



City of Arvada

City Council Agenda

NOVEMBER 27, 2023
CITY COUNCIL CHAMBERS
Regular Business

Councilmembers:

Lauren Simpson, Mayor
Randy Moorman, Mayor Pro-Tem
Lisa Feret, At large
Sharon Davis, At large
Shawna Ambrose, District 2
Bob Fifer, District 4
John Marriott, District 3

Staff Members Usually Present:

Lorie Gillis, City Manager
Linda Haley, Deputy City Manager
Don Wick, Deputy City Manager
Rachel Morris, City Attorney
Jacqueline Rhoades, Director of Public Works
Sharon Israel, Director of Utilities
Jessica Garner, Director of Community & Econ. Dev.
Bryan Archer, Director of Finance
Gabiella Bommer, Director of Human Resources
Rachael Kuroiwa, Director of Communications & Engagement
Kristen Rush, City Clerk

Info: 720-898-7550

**THIRD FLOOR CONFERENCE ROOM
EXECUTIVE SESSION
4:00 P.M.**

Legal Advice, Pursuant to CRS 24-6-402(4)(b) relating to new council members

**CITY COUNCIL MEETING – CITY COUNCIL CHAMBERS
6:00 PM**

1. Call to Order - 6:00 PM
2. Moment of Reflection and Pledge of Allegiance - Mayor Simpson
3. Roll Call of Councilmembers
4. Approval of Minutes
 - A. October 16, 2023 City Council Meeting
 - B. October 23, 2023 City Council Meeting
 - C. November 13, 2023 City Council Meeting
5. Recognitions and Communications
 - A. Recognition of Public Works Department and Facilities Management Team - Presented by Councilmember Marriott
 - B. Recognition of the Arvada West Girls Flag Football Team - Presented by Councilmember Fifer
6. Presentations
 - A. Third Quarter Financial Presentation
7. Public Comment on Issues not Scheduled on Agenda - Three Minute Limit

8. New Business

A. Consent Agenda

1. R23-101, A Resolution Accepting an Annexation Petition Concerning Canyon Pines, Triangle Property (Annexation No. 1), a Parcel of Land Generally Located at 52 Canyon Pines Drive, Finding Said Petition Substantially Compliant with C.R.S. 31-12-107(1), and Setting a Public Hearing for January 8, 2024, 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
2. R23-102, A Resolution Accepting an Annexation Petition Concerning Canyon Pines, Debrouillarde Pump Station (Annexation No. 2), a Parcel of Land Generally Located at 52 Canyon Pines Drive, Finding Said Petition Substantially Compliant with C.R.S. 31-12-107(1), and Setting a Public Hearing for January 8, 2024, 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
3. R23-103, A Resolution Authorizing an Agreement by and between the City of Arvada and Native Sun Construction, Inc. for the Ralston Trunk Sewer Improvements - Ward and 69th Project No. 17-SR-07, in an Amount Not to Exceed \$5,695,587.67, Project No. 17-SR-07
4. R23-104, A Resolution Authorizing Amendment No. 1 To "An Agreement Between The City Of Arvada and Kennedy/Jenks Consultants, Inc. for Professional Design Services" for Additional Engineering Design and Construction Phase Services, Thereby Increasing the Contract Amount From \$425,472.00 to an Amount not to Exceed \$932,028.00
5. R23-105, A Resolution Authorizing Change Order No. 4 to 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 \$805,166.86 for a revised total contract amount not to exceed \$17,089,634.49
6. R23-106, A Resolution Granting a Non-Exclusive Public Utility Easement to the Public Service Company of Colorado (D/B/A Xcel Energy) for the Construction of Utility Lines for the Meyers' Pool Replacement Facility Located at 7904 Carr Drive
7. R23-107, A Resolution Authorizing A Lease Agreement By And Between the City of Arvada And The Arvada Gardeners for the Property Located At 9195 West 57th Avenue, Also Known As The Arvada Community Garden
8. R23-108, A Resolution Authorizing A Lease Agreement By And Between The City of Arvada And The Horse Protection League For Certain Portions Of The Property Located At Long Lake Ranch
9. R23-109, A Resolution Approving An Agreement By And Between The City of Arvada And R.G. Brinkmann Company (D/B/A Brinkmann Constructors) For Construction Of The Garrison Garden Paseo In An Amount Not To Exceed \$3,608,191.87

B. Resolutions

1. R23-110, A Resolution Authorizing an Intergovernmental Agreement for Provision of Juror List by and between the City of Arvada and the State of Colorado Judicial Department

C. Ordinances (First Reading) - None

9. Other

10. Public Hearings - 6:15 PM - None

11. Public Comment - Five Minute Limit

12. Reports from City Council

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 OCTOBER 16, 2023

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

This Arvada City Council meeting was a hybrid meeting using webinar technology. Mayor Williams, Councilmember Feret, Councilmember Fifer, Councilmember Marriott, Councilmember Moorman and Councilmember Simpson were all present in chambers.

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, Councilmember Lisa Feret, Councilmember Bob Fifer, Councilmember John Marriott, Councilmember Moorman, Councilmember Lauren Simpson

Councilmember Fifer moved to excuse Mayor Pro Tem David Jones from the meeting.

Also Present: Lorie Gillis, City Manager, Rachel Morris, City Attorney; Linda Haley, Deputy City Manager; Don Wick, Deputy City Manager; Bryan Archer, Director of Finance; Rob Smetana, Acting Director of Community and Economic Development; Rachael Kuroiwa, Director of Communications and Engagement, and Kristen Rush, City Clerk.

4. Approval of Minutes –

A. October 2, 2023, City Council Meeting

The minutes stand approved.

5. Recognition and Communication –

A. Recognition of Dr. Michele Haney, Red Rocks Community College - Presented by Mayor Marc Williams

Mayor Williams read the proclamation and thanked Ms. Haney for her years of service to the community.

B. Recognition of Macron Select Basketball Team - Presented by Councilmember Marriott

Councilmember Marriott read the proclamation and said that the Macron Select 14 and Under Girls Basketball Team is part of the B&B Basketball Academy which is made up of players from Arvada and the surrounding area. The team recently traveled to Slovenia and Italy to participate in an International Basketball Academy showcase where they represented the United States and

the City of Arvada.

Macron Select is led by Coach George Grkinich who takes pride in his players excelling athletically, academically and by serving as leaders in their schools and their communities. The team was hosted by the Mayor of Sezana, Slovenia, before they competed against the 17 and under Slovenian National Team.

Macron Select is currently planning a return to Europe next Summer where they will compete against Croatia, Bosnia and Slovenia in a weekend tournament. The City of Arvada proudly recognizes the Macron Select team in their work of international competition as Arvada Ambassadors.

6. Presentations – None

7. Public Comment –

A. James Cillessen, Arvada resident, addressed council regarding a break in at his business.

8. New Business

A. Consent Agenda

1. R23-084 A Resolution Adopting the Amended Administrative Fee Schedule for Building Safety Division Permits and Services Pursuant to Chapter 18, Buildings and Building Regulations, of the Arvada City Code
2. R23-085 A Resolution Adopting the Amended Fee Schedule for Land-Use Pursuant to Chapter 74, Planning and Development, of the Arvada City Code
3. R23-086 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
4. R23-087 A Resolution Authorizing an Agreement By and Between the City of Arvada and AGL Construction Company for Services Related to the Utilities Service Line Investigation and Replacement Project in an Amount Not to Exceed \$640,000.00 for All Phase I Services
5. R23-088 A Resolution Authorizing Change Order No. 2 to an Agreement by and between the City of Arvada and Ulteig Operations, LLC, for Owner's Representative Services for the West 72nd Avenue- Kipling Street to Simms Street Project in an Amount not to Exceed \$2,085,552.00" for a Revised Total Contract Amount not to Exceed \$2,614,519.00
6. R23-089 A Resolution Authorizing a Four Month Extension of Two Leases by and Between the City of Arvada and The United States Postal Service for Lease of The Building At 5885 Allison Street and For Lease of The Parking Lot At 5886 Ammons Street

Councilmember Marriott moved that R23-084, A Resolution Adopting the Amended Administrative Fee Schedule for Building Safety Division Permits and Services Pursuant to Chapter 18, Buildings and Building Regulations, of the Arvada City Code; R23-085, A Resolution Adopting the Amended Fee Schedule for Land-Use Pursuant to Chapter 74, Planning and Development, of the Arvada City Code; R23-086, 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; R23-087, A Resolution Authorizing an Agreement By and Between the City of Arvada and AGL Construction Company for Services Related to the Utilities Service Line Investigation and Replacement Project in an Amount Not to Exceed \$640,000.00 for All Phase I Services; R23-088, A Resolution Authorizing Change Order No. 2 to an Agreement by and between the City of Arvada and Ulteig Operations, LLC, for Owner's Representative Services for the West 72nd Avenue- Kipling Street to Simms Street Project in an Amount not to Exceed \$2,085,552.00" for a Revised Total Contract Amount not to Exceed \$2,614,519.00; R23-089, A Resolution Authorizing a Four Month Extension of Two Leases by and Between the City of Arvada and The United States Postal Service for Lease of The Building At 5885 Allison Street and For Lease of The Parking Lot At 5886 Ammons Street, be approved.

The following votes were cast on the Motion:

Those voting Yes: Williams, Feret, Fifer, Marriott, Moorman, Simpson

Those Absent: Jones

The Motion was Approved

B. Resolutions -

1. R23-090 A Resolution Authorizing the Third Amendment to the Intergovernmental Agreement By and Between the Urban Drainage and Flood Control District D/B/A Mile High Flood District and the City of Arvada for Final Design, Right-of-Way Acquisition, and Construction of Drainage and Flood Control Improvements for Ralston Creek at Croke Canal (Presenter: Melanie Walter, Engineering Manager)

Melanie Walter, Engineering Manager, reviewed this resolution with council.

Councilmember Feret moved that R23-090, A Resolution Authorizing the Third Amendment to the Intergovernmental Agreement By and Between the Urban Drainage and Flood Control District D/B/A Mile High Flood District and the City of Arvada for Final Design, Right-of-Way Acquisition, and Construction of Drainage and Flood Control Improvements for Ralston Creek at Croke Canal, be approved.

The following votes were cast on the Motion:

Those voting Yes: Williams, Feret, Fifer, Marriott, Moorman, Simpson

Those Absent: Jones

The Motion was Approved

2. R23-091 A Resolution Authorizing an Intergovernmental Agreement By and Between the Urban Drainage and Flood Control District d/b/a Mile High Flood District and the City of Arvada, Regarding Design and Construction of Drainage and Flood Control Improvements for Van Bibber Creek from Oak Street to Kipling Parkway (Presenter: Melanie Walter, Engineering Manager)

Melanie Walter, Engineering Manager, reviewed this resolution with council.

Councilmember Simpson moved that R23-091, A Resolution Authorizing an Intergovernmental Agreement By and Between the Urban Drainage and Flood Control District d/b/a Mile High Flood District and the City of Arvada, Regarding Design and Construction of Drainage and Flood Control Improvements for Van Bibber Creek from Oak Street to Kipling Parkway, be approved.

The following votes were cast on the Motion:

Those voting Yes: Williams, Feret, Fifer, Marriott, Moorman, Simpson

Those Absent: Jones

The Motion was Approved

C. Ordinances (First Reading) – none

9. Other - None

10. Public Hearings –

A. CB23-025 An Ordinance Amending Various Sections of Chapter 102, Utilities, of the Arvada City Code Pertaining to Water Users Rates and Bimonthly Service Charges (Ordinance No. 4858) (Presenter: Sharon Israel, Director of Utilities)

Mayor Williams opened the public hearing on CB23-025.

Sharon Israel, Director of Utilities, reviewed this ordinance with council.

Testimony: Wilma Curry, Arvada resident

Mayor Williams closed the public hearing.

Councilmember Moorman moved that CB23-025, An Ordinance Amending Various Sections of Chapter 102, Utilities, of the Arvada City Code Pertaining to Water Users Rates and Bimonthly Service Charges, be approved on final reading, numbered 4858 and ordered published by title only.

The following votes were cast on the Motion:

Those voting Yes: Williams, Feret, Fifer, Marriott, Moorman, Simpson

Those Absent: Jones

The Motion was Approved

B. CB23-026 An Ordinance Amending Section 102-206 of Chapter 102, Utilities, of the Arvada City Code Pertaining to Wastewater Users Rates and Bimonthly Service Charges and Section 102-355 of Chapter 102, Utilities, of the Arvada City Code Pertaining to Stormwater Users Rates (Ordinance No. 4859) (Presenter: Sharon Israel, Director of Utilities)

Mayor Williams opened the public hearing on CB23-026.

Sharon Israel, Director of Utilities, reviewed this ordinance with council.

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

Councilmember Fifer moved that CB23-026, An Ordinance Amending Section 102-206 of Chapter 102, Utilities, of the Arvada City Code Pertaining to Wastewater Users Rates and Bimonthly Service Charges and Section 102-355 of Chapter 102, Utilities, of the Arvada City Code Pertaining to Stormwater Users Rates, be approved on final reading, numbered 4859 and ordered published by title only.

The following votes were cast on the Motion:

Those voting Yes: Williams, Feret, Fifer, Marriott, Moorman, Simpson

Those Absent: Jones

The Motion was Approved

C. CB23-027 An Ordinance Appropriating Funds for Fiscal Year 2024 (Ordinance No. 4860)
(Presenter: Bryan Archer, Director of Finance)

1. R23-092 A Resolution Adopting the Budget for Fiscal year 2024
2. R23-093 A Resolution Adopting the 2024 Capital Improvement Fund Budget and Allocating for Specific Projects in 2024
3. R23-094 A Resolution Adopting the Pay Plan for Fiscal Year 2024

Mayor Williams opened the public hearing on CB23-027, R23-092, R23-093 and R23-094.

Lorie Gillis, City Manager, reviewed these items with council.

No one wishing to speak for or against, the public hearings were closed.

Councilmember Simpson moved that CB23-027, An Ordinance Appropriating Funds for Fiscal Year 2024, be approved on final reading, numbered 4860 and ordered published by title only.

The following votes were cast on the Motion:

Those voting Yes: Williams, Feret, Fifer, Marriott, Moorman, Simpson

Those Absent: Jones

The Motion was Approved

Councilmember Simpson moved that R23-092, A Resolution Adopting the Budget for Fiscal year 2024, be approved.

The following votes were cast on the Motion:

Those voting Yes: Williams, Feret, Fifer, Marriott, Moorman, Simpson

Those Absent: Jones

The Motion was Approved

Councilmember Simpson moved that R23-093, A Resolution Adopting the 2024 Capital Improvement Fund Budget and Allocating for Specific Projects in 2024, be approved.

The following votes were cast on the Motion:

Those voting Yes: Williams, Feret, Fifer, Marriott, Moorman, Simpson

Those Absent: Jones

The Motion was Approved

Councilmember Simpson moved that R23-094, A Resolution Adopting the Pay Plan for Fiscal Year 2024, be approved.

The following votes were cast on the Motion:

Those voting Yes: Williams, Feret, Fifer, Marriott, Moorman, Simpson

Those Absent: Jones

The Motion was Approved

- D. CB23-028 An Ordinance Certifying the City of Arvada Mill Levy for 2023 for the Board of County Commissioners for Jefferson and Adams Counties (Ordinance No. 4861) (Presenter: Bryan Archer, Director of Finance)

Mayor Williams opened the public hearing on CB23-028.

Bryan Archer, Director of Finance reviewed these items with council.

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

Councilmember Fifer moved that CB23-028, An Ordinance Certifying the City of Arvada Mill Levy for 2023 for the Board of County Commissioners for Jefferson and Adams Counties, be approved on final reading, numbered 4861 and ordered published by title only.

The following votes were cast on the Motion:

Those voting Yes: Williams, Feret, Fifer, Marriott, Moorman, Simpson

Those Absent: Jones

The Motion was Approved

- E. CB23-029 An Ordinance Repealing and Reenacting Chapter 70, Personnel Rules, of the Arvada City Code (Ordinance No. 4862) (Presenter: Gabriella Bommer, Director of Human Resources)

Mayor Williams opened the public hearing on CB23-029.

Gabriella Bommer, Director of Human Resources, reviewed these items with council.

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

Councilmember Feret moved that CB23-029, An Ordinance Repealing and Reenacting Chapter 70, Personnel Rules, of the Arvada City Code, be approved on final reading, numbered 4862 and ordered published by title only.

The following votes were cast on the Motion:

Those voting Yes: Williams, Feret, Fifer, Marriott, Moorman, Simpson

Those Absent: Jones

The Motion was Approved

11. Public Comment - Five Minute Limit – none
12. City Council Reports –
 - A. Councilmember Simpson discussed the Arvada Center Production of “Beautiful” and said the next production will be “The Laramie Project” and encouraged everyone to see it.
 - B. Councilmember Moorman said that he will be hosting a Coffee Chat on October 27 from 2-4 p.m. at Sweet Bloom, 7745 Wadsworth Boulevard
 - C. Mayor Williams noted the passing of Alan Parker, former AURA Board member and longtime active community member.
13. City Manager Reports –
 - A. Lorie Gillis, City Manager, thanked council and the city team for all their work to get the budget approved.
14. City Attorney Reports – none
15. Adjournment at 7:10 p.m.

Lauren Simpson, Mayor

SEAL:

Kristen R. Rush, City Clerk



SUMMARY OF MINUTES OF THE MEETING OF THE ARVADA CITY COUNCIL HELD OCTOBER 23, 2023

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

This Arvada City Council meeting was a hybrid meeting using webinar technology. Mayor Williams, Councilmember Feret, Councilmember Fifer, Councilmember Marriott, Councilmember Moorman and Councilmember Simpson were all present in chambers.

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 David Jones, Councilmember Lisa Feret, Councilmember Bob Fifer, Councilmember John Marriott, Councilmember Moorman, Councilmember Lauren Simpson

Also Present: Lorie Gillis, City Manager, Rachel Morris, City Attorney; Linda Haley, Deputy City Manager; Don Wick, Deputy City Manager; Bryan Archer, Director of Finance; Rob Smetana, Acting Director of Community and Economic Development; Rachael Kuroiwa, Director of Communications and Engagement, and Kristen Rush, City Clerk.

4. Approval of Minutes – none

5. Recognition and Communication –

A. Recognition of Arvada Service Clubs - Celebrate Community Week - Presented by Councilmember Simpson

Councilmember Simpson said that Celebrate Community Week, an annual collaborative initiative from the service organizations Kiwanis International, Lions International, Optimist International, and Rotary International, took place the week of September 11-17, 2023. To celebrate Community Week, local members of these clubs were encouraged to work together on collaborative service projects and showcase the value of service in our communities.

On September 16, 2023, 29 volunteers from five service clubs observed Celebrate Community Week by volunteering to clean up several miles of Arvada Streets. The service clubs that participated in the clean up effort were the following:

Arvada Jefferson Kiwanis
Arvada Lions
Arvada Sunrise Rotary

Lake Arbor Optimists
Purpose Driven Optimists

The volunteers picked up litter from along the following streets:
W 72nd Avenue between Kipling Street and Carr Street
W 64th Ave (CDOT)
W 80th Ave between Wadsworth Bypass and Kipling Street

City Council presented a Certificate of Recognition to each of the five clubs for their service to the Arvada Community.

6. Presentations – None

7. Public Comment – None

8. New Business

A. Consent Agenda

1. R23-095 A Resolution Authorizing the Issuance of a Purchase Order and Authorizing the City Manager to Sign a Quote in an amount not to Exceed \$707,899.50 to the Statewide Internet Portal Authority (“SIPA”) for the Purchase of Google Workspace Product Licenses
2. R23-099 A Resolution Approving a Contract to Buy and Sell Real Estate by and between the City of Arvada and 4600 W. 60th Avenue, LLC Located at 4600 W. 60th Avenue, Arvada, CO 80003
3. R23-100 A Resolution Authorizing Change Order No. 3 to 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 \$3,577,701.82 for a revised total contract amount not to exceed \$16,284,467.63.

Councilmember Marriott moved that R23-095, A Resolution Authorizing the Issuance of a Purchase Order and Authorizing the City Manager to Sign a Quote in an amount not to Exceed \$707,899.50 to the Statewide Internet Portal Authority (“SIPA”) for the Purchase of Google Workspace Product Licenses; R23-099, A Resolution Approving a Contract to Buy and Sell Real Estate by and between the City of Arvada and 4600 W. 60th Avenue, LLC Located at 4600 W. 60th Avenue, Arvada, CO 80003; R23-100, A Resolution Authorizing Change Order No. 3 to 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 \$3,577,701.82 for a revised total contract amount not to exceed \$16,284,467.63, be approved.

The following votes were cast on the Motion:

Those voting Yes: Williams, Jones, Feret, Fifer, Marriott, Moorman, Simpson
The Motion was Approved

B. Resolutions -

1. R23-096 A Resolution Accepting Submission of the Arvada Police Department Facial Recognition Accountability Report in Accordance with C.R.S. 24-18-302(4) (Presenter: Aaron Jacks, Sr. Asst. City Attorney)

Aaron Jacks, Sr. Asst. City Attorney, reviewed this resolution with council.

Councilmember Marriott moved that R23-096, A Resolution Accepting Submission of the Arvada Police Department Facial Recognition Accountability Report in Accordance with C.R.S. 24-18-302(4), be approved.

The following votes were cast on the Motion:

Those voting Yes: Williams, Jones, Feret, Fifer, Marriott, Moorman, Simpson
The Motion was Approved

2. R23-097 A Resolution Authorizing an Intergovernmental Agreement Between Jefferson County R-1 School District and the City of Arvada on behalf of the Arvada Police Department for the School Resource Officer Program (Presenter: Aaron Jacks, Sr. Asst. City Attorney)

Aaron Jacks, Sr. Asst. City Attorney, reviewed this resolution with council.

Councilmember Moorman moved that R23-097, A Resolution Authorizing an Intergovernmental Agreement Between Jefferson County R-1 School District and the City of Arvada on behalf of the Arvada Police Department for the School Resource Officer Program, be approved.

The following votes were cast on the Motion:

Those voting Yes: Williams, Jones, Feret, Fifer, Marriott, Moorman, Simpson
The Motion was Approved

3. R23-098 A Resolution By City Council for the City of Arvada, Colorado to Approve the Olde Town Arvada Strategic Reinvestment Plan (Presenter: Patty McCartney, Long Range Senior Planner)

Patty McCartney, Long Range Senior Planner, and Ryan Sotirakis, Senior Associate, Urban Design and Planning, reviewed this resolution with council.

Councilmember Moorman asked that Accessibility be added as a priority and funding to increase (improve) access to and within pedestrian mall streets such as shuttle or cards.

Councilmember Marriott asked to keep general, not specific as there will be ADA compliance requirements and is part of the street designs and construction.

Councilmember Fifer asked to remove Alternative 2, (one way street design for Grandview)

Councilmember Simpson moved that R23-098, A Resolution By City Council for the City of Arvada, Colorado to Approve the Olde Town Arvada Strategic Reinvestment Plan, be approved with the amendments previously stated by councilmember Moorman and Councilmember Fifer.

The following votes were cast on the Motion:

Those voting Yes: Williams, Jones, Feret, Fifer, Marriott, Moorman, Simpson
The Motion was Approved

C. Ordinances (First Reading) – none

9. Other - None

10. Public Hearings –

A. Community Comments on the Application Process for the Community Development Block Grant 2024 Annual Action Plan and 2024 Human Services Funding Pool

Mayor Williams opened the public hearing on the 2022 Annual Action Plan for 2022 Community Development Block Grant

No one wishing to speak on the 2022 Annual Action Plan, the public hearing was closed.

This hearing was to take public comment only, no Council action is needed at this time.

11. Public Comment - Five Minute Limit – none

12. City Council Reports –

A. Councilmember Fifer said that with this being the last business meeting he wanted to say that he appreciates serving with this council and thanked the Mayor Williams and Mayor Pro Tem Jones for their service.

B. Councilmember Moorman echoed Councilmember Fifer's comments and thanked the mayor for his service.

C. Councilmember Simpson thanked Mayor Pro Tem Jones and Mayor Williams for their service.

D. Councilmember Marriott thanked Mayor Williams and Mayor Pro Tem Jones for their service.

E. Councilmember Feret thanked Mayor Williams and Mayor Pro Tem Jones for their service.

F. Mayor Williams thanked council and the city team.

13. City Manager Reports –

A. Lorie Gillis, City Manager, thanked the Mayor Williams and Mayor Pro Tem Jones for their service.

14. City Attorney Reports –
 - B. Rachel Morris, City Attorney, thanked the Mayor Williams and Mayor Pro Tem Jones for their service.
15. Adjournment at 7:10 p.m.

Lauren Simpson, Mayor

SEAL:

Kristen R. Rush, City Clerk



CITY OF ARVADA

SUMMARY OF MINUTES OF THE SWEARING-IN CEREMONY OF THE ARVADA CITY COUNCIL HELD NOVEMBER 13, 2023

I. CITY COUNCIL MEETING: CALL TO ORDER: By Mayor Williams at 7:00 p.m.

II. MOMENT OF REFLECTION AND PLEDGE OF ALLEGIANCE – Mayor Williams

III. ROLL CALL OF MEMBERS:

Those Present: Mayor Marc Williams, Mayor Pro Tem David Jones, Councilmember Lisa Feret, Councilmember Bob Fifer, Councilmember John Marriott, Councilmember Randy Moorman, Councilmember Lauren Simpson

IV. PRESENTATION OF PLAQUES

A. Mayor Pro Tem David Jones

Mayor Williams and Council Members all thanked Mayor Pro Tem Jones for his service. Mayor Williams presented a plaque to Mayor Pro Tem Jones.

Mayor Pro Tem Jones thanked City Council, staff, and welcomed our new council members.

B. Mayor Williams

Mayor Pro Tem Jones and Council Members all thanked Mayor Williams for his service. Mayor Pro Tem Jones presented a plaque to Mayor Williams

Mayor Williams thanked City Council, staff, and welcomed our new council members.

V. OATHS OF OFFICE FOR NEW COUNCIL MEMBERS:

A. Lauren Simpson

Judge Kurtz administered the Oath of Office to Lauren Simpson, Mayor.

B. Shawna Ambrose

Judge Kurtz administered the Oath of Office to Shawna Ambrose, District 2.

C. Bob Fifer

Judge Kurtz administered the Oath of Office to Bob Fifer, District 4.

D. Sharon Davis

Judge Kurtz administered the Oath of Office to Sharon Davis, Councilmember-at-large.

VI. ROLL CALL OF NEW COUNCIL MEMBERS

Those Present: Mayor Lauren Simpson, Councilmember Shawna Ambrose, Councilmember Sharon Davis, Councilmember Lisa Feret, Councilmember Bob Fifer, Councilmember Marriott, Councilmember Randy Moorman

VII. COMMENTS FROM NEWLY ELECTED COUNCIL MEMBERS

Mayor Simpson and city councilmembers all made comments and thanked their families, their campaign helpers and the citizens of Arvada.

VIII. ELECTION OF MAYOR PRO TEM

Mayor Simpson said that Councilmember Moorman is the only one interested in serving as Mayor Pro Tem.

Councilmember Fifer moved to appoint Councilmember Moorman as Mayor Pro Tem.

The following votes were cast on the Motion:

Those voting Yes: Simpson, Ambrose, Davis, Feret, Fifer, Marriott, Moorman

The Motion was Approved

IX. OATH OF OFFICE FOR MAYOR PRO TEM

Judge Kurtz administered the Oath of Office for Mayor Pro Tem to Councilmember Moorman.

X. ADJOURNMENT at 8:00 p.m.

A Reception was held in the City Hall Atrium following adjournment.

Lauren Simpson, Mayor

SEAL:

Kristen Rush, City Clerk



REPORT TO CITY COUNCIL

AGENDA ITEM
5.A.

TO: THE HONORABLE CITY COUNCIL

DATE: November 27, 2023

SUBJECT: Recognition of Public Works Department and Facilities Management Team - Presented by Councilmember Marriott

Report in Brief

In 2013 the City of Arvada joined the Department of Energy's [Better Buildings Challenge](#), becoming the first municipality in Colorado to join the initiative. The goal of the challenge was to reduce energy consumption in City operated buildings by 20% in 10 years.

The City is proud to announce surpassing the 20% goal to achieve a combined 28% reduction in energy consumption across all facilities.

The effort was coordinated by the Public Works Department and Facilities Manager, Kim Vagher, in coordination with many facilities team members who played a critical role in updating systems and infrastructure to achieve this goal. The City focused efforts on four core facilities that make up the majority of energy use:

1. The Arvada Center
2. Arvada City Hall
3. The three police substations

City Council will present the Public Works Department and Facilities Management Team with a Certificate of Recognition signed by the Mayor and Council Members who were in office when the project was completed.

Prepared by:
Chris Koch, CCO Admin

Reviewed by:
Toni Riebschlager, Law Office Administrator 9/28/2023
Laura Hemler, Assistant City Attorney 9/28/2023

Approved by:

Linda Haley, Deputy City Manager 9/29/2023
Rachel Morris, City Attorney 9/29/2023
Lorie Gillis, City Manager 11/8/2023

Enclosure, exhibits & attachments required to support the report

presented to

***PUBLIC WORKS
DEPARTMENT AND
FACILITIES
MANAGEMENT TEAM***

*In recognition of achieving the Department of Energy's Better
Buildings Challenge by reducing energy consumption by 28% in 10
years across City facilities*

Presented this 23rd day of October, 2023

Marc Williams, Mayor

David Jones, Mayor Pro Tem

Bob Fifer, Councilmember

John Marriott, Councilmember

Randy Moorman, Councilmember

Lauren Simpson, Councilmember

Lisa Feret, Councilmember



REPORT TO CITY COUNCIL

AGENDA ITEM
5.B.

TO: THE HONORABLE CITY COUNCIL

DATE: November 27, 2023

SUBJECT: Recognition of the Arvada West Girls Flag Football Team - Presented by Councilmember Fifer

Report in Brief

The Arvada West Girls Flag Football Team claimed a state championship on October 14th when they beat Cherry Creek 34 to 14 at the Denver Broncos Training Center in Englewood, Colorado. Their Championship capped a perfect season of 25 wins and 0 losses. 72 teams competed in Girls Flag Football this season in Colorado and the City of Arvada is proud to be home to the 2023 State Champion Arvada West Wildcats. The team will be recognized at the Denver Broncos game against the Los Angeles Chargers on December 31st. In February, the girls will travel to Orlando, Florida, where they will represent the Broncos 17 and Under Girls Division at the NFL Flag Championships at the NFL Pro Bowl.

Congratulations to Head Coach Mario Lopez and the entire Arvada West Community on an outstanding accomplishment!

Prepared by:

Chris Koch, CCO Admin

Reviewed by:

Toni Riebschlager, Law Office Administrator 11/6/2023

Laura Hemler, Assistant City Attorney 11/6/2023

Approved by:

Rachel Morris, City Attorney 11/14/2023

Linda Haley, Deputy City Manager 11/14/2023

Lorie Gillis, City Manager 11/15/2023

Enclosure, exhibits & attachments required to support the report

presented to

***ARVADA WEST GIRLS FLAG
FOOTBALL TEAM***

*In recognition of a perfect season of 25 wins and 0 losses and
for winning the State Championship*

Presented this 27th day of November, 2023

Lauren Simpson, Mayor

Randy Moorman, Mayor Pro Tem

Shawna Ambrose, Councilmember

Sharon Davis, Councilmember

Lisa Feret, Councilmember

Bob Fifer, Councilmember

John Marriott, Councilmember



REPORT TO CITY COUNCIL PRESENTATION

AGENDA ITEM
6.A.

TO: THE HONORABLE CITY COUNCIL

DATE: November 27, 2023

SUBJECT: Third Quarter Financial Presentation

Report in Brief

"PRESENTER: Bryan Archer - Finance Director

Finance will provide the City Council with an un-audited financial report and a presentation of the Third Quarter 2023 financials. The presentation will include revenue and expenditure highlights of the major funds including: General Fund, Parks, Tax Increments, Capital Projects, Water, Wastewater, Storm Water, Golf, Solid Waste and the Internal Service Funds, an update on the current investment market and a status update on grants.

Background

The purpose of the City Council Budget and Fiscal Policy is to guide City budget and financial management decisions based on strategic planning, performance measures, long-term financial stability, delivery of basic City services and protection of past and future investments in the City's infrastructure and facilities. The financial update is presented quarterly to help support this policy.

Strategic Alignment

The 3rd Quarter financial presentation supports the Organizational Service and Effectiveness Work System Principle :
Provides a sustainable government that operates effectively and efficiently while identifying revenue requirements to sustain current service levels and achieve future requested levels of service.

This also supports the Council's Budget and Fiscal Policy:

To guide City budget and financial management decisions based on strategic planning, performance measures, long-term financial stability, delivery of basic City services and protection of past and future investments in the City's infrastructure and facilities.

Next Steps

N/A

Prepared by:
Debra Nielson, Deputy Director of Finance

Reviewed by:

Approved by:

Jenna Belec, Executive Assistant

11/7/2023

Bryan Archer, Director of Finance	11/7/2023
Gail Walker, Legal Specialist-Contracts	11/7/2023
Kylie Justus, Assistant City Attorney	11/7/2023
Laura Hemler, Assistant City Attorney	11/7/2023
Rachel Morris, City Attorney	11/14/2023
Linda Haley, Deputy City Manager	11/14/2023
Lorie Gillis, City Manager	11/15/2023

Enclosure, exhibits & attachments required to support the report



2023 Third Quarter Financial Report (Unaudited)



City Council
November 27, 2023

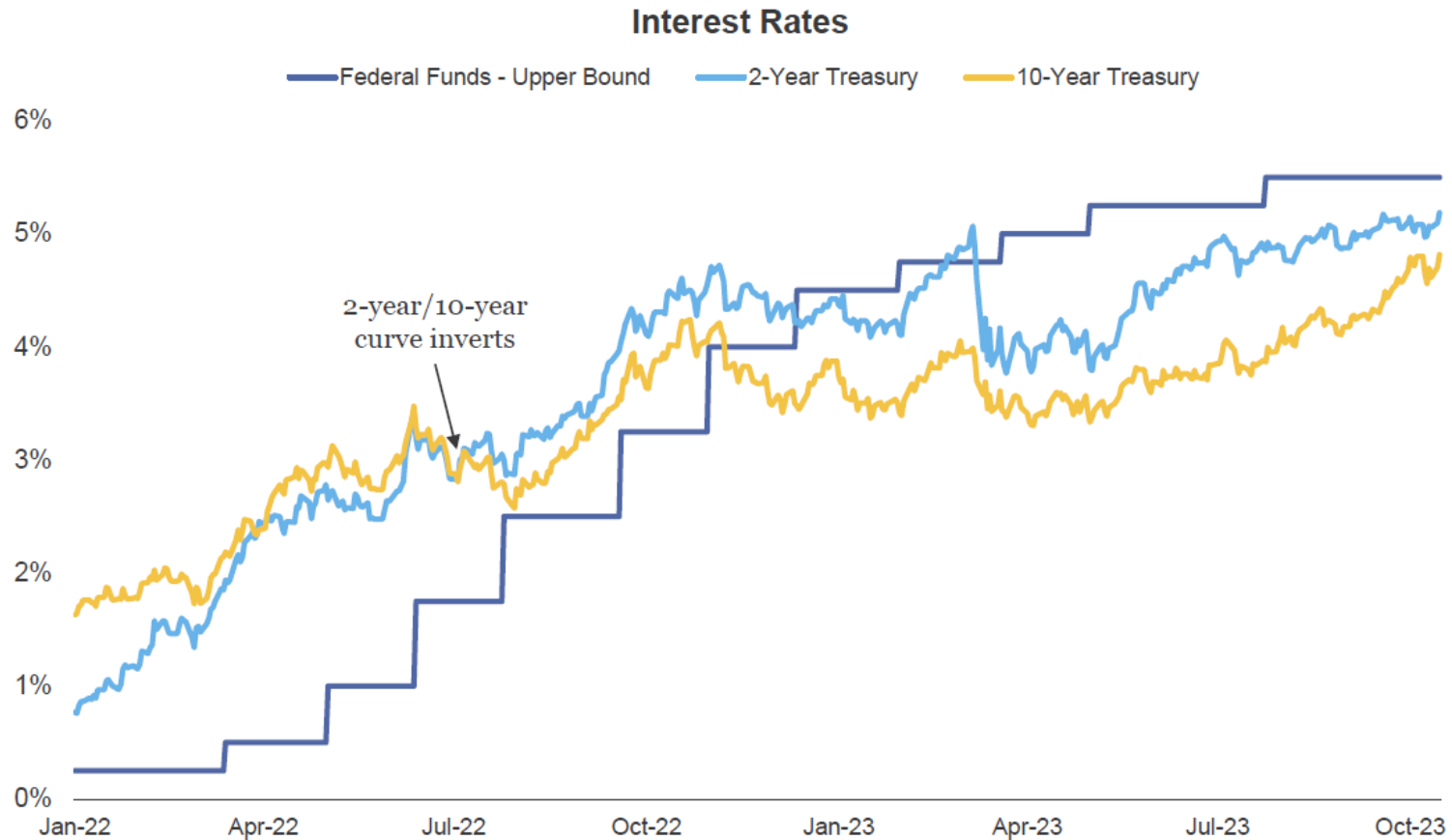


OVERVIEW

- Revenue growth was negative in 3rd quarter, but still ahead of budget (barely)
- Operating expenditures remain in-line with budgets
- CIP cost growth is slowing
- Recession on pause?

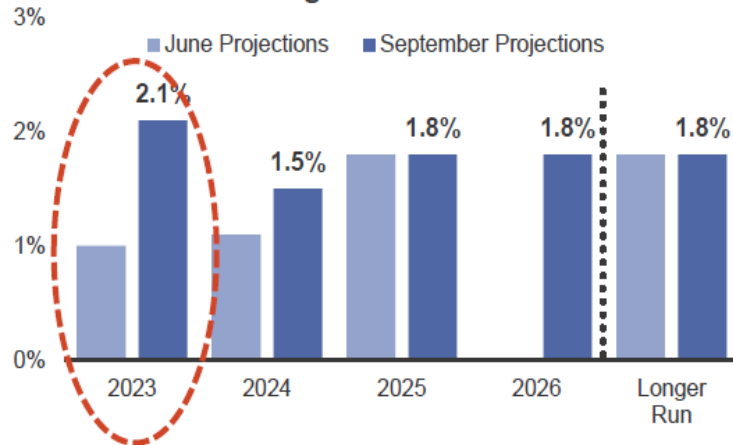


Yield Curve Remains Inverted As Rates Continue to Rise

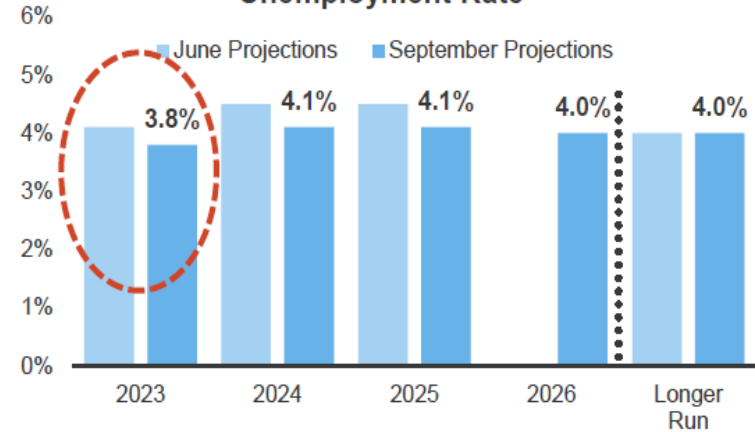


The Fed's Protections for Growth and Employment Were More Upbeat

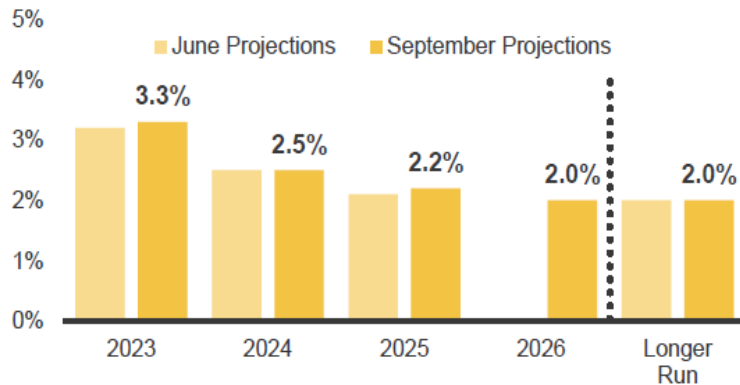
Change in Real GDP



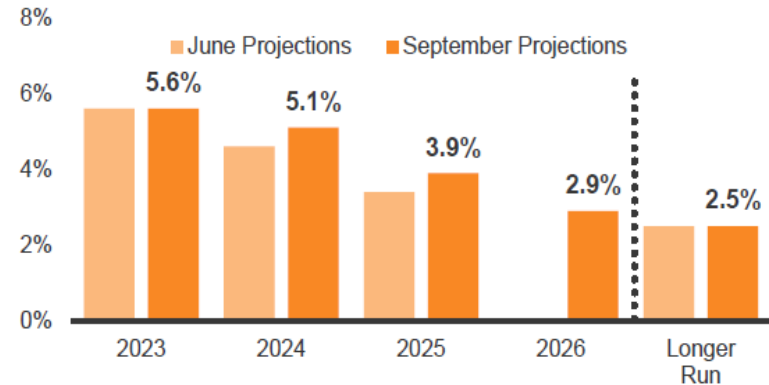
Unemployment Rate

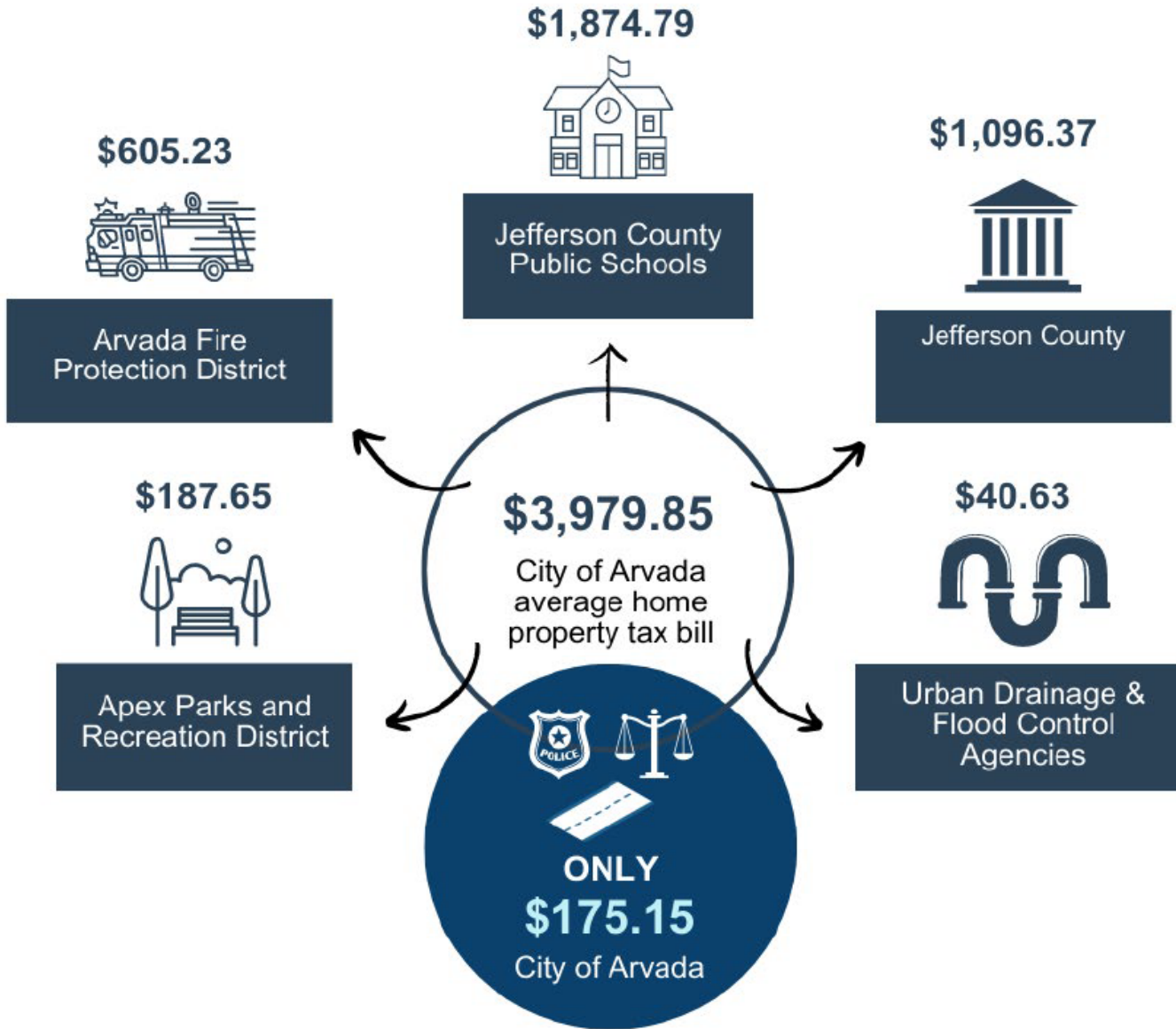


PCE Inflation



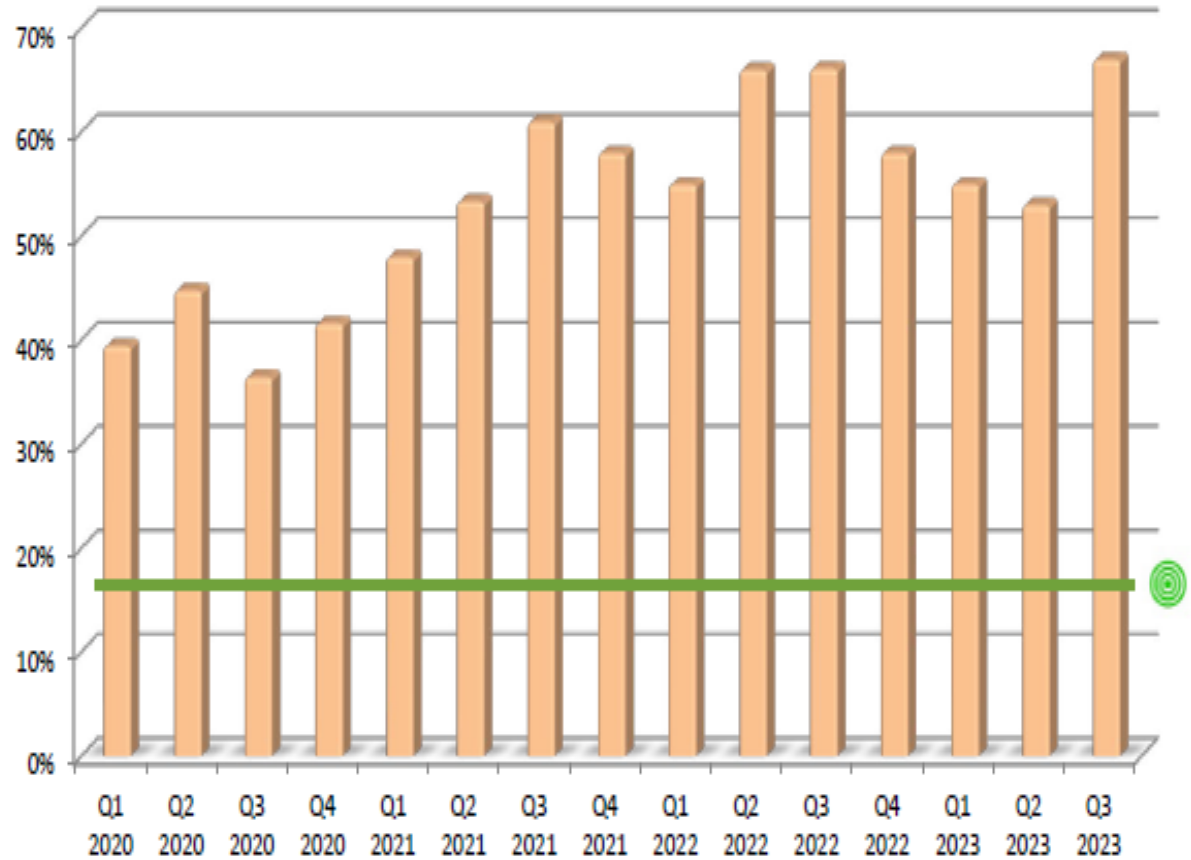
Federal Funds Rate







GENERAL FUND ENDING
FUND BALANCE BY QUARTER
COMPARED TO FUND
BALANCE GOAL OF 17% OF
BUDGETED EXPENDITURES



GENERAL FUND OVERVIEW



GENERAL FUND	YEAR TO DATE
Property Tax	MONITOR
Sales Tax	POSITIVE
Auto Use Tax	MONITOR
General Use Tax	POSITIVE
Court Revenues	POSITIVE
Building Revenues	POSITIVE
Interest Revenue	MONITOR
Personnel Expenditures	POSITIVE
Other Expenditures	MONITOR

PERFORMANCE - ACTUALS VS. BUDGET

SALES TAX

SALES TAX	YEAR TO DATE
Overall	POSITIVE

Supermarket	POSITIVE
Wholesale	POSITIVE
Electronic Shopping	POSITIVE
Full-Service Restaurants	NEGATIVE
Utilities - Electric	POSITIVE
Hardware Stores	NEGATIVE
Limited-Service Restaurants	POSITIVE
Utilities - Cable	POSITIVE
Liquor Store	NEGATIVE

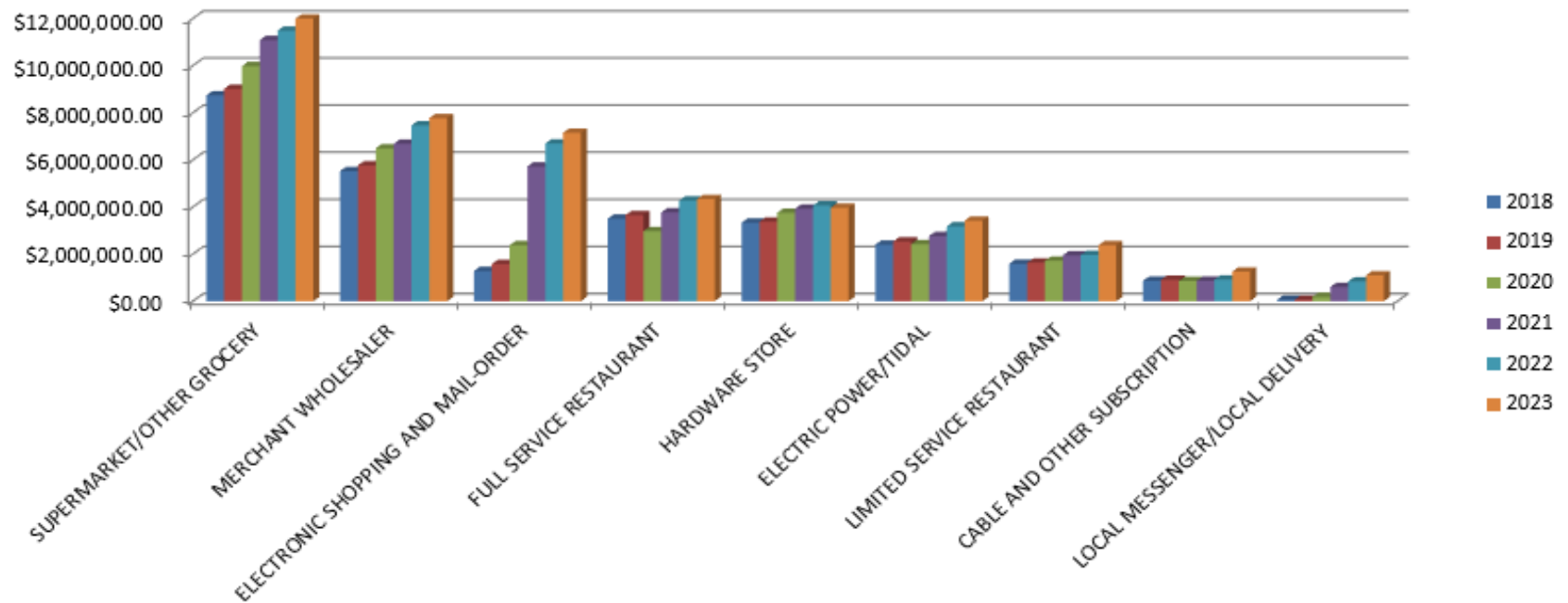


4.9% Increase



Top 70% Sales Tax Generating NAICS Categories

NAICS Code Name	2023	Percentage Change	2022	Percentage Change	2021
SUPERMARKET/OTHER GROCERY	\$11,995,450.69	4.46%	\$11,483,284.41	3.59%	\$11,085,546.59
GENERAL LINE GROCERY MERCH WHOLESA	\$7,770,351.50	4.08%	\$7,465,821.44	11.79%	\$6,678,170.84
ELECTRONIC SHOPPING AND MAIL-ORDER	\$7,150,965.28	6.85%	\$6,692,710.08	17.00%	\$5,720,098.75
FULL SERVICE RESTAURANT	\$4,333,053.70	1.36%	\$4,274,734.81	13.34%	\$3,771,472.92
HARDWARE STORE	\$3,964,762.13	-2.44%	\$4,063,976.38	3.45%	\$3,928,403.77
ELECTRIC POWER/TIDAL	\$3,418,136.86	7.68%	\$3,174,357.99	14.86%	\$2,763,631.28
LIMITED SERVICE RESTAURANT	\$2,378,273.19	21.04%	\$1,964,814.59	0.96%	\$1,946,061.66
CABLE AND OTHER SUBSCRIPTION PROGRA	\$1,255,942.10	36.96%	\$916,987.25	5.85%	\$866,271.83
LOCAL MESSENGERS/LOCAL DELIVERY	\$1,099,641.06	30.75%	\$841,022.57	39.60%	\$602,445.63
BEER/WINE/LIQUOR STORE	\$1,060,031.47	-11.11%	\$1,192,573.15	-0.32%	\$1,196,424.22
FLOOR COVERING STORE	\$899,352.55	-6.11%	\$957,917.40	12.06%	\$854,800.11
FURNITURE STORE	\$735,981.01	-14.61%	\$861,875.55	6.69%	\$807,805.24

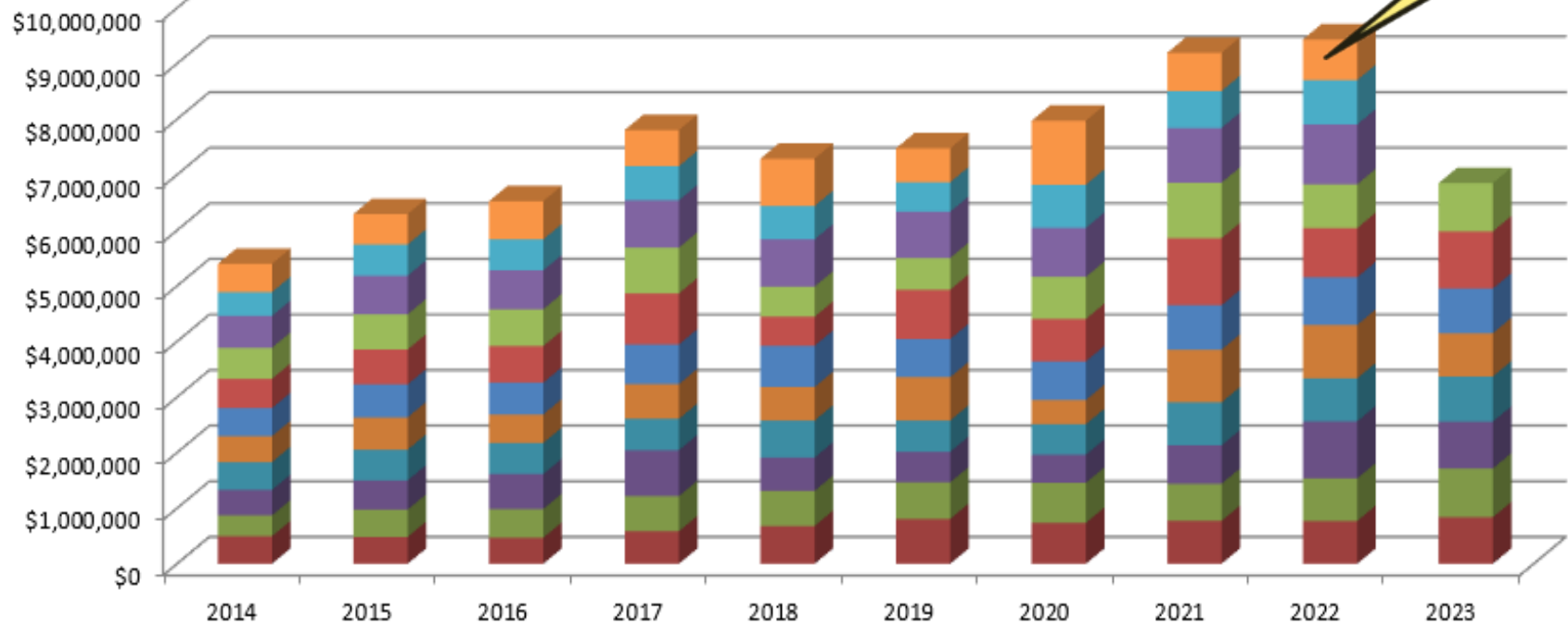


NAICS Code Name	2018	2019	2020	2021	2022	2023
SUPERMARKET/OTHER GROCERY	\$8,733,545.94	\$9,014,922.41	\$9,983,889.81	\$11,085,546.59	\$11,483,284.41	\$11,995,450.69
MERCHANT WHOLESALER	\$5,522,806.99	\$5,764,118.73	\$6,489,951.14	\$6,678,170.84	\$7,465,821.44	\$7,770,351.50
ELECTRONIC SHOPPING AND MAIL-ORDER	\$1,281,783.02	\$1,581,115.98	\$2,377,809.87	\$5,720,098.75	\$6,692,710.08	\$7,150,965.28
FULL SERVICE RESTAURANT	\$3,502,011.10	\$3,654,781.72	\$2,969,346.40	\$3,771,472.92	\$4,274,734.81	\$4,333,053.70
HARDWARE STORE	\$3,331,971.95	\$3,376,507.71	\$3,752,983.83	\$3,928,403.77	\$4,063,976.38	\$3,964,762.13
ELECTRIC POWER/TIDAL	\$2,402,907.80	\$2,538,725.25	\$2,423,593.40	\$2,763,631.28	\$3,174,357.99	\$3,418,136.86
LIMITED SERVICE RESTAURANT	\$1,587,048.51	\$1,634,585.46	\$1,715,242.64	\$1,946,061.66	\$1,964,814.59	\$2,378,273.19
CABLE AND OTHER SUBSCRIPTION	\$869,907.80	\$907,259.92	\$861,633.38	\$866,271.83	\$916,987.25	\$1,255,942.10
LOCAL MESSENGER/LOCAL DELIVERY	\$55,970.20	\$62,086.13	\$185,991.64	\$602,445.63	\$841,022.57	\$1,099,641.06



AUTO USE

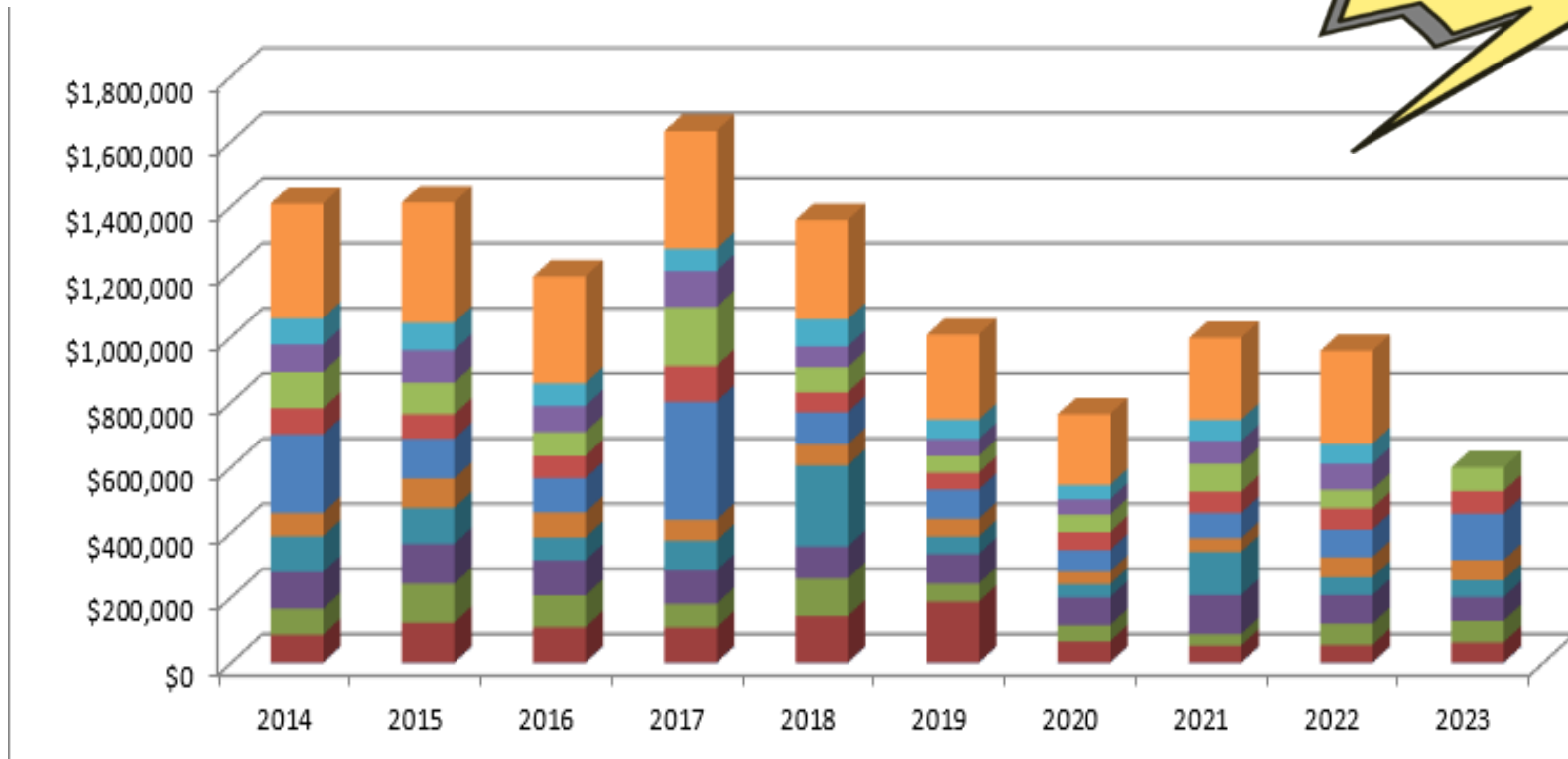
**.3%
decrease**





GENERAL USE TAX

12.3%
Increase





OTHER FUNDS OVERVIEW

FUND	REVENUES	EXPENDITURES	YEAR TO DATE
Parks	POSITIVE	POSITIVE	POSITIVE
Tax Increment Funds	POSITIVE	POSITIVE	POSITIVE
Community Development	POSITIVE	POSITIVE	POSITIVE
Arvada Housing	POSITIVE	MONITOR	POSITIVE
Capital Projects	POSITIVE	WARNING	WARNING
Water	MONITOR	MONITOR	POSITIVE
Wastewater	POSITIVE	MONITOR	POSITIVE
Stormwater	POSITIVE	MONITOR	POSITIVE
Golf	POSITIVE	POSITIVE	POSITIVE
Solid Waste	POSITIVE	POSITIVE	MONITOR
Risk Management	POSITIVE	WARNING	WARNING

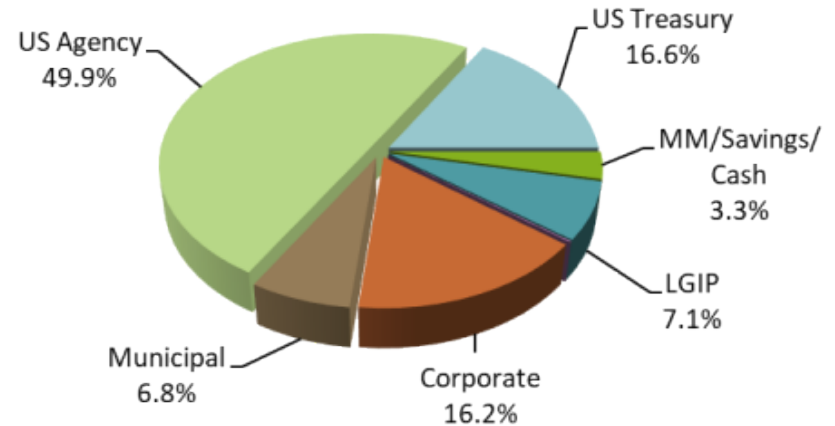
PERFORMANCE - ACTUALS VS. BUDGET

INVESTMENTS

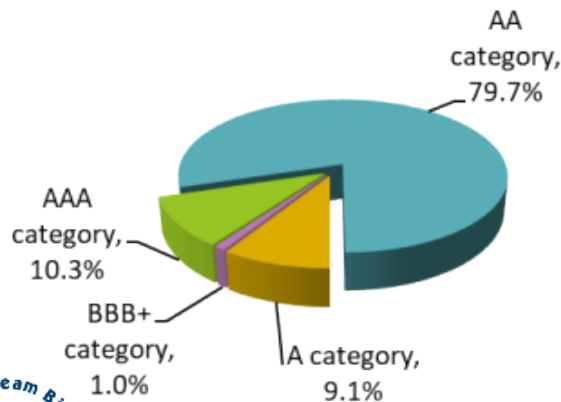
PORTFOLIO PERFORMANCE

	9/30/2023	09/30/2022	Difference
City Interest Earnings	\$ 4,465,512	\$ 2,075,617	\$ 2,389,895
PFM Interest Earnings	528,245	481,404	46,841
Total Interest Earned	\$ 4,993,757	\$ 2,557,021	\$ 2,436,736
YTD City Portfolio Yield	2.46%	1.28%	+118 bps
YTD PFM Portfolio Yield	2.08%	1.21%	+87 bps
YTD Benchmark	3.91%	1.07%	+284 bps

CONSOLIDATED PORTFOLIO ALLOCATION



CREDIT QUALITY (S&P RATING)



CONSOLIDATED PORTFOLIO CHANGES

	09/30/2023	09/30/2022	Difference
MM/Savings/Cash	\$ 10,376,686	\$ 7,620,794	\$ 2,755,892
LGIP	22,169,147	46,696,889	(24,527,742)
Time CD	-	-	-
Negotiable CD	395,000	-	395,000
Corporate	50,784,000	40,343,000	10,441,000
Municipal	21,400,000	25,330,000	(3,930,000)
US Agency	156,325,000	143,860,000	12,465,000
US Treasury	51,990,000	41,990,000	10,000,000
Total - Combined	\$ 313,439,833	\$ 305,840,683	\$ 7,599,150

INVESTMENTS – ‘A-BBB rated’ (10.04%)

Issuer	Credit Rating	Security Type	Face Amount/Shares
Bank of NY Mellon	S&P-A	Corporate Bond	3,000,000.00
GSGI	S&P-BBB+	Corporate Bond	2,000,000.00
IBM	S&P-A-	Corporate Bond	2,242,000.00
INTC	S&P-A	Corporate Bond	1,000,000.00
John Deere Capital Corp	S&P-A	Corporate Bond	1,157,000.00
MS	S&P-A+	Corporate Bond	2,000,000.00
Toronto-Dominion Bank	S&P-A	Corporate Bond	1,000,000.00
Toyota Motor Corp	S&P-A+	Corporate Bond	1,000,000.00
Toyota Motor Cr	S&P-A+	Corporate Bond	1,000,000.00
USB	S&P-A+	Corporate Bond	3,000,000.00

17,399,000.00

2023 GRANTS

<u>Grant</u>	<u>Description</u>	<u>Amount</u>	<u>Status</u>
DOLA Homeless PESTEL	pestel analysis	\$ 250,000	Declined
DOLA Homeless Services	vouchers and services	\$ 1,914,000	Awarded
DOLA Navigation Center	acquisition and services	\$10,000,000	Declined
DOLA Tap Fees for Legacy	wave tap fees for legacy	\$ 1,079,865	Declined
TIP: 64th Pkwy	multimodal improvement	\$ 1,000,000	Awarded
TIP: Bike Training Facility	renovation	\$ 200,000	Declined
TIP: Citywide Safety	Planning	\$ 160,000	Awarded
TAP: Indiana at UPRR	Planning	\$ 200,000	Awarded
State JAG	PD Supplies	\$ 24,396	Awarded
Fed JAG	TBD	\$ 28,020	Awarded
Safer Streets	camp clean up	\$ 50,000	Awarded
Nighthawk Grant PD	PD Technology	\$ 42,892	Awarded

2023 GRANTS - Continued

<u>Grant</u>	<u>Description</u>	<u>Amount</u>	<u>Status</u>
Catalytic Converter	auto theft	\$ 21,291	Awarded
CIOT	click it or ticket	\$ 3,315	Awarded
POST	OT enforcement	\$ 5,766	Awarded
HVE	high visibility enforcement	\$ 12,000	Awarded
FleetZero	EV stations-city use	\$ 99,000	Awarded
ChargeAhead	EV stations-public use	\$ 78,000	Awarded
Clean Vehicle Technology Grant	14 new EV	\$ 112,000	Declined
Turf Replacement CWCB	Resource Central for residents	\$ 25,000	Withdrawn
Turf Replacement CWCB	marge roberts park	\$ 25,000	Withdrawn
EECBG	Energy Block grant	\$ 163,520	Preparation
GOCO Community Impact	Land for Gold Strike	\$ 1,000,000	Withdrawn
GOCO Restoration	Majestic View wetlands	\$ 298,000	Withdrawn
TASP Technical Assistance	Zero Waste for City	\$ 75,000	Declined

2023 GRANTS - Continued

<u>Grant</u>	<u>Description</u>	<u>Amount</u>	<u>Status</u>
TASP Technical Assistance	Zero Waste for City	\$ 75,000	Declined
RAQC	Zero emission lawn equipment	\$ 50,000	Awarded
SCFD	General Operating	\$ 41,026	Awarded
SCFD	Majestic View	\$ 20,019	Awarded
Colorado Parks & Wildlife	Majestic View Wetlands	\$ 44,000	Awarded
Colorado Water Conservation	Majestic View Wetlands	\$ 96,000	Awarded
North American Wetlands	Majestic View Wetlands	\$ 50,000	Pending

2023 GRANTS - Summary

<u>Grant Type</u>	<u>Amount</u>
Awarded	\$ 3,889,726
Preparation	163,520
Pending	50,000
Declined	11,716,865
Withdrawn	1,348,000
	\$ 17,168,111





QUESTIONS





REPORT TO CITY COUNCIL

AGENDA ITEM
8.A.

