CITY OF ARVADA
PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD
ARVADA, CO, 80002

As Constructed	RALSTON RD - YUKON ST TO GARRISON ST LANDSCAPE PLANTING SCHEDULE		Project No./Code
No Revisions:			18-ST-40
Revised:	Designer: DJM	Structure	
	Detailer: DJM	Numbers	
Void:	Sheet Subset: LANDSCAPE	Subset Sheets: LS-35 of 35	Sheet Number 394



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Print Date:	1/21/2021 8:16:01 AM
File Name:	118355_RDCS_SH01_RALSTON.DWG
Horizontal Scale:	1"=20'
Vertical Scale:	1"=10'
	6400 South Fiddlers Green Circle, Suite 1500 Greenwood Village, CO 80111 Phone: 303.721.1440 www.FHUENG.com

Sheet Revisions			
Date	Comments	Initials	
01/22/2021	ADDENDUM 2	JVS	



CITY OF ARVADA

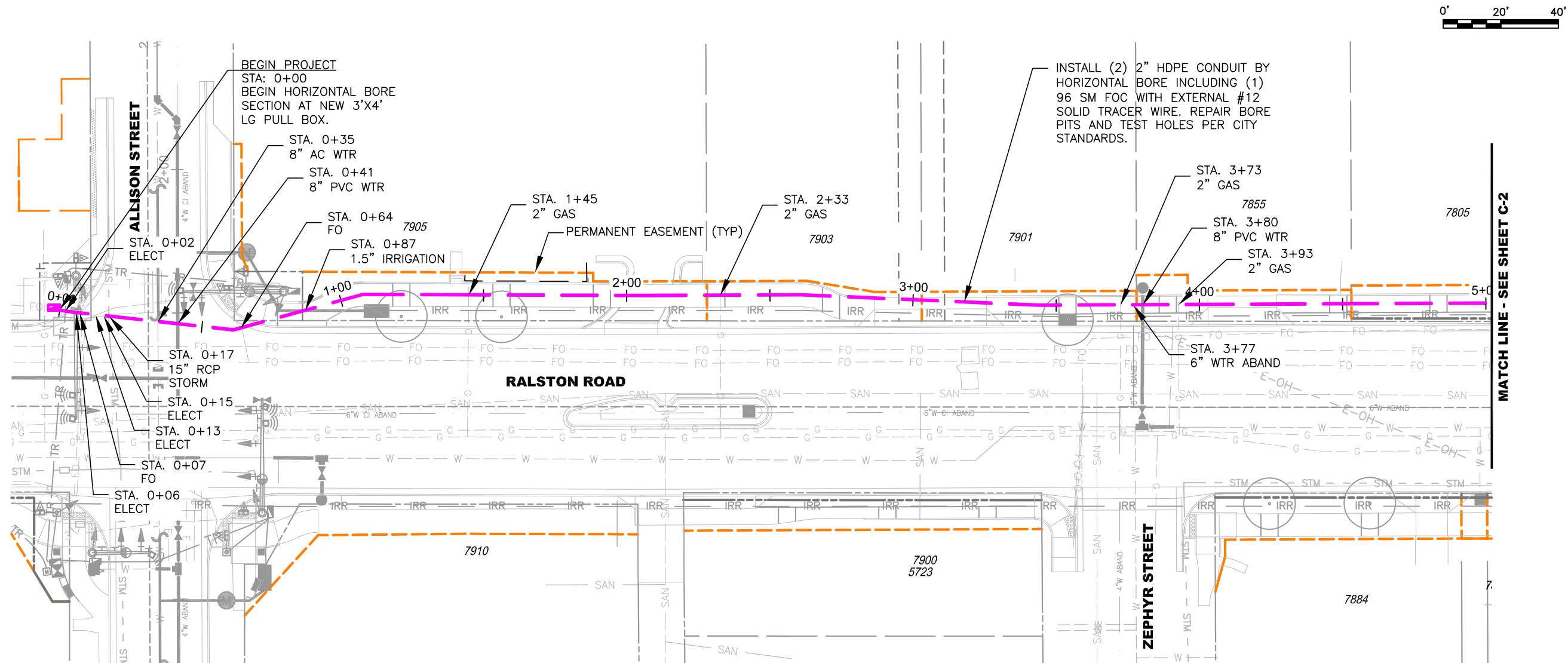
PUBLIC WORKS DEPARTMENT

8101 RALSTON ROAD

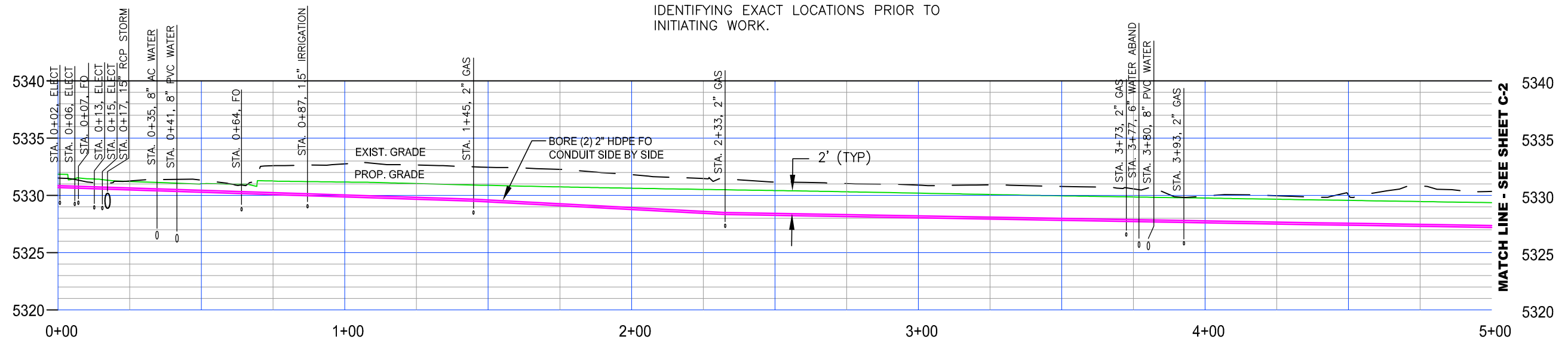
ARVADA, CO, 80002

As Constructed		RALSTON RD - YUKON ST TO GARRISON ST			Project No./Code	
No Revisions:		ROADWAY CROSS SECTION			18-ST-40	
Revised:		Designer:	JHH	Structure		
Void:		Detailer:	DAL	Numbers		
		Sheet Subset:	CROSS SECTION	Subset Sheets:	CS-28 of 33	Sheet Number 447

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CONTRACTOR NOTE:
ALL UTILITY LOCATIONS ARE APPROXIMATE.
THE CONTRACTOR IS RESPONSIBLE FOR
IDENTIFYING EXACT LOCATIONS PRIOR TO
INITIATING WORK.



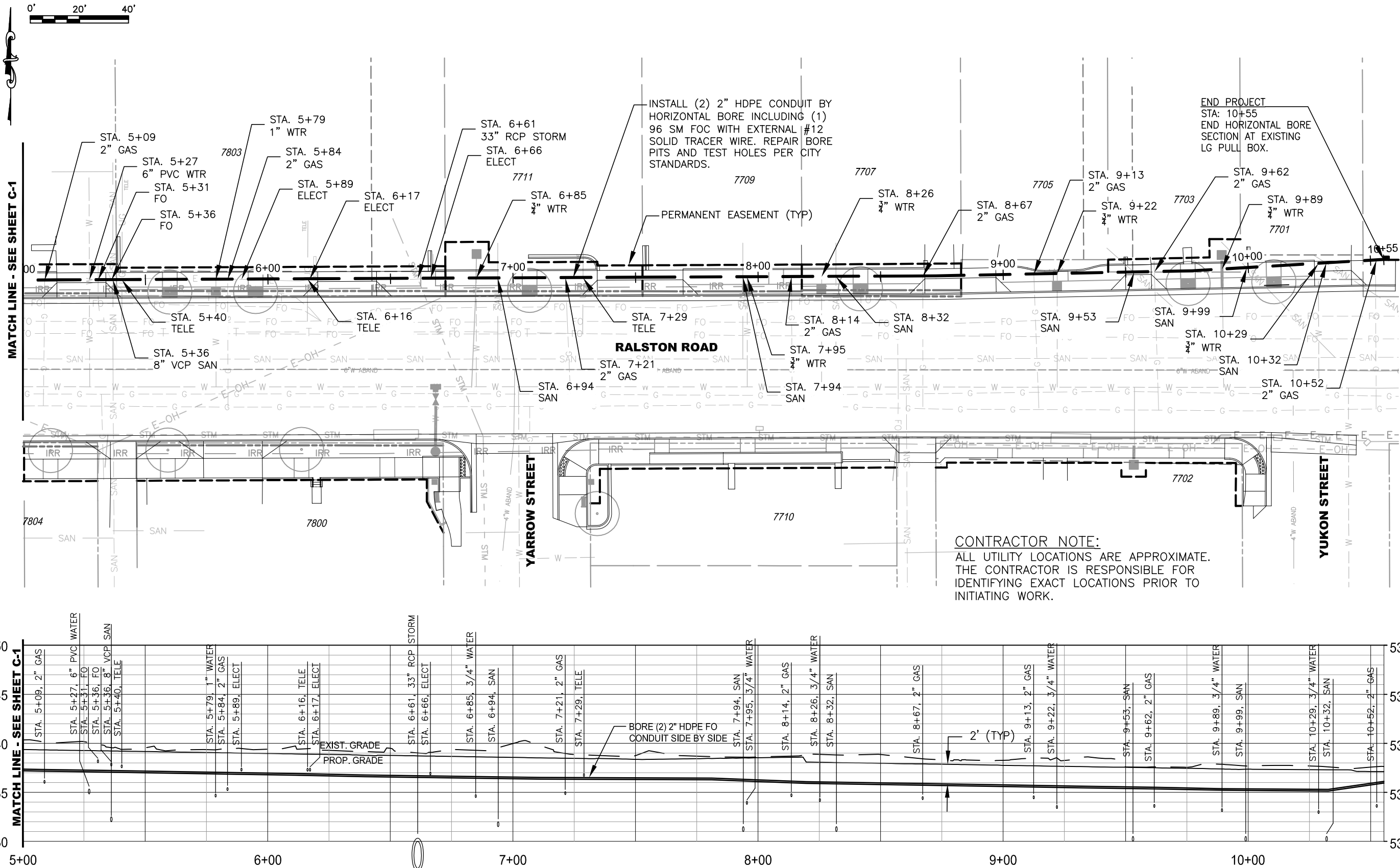
FIBER OPTIC CONDUIT PROFILE

Scale:
Horz. 1"=40'
Vert. 1"=10'

NO.	REVISION	DATE	BY
1	ADDENDUM NO. 2	1/22/21	
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3			
4			
5			

Public Works Department Engineering Division 8101 Ralston Road Arvada, Colorado 80002 Phone 720-898-7640
 CITY OF ARVADA
PROJECT NO. 18-ST-40 RALSTON ROAD - YUKON ST. TO GARRISON ST. CONDUIT FOR FIBER
ENGINEER TTT CHECKED BY
DESIGN BY
SHT OF
C-1

G:\PROJECTS\STREETS\18ST40-Ralston Road - Yukon St To Garrison St\CAD Files\ConduitFiberCOA-kbc\18ST40-ConduitFiberCOA(rn).dwg , Plot Date: 1/22/2021



FIBER OPTIC CONDUIT PROFILE

Scale:
Horz. 1"=40'
Vert. 1"=10'

NO.	REVISION	DATE	BY
1	ADDENDUM NO. 2	1/22/21	
2			
3			
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Public Works Department Engineering Division 8101 Ralston Road Arvada, Colorado 80002 Phone 720-898-7640
CITY OF ARVADA
PROJECT NO. 18-ST-40 RALSTON ROAD - YUKON ST. TO GARRISON ST. FIBER CONDUIT
ENGINEER TTT CHECKED BY DESIGN BY
SHT OF
C-2

Pre-Bid Meeting Minutes

Ralston Road – Yukon St to Garrison St

Project No. 18-ST-40

11:00 am, January 13, 2021

Google Meet: <https://meet.google.com/qxh-vorw-cwt>

Phone: 317-763-2260 PIN: 563 133 119#

Note: this meeting was not mandatory

We will start at 11:05 to give others a chance to sign in/call in.

Thank you for attending the pre-bid meeting for Ralston Rd - Yukon St to Garrison St

If you're on Google Meet, please type in your name, company name, and contact info in the chat. For those that are on the phone, please email Nancy Allen at nallen@arvada.org your contact info after the meeting. We will share the sign-in sheet as an addendum.

A. Introduction/Attendees

B. Summary of Project

This project will reconstruct and widen Ralston Road from Yukon Street to Garrison Street, approx. 5,000 ft in length and includes removal and replacement of existing pavement, curb and gutter, attached or detached sidewalks, storm sewer, water, streetscape, traffic signal equipment and conduit

C. General Bidding Information

1. Bids are accepted through Rocky Mtn BidNet until 3 pm local time January 28, 2021. We anticipate the award of this contract by City Council on March 1st with the first Notice to Proceed dated between March 15th and May 3, 2021
2. Everyone on the planholder's list including those attending the Pre-Bid meeting will receive these meeting minutes. These will be part of an addendum to be sent out by January 22nd through Rocky Mtn BidNet. **Also, questions will be taken until 12:00 noon local time on January 18th. Please e-mail all questions to Nancy Allen, nallen@arvada.org**
3. This is a Local-funded project, one of two bond funded projects approved by the residents in 2018.

D. General Information

1. 730 Calendar Day Schedule from the date of the first NTP. Time is of the essence in the performance of this contract. A pre-construction meeting will be held after award of contract and prior to construction.
2. Project has a 2-year warranty required per Section 2.40 in the City of Arvada Engineering Code of Standards and Specifications
3. Construction survey and materials testing will be the responsibility of the contractor, meeting the requirements of City standards
4. Construction is to be completed such that one lane in each direction is provided throughout construction and contractor is to maintain one-half of an access for

properties at all times, except in emergencies. A suggested phasing plan is provided in the plan set.

5. An Excel version of the bid schedule is available upon request. Please note that the official bid schedules are the bid schedules that are posted on Rocky Mountain BidNet. Also AutoCad/Civil 3D versions of the plan set will be made available only to the awarded contractor.
6. It is critical that the contractor understand and be responsible for an effective plan to communicate with landowners/business owners/tenants prior to construction and during construction

E. Questions

1. Has the City finalized all ROW agreements and easements?

90% of ROW is acquired. In final 3-4 properties in negotiation. Expected by Mar 15 all ROW acquired.

2. Will there be any consideration for providing CAD files during the estimating phase?

Not at this time, but the City will reconsider. What information is being sought? Earthwork phasing.

3. Is there an engineer's estimate to be supplied?

Yes, after bid submissions.

4. You stated there is an Excel version of the bid spreadsheet?

Yes, uploaded now (during the meeting).

5. The plans reference unclassified infrastructure is from existing grade. Does that include existing pavement, or start top of base?

Asphalt, sidewalk, and Curb/Gutter was taken into account and was NOT included in those quantities but broken out separately. We will follow-up.

6. What is the intent of pedestrian access during removal existing sidewalks?

The City will provide additional information after we have a chance to discuss. This will be included in an addendum.

7. The project specifications titles Ralston as an arterial. Can you please provide the classification of all intersecting side streets within the project area?

Most are local streets, but some are collectors. The City will provide additional information.

RALSTON ROAD - YUKON ST TO GARRISON ST
CITY OF ARVADA PROJECT NO. 18-ST-40

PRE-BID MEETING

Wednesday, January 28, 2021, 11:00 am

Google Meet: <https://meet.google.com/qxh-vorw-cwt>

Phone: 317-763-2260 PIN: 563 133 119#

SIGN IN SHEET

Name	Organization	Phone	E-mail
Chris Lisberg	COA - Transportation Design Manager	720-898-7645	clisberg@arvada.org
Dave Peacock	COA - Municipal Inspector	303-435-2660	dpeacock@arvada.org
Heidi Van Gieson	COA - Business Development Coordinator	720-898-7335	hvangieson@arvadaevents.com
Jacqueline Rhoades	COA - City Engineer	720-898-7774	jrroadess@arvada.org
Julie Richards	COA - Senior Assistant City Attorney	720-898-7184	jrichards@arvada.org
Justin Clark	COA - Construction & Inspection Supervisor	303-845-2229	jclark@arvada.org
Lance Henkel	COA - Senior Landscape Architect	720-898-7392	lhenkel@arvada.org
Nancy Allen	COA - Purchasing Manager	720-898-7093	nallen@arvada.org
Rachael Kuroiwa	COA - Manager of Communications - Infrastructure	720-898-7607	rkuroiwa@arvada.org
Sylvia Lopo	COA - Traffic Engineer	720-898-7653	slopo@arvada.org
Trang Tran	COA - Civil Engineer	720-898-7646	ttran@arvada.org
Andy Meyerkord	FHU - Project Manager		andrew.meyerkord@fhueng.com
Brad Chronowski	FHU - Senior Landscape Architect		brad.chronowski@fhueng.com
Chad Twiss	FHU - Drainage Engineer		chad.twiss@fhueng.com
Daniel Morgan	FHU - Landscape Architect		daniel.morgan@fhueng.com
Joe Haberl	FHU - Roadway Engineer		joseph.haberl@fhueng.com
Rich Follmer	FHU - Traffic Engineer		rich.follmer@fhueng.com
Zach Thennell	CEI	303-562-2000	zthenell@ceiconstructors.com
Jesus Sanchez	Colorado Paving, Inc		jsanchez@copaving.com
Gary Shields	Kinetic Industry	970-786-6593	gary.shields@kineticindustry.com
Tom Evered	Hamon Infrastructure	303-297-0340	tevered@hamoninfrastructure.com
Ryan Blount	TAT Construction	720-237-6118	estimating@tatconstruction.org
Jodi Adams	Noraa Concrete	303-637-9233	business@noraaconcrete.com
Stewart Ward	Terracon Consultants	303-454-5264	stewart.ward@terracon.com
Susan Prince	Hamon Infrastructure	303-297-0340	sprince@hamoninfrastructure.com
Brandon Shafer	APC Construction	303-996-7227	bshafer@apc.us.com
Louise Singer	Edge Contracting	303-356-5502	lsinger@edgecontracting.com
Reid Broder	Flatiron Constructors	334-318-1000	rbroder@flatironcorp.com
Tim Alley	Concrete Works of Colorado	303-665-2933	tima@cwcc-email.com
Stephen Wheeler	Flatiron Constructors	310-261-0471	swheeler@flatironcorp.com
Timothy McGinn	Sturgeon Electric	720-601-8666	tmcginn@mygroup.com
Ricardo Garcia	Graham Contracting	720-501-7871	coloradobids@grahamus.com
Greg Richardson	Graham Contracting	303-501-6738	greg.richardson@grahamus.com
Jessica Haynes	Terracon Consultants, Inc	303-454-5220	jahaynes@terracon.com
Ryan Brauch	Colorado Hydrovac and Environmental Services		Ryan.b@coloradohydrovac.com
Scott Hart	Tri state construction		Scott@tristateconst.com
Rusty Swerdfeger	Hamon Infrastructure	303-297-0340	rswerdfeger@hamoninfrastructure.com

Exhibit 2

Contractor's Response

BID BOND

We, the undersigned Hamon Infrastructure, Inc. as Principal, and Great American Insurance Company as Surety, are hereby held and firmly bound unto the City of Arvada, Colorado, in the penal sum of Five Percent (5%) of the Total Amount Bid for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

THE CONDITION of this obligation is such that whereas the Principal has submitted to the City of Arvada, Colorado the accompanying Bid Proposal, and hereby made a part hereof to enter into a Contract Agreement for the construction of City of Arvada Project No. 18-ST-40, Ralston Road – Yukon Street to Garrison Street.

WHEREAS, the City, as a condition for receiving said Bid Proposal, requires the Principal to deposit with the City a Bid Proposal Guaranty, equivalent to not less than 5 Percent of the amount of said Bid Proposal.

NOW THEREFORE,

- (A) If said Bid Proposal shall be rejected, or in the alternate,
- (B) If said Bid Proposal shall be accepted and the Principal shall execute and deliver a Contract Agreement (properly completed in accordance with said Bid Proposal) and shall furnish a Performance and Payment Bond upon the forms prescribed by the City for the faithful performance of said Contract; and for the payment of all persons performing labor or furnishing materials in connection therewith; and shall in all other respects perform the agreement created by the acceptance of said Bid Proposal;

Then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by any extension of the time within which the City may accept such Bid and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, this 19th day of January, 2021, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

PRINCIPAL

Name: Hamon Infrastructure, Inc.
Address: 5670 Franklin Street, Denver, CO 80216
By: [Signature]
Title: SECRETARY/TREASURER

SURETY

Great American Insurance Company
301 E Fourth Street, Cincinnati, OH 45202
By: [Signature]
Title: Ashlea McCaughey, Attorney-in-Fact
Attorney-in-Fact: Ashlea McCaughey
[Signature]
(SEAL) Stephen McCaughey, Surety Witness

NOTE: Surety Companies executing bonds must be authorized to transact business in the State of Colorado and be acceptable to the City.

GREAT AMERICAN INSURANCE COMPANY®

Administrative Office: 301 E 4TH STREET • CINCINNATI, OHIO 45202 • 513-369-5000 • FAX 513-723-2740

The number of persons authorized by
this power of attorney is not more than SIX

No. 0 21481

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the GREAT AMERICAN INSURANCE COMPANY, a corporation organized and existing under and by virtue of the laws of the State of Ohio, does hereby nominate, constitute and appoint the person or persons named below, each individually if more than one is named, its true and lawful attorney-in-fact, for it and in its name, place and stead to execute on behalf of the said Company, as surety, any and all bonds, undertakings and contracts of suretyship, or other written obligations in the nature thereof; provided that the liability of the said Company on any such bond, undertaking or contract of suretyship executed under this authority shall not exceed the limit stated below.

	Name	Address	Limit of Power
DONALD E. APPLEBY	MARK SWEIGART	ALL OF	ALL
TODD D. BENGFORD	ASHLEA McCAUGHEY	GREENWOOD VILLAGE, COLORADO	\$100,000,000
SARAH C. BROWN	JESSICA JEAN RINI		

This Power of Attorney revokes all previous powers issued on behalf of the attorney(s)-in-fact named above.

IN WITNESS WHEREOF the GREAT AMERICAN INSURANCE COMPANY has caused these presents to be signed and attested by its appropriate officers and its corporate seal hereunto affixed this 28TH day of SEPTEMBER 2020

Attest

GREAT AMERICAN INSURANCE COMPANY



Atty L C. B.

Assistant Secretary

Mark V. Vicario

Divisional Senior Vice President

MARK VICARIO (877-377-2405)

STATE OF OHIO, COUNTY OF HAMILTON - ss:

On this 28TH day of SEPTEMBER, 2020, before me personally appeared MARK VICARIO, to me known, being duly sworn, deposes and says that he resides in Cincinnati, Ohio, that he is a Divisional Senior Vice President of the Bond Division of Great American Insurance Company, the Company described in and which executed the above instrument; that he knows the seal of the said Company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed by authority of his office under the By-Laws of said Company, and that he signed his name thereto by like authority.



SUSAN A. KOHORST
Notary Public
State of Ohio
My Comm. Expires
May 18, 2023

Susan A. Kohorst

This Power of Attorney is granted by authority of the following resolutions adopted by the Board of Directors of Great American Insurance Company by unanimous written consent dated June 9, 2008.

RESOLVED: That the Divisional President, the several Divisional Senior Vice Presidents, Divisional Vice Presidents and Divisional Assistant Vice Presidents, or any one of them, be and hereby is authorized, from time to time, to appoint one or more Attorneys-in-Fact to execute on behalf of the Company, as surety, any and all bonds, undertakings and contracts of suretyship, or other written obligations in the nature thereof; to prescribe their respective duties and the respective limits of their authority; and to revoke any such appointment at any time.

RESOLVED FURTHER: That the Company seal and the signature of any of the aforesaid officers and any Secretary or Assistant Secretary of the Company may be affixed by facsimile to any power of attorney or certificate of either given for the execution of any bond, undertaking, contract of suretyship, or other written obligation in the nature thereof; such signature and seal when so used being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed.

CERTIFICATION

I, STEPHEN C. BERAHA, Assistant Secretary of Great American Insurance Company, do hereby certify that the foregoing Power of Attorney and the Resolutions of the Board of Directors of June 9, 2008 have not been revoked and are now in full force and effect.

Signed and sealed this 19th day of January, 2021



Atty L C. B.

Assistant Secretary

BID PROPOSAL

TO: City of Arvada, Colorado (hereinafter called "CITY").

FROM: HAMON INFRASTRUCTURES, INC (hereinafter called "BIDDER"), organized and existing under the laws of the State of COLORADO doing business as (a corporation), (a partnership), (an individual).

The Bidder, in compliance with your Advertisement for Bids, hereby proposes to perform all Work in strict accordance with the Contract Documents, for the construction of City of Arvada Project No. **18-ST-40** entitled **Ralston Road – Yukon Street to Garrison Street** within the time set forth therein, and at the prices stated on the included Bid Schedule as totaled herein.

By submission of this Bid Proposal, each Bidder certifies, and in the case of a joint venture each party thereto certifies as to his/her own organization, that this Bid Proposal has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this Bid Proposal with any other Bidder or with any competitor.

Bidder acknowledges receipt of Addendum Nos.

Initials: 1 2

Bidder states that his:

Major Material Suppliers are:

CORE + MAIN
CINDY PRECAST
BURRO

Material They Will Supply

PVC
MANHOLE
CONCRETE

Major Subcontractors are:

ASPHALT SPECIALTIES
LUMING
THOTT BROS

Work They Will Perform

ASPHALT PAVING
ELECTRICAL
CONCRETE PLUMBING

Total from included Bid Schedule:

TOTAL BID \$ 12,360,000.00

SUBMITTED BY:

Company Name: HAMON INFRASTRUCTURES, INC

Contact Names: MICHAEL D. WALTERS

Address: 5670 FRANKLIN ST DENVER, CO 80216

Phone: (303) 297-0340 Email(s): MWALTERS@HAMONINFRASTRUCTURES.COM

The undersigned hereby affirms that:

- He/she is a duly authorized agent of the Contractor,
- He/she has read all Terms and Conditions and technical specifications made available in conjunction with this solicitation and fully accept and acknowledge this bid is consistent with the specifications and terms and conditions.
- The bid is in all respects fair, without outside collusion or otherwise illegal action.

By: [Signature]
Signature of Authorized Agent

1/28/2021
Date

84-1129267
FEIN

MICHAEL D. WALTERS
Typed/Printed Name of Agent

SEC/TREAS
Title of Agent

MWALTERS@HAMONINFRASTRUCTURES.COM
Agent email

PAYMENT TERMS: The City standard is net thirty (30) days but every effort is made to meet net fifteen (15) days after the approved partial payment date when the contractor is satisfactorily performing the contract but pay. The final 5% of total payment will be paid once the contract is completed satisfactorily, advertisement for final settlement is complete, and the project is accepted by the City. Payment is the date of the check mailing or date of the credit card transaction.

BID SCHEDULE - ADDENDUM NO. 2

Ralston Road - Yukon Street to Garrison Street

Project No. 18-ST-40



Contractor: _____ HAMON INFRASTRUCTURE INC

Address, City, Zip: 5670 FRANKLIN ST, DENVER CO 80216

Telephone: _____ 303-297-0340

Bid Prepared By: _____ MICHAEL D WALTERS

No.	Spec*	Item	Unit	Unit Cost	Quantity	Extended Cost
1	COA 3.2	CLEARING AND GRUBBING	LS	\$45,000.00	1	\$45,000.00
2	COA 3.5	REMOVAL OF TREE	EA	\$1,800.00	41	\$73,800.00
3	COA 3.5	REMOVAL OF INLET	EA	\$1,500.00	17	\$25,500.00
4	COA 3.5	REMOVAL OF MANHOLE	EA	\$2,300.00	4	\$9,200.00
5	COA 3.5	REMOVAL OF FIRE HYDRANT	EA	\$1,500.00	14	\$21,000.00
6	COA 3.5	REMOVAL OF VALVE	EA	\$1,500.00	17	\$25,500.00
7	COA 3.5	REMOVAL OF PIPE (STORM SEWERS)	EA	\$3,000.00	34	\$102,000.00
8	COA 3.5	REMOVAL OF FIBER OPTIC CABLE	LF	\$1.50	2,700	\$4,050.00
9	COA 3.5	REMOVAL OF WALL	LF	\$30.00	1,297	\$38,910.00
10	COA 3.5	REMOVAL OF CONCRETE MEDIAN COVER MATERIAL	SY	\$30.00	200	\$6,000.00
11	COA 3.5	REMOVAL OF SIDEWALK	SY	\$20.00	5,452	\$109,040.00
12	COA 3.5	REMOVAL OF CURB	LF	\$10.00	952	\$9,520.00
13	COA 3.5	REMOVAL OF GUTTER	LF	\$9.00	404	\$3,636.00
14	COA 3.5	REMOVAL OF CURB AND GUTTER	LF	\$10.00	12,063	\$120,630.00
15	COA 3.5	REMOVAL OF CONCRETE CURB RAMP	SY	\$30.00	436	\$13,080.00
16	COA 3.5	REMOVAL OF BRICK PAVERS	SY	\$38.00	650	\$24,700.00
17	COA 3.5	REMOVAL OF CONCRETE PAVEMENT	SY	\$32.00	1,019	\$32,608.00
18	COA 3.5	REMOVAL OF ASPHALT MAT	SY	\$5.50	37,839	\$208,114.50
19	COA 3.5	REMOVAL OF PAVEMENT MARKING	SF	\$5.00	92	\$460.00
20	COA 3.5	REMOVAL OF LIGHT STANDARD	EA	\$210.00	13	\$2,730.00
21	COA 3.5	REMOVAL OF LIGHT STANDARD FOUNDATION	EA	\$456.00	14	\$6,384.00
22	COA 3.5	REMOVAL OF LUMINAIRE	EA	\$70.00	13	\$910.00
23	COA 3.5	REMOVAL OF SIGN	EA	\$100.00	30	\$3,000.00
24	COA 3.5	REMOVAL OF GROUND SIGN	EA	\$120.00	7	\$840.00
25	COA 3.5	REMOVAL OF SIGN PANEL	EA	\$70.00	9	\$630.00
26	COA 3.5	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	LS	\$24,000.00	1	\$24,000.00
27	COA 3.5	REMOVAL OF FENCE	LF	\$3.00	391	\$1,173.00
28	COA 3.5	REMOVAL OF BENCH	EA	\$550.00	1	\$550.00
29	COA 3.5	REPLACE 6" VCP SEWER WITH 6" PVC PIPE	LF	\$500.00	8	\$4,000.00
30	COA 3.5	REMOVE 4 INCH CI ABANDONED MAIN	LF	\$250.00	198	\$49,500.00
31	COA 3.55	REMOVE 4 INCH AC MAIN	LF	\$90.00	30	\$2,700.00
32	COA 3.55	REMOVE 6 INCH AC MAIN	LF	\$135.00	15	\$2,025.00
33	COA 3.5	REMOVE 6 INCH PVC MAIN	LF	\$135.00	15	\$2,025.00
34	COA 3.5	REMOVE 8 INCH PVC MAIN	LF	\$40.00	165	\$6,600.00
35	COA 3.5	REMOVE 12 INCH PVC MAIN	LF	\$60.00	119	\$7,140.00
36	COA 3.5	ABANDON VALVE BOX	EA	\$600.00	12	\$7,200.00
37	COA 3.33	UNCLASSIFIED EXCAVATION (COMPLETE IN PLACE)	CY	\$35.00	20,930	\$732,550.00
38	CDOT 203	POTHOLING (ROADWAY)	EA	\$277.00	200	\$55,400.00
39	CDOT 203	POTHOLING (STREETSCAPE)	EA	\$252.00	50	\$12,600.00
40	CDOT 203	POTHOLING (WATER)	EA	\$327.00	50	\$16,350.00
41	COA 3.20	SELECT BACKFILL	CY	\$55.00	1,450	\$79,750.00
42	CDOT 206	STRUCTURE BACKFILL (FLOW-FILL)	CY	\$250.00	115	\$28,750.00
43	COA 3.52	TOPSOIL	CY	\$28.00	627	\$17,556.00
44	COA 5.7.2	STABILIZED STAGING AREA	EA	\$4,500.00	3	\$13,500.00
45	COA 5.7.2	EROSION LOG (12 INCH)	LF	\$7.50	3,690	\$27,675.00
46	COA 5.7.2	AGGREGATE BAG	LF	\$25.00	290	\$7,250.00
47	COA 5.7.2	PRE-FABRICATED CONCRETE WASHOUT STRUCTURE (TYPE 1)	EA	\$4,000.00	12	\$48,000.00
48	COA 5.7.2	STORM DRAIN INLET PROTECTION (ON GRADE)	LF	\$18.00	1,509	\$24,144.00
49	COA 5.7.2	STORM DRAIN INLET PROTECTION (SUMP)	LF	\$28.00	78	\$2,184.00
50	COA 5.7.2	STORM DRAIN INLET PROTECTION (AREA)	LF	\$20.00	174	\$3,480.00

BID SCHEDULE - ADDENDUM NO. 2

Ralston Road - Yukon Street to Garrison Street

Project No. 18-ST-40



Contractor: _____ HAMON INFRASTRUCTURE INC

Address, City, Zip: 5670 FRANKLIN ST. DENVER CO 80216

Telephone: _____ 303-297-0340

Bid Prepared By: _____ MICHAEL D WALTERS

No.	Spec*	Item	Unit	Unit Cost	Quantity	Extended Cost
51	COA 5.7.2	PRE-FABRICATED VEHICLE TRACKING PAD	EA	\$6,500.00	2	\$13,000.00
52	COA 5.7	EROSION CONTROL MANAGEMENT (ECM)	DY	\$95.00	730	\$69,350.00
53	COA 3.6	RESET BRICK PAVERS	SY	\$100.00	86	\$8,600.00
54	COA 3.6	RESET VALVE BOX TO FINISHED GRADE	EA	\$400.00	60	\$24,000.00
55	COA 3.6	RESET METER BOX TO FINISHED GRADE	EA	\$1,100.00	2	\$2,200.00
56	COA 3.6	RESET GROUND SIGN	EA	\$130.00	51	\$6,630.00
57	COA 3.6	RESET SIGN PANEL	EA	\$145.00	9	\$1,305.00
58	COA 3.6	RESET FLASHING BEACON ASSEMBLY	EA	\$1,090.00	2	\$2,180.00
59	COA 3.6	RESET SIGNAL HEAD	EA	\$325.00	2	\$650.00
60	COA 3.6	RESET FIRE PREEMPTION UNIT AND TIMER	EA	\$440.00	7	\$3,080.00
61	COA 3.6	ADJUST MANHOLE	EA	\$800.00	32	\$25,600.00
62	COA 3.6	MODIFY MANHOLE	EA	\$1,600.00	13	\$20,800.00
63	COA 3.6	MODIFY INLET	EA	\$4,500.00	2	\$9,000.00
64	COA 3.6	MODIFY STRUCTURE (SPECIAL)	EA	\$5,000.00	15	\$75,000.00
65	COA 3.15	CLEAN CULVERT	EA	\$2,000.00	30	\$60,000.00
66	COA 3.6	RESET RTD SHELTER	EA	\$6,000.00	2	\$12,000.00
67	COA 3.6	RESET BENCH	EA	\$600.00	2	\$1,200.00
68	CDOT 629	RESET SURVEY MONUMENT	EA	\$450.00	4	\$1,800.00
69	CDOT 629	RESET PROPERTY PIN	EA	\$175.00	95	\$16,625.00
70	COA 5.2.2	TREE RETENTION AND PROTECTION	EA	\$800.00	25	\$20,000.00
71	COA 3.53	SEEDING ON PRIVATE PROPERTY	AC	\$11,620.00	0.39	\$4,531.80
72	COA 3.53	SOD ON CITY PROPERTY	SY	\$5.90	1,623	\$9,575.70
73	COA 3.57	WOOD MULCH (WOLFF PARK)	SF	\$3.25	910	\$2,957.50
74	COA 3.58	MULCH TYPE 1, 1-1/2" ANGULAR DECORATIVE ROCK	TON	\$86.70	270	\$23,409.00
75	COA 3.50	TREE GRATE	EA	\$1,500.00	20	\$30,000.00
76	COA 3.54	TREE (DECIDUOUS)	EA	\$601.00	55	\$33,055.00
77	COA 3.54	TREE (ORNAMENTAL)	EA	\$536.00	11	\$5,896.00
78	COA 3.54	DECIDUOUS SHRUB (5 GALLON)	EA	\$37.90	718	\$27,212.20
79	COA 3.54	EVERGREEN SHRUB (1 GALLON)	EA	\$20.30	41	\$832.30
80	COA 3.54	EVERGREEN SHRUB (5 GALLON)	EA	\$43.90	271	\$11,896.90
81	COA 3.54	ORNAMENTAL GRASSES (1 GALLON)	EA	\$15.20	661	\$10,047.20
82	COA 3.54	PERENNIALS (1 GALLON)	EA	\$14.00	312	\$4,368.00
83	COA 3.52	AMENDED TOPSOIL SHRUB BEDS (18")	CY	\$40.70	936	\$38,095.20
84	COA 3.52	AMENDED TOPSOIL SHRUB BEDS (24")	CY	\$40.70	197	\$8,017.90
85	CDOT 240	WILDLIFE BIOLOGIST	HR	\$110.00	40	\$4,400.00
86	CDOT 240	REMOVAL OF NESTS	HR	\$90.00	10	\$900.00
87	CDOT 240	NETTING (MIGRATORY BIRDS)	SY	\$18.00	20	\$360.00
88	CDOT 250	ENVIRONMENTAL HEALTH AND SAFETY	LS	\$3,320.00	1	\$3,320.00
89	COA 3.37	AGGREGATE BASE COURSE (CLASS 6)	CY	\$55.00	11,319	\$622,545.00
90	COA 3.37	HOT MIX ASPHALT (GRADING S)(100)(PG 64-22)	TON	\$64.25	13,091	\$841,096.75
91	COA 3.37	HOT MIX ASPHALT (GRADING SX)(100)(PG 76-28)	TON	\$74.95	4,707	\$352,789.65
92	COA 11.8	HOT MIX ASPHALT (PATCHING)	TON	\$220.00	388	\$85,360.00
93	COA 3.38	EMULSIFIED ASPHALT (SLOW-SETTING)	GAL	\$2.10	3,215	\$6,751.50
94	COA 3.21	CONCRETE PAVEMENT (6 INCH)	SY	\$96.00	223	\$21,408.00
95	COA 3.21	CONCRETE BUS PAD (11 INCH)	SY	\$92.00	327	\$30,084.00
96	COA 3.29	DRILLED CAISSON (18 INCH)	LF	\$210.00	20	\$4,200.00
97	COA 3.29	DRILLED CAISSON (36 INCH)	LF	\$425.00	194	\$82,450.00
98	COA 3.40	CONCRETE SLOPE AND DITCH PAVING (4 INCH)	CY	\$375.00	6	\$2,250.00
99	COA 3.11	HIGH PERFORMANCE POLYPROPYLENE PIPE (COMPLETE IN PLACE) (6 INCH)	LF	\$100.00	83	\$8,300.00
100	COA 3.11	HIGH PERFORMANCE POLYPROPYLENE PIPE (COMPLETE IN PLACE) (12 INCH)	LF	\$120.00	247	\$29,640.00

BID SCHEDULE - ADDENDUM NO. 2

Ralston Road - Yukon Street to Garrison Street

Project No. 18-ST-40



Contractor: _____ HAMON INFRASTRUCTURE INC

Address, City, Zip: 5670 FRANKLIN ST, DENVER CO 80216

Telephone: _____ 303-297-0340

Bid Prepared By: _ MICHAEL D WALTERS

No.	Spec*	Item	Unit	Unit Cost	Quantity	Extended Cost
101	COA 3.11	HIGH PERFORMANCE POLYPROPYLENE PIPE (COMPLETE IN PLACE) (15 INCH)	LF	\$125.00	210	\$26,250.00
102	COA 3.11	HIGH PERFORMANCE POLYPROPYLENE PIPE (COMPLETE IN PLACE) (18 INCH)	LF	\$140.00	1,276	\$178,640.00
103	COA 3.22	INLET TYPE 13 (5 FOOT)	EA	\$6,600.00	1	\$6,600.00
104	COA 3.22	INLET TYPE C (5 FOOT)	EA	\$6,500.00	1	\$6,500.00
105	COA 3.22	INLET TYPE 16 (5 FOOT)	EA	\$6,500.00	16	\$104,000.00
106	COA 3.22	INLET TYPE 16 (10 FOOT)	EA	\$8,000.00	1	\$8,000.00
107	COA 3.22	INLET TYPE 16 (DOUBLE) (5 FOOT)	EA	\$9,000.00	2	\$18,000.00
108	COA 3.22	INLET TYPE 16 (TRIPLE) (5 FOOT)	EA	\$10,500.00	5	\$52,500.00
109	COA 3.22	INLET TYPE 16 (DOUBLE) (SPECIAL) (5 FOOT)	EA	\$10,500.00	3	\$31,500.00
110	COA 3.22	INLET TYPE R L 5 (5 FOOT)	EA	\$7,000.00	2	\$14,000.00
111	COA 3.22	INLET TYPE R L 10 (5 FOOT)	EA	\$10,500.00	1	\$10,500.00
112	COA 3.22	INLET TYPE R L 10 (10 FOOT)	EA	\$12,500.00	1	\$12,500.00
113	COA 25.2.6	MANHOLE SLAB BASE (5 FOOT)	EA	\$6,000.00	10	\$60,000.00
114	COA 25.2.6	MANHOLE SLAB BASE (10 FOOT)	EA	\$12,000.00	1	\$12,000.00
115	COA 25.2.6	MANHOLE BOX BASE (5 FOOT)	EA	\$14,000.00	5	\$70,000.00
116	COA 3.11	4 INCH PVC PIPE	LF	\$110.00	45	\$4,950.00
117	COA 3.11	6 INCH PVC PIPE	LF	\$120.00	86	\$10,320.00
118	COA 3.11	8 INCH PVC PIPE	LF	\$80.00	502	\$40,160.00
119	COA 3.11	12 INCH PVC PIPE	LF	\$135.00	1,576	\$212,760.00
120	COA 3.11	12 INCH FUSIBLE C900 PVC PIPE	LF	\$240.00	416	\$99,840.00
121	COA 3.7	PERMANENT PLUG	EA	\$1,600.00	1	\$1,600.00
122	COA 3.13	CONNECT TO EXISTING	EA	\$2,600.00	21	\$54,600.00
123	COA 3.14	CHLORINATION AND PRESSURE TEST	EA	\$2,800.00	2	\$5,600.00
124	COA 3.28	INSTALL WATER METER (3/4 INCH)	EA	\$1,600.00	19	\$30,400.00
125	COA 3.13	TAP MAIN & INSTALL CORP STOP (3/4 INCH)	EA	\$2,100.00	2	\$4,200.00
126	COA 3.13	RECONNECT WATER SERVICE (3/4 INCH)	EA	\$3,000.00	18	\$54,000.00
127	COA 3.28	INSTALL WATER METER (1 INCH)	EA	\$1,800.00	5	\$9,000.00
128	COA 3.13	RECONNECT WATER SERVICE (1 INCH)	EA	\$4,000.00	5	\$20,000.00
129	COA 3.28	INSTALL WATER METER (1.5 INCH)	EA	\$2,800.00	1	\$2,800.00
130	COA 3.13	RECONNECT WATER SERVICE (1.5 INCH)	EA	\$5,000.00	1	\$5,000.00
131	COA 115	FIRE SPRINKLER FLOW TEST	EA	\$3,900.00	1	\$3,900.00
132	COA 3.32	FENCE (PLASTIC)	LF	\$2.50	15,000	\$37,500.00
133	COA 3.21	CONCRETE SIDEWALK (6 INCH)	SY	\$50.00	6,207	\$310,350.00
134	COA 3.21	CONCRETE SIDEWALK (SPECIAL)(TYPE 1)	SY	\$53.00	1,274	\$67,522.00
135	COA 3.21	CONCRETE SIDEWALK (SPECIAL)(TYPE 2)	SY	\$66.00	760	\$50,160.00
136	COA 3.21	CONCRETE CURB RAMP	SY	\$135.00	856	\$115,560.00
137	COA 3.21	CONCRETE CURB RAMP (SPECIAL)	SY	\$146.00	498	\$72,708.00
138	COA 3.21	DRIVEWAY (6 INCH CONCRETE)	SY	\$50.00	916	\$45,800.00
139	COA 3.21	MOUNTABLE CURB AND SIDEWALK	SY	\$55.00	27	\$1,485.00
140	COA 3.21	CURB AND GUTTER (SPECIAL)	LF	\$18.00	895	\$16,110.00
141	COA 3.21	COA 6" VERTICAL CURB AND 1' GUTTER	LF	\$17.00	1,438	\$24,446.00
142	COA 3.21	COA 6" VERTICAL CURB AND 2' GUTTER	LF	\$18.00	10,136	\$182,448.00
143	COA 3.21	VALLEY GUTTER	SY	\$81.00	995	\$80,595.00
144	COA 3.22	BI-LEVEL SIDEWALK	LS	\$40,000.00	1	\$40,000.00
145	COA 3.22	WALL (TYPE 1)	LF	\$120.00	97	\$11,640.00
146	COA 3.22	WALL (TYPE 2)	LF	\$45.00	25	\$1,125.00
147	COA 3.21	CONCRETE SPLASH PAN (14 INCH)	LF	\$20.00	1,380	\$27,600.00
148	COA 3.21	CONCRETE EDGING	LF	\$19.00	120	\$2,280.00
149	CDOT 613	2 INCH ELECTRICAL CONDUIT (BORED)	LF	\$11.00	4,485	\$49,335.00
150	CDOT 613	3 INCH ELECTRICAL CONDUIT (BORED)	LF	\$12.00	2,190	\$26,280.00

BID SCHEDULE - ADDENDUM NO. 2

Ralston Road - Yukon Street to Garrison Street

Project No. 18-ST-40



Contractor: _____ HAMON INFRASTRUCTURE INC

Address, City, Zip: 5670 FRANKLIN ST, DENVER CO 80216

Telephone: 303-297-0340

Bid Prepared By: _ MICHAEL D WALTERS

No.	Spec*	Item	Unit	Unit Cost	Quantity	Extended Cost
151	CDOT 613	1 INCH ELECTRICAL CONDUIT (PLASTIC)	LF	\$6.00	195	\$1,170.00
152	CDOT 613	2 INCH ELECTRICAL CONDUIT (PLASTIC)	LF	\$11.00	15,740	\$173,140.00
153	CDOT 613	3 INCH ELECTRICAL CONDUIT (PLASTIC)	LF	\$12.00	740	\$8,880.00
154	CDOT 613	PULL BOX (TYPE M)	EA	\$830.00	1	\$830.00
155	CDOT 613	PULL BOX (TYPE LG)	EA	\$1,160.00	16	\$18,560.00
156	CDOT 613	PULL BOX (13"X20"X18")	EA	\$815.00	54	\$44,010.00
157	CDOT 613	WIRING	LS	\$93,980.00	1	\$93,980.00
158	CDOT 613	LUMINAIRE (LED)	EA	\$565.00	13	\$7,345.00
159	CDOT 613	LIGHT STANDARD AND LUMINAIRE (PEDESTRIAN) (TYPE B)	EA	\$4,555.00	99	\$450,945.00
160	CDOT 613	LIGHT STANDARD FOUNDATION	EA	\$1,440.00	86	\$123,840.00
161	CDOT 613	LIGHT STANDARD FOUNDATION (SPECIAL)	EA	\$1,680.00	13	\$21,840.00
162	CDOT 613	LIGHTING CONTROL CENTER	EA	\$3,660.00	4	\$14,640.00
163	CDOT 613	SERVICE METER CABINET	EA	\$4,210.00	4	\$16,840.00
164	COA 3.47	SIGN PANEL (CLASS I)	SF	\$33.00	525.3	\$17,334.90
165	COA 3.48	STEEL SIGN POST (1 75 x 1.75 INCH TUBING)	LF	\$16.00	421	\$6,736.00
166	COA 3.47	SIGNAL HEAD BACKPLATES	EA	\$180.00	34	\$6,120.00
167	COA 3.47	PEDESTRIAN SIGNAL FACE (16) (COUNTDOWN)	EA	\$475.00	24	\$11,400.00
168	COA 3.47	TRAFFIC SIGNAL FACE (12-12-12)	EA	\$615.00	39	\$23,985.00
169	COA 3.47	TRAFFIC SIGNAL FACE (12-12-12-12)	EA	\$910.00	17	\$15,470.00
170	COA 3.47	TRAFFIC SIGNAL FACE (12-12-12-12-12)	EA	\$836.00	1	\$836.00
171	COA 3.47	TRAFFIC SIGNAL CONTROLLER	EA	\$20,121.00	4	\$80,484.00
172	COA 3.47	PEDESTRIAN PUSH BUTTON POST ASSEMBLY	EA	\$837.00	9	\$7,533.00
173	COA 3.47	PEDESTRIAN PUSH BUTTON STATION AND SIGN	EA	\$1,241.00	28	\$34,748.00
174	COA 3.47	MICROWAVE VEHICLE RADAR DETECTOR	EA	\$7,620.00	22	\$167,640.00
175	COA 3.47	TRAFFIC SIGNAL CONTROLLER (INSTALL ONLY)	EA	\$2,195.00	4	\$8,780.00
176	COA 3.47	TRAFFIC SIGNAL-LIGHT POLE (1-20 FOOT MAST ARM)	EA	\$17,924.00	2	\$35,848.00
177	COA 3.47	TRAFFIC SIGNAL-LIGHT POLE (1-30 FOOT MAST ARM)	EA	\$18,790.00	1	\$18,790.00
178	COA 3.47	TRAFFIC SIGNAL-LIGHT POLE (1-35 FOOT MAST ARM)	EA	\$23,774.00	2	\$47,548.00
179	COA 3.47	TRAFFIC SIGNAL-LIGHT POLE (1-40 FOOT MAST ARM)	EA	\$24,447.00	3	\$73,341.00
180	COA 3.47	TRAFFIC SIGNAL-LIGHT POLE (1-45 FOOT MAST ARM)	EA	\$25,449.00	1	\$25,449.00
181	COA 3.47	TRAFFIC SIGNAL-LIGHT POLE (1-50 FOOT MAST ARM)	EA	\$31,347.00	4	\$125,388.00
182	COA 3.47	TRAFFIC SIGNAL PEDESTAL POLE STEEL	EA	\$800.00	5	\$4,000.00
183	CDOT 630.09	TEMPORARY SIGNAL (PORTABLE)	EA	\$10,000.00	4	\$40,000.00
184	COA 50.2.10	UNINTERRUPTED POWER SUPPLY	EA	\$4,800.00	4	\$19,200.00
185	COA 3.47	CLOSED CIRCUIT TELEVISION CAMERA (TRAFFIC SURVEILLANCE)	EA	\$5,500.00	1	\$5,500.00
186	CDOT 614	FIBER OPTIC CABLE (SINGLE MODE) (12 FIBER)	LF	\$2.40	1,000	\$2,400.00
187	CDOT 614	TEST FIBER OPTIC CABLE	LS	\$975.00	1	\$975.00
188	CDOT 614	TERMINATE FIBER OPTIC CABLE (12 STRAND)	EA	\$1,335.00	4	\$5,340.00
189	CDOT 614	ETHERNET SWITCH	EA	\$4,253.00	4	\$17,012.00
190	COA 3.28	4 INCH GATE VALVE & BOX	EA	\$1,800.00	1	\$1,800.00
191	COA 3.28	6 INCH GATE VALVE & BOX	EA	\$1,900.00	2	\$3,800.00
192	COA 3.28	8 INCH GATE VALVE & BOX	EA	\$2,500.00	11	\$27,500.00
193	COA 3.28	12 INCH GATE VALVE & BOX	EA	\$4,500.00	9	\$40,500.00
194	COA 3.8	FIRE HYDRANT (ASSEMBLY)	EA	\$8,000.00	25	\$200,000.00
195	COA 3.22	STAIR	EA	\$6,000.00	7	\$42,000.00
196	COA 3.37	TEMPORARY DRIVEWAY PAVING	SY	\$35.00	3,500	\$122,500.00
197	COA 3.50	6' BENCH	EA	\$3,000.00	4	\$12,000.00
198	COA 3.50	4' BENCH	EA	\$3,000.00	11	\$33,000.00
199	COA 3.59	DISTRICT MARKER (INSPIRE, CELEBRATE, REMEMBER)	EA	\$60,000.00	3	\$180,000.00

BID SCHEDULE - ADDENDUM NO. 2

Ralston Road - Yukon Street to Garrison Street

Project No. 18-ST-40



Contractor: _____ HAMON INFRASTRUCTURE INC

Address, City, Zip: _____ 5670 FRANKLIN ST, DENVER CO 80216

Telephone: _____ 303-297-0340

Bid Prepared By: _____ MICHAEL D WALTERS

No.	Spec*	Item	Unit	Unit Cost	Quantity	Extended Cost
200	COA 3.60	DISTRICT MARKER FOUNDATION (INSPIRE, CELEBRATE, REMEMBER)	CY	\$2,600.00	9	\$23,400.00
201	COA 3.61	NEIGHBORHOOD MONUMENT	EA	\$1,800.00	17	\$30,600.00
202	COA 3.62	NEIGHBORHOOD MONUMENT FOUNDATION	CY	\$5,500.00	11	\$60,500.00
203	COA 3.63	WOLFF PARK PLANTER WALL	LF	\$21.35	40	\$854.00
204	CDOT 623	IRRIGATION POINT OF CONNECTION	EA	\$5,250.00	4	\$21,000.00
205	CDOT 623	IRRIGATION TAP FEES	SF	\$1.00	21,129	\$21,129.00
206	CDOT 623	IRRIGATION WITHIN BEDS AND CORNER PLANTERS	SF	\$1.75	20,608	\$36,064.00
207	CDOT 623	IRRIGATION FOR TREE PITS	EA	\$203.00	20	\$4,060.00
208	COA 3.11	IRRIGATION MAINLINE	LF	\$8.85	5,800	\$51,330.00
209	COA 3.11	IRRIGATION SLEEVES FOR MAINLINE	LF	\$11.90	3,850	\$45,815.00
210	COA 3.11	IRRIGATION SLEEVES FOR LATERALS - BEDS AND CORNER TREATMENTS	LF	\$9.70	4,600	\$44,620.00
211	COA 3.11	IRRIGATION SLEEVES FOR LATERALS - TREE PITS	LF	\$9.70	1,550	\$15,035.00
212	COA 3.11	IRRIGATION LATERAL FOR BEDS AND CORNER TREATMENTS	LF	\$3.70	6,775	\$25,067.50
213	COA 3.11	IRRIGATION LATERAL FOR TREE PITS	LF	\$3.70	1,700	\$6,290.00
214	CDOT 623	IRRIGATION MODIFICATION FOR ADJACENT OWNERS	LS	\$1,160.00	38	\$44,080.00
215	CDOT 623	IRRIGATION MODIFICATION FOR RALSTON CENTRAL PARK	LS	\$17,210.00	1	\$17,210.00
216	CDOT 623	IRRIGATION MODIFICATION FOR WOLFF PARK	LS	\$14,590.00	1	\$14,590.00
217	COA 3.11	IRRIGATION PIPING BORE ALLOWANCE	LF	\$100.00	963	\$96,300.00
218	CDOT 625	CONSTRUCTION SURVEYING	LS	\$250,000.00	1	\$250,000.00
219	COA 3.49	MOBILIZATION	LS	\$596,050.00	1	\$596,050.00
220	COA 50.4.7	MODIFIED EPOXY PAVEMENT MARKING	GAL	\$165.00	64	\$10,560.00
221	COA 3.45	PREFORMED THERMOPLASTIC PVMNT MRKNG (WORD-SYMBOL)	SF	\$18.50	316	\$5,846.00
222	COA 3.45	PREFORMED THERMOPLASTIC PVMNT MRKNG (XWALK-STOPLINE)	SF	\$15.00	786	\$11,790.00
223	CDOT 630	UNIFORMED TRAFFIC CONTROL	HR	\$125.00	200	\$25,000.00
224	CDOT 630	TRAFFIC CONTROL	LS	\$500,000.00	1	\$500,000.00
225	CDOT 626	PUBLIC INFORMATION SERVICES (TIER III)	LS	\$52,800.00	1	\$52,800.00
226	COA 3.48 & CDOT 620	SANITARY FACILITY	EA	\$6,770.70	5	\$33,853.50
227		F/A 01 MINOR CONTRACT REVISIONS TO INCLUDE RFIs (ROADWAY)	FA	\$350,000.00	1	\$350,000.00
228		F/A 02 EROSION CONTROL	FA	\$15,000.00	1	\$15,000.00
229		F/A 03 ENVIRONMENTAL HEALTH AND SAFETY MANAGEMENT	FA	\$75,000.00	1	\$75,000.00
230		F/A 04 IRRIGATION SYSTEM REPAIR	FA	\$25,000.00	1	\$25,000.00
231		F/A 05 UTILITY ADJUSTMENT	FA	\$75,000.00	1	\$75,000.00
232		F/A 06 HIGH EARLY STRENGTH CONCRETE (CLASS E)	FA	\$40,000.00	1	\$40,000.00
233		F/A 07 FURNISH AND INSTALL ELECTRICAL SERVICE	FA	\$20,000.00	1	\$20,000.00
234		F/A 08 MINOR CONTRACT REVISIONS TO INCLUDE RFIs (STREETSCAPE)	FA	\$100,000.00	1	\$100,000.00
235		F/A 09 MINOR CONTRACT REVISIONS TO INCLUDE RFIs (WATER)	FA	\$100,000.00	1	\$100,000.00

TOTAL BID \$ _____**\$12,360,000.00**

*City of Arvada (COA) Engineering Code of Standards and Specifications and/or CDOT Standard Specifications

REQUIRED CONTRACTOR SUBMITTAL FORM

SUBMITTAL CHECKLIST:

Proposals shall be submitted in the order listed below with each section clearly identified.

Submit completed City Submittal Forms including this sheet, Bid Bond, Bid Proposal, Bid Schedule, and any other attachments requested.

Submit implementation timeline and warranties, if applicable.

Attach Contractor's Licensing, if applicable.

☒ Insurance – Checking this box accepts that the insurance requirements listed by the City are acceptable.

Please initial to acknowledge Addenda, if any, have been considered in your proposal:

#1 man #2 man

REFERENCES:

☒ Check here if Contractor's standard reference sheet is attached, otherwise, use the space below.