TO: THE HONORABLE CITY COUNCIL

DATE: November 27, 2023

SUBJECT: Consent Agenda

Report in Brief

1. R23-101, A Resolution Accepting an Annexation Petition Concerning Canyon Pines, Triangle Property (Annexation No. 1), a Parcel of Land Generally Located at 52 Canyon Pines Drive, Finding Said Petition Substantially Compliant with C.R.S. 31-12-107(1), and Setting a Public Hearing for January 8, 2024, 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
2. R23-102, A Resolution Accepting an Annexation Petition Concerning Canyon Pines, Debrouillarde Pump Station (Annexation No. 2), a Parcel of Land Generally Located at 52 Canyon Pines Drive, Finding Said Petition Substantially Compliant with C.R.S. 31-12-107(1), and Setting a Public Hearing for January 8, 2024, 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
3. R23-103, A Resolution Authorizing an Agreement by and between the City of Arvada and Native Sun Construction, Inc. for the Ralston Trunk Sewer Improvements - Ward and 69th Project No. 17-SR-07, in an Amount Not to Exceed \$5,695,587.67, Project No. 17-SR-07
4. R23-104, A Resolution Authorizing Amendment No. 1 To "An Agreement Between The City Of Arvada and Kennedy/Jenks Consultants, Inc. for Professional Design Services" for Additional Engineering Design and Construction Phase Services, Thereby Increasing the Contract Amount From \$425,472.00 to an Amount not to Exceed \$932,028.00
5. R23-105, A Resolution Authorizing Change Order No. 4 to 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 \$805,166.86 for a revised total contract amount not to exceed \$17,089,634.49
6. R23-106, A Resolution Granting a Non-Exclusive Public Utility Easement to the Public Service Company of Colorado (D/B/A Xcel Energy) for the Construction of Utility Lines for the Meyers' Pool Replacement Facility Located at 7904 Carr Drive
7. R23-107, A Resolution Authorizing A Lease Agreement By And Between the City of Arvada And The Arvada Gardeners for the Property Located At 9195 West 57th Avenue, Also Known As The Arvada Community Garden
8. R23-108, A Resolution Authorizing A Lease Agreement By And Between The City of Arvada And The Horse Protection League For Certain Portions Of The Property Located At Long Lake Ranch

9. R23-109, A Resolution Approving An Agreement By And Between The City of Arvada And R.G. Brinkmann Company (D/B/A Brinkmann Constructors) For Construction Of The Garrison Garden Paseo In An Amount Not To Exceed \$3,608,191.87

Suggested Motion: Moved by: _____ I move that the Consent Item(s),
Number(s) _____
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:
Chris Koch, CCO Admin

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: November 27, 2023

SUBJECT: R23-101, A Resolution Accepting an Annexation Petition Concerning Canyon Pines, Triangle Property (Annexation No. 1), a Parcel of Land Generally Located at 52 Canyon Pines Drive, Finding Said Petition Substantially Compliant with C.R.S. 31-12-107(1), and Setting a Public Hearing for January 8, 2024, 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

Section 27 LLC is requesting approval of a Comprehensive Plan Amendment, annexation, and rezoning of two parcels of land known as Canyon Pines- Triangle parcel (Annexation No.1) and Canyon Pines- Arvada's DeBrouillarde Pump Station parcel (Annexation No. 2). A Planned Unit Development (PUD) for the two parcels in addition to a PUD Amendment for a portion of the original Canyon Pines development, collectively referred to as Canyon Pines Filing No. 2 accompanies these requests. The annexations will allow for the inclusion of the City's water pump station and three additional single family lots within the City limits.

The annexations include Annexation No. 1 (the Triangle, which is 1.2208 acres) and Annexation No. 2 (Arvada's DeBrouillarde Pump Station parcel, which is 2.7964 acres). Both parcels are outside of the current Comprehensive Plan boundaries requiring that the plan be amended to extend the boundaries. The Annexation No. 1 parcel and the majority of the Annexation No. 2 parcel are proposed to be rezoned PUD (Planned Unit Development). The northeast corner of the Annexation No. 2 parcel is proposed to be rezoned OS (Open Space) to accommodate a new City water pump station.

The Arvada Team recommends the City Council approve R23-101, A Resolution Accepting an Annexation Petition Concerning Canyon Pines, Triangle Property (Annexation No. 1), a Parcel of Land Generally Located at 52 Canyon Pines Drive, Finding Said Petition Substantially Compliant with C.R.S. 31-12-107(1), and Setting a Public Hearing for January 8, 2024, 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 is no financial impact to the City.

Background

The subject property is located on the north side of State Highway 72, approximately 2.5 miles west of State Highway 93. The site is directly to the west of the Union Pacific Railroad and is currently vacant.

The original Canyon Pines development was included with the Jefferson Center master development for which specific plans, regulations, and intergovernmental agreements were prepared in anticipation of development. An amendment to the City of Arvada Comprehensive Plan was approved for the area in 1989, and a Comprehensive Development Plan (CDP) was approved. The CDP specifies land uses that are allowed. An annexation agreement was also approved in 1989 that specified requirements for future development. A Subdivider's Agreement was entered into between the City, Jefferson Center Metro District (JCMD) No.1, and Jefferson Center Associates (JCA) specific for the property annexed by members of JCA. A metropolitan district was created to fund the infrastructure improvements in annexed portions of Jefferson Center.

SUBJECT: R23-101, A Resolution Accepting an Annexation Petition Concerning Canyon Pines, Triangle Property (Annexation No. 1), a Parcel of Land Generally Located at 52 Canyon Pines Drive, Finding Said Petition Substantially Compliant with C.R.S. 31-12-107(1), and Setting a Public Hearing for January 8, 2024, 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.1.

The Canyon Pines site was annexed as Jefferson Center Filings #14 and 15 in 1997. Concurrent with the annexation, the site was zoned PUD-NC-R-A (Planned Unit Development — New Community — Residential Sub-district A), and an Outline Development Plan (ODP) was approved. Subsequently, the applicant filed a lawsuit objecting to certain conditions of the annexation. By stipulation of the parties, a Jefferson County District Court order provided that a new public hearing be held concerning five specific topics. This hearing was held July 13" of 1998 and the Preliminary Site Plan for the 90 lot Canyon Pines development was approved. In 2017, the Final Development Plan and final plat were approved, and the infrastructure is nearly complete. In 2020, the Canyon Pines development was zoned PUD with the adoption of the updated Land Development Code. In order to deliver water to the development a City pump station is needed. The parcel for this station is located immediately adjacent to the east boundary of the Canyon Pines development in Annexation No. 1. The pump station parcel will be subdivided off of the larger parcel. The remaining portion of the parcel and the Annexation No. 2 parcel will be included for residential development.

Discussion

Div. 8-3-3 Annexation and Disconnection Approval Criteria	Finding	Rationale
1. The annexation is in accord with the Comprehensive Plan and the best interests of the City would be served by annexation of such property.	Complies	The annexations will be consistent with the Comprehensive Plan, once amended, and are in the best interests of the City.
2. The property is capable of being integrated into the City and developed in compliance with all applicable provisions of this Code and the Arvada City Code.	Complies	The parcels are capable of being integrated into the City. As a PUD, this development will meet the applicable provisions of the LDC and the City Code.
3. At the time any development of the area proposed to be annexed is completed, there will be capacity to adequately serve residents of such area with all necessary utilities, facilities and public services.	Complies	Infrastructure necessary to provide services to the parcels has already been completed.

Public Contact

Notice on the City Council agenda.

Commission Recommendation

The planning commission will hold a public hearing for the annexation and rezoning request on November 21, 2023. The recommendation will be forwarded to City Council.

Strategic Alignment

The project is consistent with the City Council Strategic Plan principles for the Community and Economic Development work system.

Alternative Courses of Action

N/A

Recommendation for Action

SUBJECT: R23-101, A Resolution Accepting an Annexation Petition Concerning Canyon Pines, Triangle Property (Annexation No. 1), a Parcel of Land Generally Located at 52 Canyon Pines Drive, Finding Said Petition Substantially Compliant with C.R.S. 31-12-107(1), and Setting a Public Hearing for January 8, 2024, 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.1.

The Arvada team recommends that the City Council Approve R23-101, A Resolution Accepting an Annexation Petition Concerning Canyon Pines, Triangle Property (Annexation No. 1), a Parcel of Land Generally Located at 52 Canyon Pines Drive, Finding Said Petition Substantially Compliant with C.R.S. 31-12-107(1), and Setting a Public Hearing for January 8, 2024, 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 R23-101, A Resolution Accepting an Annexation Petition Concerning Canyon Pines, Triangle Property (Annexation No. 1), a Parcel of Land Generally Located at 52 Canyon Pines Drive, Finding Said Petition Substantially Compliant with C.R.S. 31-12-107(1), and Setting a Public Hearing for January 8, 2024, 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:
Heidi Van Gieson, Administrative Specialist

Reviewed by:

Approved by:

Cheryl Drake, Senior Planner	11/8/2023
Josie Suk, Development Systems and Administrative Manager	11/9/2023
Rob Smetana, Planning Manager	11/9/2023
Jessica Garner, Director of Community and Economic Development	11/9/2023
Gail Walker, Legal Specialist-Contracts	11/9/2023
Emily Grogg, Senior Assistant City Attorney	11/10/2023
Rachel Morris, City Attorney	11/15/2023
Linda Haley, Deputy City Manager	11/15/2023
Lorie Gillis, City Manager	11/15/2023

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R23-101

A RESOLUTION ACCEPTING AN ANNEXATION PETITION CONCERNING CANYON PINES, TRIANGLE PROPERTY (ANNEXATION NO. 1), A PARCEL OF LAND GENERALLY LOCATED AT 52 CANYON PINES DRIVE, FINDING SAID PETITION SUBSTANTIALLY COMPLIANT WITH C.R.S. 31-12-107(1), AND SETTING A PUBLIC HEARING FOR JANUARY 8, 2024, 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:

See Exhibit A

Section 3. That a public hearing shall be held on the 8th day of January, 2024 at 6:15 p.m. at the Arvada City Hall 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 27th day of November, 2023.

Lauren Simpson, Mayor

ATTEST:

City Clerk

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

By: _____

Publication Dates: November 30, 2023
 December 7, 2023
 December 14, 2023
 December 21, 2023

EXHIBIT A

A RESOLUTION ACCEPTING AN ANNEXATION PETITION CONCERNING CANYON PINES, TRIANGLE PROPERTY (ANNEXATION NO. 1), A PARCEL OF LAND GENERALLY LOCATED AT 52 CANYON PINES DRIVE, FINDING SAID PETITION SUBSTANTIALLY COMPLIANT WITH C.R.S. 31-12-107(1), AND SETTING A PUBLIC HEARING FOR JANUARY 8, 2024, 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

LAND DESCRIPTION
ANNEXATION 1
PUD – LOW DENSITY RESIDENTIAL

SHEET 1 OF 5

A PARCEL OF LAND LOCATED IN THE SOUTHEAST QUARTER OF SECTION 12, TOWNSHIP 2 SOUTH, RANGE 71 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF JEFFERSON, STATE OF COLORADO MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: BEARINGS ARE BASED ON THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 12 BEING S 83°33'46" W AND MONUMENTED AS FOLLOWS:

-SOUTH QUARTER CORNER OF SECTION 12, BEING A FOUND 3.25" ALUMINUM CAP, PLS 22564, PER MON. REC. DATED 12-1-1986.

-SOUTHEAST CORNER OF SECTION 12, BEING A FOUND 3.25" ALUMINUM CAP, PLS 14057, PER MON. REC. DATED 12-13-1985.

BEGINNING AT SAID SOUTHEAST CORNER OF SECTION 12, SAID POINT ALSO BEING ON THE NORTHERLY BOUNDARY OF JEFFERSON CENTER ANNEXATION NO. 15, RECORDED AT REC. NO. F0682300 ORDINANCE NO. 3353;

THENCE S 83°33'46" W ALONG SAID NORTHERLY BOUNDARY A DISTANCE OF 745.78 FEET;

THENCE N 06°26'14" W A DISTANCE OF 142.61 FEET;

THENCE S 85°36'41" E A DISTANCE OF 759.29 FEET TO THE POINT OF BEGINNING.

CONTAINING AN AREA OF 53,179 S.F. OR 1.2208 ACRES MORE OR LESS.

TRIANGLE ANNEXATION
A PARCEL OF LAND LOCATED IN THE SOUTHEAST 1/4 SECTION 12,
T2S R71W 6TH P.M. COUNTY OF JEFFERSON, STATE OF COLORADO

SOUTH 1/4 CORNER SECTION 12
T2S, R71W, 6TH P.M. (FOUND 3
1/4" ALUMINUM CAP STAMPED
LS 22564 PER MONUMENT
RECORD DATED 12-1-1986)

PLS 26606 (VIGIL) DID NOT
ACCEPT THIS MONUMENT
ACCORDING TO MON REC DATED
10-28-99

PLS 26606 (VIGIL) DID NOT
ACCEPT THIS MONUMENT
ACCORDING TO ALTA/ACSM
SURVEY DATED 12-28-99

PLS 26606 (VIGIL) ACCEPTED
THIS MONUMENT AS SHOWN
ON THE CANYON PINES PLAT
DATED 6-8-2017

UNPLATTED
UNINCORPORATED JEFFERSON COUNTY
LAKEWOOD BRICK AND TILE COMPANY
REC. NO. 82069447

POINT OF BEGINNING
SE CORNER SECTION 12 T2S, R71W,
6TH P.M. FOUND 3 1/4" ALUMINUM CAP
STAMPED LS 14057, PER MONUMENT
RECORD DATED 11-6-97

UNPLATTED
TRIANGLE ANNEXATION
53,179 S.F.
1.2208 ACRES

S83°33'46"W 745.78'

CITY OF ARVADA
JEFFERSON CENTER ANNEXATION NO. 15
ORD. NO. 3157, RN 10682300

CANYON PINES SUBDIVISION
RN 2017059646

CANYON PINES DRIVE
RN 2017059646

LAND DESCRIPTION:

A PARCEL OF LAND LOCATED IN THE SOUTHEAST QUARTER OF SECTION 12, TOWNSHIP
2 SOUTH, RANGE 71 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF
JEFFERSON, STATE OF COLORADO MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT SAID SOUTHEAST CORNER OF SECTION 12, SAID POINT ALSO BEING ON
THE NORTHERLY BOUNDARY OF JEFFERSON CENTER ANNEXATION NO. 15, RECORDED AT
REC. NO. F0682300, ORDINANCE NO. 3353, SAID POINT ALSO BEING A POINT ON THE
NORTHERLY BOUNDARY OF CANYON PINES SUBDIVISION, A SUBDIVISION RECORDED AT
REC. NO. 2017059646;

THENCE S 83°33'46" W ALONG SAID NORTHERLY BOUNDARY A DISTANCE OF 745.78
FEET;

THENCE N 06°26'14" W A DISTANCE OF 142.61 FEET;

THENCE S 85°36'41" E A DISTANCE OF 759.29 FEET TO THE POINT OF BEGINNING.

CONTAINING AN AREA OF 53,179 S.F. OR 1.2208 ACRES MORE OR LESS.

GENERAL NOTES:

1. THE LINEAL UNITS USED ON THIS MAP ARE U.S. SURVEY FEET. ALL BEARINGS
SHOWN HEREON ARE IN DEGREES-MINUTES-SECONDS.

2. ACCORDING TO COLORADO LAW, YOU MUST COMMENCE AY 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.

3. BEARINGS ARE BASED ON THE SOUTH LINE OF THE SOUTHEAST 1/4 OF SECTION 12
BEING S 83°33'46" W AND MONUMENTED AS FOLLOWS:

-SOUTH QUARTER CORNER OF SECTION 12, BEING A FOUND 3.25" ALUMINUM CAP,
PLS 22564, PER MON. REC. DATED 12-1-1986.

-SOUTHEAST CORNER OF SECTION 12, BEING A FOUND 3.25" ALUMINUM CAP, PLS
14057, PER MON. REC. DATED 12-13-1985.

4. THIS MAP IS NOT A MONUMENTED LAND SURVEY PLAT OR AN IMPROVEMENT
SURVEY PLAT.

5. THE PURPOSE OF THIS MAP IS TO SHOW THE AREA TO BE ANNEXED INTO THE CITY
OF ARVADA AND WAS CREATED WITHOUT THE BENEFIT OF A TITLE POLICY.

CONTIGUITY STATEMENT:

THE ABOVE DESCRIBED LAND IS CONTIGUOUS TO THE CITY OF ARVADA AND MEETS
THE REQUIREMENTS SET FORTH IN COLORADO REVISED STATUES 1973, 31-12-104-(1)
(c) THAT ONE-SIXTH OR MORE OF THE PERIMETER TO BE ANNEXED IS CONTIGUOUS
WITH THE ANNEXING MUNICIPALITY.

TOTAL PERIMETER OF AREA CONSIDERED FOR ANNEXATION = 1,647.68'

ONE-SIXTH OF THE TOTAL PERIMETER OF AREA = 274.61'

PERIMETER OF THE AREA CONTIGUOUS WITH EXISTING CITY LIMITS = 745.78'

THE TOTAL CONTIGUOUS PERIMETER IS 45.26% WHICH EXCEEDS THE 1/6 (16.67%) AREA
REQUIRED.

SURVEYOR'S STATEMENT:

THE CITY OF ARVADA IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF
THE SURVEY DATA SHOWN HEREIN. THE CITY OF ARVADA'S REVIEW IS FOR GENERAL
COMPLIANCE WITH ARVADA'S LAND DEVELOPMENT CODE. THE CITY OF ARVADA,
THROUGH THE ACCEPTANCE OF THIS ANNEXATION MAP, ASSUMES NO RESPONSIBILITY
FOR COMPLETENESS AND/OR ACCURACY OF THIS ANNEXATION MAP. THE ACCURACY OF
SURVEY INFORMATION INCLUDING BOUNDARY INFORMATION, MONUMENTATION, LOT LINES,
ETC IS THE SOLE RESPONSIBILITY OF THE LICENSED SURVEYOR NAMED HEREIN.

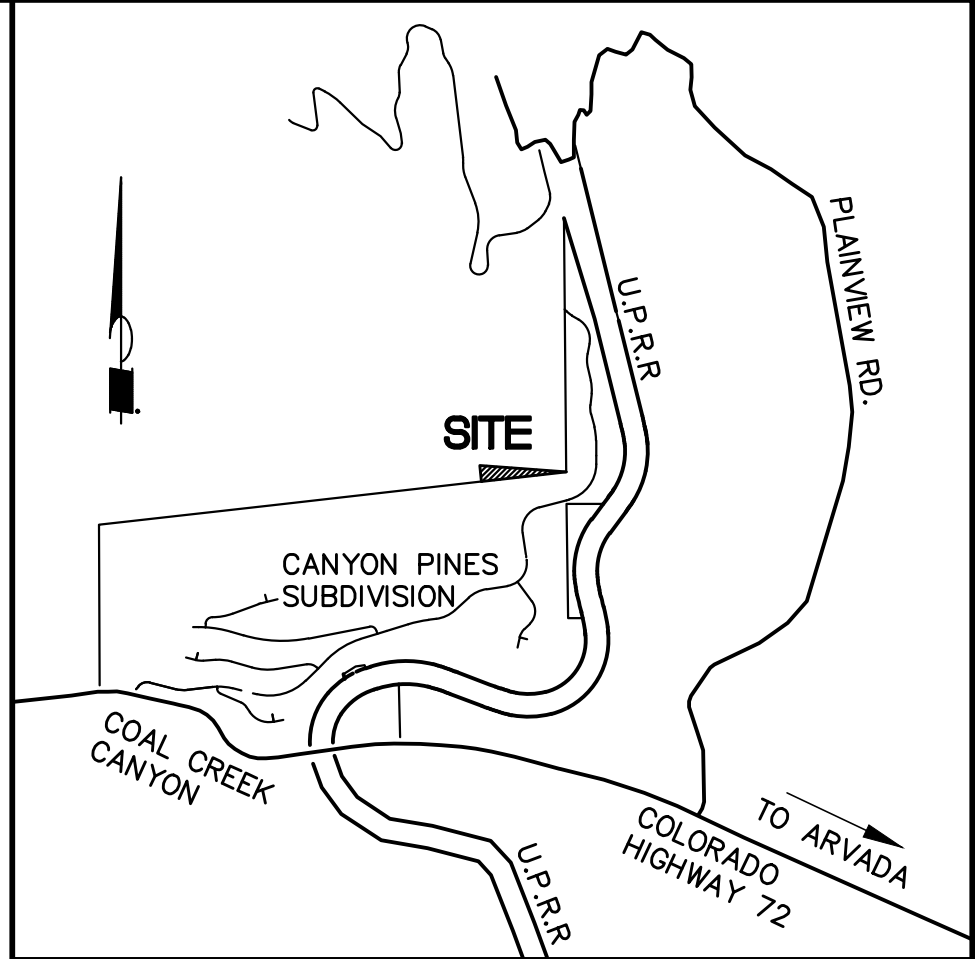
APPROVAL CERTIFICATE:

APPROVED FOR FILING BY THE CITY OF ARVADA THIS ____DAY OF

____20____

____ATTEST____
MAYOR CITY CLERK

ORDINANCE NUMBER _____



-VICINITY MAP-
SCALE: 1"=2000'

LEGEND

- BOUNDARY LINE
- ROW LINE
- LOT LINE
- EASEMENT LINE
- SECTION LINE
- SECTION CORNER
- AREA OF PREVIOUS ANNEXATION

RECORDER'S CERTIFICATE:

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 ____M

JEFFERSON COUNTY CLERK AND RECORDER

DEPUTY CLERK

SURVEYOR'S CERTIFICATE:

I, CHRISTOPHER H. McELVAIN, A DULY REGISTERED PROFESSIONAL LAND SURVEYOR IN
THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THIS MAP WAS PREPARED
UNDER MY DIRECT RESPONSIBILITY, SUPERVISION, AND CHECKING AND THAT IT IS A
TRUE AND CORRECT REPRESENTATION OF THE AREA TO BE ANNEXED TO THE CITY OF
ARVADA, COLORADO. 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) (c) THAT ONE SIXTH OR MORE OF THE PERIMETER TO BE
ANNEXED IS CONTIGUOUS WITH THE ANNEXING MUNICIPALITY.

CHRISTOPHER H. McELVAIN
COLORADO P.L.S. 36561
FOR AND ON BEHALF OF SURVEY303, LLC.

SURVEY 303 LLC
LAND SURVEYING
5368 LYNN DR. ARVADA CO. 80002
303 514 3668 SURVEY303@AOL.COM

NAME OF ANNEXATION: TRIANGLE ANNEXATION

APPROXIMATE LOCATION: 52 Canyon Pines Drive, Arvada, 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

A PARCEL OF LAND LOCATED IN THE SOUTHEAST QUARTER OF SECTION 12, TOWNSHIP 2 SOUTH, RANGE 71 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF JEFFERSON, STATE OF COLORADO MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: BEARINGS ARE BASED ON THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 12 BEING S 83°33'46" W AND MONUMENTED AS FOLLOWS:

-SOUTH QUARTER CORNER OF SECTION 12, BEING A FOUND 3.25" ALUMINUM CAP, PLS 22564, PER MON. REC. DATED 12-1-1986.

-SOUTHEAST CORNER OF SECTION 12, BEING A FOUND 3.25" ALUMINUM CAP, PLS 14057, PER MON. REC. DATED 12-13-1985.

BEGINNING AT SAID SOUTHEAST CORNER OF SECTION 12, SAID POINT ALSO BEING ON THE NORTHERLY BOUNDARY OF JEFFERSON CENTER ANNEXATION NO. 15, RECORDED AT REC. NO. F0682300 ORDINANCE NO. 3353, SAID POINT ALSO BEING A POINT ON THE NORTHERLY BOUNDARY OF CANYON PINES SUBDIVISION, A SUBDIVISION RECORDED AT REC. NO. 2017059646;

THENCE S 83°33'46" W ALONG SAID NORTHERLY BOUNDARY A DISTANCE OF 745.78 FEET;

THENCE N 06°26'14" W A DISTANCE OF 142.61 FEET;

THENCE S 85°36'41" E A DISTANCE OF 759.29 FEET TO THE POINT OF BEGINNING.

CONTAINING AN AREA OF 53,179 S.F. OR 1.2208 ACRES MORE OR LESS.

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(s) further request(s) that the City of Arvada approve the annexation of the area proposed to be annexed.

Owner's Signature:
Name of signer (print)
Address:
Date of signing:


DIANA K. TEN EYCK
98 S. ROGERSWAY GOLDEN CO 80461
JULY 25, 2023

AFFIDAVIT OF CIRCULATOR

STATE OF COLORADO

COUNTY OF Adams

) ss.

THOMAS W. TEN Eyck, Jr., being duly sworn, upon oath, deposes and states:

1. That the affiant circulated the Petition for Annexation for the purpose of obtaining the signature(s) of the above Petitioner(s).
2. That each signature thereon is the signature of the person whose name it purports to be.

NOTARY CERTIFICATE
STATE OF COLORADO)

COUNTY OF Adams

) ss.
)

Thomas W. Ten Eyck, Jr.
Circulator

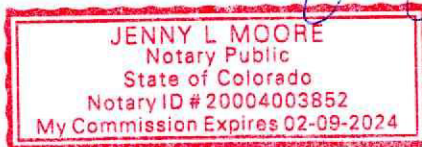
Subscribed and sworn to before me this 25th day of July, 2023

Witness my hand and official seal.

(SEAL)

My Commission Expires: 02/09/2024

Jenny L. Moore
Notary Public





REPORT TO CITY COUNCIL RESOLUTION

AGENDA ITEM
8.A.2.

TO: THE HONORABLE CITY COUNCIL

DATE: November 27, 2023

SUBJECT: R23-102, A Resolution Accepting an Annexation Petition Concerning Canyon Pines, Debrouillarde Pump Station (Annexation No. 2), a Parcel of Land Generally Located at 52 Canyon Pines Drive, Finding Said Petition Substantially Compliant with C.R.S. 31-12-107(1), and Setting a Public Hearing for January 8, 2024, 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

Section 27 LLC is requesting approval of a Comprehensive Plan Amendment, annexation, and rezoning of two parcels of land known as Canyon Pines- Triangle parcel (Annexation No.1) and Canyon Pines- Arvada's DeBrouillarde Pump Station parcel (Annexation No. 2). A Planned Unit Development (PUD) for the two parcels in addition to a PUD Amendment for a portion of the original Canyon Pines development, collectively referred to as Canyon Pines Filing No. 2 accompany these requests. The annexations will provide for the inclusion of the City's water pump station and three additional single family lots within the City limits.

The annexations include Annexation No. 1 (the Triangle, which is 1.2208 acres) and Annexation No. 2 (Arvada's DeBrouillarde Pump Station parcel, which is 2.7964 acres). Both parcels are outside of the current Comprehensive Plan boundaries, requiring that the plan be amended to extend the boundaries. The Annexation No. 1 parcel and the majority of the Annexation No. 2 parcel are proposed to be rezoned PUD (Planned Unit Development). The northeast corner of the Annexation No. 2 parcel is proposed to be rezoned OS (Open Space) to accommodate a new City water pump station.

The Arvada team recommends that the City Council Approve R23-102, A Resolution Accepting an Annexation Petition Concerning Canyon Pines, Debrouillarde Pump Station (Annexation No. 2), a Parcel of Land Generally Located at 52 Canyon Pines Drive, Finding Said Petition Substantially Compliant with C.R.S. 31-12-107(1), and Setting a Public Hearing for January 8, 2024, 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 is no financial impact to the City.

Background

The subject property is located on the north side of State Highway 72, approximately 2.5 miles west of State Highway 93. The site is directly to the west of the Union Pacific Railroad and is currently vacant.

The original Canyon Pines development was included with the Jefferson Center master development for which specific plans, regulations, and intergovernmental agreements were prepared in anticipation of development. An amendment to the City of Arvada Comprehensive Plan was approved for the area in 1989, and a Comprehensive Development Plan (CDP) was approved. The CDP specifies land uses that are allowed. An annexation agreement was also approved in 1989 that specified requirements for future development. A Subdivider's Agreement was entered into between the City, Jefferson Center Metro District (JCMD) No.1, and Jefferson Center Associates (JCA) specific for the property annexed by members of JCA. A metropolitan district was created to fund the infrastructure improvements in annexed portions of Jefferson Center.

SUBJECT: R23-102, A Resolution Accepting an Annexation Petition Concerning Canyon Pines, Debrouillarde Pump Station (Annexation No. 2), a Parcel of Land Generally Located at 52 Canyon Pines Drive, Finding Said Petition Substantially Compliant with C.R.S. 31-12-107(1), and Setting a Public Hearing for January 8, 2024, 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.2.

The Canyon Pines site was annexed as Jefferson Center Filings #14 and 15 in 1997. Concurrent with the annexation, the site was zoned PUD-NC-R-A (Planned Unit Development — New Community — Residential Sub-district A), and an Outline Development Plan (ODP) was approved. Subsequently, the applicant filed a lawsuit objecting to certain conditions of the annexation. By stipulation of the parties, a Jefferson County District Court order provided that a new public hearing be held concerning five specific topics. This hearing was held July 13" of 1998 and the Preliminary Site Plan for the 90 lot Canyon Pines development was approved. In 2017, the Final Development Plan and final plat were approved, and the infrastructure is nearly complete. In 2020, the Canyon Pines development was zoned PUD with the adoption of the updated Land Development Code. In order to deliver water to the development a City pump station is needed. The parcel for this station is located immediately adjacent to the east boundary of the Canyon Pines development in Annexation No. 1. The pump station parcel will be subdivided off of the larger parcel. The remaining portion of the parcel and the Annexation No. 2 parcel will be included for residential development.

Discussion

Div. 8-3-3 Annexation and Disconnection Approval Criteria	Finding	Rationale
1. The annexation is in accord with the Comprehensive Plan and the best interests of the City would be served by annexation of such property.	Complies	The annexations will be consistent with the Comprehensive Plan, once amended, and are in the best interests of the City.
2. The property is capable of being integrated into the City and developed in compliance with all applicable provisions of this Code and the Arvada City Code.	Complies	The parcels are capable of being integrated into the City. As a PUD, this development will meet the applicable provisions of the LDC and the City Code.
3. At the time any development of the area proposed to be annexed is completed, there will be capacity to adequately serve residents of such area with all necessary utilities, facilities and public services.	Complies	Infrastructure necessary to provide services to the parcels has already been completed.

Public Contact

Notice on the City Council agenda.

Commission Recommendation

N/A

Strategic Alignment

The project is consistent with the City Council Strategic Plan principles for the Community and Economic Development work system.

Alternative Courses of Action

N/A

Recommendation for Action

SUBJECT: R23-102, A Resolution Accepting an Annexation Petition Concerning Canyon Pines, Debrouillarde Pump Station (Annexation No. 2), a Parcel of Land Generally Located at 52 Canyon Pines Drive, Finding Said Petition Substantially Compliant with C.R.S. 31-12-107(1), and Setting a Public Hearing for January 8, 2024, 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

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The Arvada team recommends that the City Council Approve R23-102, A Resolution Accepting an Annexation Petition Concerning Canyon Pines, Debrouillarde Pump Station (Annexation No. 2), a Parcel of Land Generally Located at 52 Canyon Pines Drive, Finding Said Petition Substantially Compliant with C.R.S. 31-12-107(1), and Setting a Public Hearing for January 8, 2024, 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 R23-102, A Resolution Accepting an Annexation Petition Concerning Canyon Pines, Debrouillarde Pump Station (Annexation No. 2), a Parcel of Land Generally Located at 52 Canyon Pines Drive, Finding Said Petition Substantially Compliant with C.R.S. 31-12-107(1), and Setting a Public Hearing for January 8, 2024, 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:

Josie Suk, Development Systems and Administrative Manager

Reviewed by:

Approved by:

Cheryl Drake, Senior Planner	11/8/2023
Josie Suk, Development Systems and Administrative Manager	11/8/2023
Rob Smetana, Planning Manager	11/8/2023
Jessica Garner, Director of Community and Economic Development	11/9/2023
Gail Walker, Legal Specialist-Contracts	11/9/2023
Emily Grogg, Senior Assistant City Attorney	11/10/2023
Rachel Morris, City Attorney	11/15/2023
Linda Haley, Deputy City Manager	11/15/2023
Lorie Gillis, City Manager	11/15/2023

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R23-102

A RESOLUTION ACCEPTING AN ANNEXATION PETITION CONCERNING CANYON PINES, DEBROUILLARDE PUMP STATION (ANNEXATION NO. 2), A PARCEL OF LAND GENERALLY LOCATED AT 52 CANYON PINES DRIVE, FINDING SAID PETITION SUBSTANTIALLY COMPLIANT WITH C.R.S. 31-12-107(1), AND SETTING A PUBLIC HEARING FOR JANUARY 8, 2024, 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:

See Exhibit A

Section 3. That a public hearing shall be held on the 8th day of January, 2024 at 6:15 p.m. at the Arvada City Hall 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 27th day of November, 2023.

Lauren Simpson, Mayor

ATTEST:

City Clerk

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

By: _____

Publication Dates: November 30, 2023
 December 7, 2023
 December 14, 2023
 December 21, 2023

EXHIBIT A

A RESOLUTION ACCEPTING AN ANNEXATION PETITION CONCERNING ARVADA'S CANYON PINES, DEBROUILLARDE PUMP STATION (ANNEXATION NO. 2), A PARCEL OF LAND GENERALLY LOCATED AT 52 CANYON PINES DRIVE, FINDING SAID PETITION SUBSTANTIALLY COMPLIANT WITH C.R.S. 31-12-107(1), AND SETTING A PUBLIC HEARING FOR JANUARY 8, 2024, 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

LAND DESCRIPTION

SHEET 4 OF 5

ANNEXATION NO. 2 AND OS ZONING TOGETHER
PUBLIC AND QUASI-PUBLIC FACILITIES

A PARCEL OF LAND LOCATED IN THE NORTHWEST QUARTER OF SECTION 18, TOWNSHIP 2 SOUTH, RANGE 70 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF JEFFERSON, STATE OF COLORADO MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: BEARINGS ARE BASED ON THE NORTH LINE OF THE NORTHEAST QUARTER OF SECTION 13 BEING S 83°33'46" W AND MONUMENTED AS FOLLOWS:

-NORTH QUARTER CORNER OF SECTION 13, BEING A FOUND 3.25" ALUMINUM CAP, PLS 22564, PER MON. REC. DATED 12-1-1986.

-NORTHWEST CORNER OF SECTION 18, BEING A FOUND 3.25" ALUMINUM CAP, PLS 14057, PER MON. REC. DATED 12-13-1985.

COMMENCING AT THE NORTHWEST CORNER OF SECTION 18;

THENCE S 00°49'58" E A DISTANCE OF 279.23 FEET TO A POINT ON THE EASTERLY BOUNDARY OF JEFFERSON CENTER ANNEXATION NO. 15, RECORDED AT REC. NO. F0682300, ORDINANCE NO. 3353 AND THE POINT OF BEGINNING;

THENCE N 89°56'35" E ALONG SAID EASTERLY BOUNDARY A DISTANCE OF 322.05 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF UNION PACIFIC RAILROAD RIGHT-OF-WAY;

THENCE ALONG SAID WESTERLY RIGHT-OF-WAY LINE THE FOLLOWING FIVE (5) COURSES:

1) S 37°01'19" W A DISTANCE OF 170.74 FEET;

2) ALONG A CURVE TO THE LEFT HAVING A CHORD OF S 18°21'49" W 478.80 FEET, A RADIUS OF 748.31 FEET, AN ARC OF 487.37 FEET, AND A DELTA OF 37°18'59";

3) ALONG A CURVE TO THE LEFT HAVING A CHORD OF S 07°11'49" E 231.96 FEET, A RADIUS OF 965.03 FEET, AN ARC OF 232.52 FEET, AND A DELTA OF 13°48'19";

4) S 14°05'59" E A DISTANCE OF 132.76 FEET;

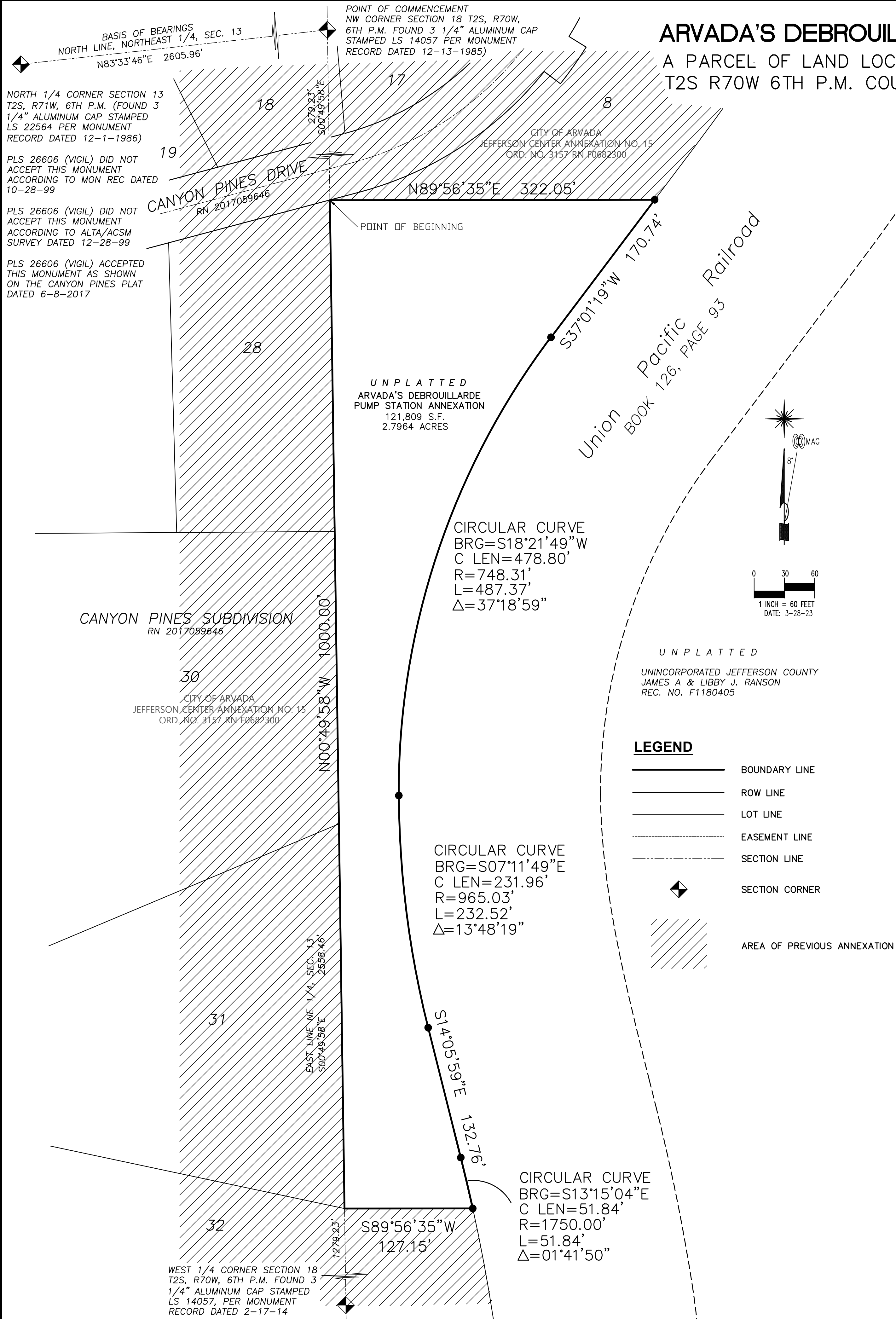
5) ALONG A CURVE TO THE RIGHT HAVING A CHORD OF S 13°15'04" E 51.84 FEET, A RADIUS OF 1750.00 FEET, AN ARC OF 51.84 FEET, AND A DELTA OF 1°41'50" TO A POINT ON SAID EASTERLY BOUNDARY OF JEFFERSON CENTER ANNEXATION NO. 15, RECORDED AT REC. NO. F0682300, ORDINANCE NO. 3353;

THENCE ALONG SAID EASTERLY BOUNDARY THE FOLLOWING TWO (2) COURSES:

1) S 89°56'35" W A DISTANCE OF 127.15 FEET;

2) N 00°49'58" W A DISTANCE OF 1000.00 FEET TO THE POINT OF BEGINNING.

CONTAINING AN AREA OF 121,809 S.F. OR 2.7964 ACRES MORE OR LESS.



LAND DESCRIPTION:

A PARCEL OF LAND LOCATED IN THE NORTHWEST QUARTER OF SECTION 18, TOWNSHIP 2 SOUTH, RANGE 70 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF JEFFERSON, STATE OF COLORADO MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SECTION 18;

THENCE S 00°49'58" E A DISTANCE OF 279.23 FEET TO A POINT ON THE EASTERLY BOUNDARY OF JEFFERSON CENTER ANNEXATION NO. 15, RECORDED AT REC. NO. F0682300, ORDINANCE NO. 3353, SAID POINT ALSO BEING A POINT ON THE EASTERLY BOUNDARY OF CANYON PINES SUBDIVISION, A SUBDIVISION RECORDED AT REC. NO. 2017059646 AND THE POINT OF BEGINNING;

THENCE N 89°56'35" E ALONG SAID EASTERLY BOUNDARY A DISTANCE OF 322.05 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF UNION PACIFIC RAILROAD;

THENCE ALONG SAID WESTERLY RIGHT-OF-WAY LINE THE FOLLOWING FIVE (5) COURSES:

- 1) S 37°01'19" W A DISTANCE OF 170.74 FEET;
- 2) ALONG A CURVE TO THE LEFT HAVING A CHORD OF S 18°21'49" W 478.80 FEET, A RADIUS OF 748.31 FEET, AN ARC OF 487.37 FEET, AND A DELTA OF 37°18'59";
- 3) ALONG A CURVE TO THE LEFT HAVING A CHORD OF S 07°11'49" E 231.96 FEET, A RADIUS OF 965.03 FEET, AN ARC OF 232.52 FEET, AND A DELTA OF 13°48'19";
- 4) S 14°05'59" E A DISTANCE OF 132.76 FEET;
- 5) ALONG A CURVE TO THE RIGHT HAVING A CHORD OF S 13°15'04" E 51.84 FEET, A RADIUS OF 1750.00 FEET, AN ARC OF 51.84 FEET, AND A DELTA OF 1°41'50" TO A POINT ON SAID EASTERLY BOUNDARY OF JEFFERSON CENTER ANNEXATION NO. 15, RECORDED AT REC. NO. F0682300, ORDINANCE NO. 3353

THENCE ALONG SAID EASTERLY BOUNDARY THE FOLLOWING TWO (2) COURSES:

- 1) S 89°56'35" W A DISTANCE OF 127.15 FEET;
- 2) N 00°49'58" W A DISTANCE OF 1000.00 FEET TO THE POINT OF BEGINNING.

CONTAINING AN AREA OF 121,809 S.F. OR 2.7964 ACRES MORE OR LESS.

GENERAL NOTES:

1. THE LINEAL UNITS USED ON THIS MAP ARE U.S. SURVEY FEET. ALL BEARINGS SHOWN HEREON ARE IN DEGREES-MINUTES-SECONDS.
2. ACCORDING TO COLORADO LAW, YOU MUST COMMENCE AY 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.
3. BEARINGS ARE BASED ON THE NORTH LINE OF THE NORTHEAST 1/4 OF SECTION 13 BEING S 83°33'46" W AND MONUMENTED AS FOLLOWS:
 - NORTH QUARTER CORNER OF SECTION 13, BEING A FOUND 3.25" ALUMINUM CAP, PLS 22564, PER MON. REC. DATED 12-1-1986.
 - NORTHWEST OF SECTION 18, BEING A FOUND 3.25" ALUMINUM CAP, PLS 14057, PER MON. REC. DATED 12-13-1985.
4. THIS MAP IS NOT A MONUMENTED LAND SURVEY PLAT OR AN IMPROVEMENT SURVEY PLAT.
5. THE PURPOSE OF THIS MAP IS TO SHOW THE AREA TO BE ANNEXED INTO THE CITY OF ARVADA AND WAS CREATED WITHOUT THE BENEFIT OF A TITLE POLICY.

CONTIGUITY STATEMENT:

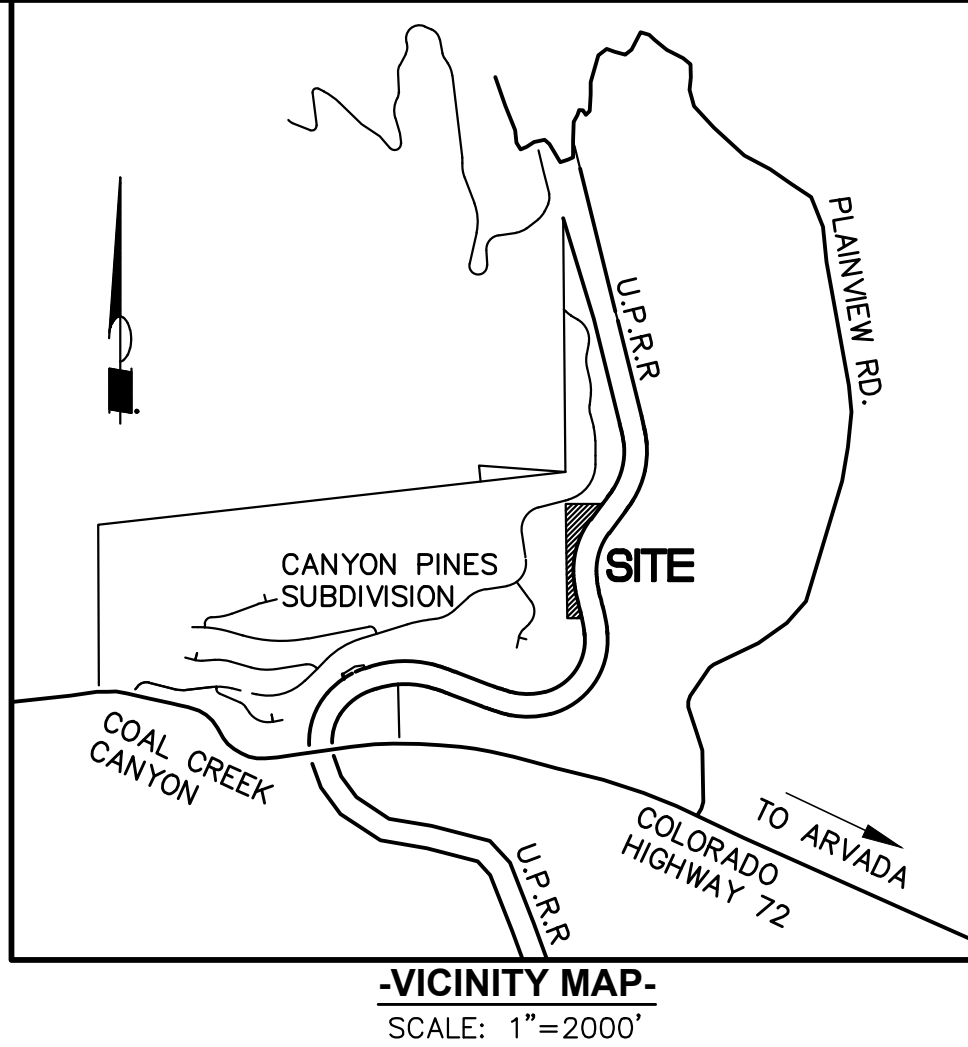
THE ABOVE DESCRIBED LAND IS CONTIGUOUS TO THE CITY OF ARVADA AND MEETS THE REQUIREMENTS SET FORTH IN COLORADO REVISED STATUES 1973, 31-12-104-(1) (a) THAT ONE-SIXTH OR MORE OF THE PERIMETER TO BE ANNEXED IS CONTIGUOUS WITH THE ANNEXING MUNICIPALITY.

TOTAL PERIMETER OF AREA CONSIDERED FOR ANNEXATION = 2,524.43'

ONE-SIXTH OF THE TOTAL PERIMETER OF AREA = 420.74"

PERIMETER OF THE AREA CONTIGUOUS WITH EXISTING CITY LIMITS = 1,449.20'

THE TOTAL CONTIGUOUS PERIMETER IS 57.4% WHICH EXCEEDS THE 1/6 (16.67%) AREA REQUIRED.



SURVEYOR'S STATEMENT:

THE CITY OF ARVADA IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE SURVEY DATA SHOWN HEREIN. THE CITY OF ARVADA'S REVIEW IS FOR GENERAL COMPLIANCE WITH ARVADA'S LAND DEVELOPMENT CODE. THE CITY OF ARVADA, THROUGH THE ACCEPTANCE OF THIS ANNEXATION MAP, ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS ANNEXATION MAP. THE ACCURACY OF SURVEY INFORMATION INCLUDING BOUNDARY INFORMATION, MONUMENTATION, LOT LINES, ETC IS THE SOLE RESPONSIBILITY OF THE LICENSED SURVEYOR NAMED HEREIN.

APPROVAL CERTIFICATE:

APPROVED FOR FILING BY THE CITY OF ARVADA THIS ____DAY OF

_____, 20____

MAYOR _____ ATTEST _____
CITY CLERK

ORDINANCE NUMBER _____

RECORDER'S CERTIFICATE:

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 ____M

JEFFERSON COUNTY CLERK AND RECORDER _____

DEPUTY CLERK _____

SURVEYOR'S CERTIFICATE:

I, CHRISTOPHER H. McELVAIN, A DULY REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THIS MAP WAS PREPARED UNDER MY DIRECT RESPONSIBILITY, SUPERVISION, AND CHECKING AND THAT IT IS A TRUE AND CORRECT REPRESENTATION OF THE AREA TO BE ANNEXED TO THE CITY OF ARVADA, COLORADO. 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) (a) THAT ONE SIXTH OR MORE OF THE PERIMETER TO BE ANNEXED IS CONTIGUOUS WITH THE ANNEXING MUNICIPALITY.

CHRISTOPHER H. McELVAIN
COLORADO P.L.S. 36561
FOR AND ON BEHALF OF SURVEY303, LLC.

SURVEY 303 LLC
LAND SURVEYING

5368 LYNN DR. ARVADA CO. 80002
303 514 3668 SURVEY303@AOL.COM

NAME OF ANNEXATION: ARVADA'S DEBROUILLARDE PUMP STATION ANNEXATION

APPROXIMATE LOCATION: 52 Canyon Pines Drive, Arvada, 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

A PARCEL OF LAND LOCATED IN THE NORTHWEST QUARTER OF SECTION 18,
TOWNSHIP 2 SOUTH, RANGE 70 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY
OF JEFFERSON, STATE OF COLORADO MORE PARTICULARLY DESCRIBED AS
FOLLOWS:

BASIS OF BEARINGS: BEARINGS ARE BASED ON THE NORTH LINE OF THE NORTHEAST
QUARTER OF SECTION 13 BEING S 83°33'46" W AND MONUMENTED AS FOLLOWS:

-NORTH QUARTER CORNER OF SECTION 13, BEING A FOUND 3.25" ALUMINUM
CAP, PLS 22564, PER MON. REC. DATED 12-1-1986.

-NORTHWEST CORNER OF SECTION 18, BEING A FOUND 3.25" ALUMINUM CAP,
PLS 14057, PER MON. REC. DATED 12-13-1985.

COMMENCING AT THE NORTHWEST CORNER OF SECTION 18;

THENCE S 00°49'58" E A DISTANCE OF 279.23 FEET TO A POINT ON THE EASTERLY
BOUNDARY OF JEFFERSON CENTER ANNEXATION NO. 15, RECORDED AT REC. NO.
F0682300, ORDINANCE NO. 3353, SAID POINT ALSO BEING A POINT ON THE EASTERLY
BOUNDARY OF CANYON PINES SUBDIVISION, A SUBDIVISION RECORDED AT REC. NO.
201705946 AND THE POINT OF BEGINNING;

THENCE N 89°56'35" E ALONG SAID EASTERLY BOUNDARY A DISTANCE OF 322.05 FEET
TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF UNION PACIFIC RAILROAD
RIGHT-OF-WAY;

THENCE ALONG SAID WESTERLY RIGHT-OF-WAY LINE THE FOLLOWING FIVE (5)
COURSES:

1) S 37°01'19" W A DISTANCE OF 170.74 FEET;

2) ALONG A CURVE TO THE LEFT HAVING A CHORD OF S 18°21'49" W 478.80 FEET, A
RADIUS OF 748.31 FEET, AN ARC OF 487.37 FEET, AND A DELTA OF 37°18'59";

3) ALONG A CURVE TO THE LEFT HAVING A CHORD OF S 07°11'49" E 231.96 FEET, A RADIUS OF 965.03 FEET, AN ARC OF 232.52 FEET, AND A DELTA OF 13°48'19";

4) S 14°05'59" E A DISTANCE OF 132.76 FEET;

5) ALONG A CURVE TO THE RIGHT HAVING A CHORD OF S 13°15'04" E 51.84 FEET, A RADIUS OF 1750.00 FEET, AN ARC OF 51.84 FEET, AND A DELTA OF 1°41'50" TO A POINT ON SAID EASTERLY BOUNDARY OF JEFFERSON CENTER ANNEXATION NO. 15, RECORDED AT REC. NO. F0682300, ORDINANCE NO. 3353;

THENCE ALONG SAID EASTERLY BOUNDARY THE FOLLOWING TWO (2) COURSES:

1) S 89°56'35" W A DISTANCE OF 127.15 FEET;

2) N 00°49'58" W A DISTANCE OF 1000.00 FEET TO THE POINT OF BEGINNING.

CONTAINING AN AREA OF 121,809 S.F. OR 2.7964 ACRES MORE OR LESS.

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(s) further request(s) that the City of Arvada approve the annexation of the area proposed to be annexed.

DEBROUILLARDE RESOURCES, LLC

Owner's Signature: by *Diana K Ten Eyck* MANAGER
Name of signer (print) DIANA K. TEN EYCK, MANAGER
Address: 98 S. ROGERS WAY GOLDEN CO 80401
Date of signing: JULY 25, 2023

AFFIDAVIT OF CIRCULATOR

STATE OF COLORADO

COUNTY OF Adams) ss.

THOMAS W. TEN EYCK, JR., being duly sworn, upon oath, deposes and states:

1. That the affiant circulated the Petition for Annexation for the purpose of obtaining the signature(s) of the above Petitioner(s).
2. That each signature thereon is the signature of the person whose name it purports to be.

NOTARY CERTIFICATE
STATE OF COLORADO)

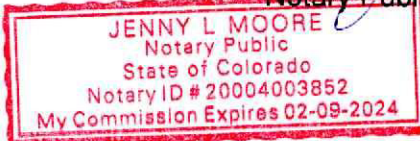
COUNTY OF Adams) ss.

Subscribed and sworn to before me this 25th day of July, 2023

Witness my hand and official seal.

(SEAL)

My Commission Expires: 08/09/2024





REPORT TO CITY COUNCIL RESOLUTION

AGENDA ITEM
8.A.3.

TO: THE HONORABLE CITY COUNCIL

DATE: November 27, 2023

SUBJECT: R23-103, A Resolution Authorizing an Agreement by and between the City of Arvada and Native Sun Construction, Inc. for the Ralston Trunk Sewer Improvements - Ward and 69th Project No. 17-SR-07, in an Amount Not to Exceed \$5,695,587.67, Project No. 17-SR-07

Report in Brief

The attached resolution authorizes an agreement with Native Sun Construction, Inc. for an amount not to exceed \$5,695,587.67. This project involves the open cut installation of 3,000 linear feet of new 27" sewer main to replace the existing damaged and undersized 18" sewer main. This segment was identified in the Arvada Sanitary Sewer Master Plan as Central/Ralston Trunk segment six (CRT6 Phase 1) and as needing immediate attention to avoid a sanitary sewer overflow.

The Arvada team recommends that the City Council approve R23-103, A Resolution Authorizing an Agreement by and between the City of Arvada and Native Sun Construction, Inc. for the Ralston Trunk Sewer Improvements - Ward and 69th Project in an Amount Not to Exceed \$5,695,587.67, Project No. 17-SR-07.

Financial Impact

CIP Project: RTSI - CRT6 (Bond), CIP Project No. 98557

Financial Impact: \$5,695,587.67

This is a one-time request for Project Construction costs.

Funding Source: UT Wastewater Bond Projects (42)

Type: CIP

Background

The City of Arvada has completed a Sanitary Sewer Master Plan that has identified sections of the Central/Ralston Trunk Sewer that will need to be replaced and upsized to meet the City's Level of Service (LoS) standards. The first project the City will be completing for the Central/Ralston Trunk Sewer is CRT 6 Phase 1. The project will begin at Danny Kendrick Park East and extend to Gibbs West Park. CRT 6 Phase 1 was selected due to capacity risk issues identified in the Sanitary Sewer Master Plan and damaged pipe that will need to be replaced in W. 69th Avenue.

Discussion

Bids for this project were opened at 2:00 p.m. on September 20, 2023, and a total of six (6) bids were received. The bids are summarized here as follows:

	Contractor	Bid Amount	Confirmed to Meet Minimum Qualifications as stated in the RFB and Completed Reference Checks
1	TWX	\$5,029,558.60	no
2	Native Sun	\$5,695,587.67	yes
3	Brannan	\$6,942,555.00	yes
4	SEMA	\$7,251,559.00	yes

SUBJECT: R23-103, A Resolution Authorizing an Agreement by and between the City of Arvada and Native Sun Construction, Inc. for the Ralston Trunk Sewer Improvements - Ward and 69th Project No. 17-SR-07, in an Amount Not to Exceed \$5,695,587.67, Project No. 17-SR-07

PAGE: 2
ITEM: 8.A.3.

5	Vortex	\$7,770,444.62	yes
6	JHL	\$8,133,019.38	yes

The lowest qualified bidder was Native Sun Construction, Inc. and they have successfully completed multiple large diameter sewer projects in the last 5 years in the Colorado front range area. This work is expected to begin with a notice to proceed after contract execution and take approximately 240 days to complete for an estimated construction completion timeframe of September 2024.

Funds for this project are available in CIP project: 98557.

This project also provides for replacement of asbestos-cement water line adjacent to the new sewer alignment. This water line has reached the end of useful life; replacing the water line as part of one project is the least disruptive for property owners and residents in the vicinity.

Additionally, the project will impact an existing playground. The Infrastructure Work System has collaborated with VCN to develop a synergistic approach and provide a new playground in Danny Kendricks Park East.

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 included in the Infrastructure Priority Area:

Provides the community with a safe, reliable high quality water supply, drainage system, and wastewater disposal services for full city build-out, as defined in the Comprehensive Plan. This includes maintaining utility rates at the 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 R23-103, A Resolution Authorizing an Agreement by and between the City of Arvada and Native Sun Construction, Inc. for the Ralston Trunk Sewer Improvements - Ward and 69th Project in an Amount Not to Exceed \$5,695,587.67, Project No. 17-SR-07.

Suggested Motion:

I move that R23-103, A Resolution Authorizing an Agreement by and between the City of Arvada and Native Sun Construction, Inc. for the Ralston Trunk Sewer Improvements - Ward and 69th Project in an Amount Not to Exceed \$5,695,587.67, Project No. 17-SR-07, be (approved) (rejected).

Prepared by:
Kris Gardner, Civil Engineer III

SUBJECT: R23-103, A Resolution Authorizing an Agreement by and between the City of Arvada and Native Sun Construction, Inc. for the Ralston Trunk Sewer Improvements - Ward and 69th Project No. 17-SR-07, in an Amount Not to Exceed \$5,695,587.67, Project No. 17-SR-07

PAGE: 3
ITEM: 8.A.3.

Reviewed by:

Approved by:

Mary Stahl, Senior Civil Engineer	10/25/2023
Jenny Wolfschlag, City Engineer	11/6/2023
Jacqueline Rhoades, Public Works Director	11/8/2023
Bryan Archer, Director of Finance	11/8/2023
Tammy Hedlund, Legal Specialist	11/8/2023
Jessica Morales, Assistant City Attorney	11/9/2023
Rachel Morris, City Attorney	11/15/2023
Don Wick, Deputy City Manager	11/15/2023
Lorie Gillis, City Manager	11/15/2023

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R23-103

A RESOLUTION AUTHORIZING AN AGREEMENT BY AND BETWEEN
THE CITY OF ARVADA AND NATIVE SUN CONSTRUCTION, INC. FOR RALSTON
TRUNK SEWER IMPROVEMENTS – WARD AND 69TH, PROJECT NO. 17-SR-07, IN AN
AMOUNT NOT TO EXCEED \$5,695,587.67

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 Native Sun Construction, Inc. for Ralston Trunk Sewer Improvements – Ward and 69th, Project No. 17-SR-07, in an amount not to exceed \$5,695,587.67.

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

APPROVED AND ADOPTED this 27th day of November, 2023.

Lauren Simpson, Mayor

ATTEST:

City Clerk

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

By: _____

**AN AGREEMENT BY AND BETWEEN THE CITY OF ARVADA AND
NATIVE SUN CONSTRUCTION, INC. FOR RALSTON TRUNK SEWER
IMPROVEMENTS – WARD AND 69TH – PROJECT NO. 17-SR-07 IN AN
AMOUNT NOT TO EXCEED \$5,695,587.67**

This Agreement made this ____ day of _____, 2023, by and between the City of Arvada, a home rule municipal corporation (“Arvada” and/or “City”) and Native Sun Construction, 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 Ralston Trunk Sewer Improvements – Ward and 69th, Project No. 17-SR-07, as described in the Contract Documents (the “Project” or the “Work”); 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.** 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 Agreement 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. **Preparation/Sufficiency of Site.** Before commencing the Project, 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 (vii) 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.
- 1.4. **Contract Documents.** The Contract Documents are incorporated herein by reference. The term "Contract Documents" means and includes the following:
- A. Arvada's solicitation entitled "Competitive Sealed Bid #23-ENG-074, Ralston Trunk Sewer Improvements - Ward and 69th - Re-Issued" ("CSB"), including all exhibits and/or addenda;
 - B. Contractor's Response to the CSB, Advertisement for Bid, Bid Proposal, Bid Schedule, Bid Bond ("**Contractor's Response**");
 - 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 dated October 23, 2023;
 - 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 (if applicable).
- 1.5. **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 CSB; (3) City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements; (4) Contractor's Response; (5) Change Orders; (6) Requests for Information and Response.

ARTICLE 2. ARVADA'S DUTIES, OBLIGATIONS AND RESPONSIBILITIES

- 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.
- 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. Notwithstanding the preceding, all Change Orders and Contract Amendments are subject to approval in accordance with the requirements of Arvada City Code. Only those authorized by Arvada City Code may approve a Change Order or Contract Amendment.
- 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. Arvada will provide and be responsible for all material testing and all other testing if needed.
- 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-calendar 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 a 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.** 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. **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.

- 4.2. **Pre-Construction Meetings.** Contractor agrees to assist in the preparation for and to participate in any pre-construction meetings with Arvada.
- 4.3. **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.
- 4.4. **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.
- 4.5. **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.
- 4.6. **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.
- 4.7. **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 set forth below:
- 6.1.1. Contractor shall commence the Work required by the Contract Documents within seven calendar days after the date of the Notice to Proceed unless otherwise mutually agreed-upon by the Parties in writing;
 - 6.1.2. Contractor shall complete the Work required by the Contract Documents, including clean-up, within **240 working days** after the date to be specified in the Notice to Proceed, unless the period for completion is extended otherwise by the Contract Documents; and
 - 6.1.3. **Compensation Amount.** Contractor agrees to perform the Work for an amount not to exceed **\$5,695,587.67**.
- 6.2. **Term.** This Agreement 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.
- 6.3. **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.
- 6.4. **Payment for Services.** At least twenty (20) calendar 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. Payment from Arvada will be paid NET 30 days for services performed in accordance with the Bid Schedule and

with this Agreement, but in no event shall the total Contract Amount exceed \$5,695,587.67 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.

- 6.5. **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 applicable Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements.
- 6.6. **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. **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.
- 7.2. **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.
- 7.3. **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 parties 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.
- 7.4. **Additional Documents.** The parties agree to execute any additional documents and to take any additional action that is necessary to carry out this Agreement.
- 7.5. **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.

- 7.6. **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.
- 7.7. **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.
- 7.8. **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.
- 7.9. **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, 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.
- 7.10. **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:
- 7.10.1. Colorado labor shall be employed to perform eighty percent (80%) of the work.
- 7.10.2. 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.

(Signatures on next page.)

DATED this _____ day of _____, 2023.

CITY OF ARVADA, a Colorado home
rule municipal corporation

Lauren Simpson
Mayor
8101 Ralston Road
Arvada, CO 80002

ATTEST:

City Clerk

APPROVED AS TO FORM:
Rachel A. Morris

By: _____

Native Sun Construction, Inc., a Colorado
Corporation

Samuel Jeffs
Senior Estimating Manager
400 S. Sierra Madre
Colorado Spring, CO 80904
Samuel.Jeffs@nscteam.com

Arvada's Solicitation Documents

**An Agreement By And Between The City Of Arvada And
Native Sun Construction, Inc. For Ralston Trunk Sewer
Improvements – Ward And 69th – Project No. 17-SR-07 In An
Amount Not To Exceed \$5,695,587.67**



COMPETITIVE SEALED BID

BID #: 23-ENG-074

Title: RALSTON TRUNK SEWER IMPROVEMENTS – WARD AND 69TH – RE- ISSUE

CSB Issued: 08/23/2023

Pre-Proposal Meeting: N/A

Questions Deadline: 09/06/2023 - 2:00 pm MT
Submit questions on BidnetDirect.com. Responses will be posted via addendum.