Name: _____ Contact Person: _____

Address: _____

Telephone No: _____ Email: _____

Describe type of work/service performed or items supplied: _____

Name: _____ Contact Person: _____

Address: _____

Telephone No: _____ Email: _____

Describe type of work/service performed or items supplied: _____

Name: _____ Contact Person: _____

Address: _____

Telephone No: _____ Email: _____

Describe type of work/service performed or items supplied: _____

Hamon Infrastructure, Inc
Project References

Project Name	Owner	Description / Type of Work	Initial Contract Amount	Current Contract Amount	Start Date	Completion Date
US 36 REPAIRS PLENARY	Plenary Americas 1700 Lincoln St. Denver, CO 80202 Christian Guevara (303) 803-9463	Excavation and Repair of Concrete Panels on US 36	\$2,896,858	\$2,896,788	Apr-20	Jun-20
CLAUDE CT. & 128TH WIDENING	City of Thornton 9500 Civic Center Dr. Thornton, CO 80229 Jim Jensen (720) 977-6204	Road Widening, Utilities, Earthwork Excavation, Piped Sewer, Concrete, Roadway	\$3,790,000	\$4,156,361	Jul-19	Jul-20
I-25 AT 58TH BOTTLENECK MITIGATION	CDOT 4670 N Holly St. Denver, CO 80216 Ben Kepler (303) 807-5492	Road Widening, Earthwork, Concrete Paving, Guardrail	\$1,489,900	\$1,326,578	Mar-20	Sep-20
WASHINGTON STREET WIDENING	Murray & Stafford 5120 Osage Street Suite 100 Denver, CO 80221 Steve Szymanski (303) 419-6360	Road Widening, Utilities, Earthwork Excavation, Piped Sewer, Concrete, Roadway	\$5,110,100	\$5,188,917	Dec-20	Oct-20
DIA - CONCOURSE C	CCD Holder-FCI, a Joint Venture 1875 Lawrence St. Ste 420 Denver, CO 80202 Vince Burdette (678) 761-1260	Excavation & Shoring of Concourse C Foundation, Settlement monitoring	\$14,020,226	\$14,020,226	Apr-19	Oct-20
56TH & PENA	CCD Infrastructure 201 W Colfax Ave. Denver, CO 80202 Todd Johnson (503) 482-8633	Roadway/Intersection Widening, Earthwork, Storm Drains, Utility Relocation, Curb & Gutter, Sidewalks, Asphalt Paving, Concrete Drainage Structures	\$5,623,620	\$5,783,603	Feb-20	Dec-20



REPORT TO CITY COUNCIL RESOLUTION

AGENDA ITEM
8.A.12.

TO: THE HONORABLE CITY COUNCIL

DATE: March 1, 2021

SUBJECT: R21-042 A Resolution Authorizing the Issuance of a Blanket Purchase Order in the Amount of \$600,000.00 to Hill Petroleum Company for the Purchase of Fuel Used in City Vehicles and Equipment

Report in Brief

Arvada participated with Arapahoe County and other members of the Colorado Multiple Assembly of Procurement Officials (MAPO) and has agreed to a contract with Hill Petroleum per MAPO bid # RFP-17-50. Hill Petroleum, a local Arvada business, was determined to be the top-rated offer and supplier for this MAPO solicitation. As a result they will be able to provide fuel on the basis of a fixed, firm rate structure through July 13, 2021.

The Arvada team recommends that the City Council approve R21-042, A Resolution Authorizing the Issuance of a Blanket Purchase Order in the Amount of \$600,000.00 to Hill Petroleum Company for the Purchase of Fuel Used in City Vehicles and Equipment.

Financial Impact

This Blanket Purchase Order for \$600,000 is a one time request. City fuel is budgeted in account number 54.731020.57001 with the source being funded by a combination of General Funds and Internal Funds from the Work Systems of Infrastructure, Vibrant Community and Neighborhoods, Operational and Service Effectiveness, Safe Community, and Community and Economic Development.

Background

The Colorado Multiple Assembly of Procurement Officials (MAPO) was established in 1989 as a cooperative association allowing public procurement professionals to collectively issue solicitations for goods and services commonly required by Colorado local government agencies, and to make purchases based on existing agreements. The City of Arvada has participated with members of this association for our fuel purchases and delivery service for over twenty years and has realized significant cost savings through this relationship. In addition, Arvada team members, including our Purchasing Manager and Senior Procurement Specialist, have served the association in leadership positions which support the efficient procurement of goods and services for Arvada and other Colorado local governments.

Discussion

The City of Arvada's portion of this total annual requirement is estimated annually at 217,000 gallons of gasoline and 62,000 gallons of diesel. The City has benefited greatly from a price and level of service standpoint by combining needs with other agencies, many of whom had considerably larger volumes. This will effectively serve the fuel requirements of the City's Vehicles and Equipment.

Public Contact

Posting of the City Council agenda.

Commission Recommendation

NA

Strategic Alignment

Providing fuel for the City vehicles supports the Strategic Results associated with Infrastructure, Vibrant Community and Neighborhoods, Organizational and Service Effectiveness, Safe Community, and Community and Economic Development.

Alternative Courses of Action

NA

Recommendation for Action

The Arvada team recommends that the City Council approve R21-042, A Resolution Authorizing the Issuance of a Blanket Purchase Order in the Amount of \$600,000.00 to Hill Petroleum Company for the Purchase of Fuel Used in City Vehicles and Equipment.

Suggested Motion:

I move that R21-042, A Resolution Authorizing the Issuance of a Blanket Purchase Order in the Amount of \$600,000.00 to Hill Petroleum Company for the Purchase of Fuel Used in City Vehicles and Equipment, be (approved) (rejected).

Prepared by:
Ike Miller, Fleet Services Manager

Reviewed by:
Hannah Gregory, Legal Administrative Assistant 2/17/2021
Erika Pierce, Litigation Paralegal 2/17/2021

Approved by:

Sharon Israel, Director of Utilities	2/16/2021
Bryan Archer, Director of Finance	2/16/2021
Laura Hemler, Assistant City Attorney	2/17/2021
Rachel Morris, City Attorney	2/17/2021
Lorie Gillis, Deputy City Manager	2/18/2021
Mark Deven, City Manager	2/18/2021

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R21-042

A RESOLUTION AUTHORIZING THE ISSUANCE OF A BLANKET PURCHASE ORDER
IN THE AMOUNT OF \$600,000.00 TO HILL PETROLEUM COMPANY FOR THE
PURCHASE OF FUEL USED IN CITY VEHICLES AND EQUIPMENT

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO:

Section 1. The city manager is hereby authorized to issue a blanket purchase order in the amount of \$600,000.00 to Hill Petroleum Company for the purchase of fuel used in City vehicles and equipment.

Section 2. This resolution shall be effective upon its approval by the City Council.

APPROVED AND ADOPTED this 1st day of March, 2021.

Marc Williams, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:
Rachel A. Morris, City Attorney

By: _____



ARAPAHOE COUNTY
COLORADO'S FIRST

Department of Finance

PURCHASING DIVISION

5334 South Prince Street
Littleton, Colorado 80120-1136
Phone: 303-795-4430
Fax: 303-738-7929
www.arapahoe.gov

TODD WEAVER
Director

5/14/2020

Hill Petroleum
6301 Ralston Road
Arvada, CO. 80002

**SUBJ: Bulk Fuel Purchase and Delivery
RFP-17-50-MAPO**

Mr. Robert Hill,

Hill Petroleum entered into an agreement with Arapahoe County for Bulk Fuel Purchase and Delivery on July 13, 2017. Please find attached with this letter the Extension of the Agreement. Please make three (3) copies of this document, have all copies signed in blue ink, have all four (4) copies notarized, and return to my attention within ten (10) business days of the date of this letter.

Please email me a copy and send the originals along with your copy of Certificate of Liability Insurance to:

**Attn: Debby Horning
Arapahoe County Fleet Mgmt.
7600 S. Peoria Street
Centennial, CO. 80112**

Sincerely,

**Debby Horning
Business Associate III**

Cc: Purchasing File

5/14/2020

Mr. Robert Hill
Hill Petroleum
6301 Ralston Road
Arvada, CO. 80002

**SUBJ: EXTENSION OF THE AGREEMENT FOR Bulk Fuel and Delivery
SOLICITATION # RFP 17-50 MAPO**

Arapahoe County and Hill Petroleum entered into an agreement for Bulk Fuel Purchase and Delivery on 07/13/2017. The parties may mutually agree upon an annual extension of this agreement pursuant to the provisions as set forth in the original Agreement for Services or Purchase Agreement (ACG Contract # RFP 17-50 MAPO).

Hill Petroleum hereby agrees to maintain pricing without any increases, and all parties mutually agree upon an annual extension of this agreement pursuant to the provisions set forth in the solicitation.

Staff has determined that it is to the best interest of the County to extend this agreement from
(Date) July 13, 2020 through July 13, 2021.

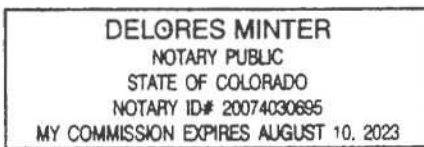
By executing the signature page, both parties agree to the extension of this Agreement for Services or Purchase Agreement.

SIGNATURE PAGE

CONTRACTOR: Hill Petroleum
By: Robert Troy Hill
(Signature)
Title: President, CEO
Signed this 14th day of May, 2020

State of Colorado
County of: Jefferson
Subscribed and sworn to before me this 14th day of May, 2020
By: Robert Troy Hill
My commission expires: 8/10/2023

Delores Minter
Notary Public



SEAL

ATTEST: Clerk to the Board

ARAPAHOE COUNTY

richard hawes

By: _____
Chair, Board of County Commissioners
(Or representative authorized by resolution)

Date: _____

5/27/20
Date: _____



REPORT TO CITY COUNCIL ORDINANCE FIRST READING

**AGENDA ITEM
8.C.1.**

TO: THE HONORABLE CITY COUNCIL

DATE: March 1, 2021

SUBJECT: CB21-007 An Ordinance Authorizing the Second Amendment to the 2021 Operating and Capital Budget in the Amount of \$1,650,000.00 and Authorizing an Intergovernmental Agreement Between the City of Arvada and the State of Colorado Acting By and Through the Department of Transportation, Pertaining to the Signal Replacements at West 64th Avenue & Simms Street and West 80th Avenue & Vance Drive, Project No. 20-TC-01 (CDOT Project No. SHO M040-037 (24218)) (Public Hearing to be set for March 15, 2021 at 6:15 p.m.)

Report in Brief

Council action is requested on the attached ordinance authorizing the second amendment to the 2021 operating and capital budget in the amount of \$1,650,000.00 and authorizing an Intergovernmental Agreement by and between the State of Colorado acting by and through the Department of Transportation and the City of Arvada for the signal replacements at West 64th Avenue & Simms Street and West 80th Avenue & Vance Drive, Project No. 20-TC-01 (CDOT Project No. SHO M040-037 (24218)).

The Arvada team recommends that the City Council approve CB21-007, An Ordinance Authorizing the Second Amendment to the 2021 Operating and Capital Budget in the Amount of \$1,650,000.00 and Authorizing an Intergovernmental Agreement Between the City of Arvada and the State of Colorado Acting By and Through the Department of Transportation, Pertaining to the Signal Replacements at West 64th Avenue & Simms Street and West 80th Avenue & Vance Drive, Project No. 20-TC-01 (CDOT Project No. SHO M040-037 (24218)) (Public Hearing to be set for March 15, 2021 at 6:15 p.m.).

Financial Impact

Funding for this project is available in Financial Project No. 93733 and 93735, HSIP 64th and Simms and HSIP 80th and Vance. The funding includes \$1,485,000.00 in federal aid and \$165,000 of local match contributions.

Background

In February 2017, the City was awarded a grant for \$550,000.00 through the Federal Highway Safety Improvement Program (HSIP) and the Colorado Department of Transportation (CDOT) to improve the intersections of West 64th Avenue & Simms Street and West 80th Avenue & Vance Drive. HSIP is a core federal aid program with the purpose of achieving a significant reduction in traffic fatalities and serious injuries on all public roads and whose objective is to target resources where they will be most effective, with a focus on performance. This project will reconstruct the traffic signals and upgrade pedestrian infrastructure to meet current standards at both locations. This project will also include slight widening of the northbound approach at West 80th Avenue & Vance Drive to accommodate a right turn lane.

In March 2020, the City requested and was awarded additional funding in the amount of \$1,100,000.00 for this project to offset rising construction costs, upgrade additional pedestrian infrastructure, and enhance intersection operations related to large-vehicle turning movements and constrained lane widths. With the additional funding, the City was able to successfully obtain a total of \$1,650,000.00 in federal aid.

Discussion

SUBJECT: CB21-007 An Ordinance Authorizing the Second Amendment to the 2021 Operating and Capital Budget in the Amount of \$1,650,000.00 and Authorizing an Intergovernmental Agreement Between the City of Arvada and the State of Colorado Acting By and Through the Department of Transportation, Pertaining to the Signal Replacements at West 64th Avenue & Simms Street and West 80th Avenue & Vance Drive, Project No. 20-TC-01 (CDOT Project No. SHO M040-037 (24218)) (Public Hearing to be set for March 15, 2021 at 6:15 p.m.)

PAGE: 2
ITEM: 8.C.1.

Since 2017 when the City was awarded the original HSIP grant, construction costs have been steadily increasing. Furthermore, through the preliminary design process it was identified that additional improvements to surrounding pedestrian infrastructure and vehicle operations would benefit all transportation modes utilizing each of these intersections. In order to provide enhanced improvements, additional funding was requested and awarded by CDOT in March 2020.

Public Contact

Both motorists and pedestrians have expressed concerns at both intersection locations through emails, phone calls, and Ask Arvada submissions. The City team, in partnership with CDOT, was able to successfully obtain a federally funded grant. In addition, the City Council agenda was posted.

Commission Recommendation

N/A

Strategic Alignment

This action aligns with the City Council Strategic Plan Priority Area of Infrastructure with the principle to provide safe and efficient connections to modes of transportation, including transit, streets, sidewalks, and bikeways with a focus on enhanced technology at high-priority intersections improving safety and minimizing traffic congestion. Implementing routine and preventative maintenance measures on existing infrastructure greatly increases the efficiency of the City's transportation system while providing safe travel for all transportation modes.

Alternative Courses of Action

N/A

Recommendation for Action

The Arvada team recommends that the City Council approve CB21-007, An Ordinance Authorizing the Second Amendment to the 2021 Operating and Capital Budget in the Amount of \$1,650,000.00 and Authorizing an Intergovernmental Agreement Between the City of Arvada and the State of Colorado Acting By and Through the Department of Transportation, Pertaining to the Signal Replacements at West 64th Avenue & Simms Street and West 80th Avenue & Vance Drive, Project No. 20-TC-01 (CDOT Project No. SHO M040-037 (24218)) (Public Hearing to be set for March 15, 2021 at 6:15 p.m.).

Suggested Motion:

I move that CB21-007, An Ordinance Authorizing the Second Amendment to the 2021 Operating and Capital Budget in the Amount of \$1,650,000.00 and Authorizing an Intergovernmental Agreement Between the City of Arvada and the State of Colorado Acting By and Through the Department of Transportation, Pertaining to the Signal Replacements at West 64th Avenue & Simms Street and West 80th Avenue & Vance Drive, Project No. 20-TC-01 (CDOT Project No. SHO M040-037 (24218)), be (approved on first reading, ordered published in full, and a public hearing set for March 15, 2021, at 6:15 p.m.) (rejected).

Prepared by:
Sylvia Lopo, Traffic Engineer

SUBJECT: CB21-007 An Ordinance Authorizing the Second Amendment to the 2021 Operating and Capital Budget in the Amount of \$1,650,000.00 and Authorizing an Intergovernmental Agreement Between the City of Arvada and the State of Colorado Acting By and Through the Department of Transportation, Pertaining to the Signal Replacements at West 64th Avenue & Simms Street and West 80th Avenue & Vance Drive, Project No. 20-TC-01 (CDOT Project No. SHO M040-037 (24218)) (Public Hearing to be set for March 15, 2021 at 6:15 p.m.)

PAGE: 3
ITEM: 8.C.1.

Reviewed by:

Approved by:

Jacqueline Rhoades, Civil Engineer III	2/10/2021
Don Wick, Director of Public Works	2/10/2021
Bryan Archer, Director of Finance	2/10/2021
Erika Pierce, Litigation Paralegal	2/16/2021
Lori Graham, Senior Assistant City Attorney	2/16/2021
Rachel Morris, City Attorney	2/16/2021
Lorie Gillis, Deputy City Manager	2/17/2021
Mark Deven, City Manager	2/17/2021

Enclosure, exhibits & attachments required to support the report

COUNCIL BILL NO. CB21-007
ORDINANCE NO. _____

AN ORDINANCE AUTHORIZING THE SECOND AMENDMENT TO THE 2021 OPERATING AND CAPITAL BUDGET IN THE AMOUNT OF \$1,650,000.00 AND AUTHORIZING AN INTERGOVERNMENTAL AGREEMENT BETWEEN THE CITY OF ARVADA AND THE STATE OF COLORADO ACTING BY AND THROUGH THE DEPARTMENT OF TRANSPORTATION, PERTAINING TO THE SIGNAL REPLACEMENTS AT WEST 64TH AVENUE & SIMMS STREET AND WEST 80TH AVENUE & VANCE DRIVE, PROJECT NO. 20-TC-01 (CDOT PROJECT NO. SHO M040-037 (24218))

WHEREAS, intergovernmental agreements (“IGAs”) between political subdivisions of the State of Colorado are authorized by C.R.S. Sec. 29-1-103.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO:

Section 1. The 2021 Operating and Capital Budget for the Capital Improvements Fund is hereby amended to increase by an additional \$1,650,000.00 for the purpose of expenditure of the City’s match share, if any, from a grant through the Colorado Department of Transportation for signal replacements at West 64th Avenue & Simms Street and West 80th and Simms Street and West 80th Avenue and Vance Drive, Project No. 20-TC-01 (CDOT Project No. SHO M040-037 (24218)).

Section 2. The Mayor or Mayor Pro Tem is hereby authorized to sign and the City Clerk to attest, in form approved by the City Attorney, an Intergovernmental Agreement, which is attached hereto, by and between the City of Arvada and between the State of Colorado Acting By and Through the Department of Transportation for signal replacements at West 64th Avenue & Simms Street and West 80th and Simms Street and West 80th Avenue and Vance Drive, Project No. 20-TC-01 (CDOT Project No. SHO M040-037 (24218)).

Section 3. Copies of the proposed Intergovernmental Agreement are on file in the Office of the City Clerk and are available for inspection by the public.

Section 4. This ordinance shall take effect five days after publication following final passage.

INTRODUCED, READ, AND ORDERED PUBLISHED this 1st day of March, 2021.

PASSED, ADOPTED, AND APPROVED this ____ day of _____, 2021.

Marc Williams, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:

Rachel A. Morris, City Attorney

Publication dates: March 4, 2021

By: _____

STATE OF COLORADO INTERGOVERNMENTAL AGREEMENT

Signature and Cover Page

State Agency Department of Transportation		Agreement Routing Number 21-HA1-XC-03185	
Local Agency CITY OF ARVADA		Agreement Effective Date The later of the effective date or December 08, 2020	
Agreement Description Intersection Imp. @ 64th & Simms / 80th & Vance Dr.		Agreement Expiration Date December 07, 2030	
Project # SHO M040-037 (24218)	Region # 1	Contract Writer DZ	Agreement Maximum Amount \$1,650,000.00

THE PARTIES HERETO HAVE EXECUTED THIS AGREEMENT

Each person signing this Agreement represents and warrants that he or she is duly authorized to execute this Agreement and to bind the Party authorizing his or her signature.

LOCAL AGENCY CITY OF ARVADA _____ Marc Williams, Mayor Date: _____	STATE OF COLORADO Jared S. Polis, Governor Department of Transportation Shoshana M. Lew, Executive Director _____ Stephen Harelson, P.E., Chief Engineer Date: _____
Additional Local Agency Signatures _____ Kristen Rush, City Clerk Date: _____ _____ Approved As To Form: Emily Grogg, City Attorney Date: _____	LEGAL REVIEW Philip J. Weiser, Attorney General _____ Assistant Attorney General _____ By: (Print Name and Title) Date: _____
In accordance with §24-30-202 C.R.S., this Agreement is not valid until signed and dated below by the State Controller or an authorized delegate. STATE CONTROLLER Robert Jaros, CPA, MBA, JD By: _____ Department of Transportation Effective Date: _____	

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EXHIBIT A, STATEMENT OF WORK
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EXHIBIT F, CERTIFICATION FOR FEDERAL-AID AGREEMENTS
EXHIBIT G, DISADVANTAGED BUSINESS ENTERPRISE
EXHIBIT H, LOCAL AGENCY PROCEDURES FOR CONSULTANT SERVICES
EXHIBIT I, FEDERAL-AID AGREEMENT PROVISIONS FOR CONSTRUCTION AGREEMENTS
EXHIBIT J, ADDITIONAL FEDERAL REQUIREMENTS
EXHIBIT K, FFATA SUPPLEMENTAL FEDERAL PROVISIONS
EXHIBIT L, SAMPLE SUBRECIPIENT MONITORING AND RISK ASSESSMENT FORM
EXHIBIT M, OMB UNIFORM GUIDANCE FOR FEDERAL AWARDS

1. PARTIES

This Agreement is entered into by and between Local Agency named on the Signature and Cover Page for this Agreement (“Local Agency”), and the STATE OF COLORADO acting by and through the State agency named on the Signature and Cover Page for this Agreement (the “State” or “CDOT”). Local Agency and the State agree to the terms and conditions in this Agreement.

2. TERM AND EFFECTIVE DATE

A. Effective Date

This Agreement shall not be valid or enforceable until the Effective Date, and Agreement Funds shall be expended within the dates shown in **Exhibit C** for each respective phase (“Phase Performance Period(s)”). The State shall not be bound by any provision of this Agreement before the Effective Date, and shall have no obligation to pay Local Agency for any Work performed or expense incurred before 1) the Effective Date of this original Agreement; 2) before the encumbering document for the respective phase *and* the official

Notice to Proceed for the respective phase; or 3) after the Final Phase Performance End Date, as shown in **Exhibit C**. Additionally, the State shall have no obligation to pay Local Agency for any Work performed or expense incurred after the Agreement Expiration Date or after required billing deadline specified in **§7.B.i.e.**, the expiration of Multimodal Transportation Options Funding (“MMOF”) if applicable, whichever is sooner. The State’s obligation to pay Agreement Funds exclusive of MMOF will continue until the Agreement Expiration Date. If Agreement Funds expire before the Agreement Expiration Date, then no payments will be made after expiration of Agreement Funds.

B. Initial Term

The Parties’ respective performances under this Agreement shall commence on the Agreement Effective Date shown on the Signature and Cover Page for this Agreement and shall terminate on December 07, 2030 as shown on the Signature and Cover Page for this Agreement, unless sooner terminated or further extended in accordance with the terms of this Agreement.

C. Early Termination in the Public Interest

The State is entering into this Agreement to serve the public interest of the State of Colorado as determined by its Governor, General Assembly, or Courts. If this Agreement ceases to further the public interest of the State, the State, in its discretion, may terminate this Agreement in whole or in part. This subsection shall not apply to a termination of this Agreement by the State for breach by Local Agency, which shall be governed by **§14.A.i**.

i. Method and Content

The State shall notify Local Agency of such termination in accordance with **§16**. The notice shall specify the effective date of the termination and whether it affects all or a portion of this Agreement.

ii. Obligations and Rights

Upon receipt of a termination notice for termination in the public interest, Local Agency shall be subject to **§14.A.i.a**

iii. Payments

If the State terminates this Agreement in the public interest, the State shall pay Local Agency an amount equal to the percentage of the total reimbursement payable under this Agreement that corresponds to the percentage of Work satisfactorily completed and accepted, as determined by the State, less payments previously made. Additionally, if this Agreement is less than 60% completed, as determined by the State, the State may reimburse Local Agency for a portion of actual out-of-pocket expenses, not otherwise reimbursed under this Agreement, incurred by Local Agency which are directly attributable to the uncompleted portion of Local Agency’s obligations, provided that the sum of any and all reimbursement shall not exceed the maximum amount payable to Local Agency hereunder.

3. AUTHORITY

Authority to enter into this Agreement exists in the law as follows:

A. Federal Authority

Pursuant to Title I, Subtitle A, of the “Fixing America’s Surface Transportation Act” (FAST Act) of 2015, and to applicable provisions of Title 23 of the United States Code and implementing regulations at Title 23 of the Code of Federal Regulations, as may be amended, (collectively referred to hereinafter as the “Federal Provisions”), certain federal funds have been and are expected to continue to be allocated for transportation projects requested by Local Agency and eligible under the Surface Transportation Improvement Program that has been proposed by the State and approved by the Federal Highway Administration (“FHWA”).

B. State Authority

Pursuant to CRS §43-1-223 and to applicable portions of the Federal Provisions, the State is responsible for the general administration and supervision of performance of projects in the Program, including the administration of federal funds for a Program project performed by a Local Agency under a contract with the State. This Agreement is executed under the authority of CRS §§29-1-203, 43-1-110; 43-1-116, 43-2-

101(4)(c) and 43-2-104.5.

4. PURPOSE

The purpose of this Agreement is to disburse Federal funds to the Local Agency pursuant to CDOT's Stewardship Agreement with the FHWA.

5. DEFINITIONS

The following terms shall be construed and interpreted as follows:

- A. **"Agreement"** means this agreement, including all attached Exhibits, all documents incorporated by reference, all referenced statutes, rules and cited authorities, and any future modifications thereto.
- B. **"Agreement Funds"** means the funds that have been appropriated, designated, encumbered, or otherwise made available for payment by the State under this Agreement.
- C. **"Award"** means an award by a Recipient to a Subrecipient funded in whole or in part by a Federal Award. The terms and conditions of the Federal Award flow down to the Award unless the terms and conditions of the Federal Award specifically indicate otherwise.
- D. **"Budget"** means the budget for the Work described in **Exhibit C**.
- E. **"Business Day"** means any day in which the State is open and conducting business, but shall not include Saturday, Sunday or any day on which the State observes one of the holidays listed in §24-11-101(1) C.R.S.
- F. **"Consultant"** means a professional engineer or designer hired by Local Agency to design the Work Product.
- G. **"Contractor"** means the general construction contractor hired by Local Agency to construct the Work.
- H. **"CORA"** means the Colorado Open Records Act, §§24-72-200.1 *et. seq.*, C.R.S.
- I. **"Effective Date"** means the date on which this Agreement is approved and signed by the Colorado State Controller or designee, as shown on the Signature and Cover Page for this Agreement.
- J. **"Evaluation"** means the process of examining Local Agency's Work and rating it based on criteria established in **§6, Exhibit A** and **Exhibit E**.
- K. **"Exhibits"** means the following exhibits attached to this Agreement:
 - i. **Exhibit A**, Statement of Work.
 - ii. **Exhibit B**, Sample Option Letter.
 - iii. **Exhibit C**, Funding Provisions
 - iv. **Exhibit D**, Local Agency Resolution
 - v. **Exhibit E**, Local Agency Contract Administration Checklist
 - vi. **Exhibit F**, Certification for Federal-Aid Contracts
 - vii. **Exhibit G**, Disadvantaged Business Enterprise
 - viii. **Exhibit H**, Local Agency Procedures for Consultant Services
 - ix. **Exhibit I**, Federal-Aid Contract Provisions for Construction Contracts
 - x. **Exhibit J**, Additional Federal Requirements
 - xi. **Exhibit K**, The Federal Funding Accountability and Transparency Act of 2006 (FFATA) Supplemental Federal Provisions
 - xii. **Exhibit L**, Sample Sub-Recipient Monitoring and Risk Assessment Form
 - xiii. **Exhibit M**, Supplemental Provisions for Federal Awards Subject to The Office of Management and Budget Uniform Administrative Requirements, Cost principles, and Audit Requirements for Federal Awards (the "Uniform Guidance")
- L. **"Federal Award"** means an award of Federal financial assistance or a cost-reimbursement contract under the Federal Acquisition Requirements by a Federal Awarding Agency to a Recipient. "Federal Award" also means an agreement setting forth the terms and conditions of the Federal Award. The term does not include payments to a contractor or payments to an individual that is a beneficiary of a Federal program.
- M. **"Federal Awarding Agency"** means a Federal agency providing a Federal Award to a Recipient.

- N. **"FHWA"** means the Federal Highway Administration, which is one of the twelve administrations under the Office of the Secretary of Transportation at the U.S. Department of Transportation. FHWA provides stewardship over the construction, maintenance and preservation of the Nation's highways and tunnels. FHWA is the Federal Awarding Agency for the Federal Award which is the subject of this Agreement.
- O. **"Goods"** means any movable material acquired, produced, or delivered by Local Agency as set forth in this Agreement and shall include any movable material acquired, produced, or delivered by Local Agency in connection with the Services.
- P. **"Incident"** means any accidental or deliberate event that results in or constitutes an imminent threat of the unauthorized access or disclosure of State Confidential Information or of the unauthorized modification, disruption, or destruction of any State Records.
- Q. **"Initial Term"** means the time period defined in **§2.B**
- R. **"Multimodal Transportation Options Funding"** or **"MMOF"** means money transferred from the general fund to the fund pursuant to C.R.S. §§24-75-219 (5)(a)(III) and (5)(b)(III) and any other money that the general assembly may appropriate or transfer to the fund.
- S. **"Notice to Proceed"** means the letter issued by the State to the Local Agency stating the date the Local Agency can begin work subject to the conditions of this Agreement.
- T. **"OMB"** means the Executive Office of the President, Office of Management and Budget.
- U. **"Oversight"** means the term as it is defined in the Stewardship Agreement between CDOT and the FHWA.
- V. **"Party"** means the State or Local Agency, and **"Parties"** means both the State and Local Agency.
- W. **"PII"** means personally identifiable information including, without limitation, any information maintained by the State about an individual that can be used to distinguish or trace an individual's identity, such as name, social security number, date and place of birth, mother's maiden name, or biometric records; and any other information that is linked or linkable to an individual, such as medical, educational, financial, and employment information. PII includes, but is not limited to, all information defined as personally identifiable information in §24-72-501 C.R.S.
- X. **"Recipient"** means the Colorado Department of Transportation (CDOT) for this Federal Award.
- Y. **"Services"** means the services to be performed by Local Agency as set forth in this Agreement, and shall include any services to be rendered by Local Agency in connection with the Goods.
- Z. **"State Confidential Information"** means any and all State Records not subject to disclosure under CORA. State Confidential Information shall include, but is not limited to, PII and State personnel records not subject to disclosure under CORA.
- AA. **"State Fiscal Rules"** means the fiscal rules promulgated by the Colorado State Controller pursuant to §24-30-202(13)(a).
- BB. **"State Fiscal Year"** means a 12 month period beginning on July 1 of each calendar year and ending on June 30 of the following calendar year. If a single calendar year follows the term, then it means the State Fiscal Year ending in that calendar year.
- CC. **"State Purchasing Director"** means the position described in the Colorado Procurement Code and its implementing regulations.
- DD. **"State Records"** means any and all State data, information, and records, regardless of physical form, including, but not limited to, information subject to disclosure under CORA.
- EE. **"Subcontractor"** means third-parties, if any, engaged by Local Agency to aid in performance of the Work.
- FF. **"Subrecipient"** means a non-Federal entity that receives a sub-award from a Recipient to carry out part of a Federal program, but does not include an individual that is a beneficiary of such program. A Subrecipient may also be a recipient of other Federal Awards directly from a Federal Awarding Agency.
- GG. **"Uniform Guidance"** means the Office of Management and Budget Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, which supersedes requirements from OMB

Circulars A-21, A-87, A-110, A-122, A-89, A-102, and A-133, and the guidance in Circular A-50 on Single Audit Act follow-up.

HH. **“Work”** means the delivery of the Goods and performance of the Services in compliance with CDOT’s Local Agency Manual described in this Agreement.

II. **“Work Product”** means the tangible and intangible results of the Work, whether finished or unfinished, including drafts. Work Product includes, but is not limited to, documents, text, software (including source code), research, reports, proposals, specifications, plans, notes, studies, data, images, photographs, negatives, pictures, drawings, designs, models, surveys, maps, materials, ideas, concepts, know-how, and any other results of the Work. “Work Product” does not include any material that was developed prior to the Effective Date that is used, without modification, in the performance of the Work.

Any other term used in this Agreement that is defined in an Exhibit shall be construed and interpreted as defined in that Exhibit.

6. STATEMENT OF WORK

Local Agency shall complete the Work as described in this Agreement and in accordance with the provisions of **Exhibit A**, and the Local Agency Manual. The State shall have no liability to compensate Local Agency for the delivery of any Goods or the performance of any Services that are not specifically set forth in this Agreement.

Work may be divided into multiple phases that have separate periods of performance. The State may not compensate for Work that Local Agency performs outside of its designated phase performance period. The performance period of phases, including, but not limited to Design, Construction, Right of Way, Utilities, or Environment phases, are identified in **Exhibit C**. The State may unilaterally modify **Exhibit C** from time to time, at its sole discretion, to extend the period of performance for a phase of Work authorized under this Agreement. To exercise this phase performance period extension option, the State will provide written notice to Local Agency in a form substantially equivalent to **Exhibit B**. The State’s unilateral extension of phase performance periods will not amend or alter in any way the funding provisions or any other terms specified in this Agreement, notwithstanding the options listed under **§7.E**

A. Local Agency Commitments

i. Design

If the Work includes preliminary design, final design, design work sheets, or special provisions and estimates (collectively referred to as the “Plans”), Local Agency shall ensure that it and its Contractors comply with and are responsible for satisfying the following requirements:

- a. Perform or provide the Plans to the extent required by the nature of the Work.
- b. Prepare final design in accordance with the requirements of the latest edition of the American Association of State Highway Transportation Officials (AASHTO) manual or other standard, such as the Uniform Building Code, as approved by the State.
- c. Prepare provisions and estimates in accordance with the most current version of the State’s Roadway and Bridge Design Manuals and Standard Specifications for Road and Bridge Construction or Local Agency specifications if approved by the State.
- d. Include details of any required detours in the Plans in order to prevent any interference of the construction Work and to protect the traveling public.
- e. Stamp the Plans as produced by a Colorado registered professional engineer.
- f. Provide final assembly of Plans and all other necessary documents.
- g. Ensure the Plans are accurate and complete.
- h. Make no further changes in the Plans following the award of the construction contract to Contractor unless agreed to in writing by the Parties. The Plans shall be considered final when approved in writing by CDOT, and when final, they will be deemed incorporated herein.

ii. Local Agency Work

- a. Local Agency shall comply with the requirements of the Americans With Disabilities Act (ADA) 42 U.S.C. § 12101, et. seq., and applicable federal regulations and standards as contained in the document “ADA Accessibility Requirements in CDOT Transportation Projects”.
 - b. Local Agency shall afford the State ample opportunity to review the Plans and shall make any changes in the Plans that are directed by the State to comply with FHWA requirements.
 - c. Local Agency may enter into a contract with a Consultant to perform all or any portion of the Plans and/or construction administration. Provided, however, if federal-aid funds are involved in the cost of such Work to be done by such Consultant, such Consultant contract (and the performance provision of the Plans under the contract) must comply with all applicable requirements of 23 C.F.R. Part 172 and with any procedures implementing those requirements as provided by the State, including those in **Exhibit H**. If Local Agency enters into a contract with a Consultant for the Work:
 - 1) Local Agency shall submit a certification that procurement of any Consultant contract complies with the requirements of 23 C.F.R. 172.5(1) prior to entering into such Consultant contract, subject to the State’s approval. If not approved by the State, Local Agency shall not enter into such Consultant contract.
 - 2) Local Agency shall ensure that all changes in the Consultant contract have prior approval by the State and FHWA and that they are in writing. Immediately after the Consultant contract has been awarded, one copy of the executed Consultant contract and any amendments shall be submitted to the State.
 - 3) Local Agency shall require that all billings under the Consultant contract comply with the State’s standardized billing format. Examples of the billing formats are available from the CDOT Agreements Office.
 - 4) Local Agency (and any Consultant) shall comply with 23 C.F.R. 172.5(b) and (d) and use the CDOT procedures described in **Exhibit H** to administer the Consultant contract.
 - 5) Local Agency may expedite any CDOT approval of its procurement process and/or Consultant contract by submitting a letter to CDOT from Local Agency’s attorney/authorized representative certifying compliance with **Exhibit H** and 23 C.F.R. 172.5(b) and (d).
 - 6) Local Agency shall ensure that the Consultant contract complies with the requirements of 49 CFR 18.36(i) and contains the following language verbatim:
 - (a) The design work under this Agreement shall be compatible with the requirements of the contract between Local Agency and the State (which is incorporated herein by this reference) for the design/construction of the project. The State is an intended third-party beneficiary of this agreement for that purpose.
 - (b) Upon advertisement of the project work for construction, the consultant shall make available services as requested by the State to assist the State in the evaluation of construction and the resolution of construction problems that may arise during the construction of the project.
 - (c) The consultant shall review the construction Contractor’s shop drawings for conformance with the contract documents and compliance with the provisions of the State’s publication, Standard Specifications for Road and Bridge Construction, in connection with this work.
 - (d) The State, in its sole discretion, may review construction plans, special provisions and estimates and may require Local Agency to make such changes therein as the State determines necessary to comply with State and FHWA requirements.
- iii. Construction
- If the Work includes construction, Local Agency shall perform the construction in accordance with the approved design plans and/or administer the construction in accordance with **Exhibit E**. Such administration shall include Work inspection and testing; approving sources of materials; performing required plant and shop inspections; documentation of contract payments, testing and inspection activities; preparing and approving pay estimates; preparing, approving and securing the funding for

contract modification orders and minor contract revisions; processing construction Contractor claims; construction supervision; and meeting the quality control requirements of the FHWA/CDOT Stewardship Agreement, as described in **Exhibit E**.

- a. The State may, after providing written notice of the reason for the suspension to Local Agency, suspend the Work, wholly or in part, due to the failure of Local Agency or its Contractor to correct conditions which are unsafe for workers or for such periods as the State may deem necessary due to unsuitable weather, or for conditions considered unsuitable for the prosecution of the Work, or for any other condition or reason deemed by the State to be in the public interest.
- b. Local Agency shall be responsible for the following:
 - 1) Appointing a qualified professional engineer, licensed in the State of Colorado, as Local Agency Project Engineer (LAPE), to perform engineering administration. The LAPE shall administer the Work in accordance with this Agreement, the requirements of the construction contract and applicable State procedures, as defined in the CDOT Local Agency Manual (https://www.codot.gov/business/designsupport/bulletins_manuals/2006-local-agency-manual).
 - 2) For the construction Services, advertising the call for bids, following its approval by the State, and awarding the construction contract(s) to the lowest responsible bidder(s).
 - (a) All Local Agency's advertising and bid awards pursuant to this Agreement shall comply with applicable requirements of 23 U.S.C. §112 and 23 C.F.R. Parts 633 and 635 and C.R.S. § 24-92-101 et seq. Those requirements include, without limitation, that Local Agency and its Contractor(s) incorporate Form 1273 (Exhibit I) in its entirety, verbatim, into any subcontract(s) for Services as terms and conditions thereof, as required by 23 C.F.R. 633.102(e).
 - (b) Local Agency may accept or reject the proposal of the apparent low bidder for Work on which competitive bids have been received. Local Agency must accept or reject such bids within 3 working days after they are publicly opened.
 - (c) If Local Agency accepts bids and makes awards that exceed the amount of available Agreement Funds, Local Agency shall provide the additional funds necessary to complete the Work or not award such bids.
 - (d) The requirements of §6.A.iii.b.2 also apply to any advertising and bid awards made by the State.
 - (e) The State (and in some cases FHWA) must approve in advance all Force Account Construction, and Local Agency shall not initiate any such Services until the State issues a written Notice to Proceed.

iv. Right of Way (ROW) and Acquisition/Relocation

- a. If Local Agency purchases a ROW for a State highway, including areas of influence, Local Agency shall convey the ROW to CDOT promptly upon the completion of the project/construction.
- b. Any acquisition/relocation activities shall comply with all applicable federal and State statutes and regulations, including but not limited to, the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, the Uniform Relocation Assistance and Real Property Acquisition Policies for Federal and Federally Assisted Programs, as amended (49 C.F.R. Part 24), CDOT's Right of Way Manual, and CDOT's Policy and Procedural Directives.
- c. The Parties' respective responsibilities for ensuring compliance with acquisition, relocation and incidentals depend on the level of federal participation as detailed in CDOT's Right of Way Manual (located at <http://www.codot.gov/business/manuals/right-of-way>); however, the State always retains oversight responsibilities.
- d. The Parties' respective responsibilities at each level of federal participation in CDOT's Right of Way Manual, and the State's reimbursement of Local Agency costs will be determined pursuant to the following categories:

- 1) Right of way acquisition (3111) for federal participation and non-participation;
- 2) Relocation activities, if applicable (3109);
- 3) Right of way incidentals, if applicable (expenses incidental to acquisition/relocation of right of way – 3114).

v. Utilities

If necessary, Local Agency shall be responsible for obtaining the proper clearance or approval from any utility company that may become involved in the Work. Prior to the Work being advertised for bids, Local Agency shall certify in writing to the State that all such clearances have been obtained.

vi. Railroads

If the Work involves modification of a railroad company's facilities and such modification will be accomplished by the railroad company, Local Agency shall make timely application to the Public Utilities Commission ("PUC") requesting its order providing for the installation of the proposed improvements. Local Agency shall not proceed with that part of the Work before obtaining the PUC's order. Local Agency shall also establish contact with the railroad company involved for the purpose of complying with applicable provisions of 23 C.F.R. 646, subpart B, concerning federal-aid projects involving railroad facilities, and:

- a. Execute an agreement with the railroad company setting out what work is to be accomplished and the location(s) thereof, and which costs shall be eligible for federal participation.
- b. Obtain the railroad's detailed estimate of the cost of the Work.
- c. Establish future maintenance responsibilities for the proposed installation.
- d. Proscribe in the agreement the future use or dispositions of the proposed improvements in the event of abandonment or elimination of a grade crossing.
- e. Establish future repair and/or replacement responsibilities, as between the railroad company and the Local Agency, in the event of accidental destruction or damage to the installation.

vii. Environmental Obligations

Local Agency shall perform all Work in accordance with the requirements of current federal and State environmental regulations, including the National Environmental Policy Act of 1969 (NEPA) as applicable.

viii. Maintenance Obligations

Local Agency shall maintain and operate the Work constructed under this Agreement at its own cost and expense during their useful life, in a manner satisfactory to the State and FHWA. Local Agency shall conduct such maintenance and operations in accordance with all applicable statutes, ordinances, and regulations pertaining to maintaining such improvements. The State and FHWA may make periodic inspections to verify that such improvements are being adequately maintained.

ix. Monitoring Obligations

Local Agency shall respond in a timely manner to and participate fully with the monitoring activities described in **§7.F.vi**.

B. State's Commitments

- i. The State will perform a final project inspection of the Work as a quality control/assurance activity. When all Work has been satisfactorily completed, the State will sign the FHWA Form 1212.
- ii. Notwithstanding any consents or approvals given by the State for the Plans, the State shall not be liable or responsible in any manner for the structural design, details or construction of any Work constituting major structures designed by, or that are the responsibility of, Local Agency, as identified in **Exhibit E**.

7. PAYMENTS

A. Maximum Amount

Payments to Local Agency are limited to the unpaid, obligated balance of the Agreement Funds set forth in **Exhibit C**. The State shall not pay Local Agency any amount under this Agreement that exceeds the Agreement Maximum set forth in **Exhibit C**.

B. Payment Procedures

i. Invoices and Payment

- a. The State shall pay Local Agency in the amounts and in accordance with conditions set forth in **Exhibit C**.
- b. Local Agency shall initiate payment requests by invoice to the State, in a form and manner approved by the State.
- c. The State shall pay each invoice within 45 days following the State's receipt of that invoice, so long as the amount invoiced correctly represents Work completed by Local Agency and previously accepted by the State during the term that the invoice covers. If the State determines that the amount of any invoice is not correct, then Local Agency shall make all changes necessary to correct that invoice.
- d. The acceptance of an invoice shall not constitute acceptance of any Work performed or deliverables provided under the Agreement.
- e. If a project is funded in part by the State with MMOF there is an expiration date for the funds. The expiration date applies to grants and local funds used to match grants. In order to receive payment from the State or credit for the match, Work must be completed prior to the expiration date of funding and invoiced in compliance with C.R.S. §§24-75-102(a) and 24-30-202(11). Billing for this work must be submitted 30 days prior to the end of the State Fiscal Year which is June 30th.

ii. Interest

Amounts not paid by the State within 45 days after the State's acceptance of the invoice shall bear interest on the unpaid balance beginning on the 46th day at the rate of 1% per month, as required by §24-30-202(24)(a), C.R.S., until paid in full; provided, however, that interest shall not accrue on unpaid amounts that the State disputes in writing. Local Agency shall invoice the State separately for accrued interest on delinquent amounts, and the invoice shall reference the delinquent payment, the number of days interest to be paid and the interest rate.

iii. Payment Disputes

If Local Agency disputes any calculation, determination, or amount of any payment, Local Agency shall notify the State in writing of its dispute within 30 days following the earlier to occur of Local Agency's receipt of the payment or notification of the determination or calculation of the payment by the State. The State will review the information presented by Local Agency and may make changes to its determination based on this review. The calculation, determination, or payment amount that results from the State's review shall not be subject to additional dispute under this subsection. No payment subject to a dispute under this subsection shall be due until after the State has concluded its review, and the State shall not pay any interest on any amount during the period it is subject to dispute under this subsection.

iv. Available Funds-Contingency-Termination

- a. The State is prohibited by law from making commitments beyond the term of the current State Fiscal Year. Payment to Local Agency beyond the current State Fiscal Year is contingent on the appropriation and continuing availability of Agreement Funds in any subsequent year (as provided in the Colorado Special Provisions). If federal funds or funds from any other non-State funds constitute all or some of the Agreement Funds, the State's obligation to pay Local Agency shall be contingent upon such non-State funding continuing to be made available for payment. Payments to be made pursuant to this Agreement shall be made only from Agreement Funds, and the State's liability for such payments shall be limited to the amount remaining of such Agreement Funds. If State, federal or other funds are not appropriated, or otherwise become unavailable to fund this Agreement, the State may, upon written notice, terminate this Agreement, in whole or in part, without incurring further liability. The State shall, however, remain obligated to pay for Services and Goods that are delivered and accepted prior to the effective date of notice of termination, and

this termination shall otherwise be treated as if this Agreement were terminated in the public interest as described in **§2.C**.

- b. If the agreement funds are terminated, the State can terminate the contract early. Payment due for work done to the date of termination will be processed in a manner consistent with **§2.C**.

v. Erroneous Payments

The State may recover, at the State's discretion, payments made to Local Agency in error for any reason, including, but not limited to, overpayments or improper payments, and unexpended or excess funds received by Local Agency. The State may recover such payments by deduction from subsequent payments under this Agreement, deduction from any payment due under any other contracts, grants or agreements between the State and Local Agency, or by any other appropriate method for collecting debts owed to the State. The close out of a Federal Award does not affect the right of FHWA or the State to disallow costs and recover funds on the basis of a later audit or other review. Any cost disallowance recovery is to be made within the Record Retention Period (as defined below in **§9.A.**).

C. Matching Funds

Local Agency shall provide matching funds as provided in **§7.A.** and **Exhibit C**. Local Agency shall have raised the full amount of matching funds prior to the Effective Date and shall report to the State regarding the status of such funds upon request. Local Agency's obligation to pay all or any part of any matching funds, whether direct or contingent, only extend to funds duly and lawfully appropriated for the purposes of this Agreement by the authorized representatives of Local Agency and paid into Local Agency's treasury. Local Agency represents to the State that the amount designated "Local Agency Matching Funds" in **Exhibit C** has been legally appropriated for the purpose of this Agreement by its authorized representatives and paid into its treasury. Local Agency may evidence such obligation by an appropriate ordinance/resolution or other authority letter expressly authorizing Local Agency to enter into this Agreement and to expend its match share of the Work. A copy of any such ordinance/resolution or authority letter is attached hereto as **Exhibit D**. Local Agency does not by this Agreement irrevocably pledge present cash reserves for payments in future fiscal years, and this Agreement is not intended to create a multiple-fiscal year debt of Local Agency. Local Agency shall not pay or be liable for any claimed interest, late charges, fees, taxes, or penalties of any nature, except as required by Local Agency's laws or policies.

D. Reimbursement of Local Agency Costs

The State shall reimburse Local Agency's allowable costs, not exceeding the maximum total amount described in **Exhibit C** and **§7**. The applicable principles described in 2 C.F.R. Part 200 shall govern the State's obligation to reimburse all costs incurred by Local Agency and submitted to the State for reimbursement hereunder, and Local Agency shall comply with all such principles. The State shall reimburse Local Agency for the federal-aid share of properly documented costs related to the Work after review and approval thereof, subject to the provisions of this Agreement and **Exhibit C**. Local Agency costs for Work performed prior to the Effective Date shall not be reimbursed absent specific allowance of pre-award costs and indication that the Federal Award funding is retroactive. Local Agency costs for Work performed after any Performance Period End Date for a respective phase of the Work, is not reimbursable. Allowable costs shall be:

- i. Reasonable and necessary to accomplish the Work and for the Goods and Services provided.
- ii. Actual net cost to Local Agency (i.e. the price paid minus any items of value received by Local Agency that reduce the cost actually incurred).

E. Unilateral Modification of Agreement Funds Budget by State Option Letter

The State may, at its discretion, issue an "Option Letter" to Local Agency to add or modify Work phases in the Work schedule in **Exhibit C** if such modifications do not increase total budgeted Agreement Funds. Such Option Letters shall amend and update **Exhibit C**, Sections 2 or 4 of the Table, and sub-sections B and C of the **Exhibit C**. Option Letters shall not be deemed valid until signed by the State Controller or an authorized delegate. Modification of **Exhibit C** by unilateral Option Letter is permitted only in the specific scenarios listed below. The State will exercise such options by providing Local Agency a fully executed Option Letter, in a form substantially equivalent to **Exhibit B**. Such Option Letters will be incorporated into this Agreement.

i. Option to Begin a Phase and/or Increase or Decrease the Encumbrance Amount

The State may require by Option Letter that Local Agency begin a new Work phase that may include Design, Construction, Environmental, Utilities, ROW Incidentals or Miscellaneous Work (but may not include Right of Way Acquisition/Relocation or Railroads) as detailed in **Exhibit A**. Such Option Letters may not modify the other terms and conditions stated in this Agreement, and must decrease the amount budgeted and encumbered for one or more other Work phases so that the total amount of budgeted Agreement Funds remains the same. The State may also issue a unilateral Option Letter to simultaneously increase and decrease the total encumbrance amount of two or more existing Work phases, as long as the total amount of budgeted Agreement Funds remains the same, replacing the original Agreement Funding exhibit (**Exhibit C**) with an updated **Exhibit C-1** (with subsequent exhibits labeled **C-2**, **C-3**, etc.).

ii. Option to Transfer Funds from One Phase to Another Phase.

The State may require or permit Local Agency to transfer Agreement Funds from one Work phase (Design, Construction, Environmental, Utilities, ROW Incidentals or Miscellaneous) to another phase as a result of changes to State, federal, and local match funding. In such case, the original funding exhibit (**Exhibit C**) will be replaced with an updated **Exhibit C-1** (with subsequent exhibits labeled **C-2**, **C-3**, etc.) attached to the Option Letter. The Agreement Funds transferred from one Work phase to another are subject to the same terms and conditions stated in the original Agreement with the total budgeted Agreement Funds remaining the same. The State may unilaterally exercise this option by providing a fully executed Option Letter to Local Agency within thirty (30) days before the initial targeted start date of the Work phase, in a form substantially equivalent to **Exhibit B**.

iii. Option to Exercise Options i and ii.

The State may require Local Agency to add a Work phase as detailed in **Exhibit A**, and encumber and transfer Agreement Funds from one Work phase to another. The original funding exhibit (**Exhibit C**) in the original Agreement will be replaced with an updated **Exhibit C-1** (with subsequent exhibits labeled **C-2**, **C-3**, etc.) attached to the Option Letter. The addition of a Work phase and encumbrance and transfer of Agreement Funds are subject to the same terms and conditions stated in the original Agreement with the total budgeted Agreement Funds remaining the same. The State may unilaterally exercise this option by providing a fully executed Option Letter to Local Agency within 30 days before the initial targeted start date of the Work phase, in a form substantially equivalent to **Exhibit B**.

iv. Option to Update a Work Phase Performance Period and/or modify information required under the OMB Uniform Guidance, as outlined in **Exhibit C**. The State may update any information contained in **Exhibit C**, Sections 2 and 4 of the Table, and sub-sections B and C of the **Exhibit C**.

F. Accounting

Local Agency shall establish and maintain accounting systems in accordance with generally accepted accounting standards (a separate set of accounts, or as a separate and integral part of its current accounting scheme). Such accounting systems shall, at a minimum, provide as follows:

i. Local Agency Performing the Work

If Local Agency is performing the Work, it shall document all allowable costs, including any approved Services contributed by Local Agency or subcontractors, using payrolls, time records, invoices, contracts, vouchers, and other applicable records.

ii. Local Agency-Checks or Draws

Checks issued or draws made by Local Agency shall be made or drawn against properly signed vouchers detailing the purpose thereof. Local Agency shall keep on file all checks, payrolls, invoices, contracts, vouchers, orders, and other accounting documents in the office of Local Agency, clearly identified, readily accessible, and to the extent feasible, separate and apart from all other Work documents.

iii. State-Administrative Services

The State may perform any necessary administrative support services required hereunder. Local Agency shall reimburse the State for the costs of any such services from the budgeted Agreement Funds as

provided for in **Exhibit C**. If FHWA Agreement Funds are or become unavailable, or if Local Agency terminates this Agreement prior to the Work being approved by the State or otherwise completed, then all actual incurred costs of such services and assistance provided by the State shall be reimbursed to the State by Local Agency at its sole expense.

iv. Local Agency-Invoices

Local Agency's invoices shall describe in detail the reimbursable costs incurred by Local Agency for which it seeks reimbursement, the dates such costs were incurred and the amounts thereof, and Local Agency shall not submit more than one invoice per month.

v. Invoicing Within 60 Days

The State shall not be liable to reimburse Local Agency for any costs invoiced more than 60 days after the date on which the costs were incurred, including costs included in Local Agency's final invoice. The State may withhold final payment to Local Agency at the State's sole discretion until completion of final audit. Any costs incurred by Local Agency that are not allowable under 2 C.F.R. Part 200 shall be Local Agency's responsibility, and the State will deduct such disallowed costs from any payments due to Local Agency. The State will not reimburse costs for Work performed after the Performance Period End Date for a respective Work phase. The State will not reimburse costs for Work performed prior to Performance Period End Date, but for which an invoice is received more than 60 days after the Performance Period End Date.

vi. Risk Assessment & Monitoring

Pursuant to 2 C.F.R. 200.331(b), – CDOT will evaluate Local Agency's risk of noncompliance with federal statutes, regulations, and terms and conditions of this Agreement. Local Agency shall complete a Risk Assessment Form (**Exhibit L**) when that may be requested by CDOT. The risk assessment is a quantitative and/or qualitative determination of the potential for Local Agency's non-compliance with the requirements of the Federal Award. The risk assessment will evaluate some or all of the following factors:

- Experience: Factors associated with the experience and history of the Subrecipient with the same or similar Federal Awards or grants.
- Monitoring/Audit: Factors associated with the results of the Subrecipient's previous audits or monitoring visits, including those performed by the Federal Awarding Agency, when the Subrecipient also receives direct federal funding. Include audit results if Subrecipient receives single audit, where the specific award being assessed was selected as a major program.
- Operation: Factors associated with the significant aspects of the Subrecipient's operations, in which failure could impact the Subrecipient's ability to perform and account for the contracted goods or services.
- Financial: Factors associated with the Subrecipient's financial stability and ability to comply with financial requirements of the Federal Award.
- Internal Controls: Factors associated with safeguarding assets and resources, deterring and detecting errors, fraud and theft, ensuring accuracy and completeness of accounting data, producing reliable and timely financial and management information, and ensuring adherence to its policies and plans.
- Impact: Factors associated with the potential impact of a Subrecipient's non-compliance to the overall success of the program objectives.
- Program Management: Factors associated with processes to manage critical personnel, approved written procedures, and knowledge of rules and regulations regarding federal-aid projects.

Following Local Agency's completion of the Risk Assessment Tool (**Exhibit L**), CDOT will determine the level of monitoring it will apply to Local Agency's performance of the Work. This risk assessment may be re-evaluated after CDOT begins performing monitoring activities.

G. Close Out

Local Agency shall close out this Award within 90 days after the Final Phase Performance End Date. Close out requires Local Agency's submission to the State of all deliverables defined in this Agreement, and Local Agency's final reimbursement request or invoice. The State will withhold 5% of allowable costs until all final documentation has been submitted and accepted by the State as substantially complete. If FHWA has not closed this Federal Award within 1 year and 90 days after the Final Phase Performance End Date due to Local Agency's failure to submit required documentation, then Local Agency may be prohibited from applying for new Federal Awards through the State until such documentation is submitted and accepted.

8. REPORTING - NOTIFICATION

A. Quarterly Reports

In addition to any reports required pursuant to §19 or pursuant to any exhibit, for any contract having a term longer than 3 months, Local Agency shall submit, on a quarterly basis, a written report specifying progress made for each specified performance measure and standard in this Agreement. Such progress report shall be in accordance with the procedures developed and prescribed by the State. Progress reports shall be submitted to the State not later than five (5) Business Days following the end of each calendar quarter or at such time as otherwise specified by the State.

B. Litigation Reporting

If Local Agency is served with a pleading or other document in connection with an action before a court or other administrative decision making body, and such pleading or document relates to this Agreement or may affect Local Agency's ability to perform its obligations under this Agreement, Local Agency shall, within 10 days after being served, notify the State of such action and deliver copies of such pleading or document to the State's principal representative identified in §16.

C. Performance and Final Status

Local Agency shall submit all financial, performance and other reports to the State no later than 60 calendar days after the Final Phase Performance End Date or sooner termination of this Agreement, containing an Evaluation of Subrecipient's performance and the final status of Subrecipient's obligations hereunder.

D. Violations Reporting

Local Agency must disclose, in a timely manner, in writing to the State and FHWA, all violations of federal or State criminal law involving fraud, bribery, or gratuity violations potentially affecting the Federal Award. Penalties for noncompliance may include suspension or debarment (2 CFR Part 180 and 31 U.S.C. 3321).

9. LOCAL AGENCY RECORDS

A. Maintenance

Local Agency shall make, keep, maintain, and allow inspection and monitoring by the State of a complete file of all records, documents, communications, notes and other written materials, electronic media files, and communications, pertaining in any manner to the Work or the delivery of Services (including, but not limited to the operation of programs) or Goods hereunder. Local Agency shall maintain such records for a period (the "Record Retention Period") of three years following the date of submission to the State of the final expenditure report, or if this Award is renewed quarterly or annually, from the date of the submission of each quarterly or annual report, respectively. If any litigation, claim, or audit related to this Award starts before expiration of the Record Retention Period, the Record Retention Period shall extend until all litigation, claims, or audit findings have been resolved and final action taken by the State or Federal Awarding Agency. The Federal Awarding Agency, a cognizant agency for audit, oversight or indirect costs, and the State, may notify Local Agency in writing that the Record Retention Period shall be extended. For records for real property and equipment, the Record Retention Period shall extend three years following final disposition of such property.

B. Inspection

Local Agency shall permit the State to audit, inspect, examine, excerpt, copy, and transcribe Local Agency Records during the Record Retention Period. Local Agency shall make Local Agency Records available during normal business hours at Local Agency's office or place of business, or at other mutually agreed upon

times or locations, upon no fewer than 2 Business Days' notice from the State, unless the State determines that a shorter period of notice, or no notice, is necessary to protect the interests of the State.

C. Monitoring

The State will monitor Local Agency's performance of its obligations under this Agreement using procedures as determined by the State. The State shall monitor Local Agency's performance in a manner that does not unduly interfere with Local Agency's performance of the Work.

D. Final Audit Report

Local Agency shall promptly submit to the State a copy of any final audit report of an audit performed on Local Agency's records that relates to or affects this Agreement or the Work, whether the audit is conducted by Local Agency or a third party.

10. CONFIDENTIAL INFORMATION-STATE RECORDS

A. Confidentiality

Local Agency shall hold and maintain, and cause all Subcontractors to hold and maintain, any and all State Records that the State provides or makes available to Local Agency for the sole and exclusive benefit of the State, unless those State Records are otherwise publicly available at the time of disclosure or are subject to disclosure by Local Agency under CORA. Local Agency shall not, without prior written approval of the State, use for Local Agency's own benefit, publish, copy, or otherwise disclose to any third party, or permit the use by any third party for its benefit or to the detriment of the State, any State Records, except as otherwise stated in this Agreement. Local Agency shall provide for the security of all State Confidential Information in accordance with all policies promulgated by the Colorado Office of Information Security and all applicable laws, rules, policies, publications, and guidelines. Local Agency shall immediately forward any request or demand for State Records to the State's principal representative.