Bids Due Date: 09/20/2023 - 2:00 pm MT

Bid Delivery address: Electronic Submissions must be submitted online at <https://www.bidnetdirect.com>.

Project Delivery Date: 240 days after notice to proceed

Submit bid as one (1) PDF file. Company name must start the file name. Late responses will not be considered for award.

Submit administrative questions NOT related to the project, contact: Cheryl Dye, cdye@arvada.org
Contact with the requesting department a result in vendor disqualification.

Documents included in this BID:

Cover Page	page 1
Advertisement for Bids	page 2
General Terms and Conditions	page 3
Special Terms and Conditions for Bidders	page 5
Insurance Requirements	page 8
Project Special Provisions	page 9
Submittal Forms to be completed and returned:	
• Bid Bond	page 29
• Bid Proposal	page 30
• Bid Schedule	page 31
• Required Contractor Submittal Form	page 32

Attachments: Example Contract Documents, Geotechnical Investigation, Construction Plans, Bid Schedule (Excel File)

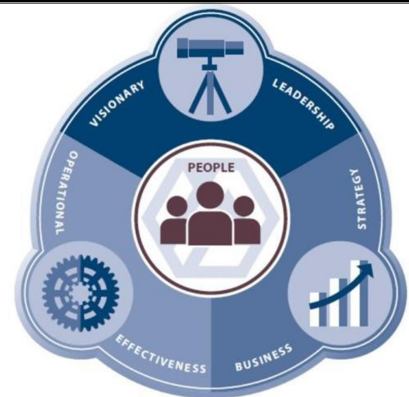
ARVADA'S VISION MISSION AND VALUES

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. 17-SR-07 Project Title: Ralston Trunk Sewer Improvements – Ward & 69th

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

ESTIMATED QUANTITIES OF THE MAJOR ITEMS OF WORKARE:

2,102	LF	Removal of Sanitary Sewer Pipe
5	EA	Removal of Sanitary Sewer Manhole
2,155	LF	Remove and Dispose of Asbestos Cement Water Pipe
175	LF	Installation of 30" PVC Sewer Main Line
3,000	LF	Installation of 27" PVC Sewer Main Line
1,770	LF	Installation of 8" PVC Sewer Main Line
29	EA	Installation of Sanitary Sewer Manhole
2,215	LF	Installation of 8" PVC Water Main
115	LF	42" Bore and Casing beneath Ralston Creek
5,290	SY	Removal and Replacement of Asphalt Pavement
760	SY	Removal and Replacement of Concrete Sidewalk
31,500	SF	Irrigated Landscaping Restoration
1	LS	Temporary Bypass Pumping Sewer
1	LS	Construction Dewatering

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 July 26, 2022, 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: 8/23/23

CITY OF ARVADA



Jenny Wolfschlag
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. 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.*

13. 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.

14. 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.

15. 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.

16. 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.

17. 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.

18. 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.

19. 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.

20. 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.

21. 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.

22. 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.

23. ACCESSIBILITY COMPLIANCE.

- 23.1 Arvada is obligated to comply with the Colorado Anti-Discrimination Act (C.R.S. §§24-34-300 *et seq.*) ("CADA"), which requires all digital and online platform and content providers to comply with the minimum *Accessibility Standards for Individuals with a Disability*, adopted by the Colorado Office of Information Technology ("OIT") under C.R.S. §24-85-103(2.5). Contractor has been advised to familiarize itself with CADA.
- 23.2 To the extent the Work or any of Contractor's services provided under the Agreement involves digital, technological components, including but not limited to software, websites, applications, digital documents (the "Material"), all Material shall comply with the OIT's currently adopted minimum *Accessibility Standards for Individuals with a Disability* at all times.
- 23.3 Contractor shall indemnify, save, 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) incurred by any of the Indemnified Parties in relationship to Contractor's failure to comply with Section (1.2) above.
- 23.4 Upon Arvada's request, Contractor shall certify to Arvada that its service(s) and digital documents are compliant with Section (1.2) above. Arvada may require Contractor's compliance to the OIT's currently adopted minimum standards of accessibility to be determined by a third party selected by Arvada to attest to Contractor's compliance.

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 issue 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 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.

22. 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 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 \$2,000,000 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 \$8,000,000.00, 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.
- 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.

SPECIAL PROVISIONS

City of Arvada Project No. 17-SR-07, Project Title: Ralston Trunk Sewer Improvements – Ward and 69th

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.

A. GENERAL CONSIDERATIONS

SC-A-1 CONTRACT TIME AND LIQUIDATED DAMAGES: This project is to be completed, including cleanup, within **240** consecutive calendar days after the date to be specified in the Notice to Proceed, unless the contract time is adjusted by change order. The Contractor 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.

SC-A-2 MINIMUM REQUIRED QUALIFICATIONS: Evidence of these qualifications must be submitted.

- 1) Two (2) successful projects of **18-inch PVC** or larger gravity sewer main, sanitary sewer or storm sewer similar to this project, in the Front Range of Colorado in the last five calendar years. Front Range Colorado is defined as Fort Collins to Pueblo. Owner contact information for all submitted projects must be provided.
- 2) Two (2) successful projects of **8-12 inch PVC** waterline in the Front Range of Colorado in the last five calendar years. Front Range Colorado is defined as Fort Collins to Pueblo. Owner contact information for all submitted projects must be provided.
- 3) Three (3) project references: two of which must be for the proposed Project Manager and one (1) of which must be for the proposed Superintendent. All references must be from Colorado entities.
- 4) Resumes for the proposed Superintendent and Project Manager must be provided.

Minimum required qualifications on this project pertain to Project Manager and Superintendent. Evidence of these minimum qualifications must be submitted with the bids.

SC-A-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 Payment Section of the Contract Documents or as hereinafter stated in the Special Conditions.

SC-A-4 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-A-5 TAXES: The City of Arvada is exempt from Colorado State Sales and Use Taxes on materials and equipment to be incorporated in the work. Said taxes shall not be included in the Contract Price.

SC-A-6 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-A-7 CITY HOLIDAYS: Arvada observed holidays generally include: New Year's Day, Martin Luther King, Jr. Day, Presidents' Day, Memorial Day, Juneteenth, Independence Day, Labor Day, Thanksgiving Day, Day After Thanksgiving, and Christmas Day. 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 the invoice from the Owner.

SC-A-8 MINOR CONTRACT REVISIONS: Miscellaneous modifications in the work, ordered by the Project Engineer 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 Conditions and the Arvada Engineering Code of Standards and Specifications. If the contractor feels that a field order issued by the Engineer entitles the contractor to a change in the total contract price or time, or both, (i.e. the contractor feels that the field order involves costs over and above the amount available in the Minor Contract Revisions bid item) then the Contractor shall notify the Engineer, in writing, within 15 days after receipt of the field order. The Contractor shall not execute any such field order changes ordered by the Engineer pending the receipt of a written Change Order document executed either by the City Manager or Mayor authorizing an increase in the total contract price. Any such work completed by the contractor prior to

receipt of an executed Change Order will be at the contractor's risk and be subject to removal by the contractor should a Change Order not be approved and executed by the City Manager or Mayor for such work.

SC-A-9 SUBSIDIARY OBLIGATIONS: The following items shall be considered subsidiary obligations of the contract. No separate payment will be made for furnishing, installing and removing temporary plugs for pressure testing, temporary connections made from new mains to existing mains, temporary base course or cold mix trench surfacing placed at contractor's option, temporary blow offs for pressure testing; temporary water service to customers as required, cutting and plugging existing lines to facilitate new pipe installation, and furnishing and installing detector wire. The contractor shall protect, or remove and replace, all shrubs, decorative rock, sod, underground sprinklers, signs, landscaping, fences, or other private or public improvements, adjacent to the construction area. Disturbed areas shall be restored to a condition equal to or better than that which existed prior to construction. All sod shall be replaced unless approved by the municipal inspector to re-use existing sod. Re- sodding of affected areas around new fire hydrants shall be considered a subsidiary obligation of the new hydrant installation.

Asphalt pavement, concrete curb, gutter, sidewalk and cross pans, etc., along the trench shall be protected unless identified by the plans for removal and replacement. Any concrete not scheduled for removal and replacement that is damaged by the contractor shall be replaced by the contractor at no cost to the City.

As a subsidiary obligation, the Contractor shall be responsible for notifying adjacent property owners and managers prior to construction of any potential service interruptions and maintaining water access.

Asphalt pavement, concrete curb, gutter, sidewalk and cross pans, etc., along the trench shall be protected unless identified by the plans for removal and replacement. Any concrete not scheduled for removal and replacement that is damaged by the contractor shall be replaced by the contractor at no cost to the City.

SC-A-10 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 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-A-11 PROJECT STATUS MEETINGS: Project status meetings will be held as necessary for scheduling, communication, and problem solving throughout the duration of the project. The Contractor shall ensure that the project manager, superintendent, or foreman is present and prepared to furnish the City with the schedule of work operations at each of these meetings as requested by the Engineer throughout the project.

SC-A-12 CHANGE OF METHOD: Any cost due to a change in construction method will be the responsibility of the contractor.

SC-A-13 COMPACTION AND MATERIALS TESTING: The Contractor shall complete field testing in accordance with the following schedule. Additional source material testing shall be completed as necessary to establish the basis of field tests. The frequency of testing listed in this schedule lists the minimum number of tests per quantity of work.

Material to be Tested	Payment Responsibility for Initial Testing	Minimum Testing Frequency
Trench Backfill	CONTRACTOR	As required. See Section 322.00 – Minimum Testing Requirements.
Asphalt Concrete	CONTRACTOR	As required when placed. See detailed requirements in Section 922.00 – Asphalt Sampling and Testing.
Cement Concrete	CONTRACTOR	As required when placed. See Section 825.00 – Concrete Testing.
Sewer Pressure Testing	CONTRACTOR	As required. See Section 524.00 – Testing and Inspection.
Waterline Disinfection	OWNER	As required. See Section 421.13 – Disinfection and Flushing of Water Lines and Section 421.14 – Leakage
Waterline–Hydrostatic Testing	CONTRACTOR	As required. See Section 421.13 – Disinfection and Flushing of Water Lines and Section 421.14 – Leakage

SC-A-14 CONSTRUCTION SURVEY & STAKING:

The Contractor shall provide, or obtain, surveying services for the staking of the project. The surveyor employed will be a Colorado Registered Licensed Surveyor and have the expertise to perform such services. Surveying shall be performed using the city of Arvada horizontal and vertical control network and benchmarks. All costs associated with surveying required for the construction and successful completion of the project shall be included in the lump sum quantity for Construction Surveying.

SC-A-15 STORMWATER CONSTRUCTION PERMIT: As a subsidiary obligation of the contract, the Contractor shall obtain a Stormwater Construction Permit from the Colorado Department of Public Health and Environment, Water Quality Control Division, Permit Enforcement Section, prior to clearing, grading, or excavating a site of one (1) acre or more. 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. The Contractor shall also obtain a Colorado state Construction Dewatering Discharge Permit from the Colorado Department of Public Health and Environment for all areas where trench dewatering is required 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 Engineer 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.

In addition, the Contractor shall be required to obtain a City of Arvada Site Development Permit from the Arvada Stormwater Utility Division. For permit requirements go to Arvada.org/services and click on Building/Development. The Contractor shall implement best management practices that include inlet protection for all inlets affected by the work as well as stockpile protection in order to control runoff from stockpiles. The Contractor shall also be required to perform daily street sweeping to limit tracking from the work site. 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. No additional payment will be made for obtaining a City of Arvada Site Development Permit and implementing best management practices required to prevent uncontrolled releases of dirt or silt from the project into drainage ways, which includes the gutter or stormwater inlets.

SC-A-16 SECTION 144.0 PERMISSIONS AND PERMITS REQUIRED BY OTHER AGENCIES of the Standard

Specifications are hereby revised for this project as follows:

Section 144.00 shall include the following:

The permits the Contractor is expected to obtain include but are not limited to:

- City of Arvada Site Development Permit
- City of Arvada Site Disturbance Permit
- City of Arvada Right of Way Permit
- City of Arvada Hydrant Meter Permit
- City of Arvada Wet Utility Permit
- CDPHE Construction Stormwater Discharge Permit
- CDPHE Dewatering Permit

SC-A-17 CONSTRUCTION WATER: All construction water will be provided by the City free of charge through existing City owned fire hydrants. Contractor will be required to obtain a hydrant meter from the City Utilities division which will require a \$2,000 refundable meter deposit upon return of the meter in acceptable working condition.

SC-A-18 SUPERINTENDENTS AND COOPERATION OF CONTRACTOR: The contractor shall, at his expense and within the contract price, keep on the work during its progress a competent project manager, foreman or superintendent and any necessary assistants. The project manager, foreman or superintendent shall represent the Contractor in his absence and all directions given to him (either verbally or in writing) shall be binding as if given to the Contractor. Any person or subcontractor employed on the work, who shall be deemed by the Engineer to be incompetent, careless, insubordinate, or otherwise objectionable by his acts, shall at once be removed from any of the work and shall not perform future work on the project except by written permission from the Engineer.

B. CONSTRUCTION CONSIDERATIONS

SC-B-1 LOCATIONS AND PRIORITIES: The City reserves the right to add, delete, or modify construction locations, priority order and portions of the work without change in the contract agreement prices, per subsection 1121.05 Changes in Contract Price of the Arvada Engineering Code of Standards and Specifications.

SC-B-2 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 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 at each construction location. The contractor shall also provide the City with an after-hours emergency contact phone number at the pre-construction meeting.

SC-B-3 MINIMIZING WORK ZONE DAMAGES: During all phases of construction including cleanup, the Contractor shall operate all

equipment and utilize personnel to minimize or prevent damages to public or private property. The Contractor shall limit the operation of heavy equipment to safe prudent speeds and minimize the 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 curbs, gutters and sidewalks as well as other facilities in the construction area. Should contractors' operations cause damages, the 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, the City may initiate and complete the repair work; deducting costs to complete the work from the total contract.

SC-B-4 LIMITATION ON CONSTRUCTION ZONE: Utility installation shall be completed in segments such as detailed in the design documents. These limitations include all aspects of construction including, but not limited to, asphalt removal, excavation, backfill, temporary trench resurfacing, pressure testing and flushing, service connections and cleanup. Adverse weather may delay the construction process. No additional locations may be opened beyond the above limit should weather cause delays.

SC-B-5 TRAFFIC CONTROL AND STREET RESTRICTIONS: Traffic control methods shall conform to Arvada Engineering Code of Standards and Specifications and the FHA Manual for Uniform Traffic Control Devices and Colorado Supplement thereto. When working in State Highway right-of-way, traffic control methods shall meet the requirements of the Colorado Department of Transportation (CDOT). Contractor's traffic control plan is subject to CDOT approval prior to commencing work on State Highway right-of-way. No hand-painted traffic control devices will be permitted. After award of the contract and prior to the start of construction, the Contractor shall submit two copies of the traffic control plans for approval encompassing all locations of the project. The Contractor shall modify the installation to meet the requirements of the City of Arvada Traffic Department, if so required.

The contractor shall notify the Project Engineer in writing of all closures, either partial or complete, of any public street, road, highway or alley per Section 185.00 of Arvada's Engineering Code of Standards and Specifications. All streets in the project will be considered for closure to thru traffic (local traffic only allowed) except for the following:

1. Ward Road – Arterial

The above street is classified as arterial or collector street. All other streets in the project are classified as local streets. Work hours shall be as outlined below.

The traffic control shall be a lump sum item for all aspects of the traffic control plan. Payment for traffic control shall be full compensation for the traffic control and labor, equipment and materials required to implement the traffic control plan.

Prorated payment of the contract amount bid for traffic control will be made monthly. The percentage paid shall be equal to the percentage of the total contract dollar amount completed that month. In no case shall payment be more than 100% of the amount bid for Traffic Control.

SC-B-6 STREET CLOSURE RESTRICTIONS: Lane closures in various street classifications are as follows:

ARTERIAL STREETS:	Lane closures 8:30 am – 3:30 pm only Construction activities: 8:30 am – 3:30 pm only Must maintain one lane each way at all times
COLLECTOR STREETS:	Lane closures 8:30 am – 3:30 pm only Construction activities: 8:30 am – 3:30 pm only Must maintain one lane with adequate flagging at all times
LOCAL STREETS:	Lane closures 7:00 am – 7:00 pm only Construction activities: 7:00 am – 7:00 pm only Must remain open to thru traffic unless otherwise noted

The majority of construction will occur during regular working hours as detailed above. The Contractor should be aware that certain construction activities will need to be performed outside regular working hours. These activities will be identified by the Engineer in accordance with the needs of affected third-parties.

There shall be no shutdowns or tie-ins on Fridays. Existing tie-in locations shall be visualized by test holing prior to the scheduled tie-in date. Flushing operations shall take place on Fridays only if they have begun prior to 8:00 am. High chlorine tests shall take place on Fridays only if they have begun prior to 9:00 am. Pressure testing on Fridays requiring Water Operations Staff support shall begin before 9:00 am. Pressure testing not requiring Water Operations Staff support shall be at the discretion of the City's inspector.

The Contractor shall submit a written request to the Project Engineer to perform overtime work outside of allowable working hours. Requests for work outside regular working hours shall be received a minimum of five working days prior to the proposed date of the work. The Contractor shall complete the necessary reviews and obtain the appropriate approvals to comply with Arvada Municipal Code. This does not include construction work that is scoped to occur outside regular working hours.

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 day's work and work may not resume until Contractor provides 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 occur, Engineer will notify Contractor in writing that there will be a price reduction for each incidence of violation in accordance with this specification. Price reduction will not be imposed where changed contract conditions are encountered during the specific period or the violation in question was a result of circumstances beyond Contractor or Subcontractor's control. The price reduction will not constitute a penalty but will be considered a failure to perform traffic control in accordance with the contract.

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 in violation of the working time limitations, as determined by the Engineer. The price reduction for each incident will increase at a progressive rate starting with \$150 for the second incident and increasing to \$600 for the fourth and subsequent incidents in accordance with the following schedule. A 15 minute grace period will be allowed at the beginning of the second incident on the project before the price reduction is applied. The 15 minute grace period applies only to the second incident. The number of incident charges will be accumulative throughout the duration of the contract.

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
6 th	\$600	\$2,250
ETC.	\$600	\$2,850
	ETC.	ETC.

SC-B-7 PROTECTION AND RESTORATION OF EXISTING LANDSCAPING: The contractor shall protect or remove and replace, all shrubs, decorative rock, sod, underground sprinklers, signs, landscaping, fences or other private or public improvements within or adjacent to the project area. Disturbed areas shall be restored to conditions equal to or better than that which existed prior to construction. All sod shall be new unless approved by the municipal inspector to re-use existing sod.

If branches of trees or shrubs will be in the path of the proposed construction, as verified by the municipal inspector prior to construction, the contractor shall prune these branches under the supervision of the City Forester.

Also, if tree or shrub roots are exposed in the construction area, the contractor shall saw-cut the roots within 24 hours after the roots are exposed. The contractor shall not cut the roots with the backhoe. If the roots are improperly cut or exposed longer than 24 hours, then the tree or shrub will be considered as damaged, and the contractor will be responsible for replacement at his cost.

Payment will be made per the applicable line items as outlined in Section D, BID TEMS.

SC-B-8 PROTECT TREE & REMOVAL OF TREE: The Contractor shall flag trees for protection, tree trimming and removal. The City Forester shall approve all flagged tree markings prior to any work. The Contractor shall abide by City Standards of tree protection for all trees identified within the plans.

SC-B-9 DEWATERING AND BYPASSING SEWAGE: The contractor shall furnish and set up all equipment, labor and materials to properly handle and divert sewage flow for the purpose of sewer main rehabilitation. The pumps and bypass lines shall be of adequate capacity and size to handle all flows. The contractor shall handle all sewage necessary to bypass or otherwise cause sewage flow to be harmless to the work and adjoining public and private property. Raw sewage shall not be allowed to contaminate groundwater.

The contractor shall provide all energy required for power equipment; temporary installation of bypass pipes under the pavement of cross streets as may be required for traffic; repaving of cross streets after removal of temporary bypass pipes; and all other related labor, equipment and materials required to bypass sewage until completion of the sewer rehabilitation and manhole replacement process in accordance with these specifications and bid documents.

Bypassed sewage shall only be discharged into a downstream sanitary sewer manhole.

Diversion of sewage or groundwater by means of diesel or gasoline pumps will only be allowed during daylight hours.

No pumps, except City approved electrical pumps are to be operated at night.

If a sewage backup occurs and enters residences or buildings, the Contractor shall be responsible for clean-up, repair, property damage, cost and claims.

If trench dewatering is required to rehabilitate the sewer main, a Colorado State Construction Dewatering Discharge Permit will be required if water is discharged into a storm sewer, channel, irrigation ditch or any waters of the United States. The Contractor shall be responsible for obtaining a dewatering permit from the Colorado Department of Health (CDOH) if required by CDOH before construction begins. Payment will be made per the applicable line items as outlined in Section D, BID TEMS.

SC-B-9-1 Contractor shall prepare a detailed Bypass Pumping Plan which describes the measures to be used to control flows. Submit the Plan to and obtain approval of the Plan from the City prior to beginning bypass pumping work. Contractor's Plan shall include, but not be limited to the following:

- A. Prepare a detailed Bypass Pumping Plan which describes the measures to be used to control flows. Submit the Plan to and obtain approval of the Plan from the Engineer prior to beginning bypass pumping work. Contractor's Plan shall include, but not be limited to the following:
 1. Drawings indicating the scheme and location of pumps, suction manhole, suction piping, discharge manhole, discharge piping, temporary sewer plugs, flow diversion structures, dams, odor control, overflow prevention monitors, and related materials and equipment for each of the bypass pumping sites.
 - a. The plans shall show the location of all bypass pumping systems, including odor control, and shall discuss phasing, reuse, and movement of systems during construction as applicable.
 - b. The bypass pumping plan shall designate which system/setup will be used where and when as applicable.
 - c. Structures and equipment within the public right-of-way shall be identified as such on the plans.
 - d. The plan shall show the sewer installation or sewer alterations to be accomplished during each bypass pump set up. The plan shall list the order of work requiring bypass pump set ups to verify downstream sewers are ready to accept bypass flows. The order of work shall correspond with the overall Project Schedule.
 2. Vehicular and pedestrian access to public and private facilities shall be coordinated with the traffic control plan. The traffic control plan shall show how vehicles and pedestrians will be protected from injury resulting from bypass operations.
 3. Contractor-performed flow monitoring results.
 4. Capacities and sizes of pumps (including backup pumps), standby equipment, and power requirements if applicable.
 5. Key operational control factors (i.e., maximum flow elevations upstream of dams).
 6. Design calculations proving adequacy of the system and selected equipment, including static lift, friction losses, fitting losses, flow velocity, pump curves identifying operating range, and pipe thickness calculations. Pipe thickness calculations shall assume an H2O live loading at crossings.
 7. Sewer plugging method and type of plug.
 8. Provide the location of the plug in the manhole (upstream or down-stream of the manhole).

9. Method of noise control, as applicable, for each pump and generator.
 10. Thrust restraint block sizes and locations where space is limited.
 11. Method of securing and bracing of sewer plug shall be submitted. At a minimum, the plug must attach to a cable/chain which is then connected/tied off to an immobile object, as approved by the Engineer.
 12. Temporary pipe supports and anchoring are required.
 13. Contingency plan for cleanup and disinfection procedures in the event of a sewer spill. The contingency plan will identify equipment, tools, and manpower necessary to complete clean up, disinfect and repair.
 14. Staffing plan including name and qualifications for on-site operators. Trained bypass pumping personnel (pump operator) shall be present during the entire bypass operation. Logs shall be maintained by the bypass pumping personnel. Submit bypass pumping personnel qualifications for agency review and approval.
 15. Site layout showing all major components.
 16. Wet weather event procedures.
 17. An emergency response plan that addresses containment, notification procedures, and equipment failure procedures. An emergency contact list with 24-hour phone numbers shall be submitted and updated as needed.
 18. Schedule including durations and dates for each sequence.
 19. Protection method for existing utilities.
- B. The number and size of pumps used in bypass pumping shall be such that if the largest pump is out of service, bypass flows will be maintained during the bypass operation.
- C. The maximum wet weather flow assumed for the project is 6,800 gpm.

At each bypassing site, the Contractor shall have the entire bypassing system in place, functional, and tested before bypassing any sewage.

The Contractor shall be responsible for all bypass flows. The Contractor shall inspect each bypass pumping, piping system, and odor control system in its entirety for leaks or spills on an hourly basis. Each bypass operation shall have a minimum of 1 trained and qualified attendant who shall provide 24/7 coverage and whose only duty is to maintain the bypass pumping and odor control systems until the bypassing of that specific pipeline is no longer required. An inspection log shall be kept at each pumping location.

The attendant shall be qualified to both operate and repair any and all problems that may occur. The attendant shall have a cellular phone for communication between the Engineer and the site in the event of emergencies. No bypassing to the ground surface, receiving waters, storm drains, or bypassing that results in soil or groundwater contamination or any potential health hazards shall be permitted. In the event of any sewage spill, the Contractor shall be responsible for the prompt notification of the City Engineer, cleanup, and disinfecting of the spill as called for in the bypass plan. The Contractor shall compensate the City for the cost of fines levied as the result of a spill or unauthorized discharge.

Work stoppage may be required due to a large storm event common to the seasons for which the Work is scheduled.

SC-B-9-2 Bypass pumping shall be executed as follows:

- A. Contractor shall notify the Engineer 48 hours prior to bypassing or diverting flow in any of the pipelines or laterals.
- B. Take precautions to ensure that bypass pumping shall not cause damage to public or private properties.
 1. In the event damage occurs, make provisions to correct such damage at no additional cost to the City.
 2. Contractor shall be responsible for damages to public or private property, overflows from the sewer system, and violations resulting in fines as a result of the bypass operation.

- C. Contractor shall include 100 percent redundancy for bypass piping; 2 or more pipes (same size or larger) shall be installed. Redundancy shall be such that if 1 line is damaged during operation a second or third pipe can immediately take its place. The Contractor shall include 1 redundant pump with the following minimum requirements.
1. 100 percent redundancy for 2 pump operations, (1 in operation and 1 on standby), each pump with project peak flow capacity.
 2. 50 percent redundancy for 3 pump operations, (2 in operation and 1 standby), each pump with 50 percent project peak flow capacity.
 3. Different arrangements will be allowed with prior approval by the Engineer.
 4. Standby pumps shall be plumbed, fueled, and operational at all times. Standby pumps shall be maintained by Contractor and ready for immediate operation.
- D. The Contractor shall maintain on site a sufficient number of valves, tees, elbows, connections, tools, sewer plugs, piping, and any other spare parts or system hardware to ensure immediate repair or modification of any part of the system as necessary.
- E. Bypassing systems shall not be shut down between shifts, on holidays or weekends, or during work stoppages without written permission from the Engineer.
- F. Overflow prevention monitors shall be programmed to alert the Contractor, the Engineer, and designated City staff.
- G. Contractor's sewage bypass pumping operations shall not harm the City, nor any other public or private party. Any and all penalties, fines, judgments, or injunctions levied due to Sanitary Sewer Overflow (SSO) spills or any other problems caused or related to Contractor's bypass pumping operations, monetary and otherwise, shall be borne and paid by the Contractor.
- H. Bypass shall be made by diversion of the flow from at least 1 manhole upstream from the section where work is taking place, around the section to be taken from service for new construction, to an existing downstream location, at least 1 manhole beyond the section where work is taking place.
- I. When performing bypass work, ensure that pumping redundancy is onsite with all appurtenances (suction/discharge pipe) attached so that a pump can immediately be started when another pump has to be taken out of service.
- J. Provide on-site a minimum of 1 trained and qualified operator for each bypass operation who shall provide 24/7 coverage and possess the experience and knowledge to operate, maintain, repair, refuel, and so forth at all times while bypass pumping systems are required.
- K. Install plugs in the upstream portion of the pipe in the manhole, if operation allows. If not, bag or plug shall be secured with length of cable that will extend to the next downstream manhole for retrieval. This is to prevent rogue/runaway bags/plugs from entering the collection system. Opening in the retrieval manhole shall be large enough to allow bag/plug removal. Also take into consideration the invert/base construction, 90-degree manholes, offset/angle points, and so forth when determining the retrieval manhole.
- L. Pumping systems for laterals shall be designed for frequent pump operation in accordance with the following requirements:
- M. Contractor shall maintain existing working levels in existing lift station wet wells.
- N. Sewage level in manholes shall be maintained at as low a level as possible to prevent odor problems and the bypass pumping equipment shall at a minimum pump at the same rate as the flow rate into the manhole.
- O. All bypass pumping operations shall be individually addressed in the bypass pumping plan.
- P. Remove the bypass pumping system when no longer needed. The Contractor shall notify the Engineer 48 hours prior to shutting down the bypass system.
- Q. After completion of bypass pumping operations, the Contractor shall clean disturbed areas, restoring them to their original condition. This operation shall include but not be limited to, pavement restoration and landscaping, at least equal to that which existed prior to start of Work.

SC-B-10 ACCESS TO MANHOLES: Under certain circumstances, it may be necessary for the contractor to remove and replace obstructions in order to gain access to a manhole. Prior to any construction, the contractor shall be responsible for discussing and obtaining permission from the appropriate property owners for gaining access to a manhole and for any obstruction removals and replacements that may be necessary on the property. Obstruction removals and replacements may include, but not be limited to, removing and replacing landscaping, sod, decorative rock and fences. The contractor shall replace an obstruction to existing or better conditions, unless otherwise approved by the property owner, in writing. Costs for gaining access to manholes and removing and replacing any obstructions shall be considered a subsidiary obligation of the contract and no separate payment shall be made.

SC-B-11 CONNECT TO EXISTING FACILITIES

Shall be performed per Section 1146.02 as well as the following: additional bends required to achieve vertical and horizontal alignment between the new mains and the existing mains and removal of existing tees and replacement with a solid sleeve on existing water mains where called for; piping between new and existing tees when the total length between tees is less than or equal to 10 feet. Any length above this will be paid for under the applicable pipe size unit price bid item. Temporary plugs on existing mains to be abandoned (where required to maintain water service or as called for on the drawings) shall also be included in the Connect to Existing Facilities bid item. Concrete plugs shall be placed in all abandoned pipe ends when the main will be permanently abandoned and won't need to be temporarily placed back in service. This item will be paid per existing facilities connection (each).

SC-B-12 TEMPORARY ASPHALT SURFACING: During construction, the City may require temporary asphalt patching on some segments of the work at high-traffic volume areas. These locations shall be at the discretion of the municipal inspector and engineer. Thickness of the temporary asphalt patch shall be a minimum of two (2) inches. Measurement shall be computed on the basis of actual square yards of surface patch. Accepted quantities of temporary asphalt patch will be paid at the contract unit price bid for this item as it appears on the Bid Schedule. No separate payment will be made for excavation to place or remove the patch, nor to maintain this item during construction.

SC-B-13 SELECT AND/OR FLOWABLE BACKFILL: The City of Arvada shall have the option to require substitution of select and/or flowable backfill material in lieu of backfilling with excavated native trench material. All excavated locations under concrete flatwork or pavement may require select backfill material within five (5) feet of the finished surface elevation depending on the properties of the native material. Select and/or acceptable backfill material shall meet the specifications in Section 300 of the City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements. The Engineer and/or Municipal Inspector will determine, at the time of excavation, the need and use of select and/or flowable backfill. The required method of removing excess trench spoils is to load them into dump trucks during excavation for immediate removal from the job site. Payment shall be per section 300 of the City of Arvada Engineering Code of Standards and Specifications. Maximum payment width for select backfill material on sanitary sewer pipe sections shall be seven (7) feet. Maximum payment width for select backfill material on water main pipe shall be three (3) feet. Maximum payment width around manholes shall be the O.D. of the manhole plus four (4) feet. Measurement depth shall be from the first five feet below the bottom of the asphalt resurfacing. Any trench excavated beyond these limits shall be backfilled with select or acceptable backfill material at the Contractor's expense. Quantity reflected in plan represents maximum calculated volume based on widths and depth stated above. Contractor will be paid for cubic yards of select fill or flowable backfill imported to the site, up to the maximum pay area as stated above. The use of Select Backfill and/or Flowable backfill will be at the discretion of the City for terms of use. The Contractor shall test excavated native soil materials and shall provide the City with results for the City to determine if the application of select and/or Flowable Backfill shall be deemed necessary for use.

SC-B-14 ASPHALT TRENCH REMOVAL AND RESURFACING:

Water Line Installation: Asphalt shall be removed and disposed of within the trench limits as prescribed in Arvada Standard Detail W-1. All asphalt edges shall be cut to a smooth, vertical and straight line with square corners. Any edges that do not hold up during installation of the water main and appurtenances shall be re-cut to smooth, vertical and straight lines with square corners by the contractor prior to final cleanup. Trenches shall be backfilled within two (2) inches of grade with select backfill material after installation of the new water main. The final two (2) inches shall be CDOT Class VI base course or asphalt rotomillings previously stockpiled. This surface shall be maintained free of chuckholes, ruts and loose rock by patrolling until permanent asphalt surfacing is placed.

Sanitary Sewer Installation: Asphalt shall be removed and disposed of within the trench limits seven (7) feet maximum width for sewer pipe. All asphalt edges shall be cut to a smooth, vertical and straight line with square corners. Any edges that do not hold up during installation of the sewer main and appurtenances shall be re-cut to smooth, vertical and straight lines with square corners by the contractor prior to final cleanup. Trenches shall be backfilled to within two (2) inches of grade with select backfill material after installation of the new sewer main. The final two (2) inches shall be a temporary asphalt patch. This surface shall be maintained free of chuckholes, ruts and loose rock by patrolling until permanent asphalt surfacing is placed. Asphalt trench removal, including sawcutting to provide a smooth square edge, shall be considered a subsidiary obligation of the contract and no separate measurement or payment will be made.

SC-B-15 TAP MAIN AND INSTALL CORPORATION STOP, ALL SIZES:

Tapping Procedure: The tapping machine should be in good condition. The boring bar should have no wobble. The tapping tool must be clean and sharp, threaded for AWWA service. Lubricate the cutting and tapping edges of the tool with lubricant recommended by the tool manufacturer and compatible with the pipe material. Do not force drill. A test tap should be performed with the machine prior to actually tapping a live main to verify the boring bar stop mark. When the corporation stop is inserted and tightened into the saddle, there should be a minimum of one thread and a maximum of three threads showing. It is recommended that Teflon Tape be used on the corporation stop prior to installation. Do not use pipe dope. Do not tap PVC in an area that appears to be discolored or sunburned. Taps installed on opposite sides of the main shall be separated by at least eighteen (18) inches as measured along pipe center line. All taps require the use of a service saddle. The saddle shall be installed so that the pipe is not distorted when the saddle is tightened.

All service connections should be installed so that the outlet forms a 45-degree angle above the projected horizontal plane through the pipe center line. All tapping methods shall be in strict compliance with the pipe manufacturer's recommendations and Uni-Bell Publication UNI-B8. Tapping saddles for PVC pipe shall be bronze with double stainless-steel straps (A.Y. McDonald 3845, Ford 202BS, Mueller BR2S, or Romac 202BS or equivalent approved by the Engineer). Corporation stops shall be Mueller B25000 (flare ends) or B25008 (compression ends) or equivalent ball valve type corporation stop. Taps will be made only after release of main by the City Engineering Division and following submittal of health release certifications, successful pressure testing, and installation of the service pipe from main to curb stop or meter pit. Dry tapping is strictly prohibited. No tapping shall be performed when the ambient air temperature is less than 40°F unless a portable heater is installed in the excavated area and the tapping procedure is approved by the City representative in the field. The City reserves the right to add or delete all or any portion of main tapping from the contract and utilize City forces to perform all or any portion of the taps in accordance with Arvada's Engineering Code of Standards and Specifications.

SC-B-16 SEWER SERVICE CROSSING: If a sanitary sewer service is encountered crossing above or less than two (2) feet below the proposed water main, the sewer service shall be replaced a minimum of two (2) feet beyond either side of the new water pipe trench wall, or as directed by the City representative, with a singular piece of SDR 35 PVC pipe. All joints within ten (10) feet of the water main and connections to existing pipe shall be concrete encased if so directed. Construction methods shall comply with Arvada Engineering Code of Standards and Specifications. The quantity paid for shall be inclusive of the cost for 4" Sanitary Sewer Service Tap & Reconnection. Payment shall include all labor, equipment, excavation, dewatering, materials including PVC pipe, fittings, bedding, concrete encasement, and any other incidentals required to install the PVC service pipe as described above, excluding trench resurfacing, select backfill, and removal and replacement of concrete curb, gutter, and sidewalk.

SC-B-17 EXISTING SANITARY UNDERDRAIN SYSTEM REPLACEMENT: If an existing sanitary sewer underdrain system is encountered when removing existing sanitary sewer facilities, it is the contractor's responsibility to notify the City and Engineer of its field locations and depth. The existing underdrain system found in its existing state shall be best protected in place and where damaged or unavoidable removal is necessary to perform the proposed work, the system shall be replaced to restore its original service functionality, whether that be exactly in its original location or if modifications are necessary to connect around, avoiding a proposed feature. Throughout the duration of repair, the underdrain system shall have dewatering and bypass pumping features installed for proper and adequate sizing of the maximum capacity that can potentially occur during replacement of the existing underdrain pipe. The quantity paid for shall be in lineal feet. Payment shall include all, labor, equipment, excavation, dewatering, bypass pumping, materials including but not limited to, fittings, bedding, concrete encasement, and any other incidentals required to properly install the impacted underdrain system as described above. Trench resurfacing, select backfill, and removal and replacement of concrete curb, gutter, and sidewalk is excluded.

SC-B-18 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 utility construction sites. 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 to eliminate potential pollutants from leaving the site. Due to the fast-paced nature of utility projects, the site's erosion and sediment controls and material management BMPs must be inspected and maintained by the owner/operator daily. No separate measurement will be made for maintaining the BMPs 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. 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 BMPs during the performance of the work. A Site Development Permit will be required:

Site Development Permit (SDP):

In accordance with the City of Arvada's permit criteria, contractors performing underground utility construction including the installation, maintenance and repair of all utilities under hard-surfaced roads, streets or sidewalks must acquire a City Site Development Permit and implement and maintain erosion control, sediment entrapment, and material management BMPs.

Initial documentation required:

- Completed SDP Application
- Application fee (waived for City funded projects)
- Escrow/LOC (waived for City funded projects)
- Site Map
- Potential pollutant list
- BMP specification details

SDP – Required Documentation:

A site map including construction boundaries, all proposed locations of BMPs, stockpiles, staging areas, portable restrooms, concrete containment, construction material storage and waste material storage must be prepared by the contractor and provided to the City's Stormwater Division for approval prior to beginning work. This site map must be updated daily by the contractor to reflect the site's condition.

Potential pollutants must be listed and BMPs prescribed for each individual pollutant. If onsite 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 Underground Utilities:

- ✓ All paved surfaces, gutters and sidewalks affected by utility work must be cleared at the end of each day.
- ✓ Where consistent with safety and space considerations, excavated material is to be placed on the uphill side of trenches.
- ✓ Trench dewatering discharges must be filtered and not allowed to come in contact with stockpiles or soils remaining on paved surfaces or in gutters. Site dewatering permits must be obtained from the Colorado Department of Public Health and Environment.
- ✓ Water main flushing discharges must be routed around disturbed areas and stockpiles. Water must not come in contact with soil stockpiles or soils remaining on paved surfaces or in gutters.
- ✓ All inlets within and downstream of work areas must be protected.
- ✓ Curb check dams must 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 should any type of concrete work be conducted. If small amounts of concrete are to be prepared on site, containment is required.
- ✓ Staging areas must be designated and employ appropriate BMPs. Staging areas (whether on public or private property) must be restored to a condition equal to or better than that which existed prior to construction, including necessary re-vegetation.
- ✓ 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.
- ✓ 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 within 48 hours.

SC-B-19 IRRIGATED LANDSCAPING & RESTORATION (INCLUDES SOD AND TOPSOIL): Arvada may require seed verification tests at the contractor's expense. seed specifications and application rate may vary based on projected land use. native grass blend shall consist of the following:

- 20% Perennial Ryegrass, Elgon (Tetraploid)
- 20% Desert Wheat Grass (Nordan)
- 10% Blue Grama (Alma)
- 10% Side Oats Grama (Butte)
- 10% Big Bluestem (Bison)
- 10% Coated Creeping Meadow Foxtail (Garrison)
- 10% Indian Grass (Tomahawk)
- 10 % Streambank Wheatgrass (Sodar)

If this blend can't be made, a suitable substitute, such as a dryland pasture mix, must be presented for approval to the project engineer before application. Sod, Topsoil and irrigation systems shall be installed in the disturbed areas as specified in the plan including the area around the existing playground location. Irrigation shall not be installed on any residential property.

SC-B-20 FIELD ENGINEERED CHANGES: The City shall reserve the right to make minor changes to the depth and alignment of pipeline sections and appurtenances to accommodate existing utilities (gas, electric, telephone, cable television, etc.) and also including existing water and sewer mains and/or services or other field conditions.

City survey crews are available to assist the contractor in verifying existing elevations from Contractor excavated potholes if required prior to pipe placement.

The contractor shall install the new pipeline and appurtenances as directed by the Engineer.

No additional compensation beyond the unit prices bid for the actual work performed shall be made for performing field engineered changes or for down time during the design of field engineered changes as directed by the Engineer.

Reasonable time must be allowed for the Engineer to design field engineered changes. The additional costs for performing field engineered construction changes and allowing the Engineer reasonable time to design field engineered changes as necessary to complete the work shall be included in the contractor's unit price bid for pipe and appurtenances.

SC-B-21 ASBESTOS-CEMENT PIPE CROSSINGS AND CONNECTIONS: Contractor shall be fully responsible for the proper removal and disposal of all AC pipe encountered on the project that is required to be removed in order to complete the work. Removal of AC pipe is considered to be a Class II Asbestos removal according to OSHA standards. Contractor shall be responsible for considering the regulations and procedures carefully and proceeding accordingly. Contractor may consider having a certified asbestos removal contractor perform this part of the work, or otherwise must follow all OSHA regulations in the removal process. Contractor shall also be responsible for following any of the Colorado Department of Public Health and Environment's (CDPHE) Asbestos Regulations or Jefferson County Health Department standards that apply to AC pipe removal.

The Contractor shall be responsible for test holing to determine the AC pipe outside diameter prior to construction. The Contractor shall submit an AC crossing and connection plan a minimum of 10 days prior to the actual work for review by the Engineer and City. The plan shall include:

1. Outside diameter of AC pipe potholed
2. Date and Time of work to take place
3. Contractor, City, and Engineer emergency contact information
4. Safety measures in accordance with State and Federal regulations
5. Valve closures required for AC pipe crossings and times of valve closure
6. Transition fittings to be used
7. Emergency Plan of Action
8. Alternative methods of Crossing AC Pipe if desired

The Contractor shall be responsible for scheduling a meeting with the City and Engineer a minimum of 5 days prior to crossing to review field conditions. It shall be the responsibility of the Contractor to follow State and Federal regulations (including, but not limited to CDPHE, Regulation 8 Part B) as they apply to asbestos materials.

At all AC pipe crossings, the trench shall be backfilled with Controlled Low Strength Material (CLSM) "flowable fill" per MGPEC Section 19.

SC-B-22 CONTRACTOR'S SCHEDULE OF WORK: The Contractor shall submit for review by the City of Arvada, within fourteen (14) Calendar Days from Notice of Award, its baseline Schedule of Work in graphic bar chart form (e.g., Gantt Chart). This Schedule of Work shall be the Contractor's working schedule and shall be used to plan, organize, and execute the Work, record and report the progress of the Work, and forecast remaining Work. The Contractor shall be responsible for assuring that all Subcontractor Work and acquisition and delivery of Materials and Equipment, as well as its own Work, are included in the Schedule of Work and that the Schedule of Work represents a coordinated plan of Work. The Schedule of Work shall be periodically updated as required herein.

The Schedule of Work shall clearly show all intermediate Milestone Dates, Substantial Completion of the Work, procurement, fabrication, and construction activities, activity descriptions and durations, activity start and finish dates, specified phasing and sequencing requirements, and the proposed sequence of activities required for the orderly performance and completion of all elements of the Work. The selection and number of activities shown on the Schedule of Work shall be subject to the City's review and acceptance. Activity durations shall be in Calendar Days, and in general, shall not be less than one (1) Calendar Day nor exceed fourteen (14) Calendar Days. Seasonal weather conditions, holidays, long lead time procurements, and other contingencies shall be considered in the planning and scheduling of the Work.

Acceptance of the Schedule of Work by the City shall be a Condition Precedent to the making of any progress payments to the Contractor. Acceptance of the Schedule of Work by the City shall not relieve the Contractor of its sole responsibility for the accuracy or feasibility of the Schedule of Work, or of its sole responsibility to complete the Work in accordance with the Contract Documents, nor does such acceptance by the City warrant, acknowledge or admit the reasonableness of durations, sequence, or logic of the Schedule of Work.

The Schedule of Work shall be monitored on a weekly basis and updated on a bi-weekly basis during Construction progress meetings to incorporate actual start and finish dates, to record actual progress achieved during the reporting period, and to provide a more accurate schedule of the next period's Work. The Schedule of Work shall be accompanied by a written narrative if the schedule has been impacted by Change Orders, delaying events, or if any activities are behind schedule, and actions that are being taken to improve progress and attain compliance with the Contract Time for completion of the Work.

SC-B-23 SUBMITTAL PROCEDURES: Within fourteen (14) Calendar Days from Notice of Award, the Contractor shall submit a Submittal Log indicating the Contractor's proposed submittal date and the time allotted for the Engineer's review and approval of each Submittal if sooner than specified for each required submittal. This Submittal Log shall be consistent with the Contractor's Schedule of Work. The Contractor shall thoroughly review the Submittal Log to ensure that all of the Project submittal requirements are listed and in the appropriate order of operations for their proposed construction schedule.

Before submitting a Shop Drawing or Sample, Contractor shall have:

- a. reviewed and coordinated the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
- b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
- c. determined and verified the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
- d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.

Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that submittal, and that Contractor approves the submittal.

With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be set forth in a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to Engineer for review of each such variation.

SUBMITTAL PROCEDURES:

1. Contractor shall submit Shop Drawings and Samples to Owner/Engineer for review in accordance with the accepted Schedule of Submittals.
2. Transmit each submittal with Owner/Engineer accepted transmittal form certifying compliance with requirements of Contract Documents.
3. Sequentially number transmittal forms. Mark transmittal forms for resubmittals with original number and sequential alphabetic suffix.
4. Show each Submittal with the following numbering and tracking system:
 - A. Submittals shall be numbered according to specification section. For example, the first product submittal for Section 055000 would be "055000-1". Resubmittals of that submittal would be "055000-1.1", followed by "055000-1.2", and so on. The second product submittal for that Section would be "05 50 00-2".
 - B. Submittals containing product information from multiple sections of the specifications will not be reviewed. Contractor and/or their supplier shall divide submittals in a manner that meets the numbering and tracking system requirements stated herein.
 - C. Alternative method of numbering may be used if acceptable to Engineer.
5. Identify: Project, Contractor, subcontractor and supplier, pertinent drawing and detail number, and specification Section number appropriate to submittal.
6. Apply Contractor's stamp, signed or initialed, certifying that review, approval, verification of products required, field dimensions, adjacent construction Work, and coordination of information is according to requirements of the Work and Contract Documents.

7. Coordinate submission of related items.
 - A. All shop drawings for interrelated items shall be scheduled for submission at the same time.
 - B. The Owner/Engineer may hold shop drawings in cases where partial submission cannot be reviewed until the complete submission has been received or where shop drawings cannot be reviewed until correlated items affected by them have been received. When such shop drawings are held, the Engineer will advise the Contractor in writing that the shop drawing submitted will not be reviewed until shop drawings for all related items have been received.
8. Electronic transmittals of submittals shall be provided by the Contractor under established protocols described elsewhere in the Contract Documents. The Contractor shall provide electronic submittals in portable document format (PDF). Reviewed submittals will be returned to the Contractor as PDF electronic files.
9. For each submittal for review, allow not less than fourteen (14) days for Owner review.
10. Identify variations in Contract Documents and product or system limitations that may be detrimental to successful performance of completed Work.
11. Allow space on submittals for Contractor and Owner/Engineer review stamps or comments.
12. When revised for resubmission, the Contractor shall identify changes made since previous submission. A narrative of changes shall be provided, and shop drawings or calculations shall indicate that a revision was made.
13. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report inability to comply with review comments.
14. Submittals not requested will not be recognized nor processed.
15. Incomplete Submittals: Owner/Engineer will not review. Complete submittals for each item are required. Delays resulting from incomplete submittals are not the responsibility of Owner.

ENGINEER'S SUBMITTAL REVIEW:

1. Informational submittals and other similar data are for Owner/Engineer's information, do not require Owner's responsive action, and will not be reviewed or returned with comment.
2. The Owner/Engineer's review of submittals and shop drawings is not a check of any dimension or quantity and will not relieve the Contractor from responsibility for errors of any sort in the submittals and shop drawings.
3. Submittals made by Contractor that are not required by Contract Documents may be returned without action.
4. The Owner/Engineer will review the submitted data and shop drawings and return to the Contractor with notations thereon indicating "No Exception Taken", "Make Corrections Noted", "Rejected", "Revise and Resubmit", or "Submit Specified Item".
5. If more than two (2) submissions of an item are required to meet the Project specifications, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner/Engineer may impose a set-off against payments due to Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.
6. Owner/Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Owner/Engineer. Owner/Engineer's review will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
7. Owner/Engineer's review will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs incident thereto.
8. Owner/Engineer's review of a separate item as such will not indicate approval of the assembly in which the item functions.
9. Owner/Engineer's review of a Shop Drawing or Sample shall not relieve Contractor from responsibility for

any variation from the requirements of the Contract Documents. Owner/Engineer will document any such accepted variation from the requirements of the Contract Documents in a Field Order.

10. Owner/Engineer's review of a Shop Drawing or Sample shall not relieve Contractor from responsibility for complying with the Contractor's submittal requirements.
11. Owner/Engineer's review of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, shall not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
12. Neither Owner/Engineer's receipt, review, return of a Shop Drawing, Sample, or other submittal shall result in such item becoming a Contract Document.
13. Contractor shall perform the Work in compliance with the requirements and commitments set forth in returned Shop Drawings and Samples.

SC-B-24 SUBMITTAL LOG: The Contractor shall create and submit for City approval a submittal log template within twenty-eight (28) Calendar Days from Notice of Award.

C. OBLIGATIONS TO PUBLIC

SC-C-1 TRENCH MAINTENANCE: No more than fifteen (15) feet of trench is to be left barricaded and opened overnight. Cold mix or base course trench surfacing shall be maintained free of surface ruts until permanently resurfaced. Cold mix, rotomillings, or base course shall be placed during backfill installation and shall remain in place until weather permits the installation of hot plant mix.

SC-C-2 PROJECT SITE CLEANUP: 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 base course or other means as necessary. This work shall be completed at a minimum on a daily basis or more frequently as required by the Engineer and/or Inspector to maintain a clean work site. Loose rock scattered beyond the trench limits shall be swept, picked up and removed from the site. Gutters and roadside ditches shall be kept open to allow stormwater runoff as well as water from flushing operations to flow to storm drainage inlets or road side ditches and prevent the water from running down sidewalks or on private property. Contractor will be responsible for any damage caused by flushing operations due to gutters, roadside ditches or other natural drainage ways being blocked by construction materials. Contractor shall also be responsible for providing inlet protection to all stormwater inlets susceptible to runoff from the project due to flushing operations and/or rainfall. Fine soil particles from construction operations shall be prevented from entering the storm sewer system. New water mains will not be filled or flushed until this provision has been met.

Final right-of-way and area clean-up shall include the removal of all debris, etc., including fine soil particles. Various methods of clean-up shall be acceptable, if the area can be cleaned to a condition equal or better than pre-construction conditions as determined by the City's Inspector.

Note: For each calendar day a substantive complaint is received from an affected citizen or for each day that trench maintenance and project site cleanup is not completed in accordance with the above parameters as determined by the Engineer and/or Inspector, the total contract amount will be reduced by \$250. The Engineer will investigate or have their designated representative investigate all registered complaints. The Engineer shall determine if the complaint is substantive. Their decision will be final.

SC-C-3 SERVICE INTERRUPTION & NOTIFICATION: The contractor shall notify, in person, all parties that will be affected a minimum of twenty-four (48) hours prior to the time the contractor 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. Contractor must provide, install, and maintain all temporary piping and fittings required to provide temporary overnight water service to residents during installation of cured-in-place pipe. All water delivered to residents must meet CDPHE and City drinking water standards. Notification for water shutoffs on Monday shall be made by 4:00 p.m. the previous Friday. The City will provide the contractor with notification card door hangers to leave in the event no one can be contacted in person at the residence or business. The City will also provide shut-off lists to the contractor for each required shut off so that all residents who will be affected during a particular shut off are notified.

The City of Arvada Utilities Division will operate all existing valves, hydrants, blow offs, and curb stops. NO VALVE OR OTHER CONTROL ON THE EXISTING SYSTEM SHALL BE OPERATED FOR ANY PURPOSE BY THE CONTRACTOR. ONCE A CITY OF ARVADA OPERATOR HAS FILLED A LINE UP TO A NEWLY INSTALLED VALVE, THAT VALVE ALSO MAY NOT BE OPERATED BY THE CONTRACTOR FOR ANY PURPOSE. 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 six (6) hours and interruption of service shall be limited to the hours between 8:30 a.m. and 3:00 p.m., unless prior approval is received from the Engineer and/or Municipal Inspector. The Utilities Division will not shut down water mains for tie-ins after 11:00 a.m. in order for water to be turned back on by 3:00 p.m. Contractor must be within 60 minutes of cutting into the water main based on the judgment of the City's Municipal Inspector and/or Water Utility Division personnel before existing mains will be isolated.

Contractor shall provide sufficient cuts or openings in existing pipe to allow timely drainage of water for tie-ins where fire hydrants or blow offs are not available to drain the line. Should an unintended service interruption occur as a result of the work, Contractor shall immediately notify all parties not previously notified.

SC-C-4 MAINTAINING WATER SERVICE: Water service to all customers shall be a priority item of this work. Water service to schools, businesses, hospitals, medical centers and all other commercial enterprises and those other customers that indicate a need for uninterrupted water service shall not be interrupted during school or business hours. In certain instances, work may need to be done overnight in order to meet this requirement. Overnight work must be approved in writing by the City Manager prior to commencement. If necessary that an interruption be made or if an unintentional interruption occurs, Contractor shall provide the necessary temporary piping, hoses, etc., to provide temporary water service to those customers. All water delivered shall meet CDPHE and City drinking water standards. This work shall also be coordinated through the City's Water Utility Division.

This work shall be considered a subsidiary obligation of water main installation contract work. No separate payment shall be made for supplying temporary water service to any customer during this work or for completing work during overnight hours in order to maintain an uninterrupted water supply during school or business hours where necessary.

SC-C-5 FILLING AND FLUSHING WATER MAINS: City forces will operate all valves required to fill and flush the new water mains in order to put them into service. Mains shall be installed whenever possible (in accordance with the construction drawings) so that the new main can be filled from the low point of the new line in order to allow air to be released from the high point of the new line and avoid air pockets. Contractor must provide 24-hour notice for scheduling of chlorine residual test prior to flushing. Chlorine tablets must be in contact with water a minimum of 24 hours prior to chlorine level testing and flushing of the new water main.

SC-C-6 BACTERIOLOGICAL ANALYSIS OF NEW WATER MAINS: Bacteriological testing to be performed by City water quality team members shall only occur Monday through Thursday.

SC-C-7 USE OF PRIVATE LAND: Certain portions of this project require working near existing structures and property within private easements. It is the Contractor's responsibility to conduct its operations and limit the size of equipment used in such a manner to prevent damage to existing property from excessive vibration or from other direct or indirect Contractor operations. The cost associated with repairing or replacing the property that is damaged by the Contractor's operations shall be the responsibility of the Contractor.

SC-C-8 DRIVEWAY ACCESS: Contractor shall coordinate the work and minimize inconveniences to citizens and affected property owners. Residents shall be notified by the contractor 24 hours prior to the time that access must be denied to their driveway or when the driveway will be blocked for any period of time. Residents shall be provided access to their driveways between 5:00 pm and 7:30 am, and at all times on weekends or holidays or when work is not occurring.

SC-C-9 PARKING RESTRICTIONS: Contractor shall coordinate the work and minimize inconveniences to citizens, affected property owners and the traveling public. Residents shall be notified 24 hours prior to the time that access must be denied to their parking spaces when access to said residential parking lots will be blocked for a period in excess of one (1) hour. Residents shall be provided access to their parking lots between 5:00 P.M. and 7:30 A.M., and at all times on weekends and holidays or when work is not underway.

SC-C-10 NOTIFICATION OF ADJACENT PROPERTY OWNERS AND MANAGERS: The contractor shall notify property managers, owners, tenants, or responsible parties that work or dwell in buildings adjacent to the construction site, in writing, not less than seven days prior to construction of the impending construction activity. The contractor shall prepare a written notification describing the method, location, and likely duration of construction. It shall also include both a phone number where a representative of the contractor can be reached during normal business hours and the name and telephone number of City's project engineer and municipal inspector.

The written notice shall be approved by the project engineer prior to distribution. Distribution shall be coordinated with the City's municipal inspector. Contractor shall also provide written notification to residents 24 hours prior to the start of construction on each street and also notify residents once individual sewer service laterals are reinstated. The contractor shall also notify residents as necessary should the construction schedule change due to unforeseen circumstances. There will be no separate payment for the Contractor's obligation to notify the public of construction activities.

D. BID ITEMS

Below are the bid items assigned for the work to be completed. This includes subsidiary obligations required to complete the work that may not be quantified in the plans and specifications. Referenced sections are from the City of Arvada Engineering Code of Standards and Specifications. References to sections are provided to aid the contractor in the bidding process and may not include all applicable sections for the work to be performed. Items discussed in sections A through C of the Special Provisions replace, or are in addition to, City of Arvada Engineering Code of Standards and Specifications and apply to the bid items as applicable.

Exploratory Potholing

Shall be performed per Section 143.00. Contractor shall determine the level of effort required based on provided utility potholes performed during the design process and the work to be performed. The Contractor shall be required to locate all utility crossings to Subsurface Quality Engineering (SUE) Quality Level A (QL-A) in accordance with ASCE C-I-38-02, Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data, along proposed construction areas to determine exact size, type, location and depth prior to installation of the improvements. Contractor shall visualize all existing water mains that will be connected to the new water main via test holing prior to the planned tie-in date, and with enough advanced notice for Contractor to plan for tie-in, including procurement of specialty parts, if needed. This item will be paid as a lump sum.

Protect Tree

Shall be performed per Section 148.05. This item will be paid per tree (each).

Traffic Control and Street Restrictions (Barricades & Warning Signs) (Includes Trail Detouring)

Shall be performed per Section 149.00, 1181.00. Contractor shall determine the level of effort required based on work to be performed. This item will be paid as a lump sum.

Record Drawings

Shall be created per Section 222.00. This item will be paid as a lump sum.

Removal of Sanitary Sewer Manhole

Shall be completely removed and disposed of offsite per Section 332.00, 1134.00. This item will be paid per manhole (each).

Existing Sanitary Underdrain System Replacement

Removed or damaged underdrain shall be disposed of offsite per Section 332.00, 1134.00. This item will be paid per lineal foot.

Abandon Sanitary Sewer Manhole

Shall be performed per Section 332.00. This item will be paid per manhole (each).

Abandon Sanitary Sewer Pipe

Shall be performed per Section 332.00. This item will be paid per lineal foot.

Abandon Waterline

Shall be performed per Section 332.00. This item will be paid per lineal foot.

Abandon Gate Valve

Shall be performed per Section 332.00. This item will be paid per valve (each).

Removal of Sanitary Sewer Pipe

Shall be performed per Section 332.00, 1134.00. This item will be paid per lineal foot.

Remove & Dispose of Asbestos Cement Water Pipe

Shall be performed per Section 332.00, 1146.08. This item will be paid per lineal foot.

Removal of Gate Valve

Shall be performed per Section 332.00, 1134.00. This item will be paid per gate valve (each).

Removal of Fire Hydrant Assembly

Shall be performed per Section 332.00, 1134.0. Fire hydrant shall be returned to the city. This item will be paid per hydrant (each).

Remove & Dispose of Asphalt Pavement

Shall be performed per Section 333.00, 1134.00. This work includes any required saw cutting. This item will be paid per square yard of removal.

Removal of Playground Equipment & Dispose

Shall be performed per Section 1134.00. The playground shall be disassembled, removed and disposed unless directed by the City to salvage for future use. This item will be paid per lump sum.

Remove, Reset & Replace Irrigation System

Shall be performed per Section 1134.00, 1141.00. Any irrigation facilities affected by the project shall be removed, reset, and replaced as needed to restore it to pre-construction condition. Contractor shall determine the level of effort required based on work to be performed. This item will be paid as a lump sum.

Removal of Boulder and Return to City

Shall be performed per Section 1134.00. This item will be paid per boulder (each).

Reset Street Light & Pull Box

Shall include all labor, materials, equipment, and incidentals required relocation. It shall also include all electrical work and coordination with electrical provider necessary. This item will be paid per streetlight (each).

Reset Fence

Shall include all labor, materials, equipment, and incidentals required for the reset. If the existing fence can't be reset, an equivalent fence shall be constructed in the locations shown in the plans. This item will be paid per lineal foot.

Reset Ground Sign

Shall include all labor, materials, equipment, and incidentals required for the reset. This item will be paid per sign (each).

Removal of Trash Receptacle and Return to City

Shall be performed per Section 1134.00. This item will be paid per receptacle (each).

Removal of Bus Enclosure and Concrete Pad

Shall be performed per Section 1134.00. Bus stop enclosure shall be returned to RTD unless otherwise directed. This item will be paid for as each.

Removal of Bench and Return to City

Shall be performed per Section 1134.00. This item will be paid per bench (each).

Remove & Dispose of Concrete Flatwork

Shall be performed per Section 333.00, 1134.00. This work includes any required saw cutting. This item will be paid per square yard of removal.

Clearing and Grubbing

Shall be performed per Section 341.00, 1131.00. This item will be paid as a lump sum.

Removal of Tree

Shall be performed per Section 341.00, 1134.00. This item will be paid per tree (each).

Erosion Control

Shall be performed per Section 350.00 through 355.00, 1136.00. An erosion control plan has been provided with the construction plans, but the contractor is responsible to maintain and revise the plan as necessary based on construction activities. This item will be paid as a lump sum.

Dewatering

Shall be performed per Section 364.20. This item will be paid as a lump sum.

Flowable fill

Shall be performed per SC-B-13 & Section 369.00. This item will be paid per cubic yard. Contractor shall document the locations and amount used for the City and Engineers record.

Select Backfill

Shall be performed per SC-B-13 & Section 369.00. This item will be paid per cubic yard

Trench Maintenance Project Site Clean up

Shall be performed per Section 129.03, 364.00, 560.00, 834.00. This item will be paid as a lump sum.

Waterline 8" PVC Pipe (Complete-In-Place)

Shall be performed per Section 420.00, 1140.00. This item will be paid per lineal foot and shall include all required bends, fittings, and joint restraints / thrust blocks.

Waterline 6" PVC Pipe (Complete-In-Place)

Shall be performed per Section 420.00, 1140.00. This item will be paid per lineal foot and shall include all required bends, fittings, and joint restraints / thrust blocks.

8" Plug

Shall be performed per Section 420.00, 1140.00. This item will be paid per plug (each).

8"x6" Reducer

Shall be performed per Section 420.00, 1140.00. This item will be paid per reducer (each) and shall include any required fittings to connect to AC water pipe.

8" Gate Valve and Valve Box

Shall be performed per Section 420.07, 1140.00. This item will be paid per valve (each).

6" Gate Valve and Valve Box

Shall be performed per Section 420.07, 1140.00. This item will be paid per valve (each).

Fire Hydrant Assembly

Shall be performed per Section 420.10, 1143.00. This item will be paid per hydrant (each).

Reconnect Water Service (3/4" DIA.)

Shall be performed per Section 424.00, 1140.00. This item will be paid per service (each) and includes tap, connection, and copper (type K) service line extension.

Connect to Existing Facilities

Shall be performed per Section 1146.02. This item will be paid per connection (each).

4" Sanitary Sewer Service Tap & Reconnection

Shall be performed per Section 522.00 through 532.00, 1140.00. This item will be paid per service (each) and shall include all bends, fitting, and pipe to connect to the new main alignment.

Sewer Main Line Pipe (8" PVC) (Complete-In-Place)

Shall be performed per Section 522.00 through 532.00, 1140.00. This item will be paid per lineal foot.

Sewer Main Line Pipe (27" PVC) (Complete-In-Place)

Shall be performed per Section 522.00 through 532.00, 1140.00. This item will be paid per lineal foot.

Sewer Main Line Pipe (30" PVC) (Complete-In-Place)

Shall be performed per Section 522.00 through 532.00, 1140.00. This item will be paid per lineal foot.

Manholes 4' DIA (Complete-In-Place)

Shall be performed per Section 522.00 through 532.00, 1140.00. This item will be paid per manhole (each).

Manholes 5' DIA (Complete-In-Place)

Shall be performed per Section 522.00 through 532.00, 1140.00. This item will be paid per manhole (each).

42" Steel Casing (Bore) Includes Sewer Main Line Pipe (30" PVC)

Shall be performed per Section 522.00 through 532.00, 1145.00. This item will be paid per lineal foot.

Sanitary Sewer Bypass Pumping

Shall be performed per Section 522.00 through 532.00. This item will be paid per lineal foot.

Pavement Markings

Existing pavement markings damaged during construction activities shall be replaced per Section 732.00. Contractor shall document existing pavement marking in preparing bids to determine the level of effort. This item will be paid as a lump sum.

Vertical curb and Gutter

Shall be performed per Section 821.00 through 839.00. This item will be paid per lineal foot.

Mountable Curb, Gutter & Sidewalk

Shall be performed per Section 821.00 through 839.00. This item will be paid per lineal foot.

Concrete Curb Ramp with Detectable Warnings

Shall be performed per Section 821.00 through 839.00. This item will be paid per square yard.

Concrete Sidewalk

Shall be performed per Section 821.00 through 839.00. This item will be paid per square yard.

Concrete Crosspans & Curb Return Fillet Replacement

Shall be performed per Section 821.00 through 839.00. This item will be paid per square yard.

Multi-Use Pathway

Shall be performed per Section 821.00 through 839.00. It shall include Concrete Bikeway (6 Inch) and Aggregate Base Course (Class 6) (6 Inch). This item will be paid per square yard.

Hot Mix Asphalt (Patching) (Asphalt) 6-Inch Depth (Local Streets)

Shall be performed per Section 930.00 through 938.00. This item will be paid per square foot.

Hot Mix Asphalt (Patching) (Asphalt) 9-Inch Depth (Ward Road)

Shall be performed per Section 930.00 through 938.00. This item will be paid per square foot.

Temporary Asphalt Surfacing (2 Inch)

Shall abide and be performed per SC-B-11. This item will be paid per square foot.

Non-Irrigated Native Landscaping & Restoration (Includes seeding, Topsoil & Mulch, Watering)

Shall be performed per Section 1030.00 through 1050.00. This item will be paid per square foot.

Irrigated Landscaping & Restoration (Includes Sod and Topsoil)

Shall be performed per Section 1030.00 through 1050.00. This item will be paid per square foot.