B. Other Entity Access and Nondisclosure Agreements

Local Agency may provide State Records to its agents, employees, assigns and Subcontractors as necessary to perform the Work, but shall restrict access to State Confidential Information to those agents, employees, assigns and Subcontractors who require access to perform their obligations under this Agreement. Local Agency shall ensure all such agents, employees, assigns, and Subcontractors sign nondisclosure agreements with provisions at least as protective as those in this Agreement, and that the nondisclosure agreements are in force at all times the agent, employee, assign or Subcontractor has access to any State Confidential Information. Local Agency shall provide copies of those signed nondisclosure agreements to the State upon request.

C. Use, Security, and Retention

Local Agency shall use, hold and maintain State Confidential Information in compliance with any and all applicable laws and regulations in facilities located within the United States, and shall maintain a secure environment that ensures confidentiality of all State Confidential Information wherever located. Local Agency shall provide the State with access, subject to Local Agency's reasonable security requirements, for purposes of inspecting and monitoring access and use of State Confidential Information and evaluating security control effectiveness. Upon the expiration or termination of this Agreement, Local Agency shall return State Records provided to Local Agency or destroy such State Records and certify to the State that it has done so, as directed by the State. If Local Agency is prevented by law or regulation from returning or destroying State Confidential Information, Local Agency warrants it will guarantee the confidentiality of, and cease to use, such State Confidential Information.

D. Incident Notice and Remediation

If Local Agency becomes aware of any Incident, it shall notify the State immediately and cooperate with the State regarding recovery, remediation, and the necessity to involve law enforcement, as determined by the State. Unless Local Agency can establish that none of Local Agency or any of its agents, employees, assigns or Subcontractors are the cause or source of the Incident, Local Agency shall be responsible for the cost of notifying each person who may have been impacted by the Incident. After an Incident, Local Agency shall take steps to reduce the risk of incurring a similar type of Incident in the future as directed by the State, which

may include, but is not limited to, developing and implementing a remediation plan that is approved by the State at no additional cost to the State.

11. CONFLICTS OF INTEREST

A. Actual Conflicts of Interest

Local Agency shall not engage in any business or activities, or maintain any relationships that conflict in any way with the full performance of the obligations of Local Agency under this Agreement. Such a conflict of interest would arise when a Local Agency or Subcontractor's employee, officer or agent were to offer or provide any tangible personal benefit to an employee of the State, or any member of his or her immediate family or his or her partner, related to the award of, entry into or management or oversight of this Agreement. Officers, employees and agents of Local Agency may neither solicit nor accept gratuities, favors or anything of monetary value from contractors or parties to subcontracts.

B. Apparent Conflicts of Interest

Local Agency acknowledges that, with respect to this Agreement, even the appearance of a conflict of interest shall be harmful to the State's interests. Absent the State's prior written approval, Local Agency shall refrain from any practices, activities or relationships that reasonably appear to be in conflict with the full performance of Local Agency's obligations under this Agreement.

C. Disclosure to the State

If a conflict or the appearance of a conflict arises, or if Local Agency is uncertain whether a conflict or the appearance of a conflict has arisen, Local Agency shall submit to the State a disclosure statement setting forth the relevant details for the State's consideration. Failure to promptly submit a disclosure statement or to follow the State's direction in regard to the actual or apparent conflict constitutes a breach of this Agreement.

12. INSURANCE

Local Agency shall obtain and maintain, and ensure that each Subcontractor shall obtain and maintain, insurance as specified in this section at all times during the term of this Agreement. All insurance policies required by this Agreement that are not provided through self-insurance shall be issued by insurance companies with an AM Best rating of A-VIII or better.

A. Local Agency Insurance

Local Agency is a "public entity" within the meaning of the Colorado Governmental Immunity Act, §24-10-101, *et seq.*, C.R.S. (the "GIA") and shall maintain at all times during the term of this Agreement such liability insurance, by commercial policy or self-insurance, as is necessary to meet its liabilities under the GIA.

B. Subcontractor Requirements

Local Agency shall ensure that each Subcontractor that is a public entity within the meaning of the GIA, maintains at all times during the terms of this Agreement, such liability insurance, by commercial policy or self-insurance, as is necessary to meet the Subcontractor's obligations under the GIA. Local Agency shall ensure that each Subcontractor that is not a public entity within the meaning of the GIA, maintains at all times during the terms of this Agreement all of the following insurance policies:

i. Workers' Compensation

Workers' compensation insurance as required by state statute, and employers' liability insurance covering all Local Agency or Subcontractor employees acting within the course and scope of their employment.

ii. General Liability

Commercial general liability insurance written on an Insurance Services Office occurrence form, covering premises operations, fire damage, independent contractors, products and completed operations, blanket contractual liability, personal injury, and advertising liability with minimum limits as follows:

- a. \$1,000,000 each occurrence;
- b. \$1,000,000 general aggregate;

- c. \$1,000,000 products and completed operations aggregate; and
 - d. \$50,000 any 1 fire.
- iii. Automobile Liability
Automobile liability insurance covering any auto (including owned, hired and non-owned autos) with a minimum limit of \$1,000,000 each accident combined single limit.
- iv. Protected Information
Liability insurance covering all loss of State Confidential Information, such as PII, PHI, PCI, Tax Information, and CJI, and claims based on alleged violations of privacy rights through improper use or disclosure of protected information with minimum limits as follows:
 - a. \$1,000,000 each occurrence; and
 - b. \$2,000,000 general aggregate.
- v. Professional Liability Insurance
Professional liability insurance covering any damages caused by an error, omission or any negligent act with minimum limits as follows:
 - a. \$1,000,000 each occurrence; and
 - b. \$1,000,000 general aggregate.
- vi. Crime Insurance
Crime insurance including employee dishonesty coverage with minimum limits as follows:
 - a. \$1,000,000 each occurrence; and
 - b. \$1,000,000 general aggregate.
- C. Additional Insured
The State shall be named as additional insured on all commercial general liability policies (leases and construction contracts require additional insured coverage for completed operations) required of Local Agency and Subcontractors. In the event of cancellation of any commercial general liability policy, the carrier shall provide at least 10 days prior written notice to CDOT.
- D. Primacy of Coverage
Coverage required of Local Agency and each Subcontractor shall be primary over any insurance or self-insurance program carried by Local Agency or the State.
- E. Cancellation
All commercial insurance policies shall include provisions preventing cancellation or non-renewal, except for cancellation based on non-payment of premiums, without at least 30 days prior notice to Local Agency and Local Agency shall forward such notice to the State in accordance with §16 within 7 days of Local Agency's receipt of such notice.
- F. Subrogation Waiver
All commercial insurance policies secured or maintained by Local Agency or its Subcontractors in relation to this Agreement shall include clauses stating that each carrier shall waive all rights of recovery under subrogation or otherwise against Local Agency or the State, its agencies, institutions, organizations, officers, agents, employees, and volunteers.
- G. Certificates
For each commercial insurance plan provided by Local Agency under this Agreement, Local Agency shall provide to the State certificates evidencing Local Agency's insurance coverage required in this Agreement within 7 Business Days following the Effective Date. Local Agency shall provide to the State certificates evidencing Subcontractor insurance coverage required under this Agreement within 7 Business Days following the Effective Date, except that, if Local Agency's subcontract is not in effect as of the Effective

Date, Local Agency shall provide to the State certificates showing Subcontractor insurance coverage required under this Agreement within 7 Business Days following Local Agency's execution of the subcontract. No later than 15 days before the expiration date of Local Agency's or any Subcontractor's coverage, Local Agency shall deliver to the State certificates of insurance evidencing renewals of coverage. At any other time during the term of this Agreement, upon request by the State, Local Agency shall, within 7 Business Days following the request by the State, supply to the State evidence satisfactory to the State of compliance with the provisions of this **§12**.

13. BREACH

A. Defined

The failure of a Party to perform any of its obligations in accordance with this Agreement, in whole or in part or in a timely or satisfactory manner, shall be a breach. The institution of proceedings under any bankruptcy, insolvency, reorganization or similar law, by or against Local Agency, or the appointment of a receiver or similar officer for Local Agency or any of its property, which is not vacated or fully stayed within 30 days after the institution of such proceeding, shall also constitute a breach.

B. Notice and Cure Period

In the event of a breach, the aggrieved Party shall give written notice of breach to the other Party. If the notified Party does not cure the breach, at its sole expense, within 30 days after the delivery of written notice, the Party may exercise any of the remedies as described in **§14** for that Party. Notwithstanding any provision of this Agreement to the contrary, the State, in its discretion, need not provide notice or a cure period and may immediately terminate this Agreement in whole or in part or institute any other remedy in the Agreement in order to protect the public interest of the State.

14. REMEDIES

A. State's Remedies

If Local Agency is in breach under any provision of this Agreement and fails to cure such breach, the State, following the notice and cure period set forth in **§13.B**, shall have all of the remedies listed in this **§14.A**, in addition to all other remedies set forth in this Agreement or at law. The State may exercise any or all of the remedies available to it, in its discretion, concurrently or consecutively.

i. Termination for Breach

In the event of Local Agency's uncured breach, the State may terminate this entire Agreement or any part of this Agreement. Local Agency shall continue performance of this Agreement to the extent not terminated, if any.

a. Obligations and Rights

To the extent specified in any termination notice, Local Agency shall not incur further obligations or render further performance past the effective date of such notice, and shall terminate outstanding orders and subcontracts with third parties. However, Local Agency shall complete and deliver to the State all Work not cancelled by the termination notice, and may incur obligations as necessary to do so within this Agreement's terms. At the request of the State, Local Agency shall assign to the State all of Local Agency's rights, title, and interest in and to such terminated orders or subcontracts. Upon termination, Local Agency shall take timely, reasonable and necessary action to protect and preserve property in the possession of Local Agency but in which the State has an interest. At the State's request, Local Agency shall return materials owned by the State in Local Agency's possession at the time of any termination. Local Agency shall deliver all completed Work Product and all Work Product that was in the process of completion to the State at the State's request.

b. Payments

Notwithstanding anything to the contrary, the State shall only pay Local Agency for accepted Work received as of the date of termination. If, after termination by the State, the State agrees that Local Agency was not in breach or that Local Agency's action or inaction was excusable, such termination shall be treated as a termination in the public interest, and the rights and obligations of the Parties shall be as if this Agreement had been terminated in the public interest under **§2.C**.

c. Damages and Withholding

Notwithstanding any other remedial action by the State, Local Agency shall remain liable to the State for any damages sustained by the State in connection with any breach by Local Agency, and the State may withhold payment to Local Agency for the purpose of mitigating the State's damages until such time as the exact amount of damages due to the State from Local Agency is determined. The State may withhold any amount that may be due Local Agency as the State deems necessary to protect the State against loss including, without limitation, loss as a result of outstanding liens and excess costs incurred by the State in procuring from third parties replacement Work as cover.

ii. Remedies Not Involving Termination

The State, in its discretion, may exercise one or more of the following additional remedies:

a. Suspend Performance

Suspend Local Agency's performance with respect to all or any portion of the Work pending corrective action as specified by the State without entitling Local Agency to an adjustment in price or cost or an adjustment in the performance schedule. Local Agency shall promptly cease performing Work and incurring costs in accordance with the State's directive, and the State shall not be liable for costs incurred by Local Agency after the suspension of performance.

b. Withhold Payment

Withhold payment to Local Agency until Local Agency corrects its Work.

c. Deny Payment

Deny payment for Work not performed, or that due to Local Agency's actions or inactions, cannot be performed or if they were performed are reasonably of no value to the state; provided, that any denial of payment shall be equal to the value of the obligations not performed.

d. Removal

Demand immediate removal from the Work of any of Local Agency's employees, agents, or Subcontractors from the Work whom the State deems incompetent, careless, insubordinate, unsuitable, or otherwise unacceptable or whose continued relation to this Agreement is deemed by the State to be contrary to the public interest or the State's best interest.

e. Intellectual Property

If any Work infringes a patent, copyright, trademark, trade secret, or other intellectual property right, Local Agency shall, as approved by the State **(a)** secure that right to use such Work for the State or Local Agency; **(b)** replace the Work with noninfringing Work or modify the Work so that it becomes noninfringing; or, **(c)** remove any infringing Work and refund the amount paid for such Work to the State.

B. Local Agency's Remedies

If the State is in breach of any provision of this Agreement and does not cure such breach, Local Agency, following the notice and cure period in **§13.B** and the dispute resolution process in **§15** shall have all remedies available at law and equity.

15. DISPUTE RESOLUTION

A. Initial Resolution

Except as herein specifically provided otherwise, disputes concerning the performance of this Agreement which cannot be resolved by the designated Agreement representatives shall be referred in writing to a senior departmental management staff member designated by the State and a senior manager designated by Local Agency for resolution.

B. Resolution of Controversies

If the initial resolution described in §15.A fails to resolve the dispute within 10 Business Days, Contractor shall submit any alleged breach of this Contract by the State to the Procurement Official of CDOT as

described in §24-101-301(30), C.R.S. for resolution in accordance with the provisions of §§24-106-109, 24-109-101.1, 24-109-101.5, 24-109-106, 24-109-107, 24-109-201 through 24-109-206, and 24-109-501 through 24-109-505, C.R.S., (the “Resolution Statutes”), except that if Contractor wishes to challenge any decision rendered by the Procurement Official, Contractor’s challenge shall be an appeal to the executive director of the Department of Personnel and Administration, or their delegate, under the Resolution Statutes before Contractor pursues any further action as permitted by such statutes. Except as otherwise stated in this Section, all requirements of the Resolution Statutes shall apply including, without limitation, time limitations.

16. NOTICES AND REPRESENTATIVES

Each individual identified below shall be the principal representative of the designating Party. All notices required or permitted to be given under this Agreement shall be in writing, and shall be delivered **(i)** by hand with receipt required, **(ii)** by certified or registered mail to such Party’s principal representative at the address set forth below or **(iii)** as an email with read receipt requested to the principal representative at the email address, if any, set forth below. If a Party delivers a notice to another through email and the email is undeliverable, then, unless the Party has been provided with an alternate email contact, the Party delivering the notice shall deliver the notice by hand with receipt required or by certified or registered mail to such Party’s principal representative at the address set forth below. Either Party may change its principal representative or principal representative contact information by notice submitted in accordance with this **§16** without a formal amendment to this Agreement. Unless otherwise provided in this Agreement, notices shall be effective upon delivery of the written notice.

For the State

Colorado Department of Transportation (CDOT)
Tracy Vance, CEPM - I
CDOT - Region 1
2829 W. Howard Place, 2nd Floor
Denver, CO 80204
303-512-4090
tracy.vance@state.co.us

For the Local Agency

CITY OF ARVADA
Sylvia Lopo, Traffic Engineer
8101 Ralston Rd
Arvada, CO 80002-8101
720-898-7653
slopo@arvada.org

17. RIGHTS IN WORK PRODUCT AND OTHER INFORMATION

A. Work Product

Local Agency assigns to the State and its successors and assigns, the entire right, title, and interest in and to all causes of action, either in law or in equity, for past, present, or future infringement of intellectual property rights related to the Work Product and all works based on, derived from, or incorporating the Work Product. Whether or not Local Agency is under contract with the State at the time, Local Agency shall execute applications, assignments, and other documents, and shall render all other reasonable assistance requested by the State, to enable the State to secure patents, copyrights, licenses and other intellectual property rights related to the Work Product. The Parties intend the Work Product to be works made for hire.

i. Copyrights

To the extent that the Work Product (or any portion of the Work Product) would not be considered works made for hire under applicable law, Local Agency hereby assigns to the State, the entire right, title, and interest in and to copyrights in all Work Product and all works based upon, derived from, or incorporating the Work Product; all copyright applications, registrations, extensions, or renewals relating to all Work Product and all works based upon, derived from, or incorporating the Work Product; and all moral rights

or similar rights with respect to the Work Product throughout the world. To the extent that Local Agency cannot make any of the assignments required by this section, Local Agency hereby grants to the State a perpetual, irrevocable, royalty-free license to use, modify, copy, publish, display, perform, transfer, distribute, sell, and create derivative works of the Work Product and all works based upon, derived from, or incorporating the Work Product by all means and methods and in any format now known or invented in the future. The State may assign and license its rights under this license.

ii. Patents

In addition, Local Agency grants to the State (and to recipients of Work Product distributed by or on behalf of the State) a perpetual, worldwide, no-charge, royalty-free, irrevocable patent license to make, have made, use, distribute, sell, offer for sale, import, transfer, and otherwise utilize, operate, modify and propagate the contents of the Work Product. Such license applies only to those patent claims licensable by Local Agency that are necessarily infringed by the Work Product alone, or by the combination of the Work Product with anything else used by the State.

B. Exclusive Property of the State

Except to the extent specifically provided elsewhere in this Agreement, any pre-existing State Records, State software, research, reports, studies, photographs, negatives, or other documents, drawings, models, materials, data, and information shall be the exclusive property of the State (collectively, "State Materials"). Local Agency shall not use, willingly allow, cause or permit Work Product or State Materials to be used for any purpose other than the performance of Local Agency's obligations in this Agreement without the prior written consent of the State. Upon termination of this Agreement for any reason, Local Agency shall provide all Work Product and State Materials to the State in a form and manner as directed by the State.

18. GOVERNMENTAL IMMUNITY

Liability for claims for injuries to persons or property arising from the negligence of the Parties, their departments, boards, commissions committees, bureaus, offices, employees and officials shall be controlled and limited by the provisions of the GIA; the Federal Tort Claims Act, 28 U.S.C. Pt. VI, Ch. 171 and 28 U.S.C. 1346(b), and the State's risk management statutes, §§24-30-1501, *et seq.* C.R.S.

19. STATEWIDE CONTRACT MANAGEMENT SYSTEM

If the maximum amount payable to Local Agency under this Agreement is \$100,000 or greater, either on the Effective Date or at anytime thereafter, this **§19** shall apply. Local Agency agrees to be governed by and comply with the provisions of §24-102-205, §24-102-206, §24-103-601, §24-103.5-101 and §24-105-102 C.R.S. regarding the monitoring of vendor performance and the reporting of contract performance information in the State's contract management system ("Contract Management System" or "CMS"). Local Agency's performance shall be subject to evaluation and review in accordance with the terms and conditions of this Agreement, Colorado statutes governing CMS, and State Fiscal Rules and State Controller policies.

20. GENERAL PROVISIONS

A. Assignment

Local Agency's rights and obligations under this Agreement are personal and may not be transferred or assigned without the prior, written consent of the State. Any attempt at assignment or transfer without such consent shall be void. Any assignment or transfer of Local Agency's rights and obligations approved by the State shall be subject to the provisions of this Agreement

B. Subcontracts

Local Agency shall not enter into any subcontract in connection with its obligations under this Agreement without the prior, written approval of the State. Local Agency shall submit to the State a copy of each such subcontract upon request by the State. All subcontracts entered into by Local Agency in connection with this Agreement shall comply with all applicable federal and state laws and regulations, shall provide that they are governed by the laws of the State of Colorado, and shall be subject to all provisions of this Agreement.

C. Binding Effect

Except as otherwise provided in **§20.A.** all provisions of this Agreement, including the benefits and burdens, shall extend to and be binding upon the Parties' respective successors and assigns.

D. Authority

Each Party represents and warrants to the other that the execution and delivery of this Agreement and the performance of such Party's obligations have been duly authorized.

E. Captions and References

The captions and headings in this Agreement are for convenience of reference only, and shall not be used to interpret, define, or limit its provisions. All references in this Agreement to sections (whether spelled out or using the § symbol), subsections, exhibits or other attachments, are references to sections, subsections, exhibits or other attachments contained herein or incorporated as a part hereof, unless otherwise noted.

F. Counterparts

This Agreement may be executed in multiple, identical, original counterparts, each of which shall be deemed to be an original, but all of which, taken together, shall constitute one and the same agreement.

G. Entire Understanding

This Agreement represents the complete integration of all understandings between the Parties related to the Work, and all prior representations and understandings related to the Work, oral or written, are merged into this Agreement. Prior or contemporaneous additions, deletions, or other changes to this Agreement shall not have any force or effect whatsoever, unless embodied herein.

H. Jurisdiction and Venue

All suits or actions related to this Agreement shall be filed and proceedings held in the State of Colorado and exclusive venue shall be in the City and County of Denver.

I. Modification

Except as otherwise provided in this Agreement, any modification to this Agreement shall only be effective if agreed to in a formal amendment to this Agreement, properly executed and approved in accordance with applicable Colorado State law and State Fiscal Rules. Modifications permitted under this Agreement, other than contract amendments, shall conform to the policies promulgated by the Colorado State Controller.

J. Statutes, Regulations, Fiscal Rules, and Other Authority.

Any reference in this Agreement to a statute, regulation, State Fiscal Rule, fiscal policy or other authority shall be interpreted to refer to such authority then current, as may have been changed or amended since the Effective Date of this Agreement.

K. Order of Precedence

In the event of a conflict or inconsistency between this Agreement and any exhibits or attachment such conflict or inconsistency shall be resolved by reference to the documents in the following order of priority:

- i. Colorado Special Provisions in the main body of this Agreement.
- ii. The provisions of the other sections of the main body of this Agreement.
- iii. **Exhibit A**, Statement of Work.
- iv. **Exhibit D**, Local Agency Resolution.
- v. **Exhibit C**, Funding Provisions.
- vi. **Exhibit B**, Sample Option Letter.
- vii. **Exhibit E**, Local Agency Contract Administration Checklist.
- viii. Other exhibits in descending order of their attachment.

L. Severability

The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement, which shall remain in full force and effect, provided that the Parties can continue to perform their obligations under this Agreement in accordance with the intent of the Agreement.

M. Survival of Certain Agreement Terms

Any provision of this Agreement that imposes an obligation on a Party after termination or expiration of the Agreement shall survive the termination or expiration of the Agreement and shall be enforceable by the other Party.

N. Third Party Beneficiaries

Except for the Parties' respective successors and assigns described in **§20.C**, this Agreement does not and is not intended to confer any rights or remedies upon any person or entity other than the Parties. Enforcement of this Agreement and all rights and obligations hereunder are reserved solely to the Parties. Any services or benefits which third parties receive as a result of this Agreement are incidental to the Agreement, and do not create any rights for such third parties.

O. Waiver

A Party's failure or delay in exercising any right, power, or privilege under this Agreement, whether explicit or by lack of enforcement, shall not operate as a waiver, nor shall any single or partial exercise of any right, power, or privilege preclude any other or further exercise of such right, power, or privilege.

P. CORA Disclosure

To the extent not prohibited by federal law, this Agreement and the performance measures and standards required under §24-103.5-101 C.R.S., if any, are subject to public release through the CORA.

Q. Standard and Manner of Performance

Local Agency shall perform its obligations under this Agreement in accordance with the highest standards of care, skill and diligence in Local Agency's industry, trade, or profession.

R. Licenses, Permits, and Other Authorizations.

Local Agency shall secure, prior to the Effective Date, and maintain at all times during the term of this Agreement, at its sole expense, all licenses, certifications, permits, and other authorizations required to perform its obligations under this Agreement, and shall ensure that all employees, agents and Subcontractors secure and maintain at all times during the term of their employment, agency or subcontract, all license, certifications, permits and other authorizations required to perform their obligations in relation to this Agreement.

21. COLORADO SPECIAL PROVISIONS (COLORADO FISCAL RULE 3-3)

These Special Provisions apply to all contracts except where noted in italics.

A. STATUTORY APPROVAL. §24-30-202(1), C.R.S.

This Contract shall not be valid until it has been approved by the Colorado State Controller or designee. If this Contract is for a Major Information Technology Project, as defined in §24-37.5-102(2.6), then this Contract shall not be valid until it has been approved by the State's Chief Information Officer or designee.

B. FUND AVAILABILITY. §24-30-202(5.5), C.R.S.

Financial obligations of the State payable after the current State Fiscal Year are contingent upon funds for that purpose being appropriated, budgeted, and otherwise made available.

C. GOVERNMENTAL IMMUNITY.

Liability for claims for injuries to persons or property arising from the negligence of the State, its departments, boards, commissions committees, bureaus, offices, employees and officials shall be controlled and limited by the provisions of the Colorado Governmental Immunity Act, §24-10-101, et seq., C.R.S.; the Federal Tort Claims Act, 28 U.S.C. Pt. VI, Ch. 171 and 28 U.S.C. 1346(b), and the State's risk management statutes, §§24-30-1501, et seq. C.R.S. No term or condition of this Contract shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protections, or other provisions, contained in these statutes.

D. INDEPENDENT CONTRACTOR

Contractor shall perform its duties hereunder as an independent contractor and not as an employee. Neither Contractor nor any agent or employee of Contractor shall be deemed to be an agent or employee of the State.

Contractor shall not have authorization, express or implied, to bind the State to any agreement, liability or understanding, except as expressly set forth herein. **Contractor and its employees and agents are not entitled to unemployment insurance or workers compensation benefits through the State and the State shall not pay for or otherwise provide such coverage for Contractor or any of its agents or employees. Contractor shall pay when due all applicable employment taxes and income taxes and local head taxes incurred pursuant to this Contract. Contractor shall (i) provide and keep in force workers' compensation and unemployment compensation insurance in the amounts required by law, (ii) provide proof thereof when requested by the State, and (iii) be solely responsible for its acts and those of its employees and agents.**

E. COMPLIANCE WITH LAW.

Contractor shall comply with all applicable federal and State laws, rules, and regulations in effect or hereafter established, including, without limitation, laws applicable to discrimination and unfair employment practices.

F. CHOICE OF LAW, JURISDICTION, AND VENUE.

Colorado law, and rules and regulations issued pursuant thereto, shall be applied in the interpretation, execution, and enforcement of this Contract. Any provision included or incorporated herein by reference which conflicts with said laws, rules, and regulations shall be null and void. All suits or actions related to this Contract shall be filed and proceedings held in the State of Colorado and exclusive venue shall be in the City and County of Denver.

G. PROHIBITED TERMS.

Any term included in this Contract that requires the State to indemnify or hold Contractor harmless; requires the State to agree to binding arbitration; limits Contractor's liability for damages resulting from death, bodily injury, or damage to tangible property; or that conflicts with this provision in any way shall be void ab initio. Nothing in this Contract shall be construed as a waiver of any provision of §24-106-109 C.R.S. Any term included in this Contract that limits Contractor's liability that is not void under this section shall apply only in excess of any insurance to be maintained under this Contract, and no insurance policy shall be interpreted as being subject to any limitations of liability of this Contract.

H. SOFTWARE PIRACY PROHIBITION.

State or other public funds payable under this Contract shall not be used for the acquisition, operation, or maintenance of computer software in violation of federal copyright laws or applicable licensing restrictions. Contractor hereby certifies and warrants that, during the term of this Contract and any extensions, Contractor has and shall maintain in place appropriate systems and controls to prevent such improper use of public funds. If the State determines that Contractor is in violation of this provision, the State may exercise any remedy available at law or in equity or under this Contract, including, without limitation, immediate termination of this Contract and any remedy consistent with federal copyright laws or applicable licensing restrictions.

I. EMPLOYEE FINANCIAL INTEREST/CONFLICT OF INTEREST. §§24-18-201 and 24-50-507, C.R.S.

The signatories aver that to their knowledge, no employee of the State has any personal or beneficial interest whatsoever in the service or property described in this Contract. Contractor has no interest and shall not acquire any interest, direct or indirect, that would conflict in any manner or degree with the performance of Contractor's services and Contractor shall not employ any person having such known interests.

J. VENDOR OFFSET AND ERRONEOUS PAYMENTS. §§24-30-202(1) and 24-30-202.4, C.R.S.

[Not applicable to intergovernmental agreements] Subject to §24-30-202.4(3.5), C.R.S., the State Controller may withhold payment under the State's vendor offset intercept system for debts owed to State agencies for: **(i)** unpaid child support debts or child support arrearages; **(ii)** unpaid balances of tax, accrued interest, or other charges specified in §§39-21-101, *et seq.*, C.R.S.; **(iii)** unpaid loans due to the Student Loan Division of the Department of Higher Education; **(iv)** amounts required to be paid to the Unemployment Compensation Fund; and **(v)** other unpaid debts owing to the State as a result of final agency determination or judicial action. The State may also recover, at the State's discretion, payments made to Contractor in error for any reason, including, but not limited to, overpayments or improper payments, and unexpended or excess funds received by Contractor by deduction from subsequent payments under this Contract, deduction from any payment due

under any other contracts, grants or agreements between the State and Contractor, or by any other appropriate method for collecting debts owed to the State.

K. PUBLIC CONTRACTS FOR SERVICES. §§8-17.5-101, et seq., C.R.S.

[Not applicable to agreements relating to the offer, issuance, or sale of securities, investment advisory services or fund management services, sponsored projects, intergovernmental agreements, or information technology services or products and services] Contractor certifies, warrants, and agrees that it does not knowingly employ or contract with an illegal alien who will perform work under this Contract and will confirm the employment eligibility of all employees who are newly hired for employment in the United States to perform work under this Contract, through participation in the E-Verify Program or the State verification program established pursuant to §8-17.5-102(5)(c), C.R.S., Contractor shall not knowingly employ or contract with an illegal alien to perform work under this Contract or enter into a contract with a Subcontractor that fails to certify to Contractor that the Subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this Contract. Contractor **(i)** shall not use E-Verify Program or the program procedures of the Colorado Department of Labor and Employment (“Department Program”) to undertake pre-employment screening of job applicants while this Contract is being performed, **(ii)** shall notify the Subcontractor and the contracting State agency or institution of higher education within 3 days if Contractor has actual knowledge that a Subcontractor is employing or contracting with an illegal alien for work under this Contract, **(iii)** shall terminate the subcontract if a Subcontractor does not stop employing or contracting with the illegal alien within 3 days of receiving the notice, and **(iv)** shall comply with reasonable requests made in the course of an investigation, undertaken pursuant to §8-17.5-102(5), C.R.S., by the Colorado Department of Labor and Employment. If Contractor participates in the Department program, Contractor shall deliver to the contracting State agency, Institution of Higher Education or political subdivision, a written, notarized affirmation, affirming that Contractor has examined the legal work status of such employee, and shall comply with all of the other requirements of the Department program. If Contractor fails to comply with any requirement of this provision or §§8-17.5-101, et seq., C.R.S., the contracting State agency, institution of higher education or political subdivision may terminate this Contract for breach and, if so terminated, Contractor shall be liable for damages.

L. PUBLIC CONTRACTS WITH NATURAL PERSONS. §§24-76.5-101, et seq., C.R.S.

Contractor, if a natural person eighteen (18) years of age or older, hereby swears and affirms under penalty of perjury that Contractor **(i)** is a citizen or otherwise lawfully present in the United States pursuant to federal law, **(ii)** shall comply with the provisions of §§24-76.5-101, et seq., C.R.S., and **(iii)** has produced one form of identification required by §24-76.5-103, C.R.S. prior to the Effective Date of this Contract.

Revised 11-1-18

22. FEDERAL REQUIREMENTS

Local Agency and/or their contractors, subcontractors, and consultants shall at all times during the execution of this Agreement strictly adhere to, and comply with, all applicable federal and State laws, and their implementing regulations, as they currently exist and may hereafter be amended. A summary of applicable federal provisions are attached hereto as Exhibit F, Exhibit I, Exhibit J, Exhibit K and Exhibit M are hereby incorporated by this reference.

23. DISADVANTAGED BUSINESS ENTERPRISE (DBE)

Local Agency will comply with all requirements of Exhibit G and Local Agency Contract Administration Checklist regarding DBE requirements for the Work, except that if Local Agency desires to use its own DBE program to implement and administer the DBE provisions of 49 C.F.R. Part 26 under this Agreement, it must submit a copy of its program’s requirements to the State for review and approval before the execution of this Agreement. If Local Agency uses any State- approved DBE program for this Agreement, Local Agency shall be solely responsible to defend that DBE program and its use of that program against all legal and other challenges or complaints, at its sole cost and expense. Such responsibility includes, without limitation, determinations concerning DBE eligibility requirements and certification, adequate legal and factual bases for DBE goals and good faith efforts. State approval (if provided) of Local Agency’s DBE program does not waive or modify the sole responsibility of Local Agency for use of its program.

24. DISPUTES

Except as otherwise provided in this Agreement, any dispute concerning a question of fact arising under this Agreement which is not disposed of by agreement shall be decided by the Chief Engineer of the Department of Transportation. The decision of the Chief Engineer will be final and conclusive unless, within 30 calendar days after the date of receipt of a copy of such written decision, Local Agency mails or otherwise furnishes to the State a written appeal addressed to the Executive Director of CDOT. In connection with any appeal proceeding under this clause, Local Agency shall be afforded an opportunity to be heard and to offer evidence in support of its appeal. Pending final decision of a dispute hereunder, Local Agency shall proceed diligently with the performance of this Agreement in accordance with the Chief Engineer's decision. The decision of the Executive Director or his duly authorized representative for the determination of such appeals shall be final and conclusive and serve as final agency action. This dispute clause does not preclude consideration of questions of law in connection with decisions provided for herein. Nothing in this Agreement, however, shall be construed as making final the decision of any administrative official, representative, or board on a question of law.

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EXHIBIT A
SCOPE OF WORK

Intersection Improvements at 64th & Simms, and 80th and Vance Dr.
SHO M040-037
SubAccount #24218

The proposed project will provide intersection safety improvements at two locations in Arvada.

The improvements at 64th Avenue & Simms Street will replace the traffic signal equipment, upgrade curb ramps to meet current ADA standards and improve pedestrian accessibility. The existing intersection geometry will be modified with the removal of the channelizing island in the southwest corner and modifications to the curb returns in the northeast and southeast corners.

The improvements 80th Avenue & Vance Drive will replace the traffic signal equipment, upgrade curb ramps to meet current ADA standards and improve turning vehicle sight distance. The existing intersection geometry will include modifications to the curb returns to facilitate truck turning operations and minor widening on the northbound approach to include a short right turn pocket.

Both locations will be connected to the City's fiber optic network as part of the project. Land acquisition and utility relocations will be required for this project.

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EXHIBIT B
SAMPLE IGA OPTION LETTER

Date	State Fiscal Year	Option Letter No.
Project Code	Original Agreement #	

Vendor Name: _____

Option to unilaterally add phasing to include Design, Construction, Environmental, Utilities, ROW incidentals or Miscellaneous and to update encumbrance amount(s).

Option to unilaterally transfer funds from one phase to another phase.

Option to unilaterally add phasing to include Design, Construction, Environmental, Utilities, ROW incidentals or Miscellaneous, to update encumbrance amount(s), and to unilaterally transfer funds from one phase to another phase.

Option to unilaterally extend the performance of this Agreement and/or update a Work Phase Performance Period.

Option A

In accordance with the terms of the original Agreement between the State of Colorado, Department of Transportation and the Local Agency), the State hereby exercises the option to authorize the Local Agency to add a phase and to encumber funds for the phase based on changes in funding availability and authorization. The total encumbrance is (or increased) by \$0.00. A new **Exhibit C-1** is made part of the original Agreement and replaces **Exhibit C**.

Option B

In accordance with the terms of the original Agreement between the State of Colorado, Department of Transportation and the Local Agency, the State hereby exercises the option to transfer funds based on variance in actual phase costs and original phase estimates. A new **Exhibit C-1** is made part of the original Agreement and replaces **Exhibit C**.

Option C

In accordance with the terms of the original Agreement between the State of Colorado, Department of Transportation and the Local Agency, the State hereby exercises the option to 1) release the Local Agency to begin a phase; 2) to encumber funds for the phase based upon changes in funding availability and authorization; and 3) to transfer funds from phases based on variance in actual phase costs and original phase estimates. A new **Exhibit C-1** is made part of the original Agreement and replaces **Exhibit C**.

Option D

In accordance with the terms of the original Agreement between the State of Colorado, Department of Transportation and the Local Agency, the State hereby exercises the option extend the performance of this Agreement and/or update a Work Phase Performance Period.

The total encumbrance as a result of this option and all previous options and/or amendments is now\$0.00, as referenced in **Exhibit C-1**. The total budgeted funds to satisfy services/goods ordered under the Agreement remains the same: as referenced in **Exhibit C-1**.

The effective date of this option letter is upon approval of the State Controller or delegate.

STATE OF COLORADO
Jared S. Polis
Department of Transportation

By: _____
Stephen Harelson, P.E., Chief Engineer
(For) Shoshana M. Lew, Executive Director

Date: _____

ALL AGREEMENTS MUST BE APPROVED BY THE STATE CONTROLLER

CRS §24-30-202 requires the State Controller to approve all State Agreements. This Agreement is not valid until signed and dated below by the State Controller or delegate. Contractor is not authorized to begin performance until such time. If the Local Agency begins performing prior thereto, the State of Colorado is not obligated to pay the Local Agency for such performance or for any goods and/or services provided hereunder.

STATE OF COLORADO
STATE CONTROLLER
Robert Jaros, CPA, MBA, JD

By: _____
Colorado Department of Transportation

Date:_____

EXHIBIT C **FUNDING PROVISIONS**

EXHIBIT C – FUNDING PROVISIONS

SHO M040-037 (24218)

Cost of Work Estimate

The Local Agency has estimated the total cost the Work to be \$1,650,000.00, which is to be funded as follows:

1. BUDGETED FUNDS				
a.	Federal Funds (90.00% of Participating Costs)		\$1,485,000.00	
b.	Local Agency Matching Funds (10.00% of Participating Costs)		\$165,000.00	
TOTAL BUDGETED FUNDS				\$1,650,000.00
2. OMB UNIFORM GUIDANCE				
a.	Federal Award Identification Number (FAIN):		TBD	
b.	Federal Award Date (also Phase Performance Start Date):		See Below	
c.	Amount of Federal Funds Obligated:		\$0.00	
d.	Total Amount of Federal Award:		\$1,485,000.00	
e.	Name of Federal Awarding Agency:		FHWA	
f.	CFDA# - Highway Planning and Construction		CFDA 20.205	
g.	Is the Award for R&D?		No	
h.	Indirect Cost Rate (if applicable)		N/A	
3. ESTIMATED PAYMENT TO LOCAL AGENCY				
a.	Federal Funds Budgeted		\$1,485,000.00	
b.	Less Estimated Federal Share of CDOT-Incurred Costs		\$0.00	
TOTAL ESTIMATED PAYMENT TO LOCAL AGENCY				\$1,485,000.00
4. FOR CDOT ENCUMBRANCE PURPOSES				
a.	Total Encumbrance Amount		\$1,650,000.00	
b.	Less ROW Acquisition 3111 and/or ROW Relocation 3109		\$0.00	
Net to be encumbered as follows:				\$1,650,000.00
Note: No funds are currently available. Design and Construction funds will become available after execution of an Option letter (Exhibit B) or formal Amendment.				
WBS Element 24218.10.30	Performance Period Start*/End Date TBD / TBD	Design	3020	\$0.00
WBS Element 24218.20.10	TBD / TBD	Const.	3301	\$0.00

*The Local Agency should not begin work until all three of the following are in place:

- 1) Phase Performance Period Start Date; 2) The execution of the document encumbering funds for the respective phase; and 3) Local Agency receipt of the official Notice to Proceed. Any work performed before these three (3) milestones are achieved will not be reimbursable.

B. Matching Funds

The matching ratio for the federal participating funds for this Work is 90.00% federal-aid funds to 10.00% Local Agency funds, it being understood that such ratio applies only to the \$1,650,000.00 that is eligible for federal participation, it being further understood that all non-participating costs are borne by the Local Agency at 100%. If the total participating cost of performance of the Work exceeds \$1,650,000.00, and additional federal funds are made available for the Work, the Local Agency shall pay 10.00% of all such costs eligible for federal participation and 100% of all non-participating costs; if additional federal funds are not made available, the Local Agency shall pay all such excess costs. If the total participating cost of performance of the Work is less than \$1,650,000.00, then the amounts of Local Agency and federal-aid funds will be decreased in accordance with the funding ratio described herein. The performance of the Work shall be at no cost to the State.

C. Maximum Amount Payable

The maximum amount payable to the Local Agency under this Agreement shall be \$1,485,000.00 (for CDOT accounting purposes, the federal funds of \$1,485,000.00 and the Local Agency matching funds of \$165,000.00 will be encumbered for a total encumbrance of \$1,650,000.00), unless such amount is increased by an appropriate written modification to this Agreement executed before any increased cost is incurred. It is understood and agreed by the parties hereto that the total cost of the Work stated hereinbefore is the best estimate available, based on the design data as approved at the time of execution of this Agreement, and that such cost is subject to revisions (in accord with the procedure in the previous sentence) agreeable to the parties prior to bid and award.

The maximum amount payable shall be reduced without amendment when the actual amount of the Local Agency's awarded contract is less than the budgeted total of the federal participating funds and the Local Agency matching funds. The maximum amount payable shall be reduced through the execution of an Option Letter as described in Section 7. E. of this contract.

D. Single Audit Act Amendment

All state and local government and non-profit organizations receiving \$750,000 or more from all funding sources defined as federal financial assistance for Single Audit Act Amendment purposes shall comply with the audit requirements of 2 CFR part 200, subpart F (Audit Requirements) see also, 49 C.F.R. 18.20 through 18.26. The Single Audit Act Amendment requirements applicable to the Local Agency receiving federal funds are as follows:

- i. Expenditure less than \$750,000**
If the Local Agency expends less than \$750,000 in Federal funds (all federal sources, not just Highway funds) in its fiscal year then this requirement does not apply.
- ii. Expenditure of \$750,000 or more-Highway Funds Only**
If the Local Agency expends \$750,000 or more, in Federal funds, but only received federal Highway funds (Catalog of Federal Domestic Assistance, CFDA 20.205) then a program specific audit shall be performed. This audit will examine the "financial" procedures and processes for this program area.
- iii. Expenditure of \$750,000 or more-Multiple Funding Sources**
If the Local Agency expends \$750,000 or more in Federal funds, and the Federal funds are from multiple sources (FTA, HUD, NPS, etc.) then the Single Audit Act applies, which is an audit on the entire organization/entity.
- iv. Independent CPA**
Single Audit shall only be conducted by an independent CPA, not by an auditor on staff. An audit is an allowable direct or indirect cost.

EXHIBIT D

LOCAL AGENCY RESOLUTION (If APPLICABLE)

EXHIBIT E LOCAL AGENCY AGREEMENT ADMINISTRATION CHECKLIST

COLORADO DEPARTMENT OF TRANSPORTATION LOCAL AGENCY CONTRACT ADMINISTRATION CHECKLIST			
Project No. SHO M040-037	STIP No. SR16682	Project Code 24218	Region 1
Project Location 64th Avenue & Simms St, 80th Avenue & Vance Dr			Date 11/9/2020
Project Description 64th Avenue & Simms St, 80th Avenue & Vance Dr Intersection Improvements			
Local Agency Arvada	Local Agency Project Manager Sylvia Lopo		
CDOT Resident Engineer Maria Hajiaghaee	CDOT Project Manager Tracy Vance		
INSTRUCTIONS: This checklist shall be utilized to establish the contract administration responsibilities of the individual parties to this agreement. The checklist becomes an attachment to the Local Agency agreement. Section numbers correspond to the applicable chapters of the <i>CDOT Local Agency Manual</i> . The checklist shall be prepared by placing an "X" under the responsible party, opposite each of the tasks. The "X" denotes the party responsible for initiating and executing the task. Only one responsible party should be selected. When neither CDOT nor the Local Agency is responsible for a task, not applicable (NA) shall be noted. In addition, a "#" will denote that CDOT must concur or approve. Tasks that will be performed by Headquarters staff will be indicated. The Regions, in accordance with established policies and procedures, will determine who will perform all other tasks that are the responsibility of CDOT. The checklist shall be prepared by the CDOT Resident Engineer or the CDOT Project Manager, in cooperation with the Local Agency Project Manager, and submitted to the Region Program Engineer. If contract administration responsibilities change, the CDOT Resident Engineer, in cooperation with the Local Agency Project Manager, will prepare and distribute a revised checklist. Note: Failure to comply with applicable Federal and State requirements may result in the loss of Federal or State participation in funding.			

NO.	DESCRIPTION OF TASK	RESPONSIBLE PARTY	
		LA	CDOT
TIP / STIP AND LONG-RANGE PLANS			
2.1	Review Project to ensure it is consistent with STIP and amendments thereto		X
FEDERAL FUNDING OBLIGATION AND AUTHORIZATION			
4.1	Authorize funding by phases (CDOT Form 418 - Federal-aid Program Data. Requires FHWA concurrence/involvement)		X
PROJECT DEVELOPMENT			
5.1	Prepare Design Data - CDOT Form 463	X	#
5.2	Prepare Local Agency/CDOT Inter-Governmental Agreement (see also Chapter 3)		X
5.3	Conduct Consultant Selection/Execute Consultant Agreement		
	- Project Development - Construction Contract Administration (including Fabrication Inspection Services)	X X	# #
5.4	Conduct Design Scoping Review Meeting	X	X
5.5	Conduct Public Involvement	X	
5.6	Conduct Field Inspection Review (FIR)	X	X
5.7	Conduct Environmental Processes (may require FHWA concurrence/involvement)	X	#
5.8	Acquire Right-of-Way (may require FHWA concurrence/involvement)	X	#
5.9	Obtain Utility and Railroad Agreements	X	#
5.10	Conduct Final Office Review (FOR)	X	X
5.11	Justify Force Account Work by the Local Agency	X	#

NO.	DESCRIPTION OF TASK	RESPONSIBLE PARTY	
		LA	CDOT
5.12	Justify Proprietary, Sole Source, or Local Agency Furnished Items	X	#
5.13	Document Design Exceptions - CDOT Form 464	X	#
5.14	Prepare Plans, Specifications, Construction Cost Estimates and Submittals	X	
5.15	Ensure Authorization of Funds for Construction		X
PROJECT DEVELOPMENT CIVIL RIGHTS AND LABOR COMPLIANCE			
6.1	Set Disadvantaged Business Enterprise (DBE) Goals for Consultant and Construction Contracts (CDOT Region EEO/Civil Rights Specialist).		X
6.2	Determine Applicability of Davis-Bacon Act This project ☐ is ☒ is not exempt from Davis-Bacon requirements as determined by the functional classification of the project location (Projects located on local roads and rural minor collectors may be exempt.) Maria Hajiaghaee _____ CDOT Resident Engineer (Signature on File) 11/09/2020 Date		X
6.3	Set On-the-Job Training Goals (CDOT Region EEO/Civil Rights Specialist)		X
6.4	Title VI Assurances		X
	Ensure the correct Federal Wage Decision, all required Disadvantaged Business Enterprise/On-the-Job Training special provisions and FHWA Form 1273 are included in the Contract (CDOT Resident Engineer)		X
ADVERTISE, BID AND AWARD of CONSTRUCTION PROJECTS			
7.1	Obtain Approval for Advertisement Period of Less Than Three Weeks	X	
7.2	Advertise for Bids	X	#
7.3	Distribute "Advertisement Set" of Plans and Specifications	X	
7.4	Review Worksite and Plan Details with Prospective Bidders While Project Is Under Advertisement	X	
7.5	Open Bids	X	
7.6	Process Bids for Compliance		
	Check CDOT Form 1415 – Commitment Confirmation when the low bidder meets DBE goals		X
	Evaluate CDOT Form 1416 - Good Faith Effort Report and determine if the Contractor has made a good faith effort when the low bidder does not meet DBE goals		X
	Submit required documentation for CDOT award concurrence	X	
7.7	Concurrence from CDOT to Award		X
7.8	Approve Rejection of Low Bidder		X
7.9	Award Contract	X	#
7.10	Provide "Award" and "Record" Sets of Plans and Specifications	X	
CONSTRUCTION MANAGEMENT			
8.1	Issue Notice to Proceed to the Contractor	X	#
8.2	Project Safety	X	
8.3	Conduct Conferences:		
	Pre-Construction Conference (Appendix B) • Fabrication Inspection Notifications	X	
	Pre-survey • Construction staking • Monumentation	X X	
	Partnering (Optional)	NA	NA
	Structural Concrete Pre-Pour (Agenda is in <i>CDOT Construction Manual</i>)	X	
	Concrete Pavement Pre-Paving (Agenda is in <i>CDOT Construction Manual</i>)	X	
	HMA Pre-Paving (Agenda is in <i>CDOT Construction Manual</i>)	X	
8.4	Develop and distribute Public Notice of Planned Construction to media and local residents	X	
8.5	Supervise Construction		
	A Professional Engineer (PE) registered in Colorado, who will be "in responsible charge of construction supervision." Mazedur Hossain 720-898-7744 Local Agency Professional Engineer or Phone number CDOT Resident Engineer	X	
	Provide competent, experienced staff who will ensure the Contract work is constructed in		

NO.	DESCRIPTION OF TASK	RESPONSIBLE PARTY	
		LA	CDOT
	accordance with the plans and specifications	X	
	Construction inspection and documentation	X	
	Fabrication Inspection and documentation	X	
8.6	Approve Shop Drawings	X	
8.7	Perform Traffic Control Inspections	X	
8.8	Perform Construction Surveying	X	#
8.9	Monument Right-of-Way	X	
8.10	Prepare and Approve Interim and Final Contractor Pay Estimates. Collect and review CDOT Form 1418 (or equivalent) Provide the name and phone number of the person authorized for this task. Sylvia Lopo _____ 720-898-7653 _____ Local Agency Representative Phone number	X	
8.11	Prepare and Approve Interim and Final Utility and Railroad Billings	X	#
8.12	Prepare and Authorize Change Orders	X	#
8.13	Submit Change Order Package to CDOT	X	X
8.14	Prepare Local Agency Reimbursement Requests	X	
8.15	Monitor Project Financial Status	X	
8.16	Prepare and Submit Monthly Progress Reports	X	
8.17	Resolve Contractor Claims and Disputes	X	
8.18	Conduct Routine and Random Project Reviews Provide the name and phone number of the person responsible for this task. _____ 303-757-9914 _____ Maria Hajiaghadee CDOT Resident Engineer Phone number		X
8.19	Ongoing Oversight of DBE Participation	X	
MATERIALS			
9.1	Discuss Materials at Pre-Construction Meeting • Buy America documentation required prior to installation of steel	X	X
9.2	Complete CDOT Form 250 - Materials Documentation Record • Generate form, which includes determining the minimum number of required tests and applicable material submittals for all materials placed on the project • Update the form as work progresses • Complete and distribute form after work is completed	X X	X
9.3	Perform Project Acceptance Samples and Tests	X	
9.4	Perform Laboratory Verification Tests	X	
9.5	Accept Manufactured Products Inspection of structural components: • Fabrication of structural steel and pre-stressed concrete structural components • Bridge modular expansion devices (0" to 6" or greater) • Fabrication of bearing devices	X X X	
9.6	Approve Sources of Materials	X	
9.7	Independent Assurance Testing (IAT), Local Agency Procedures ☐ CDOT Procedures ☒ • Generate IAT schedule • Schedule and provide notification • Conduct IAT	X X X	
9.8	Approve mix designs • Concrete • Hot mix asphalt	X X	
9.9	Check Final Materials Documentation	X	X
9.10	Complete and Distribute Final Materials Documentation	X	X

NO.	DESCRIPTION OF TASK	RESPONSIBLE PARTY	
		LA	CDOT
CONSTRUCTION CIVIL RIGHTS AND LABOR COMPLIANCE			
10.1	Fulfill Project Bulletin Board and Pre-Construction Packet Requirements	X	
10.2	Process CDOT Form 205 - Sublet Permit Application Review and sign completed CDOT Form 205 for each subcontractor, and submit to EEO/Civil Rights Specialist	X	X
10.3	Conduct Equal Employment Opportunity and Labor Compliance Verification Employee Interviews. Complete CDOT Form 280	X	
10.4	Monitor Disadvantaged Business Enterprise Participation to Ensure Compliance with the “Commercially Useful Function” Requirements	X	
10.5	Conduct Interviews When Project Utilizes On-the-Job Trainees. • Complete CDOT Form 1337 – Contractor Commitment to Meet OJT Requirements. • Complete CDOT Form 838 – OJT Trainee / Apprentice Record. • Complete CDOT Form 200 - OJT Training Questionnaire	X X X X	
10.6	Check Certified Payrolls (Contact the Region EEO/Civil Rights Specialists for training requirements.)	X	X
10.7	Submit FHWA Form 1391 - Highway Construction Contractor's Annual EEO Report	X	
FINALS			
11.1	Conduct Final Project Inspection. Complete and submit CDOT Form 1212 - Final Acceptance Report (Resident Engineer with mandatory Local Agency participation.)		X
11.2	Write Final Project Acceptance Letter	X	
11.3	Advertise for Final Settlement	X	
11.4	Prepare and Distribute Final As-Constructed Plans	X	
11.5	Prepare EEO Certification and Collect EEO Forms	X	
11.6	Check Final Quantities, Plans, and Pay Estimate; Check Project Documentation; and submit Final Certifications	X	
11.7	Check Material Documentation and Accept Final Material Certification (See Chapter 9)	X	
11.8	Obtain CDOT Form 1419 from the Contractor and Submit to the CDOT Project Manager	X	
11.9	(FHWA Form 47 discontinued)	NA	NA
11.10	Complete and Submit CDOT Form 1212 – Final Acceptance Report (by CDOT)		X
11.11	Process Final Payment	X	
11.12	Complete and Submit CDOT Form 950 - Project Closure		X
11.13	Retain Project Records for Six Years from Date of Project Closure	X	
11.14	Retain Final Version of Local Agency Contract Administration Checklist	X	X

cc: CDOT Resident Engineer/Project Manager
CDOT Region Program Engineer
CDOT Region EEO/Civil Rights Specialist
CDOT Region Materials Engineer
CDOT Contracts and Market Analysis Branch
Local Agency Project Manager

EXHIBIT F
CERTIFICATION FOR FEDERAL-AID CONTRACTS

The Local Agency certifies, by signing this Agreement, to the best of its knowledge and belief, that:

No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, Agreement, loan, or cooperative agreement.

If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer of Congress, or an employee of a Member of Congress in connection with this Federal contract, Agreement, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such sub-recipients shall certify and disclose accordingly.

EXHIBIT G
DISADVANTAGED BUSINESS ENTERPRISE

SECTION 1. Policy.

It is the policy of the Colorado Department of Transportation (CDOT) that disadvantaged business enterprises shall have the maximum opportunity to participate in the performance of contracts financed in whole or in part with Federal funds under this agreement, pursuant to 49 CFR Part 26. Consequently, the 49 CFR Part IE DBE requirements the Colorado Department of Transportation DBE Program (or a Local Agency DBE Program approved in advance by the State) apply to this agreement.

SECTION 2. DBE Obligation.

The recipient or its the Local Agency agrees to ensure that disadvantaged business enterprises as determined by the Office of Certification at the Colorado Department of Regulatory Agencies have the maximum opportunity to participate in the performance of contracts and subcontracts financed in whole or in part with Federal funds provided under this agreement. In this regard, all participants or contractors shall take all necessary and reasonable steps in accordance with the CDOT DBE program (or a Local Agency DBE Program approved in advance by the State) to ensure that disadvantaged business enterprises have the maximum opportunity to compete for and perform contracts. Recipients and their contractors shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of CDOT assisted contracts.

SECTION 3 DBE Program.

The Local Agency (sub-recipient) shall be responsible for obtaining the Disadvantaged Business Enterprise Program of the Colorado Department of Transportation, 1988, as amended, and shall comply with the applicable provisions of the program. (If applicable).

A copy of the DBE Program is available from and will be mailed to the Local Agency upon request: Business Programs Office

Colorado Department of Transportation 2829 West Howard Place

Denver, Colorado 80204

Phone: (303) 757-9007

REVISED 1/22/98

REQUIRED BY 49 CFR PART 26

EXHIBIT H

LOCAL AGENCY PROCEDURES FOR CONSULTANT SERVICES

Title 23 Code of Federal Regulations (CFR) 172 applies to a federally funded Local Agency project agreement administered by CDOT that involves professional consultant services. 23 CFR 172.1 states “The policies and procedures involve federally funded contracts for engineering and design related services for projects subject to the provisions of 23 U.S.C. 112(a) and are issued to ensure that a qualified consultant is obtained through an equitable selection process, that prescribed work is properly accomplished in a timely manner, and at fair and reasonable cost” and according to 23 CFR 172.5 “Price shall not be used as a factor in the analysis and selection phase.” Therefore, local agencies must comply with these CFR requirements when obtaining professional consultant services under a federally funded consultant contract administered by CDOT.

CDOT has formulated its procedures in Procedural Directive (P.D.) 400.1 and the related operations guidebook titled "Obtaining Professional Consultant Services". This directive and guidebook incorporate requirements from both Federal and State regulations, i.e., 23 CFR 172 and CRS §24-30-1401 et seq. Copies of the directive and the guidebook may be obtained upon request from CDOT's Agreements and Consultant Management Unit. [Local agencies should have their own written procedures on file for each method of procurement that addresses the items in 23 CFR 172].

Because the procedures and laws described in the Procedural Directive and the guidebook are quite lengthy, the subsequent steps serve as a short-hand guide to CDOT procedures that a Local Agency must follow in obtaining professional consultant services. This guidance follows the format of 23 CFR 172. The steps are:

1. The contracting Local Agency shall document the need for obtaining professional services.
2. Prior to solicitation for consultant services, the contracting Local Agency shall develop a detailed scope of work and a list of evaluation factors and their relative importance. The evaluation factors are those identified in C.R.S. 24-30-1403. Also, a detailed cost estimate should be prepared for use during negotiations.
3. The contracting agency must advertise for contracts in conformity with the requirements of C.R.S. 24-30-1405. The public notice period, when such notice is required, is a minimum of 15 days prior to the selection of the three most qualified firms and the advertising should be done in one or more daily newspapers of general circulation.
4. The Local Agency shall not advertise any federal aid contract without prior review by the CDOT Regional Civil Rights Office (RCRO) to determine whether the contract shall be subject to a DBE contract goal. If the RCRO determines a goal is necessary, then the Local Agency shall include the goal and the applicable provisions within the advertisement. The Local Agency shall not award a contract to any Contractor or Consultant without the confirmation by the CDOT Civil Rights and Business Resource Center that the Contractor or Consultant has demonstrated good faith efforts. The Local Agency shall work with the CDOT RCRO to ensure compliance with the established terms during the performance of the contract.
5. The Local Agency shall require that all contractors pay subcontractors for satisfactory performance of work no later than 30 days after the receipt of payment for that work from the contractor. For construction projects, this time period shall be reduced to seven days in accordance with Colorado Revised Statute 24-91-103(2). If the Local Agency withholds retainage from contractors and/or allows contractors to withhold retainage from subcontractors, such retainage provisions must comply with 49 CFR 26.29.
6. Payments to all Subconsultants shall be made within thirty days of receipt of payment from [the Local Agency] or no later than ninety days from the date of the submission of a complete invoice from the Subconsultant, whichever occurs first. If the Consultant has good cause to dispute an amount invoiced by a Subconsultant, the Consultant shall notify [the Local Agency] no later than the required date for payment. Such notification shall include the amount disputed and justification for the withholding. The Consultant shall maintain records of payment that show amounts paid to all Subconsultants. Good cause does not include the Consultant's failure to submit an invoice to the Local Agency or to deposit payments made.
7. The analysis and selection of the consultants shall be done in accordance with CRS §24-30-1403. This section of the regulation identifies the criteria to be used in the evaluation of CDOT pre-qualified prime consultants and their team. It also shows which criteria are used to short-list and to make a final selection.

The short-list is based on the following evaluation factors:

- a. Qualifications,

- b. Approach to the Work,
- c. Ability to furnish professional services.
- d. Anticipated design concepts, and
- e. Alternative methods of approach for furnishing the professional services. Evaluation factors for final selection are the consultant's:

- a. Abilities of their personnel,
 - b. Past performance,
 - c. Willingness to meet the time and budget requirement,
 - d. Location,
 - e. Current and projected work load,
 - f. Volume of previously awarded contracts, and
 - g. Involvement of minority consultants.
8. Once a consultant is selected, the Local Agency enters into negotiations with the consultant to obtain a fair and reasonable price for the anticipated work. Pre-negotiation audits are prepared for contracts expected to be greater than \$50,000. Federal reimbursements for costs are limited to those costs allowable under the cost principles of 48 CFR 31. Fixed fees (profit) are determined with consideration given to size, complexity, duration, and degree of risk involved in the work. Profit is in the range of six to 15 percent of the total direct and indirect costs.
9. A qualified Local Agency employee shall be responsible and in charge of the Work to ensure that the work being pursued is complete, accurate, and consistent with the terms, conditions, and specifications of the contract. At the end of Work, the Local Agency prepares a performance evaluation (a CDOT form is available) on the consultant.

CRS §§24-30-1401 THROUGH 24-30-1408, 23 CFR PART 172, AND P.D. 400.1, PROVIDE ADDITIONAL DETAILS FOR COMPLYING WITH THE PRECEEDING EIGHT (8) STEPS.

EXHIBIT I

FEDERAL-AID CONTRACT PROVISIONS FOR CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety; Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Government wide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design- build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension/debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60- 1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. **EEO Officer:** The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. **Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. **Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. **Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. **Training and Promotion:**

The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

a. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

b. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

c. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher-paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract.

The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt.

Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA- 1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein; Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account, assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements.

It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency.

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

- (i) That the payroll for the payroll period contains the information required to be provided under §5.5(a)(3)
- (ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5(a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;
- (ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;
- (iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices.

Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity.

The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S.DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. **Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. **Subcontracts.** The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. **Contract termination: debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. **Compliance with Davis-Bacon and Related Act requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. **Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and

7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

- a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
- b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
- c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;
- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

- a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.
- b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below.

The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

- c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.
- d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).
- f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.
- g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.
- h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

- i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

- j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

- a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

- (1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

- (2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

- (3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph(a)(2) of this certification; and

- (4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

- b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

- a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

- b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS
ROAD CONTRACTS**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

EXHIBIT J

ADDITIONAL FEDERAL REQUIREMENTS

Federal laws and regulations that may be applicable to the Work include:

Executive Order 11246

Executive Order 11246 of September 24, 1965 entitled "Equal Employment Opportunity," as amended by Executive Order 11375 of October 13, 1967 and as supplemented in Department of Labor regulations (41 CFR Chapter 60) (All construction contracts awarded in excess of \$10,000 by the Local Agencies and their contractors or the Local Agencies).

Copeland "Anti-Kickback" Act

The Copeland "Anti-Kickback" Act (18 U.S.C. 874) as supplemented in Department of Labor regulations (29 CFR Part 3) (All contracts and sub-Agreements for construction or repair).

Davis-Bacon Act

The Davis-Bacon Act (40 U.S.C. 276a to a-7) as supplemented by Department of Labor regulations (29 CFR Part 5) (Construction contracts in excess of \$2,000 awarded by the Local Agencies and the Local Agencies when required by Federal Agreement program legislation. This act requires that all laborers and mechanics employed by contractors or sub-contractors to work on construction projects financed by federal assistance must be paid wages not less than those established for the locality of the project by the Secretary of Labor).

Contract Work Hours and Safety Standards Act

Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330) as supplemented by Department of Labor regulations (29 CFR Part 5). (Construction contracts awarded by the Local Agency's in excess of \$2,000, and in excess of \$2,500 for other contracts which involve the employment of mechanics or laborers).

Clear Air Act

Standards, orders, or requirements issued under section 306 of the Clear Air Act (42 U.S.C. 1857(h), section 508 of the Clean Water Act (33 U.S.C. 1368). Executive Order 11738, and Environmental Protection Agency regulations (40 CFR Part 15) (contracts, subcontracts, and sub-Agreements of amounts in excess of \$100,000).

Energy Policy and Conservation Act

Mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94-163).

OMB Circulars

Office of Management and Budget Circulars A-87, A-21 or A-122, and A-102 or A-110, whichever is applicable.

Hatch Act

The Hatch Act (5 USC 1501-1508) and Public Law 95-454 Section 4728. These statutes state that federal funds cannot be used for partisan political purposes of any kind by any person or organization involved in the administration of federally-assisted programs.

Nondiscrimination

The Local Agency shall not exclude from participation in, deny the benefits of, or subject to discrimination any person in the United States on the ground of race, color national origin, sex, age or disability. Prior to the receipt of any Federal financial assistance from CDOT, the Local Agency shall execute the attached Standard DOT Title VI assurance. As appropriate, the Local Agency shall include Appendix A, B, or C to the Standard DOT Title VI assurance in any contract utilizing federal funds, land or other aid. The Local Agency shall also include the following in all contract advertisements:

The [Local Agency], in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (79 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, DBEs will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for any award.

ADA

In any contract utilizing federal funds, land, or other federal aid, the Local Agency shall require the federal-aid recipient or contractor to provide a statement of written assurance that they will comply with Section 504 and not discriminate on the basis of disability.

Uniform Relocation Assistance and Real Property Acquisition Policies Act

The Uniform Relocation Assistance and Real Property Acquisition Policies Act, as amended (Public Law 91-646, as amended and Public Law 100-17, 101 Stat. 246-256). (If the contractor is acquiring real property and displacing households or businesses in the performance of the Agreement).

Drug-Free Workplace Act

The Drug-Free Workplace Act (Public Law 100-690 Title V, subtitle D, 41 USC 701 et seq.).

Age Discrimination Act of 1975

The Age Discrimination Act of 1975, 42 U.S.C. Sections 6101 et seq. and its implementing regulation, 45 C.F.R. Part 91; Section 504 of the Rehabilitation Act of 1973, 29 U.S.C. 794, as amended, and implementing regulation 45 C.F.R. Part 84.

23 C.F.R. Part 172

23 C.F.R. Part 172, concerning "Administration of Engineering and Design Related Contracts".

23 C.F.R Part 633

23 C.F.R Part 633, concerning "Required Contract Provisions for Federal-Aid Construction Contracts".

23 C.F.R. Part 635

23 C.F.R. Part 635, concerning "Construction and Maintenance Provisions".

Title VI of the Civil Rights Act of 1964 and 162(a) of the Federal Aid Highway Act of 1973

Title VI of the Civil Rights Act of 1964 and 162(a) of the Federal Aid Highway Act of 1973. The requirements for which are shown in the Nondiscrimination Provisions, which are attached hereto and made a part hereof.

Nondiscrimination Provisions:

In compliance with Title VI of the Civil Rights Act of 1964 and with Section 162(a) of the Federal Aid Highway Act of 1973, the Contractor, for itself, its assignees and successors in interest, agree as follows:

i. Compliance with Regulations

The Contractor will comply with the Regulations of the Department of Transportation relative to nondiscrimination in Federally assisted programs of the Department of Transportation (Title 49, Code of Federal Regulations, Part 21, hereinafter referred to as the "Regulations"), which are herein incorporated by reference and made a part of this Agreement.

ii. Nondiscrimination

The Contractor, with regard to the work performed by it after award and prior to completion of the contract work, will not discriminate on the ground of race, color, sex, mental or physical handicap or national origin in the selection and retention of Subcontractors, including procurement of materials and leases of equipment. The Contractor will not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix C of the Regulations.

iii. Solicitations for Subcontracts, Including Procurement of Materials and Equipment

In all solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurement of materials or equipment, each potential Subcontractor or supplier shall be notified by the Contractor of the Contractor's obligations under this Agreement and the Regulations relative to nondiscrimination on the ground of race, color, sex, mental or physical handicap or national origin.

iv. Information and Reports

The Contractor will provide all information and reports required by the Regulations, or orders and instructions issued pursuant thereto and will permit access to its books, records, accounts, other sources of information and its facilities as may be determined by the State or the FHWA to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of the Contractor is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the State, or the FHWA as appropriate and shall set forth what efforts have been made to obtain the information.

v. Sanctions for Noncompliance

In the event of the Contractor's noncompliance with the nondiscrimination provisions of this Agreement, the State shall impose such contract sanctions as it or the FHWA may determine to be appropriate, including, but not limited to: **a.** Withholding of payments to the Contractor under the contract until the Contractor complies, and/or **b.** Cancellation, termination or suspension of the contract, in whole or in part.

Incorporation of Provisions §22

The Contractor will include the provisions of this Exhibit J in every subcontract, including procurement of materials and leases of equipment, unless exempt by the Regulations, orders, or instructions issued pursuant thereto. The Contractor will take such action with respect to any subcontract or procurement as the State or the FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance; provided, however, that, in the event the Contractor becomes involved in, or is threatened with, litigation with a Subcontractor or supplier as a result of such direction, the Contractor may request the State to enter into such litigation to protect the interest of the State and in addition, the Contractor may request the FHWA to enter into such litigation to protect the interests of the United States.

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SAMPLE

The United States Department of Transportation (USDOT) Standard Title VI/Non-Discrimination

Assurances for Local Agencies

DOT Order No. 1050.2A

The [Local Agency] (herein referred to as the "Recipient"), **HEREBY AGREES THAT**, as a condition to receiving any Federal financial assistance from the U.S. Department of Transportation (DOT), through the Colorado Department of Transportation and the Federal Highway Administration (FHWA), Federal Transit Administration (FTA), and Federal Aviation Administration (FAA), is subject to and will comply with the following:

Statutory/Regulatory Authorities

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);
- 49 C.F.R. Part 21 (entitled Non-discrimination In Federally-Assisted Programs Of The Department Of Transportation-Effectuation Of Title VI Of The Civil Rights Act Of 1964);
- 28 C.F.R. section 50.3 (U.S. Department of Justice Guidelines for Enforcement of Title VI of the Civil Rights Act of 1964);

The preceding statutory and regulatory cites hereinafter are referred to as the "Acts" and "Regulations," respectively.

General Assurances

In accordance with the Acts, the Regulations, and other pertinent directives, circulars, policy, memoranda, and/or guidance, the Recipient hereby gives assurance that it will promptly take any measures necessary to ensure that:

"No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity, "for which the Recipient receives Federal financial assistance from DOT, including the FHWA, FTA, or FAA.

The Civil Rights Restoration Act of 1987 clarified the original intent of Congress, with respect to Title VI and other Non-discrimination requirements (The Age Discrimination Act of 1975, and Section 504 of the Rehabilitation Act of 1973), by restoring the broad, institutional-wide scope and coverage of these non- discrimination statutes and requirements to include all programs and activities of the Recipient, so long as any portion of the program is Federally assisted.

Specific Assurances

More specifically, and without limiting the above general Assurance, the Recipient agrees with and gives the following Assurances with respect to its Federally assisted FHWA, FTA, and FAA assisted programs:

1. The Recipient agrees that each "activity," "facility," or "program," as defined in §§ 21.23(b) and 21.23(e) of 49 C.F.R. § 21 will be (with regard to an "activity") facilitated, or will be (with regard to a "facility") operated, or will be (with regard to a "program") conducted in compliance with all requirements imposed by, or pursuant to the Acts and the Regulations.
2. The Recipient will insert the following notification in all solicitations for bids, Requests For Proposals for work, or material subject to the Acts and the Regulations made in connection with all FHWA, FTA and FAA programs and, in adapted form, in all proposals for negotiated agreements regardless of funding source:
3. "The [Local Agency] in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity

4. to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award."
5. The Recipient will insert the clauses of Appendix A and E of this Assurance in every contract or agreement subject to the Acts and the Regulations.
6. The Recipient will insert the clauses of Appendix B of this Assurance, as a covenant running with the land, in any deed from the United States effecting or recording a transfer of real property, structures, use, or improvements thereon or interest therein to a Recipient.
7. That where the Recipient receives Federal financial assistance to construct a facility, or part of a facility, the Assurance will extend to the entire facility and facilities operated in connection therewith.
8. That where the Recipient receives Federal financial assistance in the form, or for the acquisition of real property or an interest in real property, the Assurance will extend to rights to space on, over, or under such property.
9. That the Recipient will include the clauses set forth in Appendix C and Appendix D of this Assurance, as a covenant running with the land, in any future deeds, leases, licenses, permits, or similar instruments entered into by the Recipient with other parties:
 - a. for the subsequent transfer of real property acquired or improved under the applicable activity, project, or program; and
 - b. for the construction or use of, or access to, space on, over, or under real property acquired or improved under the applicable activity, project, or program.
10. That this Assurance obligates the Recipient for the period during which Federal financial assistance is extended to the program, except where the Federal financial assistance is to provide, or is in the form of, personal property, or real property, or interest therein, or structures or improvements thereon, in which case the Assurance obligates the Recipient, or any transferee for the longer of the following periods:
 - a. the period during which the property is used for a purpose for which the Federal financial assistance is extended, or for another purpose involving the provision of similar services or benefits; or
 - b. the period during which the Recipient retains ownership or possession of the property.
11. The Recipient will provide for such methods of administration for the program as are found by the Secretary of Transportation or the official to whom he/she delegates specific authority to give reasonable guarantee that it, other recipients, sub-recipients, sub-grantees, contractors, subcontractors, consultants, transferees, successors in interest, and other participants of Federal financial assistance under such program will comply with all requirements imposed or pursuant to the Acts, the Regulations, and this Assurance.
12. The Recipient agrees that the United States has a right to seek judicial enforcement with regard to any matter arising under the Acts, the Regulations, and this Assurance.

By signing this ASSURANCE, the [Local Agency] also agrees to comply (and require any sub-recipients, sub-grantees, contractors, successors, transferees, and/or assignees to comply) with all applicable provisions governing the FHWA, FTA, and FAA's access to records, accounts, documents, information, facilities, and staff. You also recognize that you must comply with any program or compliance reviews, and/or complaint investigations conducted by CDOT, FHWA, FTA, or FAA. You must keep records, reports, and submit the material for review

upon request to CDOT, FHWA, FTA, or FAA, or its designee in a timely, complete, and accurate way. Additionally, you must comply with all other reporting, data collection, and evaluation requirements, as prescribed by law or detailed in program guidance.

[Local Agency] gives this ASSURANCE in consideration of and for obtaining any Federal grants, loans, contracts, agreements, property, and/or discounts, or other Federal-aid and Federal financial assistance extended after the date hereof to the recipients by the U.S. Department of Transportation under the FHWA, FTA, and FAA. This ASSURANCE is binding on [Local Agency], other recipients, sub-recipients, sub-grantees, contractors, subcontractors and their subcontractors', transferees, successors in interest, and any other participants in the FHWA, FTA, and FAA funded programs. The person(s) signing below is authorized to sign this ASSURANCE on behalf of the Recipient.

(Name of Recipient)

by _____
(Signature of Authorized Official)

DATED _____

APPENDIX A

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, FHWA, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.
4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the [Local Agency], CDOT or FHWA to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the [Local Agency], CDOT or FHWA, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non- discrimination provisions of this contract, the [Local Agency] will impose such contract sanctions as it, CDOT or FHWA may determine to be appropriate, including, but not limited to:
 - a. withholding payments to the contractor under the contract until the contractor complies; and/or
 - b. cancelling, terminating, or suspending a contract, in whole or in part.
6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the [Local Agency], CDOT or FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

APPENDIX B

CLAUSES FOR DEEDS TRANSFERRING UNITED STATES PROPERTY

The following clauses will be included in deeds effecting or recording the transfer of real property, structures, or improvements thereon, or granting interest therein from the United States pursuant to the provisions of Assurance 4:

NOW, THEREFORE, the U.S. Department of Transportation as authorized by law and upon the condition that the [Local Agency] will accept title to the lands and maintain the project constructed thereon in accordance with (*Name of Appropriate Legislative Authority*), the Regulations for the Administration of (*Name of Appropriate Program*), and the policies and procedures prescribed by the FHWA of the U.S. Department of Transportation in accordance and in compliance with all requirements imposed by Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation pertaining to and effectuating the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252; 42 U.S.C. § 2000d to 2000d-4), does hereby remise, release, quitclaim and convey unto the [Local Agency] all the right, title and interest of the U.S. Department of Transportation in and to said lands described in Exhibit A attached hereto and made a part hereof.

(HABENDUM CLAUSE)

TO HAVE AND TO HOLD said lands and interests therein unto [Local Agency] and its successors forever, subject, however, to the covenants, conditions, restrictions and reservations herein contained as follows, which will remain in effect for the period during which the real property or structures are used for a purpose for which Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits and will be binding on the [Local Agency] its successors and assigns.

The [Local Agency], in consideration of the conveyance of said lands and interests in lands, does hereby covenant and agree as a covenant running with the land for itself, its successors and assigns, that (1) no person will on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination with regard to any facility located wholly or in part on, over, or under such lands hereby conveyed [,] [and]* (2) that the [Local Agency] will use the lands and interests in lands and interests in lands so conveyed, in compliance with all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations and Acts may be amended [, and (3) that in the event of breach of any of the above-mentioned non-discrimination conditions, the Department will have a right to enter or re-enter said lands and facilities on said land, and that above described land and facilities will thereon revert to and vest in and become the absolute property of the U.S. Department of Transportation and its assigns as such interest existed prior to this instruction].*

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

APPENDIX C

CLAUSES FOR TRANSFER OF REAL PROPERTY ACQUIRED OR IMPROVED UNDER THE ACTIVITY, FACILITY, OR PROGRAM

The following clauses will be included in deeds, licenses, leases, permits, or similar instruments entered into by the [Local Agency] pursuant to the provisions of Assurance 7(a):

- A. The (grantee, lessee, permittee, etc. as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree [in the case of deeds and leases add "as a covenant running with the land"] that:
 - 1. In the event facilities are constructed, maintained, or otherwise operated on the property described in this (deed, license, lease, permit, etc.) for a purpose for which a U.S. Department of Transportation activity, facility, or program is extended or for another purpose involving the provision of similar services or benefits, the (grantee, licensee, lessee, permittee, etc.) will maintain and operate such facilities and services in compliance with all requirements imposed by the Acts and Regulations (as may be amended) such that no person on the grounds of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities.
- B. With respect to licenses, leases, permits, etc., in the event of breach of any of the above Non-discrimination covenants, [Local Agency] will have the right to terminate the (lease, license, permit, etc.) and to enter, re-enter, and repossess said lands and facilities thereon, and hold the same as if the (lease, license, permit, etc.) had never been made or issued. *
- C. With respect to a deed, in the event of breach of any of the above Non-discrimination covenants, the [Local Agency] will have the right to enter or re-enter the lands and facilities thereon, and the above described lands and facilities will there upon revert to and vest in and become the absolute property of the [Local Agency] and its assigns. *

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

APPENDIX D

CLAUSES FOR CONSTRUCTION/USE/ACCESS TO REAL PROPERTY ACQUIRED UNDER THE ACTIVITY, FACILITY OR PROGRAM

The following clauses will be included in deeds, licenses, permits, or similar instruments/agreements entered into by [Local Agency] pursuant to the provisions of Assurance 7(b):

- A. The (grantee, licensee, permittee, etc., as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds and leases add, "as a covenant running with the land") that (1) no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in the construction of any improvements on, over, or under such land, and the furnishing of services thereon, no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, (3) that the (grantee, licensee, lessee, permittee, etc.) will use the premises in compliance with all other requirements imposed by or pursuant to the Acts and Regulations, as amended, set forth in this Assurance.
- B. With respect to (licenses, leases, permits, etc.), in the event of breach of any of the above Non- discrimination covenants, [Local Agency] will have the right to terminate the (license, permit, etc., as appropriate) and to enter or re-enter and repossess said land and the facilities thereon, and hold the same as if said (license, permit, etc., as appropriate) had never been made or issued. *
- C. With respect to deeds, in the event of breach of any of the above Non-discrimination covenants, [Local Agency] will there upon revert to and vest in and become the absolute property of [Local Agency] of Transportation and its assigns. *

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

APPENDIX E

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq.).

EXHIBIT K
FFATA SUPPLEMENTAL FEDERAL PROVISIONS

State of Colorado
Supplemental Provisions for
Federally Funded Contracts, Grants, and Purchase Orders
Subject to
The Federal Funding Accountability and Transparency Act of 2006 (FFATA), As Amended
Revised as of 3-20-13

The contract, grant, or purchase order to which these Supplemental Provisions are attached has been funded, in whole or in part, with an Award of Federal funds. In the event of a conflict between the provisions of these Supplemental Provisions, the Special Provisions, the contract or any attachments or exhibits incorporated into and made a part of the contract, the provisions of these Supplemental Provisions shall control.

1. Definitions. For the purposes of these Supplemental Provisions, the following terms shall have the meanings ascribed to them below.

1.1. “Award” means an award of Federal financial assistance that a non-Federal Entity receives or administers in the form of:

- 1.1.1.** Grants;
- 1.1.2.** Contracts;
- 1.1.3.** Cooperative agreements, which do not include cooperative research and development agreements (CRDA) pursuant to the Federal Technology Transfer Act of 1986, as amended (15 U.S.C. 3710);
- 1.1.4.** Loans;
- 1.1.5.** Loan Guarantees;
- 1.1.6.** Subsidies;
- 1.1.7.** Insurance;
- 1.1.8.** Food commodities;
- 1.1.9.** Direct appropriations;
- 1.1.10.** Assessed and voluntary contributions; and
- 1.1.11.** Other financial assistance transactions that authorize the expenditure of Federal funds by non-Federal Entities.

Award **does not** include:

- 1.1.12.** Technical assistance, which provides services in lieu of money;
- 1.1.13.** A transfer of title to Federally-owned property provided in lieu of money; even if the award is called a grant;
- 1.1.14.** Any award classified for security purposes; or
- 1.1.15.** Any award funded in whole or in part with Recovery funds, as defined in section 1512 of the American Recovery and Reinvestment Act (ARRA) of 2009 (Public Law 111-5).

1.2. “Contract” means the contract to which these Supplemental Provisions are attached and includes all Award types in §1.1.1 through 1.1.11 above.

1.3. “Contractor” means the party or parties to a Contract funded, in whole or in part, with Federal financial assistance, other than the Prime Recipient, and includes grantees, subgrantees, Subrecipients, and borrowers. For purposes of Transparency Act reporting, Contractor does not include Vendors.

1.4. “Data Universal Numbering System (DUNS) Number” means the nine-digit number established and assigned by Dun and Bradstreet, Inc. to uniquely identify a business entity. Dun and Bradstreet’s website may be found at: <http://fedgov.dnb.com/webform>.

1.5. “Entity” means all of the following as defined at 2 CFR part 25, subpart C;

- 1.5.1.** A governmental organization, which is a State, local government, or Indian Tribe;
- 1.5.2.** A foreign public entity;
- 1.5.3.** A domestic or foreign non-profit organization;

- 1.5.4. A domestic or foreign for-profit organization; and
- 1.5.5. A Federal agency, but only a Subrecipient under an Award or Subaward to a non-Federal entity.
- 1.6. **“Executive”** means an officer, managing partner or any other employee in a management position.
- 1.7. **“Federal Award Identification Number (FAIN)”** means an Award number assigned by a Federal agency to a Prime Recipient.
- 1.8. **“FFATA”** means the Federal Funding Accountability and Transparency Act of 2006 (Public Law 109- 282), as amended by §6202 of Public Law 110-252. FFATA, as amended, also is referred to as the “Transparency Act.”
- 1.9. **“Prime Recipient”** means a Colorado State agency or institution of higher education that receives an Award.
- 1.10. **“Subaward”** means a legal instrument pursuant to which a Prime Recipient of Award funds awards all or a portion of such funds to a Subrecipient, in exchange for the Subrecipient’s support in the performance of all or any portion of the substantive project or program for which the Award was granted.
- 1.11. **“Subrecipient”** means a non-Federal Entity (or a Federal agency under an Award or Subaward to a non-Federal Entity) receiving Federal funds through a Prime Recipient to support the performance of the Federal project or program for which the Federal funds were awarded. A Subrecipient is subject to the terms and conditions of the Federal Award to the Prime Recipient, including program compliance requirements. The term “Subrecipient” includes and may be referred to as Subgrantee.
- 1.12. **“Subrecipient Parent DUNS Number”** means the subrecipient parent organization’s 9-digit Data Universal Numbering System (DUNS) number that appears in the subrecipient’s System for Award Management (SAM) profile, if applicable.
- 1.13. **“Supplemental Provisions”** means these Supplemental Provisions for Federally Funded Contracts, Grants, and Purchase Orders subject to the Federal Funding Accountability and Transparency Act of 2006, As Amended, as may be revised pursuant to ongoing guidance from the relevant Federal or State of Colorado agency or institution of higher education.
- 1.14. **“System for Award Management (SAM)”** means the Federal repository into which an Entity must enter the information required under the Transparency Act, which may be found at <http://www.sam.gov>.
- 1.15. **“Total Compensation”** means the cash and noncash dollar value earned by an Executive during the Prime Recipient’s or Subrecipient’s preceding fiscal year and includes the following:
- 1.15.1. Salary and bonus;
 - 1.15.2. Awards of stock, stock options, and stock appreciation rights, using the dollar amount recognized for financial statement reporting purposes with respect to the fiscal year in accordance with the Statement of Financial Accounting Standards No. 123 (Revised 2005) (FAS 123R), Shared Based Payments;
 - 1.15.3. Earnings for services under non-equity incentive plans, not including group life, health, hospitalization or medical reimbursement plans that do not discriminate in favor of Executives and are available generally to all salaried employees;
 - 1.15.4. Change in present value of defined benefit and actuarial pension plans;
 - 1.15.5. Above-market earnings on deferred compensation which is not tax-qualified;
 - 1.15.6. Other compensation, if the aggregate value of all such other compensation (e.g. severance, termination payments, value of life insurance paid on behalf of the employee, perquisites or property) for the Executive exceeds \$10,000.
- 1.16. **“Transparency Act”** means the Federal Funding Accountability and Transparency Act of 2006 (Public Law 109-282), as amended by §6202 of Public Law 110-252. The Transparency Act also is referred to as FFATA.
- 1.17 **“Vendor”** means a dealer, distributor, merchant or other seller providing property or services required for a project or program funded by an Award. A Vendor is not a Prime Recipient or a Subrecipient and is not subject to the terms and conditions of the Federal award. Program compliance requirements do not pass through to a Vendor.

2. **Compliance.** Contractor shall comply with all applicable provisions of the Transparency Act and the regulations issued pursuant thereto, including but not limited to these Supplemental Provisions. Any revisions to such provisions or regulations shall automatically become a part of these Supplemental Provisions, without the necessity of either party executing any further instrument. The State of Colorado may provide written notification to Contractor of such revisions, but such notice shall not be a condition precedent to the effectiveness of such revisions.
3. **System for Award Management (SAM) and Data Universal Numbering System (DUNS) Requirements.**
 - 3.1. **SAM.** Contractor shall maintain the currency of its information in SAM until the Contractor submits the final financial report required under the Award or receives final payment, whichever is later. Contractor shall review and update SAM information at least annually after the initial registration, and more frequently if required by changes in its information.
 - 3.2. **DUNS.** Contractor shall provide its DUNS number to its Prime Recipient, and shall update Contractor's information in Dun & Bradstreet, Inc. at least annually after the initial registration, and more frequently if required by changes in Contractor's information.
4. **Total Compensation.** Contractor shall include Total Compensation in SAM for each of its five most highly compensated Executives for the preceding fiscal year if:
 - 4.1. The total Federal funding authorized to date under the Award is \$25,000 or more; and
 - 4.2. In the preceding fiscal year, Contractor received:
 - 4.2.1. 80% or more of its annual gross revenues from Federal procurement contracts and subcontracts and/or Federal financial assistance Awards or Subawards subject to the Transparency Act; and
 - 4.2.2. \$25,000,000 or more in annual gross revenues from Federal procurement contracts and subcontracts and/or Federal financial assistance Awards or Subawards subject to the Transparency Act; and
 - 4.3. The public does not have access to information about the compensation of such Executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d) or § 6104 of the Internal Revenue Code of 1986.
5. **Reporting.** Contractor shall report data elements to SAM and to the Prime Recipient as required in §7 below if Contractor is a Subrecipient for the Award pursuant to the Transparency Act. No direct payment shall be made to Contractor for providing any reports required under these Supplemental Provisions and the cost of producing such reports shall be included in the Contract price. The reporting requirements in §7 below are based on guidance from the US Office of Management and Budget (OMB), and as such are subject to change at any time by OMB. Any such changes shall be automatically incorporated into this Contract and shall become part of Contractor's obligations under this Contract, as provided in §2 above. The Colorado Office of the State Controller will provide summaries of revised OMB reporting requirements at <http://www.colorado.gov/dpa/dfp/sco/FFATA.htm>.
6. **Effective Date and Dollar Threshold for Reporting.** The effective date of these Supplemental Provisions apply to new Awards as of October 1, 2010. Reporting requirements in §7 below apply to new Awards as of October 1, 2010, if the initial award is \$25,000 or more. If the initial Award is below \$25,000 but subsequent Award modifications result in a total Award of \$25,000 or more, the Award is subject to the reporting requirements as of the date the Award exceeds \$25,000. If the initial Award is \$25,000 or more, but funding is subsequently de-obligated such that the total award amount falls below \$25,000, the Award shall continue to be subject to the reporting requirements.
7. **Subrecipient Reporting Requirements.** If Contractor is a Subrecipient, Contractor shall report as set forth below.

7.1 To SAM. A Subrecipient shall register in SAM and report the following data elements in SAM *for each* Federal Award Identification Number no later than the end of the month following the month in which the Subaward was made:

7.1.1 Subrecipient DUNS Number;

7.1.2 Subrecipient DUNS Number + 4 if more than one electronic funds transfer (EFT) account;

7.1.3 Subrecipient Parent DUNS Number;

7.1.4 Subrecipient's address, including: Street Address, City, State, Country, Zip + 4, and Congressional District;

7.1.5 Subrecipient's top 5 most highly compensated Executives if the criteria in §4 above are met; and

7.1.6 Subrecipient's Total Compensation of top 5 most highly compensated Executives if criteria in §4 above met.

7.2 To Prime Recipient. A Subrecipient shall report to its Prime Recipient, upon the effective date of the Contract, the following data elements:

7.2.1 Subrecipient's DUNS Number as registered in **SAM**.

7.2.2 Primary Place of Performance Information, including: Street Address, City, State, Country, Zip code + 4, and Congressional District.

8. Exemptions.

8.1. These Supplemental Provisions do not apply to an individual who receives an Award as a natural person, unrelated to any business or non-profit organization he or she may own or operate in his or her name.

8.2 A Contractor with gross income from all sources of less than \$300,000 in the previous tax year is exempt from the requirements to report Subawards and the Total Compensation of its most highly compensated Executives.

8.3 Effective October 1, 2010, "Award" currently means a grant, cooperative agreement, or other arrangement as defined in Section 1.1 of these Special Provisions. On future dates "Award" may include other items to be specified by OMB in policy memoranda available at the OMB Web site; Award also will include other types of Awards subject to the Transparency Act.

8.4 There are no Transparency Act reporting requirements for Vendors.

Event of Default. Failure to comply with these Supplemental Provisions shall constitute an event of default under the Contract and the State of Colorado may terminate the Contract upon 30 days prior written notice if the default remains uncured five calendar days following the termination of the 30 day notice period. This remedy will be in addition to any other remedy available to the State of Colorado under the Contract, at law or in equity.

EXHIBIT L

SAMPLE SUBRECIPIENT MONITORING AND RISK ASSESSMENT

	CDOT SUBRECIPIENT RISK ASSESSMENT	Date:		
Name of Entity (Subrecipient):				
Name of Project / Program:				
Estimated Award Period:				
Entity Executive Director or VP:				
Entity Chief Financial Officer:				
Entity Representative for this Self Assessment:				
Instructions: (See "Instructions" tab for more information) 1. Check only one box for each question. All questions are required to be answered. 2. Utilize the "Comment" section below the last question for additional responses. 3. When complete, check the box at the bottom of the form to authorize.				
		Yes	No	N/A
EXPERIENCE ASSESSMENT				
		Yes	No	N/A
1 Is your entity new to operating or managing federal funds (has not done so within the past three years)?		☐	☐	
2 Is this funding program new for your entity (managed for less than three years)? <i>Examples of funding programs include CMAQ, TAP, STP-M, etc.</i>		☐	☐	
3 Does your staff assigned to the program have at least three full years of experience with this federal program?		☐	☐	
MONITORING/AUDIT ASSESSMENT				
		Yes	No	N/A
4 Has your entity had an on-site project or grant review from an external entity (e.g., CDOT, FHWA) within the last three years?		☐	☐	☐
5 a) Were there non-compliance issues in this prior review?		☐	☐	☐
b) What were the number and extent of issues in prior review?		☐ 1 to 2	☐ >3	☐
OPERATION ASSESSMENT				
		Yes	No	N/A
6 Does your entity have a time and effort reporting system in place to account for 100% of all employees' time, that can provide a breakdown of the actual time spent on each funded project? <i>If No, in the comment section please explain how you intend to document 100% of hours worked by employees and breakdown of time spent on each funding project.</i>		☐	☐	
FINANCIAL ASSESSMENT				
		Yes	No	N/A
7 a) Does your entity have an indirect cost rate that is approved and current?		☐	☐	
b) If Yes, who approved the rate, and what date was it approved?				
8 Is this grant/award 10% or more of your entity's overall funding?		☐ >10%	☐ <10%	
9 Has your entity returned lapsed* funds? <i>*Funds "lapse" when they are no longer available for obligation.</i>		☐	☐	☐
10 Has your entity had difficulty meeting local match requirements in the last three years?		☐	☐	☐
11 What is the total federal funding your entity has been awarded for the last federal fiscal year, and what is your entity's fiscal year end?				

INTERNAL CONTROLS ASSESSMENT		Yes	No	N/A
12	Has your entity had any significant changes in key personnel or accounting system(s) in the last year? (e.g., Controller, Exec Director, Program Mgr, Accounting Mgr, etc.) If Yes, in the comment section, please identify the accounting system(s), and / or list personnel positions and identify any that are vacant.	☐	☐	☐
13	Does your entity have financial procedures and controls in place to accommodate a federal-aid project?	☐	☐	
14	Does your accounting system identify the receipts and expenditures of program funds separately for each award?	☐	☐	
15	Will your accounting system provide for the recording of expenditures for each award by the budget cost categories shown in the approved budget?	☐	☐	
16	Does your agency have a review process for all expenditures that will ensure that all costs are reasonable, allowable and allocated correctly to each funding source? If Yes, in the comment section, please explain your current process for reviewing costs.	☐	☐	☐
17	How many total FTE perform accounting functions within your organization?	☐ ≥ 6	☐ 2 to 5	☐ < 2
IMPACT ASSESSMENT		Yes	No	N/A
18	For this upcoming federal award or in the immediate future, does your entity have any potential conflicts of interest* in accordance with applicable Federal awarding agency policy? If Yes, please disclose these conflicts in writing, along with supporting information, and submit with this form. (*Any practices, activities or relationships that reasonably appear to be in conflict with the full performance of the Subrecipient's obligations to the State.)	☐	☐	
19	For this award, has your entity disclosed to CDOT, in writing, violations of Federal criminal law involving fraud, bribery, or gratuity violations potentially affecting the award? Response options: YES = Check if have one or more violation(s) and have either disclosed previously to CDOT or as part of this form. In the comment section, list all violations with names of supporting documentation and submit with this form. NO = Check if have one or more violation(s) and have not disclosed previously or will not disclose as part of this form. Explain in the comment section. N/A = Check if have no violations.	☐	☐	☐
PROGRAM MANAGEMENT ASSESSMENT		Yes	No	N/A
20	Does your entity have a written process/procedure or certification statement approved by your governing board ensuring critical project personnel are capable of effectively managing Federal-aid projects? If Yes, please submit with this form.	☐	☐	☐
21	Does your entity have written procurement policies or certification statement for consultant selection approved by your governing board in compliance with 23 CFR 172*? If Yes, please submit with this form. (*The Brooks Act requires agencies to promote open competition by advertising, ranking, selecting, and negotiating contracts based on demonstrated competence and qualifications, at a fair and reasonable price.)	☐	☐	☐
22	a) Is your staff familiar with the relevant CDOT manuals and federal program requirements?	☐	☐	☐
	b) Does your entity have a written policy or a certification statement approved by your governing board assuring federal-aid projects will receive adequate inspections? If Yes, please submit with this form.	☐	☐	☐
	c) Does your entity have a written process or a certification statement approved by your governing board assuring a contractor's work will be completed in conformance with approved plans and specifications? If Yes, please submit with this form.	☐	☐	☐

d) Does your entity have a written policy or certification statement approved by your governing board assuring that materials installed on the projects are sampled and tested per approved processes. <i>If Yes, please submit with this form.</i>	☐	☐	☐
e) Does your entity have a written policy or certification statement approved by your governing board assuring that only US manufactured steel will be incorporated into the project (<i>Buy America requirements</i>)? <i>If Yes, please submit with this form.</i>	☐	☐	☐
Comments - As needed, include the question number and provide comments related to the above questions. Insert additional rows as needed.			
☐ By checking this box, the Executive Director, VP or Chief Financial Officer of this entity certifies that all information provided on this form is true and correct.  Tool Version: v2.0 (081816)			

**EXHIBIT M - OMB Uniform Guidance for Federal
Awards Subject to
The Office of Management and Budget Uniform Administrative Requirements, Cost Principles, and Audit
Requirements for Federal Awards (“Uniform Guidance”),
Federal Register, Vol. 78, No. 248, 78590**

The agreement to which these Uniform Guidance Supplemental Provisions are attached has been funded, in whole or in part, with an award of Federal funds. In the event of a conflict between the provisions of these Supplemental Provisions, the Special Provisions, the agreement or any attachments or exhibits incorporated into and made a part of the agreement, the provisions of these Uniform Guidance Supplemental Provisions shall control. In the event of a conflict between the provisions of these Supplemental Provisions and the FFATA Supplemental Provisions, the FFATA Supplemental Provisions shall control.

- 9. Definitions.** For the purposes of these Supplemental Provisions, the following terms shall have the meanings ascribed to them below.
- 9.1. “Award”** means an award by a Recipient to a Subrecipient funded in whole or in part by a Federal Award. The terms and conditions of the Federal Award flow down to the Award unless the terms and conditions of the Federal Award specifically indicate otherwise. 2 CFR §200.38
 - 9.2. “Federal Award”** means an award of Federal financial assistance or a cost-reimbursement contract under the Federal Acquisition Requirements by a Federal Awarding Agency to a Recipient. “Federal Award” also means an agreement setting forth the terms and conditions of the Federal Award. The term does not include payments to a contractor or payments to an individual that is a beneficiary of a Federal program.
 - 9.3. “Federal Awarding Agency”** means a Federal agency providing a Federal Award to a Recipient. 2CFR §200.37
 - 9.4. “FFATA”** means the Federal Funding Accountability and Transparency Act of 2006 (Public Law 109-282), as amended by §6202 of Public Law 110-252.
 - 9.5. “Grant” or “Grant Agreement”** means an agreement setting forth the terms and conditions of an Award. The term does not include an agreement that provides only direct Federal cash assistance to an individual, a subsidy, a loan, a loan guarantee, insurance, or acquires property or services for the direct benefit of use of the Federal Awarding Agency or Recipient. 2 CFR §200.51.
 - 9.6. “OMB”** means the Executive Office of the President, Office of Management and Budget.
 - 9.7. “Recipient”** means a Colorado State department, agency or institution of higher education that receives a Federal Award from a Federal Awarding Agency to carry out an activity under a Federal program. The term does not include Subrecipients. 2 CFR §200.86
 - 9.8. “State”** means the State of Colorado, acting by and through its departments, agencies and institutions of higher education.
 - 9.9. “Subrecipient”** means a non-Federal entity receiving an Award from a Recipient to carry out part of a Federal program. The term does not include an individual who is a beneficiary of such program.
 - 9.10. “Uniform Guidance”** means the Office of Management and Budget Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, which supersedes requirements from OMB Circulars A-21, A-87, A-110, and A-122, OMB Circulars A-89, A-102, and A- 133, and the guidance in Circular A-50 on Single Audit Act follow-up. The terms and conditions of the Uniform Guidance flow down to Awards to Subrecipients unless the Uniform Guidance or the terms and conditions of the Federal Award specifically indicate otherwise.
 - 9.11. “Uniform Guidance Supplemental Provisions”** means these Supplemental Provisions for Federal Awards subject to the OMB Uniform Guidance, as may be revised pursuant to ongoing guidance from relevant Federal agencies or the Colorado State Controller.
- 10. Compliance.** Subrecipient shall comply with all applicable provisions of the Uniform Guidance, including but not limited to these Uniform Guidance Supplemental Provisions. Any revisions to such provisions

automatically shall become a part of these Supplemental Provisions, without the necessity of either party executing any further instrument. The State of Colorado may provide written notification to Subrecipient of such revisions, but such notice shall not be a condition precedent to the effectiveness of such revisions.

11. Procurement Standards.

- 3.1 Procurement Procedures.** Subrecipient shall use its own documented procurement procedures which reflect applicable State, local, and Tribal laws and regulations, provided that the procurements conform to applicable Federal law and the standards identified in the Uniform Guidance, including without limitation, §§200.318 through 200.326 thereof.
- 3.2 Procurement of Recovered Materials.** If Subrecipient is a State Agency or an agency of a political subdivision of a state, its contractors must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.
- 4. Access to Records.** Subrecipient shall permit Recipient and auditors to have access to Subrecipient's records and financial statements as necessary for Recipient to meet the requirements of §200.331 (Requirements for pass-through entities), §§200.300 (Statutory and national policy requirements) through 200.309 (Period of performance), and Subpart F-Audit Requirements of the Uniform Guidance. 2 CFR §200.331(a)(5).
- 5. Single Audit Requirements.** If Subrecipient expends \$750,000 or more in Federal Awards during Subrecipient's fiscal year, Subrecipient shall procure or arrange for a single or program-specific audit conducted for that year in accordance with the provisions of Subpart F-Audit Requirements of the Uniform Guidance, issued pursuant to the Single Audit Act Amendments of 1996, (31 U.S.C. 7501-7507). 2 CFR §200.501.
 - 5.1 Election.** Subrecipient shall have a single audit conducted in accordance with Uniform Guidance §200.514 (Scope of audit), except when it elects to have a program-specific audit conducted in accordance with §200.507 (Program-specific audits). Subrecipient may elect to have a program-specific audit if Subrecipient expends Federal Awards under only one Federal program (excluding research and development) and the Federal program's statutes, regulations, or the terms and conditions of the Federal award do not require a financial statement audit of Recipient. A program-specific audit may not be elected for research and development unless all of the Federal Awards expended were received from Recipient and Recipient approves in advance a program-specific audit.
 - 5.2 Exemption.** If Subrecipient expends less than \$750,000 in Federal Awards during its fiscal year, Subrecipient shall be exempt from Federal audit requirements for that year, except as noted in 2 CFR §200.503 (Relation to other audit requirements), but records shall be available for review or audit by appropriate officials of the Federal agency, the State, and the Government Accountability Office.
 - 5.3 Subrecipient Compliance Responsibility.** Subrecipient shall procure or otherwise arrange for the audit required by Part F of the Uniform Guidance and ensure it is properly performed and submitted when due in accordance with the Uniform Guidance. Subrecipient shall prepare appropriate financial statements, including the schedule of expenditures of Federal awards in accordance with Uniform Guidance §200.510 (Financial statements) and provide the auditor with access to personnel, accounts, books, records, supporting documentation, and other information as needed for the auditor to perform the audit required by Uniform Guidance Part F-Audit Requirements.
- 6. Contract Provisions for Subrecipient Contracts.** Subrecipient shall comply with and shall include all of the following applicable provisions in all subcontracts entered into by it pursuant to this Grant Agreement.

- 6.1 Equal Employment Opportunity.** Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of “federally assisted construction contract” in 41 CFR Part 60-1.3 shall include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, “Equal Employment Opportunity” (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, “Amending Executive Order 11246 Relating to Equal Employment Opportunity,” and implementing regulations at 41 CFR part 60, “Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor.”

“During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's non-compliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: *Provided, however*, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the contractor may request the United States to enter into such litigation to protect the interests of the United States.”

- 4.2 Davis-Bacon Act.** Davis-Bacon Act, as amended (40 U.S.C. 3141-3148). When required by Federal program legislation, all prime construction contracts in excess of \$2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-

3148) as supplemented by Department of Labor regulations (29 CFR Part 5, “Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction”). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland “Anti-Kickback” Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, “Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States”). The Act provides that each contractor or Subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled.

The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.

- 4.3 Rights to Inventions Made Under a Contract or Agreement.** If the Federal Award meets the definition of “funding agreement” under 37 CFR §401.2 (a) and Subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that “funding agreement,” Subrecipient must comply with the requirements of 37 CFR Part 401, “Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements,” and any implementing regulations issued by the awarding agency.
 - 4.4 Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended.** Contracts and subgrants of amounts in excess of \$150,000 must contain a provision that requires the non-Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).
 - 4.5 Debarment and Suspension (Executive Orders 12549 and 12689).** A contract award (see 2 CFR 180.220) must not be made to parties listed on the government wide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), “Debarment and Suspension.” SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.
 - 4.6 Byrd Anti-Lobbying Amendment (31 U.S.C. 1352).** Contractors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.
- 7. Certifications.** Unless prohibited by Federal statutes or regulations, Recipient may require Subrecipient to submit certifications and representations required by Federal statutes or regulations on an annual basis. 2 CFR §200.208. Submission may be required more frequently if Subrecipient fails to meet a requirement of the Federal award. Subrecipient shall certify in writing to the State at the end of the Award that the project or activity was completed or the level of effort was expended. 2 CFR §200.201(3). If the required level of activity or effort was not carried out, the amount of the Award must be adjusted.
- 1.8.Event of Default.** Failure to comply with these Uniform Guidance Supplemental Provisions shall constitute an event of default under the Grant Agreement (2 CFR §200.339) and the State may terminate the Grant upon 30

days prior written notice if the default remains uncured five calendar days following the termination of the 30 day notice period. This remedy will be in addition to any other remedy available to the State of Colorado under the Grant, at law or in equity.

9. **Effective Date.** The effective date of the Uniform Guidance is December 26, 2013. 2 CFR §200.110. The procurement standards set forth in Uniform Guidance §§200.317-200.326 are applicable to new Awards made by Recipient as of December 26, 2015. The standards set forth in Uniform Guidance Subpart F-Audit Requirements are applicable to audits of fiscal years beginning on or after December 26, 2014.

10. **Performance Measurement**

The Uniform Guidance requires completion of OMB-approved standard information collection forms (the PPR). The form focuses on outcomes, as related to the Federal Award Performance Goals that awarding Federal agencies are required to detail in the Awards.

Section 200.301 provides guidance to Federal agencies to measure performance in a way that will help the Federal awarding agency and other non-Federal entities to improve program outcomes.

The Federal awarding agency is required to provide recipients with clear performance goals, indicators, and milestones (200.210). Also, must require the recipient to relate financial data to performance accomplishments of the Federal award.



REPORT TO CITY COUNCIL ORDINANCE FIRST READING

**AGENDA ITEM
8.C.2.**

TO: THE HONORABLE CITY COUNCIL

DATE: March 1, 2021

SUBJECT: CB21-008 An Ordinance Authorizing the Third Amendment to the 2021 Operating and Capital Budget in the Amount of \$450,000.00 and Authorizing an Intergovernmental Agreement Between the City of Arvada and the State of Colorado Acting By and Through the Department of Transportation, Pertaining to the Signal Replacements at West 58th Avenue & Kipling Parkway, Project No. 20-TC-02 (CDOT Project No. SHO M040-034 (22278)) (Public Hearing to be set for March 15, 2021 at 6:15 p.m.)

Report in Brief

Council action is requested on the attached ordinance authorizing the third amendment to the 2021 operating and capital budget in the amount of \$450,000.00 and authorizing an Intergovernmental Agreement by and between the State of Colorado acting by and through the Department of Transportation and the City of Arvada for the signal replacements at West 58th Avenue & Kipling Parkway, Project No. 20-TC-02 (CDOT Project No. SHO M040-034 (22278)).

The Arvada team recommends that the City Council approve CB21-008, An Ordinance Authorizing the Third Amendment to the 2021 Operating and Capital Budget in the Amount of \$450,000.00 and Authorizing an Intergovernmental Agreement Between the City of Arvada and the State of Colorado Acting By and Through the Department of Transportation, Pertaining to the Signal Replacements at West 58th Avenue & Kipling Parkway, Project No. 20-TC-02 (CDOT Project No. SHO M040-034 (22278)) (Public Hearing to be set for March 15, 2021 at 6:15 p.m.).

Financial Impact

Funding for this project is available in Financial Project No. 93734, HSIP 58th and Kipling. The funding includes \$405,000.00 in federal aid and \$45,000 of local match contributions.

Background

In February 2017, the City was awarded a grant for \$133,000 through the Federal Highway Safety Improvement Program (HSIP) and the Colorado Department of Transportation (CDOT) to improve the intersection of West 58th Avenue & Kipling Parkway. HSIP is a core federal aid program with the purpose of achieving a significant reduction in traffic fatalities and serious injuries on all public roads and whose objective is to target resources where they will be most effective, with a focus on performance. This project will reconstruct the traffic signal and upgrade pedestrian infrastructure to meet current standards at this location.

In March 2020, the City requested and was awarded additional funding in the amount of \$317,000 for this project to offset rising construction costs and upgrade additional pedestrian infrastructure. With the additional funding, the City was able to successfully obtain a total of \$450,000 in federal aid.

Discussion

Since 2017 when the City was awarded the original HSIP grant, construction costs have been steadily increasing. Furthermore, through the preliminary design process it was identified that additional improvements to surrounding pedestrian infrastructure

SUBJECT: CB21-008 An Ordinance Authorizing the Third Amendment to the 2021 Operating and Capital Budget in the Amount of \$450,000.00 and Authorizing an Intergovernmental Agreement Between the City of Arvada and the State of Colorado Acting By and Through the Department of Transportation, Pertaining to the Signal Replacements at West 58th Avenue & Kipling Parkway, Project No. 20-TC-02 (CDOT Project No. SHO M040-034 (22278)) (Public Hearing to be set for March 15, 2021 at 6:15 p.m.)

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ITEM: 8.C.2.

and vehicle operations would benefit all transportation modes utilizing this intersection. In order to provide enhanced improvements, additional funding was requested and awarded by CDOT in March 2020.

Public Contact

Both motorists and pedestrians have expressed concerns at this intersection through emails, phone calls, and Ask Arvada submissions. The City team, in partnership with CDOT, was able to successfully obtain a federally funded grant. In addition, the City Council agenda was posted.

Commission Recommendation

N/A

Strategic Alignment

This action aligns with the City Council Strategic Plan Priority Area of Infrastructure with the principle to provide safe and efficient connections to modes of transportation, including transit, streets, sidewalks, and bikeways with a focus on enhanced technology at high-priority intersections improving safety and minimizing traffic congestion. Implementing routine and preventative maintenance measures on existing infrastructure greatly increases the efficiency of the City's transportation system while providing safe travel for all transportation modes.

Alternative Courses of Action

N/A

Recommendation for Action

The Arvada team recommends that the City Council approve CB21-008, An Ordinance Authorizing the Third Amendment to the 2021 Operating and Capital Budget in the Amount of \$450,000.00 and Authorizing an Intergovernmental Agreement Between the City of Arvada and the State of Colorado Acting By and Through the Department of Transportation, Pertaining to the Signal Replacements at West 58th Avenue & Kipling Parkway, Project No. 20-TC-02 (CDOT Project No. SHO M040-034 (22278)) (Public Hearing to be set for March 15, 2021 at 6:15 p.m.).

Suggested Motion:

I move that CB21-008, An Ordinance Authorizing the Third Amendment to the 2021 Operating and Capital Budget in the Amount of \$450,000.00 and Authorizing an Intergovernmental Agreement Between the City of Arvada and the State of Colorado Acting By and Through the Department of Transportation, Pertaining to the Signal Replacements at West 58th Avenue & Kipling Parkway, Project No. 20-TC-02 (CDOT Project No. SHO M040-034 (22278)), be (approved on first reading, ordered published in full, and a public hearing set for March 15, 2021, at 6:15 p.m.) (rejected).

Prepared by:
Sylvia Lopo, Traffic Engineer

Reviewed by:

Approved by:

SUBJECT: CB21-008 An Ordinance Authorizing the Third Amendment to the 2021 Operating and Capital Budget in the Amount of \$450,000.00 and Authorizing an Intergovernmental Agreement Between the City of Arvada and the State of Colorado Acting By and Through the Department of Transportation, Pertaining to the Signal Replacements at West 58th Avenue & Kipling Parkway, Project No. 20-TC-02 (CDOT Project No. SHO M040-034 (22278)) (Public Hearing to be set for March 15, 2021 at 6:15 p.m.)

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ITEM: 8.C.2.

Jacqueline Rhoades, Civil Engineer III	2/10/2021
Don Wick, Director of Public Works	2/10/2021
Bryan Archer, Director of Finance	2/10/2021
Erika Pierce, Litigation Paralegal	2/16/2021
Lori Graham, Senior Assistant City Attorney	2/16/2021
Rachel Morris, City Attorney	2/16/2021
Lorie Gillis, Deputy City Manager	2/18/2021
Mark Deven, City Manager	2/18/2021

Enclosure, exhibits & attachments required to support the report

COUNCIL BILL NO. CB21-008
ORDINANCE NO. _____

AN ORDINANCE AUTHORIZING THE THIRD AMENDMENT TO THE 2021 OPERATING AND CAPITAL BUDGET IN THE AMOUNT OF \$450,000.00 AND AUTHORIZING AN INTERGOVERNMENTAL AGREEMENT BETWEEN THE CITY OF ARVADA AND THE STATE OF COLORADO ACTING BY AND THROUGH THE DEPARTMENT OF TRANSPORTATION, PERTAINING TO THE SIGNAL REPLACEMENTS AT WEST 58TH AVENUE & KIPLING PARKWAY, PROJECT NO. 20-TC-02 (CDOT PROJECT NO. SHO M040-034 (22278))

WHEREAS, intergovernmental agreements (“IGAs”) between political subdivisions of the State of Colorado are authorized by C.R.S. Sec. 29-1-103.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO:

Section 1. The 2021 Operating and Capital Budget for the Capital Improvements Fund is hereby amended to increase by an additional \$450,000.00 for the purpose of expenditure of the City’s match share, if any, from a grant through the Colorado Department of Transportation for signal replacements at West 58th Avenue & Kipling Parkway, Project No. 20-TC-02 (CDOT PROJECT NO. SHO M040-034 (22278)).

Section 2. The Mayor or Mayor Pro Tem is hereby authorized to sign and the City Clerk to attest, in form approved by the City Attorney, an Intergovernmental Agreement, which is attached hereto, by and between the City of Arvada and between the State of Colorado Acting By and Through the Department of Transportation for signal replacements at West 64th Avenue & Simms Street and West 80th and Simms Street and West 80th Avenue and Vance Drive, Project No. 20-TC-02 (CDOT PROJECT NO. SHO M040-034 (22278)).

Section 3. Copies of the proposed Intergovernmental Agreement are on file in the Office of the City Clerk and are available for inspection by the public.

Section 4. This ordinance shall take effect five days after publication following final passage.

INTRODUCED, READ, AND ORDERED PUBLISHED this 1st day of March, 2021.

PASSED, ADOPTED, AND APPROVED this ____ day of _____, 2021.

Marc Williams, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:

Rachel A. Morris, City Attorney

Publication dates: March 4, 2021

By: _____

STATE OF COLORADO INTERGOVERNMENTAL AGREEMENT

Signature and Cover Page

State Agency Department of Transportation			Agreement Routing Number 21-HA1-XC-03186
Local Agency CITY OF ARVADA			Agreement Effective Date The later of the effective date or December 08, 2020
Agreement Description 58th Ave. & Kipling Pkwy Intersection Imp's			Agreement Expiration Date December 07, 2030
Project # SHO M040-034 (22278)	Region # 1	Contract Writer DZ	Agreement Maximum Amount \$450,000.00

THE PARTIES HERETO HAVE EXECUTED THIS AGREEMENT

Each person signing this Agreement represents and warrants that he or she is duly authorized to execute this Agreement and to bind the Party authorizing his or her signature.

LOCAL AGENCY CITY OF ARVADA _____ Marc Williams, Mayor Date: _____	STATE OF COLORADO Jared S. Polis, Governor Department of Transportation Shoshana M. Lew, Executive Director _____ Stephen Harelson, P.E., Chief Engineer Date: _____
Additional Local Agency Signatures _____ Kristen Rush, City Clerk Date: _____ _____ Approved As To Form: Emily Grogg, City Attorney Date: _____	LEGAL REVIEW Philip J. Weiser, Attorney General _____ Assistant Attorney General _____ By: (Print Name and Title) Date: _____
In accordance with §24-30-202 C.R.S., this Agreement is not valid until signed and dated below by the State Controller or an authorized delegate. STATE CONTROLLER Robert Jaros, CPA, MBA, JD By: _____ Department of Transportation Effective Date: _____	

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EXHIBIT L, SAMPLE SUBRECIPIENT MONITORING AND RISK ASSESSMENT FORM
EXHIBIT M, OMB UNIFORM GUIDANCE FOR FEDERAL AWARDS

1. PARTIES

This Agreement is entered into by and between Local Agency named on the Signature and Cover Page for this Agreement (“Local Agency”), and the STATE OF COLORADO acting by and through the State agency named on the Signature and Cover Page for this Agreement (the “State” or “CDOT”). Local Agency and the State agree to the terms and conditions in this Agreement.

2. TERM AND EFFECTIVE DATE

A. Effective Date

This Agreement shall not be valid or enforceable until the Effective Date, and Agreement Funds shall be expended within the dates shown in **Exhibit C** for each respective phase (“Phase Performance Period(s)”). The State shall not be bound by any provision of this Agreement before the Effective Date, and shall have no obligation to pay Local Agency for any Work performed or expense incurred before 1) the Effective Date of this original Agreement; 2) before the encumbering document for the respective phase *and* the official

Notice to Proceed for the respective phase; or 3) after the Final Phase Performance End Date, as shown in **Exhibit C**. Additionally, the State shall have no obligation to pay Local Agency for any Work performed or expense incurred after the Agreement Expiration Date or after required billing deadline specified in **§7.B.i.e.**, the expiration of Multimodal Transportation Options Funding (“MMOF”) if applicable, whichever is sooner. The State’s obligation to pay Agreement Funds exclusive of MMOF will continue until the Agreement Expiration Date. If Agreement Funds expire before the Agreement Expiration Date, then no payments will be made after expiration of Agreement Funds.

B. Initial Term

The Parties’ respective performances under this Agreement shall commence on the Agreement Effective Date shown on the Signature and Cover Page for this Agreement and shall terminate on December 07, 2030 as shown on the Signature and Cover Page for this Agreement, unless sooner terminated or further extended in accordance with the terms of this Agreement.

C. Early Termination in the Public Interest

The State is entering into this Agreement to serve the public interest of the State of Colorado as determined by its Governor, General Assembly, or Courts. If this Agreement ceases to further the public interest of the State, the State, in its discretion, may terminate this Agreement in whole or in part. This subsection shall not apply to a termination of this Agreement by the State for breach by Local Agency, which shall be governed by **§14.A.i**.

i. Method and Content

The State shall notify Local Agency of such termination in accordance with **§16**. The notice shall specify the effective date of the termination and whether it affects all or a portion of this Agreement.

ii. Obligations and Rights

Upon receipt of a termination notice for termination in the public interest, Local Agency shall be subject to **§14.A.i.a**

iii. Payments

If the State terminates this Agreement in the public interest, the State shall pay Local Agency an amount equal to the percentage of the total reimbursement payable under this Agreement that corresponds to the percentage of Work satisfactorily completed and accepted, as determined by the State, less payments previously made. Additionally, if this Agreement is less than 60% completed, as determined by the State, the State may reimburse Local Agency for a portion of actual out-of-pocket expenses, not otherwise reimbursed under this Agreement, incurred by Local Agency which are directly attributable to the uncompleted portion of Local Agency’s obligations, provided that the sum of any and all reimbursement shall not exceed the maximum amount payable to Local Agency hereunder.