Soft Trail (4 Inch)

Shall be performed per Section 1070.00. This item will be paid per square yard.

Equestrian Trail (4 Inch)

Shall be performed per Section 1070.00. This item will be paid per square yard.

River Rock Mulch (4 Inch)

Contractor shall attempt to match existing rock mulch size in color in area to be installed. This item will be paid per square yard.

Construction Survey & Staking

Shall be performed per SC-A-14. This item will be paid as a lump sum.

Compaction and Materials Testing

Testing shall be performed per Section 320, 321, 322 by a licensed geotechnical engineer. Contractor to furnish all testing results and reports to the Engineer and City. This item will be paid as a lump sum.

Mobilization, Permits, Fees, Licenses, Administration

Shall be performed per Section 1124.00. This shall include all labor, materials, equipment, and incidentals required for the Contractor to mobilize. Shall include all costs for Contractor's insurance and bonds, construction permits and fees, job trailers and site administration expenses, utilities including power, telephone, etc. This item shall not exceed more than ten (10) percent of the Base Bid. This item will be paid per defined in the City of Arvada Engineering Code of Standards and Specifications, latest edition.

Minor Contract Revisions

Shall be performed per SC-A-8 "Minor Contract Revisions".

End Project Special Provisions.

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. **17-SR-07, RALSTON TRUNK SEWER IMPROVEMENTS – WARD AND 69TH**

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 _____, 2023, 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)

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. **17-SR-07** entitled **Ralston Trunk Sewer Improvements – Ward & 69th** 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 **240** 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 **November 15, 2023**. For each calendar day that the work exceeds the allotted contract time, the Contractor shall agree to pay the owner Liquidated Damages per section 1121.07 of the City of Arvada Engineering Code Standards and Specifications, 2022 Edition. 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. 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..



Use Excel file included
with the Bid Docs to
complete



Drexel, Barrell & Co.
1376 Miners Drive, Ste 107
Lafayette, CO 80026
T: (303) 442-4338
drexelbarrell.com

Project: City of Arvada Ralston Trunk Sewer Improvements: Ward and 69th
Bid No. CSB 23-ENG-074

Contractor:

Date:

Bid Schedule

ITEM NO.	CONTRACT ITEM	UNIT	QUANTITY	UNIT COST	COST
1	EXPLORATORY POTHOLING	LS	1	\$	-
2	PROTECT TREE	EA	34	\$	-
3	TRAFFIC CONTROL AND STREET RESTRICTIONS (BARRICADES & WARNING SIGNS) (INCLUDES TRAIL DETOURING)	LS	1	\$	-
4	RECORD DRAWINGS	LS	1	\$	-
5	REMOVAL OF SANITARY SEWER MANHOLE	EA	10	\$	-
6	EXISTING SANITARY UNDERDRAIN SYSTEM REPLACEMENT	LF	1000	\$	-
7	ABANDON SANITARY SEWER MANHOLE	EA	5	\$	-
8	ABANDON SANITARY SEWER PIPE	LF	1419	\$	-
9	ABANDON WATERLINE	LF	192	\$	-
10	ABANDON GATE VALVE	EA	1	\$	-
11	REMOVAL OF SANITARY SEWER PIPE	LF	2102	\$	-
12	REMOVE & DISPOSE OF ASBESTOS CEMENT WATER PIPE	LF	2154	\$	-
13	REMOVAL OF GATE VALVE	EA	12	\$	-
14	REMOVAL OF FIRE HYDRANT ASSEMBLY	EA	3	\$	-
15	REMOVE & DISPOSE OF ASPHALT PAVEMENT	SY	5290	\$	-
16	REMOVAL OF PLAYGROUND EQUIPMENT & DISPOSE	LS	1	\$	-
17	REMOVE, RESET & REPLACE IRRIGATION SYSTEM	LS	1	\$	-
18	REMOVAL OF BOULDER AND RETURN TO CITY	EA	2	\$	-
19	RESET STREET LIGHT & PULL BOX	EA	1	\$	-
20	RESET FENCE	LF	128	\$	-
21	RESET GROUND SIGN	EA	2	\$	-
22	REMOVAL OF TRASH RECEPTACLE AND RETURN TO CITY	EA	2	\$	-
23	REMOVAL OF BUS STOP ENCLOSURE AND CONCRETE PAD	EA	1	\$	-
24	REMOVAL OF BENCH AND RETURN TO CITY	EA	2	\$	-
25	REMOVE & DISPOSE OF CONCRETE FLATWORK	SY	870	\$	-
26	CLEARING AND GRUBBING	LS	1	\$	-
27	REMOVAL OF TREE	EA	10	\$	-
28	EROSION CONTROL	LS	1	\$	-
29	DEWATERING	LS	1	\$	-
30	FLOWABLE FILL	CY	100	\$	-
31	SELECT BACKFILL	CY	8800	\$	-
32	TRENCH MAINTENANCE PROJECT SITE CLEAN UP	LS	1	\$	-
33	WATERLINE 8" PVC PIPE (COMPLETE-IN-PLACE)	LF	2215	\$	-
34	WATERLINE 6" PVC PIPE (COMPLETE-IN-PLACE)	LF	83	\$	-
35	8" PLUG	EA	2	\$	-
36	8" X 6" REDUCER	EA	3	\$	-
37	8" GATE VALVE AND VALVE BOX	EA	15	\$	-
38	6" GATE VALVE AND VALVE BOX	EA	5	\$	-
39	FIRE HYDRANT ASSEMBLY	EA	5	\$	-
40	RECONNECT WATER SERVICE (3/4" DIA.)	EA	28	\$	-
41	CONNECT TO EXISTING FACILITIES	EA	7	\$	-
42	4" SANITARY SEWER SERVICE TAP & RECONNECTION	EA	22	\$	-
43	SEWER MAIN LINE PIPE (8" PVC) (COMPLETE-IN-PLACE)	LF	1767	\$	-
44	SEWER MAIN LINE PIPE (27" PVC) (COMPLETE-IN-PLACE)	LF	2997	\$	-
45	SEWER MAIN LINE PIPE (30" PVC) (COMPLETE-IN PLACE)	LF	175	\$	-
46	MANHOLES 4' DIA (COMPLETE-IN-PLACE)	EA	11	\$	-
47	MANHOLES 5' DIA (COMPLETE-IN-PLACE)	EA	18	\$	-
48	42" STEEL CASING (BORE) INCLUDES SEWER MAIN LINE PIPE (30" PVC)	LF	115	\$	-
49	SANITARY SEWER BYPASS PUMPING	LS	1	\$	-
50	PAVEMENT MARKINGS	LS	1	\$	-
51	VERTICAL CURB AND GUTTER	LF	83	\$	-
52	MOUNTABLE CURB, GUTTER & SIDEWALK	SY	38	\$	-
53	CONCRETE CURB RAMP WITH DETECTABLE WARNINGS	SY	32	\$	-
54	CONCRETE SIDEWALK	SY	5	\$	-
55	CONCRETE CROSSPANS & CURB RETURN FILLET REPLACEMENT	SY	116	\$	-
56	MULTI-USE PATHWAY	SY	269	\$	-
57	HOT MIX ASPHALT (PATCHING) (ASPHALT) 6-INCH DEPTH (LOCAL STREETS)	SF	43800	\$	-
58	HOT MIX ASPHALT (PATCHING) (ASPHALT) 9-INCH DEPTH (WARD ROAD)	SF	3778	\$	-
59	TEMPORARY ASPHALT SURFACING (2 INCH)	SF	4000	\$	-
60	NON-IRRIGATED NATIVE LANDSCAPING & RESTORATION (INCLUDES SEEDING, TOPSOIL & MULCH)	SF	36200	\$	-
61	IRRIGATED LANDSCAPING & RESTORATION (INCLUDES SOD AND TOPSOIL)	SF	35580	\$	-
62	SOFT TRAIL (4 INCH)	SY	505	\$	-
63	EQUESTRIAN TRAIL (4 INCH)	SY	300	\$	-
64	RIVER ROCK MULCH (4 INCH)	SY	6.0	\$	-
65	CONSTRUCTION SURVEY & STAKING	LS	1	\$	-
66	COMPACTION AND MATERIALS TESTING	LS	1	\$	-
67	MOBILIZATION, PERMITS, FEES, LICENSES AND ADMINISTRATION	LS	1	\$	-
68	MINOR CONTRACT REVISIONS	F/A	1	\$ 370,000.00	\$ 370,000.00
CONSTRUCTION COST TOTAL				\$	370,000.00

REQUIRED CONTRACTOR SUBMITTAL FORM

VARIATIONS: The vendor shall identify all variations and exceptions to this CSB. 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 _____

SUBMITTAL CHECKLIST:

Bid Proposals shall be submitted in the order listed below with each section clearly identified. Missing information or required documents will result in submission being deemed non-responsive.

- ☐ Submit completed City Submittal Forms including this sheet, Bid Bond, Bid Proposal, Bid Schedule (Please use attached Excel File Bid Schedule), and any other attachments requested.
- ☐ Completed Performance Measures Form
- ☐ 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 _____ #3 _____

MINIMUM REQUIRED QUALIFICATIONS:

Evidence of these qualifications must be submitted.

- ☐ Two (2) successful projects of **18-inch PVC** or larger gravity sewer main, sanitary sewer or storm sewer similar to this project, in the Front Range of Colorado in the last five calendar years. Front Range Colorado is defined as Fort Collins to Pueblo. Owner contact information for all submitted projects must be provided.
- ☐ Two (2) successful projects of **8-12 inch PVC** waterline in the Front Range of Colorado in the last five calendar years. Front Range Colorado is defined as Fort Collins to Pueblo. Owner contact information for all submitted projects must be provided.
- ☐ Three (3) project references: two of which must be for the proposed Project Manager and one (1) of which must be for the proposed Superintendent. All references must be from Colorado entities.
- ☐ Resumes for the proposed Superintendent and Project Manager must be provided.

REFERENCES:

- ☐ Check here if Contractor's standard reference sheet is attached, otherwise, use the spaces 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 itemssupplied: _____

Name: _____ Contact Person: _____

Address: _____

Telephone No: _____ Email: _____

Describe type of work/service performed or itemssupplied: _____

QUALIFICATION PROJECTS:

☐ Check here if qualifications are attached separately, otherwise, use the spaces below.

Project Name: _____ Owner: _____

Project Location: _____ Date Completed: _____

Project Description: _____

Sizes of Pipe Installed: _____ Length Installed: _____

Project Manager: _____ Superintendent: _____

Project Name: _____ Owner: _____

Project Location: _____ Date Completed: _____

Project Description: _____

Sizes of Pipe Installed: _____ Length Installed: _____

Project Manager: _____ Superintendent: _____

Project Name: _____ Owner: _____

Project Location: _____ Date Completed: _____

Project Description: _____

Sizes of Pipe Installed: _____ Length Installed: _____

Project Manager: _____ Superintendent: _____

Project Name: _____ Owner: _____

Project Location: _____ Date Completed: _____

Project Description: _____

Sizes of Pipe Installed: _____ Length Installed: _____

Project Manager: _____ Superintendent: _____

Project Name: _____ Owner: _____

Project Location: _____ Date Completed: _____

Project Description: _____

Sizes of Pipe Installed: _____ Length Installed: _____

Project Manager: _____ Superintendent: _____

Project Name: _____ Owner: _____

Project Location: _____ Date Completed: _____

Project Description: _____

Sizes of Pipe Installed: _____ Length Installed: _____

Project Manager: _____ Superintendent: _____

VENDOR NAME: _____

SOLICITATION #: 23-ENG-074

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 the City will monitor and report on the Vendor’s 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 be evaluated by the City per these defined metrics 2 months prior to contract renewal. The department will review with the vendor any measures needing improvement.

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 be considered when renewing or awarding a contract with a vendor.

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 _____, 2023, a copy of which is hereto attached and made a part hereof, for the performance of City of Arvada Project No.'s _____.

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 _____, 2023.

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. _____, _____

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. _____, _____

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

Dollars

Contract
Days

Calendar

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 Rachael Morris, City Attorney

By: _____



CITY OF ARVADA

PURCHASING DIVISION

FACSIMILE: 720-898-7098 ▲ TDD: 720-898-7869

PHONE: 720-898-7099

REQUEST FOR PROPOSALS- ADDENDUM No. 1

Proposal #: 23-ENG-074

Title: Ralston Trunk Sewer Improvements – Ward & 69th – Re-Issued

RFP Issued: 08/23/2023

Addendum #: 1

Today's Date: 09/07/2023

Proposals Due By: 09/20/2023 - 2:00 PM MT (NO CHANGE)

Solicitation and all related addenda and communications are available at WWW.BIDNETDIRECT.COM.

The following clarifications are provided to be incorporated into the Request for Proposals. All other information shall remain unchanged.

Question and Answers

1. **Question:** Will the City Provide for Survey, for the concrete replacement in the park
Answer: The contractor is required to provide necessary surveying services. Electronic files will be available to the selected contractor.
2. **Question:** Is the Underdrain in the playground included in the concrete replacement item?
Answer: The playground will be removed as part of this project. If underdrain being referenced is related to playground features, it will be removed with playground.
3. **Question:** What is required for the landscaping/irrigation replacement in the park?
Answer: Landscaping and irrigation will be replace in all disturbed areas. The existing playground area will be replaced with new irrigated sod. The contractor is required to repair any damage to existing irrigation systems disturbed during construction activities and ensure proper irrigation system coverage for all new sod areas.
4. **Question:** Can the city provide a bypass pumping plan?
Answer: The contractor is responsible for preparing a bypass pumping plan and the bypass pumping plan will need to be reviewed and approved by the City.
5. **Question:** Is the 8" line on 70th Ave, remove & replace? if so, would pipe testing be required on the 8" main where the services will be connected?
Answer: Refer to Demolition Plan for existing items to be removed and replaced. Pipe testing on new water mains will be required prior to reconnecting water services.
6. **Question:** Will the City of Arvada allow ADS Sanitite HP (polypropylene pipe) per ASTM F2736 to be bid as a value engineer alternate to the PVC sanitary sewer pipe that is specified on the plans? Polypropylene pipe is allowed for sanitary sewer non-pressure pipe per Table 25.1
Answer: Pipe shall be PVC per Section 522.00 Materials for Sewer Main Line Pipe (522.01) and Sewer Service Line Pipe (522.01.01).

End of Addendum 1

DESIGN PLANS:
CITY OF ARVADA
RALSTON TRUNK SEWER IMPROVEMENTS
WARD AND 69TH
PHASE 1
LOCATED IN SECTION 5 AND SECTION 6, TOWNSHIP 3 SOUTH, RANGE 69 WEST, 6TH P.M.
COUNTY OF JEFFERSON, STATE OF COLORADO
JUNE 27, 2023

BENCHMARKS:

CITY OF ARVADA BENCHMARK 430, LOCATED AT THE SOUTHWEST CORNER OF WARD ROAD AND WEST 69TH AVENUE WITH AN ELEVATION OF 5449.18.

CITY OF ARVADA BENCHMARK 863, LOCATED SOUTHEAST OF THE INTERSECTION OF BEECH STREET AND RALSTON CREEK TRAIL WITH AN ELEVATION OF 5483.59.



VICINITY MAP
NOT TO SCALE

OWNER
CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
8101 RALSTON ROAD
ARVADA, COLORADO 80002
KRIS GARDNER, P.E.
720-898-7647

CIVIL ENGINEER
Drexel, Barrell & Co.
1376 MINERS DRIVE, SUITE 107
LAFAYETTE, COLORADO 80301
CONTACT: GARRETT LINGREEN, P.E.
glingreen@drexelbarrell.com
(303) 442-4338

BID SET

SHEET NO.	INDEX OF SHEETS
01	CV01 COVER SHEET
02-03	NT01-NT02 GENERAL NOTES & LEGEND
04	SQ01 SUMMARY OF APPROXIMATE QUANTITIES
05	SV01 SURVEY CONTROL DIAGRAM
06-07	TS01-TS02 TYPICAL SECTIONS
08-11	EX01-EX04 EXISTING CONDITIONS
12-16	DM01-DM05 DEMOLITION PLAN
17-22	SS01-SS06 SANITARY SEWER PLAN & PROFILE-TRUNKLINE
23-27	SS7-SS11 SANITARY SEWER PLAN & PROFILE-8" MAIN
28-31	WT01-WT04 WATERLINE PLAN
32-33	TD01-TD02 TRAIL DETOUR & CONSTRUCTION ACCESS PLAN
34-40	EC01-EC07 EROSION CONTROL PLAN
41-42	EC08-EC09 EROSION CONTROL DETAILS

Engineer's Certification

These plans for the Ralston Trunk Sewer Improvements Ward and 69th Phase 1 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."

APPROVED
CITY OF ARVADA, COLORADO
PROJECT NO. 17-SR-07
BY: *Garrett Lingreen* DATE: 7/10/23
Assistant City Engineer
Review if for the general compliance with the City of Arvada "Engineering Code of Standards", 2022 edition. Sole responsibility for completeness and/or accuracy of these Documents shall remain with the Registered Professional Engineer sealing these Plans. The City does not accept liability for facilities designed by others.

PREPARED BY:

DBC
Drexel, Barrell & Co.
Engineers & Surveyors
1376 MINERS DRIVE, STE 107
LAFAYETTE, COLORADO 80026
CONTACT:
GARRETT LINGREEN, P.E.
(303) 442-4338
LAFAYETTE
COLORADO SPRINGS

OWNER/CLIENT:

CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
8101 RALSTON ROAD
ARVADA, COLORADO 80002
KRIS GARDNER, P.E.
720-898-7647

BID SET
CITY OF ARVADA PROJECT NO. 17-SR-07
RALSTON TRUNK SEWER IMPROVEMENTS
WARD AND 69TH
PHASE 1
ARVADA, COLORADO

ISSUE	DATE
BID SET	06-27-2023
DESIGNED BY:	GSG
DRAWN BY:	SMM
CHECKED BY:	GJL
FILE NAME:	21666-00 CV01

Garrett Lingreen
43296
PROFESSIONAL ENGINEER
06-27-2023

DRAWING SCALE IN FEET:
HORIZONTAL: SEE PLAN
VERTICAL: SEE PLAN

COVER SHEET

PROJECT: 21666-00BLCV
DRAWING NO.

CV01

SHEET: 01 OF 42

- 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', LATEST EDITION, 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. CERTIFICATES OF OCCUPANCY FOR ANY BUILDINGS OR STRUCTURES WITHIN THE DEVELOPMENT WILL NOT BE ISSUED UNTIL THIS FORM HAS BEEN RECEIVED, REVIEWED AND APPROVED BY THE CITY OF ARVADA ENGINEERING DIVISION.
- K. OWNER/DEVELOPER 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 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 ADA STANDARD. 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.

- 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 REMOVED TO A DEPTH REQUIRED BY THE CITY OF ARVADA ACCORDING TO INFORMATION OBTAINED FROM LABORATORY TESTS AND/OR 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. 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. "PROOF ROLLING SHALL BE INSPECTED AND ACCEPTED BY THE CITY PRIOR TO INSTALLATION OF PAVEMENT AND/OR CONCRETE FLATWORK."
- E. 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."

A. CONTRACTOR IS TO NOTIFY AFFECTED IRRIGATION OWNER A MINIMUM OF 24 HOURS PRIOR TO BEGINNING ANY CONSTRUCTION. ALL REVISIONS TO THE EXISTING IRRIGATION SYSTEM TO BE COORDINATED WITH THE CITY OF ARVADA – PARKS MAINTENANCE DIVISION.

B. ALL IRRIGATION PIPE JOINTS SHALL BE WATERTIGHT AND PASS A LOW AIR PRESSURE TEST.

- A. CONTRACTOR SHALL NOTIFY ALL AFFECTED PARTIES, CITY OF ARVADA UTILITY AND ENGINEERING DIVISION A MINIMUM OF 24 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 SINGLE COATING.
- E. ALL PVC WATER MAINS SHALL BE INSTALLED WITH WHITE #12 TYPE UF OR USE CABLE SINK CEMENT 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 DRAWINGS.
- I. ALL SANITARY SEWER MAINS INSTALLED SHALL BE HIGH PRESSURE JET CLEANED AFTER COMPLETION OF THE FINAL LIFT OF ASPHALT PLACEMENT AND PRIOR TO REQUIRED TELEVISION INSPECTION BY THE CITY'S WASTEWATER DIVISION.

Review if for the general compliance with the City of Arvada "Engineering Code of Standards", 2022 edition. Sole responsibility for completeness and/or accuracy of these Documents shall remain with the Registered Professional Engineer sealing these Plans. The City does not accept liability for facilities designed by others.

EET: 02 OF

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.
- R. TOTAL AREA OF DISTURBANCE: 2.83 AC
TOTAL AREA OF CONSTRUCTION: 7.59 AC
- S. SEDIMENT AND EROSION CONTROL MEASURES SHALL BE KEPT IN GOOD REPAIR AND FULLY FUNCTIONAL UNTIL FINAL STABILIZATION IS ACHIEVED AND APPROVED. TEMPORARY STABILIZATION MUST BE IMPLEMENTED FOR EARTH DISTURBING ACTIVITIES ON ANY PORTION OF THE SITE WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED, OR TEMPORARILY CEASED FOR MORE THAN FOURTEEN (14) CALENDAR DAYS. PERMANENT STABILIZATION (SOD, SEED, MULCHING, ETC.) SHALL BE IN PLACE AS SOON AS FINAL GRADING IS ACHIEVED AND CONSTRUCTION ACTIVITY HAS CEASED IN ACCORDANCE WITH THE REQUIREMENTS IN SECTIONS 1020.00 AND 1030.00 OF THE STANDARDS AND SPECIFICATIONS AND ARVADA MUNICIPAL CODE CHAPTER 50.

- T. ALL TREES IN THE LIMIT OF WORK MUST HAVE TREE PROTECTION. TREE PROTECTION TO EXTEND TO DRIP LINE OF CANOPIES WHERE POSSIBLE. CONTRACTOR TO NOTIFY THE OWNER TO DISCUSS CONDITIONS WHERE THIS IS NOT POSSIBLE AND RECEIVE PERMISSION TO REDUCE AREA OF TREE PROTECTION.
- U. ARVADA MAY REQUIRE SEED VERIFICATION TESTS AT THE CONTRACTOR'S EXPENSE. SEED SPECIFICATIONS AND APPLICATION RATE MAY VARY BASED ON PROJECTED LAND USE. NATIVE GRASS BLEND SHALL CONSIST OF THE FOLLOWING:
20% PERENNIAL RYEGRASS, ELGON (TETRAPLOID)
20% DESERT WHEAT GRASS (NORDAN)
10% BLUE GRAMA (ALMA)
10% SIDE OATS GRAMA (BUTTE)
10% BIG BLUESTEM (BISON)
10% COATED CREEPING MEADOW FOXTAIL (GARRISON)
10% INDIAN GRASS (TOMAHAWK)
10 % STREAMBANK WHEATGRASS (SODAR)
IF THIS BLEND CAN NOT BE MADE A SUITABLE SUBSTITUTE, SUCH AS A DRYLAND PASTURE MIX, MUST BE PRESENTED FOR APPROVAL TO THE PROJECT ENGINEER BEFORE APPLICATION.

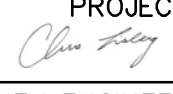
LEGEND:

- EX. ENCASEMENT
- EX. STORM
- EX. OVERHEAD ELECTRIC
- EX. ELECTRICAL
- EX. SANITARY (QL C)
- EX. GAS
- EX. WATER
- EX. TELEPHONE
- EX. PLUG
- EX. GATE VALVE
- EX. FIRE HYDRANT
- ROW/PROPERTY LINE
- EASEMENT LINE
- EX. EDGE OF ASPHALT
- EX. INDEX CONTOUR
- EX. INTERMEDIATE CONTOUR
- EX. WATER EDGE
- PR. ASPHALT SAWCUT
- PR. CONCRETE SAWCUT
- PR. SANITARY
- PR. WATER 8" PVC (6" TO HYDRANTS)
- PR. SANITARY MANHOLE
- PR. WATERLINE FITTINGS
- PR. HORZ. BORING PIT
- PR. CONSTRUCTION ACCESS AREA
- MULTI-USE PATHWAY
- CONCRETE PAVEMENT & FLATWORK (SEE PLAN SHEET LABELS)
- HOT MIX ASPHALT (PATCHING) (ASPHALT)
- EQUESTRIAN TRAIL (4 INCH) & SOFT TRAIL (4 INCH)
- IRRIGATED LANDSCAPING & RESTORATION (INCLUDES SOD AND TOPSOIL)
- NON-IRRIGATED NATIVE LANDSCAPING & RESTORATION (INCLUDING SEEDING, TOPSOIL & MULCH)
- ROCK MULCH (4 INCH)
- POTHOLE LOCATIONS
- EX. FLOODWAY
- EX. 100-YEAR FLOODPLAIN
- EX. 500-YEAR FLOODPLAIN

ABBREVIATIONS

- CMP: CORRUGATED METAL PIPE
- CONC: CONCRETE
- DIA: DIAMETER
- E: EASTING
- EG: EXISTING GRADE
- ELEC: ELECTRIC
- EOA: EDGE OF ASPHALT
- EX: EXISTING
- FES: FLARED END SECTION
- FG: FINISHED GRADE
- FL: FLOWLINE
- INV: INVERT
- HDPE: HIGH DENSITY POLY ETHYLENE
- LF: LINEAR FEET
- ME: MATCH ELEVATION
- MH: MANHOLE
- N: NORTHING
- PC: POINT OF CURVATURE
- PVC: POLYVINYL CHLORIDE
- PI: POINT OF INTERSECTION
- PT: POINT OF TANGENCY
- PRC: POINT OF REVERSE CURVE
- PCC: POINT OF COMPOUND CURVE
- RCP: REINFORCED CONCRETE PIPE
- REM.:REMOVE
- R&D:REMOVE AND DISPOSE
- ROW: RIGHT OF WAY
- SAN: SANITARY
- SW: SIDEWALK
- TELE: TELEPHONE
- VCP: VITRIFIED CLAY PIPE

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BY:  DATE: 7/10/23

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WARD AND 69TH
PHASE I
ARVADA, COLORADO

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FILE NAME:	21666-00 NT01


06-27-2023

DRAWING SCALE IN FEET:
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GENERAL NOTES
& LEGEND

PROJECT:21666-00BLCV
DRAWING NO.

NT02

SHEET: 03 OF 42

SUMMARY OF APPROXIMATE QUANTITIES			
ITEM NO.	CONTRACT ITEM	UNIT	QUANTITY
1	EXPLORATORY POTHOLING	LS	1
2	PROTECT TREE	EA	34
3	TRAFFIC CONTROL AND STREET RESTRICTIONS (BARRICADES & WARNING SIGNS) (INCLUDES TRAIL DETOURING)	LS	1
4	RECORD DRAWINGS	LS	1
5	REMOVAL OF SANITARY SEWER MANHOLE	EA	10
6	EXISTING SANITARY UNDERDRAIN SYSTEM REPLACEMENT	LF	1000
7	ABANDON SANITARY SEWER MANHOLE	EA	5
8	ABANDON SANITARY SEWER PIPE	LF	1419
9	ABANDON WATERLINE	LF	192
10	ABANDON GATE VALVE	EA	1
11	REMOVAL OF SANITARY SEWER PIPE	LF	2102
12	REMOVE & DISPOSE OF ASBESTOS CEMENT WATER PIPE	LF	2154
13	REMOVAL OF GATE VALVE	EA	12
14	REMOVAL OF FIRE HYDRANT ASSEMBLY	EA	3
15	REMOVE & DISPOSE OF ASPHALT PAVEMENT	SY	5290
16	REMOVAL OF PLAYGROUND EQUIPMENT & DISPOSE	LS	1
17	REMOVE, RESET & REPLACE IRRIGATION SYSTEM	LS	1
18	REMOVAL OF BOULDER AND RETURN TO CITY	EA	2
19	RESET STREET LIGHT & PULL BOX	EA	1
20	RESET FENCE	LF	128
21	RESET GROUND SIGN	EA	2
22	REMOVAL OF TRASH RECEPTACLE AND RETURN TO CITY	EA	2
23	REMOVAL OF BUS STOP ENCLOSURE AND CONCRETE PAD	EA	1
24	REMOVAL OF BENCH AND RETURN TO CITY	EA	2
25	REMOVE & DISPOSE OF CONCRETE FLATWORK	SY	870
26	CLEARING AND GRUBBING	LS	1
27	REMOVAL OF TREE	EA	10
28	EROSION CONTROL	LS	1
29	DEWATERING	LS	1
30	FLOWABLE FILL	CY	100
31	SELECT BACKFILL	CY	8800
32	TRENCH MAINTENANCE PROJECT SITE CLEAN UP	LS	1
33	WATERLINE 8" PVC PIPE (COMPLETE-IN-PLACE)	LF	2215
34	WATERLINE 6" PVC PIPE (COMPLETE-IN-PLACE)	LF	83
35	8" PLUG	EA	2
36	8" X 6" REDUCER	EA	3
37	8" GATE VALVE AND VALVE BOX	EA	15
38	6" GATE VALVE AND VALVE BOX	EA	5
39	FIRE HYDRANT ASSEMBLY	EA	5
40	RECONNECT WATER SERVICE (3/4" DIA.)	EA	28
41	CONNECT TO EXISTING FACILITIES	EA	7
42	4" SANITARY SEWER SERVICE TAP & RECONNECTION	EA	22
43	SEWER MAIN LINE PIPE (8" PVC) (COMPLETE-IN-PLACE)	LF	1767
44	SEWER MAIN LINE PIPE (27" PVC) (COMPLETE-IN-PLACE)	LF	2997
45	SEWER MAIN LINE PIPE (30" PVC) (COMPLETE-IN PLACE)	LF	175
46	MANHOLES 4' DIA (COMPLETE-IN-PLACE)	EA	11
47	MANHOLES 5' DIA (COMPLETE-IN-PLACE)	EA	18
48	42" STEEL CASING (BORE) INCLUDES SEWER MAIN LINE PIPE (30" PVC)	LF	115
49	SANITARY SEWER BYPASS PUMPING	LS	1
50	PAVEMENT MARKINGS	LS	1
51	VERTICAL CURB AND GUTTER	LF	83
52	MOUNTABLE CURB, GUTTER & SIDEWALK	SY	38
53	CONCRETE CURB RAMP WITH DETECTABLE WARNINGS	SY	32
54	CONCRETE SIDEWALK	SY	5
55	CONCRETE CROSSPANS & CURB RETURN FILLET REPLACEMENT	SY	116
56	MULTI-USE PATHWAY	SY	269
57	HOT MIX ASPHALT (PATCHING) (ASPHALT) 6-INCH DEPTH (LOCAL STREETS)	SF	43800
58	HOT MIX ASPHALT (PATCHING) (ASPHALT) 9-INCH DEPTH (WARD ROAD)	SF	3778
59	TEMPORARY ASPHALT SURFACING (2 INCH)	SF	4000
60	NON-IRRIGATED NATIVE LANDSCAPING & RESTORATION (INCLUDES SEEDING, TOPSOIL & MULCH)	SF	36200
61	IRRIGATED LANDSCAPING & RESTORATION (INCLUDES SOD AND TOPSOIL)	SF	35580
62	SOFT TRAIL (4 INCH)	SY	505
63	EQUESTRIAN TRAIL (4 INCH)	SY	300
64	RIVER ROCK MULCH (4 INCH)	SY	6
65	CONSTRUCTION SURVEY & STAKING	LS	1
66	COMPACTION AND MATERIALS TESTING	LS	1
67	MOBILIZATION, PERMITS,FEES, LICENSES AND ADMINISTRATION	LS	1
68	MINOR CONTRACT REVISIONS	F/A	

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BID SET
CITY OF ARVADA PROJECT NO. 17-SR-07
RALSTON TRUNK SEWER IMPROVEMENTS
WARD AND 69TH
PHASE I
ARVADA, COLORADO

ISSUE	DATE
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DRAWN BY:	SMM
CHECKED BY:	GJL
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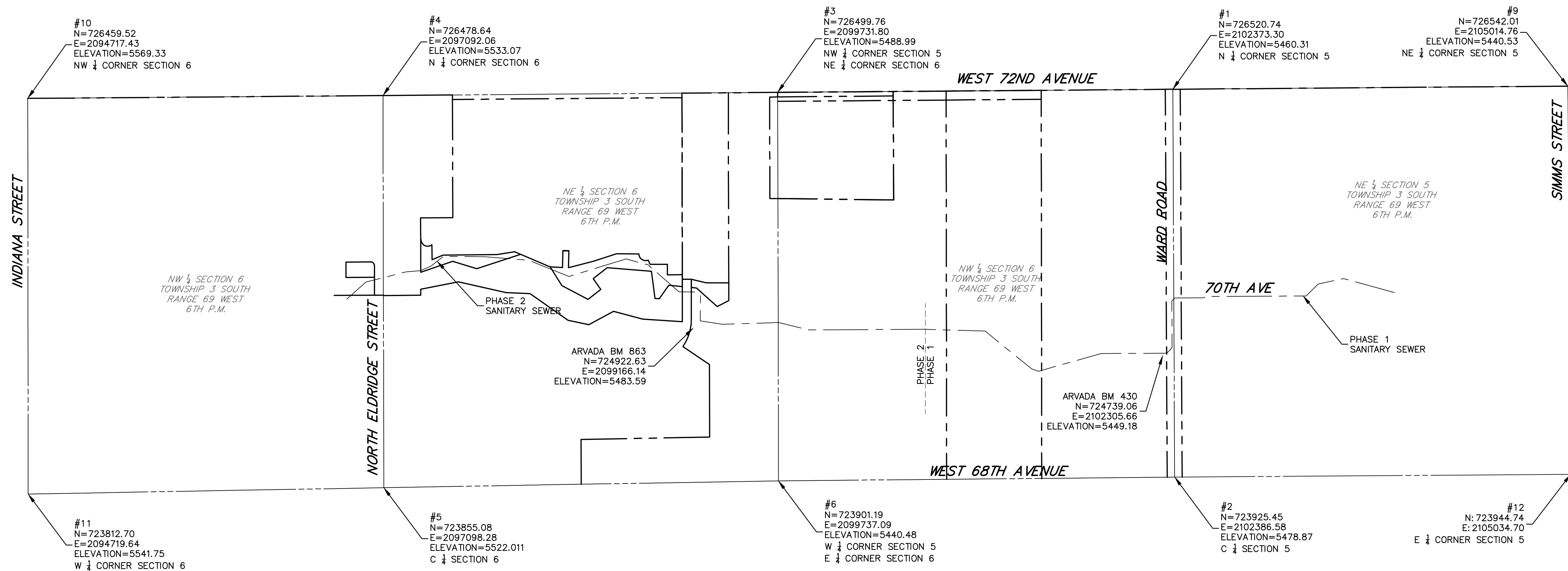
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SUM OF APPROXIMATE QUANTITIES

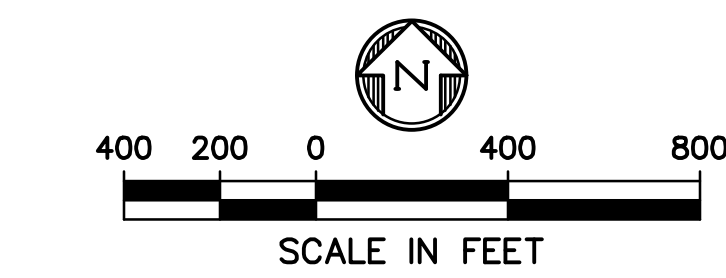
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DRAWING NO.

SQ01

SHEET: 04 OF 42



NOTE:
SURVEY COORDIANTE SYSTEM BASED ON PLANS
PREPARED CITY OF ARVADA, ENTITLED "PROJECT
17-SR-07 -SANITARY SEWER REPLACEMENT".



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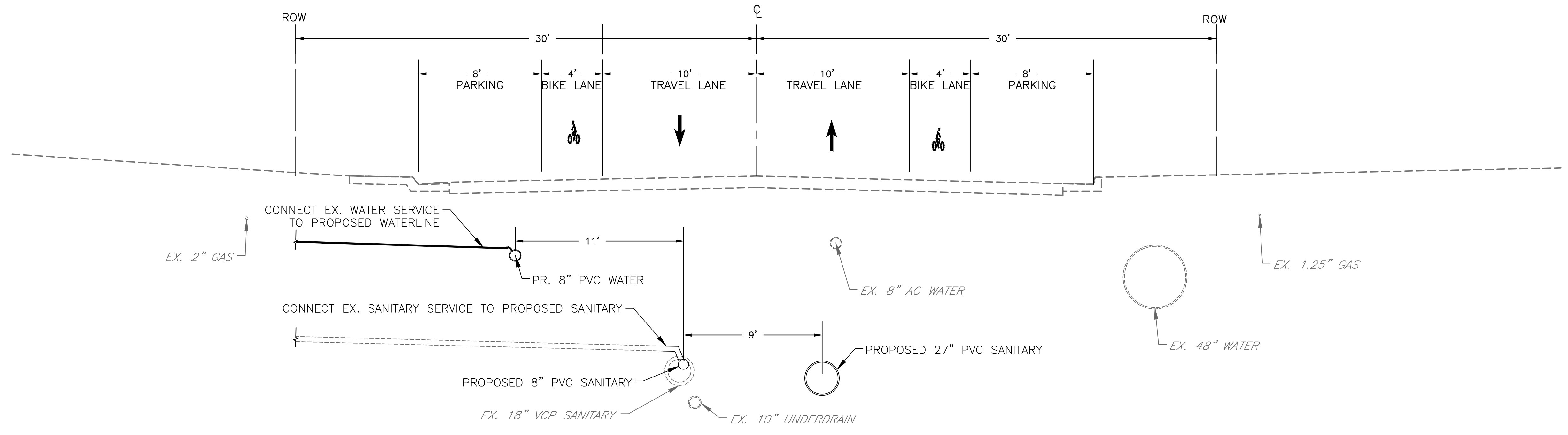
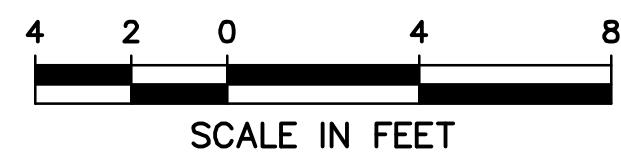
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SURVEY
CONTROL
DIAGRAM

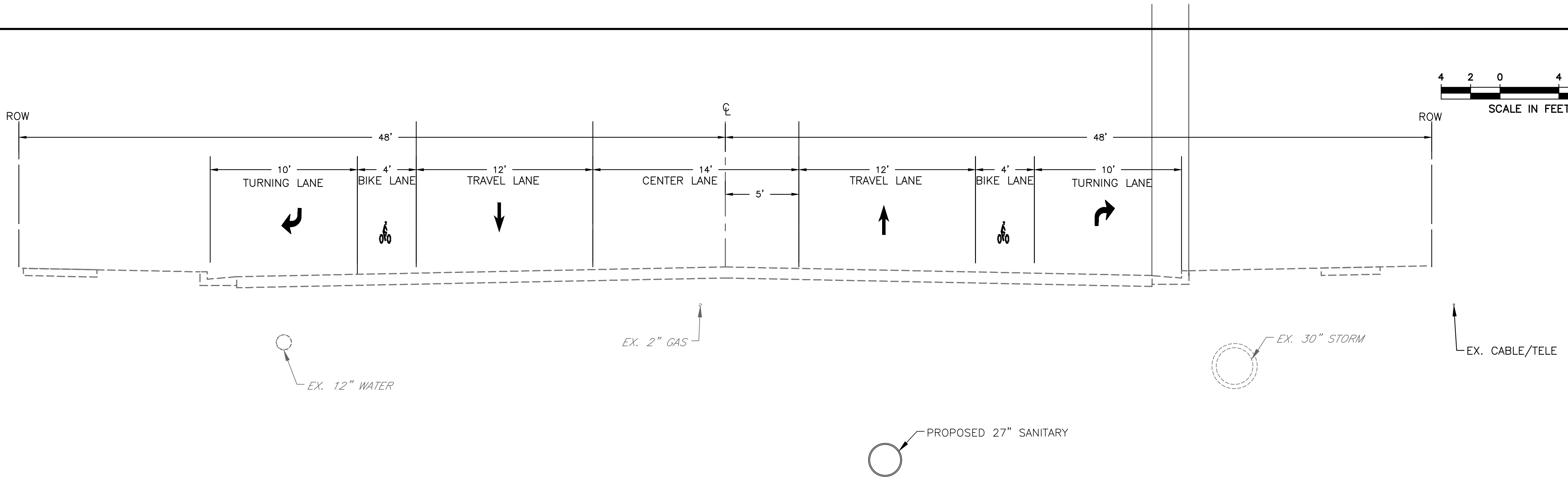
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SHEET: 05 OF 42



W. 70TH AVE TYPICAL SECTION
(LOOKING WEST)



WARD ROAD TYPICAL SECTION
(LOOKING SOUTH)

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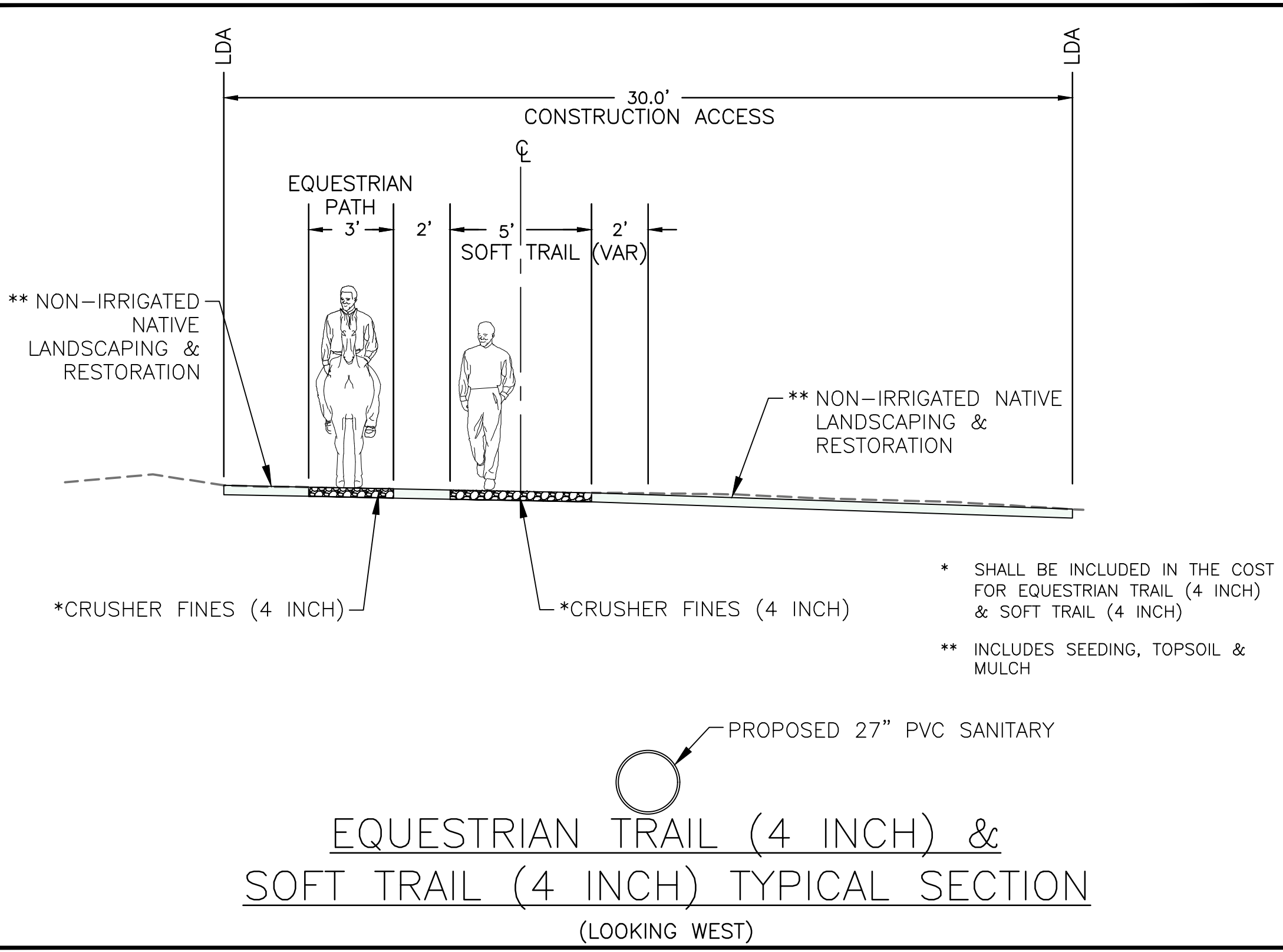
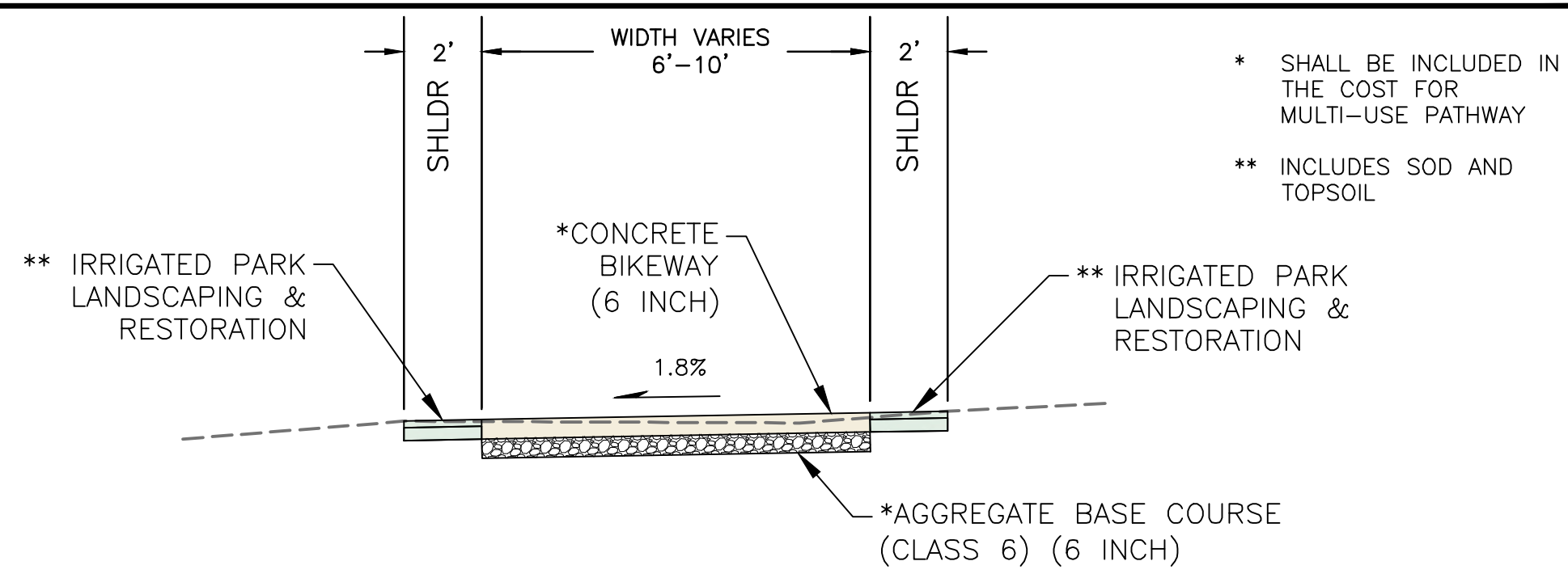
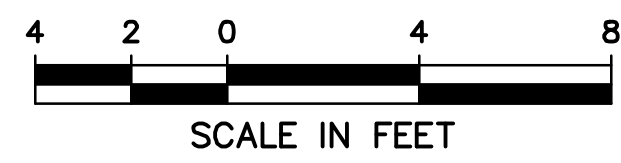
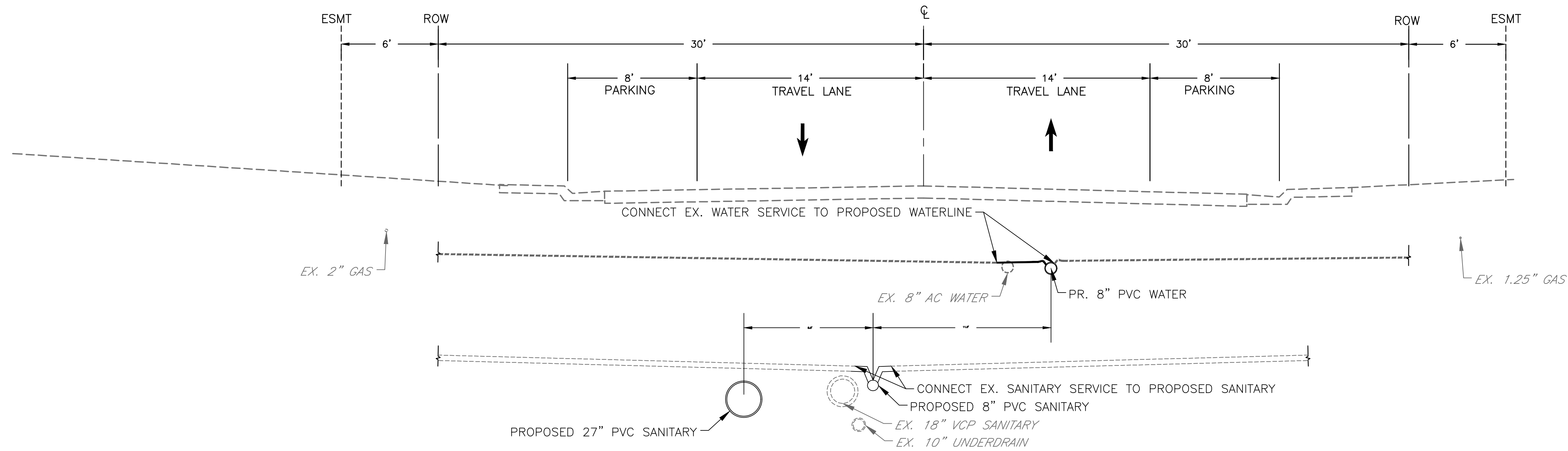
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TYPICAL
SECTIONS

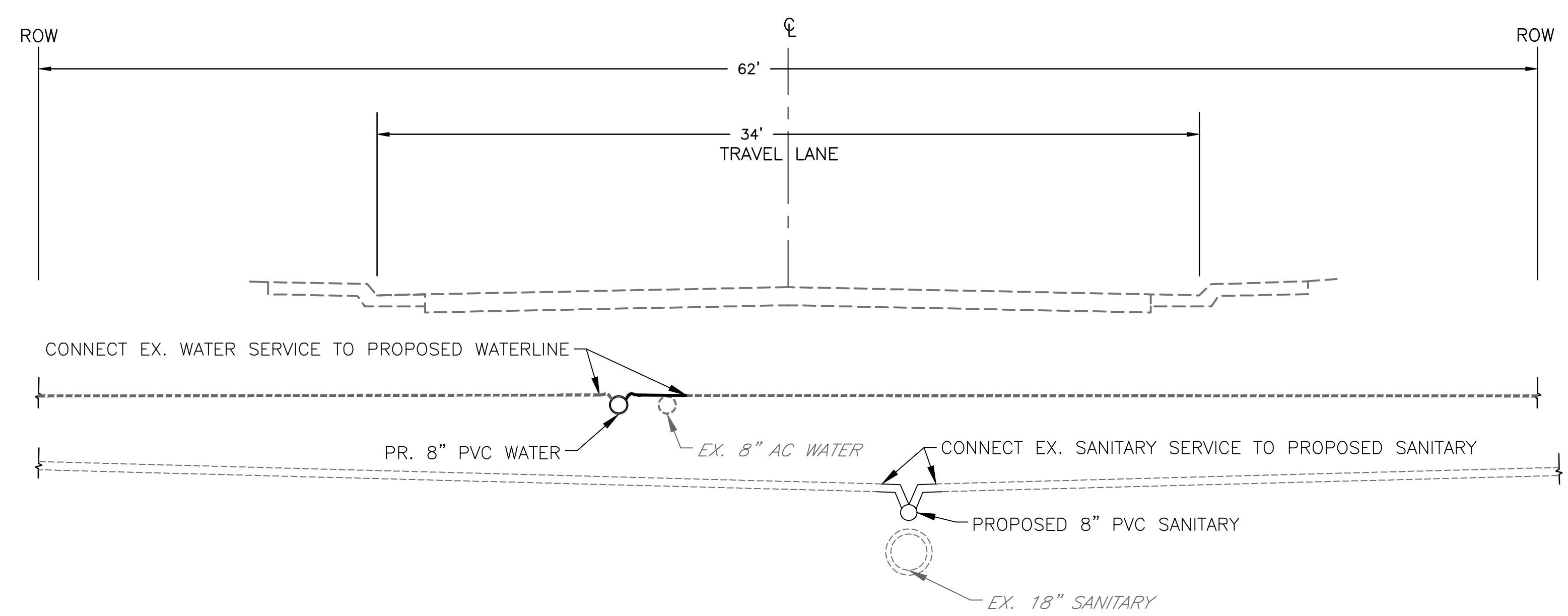
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SHEET: 06 OF 42



W. 69TH AVE TYPICAL SECTION
(LOOKING WEST)



WELCH COURT TYPICAL SECTION
(LOOKING SOUTH)

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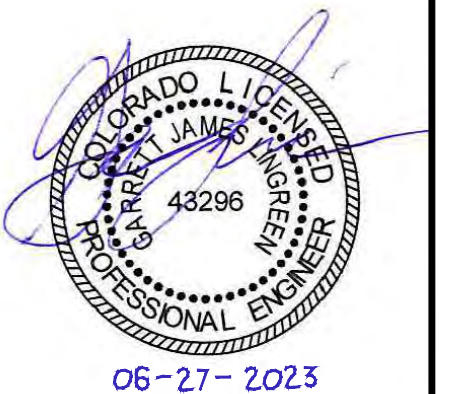
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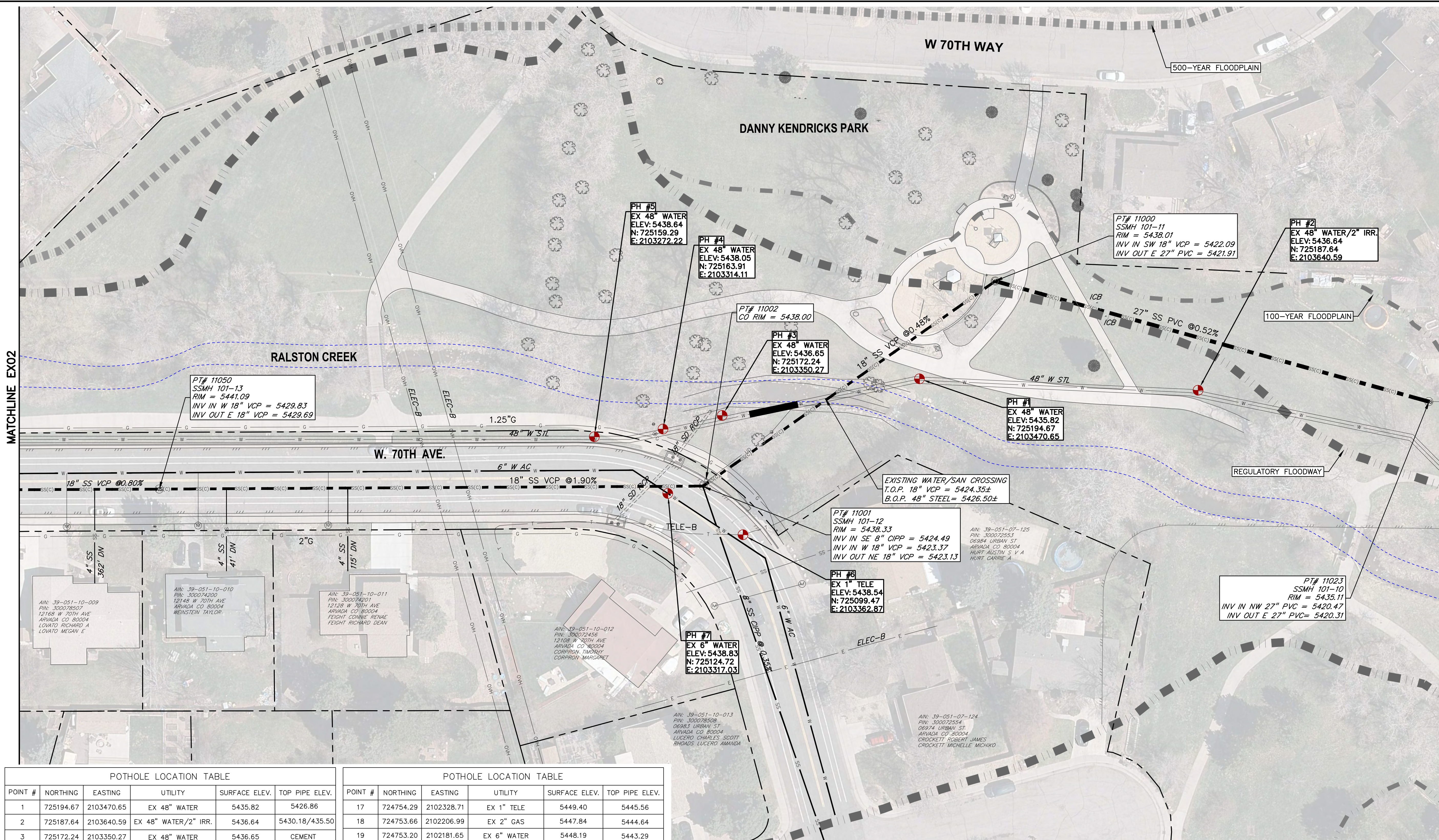
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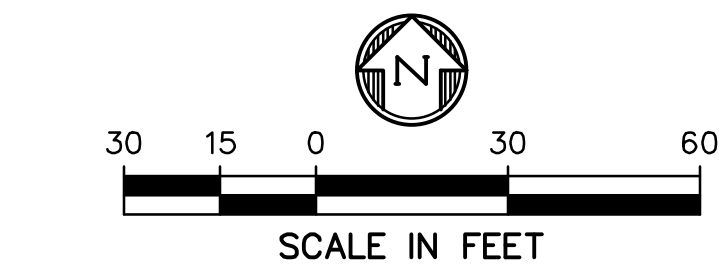
TS02

SHEET: 07 OF 42



POTHOLE LOCATION TABLE					
POINT #	NORTHING	EASTING	UTILITY	SURFACE ELEV.	TOP PIPE ELEV.
1	725194.67	2103470.65	EX 48" WATER	5435.82	5426.86
2	725187.64	2103640.59	EX 48" WATER/2" IRR.	5436.64	5430.18/435.50
3	725172.24	2103350.27	EX 48" WATER	5436.65	CEMENT
4	725163.91	2103314.11	EX 48" WATER	5438.05	5432.51
5	725159.29	2103272.22	EX 48" WATER	5438.64	5433.90
6	725099.47	2103362.87	EX 1" TELE	5438.54	5435.18
7	725124.72	2103317.03	EX 6" WATER	5438.83	5432.95
8	725115.52	2102758.82	EX 1.5" ELEC	5442.60	5440.18
9	725097.10	2102619.83	EX 2" GAS	5443.95	5441.67
10	725114.50	2102428.96	EX TELE/TV (DNF)	5447.28	DNF
11	725115.32	2102407.04	EX 12" WATER	5446.94	5443.20
12	725115.91	2102399.36	EX 12" WATER	5447.26	5443.20
13	725121.82	2102379.90	EX 2" GAS	5447.59	5443.87
14	724770.52	2102382.13	EX 2" GAS	5450.15	5447.15
15	724774.81	2102355.96	EX 8" WATER	5449.53	5445.27
16	724754.29	2102328.71	EX 2" ELEC	5449.40	5445.76

POTHOLE LOCATION TABLE					
POINT #	NORTHING	EASTING	UTILITY	SURFACE ELEV.	TOP PIPE ELEV.
17	724754.29	2102328.71	EX 1" TELE	5449.40	5445.56
18	724753.66	2102206.99	EX 2" GAS	5447.84	5444.64
19	724753.20	2102181.65	EX 6" WATER	5448.19	5443.29
20	724730.77	2102181.00	EX 2" GAS	5448.32	5445.40
21	724770.32	2102170.44	EX 8" WATER	5448.23	5443.29
22	724805.90	2102184.86	EX GAS (DNF)	5447.92	DNF
23	724799.60	2102172.50	EX GAS (DNF)	5447.83	DNF
24	724891.05	2102175.10	EX 4" TELE	5447.65	5443.75
25	724892.85	2102175.80	EX ELEC (DNF)	5447.66	DNF
26	725011.72	2102176.23	EX 2" GAS	5447.50	5445.26
27	724692.25	2101607.50	EX 18" STORM	5457.31	5453.95
28	724655.78	2101635.32	EX 2" GAS	5456.64	5453.76
29	724685.45	2101585.13	EX 2" GAS	5458.04	5454.42
30	724642.80	2101509.89	EX 2" GAS	5459.40	5454.90
31	724639.47	2101498.27	EX TELE	5459.36	5457.20
32	724697.98	2101469.87	EX 8" WATER (DNF)	5458.95	DNF



APPROVED
CITY OF ARVADA, COLORADO
PROJECT NO. 17-SR-07

BY: *[Signature]* DATE: 7/10/23

CITY ENGINEER

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PREPARED BY:
DBC
Drexel, Barrell & Co.
Engineers • Surveyors
1376 MINERS DRIVE, STE 107
LAFAYETTE, COLORADO 80026
CONTACT:
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(303) 442-4338
LAFAYETTE
COLORADO SPRINGS

OWNER/CLIENT:

CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
8101 RALSTON ROAD
ARVADA, COLORADO 80002
KRIS GARDNER, P.E.
720-898-7647

BID SET
CITY OF ARVADA PROJECT NO. 17-SR-07
RALSTON TRUNK SEWER IMPROVEMENTS
WARD AND 69TH
PHASE I
ARVADA, COLORADO

ISSUE	DATE
BID SET	06-27-2023
DESIGNED BY:	GSG
DRAWN BY:	SMM
CHECKED BY:	GJL
FILE NAME:	21666-00 EX01



DRAWING SCALE IN FEET:
HORIZONTAL: SEE PLAN
VERTICAL: SEE PLAN

EXISTING
CONDITIONS

PROJECT:21666-00BLCV
DRAWING NO.