3. AUTHORITY

Authority to enter into this Agreement exists in the law as follows:

A. Federal Authority

Pursuant to Title I, Subtitle A, of the “Fixing America’s Surface Transportation Act” (FAST Act) of 2015, and to applicable provisions of Title 23 of the United States Code and implementing regulations at Title 23 of the Code of Federal Regulations, as may be amended, (collectively referred to hereinafter as the “Federal Provisions”), certain federal funds have been and are expected to continue to be allocated for transportation projects requested by Local Agency and eligible under the Surface Transportation Improvement Program that has been proposed by the State and approved by the Federal Highway Administration (“FHWA”).

B. State Authority

Pursuant to CRS §43-1-223 and to applicable portions of the Federal Provisions, the State is responsible for the general administration and supervision of performance of projects in the Program, including the administration of federal funds for a Program project performed by a Local Agency under a contract with the State. This Agreement is executed under the authority of CRS §§29-1-203, 43-1-110; 43-1-116, 43-2-

101(4)(c) and 43-2-104.5.

4. PURPOSE

The purpose of this Agreement is to disburse Federal funds to the Local Agency pursuant to CDOT's Stewardship Agreement with the FHWA.

5. DEFINITIONS

The following terms shall be construed and interpreted as follows:

- A. **"Agreement"** means this agreement, including all attached Exhibits, all documents incorporated by reference, all referenced statutes, rules and cited authorities, and any future modifications thereto.
- B. **"Agreement Funds"** means the funds that have been appropriated, designated, encumbered, or otherwise made available for payment by the State under this Agreement.
- C. **"Award"** means an award by a Recipient to a Subrecipient funded in whole or in part by a Federal Award. The terms and conditions of the Federal Award flow down to the Award unless the terms and conditions of the Federal Award specifically indicate otherwise.
- D. **"Budget"** means the budget for the Work described in **Exhibit C**.
- E. **"Business Day"** means any day in which the State is open and conducting business, but shall not include Saturday, Sunday or any day on which the State observes one of the holidays listed in §24-11-101(1) C.R.S.
- F. **"Consultant"** means a professional engineer or designer hired by Local Agency to design the Work Product.
- G. **"Contractor"** means the general construction contractor hired by Local Agency to construct the Work.
- H. **"CORA"** means the Colorado Open Records Act, §§24-72-200.1 *et. seq.*, C.R.S.
- I. **"Effective Date"** means the date on which this Agreement is approved and signed by the Colorado State Controller or designee, as shown on the Signature and Cover Page for this Agreement.
- J. **"Evaluation"** means the process of examining Local Agency's Work and rating it based on criteria established in **§6, Exhibit A** and **Exhibit E**.
- K. **"Exhibits"** means the following exhibits attached to this Agreement:
 - i. **Exhibit A**, Statement of Work.
 - ii. **Exhibit B**, Sample Option Letter.
 - iii. **Exhibit C**, Funding Provisions
 - iv. **Exhibit D**, Local Agency Resolution
 - v. **Exhibit E**, Local Agency Contract Administration Checklist
 - vi. **Exhibit F**, Certification for Federal-Aid Contracts
 - vii. **Exhibit G**, Disadvantaged Business Enterprise
 - viii. **Exhibit H**, Local Agency Procedures for Consultant Services
 - ix. **Exhibit I**, Federal-Aid Contract Provisions for Construction Contracts
 - x. **Exhibit J**, Additional Federal Requirements
 - xi. **Exhibit K**, The Federal Funding Accountability and Transparency Act of 2006 (FFATA) Supplemental Federal Provisions
 - xii. **Exhibit L**, Sample Sub-Recipient Monitoring and Risk Assessment Form
 - xiii. **Exhibit M**, Supplemental Provisions for Federal Awards Subject to The Office of Management and Budget Uniform Administrative Requirements, Cost principles, and Audit Requirements for Federal Awards (the "Uniform Guidance")
- L. **"Federal Award"** means an award of Federal financial assistance or a cost-reimbursement contract under the Federal Acquisition Requirements by a Federal Awarding Agency to a Recipient. "Federal Award" also means an agreement setting forth the terms and conditions of the Federal Award. The term does not include payments to a contractor or payments to an individual that is a beneficiary of a Federal program.
- M. **"Federal Awarding Agency"** means a Federal agency providing a Federal Award to a Recipient.

- N. **"FHWA"** means the Federal Highway Administration, which is one of the twelve administrations under the Office of the Secretary of Transportation at the U.S. Department of Transportation. FHWA provides stewardship over the construction, maintenance and preservation of the Nation's highways and tunnels. FHWA is the Federal Awarding Agency for the Federal Award which is the subject of this Agreement.
- O. **"Goods"** means any movable material acquired, produced, or delivered by Local Agency as set forth in this Agreement and shall include any movable material acquired, produced, or delivered by Local Agency in connection with the Services.
- P. **"Incident"** means any accidental or deliberate event that results in or constitutes an imminent threat of the unauthorized access or disclosure of State Confidential Information or of the unauthorized modification, disruption, or destruction of any State Records.
- Q. **"Initial Term"** means the time period defined in **§2.B**
- R. **"Multimodal Transportation Options Funding"** or **"MMOF"** means money transferred from the general fund to the fund pursuant to C.R.S. §§24-75-219 (5)(a)(III) and (5)(b)(III) and any other money that the general assembly may appropriate or transfer to the fund.
- S. **"Notice to Proceed"** means the letter issued by the State to the Local Agency stating the date the Local Agency can begin work subject to the conditions of this Agreement.
- T. **"OMB"** means the Executive Office of the President, Office of Management and Budget.
- U. **"Oversight"** means the term as it is defined in the Stewardship Agreement between CDOT and the FHWA.
- V. **"Party"** means the State or Local Agency, and **"Parties"** means both the State and Local Agency.
- W. **"PII"** means personally identifiable information including, without limitation, any information maintained by the State about an individual that can be used to distinguish or trace an individual's identity, such as name, social security number, date and place of birth, mother's maiden name, or biometric records; and any other information that is linked or linkable to an individual, such as medical, educational, financial, and employment information. PII includes, but is not limited to, all information defined as personally identifiable information in §24-72-501 C.R.S.
- X. **"Recipient"** means the Colorado Department of Transportation (CDOT) for this Federal Award.
- Y. **"Services"** means the services to be performed by Local Agency as set forth in this Agreement, and shall include any services to be rendered by Local Agency in connection with the Goods.
- Z. **"State Confidential Information"** means any and all State Records not subject to disclosure under CORA. State Confidential Information shall include, but is not limited to, PII and State personnel records not subject to disclosure under CORA.
- AA. **"State Fiscal Rules"** means the fiscal rules promulgated by the Colorado State Controller pursuant to §24-30-202(13)(a).
- BB. **"State Fiscal Year"** means a 12 month period beginning on July 1 of each calendar year and ending on June 30 of the following calendar year. If a single calendar year follows the term, then it means the State Fiscal Year ending in that calendar year.
- CC. **"State Purchasing Director"** means the position described in the Colorado Procurement Code and its implementing regulations.
- DD. **"State Records"** means any and all State data, information, and records, regardless of physical form, including, but not limited to, information subject to disclosure under CORA.
- EE. **"Subcontractor"** means third-parties, if any, engaged by Local Agency to aid in performance of the Work.
- FF. **"Subrecipient"** means a non-Federal entity that receives a sub-award from a Recipient to carry out part of a Federal program, but does not include an individual that is a beneficiary of such program. A Subrecipient may also be a recipient of other Federal Awards directly from a Federal Awarding Agency.
- GG. **"Uniform Guidance"** means the Office of Management and Budget Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, which supersedes requirements from OMB

Circulars A-21, A-87, A-110, A-122, A-89, A-102, and A-133, and the guidance in Circular A-50 on Single Audit Act follow-up.

HH. **“Work”** means the delivery of the Goods and performance of the Services in compliance with CDOT’s Local Agency Manual described in this Agreement.

II. **“Work Product”** means the tangible and intangible results of the Work, whether finished or unfinished, including drafts. Work Product includes, but is not limited to, documents, text, software (including source code), research, reports, proposals, specifications, plans, notes, studies, data, images, photographs, negatives, pictures, drawings, designs, models, surveys, maps, materials, ideas, concepts, know-how, and any other results of the Work. “Work Product” does not include any material that was developed prior to the Effective Date that is used, without modification, in the performance of the Work.

Any other term used in this Agreement that is defined in an Exhibit shall be construed and interpreted as defined in that Exhibit.

6. STATEMENT OF WORK

Local Agency shall complete the Work as described in this Agreement and in accordance with the provisions of **Exhibit A**, and the Local Agency Manual. The State shall have no liability to compensate Local Agency for the delivery of any Goods or the performance of any Services that are not specifically set forth in this Agreement.

Work may be divided into multiple phases that have separate periods of performance. The State may not compensate for Work that Local Agency performs outside of its designated phase performance period. The performance period of phases, including, but not limited to Design, Construction, Right of Way, Utilities, or Environment phases, are identified in **Exhibit C**. The State may unilaterally modify **Exhibit C** from time to time, at its sole discretion, to extend the period of performance for a phase of Work authorized under this Agreement. To exercise this phase performance period extension option, the State will provide written notice to Local Agency in a form substantially equivalent to **Exhibit B**. The State’s unilateral extension of phase performance periods will not amend or alter in any way the funding provisions or any other terms specified in this Agreement, notwithstanding the options listed under **§7.E**

A. Local Agency Commitments

i. Design

If the Work includes preliminary design, final design, design work sheets, or special provisions and estimates (collectively referred to as the “Plans”), Local Agency shall ensure that it and its Contractors comply with and are responsible for satisfying the following requirements:

- a. Perform or provide the Plans to the extent required by the nature of the Work.
- b. Prepare final design in accordance with the requirements of the latest edition of the American Association of State Highway Transportation Officials (AASHTO) manual or other standard, such as the Uniform Building Code, as approved by the State.
- c. Prepare provisions and estimates in accordance with the most current version of the State’s Roadway and Bridge Design Manuals and Standard Specifications for Road and Bridge Construction or Local Agency specifications if approved by the State.
- d. Include details of any required detours in the Plans in order to prevent any interference of the construction Work and to protect the traveling public.
- e. Stamp the Plans as produced by a Colorado registered professional engineer.
- f. Provide final assembly of Plans and all other necessary documents.
- g. Ensure the Plans are accurate and complete.
- h. Make no further changes in the Plans following the award of the construction contract to Contractor unless agreed to in writing by the Parties. The Plans shall be considered final when approved in writing by CDOT, and when final, they will be deemed incorporated herein.

ii. Local Agency Work

- a. Local Agency shall comply with the requirements of the Americans With Disabilities Act (ADA) 42 U.S.C. § 12101, et. seq., and applicable federal regulations and standards as contained in the document “ADA Accessibility Requirements in CDOT Transportation Projects”.
 - b. Local Agency shall afford the State ample opportunity to review the Plans and shall make any changes in the Plans that are directed by the State to comply with FHWA requirements.
 - c. Local Agency may enter into a contract with a Consultant to perform all or any portion of the Plans and/or construction administration. Provided, however, if federal-aid funds are involved in the cost of such Work to be done by such Consultant, such Consultant contract (and the performance provision of the Plans under the contract) must comply with all applicable requirements of 23 C.F.R. Part 172 and with any procedures implementing those requirements as provided by the State, including those in **Exhibit H**. If Local Agency enters into a contract with a Consultant for the Work:
 - 1) Local Agency shall submit a certification that procurement of any Consultant contract complies with the requirements of 23 C.F.R. 172.5(1) prior to entering into such Consultant contract, subject to the State’s approval. If not approved by the State, Local Agency shall not enter into such Consultant contract.
 - 2) Local Agency shall ensure that all changes in the Consultant contract have prior approval by the State and FHWA and that they are in writing. Immediately after the Consultant contract has been awarded, one copy of the executed Consultant contract and any amendments shall be submitted to the State.
 - 3) Local Agency shall require that all billings under the Consultant contract comply with the State’s standardized billing format. Examples of the billing formats are available from the CDOT Agreements Office.
 - 4) Local Agency (and any Consultant) shall comply with 23 C.F.R. 172.5(b) and (d) and use the CDOT procedures described in **Exhibit H** to administer the Consultant contract.
 - 5) Local Agency may expedite any CDOT approval of its procurement process and/or Consultant contract by submitting a letter to CDOT from Local Agency’s attorney/authorized representative certifying compliance with **Exhibit H** and 23 C.F.R. 172.5(b) and (d).
 - 6) Local Agency shall ensure that the Consultant contract complies with the requirements of 49 CFR 18.36(i) and contains the following language verbatim:
 - (a) The design work under this Agreement shall be compatible with the requirements of the contract between Local Agency and the State (which is incorporated herein by this reference) for the design/construction of the project. The State is an intended third-party beneficiary of this agreement for that purpose.
 - (b) Upon advertisement of the project work for construction, the consultant shall make available services as requested by the State to assist the State in the evaluation of construction and the resolution of construction problems that may arise during the construction of the project.
 - (c) The consultant shall review the construction Contractor’s shop drawings for conformance with the contract documents and compliance with the provisions of the State’s publication, Standard Specifications for Road and Bridge Construction, in connection with this work.
 - (d) The State, in its sole discretion, may review construction plans, special provisions and estimates and may require Local Agency to make such changes therein as the State determines necessary to comply with State and FHWA requirements.
- iii. Construction
- If the Work includes construction, Local Agency shall perform the construction in accordance with the approved design plans and/or administer the construction in accordance with **Exhibit E**. Such administration shall include Work inspection and testing; approving sources of materials; performing required plant and shop inspections; documentation of contract payments, testing and inspection activities; preparing and approving pay estimates; preparing, approving and securing the funding for

contract modification orders and minor contract revisions; processing construction Contractor claims; construction supervision; and meeting the quality control requirements of the FHWA/CDOT Stewardship Agreement, as described in **Exhibit E**.

- a. The State may, after providing written notice of the reason for the suspension to Local Agency, suspend the Work, wholly or in part, due to the failure of Local Agency or its Contractor to correct conditions which are unsafe for workers or for such periods as the State may deem necessary due to unsuitable weather, or for conditions considered unsuitable for the prosecution of the Work, or for any other condition or reason deemed by the State to be in the public interest.
- b. Local Agency shall be responsible for the following:
 - 1) Appointing a qualified professional engineer, licensed in the State of Colorado, as Local Agency Project Engineer (LAPE), to perform engineering administration. The LAPE shall administer the Work in accordance with this Agreement, the requirements of the construction contract and applicable State procedures, as defined in the CDOT Local Agency Manual (https://www.codot.gov/business/designsupport/bulletins_manuals/2006-local-agency-manual).
 - 2) For the construction Services, advertising the call for bids, following its approval by the State, and awarding the construction contract(s) to the lowest responsible bidder(s).
 - (a) All Local Agency's advertising and bid awards pursuant to this Agreement shall comply with applicable requirements of 23 U.S.C. §112 and 23 C.F.R. Parts 633 and 635 and C.R.S. § 24-92-101 et seq. Those requirements include, without limitation, that Local Agency and its Contractor(s) incorporate Form 1273 (Exhibit I) in its entirety, verbatim, into any subcontract(s) for Services as terms and conditions thereof, as required by 23 C.F.R. 633.102(e).
 - (b) Local Agency may accept or reject the proposal of the apparent low bidder for Work on which competitive bids have been received. Local Agency must accept or reject such bids within 3 working days after they are publicly opened.
 - (c) If Local Agency accepts bids and makes awards that exceed the amount of available Agreement Funds, Local Agency shall provide the additional funds necessary to complete the Work or not award such bids.
 - (d) The requirements of §6.A.iii.b.2 also apply to any advertising and bid awards made by the State.
 - (e) The State (and in some cases FHWA) must approve in advance all Force Account Construction, and Local Agency shall not initiate any such Services until the State issues a written Notice to Proceed.
- iv. Right of Way (ROW) and Acquisition/Relocation
 - a. If Local Agency purchases a ROW for a State highway, including areas of influence, Local Agency shall convey the ROW to CDOT promptly upon the completion of the project/construction.
 - b. Any acquisition/relocation activities shall comply with all applicable federal and State statutes and regulations, including but not limited to, the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, the Uniform Relocation Assistance and Real Property Acquisition Policies for Federal and Federally Assisted Programs, as amended (49 C.F.R. Part 24), CDOT's Right of Way Manual, and CDOT's Policy and Procedural Directives.
 - c. The Parties' respective responsibilities for ensuring compliance with acquisition, relocation and incidentals depend on the level of federal participation as detailed in CDOT's Right of Way Manual (located at <http://www.codot.gov/business/manuals/right-of-way>); however, the State always retains oversight responsibilities.
 - d. The Parties' respective responsibilities at each level of federal participation in CDOT's Right of Way Manual, and the State's reimbursement of Local Agency costs will be determined pursuant to the following categories:

- 1) Right of way acquisition (3111) for federal participation and non-participation;
- 2) Relocation activities, if applicable (3109);
- 3) Right of way incidentals, if applicable (expenses incidental to acquisition/relocation of right of way – 3114).

v. Utilities

If necessary, Local Agency shall be responsible for obtaining the proper clearance or approval from any utility company that may become involved in the Work. Prior to the Work being advertised for bids, Local Agency shall certify in writing to the State that all such clearances have been obtained.

vi. Railroads

If the Work involves modification of a railroad company's facilities and such modification will be accomplished by the railroad company, Local Agency shall make timely application to the Public Utilities Commission ("PUC") requesting its order providing for the installation of the proposed improvements. Local Agency shall not proceed with that part of the Work before obtaining the PUC's order. Local Agency shall also establish contact with the railroad company involved for the purpose of complying with applicable provisions of 23 C.F.R. 646, subpart B, concerning federal-aid projects involving railroad facilities, and:

- a. Execute an agreement with the railroad company setting out what work is to be accomplished and the location(s) thereof, and which costs shall be eligible for federal participation.
- b. Obtain the railroad's detailed estimate of the cost of the Work.
- c. Establish future maintenance responsibilities for the proposed installation.
- d. Proscribe in the agreement the future use or dispositions of the proposed improvements in the event of abandonment or elimination of a grade crossing.
- e. Establish future repair and/or replacement responsibilities, as between the railroad company and the Local Agency, in the event of accidental destruction or damage to the installation.

vii. Environmental Obligations

Local Agency shall perform all Work in accordance with the requirements of current federal and State environmental regulations, including the National Environmental Policy Act of 1969 (NEPA) as applicable.

viii. Maintenance Obligations

Local Agency shall maintain and operate the Work constructed under this Agreement at its own cost and expense during their useful life, in a manner satisfactory to the State and FHWA. Local Agency shall conduct such maintenance and operations in accordance with all applicable statutes, ordinances, and regulations pertaining to maintaining such improvements. The State and FHWA may make periodic inspections to verify that such improvements are being adequately maintained.

ix. Monitoring Obligations

Local Agency shall respond in a timely manner to and participate fully with the monitoring activities described in **§7.F.vi.**

B. State's Commitments

- i. The State will perform a final project inspection of the Work as a quality control/assurance activity. When all Work has been satisfactorily completed, the State will sign the FHWA Form 1212.
- ii. Notwithstanding any consents or approvals given by the State for the Plans, the State shall not be liable or responsible in any manner for the structural design, details or construction of any Work constituting major structures designed by, or that are the responsibility of, Local Agency, as identified in **Exhibit E.**

7. PAYMENTS

A. Maximum Amount

Payments to Local Agency are limited to the unpaid, obligated balance of the Agreement Funds set forth in **Exhibit C**. The State shall not pay Local Agency any amount under this Agreement that exceeds the Agreement Maximum set forth in **Exhibit C**.

B. Payment Procedures

i. Invoices and Payment

- a. The State shall pay Local Agency in the amounts and in accordance with conditions set forth in **Exhibit C**.
- b. Local Agency shall initiate payment requests by invoice to the State, in a form and manner approved by the State.
- c. The State shall pay each invoice within 45 days following the State's receipt of that invoice, so long as the amount invoiced correctly represents Work completed by Local Agency and previously accepted by the State during the term that the invoice covers. If the State determines that the amount of any invoice is not correct, then Local Agency shall make all changes necessary to correct that invoice.
- d. The acceptance of an invoice shall not constitute acceptance of any Work performed or deliverables provided under the Agreement.
- e. If a project is funded in part by the State with MMOF there is an expiration date for the funds. The expiration date applies to grants and local funds used to match grants. In order to receive payment from the State or credit for the match, Work must be completed prior to the expiration date of funding and invoiced in compliance with C.R.S. §§24-75-102(a) and 24-30-202(11). Billing for this work must be submitted 30 days prior to the end of the State Fiscal Year which is June 30th.

ii. Interest

Amounts not paid by the State within 45 days after the State's acceptance of the invoice shall bear interest on the unpaid balance beginning on the 46th day at the rate of 1% per month, as required by §24-30-202(24)(a), C.R.S., until paid in full; provided, however, that interest shall not accrue on unpaid amounts that the State disputes in writing. Local Agency shall invoice the State separately for accrued interest on delinquent amounts, and the invoice shall reference the delinquent payment, the number of days interest to be paid and the interest rate.

iii. Payment Disputes

If Local Agency disputes any calculation, determination, or amount of any payment, Local Agency shall notify the State in writing of its dispute within 30 days following the earlier to occur of Local Agency's receipt of the payment or notification of the determination or calculation of the payment by the State. The State will review the information presented by Local Agency and may make changes to its determination based on this review. The calculation, determination, or payment amount that results from the State's review shall not be subject to additional dispute under this subsection. No payment subject to a dispute under this subsection shall be due until after the State has concluded its review, and the State shall not pay any interest on any amount during the period it is subject to dispute under this subsection.

iv. Available Funds-Contingency-Termination

- a. The State is prohibited by law from making commitments beyond the term of the current State Fiscal Year. Payment to Local Agency beyond the current State Fiscal Year is contingent on the appropriation and continuing availability of Agreement Funds in any subsequent year (as provided in the Colorado Special Provisions). If federal funds or funds from any other non-State funds constitute all or some of the Agreement Funds, the State's obligation to pay Local Agency shall be contingent upon such non-State funding continuing to be made available for payment. Payments to be made pursuant to this Agreement shall be made only from Agreement Funds, and the State's liability for such payments shall be limited to the amount remaining of such Agreement Funds. If State, federal or other funds are not appropriated, or otherwise become unavailable to fund this Agreement, the State may, upon written notice, terminate this Agreement, in whole or in part, without incurring further liability. The State shall, however, remain obligated to pay for Services and Goods that are delivered and accepted prior to the effective date of notice of termination, and

this termination shall otherwise be treated as if this Agreement were terminated in the public interest as described in **§2.C**.

- b. If the agreement funds are terminated, the State can terminate the contract early. Payment due for work done to the date of termination will be processed in a manner consistent with **§2.C**.

v. Erroneous Payments

The State may recover, at the State's discretion, payments made to Local Agency in error for any reason, including, but not limited to, overpayments or improper payments, and unexpended or excess funds received by Local Agency. The State may recover such payments by deduction from subsequent payments under this Agreement, deduction from any payment due under any other contracts, grants or agreements between the State and Local Agency, or by any other appropriate method for collecting debts owed to the State. The close out of a Federal Award does not affect the right of FHWA or the State to disallow costs and recover funds on the basis of a later audit or other review. Any cost disallowance recovery is to be made within the Record Retention Period (as defined below in **§9.A**).

C. Matching Funds

Local Agency shall provide matching funds as provided in **§7.A** and **Exhibit C**. Local Agency shall have raised the full amount of matching funds prior to the Effective Date and shall report to the State regarding the status of such funds upon request. Local Agency's obligation to pay all or any part of any matching funds, whether direct or contingent, only extend to funds duly and lawfully appropriated for the purposes of this Agreement by the authorized representatives of Local Agency and paid into Local Agency's treasury. Local Agency represents to the State that the amount designated "Local Agency Matching Funds" in **Exhibit C** has been legally appropriated for the purpose of this Agreement by its authorized representatives and paid into its treasury. Local Agency may evidence such obligation by an appropriate ordinance/resolution or other authority letter expressly authorizing Local Agency to enter into this Agreement and to expend its match share of the Work. A copy of any such ordinance/resolution or authority letter is attached hereto as **Exhibit D**. Local Agency does not by this Agreement irrevocably pledge present cash reserves for payments in future fiscal years, and this Agreement is not intended to create a multiple-fiscal year debt of Local Agency. Local Agency shall not pay or be liable for any claimed interest, late charges, fees, taxes, or penalties of any nature, except as required by Local Agency's laws or policies.

D. Reimbursement of Local Agency Costs

The State shall reimburse Local Agency's allowable costs, not exceeding the maximum total amount described in **Exhibit C** and **§7**. The applicable principles described in 2 C.F.R. Part 200 shall govern the State's obligation to reimburse all costs incurred by Local Agency and submitted to the State for reimbursement hereunder, and Local Agency shall comply with all such principles. The State shall reimburse Local Agency for the federal-aid share of properly documented costs related to the Work after review and approval thereof, subject to the provisions of this Agreement and **Exhibit C**. Local Agency costs for Work performed prior to the Effective Date shall not be reimbursed absent specific allowance of pre-award costs and indication that the Federal Award funding is retroactive. Local Agency costs for Work performed after any Performance Period End Date for a respective phase of the Work, is not reimbursable. Allowable costs shall be:

- i. Reasonable and necessary to accomplish the Work and for the Goods and Services provided.
- ii. Actual net cost to Local Agency (i.e. the price paid minus any items of value received by Local Agency that reduce the cost actually incurred).

E. Unilateral Modification of Agreement Funds Budget by State Option Letter

The State may, at its discretion, issue an "Option Letter" to Local Agency to add or modify Work phases in the Work schedule in **Exhibit C** if such modifications do not increase total budgeted Agreement Funds. Such Option Letters shall amend and update **Exhibit C**, Sections 2 or 4 of the Table, and sub-sections B and C of the **Exhibit C**. Option Letters shall not be deemed valid until signed by the State Controller or an authorized delegate. Modification of **Exhibit C** by unilateral Option Letter is permitted only in the specific scenarios listed below. The State will exercise such options by providing Local Agency a fully executed Option Letter, in a form substantially equivalent to **Exhibit B**. Such Option Letters will be incorporated into this Agreement.

i. Option to Begin a Phase and/or Increase or Decrease the Encumbrance Amount

The State may require by Option Letter that Local Agency begin a new Work phase that may include Design, Construction, Environmental, Utilities, ROW Incidentals or Miscellaneous Work (but may not include Right of Way Acquisition/Relocation or Railroads) as detailed in **Exhibit A**. Such Option Letters may not modify the other terms and conditions stated in this Agreement, and must decrease the amount budgeted and encumbered for one or more other Work phases so that the total amount of budgeted Agreement Funds remains the same. The State may also issue a unilateral Option Letter to simultaneously increase and decrease the total encumbrance amount of two or more existing Work phases, as long as the total amount of budgeted Agreement Funds remains the same, replacing the original Agreement Funding exhibit (**Exhibit C**) with an updated **Exhibit C-1** (with subsequent exhibits labeled **C-2**, **C-3**, etc.).

ii. Option to Transfer Funds from One Phase to Another Phase.

The State may require or permit Local Agency to transfer Agreement Funds from one Work phase (Design, Construction, Environmental, Utilities, ROW Incidentals or Miscellaneous) to another phase as a result of changes to State, federal, and local match funding. In such case, the original funding exhibit (**Exhibit C**) will be replaced with an updated **Exhibit C-1** (with subsequent exhibits labeled **C-2**, **C-3**, etc.) attached to the Option Letter. The Agreement Funds transferred from one Work phase to another are subject to the same terms and conditions stated in the original Agreement with the total budgeted Agreement Funds remaining the same. The State may unilaterally exercise this option by providing a fully executed Option Letter to Local Agency within thirty (30) days before the initial targeted start date of the Work phase, in a form substantially equivalent to **Exhibit B**.

iii. Option to Exercise Options i and ii.

The State may require Local Agency to add a Work phase as detailed in **Exhibit A**, and encumber and transfer Agreement Funds from one Work phase to another. The original funding exhibit (**Exhibit C**) in the original Agreement will be replaced with an updated **Exhibit C-1** (with subsequent exhibits labeled **C-2**, **C-3**, etc.) attached to the Option Letter. The addition of a Work phase and encumbrance and transfer of Agreement Funds are subject to the same terms and conditions stated in the original Agreement with the total budgeted Agreement Funds remaining the same. The State may unilaterally exercise this option by providing a fully executed Option Letter to Local Agency within 30 days before the initial targeted start date of the Work phase, in a form substantially equivalent to **Exhibit B**.

iv. Option to Update a Work Phase Performance Period and/or modify information required under the OMB Uniform Guidance, as outlined in **Exhibit C**. The State may update any information contained in **Exhibit C**, Sections 2 and 4 of the Table, and sub-sections B and C of the **Exhibit C**.

F. Accounting

Local Agency shall establish and maintain accounting systems in accordance with generally accepted accounting standards (a separate set of accounts, or as a separate and integral part of its current accounting scheme). Such accounting systems shall, at a minimum, provide as follows:

i. Local Agency Performing the Work

If Local Agency is performing the Work, it shall document all allowable costs, including any approved Services contributed by Local Agency or subcontractors, using payrolls, time records, invoices, contracts, vouchers, and other applicable records.

ii. Local Agency-Checks or Draws

Checks issued or draws made by Local Agency shall be made or drawn against properly signed vouchers detailing the purpose thereof. Local Agency shall keep on file all checks, payrolls, invoices, contracts, vouchers, orders, and other accounting documents in the office of Local Agency, clearly identified, readily accessible, and to the extent feasible, separate and apart from all other Work documents.

iii. State-Administrative Services

The State may perform any necessary administrative support services required hereunder. Local Agency shall reimburse the State for the costs of any such services from the budgeted Agreement Funds as

provided for in **Exhibit C**. If FHWA Agreement Funds are or become unavailable, or if Local Agency terminates this Agreement prior to the Work being approved by the State or otherwise completed, then all actual incurred costs of such services and assistance provided by the State shall be reimbursed to the State by Local Agency at its sole expense.

iv. Local Agency-Invoices

Local Agency's invoices shall describe in detail the reimbursable costs incurred by Local Agency for which it seeks reimbursement, the dates such costs were incurred and the amounts thereof, and Local Agency shall not submit more than one invoice per month.

v. Invoicing Within 60 Days

The State shall not be liable to reimburse Local Agency for any costs invoiced more than 60 days after the date on which the costs were incurred, including costs included in Local Agency's final invoice. The State may withhold final payment to Local Agency at the State's sole discretion until completion of final audit. Any costs incurred by Local Agency that are not allowable under 2 C.F.R. Part 200 shall be Local Agency's responsibility, and the State will deduct such disallowed costs from any payments due to Local Agency. The State will not reimburse costs for Work performed after the Performance Period End Date for a respective Work phase. The State will not reimburse costs for Work performed prior to Performance Period End Date, but for which an invoice is received more than 60 days after the Performance Period End Date.

vi. Risk Assessment & Monitoring

Pursuant to 2 C.F.R. 200.331(b), – CDOT will evaluate Local Agency's risk of noncompliance with federal statutes, regulations, and terms and conditions of this Agreement. Local Agency shall complete a Risk Assessment Form (**Exhibit L**) when that may be requested by CDOT. The risk assessment is a quantitative and/or qualitative determination of the potential for Local Agency's non-compliance with the requirements of the Federal Award. The risk assessment will evaluate some or all of the following factors:

- Experience: Factors associated with the experience and history of the Subrecipient with the same or similar Federal Awards or grants.
- Monitoring/Audit: Factors associated with the results of the Subrecipient's previous audits or monitoring visits, including those performed by the Federal Awarding Agency, when the Subrecipient also receives direct federal funding. Include audit results if Subrecipient receives single audit, where the specific award being assessed was selected as a major program.
- Operation: Factors associated with the significant aspects of the Subrecipient's operations, in which failure could impact the Subrecipient's ability to perform and account for the contracted goods or services.
- Financial: Factors associated with the Subrecipient's financial stability and ability to comply with financial requirements of the Federal Award.
- Internal Controls: Factors associated with safeguarding assets and resources, deterring and detecting errors, fraud and theft, ensuring accuracy and completeness of accounting data, producing reliable and timely financial and management information, and ensuring adherence to its policies and plans.
- Impact: Factors associated with the potential impact of a Subrecipient's non-compliance to the overall success of the program objectives.
- Program Management: Factors associated with processes to manage critical personnel, approved written procedures, and knowledge of rules and regulations regarding federal-aid projects.

Following Local Agency's completion of the Risk Assessment Tool (**Exhibit L**), CDOT will determine the level of monitoring it will apply to Local Agency's performance of the Work. This risk assessment may be re-evaluated after CDOT begins performing monitoring activities.

G. Close Out

Local Agency shall close out this Award within 90 days after the Final Phase Performance End Date. Close out requires Local Agency's submission to the State of all deliverables defined in this Agreement, and Local Agency's final reimbursement request or invoice. The State will withhold 5% of allowable costs until all final documentation has been submitted and accepted by the State as substantially complete. If FHWA has not closed this Federal Award within 1 year and 90 days after the Final Phase Performance End Date due to Local Agency's failure to submit required documentation, then Local Agency may be prohibited from applying for new Federal Awards through the State until such documentation is submitted and accepted.

8. REPORTING - NOTIFICATION

A. Quarterly Reports

In addition to any reports required pursuant to §19 or pursuant to any exhibit, for any contract having a term longer than 3 months, Local Agency shall submit, on a quarterly basis, a written report specifying progress made for each specified performance measure and standard in this Agreement. Such progress report shall be in accordance with the procedures developed and prescribed by the State. Progress reports shall be submitted to the State not later than five (5) Business Days following the end of each calendar quarter or at such time as otherwise specified by the State.

B. Litigation Reporting

If Local Agency is served with a pleading or other document in connection with an action before a court or other administrative decision making body, and such pleading or document relates to this Agreement or may affect Local Agency's ability to perform its obligations under this Agreement, Local Agency shall, within 10 days after being served, notify the State of such action and deliver copies of such pleading or document to the State's principal representative identified in §16.

C. Performance and Final Status

Local Agency shall submit all financial, performance and other reports to the State no later than 60 calendar days after the Final Phase Performance End Date or sooner termination of this Agreement, containing an Evaluation of Subrecipient's performance and the final status of Subrecipient's obligations hereunder.

D. Violations Reporting

Local Agency must disclose, in a timely manner, in writing to the State and FHWA, all violations of federal or State criminal law involving fraud, bribery, or gratuity violations potentially affecting the Federal Award. Penalties for noncompliance may include suspension or debarment (2 CFR Part 180 and 31 U.S.C. 3321).

9. LOCAL AGENCY RECORDS

A. Maintenance

Local Agency shall make, keep, maintain, and allow inspection and monitoring by the State of a complete file of all records, documents, communications, notes and other written materials, electronic media files, and communications, pertaining in any manner to the Work or the delivery of Services (including, but not limited to the operation of programs) or Goods hereunder. Local Agency shall maintain such records for a period (the "Record Retention Period") of three years following the date of submission to the State of the final expenditure report, or if this Award is renewed quarterly or annually, from the date of the submission of each quarterly or annual report, respectively. If any litigation, claim, or audit related to this Award starts before expiration of the Record Retention Period, the Record Retention Period shall extend until all litigation, claims, or audit findings have been resolved and final action taken by the State or Federal Awarding Agency. The Federal Awarding Agency, a cognizant agency for audit, oversight or indirect costs, and the State, may notify Local Agency in writing that the Record Retention Period shall be extended. For records for real property and equipment, the Record Retention Period shall extend three years following final disposition of such property.

B. Inspection

Local Agency shall permit the State to audit, inspect, examine, excerpt, copy, and transcribe Local Agency Records during the Record Retention Period. Local Agency shall make Local Agency Records available during normal business hours at Local Agency's office or place of business, or at other mutually agreed upon

times or locations, upon no fewer than 2 Business Days' notice from the State, unless the State determines that a shorter period of notice, or no notice, is necessary to protect the interests of the State.

C. Monitoring

The State will monitor Local Agency's performance of its obligations under this Agreement using procedures as determined by the State. The State shall monitor Local Agency's performance in a manner that does not unduly interfere with Local Agency's performance of the Work.

D. Final Audit Report

Local Agency shall promptly submit to the State a copy of any final audit report of an audit performed on Local Agency's records that relates to or affects this Agreement or the Work, whether the audit is conducted by Local Agency or a third party.

10. CONFIDENTIAL INFORMATION-STATE RECORDS

A. Confidentiality

Local Agency shall hold and maintain, and cause all Subcontractors to hold and maintain, any and all State Records that the State provides or makes available to Local Agency for the sole and exclusive benefit of the State, unless those State Records are otherwise publicly available at the time of disclosure or are subject to disclosure by Local Agency under CORA. Local Agency shall not, without prior written approval of the State, use for Local Agency's own benefit, publish, copy, or otherwise disclose to any third party, or permit the use by any third party for its benefit or to the detriment of the State, any State Records, except as otherwise stated in this Agreement. Local Agency shall provide for the security of all State Confidential Information in accordance with all policies promulgated by the Colorado Office of Information Security and all applicable laws, rules, policies, publications, and guidelines. Local Agency shall immediately forward any request or demand for State Records to the State's principal representative.

B. Other Entity Access and Nondisclosure Agreements

Local Agency may provide State Records to its agents, employees, assigns and Subcontractors as necessary to perform the Work, but shall restrict access to State Confidential Information to those agents, employees, assigns and Subcontractors who require access to perform their obligations under this Agreement. Local Agency shall ensure all such agents, employees, assigns, and Subcontractors sign nondisclosure agreements with provisions at least as protective as those in this Agreement, and that the nondisclosure agreements are in force at all times the agent, employee, assign or Subcontractor has access to any State Confidential Information. Local Agency shall provide copies of those signed nondisclosure agreements to the State upon request.

C. Use, Security, and Retention

Local Agency shall use, hold and maintain State Confidential Information in compliance with any and all applicable laws and regulations in facilities located within the United States, and shall maintain a secure environment that ensures confidentiality of all State Confidential Information wherever located. Local Agency shall provide the State with access, subject to Local Agency's reasonable security requirements, for purposes of inspecting and monitoring access and use of State Confidential Information and evaluating security control effectiveness. Upon the expiration or termination of this Agreement, Local Agency shall return State Records provided to Local Agency or destroy such State Records and certify to the State that it has done so, as directed by the State. If Local Agency is prevented by law or regulation from returning or destroying State Confidential Information, Local Agency warrants it will guarantee the confidentiality of, and cease to use, such State Confidential Information.

D. Incident Notice and Remediation

If Local Agency becomes aware of any Incident, it shall notify the State immediately and cooperate with the State regarding recovery, remediation, and the necessity to involve law enforcement, as determined by the State. Unless Local Agency can establish that none of Local Agency or any of its agents, employees, assigns or Subcontractors are the cause or source of the Incident, Local Agency shall be responsible for the cost of notifying each person who may have been impacted by the Incident. After an Incident, Local Agency shall take steps to reduce the risk of incurring a similar type of Incident in the future as directed by the State, which

may include, but is not limited to, developing and implementing a remediation plan that is approved by the State at no additional cost to the State.

11. CONFLICTS OF INTEREST

A. Actual Conflicts of Interest

Local Agency shall not engage in any business or activities, or maintain any relationships that conflict in any way with the full performance of the obligations of Local Agency under this Agreement. Such a conflict of interest would arise when a Local Agency or Subcontractor's employee, officer or agent were to offer or provide any tangible personal benefit to an employee of the State, or any member of his or her immediate family or his or her partner, related to the award of, entry into or management or oversight of this Agreement. Officers, employees and agents of Local Agency may neither solicit nor accept gratuities, favors or anything of monetary value from contractors or parties to subcontracts.

B. Apparent Conflicts of Interest

Local Agency acknowledges that, with respect to this Agreement, even the appearance of a conflict of interest shall be harmful to the State's interests. Absent the State's prior written approval, Local Agency shall refrain from any practices, activities or relationships that reasonably appear to be in conflict with the full performance of Local Agency's obligations under this Agreement.

C. Disclosure to the State

If a conflict or the appearance of a conflict arises, or if Local Agency is uncertain whether a conflict or the appearance of a conflict has arisen, Local Agency shall submit to the State a disclosure statement setting forth the relevant details for the State's consideration. Failure to promptly submit a disclosure statement or to follow the State's direction in regard to the actual or apparent conflict constitutes a breach of this Agreement.

12. INSURANCE

Local Agency shall obtain and maintain, and ensure that each Subcontractor shall obtain and maintain, insurance as specified in this section at all times during the term of this Agreement. All insurance policies required by this Agreement that are not provided through self-insurance shall be issued by insurance companies with an AM Best rating of A-VIII or better.

A. Local Agency Insurance

Local Agency is a "public entity" within the meaning of the Colorado Governmental Immunity Act, §24-10-101, *et seq.*, C.R.S. (the "GIA") and shall maintain at all times during the term of this Agreement such liability insurance, by commercial policy or self-insurance, as is necessary to meet its liabilities under the GIA.

B. Subcontractor Requirements

Local Agency shall ensure that each Subcontractor that is a public entity within the meaning of the GIA, maintains at all times during the terms of this Agreement, such liability insurance, by commercial policy or self-insurance, as is necessary to meet the Subcontractor's obligations under the GIA. Local Agency shall ensure that each Subcontractor that is not a public entity within the meaning of the GIA, maintains at all times during the terms of this Agreement all of the following insurance policies:

i. Workers' Compensation

Workers' compensation insurance as required by state statute, and employers' liability insurance covering all Local Agency or Subcontractor employees acting within the course and scope of their employment.

ii. General Liability

Commercial general liability insurance written on an Insurance Services Office occurrence form, covering premises operations, fire damage, independent contractors, products and completed operations, blanket contractual liability, personal injury, and advertising liability with minimum limits as follows:

- a. \$1,000,000 each occurrence;
- b. \$1,000,000 general aggregate;

- c. \$1,000,000 products and completed operations aggregate; and
 - d. \$50,000 any 1 fire.
- iii. Automobile Liability
Automobile liability insurance covering any auto (including owned, hired and non-owned autos) with a minimum limit of \$1,000,000 each accident combined single limit.
- iv. Protected Information
Liability insurance covering all loss of State Confidential Information, such as PII, PHI, PCI, Tax Information, and CJI, and claims based on alleged violations of privacy rights through improper use or disclosure of protected information with minimum limits as follows:
 - a. \$1,000,000 each occurrence; and
 - b. \$2,000,000 general aggregate.
- v. Professional Liability Insurance
Professional liability insurance covering any damages caused by an error, omission or any negligent act with minimum limits as follows:
 - a. \$1,000,000 each occurrence; and
 - b. \$1,000,000 general aggregate.
- vi. Crime Insurance
Crime insurance including employee dishonesty coverage with minimum limits as follows:
 - a. \$1,000,000 each occurrence; and
 - b. \$1,000,000 general aggregate.
- C. Additional Insured
The State shall be named as additional insured on all commercial general liability policies (leases and construction contracts require additional insured coverage for completed operations) required of Local Agency and Subcontractors. In the event of cancellation of any commercial general liability policy, the carrier shall provide at least 10 days prior written notice to CDOT.
- D. Primacy of Coverage
Coverage required of Local Agency and each Subcontractor shall be primary over any insurance or self-insurance program carried by Local Agency or the State.
- E. Cancellation
All commercial insurance policies shall include provisions preventing cancellation or non-renewal, except for cancellation based on non-payment of premiums, without at least 30 days prior notice to Local Agency and Local Agency shall forward such notice to the State in accordance with §16 within 7 days of Local Agency's receipt of such notice.
- F. Subrogation Waiver
All commercial insurance policies secured or maintained by Local Agency or its Subcontractors in relation to this Agreement shall include clauses stating that each carrier shall waive all rights of recovery under subrogation or otherwise against Local Agency or the State, its agencies, institutions, organizations, officers, agents, employees, and volunteers.
- G. Certificates
For each commercial insurance plan provided by Local Agency under this Agreement, Local Agency shall provide to the State certificates evidencing Local Agency's insurance coverage required in this Agreement within 7 Business Days following the Effective Date. Local Agency shall provide to the State certificates evidencing Subcontractor insurance coverage required under this Agreement within 7 Business Days following the Effective Date, except that, if Local Agency's subcontract is not in effect as of the Effective

Date, Local Agency shall provide to the State certificates showing Subcontractor insurance coverage required under this Agreement within 7 Business Days following Local Agency's execution of the subcontract. No later than 15 days before the expiration date of Local Agency's or any Subcontractor's coverage, Local Agency shall deliver to the State certificates of insurance evidencing renewals of coverage. At any other time during the term of this Agreement, upon request by the State, Local Agency shall, within 7 Business Days following the request by the State, supply to the State evidence satisfactory to the State of compliance with the provisions of this **§12**.

13. BREACH

A. Defined

The failure of a Party to perform any of its obligations in accordance with this Agreement, in whole or in part or in a timely or satisfactory manner, shall be a breach. The institution of proceedings under any bankruptcy, insolvency, reorganization or similar law, by or against Local Agency, or the appointment of a receiver or similar officer for Local Agency or any of its property, which is not vacated or fully stayed within 30 days after the institution of such proceeding, shall also constitute a breach.

B. Notice and Cure Period

In the event of a breach, the aggrieved Party shall give written notice of breach to the other Party. If the notified Party does not cure the breach, at its sole expense, within 30 days after the delivery of written notice, the Party may exercise any of the remedies as described in **§14** for that Party. Notwithstanding any provision of this Agreement to the contrary, the State, in its discretion, need not provide notice or a cure period and may immediately terminate this Agreement in whole or in part or institute any other remedy in the Agreement in order to protect the public interest of the State.

14. REMEDIES

A. State's Remedies

If Local Agency is in breach under any provision of this Agreement and fails to cure such breach, the State, following the notice and cure period set forth in **§13.B**, shall have all of the remedies listed in this **§14.A**, in addition to all other remedies set forth in this Agreement or at law. The State may exercise any or all of the remedies available to it, in its discretion, concurrently or consecutively.

i. Termination for Breach

In the event of Local Agency's uncured breach, the State may terminate this entire Agreement or any part of this Agreement. Local Agency shall continue performance of this Agreement to the extent not terminated, if any.

a. Obligations and Rights

To the extent specified in any termination notice, Local Agency shall not incur further obligations or render further performance past the effective date of such notice, and shall terminate outstanding orders and subcontracts with third parties. However, Local Agency shall complete and deliver to the State all Work not cancelled by the termination notice, and may incur obligations as necessary to do so within this Agreement's terms. At the request of the State, Local Agency shall assign to the State all of Local Agency's rights, title, and interest in and to such terminated orders or subcontracts. Upon termination, Local Agency shall take timely, reasonable and necessary action to protect and preserve property in the possession of Local Agency but in which the State has an interest. At the State's request, Local Agency shall return materials owned by the State in Local Agency's possession at the time of any termination. Local Agency shall deliver all completed Work Product and all Work Product that was in the process of completion to the State at the State's request.

b. Payments

Notwithstanding anything to the contrary, the State shall only pay Local Agency for accepted Work received as of the date of termination. If, after termination by the State, the State agrees that Local Agency was not in breach or that Local Agency's action or inaction was excusable, such termination shall be treated as a termination in the public interest, and the rights and obligations of the Parties shall be as if this Agreement had been terminated in the public interest under **§2.C**.

c. Damages and Withholding

Notwithstanding any other remedial action by the State, Local Agency shall remain liable to the State for any damages sustained by the State in connection with any breach by Local Agency, and the State may withhold payment to Local Agency for the purpose of mitigating the State's damages until such time as the exact amount of damages due to the State from Local Agency is determined. The State may withhold any amount that may be due Local Agency as the State deems necessary to protect the State against loss including, without limitation, loss as a result of outstanding liens and excess costs incurred by the State in procuring from third parties replacement Work as cover.

ii. Remedies Not Involving Termination

The State, in its discretion, may exercise one or more of the following additional remedies:

a. Suspend Performance

Suspend Local Agency's performance with respect to all or any portion of the Work pending corrective action as specified by the State without entitling Local Agency to an adjustment in price or cost or an adjustment in the performance schedule. Local Agency shall promptly cease performing Work and incurring costs in accordance with the State's directive, and the State shall not be liable for costs incurred by Local Agency after the suspension of performance.

b. Withhold Payment

Withhold payment to Local Agency until Local Agency corrects its Work.

c. Deny Payment

Deny payment for Work not performed, or that due to Local Agency's actions or inactions, cannot be performed or if they were performed are reasonably of no value to the state; provided, that any denial of payment shall be equal to the value of the obligations not performed.

d. Removal

Demand immediate removal from the Work of any of Local Agency's employees, agents, or Subcontractors from the Work whom the State deems incompetent, careless, insubordinate, unsuitable, or otherwise unacceptable or whose continued relation to this Agreement is deemed by the State to be contrary to the public interest or the State's best interest.

e. Intellectual Property

If any Work infringes a patent, copyright, trademark, trade secret, or other intellectual property right, Local Agency shall, as approved by the State **(a)** secure that right to use such Work for the State or Local Agency; **(b)** replace the Work with noninfringing Work or modify the Work so that it becomes noninfringing; or, **(c)** remove any infringing Work and refund the amount paid for such Work to the State.

B. Local Agency's Remedies

If the State is in breach of any provision of this Agreement and does not cure such breach, Local Agency, following the notice and cure period in **§13.B** and the dispute resolution process in **§15** shall have all remedies available at law and equity.

15. DISPUTE RESOLUTION

A. Initial Resolution

Except as herein specifically provided otherwise, disputes concerning the performance of this Agreement which cannot be resolved by the designated Agreement representatives shall be referred in writing to a senior departmental management staff member designated by the State and a senior manager designated by Local Agency for resolution.

B. Resolution of Controversies

If the initial resolution described in §15.A fails to resolve the dispute within 10 Business Days, Contractor shall submit any alleged breach of this Contract by the State to the Procurement Official of CDOT as

described in §24-101-301(30), C.R.S. for resolution in accordance with the provisions of §§24-106-109, 24-109-101.1, 24-109-101.5, 24-109-106, 24-109-107, 24-109-201 through 24-109-206, and 24-109-501 through 24-109-505, C.R.S., (the “Resolution Statutes”), except that if Contractor wishes to challenge any decision rendered by the Procurement Official, Contractor’s challenge shall be an appeal to the executive director of the Department of Personnel and Administration, or their delegate, under the Resolution Statutes before Contractor pursues any further action as permitted by such statutes. Except as otherwise stated in this Section, all requirements of the Resolution Statutes shall apply including, without limitation, time limitations.

16. NOTICES AND REPRESENTATIVES

Each individual identified below shall be the principal representative of the designating Party. All notices required or permitted to be given under this Agreement shall be in writing, and shall be delivered **(i)** by hand with receipt required, **(ii)** by certified or registered mail to such Party’s principal representative at the address set forth below or **(iii)** as an email with read receipt requested to the principal representative at the email address, if any, set forth below. If a Party delivers a notice to another through email and the email is undeliverable, then, unless the Party has been provided with an alternate email contact, the Party delivering the notice shall deliver the notice by hand with receipt required or by certified or registered mail to such Party’s principal representative at the address set forth below. Either Party may change its principal representative or principal representative contact information by notice submitted in accordance with this **§16** without a formal amendment to this Agreement. Unless otherwise provided in this Agreement, notices shall be effective upon delivery of the written notice.

For the State

Colorado Department of Transportation (CDOT)
Tracy Vance, CEPM - I
CDOT - Region 1
2829 W. Howard Place, 2nd Floor
Denver, CO 80204
303-512-4090
tracy.vance@state.co.us

For the Local Agency

CITY OF ARVADA
Sylvia Lopo, Traffic Engineer
8101 Ralston Rd
Arvada, CO 80002-8101
720-898-7653
slopo@arvada.org

17. RIGHTS IN WORK PRODUCT AND OTHER INFORMATION

A. Work Product

Local Agency assigns to the State and its successors and assigns, the entire right, title, and interest in and to all causes of action, either in law or in equity, for past, present, or future infringement of intellectual property rights related to the Work Product and all works based on, derived from, or incorporating the Work Product. Whether or not Local Agency is under contract with the State at the time, Local Agency shall execute applications, assignments, and other documents, and shall render all other reasonable assistance requested by the State, to enable the State to secure patents, copyrights, licenses and other intellectual property rights related to the Work Product. The Parties intend the Work Product to be works made for hire.

i. Copyrights

To the extent that the Work Product (or any portion of the Work Product) would not be considered works made for hire under applicable law, Local Agency hereby assigns to the State, the entire right, title, and interest in and to copyrights in all Work Product and all works based upon, derived from, or incorporating the Work Product; all copyright applications, registrations, extensions, or renewals relating to all Work Product and all works based upon, derived from, or incorporating the Work Product; and all moral rights

or similar rights with respect to the Work Product throughout the world. To the extent that Local Agency cannot make any of the assignments required by this section, Local Agency hereby grants to the State a perpetual, irrevocable, royalty-free license to use, modify, copy, publish, display, perform, transfer, distribute, sell, and create derivative works of the Work Product and all works based upon, derived from, or incorporating the Work Product by all means and methods and in any format now known or invented in the future. The State may assign and license its rights under this license.

ii. Patents

In addition, Local Agency grants to the State (and to recipients of Work Product distributed by or on behalf of the State) a perpetual, worldwide, no-charge, royalty-free, irrevocable patent license to make, have made, use, distribute, sell, offer for sale, import, transfer, and otherwise utilize, operate, modify and propagate the contents of the Work Product. Such license applies only to those patent claims licensable by Local Agency that are necessarily infringed by the Work Product alone, or by the combination of the Work Product with anything else used by the State.

B. Exclusive Property of the State

Except to the extent specifically provided elsewhere in this Agreement, any pre-existing State Records, State software, research, reports, studies, photographs, negatives, or other documents, drawings, models, materials, data, and information shall be the exclusive property of the State (collectively, "State Materials"). Local Agency shall not use, willingly allow, cause or permit Work Product or State Materials to be used for any purpose other than the performance of Local Agency's obligations in this Agreement without the prior written consent of the State. Upon termination of this Agreement for any reason, Local Agency shall provide all Work Product and State Materials to the State in a form and manner as directed by the State.

18. GOVERNMENTAL IMMUNITY

Liability for claims for injuries to persons or property arising from the negligence of the Parties, their departments, boards, commissions committees, bureaus, offices, employees and officials shall be controlled and limited by the provisions of the GIA; the Federal Tort Claims Act, 28 U.S.C. Pt. VI, Ch. 171 and 28 U.S.C. 1346(b), and the State's risk management statutes, §§24-30-1501, *et seq.* C.R.S.

19. STATEWIDE CONTRACT MANAGEMENT SYSTEM

If the maximum amount payable to Local Agency under this Agreement is \$100,000 or greater, either on the Effective Date or at anytime thereafter, this **§19** shall apply. Local Agency agrees to be governed by and comply with the provisions of §24-102-205, §24-102-206, §24-103-601, §24-103.5-101 and §24-105-102 C.R.S. regarding the monitoring of vendor performance and the reporting of contract performance information in the State's contract management system ("Contract Management System" or "CMS"). Local Agency's performance shall be subject to evaluation and review in accordance with the terms and conditions of this Agreement, Colorado statutes governing CMS, and State Fiscal Rules and State Controller policies.

20. GENERAL PROVISIONS

A. Assignment

Local Agency's rights and obligations under this Agreement are personal and may not be transferred or assigned without the prior, written consent of the State. Any attempt at assignment or transfer without such consent shall be void. Any assignment or transfer of Local Agency's rights and obligations approved by the State shall be subject to the provisions of this Agreement

B. Subcontracts

Local Agency shall not enter into any subcontract in connection with its obligations under this Agreement without the prior, written approval of the State. Local Agency shall submit to the State a copy of each such subcontract upon request by the State. All subcontracts entered into by Local Agency in connection with this Agreement shall comply with all applicable federal and state laws and regulations, shall provide that they are governed by the laws of the State of Colorado, and shall be subject to all provisions of this Agreement.

C. Binding Effect

Except as otherwise provided in **§20.A.** all provisions of this Agreement, including the benefits and burdens, shall extend to and be binding upon the Parties' respective successors and assigns.

D. Authority

Each Party represents and warrants to the other that the execution and delivery of this Agreement and the performance of such Party's obligations have been duly authorized.

E. Captions and References

The captions and headings in this Agreement are for convenience of reference only, and shall not be used to interpret, define, or limit its provisions. All references in this Agreement to sections (whether spelled out or using the § symbol), subsections, exhibits or other attachments, are references to sections, subsections, exhibits or other attachments contained herein or incorporated as a part hereof, unless otherwise noted.

F. Counterparts

This Agreement may be executed in multiple, identical, original counterparts, each of which shall be deemed to be an original, but all of which, taken together, shall constitute one and the same agreement.

G. Entire Understanding

This Agreement represents the complete integration of all understandings between the Parties related to the Work, and all prior representations and understandings related to the Work, oral or written, are merged into this Agreement. Prior or contemporaneous additions, deletions, or other changes to this Agreement shall not have any force or effect whatsoever, unless embodied herein.

H. Jurisdiction and Venue

All suits or actions related to this Agreement shall be filed and proceedings held in the State of Colorado and exclusive venue shall be in the City and County of Denver.

I. Modification

Except as otherwise provided in this Agreement, any modification to this Agreement shall only be effective if agreed to in a formal amendment to this Agreement, properly executed and approved in accordance with applicable Colorado State law and State Fiscal Rules. Modifications permitted under this Agreement, other than contract amendments, shall conform to the policies promulgated by the Colorado State Controller.

J. Statutes, Regulations, Fiscal Rules, and Other Authority.

Any reference in this Agreement to a statute, regulation, State Fiscal Rule, fiscal policy or other authority shall be interpreted to refer to such authority then current, as may have been changed or amended since the Effective Date of this Agreement.

K. Order of Precedence

In the event of a conflict or inconsistency between this Agreement and any exhibits or attachment such conflict or inconsistency shall be resolved by reference to the documents in the following order of priority:

- i. Colorado Special Provisions in the main body of this Agreement.
- ii. The provisions of the other sections of the main body of this Agreement.
- iii. **Exhibit A**, Statement of Work.
- iv. **Exhibit D**, Local Agency Resolution.
- v. **Exhibit C**, Funding Provisions.
- vi. **Exhibit B**, Sample Option Letter.
- vii. **Exhibit E**, Local Agency Contract Administration Checklist.
- viii. Other exhibits in descending order of their attachment.

L. Severability

The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement, which shall remain in full force and effect, provided that the Parties can continue to perform their obligations under this Agreement in accordance with the intent of the Agreement.

M. Survival of Certain Agreement Terms

Any provision of this Agreement that imposes an obligation on a Party after termination or expiration of the Agreement shall survive the termination or expiration of the Agreement and shall be enforceable by the other Party.

N. Third Party Beneficiaries

Except for the Parties' respective successors and assigns described in **§20.C**, this Agreement does not and is not intended to confer any rights or remedies upon any person or entity other than the Parties. Enforcement of this Agreement and all rights and obligations hereunder are reserved solely to the Parties. Any services or benefits which third parties receive as a result of this Agreement are incidental to the Agreement, and do not create any rights for such third parties.

O. Waiver

A Party's failure or delay in exercising any right, power, or privilege under this Agreement, whether explicit or by lack of enforcement, shall not operate as a waiver, nor shall any single or partial exercise of any right, power, or privilege preclude any other or further exercise of such right, power, or privilege.

P. CORA Disclosure

To the extent not prohibited by federal law, this Agreement and the performance measures and standards required under §24-103.5-101 C.R.S., if any, are subject to public release through the CORA.

Q. Standard and Manner of Performance

Local Agency shall perform its obligations under this Agreement in accordance with the highest standards of care, skill and diligence in Local Agency's industry, trade, or profession.