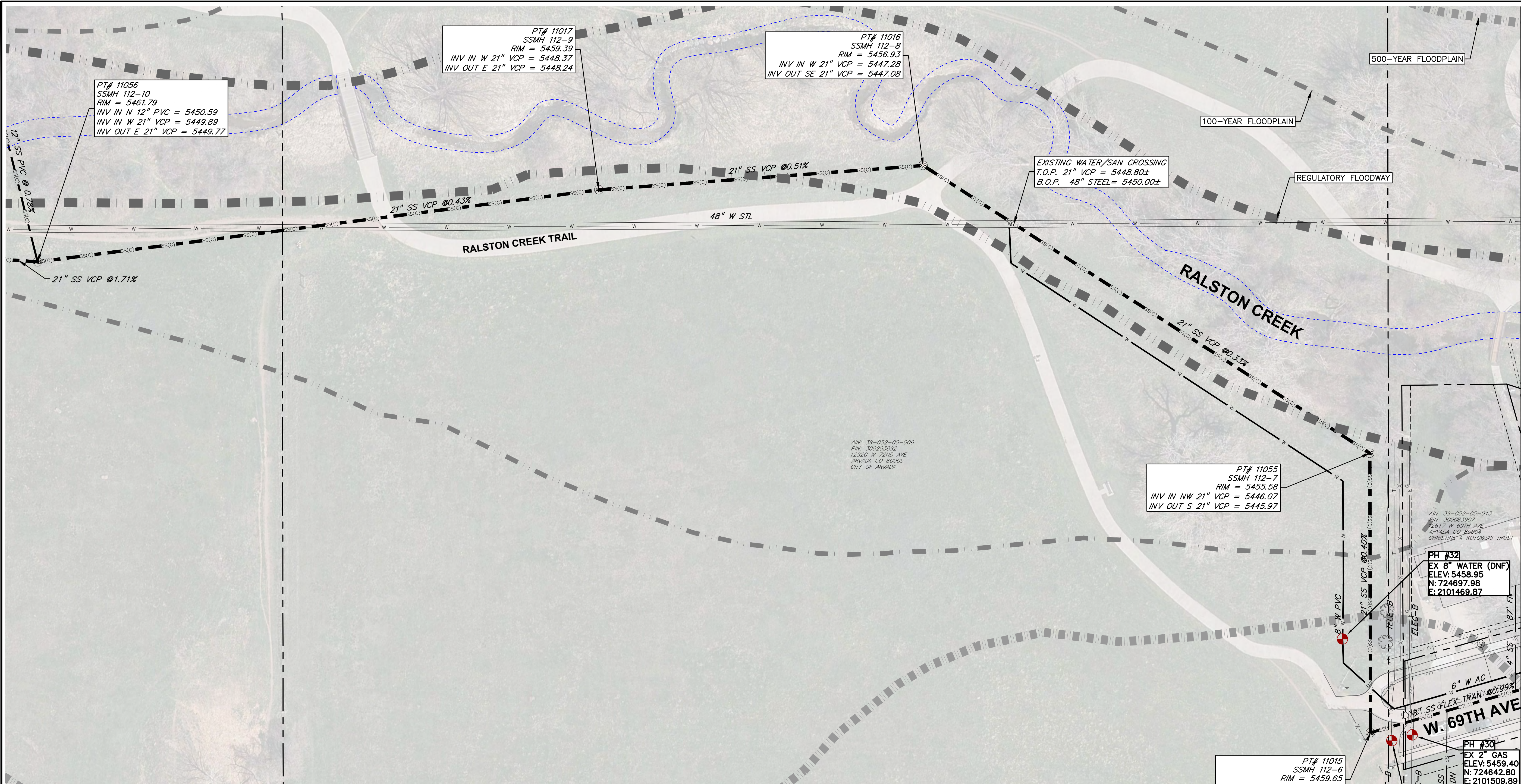
EX01
SHEET: 08 OF 42



POTHOLE LOCATION TABLE					
POINT #	NORTHING	EASTING	UTILITY	SURFACE ELEV.	TOP PIPE ELEV.
17	724754.29	2102328.71	EX 1" TELE	5449.40	5445.56
18	724753.66	2102206.99	EX 2" GAS	5447.84	5444.64
19	724753.20	2102181.65	EX 6" WATER	5448.19	5443.29
20	724730.77	2102181.00	EX 2" GAS	5448.32	5445.40
21	724770.32	2102170.44	EX 8" WATER	5448.23	5443.29
22	724805.90	2102184.86	EX GAS (DNF)	5447.92	DNF
23	724799.60	2102172.50	EX GAS (DNF)	5447.83	DNF
24	724891.05	2102175.10	EX 4" TELE	5447.65	5443.75
25	724892.85	2102175.80	EX ELEC (DNF)	5447.66	DNF
26	725011.72	2102176.23	EX 2" GAS	5447.50	5445.26
27	724692.25	2101607.50	EX 18" STORM	5457.31	5453.95
28	724655.78	2101635.32	EX 2" GAS	5456.64	5453.76
29	724685.45	2101585.13	EX 2" GAS	5458.04	5454.42
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31	724639.47	2101498.27	EX TELE	5459.36	5457.20
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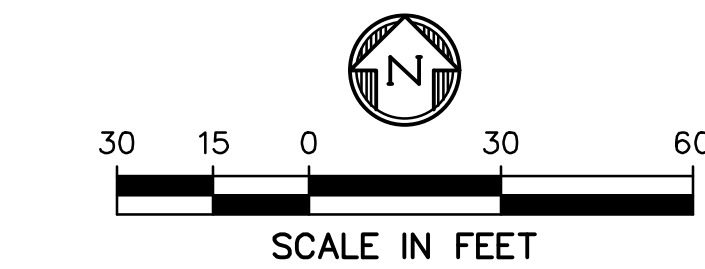
PREPARED BY:	
 Drexel, Barrell & Co. Traditional Services, Innovative Solutions Since 1989	
Drexel, Barrell & Co. Engineers • Surveyors 1376 MINERS DRIVE, STE 107 LAFAYETTE, COLORADO 80026	
CONTACT: GARRETT LINGREEN, P.E. (303) 442-4338 LAFAYETTE COLORADO SPRINGS	
OWNER/CLIENT:	
CITY OF ARVADA	
PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION 8101 RALSTON ROAD ARVADA, COLORADO 80002 KRIS GARDNER, P.E. 720-898-7647	
BID SET CITY OF ARVADA PROJECT NO. 17-SR-07 RALSTON TRUNK SEWER IMPROVEMENTS WARD AND 69TH PHASE 1 ARVADA, COLORADO	
ISSUE	DATE
BID SET	06-27-2023
DESIGNED BY:	GSG
DRAWN BY:	SMM
CHECKED BY:	GJL
FILE NAME:	21666--00 EX01
 06-27-2023	
DRAWING SCALE IN FEET: HORIZONTAL: SEE PLAN VERTICAL: SEE PLAN	
EXISTING CONDITIONS	
PROJECT: 21666--00BLCV DRAWING NO.	
EX02	
SHEET: 09 OF 42	

PREPARED BY:  Drexel, Barrell & Co. <i>Traditional Surveying and Engineering Solutions Since 1984</i> Drexel, Barrell & Co. Engineers • Surveyors 1376 MINERS DRIVE, STE 107 LAFAYETTE, COLORADO 80026 CONTACT: GARRETT LINGREEN, P.E. (303) 442-4338 LAFAYETTE COLORADO SPRINGS	
OWNER/CLIENT: CITY OF ARVADA PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION 8101 RALSTON ROAD ARVADA, COLORADO 80002 KRIS GARDNER, P.E. 720-898-7647	
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ISSUE	DATE
BID SET	06-27-2023
DESIGNED BY:	GSB
DRAWN BY:	SMM
CHECKED BY:	GJL
FILE NAME: 21666-00 EX01	
 06-27-2023	
DRAWING SCALE IN FEET: HORIZONTAL: SEE PLAN VERTICAL: SEE PLAN	
EXISTING CONDITIONS	
PROJECT: 21666-00BLCV DRAWING NO.	
EX03	
SHEET: 10 OF 42	



POTHOLE LOCATION TABLE					
POINT #	NORTHING	EASTING	UTILITY	SURFACE ELEV.	TOP PIPE ELEV.
1	725194.67	2103470.65	EX 48" WATER	5435.82	5426.86
2	725187.64	2103640.59	EX 48" WATER/2" IRR.	5436.64	5430.18/435.50
3	725172.24	2103350.27	EX 48" WATER	5436.65	CEMENT
4	725163.91	2103314.11	EX 48" WATER	5438.05	5432.51
5	725159.29	2103272.22	EX 48" WATER	5438.64	5433.90
6	725099.47	2103362.87	EX 1" TELE	5438.54	5435.18
7	725124.72	2103317.03	EX 6" WATER	5438.83	5432.95
8	725115.52	2102758.82	EX 1.5" ELEC	5442.60	5440.18
9	725097.10	2102619.83	EX 2" GAS	5443.95	5441.67
10	725114.50	2102428.96	EX TELE/TV (DNF)	5447.28	DNF
11	725115.32	2102407.04	EX 12" WATER	5446.94	5443.20
12	725115.91	2102399.36	EX 12" WATER	5447.26	5443.20
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14	724770.52	2102382.13	EX 2" GAS	5450.15	5447.15
15	724774.81	2102355.96	EX 8" WATER	5449.53	5445.27
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32	724697.98	2101469.87	EX 8" WATER (DNF)	5458.95	DNF



APPROVED
CITY OF ARVADA, COLORADO
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Engineers & Surveyors
1376 MINERS DRIVE, STE 107
LAFAYETTE, COLORADO 80026
CONTACT:
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LAFAYETTE, COLORADO SPRINGS

OWNER/CLIENT:

CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
8101 RALSTON ROAD
ARVADA, COLORADO 80002
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BID SET
CITY OF ARVADA PROJECT NO. 17-SR-07
RALSTON TRUNK SEWER IMPROVEMENTS
WARD AND 69TH
PHASE I
ARVADA, COLORADO

MATCHLINE EX03

ISSUE	DATE
BID SET	06-27-2023
DESIGNED BY:	GSG
DRAWN BY:	SMM
CHECKED BY:	GJL
FILE NAME:	21666-00 EX01

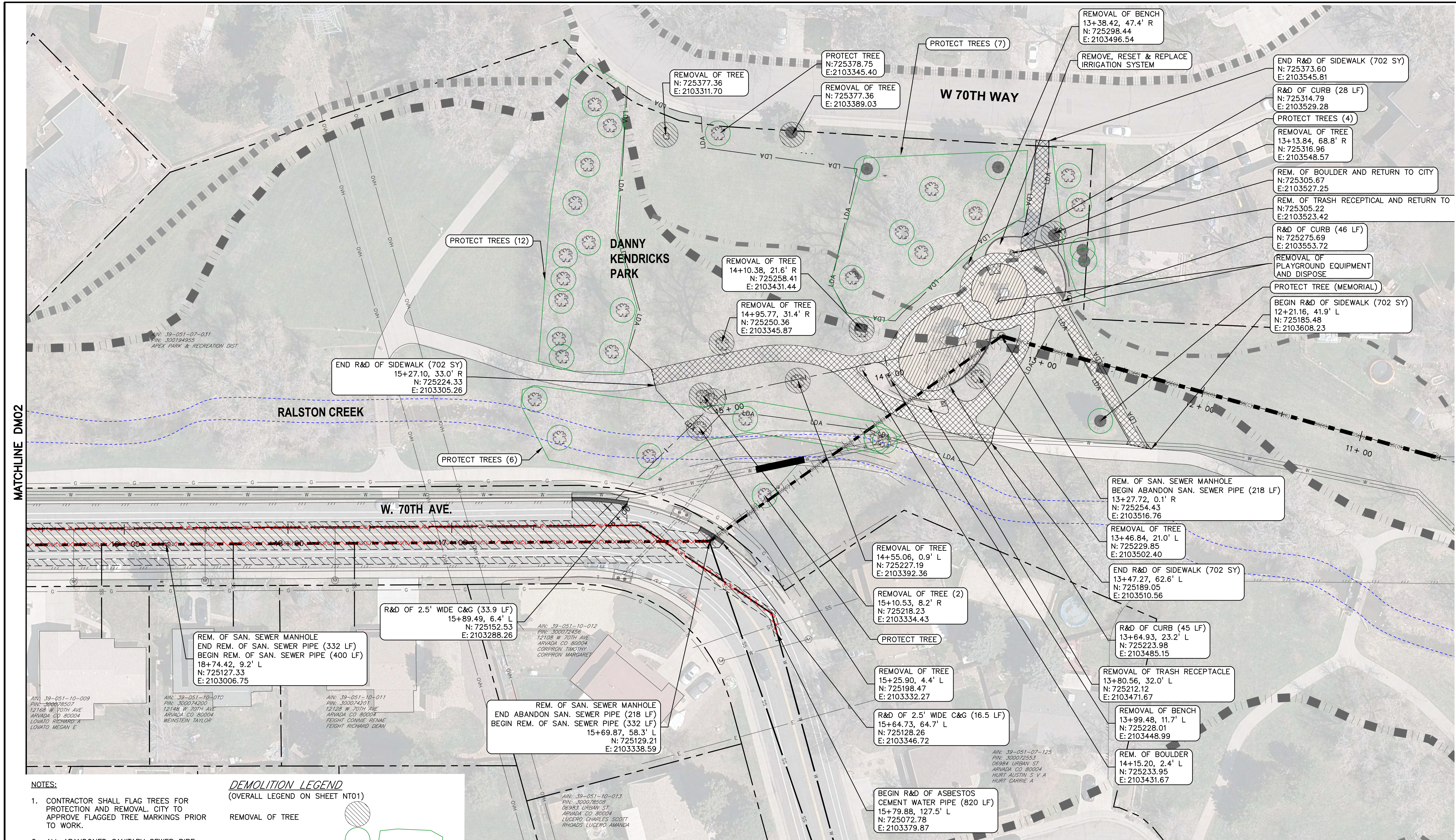
06-27-2023

DRAWING SCALE IN FEET:
HORIZONTAL: SEE PLAN
VERTICAL: SEE PLAN

EXISTING CONDITIONS

PROJECT:21666-00BLCV
DRAWING NO.
EX04

SHEET: 11 OF 42



PREPARED BY:
DBC
Drexel, Barrell & Co.
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1376 MINERS DRIVE, STE 107
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CONTACT:
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(303) 443-4338
LAFAYETTE
COLORADO SPRINGS

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ENGINEERING DIVISION
8101 RALSTON ROAD
ARVADA, COLORADO 80002
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720-898-7647

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RALSTON TRUNK SEWER IMPROVEMENTS
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PHASE I
ARVADA, COLORADO

ISSUE	DATE
BID SET	06-27-2023
DESIGNED BY:	GSG
DRAWN BY:	SMM
CHECKED BY:	GUL
FILE NAME:	21666-00_DM01

06-27-2023

DRAWING SCALE IN FEET:
HORIZONTAL: SEE PLAN
VERTICAL: SEE PLAN

DEMOLITION PLAN

PROJECT: 21666-00BLCV
DRAWING NO.

DM01

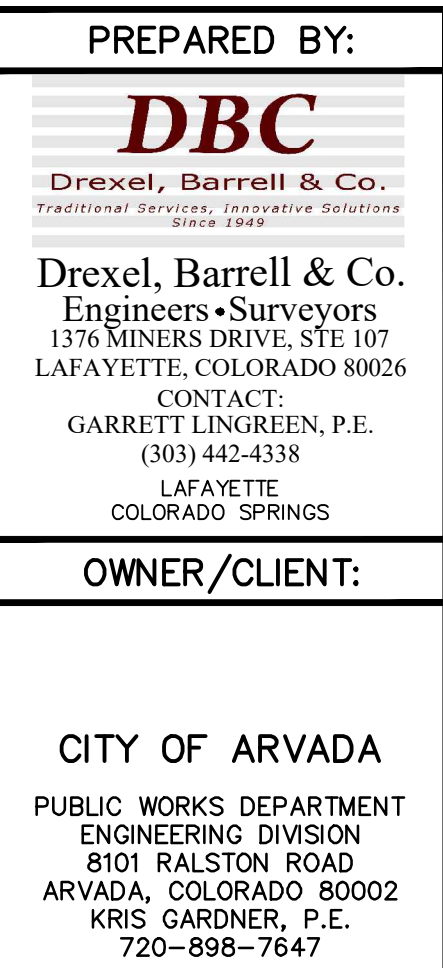
SHEET: 12 OF 42

NOTES:
1. CONTRACTOR SHALL FLAG TREES FOR PROTECTION AND REMOVAL. CITY TO APPROVE FLAGGED TREE MARKINGS PRIOR TO WORK.
2. ALL ABANDONED SANITARY SEWER PIPE UNDERNEATH EXISTING ROADWAYS AND WITHIN CITY RIGHT-OF-WAY SHALL BE CONCRETE FLOW-FILLED AND CAPPED AT EACH MANHOLE STRUCTURE.
3. TREE PROTECTION SHALL EXTEND BEYOND DRIP LINE SEE DETAIL.

DEMOLITION LEGEND
(OVERALL LEGEND ON SHEET NT01)
REMOVAL OF TREE
PROTECT TREE
REMOVE & DISPOSE (R&D) OF ASPHALT PAVEMENT
REMOVE & DISPOSE OF CURB RAMP OR SIDEWALK OR CONCRETE PAVEMENT*
REMOVAL OF PIPE
ABANDON SANITARY SEWER PIPE
ABANDON WATERLINE
REMOVE & DISPOSE (R&D) OF CURB AND/OR GUTTER AND/OR SIDEWALK*
SAWCUT CONCRETE
SAWCUT ASPHALT
LIMITS OF DISTURBANCE
* ALL WORK SHALL BE PAID FOR AS REMOVE & DISPOSE OF CONCRETE FLATWORK

30 15 0 30 60
SCALE IN FEET

APPROVED
CITY OF ARVADA, COLORADO
PROJECT NO. 17-SR-07
BY:
CITY ENGINEER
DATE: 7/10/23
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WARD AND 69TH
PHASE 1
ARVADA, COLORADO

ISSUE	DATE
BID SET	06-27-2023
DESIGNED BY:	GSG
DRAWN BY:	SMM
CHECKED BY:	GJL
FILE NAME:	21666-00 DM01



DRAWING SCALE IN FEET:
HORIZONTAL: SEE PLAN
VERTICAL: SEE PLAN

DEMOLITION PLAN

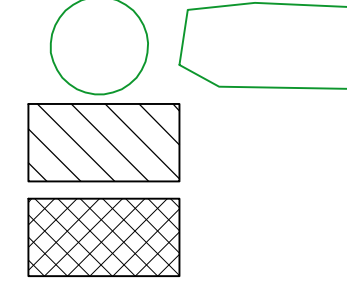
PROJECT:21666-00BLCV
DRAWING NO.

DM04

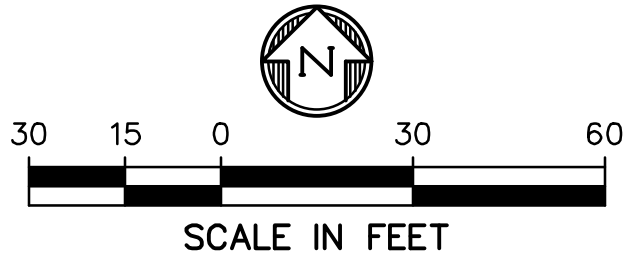
SHEET: 15 OF 42

- NOTES:**
1. CONTRACTOR SHALL FLAG TREES FOR PROTECTION AND REMOVAL. CITY TO APPROVE FLAGGED TREE MARKINGS PRIOR TO WORK.
 2. ALL ABANDONED SANITARY SEWER PIPE UNDERNEATH EXISTING ROADWAYS AND WITHIN CITY RIGHT-OF-WAY SHALL BE CONCRETE FLOW-FILLED AND CAPPED AT EACH MANHOLE STRUCTURE.
 3. TREE PROTECTION SHALL EXTEND BEYOND DRIP LINE SEE DETAIL.

DEMOLITION LEGEND
(OVERALL LEGEND ON SHEET NT01)

- REMOVAL OF TREE**
- PROTECT TREE**
- REMOVE & DISPOSE (R&D)
OF ASPHALT PAVEMENT**
- REMOVE & DISPOSE OF
CURB RAMP OR SIDEWALK
OR CONCRETE PAVEMENT***
- REMOVAL OF PIPE**
- ABANDON SANITARY SEWER PIPE**
- ABANDON WATERLINE**
- REMOVE & DISPOSE (R&D)
OF CURB AND/OR GUTTER
AND/OR SIDEWALK***
- SAWCUT CONCRETE**
- SAWCUT ASPHALT**
- LIMITS OF DISTURBANCE**
- The legend contains several symbols: a hatched circle, a green circle, a green hexagon, a hatched rectangle, a cross-hatched rectangle, a red wavy line, a line with cross-ticks, a line with vertical ticks, a solid black rectangle, a dashed line, and a line with a central dot.

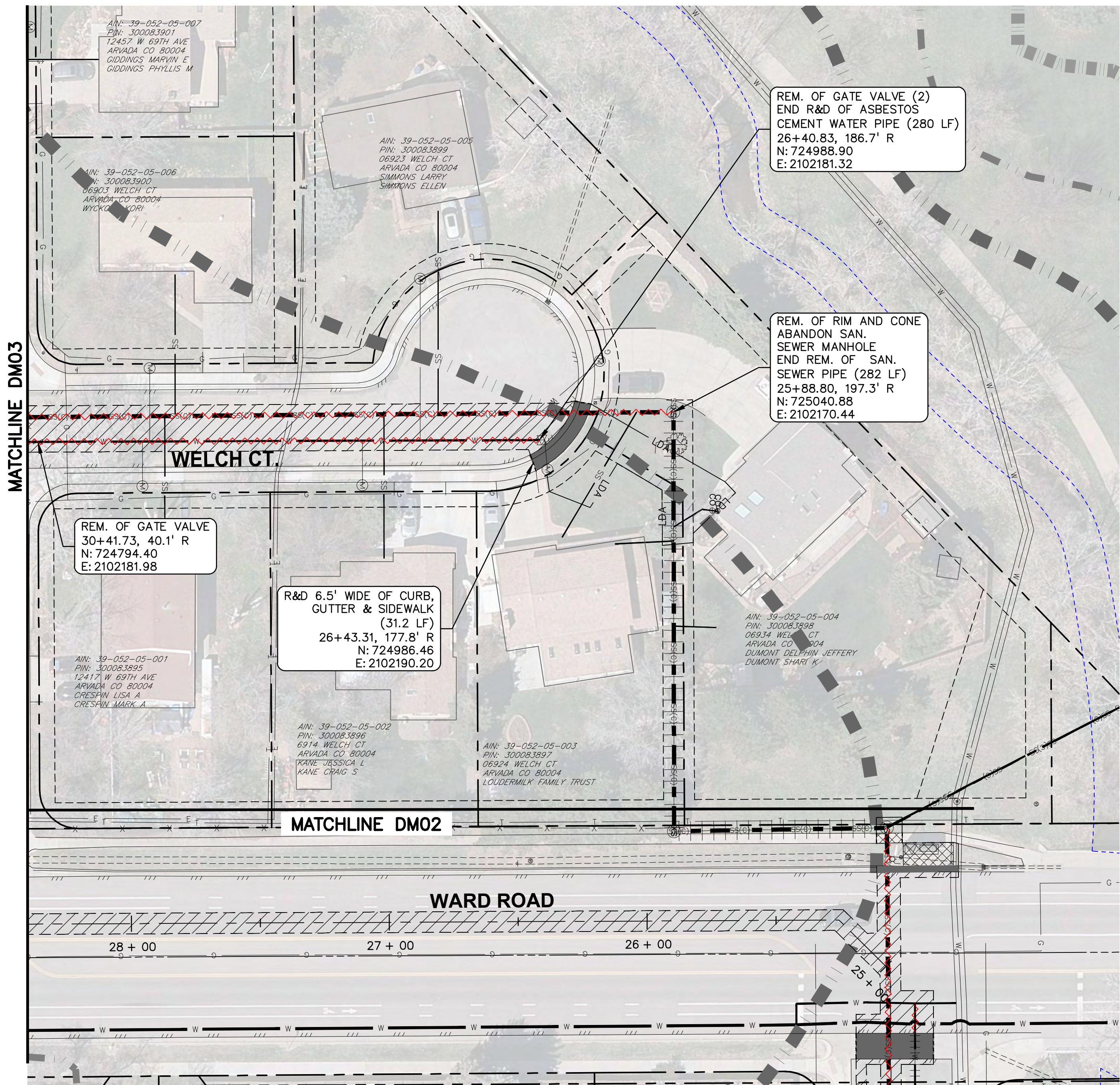
* ALL WORK SHALL BE PAID FOR AS REMOVE &
DISPOSE OF CONCRETE FLATWORK



APPROVED
CITY OF ARVADA, COLORADO
PROJECT NO. 17-SR-07

BY: *Chris Foy* DATE: 7/10/23
CITY ENGINEER

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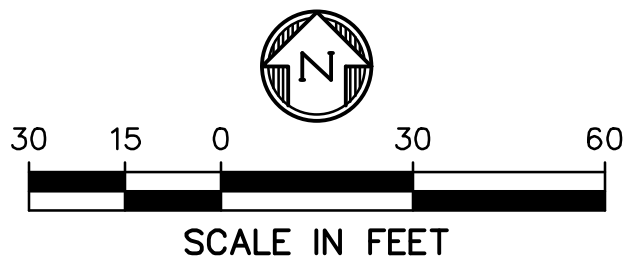
NOTES:

- CONTRACTOR SHALL FLAG TREES FOR PROTECTION AND REMOVAL. CITY TO APPROVE FLAGGED TREE MARKINGS PRIOR TO WORK.
- ALL ABANDONED SANITARY SEWER PIPE UNDERNEATH EXISTING ROADWAYS AND WITHIN CITY RIGHT-OF-WAY SHALL BE CONCRETE FLOW-FILLED AND CAPPED AT EACH MANHOLE STRUCTURE.
- TREE PROTECTION SHALL EXTEND BEYOND DRIP LINE SEE DETAIL.

DEMOLITION LEGEND

(OVERALL LEGEND ON SHEET NT01)

- REMOVAL OF TREE
- PROTECT TREE
- REMOVE & DISPOSE (R&D) OF ASPHALT PAVEMENT
- REMOVE & DISPOSE OF CURB RAMP OR SIDEWALK OR CONCRETE PAVEMENT*
- REMOVAL OF PIPE
- ABANDON SANITARY SEWER PIPE
- ABANDON WATERLINE
- REMOVE & DISPOSE (R&D) OF CURB AND/OR GUTTER AND/OR SIDEWALK*
- SAWCUT CONCRETE
- SAWCUT ASPHALT
- LIMITS OF DISTURBANCE
- * ALL WORK SHALL BE PAID FOR AS REMOVE & DISPOSE OF CONCRETE FLATWORK



APPROVED
CITY OF ARVADA, COLORADO
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BY: *[Signature]* DATE: 7/10/23
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Engineers & Surveyors
1376 MINERS DRIVE, STE 107
LAFAYETTE, COLORADO 80026
CONTACT:
GARRETT LINGREEN, P.E.
(303) 443-4338
LAFAYETTE
COLORADO SPRINGS

OWNER/CLIENT:

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ENGINEERING DIVISION
8101 RALSTON ROAD
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BID SET
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WARD AND 69TH
PHASE I
ARVADA, COLORADO

ISSUE

BID SET

06-27-2023

DESIGNED BY: GSG

DRAWN BY: SMM

CHECKED BY: GJL

FILE NAME: 21666-00 DM01



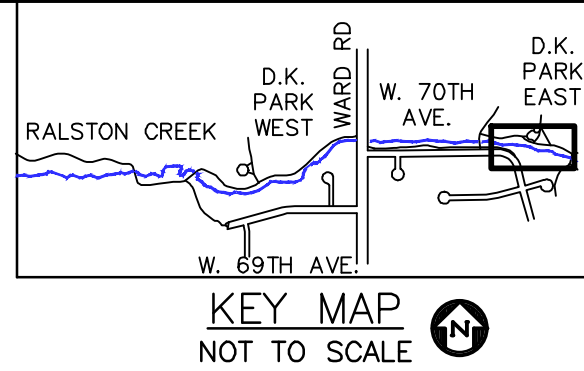
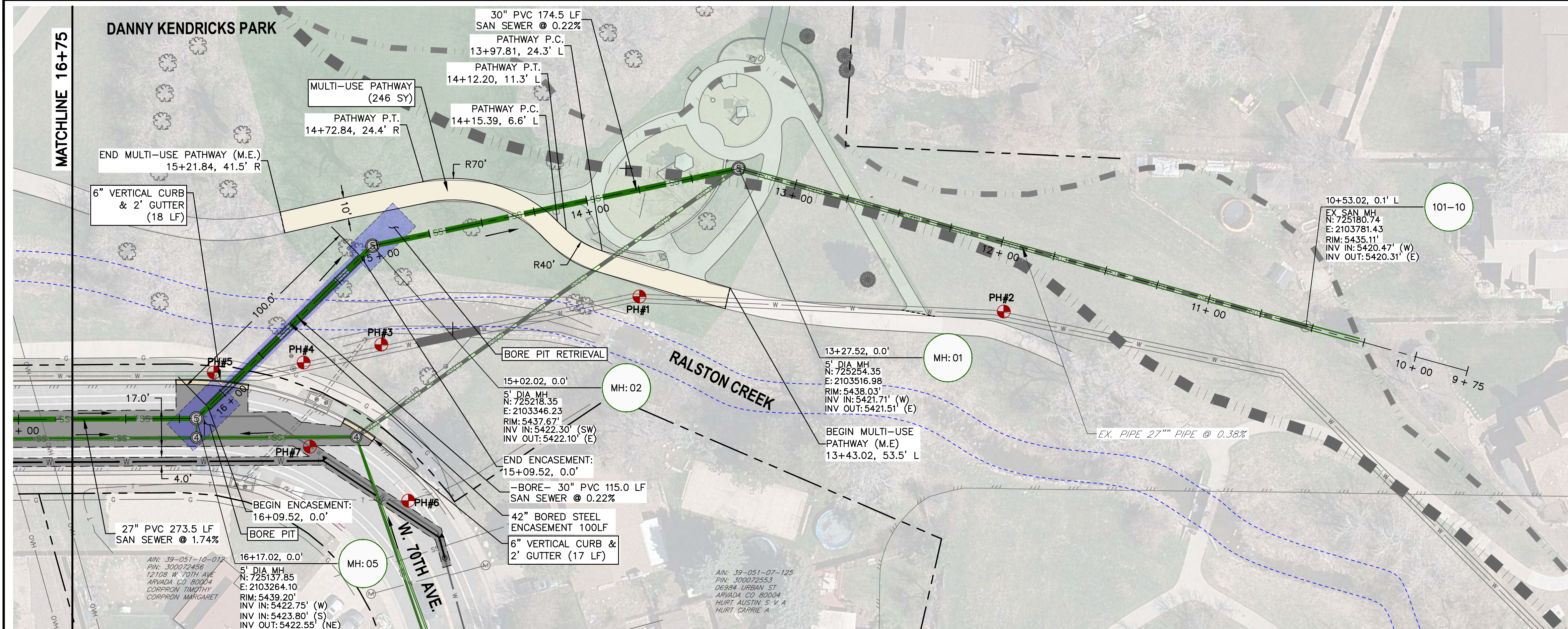
DRAWING SCALE IN FEET:
HORIZONTAL: SEE PLAN
VERTICAL: SEE PLAN

DEMOLITION
PLAN

PROJECT: 21666-00BLCV
DRAWING NO.

DM05

SHEET: 16 OF 42



- SANITARY SEWER NOTES:**
1. ALL SANITARY SEWER MANHOLES SHALL BE WATERTIGHT WITH BOLTED RIMS AND WATERPROOF LINING.
 2. ALL LABELED SANITARY PIPE LENGTHS ARE TO CENTER OF STRUCTURES.
 3. ALL PROPOSED FLATWORK FOR THE SITE IS LABELED IN THE SANITARY PLAN & PROFILES.

PREPARED BY:
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Engineers & Surveyors
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ARVADA, COLORADO

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FILE NAME:	21666-00 SS01



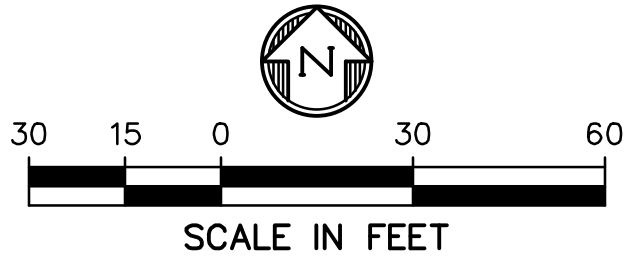
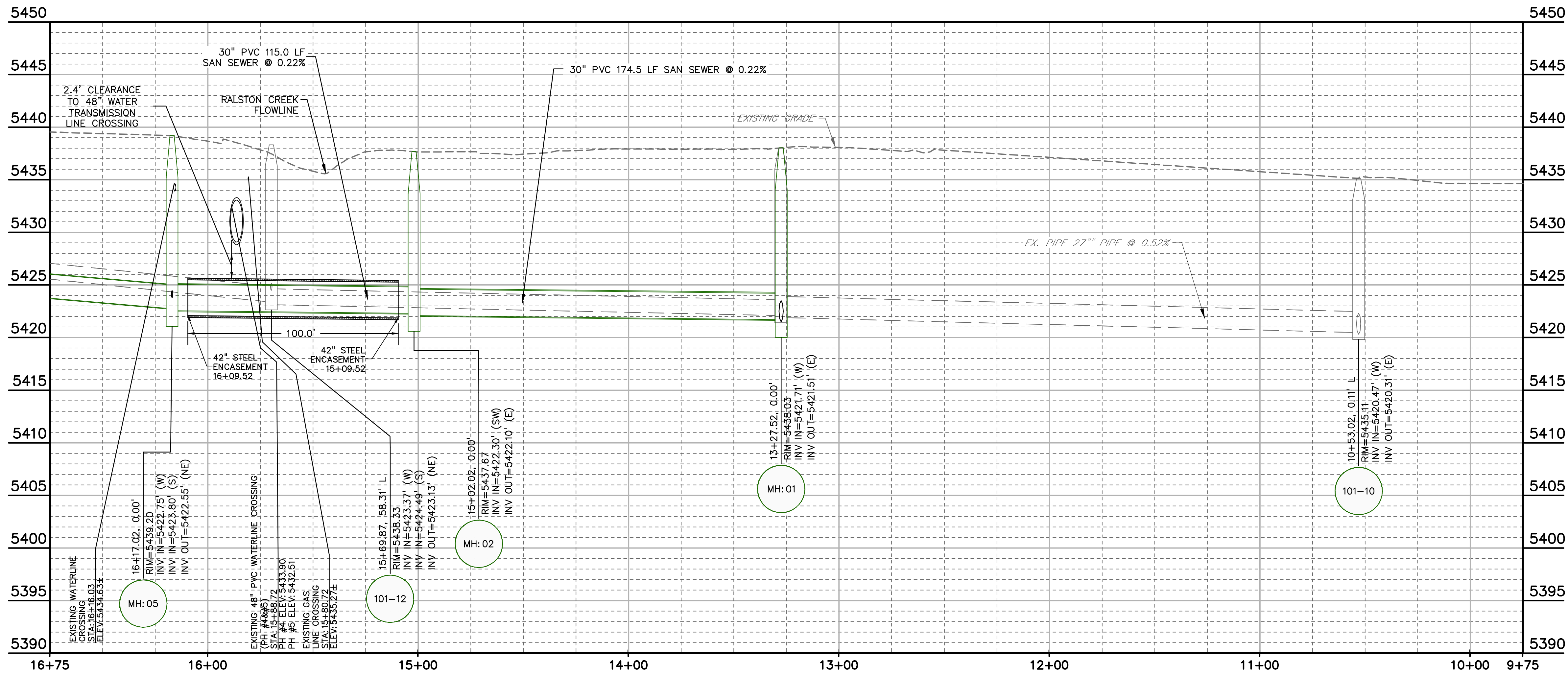
DRAWING SCALE IN FEET:
HORIZONTAL: SEE PLAN
VERTICAL: SEE PLAN

SANITARY PLAN & PROFILE (TRUNKLINE)

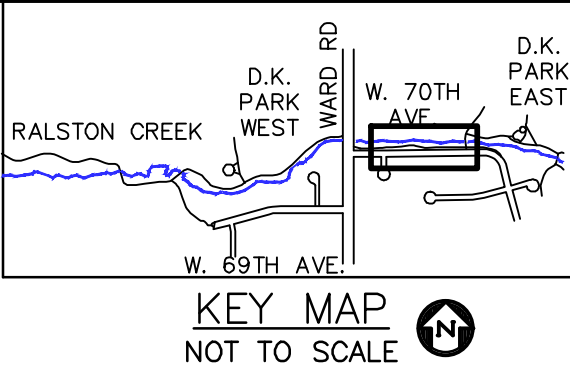
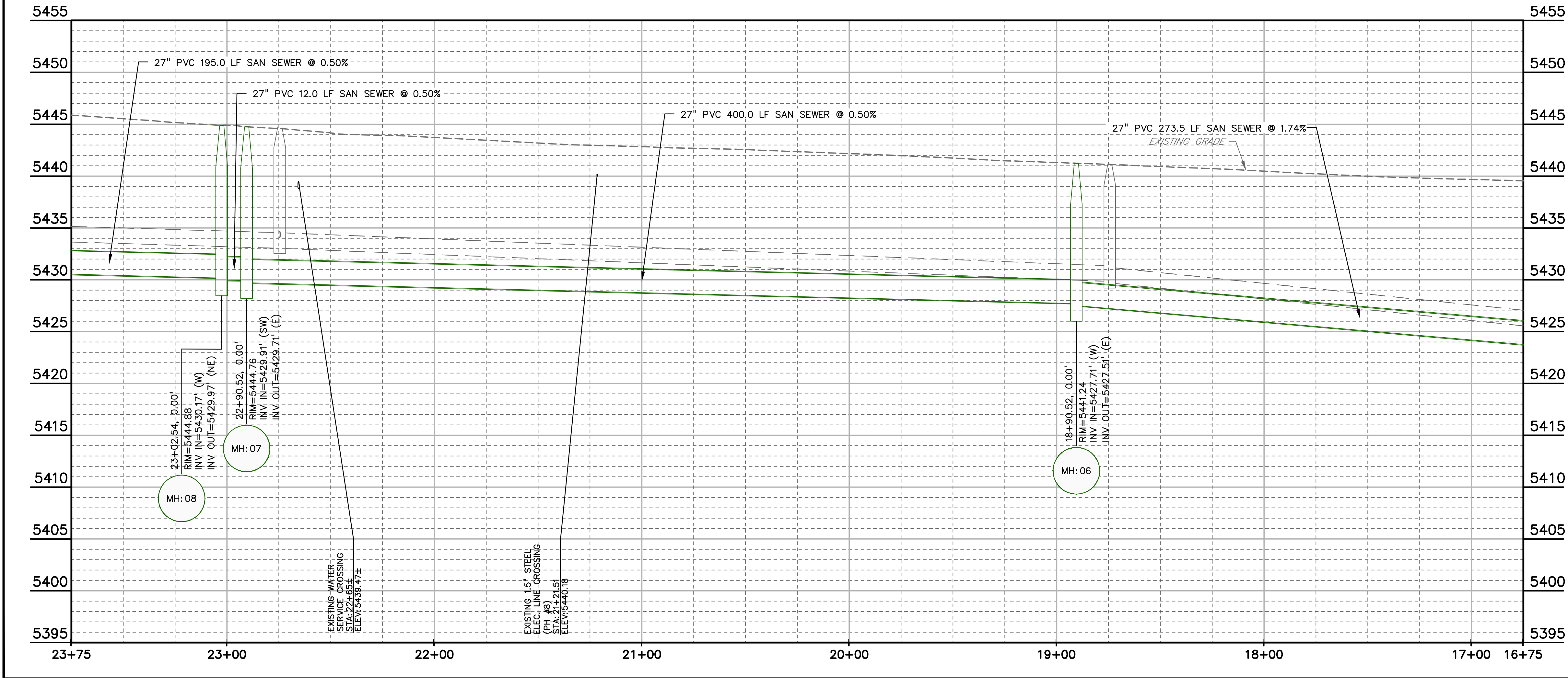
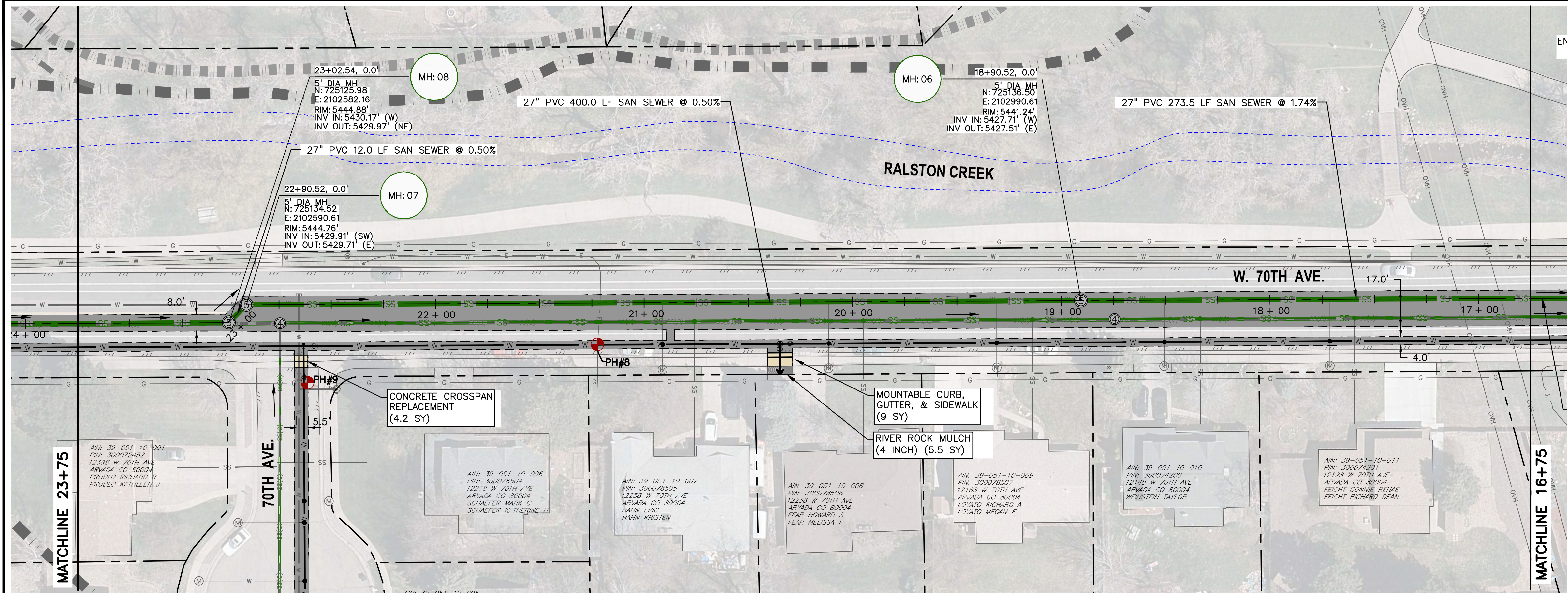
PROJECT: 21666-00BLCV
DRAWING NO.

SS01

SHEET: 17 OF 42



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CITY OF ARVADA, COLORADO
PROJECT NO. 17-SR-07
BY: *[Signature]* DATE: 7/10/23
CITY ENGINEER
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 - ALL LABELED SANITARY PIPE LENGTHS ARE TO CENTER OF STRUCTURES.
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PREPARED BY:

DBC
Drexel, Barrell & Co.
Engineers & Surveyors
1376 MINERS DRIVE, STE 107
LAFAYETTE, COLORADO 80026
CONTACT:
GARRETT LINGREEN, P.E.
(303) 443-4338
LAFAYETTE
COLORADO SPRINGS

OWNER/CLIENT:

CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
8101 RALSTON ROAD
ARVADA, COLORADO 80002
KRIS GARDNER, P.E.
720-898-7647

BID SET
CITY OF ARVADA PROJECT NO. 17-SR-07
RALSTON TRUNK SEWER IMPROVEMENTS
WARD AND 69TH
PHASE I
ARVADA, COLORADO

ISSUE	DATE
BID SET	06-27-2023
DESIGNED BY:	GSG
DRAWN BY:	SMM
CHECKED BY:	GJL
FILE NAME:	21666-00 SS01

DRAWING SCALE IN FEET:
HORIZONTAL: SEE PLAN
VERTICAL: SEE PLAN

**SANITARY
PLAN & PROFILE
(TRUNKLINE)**

PROJECT: 21666-00BLCV
DRAWING NO.

SS02

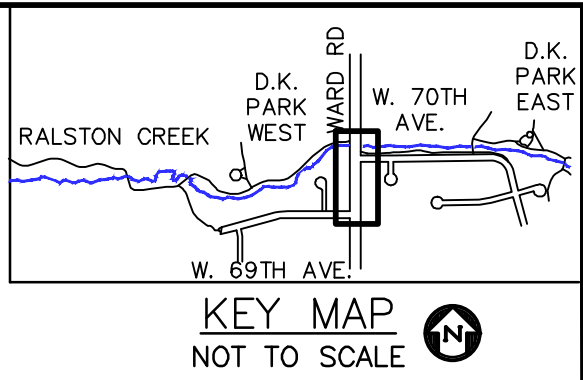
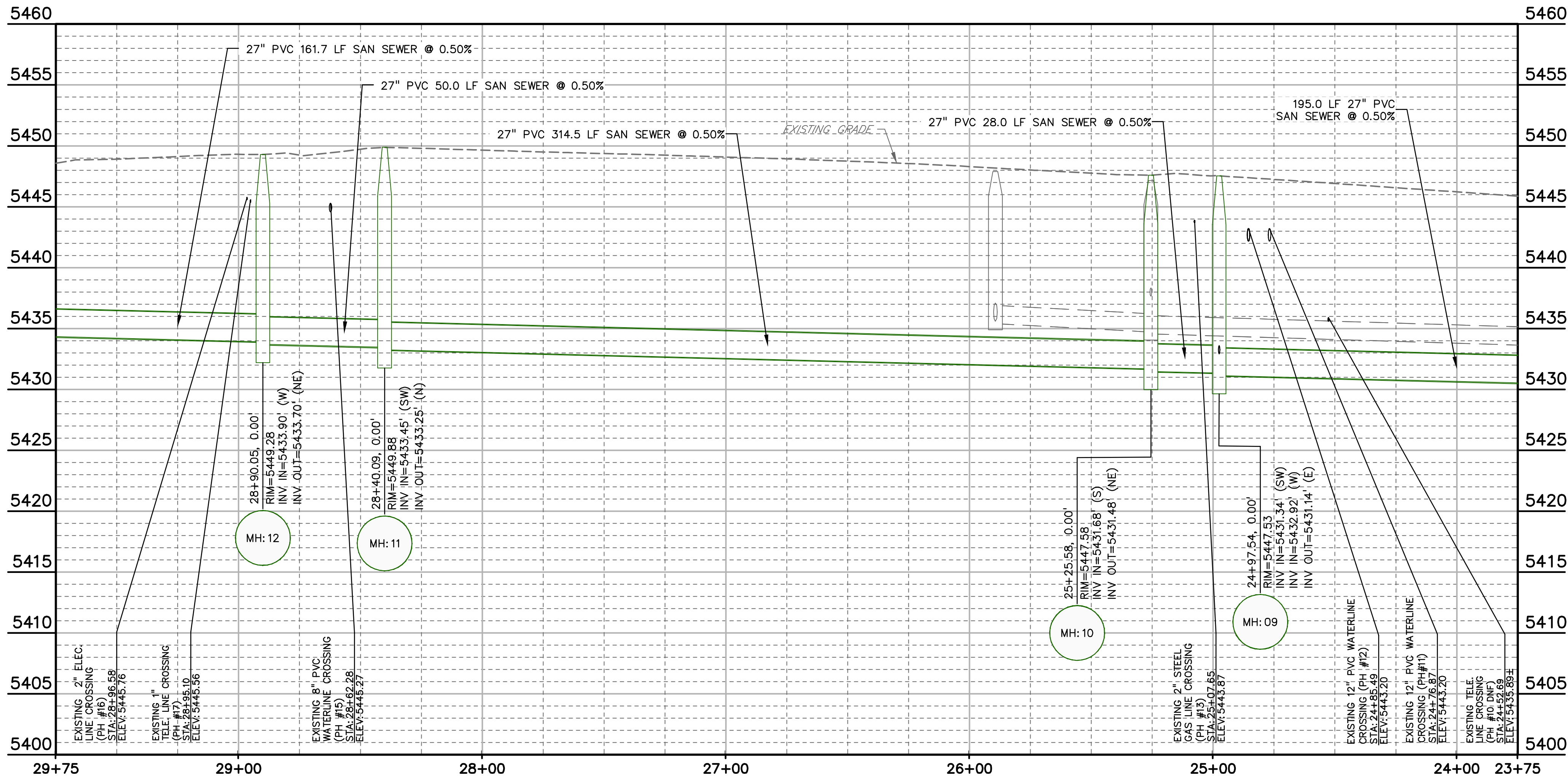
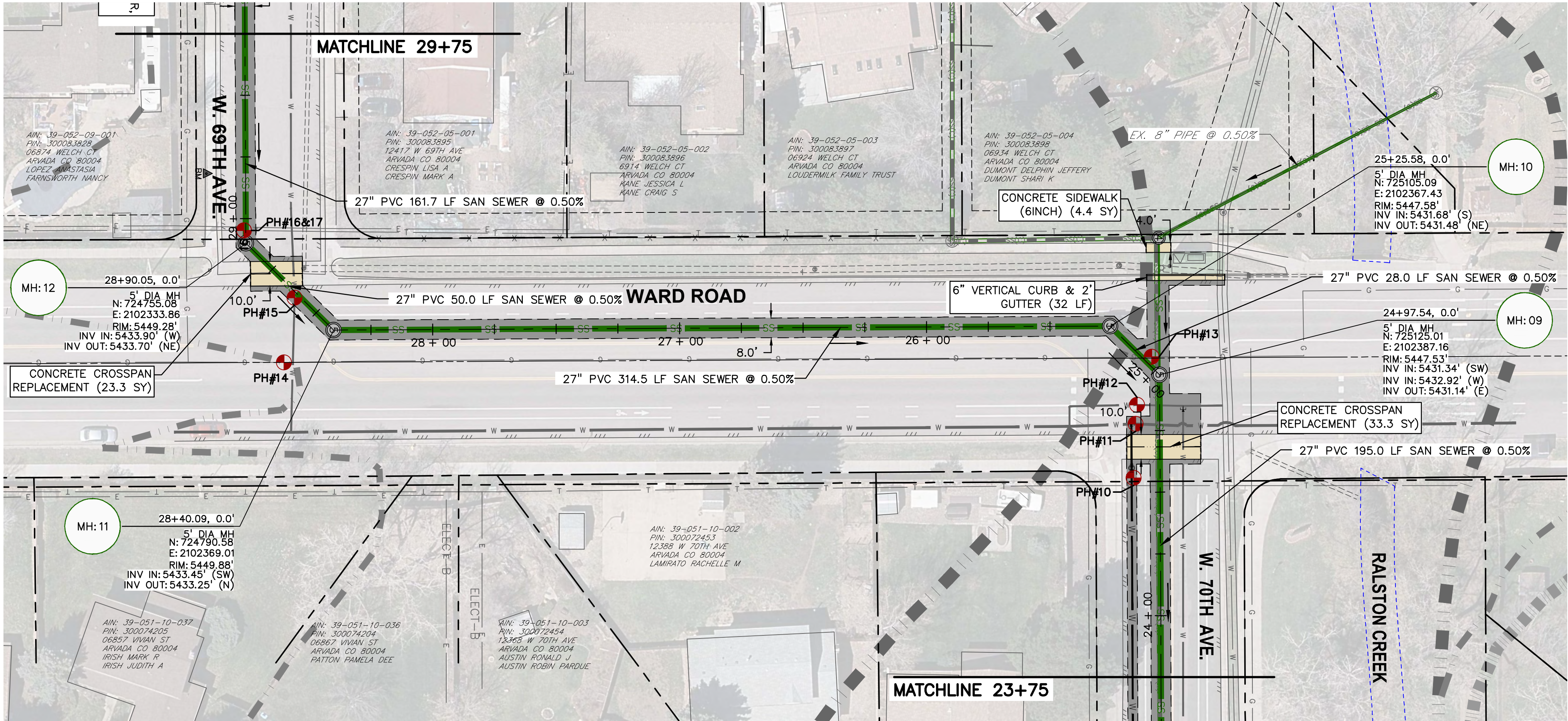
SHEET: 18 OF 42

APPROVED
CITY OF ARVADA, COLORADO
PROJECT NO. 17-SR-07

BY: DATE: 7/10/23

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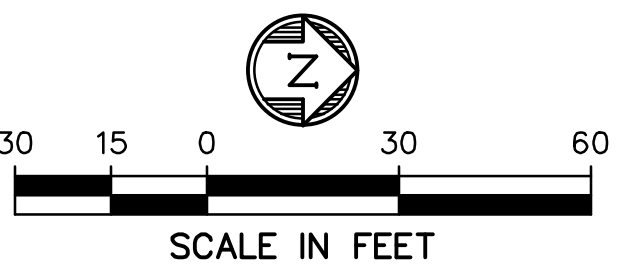
DRAWING SCALE IN FEET:
HORIZONTAL: SEE PLAN
VERTICAL: SEE PLAN

SANITARY
PLAN & PROFILE
(TRUNKLINE)

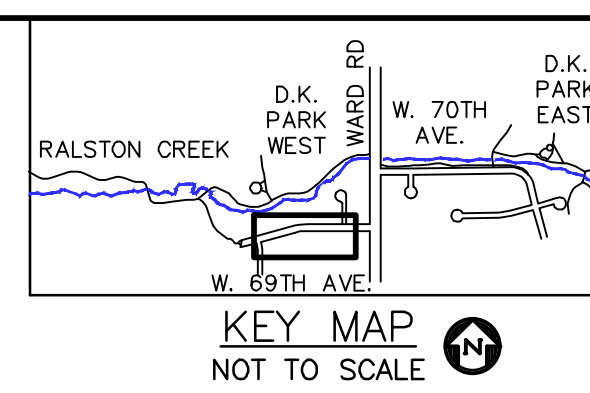
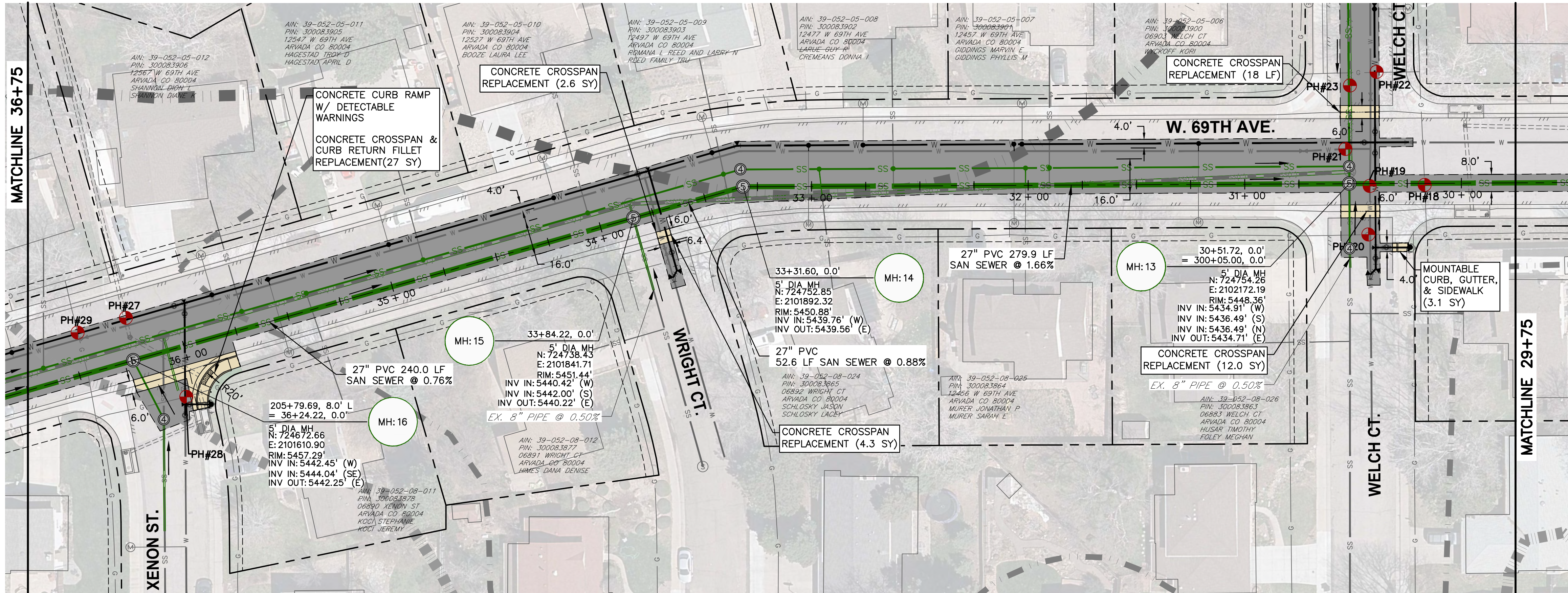
PROJECT:21666-00BLCV
DRAWING NO.

SS03

SHEET: 19 OF 42



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PROJECT NO. 17-SR-07
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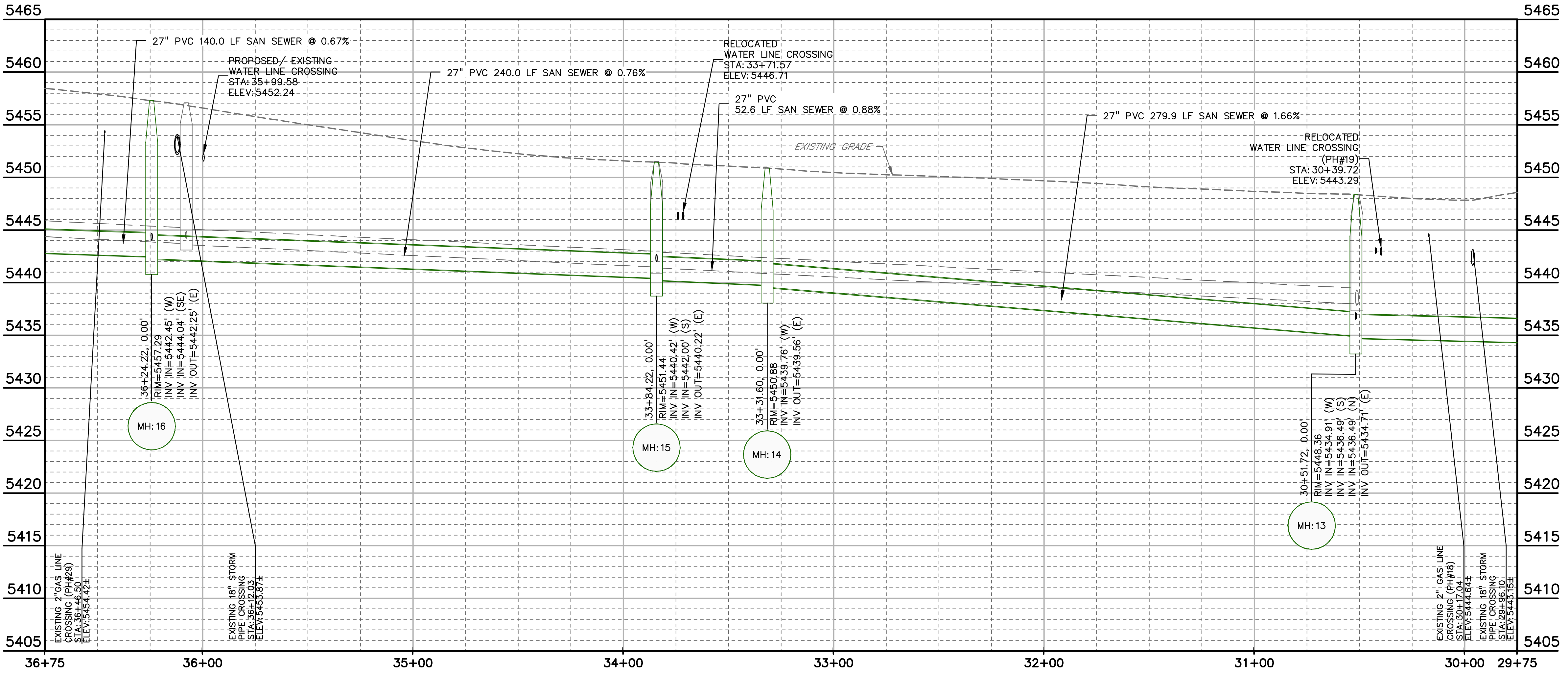
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DRAWING SCALE IN FEET:
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VERTICAL: SEE PLAN

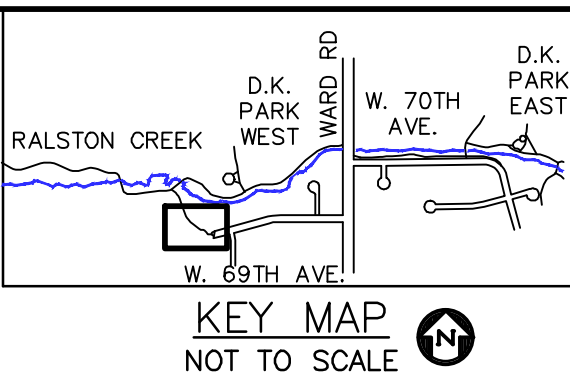
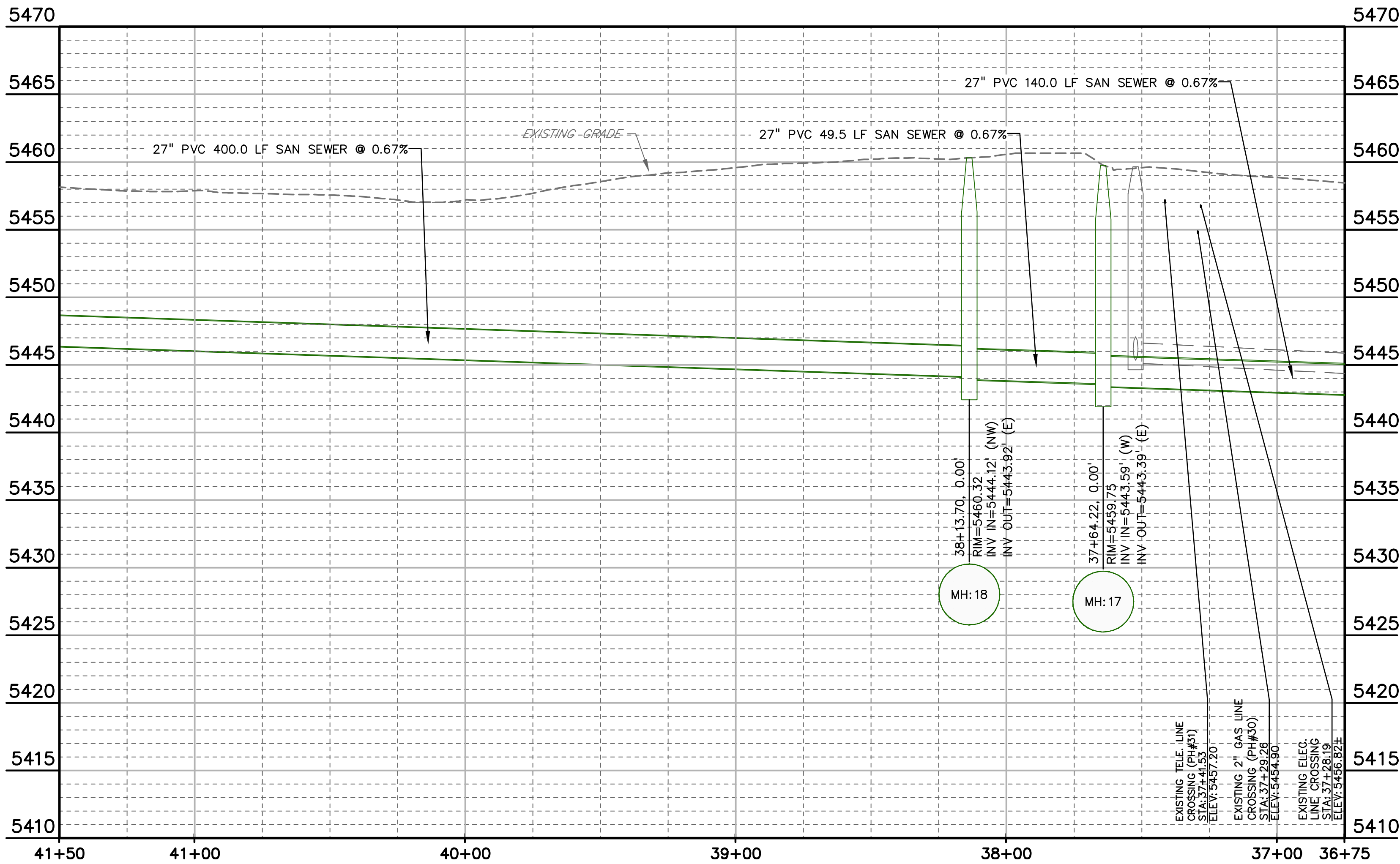
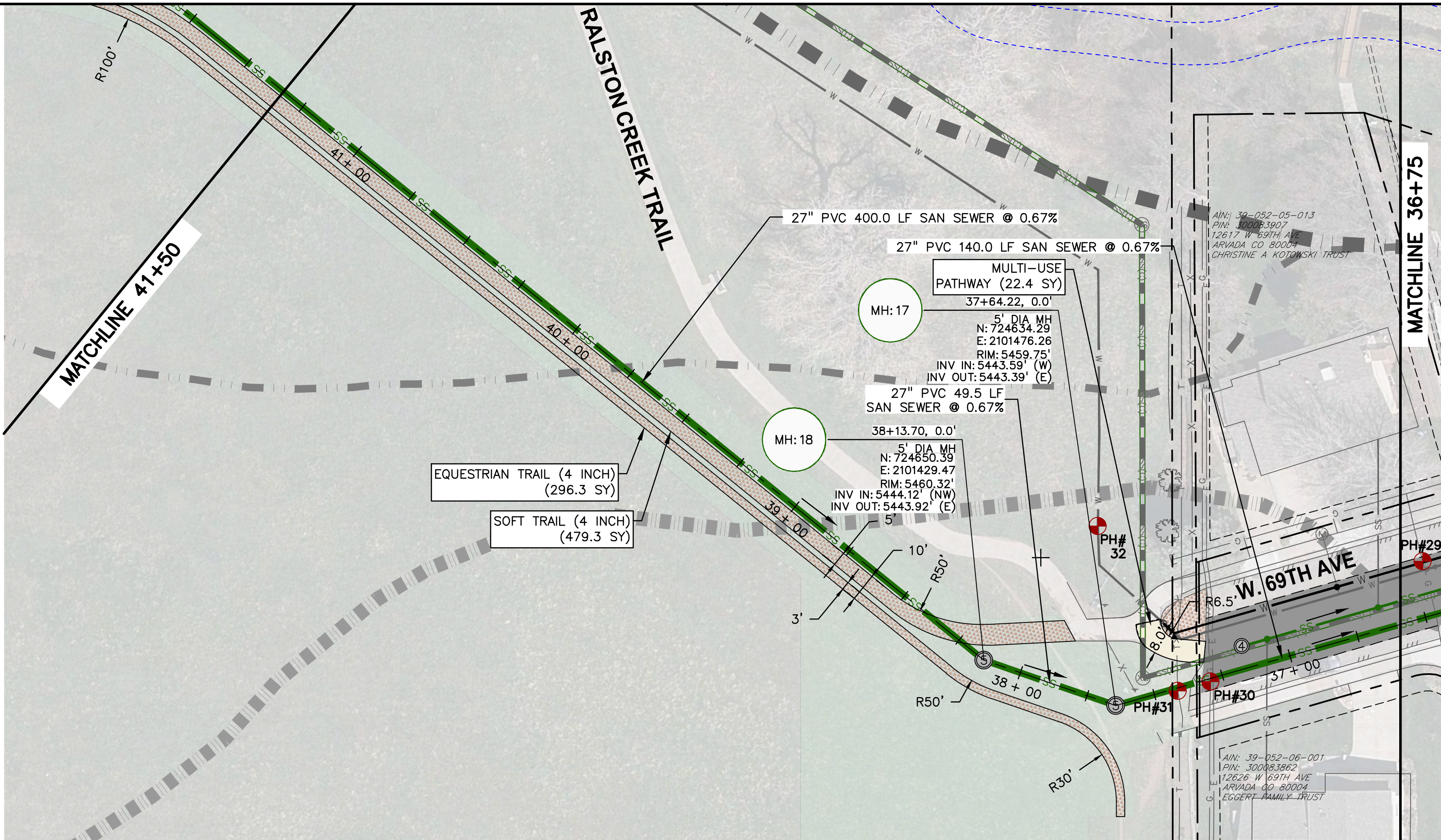
SANITARY
PLAN & PROFILE
(TRUNKLINE)

PROJECT:21666-00BLCV
DRAWING NO.

SS04
SHEET: 20 OF 42



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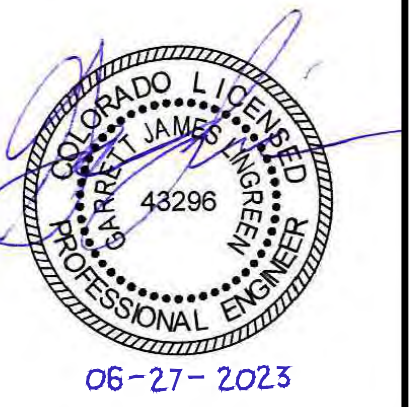
PREPARED BY:
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DRAWN BY:	SMM
CHECKED BY:	GJL
FILE NAME:	21666-00 SS01



DRAWING SCALE IN FEET:
HORIZONTAL: SEE PLAN
VERTICAL: SEE PLAN

**SANITARY
PLAN & PROFILE
(TRUNKLINE)**

PROJECT: 21666-00BLCV
DRAWING NO.

SS05

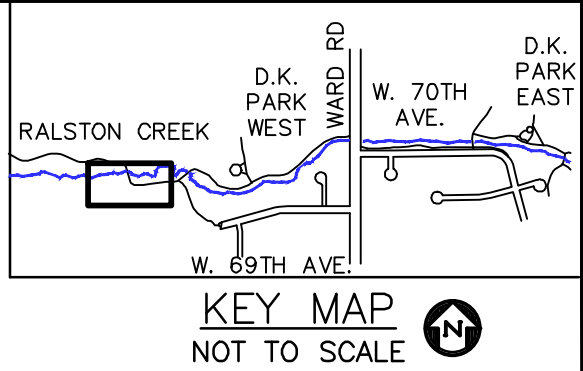
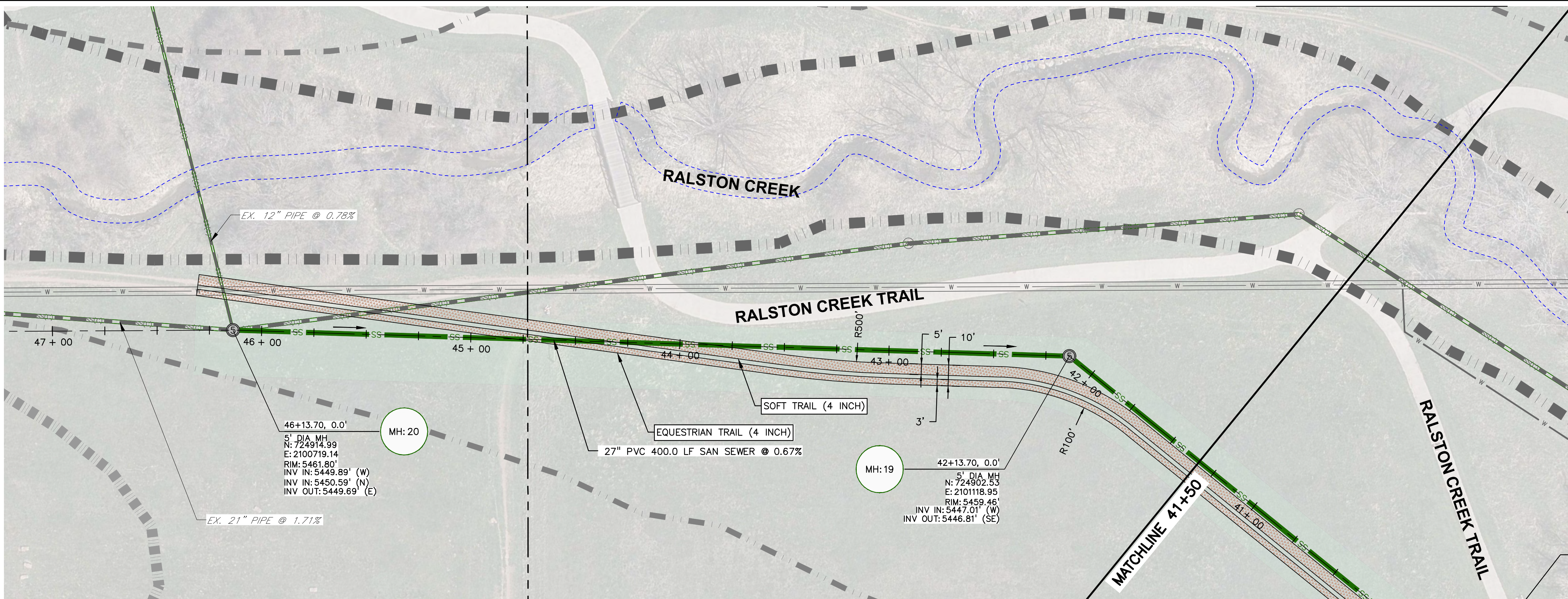
SHEET: 21 OF 42

30 15 0 30 60
SCALE IN FEET

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PROJECT NO. 17-SR-07

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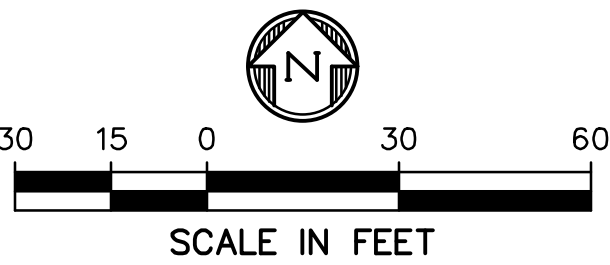
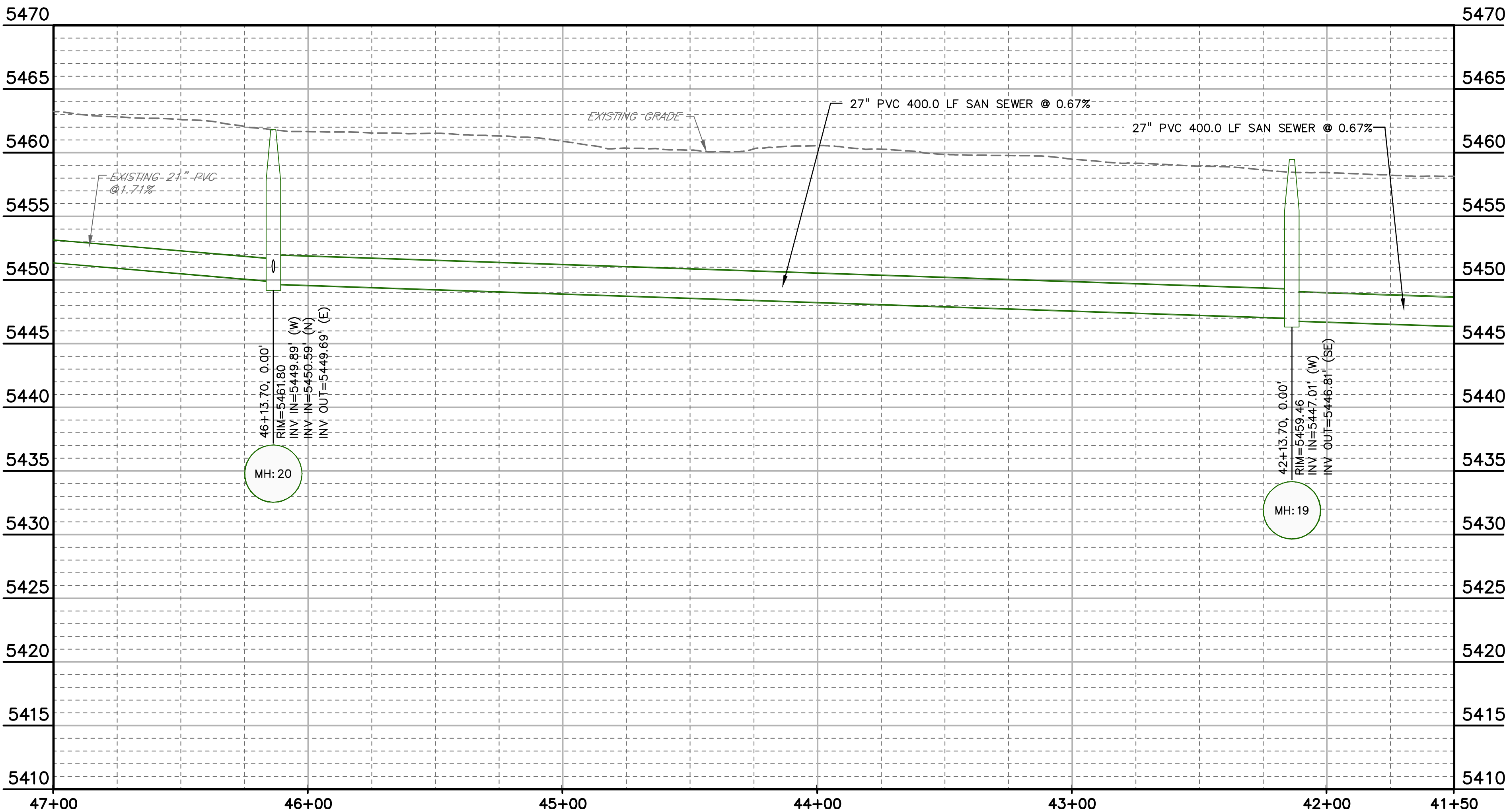
DRAWING SCALE IN FEET:
HORIZONTAL: SEE PLAN
VERTICAL: SEE PLAN

SANITARY
PLAN & PROFILE
(TRUNKLINE)

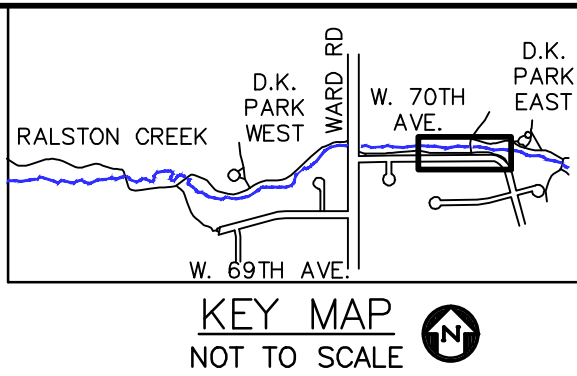
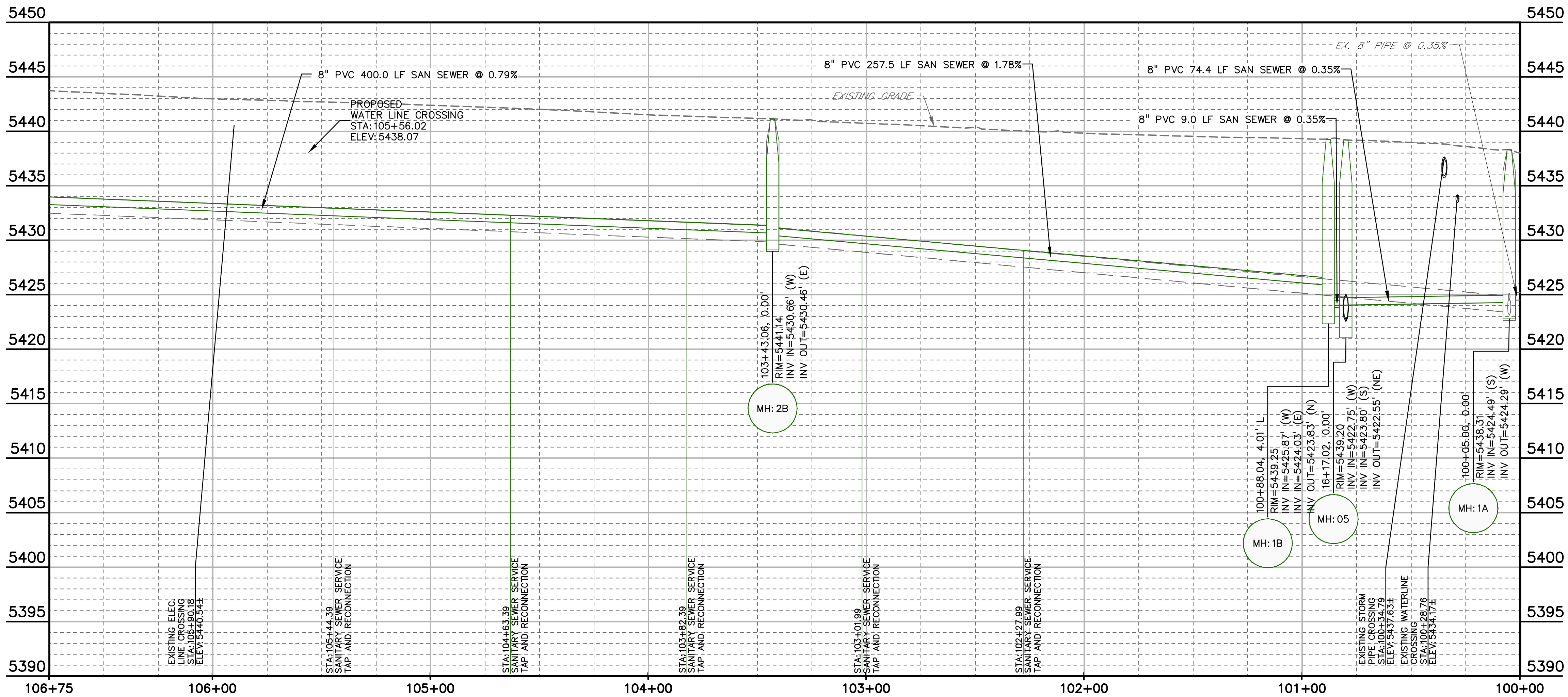
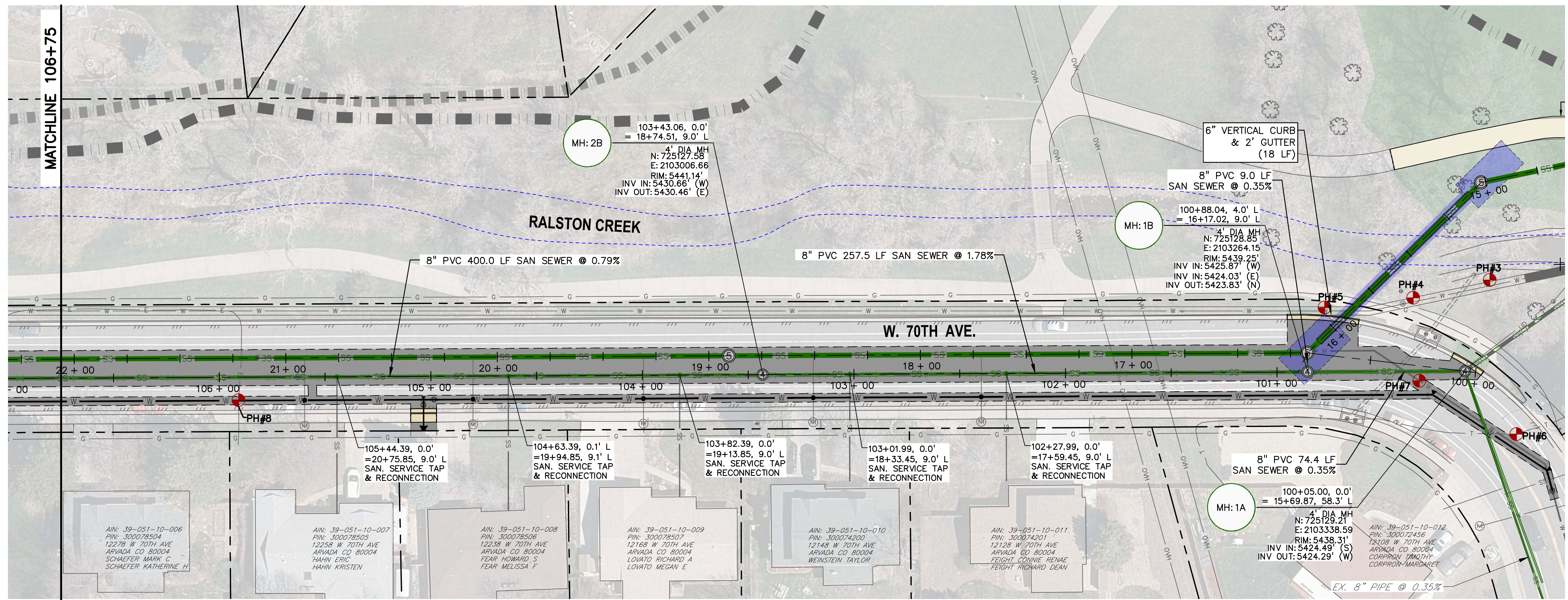
PROJECT:21666-00BLCV
DRAWING NO.

SS06

SHEET: 22 OF 42



APPROVED
CITY OF ARVADA, COLORADO
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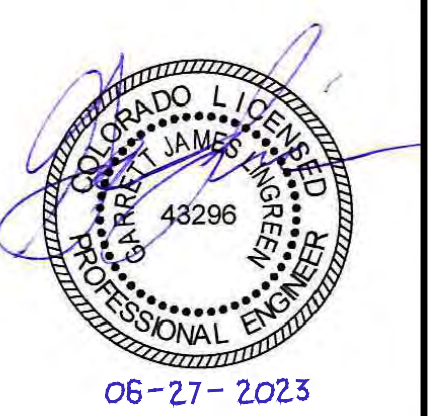
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RALSTON TRUNK SEWER IMPROVEMENTS
WARD AND 69TH
PHASE I
ARVADA, COLORADO

ISSUE	DATE
BID SET	06-27-2023
DESIGNED BY:	GSG
DRAWN BY:	SMM
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FILE NAME:	21666-00 SS01



DRAWING SCALE IN FEET:
HORIZONTAL: SEE PLAN
VERTICAL: SEE PLAN

**SANITARY
PLAN & PROFILE
(8" MAIN)**

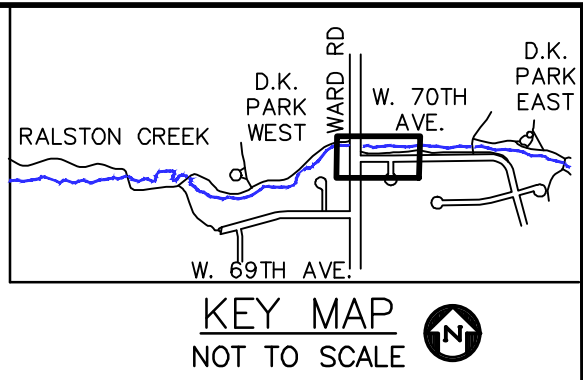
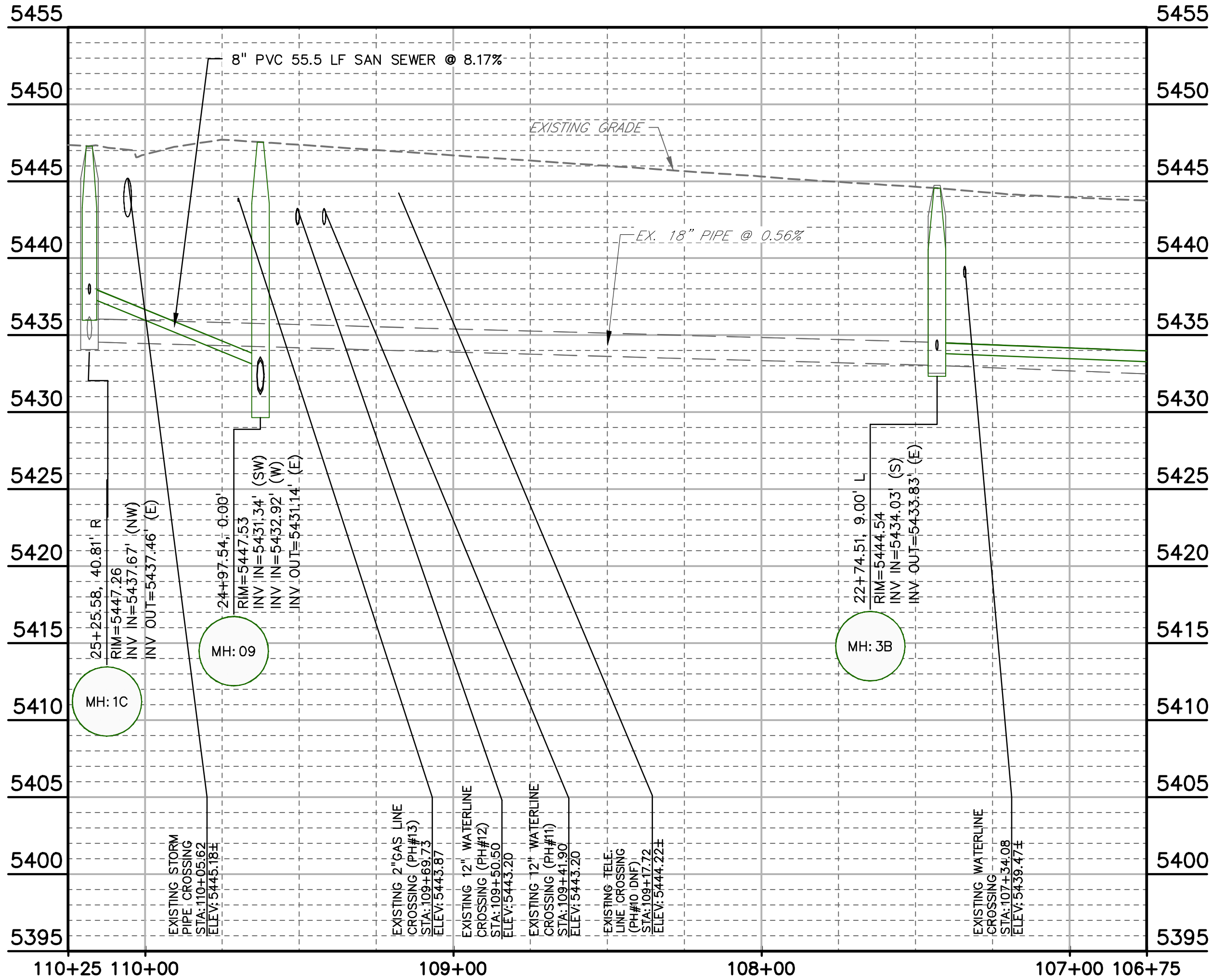
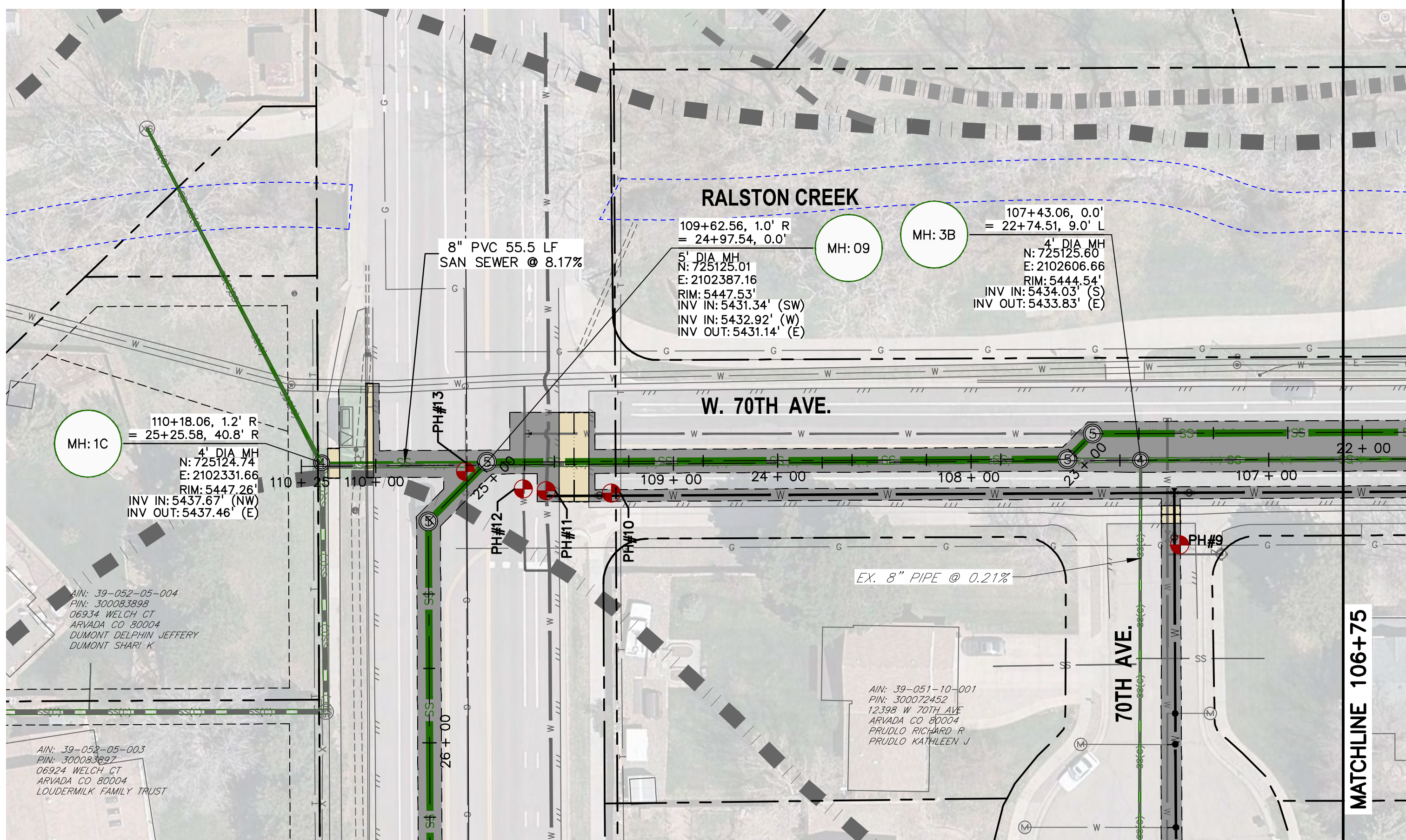
PROJECT: 21666-00BLCV
DRAWING NO.

SS07

SHEET: 23 OF 42

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30 15 0 30 60
SCALE IN FEET



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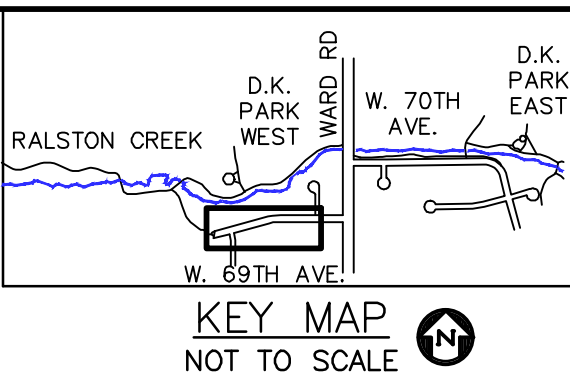
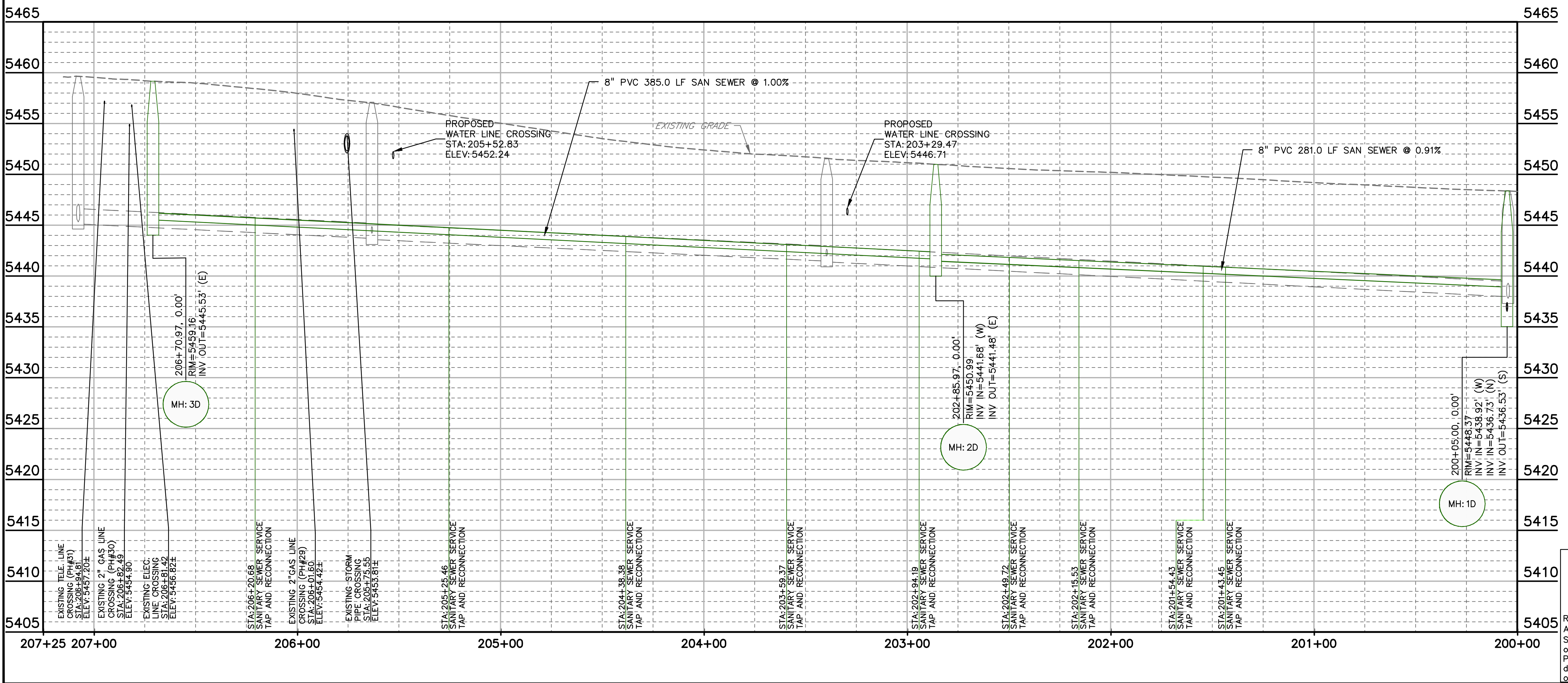
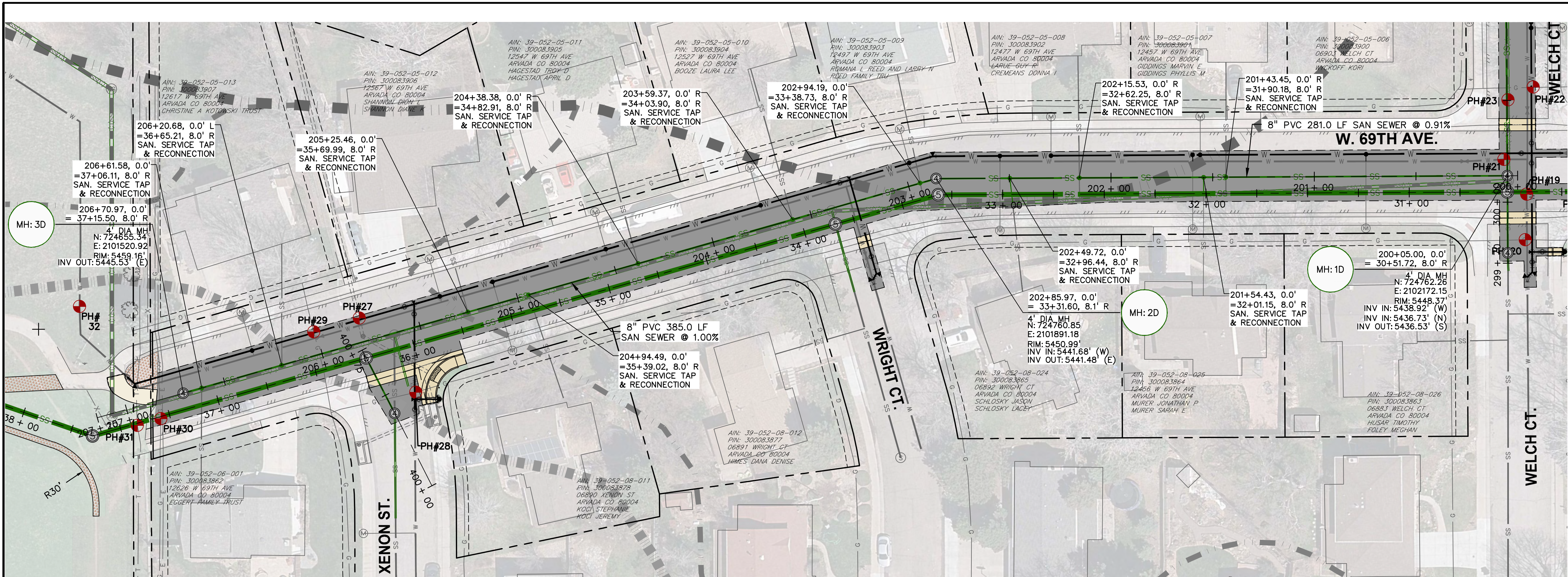
SANITARY
PLAN & PROFILE
(8" MAIN)

PROJECT: 21666-00BLCV
DRAWING NO.

SS08

SHEET: 24 OF 42

APPROVED
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CHECKED BY:	GUL
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06-27-2023

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VERTICAL: SEE PLAN

SANITARY PLAN & PROFILE (8" MAIN)

PROJECT: 21666-00BLCV
DRAWING NO.

SS09

SHEET: 25 OF 42

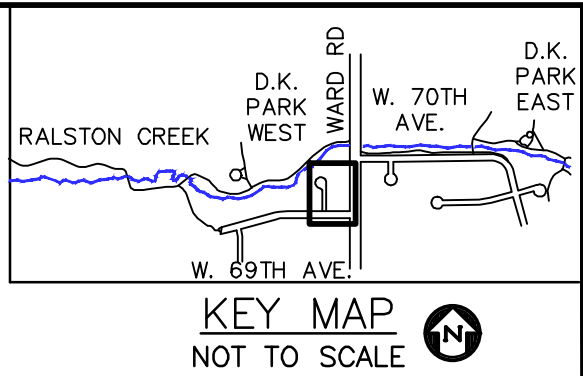
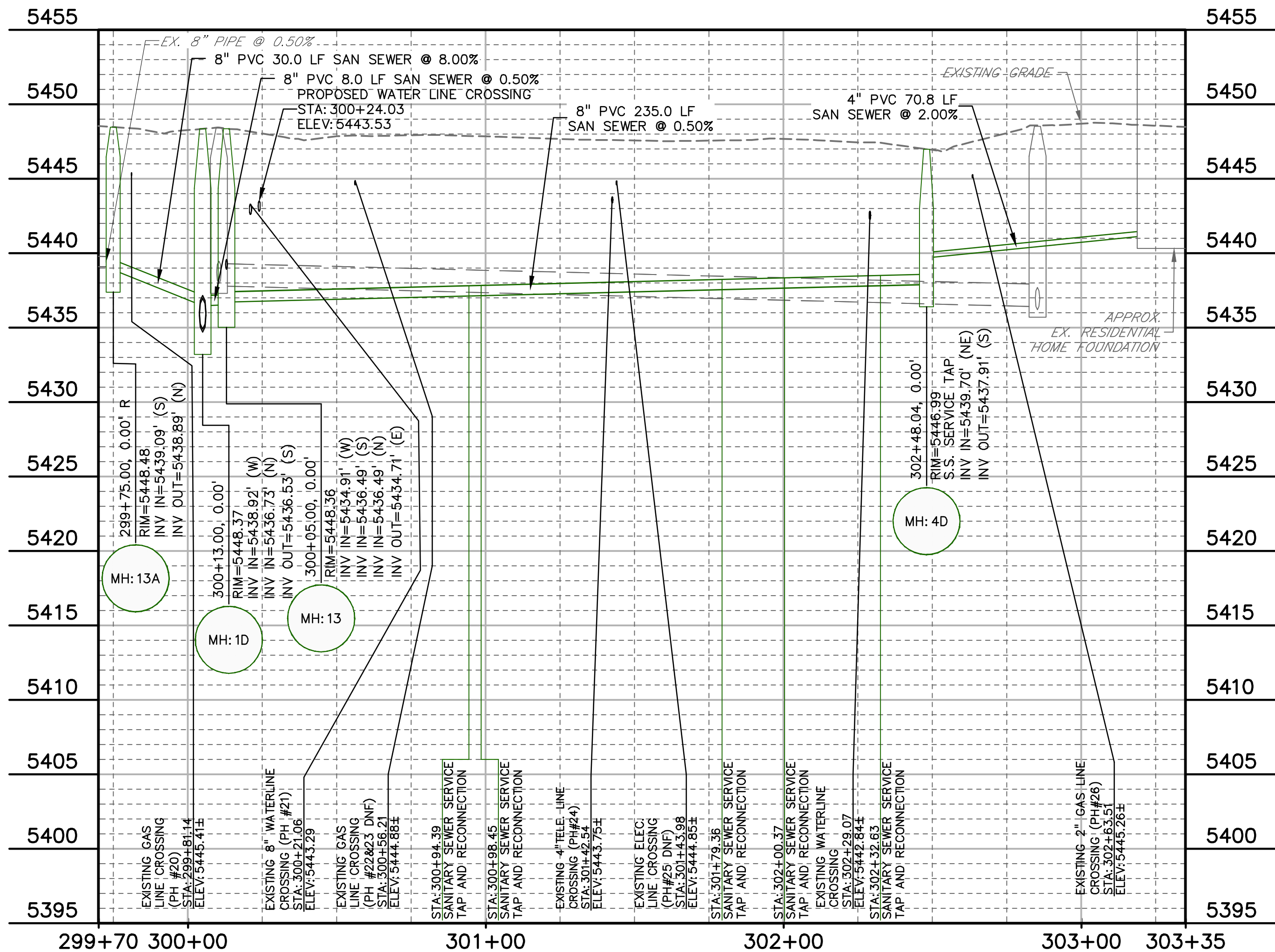
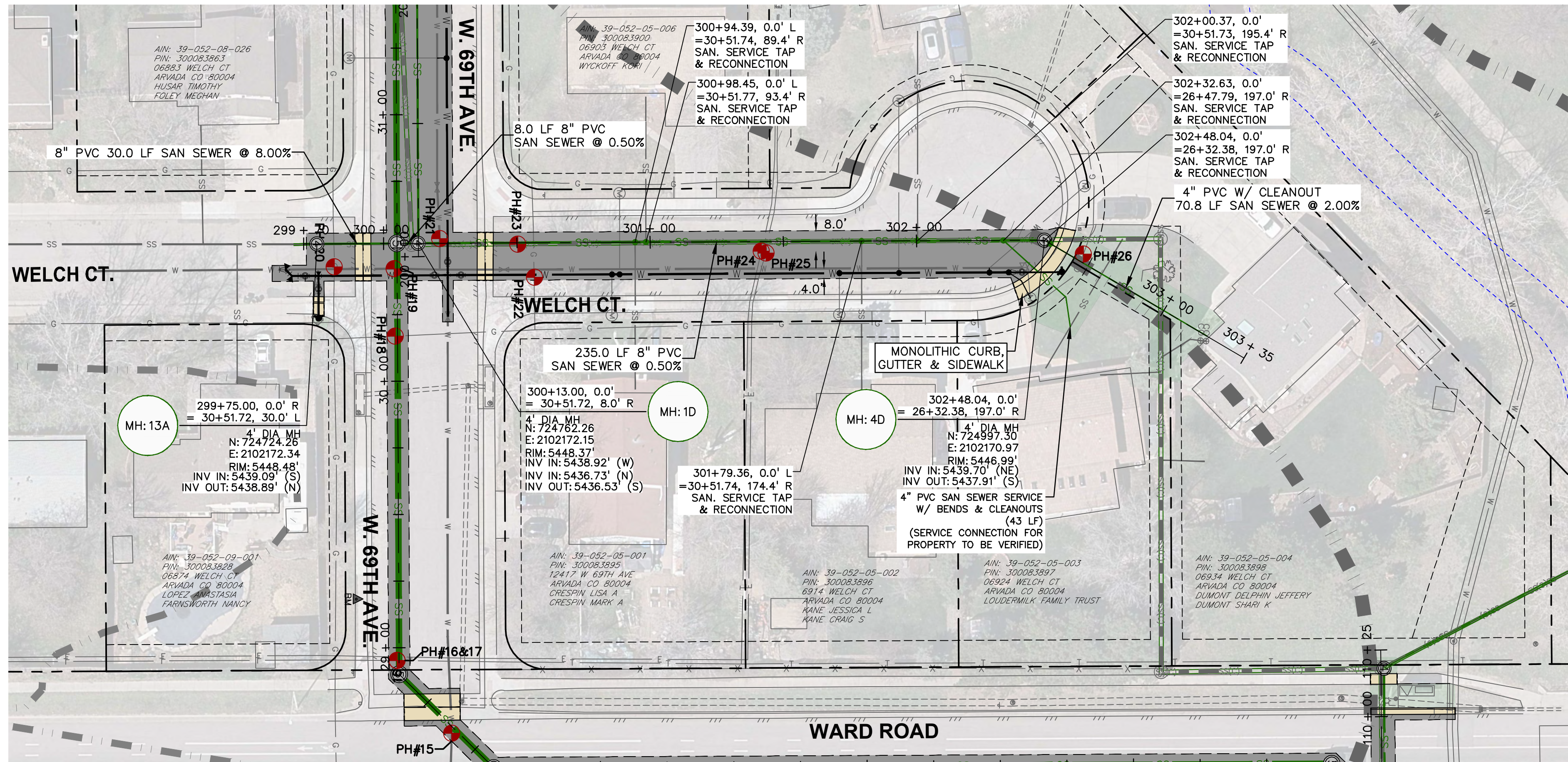
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VERTICAL: SEE PLAN

**SANITARY
PLAN & PROFILE
(8" MAIN)**

PROJECT: 21666-00BLCV
DRAWING NO.

SS10

SHEET: 26 OF 42

30 15 0 30 60

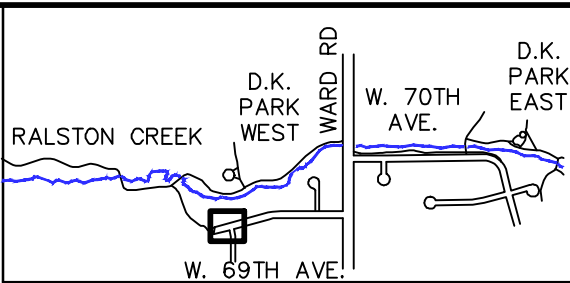
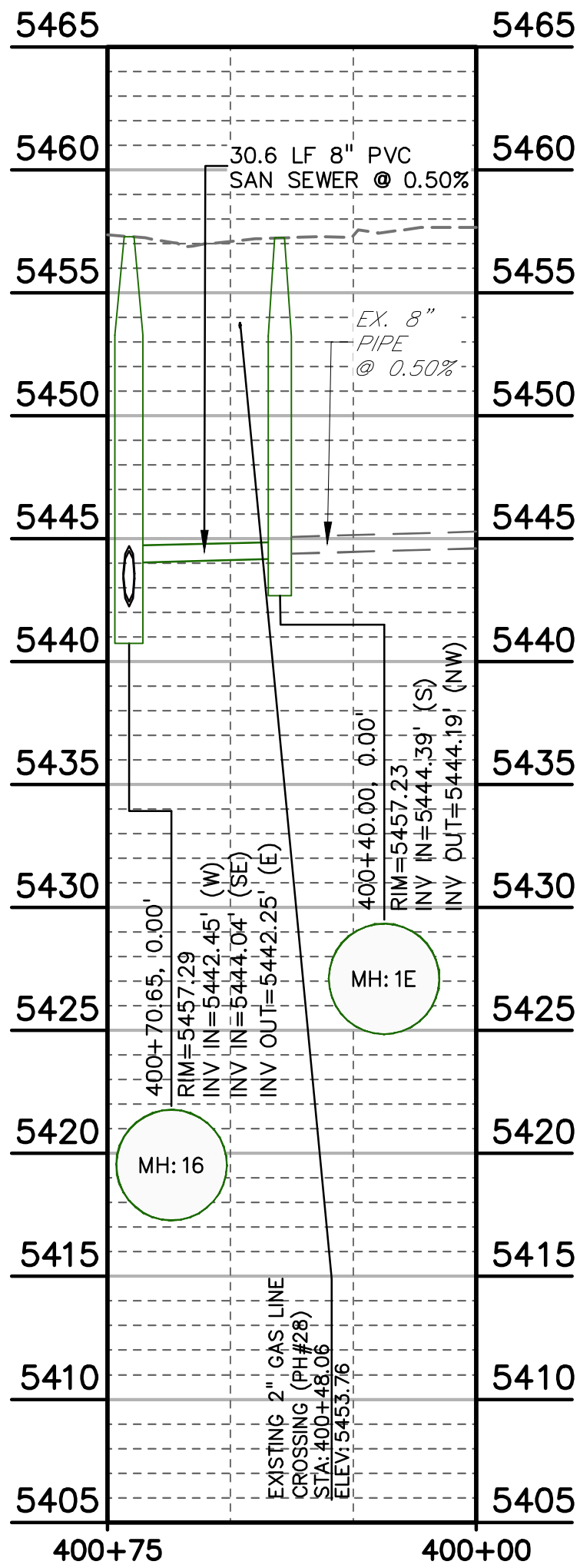
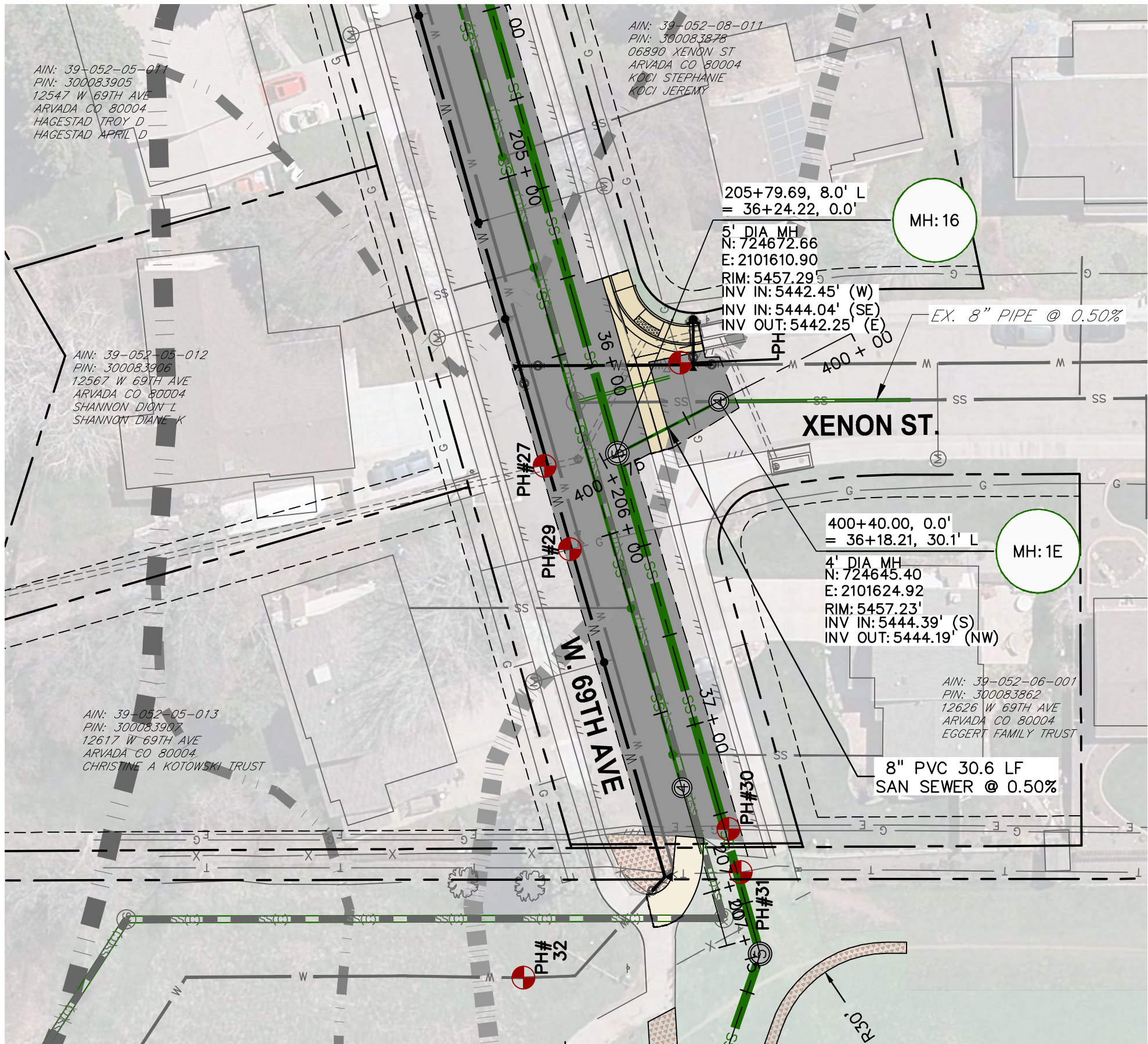
SCALE IN FEET

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KEY MAP
NOT TO SCALE

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LAFAYETTE, COLORADO 80026
CONTACT:
GARRETT LINGREEN, P.E.
(303) 443-4338
LAFAYETTE
COLORADO SPRINGS

OWNER/CLIENT:

CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
8101 RALSTON ROAD
ARVADA, COLORADO 80002
KRIS GARDNER, P.E.
720-898-7647

BID SET
CITY OF ARVADA PROJECT NO. 17-SR-07
RALSTON TRUNK SEWER IMPROVEMENTS
WARD AND 69TH
PHASE I
ARVADA, COLORADO

ISSUE	DATE
BID SET	06-27-2023
DESIGNED BY:	GSG
DRAWN BY:	SMM
CHECKED BY:	GJL
FILE NAME:	21666-00 SS01



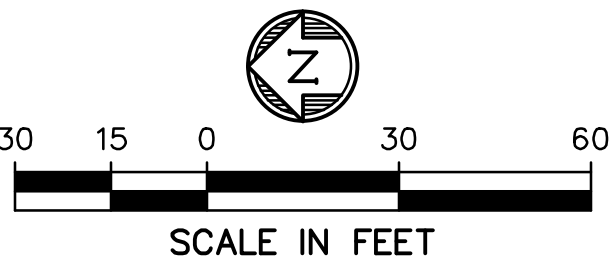
06-27-2023
DRAWING SCALE IN FEET:
HORIZONTAL: SEE PLAN
VERTICAL: SEE PLAN

SANITARY
PLAN & PROFILE
(8" MAIN)

PROJECT:21666-00BLCV
DRAWING NO.

SS11

SHEET: 27 OF 42



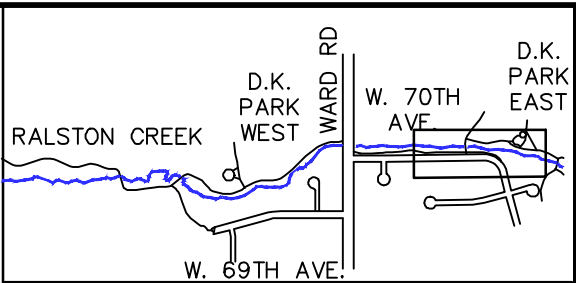
APPROVED

CITY OF ARVADA, COLORADO
PROJECT NO. 17-SR-07

BY: *Garrett Lingreen* DATE: 7/10/23

CITY ENGINEER

Review for the general compliance with the City of Arvada "Engineering Code of Standards", 2022 edition. Sole responsibility for completeness and/or accuracy of these Documents shall remain with the Registered Professional Engineer sealing these Plans. The City does not accept liability for facilities designed by others.



KEY MAP
NOT TO SCALE

PREPARED BY:

DBC
Drexel, Barrell & Co.
Traditional Services, Innovative Solutions
Since 1988

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Engineers & Surveyors
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PHASE I
ARVADA, COLORADO

ISSUE

BID SET

06-27-2023

DESIGNED BY: GSG

DRAWN BY: SMM

CHECKED BY: GUL

FILE NAME: 21666-00 WT01



06-27-2023

DRAWING SCALE IN FEET:

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VERTICAL: SEE PLAN

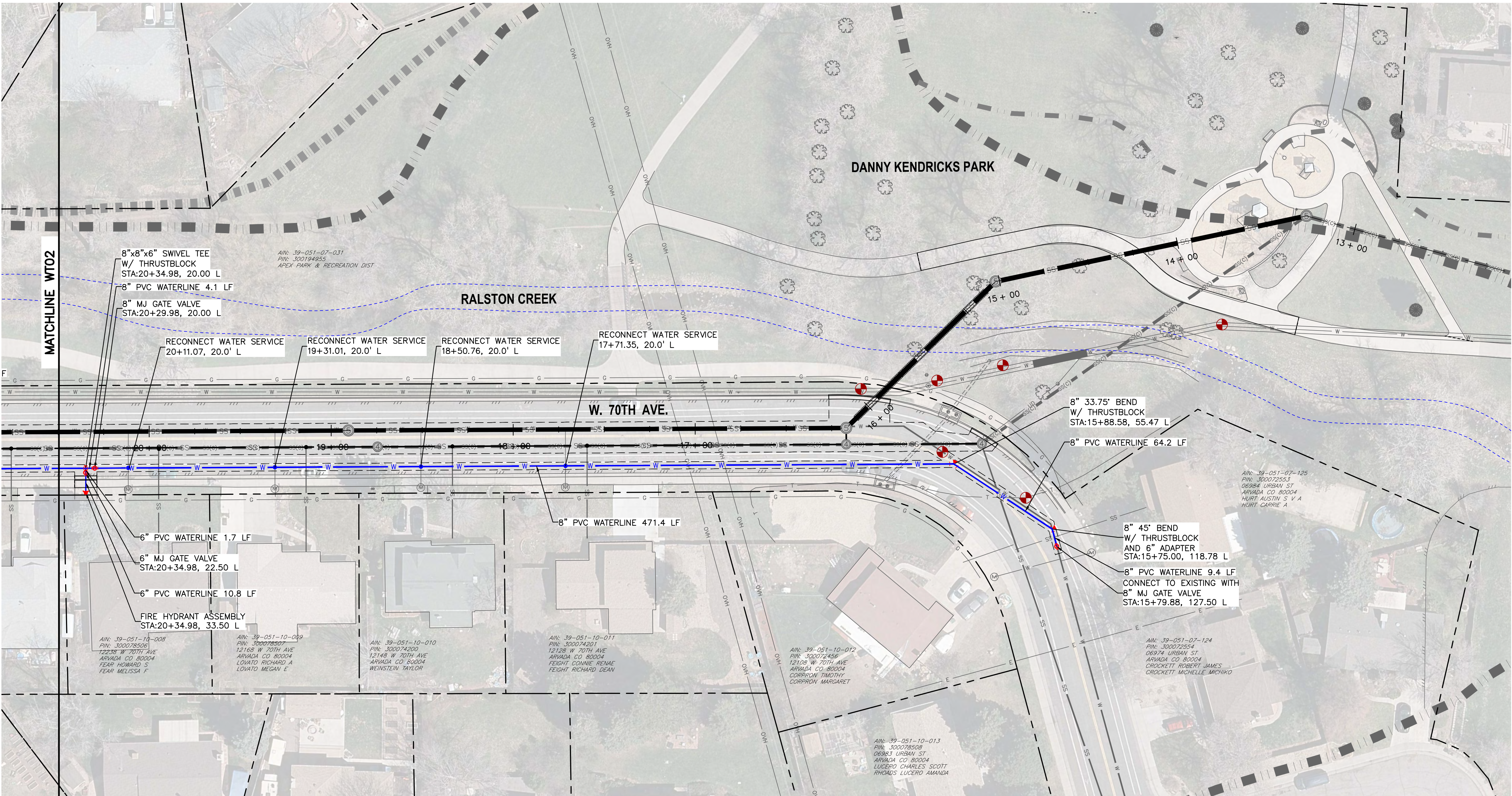
WATERLINE PLAN

PROJECT: 21666-00BLCV

DRAWING NO.

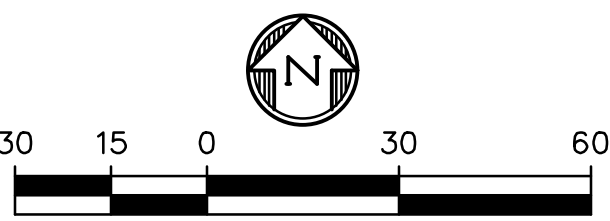
WT01

SHEET: 28 OF 42



WATER NOTES

1. WATER LINE STATIONING REFERENCES SANITARY TRUNK LINE STATIONING.



SCALE IN FEET

APPROVED

CITY OF ARVADA, COLORADO

PROJECT NO. 17-SR-07

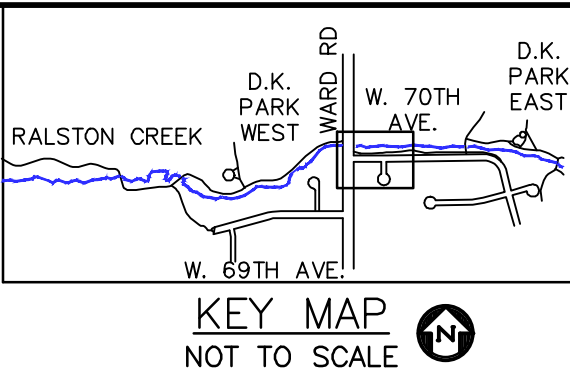
BY:

CITY ENGINEER

DATE:

7/10/23

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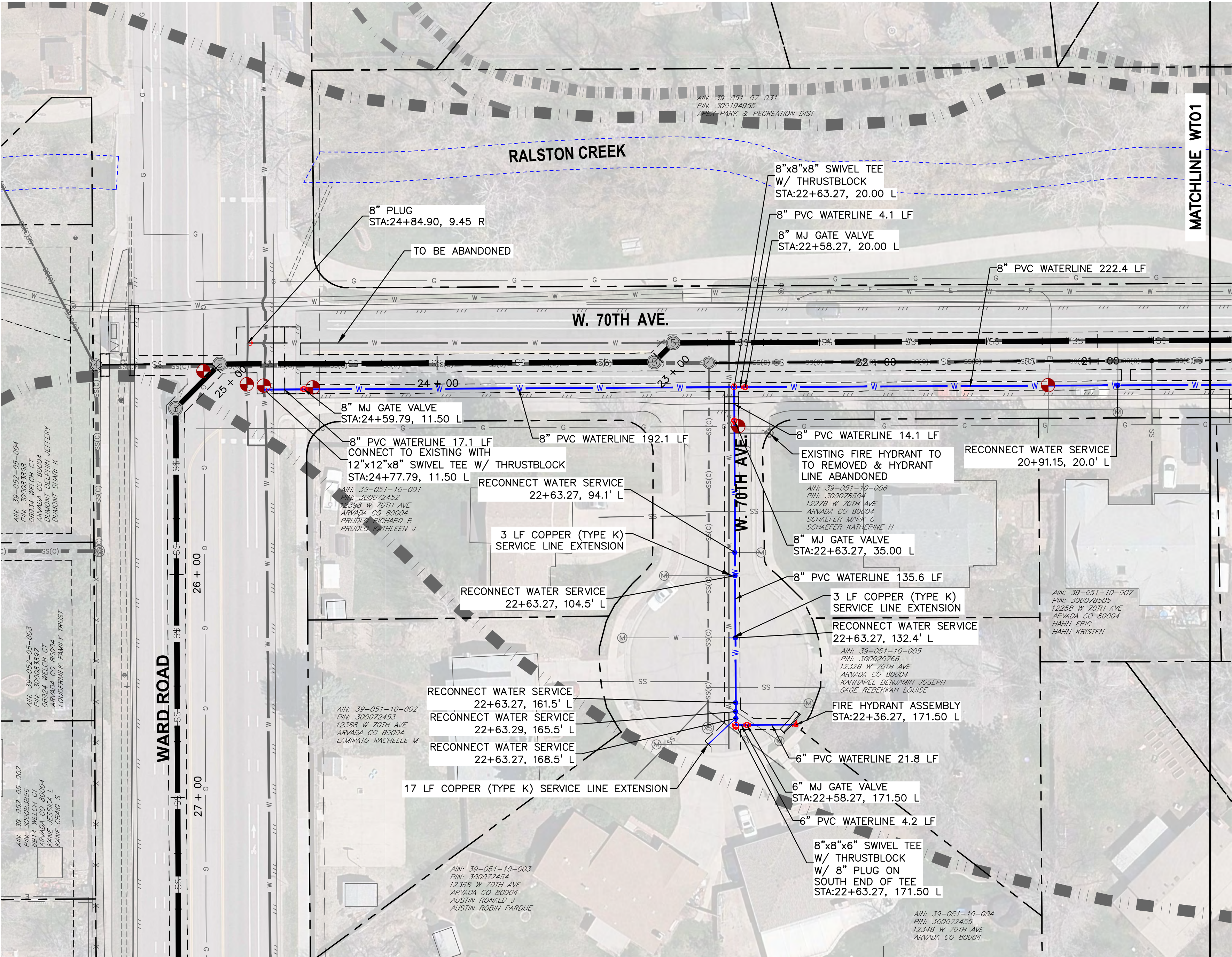


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WATER NOTES

1. WATER LINE STATIONING REFERENCES SANITARY TRUNK LINE STATIONING.

30 15 0 30 60
SCALE IN FEET

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CITY OF ARVADA, COLORADO
PROJECT NO. 17-SR-07

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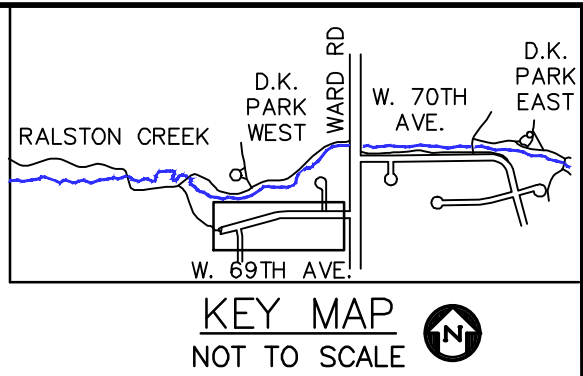
DRAWING SCALE IN FEET:
HORIZONTAL: SEE PLAN
VERTICAL: SEE PLAN

WATERLINE PLAN

PROJECT: 21666-00BLCV
DRAWING NO.

WT02

SHEET: 29 OF 42



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Since 1988

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WARD AND 69TH
PHASE I
ARVADA, COLORADO

ISSUE DATE

BID SET 06-27-2023

DESIGNED BY: GSG

DRAWN BY: SMM

CHECKED BY: GJL

FILE NAME: 21666-00 WT01



06-27-2023

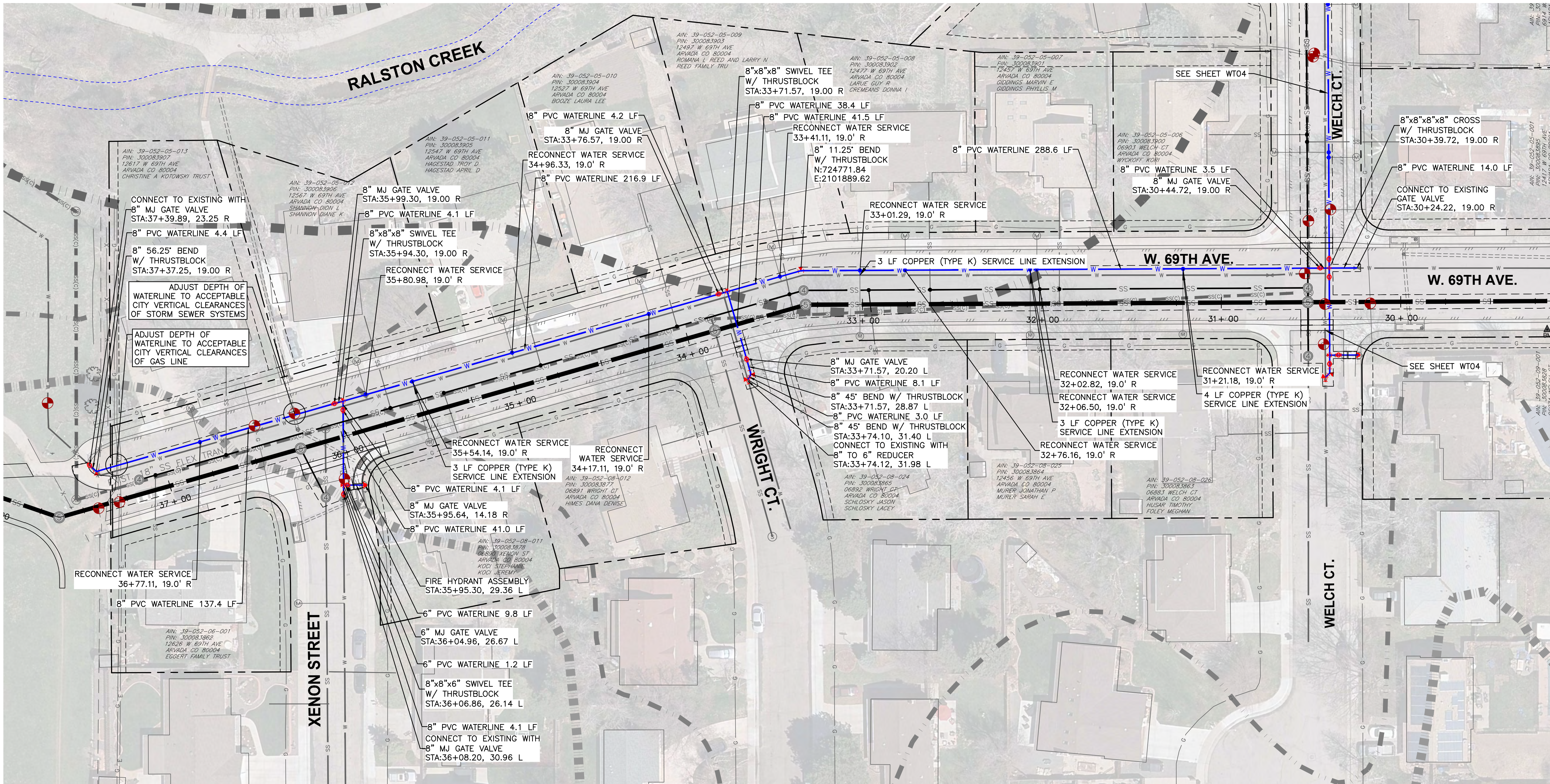
DRAWING SCALE IN FEET:
HORIZONTAL: SEE PLAN
VERTICAL: SEE PLAN

WATERLINE PLAN

PROJECT: 21666-00BLCV
DRAWING NO.

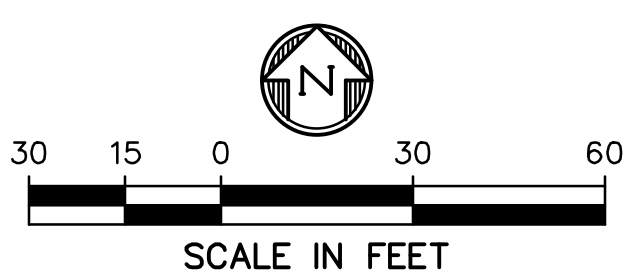
WT03

SHEET: 30 OF 42



WATER NOTES

1. WATER LINE STATIONING REFERENCES SANITARY TRUNK LINE STATIONING.



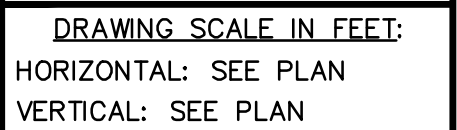
APPROVED
CITY OF ARVADA, COLORADO
PROJECT NO. 17-SR-07
BY: *[Signature]* DATE: 7/10/23
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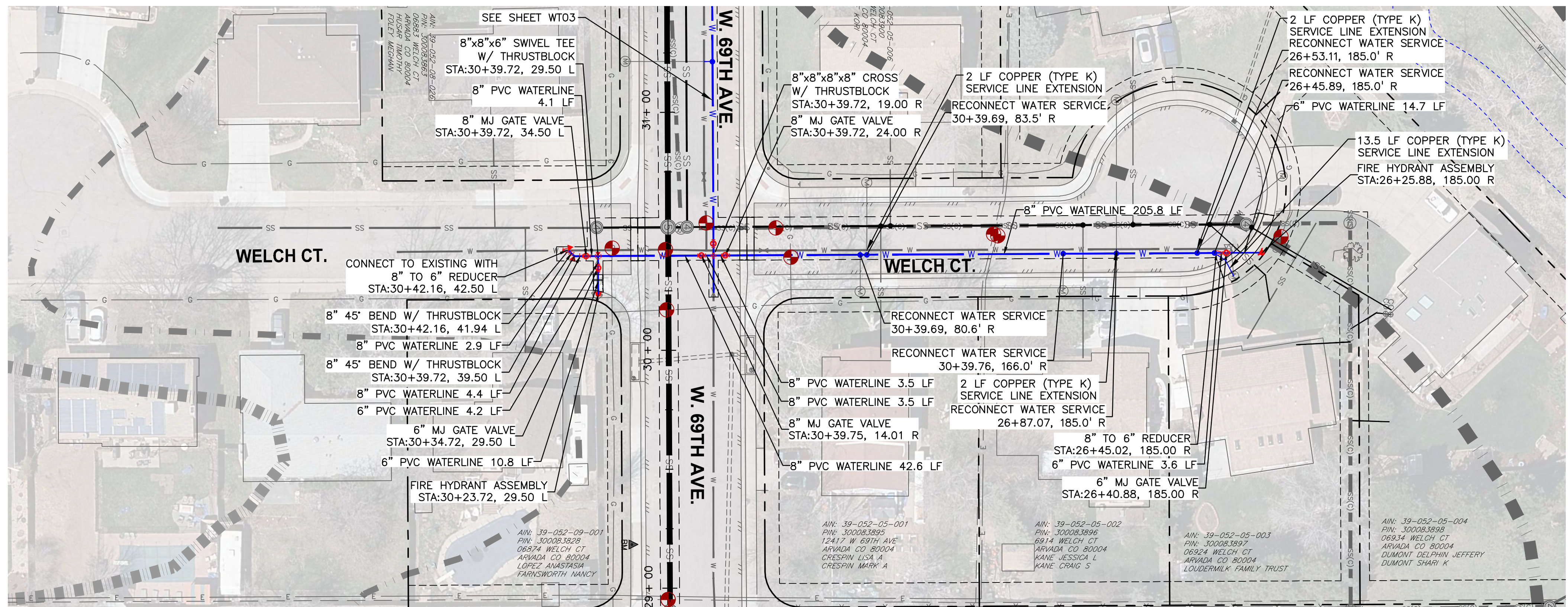
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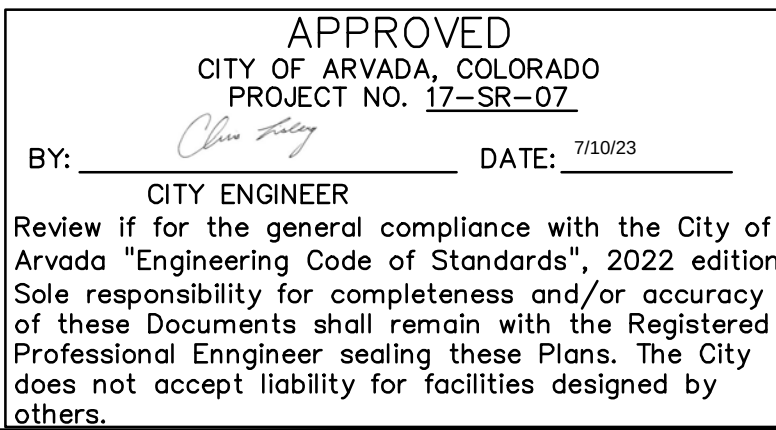


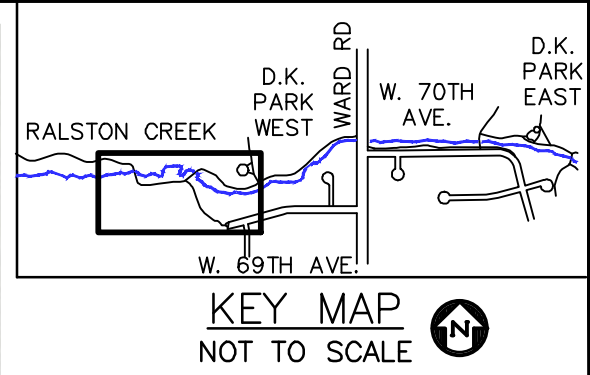
PROJECT:21666-00BLCV
DRAWING NO.