R. Licenses, Permits, and Other Authorizations.

Local Agency shall secure, prior to the Effective Date, and maintain at all times during the term of this Agreement, at its sole expense, all licenses, certifications, permits, and other authorizations required to perform its obligations under this Agreement, and shall ensure that all employees, agents and Subcontractors secure and maintain at all times during the term of their employment, agency or subcontract, all license, certifications, permits and other authorizations required to perform their obligations in relation to this Agreement.

21. COLORADO SPECIAL PROVISIONS (COLORADO FISCAL RULE 3-3)

These Special Provisions apply to all contracts except where noted in italics.

A. STATUTORY APPROVAL. §24-30-202(1), C.R.S.

This Contract shall not be valid until it has been approved by the Colorado State Controller or designee. If this Contract is for a Major Information Technology Project, as defined in §24-37.5-102(2.6), then this Contract shall not be valid until it has been approved by the State's Chief Information Officer or designee.

B. FUND AVAILABILITY. §24-30-202(5.5), C.R.S.

Financial obligations of the State payable after the current State Fiscal Year are contingent upon funds for that purpose being appropriated, budgeted, and otherwise made available.

C. GOVERNMENTAL IMMUNITY.

Liability for claims for injuries to persons or property arising from the negligence of the State, its departments, boards, commissions committees, bureaus, offices, employees and officials shall be controlled and limited by the provisions of the Colorado Governmental Immunity Act, §24-10-101, et seq., C.R.S.; the Federal Tort Claims Act, 28 U.S.C. Pt. VI, Ch. 171 and 28 U.S.C. 1346(b), and the State's risk management statutes, §§24-30-1501, et seq. C.R.S. No term or condition of this Contract shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protections, or other provisions, contained in these statutes.

D. INDEPENDENT CONTRACTOR

Contractor shall perform its duties hereunder as an independent contractor and not as an employee. Neither Contractor nor any agent or employee of Contractor shall be deemed to be an agent or employee of the State.

Contractor shall not have authorization, express or implied, to bind the State to any agreement, liability or understanding, except as expressly set forth herein. **Contractor and its employees and agents are not entitled to unemployment insurance or workers compensation benefits through the State and the State shall not pay for or otherwise provide such coverage for Contractor or any of its agents or employees. Contractor shall pay when due all applicable employment taxes and income taxes and local head taxes incurred pursuant to this Contract. Contractor shall (i) provide and keep in force workers' compensation and unemployment compensation insurance in the amounts required by law, (ii) provide proof thereof when requested by the State, and (iii) be solely responsible for its acts and those of its employees and agents.**

E. COMPLIANCE WITH LAW.

Contractor shall comply with all applicable federal and State laws, rules, and regulations in effect or hereafter established, including, without limitation, laws applicable to discrimination and unfair employment practices.

F. CHOICE OF LAW, JURISDICTION, AND VENUE.

Colorado law, and rules and regulations issued pursuant thereto, shall be applied in the interpretation, execution, and enforcement of this Contract. Any provision included or incorporated herein by reference which conflicts with said laws, rules, and regulations shall be null and void. All suits or actions related to this Contract shall be filed and proceedings held in the State of Colorado and exclusive venue shall be in the City and County of Denver.

G. PROHIBITED TERMS.

Any term included in this Contract that requires the State to indemnify or hold Contractor harmless; requires the State to agree to binding arbitration; limits Contractor's liability for damages resulting from death, bodily injury, or damage to tangible property; or that conflicts with this provision in any way shall be void ab initio. Nothing in this Contract shall be construed as a waiver of any provision of §24-106-109 C.R.S. Any term included in this Contract that limits Contractor's liability that is not void under this section shall apply only in excess of any insurance to be maintained under this Contract, and no insurance policy shall be interpreted as being subject to any limitations of liability of this Contract.

H. SOFTWARE PIRACY PROHIBITION.

State or other public funds payable under this Contract shall not be used for the acquisition, operation, or maintenance of computer software in violation of federal copyright laws or applicable licensing restrictions. Contractor hereby certifies and warrants that, during the term of this Contract and any extensions, Contractor has and shall maintain in place appropriate systems and controls to prevent such improper use of public funds. If the State determines that Contractor is in violation of this provision, the State may exercise any remedy available at law or in equity or under this Contract, including, without limitation, immediate termination of this Contract and any remedy consistent with federal copyright laws or applicable licensing restrictions.

I. EMPLOYEE FINANCIAL INTEREST/CONFLICT OF INTEREST. §§24-18-201 and 24-50-507, C.R.S.

The signatories aver that to their knowledge, no employee of the State has any personal or beneficial interest whatsoever in the service or property described in this Contract. Contractor has no interest and shall not acquire any interest, direct or indirect, that would conflict in any manner or degree with the performance of Contractor's services and Contractor shall not employ any person having such known interests.

J. VENDOR OFFSET AND ERRONEOUS PAYMENTS. §§24-30-202(1) and 24-30-202.4, C.R.S.

[Not applicable to intergovernmental agreements] Subject to §24-30-202.4(3.5), C.R.S., the State Controller may withhold payment under the State's vendor offset intercept system for debts owed to State agencies for: **(i)** unpaid child support debts or child support arrearages; **(ii)** unpaid balances of tax, accrued interest, or other charges specified in §§39-21-101, *et seq.*, C.R.S.; **(iii)** unpaid loans due to the Student Loan Division of the Department of Higher Education; **(iv)** amounts required to be paid to the Unemployment Compensation Fund; and **(v)** other unpaid debts owing to the State as a result of final agency determination or judicial action. The State may also recover, at the State's discretion, payments made to Contractor in error for any reason, including, but not limited to, overpayments or improper payments, and unexpended or excess funds received by Contractor by deduction from subsequent payments under this Contract, deduction from any payment due

under any other contracts, grants or agreements between the State and Contractor, or by any other appropriate method for collecting debts owed to the State.

K. PUBLIC CONTRACTS FOR SERVICES. §§8-17.5-101, et seq., C.R.S.

[Not applicable to agreements relating to the offer, issuance, or sale of securities, investment advisory services or fund management services, sponsored projects, intergovernmental agreements, or information technology services or products and services] Contractor certifies, warrants, and agrees that it does not knowingly employ or contract with an illegal alien who will perform work under this Contract and will confirm the employment eligibility of all employees who are newly hired for employment in the United States to perform work under this Contract, through participation in the E-Verify Program or the State verification program established pursuant to §8-17.5-102(5)(c), C.R.S., Contractor shall not knowingly employ or contract with an illegal alien to perform work under this Contract or enter into a contract with a Subcontractor that fails to certify to Contractor that the Subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this Contract. Contractor **(i)** shall not use E-Verify Program or the program procedures of the Colorado Department of Labor and Employment (“Department Program”) to undertake pre-employment screening of job applicants while this Contract is being performed, **(ii)** shall notify the Subcontractor and the contracting State agency or institution of higher education within 3 days if Contractor has actual knowledge that a Subcontractor is employing or contracting with an illegal alien for work under this Contract, **(iii)** shall terminate the subcontract if a Subcontractor does not stop employing or contracting with the illegal alien within 3 days of receiving the notice, and **(iv)** shall comply with reasonable requests made in the course of an investigation, undertaken pursuant to §8-17.5-102(5), C.R.S., by the Colorado Department of Labor and Employment. If Contractor participates in the Department program, Contractor shall deliver to the contracting State agency, Institution of Higher Education or political subdivision, a written, notarized affirmation, affirming that Contractor has examined the legal work status of such employee, and shall comply with all of the other requirements of the Department program. If Contractor fails to comply with any requirement of this provision or §§8-17.5-101, et seq., C.R.S., the contracting State agency, institution of higher education or political subdivision may terminate this Contract for breach and, if so terminated, Contractor shall be liable for damages.

L. PUBLIC CONTRACTS WITH NATURAL PERSONS. §§24-76.5-101, et seq., C.R.S.

Contractor, if a natural person eighteen (18) years of age or older, hereby swears and affirms under penalty of perjury that Contractor **(i)** is a citizen or otherwise lawfully present in the United States pursuant to federal law, **(ii)** shall comply with the provisions of §§24-76.5-101, et seq., C.R.S., and **(iii)** has produced one form of identification required by §24-76.5-103, C.R.S. prior to the Effective Date of this Contract.

Revised 11-1-18

22. FEDERAL REQUIREMENTS

Local Agency and/or their contractors, subcontractors, and consultants shall at all times during the execution of this Agreement strictly adhere to, and comply with, all applicable federal and State laws, and their implementing regulations, as they currently exist and may hereafter be amended. A summary of applicable federal provisions are attached hereto as Exhibit F, Exhibit I, Exhibit J, Exhibit K and Exhibit M are hereby incorporated by this reference.

23. DISADVANTAGED BUSINESS ENTERPRISE (DBE)

Local Agency will comply with all requirements of Exhibit G and Local Agency Contract Administration Checklist regarding DBE requirements for the Work, except that if Local Agency desires to use its own DBE program to implement and administer the DBE provisions of 49 C.F.R. Part 26 under this Agreement, it must submit a copy of its program’s requirements to the State for review and approval before the execution of this Agreement. If Local Agency uses any State- approved DBE program for this Agreement, Local Agency shall be solely responsible to defend that DBE program and its use of that program against all legal and other challenges or complaints, at its sole cost and expense. Such responsibility includes, without limitation, determinations concerning DBE eligibility requirements and certification, adequate legal and factual bases for DBE goals and good faith efforts. State approval (if provided) of Local Agency’s DBE program does not waive or modify the sole responsibility of Local Agency for use of its program.

24. DISPUTES

Except as otherwise provided in this Agreement, any dispute concerning a question of fact arising under this Agreement which is not disposed of by agreement shall be decided by the Chief Engineer of the Department of Transportation. The decision of the Chief Engineer will be final and conclusive unless, within 30 calendar days after the date of receipt of a copy of such written decision, Local Agency mails or otherwise furnishes to the State a written appeal addressed to the Executive Director of CDOT. In connection with any appeal proceeding under this clause, Local Agency shall be afforded an opportunity to be heard and to offer evidence in support of its appeal. Pending final decision of a dispute hereunder, Local Agency shall proceed diligently with the performance of this Agreement in accordance with the Chief Engineer's decision. The decision of the Executive Director or his duly authorized representative for the determination of such appeals shall be final and conclusive and serve as final agency action. This dispute clause does not preclude consideration of questions of law in connection with decisions provided for herein. Nothing in this Agreement, however, shall be construed as making final the decision of any administrative official, representative, or board on a question of law.

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EXHIBIT A
SCOPE OF WORK

58th Avenue and Kipling Parkway Intersection Improvements
SHE M040-034
SubAccount #22278

The proposed project will provide intersection safety improvements at one location in Arvada. The improvements will replace the traffic signal equipment, upgrade curb ramps to meet current ADA standards and improve pedestrian accessibility. The existing intersection geometry will remain in place. Land acquisition will not be required for this project.

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EXHIBIT B
SAMPLE IGA OPTION LETTER

Date	State Fiscal Year	Option Letter No.
Project Code	Original Agreement #	

Vendor Name: _____

Option to unilaterally add phasing to include Design, Construction, Environmental, Utilities, ROW incidentals or Miscellaneous and to update encumbrance amount(s).

Option to unilaterally transfer funds from one phase to another phase.

Option to unilaterally add phasing to include Design, Construction, Environmental, Utilities, ROW incidentals or Miscellaneous, to update encumbrance amount(s), and to unilaterally transfer funds from one phase to another phase.

Option to unilaterally extend the performance of this Agreement and/or update a Work Phase Performance Period.

Option A

In accordance with the terms of the original Agreement between the State of Colorado, Department of Transportation and the Local Agency), the State hereby exercises the option to authorize the Local Agency to add a phase and to encumber funds for the phase based on changes in funding availability and authorization. The total encumbrance is (or increased) by \$0.00. A new **Exhibit C-1** is made part of the original Agreement and replaces **Exhibit C**.

Option B

In accordance with the terms of the original Agreement between the State of Colorado, Department of Transportation and the Local Agency, the State hereby exercises the option to transfer funds based on variance in actual phase costs and original phase estimates. A new **Exhibit C-1** is made part of the original Agreement and replaces **Exhibit C**.

Option C

In accordance with the terms of the original Agreement between the State of Colorado, Department of Transportation and the Local Agency, the State hereby exercises the option to 1) release the Local Agency to begin a phase; 2) to encumber funds for the phase based upon changes in funding availability and authorization; and 3) to transfer funds from phases based on variance in actual phase costs and original phase estimates. A new **Exhibit C-1** is made part of the original Agreement and replaces **Exhibit C**.

Option D

In accordance with the terms of the original Agreement between the State of Colorado, Department of Transportation and the Local Agency, the State hereby exercises the option extend the performance of this Agreement and/or update a Work Phase Performance Period.

The total encumbrance as a result of this option and all previous options and/or amendments is now\$0.00, as referenced in **Exhibit C-1**. The total budgeted funds to satisfy services/goods ordered under the Agreement remains the same: as referenced in **Exhibit C-1**.

The effective date of this option letter is upon approval of the State Controller or delegate.

STATE OF COLORADO
Jared S. Polis
Department of Transportation

By: _____
Stephen Harelson, P.E., Chief Engineer
(For) Shoshana M. Lew, Executive Director

Date: _____

ALL AGREEMENTS MUST BE APPROVED BY THE STATE CONTROLLER

CRS §24-30-202 requires the State Controller to approve all State Agreements. This Agreement is not valid until signed and dated below by the State Controller or delegate. Contractor is not authorized to begin performance until such time. If the Local Agency begins performing prior thereto, the State of Colorado is not obligated to pay the Local Agency for such performance or for any goods and/or services provided hereunder.

STATE OF COLORADO
STATE CONTROLLER
Robert Jaros, CPA, MBA, JD

By: _____
Colorado Department of Transportation

Date:_____

EXHIBIT C **FUNDING PROVISIONS**

EXHIBIT C – FUNDING PROVISIONS

SHO M040-034 (22278)

Cost of Work Estimate

The Local Agency has estimated the total cost the Work to be \$450,000.00, which is to be funded as follows:

1. BUDGETED FUNDS				
a.	Federal Funds (90.00% of Participating Costs)		\$405,000.00	
b.	Local Agency Matching Funds (10.00% of Participating Costs)		\$45,000.00	
TOTAL BUDGETED FUNDS			\$450,000.00	
2. OMB UNIFORM GUIDANCE				
a.	Federal Award Identification Number (FAIN):		TBD	
b.	Federal Award Date (also Phase Performance Start Date):		See Below	
c.	Amount of Federal Funds Obligated:		\$0.00	
d.	Total Amount of Federal Award:		\$405,000.00	
e.	Name of Federal Awarding Agency:		FHWA	
f.	CFDA# - Highway Planning and Construction		CFDA 20.205	
g.	Is the Award for R&D?		No	
h.	Indirect Cost Rate (if applicable)		N/A	
3. ESTIMATED PAYMENT TO LOCAL AGENCY				
a.	Federal Funds Budgeted		\$405,000.00	
b.	Less Estimated Federal Share of CDOT-Incurred Costs		\$0.00	
TOTAL ESTIMATED PAYMENT TO LOCAL AGENCY			\$405,000.00	
4. FOR CDOT ENCUMBRANCE PURPOSES				
a.	Total Encumbrance Amount		\$450,000.00	
b.	Less ROW Acquisition 3111 and/or ROW Relocation 3109		\$0.00	
Net to be encumbered as follows:			\$450,000.00	
<i>Note: No funds are currently available. Design and Construction funds will become available after execution of an Option letter (Exhibit B) or formal Amendment.</i>				
WBS Element 22278.10.30	Performance Period Start*/End Date TBD / TBD	Design	3020	\$0.00
WBS Element 22278.20.10	TBD / TBD	Const.	3301	\$0.00

*The Local Agency should not begin work until all three of the following are in place:

- 1) Phase Performance Period Start Date; 2) The execution of the document encumbering funds for the respective phase; and 3) Local Agency receipt of the official Notice to Proceed. Any work performed before these three (3) milestones are achieved will not be reimbursable.

B. Matching Funds

The matching ratio for the federal participating funds for this Work is 90.00% federal-aid funds to 10.00% Local Agency funds, it being understood that such ratio applies only to the \$450,000.00 that is eligible for federal participation, it being further understood that all non-participating costs are borne by the Local Agency at 100%. If the total participating cost of performance of the Work exceeds \$450,000.00, and additional federal funds are made available for the Work, the Local Agency shall pay 10.00% of all such costs eligible for federal participation and 100% of all non-participating costs; if additional federal funds are not made available, the Local Agency shall pay all such excess costs. If the total participating cost of performance of the Work is less than \$450,000.00, then the amounts of Local Agency and federal-aid funds will be decreased in accordance with the funding ratio described herein. The performance of the Work shall be at no cost to the State.

C. Maximum Amount Payable

The maximum amount payable to the Local Agency under this Agreement shall be \$405,000.00 (for CDOT accounting purposes, the federal funds of \$405,000.00 and the Local Agency matching funds of \$45,000.00 will be encumbered for a total encumbrance of \$450,000.00), unless such amount is increased by an appropriate written modification to this Agreement executed before any increased cost is incurred. It is understood and agreed by the parties hereto that the total cost of the Work stated hereinbefore is the best estimate available, based on the design data as approved at the time of execution of this Agreement, and that such cost is subject to revisions (in accord with the procedure in the previous sentence) agreeable to the parties prior to bid and award.

The maximum amount payable shall be reduced without amendment when the actual amount of the Local Agency's awarded contract is less than the budgeted total of the federal participating funds and the Local Agency matching funds. The maximum amount payable shall be reduced through the execution of an Option Letter as described in Section 7. E. of this contract.

D. Single Audit Act Amendment

All state and local government and non-profit organizations receiving \$750,000 or more from all funding sources defined as federal financial assistance for Single Audit Act Amendment purposes shall comply with the audit requirements of 2 CFR part 200, subpart F (Audit Requirements) see also, 49 C.F.R. 18.20 through 18.26. The Single Audit Act Amendment requirements applicable to the Local Agency receiving federal funds are as follows:

- i. Expenditure less than \$750,000**
If the Local Agency expends less than \$750,000 in Federal funds (all federal sources, not just Highway funds) in its fiscal year then this requirement does not apply.
- ii. Expenditure of \$750,000 or more-Highway Funds Only**
If the Local Agency expends \$750,000 or more, in Federal funds, but only received federal Highway funds (Catalog of Federal Domestic Assistance, CFDA 20.205) then a program specific audit shall be performed. This audit will examine the "financial" procedures and processes for this program area.
- iii. Expenditure of \$750,000 or more-Multiple Funding Sources**
If the Local Agency expends \$750,000 or more in Federal funds, and the Federal funds are from multiple sources (FTA, HUD, NPS, etc.) then the Single Audit Act applies, which is an audit on the entire organization/entity.
- iv. Independent CPA**
Single Audit shall only be conducted by an independent CPA, not by an auditor on staff. An audit is an allowable direct or indirect cost.

EXHIBIT D

LOCAL AGENCY RESOLUTION (If APPLICABLE)

EXHIBIT E LOCAL AGENCY AGREEMENT ADMINISTRATION CHECKLIST

COLORADO DEPARTMENT OF TRANSPORTATION LOCAL AGENCY CONTRACT ADMINISTRATION CHECKLIST			
Project No. SHO M040-034	STIP No. SR16682	Project Code 22278	Region 1
Project Location 58th Avenue & Kipling Parkway			Date 11/9/2020
Project Description 58th Avenue & Kipling Parkway Intersection Improvements			
Local Agency Arvada	Local Agency Project Manager Sylvia Lopo		
CDOT Resident Engineer Maria Hajiaghaee	CDOT Project Manager Tracy Vance		
INSTRUCTIONS: This checklist shall be utilized to establish the contract administration responsibilities of the individual parties to this agreement. The checklist becomes an attachment to the Local Agency agreement. Section numbers correspond to the applicable chapters of the <i>CDOT Local Agency Manual</i> . The checklist shall be prepared by placing an "X" under the responsible party, opposite each of the tasks. The "X" denotes the party responsible for initiating and executing the task. Only one responsible party should be selected. When neither CDOT nor the Local Agency is responsible for a task, not applicable (NA) shall be noted. In addition, a "#" will denote that CDOT must concur or approve. Tasks that will be performed by Headquarters staff will be indicated. The Regions, in accordance with established policies and procedures, will determine who will perform all other tasks that are the responsibility of CDOT. The checklist shall be prepared by the CDOT Resident Engineer or the CDOT Project Manager, in cooperation with the Local Agency Project Manager, and submitted to the Region Program Engineer. If contract administration responsibilities change, the CDOT Resident Engineer, in cooperation with the Local Agency Project Manager, will prepare and distribute a revised checklist. Note: Failure to comply with applicable Federal and State requirements may result in the loss of Federal or State participation in funding.			

NO.	DESCRIPTION OF TASK	RESPONSIBLE PARTY	
		LA	CDOT
TIP / STIP AND LONG-RANGE PLANS			
2.1	Review Project to ensure it is consistent with STIP and amendments thereto		X
FEDERAL FUNDING OBLIGATION AND AUTHORIZATION			
4.1	Authorize funding by phases (CDOT Form 418 - Federal-aid Program Data. Requires FHWA concurrence/involvement)		X
PROJECT DEVELOPMENT			
5.1	Prepare Design Data - CDOT Form 463	X	#
5.2	Prepare Local Agency/CDOT Inter-Governmental Agreement (see also Chapter 3)		X
5.3	Conduct Consultant Selection/Execute Consultant Agreement		
	- Project Development - Construction Contract Administration (including Fabrication Inspection Services)	X X	# #
5.4	Conduct Design Scoping Review Meeting	X	X
5.5	Conduct Public Involvement	X	
5.6	Conduct Field Inspection Review (FIR)	X	X
5.7	Conduct Environmental Processes (may require FHWA concurrence/involvement)	X	#
5.8	Acquire Right-of-Way (may require FHWA concurrence/involvement)	X	#
5.9	Obtain Utility and Railroad Agreements	X	#
5.10	Conduct Final Office Review (FOR)	X	X
5.11	Justify Force Account Work by the Local Agency	X	#

NO.	DESCRIPTION OF TASK	RESPONSIBLE PARTY	
		LA	CDOT
5.12	Justify Proprietary, Sole Source, or Local Agency Furnished Items	X	#
5.13	Document Design Exceptions - CDOT Form 464	X	#
5.14	Prepare Plans, Specifications, Construction Cost Estimates and Submittals	X	
5.15	Ensure Authorization of Funds for Construction		X
PROJECT DEVELOPMENT CIVIL RIGHTS AND LABOR COMPLIANCE			
6.1	Set Disadvantaged Business Enterprise (DBE) Goals for Consultant and Construction Contracts (CDOT Region EEO/Civil Rights Specialist).		X
6.2	Determine Applicability of Davis-Bacon Act This project ☐ is ☒ is not exempt from Davis-Bacon requirements as determined by the functional classification of the project location (Projects located on local roads and rural minor collectors may be exempt.) Maria Hajiaghaee _____ CDOT Resident Engineer (Signature on File) 11/09/2020 Date		X
6.3	Set On-the-Job Training Goals (CDOT Region EEO/Civil Rights Specialist)		X
6.4	Title VI Assurances		X
	Ensure the correct Federal Wage Decision, all required Disadvantaged Business Enterprise/On-the-Job Training special provisions and FHWA Form 1273 are included in the Contract (CDOT Resident Engineer)		X
ADVERTISE, BID AND AWARD of CONSTRUCTION PROJECTS			
7.1	Obtain Approval for Advertisement Period of Less Than Three Weeks	X	
7.2	Advertise for Bids	X	#
7.3	Distribute "Advertisement Set" of Plans and Specifications	X	
7.4	Review Worksite and Plan Details with Prospective Bidders While Project Is Under Advertisement	X	
7.5	Open Bids	X	
7.6	Process Bids for Compliance		
	Check CDOT Form 1415 – Commitment Confirmation when the low bidder meets DBE goals		X
	Evaluate CDOT Form 1416 - Good Faith Effort Report and determine if the Contractor has made a good faith effort when the low bidder does not meet DBE goals		X
	Submit required documentation for CDOT award concurrence	X	
7.7	Concurrence from CDOT to Award		X
7.8	Approve Rejection of Low Bidder		X
7.9	Award Contract	X	#
7.10	Provide "Award" and "Record" Sets of Plans and Specifications	X	
CONSTRUCTION MANAGEMENT			
8.1	Issue Notice to Proceed to the Contractor	X	#
8.2	Project Safety	X	
8.3	Conduct Conferences:		
	Pre-Construction Conference (Appendix B) • Fabrication Inspection Notifications	X	
	Pre-survey • Construction staking • Monumentation	X X	
	Partnering (Optional)	NA	NA
	Structural Concrete Pre-Pour (Agenda is in <i>CDOT Construction Manual</i>)	X	
	Concrete Pavement Pre-Paving (Agenda is in <i>CDOT Construction Manual</i>)	X	
	HMA Pre-Paving (Agenda is in <i>CDOT Construction Manual</i>)	X	
8.4	Develop and distribute Public Notice of Planned Construction to media and local residents	X	
8.5	Supervise Construction		
	A Professional Engineer (PE) registered in Colorado, who will be "in responsible charge of construction supervision." Mazedur Hossain 720-898-7744 Local Agency Professional Engineer or Phone number CDOT Resident Engineer	X	
	Provide competent, experienced staff who will ensure the Contract work is constructed in		

NO.	DESCRIPTION OF TASK	RESPONSIBLE PARTY	
		LA	CDOT
	accordance with the plans and specifications	X	
	Construction inspection and documentation	X	
	Fabrication Inspection and documentation	X	
8.6	Approve Shop Drawings	X	
8.7	Perform Traffic Control Inspections	X	
8.8	Perform Construction Surveying	X	#
8.9	Monument Right-of-Way	X	
8.10	Prepare and Approve Interim and Final Contractor Pay Estimates. Collect and review CDOT Form 1418 (or equivalent) Provide the name and phone number of the person authorized for this task. Sylvia Lopo _____ 720-898-7653 _____ Local Agency Representative Phone number	X	
8.11	Prepare and Approve Interim and Final Utility and Railroad Billings	X	#
8.12	Prepare and Authorize Change Orders	X	#
8.13	Submit Change Order Package to CDOT	X	X
8.14	Prepare Local Agency Reimbursement Requests	X	
8.15	Monitor Project Financial Status	X	
8.16	Prepare and Submit Monthly Progress Reports	X	
8.17	Resolve Contractor Claims and Disputes	X	
8.18	Conduct Routine and Random Project Reviews Provide the name and phone number of the person responsible for this task. _____ 303-757-9914 _____ Maria Hajiaghvae CDOT Resident Engineer Phone number		X
8.19	Ongoing Oversight of DBE Participation	X	
MATERIALS			
9.1	Discuss Materials at Pre-Construction Meeting • Buy America documentation required prior to installation of steel	X	X
9.2	Complete CDOT Form 250 - Materials Documentation Record • Generate form, which includes determining the minimum number of required tests and applicable material submittals for all materials placed on the project • Update the form as work progresses • Complete and distribute form after work is completed	X X	X
9.3	Perform Project Acceptance Samples and Tests	X	
9.4	Perform Laboratory Verification Tests	X	
9.5	Accept Manufactured Products Inspection of structural components: • Fabrication of structural steel and pre-stressed concrete structural components • Bridge modular expansion devices (0" to 6" or greater) • Fabrication of bearing devices	X X X	
9.6	Approve Sources of Materials	X	
9.7	Independent Assurance Testing (IAT), Local Agency Procedures ☐ CDOT Procedures ☒ • Generate IAT schedule • Schedule and provide notification • Conduct IAT	X X X	
9.8	Approve mix designs • Concrete • Hot mix asphalt	X X	
9.9	Check Final Materials Documentation	X	X
9.10	Complete and Distribute Final Materials Documentation	X	X

NO.	DESCRIPTION OF TASK	RESPONSIBLE PARTY	
		LA	CDOT
CONSTRUCTION CIVIL RIGHTS AND LABOR COMPLIANCE			
10.1	Fulfill Project Bulletin Board and Pre-Construction Packet Requirements	X	
10.2	Process CDOT Form 205 - Sublet Permit Application Review and sign completed CDOT Form 205 for each subcontractor, and submit to EEO/Civil Rights Specialist	X	X
10.3	Conduct Equal Employment Opportunity and Labor Compliance Verification Employee Interviews. Complete CDOT Form 280	X	
10.4	Monitor Disadvantaged Business Enterprise Participation to Ensure Compliance with the “Commercially Useful Function” Requirements	X	
10.5	Conduct Interviews When Project Utilizes On-the-Job Trainees. • Complete CDOT Form 1337 – Contractor Commitment to Meet OJT Requirements. • Complete CDOT Form 838 – OJT Trainee / Apprentice Record. • Complete CDOT Form 200 - OJT Training Questionnaire	X X X X	
10.6	Check Certified Payrolls (Contact the Region EEO/Civil Rights Specialists for training requirements.)	X	X
10.7	Submit FHWA Form 1391 - Highway Construction Contractor's Annual EEO Report	X	
FINALS			
11.1	Conduct Final Project Inspection. Complete and submit CDOT Form 1212 - Final Acceptance Report (Resident Engineer with mandatory Local Agency participation.)		X
11.2	Write Final Project Acceptance Letter	X	
11.3	Advertise for Final Settlement	X	
11.4	Prepare and Distribute Final As-Constructed Plans	X	
11.5	Prepare EEO Certification and Collect EEO Forms	X	
11.6	Check Final Quantities, Plans, and Pay Estimate; Check Project Documentation; and submit Final Certifications	X	
11.7	Check Material Documentation and Accept Final Material Certification (See Chapter 9)	X	
11.8	Obtain CDOT Form 1419 from the Contractor and Submit to the CDOT Project Manager	X	
11.9	(FHWA Form 47 discontinued)	NA	NA
11.10	Complete and Submit CDOT Form 1212 – Final Acceptance Report (by CDOT)		X
11.11	Process Final Payment	X	
11.12	Complete and Submit CDOT Form 950 - Project Closure		X
11.13	Retain Project Records for Six Years from Date of Project Closure	X	
11.14	Retain Final Version of Local Agency Contract Administration Checklist	X	X

cc: CDOT Resident Engineer/Project Manager
CDOT Region Program Engineer
CDOT Region EEO/Civil Rights Specialist
CDOT Region Materials Engineer
CDOT Contracts and Market Analysis Branch
Local Agency Project Manager

EXHIBIT F
CERTIFICATION FOR FEDERAL-AID CONTRACTS

The Local Agency certifies, by signing this Agreement, to the best of its knowledge and belief, that:

No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, Agreement, loan, or cooperative agreement.

If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer of Congress, or an employee of a Member of Congress in connection with this Federal contract, Agreement, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such sub-recipients shall certify and disclose accordingly.

EXHIBIT G
DISADVANTAGED BUSINESS ENTERPRISE

SECTION 1. Policy.

It is the policy of the Colorado Department of Transportation (CDOT) that disadvantaged business enterprises shall have the maximum opportunity to participate in the performance of contracts financed in whole or in part with Federal funds under this agreement, pursuant to 49 CFR Part 26. Consequently, the 49 CFR Part IE DBE requirements the Colorado Department of Transportation DBE Program (or a Local Agency DBE Program approved in advance by the State) apply to this agreement.

SECTION 2. DBE Obligation.

The recipient or its the Local Agency agrees to ensure that disadvantaged business enterprises as determined by the Office of Certification at the Colorado Department of Regulatory Agencies have the maximum opportunity to participate in the performance of contracts and subcontracts financed in whole or in part with Federal funds provided under this agreement. In this regard, all participants or contractors shall take all necessary and reasonable steps in accordance with the CDOT DBE program (or a Local Agency DBE Program approved in advance by the State) to ensure that disadvantaged business enterprises have the maximum opportunity to compete for and perform contracts. Recipients and their contractors shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of CDOT assisted contracts.

SECTION 3 DBE Program.

The Local Agency (sub-recipient) shall be responsible for obtaining the Disadvantaged Business Enterprise Program of the Colorado Department of Transportation, 1988, as amended, and shall comply with the applicable provisions of the program. (If applicable).

A copy of the DBE Program is available from and will be mailed to the Local Agency upon request: Business Programs Office

Colorado Department of Transportation 2829 West Howard Place

Denver, Colorado 80204

Phone: (303) 757-9007

REVISED 1/22/98

REQUIRED BY 49 CFR PART 26

EXHIBIT H

LOCAL AGENCY PROCEDURES FOR CONSULTANT SERVICES

Title 23 Code of Federal Regulations (CFR) 172 applies to a federally funded Local Agency project agreement administered by CDOT that involves professional consultant services. 23 CFR 172.1 states “The policies and procedures involve federally funded contracts for engineering and design related services for projects subject to the provisions of 23 U.S.C. 112(a) and are issued to ensure that a qualified consultant is obtained through an equitable selection process, that prescribed work is properly accomplished in a timely manner, and at fair and reasonable cost” and according to 23 CFR 172.5 “Price shall not be used as a factor in the analysis and selection phase.” Therefore, local agencies must comply with these CFR requirements when obtaining professional consultant services under a federally funded consultant contract administered by CDOT.

CDOT has formulated its procedures in Procedural Directive (P.D.) 400.1 and the related operations guidebook titled "Obtaining Professional Consultant Services". This directive and guidebook incorporate requirements from both Federal and State regulations, i.e., 23 CFR 172 and CRS §24-30-1401 et seq. Copies of the directive and the guidebook may be obtained upon request from CDOT's Agreements and Consultant Management Unit. [Local agencies should have their own written procedures on file for each method of procurement that addresses the items in 23 CFR 172].

Because the procedures and laws described in the Procedural Directive and the guidebook are quite lengthy, the subsequent steps serve as a short-hand guide to CDOT procedures that a Local Agency must follow in obtaining professional consultant services. This guidance follows the format of 23 CFR 172. The steps are:

1. The contracting Local Agency shall document the need for obtaining professional services.
2. Prior to solicitation for consultant services, the contracting Local Agency shall develop a detailed scope of work and a list of evaluation factors and their relative importance. The evaluation factors are those identified in C.R.S. 24-30-1403. Also, a detailed cost estimate should be prepared for use during negotiations.
3. The contracting agency must advertise for contracts in conformity with the requirements of C.R.S. 24-30-1405. The public notice period, when such notice is required, is a minimum of 15 days prior to the selection of the three most qualified firms and the advertising should be done in one or more daily newspapers of general circulation.
4. The Local Agency shall not advertise any federal aid contract without prior review by the CDOT Regional Civil Rights Office (RCRO) to determine whether the contract shall be subject to a DBE contract goal. If the RCRO determines a goal is necessary, then the Local Agency shall include the goal and the applicable provisions within the advertisement. The Local Agency shall not award a contract to any Contractor or Consultant without the confirmation by the CDOT Civil Rights and Business Resource Center that the Contractor or Consultant has demonstrated good faith efforts. The Local Agency shall work with the CDOT RCRO to ensure compliance with the established terms during the performance of the contract.
5. The Local Agency shall require that all contractors pay subcontractors for satisfactory performance of work no later than 30 days after the receipt of payment for that work from the contractor. For construction projects, this time period shall be reduced to seven days in accordance with Colorado Revised Statute 24-91-103(2). If the Local Agency withholds retainage from contractors and/or allows contractors to withhold retainage from subcontractors, such retainage provisions must comply with 49 CFR 26.29.
6. Payments to all Subconsultants shall be made within thirty days of receipt of payment from [the Local Agency] or no later than ninety days from the date of the submission of a complete invoice from the Subconsultant, whichever occurs first. If the Consultant has good cause to dispute an amount invoiced by a Subconsultant, the Consultant shall notify [the Local Agency] no later than the required date for payment. Such notification shall include the amount disputed and justification for the withholding. The Consultant shall maintain records of payment that show amounts paid to all Subconsultants. Good cause does not include the Consultant's failure to submit an invoice to the Local Agency or to deposit payments made.
7. The analysis and selection of the consultants shall be done in accordance with CRS §24-30-1403. This section of the regulation identifies the criteria to be used in the evaluation of CDOT pre-qualified prime consultants and their team. It also shows which criteria are used to short-list and to make a final selection.

The short-list is based on the following evaluation factors:

- a. Qualifications,

- b. Approach to the Work,
- c. Ability to furnish professional services.
- d. Anticipated design concepts, and
- e. Alternative methods of approach for furnishing the professional services. Evaluation factors for final selection are the consultant's:

- a. Abilities of their personnel,
 - b. Past performance,
 - c. Willingness to meet the time and budget requirement,
 - d. Location,
 - e. Current and projected work load,
 - f. Volume of previously awarded contracts, and
 - g. Involvement of minority consultants.
8. Once a consultant is selected, the Local Agency enters into negotiations with the consultant to obtain a fair and reasonable price for the anticipated work. Pre-negotiation audits are prepared for contracts expected to be greater than \$50,000. Federal reimbursements for costs are limited to those costs allowable under the cost principles of 48 CFR 31. Fixed fees (profit) are determined with consideration given to size, complexity, duration, and degree of risk involved in the work. Profit is in the range of six to 15 percent of the total direct and indirect costs.
9. A qualified Local Agency employee shall be responsible and in charge of the Work to ensure that the work being pursued is complete, accurate, and consistent with the terms, conditions, and specifications of the contract. At the end of Work, the Local Agency prepares a performance evaluation (a CDOT form is available) on the consultant.

CRS §§24-30-1401 THROUGH 24-30-1408, 23 CFR PART 172, AND P.D. 400.1, PROVIDE ADDITIONAL DETAILS FOR COMPLYING WITH THE PRECEEDING EIGHT (8) STEPS.

EXHIBIT I

FEDERAL-AID CONTRACT PROVISIONS FOR CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Government wide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design- build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension/debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60- 1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. **EEO Officer:** The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. **Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. **Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. **Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. **Training and Promotion:**

The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

a. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

b. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

c. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. **Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higherpaying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. **Reasonable Accommodation for Applicants / Employees with Disabilities:** The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. **Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:** The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract.

The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. **Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt.

Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA- 1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein; Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account, assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements.

It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency.

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

- (i) That the payroll for the payroll period contains the information required to be provided under §5.5(a)(3)
- (ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5(a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;
- (ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;
- (iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices.

Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity.

The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S.DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. **Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. **Subcontracts.** The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. **Contract termination: debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. **Compliance with Davis-Bacon and Related Act requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. **Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and

7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

- a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
- b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
- c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;
- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

- a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.
- b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below.

The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

- c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.
- d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).
- f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.
- g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.
- h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

- i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

- j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

- (1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

- (2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

- (3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph(a)(2) of this certification; and

- (4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

- a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

- b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS
ROAD CONTRACTS**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

EXHIBIT J

ADDITIONAL FEDERAL REQUIREMENTS

Federal laws and regulations that may be applicable to the Work include:

Executive Order 11246

Executive Order 11246 of September 24, 1965 entitled "Equal Employment Opportunity," as amended by Executive Order 11375 of October 13, 1967 and as supplemented in Department of Labor regulations (41 CFR Chapter 60) (All construction contracts awarded in excess of \$10,000 by the Local Agencies and their contractors or the Local Agencies).

Copeland "Anti-Kickback" Act

The Copeland "Anti-Kickback" Act (18 U.S.C. 874) as supplemented in Department of Labor regulations (29 CFR Part 3) (All contracts and sub-Agreements for construction or repair).

Davis-Bacon Act

The Davis-Bacon Act (40 U.S.C. 276a to a-7) as supplemented by Department of Labor regulations (29 CFR Part 5) (Construction contracts in excess of \$2,000 awarded by the Local Agencies and the Local Agencies when required by Federal Agreement program legislation. This act requires that all laborers and mechanics employed by contractors or sub-contractors to work on construction projects financed by federal assistance must be paid wages not less than those established for the locality of the project by the Secretary of Labor).

Contract Work Hours and Safety Standards Act

Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330) as supplemented by Department of Labor regulations (29 CFR Part 5). (Construction contracts awarded by the Local Agency's in excess of \$2,000, and in excess of \$2,500 for other contracts which involve the employment of mechanics or laborers).

Clear Air Act

Standards, orders, or requirements issued under section 306 of the Clear Air Act (42 U.S.C. 1857(h), section 508 of the Clean Water Act (33 U.S.C. 1368). Executive Order 11738, and Environmental Protection Agency regulations (40 CFR Part 15) (contracts, subcontracts, and sub-Agreements of amounts in excess of \$100,000).

Energy Policy and Conservation Act

Mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94-163).

OMB Circulars

Office of Management and Budget Circulars A-87, A-21 or A-122, and A-102 or A-110, whichever is applicable.

Hatch Act

The Hatch Act (5 USC 1501-1508) and Public Law 95-454 Section 4728. These statutes state that federal funds cannot be used for partisan political purposes of any kind by any person or organization involved in the administration of federally-assisted programs.

Nondiscrimination

The Local Agency shall not exclude from participation in, deny the benefits of, or subject to discrimination any person in the United States on the ground of race, color national origin, sex, age or disability. Prior to the receipt of any Federal financial assistance from CDOT, the Local Agency shall execute the attached Standard DOT Title VI assurance. As appropriate, the Local Agency shall include Appendix A, B, or C to the Standard DOT Title VI assurance in any contract utilizing federal funds, land or other aid. The Local Agency shall also include the following in all contract advertisements:

The [Local Agency], in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (79 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, DBEs will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for any award.

ADA

In any contract utilizing federal funds, land, or other federal aid, the Local Agency shall require the federal-aid recipient or contractor to provide a statement of written assurance that they will comply with Section 504 and not discriminate on the basis of disability.

Uniform Relocation Assistance and Real Property Acquisition Policies Act

The Uniform Relocation Assistance and Real Property Acquisition Policies Act, as amended (Public Law 91-646, as amended and Public Law 100-17, 101 Stat. 246-256). (If the contractor is acquiring real property and displacing households or businesses in the performance of the Agreement).

Drug-Free Workplace Act

The Drug-Free Workplace Act (Public Law 100-690 Title V, subtitle D, 41 USC 701 et seq.).

Age Discrimination Act of 1975

The Age Discrimination Act of 1975, 42 U.S.C. Sections 6101 et seq. and its implementing regulation, 45 C.F.R. Part 91; Section 504 of the Rehabilitation Act of 1973, 29 U.S.C. 794, as amended, and implementing regulation 45 C.F.R. Part 84.

23 C.F.R. Part 172

23 C.F.R. Part 172, concerning "Administration of Engineering and Design Related Contracts".

23 C.F.R Part 633

23 C.F.R Part 633, concerning "Required Contract Provisions for Federal-Aid Construction Contracts".

23 C.F.R. Part 635

23 C.F.R. Part 635, concerning "Construction and Maintenance Provisions".

Title VI of the Civil Rights Act of 1964 and 162(a) of the Federal Aid Highway Act of 1973

Title VI of the Civil Rights Act of 1964 and 162(a) of the Federal Aid Highway Act of 1973. The requirements for which are shown in the Nondiscrimination Provisions, which are attached hereto and made a part hereof.

Nondiscrimination Provisions:

In compliance with Title VI of the Civil Rights Act of 1964 and with Section 162(a) of the Federal Aid Highway Act of 1973, the Contractor, for itself, its assignees and successors in interest, agree as follows:

i. Compliance with Regulations

The Contractor will comply with the Regulations of the Department of Transportation relative to nondiscrimination in Federally assisted programs of the Department of Transportation (Title 49, Code of Federal Regulations, Part 21, hereinafter referred to as the "Regulations"), which are herein incorporated by reference and made a part of this Agreement.

ii. Nondiscrimination

The Contractor, with regard to the work performed by it after award and prior to completion of the contract work, will not discriminate on the ground of race, color, sex, mental or physical handicap or national origin in the selection and retention of Subcontractors, including procurement of materials and leases of equipment. The Contractor will not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix C of the Regulations.

iii. Solicitations for Subcontracts, Including Procurement of Materials and Equipment

In all solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurement of materials or equipment, each potential Subcontractor or supplier shall be notified by the Contractor of the Contractor's obligations under this Agreement and the Regulations relative to nondiscrimination on the ground of race, color, sex, mental or physical handicap or national origin.

iv. Information and Reports

The Contractor will provide all information and reports required by the Regulations, or orders and instructions issued pursuant thereto and will permit access to its books, records, accounts, other sources of information and its facilities as may be determined by the State or the FHWA to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of the Contractor is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the State, or the FHWA as appropriate and shall set forth what efforts have been made to obtain the information.

v. Sanctions for Noncompliance

In the event of the Contractor's noncompliance with the nondiscrimination provisions of this Agreement, the State shall impose such contract sanctions as it or the FHWA may determine to be appropriate, including, but not limited to: **a.** Withholding of payments to the Contractor under the contract until the Contractor complies, and/or **b.** Cancellation, termination or suspension of the contract, in whole or in part.

Incorporation of Provisions §22

The Contractor will include the provisions of this Exhibit J in every subcontract, including procurement of materials and leases of equipment, unless exempt by the Regulations, orders, or instructions issued pursuant thereto. The Contractor will take such action with respect to any subcontract or procurement as the State or the FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance; provided, however, that, in the event the Contractor becomes involved in, or is threatened with, litigation with a Subcontractor or supplier as a result of such direction, the Contractor may request the State to enter into such litigation to protect the interest of the State and in addition, the Contractor may request the FHWA to enter into such litigation to protect the interests of the United States.

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SAMPLE

The United States Department of Transportation (USDOT) Standard Title VI/Non-Discrimination

Assurances for Local Agencies

DOT Order No. 1050.2A

The [Local Agency] (herein referred to as the "Recipient"), **HEREBY AGREES THAT**, as a condition to receiving any Federal financial assistance from the U.S. Department of Transportation (DOT), through the Colorado Department of Transportation and the Federal Highway Administration (FHWA), Federal Transit Administration (FTA), and Federal Aviation Administration (FAA), is subject to and will comply with the following:

Statutory/Regulatory Authorities

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);
- 49 C.F.R. Part 21 (entitled Non-discrimination In Federally-Assisted Programs Of The Department Of Transportation-Effectuation Of Title VI Of The Civil Rights Act Of 1964);
- 28 C.F.R. section 50.3 (U.S. Department of Justice Guidelines for Enforcement of Title VI of the Civil Rights Act of 1964);

The preceding statutory and regulatory cites hereinafter are referred to as the "Acts" and "Regulations," respectively.

General Assurances

In accordance with the Acts, the Regulations, and other pertinent directives, circulars, policy, memoranda, and/or guidance, the Recipient hereby gives assurance that it will promptly take any measures necessary to ensure that:

"No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity, "for which the Recipient receives Federal financial assistance from DOT, including the FHWA, FTA, or FAA.

The Civil Rights Restoration Act of 1987 clarified the original intent of Congress, with respect to Title VI and other Non-discrimination requirements (The Age Discrimination Act of 1975, and Section 504 of the Rehabilitation Act of 1973), by restoring the broad, institutional-wide scope and coverage of these non- discrimination statutes and requirements to include all programs and activities of the Recipient, so long as any portion of the program is Federally assisted.

Specific Assurances

More specifically, and without limiting the above general Assurance, the Recipient agrees with and gives the following Assurances with respect to its Federally assisted FHWA, FTA, and FAA assisted programs:

1. The Recipient agrees that each "activity," "facility," or "program," as defined in §§ 21.23(b) and 21.23(e) of 49 C.F.R. § 21 will be (with regard to an "activity") facilitated, or will be (with regard to a "facility") operated, or will be (with regard to a "program") conducted in compliance with all requirements imposed by, or pursuant to the Acts and the Regulations.
2. The Recipient will insert the following notification in all solicitations for bids, Requests For Proposals for work, or material subject to the Acts and the Regulations made in connection with all FHWA, FTA and FAA programs and, in adapted form, in all proposals for negotiated agreements regardless of funding source:
3. "The [Local Agency] in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity

4. to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award."
5. The Recipient will insert the clauses of Appendix A and E of this Assurance in every contract or agreement subject to the Acts and the Regulations.
6. The Recipient will insert the clauses of Appendix B of this Assurance, as a covenant running with the land, in any deed from the United States effecting or recording a transfer of real property, structures, use, or improvements thereon or interest therein to a Recipient.
7. That where the Recipient receives Federal financial assistance to construct a facility, or part of a facility, the Assurance will extend to the entire facility and facilities operated in connection therewith.
8. That where the Recipient receives Federal financial assistance in the form, or for the acquisition of real property or an interest in real property, the Assurance will extend to rights to space on, over, or under such property.
9. That the Recipient will include the clauses set forth in Appendix C and Appendix D of this Assurance, as a covenant running with the land, in any future deeds, leases, licenses, permits, or similar instruments entered into by the Recipient with other parties:
 - a. for the subsequent transfer of real property acquired or improved under the applicable activity, project, or program; and
 - b. for the construction or use of, or access to, space on, over, or under real property acquired or improved under the applicable activity, project, or program.
10. That this Assurance obligates the Recipient for the period during which Federal financial assistance is extended to the program, except where the Federal financial assistance is to provide, or is in the form of, personal property, or real property, or interest therein, or structures or improvements thereon, in which case the Assurance obligates the Recipient, or any transferee for the longer of the following periods:
 - a. the period during which the property is used for a purpose for which the Federal financial assistance is extended, or for another purpose involving the provision of similar services or benefits; or
 - b. the period during which the Recipient retains ownership or possession of the property.
11. The Recipient will provide for such methods of administration for the program as are found by the Secretary of Transportation or the official to whom he/she delegates specific authority to give reasonable guarantee that it, other recipients, sub-recipients, sub-grantees, contractors, subcontractors, consultants, transferees, successors in interest, and other participants of Federal financial assistance under such program will comply with all requirements imposed or pursuant to the Acts, the Regulations, and this Assurance.
12. The Recipient agrees that the United States has a right to seek judicial enforcement with regard to any matter arising under the Acts, the Regulations, and this Assurance.

By signing this ASSURANCE, the [Local Agency] also agrees to comply (and require any sub-recipients, sub-grantees, contractors, successors, transferees, and/or assignees to comply) with all applicable provisions governing the FHWA, FTA, and FAA's access to records, accounts, documents, information, facilities, and staff. You also recognize that you must comply with any program or compliance reviews, and/or complaint investigations conducted by CDOT, FHWA, FTA, or FAA. You must keep records, reports, and submit the material for review

upon request to CDOT, FHWA, FTA, or FAA, or its designee in a timely, complete, and accurate way. Additionally, you must comply with all other reporting, data collection, and evaluation requirements, as prescribed by law or detailed in program guidance.

[Local Agency] gives this ASSURANCE in consideration of and for obtaining any Federal grants, loans, contracts, agreements, property, and/or discounts, or other Federal-aid and Federal financial assistance extended after the date hereof to the recipients by the U.S. Department of Transportation under the FHWA, FTA, and FAA. This ASSURANCE is binding on [Local Agency], other recipients, sub-recipients, sub-grantees, contractors, subcontractors and their subcontractors', transferees, successors in interest, and any other participants in the FHWA, FTA, and FAA funded programs. The person(s) signing below is authorized to sign this ASSURANCE on behalf of the Recipient.

(Name of Recipient)

by _____
(Signature of Authorized Official)

DATED _____

APPENDIX A

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, FHWA, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.
4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the [Local Agency], CDOT or FHWA to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the [Local Agency], CDOT or FHWA, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non- discrimination provisions of this contract, the [Local Agency] will impose such contract sanctions as it, CDOT or FHWA may determine to be appropriate, including, but not limited to:
 - a. withholding payments to the contractor under the contract until the contractor complies; and/or
 - b. cancelling, terminating, or suspending a contract, in whole or in part.
6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the [Local Agency], CDOT or FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

APPENDIX B

CLAUSES FOR DEEDS TRANSFERRING UNITED STATES PROPERTY

The following clauses will be included in deeds effecting or recording the transfer of real property, structures, or improvements thereon, or granting interest therein from the United States pursuant to the provisions of Assurance 4:

NOW, THEREFORE, the U.S. Department of Transportation as authorized by law and upon the condition that the [Local Agency] will accept title to the lands and maintain the project constructed thereon in accordance with (*Name of Appropriate Legislative Authority*), the Regulations for the Administration of (*Name of Appropriate Program*), and the policies and procedures prescribed by the FHWA of the U.S. Department of Transportation in accordance and in compliance with all requirements imposed by Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation pertaining to and effectuating the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252; 42 U.S.C. § 2000d to 2000d-4), does hereby remise, release, quitclaim and convey unto the [Local Agency] all the right, title and interest of the U.S. Department of Transportation in and to said lands described in Exhibit A attached hereto and made a part hereof.

(HABENDUM CLAUSE)

TO HAVE AND TO HOLD said lands and interests therein unto [Local Agency] and its successors forever, subject, however, to the covenants, conditions, restrictions and reservations herein contained as follows, which will remain in effect for the period during which the real property or structures are used for a purpose for which Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits and will be binding on the [Local Agency] its successors and assigns.

The [Local Agency], in consideration of the conveyance of said lands and interests in lands, does hereby covenant and agree as a covenant running with the land for itself, its successors and assigns, that (1) no person will on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination with regard to any facility located wholly or in part on, over, or under such lands hereby conveyed [,] [and]* (2) that the [Local Agency] will use the lands and interests in lands and interests in lands so conveyed, in compliance with all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations and Acts may be amended [, and (3) that in the event of breach of any of the above-mentioned non-discrimination conditions, the Department will have a right to enter or re-enter said lands and facilities on said land, and that above described land and facilities will thereon revert to and vest in and become the absolute property of the U.S. Department of Transportation and its assigns as such interest existed prior to this instruction].*

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

APPENDIX C

CLAUSES FOR TRANSFER OF REAL PROPERTY ACQUIRED OR IMPROVED UNDER THE ACTIVITY, FACILITY, OR PROGRAM

The following clauses will be included in deeds, licenses, leases, permits, or similar instruments entered into by the [Local Agency] pursuant to the provisions of Assurance 7(a):

- A. The (grantee, lessee, permittee, etc. as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree [in the case of deeds and leases add "as a covenant running with the land"] that:
 - 1. In the event facilities are constructed, maintained, or otherwise operated on the property described in this (deed, license, lease, permit, etc.) for a purpose for which a U.S. Department of Transportation activity, facility, or program is extended or for another purpose involving the provision of similar services or benefits, the (grantee, licensee, lessee, permittee, etc.) will maintain and operate such facilities and services in compliance with all requirements imposed by the Acts and Regulations (as may be amended) such that no person on the grounds of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities.
- B. With respect to licenses, leases, permits, etc., in the event of breach of any of the above Non-discrimination covenants, [Local Agency] will have the right to terminate the (lease, license, permit, etc.) and to enter, re-enter, and repossess said lands and facilities thereon, and hold the same as if the (lease, license, permit, etc.) had never been made or issued. *
- C. With respect to a deed, in the event of breach of any of the above Non-discrimination covenants, the [Local Agency] will have the right to enter or re-enter the lands and facilities thereon, and the above described lands and facilities will there upon revert to and vest in and become the absolute property of the [Local Agency] and its assigns. *

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

APPENDIX D

CLAUSES FOR CONSTRUCTION/USE/ACCESS TO REAL PROPERTY ACQUIRED UNDER THE ACTIVITY, FACILITY OR PROGRAM

The following clauses will be included in deeds, licenses, permits, or similar instruments/agreements entered into by [Local Agency] pursuant to the provisions of Assurance 7(b):

- A. The (grantee, licensee, permittee, etc., as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds and leases add, "as a covenant running with the land") that (1) no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in the construction of any improvements on, over, or under such land, and the furnishing of services thereon, no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, (3) that the (grantee, licensee, lessee, permittee, etc.) will use the premises in compliance with all other requirements imposed by or pursuant to the Acts and Regulations, as amended, set forth in this Assurance.
- B. With respect to (licenses, leases, permits, etc.), in the event of breach of any of the above Non- discrimination covenants, [Local Agency] will have the right to terminate the (license, permit, etc., as appropriate) and to enter or re-enter and repossess said land and the facilities thereon, and hold the same as if said (license, permit, etc., as appropriate) had never been made or issued. *
- C. With respect to deeds, in the event of breach of any of the above Non-discrimination covenants, [Local Agency] will there upon revert to and vest in and become the absolute property of [Local Agency] of Transportation and its assigns. *

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

APPENDIX E

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq.).

EXHIBIT K
FFATA SUPPLEMENTAL FEDERAL PROVISIONS

State of Colorado
Supplemental Provisions for
Federally Funded Contracts, Grants, and Purchase Orders
Subject to
The Federal Funding Accountability and Transparency Act of 2006 (FFATA), As Amended
Revised as of 3-20-13

The contract, grant, or purchase order to which these Supplemental Provisions are attached has been funded, in whole or in part, with an Award of Federal funds. In the event of a conflict between the provisions of these Supplemental Provisions, the Special Provisions, the contract or any attachments or exhibits incorporated into and made a part of the contract, the provisions of these Supplemental Provisions shall control.

1. Definitions. For the purposes of these Supplemental Provisions, the following terms shall have the meanings ascribed to them below.

1.1. “Award” means an award of Federal financial assistance that a non-Federal Entity receives or administers in the form of:

- 1.1.1.** Grants;
- 1.1.2.** Contracts;
- 1.1.3.** Cooperative agreements, which do not include cooperative research and development agreements (CRDA) pursuant to the Federal Technology Transfer Act of 1986, as amended (15 U.S.C. 3710);
- 1.1.4.** Loans;
- 1.1.5.** Loan Guarantees;
- 1.1.6.** Subsidies;
- 1.1.7.** Insurance;
- 1.1.8.** Food commodities;
- 1.1.9.** Direct appropriations;
- 1.1.10.** Assessed and voluntary contributions; and
- 1.1.11.** Other financial assistance transactions that authorize the expenditure of Federal funds by non-Federal Entities.

Award **does not** include:

- 1.1.12.** Technical assistance, which provides services in lieu of money;
- 1.1.13.** A transfer of title to Federally-owned property provided in lieu of money; even if the award is called a grant;
- 1.1.14.** Any award classified for security purposes; or
- 1.1.15.** Any award funded in whole or in part with Recovery funds, as defined in section 1512 of the American Recovery and Reinvestment Act (ARRA) of 2009 (Public Law 111-5).

1.2. “Contract” means the contract to which these Supplemental Provisions are attached and includes all Award types in §1.1.1 through 1.1.11 above.

1.3. “Contractor” means the party or parties to a Contract funded, in whole or in part, with Federal financial assistance, other than the Prime Recipient, and includes grantees, subgrantees, Subrecipients, and borrowers. For purposes of Transparency Act reporting, Contractor does not include Vendors.

1.4. “Data Universal Numbering System (DUNS) Number” means the nine-digit number established and assigned by Dun and Bradstreet, Inc. to uniquely identify a business entity. Dun and Bradstreet’s website may be found at: <http://fedgov.dnb.com/webform>.

1.5. “Entity” means all of the following as defined at 2 CFR part 25, subpart C;

- 1.5.1.** A governmental organization, which is a State, local government, or Indian Tribe;
- 1.5.2.** A foreign public entity;
- 1.5.3.** A domestic or foreign non-profit organization;

- 1.5.4. A domestic or foreign for-profit organization; and
- 1.5.5. A Federal agency, but only a Subrecipient under an Award or Subaward to a non-Federal entity.
- 1.6. **“Executive”** means an officer, managing partner or any other employee in a management position.
- 1.7. **“Federal Award Identification Number (FAIN)”** means an Award number assigned by a Federal agency to a Prime Recipient.
- 1.8. **“FFATA”** means the Federal Funding Accountability and Transparency Act of 2006 (Public Law 109- 282), as amended by §6202 of Public Law 110-252. FFATA, as amended, also is referred to as the “Transparency Act.”
- 1.9. **“Prime Recipient”** means a Colorado State agency or institution of higher education that receives an Award.
- 1.10. **“Subaward”** means a legal instrument pursuant to which a Prime Recipient of Award funds awards all or a portion of such funds to a Subrecipient, in exchange for the Subrecipient’s support in the performance of all or any portion of the substantive project or program for which the Award was granted.
- 1.11. **“Subrecipient”** means a non-Federal Entity (or a Federal agency under an Award or Subaward to a non-Federal Entity) receiving Federal funds through a Prime Recipient to support the performance of the Federal project or program for which the Federal funds were awarded. A Subrecipient is subject to the terms and conditions of the Federal Award to the Prime Recipient, including program compliance requirements. The term “Subrecipient” includes and may be referred to as Subgrantee.
- 1.12. **“Subrecipient Parent DUNS Number”** means the subrecipient parent organization’s 9-digit Data Universal Numbering System (DUNS) number that appears in the subrecipient’s System for Award Management (SAM) profile, if applicable.
- 1.13. **“Supplemental Provisions”** means these Supplemental Provisions for Federally Funded Contracts, Grants, and Purchase Orders subject to the Federal Funding Accountability and Transparency Act of 2006, As Amended, as may be revised pursuant to ongoing guidance from the relevant Federal or State of Colorado agency or institution of higher education.
- 1.14. **“System for Award Management (SAM)”** means the Federal repository into which an Entity must enter the information required under the Transparency Act, which may be found at <http://www.sam.gov>.
- 1.15. **“Total Compensation”** means the cash and noncash dollar value earned by an Executive during the Prime Recipient’s or Subrecipient’s preceding fiscal year and includes the following:
- 1.15.1. Salary and bonus;
 - 1.15.2. Awards of stock, stock options, and stock appreciation rights, using the dollar amount recognized for financial statement reporting purposes with respect to the fiscal year in accordance with the Statement of Financial Accounting Standards No. 123 (Revised 2005) (FAS 123R), Shared Based Payments;
 - 1.15.3. Earnings for services under non-equity incentive plans, not including group life, health, hospitalization or medical reimbursement plans that do not discriminate in favor of Executives and are available generally to all salaried employees;
 - 1.15.4. Change in present value of defined benefit and actuarial pension plans;
 - 1.15.5. Above-market earnings on deferred compensation which is not tax-qualified;
 - 1.15.6. Other compensation, if the aggregate value of all such other compensation (e.g. severance, termination payments, value of life insurance paid on behalf of the employee, perquisites or property) for the Executive exceeds \$10,000.
- 1.16. **“Transparency Act”** means the Federal Funding Accountability and Transparency Act of 2006 (Public Law 109-282), as amended by §6202 of Public Law 110-252. The Transparency Act also is referred to as FFATA.
- 1.17 **“Vendor”** means a dealer, distributor, merchant or other seller providing property or services required for a project or program funded by an Award. A Vendor is not a Prime Recipient or a Subrecipient and is not subject to the terms and conditions of the Federal award. Program compliance requirements do not pass through to a Vendor.

2. **Compliance.** Contractor shall comply with all applicable provisions of the Transparency Act and the regulations issued pursuant thereto, including but not limited to these Supplemental Provisions. Any revisions to such provisions or regulations shall automatically become a part of these Supplemental Provisions, without the necessity of either party executing any further instrument. The State of Colorado may provide written notification to Contractor of such revisions, but such notice shall not be a condition precedent to the effectiveness of such revisions.
3. **System for Award Management (SAM) and Data Universal Numbering System (DUNS) Requirements.**
 - 3.1. **SAM.** Contractor shall maintain the currency of its information in SAM until the Contractor submits the final financial report required under the Award or receives final payment, whichever is later. Contractor shall review and update SAM information at least annually after the initial registration, and more frequently if required by changes in its information.
 - 3.2. **DUNS.** Contractor shall provide its DUNS number to its Prime Recipient, and shall update Contractor's information in Dun & Bradstreet, Inc. at least annually after the initial registration, and more frequently if required by changes in Contractor's information.
4. **Total Compensation.** Contractor shall include Total Compensation in SAM for each of its five most highly compensated Executives for the preceding fiscal year if:
 - 4.1. The total Federal funding authorized to date under the Award is \$25,000 or more; and
 - 4.2. In the preceding fiscal year, Contractor received:
 - 4.2.1. 80% or more of its annual gross revenues from Federal procurement contracts and subcontracts and/or Federal financial assistance Awards or Subawards subject to the Transparency Act; and
 - 4.2.2. \$25,000,000 or more in annual gross revenues from Federal procurement contracts and subcontracts and/or Federal financial assistance Awards or Subawards subject to the Transparency Act; and
 - 4.3. The public does not have access to information about the compensation of such Executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d) or § 6104 of the Internal Revenue Code of 1986.
5. **Reporting.** Contractor shall report data elements to SAM and to the Prime Recipient as required in §7 below if Contractor is a Subrecipient for the Award pursuant to the Transparency Act. No direct payment shall be made to Contractor for providing any reports required under these Supplemental Provisions and the cost of producing such reports shall be included in the Contract price. The reporting requirements in §7 below are based on guidance from the US Office of Management and Budget (OMB), and as such are subject to change at any time by OMB. Any such changes shall be automatically incorporated into this Contract and shall become part of Contractor's obligations under this Contract, as provided in §2 above. The Colorado Office of the State Controller will provide summaries of revised OMB reporting requirements at <http://www.colorado.gov/dpa/dfp/sco/FFATA.htm>.
6. **Effective Date and Dollar Threshold for Reporting.** The effective date of these Supplemental Provisions apply to new Awards as of October 1, 2010. Reporting requirements in §7 below apply to new Awards as of October 1, 2010, if the initial award is \$25,000 or more. If the initial Award is below \$25,000 but subsequent Award modifications result in a total Award of \$25,000 or more, the Award is subject to the reporting requirements as of the date the Award exceeds \$25,000. If the initial Award is \$25,000 or more, but funding is subsequently de-obligated such that the total award amount falls below \$25,000, the Award shall continue to be subject to the reporting requirements.
7. **Subrecipient Reporting Requirements.** If Contractor is a Subrecipient, Contractor shall report as set forth below.

7.1 To SAM. A Subrecipient shall register in SAM and report the following data elements in SAM *for each* Federal Award Identification Number no later than the end of the month following the month in which the Subaward was made:

- 7.1.1** Subrecipient DUNS Number;
- 7.1.2** Subrecipient DUNS Number + 4 if more than one electronic funds transfer (EFT) account;
- 7.1.3** Subrecipient Parent DUNS Number;
- 7.1.4** Subrecipient's address, including: Street Address, City, State, Country, Zip + 4, and Congressional District;
- 7.1.5** Subrecipient's top 5 most highly compensated Executives if the criteria in §4 above are met; and
- 7.1.6** Subrecipient's Total Compensation of top 5 most highly compensated Executives if criteria in §4 above met.

7.2 To Prime Recipient. A Subrecipient shall report to its Prime Recipient, upon the effective date of the Contract, the following data elements:

- 7.2.1** Subrecipient's DUNS Number as registered in **SAM**.
- 7.2.2** Primary Place of Performance Information, including: Street Address, City, State, Country, Zip code + 4, and Congressional District.

8. Exemptions.

- 8.1.** These Supplemental Provisions do not apply to an individual who receives an Award as a natural person, unrelated to any business or non-profit organization he or she may own or operate in his or her name.
- 8.2** A Contractor with gross income from all sources of less than \$300,000 in the previous tax year is exempt from the requirements to report Subawards and the Total Compensation of its most highly compensated Executives.
- 8.3** Effective October 1, 2010, "Award" currently means a grant, cooperative agreement, or other arrangement as defined in Section 1.1 of these Special Provisions. On future dates "Award" may include other items to be specified by OMB in policy memoranda available at the OMB Web site; Award also will include other types of Awards subject to the Transparency Act.
- 8.4** There are no Transparency Act reporting requirements for Vendors.

Event of Default. Failure to comply with these Supplemental Provisions shall constitute an event of default under the Contract and the State of Colorado may terminate the Contract upon 30 days prior written notice if the default remains uncured five calendar days following the termination of the 30 day notice period. This remedy will be in addition to any other remedy available to the State of Colorado under the Contract, at law or in equity.

EXHIBIT L

SAMPLE SUBRECIPIENT MONITORING AND RISK ASSESSMENT

	CDOT SUBRECIPIENT RISK ASSESSMENT	Date:		
Name of Entity (Subrecipient):				
Name of Project / Program:				
Estimated Award Period:				
Entity Executive Director or VP:				
Entity Chief Financial Officer:				
Entity Representative for this Self Assessment:				
Instructions: (See "Instructions" tab for more information) 1. Check only one box for each question. All questions are required to be answered. 2. Utilize the "Comment" section below the last question for additional responses. 3. When complete, check the box at the bottom of the form to authorize.				
		Yes	No	N/A
EXPERIENCE ASSESSMENT				
		Yes	No	N/A
1 Is your entity new to operating or managing federal funds (has not done so within the past three years)?		☐	☐	
2 Is this funding program new for your entity (managed for less than three years)? <i>Examples of funding programs include CMAQ, TAP, STP-M, etc.</i>		☐	☐	
3 Does your staff assigned to the program have at least three full years of experience with this federal program?		☐	☐	
MONITORING/AUDIT ASSESSMENT				
		Yes	No	N/A
4 Has your entity had an on-site project or grant review from an external entity (e.g., CDOT, FHWA) within the last three years?		☐	☐	☐
5 a) Were there non-compliance issues in this prior review?		☐	☐	☐
b) What were the number and extent of issues in prior review?		☐ 1 to 2	☐ >3	☐
OPERATION ASSESSMENT				
		Yes	No	N/A
6 Does your entity have a time and effort reporting system in place to account for 100% of all employees' time, that can provide a breakdown of the actual time spent on each funded project? <i>If No, in the comment section please explain how you intend to document 100% of hours worked by employees and breakdown of time spent on each funding project.</i>		☐	☐	
FINANCIAL ASSESSMENT				
		Yes	No	N/A
7 a) Does your entity have an indirect cost rate that is approved and current?		☐	☐	
b) If Yes, who approved the rate, and what date was it approved?				
8 Is this grant/award 10% or more of your entity's overall funding?		☐ >10%	☐ <10%	
9 Has your entity returned lapsed* funds? <i>*Funds "lapse" when they are no longer available for obligation.</i>		☐	☐	☐
10 Has your entity had difficulty meeting local match requirements in the last three years?		☐	☐	☐
11 What is the total federal funding your entity has been awarded for the last federal fiscal year, and what is your entity's fiscal year end?				

INTERNAL CONTROLS ASSESSMENT		Yes	No	N/A
12	Has your entity had any significant changes in key personnel or accounting system(s) in the last year? (e.g., Controller, Exec Director, Program Mgr, Accounting Mgr, etc.) If Yes, in the comment section, please identify the accounting system(s), and / or list personnel positions and identify any that are vacant.	☐	☐	☐
13	Does your entity have financial procedures and controls in place to accommodate a federal-aid project?	☐	☐	
14	Does your accounting system identify the receipts and expenditures of program funds separately for each award?	☐	☐	
15	Will your accounting system provide for the recording of expenditures for each award by the budget cost categories shown in the approved budget?	☐	☐	
16	Does your agency have a review process for all expenditures that will ensure that all costs are reasonable, allowable and allocated correctly to each funding source? If Yes, in the comment section, please explain your current process for reviewing costs.	☐	☐	☐
17	How many total FTE perform accounting functions within your organization?	☐ ≥ 6	☐ 2 to 5	☐ < 2
IMPACT ASSESSMENT		Yes	No	N/A
18	For this upcoming federal award or in the immediate future, does your entity have any potential conflicts of interest* in accordance with applicable Federal awarding agency policy? If Yes, please disclose these conflicts in writing, along with supporting information, and submit with this form. (*Any practices, activities or relationships that reasonably appear to be in conflict with the full performance of the Subrecipient's obligations to the State.)	☐	☐	
19	For this award, has your entity disclosed to CDOT, in writing, violations of Federal criminal law involving fraud, bribery, or gratuity violations potentially affecting the award? Response options: YES = Check if have one or more violation(s) and have either disclosed previously to CDOT or as part of this form. In the comment section, list all violations with names of supporting documentation and submit with this form. NO = Check if have one or more violation(s) and have not disclosed previously or will not disclose as part of this form. Explain in the comment section. N/A = Check if have no violations.	☐	☐	☐
PROGRAM MANAGEMENT ASSESSMENT		Yes	No	N/A
20	Does your entity have a written process/procedure or certification statement approved by your governing board ensuring critical project personnel are capable of effectively managing Federal-aid projects? If Yes, please submit with this form.	☐	☐	☐
21	Does your entity have written procurement policies or certification statement for consultant selection approved by your governing board in compliance with 23 CFR 172*? If Yes, please submit with this form. (*The Brooks Act requires agencies to promote open competition by advertising, ranking, selecting, and negotiating contracts based on demonstrated competence and qualifications, at a fair and reasonable price.)	☐	☐	☐
22	a) Is your staff familiar with the relevant CDOT manuals and federal program requirements?	☐	☐	☐
	b) Does your entity have a written policy or a certification statement approved by your governing board assuring federal-aid projects will receive adequate inspections? If Yes, please submit with this form.	☐	☐	☐
	c) Does your entity have a written process or a certification statement approved by your governing board assuring a contractor's work will be completed in conformance with approved plans and specifications? If Yes, please submit with this form.	☐	☐	☐

d) Does your entity have a written policy or certification statement approved by your governing board assuring that materials installed on the projects are sampled and tested per approved processes. <i>If Yes, please submit with this form.</i>	☐	☐	☐
e) Does your entity have a written policy or certification statement approved by your governing board assuring that only US manufactured steel will be incorporated into the project (<i>Buy America requirements</i>)? <i>If Yes, please submit with this form.</i>	☐	☐	☐
Comments - As needed, include the question number and provide comments related to the above questions. Insert additional rows as needed.			
☐ By checking this box, the Executive Director, VP or Chief Financial Officer of this entity certifies that all information provided on this form is true and correct.  Tool Version: v2.0 (081816)			

**EXHIBIT M - OMB Uniform Guidance for Federal
Awards Subject to
The Office of Management and Budget Uniform Administrative Requirements, Cost Principles, and Audit
Requirements for Federal Awards (“Uniform Guidance”),
Federal Register, Vol. 78, No. 248, 78590**

The agreement to which these Uniform Guidance Supplemental Provisions are attached has been funded, in whole or in part, with an award of Federal funds. In the event of a conflict between the provisions of these Supplemental Provisions, the Special Provisions, the agreement or any attachments or exhibits incorporated into and made a part of the agreement, the provisions of these Uniform Guidance Supplemental Provisions shall control. In the event of a conflict between the provisions of these Supplemental Provisions and the FFATA Supplemental Provisions, the FFATA Supplemental Provisions shall control.

- 9. Definitions.** For the purposes of these Supplemental Provisions, the following terms shall have the meanings ascribed to them below.
- 9.1. “Award”** means an award by a Recipient to a Subrecipient funded in whole or in part by a Federal Award. The terms and conditions of the Federal Award flow down to the Award unless the terms and conditions of the Federal Award specifically indicate otherwise. 2 CFR §200.38
 - 9.2. “Federal Award”** means an award of Federal financial assistance or a cost-reimbursement contract under the Federal Acquisition Requirements by a Federal Awarding Agency to a Recipient. “Federal Award” also means an agreement setting forth the terms and conditions of the Federal Award. The term does not include payments to a contractor or payments to an individual that is a beneficiary of a Federal program.
 - 9.3. “Federal Awarding Agency”** means a Federal agency providing a Federal Award to a Recipient. 2CFR §200.37
 - 9.4. “FFATA”** means the Federal Funding Accountability and Transparency Act of 2006 (Public Law 109-282), as amended by §6202 of Public Law 110-252.
 - 9.5. “Grant” or “Grant Agreement”** means an agreement setting forth the terms and conditions of an Award. The term does not include an agreement that provides only direct Federal cash assistance to an individual, a subsidy, a loan, a loan guarantee, insurance, or acquires property or services for the direct benefit of use of the Federal Awarding Agency or Recipient. 2 CFR §200.51.
 - 9.6. “OMB”** means the Executive Office of the President, Office of Management and Budget.
 - 9.7. “Recipient”** means a Colorado State department, agency or institution of higher education that receives a Federal Award from a Federal Awarding Agency to carry out an activity under a Federal program. The term does not include Subrecipients. 2 CFR §200.86
 - 9.8. “State”** means the State of Colorado, acting by and through its departments, agencies and institutions of higher education.
 - 9.9. “Subrecipient”** means a non-Federal entity receiving an Award from a Recipient to carry out part of a Federal program. The term does not include an individual who is a beneficiary of such program.
 - 9.10. “Uniform Guidance”** means the Office of Management and Budget Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, which supersedes requirements from OMB Circulars A-21, A-87, A-110, and A-122, OMB Circulars A-89, A-102, and A- 133, and the guidance in Circular A-50 on Single Audit Act follow-up. The terms and conditions of the Uniform Guidance flow down to Awards to Subrecipients unless the Uniform Guidance or the terms and conditions of the Federal Award specifically indicate otherwise.
 - 9.11. “Uniform Guidance Supplemental Provisions”** means these Supplemental Provisions for Federal Awards subject to the OMB Uniform Guidance, as may be revised pursuant to ongoing guidance from relevant Federal agencies or the Colorado State Controller.
- 10. Compliance.** Subrecipient shall comply with all applicable provisions of the Uniform Guidance, including but not limited to these Uniform Guidance Supplemental Provisions. Any revisions to such provisions

automatically shall become a part of these Supplemental Provisions, without the necessity of either party executing any further instrument. The State of Colorado may provide written notification to Subrecipient of such revisions, but such notice shall not be a condition precedent to the effectiveness of such revisions.

11. Procurement Standards.

- 3.1 Procurement Procedures.** Subrecipient shall use its own documented procurement procedures which reflect applicable State, local, and Tribal laws and regulations, provided that the procurements conform to applicable Federal law and the standards identified in the Uniform Guidance, including without limitation, §§200.318 through 200.326 thereof.
- 3.2 Procurement of Recovered Materials.** If Subrecipient is a State Agency or an agency of a political subdivision of a state, its contractors must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.
- 4. Access to Records.** Subrecipient shall permit Recipient and auditors to have access to Subrecipient's records and financial statements as necessary for Recipient to meet the requirements of §200.331 (Requirements for pass-through entities), §§200.300 (Statutory and national policy requirements) through 200.309 (Period of performance), and Subpart F-Audit Requirements of the Uniform Guidance. 2 CFR §200.331(a)(5).
- 5. Single Audit Requirements.** If Subrecipient expends \$750,000 or more in Federal Awards during Subrecipient's fiscal year, Subrecipient shall procure or arrange for a single or program-specific audit conducted for that year in accordance with the provisions of Subpart F-Audit Requirements of the Uniform Guidance, issued pursuant to the Single Audit Act Amendments of 1996, (31 U.S.C. 7501-7507). 2 CFR §200.501.
 - 5.1 Election.** Subrecipient shall have a single audit conducted in accordance with Uniform Guidance §200.514 (Scope of audit), except when it elects to have a program-specific audit conducted in accordance with §200.507 (Program-specific audits). Subrecipient may elect to have a program-specific audit if Subrecipient expends Federal Awards under only one Federal program (excluding research and development) and the Federal program's statutes, regulations, or the terms and conditions of the Federal award do not require a financial statement audit of Recipient. A program-specific audit may not be elected for research and development unless all of the Federal Awards expended were received from Recipient and Recipient approves in advance a program-specific audit.
 - 5.2 Exemption.** If Subrecipient expends less than \$750,000 in Federal Awards during its fiscal year, Subrecipient shall be exempt from Federal audit requirements for that year, except as noted in 2 CFR §200.503 (Relation to other audit requirements), but records shall be available for review or audit by appropriate officials of the Federal agency, the State, and the Government Accountability Office.
 - 5.3 Subrecipient Compliance Responsibility.** Subrecipient shall procure or otherwise arrange for the audit required by Part F of the Uniform Guidance and ensure it is properly performed and submitted when due in accordance with the Uniform Guidance. Subrecipient shall prepare appropriate financial statements, including the schedule of expenditures of Federal awards in accordance with Uniform Guidance §200.510 (Financial statements) and provide the auditor with access to personnel, accounts, books, records, supporting documentation, and other information as needed for the auditor to perform the audit required by Uniform Guidance Part F-Audit Requirements.
- 6. Contract Provisions for Subrecipient Contracts.** Subrecipient shall comply with and shall include all of the following applicable provisions in all subcontracts entered into by it pursuant to this Grant Agreement.

- 6.1 Equal Employment Opportunity.** Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of “federally assisted construction contract” in 41 CFR Part 60-1.3 shall include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, “Equal Employment Opportunity” (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, “Amending Executive Order 11246 Relating to Equal Employment Opportunity,” and implementing regulations at 41 CFR part 60, “Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor.”

“During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's non-compliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: *Provided, however*, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the contractor may request the United States to enter into such litigation to protect the interests of the United States.”

- 4.2 Davis-Bacon Act.** Davis-Bacon Act, as amended (40 U.S.C. 3141-3148). When required by Federal program legislation, all prime construction contracts in excess of \$2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-

3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or Subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled.

The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.

- 4.3 Rights to Inventions Made Under a Contract or Agreement.** If the Federal Award meets the definition of "funding agreement" under 37 CFR §401.2 (a) and Subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," Subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.
- 4.4 Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended.** Contracts and subgrants of amounts in excess of \$150,000 must contain a provision that requires the non-Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).
- 4.5 Debarment and Suspension (Executive Orders 12549 and 12689).** A contract award (see 2 CFR 180.220) must not be made to parties listed on the government wide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.
- 4.6 Byrd Anti-Lobbying Amendment (31 U.S.C. 1352).** Contractors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.
- 7. Certifications.** Unless prohibited by Federal statutes or regulations, Recipient may require Subrecipient to submit certifications and representations required by Federal statutes or regulations on an annual basis. 2 CFR §200.208. Submission may be required more frequently if Subrecipient fails to meet a requirement of the Federal award. Subrecipient shall certify in writing to the State at the end of the Award that the project or activity was completed or the level of effort was expended. 2 CFR §200.201(3). If the required level of activity or effort was not carried out, the amount of the Award must be adjusted.
- 1. 8.Event of Default.** Failure to comply with these Uniform Guidance Supplemental Provisions shall constitute an event of default under the Grant Agreement (2 CFR §200.339) and the State may terminate the Grant upon 30

days prior written notice if the default remains uncured five calendar days following the termination of the 30 day notice period. This remedy will be in addition to any other remedy available to the State of Colorado under the Grant, at law or in equity.

9. **Effective Date.** The effective date of the Uniform Guidance is December 26, 2013. 2 CFR §200.110. The procurement standards set forth in Uniform Guidance §§200.317-200.326 are applicable to new Awards made by Recipient as of December 26, 2015. The standards set forth in Uniform Guidance Subpart F-Audit Requirements are applicable to audits of fiscal years beginning on or after December 26, 2014.

10. **Performance Measurement**

The Uniform Guidance requires completion of OMB-approved standard information collection forms (the PPR). The form focuses on outcomes, as related to the Federal Award Performance Goals that awarding Federal agencies are required to detail in the Awards.

Section 200.301 provides guidance to Federal agencies to measure performance in a way that will help the Federal awarding agency and other non-Federal entities to improve program outcomes.

The Federal awarding agency is required to provide recipients with clear performance goals, indicators, and milestones (200.210). Also, must require the recipient to relate financial data to performance accomplishments of the Federal award.



REPORT TO CITY COUNCIL PUBLIC HEARING

AGENDA ITEM
10.A.

TO: THE HONORABLE CITY COUNCIL

DATE: March 1, 2021

SUBJECT: CB21-006 An Ordinance Amending Article V, International Residential Code, Section 18-181, Climatic and Geographical Design Criteria of Chapter 18, Buildings and Building Regulations, of the Arvada City Code (Ordinance No. 4753)

Report in Brief

The Floodplain Insurance Rate Maps (FIRM) were updated via an emergency Ordinance on January 11, 2021. These maps are also referenced in the City's adopted Building Code and this proposed amendment simply resolves any conflict between City Ordinances by also updating the FIRM dates in Chapter 18 of the Arvada City Code.

The Arvada team recommends that the City Council approve CB21-006, An Ordinance Amending Article V, International Residential Code, Section 18-181, Climatic and Geographical Design Criteria of Chapter 18, Buildings and Building Regulations, of the Arvada City Code.

Financial Impact

There are no financial impacts as a result of this Ordinance.

Background

Arvada's adopted Flood Insurance Rate Maps (FIRM) are referenced in the City's adopted Building Code and this proposed amendment simply provides continuity between City Ordinances. The Floodplain and FIRM map updates approved on January 11, 2021 were needed to ensure continued availability of flood insurance to certain properties within the City.

Discussion

This minor change will update Arvada's adopted Flood Insurance Rate Maps (FIRM) referenced in the City's adopted Building Code and provides continuity between City Ordinances. The Floodplain and FIRM map updates approved on January 11, 2021 were needed to ensure continued availability of flood insurance to certain properties within the City.

Public Contact

Posting of the City Council Agenda

Commission Recommendation

N/A

Strategic Alignment

The recommended action aligns with the Infrastructure Priority Area within the City Council Strategic Plan. Specifically, updating Official Floodplain Map is consistent with the following Principle:

Applies cost-effective and timely engineering design, geographic information, effective construction practices, and established standards and specifications to align public infrastructure priorities with community growth and redevelopment needs.

Alternative Courses of Action

N/A

Recommendation for Action

The Arvada team recommends that the City Council approve CB21-006, An Ordinance Amending Article V, International Residential Code, Section 18-181, Climatic and Geographical Design Criteria of Chapter 18, Buildings and Building Regulations, of the Arvada City Code.

Suggested Motion:

I move that CB21-006, An Ordinance Amending Article V, International Residential Code, Section 18-181, Climatic and Geographical Design Criteria of Chapter 18, Buildings and Building Regulations, of the Arvada City Code, be (approved on final reading, numbered 4753 and ordered published by title only) (rejected).

Prepared by:

Brita Van Horne, Deputy Director of Community & Economic Development

Reviewed by:

Approved by:

Josie Suk, Development Systems and Administrative Manager	2/2/2021
Brita Van Horne, Deputy Director of Community & Economic Development	2/2/2021
Ryan Stachelski, Director of Community and Economic Development	2/4/2021
Gail Walker, Legal Specialist-Contracts	2/4/2021
Emily Grogg, Senior Assistant City Attorney	2/4/2021
Rachel Morris, City Attorney	2/16/2021
Lorie Gillis, Deputy City Manager	2/18/2021
Mark Deven, City Manager	2/18/2021

Enclosure, exhibits & attachments required to support the report

COUNCIL BILL NO. CB21-006
ORDINANCE NO. 4753

AN ORDINANCE AMENDING ARTICLE V, INTERNATIONAL RESIDENTIAL CODE,
SECTION 18-181, CLIMATIC AND GEOGRAPHICAL DESIGN CRITERIA OF CHAPTER 18,
BUILDINGS AND BUILDING REGULATIONS, OF THE ARVADA CITY CODE

WHEREAS, the Federal Emergency Management Agency (FEMA) has approved new Flood Insurance Studies (FIS) and associated Flood Insurance Rate Maps (FIRM), dated January 15, 2021 for Jefferson County and September 28, 2018 for Adams County; and

WHEREAS, the City of Arvada adopted the new FIS and associated FIRM on January 11, 2021 through Ordinance No. 4748, An Emergency Ordinance Adopting the Floodplain Map Dated November 20, 2020, as the Official Floodplain Map of the City of Arvada, Superseding That Dated November 15, 2019, and Further Adopting the Flood Insurance Study (“FIS”) and the Flood Insurance Rate Maps (“FIRM”) Prepared By the Federal Emergency Management Agency (“FEMA”); and

WHEREAS, such adoption makes it necessary and desirable to modify and update the City of Arvada’s existing Building Code pertaining to the FIRM.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO:

Section 1. Section 18-181, I.R.C. Section R301.2, Climatic and geographical design criteria, of Article V, International Residential Code, is hereby amended to read as follows:

Table R301.2 (1) of Section R301.2. Climatic and geographical design criteria, is hereby amended to read as follows:

Table R301.2 (1)
CLIMATIC AND GEOGRAPHICAL DESIGN CRITERIA

Ground and Roof Snow Load ^b	Wind Design		Seismic Design Category ^f	Subject to Damage From			Winter Design Temp ^e	Ice Barrier Underlay-ment Reuired ^h	Flood Hazards ^g	Air Freezing Index ⁱ	Mean Annual Temp ^j	IECC Zone
	Speed (mph) ^d	Topo-graphic Effects ^k		Weathering ^a	Frost-li ne Depth ^b	Termite ^c						
30 psf	136 V ^{ult} E. of Hwy 93 150 V ^{ult} W. of Hwy 93 Exp.C	Yes	“B”	Severe	36”	Slight	1° F	No	NFIP: Nov. 20, 1972 FIRM: January 15, 2021 for Jefferson County and September 28, 2018 for Adams County, or as	500-1000	50.5	5b

									amended and most recently adopted by the city			
--	--	--	--	--	--	--	--	--	--	--	--	--

Manual J Design Criteria ^a							
Elevation	Latitude	Winter Heating 99% Dry Bulb	Summer Cooling 1% Dry Bulb	Altitude Correction Factor	Indoor Design Temp.	Design Temp. Cooling	Heating Temp. Difference
5453' E. of Hwy. 93; Varies W. of Hwy. 93	40 ° North	1 °	91 °	.832 E. of Hwy. 93; Varies W. of Hwy. 93	70 °	75 °	69 °

Cooling Temperature Difference	Wind Velocity Heating	Wind Velocity Cooling	Coincident Wet Bulb	Daily Range	Winter Humidity	Summer Humidity	--
16 °	15 mph	7.5 mph	60	High (H)	30%	50%	--

Section 2. Severability. If any section, paragraph, sentence, clause, or phrase of this ordinance is held to be unconstitutional or invalid for any reason, such decision shall not affect the validity or constitutionality of the remaining portions of this ordinance. The City Council hereby declares that it would have adopted this ordinance and each part or parts thereof irrespective of the fact that any part or parts to be declared unconstitutional or invalid.

Section 3. This ordinance shall take effect five days after publication following final passage.

INTRODUCED, READ, AND ORDERED PUBLISHED this 1st day of February, 2021.

PASSED, ADOPTED, AND APPROVED this 1st day of March, 2021.

Marc Williams, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:

Rachel A. Morris, City Attorney

By: _____

Publication Dates: February 4, 2021
March 4, 2021

REDLINE/STRIKEOVER VERSION

FOR INFORMATION ONLY — NOT PART OF THE ORDINANCE

Underlined indicates new material
~~Strikeover~~ indicates deleted material

Table R301.2 (1) of Section R301.2. Climatic and geographical design criteria, is hereby amended ~~in its entirety~~ to read as follows:

Table R301.2 (1)
 CLIMATIC AND GEOGRAPHICAL DESIGN CRITERIA

Ground and Roof Snow Load ^b	Wind Design		Seismic Design Category ^f	Subject to Damage From			Winter Design Temp ^e	Ice Barrier Underlay-ment Reuired ^h	Flood Hazards ^g	Air Freezing Index ⁱ	Mean Annual Temp ^j	IECC Zone
	Speed (mph) ^d	Topo-graphic Effects ^k		Weathering ^a	Frost-li ne Depth ^b	Termite ^c						
30 psf ^f	136 V ^{ult} E. of Hwy 93 150 V ^{ult} W. of Hwy 93 Exp.C	Yes	"B"	Severe	36"	Slight	1° F	No	NFIP: Nov. 20, 1972 FIRM: July 13, 2016 <u>January 15, 2021 for Jefferson County and September 28, 2018 for Adams County, or as amended and most recently adopted by the city</u>	500-1000	50.5	5b

Manual J Design Criteria ^a							
Elevation	Latitude	Winter Heating 99% Dry Bulb	Summer Cooling 1% Dry Bulb	Altitude Correction Factor	Indoor Design Temp.	Design Temp. Cooling	Heating Temp. Difference
5453' E. of Hwy. 93; Varies W. of Hwy. 93	40 ° North	1°	91°	.832 E. of Hwy. 93; Varies W. of Hwy. 93	70 °	75 °	69 °

Cooling Temperature Difference	Wind Velocity Heating	Wind Velocity Cooling	Coincident Wet Bulb	Daily Range	Winter Humidity	Summer Humidity	--
16 °	15 mph	7.5 mph	60	High (H)	30%	50%	--



REPORT TO CITY COUNCIL PUBLIC HEARING

AGENDA ITEM
10.B.

TO: THE HONORABLE CITY COUNCIL

DATE: March 1, 2021

SUBJECT: Conditional Use Application for Clear Creek Commons, Approximately Located at the Southeast Corner of West 52nd Avenue and Marshall Street

Report in Brief

The owner of the property at the southeast corner of W. 52nd Avenue and Marshall Street, Brew Lab LLC, is requesting Conditional Use approval to allow for the development of an apartment community within a MX-S (Mixed Use-Suburban) zoning district. The site currently contains a single family detached structure, greenhouses, and numerous other accessory buildings.

The new community would contain 275 units in one five-story building on the 4.36 acre site. The majority of the 275 units will be studio and one-bedroom units. A parking podium will comprise most of the ground floor with the exception of the lobby and eight units on the north side of the property, adjacent to W. 52nd Avenue. Above the parking deck, on the second floor, there are two large outdoor amenity areas.

The five story height is achievable under the Land Development Code (LDC) as the applicant plans to pursue affordable housing tax credits.

The Planning Commission voted 7-0 to recommend approval of the Conditional Use Application with the condition that the project be developed using Low Income Housing Tax Credits (LIHTC). The condition was based on Conditional Use approval criteria 4 identified in the LDC.

Please note that a published notice was posted in the newspaper 7 days prior to the meeting, and a public hearing sign was posted 15 days prior to the meeting as required by the code. There was an issue with the written notice to adjacent property owners, required to be sent 15 days prior to the meeting, which, unfortunately, was not sent in accordance with the timeline. The applicant and the City team will discuss with Council when this agenda item is called. The applicant and City team believe that this matter should be addressed by continuing the public hearing to March 15.

The Arvada team recommends that the City Council continue the public hearing on the Conditional Use Application for Clear Creek Commons, approximately located at the southeast corner of West 52nd Avenue and Marshall Street and set for a public hearing on March 15, 2021 at 6:15 PM.

Financial Impact

There is no direct financial impact associated with the proposed action.

Background

The owner of the property at the southeast corner of W. 52nd Avenue and Marshall Street, Brew Lab LLC, is requesting Conditional Use approval to allow for the development of an apartment community within a MX-S (Mixed Use-Suburban) zoning district. The site currently contains a single family detached structure, greenhouses, and numerous other accessory buildings.

The subject property consists of two parcels located at the southeast corner of W. 52nd Avenue and Marshall Street, also known as 5190 Marshall Street.

The property was annexed into the City of Arvada in 2016 as the Spano Corner Annexation. With annexation, the property was zoned CC-A (Clear Creek Zoning District – Industrial and Commercial Sub-District). The current MX-S zoning was adopted in May of 2020 as part of the remapping associated with the adoption of the LDC. According to Jefferson County Assessor records, most of the buildings on site were built between 1957 and 1960.

Discussion

The new community would contain 275 units in one five-story building on the 4.36 acre site. The majority of the 275 units will be studio and one-bedroom units. A parking podium will comprise most of the ground floor with the exception of the lobby and eight units on the north side of the property, adjacent to W. 52nd Avenue. Above the parking deck, on the second floor, there are two large outdoor amenity areas. As described in more detail in the staff report, the five story height is achievable under the Land Development Code (LDC) as the applicant plans to pursue affordable housing tax credits for the project.

In consideration of the proposed Conditional Use Application, the City Council should note that the Planning Commission made their recommendation based on their findings regarding the approval criteria shown on the tables below that are also found on pages 8-9 of the Planning Commission staff report. The City Council must consider this approval criteria and the analysis of the Community and Economic Development team as summarized below.

8-3-5-1 Conditional Use Permit Approval Criteria (5-18-20)	Finding	Rationale
1. The application complies with the applicable standards of this LDC, other adopted City ordinances, resolutions and regulations including but not limited to any use-specific standards for the proposed conditional use in Division 3-1-3, any approved Master Development Plan that includes the property, and any conditions specifically applied to development of the property by the Planning Commission or City Council in a prior decision affecting the property;	Complies	The proposed use complies with all of the requirements of the LDC. No Code modifications are proposed or required.
2. The application is consistent with the Arvada Comprehensive Plan;	Complies	The proposed use is consistent with numerous Comprehensive Plan goals.
3. The use is consistent with the purpose and intent of the zoning district in which it is located;	Complies	The proposed use is consistent with the purpose of the MX-S zone district, which allows for a variety of residential and nonresidential uses, in a mixed-use or single-use configuration. The project, as planned, will comply with all of the dimensional and development standards of the zoning district.
4. The size, scale, height, density, multi-modal traffic impacts, hours of operation and other similar characteristics of the proposed use are	Complies	The size, scale, height, density, and traffic impacts are consistent with the planned uses in the surrounding area. The land on the west side of Marshall St. has a Comprehensive

comparable with existing and planned uses in the surrounding area;		Plan Future Land Use designation of Mixed-Use and is zoned MX-U which allows for mixed-use buildings up to 65 feet in height. This project would act as a transition between the more intensive development and taller maximum building heights allowed in the MX-U zone district to the west. It is also consistent with the planned uses on the west side of Marshall St. north of W 52 nd Ave. which is also zoned MX-S. Much of the surrounding area to the north and west is zoned IL (Light Industrial) or IG (Heavy Industrial) and include industrial uses in large industrial buildings, many of which are two stories in height, but allowed to heights of between 40 and 45 feet, depending on the zoning district, if redeveloped in the future. While the proposed building is taller than the other existing buildings in the area, it complies with the maximum height allowed within the MX-S zone district with the height bonus for LIHTCs. In addition, as explained above, the site layout substantially exceeds the height transition requirement. For these reasons, staff finds that the proposed conditional use is comparable with existing and planned uses in the surrounding area.
5. Facilities and services including sewer, water, storm water, gas, electricity, police and fire protection, and roads and transportation will, prior to or as part of the development, be available to serve the subject property while maintaining adequate levels of service for existing development; and	Complies	All facilities and services are available to this site. The proposed use will not have an adverse impact on facilities or services.
6. The application mitigates any adverse impacts on the surrounding area to the degree practicable.	Complies	The location of the building along the western and northern sides of the property and the design which orients the majority of the units toward the Marshall St and W 52 nd Ave. rights-of-way mitigates adverse impacts on surrounding properties to the degree practicable.

Public Contact

The required neighborhood meeting for this project took place on January 8, 2021. The applicant, staff and approximately 6 neighbors were in attendance.

Please note that a published notice was posted in the newspaper 7 days prior to the meeting, and a public hearing sign was posted 15 days prior to the meeting as required by the code. There was an issue with the written notice to adjacent property owners, required to be sent 15 days prior to the meeting, which, unfortunately, was not sent in accordance with the timeline. The applicant and the City team will discuss with Council when this agenda item is called. The applicant and City team believe that this matter should be addressed by continuing the public hearing to March 15.

Commission Recommendation

The Planning Commission voted 7 to 0 to recommend approval to the City Council, with the condition that the project be developed using Low Income Housing Tax Credits (LIHTC).

Strategic Alignment

The Clear Creek Commons project aligns with the Community and Economic Development strategic goals.

Alternative Courses of Action

Option 1: Continue the public hearing on this agenda item due to an issue with the written notice for the public hearing.

Option 2: Receive evidence at a public hearing and approve the Conditional Use Application for Clear Creek Commons, with a condition that the project be developed using Low Income Housing Tax Credits (LIHTC). This is based on the fact that the alternative site plan indicating a four story building, without using LIHTC, was not fully developed and it's full impacts are unknown.

Option 3: Receive evidence at a public hearing and approve the Conditional Use Application for Clear Creek Commons without conditions.

Option 4: Receive evidence at a public hearing and deny the Conditional Use Application for Clear Creek Commons.

Recommendation for Action

The Arvada Team recommends that the City Council continue the public hearing on the Conditional Use Application for Clear Creek Commons due to an issue with the written notice for the public hearing.

Suggested Motion:

Option 1 (Continuance): I move that the public hearing on the Conditional Use Application for Clear Creek Commons, approximately located at the southeast corner of West 52nd Avenue and Marshall Street, be continued and set for a public hearing on March 15, 2021 at 6:15 p.m.

Option 2 (Application Approval with Condition): I move that the Conditional Use Application for Clear Creek Commons, approximately located at the southeast corner of West 52nd Avenue and Marshall Street be approved with a condition that the project be developed using Low Income Housing Tax Credits (LIHTC). This motion is based on the findings of fact adopted by Planning Commission (if approved).

Option 3 (Application Approval without Condition): I move that the Conditional Use Application for Clear Creek Commons, approximately located at the southeast corner of West 52nd Avenue and Marshall Street be approved. This motion is based on the findings of fact adopted by Planning Commission.

Option 4 (Application Denial): I move that the Conditional Use Application for Clear Creek Commons, approximately located at the southeast corner of West 52nd Avenue and Marshall Street be denied. This motion is based on the following findings of fact for denial: (Recite approval criteria you believe the evidence fails to satisfy and your reasons).

Prepared by:
Stephanie Wallace, Administrative Specialist

Reviewed by:

Approved by:

Jacob Nitchals, Senior Planner	2/9/2021
Josie Suk, Development Systems and Administrative Manager	2/9/2021
Robert Smetana, Manager of City Planning and Development	2/10/2021
Ryan Stachelski, Director of Community and Economic Development	2/12/2021
Gail Walker, Legal Specialist-Contracts	2/12/2021
Rachel Morris, City Attorney	2/17/2021
Lorie Gillis, Deputy City Manager	2/18/2021
Mark Deven, City Manager	2/18/2021

Enclosure, exhibits & attachments required to support the report

City of Arvada
Community and Economic Development Department
PUBLIC HEARING STAFF REPORT

Clear Creek Commons
Conditional Use
DA2020-0077

NATURE OF REQUEST

The owner of the property at the southeast corner of W 52nd Avenue and Marshall Street, Brew Lab LLC, is requesting Conditional Use approval to allow for the development of an apartment community within a MX-S (Mixed Use-Suburban) zoning district. The site currently contains a single family detached structure, greenhouses, and numerous other accessory buildings.

The new community would contain 275 units in one five-story building on the 4.36 acre site. The majority of the 275 units will be studio and one-bedroom units. A parking podium will comprise most of the ground floor with the exception of the lobby and eight units on the north side of the property, adjacent to W 52nd Avenue. Above the parking deck, on the second floor, there are two large outdoor amenity areas.

As described in more detail below, the five story height is achievable under the Land Development Code (LDC) as the applicant plans to pursue affordable housing tax credits for the project.

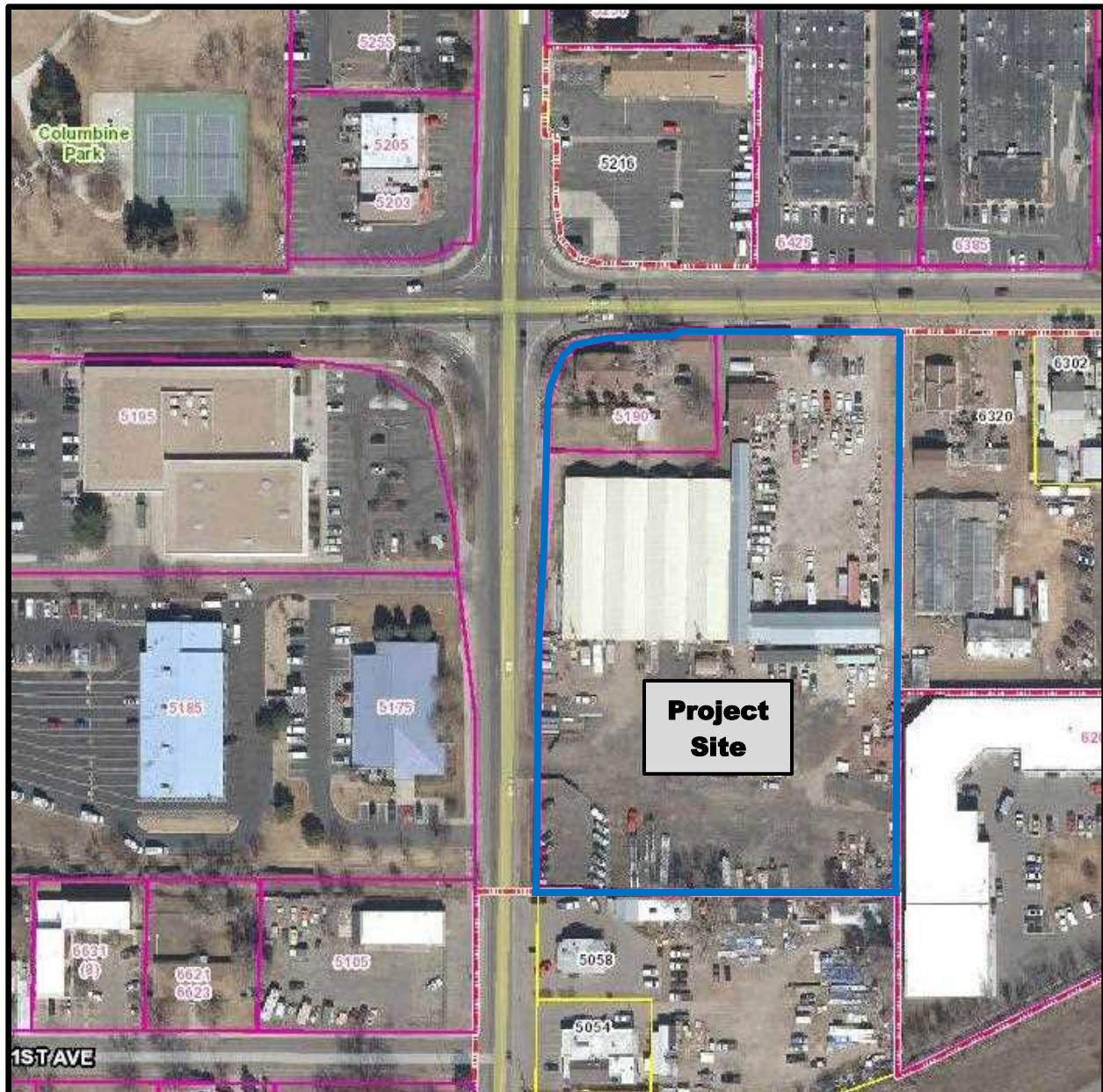
LOCATION AND HISTORY

The subject property consists of two parcels located at the southeast corner of W 52nd Avenue and Marshall Street, also known as 5190 Marshall Street.

The property was annexed into the City of Arvada in 2016 as the Spano Corner Annexation. With annexation, the property was zoned CC-A (Clear Creek Zoning District – Industrial and Commercial Sub-District). The current MX-S zoning was adopted in May of 2020 as part of the remapping associated with the adoption of the LDC.

According to Jefferson County Assessor records, most of the buildings on site were built between 1957 and 1960.

Vicinity Map



NEIGHBORHOOD MEETING

Division 8-2-2 of the Land Development Code requires that at least one neighborhood meeting be held for projects that require public hearings before the Planning Commission and City Council.

The required neighborhood meeting for this project took place on January 8, 2021. The applicant, staff, and six members of the public were in attendance.

Some of the issues discussed during the meeting included: traffic impacts, site access, the existing condition of Marshall St. and how the project will impact the street, the need for traffic calming and other safety measures on Marshall St., solar access and loss of western views from adjacent properties, the use of "Section 8" vouchers, and homeless camps in the area.

The applicant prepared a summary of the meeting, which is attached.

PUBLIC NOTIFICATION

Division 8-2-4 of the Land Development Code requires public notification for all public hearings as follows:

Written Notice: At least 15 days prior to all public hearings, written notice must be mailed to all property owners within 500 feet of the subject property and to all homeowners associations and neighborhood associations with a known interest in the subject property. The applicant will provide an affidavit of mailing verifying this requirement has been met prior to the public hearing.

Posted Notice: At least 15 days prior to all public hearings, signs notifying the public of the hearing must be posted on the subject property. The applicant will provide a posting log verifying that this requirement has been met prior to the public hearing.

Published Notice: At least 15 days prior to all public hearings, notice of the hearing must be published in a newspaper of general circulation in the City. The required notice has been published.

SEVERED MINERAL RIGHTS

At least 30 days prior to the public hearing, written notice of the application must be mailed to any owner of mineral rights associated with the subject property. The applicant has provided the required Certification of Notice pursuant to Colorado Revised Statute 24-65.5-103.

DEVELOPMENT REVIEW TIMELINE

The application was accepted by the City for review on August 31, 2020. The standard review timeline allows for three reviews within a 20 week timeframe to reach a Planning Commission public hearing. This project required three reviews and will be presented to Planning Commission within 21 weeks of acceptance of the application.

ALIGNMENT WITH CITY COUNCIL STRATEGIC PLAN

This project aligns with the Community and Economic Development strategic goals.

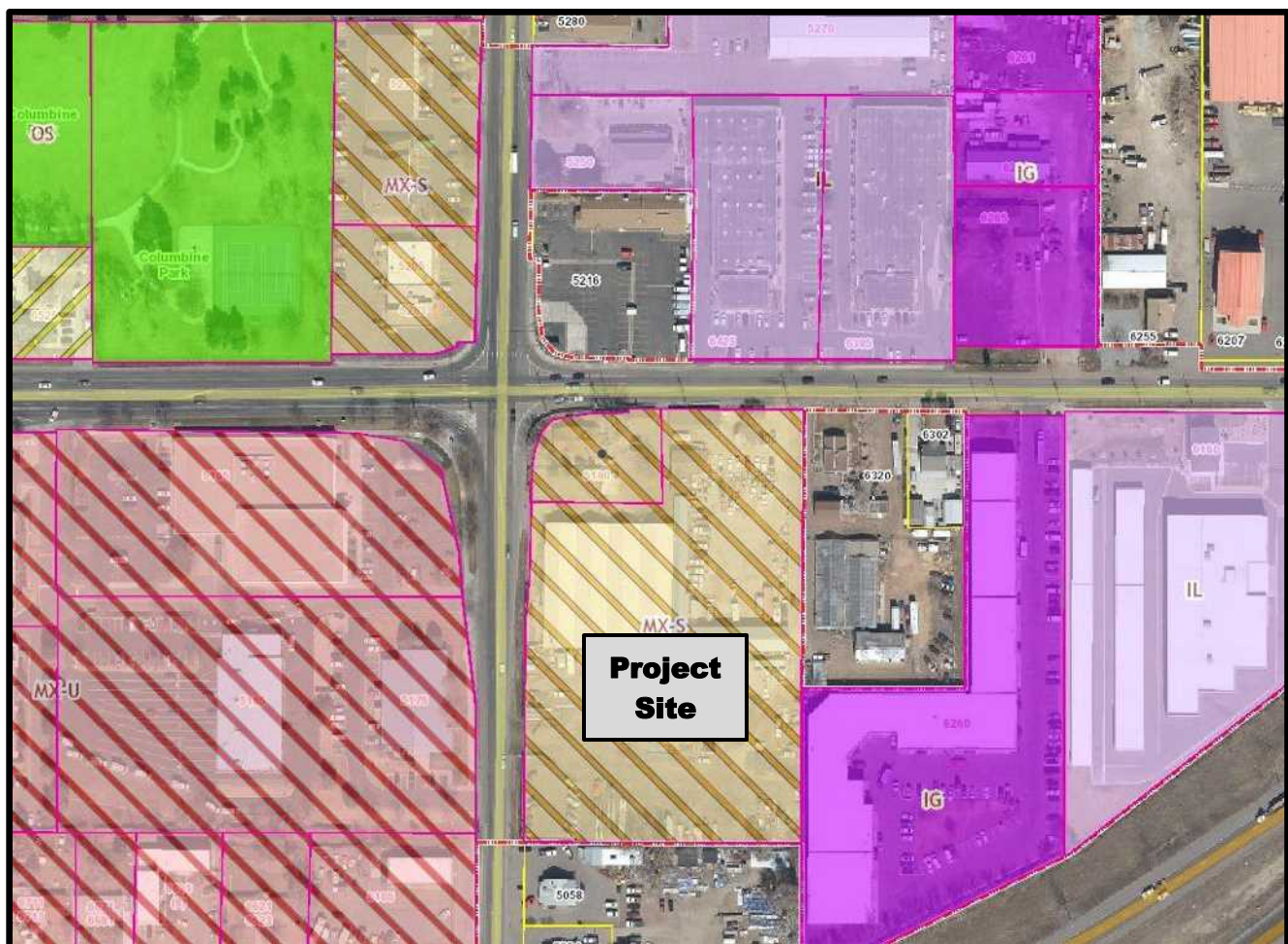
ZONING AND LAND USE

The subject property is currently zoned MX-S and is 4.36 acres in size.

Surrounding properties are zoned and utilized as follows:

Direction	Zoning	Actual Use
North	IL (Light Industrial) and Jefferson County C-1 (Commercial One)	Office & Light Industrial and Retail & Vehicle & Equipment Rental (U-Haul)
South	Split Zoned Parcel: Jefferson County C-1 & R-2 (Residential-Two)	Restaurant and unknown storage yard
East	Split Zoned Parcel: Jefferson County R-2 and A-1 (Agricultural-One)	Single-Family Residential
West	MX-U (Mixed-Use Urban)	Light Industrial & Office (Vehicle Emission Testing Facility & Corporate Office) Warehouse & Office (Complete Business Systems)

Zoning – City of Arvada



Zoning – Jefferson County



PROJECT ANALYSIS

Compliance with the Comprehensive Plan

The project site is within an area designated as Clear Creek on the 2014 Comprehensive Plan Future Land Use map. The proposed Conditional Use is consistent with the following Comprehensive Plan Goals:

- Goal L-5: Designate and promote redevelopment and infill to generate economic revitalization, improve physical conditions, and provide and appropriate mix of quality housing choices.
- Goal N-1: Plan for a range of neighborhoods and accessible housing of different tenure types to accommodate diverse incomes and all ages and abilities.
- Goal N-2: Encourage development of workforce or assisted housing throughout Arvada.

Setbacks

The MX-S zone district requires that urban multifamily buildings be located within a 10 to 35-foot wide frontage zone adjacent to public streets. The side setback is 10 feet, while the rear setback can be zero.

Although setbacks will be reviewed as part of a Site Plan application, should the Conditional Use approval be granted, the conceptual plan included as part of this application indicates that the building will comply with this frontage zone requirement, as well as the side and rear setbacks.

Building Height and Height Transition

The maximum building height allowed in this MX-S zone district is 45 feet. In addition the 45-foot maximum building height, section 2-1-10-4 allows a 15-foot height bonus for projects that include affordable housing units, resulting in a maximum building height of 60 feet.

Although building height will be reviewed as part of a Site Plan application, should the Conditional Use approval be granted, the conceptual plan included as part of this application indicates a maximum building height of approximately 54.5 feet. In order to construct the proposed five-story building, the project will need to be awarded Low Income Housing Tax Credits (LIHTCs) through the Colorado Housing and Finance Authority (CHFA). The conceptual plans include renderings of a four story building, demonstrating what the project might look like should the project not be awarded LIHTCs.

The single family house on the lot to the east of the project site triggers the height transition requirements in the Land Development Code. In this case, the height transition limits the height of the building located within 35 feet of the eastern property line to 35 feet.

Although compliance with the height transition will be reviewed as part of a Site Plan application, should the Conditional Use approval be granted, the conceptual plan included as part of this application indicates that the entire building is located outside of the height transition zone. The closest portion of the building is set back 58 feet from the eastern property line and the majority of the building is set back 132 feet.

Open Space

The MX-S zoning district requires that a minimum of 25 percent of the site be landscape surface area. Additionally, small urban park space is required in an amount equal to 10 percent of the site area.

Compliance with the landscape surface area will be reviewed as part of a Site Plan. However, the conceptual plan indicates that approximately 34 percent of the site will be landscaped and approximately 11% will be utilized as a small urban park.

Landscaping, Buffering and Fencing

Specific details of the landscape plan, including buffering materials and fencing will be reviewed as part of any future Site Plan application. However, the conceptual plan indicates compliance with all applicable landscaping standards including parking lot landscaping, street trees, and bufferyards.

Building Design

The conceptual plan shows a building with a modern architectural theme, with a variety of exterior materials being utilized. Some of the proposed materials identified include synthetic wood, stucco, and brick.



Circulation and Connectivity

There are two points of vehicular access proposed, one off of Marshall St. at the southern edge off the property and the other off W 52nd Ave. at the eastern edge of the property. Fire and emergency access is provided between the two points of access.

A trip generation report was required as part of the Conditional Use application. The report indicates that this project will generate an average of 1,502 weekday trips, with 93 morning and 117 evening peak hour trips. The study concluded the traffic impacts of the proposed project can be accommodated by the adjacent roadway network without major modifications.

With the development, sidewalks will be constructed along Marshall St. and W 52nd Avenue. Pedestrian access to the lobby is located at the northwest corner of the property.

Grading and Drainage

Based on the conceptual plan and associated drainage letter, stormwater will be conveyed to an underground detention and water quality facility system.

Parking and Loading

Per Division 4-5-2 of the LDC, an affordable multifamily project such as this is required to provide 1.4 parking spaces for each studio or one bedroom unit, two spaces for each two bedroom or larger unit, and two loading spaces. Based on the Code, a total of 409 spaces are required. The conceptual plan includes 408 spaces; however, there is room for an additional space on the southernmost and easternmost parking rows. Parking will be reviewed in more detail with a Site Plan application.

Utility Services

This site is served by City of Arvada water. Clear Creek Valley Water and Sanitation District provides sanitary service.

Police and Fire Protection

Police and fire protection is available for this project.

LAND DEVELOPMENT CODE APPROVAL CRITERIA

It is the responsibility of the applicant to justify the requested land use application. The Planning Commission should make a recommendation to the City Council based on its findings regarding the approval criteria shown in the table(s) below and upon testimony heard during the public hearing as it applied to the criteria.

Staff performed an analysis of the proposal, based on the approval criteria listed in Section 8 of the Land Development Code, and presents the following findings:

8-3-5-1 Conditional Use Permit Approval Criteria (5-18-20)	Finding	Rationale
1. The application complies with the applicable standards of this LDC, other adopted City ordinances, resolutions and regulations including but not limited to any use-specific standards for the proposed conditional use in Division 3-1-3, any approved Master Development Plan that includes the property, and any conditions specifically applied to development of the property by the Planning Commission or City Council in a prior decision affecting the property;	Complies	The proposed use complies with all of the requirements of the LDC. No Code modifications are proposed or required.
2. The application is consistent with the Arvada Comprehensive Plan;	Complies	The proposed use is consistent with numerous Comprehensive Plan goals.
3. The use is consistent with the purpose and intent of the zoning district in which it is located;	Complies	The proposed use is consistent with the purpose of the MX-S zone district, which allows for a variety of residential and nonresidential uses, in a mixed-use or single-use configuration. The project, as planned, will comply with all of the dimensional and development standards of the zoning district.
4. The size, scale, height, density, multi-modal traffic impacts, hours of operation and other similar characteristics of the proposed use are comparable with existing and planned uses in the surrounding area;	Complies	The size, scale, height, density, and traffic impacts are consistent with the planned uses in the surrounding area. The land on the west side of Marshall St. has a Comprehensive Plan Future Land Use designation of Mixed-Use and is zoned MX-U which allows for mixed-use buildings up to 65 feet in height. This project would act as a transition between the more intensive development and taller maximum building heights allowed in the MX-U zone district to the west. It is also consistent with the planned

		uses on the west side of Marshall St. north of W 52 nd Ave. which is also zoned MX-S. Much of the surrounding area to the north and west is zoned IL (Light Industrial) or IG (Heavy Industrial) and include industrial uses in large industrial buildings, many of which are two stories in height, but allowed to heights of between 40 and 45 feet, depending on the zoning district, if redeveloped in the future. While the proposed building is taller than the other existing buildings in the area, it complies with the maximum height allowed within the MX-S zone district with the height bonus for LIHTCs. In addition, as explained above, the site layout substantially exceeds the height transition requirement. For these reasons, staff finds that the proposed conditional use is comparable with existing and planned uses in the surrounding area.
5. Facilities and services including sewer, water, storm water, gas, electricity, police and fire protection, and roads and transportation will, prior to or as part of the development, be available to serve the subject property while maintaining adequate levels of service for existing development; and	Complies	All facilities and services are available to this site. The proposed use will not have an adverse impact on facilities or services.
6. The application mitigates any adverse impacts on the surrounding area to the degree practicable.	Complies	The location of the building along the western and northern sides of the property and the design which orients the majority of the units toward the Marshall St and W 52 nd Ave. rights-of-way mitigates adverse impacts on surrounding properties to the degree practicable.