SHEET: 31 OF 42



1. WATER LINE STATIONING REFERENCES SANITARY TRUNK LINE STATIONING.





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DRAWING SCALE IN FEET:
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VERTICAL: SEE PLAN

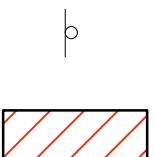
TRAIL DETOUR
& CONSTRUCTION
ACCESS PLAN

PROJECT: 21666-00BLCV
DRAWING NO.

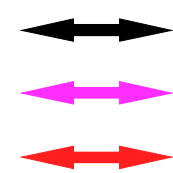
TD02

SHEET: 33 OF 42

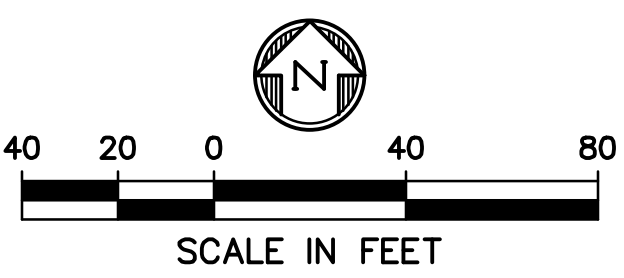
LEGEND
(OVERALL LEGEND ON SHEET NT01)
TEMPORARY TRAFFIC CONTROL
SIGN (SHOWN FACING WEST)*
PR. CONSTRUCTION ACCESS AREA



MULTI-USE DETOUR PATHING
PEDESTRIAN DETOUR PATHING
CYCLIST DETOUR PATHING



NOTE:
*SEE CDOT S-630-1, S-630-2 &
MUTCD TEMPORARY TRAFFIC CONTROL



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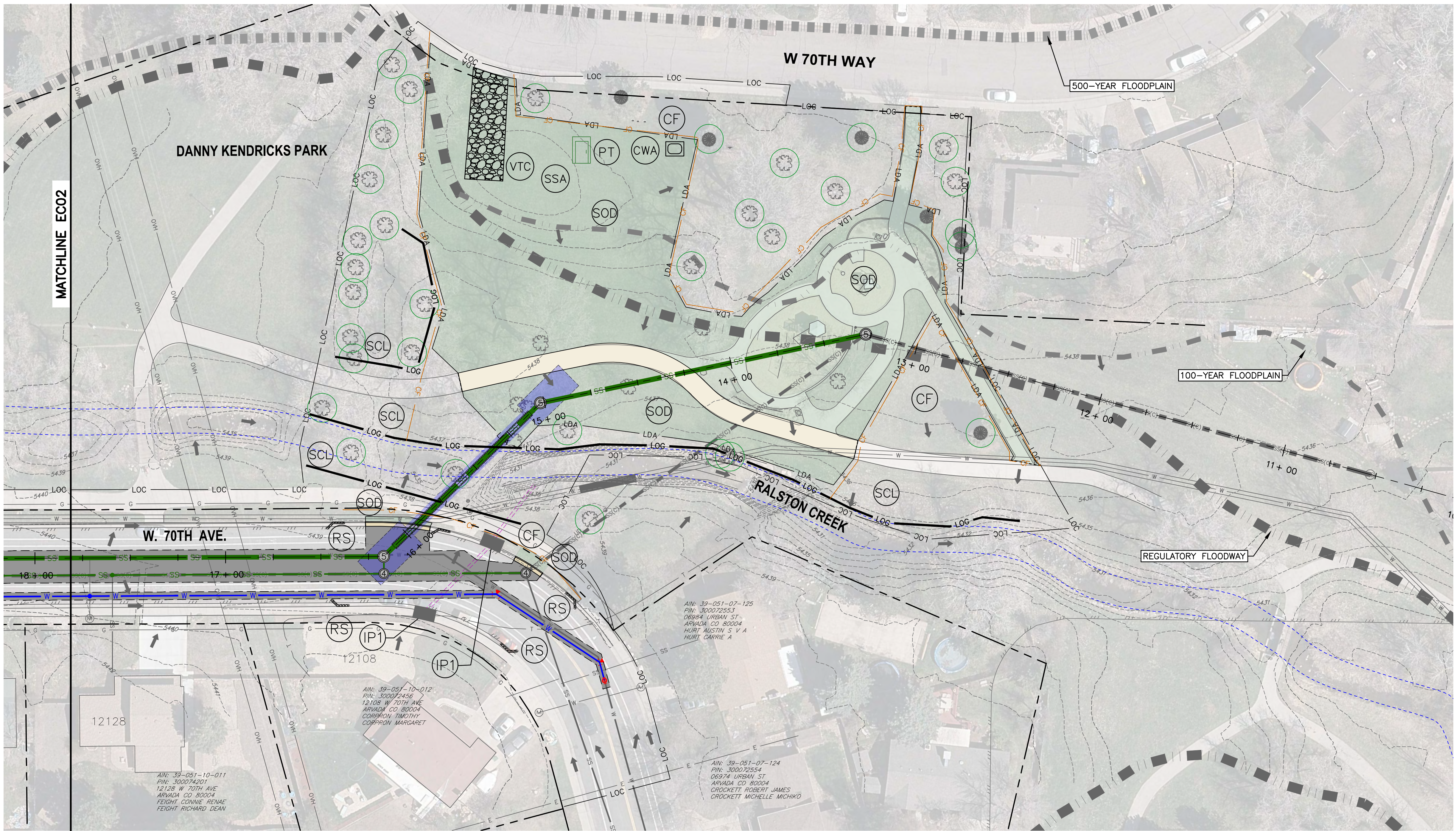
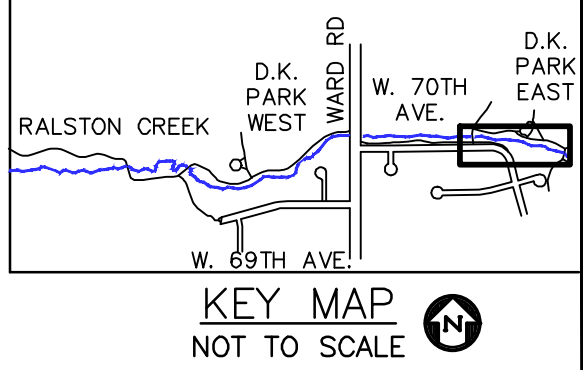
DRAWING SCALE IN FEET:
HORIZONTAL: SEE PLAN
VERTICAL: SEE PLAN

EROSION
CONTROL
PLAN

PROJECT: 21666--00BLCV
DRAWING NO.

EC01

SHEET: 34 OF 42



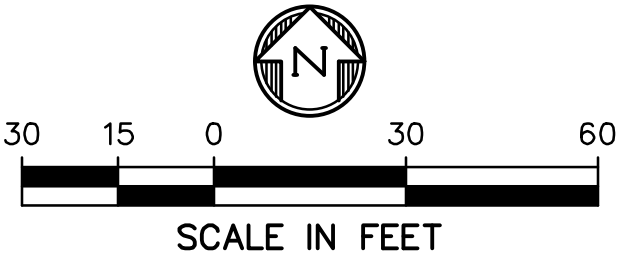
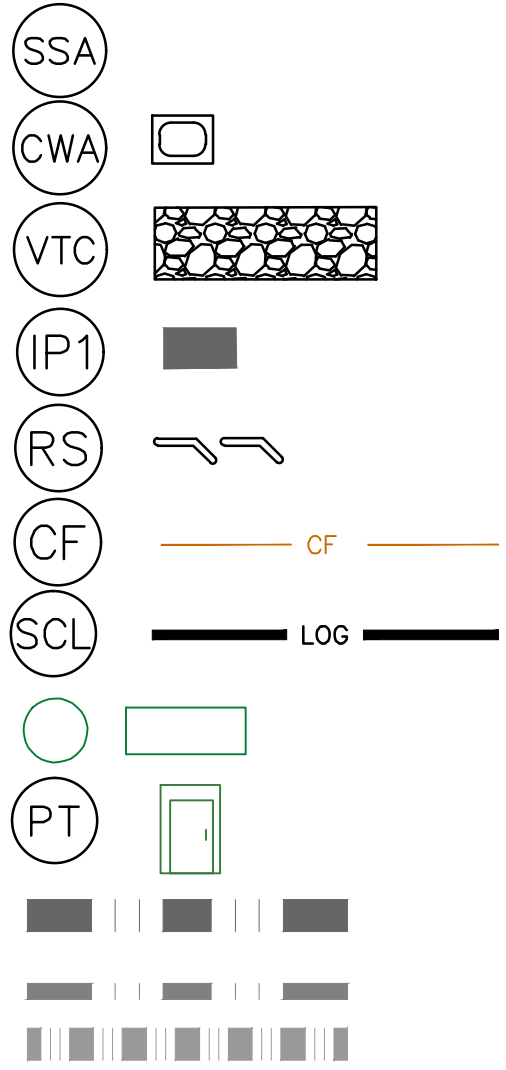
NOTES

- CONTRACTOR SHALL SUBMIT A CONSTRUCTION SITE MANAGEMENT PLAN TO THE CITY FOR APPROVAL PRIOR TO BUILDING PERMIT ISSUANCE.
- CONTRACTOR SHALL WORK IN A MANNER THAT MINIMIZES THE POTENTIAL FOR EROSION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING, INSPECTING, AND MAINTAINING ALL NECESSARY EROSION AND SEDIMENT CONTROL DURING CONSTRUCTION AND REMOVING EROSION CONTROL WHEN PROJECT IS COMPLETE AND VEGETATION IS ESTABLISHED.
- ANY AREA DISTURBED BY CONSTRUCTION AND NOT PAVED OR NATURAL ROCK SURFACE SHALL BE REVEGETATED WITHIN ONE CONSTRUCTION SEASON.
- ALL EROSION CONTROL MEASURES SHALL BE WITHIN R.O.W. AND EASEMENTS.
- SEDIMENT CONTROL LOGS SHALL BE PLACED AROUND CONSTRUCTION STOCKPILES THAT SHALL REMAIN OVER A SINGLE WORK DAY.
- CONCRETE WASHOUT STRUCTURE SHALL BE PREFABRICATED WASHOUT STRUCTURE TYPE 1 AND VEHICLE TRACKING PAD SHALL BE PREFABRICATED. CONCRETE WASHOUT STRUCTURE AND VEHICLE TRACKING PAD MAY BE MOVED THROUGHOUT THE PROJECT AS NECESSARY WITH APPROVAL FROM THE CITY BUT SHALL ONLY BE PAID FOR ONCE. DO NOT LOCATE ANY UNLINED CONCRETE WASHOUT STRUCTURE WITHIN 400 FT OF A NATURAL DRAINAGE PATHWAY OR WATERBODY.
- THE SITE HAS LIMITED SPACE FOR A STABILIZED STAGING AREA. CONTRACTOR TO COORDINATE WITH CITY FOR AN ACCEPTABLE LOCATION. DO NOT LOCATE STAGING AREA WITHIN 400 FEET OF A NATURAL DRAINAGE PATHWAY OR WATERBODY.
- CONTRACTOR TO PROTECT ALL TREES WITHIN LIMITS OF CONSTRUCTION UNLESS CALLED OUT FOR REMOVAL ON THE DEMOLITION PLAN.
- TOTAL AREA OF DISTURBANCE: 2.83 AC
TOTAL AREA OF CONSTRUCTION: 7.59 AC
- ARVADA MAY REQUIRE SEED VERIFICATION TESTS AT THE CONTRACTOR'S EXPENSE. SEED SPECIFICATIONS AND APPLICATION RATE MAY VARY BASED ON PROJECTED LAND USE. NATIVE GRASS BLEND SHALL CONSIST OF THE FOLLOWING:
 - 20% PERENNIAL RYEGRASS, ELGON (TETRAPLOID)
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 - 10% INDIAN GRASS (TOMAHAWK)
 - 10% STREAMBANK WHEATGRASS (SODAR)IF THIS BLEND CAN NOT BE MADE A SUITABLE SUBSTITUTE, SUCH AS A DRYLAND PASTURE MIX, MUST BE PRESENTED FOR APPROVAL TO THE PROJECT ENGINEER BEFORE APPLICATION.
- TREE PROTECTION SHALL EXTEND BEYOND DRIP LINE SEE DETAIL.

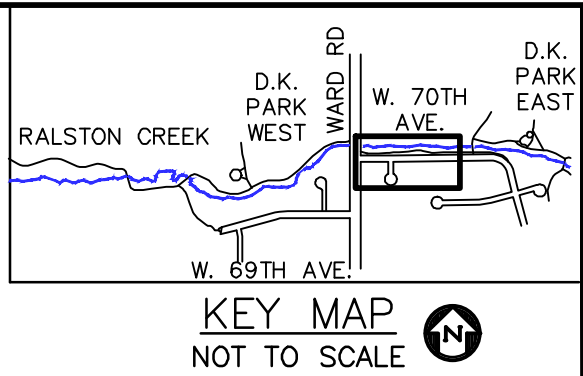
LEGEND

- EXISTING STORM SEWER
DIRECTION OF EXISTING FLOW
EX. INTERMEDIATE CONTOUR
EX. INDEX CONTOUR
LIMITS OF DISTURBANCE
LIMITS OF CONSTRUCTION
EX. WETLANDS BOUNDARY
EX. EDGE OF WATER BOUNDARY
NON-IRRIGATED NATIVE LANDSCAPING & RESTORATION (INCLUDING SEEDING, TOPSOIL & MULCH)
IRRIGATED LANDSCAPING & RESTORATION (INCLUDES SOD & TOPSOIL)
EQUESTRIAN TRAIL & SOFT TRAIL
MULTI-USE PATHWAY
CONCRETE PAVEMENT & FLATWORK
HOT MIX ASPHALT (PATCHING) (ASPHALT)

- STABILIZED STAGING AREA
PRE-FABRICATED CONCRETE WASHOUT STRUCTURE
PRE-FABRICATED VEHICLE TRACKING PAD
INLET PROTECTION-TYPE:
ROCK SOCK
CONSTRUCTION FENCE
SEDIMENT CONTROL LOG
PROTECT TREE
PORTABLE TOILET
EX. REGULATORY FLOODWAY
EX. 100 YEAR FLOODPLAIN
EX. 500 YEAR FLOODPLAIN



APPROVED
CITY OF ARVADA, COLORADO
PROJECT NO. 17-SR-07
BY: [Signature] DATE: 7/10/23
CITY ENGINEER
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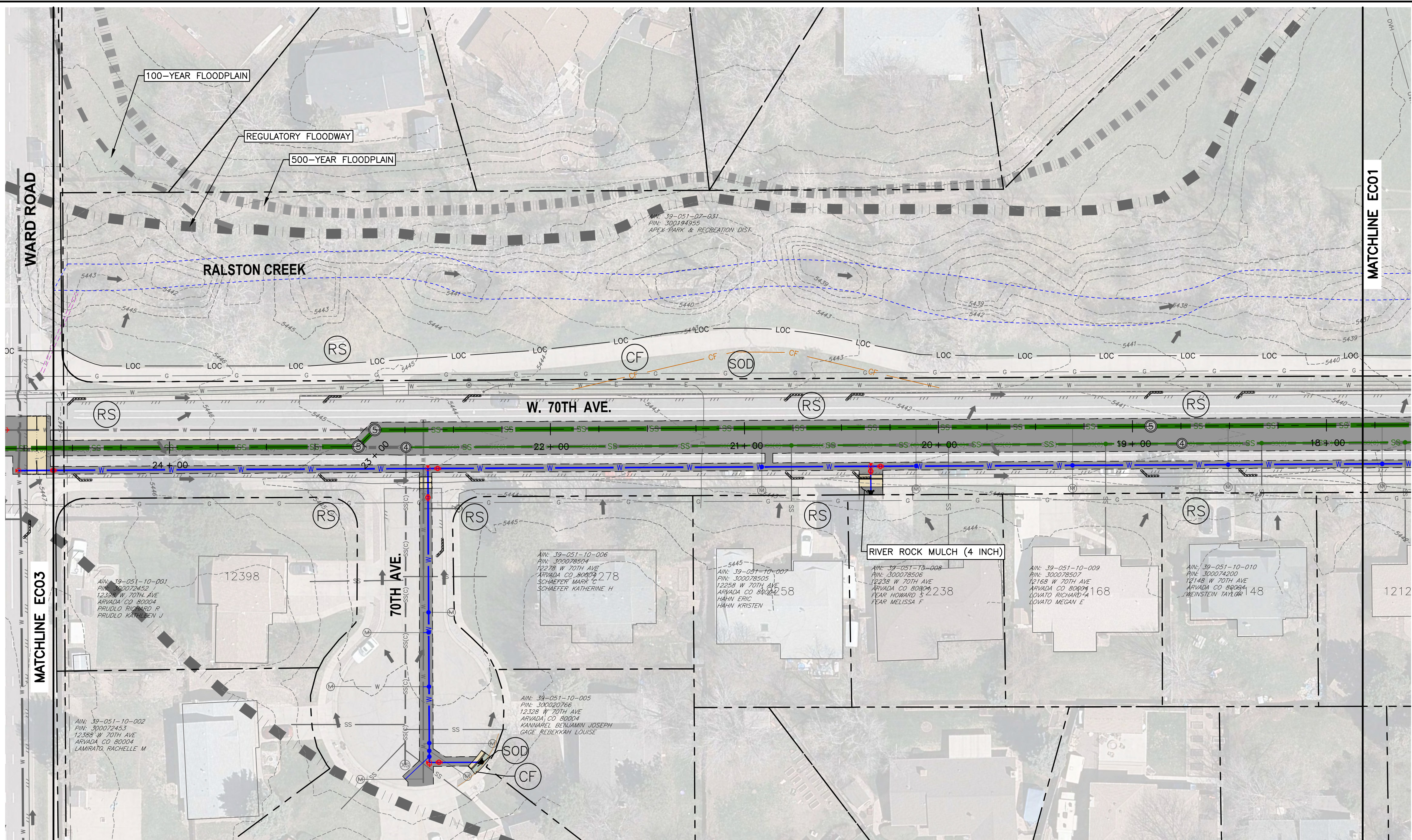
DRAWING SCALE IN FEET:
HORIZONTAL: SEE PLAN
VERTICAL: SEE PLAN

EROSION
CONTROL
PLAN

PROJECT: 21666-00BLCV
DRAWING NO.

EC02

SHEET: 35 OF 42



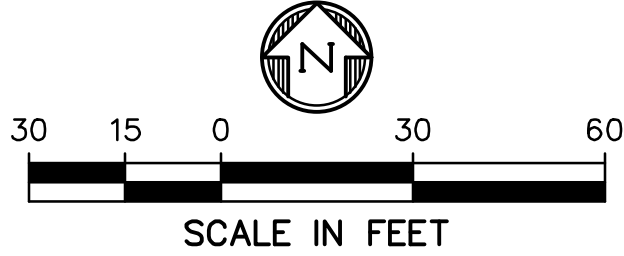
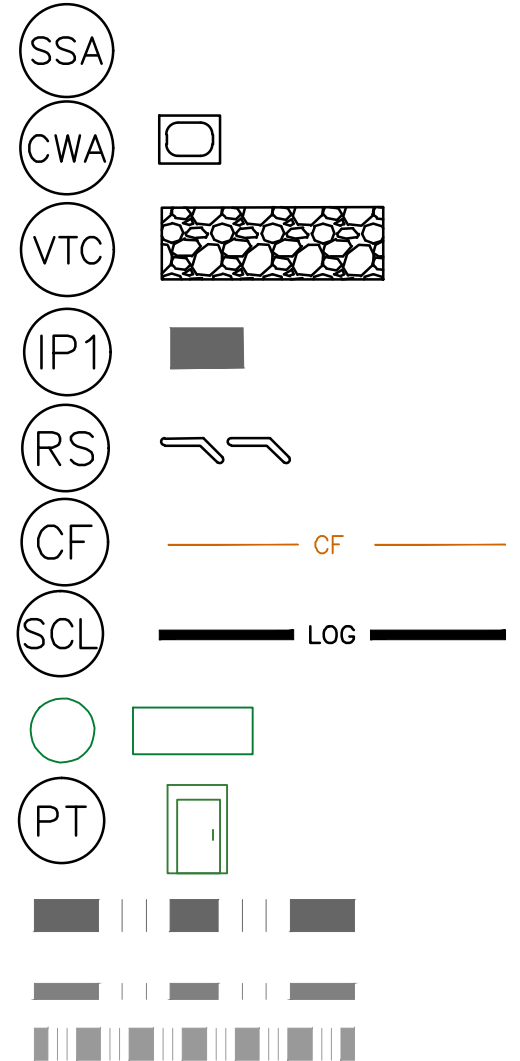
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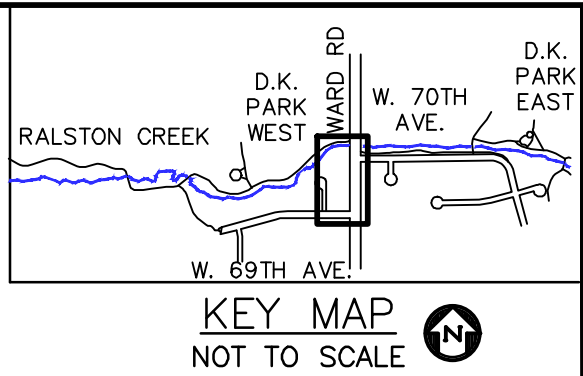
LEGEND

- EXISTING STORM SEWER
DIRECTION OF EXISTING FLOW
EX. INTERMEDIATE CONTOUR
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LIMITS OF DISTURBANCE
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- STABILIZED STAGING AREA
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PRE-FABRICATED VEHICLE TRACKING PAD
INLET PROTECTION-TYPE:
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SEDIMENT CONTROL LOG
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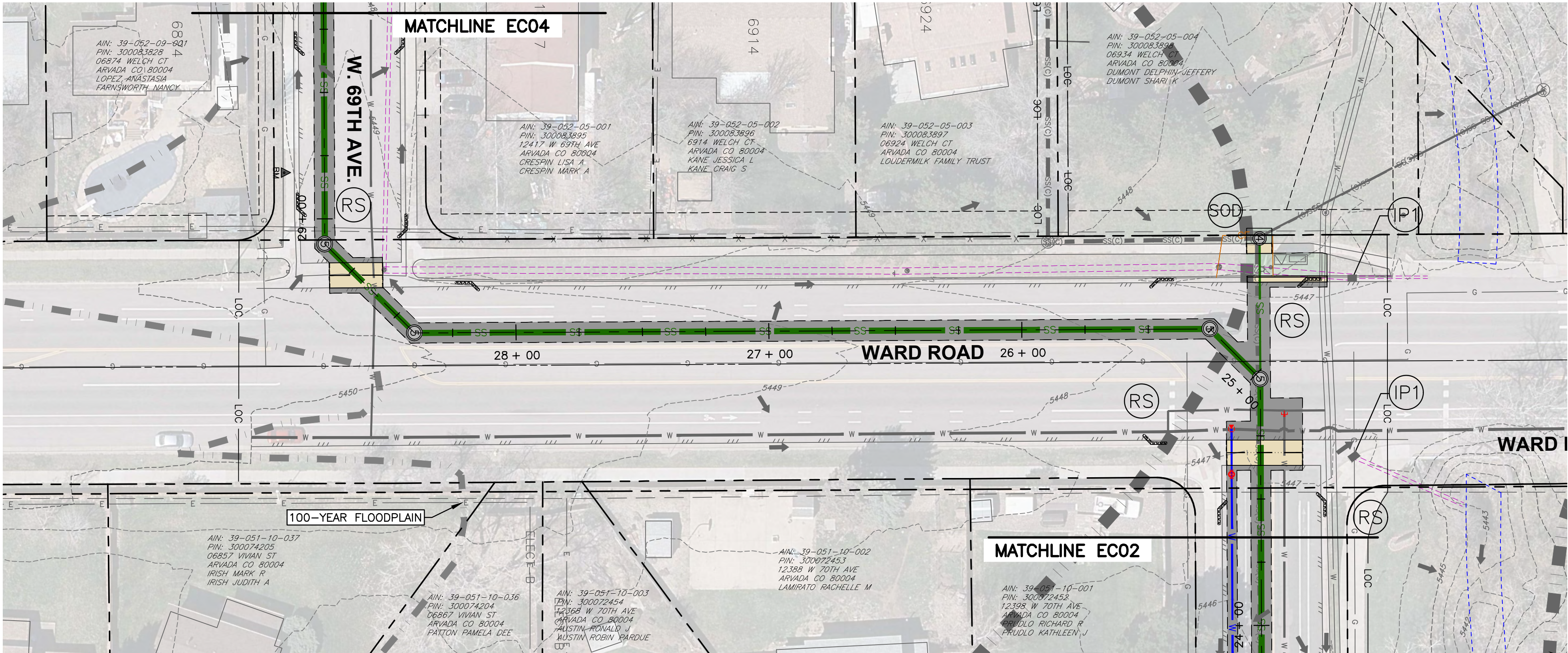


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LAFAYETTE, COLORADO 80026
CONTACT:
GARRETT LINGREEN, P.E.
(303) 443-4338
LAFAYETTE
COLORADO SPRINGS

OWNER/CLIENT:

CITY OF ARVADA
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
8101 RALSTON ROAD
ARVADA, COLORADO 80002
KRIS GARDNER, P.E.
720-898-7647



NOTES

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LEGEND

EXISTING STORM SEWER

DIRECTION OF EXISTING FLOW

EX. INTERMEDIATE CONTOUR

EX. INDEX CONTOUR

LIMITS OF DISTURBANCE

LIMITS OF CONSTRUCTION

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EX. EDGE OF WATER BOUNDARY

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IRRIGATED LANDSCAPING & RESTORATION (INCLUDES SOD & TOPSOIL)

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MULTI-USE PATHWAY

CONCRETE PAVEMENT & FLATWORK

HOT MIX ASPHALT (PATCHING) (ASPHALT)

STABILIZED STAGING AREA

PRE-FABRICATED CONCRETE WASHOUT STRUCTURE

PRE-FABRICATED VEHICLE TRACKING PAD

INLET PROTECTION-TYPE:

ROCK SOCK

CONSTRUCTION FENCE

SEDIMENT CONTROL LOG

PROTECT TREE

PORTABLE TOILET

EX. REGULATORY FLOODWAY

EX. 100 YEAR FLOODPLAIN

EX. 500 YEAR FLOODPLAIN

SSA

CWA

VTC

IP1

RS

CF

SCL

PT

LOG

SCALE IN FEET

30 15 0 30 60

APPROVED

CITY OF ARVADA, COLORADO

PROJECT NO. 17-SR-07

BY: *[Signature]* DATE: 7/10/23

CITY ENGINEER

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BID SET

CITY OF ARVADA PROJECT NO. 17-SR-07

RALSTON TRUNK SEWER IMPROVEMENTS

WARD AND 69TH

PHASE I

ARVADA, COLORADO

ISSUE	DATE
BID SET	06-27-2023
DESIGNED BY:	GSG
DRAWN BY:	SMM
CHECKED BY:	GJL
FILE NAME:	21666-00 EC01

PROFESSIONAL ENGINEER

43296

06-27-2023

DRAWING SCALE IN FEET:

HORIZONTAL: SEE PLAN

VERTICAL: SEE PLAN

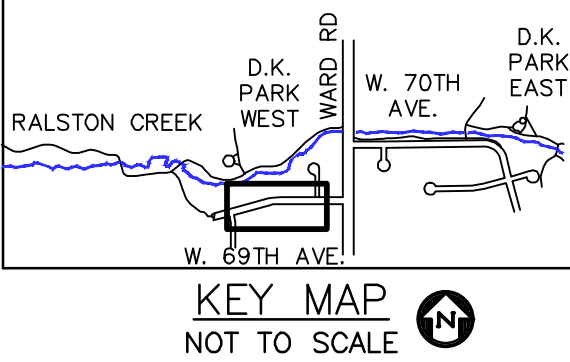
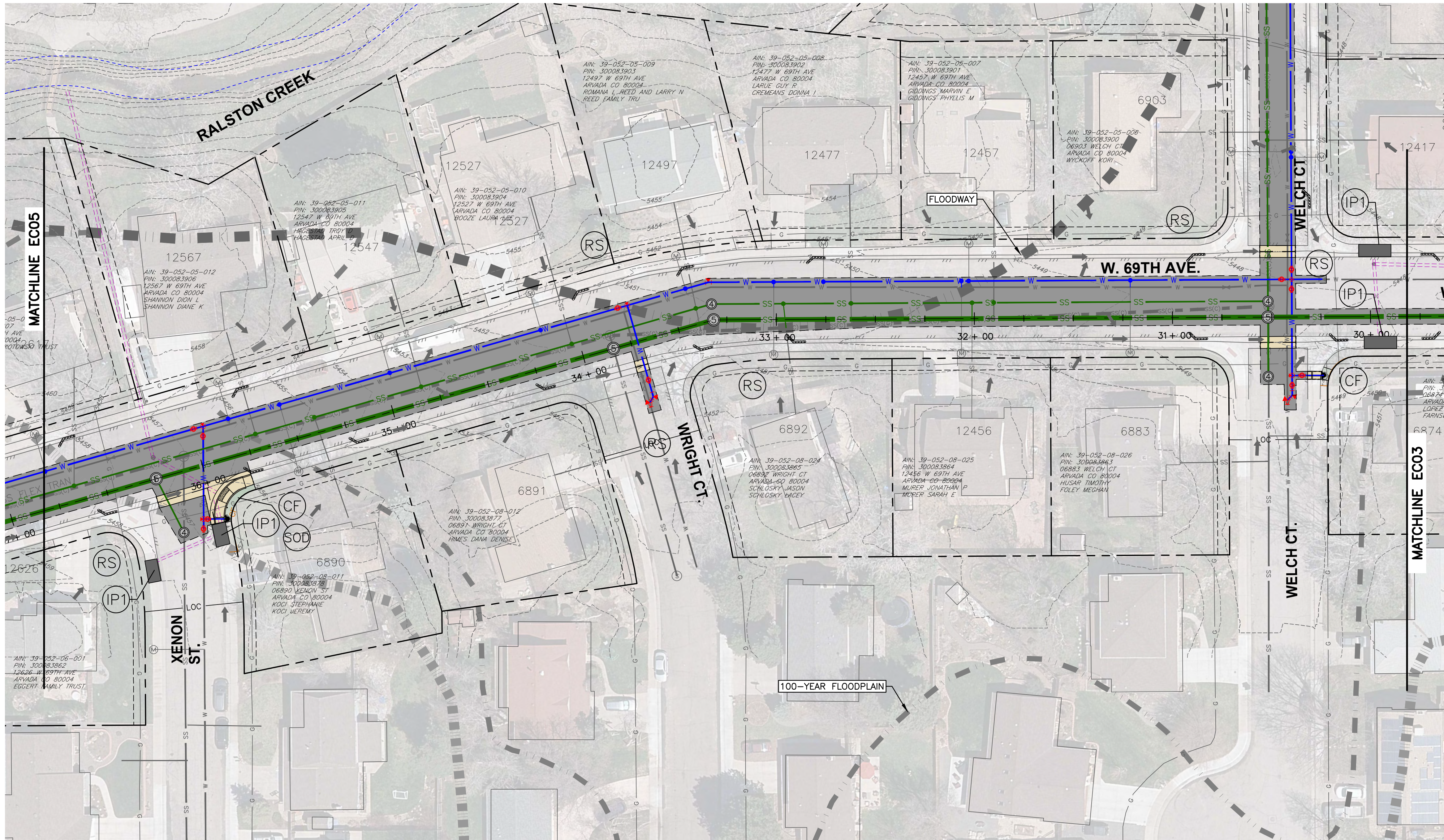
EROSION CONTROL PLAN

PROJECT: 21666-00BLCV

DRAWING NO.

EC03

SHEET: 36 OF 42



PREPARED BY:

DBC
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EROSION CONTROL PLAN

PROJECT: 21666-00BLCV
DRAWING NO.

EC04

SHEET: 37 OF 42

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SCALE IN FEET

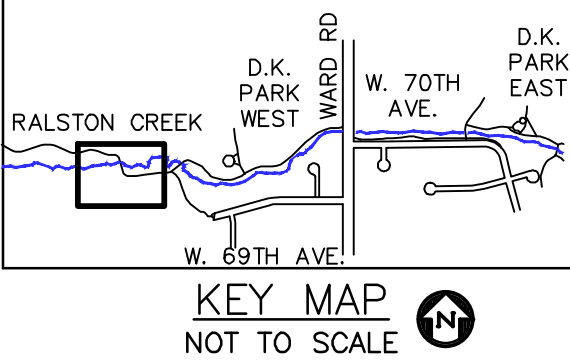
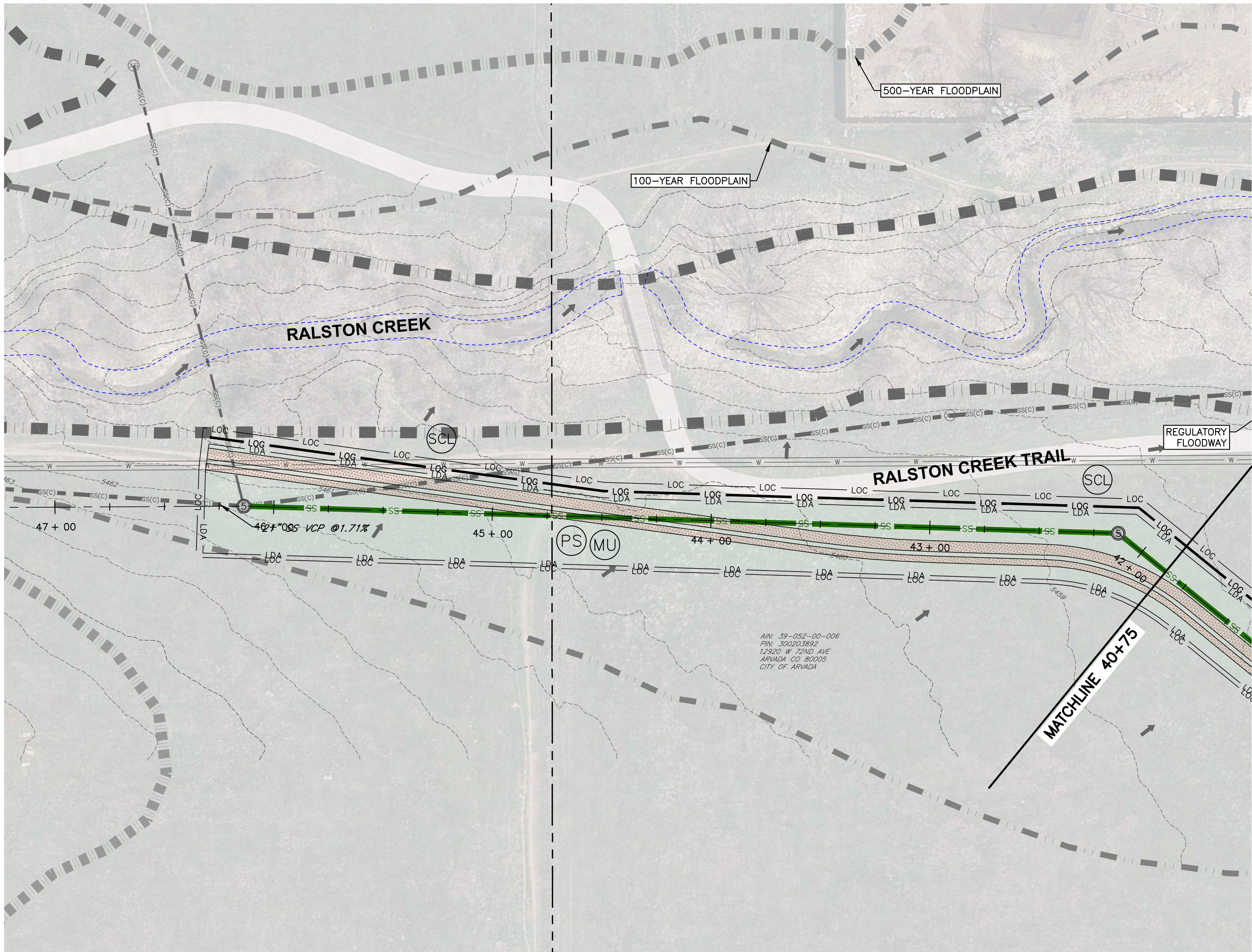
30 15 0 30 60

APPROVED
CITY OF ARVADA, COLORADO
PROJECT NO. 17-SR-07

BY: *[Signature]* DATE: 7/10/23

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BID SET

CITY OF ARVADA PROJECT NO. 17-SR-07
RALSTON TRUNK SEWER IMPROVEMENTS
WARD AND 69TH
PHASE 1
ARVADA, COLORADO

ISSUE	DATE
BID SET	06-27-2023
DESIGNED BY:	GSG
DRAWN BY:	SMM
CHECKED BY:	GJL
FILE NAME:	21666-00 EC01

Professional Engineer Seal for JAMES L. LIEBERMAN, No. 43296, State of Colorado, dated 06-27-2023.

DRAWING SCALE IN FEET:
HORIZONTAL: SEE PLAN
VERTICAL: SEE PLAN

EROSION CONTROL PLAN

PROJECT: 21666-00BLCV
DRAWING NO.

EC06

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EX. INDEX CONTOUR

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STABILIZED STAGING AREA

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PRE-FABRICATED VEHICLE TRACKING PAD

INLET PROTECTION-TYPE:

ROCK SOCK

CONSTRUCTION FENCE

SEDIMENT CONTROL LOG

PROTECT TREE

PORTABLE TOILET

EX. REGULATORY FLOODWAY

EX. 100 YEAR FLOODPLAIN

EX. 500 YEAR FLOODPLAIN

Legend symbols for erosion control measures:

- SSA (Stabilized Staging Area)
- CWA (Pre-fabricated Concrete Washout Structure)
- VTC (Pre-fabricated Vehicle Tracking Pad)
- IP1 (Inlet Protection Type 1)
- RS (Rock Sock)
- CF (Construction Fence)
- SCL (Sediment Control Log)
- PT (Protect Tree)

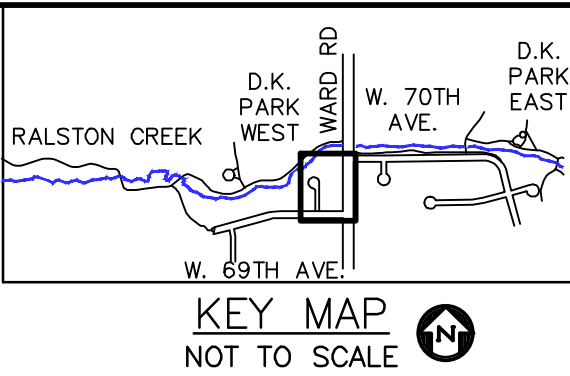
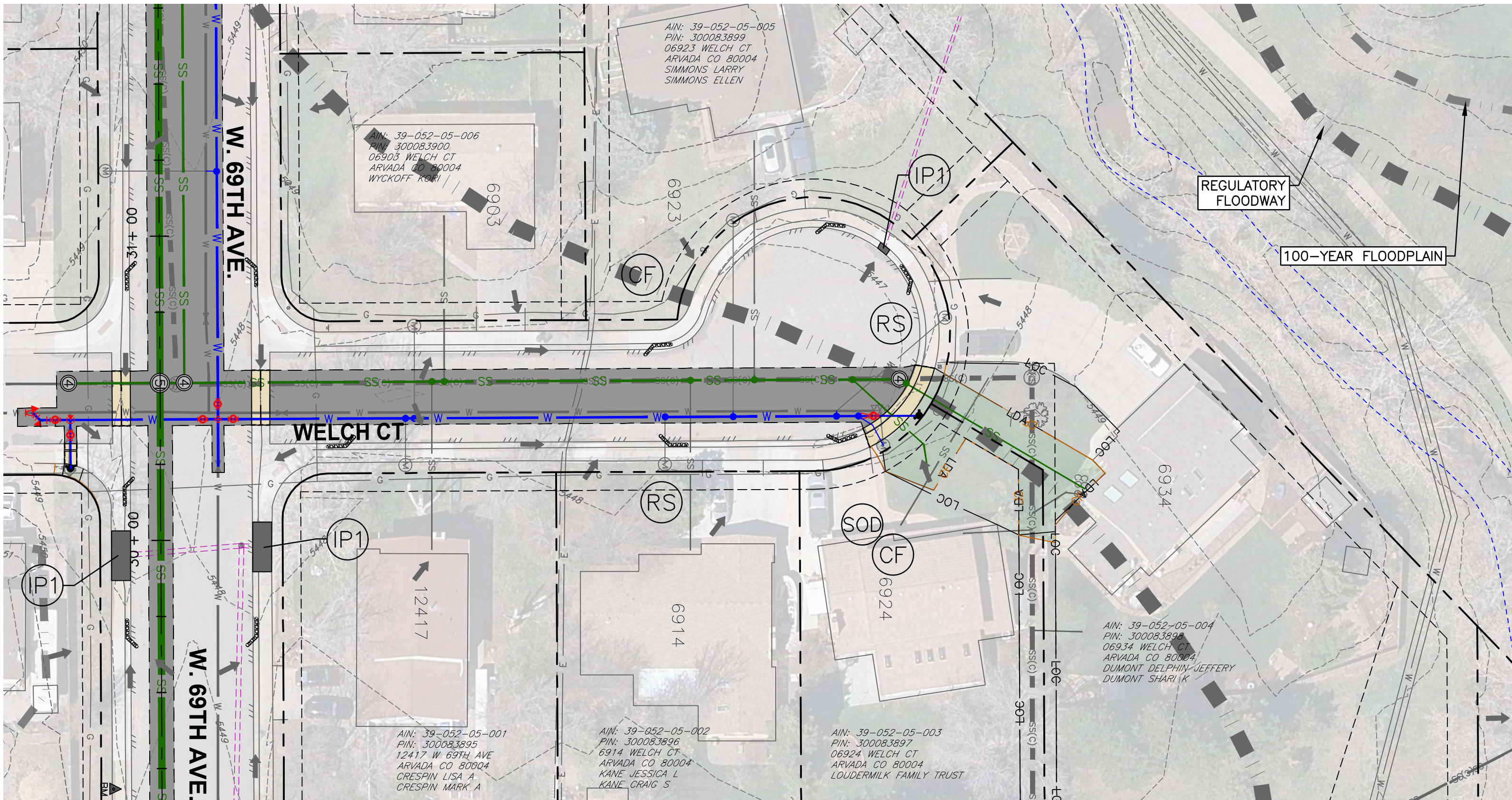
Scale in feet: 30 15 0 30 60

APPROVED
CITY OF ARVADA, COLORADO
PROJECT NO. 17-SR-07

BY: [Signature] DATE: 7/10/23

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BID SET
CITY OF ARVADA PROJECT NO. 17-SR-07
RALSTON TRUNK SEWER IMPROVEMENTS
WARD AND 69TH
PHASE I
ARVADA, COLORADO

ISSUE	DATE
BID SET	06-27-2023
DESIGNED BY:	GSG
DRAWN BY:	SMM
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FILE NAME:	21666-00 EC01

06-27-2023

DRAWING SCALE IN FEET:
HORIZONTAL: SEE PLAN
VERTICAL: SEE PLAN

EROSION CONTROL PLAN

PROJECT:21666-00BLCV
DRAWING NO.

EC07

NOTES

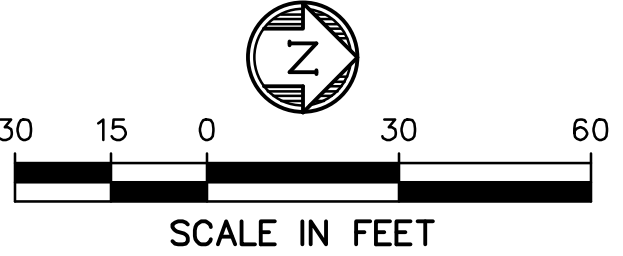
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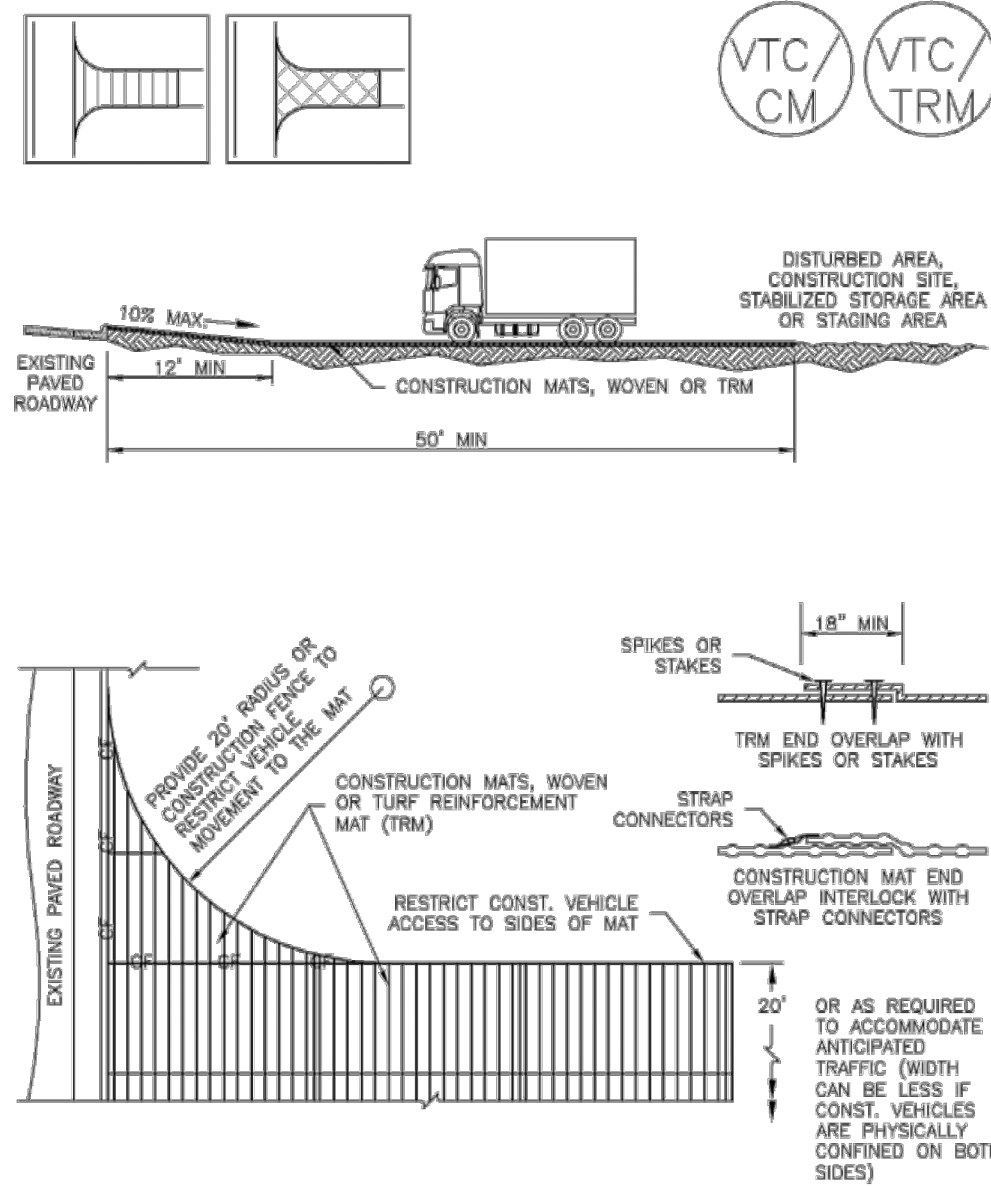
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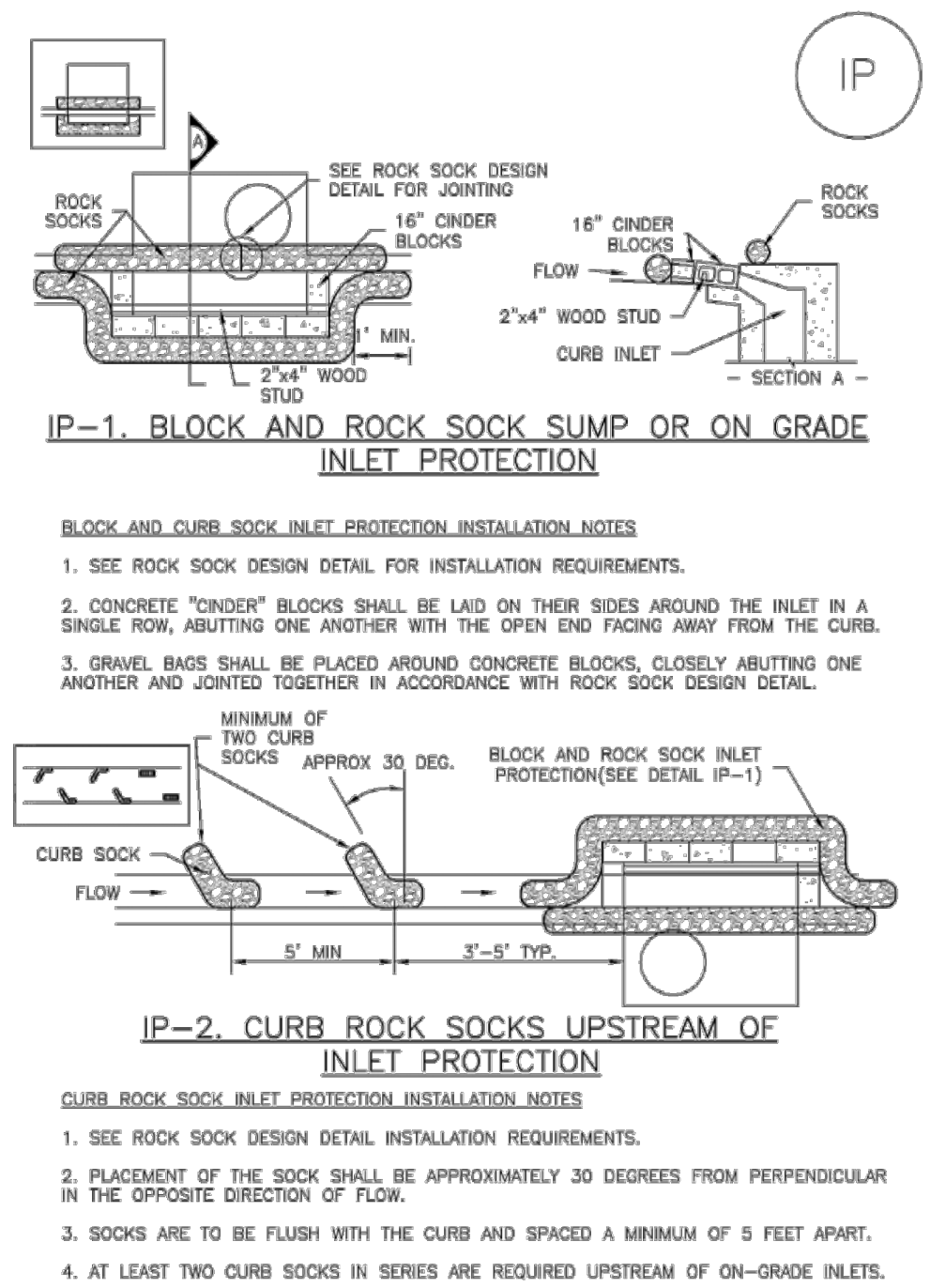
Vehicle Tracking Control (VTC) SM-4



VTC-3. VEHICLE TRACKING CONTROL W/ CONSTRUCTION MAT OR TURF REINFORCEMENT MAT (TRM)

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 VTC-5

SC-6 Inlet Protection (IP)



IP-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 August 2013

SM-4 Vehicle Tracking Control (VTC)

- STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES**
- SEE PLAN VIEW FOR:
 - LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S).
 - TYPE OF CONSTRUCTION ENTRANCE(S)/EXIT(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).
 - CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.
 - A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.
 - STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
 - A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.
 - UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.
- STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES**
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.
 - SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.
- (DETAILS ADAPTED FROM CITY OF BIRMINGHAM, COLORADO, NOT AVAILABLE IN AUTOCAD)

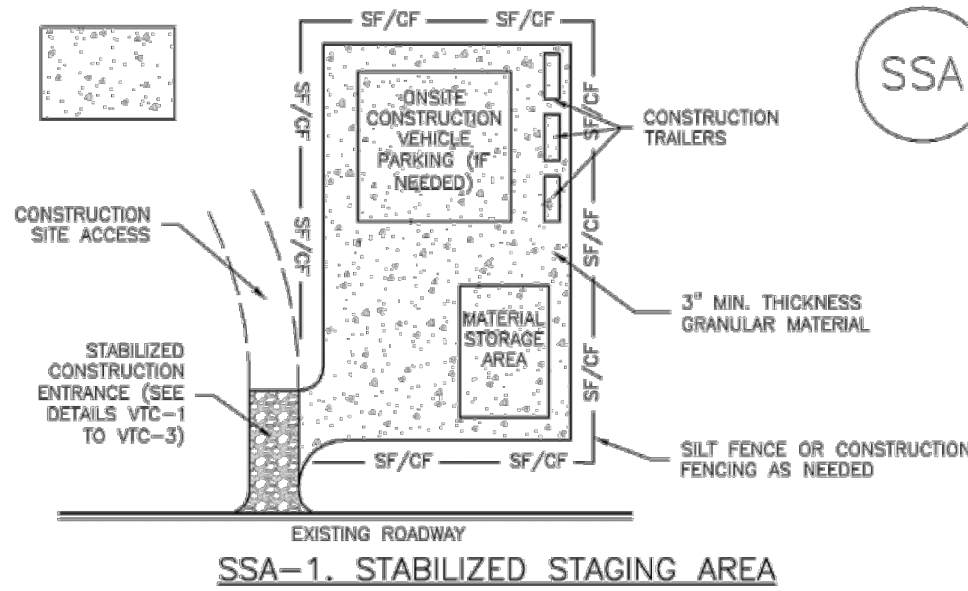
VTC-6 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

SC-6 Inlet Protection (IP)

- GENERAL INLET PROTECTION INSTALLATION NOTES**
- SEE PLAN VIEW FOR:
 - LOCATION OF INLET PROTECTION.
 - TYPE OF INLET PROTECTION (IP-1, IP-2, IP-3, IP-4, IP-5, IP-6).
 - INLET PROTECTION SHALL BE INSTALLED PROMPTLY AFTER INLET CONSTRUCTION OR PAVING IS COMPLETE (TYPICALLY WITHIN 48 HOURS). IF A RAINFALL/RUNOFF EVENT IS FORECAST, INSTALL INLET PROTECTION PRIOR TO ONSET OF EVENT.
 - MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.
- INLET PROTECTION MAINTENANCE NOTES**
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - SEDIMENT ACCUMULATED UPSTREAM OF INLET PROTECTION SHALL BE REMOVED AS NECESSARY TO MAINTAIN BMP EFFECTIVENESS. TYPICALLY WHEN STORAGE VOLUME REACHES 50% OF CAPACITY, A DEPTH OF 6" WHEN SILT FENCE IS USED, OR 1/3 OF THE HEIGHT FOR STRAW BALES.
 - INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED, UNLESS THE LOCAL JURISDICTION APPROVES EARLIER REMOVAL OF INLET PROTECTION IN STREETS.
 - WHEN INLET PROTECTION AT AREA INLETS IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.
- (DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)
- NOTE: THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF INLET PROTECTION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY PROPRIETARY INLET PROTECTION METHODS ON THE MARKET. UDFCD NEITHER ENDORSES NOR DISCOURAGES USE OF PROPRIETARY INLET PROTECTION. HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THE SWMP AND THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN IN THE MANUFACTURER'S DETAILS.
- NOTE: SOME MUNICIPALITIES DISCOURAGE OR PROHIBIT THE USE OF STRAW BALES FOR INLET PROTECTION. CHECK WITH LOCAL JURISDICTION TO DETERMINE IF STRAW BALE INLET PROTECTION IS ACCEPTABLE.

IP-8 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 August 2013

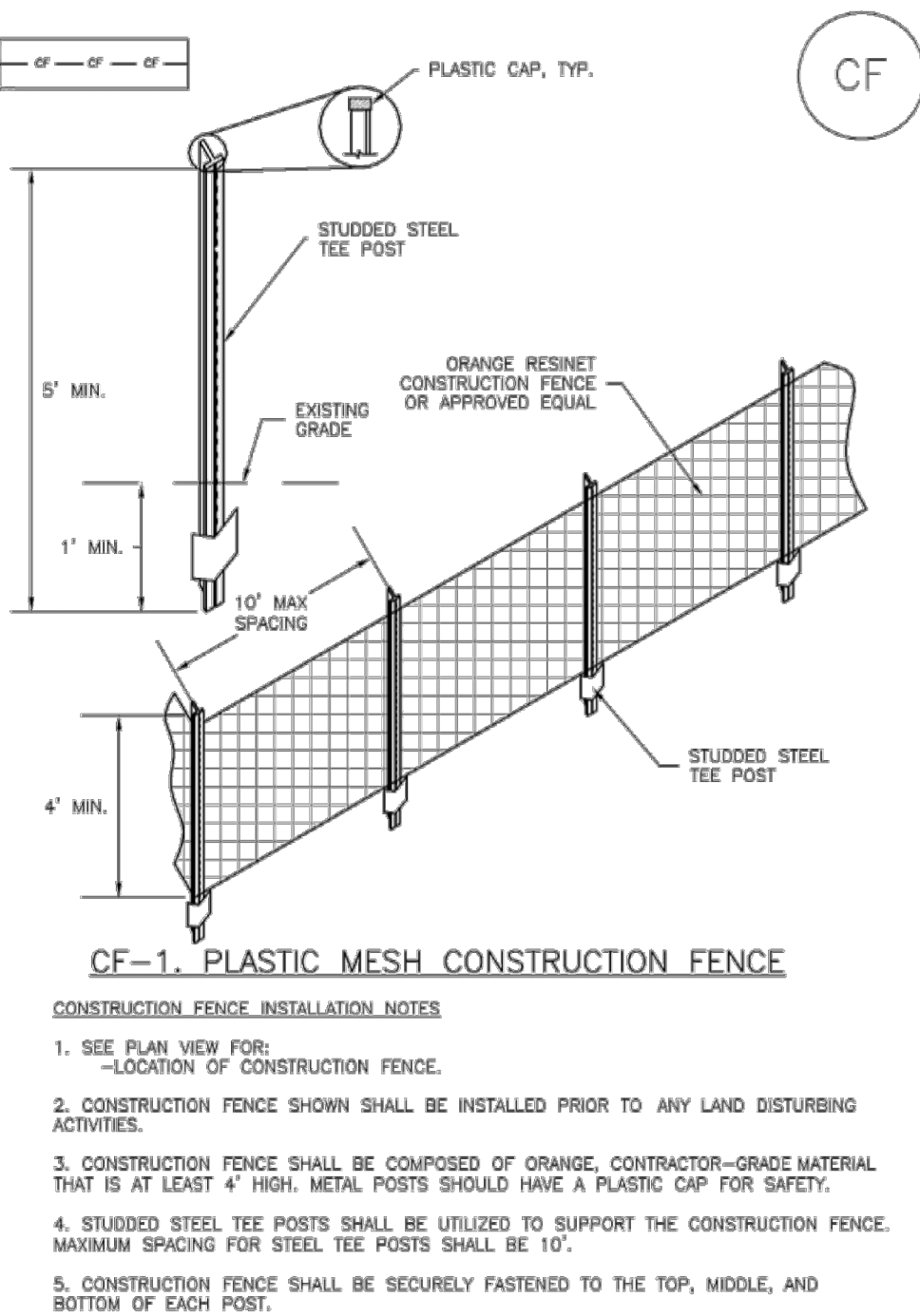
Stabilized Staging Area (SSA) SM-6



- SSA-1. STABILIZED STAGING AREA**
- STABILIZED STAGING AREA INSTALLATION NOTES**
- SEE PLAN VIEW FOR:
 - LOCATION OF STAGING AREA(S).
 - CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
 - STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.
 - STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.
 - THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.
 - UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.
 - ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.
- STABILIZED STAGING AREA MAINTENANCE NOTES**
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SSA-3

SM-3 Construction Fence (CF)



CF-2 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

SM-6 Stabilized Staging Area (SSA)

- STABILIZED STAGING AREA MAINTENANCE NOTES**
- STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
 - THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.
- NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.
- (DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

SSA-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

Construction Fence (CF) SM-3

- CONSTRUCTION FENCE MAINTENANCE NOTES**
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - CONSTRUCTION FENCE SHALL BE REPAIRED OR REPLACED WHEN THERE ARE SIGNS OF DAMAGE SUCH AS RIPS OR SAGS. CONSTRUCTION FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
 - WHEN CONSTRUCTION FENCES ARE REMOVED, ALL DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND/OR REMOVAL OF THE FENCE SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.
- (DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 CF-3

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BID SET
CITY OF ARVADA PROJECT NO. 17-SR-07
RALSTON TRUNK SEWER IMPROVEMENTS
WARD AND 69TH
PHASE 1
ARVADA, COLORADO

ISSUE	DATE
BID SET	06-27-2023
DESIGNED BY:	GSG
DRAWN BY:	SMM
CHECKED BY:	GUL
FILE NAME:	21666-00 EC08



DRAWING SCALE IN FEET:
HORIZONTAL: SEE PLAN
VERTICAL: SEE PLAN

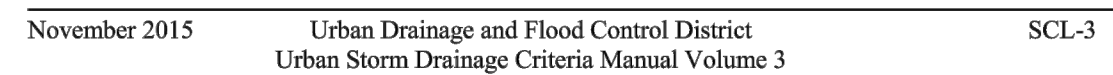
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CONTROL
DETAILS

PROJECT:21666-00BLCV
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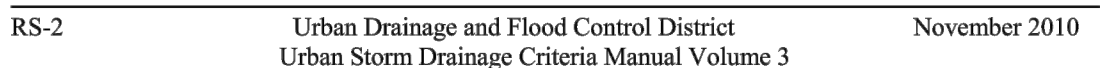
EC08

SHEET: 41 OF 42

SC-2



Rock Sock (RS)



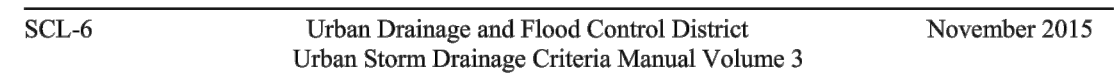
SC-2



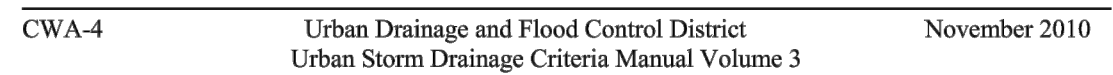
SC-5



Sediment Control Log (SCL)



Concrete Washout Area (CWA)



SHEET: 42 OF 42



GEOTECHNICAL ENGINEERING AND PAVEMENT DESIGN REPORT

***RALSTON SEWER TRUNK IMPROVEMENTS
WARD ROAD AND WEST 69TH AVENUE
ARVADA, COLORADO***

PREPARED FOR:

Drexel Barrell & Co.
1376 Miners Drive, Suite 107
Lafayette, CO 80026

PREPARED BY:

Cole Garner Geotechnical
1070 W. 124th Avenue, Suite 300
Westminster, Colorado 80234

CGG Project No.: 23.22.029
June 30, 2023



Cole Garner Geotechnical1070 W. 124th Ave, Ste. 300

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June 30, 2023

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Attn: Mr. Gary Grembowiec, P.E.
P: 303.442.4338
M: 973.800.3745
ggrembowiec@drexelbarrell.com

**Re: Geotechnical Engineering and Pavement Thickness Design Report
Ralston Sewer Trunk Improvements
In the Vicinity of Ward Road and West 69th Avenue
Arvada, Colorado
CGG Project No. 23.22.029**

Cole Garner Geotechnical (CGG) has completed geotechnical engineering investigation for approximately 2,000 lineal feet portion of a proposed underground sewer trunk and pavement thickness design for in the vicinity of Ward Road and West 69th Avenue in Arvada, Colorado. These services were performed in general accordance with our proposal number P23.22.002, executed February 1, 2023.

This geotechnical summary should be used in conjunction with the entire report for design and/or construction purposes. It should be recognized that specific details were not included or fully developed in this section, and the report must be read in its entirety for a comprehensive understanding of the items contained herein. The section titled General Comments should be read for an understanding of the report limitations.

- **Subsurface Conditions:**

- **Existing Pavement Materials:** Existing asphalt concrete (AC) thicknesses ranged from about 5 to 6 inches and aggregate base course (ABC) thicknesses ranged from about 6 inches to 10 inches.
- **Existing Man-made Fill:** Existing man-made fill, likely related to existing roadway, utility, and open space construction, was encountered extending to a depth of at least 5 feet below existing site grades (between our 4' and 9' sample drives). The fill was variable, but was primarily comprised of dark brown sandy lean clay and clayey sand with some gravels.
- **Native Soils:** Native soils consisting of silty sand and fine to coarse sand with silt and gravel were encountered underlying the fill soils. These soils were observed to be highly saturated with groundwater.
- **Sedimentary Claystone Bedrock:** Claystone bedrock was encountered underlying the overburden soils in four of our deeper borings at depths ranging from about 13 to 24 feet below existing grades (typically 13 to 16 feet).

- **Groundwater:** Groundwater was encountered at depths ranging from about 8 feet to 16 feet below existing site grades in five of our borings. The borings were backfilled upon completion of drilling for safety reasons. We believe groundwater is perched atop the impermeable claystone bedrock materials and related to regional groundwater in the Ralston Creek Valley.

Other specific information regarding the lithology encountered is noted on the Boring Logs.

- **Underground Utility Construction Considerations:** Based on the information obtained from our subsurface exploration and laboratory testing, we believe the site to be suitable for the proposed construction. ***We anticipate that construction will be primarily impacted by the presence of caving gravelly sand soils saturated with groundwater at relatively shallow depths.***

Dewatering and shoring methods will be required for installation of underground utilities, especially as excavations approach the groundwater depths reported here. We anticipate that clay soils may stand on relatively steep, temporary slopes, however, sloping and shoring of the excavations may be required where granular soils and variable gravelly clay fills are present, especially where excavations approach the groundwater table. Typical heavy-duty, excavators should be able to penetrate the soils along the alignment and at proposed horizontal drilling entry and exit points.

- **Existing Fill:** As discussed, approximately 6 feet of existing man-made fill was encountered in our borings. ***We have no information regarding the placement of these fill materials;*** however, it is assumed that these fill materials are associated with construction of the existing roadway(s), underground utilities, open space construction, or other “recent” redevelopment activities at the site. ***The field and laboratory data from our boring locations and sampling intervals suggest that the variable gravelly clay and clayey sand fill soils are considered to provide poor support for pavements in their current condition.*** Stabilization (overexcavation, mechanical, or chemical) will likely be required for support of reconstructed pavements at the site. Placement of closely-controlled utility trench backfill under the direction of the Geotechnical Engineer may eliminate the need for pavement subgrade stabilization.
- **Pavement Thickness:** Based on the design methods presented in the City of Arvada Standards, the minimum pavement section thickness alternatives for the proposed public are summarized below. ***The on-site soils appear to provide relatively good support for pavements in a reconditioned (moisture-conditioned and compacted) state.*** These materials should be free of unsuitable debris and larger fragments of fill. The use of CDOT Class 1 structural fill beneath site pavements could further improve stability and pavement support characteristics, if required.