STAFF RECOMMENDATION

Based upon project analysis and review of the Land Development Code approval criteria, staff recommends approval of the Conditional Use.

The Planning Commission may recommend denial of the request(s) if it cannot make affirmative findings of the approval criteria stated above.

CLEAR CREEK COMMONS
SITE DEVELOPMENT PLAN
5190 MARSHALL, ARVADA, CO, 80002

LEGAL DESCRIPTION

PARCEL 1: A TRACT OF LAND IN THE NW 1/4 OF THE SW 1/4 OF SECTION 13, TOWNSHIP 3 SOUTH, RANGE 69 WEST OF THE 6TH P.M. DESCRIBED AS FOLLOWS: BEGINNING AT A POINT 25 FEET SOUTH OF THE NORTHEAST CORNER OF SAID NW 1/4 OF THE SW 1/4 OF SECTION 13, THENCE SOUTH ALONG THE EAST LINE OF SAID NW 1/4 OF THE SW 1/4, 548.3 FEET; THENCE WEST AND PARALLEL TO THE NORTH LINE OF SAID NW 1/4 OF THE SW 1/4, 356.25 FEET TO A POINT ON THE EAST LINE OF MARSHALL STREET; THENCE NORTHERLY ALONG THE EAST LINE OF MARSHALL STREET, 548.33 FEET; THENCE EAST AND PARALLEL TO THE NORTH LINE OF SAID NW 1/4 OF THE SW 1/4, 350.00 FEET TO THE TRUE POINT OF BEGINNING, EXCEPTING THEREFROM A TRACT OF LAND IN THE NW 1/4 OF THE SW 1/4 OF SECTION 13, TOWNSHIP 3 SOUTH, RANGE 69 WEST OF THE 6TH P.M., COUNTY OF JEFFERSON, STATE OF COLORADO, DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHEAST CORNER OF SAID NW 1/4 OF THE SW 1/4 OF SECTION 13, THENCE SOUTH ALONG THE EAST LINE OF SAID NW 1/4 OF THE SW 1/4, 25 FEET; THENCE WEST AND PARALLEL TO THE NORTH LINE OF SAID NW 1/4 OF THE SW 1/4, 180.0 FEET TO THE TRUE POINT OF BEGINNING; THENCE SOUTH AND PARALLEL TO THE EAST LINE OF SAID NW 1/4 OF THE SW 1/4, 126.0 FEET; THENCE WEST AND PARALLEL TO THE NORTH LINE OF SAID NW 1/4 OF THE SW 1/4, 171.45 FEET TO A POINT ON TH EAST LINE OF MARSHALL STREET; THENCE NORTHERLY ALONG THE EAST LINE OF MARSHALL STREET, 126.0 FEET; THENCE EAST AND PARALLEL TO THE NORTH LINE OF SAID NW 1/4 OF THE SW 1/4, 170.0 FEET TO THE TRUE POINT OF BEGINNING AND EXCEPT THAT PORTION CONVEYED TO THE CITY OF ARVADA IN DEED RECORDED APRIL 18, 1985 UNDER RECEPTION NO. 85036218. PARCEL 2: A TRACT OF LAND IN THE NORTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 13, TOWNSHIP 3 SOUTH, RANGE 69 WEST OF THE 6TH P.M., COUNTY OF JEFFERSON, STATE OF COLORADO, DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHEAST CORNER OF SAID NORTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 13, THENCE SOUTH ALONG THE EAST LINE OF THE SAID NORTHWEST 1/4 OF THE SOUTHWEST 1/4, 25 FEET; THENCE WEST AND PARALLEL TO THE NORTH LINE OF SAID NORTHWEST 1/4 OF THE SOUTHWEST 1/4, 180.0 FEET TO THE TRUE POINT OF BEGINNING; THENCE SOUTH AND PARALLEL TO THE EAST LINE OF SAID NORTHWEST 1/4 OF THE SOUTHWEST 1/4, 126.0 FEET; THENCE WEST AND PARALLEL TO THE NORTH LINE OF SAID NORTHWEST 1/4 OF THE SOUTHWEST 1/4, 171.45 FEET TO A POINT ON THE EAST LINE OF MARSHALL STREET; THENCE NORTHERLY ALONG THE EAST LINE OF MARSHALL STREET, 126.0 FEET; THENCE EAST AND PARALLEL TO THE NORTH LINE OF SAID NORTHWEST 1/4 OF THE SOUTHWEST 1/4, 170.0 FEET TO THE TRUE POINT OF BEGINNING; EXCEPT THAT PORTION DESCRIBED IN DEED RECORDED APRIL 18, 1985 UNDER RECEPTION NO. 85036220, COUNTY OF JEFFERSON, STATE OF COLORADO.
DEVELOPMENT NOTE: This proposal constitutes the maximum number of stories and/or number of units the developer intends to construct within the current land development code. The final development and structure may be reduced in stories and/or the number of units to achieve the developer's final desired project at this location. See sheet 10 of 10 for renderings of a sample 4 story design.

ZONING INFORMATION

ZONE DISTRICT	MX-S	
GENERAL ZONE LOT INFORMATION	SQ-FT	ACRES more-or-less
TOTAL ZONE LOT SIZE (GROSS PROJECT AREA)	189,992sf.	±4.36
TOTAL ROW DEDICATED AREA	2290sf	
TOTAL ZONE LOT SIZE MINUS ROW DEDICATION	187,702sf.	±4.30
PRIMARY STREET	WEST 52nd AVENUE	
SIDE STREET	MARSHALL	
PROPOSED USE	URBAN MULTI-FAMILY	
LOT STANDARDS	REQUIRED/ ALLOWABLE	PROVIDED
MAX LOT COVERAGE	60%/112,621sf	42.1%/79,120sf
BUILDING AND SITING STANDARDS	REQUIRED/ ALLOWABLE	PROVIDED
PRIMARY STREET FRONTAGE ZONE	10'/35'	VARIES 23'-4 ⁵ / ₈ "
MIN. FRONT (52nd AVE) BUILDING FACADE WITHIN FRONTAGE	20%=68.67'	74%=255.1'
MIN. SIDE (MARSHALL) BUILDING FACADE WITHIN FRONTAGE	20%=108.33'	38%=204'
SIDE STREET	10'/35'	VARIES 28'-6 ¹ / ₂ "
SIDE INTERIOR	10'	VARIES 58'-2 ³ / ₈ "
REAR	10'	90'-7"
BUILDING STANDARDS	REQUIRED/ ALLOWABLE	PROVIDED
BUILDING HEIGHT, FT MAX = 45'	SEE BELOW	SEE BELOW
45' max. height in MX-S with 15'-0" increase per section 2-1-10-4 of the LDC =	60'	59'-0"
SITE STANDARDS	REQUIRED/ ALLOWABLE	PROVIDED
MIN. LANDSCAPE AREA	25%	35.9%
MIN. URBAN PARK	10%	11.9%

SHEET INDEX

1 OF 10	COVER
2 OF 10	LAND SURVEY PLAT
3 OF 10	SITE PLAN
4 OF 10	GRADING & UTILITY PLAN
5 OF 10	LANDSCAPE PLAN
6 OF 10	ARCHITECTURAL FLOOR PLANS
7 OF 10	ARCHITECTURAL ELEVATIONS
8 OF 10	ARCHITECTURAL ELEVATIONS
9 OF 10	ARCHITECTURAL RENDERINGS 3D VIEWS
10 OF 10	ARCHITECTURAL RENDERINGS 3D VIEWS

VICINITY MAP



PROJECT LOCATION



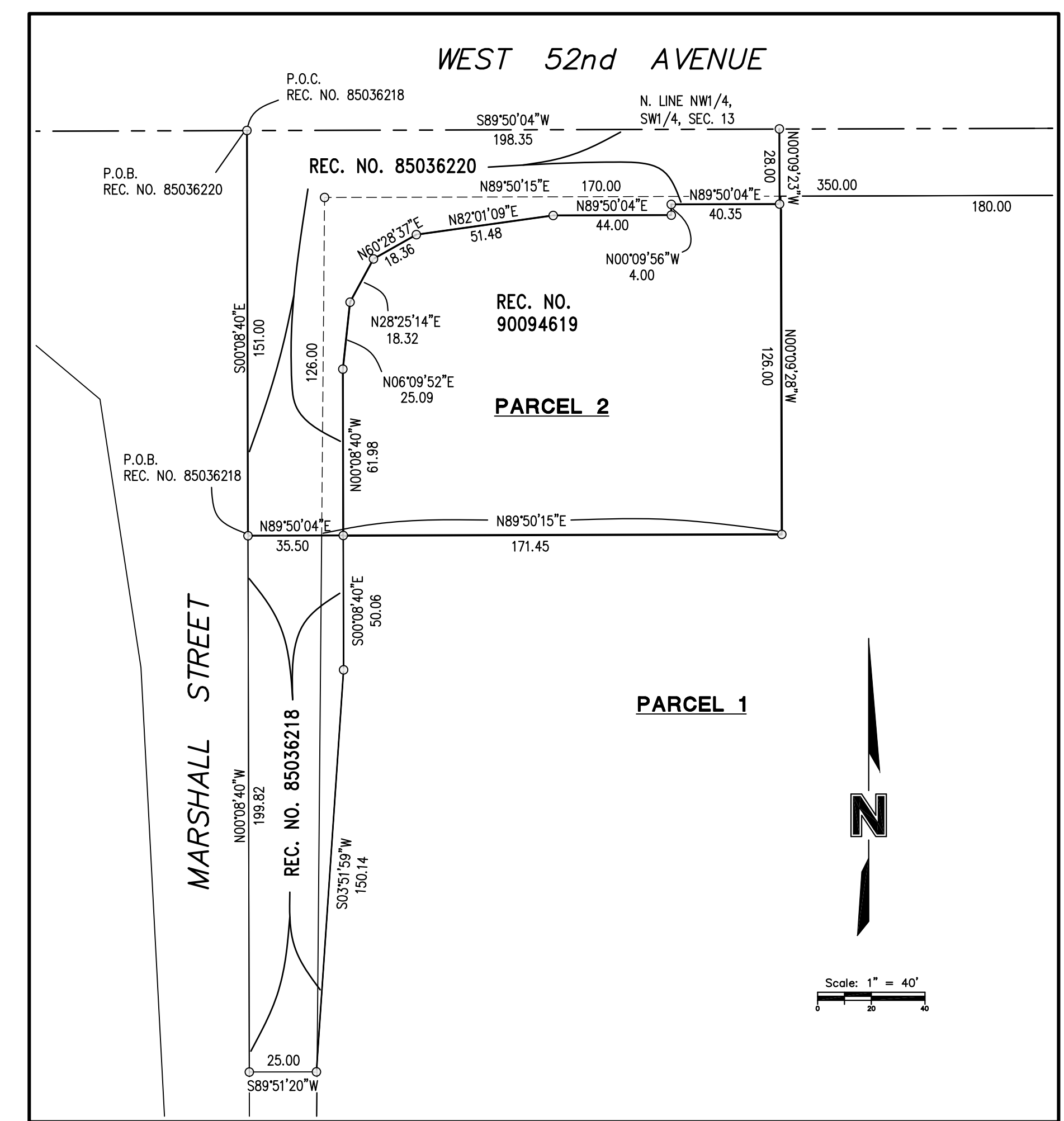
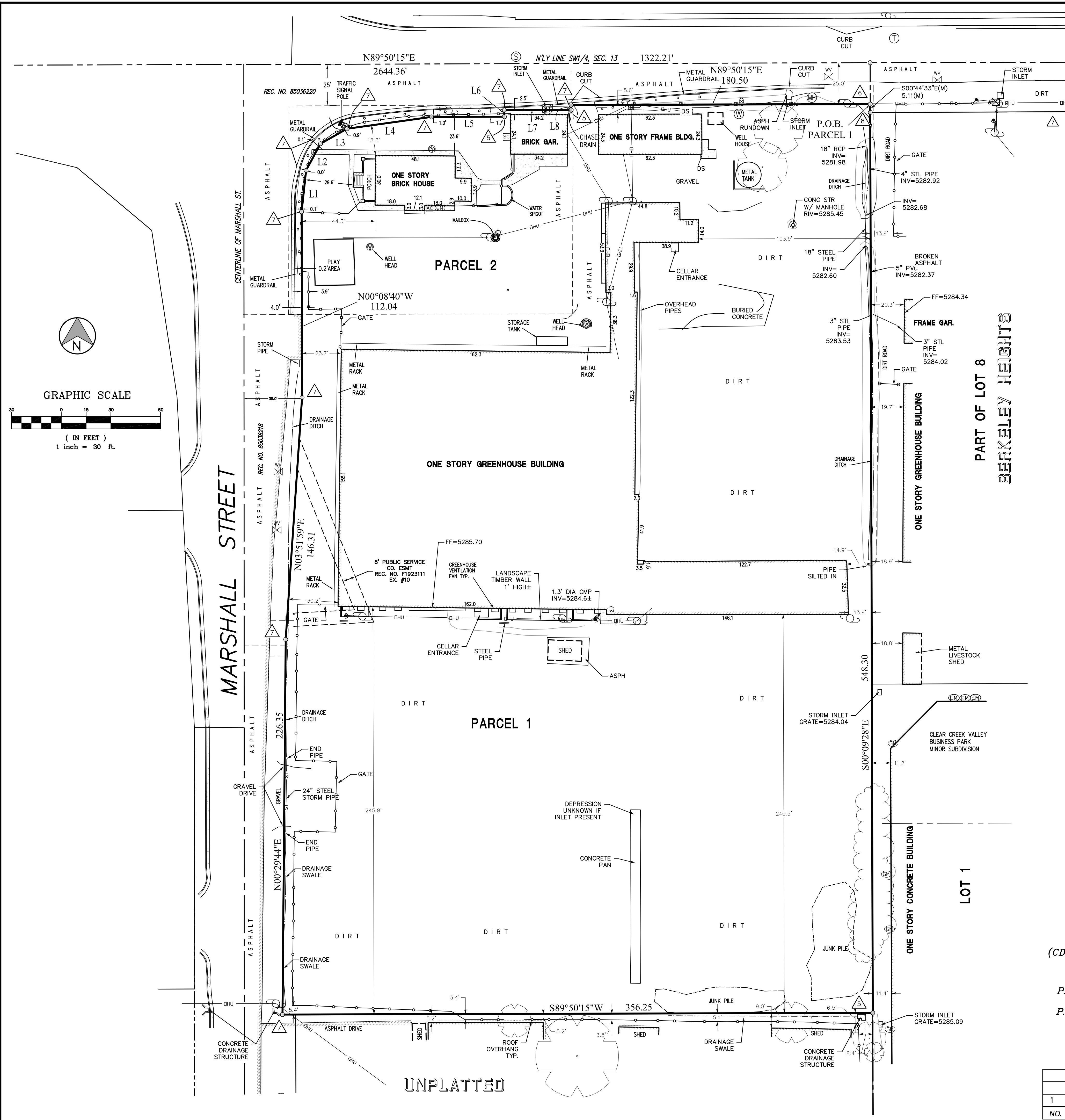
DATE	ISSUE
7.31.2020	City Submittal
10.16.2020	Revised City Submittal
12.02.2020	Revised City Submittal

COVER

SHEET 1 OF 10

PROJECT NO. PA2020-0021

P:\Esl Projects\5190 Marshall St\dwg\esl 5190 Marshall St.dwg 11/25/2015 5:11:11 PM MST



- LEGEND**
- UTILITY POLE
 - CHAINLINK FENCE
 - DHU OVERHEAD UTILITY LINES
 - CONCRETE
 - TRAFFIC SIGNAL POLE
 - TRAFFIC VAULT
 - EDGE OF ASPHALT
 - WOODEN FENCE
- MONUMENT LEGEND**
- FOUND A 3-1/4" ALUMINUM CAP IN A RANGE BOX STAMPED AS SHOWN HEREON AT THE WEST QUARTER CORNER OF SECTION 13
 - FOUND A 2-1/2" BRASS CAP IN A 2" CONCRETE DIVIDER 2.6' OFF OF THE GROUND STAMPED AS SHOWN HEREON AT THE NORTHEAST CORNER OF THE SOUTHWEST QUARTER OF SECTION 13
 - FOUND A 3-1/4" ALUMINUM CAP IN A RANGE BOX STAMPED AS SHOWN HEREON AT THE SOUTHWEST CORNER OF SECTION 13
 - DID NOT LOCATE THIS CORNER. ESTABLISHED THE SURVEY POSITION FROM THE CITY OF WHEAT RIDGE CONTROL DATA. THIS DATA AGREES WITH OTHER LAND SURVEY PLATS AND CDOT INFO.
 - FOUND A GREEN PLASTIC CAP ON A #5 REBAR STAMPED "FRONTIER SURV. - PLS 30830"
 - SET A NAIL AND WASHER UNDER THE DIRT IN THE ASPHALT SURFACE STAMPED "PLS 30830"
 - SET A YELLOW PLASTIC CAP STAMPED "ESI LAND SURV - PLS 30830"
 - FOUND A YELLOW PLASTIC CAP ON A REBAR STAMPED "LS 10945"
 - FOUND A 1.5" ALUMINUM CAP ON A REBAR STAMPED "ENG SVC - PLS 16837"
 - FOUND A STEEL ROD
- (R) - RECORD ANGLES & DISTANCES ARE AS SHOWN ON RECORDED DEEDS AND PLATS
- (M) - MEASURED ANGLE AND/OR DISTANCE AS PER FRONTIER SURVEYING, INC. FIELD SURVEY
- (S) - ANGLE AND/OR DISTANCE AS PER FRONTIER SURVEYING, INC. FIELD SURVEY
- (CDOT) - ANGLE AND/OR DISTANCE AS PER THE COLORADO DEPARTMENT OF TRANSPORTATION DEEDS AND RIGHT OF WAY SURVEY
- P.O.C. - POINT OF COMMENCEMENT
- P.O.B. - POINT OF BEGINNING

Esi land surveying, llc 3531 S. Logan St. Unit D-324 Englewood, CO 80113 303-340-0113			
LAND SURVEY PLAT SITUATED IN THE SW1/4 SECTION 13, TOWNSHIP 3 SOUTH RANGE 69 WEST OF THE SIXTH P.M. CITY OF ARVADA, JEFFERSON COUNTY, COLORADO FIELD WORK COMPLETED NOVEMBER 5, 2015			
DRAWN BY	DLL	JOB NUMBER	15-141
CHECKED BY		SHEET NUMBER	2 OF 9
NO.	DATE	DESCRIPTION	BY
1	11/05/15	FINAL SURVEY	D.L.L.

[illegible][illegible]

0 15' 30' 60'

MmD
ARCHITECTURE

DATE	ISSUE
------	-------

03.10.2020	City submittal
01.16.2020	Revised City submittal
02.02.2020	Revised City submittal

SITE PLAN

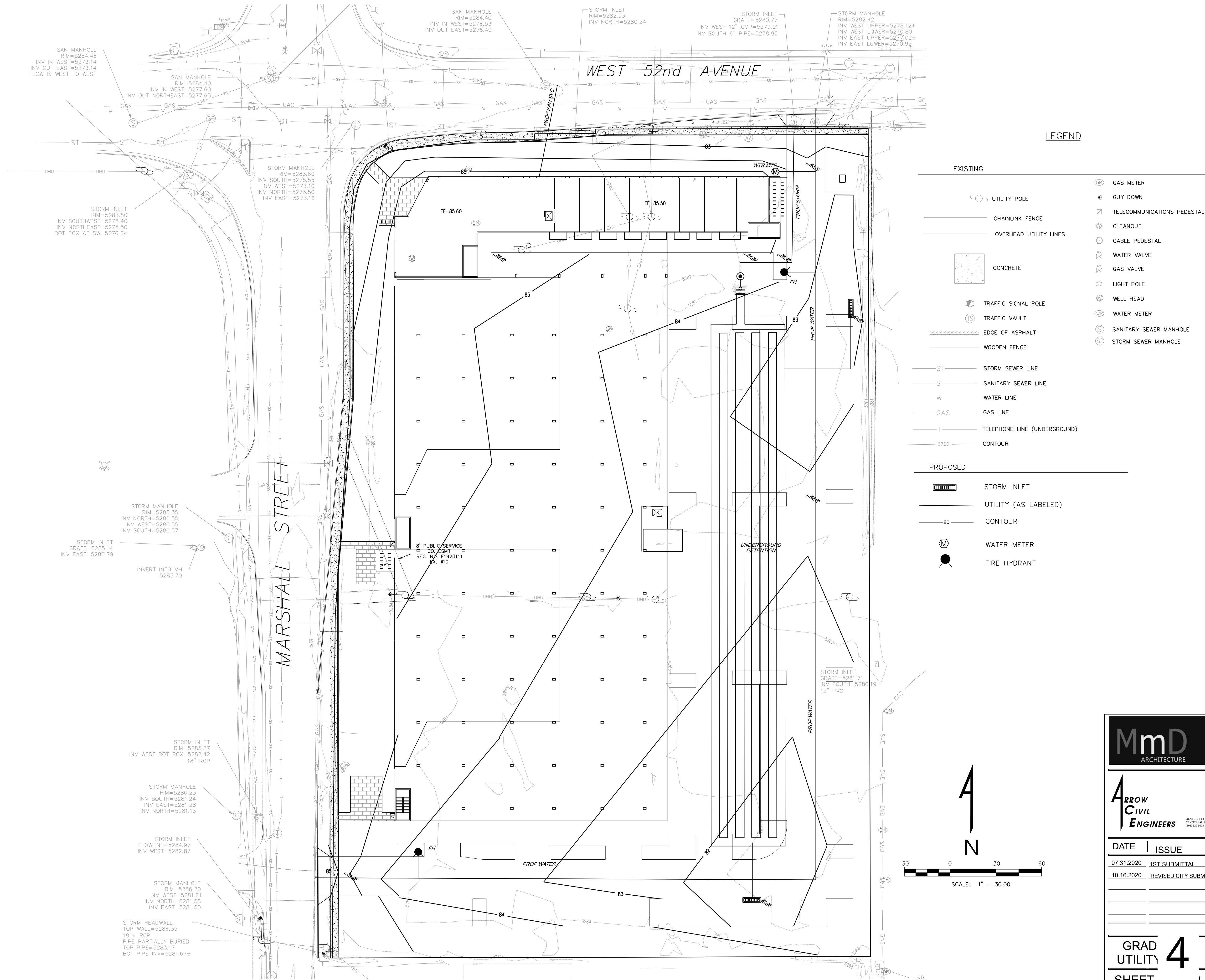
SHEET 3 OF 10

PROJECT NO. PA2020-0021

CLEAR CREEK COMMONS

SITE DEVELOPMENT PLAN

5190 MARSHALL, ARVADA, CO 80002



MmD
ARCHITECTURE

ARROW
CIVIL
ENGINEERS

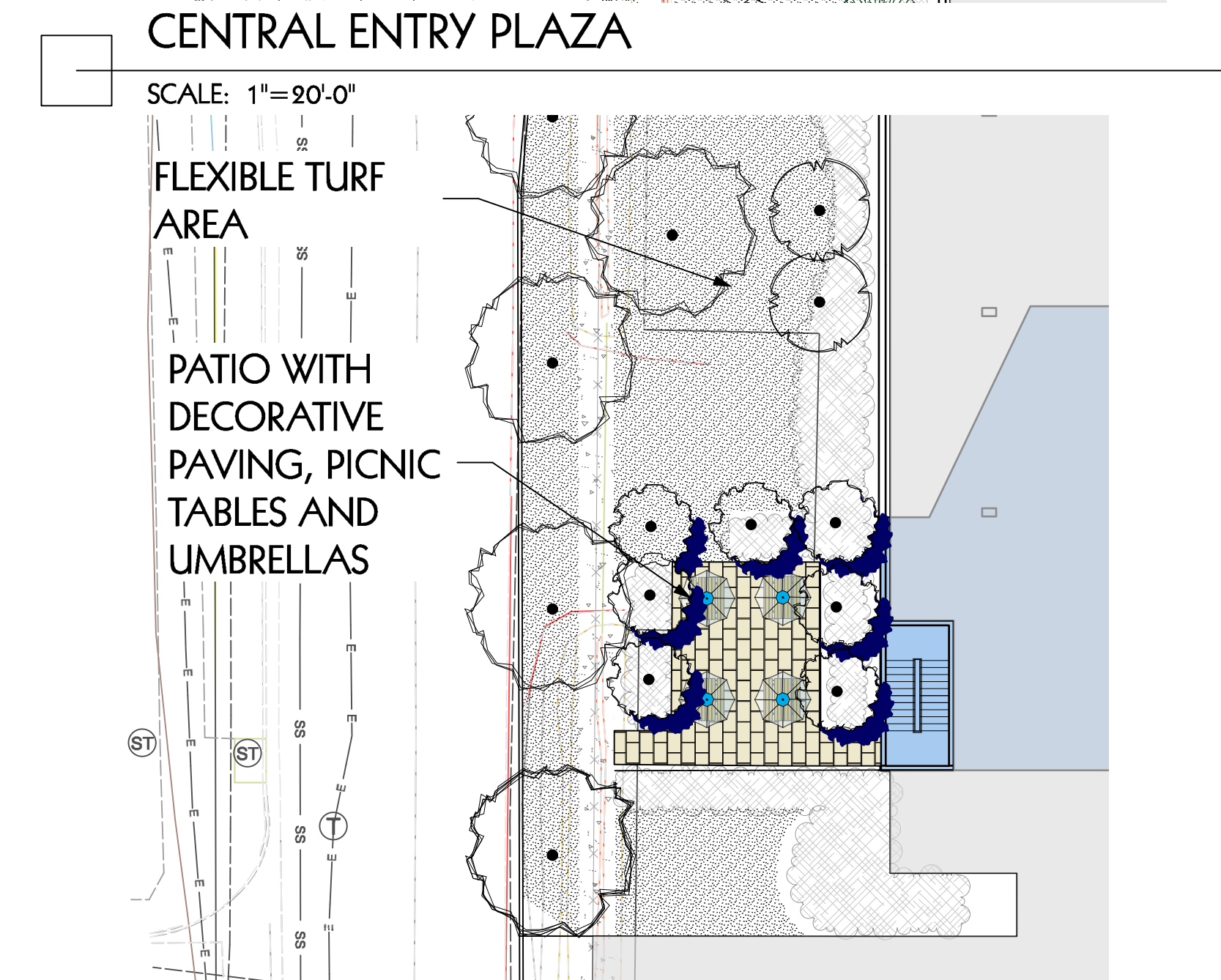
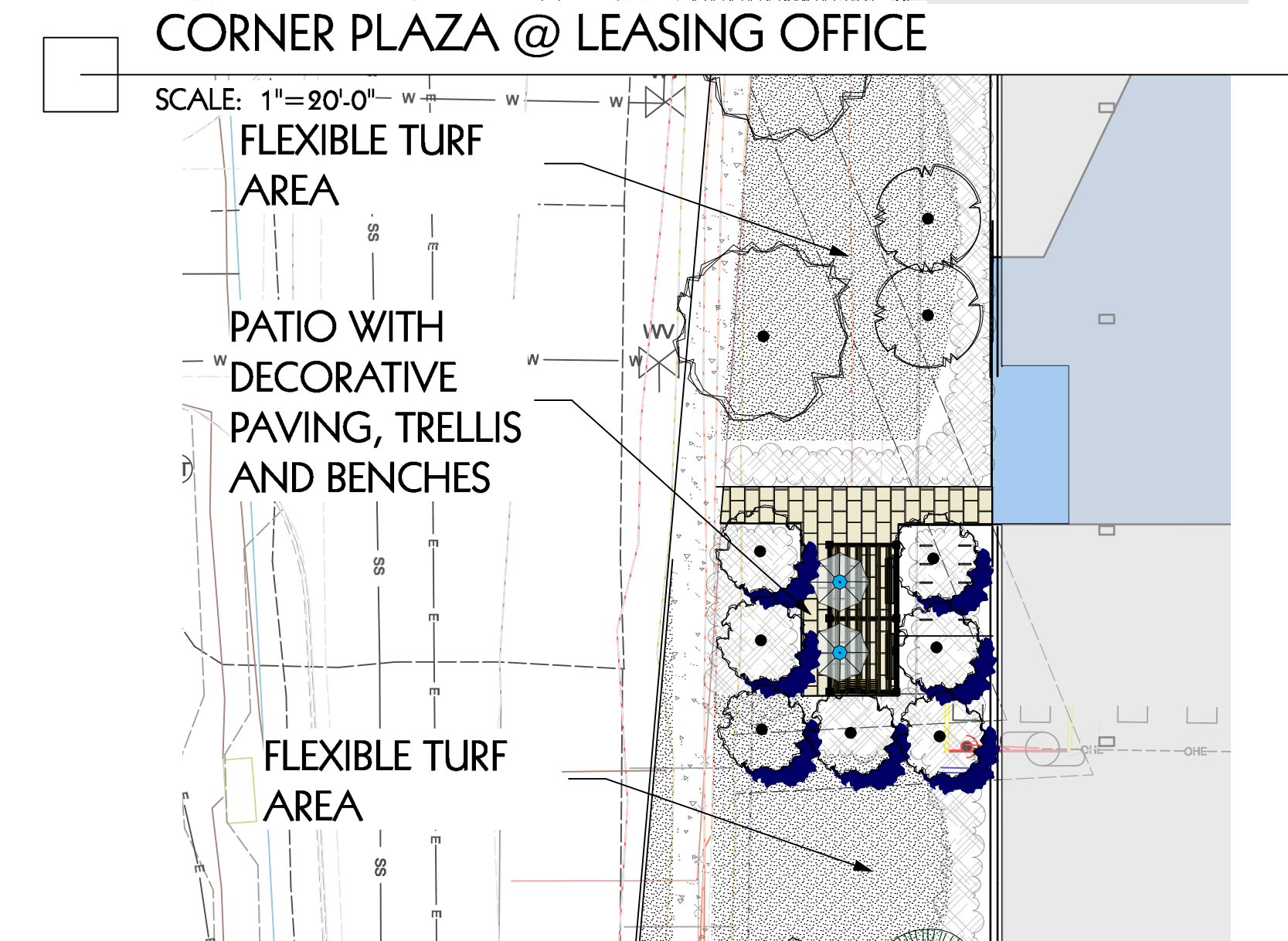
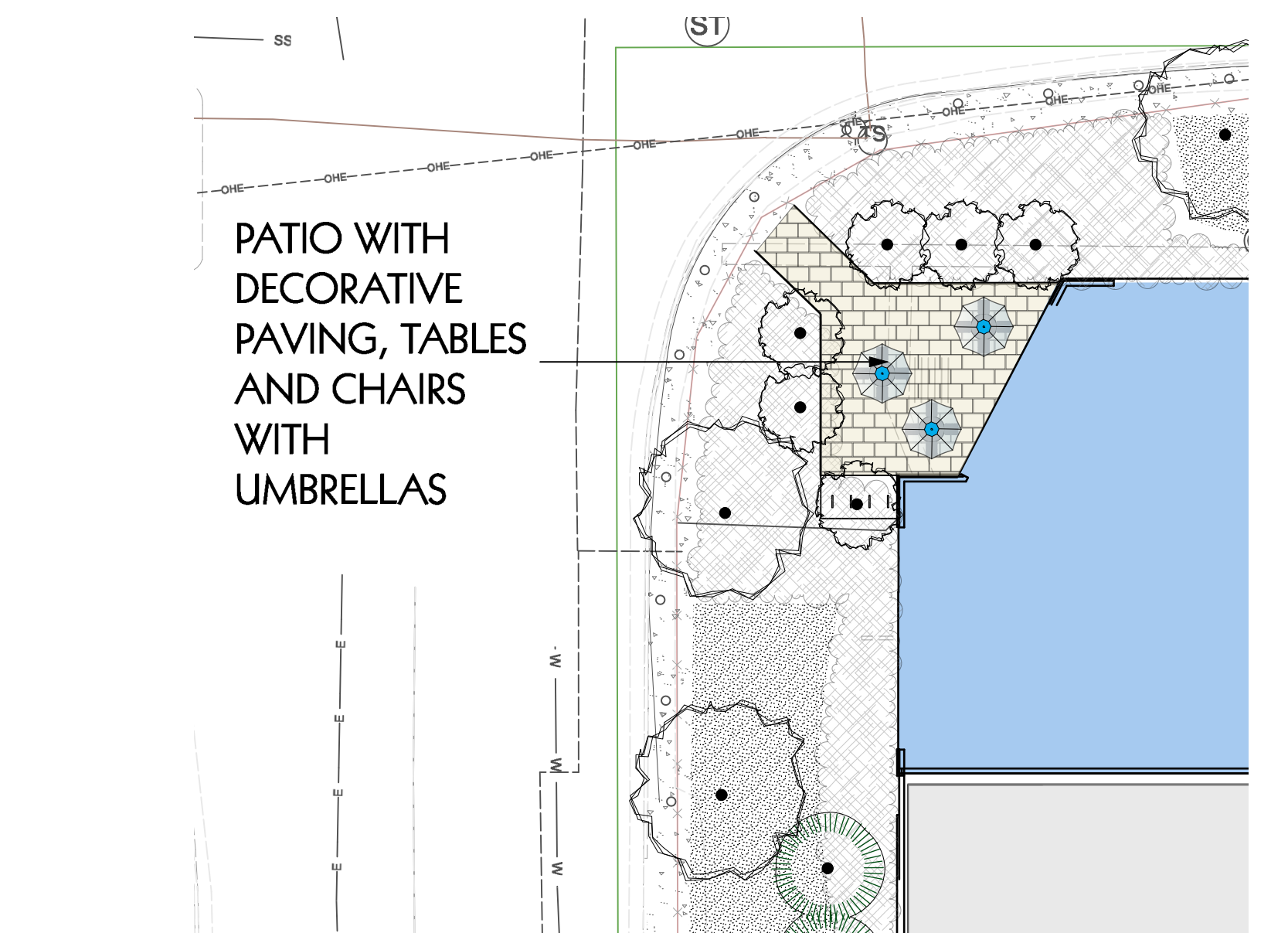
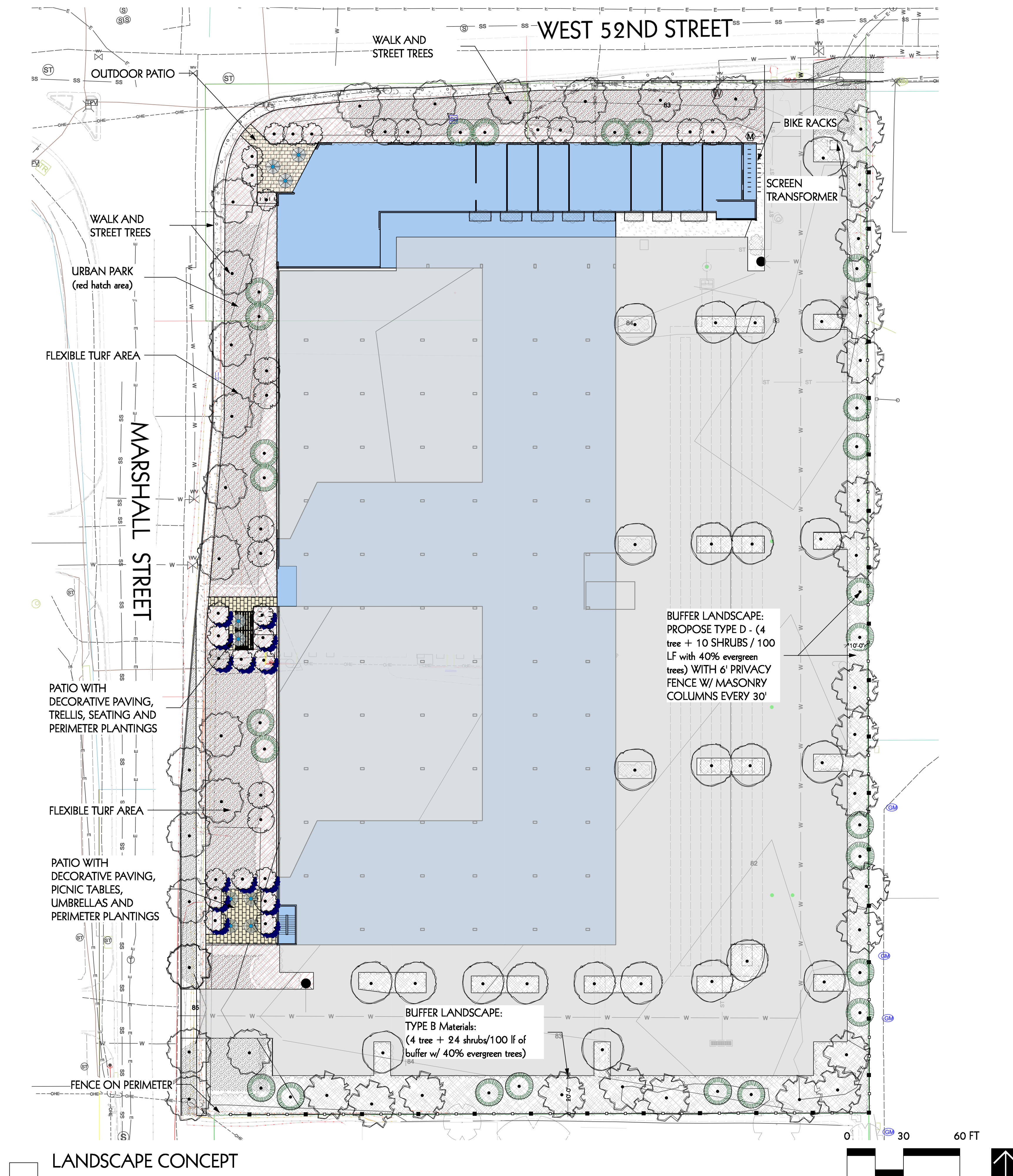
DATE | ISSUE

07.31.2020 | 1ST SUBMITTAL

10.16.2020 | REVISED CITY SUBMITTAL

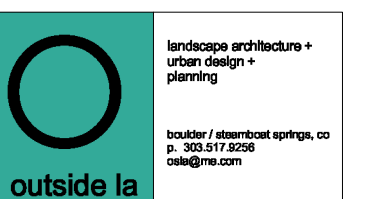
GRAD
UTILITY
SHEET

4



NOTES:

1. ALL PLANTS TO BE SELECTED FROM ARVADA APPROVED PLANT LIST
2. FINAL PLANS TO BE STAMPED, SIGNED & DATED BY CO. REGISTERED LANDSCAPE ARCH.

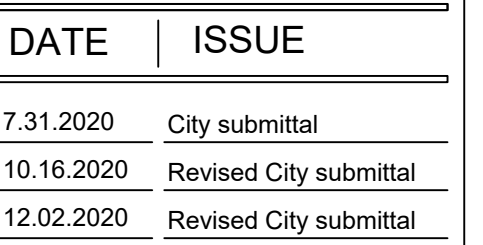
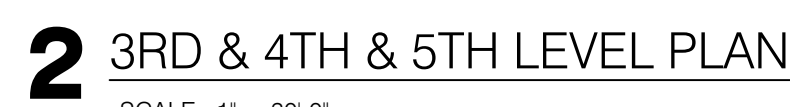


DATE	ISSUE
7.31.2020	City submittal
10.16.2020	Revised City submittal
12.02.2020	Revised City submittal #2

**LANDSCAPE
CONCEPT PLAN**

5190 MARSHALL, ARVADA, CO 80002

WEST 52nd Ave



SHEET 6 OF 10

PROJECT NO. PA2020-0021

5190 MARSHALL, ARVADA, CO, 80002



2 52nd AVE (NORTH) ELEVATION

SCALE: 1/16" = 1'-0"



PROJECT NO. PA2020-0021

CLEAR CREEK COMMONS
SITE DEVELOPMENT PLAN
5190 MARSHALL, ARVADA, CO, 80002



1 EAST ELEVATION
SCALE: 1/16" = 1'-0"



2 SOUTH ELEVATION
SCALE: 1/16" = 1'-0"



DATE	ISSUE
7.31.2020	City Submittal
10.16.2020	Revised City Submittal
12.02.2020	Revised City Submittal

BUILDING
ELEVATIONS

SHEET 8 OF 10

PROJECT NO. PA2020-0021

CLEAR CREEK COMMONS
SITE DEVELOPMENT PLAN
5190 MARSHALL, ARVADA, CO, 80002



1 5 STORY OPTION / AERIAL VIEW FROM 52nd AND MARSHALL



2 5 STORY SOUTHWEST PERSPECTIVE FROM MARSHALL



3 5 STORY NORTH EAST PERSPECTIVE FROM W. 52nd AVE



DATE	ISSUE
7.31.2020	City Submittal
10.16.2020	Revised City Submittal
12.02.2020	Revised City Submittal

5 STORY OPTION
3D VIEWS

SHEET 9 OF 10

PROJECT NO. PA2020-0021

CLEAR CREEK COMMONS
SITE DEVELOPMENT PLAN
5190 MARSHALL, ARVADA, CO, 80002



1 4 STORY OPTION / AERIAL VIEW FROM 53ND AND MARHALL



2 4 STORY SOUTHWEST PERSPECTIVE FROM MARSHALL



3 4 STORY NORTH EAST PERSPECTIVE FROM W. 52nd AVE



DATE	ISSUE
7.31.2020	City Submittal
10.16.2020	Revised City Submittal

4 STORY OPTION
3D VIEWS

SHEET 10 OF 10

PROJECT NO. PA2020-0021

5190 Marshall / Clear Creek Commons

Meeting Notes on January 7, 2020 Zoom Neighborhood Meeting

The following details the major items from the zoom meeting held by Ilan Salzberg, principal, Brew Lab LLC, as redevelopers of the parcel at 5190 Marshall in coordination with Jacob Nitchals on behalf of Arvada Planning and Zoning.

In attendance via zoom were the immediately adjacent neighbors of the site to the East and South, both in unincorporated Jefferson County and other interested neighbors owning land in the vicinity.

The project received general support as a needed enhancement and welcome upgrade for the area from all but the neighbor to the east.

There was substantial discussion as to the need for new asphalt grading and bike lanes on Marshall and forethought in roadway design to address traffic concerns. There was substantial additional discussion as to road widening and turn out lanes that was beyond the scope of the Clear Creek Commons project but nonetheless received significant attention. Despite the concern, neighbors acknowledged that currently no one had experienced waits of more than one light cycle at the 52nd and Marshall intersection and traffic does flow rather well. There were some concerns raised as to additional traffic impacts of the proposed residential use. Neighbors were referred to the transportation study included in the Clear Creek Commons Application for impacts from the proposed project.

The neighbor to the east raised concerns over the location of the proposed curb cut 35 feet west of the property line and this impact on her property. The developer and the city explained that the proposed curb cut was placed in its location on consultation with transportation engineering as best practice away from the existing intersection. The significant buffering between the adjacent property and the proposed curb cut was shown to little effect.

The neighbor to the east further raised concern as to the shade impact of the new structure. The developer showed the attached study detailing the developer's decision to pull the property 58' off the east property line. The solar impacts on the adjacent property are far greater from the required tree planting 5' off the property line. The developer explained that other site uses, including industrial would result in building a 35' building at 10' from the property line with far more dramatic impacts, similar to the Clear Creek Business Park that abuts the neighbor property on the south and west. The Developer further explained that the bulk of the proposed building is located in almost precisely the same location as the tallest existing buildings on site. This did little to change this neighbor's position that they would bear the brunt of the impacts of this redevelopment.

The neighbor asked at length if the owners of the Clear Creek Business Park had been notified of the meetings and plans. It was confirmed that they were notified and all required processes had been followed.

The other neighbors consistently wished the project success and appreciated the thoughtful design. There was some focus and aspiration that the greenhouse project to the west of Marshall be redeveloped as well. This again was outside the focus of the night's meeting.

The meeting lasted One hour and fifteen minutes.

PLANNING COMMISSION MEETING MINUTES

January 19, 2021

Synopsis of Meeting Minutes from January 19, 2021 Planning Commission

DA2020-0077 A Conditional Use Application For Clear Creek Commons, Approximately Located At The Southeast Corner Of West 52nd Avenue And Marshall Street

Mr. Owens entered into the record the Staff Report DA2020-0077 dated January 19, 2021, affidavit of mailing, posting log and public comment that was received via email.

Mr. Nitchals gave a brief overview of the project and the application for a Conditional Use Application. Staff recommends approval.

Mr. Salzberg, applicant, gave an overview of the design of the proposed project. He discussed the details and constraints of the site and nearby areas. He explained the reasons that the project fits the requirements for a Conditional Use Application.

Mr. Owens opened the hearing for comments from the public.

PUBLIC COMMENT

IN FAVOR

Brandon Figliolino, emailed his comment and stated he supports the conditional use permit for the Clear Creek Commons project. I think it will bring much needed housing to this area of the city, and in reading the public hearing meeting summary, believe the developer did a good job of connecting with nearby residents to put forth a project that benefits everyone.

IN OPPOSITION

Pauline Spano, resident to the east of the proposed project. She referenced recorded documents and stated she has an easement over the adjacent property. She is opposed to this project, because they have greenhouses which are currently not being used. They have been there for 78 years and if the five story building goes in, it will hugely impede on them as far as sunlight and the view.

Nancy Young, resident, discussed her concerns that 52nd and Marshall is retail commercial in nature and that residential is out of place on that street. She expressed concerns about a Kombucha Brewery and retail that will be lost with redevelopment of the site. She also expressed her concern about the proposed project being vague and uncertain. She agrees that affordable housing is needed in Arvada. She stated, that this project should be approved only with the condition that it be affordable housing.

Roxy Vendena, resident, had no comment.

PLANNING COMMISSION MEETING MINUTES

January 19, 2021

APPLICANT REBUTTAL

Mr. Salzberg stated that Ms. Spano brought up the asserted easement years ago and his title company does not recognize the easement. He said that documentation had been provided to Mr. Nitchals. He responded to Ms. Young's comment about the Kombucha permit stating there is no active license for a Kombucha user at the old farm house. He stated this area is ideal for retail; however, retail follows roof tops. He responded to the concerns about the existing greenhouses stating there will be a nominal impact on solar access.

Mr. Owens closed public comment.

QUESTIONS FROM THE COMMISSION

Mr. Griffith stated his appreciation of the work put into this project, acknowledging there are benefits to this project. He believes in the concept of retail following rooftops, but he also knows retail follows activation and public life. He recommended activating the ground floor of the building along Marshall St. He approves of the smaller workforce housing development and affordable housing. He also recommends looking at ground level retail, such as a coffee shop. He asked what size the units will be.

Mr. Salzberg responded 36 two-bedroom units with the remainder approximately evenly split between one-bedroom and studios. Mr. Salzberg agrees with the recommendation regarding ground level retail and stated that the lobby is large enough that they could consider it in the future if it is conducive to the area.

There was discussion between Mr. Griffith and Mr. Owens, to add a condition that approval be based on the project receiving Low Income Housing Tax Credits.

Mr. Gay asked Staff, is there a concern on the mixed use zoning being retail and housing.

Mr. Nitchals responded City Staff evaluates these on case-by-case bases. That is why Council required a Conditional Use for developments with a residential land use in the Mixed-Use zone districts with the Land Development Code update. He reiterated what mixed use is.

Mr. Magee asked the applicant if the tax credit is part of the financial strategy to finance the project.

Mr. Salzberg responded the project could go two different directions. He stated if LIHTCs are available, this would be the preference. If not, I would do a market rate project.

PLANNING COMMISSION MEETING MINUTES

January 19, 2021

There was further discussion between Mr. Magee and Mr. Salzberg on how the project would have to be 100% LIHTCs. Mr. Salzberg would like to move forward with the project even if LIHTCs is not available. Mr. Magee applauded Mr. Salzberg's willingness to address the existing neighbor's concerns.

Mr. Magee asked staff if Jefferson County has been contacted in any aspect of this project.

Mr. Nitchals responded Jefferson County was involved in the rezoning of this property to MX-S. They will be a referral agency when the actual site plan application comes in. He stated they have not been involved in the Conditional Use Application.

Mr. Magee added a few comments regarding the traffic study. Just to the south which is Wheat Ridge, traffic will bottle neck. He agrees with Mr. Owens to add the condition regarding affordability. He stated if this project is not granted LIHTCs, the applicant would be allowed to apply for a new Conditional Use for a four-story market rate project.

Mr. Griffith asked Mr. Salzberg for a ballpark timeframe of having clarity on which way the project may go.

Mr. Salzberg responded it's a cart before the horse situation. We need thumbs up from the City, before the Colorado Housing and Finance Authority (CHFA) will award the project LIHTCs. He expressed his hope for approval to move forward with either option, LIHTCs or market rate.

Commissioners agreed that workforce housing would be highly desirable in this area.

Mr. Owens expressed his concern on Criteria 6, the mitigation on the adverse impacts on the surrounding area. He stated that no one has the right to a view and he understands the Spano Family has been there for years. His concern is regarding the solar impact and that a solar study has not been performed on the proposed building. The current use is for greenhouses on the adjacent property. He is not comfortable going forward without a solar study. His other concern is if the commission grants a Conditional Use Application then any type of housing could be built here.

The Commissioners had discussion on the solar study/impact and the use by right aspect of the Conditional Use. A question was raised on how long the greenhouses have been inactive. If it's been 20 to 30 years, then it's unlikely that they will be used in the future.

Mr. Salzberg commented he could obtain a solar study, but a setbacks study was done in lieu of a solar study.

PLANNING COMMISSION MEETING MINUTES

January 19, 2021

Mr. Owens commented Mr. Salzberg is asking for the Commission to grant this conditional use application. However, the Commission has to balance what is the best use for Arvada and that neighborhood. He stated we need affordable housing in Arvada and if that is obtainable that is a tradeoff.

Ms. Connell expressed the same concern as Mr. Owens.

Mr. Griffith asked Staff if there are other affordable housing projects that could be looked at to compare the cart before the horse situation that Mr. Salzberg mentioned and how we got around that on those projects.

Mr. Smetana responded there have been three different projects that applied for Low Income Housing Tax Credits through CHFA. In all three cases CHFA wanted a letter from the City saying it is approvable and we provided it in those cases. CHFA is hesitant to grant funds for a project that doesn't have at least the zoning in place. Allison Village which is MX-U also, was a Conditional Use Application and the City did grant it.

Mr. Magee expressed his concern on having one vote for two projects, tax credit vs. market rate.

Mr. Smetana brought up the criteria for a Conditional Use Application and advised the Commission that they are being asked if a residential use is appropriate at this location and are there factors that need to be migrated to allow that residential use. The actual site design would be reviewed at the site plan level. Should the City Council approve the Conditional Use Application.

MOTION:

It was moved by Mr. Magee, that DA2020-0077, a Conditional Use Application for Clear Creek Commons, approximately located at the southeast corner of West 52nd Avenue and Marshall Street, be recommended to City Council for approval.

This motion is based on the findings of fact and approval criteria on Pages 8 and 9 of the Staff Report.

DISCUSSION OF MOTION DA2020-0077

Mr. Griffith motioned to amend the motion to include a condition that the applicant achieves the Low Income Housing Tax Credits, LIHTCs to move forward.

The following votes were cast on the amended motion:

Those voting Yes: Owens, McCarron, Gay, Connell, Griffith, Magee, Hannan

Those voting No: None

Those absent: None

PLANNING COMMISSION MEETING MINUTES

January 19, 2021

The motion carried 7-0.

Mr. Owens explained that they are voting to recommend approval of the Conditional Use Application, with the condition that the tax credits for affordable housing are required.

DISCUSSION OF THE AMENDED MOTION DA2020-0077

Mr. Griffith stated his appreciation to the applicant for doing business in Arvada.

Mr. Owens suggested acquiring a solar study so it could be reviewed at City Council. He stated the reason he supports the amendment is because of Criteria 4.

The following votes were cast on the motion:

Those voting Yes: Owens, McCarron, Gay, Connell, Griffith, Magee, Hannan

Those voting No: None

Those absent: None

The motion carried 7-0.

Mr. Owens explained that the motion carried as amended.



REPORT FROM CITY COUNCIL

AGENDA ITEM
12.A.

DATE: March 1, 2021

SUBJECT: Council Committee Reports

Report in Brief

City Council members are appointed to various committees and boards as set out on the attached listing. As meetings are held, individual council members will report back to the full City Council any relevant discussions and issues that occurred.

Prepared by:

Janet Newman, Administrative Specialist

Reviewed by:

Approved by:

Enclosure, exhibits & attachments required to support the report

Council Member	Committee
Marc Williams	Arvada Urban Renewal Authority E-470 Authority (alternate) Jefferson Parkway Public Highway Authority Northwest Parkway Authority (Associate Member) (alternate) Urban Drainage and Flood Control District West Connect Coalition *Metro Mayors Caucus
Dot Miller	Adams County Economic Development Association Arvada Municipal Court/Judicial Committee CML Policy Committee Jefferson County Community Corrections Board (alternate) Smart City Advisory Committee
Bob Fifer	Apex Coordinating Committee Arvada Fire Protection District Coordinating Committee Arvada Transportation Committee Denver Regional Council of Governments Jefferson County R-1 Schools Coordinating Committee Jeffco Transportation Action & Advisory Group (JEFFTAAG) Smart City Advisory Committee
Nancy Ford	Arvada Center for the Arts and Humanities Arvada Sustainability Advisory Committee Arvada Visitors Center Committee (alternate) Rocky Flats Stewardship Council
David Jones	E-470 Authority (alternate) Jefferson County Community Corrections Board Jefferson County R-1 Schools Coordinating Committee Jefferson Economic Development Council (JEDC) Jefferson Parkway Public Highway Authority Northwest Parkway Authority (Associate Member) (alternate) West Connect Coalition (alternate)
John Marriott	Adams County Economic Development Association (alternate) Apex Coordinating Committee Arvada Audit Committee Arvada Economic Development Association Board Arvada Municipal Court/Judicial Committee CML Policy Committee Denver Regional Council of Governments (alternate) Jeffco Transportation Action & Advisory Group (JEFFTAAG) (alternate) Olde Town Business Improvement (BID) District Rocky Mountain Metropolitan Airport Community Noise Roundtable
Lauren Simpson	Arvada Audit Committee Arvada Fire Protection District Coordinating Committee Arvada Visitors Center Committee Smart City Advisory Committee

*Asterisked committees are not appointed by Council



REPORT TO CITY COUNCIL

AGENDA ITEM
13.A.

TO: THE HONORABLE CITY COUNCIL

DATE: March 1, 2021

SUBJECT: Review of Future Workshops and Presentations

Report in Brief

The City Manager's Office maintains a list of upcoming workshops and presentations to be scheduled for City Council meetings. During City Manager Reports, at the end of City Council business meetings, City Manager, Mark Deven, will review with City Council the tentative schedule and make any adjustments necessary.

Prepared by:

Janet Newman, Administrative Specialist

Reviewed by:

Approved by:

Rachel Morris, City Attorney 2/16/2021

Lorie Gillis, Deputy City Manager 2/17/2021

Mark Deven, City Manager 2/17/2021

Enclosure, exhibits & attachments required to support the report

2021 CITY COUNCIL WORKSHOPS, PRESENTATIONS AND RETREATS (TENTATIVE)

WORKSHOPS	Date	Lead
Waste Hauling at Business Meeting	March 1	CMO
Olde Town Street Closures As a result of the 2020 COVID-19 pandemic many businesses, and restaurants in particular, needed to look for ways to increase their seating capacity outside. In May, 2020 the City Team began working on a plan that closed several streets in Olde Town, for what was intended to be a temporary period of time. The closure in Olde Town started on June 12th and was originally stated to end on Labor Day. As the pandemic continued, the need to continue the Olde Town street closure was identified. The current deadline for the extension of the closure in Olde Town is March 31, 2021. Feedback from the closures has been largely positive and requests have come from the BID and community in general to continue the closures past the pandemic. The original setup of the closures was done with temporary barriers. If the closures are to continue, improvements need to be made to enhance the look of the closures. The plans being presented tonight will consider a "semi-permanent" design which does not make any significant changes to the overall public infrastructure of Olde Town, but enhances the closures in order to integrate the look of the closures into the historic district. Should the City Council want to see this closure happen on a more permanent basis, more work would need to be done from a public safety, fire protection, infrastructure, and community outreach perspective. That work would be done while the streets were closed with the "semi-permanent" configuration. Next Step: Receive feedback from the City Council on the layout, design, and duration of the proposed closures. Discuss with City Council their thoughts related to moving toward a permanent closure of streets in Olde Town.	March 8	CED
Housing Strategies – 45 minutes	March 22	VCN
Metro Districts – 45 minutes Metro districts and their use of financing to fund public infrastructure has been a hot button topic over the past several years. With the use of metro districts increasing in and around Arvada, it is important to insure that the City's foundational documents related to Metro Districts reflect both the current best practices related to the use of Metro Districts and that the Ordinance and model service plan reflects the City Council's vision for what the City's documents should contain before the City considers new metro districts in Arvada. During this workshop we will discuss an updated draft to the City's metro district ordinance and model service plan and seek feedback as to the documents proposed content. Next Steps: Based on City Council feedback, update the proposed metro district ordinance and model service plan and bring forward to City Council for a public hearing for adoption.	March 22	CED
Waste Hauling Update (tentative)	March 22	CMO
Tobacco and Vaping	April 12	CMO
Waste Hauling Update (tentative) (move ADA here if this is not going)	April 12	
Bond Project Update – 45 Minutes (keep the rest of the agenda light)	April 26	PW
Waste Hauling Update	May 10	
Americans with Disabilities Act Self-Evaluation and Transition Plan (No other workshops)	May 24	PW
	June 14	
	July 12	
	July 26	
	Aug 9	
	Aug 23	
	Sept 27	
	Oct 11	

Communications Update	Oct 25	CMO
	Nov 22	
	Dec 13	
Traffic Violation Fee	TBD	PW
Financial Scenarios for Street Maintenance Deficit/Options for Increasing Maintenance Funds Engage City Council in a discussion around the current street maintenance needs and how the City might fund them. This will include revenue enhancements, future allocations and expenditure realignments.	TBD	PW/Fin/ CMO
Fiber Master Plan The Fiber Master Plan which is also called Arvada Fiber Optic Network (AFON), was first presented to City Council 4/10/2017. City Councils had set a strategic goal to build a fiber network to enable high speed/real-time connectivity to city facilities and assets in order to enhance city operations. This workshop is intended to brief City Council as to the progress of the AFON build out. Updates are intended to cover conduit installation progress, fiber installation progress, current collocate opportunities, IGA member updates, and connections to current assets (city buildings, traffic, signals, utilities, radio, etc.).	TBD	PW
Community Survey Update The purpose of this item is to continue a discussion with Council about the Community Survey results and what the City team is doing to apply what is learned. Discussion will include an update on action plans targeting key drivers of the City's 5-star rating as well as how Worksystems are targeting specific measures.	TBD	CMO
Affordable Housing Presentation	TBD	VCN
Problem Properties	TBD	P.D.
Water Storage – Plan B (include with master plan presentation)	TBD	Utilities
Activation of Historical Assets	TBD	VCN
N.W. Arvada	TBD	CED
Bond Project Update	TBD	PW
Body Worn Cameras	TBD	PD
Customer Service Philosophy	TBD	CMO
Ask Arvada Update	TBD	CMO
Diversity and Equity Committee	TBD	CMO
COUNCIL JOINT MEETINGS/DINNERS:		
Denver Water Board Apex Board AURA Board Arvada Center Board–Per Coop Agreement - Annually after October 1 of each year Jefferson Parkway Meeting with Jeffco and Broomfield Council Annual Retreat		