Geotechnical Engineering and Pavement Thickness Design Report
Ralston Sewer Trunk – Arvada, Colorado
CGG Project No. 23.22.029

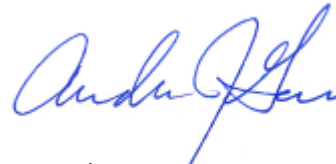
Traffic Area	Alternative*	Pavement Section Thickness (Inches)			
		Asphalt Concrete Surface	Aggregate Base Course	Portland Cement Concrete	Total
Local <i>West 69th Avenue, Welch Court, West 70th Avenue</i> ESAL ₂₀ =73,000	A	6	--	--	6
	B	4	6	--	10
	C	--	--	5-½	5-½
Collector <i>Ward Road</i> ESAL ₂₀ =1,500,000	A	9-½	--	--	9-½
	B	7	10	--	17
	C	--	--	9	9

We appreciate being of service to you in the geotechnical engineering phase of this project, and are prepared to assist you during the construction phases as well. Please do not hesitate to contact us if you have any questions concerning this report or any of our testing, inspection, design and consulting services.

Sincerely,

Cole Garner Geotechnical


Patrick Maloney, E.I., G.I.T.
Project Engineer


Andrew J. Garner, P.E.
Principal, COO



Copies to: Addressee (1 PDF copy)

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**GEOTECHNICAL ENGINEERING REPORT
RALSTON SEWER TRUNK IMPROVEMENTS
IN THE VICINITY OF WARD ROAD AND WEST 69TH AVENUE
ARVADA, COLORADO**

CGG Project No. 23.22.029

June 30, 2023

INTRODUCTION

This report contains the results of our geotechnical engineering investigation for a 2,000 lineal feet portion of a proposed underground sewer trunk and pavement thickness design for in the vicinity of Ward Road and West 69th Avenue in Arvada, Colorado. The purpose of these services is to provide information and geotechnical engineering recommendations relative to:

- Subsurface soil and bedrock conditions
- Groundwater conditions
- Underground utility construction
- Pavement structural sections
- Earthwork
- Drainage

The recommendations contained in this report are based upon the results of field and laboratory testing, engineering analyses, our experience with similar soil conditions and structures, and current City of Arvada *Engineering Standards and Specifications* (herein referred to as the Standards).

PROJECT INFORMATION

Project Description: We understand that approximately 2,000 linear feet of sanitary sewer will be removed and replaced within the vicinity of Ward Road, West 70th Avenue, Welch Court, and West 69th Avenue within the city of Arvada, Colorado. New PVC sewer lines will be installed to a maximum depth of about 15 feet below existing grades along the alignment and will generally be installed in open trenches (with and without shoring as space allows). The downstream end of the new line (east end) will need to be installed by laterally boring beneath Ralston Creek and an existing playground at Danny Kendricks East Park. We understand that existing asphalt pavement conditions and proposed asphalt concrete pavement patching and/or reconstruction recommendations will also be required.

If our assumptions above are not accurate, or if you have additional useful information, please inform us as soon as possible.

Site Information and Conditions: Site conditions generally consist of open space/public park property and the existing alignments of public roadways as follows:

- Danny Kendrick West Park East: Sod landscaping adjacent to Ralston Creek channel;
- 70th Avenue: Approximately 850 linear feet, one lane of travel in the east and westbound directions;
- Ward Road: Approximately 350 linear feet, one lane of travel in the north and southbound directions along with a center median and shoulder turn lanes;
- Welch Court: Approximately 215 linear feet, one lane of travel in the north and southbound directions, ends in a cul-de-sac at north end of roadway;
- West 69th Avenue: Approximately 875 linear feet, one lane of travel in the east and westbound directions; and
- City of Arvada Open Space (B6): Low to moderate growth of native grass and weeds. North side of public open space is adjacent to the Ralston Creek channel.

Existing pavement conditions and thicknesses varied slightly along the alignments, but all were surfaced with hot-mix asphalt concrete. Explored areas outside of roadways (Boring Nos. 1 and 6) consisted of park and open space property with relatively minimal elevation change. The ground surface in these areas was covered with sod landscaping and/or a low to moderate growth of grass and weeds.

SITE EXPLORATION PROCEDURES

The scope of the services performed for this project included site reconnaissance by a field engineer, a subsurface exploration program, laboratory testing and engineering analysis.

Field Exploration: Our scope of services included geotechnical exploration of the subsurface materials at six (6) locations along the alignment of the proposed sanitary sewer line. These exploratory test borings were drilled within West 70th Avenue, Ward Road, Welch Court, and West 69th Avenue for utility trench construction and pavement reconstruction design in accordance with the referenced *Standards* and within open space/park areas for utility trench construction and horizontal boring. Asphalt concrete (AC) cores and aggregate base course (ABC) measurements were performed at boring locations 2 through 5 for existing pavement condition assessments along the alignment. The borings were advanced to depths ranging from approximately 15 to 25 feet below the existing grades. Please refer to the attached Boring Location Diagram in Appendix A for specific boring locations.

Borings were advanced with truck- and all-terrain-vehicle-mounted drilling rigs utilizing 4-inch diameter, solid stem auger. A lithologic log of each boring was recorded by our field personnel during the drilling operations. At selected intervals, samples of the subsurface materials were obtained by driving standard split-spoon or modified California barrel samplers. Penetration resistance measurements were obtained by driving the sample barrel into the subsurface materials with a 140-pound automatic hammer falling 30

inches. The penetration resistance value is a useful index to the consistency, relative density or hardness of the materials encountered.

Groundwater measurements were obtained in the borings during exploration and then the borings were backfilled immediately thereafter for safety considerations. Where the borings were performed in existing pavements, they were backfilled with non-shrink grout mixed with sand and the pavement was patched with non-shrink grout or temporary cold-mix asphalt, according to the required Standards.

Laboratory Testing: Samples retrieved during the field exploration were returned to the laboratory for observation by the project geotechnical engineer, and were visually-manually classified in general accordance with the Unified Soil Classification System described in Appendix C. Bedrock is described according to the notes on Bedrock Classification. At that time, an applicable laboratory-testing program was formulated to determine engineering properties of the subsurface materials. Following the completion of the laboratory testing, the field descriptions were confirmed or modified as necessary, and Boring Logs were prepared. These logs are presented in Appendix A.

Laboratory test results are presented in Appendix B. These results were used for the geotechnical engineering analyses and the development of foundation and earthwork recommendations. Laboratory tests were performed in general accordance with the applicable local or other accepted standards.

Selected soil and bedrock samples were tested for the following engineering properties:

- Water content
- Dry density
- Swell/Consolidation potential
- R-value
- Grain size
- Plasticity Index
- Water-soluble sulfates

SUBSURFACE CONDITIONS

Geology: Surficial geologic conditions at the site, as mapped by the U.S. Geological Survey (USGS) (¹Van Horn, 1972), consist of the Piney Creek (Qp) and Broadway (Qb) Alluvium of Pleistocene and Holocene Age. These materials are typically described as fine to coarse sands with varying amounts of gravel deposited by historic waterways (in the current Ralston Creek Valley) These kinds of deposits are generally variable in thickness.

Bedrock units underlying the surface, as mapped nearby, consist of the Arapahoe Formation (Ka) of Upper Cretaceous Age. This unit is typically described as consisting of claystone, siltstone, and sandstone derived

¹ Van Horn, Richard, 1972., *Surficial and Bedrock Geologic Map of the Golden Quadrangle, Jefferson County, Colorado*, United States Geological Survey, Miscellaneous Investigations Series, Map I-761-A.

from volcanic debris that has been partially altered to montmorillonitic clay. The formation can be up to approximately 1,00 feet in thickness in the region.

Due to the relatively flat nature of these roadway alignments and open space, geologic hazards at the site are anticipated to be low. Seismic activity in the area is anticipated to be low, and the alignment should be relatively stable from a structural standpoint. With proper site grading erosional problems at the site should be reduced.

Mapping completed by the Colorado Geological Survey (²Hart, 1972) indicates the site is located in an area of "Low Swell Potential." This category includes several bedrock formations and many surficial deposits (such as the Alluvium mentioned above). As discussed, the thickness of these surficial deposits can be highly variable and bedrock with potentially higher expansive potential could be locally close to the surface.

Typical Subsurface Profile: Existing asphalt concrete (AC) thicknesses ranged from about 5 to 6 inches and aggregate base course (ABC) thicknesses ranged from about 6 inches to 10 inches. It should be noted that accurate thicknesses of aggregate based course can be difficult to determine in geotechnical auger borings.

Existing man-made fill (likely related to existing roadway(s), utility, open space construction, or other "recent" redevelopment activities at the site) was encountered in our borings and extended to a depth of about 6 feet existing site grades. The fill was variable, but was primarily comprised of sandy lean clay and clayey sand with some gravels. ***The variable gravelly clay fill and clayey sand soils are considered to provide poor support for pavements. However, the on-site soils appear to provide relatively good support for pavements in a reconditioned (moisture-conditioned and compacted) state.***

Native alluvial soils consisting of silty sand and fine to coarse sand with silt and gravel were encountered underlying the fill soils. These soils were observed to be highly saturated with groundwater that we assume is perched atop the impermeable claystone bedrock materials. Claystone bedrock was encountered underlying the overburden soils in four of our deeper borings at depths ranging from about 13 to 24 feet below existing grades (typically 13 to 16 feet).

Other specific information regarding the subsurface conditions is shown on the Boring Logs.

Groundwater Conditions: Groundwater was encountered at depths ranging from about 8 feet to 16 feet below existing site grades in five of our borings. The borings were backfilled upon completion of drilling for safety reasons.

² Hart, Stephen S., 1972, *Potentially Swelling Soil and Rock in the Front Range Urban Corridor, Colorado*, Colorado Geological Survey, Sheet 2 of 4.

Based upon review of U.S. Geological Survey Maps, (³Hillier, et al, 1983), regional groundwater beneath the project area is expected to be encountered in unconsolidated alluvial deposits at depths generally between 5 and 20 feet below the existing ground surface.

Current groundwater observations may not be indicative of seasonal “high water” conditions although the recent “historic” year-to-date precipitation in the Front Range could indicate that these measurements are indicative of “high water” conditions. Groundwater fluctuations are dependent upon several factors including hydrologic conditions, type of site development, irrigation demands on or adjacent to the site, fluctuations in water features, seasonal and weather conditions. ***The possibility of groundwater fluctuations should be considered when developing design and construction plans for the project.***

Laboratory Test Results: Samples of the subgrade soils were submitted to the laboratory for classification testing including percent passing the #200 sieve and Atterberg Limits. Laboratory test results indicate that the subgrade materials are predominantly non-plastic although three fine-grained samples exhibited low to moderate plasticity with Plasticity Indices (PI) ranging from 8 to 28. The non-plastic granular soils classified as A-1-b, A-2-4, and A-4 under AASHTO guidelines while the plastic soils classified as A-2-6, A-4, and A-7-6. Group Indices ranged from 0 to 16 (typically 0 to 1). Water-soluble sulfate testing of select samples indicated concentrations ranging from 0 to 1,500 parts per million (ppm).

As required by the Standards, swell/expansion testing was conducted on select relatively undisturbed subgrade sample(s). The samples tested exhibited low swell/consolidation potential generally ranging from -1.2 to +1.7 percent when inundated under a surcharge load of 200 psf.

A composite sample of the A-4 soils, representative of those present at the site, were submitted for R-value testing in accordance with the Standards. These results indicated an R-value of 48. We believe that these results are unrealistic given the site soil conditions. Based on our experience, we believe an R-value of 20 is appropriate for the soils that will be present beneath reconstructed pavements. ***The variable gravelly clay fill and clayey sand soils are considered to provide poor support for pavements. However, the on-site soils appear to provide relatively good support for pavements in a reconditioned (moisture-conditioned and compacted) state.***

RECOMMENDATIONS FOR DESIGN AND CONSTRUCTION

Geotechnical Considerations: In our opinion, the site appears suitable for the proposed sanitary sewer installation and roadway reconstruction/rehabilitation as long as the recommendations included herein are incorporated into the design and construction aspects of the project. The primary geotechnical

¹ Hillier, Donald E.; and Schneider, Paul A., Jr., Hutchinson, E. Carter, 1983, *Depth to Water Table (1976-1977) in the Greater Denver Area, Front Range Urban Corridor, Colorado*, United States Geological Survey, Map I-856-K.

concerns at the site include the presence of variable, soft man-made fill soils beneath proposed pavements, shallow groundwater, and wet caving gravelly sand soils.

- **Underground Utility Construction Considerations:** Based on the information obtained from our subsurface exploration and laboratory testing, we believe the site to be suitable for the proposed construction. ***We anticipate that construction will be primarily impacted by the presence of caving gravelly sand soils saturated with groundwater at relatively shallow depths.***

Dewatering and shoring methods will be required for installation of underground utilities, especially as excavations approach the groundwater depths reported here. We anticipate that clay soils may stand on relatively steep, temporary slopes, however, sloping and shoring of the excavations may be required where granular soils and variable gravelly clay fills are present, especially where excavations approach the groundwater table. Typical heavy-duty, excavators should be able to penetrate the soils along the alignment and at proposed horizontal drilling entry and exit points.

- **Existing Fill:** As discussed, approximately 6 feet of existing man-made fill was encountered in our borings. ***We have no information regarding the placement of these fill materials;*** however, it is assumed that these fill materials are associated with construction of the existing roadway(s), underground utilities, open space construction, or other “recent” redevelopment activities at the site. ***The field and laboratory data from our boring locations and sampling intervals suggest that the gravelly clay fill soils are considered to provide poor support for pavements in their current condition. However, the on-site soils appear to provide relatively good support for pavements in a reconditioned (moisture-conditioned and compacted) state.*** Stabilization (overexcavation, mechanical, or chemical) could be required for support of reconstructed pavements at the site. Placement of closely-controlled utility trench backfill under the direction of the Geotechnical Engineer may eliminate the need for pavement subgrade stabilization. The use of CDOT Class 1 structural fill beneath site pavements could further improve stability and pavement support characteristics, if required.

Horizontal Directional Drilling: Based on the results of our field testing, the subsurface materials generally consist of variable fill soils with gravel underlain by very loose to loose sand saturated with groundwater and claystone bedrock. In our opinion, ***the overburden soils have moderate to high potential for caving.*** Some debris and gravels were encountered in the borings, specifically in the upper fill soils.

- **Drilling Fluid:** Drilling fluid should be used during drilling and back-reaming operations. Drilling fluid should be composed of clean water and appropriate additives and bentonite. Water should be from an authorized source with a minimum pH of 6.0. Water of a lower pH or with excessive calcium should be treated with the appropriate amount of sodium carbonate or equivalent. The water and additives should be mixed thoroughly and be absent of any clumps or clods. The viscosity of the fluid should be appropriate for the generally loose sands and hard claystone bedrock materials that are anticipated within the

subsurface. Potentially hazardous materials should not be used in drilling fluid. Based on the soil conditions at the site, the following generic items are offered:

- The fluid pressure and pumping rate for pilot drill and pre-ream should be commensurate with the subsoil conditions.
 - The drilling fluid viscosity and density should be appropriate for the variation of the subsoil conditions.
 - Bentonite may be used for suspension of cutting and fluid loss control. Polymer may be used to increase viscosity and control swelling in clayey materials;
 - Drilling fluid should not be recycled and should be hauled off the site.
-
- **Heaving Potential:** Drilling fluid should include bentonite to control swelling in the claystone bedrock materials if these materials are penetrated. However, heaving may occur when attempting to back-ream too large a hole. To minimize heaving, reaming passes should be completed leaving the bored hole at full design diameter during pullback. The pullback barrel reamer should be no larger than the design bored diameter. The pullback rate should minimize overcutting of the borehole so that excessive voids are reduced and post installation settlement may be minimized.
-
- **Control and Containment:** The drilling operations should be monitored continuously by experienced personnel trained in all aspects of the directional drilling process. These procedures include a very accurate monitoring and control system to track the progress and exact location of the drilling head at all times. Horizontal and vertical adjustments should be made throughout the procedure so that the drilling profile matches the planned profile. The specific weight of the drilling fluid should be adjusted throughout the procedure to maintain hydrological stability. Jetting pressures should be limited to avoid drilling fluid release during drilling. However, should release of drilling fluid in the project area occur, operations should stop immediately and measures should be taken to contain the release.

Generic measures may include the following:

- If a release is detected, the drilling crew should take immediate corrective action to contain the release and to prevent migration offsite.
- Pits and/or berms should be constructed around the borehole entry point to contain drilling fluid and return.
- Containment equipment, including earth moving equipment, portable pumps, hand tools, sandbags, hay bales, silt fencing, lumber, and vacuum trucks, should be stored and readily available at the drilling site.
- If hand tools cannot contain a small release, small collection sumps may be constructed to pump the release material into the drilling fluid processing system.
- Any drilling fluid seepage should be removed using a vacuum truck and then transported to an approved disposal site.

- **Monitoring:** Contractor personnel should be onsite during the directional drilling activities and continuously monitor all operations during drilling activities. The drilling operator should maintain records on drilling fluid pumping rates, pressures, viscosity and density, etc. throughout the course of drilling activities. Drilling is typically done during daytime hours. If nighttime drilling activities are necessary, appropriate lighting should be provided to assure continued drilling fluid release monitoring. Since the HDD installation is along an active canal/irrigation ditch, a survey grid line should be established and monitoring points should be utilized to provide early indications of settlement.
- **Temporary Excavation & Shoring:** It is our understanding that the HDD installation will require “Boring and Receiving Pits” for operation. We understand that the depth of these pits will be limited to about 4 feet below existing site grade. Subsurface conditions at the entry and exit points (Boring No. 1) consist of relatively stiff clayey fill soils.

The individual contractor(s) is responsible for designing and constructing stable, dry, temporary excavations as required maintaining stability of both the excavation sides and bottoming. All excavations should be sloped or shored in the interest of safety following local and federal regulations, including current OSHA excavation and trench safety standards. We believe it is prudent to plan on OSHA Type C soils at the pit locations. The selection and design of the shoring system, if required, should be the contractor's responsibility. The contractor should have the shoring system designed and signed by a Colorado Registered Engineer.

Based on the boring data, conventional equipment could be used to excavate on-site soil materials. The materials to be excavated are anticipated to be clays of low plasticity and loose silty sands with gravel. Also, the sandy soils may contain relatively high moisture contents (wet of optimum).

- **Working Platform:** The near-surface fill soils at our boring locations are generally variable, ranging from loose to stiff. ***While we feel that these soils should generally provide a stable working platform, the presence of soft, unsuitable fills should be accounted for.*** If mobility and support becomes difficult due to unsuitable fill soils, precipitation, proximity to groundwater, etc., it may be necessary to stabilize the subgrade soil. The contractor may minimize the disturbance or mitigate existing ground conditions by constructing a working platform, if required, at the bottom of the excavation. The working platform may be installed as follows:
 - Over-excavating 12 inches below the planned excavation subgrade;
 - Placing a layer of geotextile enhancement fabric at the bottom of the resulting excavation;
 - Backfilling with crushed rock (3-4 inches maximum size) or other such bridging material.

The Contractor may choose to use other measures such as placing timber material or other construction techniques.

- **Construction Dewatering:** *Based upon our groundwater measurements, temporary dewatering will likely be required during construction.* Dewatering of excavations is normally the responsibility of the contractor and should be a design-build system. Generally this type of dewatering can be performed by pumping from low spots within the excavation. The contractor should satisfy himself/herself with the prevailing conditions and obtain additional information if needed to design the required dewatering method.

Earthwork:

- **General Considerations:** The following presents recommendations for site preparation, excavation, subgrade preparation and placement of engineered fills on the project.

All earthwork on the project should be observed and evaluated by CGG. The evaluation of earthwork should include observation and testing of engineered fills, subgrade preparation, foundation bearing soils and other geotechnical conditions exposed during the construction of the project.

- **Demolition and Site Preparation:** Strip and remove vegetation, existing foundations and pavements, any unsuitable existing fills, or any other deleterious materials from the site. Stripped materials consisting of vegetation and organic materials should be wasted from the site or used to revegetate landscaped areas or exposed slopes after completion of grading operations. Asphalt or concrete materials removed as part of site reclamation may be re-used on the site. We recommend that these materials be crushed to a maximum size of 4 to 6 inches and used to stabilize any soft soils that may be encountered.
- **Fill Materials:** On-site soils may be used for general site grading and trench backfill, provided they are free of unsuitable debris and fill fragments. However, the use of CDOT Class 1 structural fill beneath site pavements could improve pavement support characteristics. Imported fill materials should conform to the following requirements:

	Percent finer by weight
<u>Gradation</u>	<u>(ASTM C136)</u>
2"	100
No. 4 Sieve.....	30-100
No. 40 Sieve	10-60
No. 200 Sieve	5-20
Liquid Limit	Non-plastic
Plasticity Index.....	Non-plastic

- **Fill Placement and Compaction:** Engineered fill should be placed and compacted in horizontal lifts, using equipment and procedures that will produce recommended moisture contents and densities

throughout the lift. Engineered fills should be placed and compacted according to the recommendations in the following table:

Criteria	Recommended values
Lift thickness	8 inches or less in loose thickness, depending on equipment
Moisture content range	Pavement Subgrade (onsite clays): Optimum to +2% percent above optimum Non-plastic sands/ABC: -2% percent below to +2% percent above optimum
Compaction	Pavement Subgrade (onsite clays): 95 percent minimum standard Proctor dry density (AASHTO T99) Non-plastic sands/ABC: 95 percent minimum modified Proctor dry density (AASHTO T180)

Observation and compaction testing should be performed by a qualified Geotechnical Engineer during subgrade preparation, backfill and other earthwork operations. Should the results of the in-place density tests indicate the specified moisture or compaction limits have not been met, the area represented by the test should be reworked and retested as required until the specified moisture and compaction requirements are achieved.

- **Excavations:** Caving gravelly sand soils and groundwater are present at the site. The individual contractor(s) should be made responsible for designing and constructing stable, temporary excavations, as required, in order to maintain stability of both the excavation sides and bottom. All excavations should be sloped or shored in the interest of safety following local and federal regulations, including current OSHA excavation and trench safety standards. We believe it is prudent to plan on OSHA Type C soils at the pit locations.

As a safety measure, it is recommended that all vehicles and soil piles be kept to a minimum lateral distance from the crest of the slope equal to no less than the slope height. The exposed slope face should be protected against the elements.

Pavement Design and Construction: Design of pavements for the public roadways has been performed in general accordance with the City of Arvada *Engineering Standards and Specifications*, 2022 Edition, respectively (Standards). These Standards are based in part on methods outlined in the 1993 *Guide for Design of Pavement Structures* by the American Association of State Highway and Transportation Officials (AASHTO), the Municipal Government Pavement Engineers Council (MGPEC) 2021 *Pavement Design Standards and Construction Specifications Manual*, and the 2017 *Pavement Design Manual* by the Colorado Department of Transportation (CDOT).

- **Subgrade Soil Support:** The non-plastic granular soils classified as A-1-b, A-2-4, and A-4 under AASHTO guidelines while the plastic soils classified as A-2-6, A-4, and A-7-6. Group Indices ranged from 0 to 16 (typically 0 to 1). ***The variable gravelly clay fill and clayey sand soils are considered to provide poor***

support for pavements. However, the on-site soils appear to provide relatively good support for pavements in a reconditioned (moisture-conditioned and compacted) state. These materials should be free of unsuitable debris and larger fragments of fill. The use of CDOT Class 1 structural fill beneath site pavements could further improve stability and pavement support characteristics, if required.

Laboratory test results indicate that the subgrade materials are predominantly non-plastic although three fine-grained samples exhibited low to moderate plasticity with Plasticity Indices (PI) ranging from 8 to 28. At current moisture contents, these fill soils exhibit low expansive/consolidation potential. Even low expansive materials may heave upon additional wetting, potentially resulting in pavement distress and other movement causing common cosmetic distress such as edge cracking, uneven curb and gutter, etc. We believe that some heave-related distress should be anticipated during the design life of the pavement even with subgrade mitigation.

As outlined in the Standards, the pavement thickness design is based on the poorest quality subgrade soils present along each roadway. As discussed, AASHTO A-4 are representative of the soils present along the proposed alignments. Therefore, pavement thickness calculations were based on R-value testing of these materials. A composite sample of the A-4 soils were submitted for R-value testing in accordance with the Standards. These results indicated an R-value of 48. **We believe that these results are unrealistic given the site soil conditions. Based on our experience, we believe an R-value of 20 is appropriate for the soils that will be present beneath reconstructed pavements.** A correlated Resilient Modulus (M_R) of 4,940 psi for the A-4 subgrade soils was used for design per the Standards.

- **Design Traffic Values:** Design traffic values, used to determine pavement thickness are defined as 18-kip equivalent daily load applications ($EDLA_{20}$) and 18-kip equivalent single axle loads ($ESAL_{20}$) based on a 20-year design, per the Standards. The pavement rehabilitation design was performed for a 20-year design life. These values are based on roadway classification and design traffic values. We assume that Ward Road is classified as a Collector street and that West 69th Avenue, Welch Court, and West 70th Avenue are classified as Local by the City of Arvada. Using the traffic values from the Standards, design $EDLA_{20}/ESAL_{20}$ values were determined to be as follows:

Traffic Classification	Roadway	Equivalent Single Axle Loads ($ESAL_{20}$)
Arterial	--	2,200,000
Collector	Ward Road, West 70 th Avenue	1,500,000
Local	West 69 th Avenue, Welch Court	73,000

- **Recommended Pavement Sections:** Using the correlated design M_R value and the $ESAL_{20}$ values outlined above, the required structural number (SN) for the proposed Public Streets was determined using appropriate methods and the appropriate design Nomographs provided by CDOT and AASHTO. Other factors utilized for design included a drainage coefficient of 1.0, a reliability of 85 to 90 percent, a standard deviation of 0.44, and a serviceability loss of 2.0 to 2.5; depending on traffic classification.

We understand that the City of Arvada does not allow “rigid” Portland cement concrete pavement sections for public roadways, unless approved by the Public Works director. As outlined in the Standards, structural coefficients of 0.44 and 0.12 were used for each inch of asphalt concrete and aggregate base course, respectively. The thickness calculations are included in Appendix D. The following table summarizes the recommended pavement sections. Recommended pavement sections meet the minimum pavement sections as put forth in the Standards.

Traffic Area	Alternative	Pavement Section Thickness (Inches)			
		Asphalt Concrete Surface	Aggregate Base Course	Portland Cement Concrete	Total
Local <i>West 69th Avenue, Welch Court, West 70th Avenue</i> ESAL ₂₀ =73,000	A	6	--	--	6
	B	4	6	--	10
	C	--	--	5-½	5-½
Collector <i>Ward Road</i> ESAL ₂₀ =1,500,000	A	9-½	--	--	9-½
	B	7	10	--	17
	C	--	--	9	9

* We believe that City of Arvada minimum pavement sections for each roadway classification.

**In our opinion, full-depth asphalt sections may be structurally equivalent, but may result in premature cracking of the sections. Typically, these cracks are longitudinal in nature and do not constitute structural failure of the pavement, but should be sealed right away.

- **Subgrade Preparation:** In order to provide a more uniform subgrade for site pavements, we recommend that over-excavated fill, scarified subgrade, and pavement subgrade soils should be placed and compacted in horizontal lifts, using equipment and procedures that will produce recommended moisture contents and densities throughout the lift, as described in the Earthwork section above.

Just prior to placement of base course, all pavement areas should be rough graded and then thoroughly proof rolled with a loaded tandem axle dump truck, water truck, or other heavy equipment approved by the observing engineer within 24 hours prior to paving. Particular attention should be paid to high traffic areas that were rutted and disturbed earlier and to areas where backfilled trenches are located. Areas where unsuitable conditions are located should be repaired by removing and replacing the materials with properly compacted engineered fills or additional base course. At a minimum, all subgrade soils should be scarified, moisture conditioned, and recompacted just prior to paving.

- **Subsurface Drainage:** In our experience, surface water (from precipitation and irrigation) tends to collect behind curbs, attached sidewalks, etc. and this water infiltrates the subsurface over time. This water, if allowed to pond adjacent to roadways for extended periods, can cause:
 - minor swell of the clayey pavement subgrade soils, which has been known to cause cracking approximately 1 to 3 feet from the edge of curb and gutter (commonly known as edge cracking) and
 - softening of the subgrade soils, particularly in areas of the roads that are lowest in elevation. These soft subgrade soils commonly cause localized alligator cracking and structural failure.

In our experience, the use of composite sections (HMA over ABC) often reduce the potential for these subgrade issues, however, in those areas that are lowest in elevation (particularly where storm sewer inlets are located) this subsurface water may collect and pool within the base course.

- **Pavement Materials:** Materials and construction of pavements for the project should be in accordance with the requirements and specifications of the City of Arvada. Materials should be submitted to the City of Arvada for approval prior to use on the site.
 - **Aggregate Base Course:** Aggregate base course should consist of a blend of sand and gravel which meets strict specifications for quality and gradation. Use of materials meeting MGPEC or Colorado Department of Transportation (CDOT) Class 5 or 6 specifications is recommended as follows:

<u>Standard Sieve Size</u>	<u>Percent Passing by Weight</u>		
	<u>Class 5</u>	<u>Class 6</u>	<u>MGPEC</u>
1-1/2".....	100	--	--
1" 95-100 -- --			
3/4".....	--	100	100
No. 4	30-70	30-65	35-65
No. 8	--	25-55	25-55
No. 200	3-15	3-12	3-15
Liquid Limit.....	30 Maximum		
Plasticity Index	15 Maximum		
Los Angeles Abrasion (AASHTO T 96)	45 Maximum		
R-Value	78 Minimum		
Resilient Modulus, psi	20,000 Minimum		

In addition, the base course material should be moisture stable. Moisture stability is determined by R-value testing which shows a maximum 12-point difference in R-values between exudation

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pressures of 300 psi and 100 psi. Aggregate base course material should be tested to determine compliance with these specifications prior to importation to the site. Aggregate base course should be obtained from approved sources.

Aggregate base course should be placed in lifts not exceeding 6 inches and compacted to a minimum of 100 percent standard Proctor density (ASTM D-698), within a moisture content range of 2 percent below to 2 percent above optimum. Where base course thickness exceeds 6 inches, the material should be placed and compacted in 2 or more lifts of equal thickness.

- **Asphalt Concrete:** Asphalt concrete should be obtained from an approved mix design stating the Hveem properties, optimum asphalt content, job mix formula (JMF), and recommended mixing and placing temperatures. Aggregate used in asphalt concrete should meet a particular gradation.

Use of materials meeting MGPEC and CDOT Grading SX, S and/or SG specifications is recommended as outlined below:

Grading:	Normal Gradings					
	Grading SX (1/2" nominal)		Grading S (3/4" nominal)		Grading SG (1" nominal)	
Sieve Size	Master Range & Control Points	<i>Restricted Zone Boundary (Guideline Only) see note *</i>	Master Range & Control Points	<i>Restricted Zone Boundary (Guideline Only) see note *</i>	Master Range & Control Points	<i>Restricted Zone Boundary (Guideline Only) see note *</i>
1-1/2"					100	
1"			100		90-100	
3/4"	100		90-100		@@	
1/2"	90-100		@@		@@	
3/8"	@@		@@		@@	
#4	@@		@@		@@	point=39.5
#8	28-58	point=39.1	23-49	point=34.6	19-45	26.8-30.8
#16	--	25.6-31.6	--	22.3-28.3	--	18.1-24.1
#30	@@	19.1-23.1	@@	16.7-20.7	@@	13.6-17.6
#50	@@	point=15.5	@@	point=13.7	@@	point=11.4
#100	--		--		--	
#200	2.0-8.0		2.0-7.0		1.0-7.0	

General Note: Mix designs shall be reworked if mixes segregate in the field and field procedures cannot correct the problem. The Engineer shall determine segregation.

@@ Note: These additional screens shall have a % passing initially established from the Mix Design JMF. Tolerances shall then be applied to establish the AMPR.

***Note:** The restricted zone boundaries (Guideline Only) shown for Gradings SX, S and SG are to be used as guidelines in mix design development. However, the job-mix gradation is not required to pass above or below the restricted zone boundaries.

All mixes shall meet the minimum voids in material aggregate (VMA) specified in the following table, below. VMA shall be based on the most recent tests of the Bulk Specific Gravity of the Compacted Mix (CP-L 5103) and Aggregate (T 84 & T 85), and calculated according to CP-48.

Nominal Maximum Particle Size ¹	Mixture Air Voids ² , %		
	3.5	4.0	4.5
1"	12.2	12.7	13.2
3/4"	13.2	13.7	14.2
1/2"	14.2	14.7	15.2

¹The Nominal Maximum Particle Size is defined as one sieve size larger than the first sieve to retain more than 10%, but shall not exceed the 100% passing size. The Nominal Maximum Particle Size can vary during mix production even when the 100% passing size is constant.

²Minimum VMA criteria applies to both design and plant produced mix. The VMA minimum shall be interpolated based on actual air voids.

Aggregates should not contain clay balls, organic matter or other deleterious substances. After the job mix formula is established, all mix furnished for the project should conform within the following range of tolerances:

○ **Mix Tolerances:**

- Maximum Size ±0 percentage points
- Passing No. 3/8 and larger ±6 percentage points
- Passing No. 4 and No. 8..... ±5 percentage points
- Passing No. 30 to No. 50 ±4 percentage points
- Passing No. 200 ±2 percentage points
- Asphalt Content ±0.3 percentage points
- Air Voids ±1.2 percentage points
- VMA..... ±1.2 percentage points

Performance-Graded Binders (PG) for each proposed traffic area shall meet the requirements for PG 64-22 with 75 design revolutions. The mix design should be performed using the Superpave procedures as outlined in the Standards for proposed Traffic area.

The Superpave mixture properties are summarized below:

Traffic Level	Low	Medium	High
Traffic Loading, total 18 kip ESAL's over design life (usually 20 years)	(0-100,000)	(100,000 to <3.0 Million)	(3.0 Million to <30 Million)
Design Gyration, N _{design} ; (Air Void Specification: 3.5% to 4.5%)	50	75	100
Hveem Stability, (100mm plugs)	N/A	28 Min.	30 Min.
Voids in Mineral Aggregate, %(VMA) (test method is CDOT CP 48)	see table	see table	see table
Voids Filled with Asphalt, % (calculate by MS-2)	70 -- 80	65 -- 78	65 -- 75
Tensile Strength Ratio, min. % retained (Lottman)	80	80	80
Dry Tensile Strength, min. psi	30	30	30

The mix design should be submitted prior to construction to verify its adequacy. The asphalt concrete should be placed in maximum 3-inch lifts and compacted to between 92 and 96 percent of Rice value (AASHTO T-209).

- **Portland Cement Concrete:** Where rigid pavements are used, portland cement concrete mix design shall conform with MGPEC specifications. The concrete should meet "MGPEC PCCP Mix" specifications with the following minimum properties:

Laboratory Compressive Strength @ 28 days4,000 psi minimum
Modulus of Rupture @ 28 days..... 600 psi minimum
Cement Type Type II Portland
Entrained Air Content..... 5 to 8% (¾" nominal aggregate size)
Entrained Air Content..... 4.5 to 7.5% (1.0" or 1.5" nominal aggregate size)
Minimum Cement Content..... 610 lb/cubic yard
Water/Cement Ratio0.45 maximum
Concrete Aggregate.....ASTM C33 and AASHTO M6 & M80

PCCP aggregate shall conform to the following gradation specifications:

Sieve Size	PCCP Aggregate Gradations		
	No. 67 (3/4" nominal)	No. 57 (1" nominal)	No. 467 (Combined Grading)
2"	--	--	100
1-1/2"	--	100	95-100
1"	100	95-100	--
3/4"	90-100	--	35-70
1/2"	--	25-60	--
3/8"	20-55	--	10-30
#4	0-10	0-10	0-5
#8	0-5	0-5	--
#200	--	--	--

Concrete should be deposited by truck mixers or agitators and placed a maximum of 90 minutes from the time the water is added to the mix. Other specifications outlined by MGPEC and CDOT should be followed.

Longitudinal and transverse joints should be provided as needed in concrete pavements for expansion/contraction and isolation per MGPEC requirements. The location and extent of joints should be based upon the final pavement geometry. Sawed joints should be cut within 24 hours of concrete placement and should be a minimum of 25 percent of slab thickness plus 1/4 inch. All joints should be sealed to prevent entry of foreign material and doweled where necessary for load transfer.

- **Compliance:** Recommendations for pavement design and construction presented depend upon compliance with recommended material specifications. To assess compliance, observation and testing should be performed under the observation of the geotechnical engineer.
- **Pavement Performance and Maintenance:** Future performance of pavements will be dependent upon several factors, including:
 - maintaining stable moisture content of the subgrade soils; and
 - providing for a planned program of preventative maintenance.

The performance of all pavements can be enhanced by minimizing excess moisture which can reach the subgrade soils. The following recommendations should be considered at minimum:

- site grading at a minimum 2 percent grade onto or away from the pavements.
- the subgrade and the pavement surface have a minimum 1/4 inch per foot slope to promote proper surface drainage.
- install joint sealant and seal cracks immediately.
- compaction of any utility trenches for landscaped areas to the same criteria as the pavement subgrade.
- place compacted, low permeability backfill against the exterior edge of shoulder, curb and gutter, etc..

Preventative maintenance should be planned and provided for an ongoing pavement management program in order to enhance future pavement performance. Preventative maintenance activities are intended to slow the rate of pavement deterioration and to preserve the pavement investment.

Preventative maintenance consists of both localized maintenance (e.g. crack sealing and patching) and global maintenance (e.g. surface sealing). Preventative maintenance is usually the first priority when implementing a planned pavement maintenance program and provides the highest return on investment for pavements.

Additional Recommendations:

- **Concrete Corrosion Protection:** Select soil samples from our geotechnical exploration were tested for the presence of water-soluble sulfates in order to determine corrosion characteristics and the appropriate concrete mixtures. Results of testing indicate water soluble-sulfate concentrations ranging from 0 to 1,500 parts per million (ppm).

Project concrete should meet CDOT Class P requirements as discussed in the Pavement Materials section above. Results of testing indicate the site soils are within CDOT Sulfate Exposure Classes 0 and 1, as outlined in Section 601 of the CDOT *Standard Specifications for Road and Bridge Construction (2017)* manual. Therefore, project concrete should be designed in accordance with CDOT Sulfate Exposure Class 1. Requirements for concrete pavement are listed in the table below.

CDOT Sulfate Exposure Class	Portland Cement Type (ASTM C150)	Maximum Water/Cement Ratio	Minimum Concrete Compressive Strength (psi)
1	II (or equivalent)	0.44*	4,500

* Maximum water/cement ratio allowed for CDOT Class P concrete.

- **Final Grades and Surface Drainage:** Soil embankments comprised of on-site or imported fine-grained soils should be designed for a maximum slope of 3:1, horizontal to vertical. All final grades should be designed and constructed to provide positive drainage away from the pavements during construction

and throughout the life of the proposed project. Infiltration of water into utility trenches or subgrade soils could result in pavement distress. Landscaped irrigation adjacent to the pavements should be minimized or eliminated.

Water permitted to pond near pavements (either during or post-construction) can result in softening of the subgrade, loss of support and potentially excessive movement and distress. Exposed ground (unpaved, landscaped areas) should be sloped at a minimum of 5 percent grade away from pavement edges, where possible.

GENERAL COMMENTS AND LIMITATIONS

CGG should be retained to review the final design plans and specifications so comments can be made regarding interpretation and implementation of our geotechnical recommendations in the design and specifications. CGG should also be retained to provide testing and observation during the over-excavation, subgrade preparation, and other construction phases of the project.

The analysis and recommendations presented in this report are based upon the data obtained from the borings performed at the indicated locations and from other information discussed in this report. This report does not reflect variations that may occur between borings, across the site, or due to the modifying effects of weather. The nature and extent of such variations may not become evident until during or after construction. If variations appear, we should be immediately notified so that further evaluation and supplemental recommendations can be provided.

The scope of services for this project does not include, either specifically or by implication, any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

This report has been prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted geotechnical engineering practices. No warranties, express or implied, are intended or made. Site safety, excavation support, and dewatering requirements are the responsibility of others. In the event that changes are planned in the nature, design, or location of the project as outlined in this report, the conclusions and recommendations contained in this report shall not be considered valid unless CGG reviews the changes, and either verifies or modifies the conclusions of this report in writing.

APPENDIX A

FIGURE 1 - SITE VICINITY MAP

FIGURE 2 - BORING LOCATION DIAGRAM

LOGS OF BORINGS

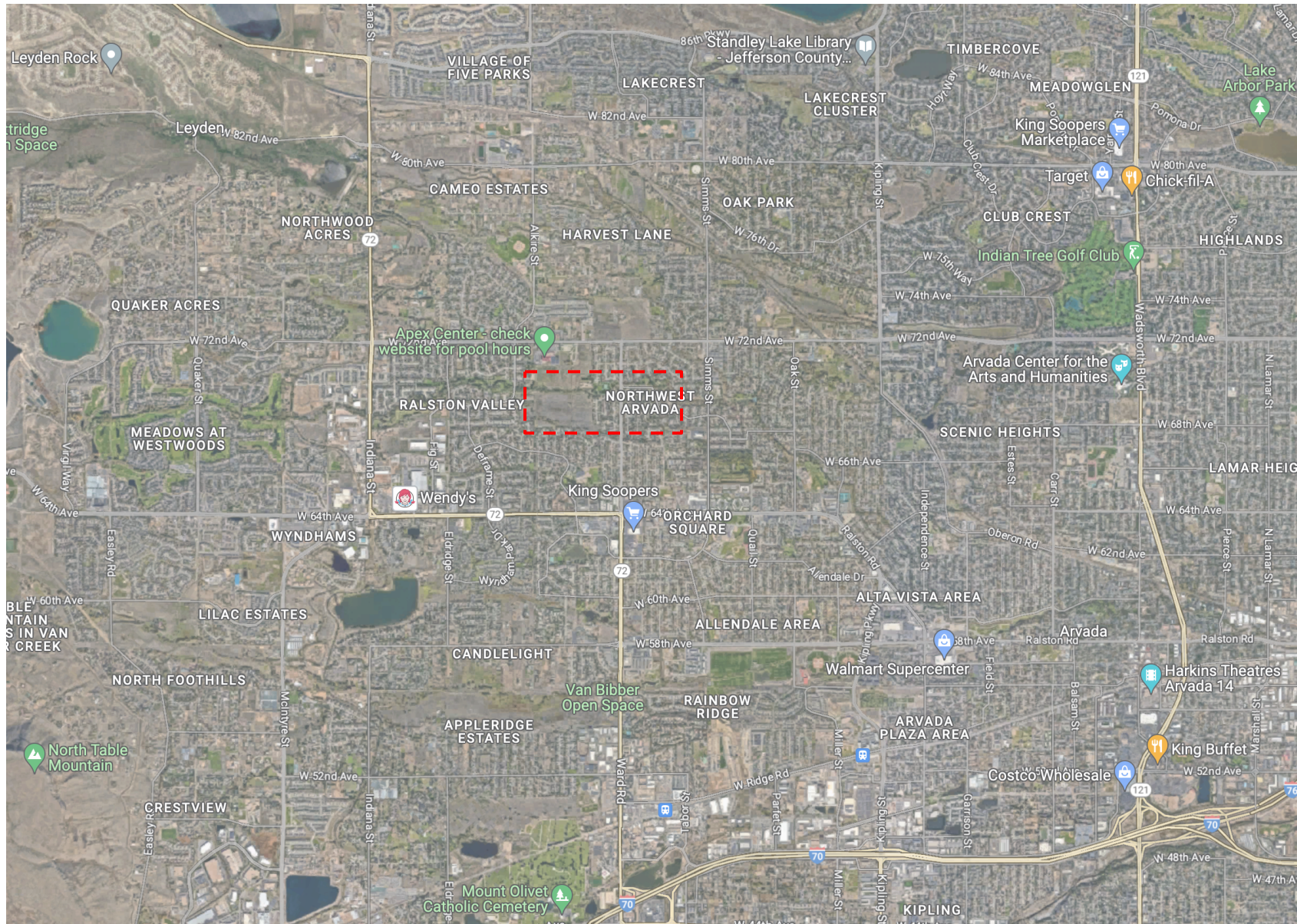


IMAGE SOURCE: GOOGLE MAPS (maps.google.com)

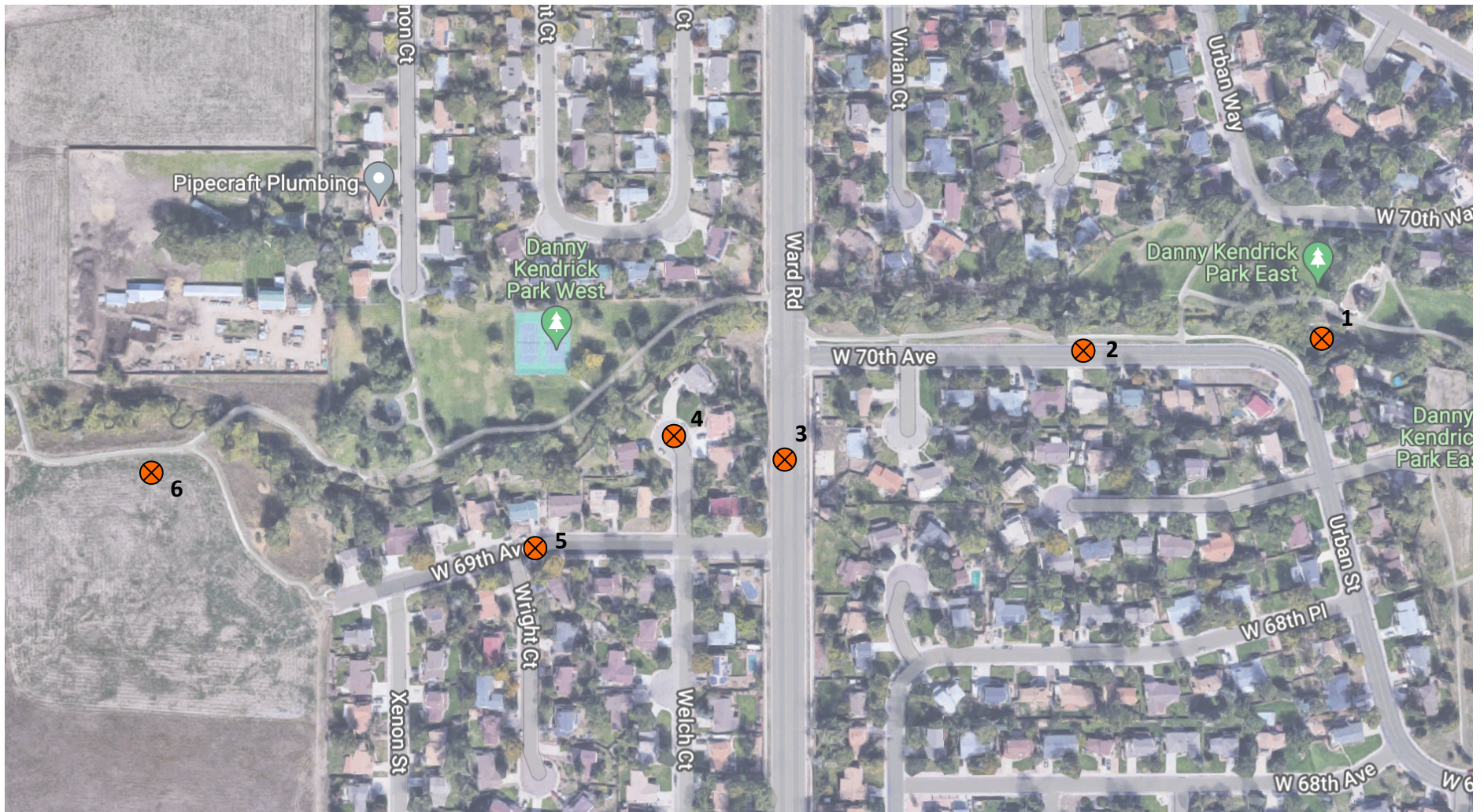
 PROJECT SITE



FIGURE 1 – SITE VICINITY MAP
RALSTON SEWER TRUNK
WARD ROAD AND WEST 70TH AVENUE
ARVADA, COLORADO
CGG PROJECT NO. 23.22.029



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 Westminster, CO 80234
 (303) 996-2999




 APPROXIMATE BORING LOCATIONS



FIGURE 2 – BORING LOCATION DIAGRAM
RALSTON SEWER TRUNK
WARD ROAD AND WEST 70TH AVENUE
ARVADA, COLORADO
CGG PROJECT NO. 23.22.029



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BORING NUMBER 1

PAGE 1 OF 1

CLIENT	Drexel, Barrel, & Co.	PROJECT NAME	Ralston Sewer Trunk Improvements
PROJECT NUMBER	23.22.029	PROJECT LOCATION	Ward Road & W 69th Ave - Arvada, CO
DATE STARTED	6/6/23	COMPLETED	6/6/23
DRILLING CONTRACTOR	Vine Laboratories	GROUND SURFACE ELEV.	Not Provided
DRILLING METHOD	Buggy Rig/Solid Stem Auger	PROPOSED ELEV.	Not Provided
HAMMER TYPE	Automatic	SURFACE CONDITIONS	Sod landscaping
LOGGED BY	JL	CHECKED BY	AG
		GROUND WATER LEVELS:	
		▽ DURING DRILLING	16.00 ft
		▽ AFTER DRILLING	Backfilled - 6/6/23

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 6/28/23 17:10 - Y:\GINT BACKUPS\MAIN TRANSFER 10.28\PROJECTS GEO 2022\23.22.029 RALSTON SEWER TRUNK.GPJ

GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	USCS SYMBOL	SAMPLE TYPE	RECOVERY %	PENETRATION blows/in	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	SWELL-CONSOL /SURCHARGE LOAD, %psf
		0							
	FILL - SANDY LEAN CLAY to CLAYEY SAND , with some gravel (apprx. 0.5-1" gravel), brown, black, moist, stiff		SC	CB	100	14 / 12	12.3	112	
		5	CL/SC	CB	100	14 / 12	6.8	120	+1.0/500
	FINE to COARSE SAND with SILT , with some gravel (apprx. 0.5-1" diameter), brown, orangish-brown, moist, loose to medium dense								
			SW-SM	CB	100	20 / 12	3.8	117	
		10	SW-SM	CB	100	16 / 12	7.3	123	
		15	SW-SM	CB	100	6 / 12	25.9	98	
	FINE to COARSE SAND with GRAVEL , aprpx. 1" diameter gravel, grey, dark brown, wet, medium dense								
		20	SP/GW	CB	100	23 / 12	7.5	139	
	CLAYSTONE BEDROCK , grey to dark grey, bluish-grey, moist, very hard								
		25	-	CB	100	50 / 1	12.5	146	

Approximate bottom of borehole at 25.0 feet.



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BORING NUMBER 2

PAGE 1 OF 1

CLIENT Drexel, Barrel, & Co.

PROJECT NAME Ralston Sewer Trunk Improvements

PROJECT NUMBER 23.22.029

PROJECT LOCATION Ward Road & W 69th Ave - Arvada, CO

DATE STARTED 5/15/23

COMPLETED 5/15/23

GROUND SURFACE ELEV. Not Provided PROPOSED ELEV. Not Provided

DRILLING CONTRACTOR Vine Laboratories

SURFACE CONDITIONS Asphalt: 5" Base Course: ~7"

DRILLING METHOD CME-75 / Solid Stem Auger

GROUND WATER LEVELS:

HAMMER TYPE Automatic

▽ DURING DRILLING 11.00 ft

LOGGED BY JL

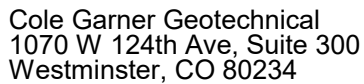
CHECKED BY AG

▽ AFTER DRILLING Backfilled - 5/15/23

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 6/28/23 17:10 - Y:\GINT BACKUPS\MAIN TRANSFER 10.28\PROJECTS GEO 2022\23.22.029 RALSTON SEWER TRUNK.GPJ

GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	USCS SYMBOL	SAMPLE TYPE	RECOVERY %	PENETRATION blows/in	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	SWELL-CONSOL /SURCHARGE LOAD, %psf
		0							
	FILL - SANDY LEAN CLAY to CLAYEY SAND , with appr. 1-2" diameter gravel, brown to dark brown, moist, loose								
			CL/SC	CB	100	5 / 12	6.8	142	
		5	SC	CB	100	9 / 12	17.3	113	
	SILTY SAND , varies clayey, fine- to coarse-grained, with appr. 1-2" diameter gravel, brown to dark brown, moist, loose								
			SM	CB	100	5 / 12	15.4	117	
		10	SM	CB	100	5 / 12	12.8	99	-1.2/500
	FINE to COARSE SAND with GRAVEL , appr. 1-2" diameter gravel, brown, grey, wet, medium dense								
			SP/GW	CB	0	15 / 12			
		15	SP/GW	CB	100	16 / 12	9.4	136	
	CLAYSTONE BEDROCK , tan, olive-brown, grey, iron-stained, moist, hard								
		20	-	CB	100	50 / 8			

Approximate bottom of borehole at 20.0 feet.



▼ AFTER DRILLING Backfilled - 6/6/23

GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	USCS SYMBOL	SAMPLE TYPE	RECOVERY %	PENETRATION blows/in	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	SWELL-CONSOL /SURCHARGE LOAD, %psf
		0							
	FILL - SANDY LEAN CLAY to CLAYEY SAND , with some gravel (apprx. 0.5-1" diameter), brown to dark brown, black, moist, medium stiff to stiff								
			CL	CB	100	11 / 12	21.3	107	
		5	CL/SC	CB	100	6 / 12	23.5	98	-0.7/500
	SILTY SAND , with some gravel (apprx. 1-2" diameter), fine- to coarse-grained, tan, orangish-brown, moist, loose to medium dense								
			SM	CB	100	7 / 12	19.5	106	
		10	SM	CB	100	23 / 12	7.0	121	
	CLAYSTONE BEDROCK , with limited gravel, light grey to dark grey, bluish-grey, moist, hard to very hard								
		15	-	CB	100	50 / 8	14.5	118	+1.6/1000
		20	-	CB	100	50 / 5	14.1	120	

Approximate bottom of borehole at 20.0 feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 6/28/23 17:10 - Y:\GINT BACKUPS\MAIN TRANSFER 10.28\PROJECTS GEO 2022\23.22.029 RALSTON SEWER TRUNK.GPJ



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BORING NUMBER 4

PAGE 1 OF 1

CLIENT Drexel, Barrel, & Co.
PROJECT NUMBER 23.22.029
DATE STARTED 5/15/23 COMPLETED 5/15/23
DRILLING CONTRACTOR Vine Laboratories
DRILLING METHOD CME-75 / Solid Stem Auger
HAMMER TYPE Automatic
LOGGED BY JL CHECKED BY AG

PROJECT NAME Ralston Sewer Trunk Improvements
PROJECT LOCATION Ward Road & W 69th Ave - Arvada, CO
GROUND SURFACE ELEV. Not Provided PROPOSED ELEV. Not Provided
SURFACE CONDITIONS Asphalt: 4" Base Course: ~6"
GROUND WATER LEVELS:
▽ DURING DRILLING 8.00 ft
▽ AFTER DRILLING Backfilled - 5/15/23

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 6/28/23 17:11 - Y:\GINT BACKUPS\MAIN TRANSFER 10.28\PROJECTS GEO 2022\23.22.029 RALSTON SEWER TRUNK.GPJ

GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	USCS SYMBOL	SAMPLE TYPE	RECOVERY %	PENETRATION blows/in	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	SWELL-CONSOL /SURCHARGE LOAD, %psf
		0							
	FILL - SILTY SAND , fine- to coarse-grained, tan, reddish-brown, grey, moist, loose		SM	CB	100	8 / 12	16.4	99	
		5	SM	CB	100	9 / 12	9.8	106	
	CLAYEY to SILTY SAND , fine- to medium-grained, dark grey, black, moist to wet, very loose		SM	CB	100	5 / 12	23.7	104	
	FINE to COARSE SAND with GRAVEL , 1-2" diameter gravel, dark grey, tan, light brown, buff, moist to wet, medium dense to very dense								
		10	SP/GW	CB	0	20 / 12			
			SP/GW	CB	100	50 / 8	11.9	126	
		15	SP/GW	CB	100	50 / 4	11.2	135	

Approximate bottom of borehole at 15.0 feet.



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BORING NUMBER 5

PAGE 1 OF 1

CLIENT	Drexel, Barrel, & Co.	PROJECT NAME	Ralston Sewer Trunk Improvements
PROJECT NUMBER	23.22.029	PROJECT LOCATION	Ward Road & W 69th Ave - Arvada, CO
DATE STARTED	5/15/23	COMPLETED	5/15/23
DRILLING CONTRACTOR	Vine Laboratories	GROUND SURFACE ELEV.	Not Provided
DRILLING METHOD	CME-75 / Solid Stem Auger	PROPOSED ELEV.	Not Provided
HAMMER TYPE	Automatic	SURFACE CONDITIONS	Asphalt: 5" Base Course: ~6"
LOGGED BY	JL	CHECKED BY	AG
		GROUND WATER LEVELS:	
		▽ DURING DRILLING	7.00 ft
		▽ AFTER DRILLING	Backfilled - 5/15/23

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 6/28/23 17:11 - Y:\GINT BACKUPS\MAIN TRANSFER 10.28\PROJECTS GEO 2022\23.22.029 RALSTON SEWER TRUNK.GPJ

GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	USCS SYMBOL	SAMPLE TYPE	RECOVERY %	PENETRATION blows/in	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	SWELL-CONSOL /SURCHARGE LOAD, %psf
		0							
	FILL - SILTY SAND , fine- to coarse-grained, varies clayey, with arpx. 0.5-1" diameter gravel, brown, reddish-brown, moist, loose		SM	CB	100	12 / 12	12.5	121	
		5	SM	CB	100	11 / 12	11.6	120	
	FINE to COARSE SAND with SILT , varies to Silty Sand, with arpx. 1-2" diameter gravel, brown, tan, buff, moist to wet, loose ▽ to very dense		SP-SM	CB	0	9 / 12			
		10	SP-SM	CB	100	7 / 12	2.5	75	
			SM	CB	100	28 / 12	13.4	122	
		15	SP-SM	CB	0	50 / 4			

Approximate bottom of borehole at 15.0 feet.



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BORING NUMBER 6

PAGE 1 OF 1

CLIENT	Drexel, Barrel, & Co.	PROJECT NAME	Ralston Sewer Trunk Improvements
PROJECT NUMBER	23.22.029	PROJECT LOCATION	Ward Road & W 69th Ave - Arvada, CO
DATE STARTED	6/6/23	COMPLETED	6/6/23
DRILLING CONTRACTOR	Vine Laboratories	GROUND SURFACE ELEV.	Not Provided
DRILLING METHOD	Buggy Rig/Solid Stem Auger	PROPOSED ELEV.	Not Provided
HAMMER TYPE	Automatic	SURFACE CONDITIONS	Low to moderate growth of grass and weeds
LOGGED BY	JL	CHECKED BY	AG
		GROUND WATER LEVELS:	
		▽ DURING DRILLING	8.00 ft
		▽ AFTER DRILLING	Backfilled - 6/6/23

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 6/28/23 17:11 - Y:\GINT BACKUPS\MAIN TRANSFER 10.28\PROJECTS GEO 2022\23.22.029 RALSTON SEWER TRUNK.GPJ

GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	USCS SYMBOL	SAMPLE TYPE	RECOVERY %	PENETRATION blows/in	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	SWELL-CONSOL /SURCHARGE LOAD, %psf
		0							
	SANDY LEAN CLAY to SILTY SAND , brown to dark brown, dry to moist, stiff/loose to medium dense		CL/SM	CB	100	16 / 12	14.3	111	+1.7/200
		5	SM	CB	100	14 / 12	14.0	118	
	FINE to COARSE SAND with GRAVEL , varies to Silty Sand, with apprx. 1" diameter gravel, brown to dark brown, grey, wet, medium dense to dense		SP/GW	CB	100	14 / 12			
		10	SP/GW	CB	100	28 / 12	5.9		
		15	SP/GW	CB	100	50 / 10			
	CLAYSTONE BEDROCK , grey to dark grey, moist, very hard								
		20	-	CB	100	50 / 5	16.5	117	

Approximate bottom of borehole at 20.0 feet.

APPENDIX B

LABORATORY TEST RESULTS

FIGURE 3 - PAVEMENT SUBGRADE SOIL TYPE DIAGRAM

FIGURE 4 - ESAL₂₀ DIAGRAM



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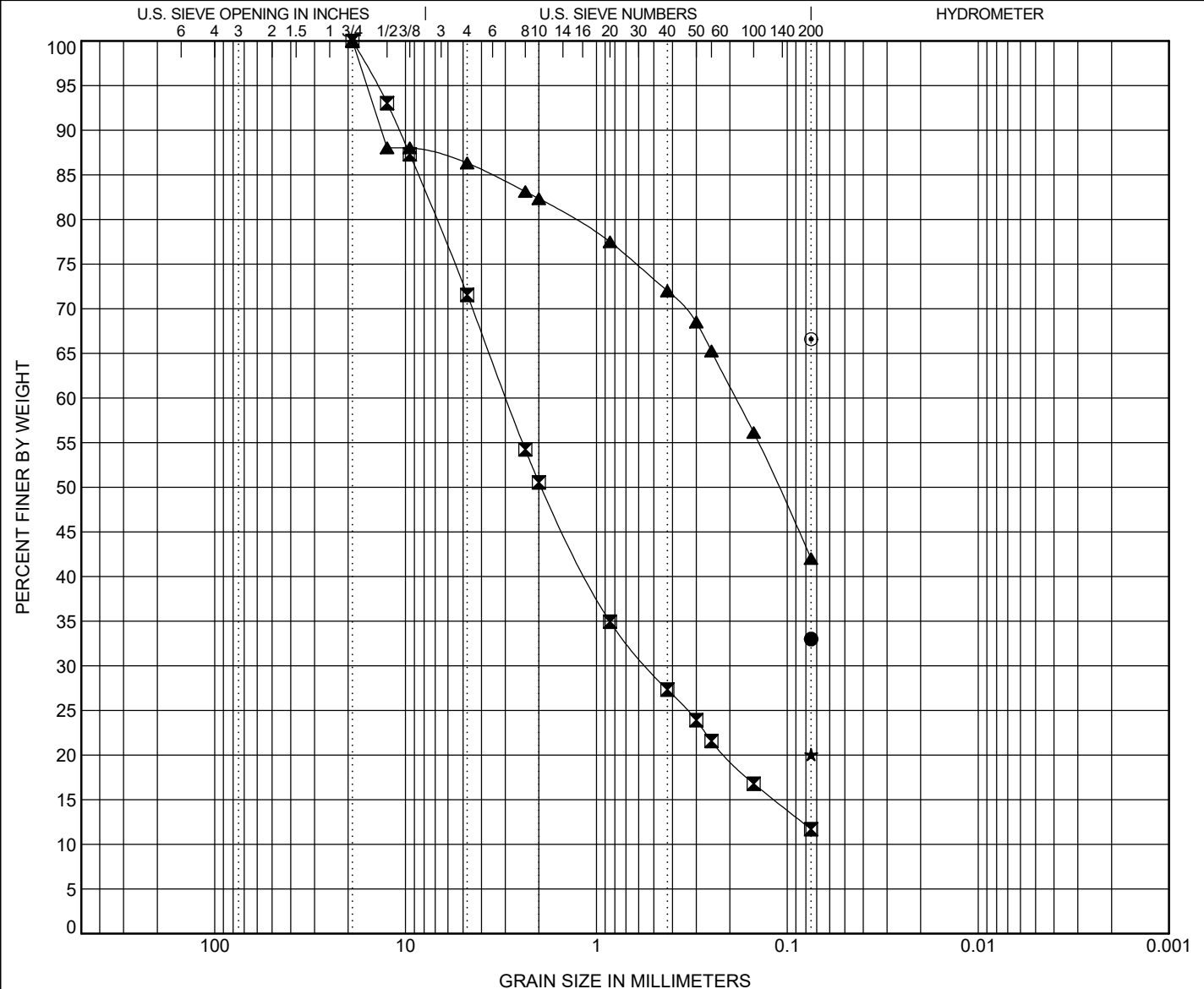
GRAIN SIZE DISTRIBUTION

CLIENT Drexel, Barrel, & Co.

PROJECT NAME Ralston Sewer Trunk Improvements

PROJECT NUMBER 23.22.029

PROJECT LOCATION Ward Road & W 69th Ave - Arvada, CO





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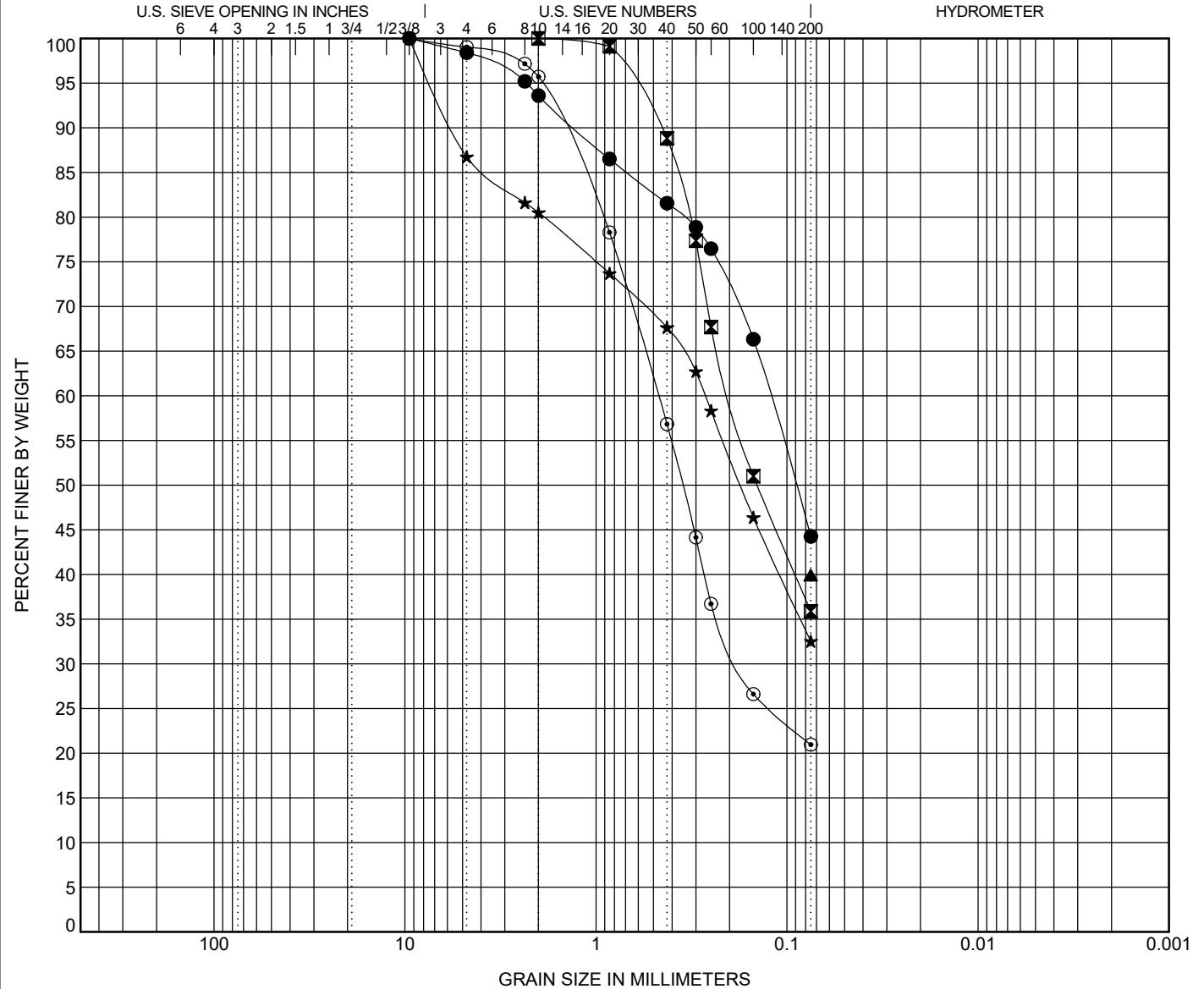
GRAIN SIZE DISTRIBUTION

CLIENT Drexel, Barrel, & Co.

PROJECT NAME Ralston Sewer Trunk Improvements

PROJECT NUMBER 23.22.029

PROJECT LOCATION Ward Road & W 69th Ave - Arvada, CO

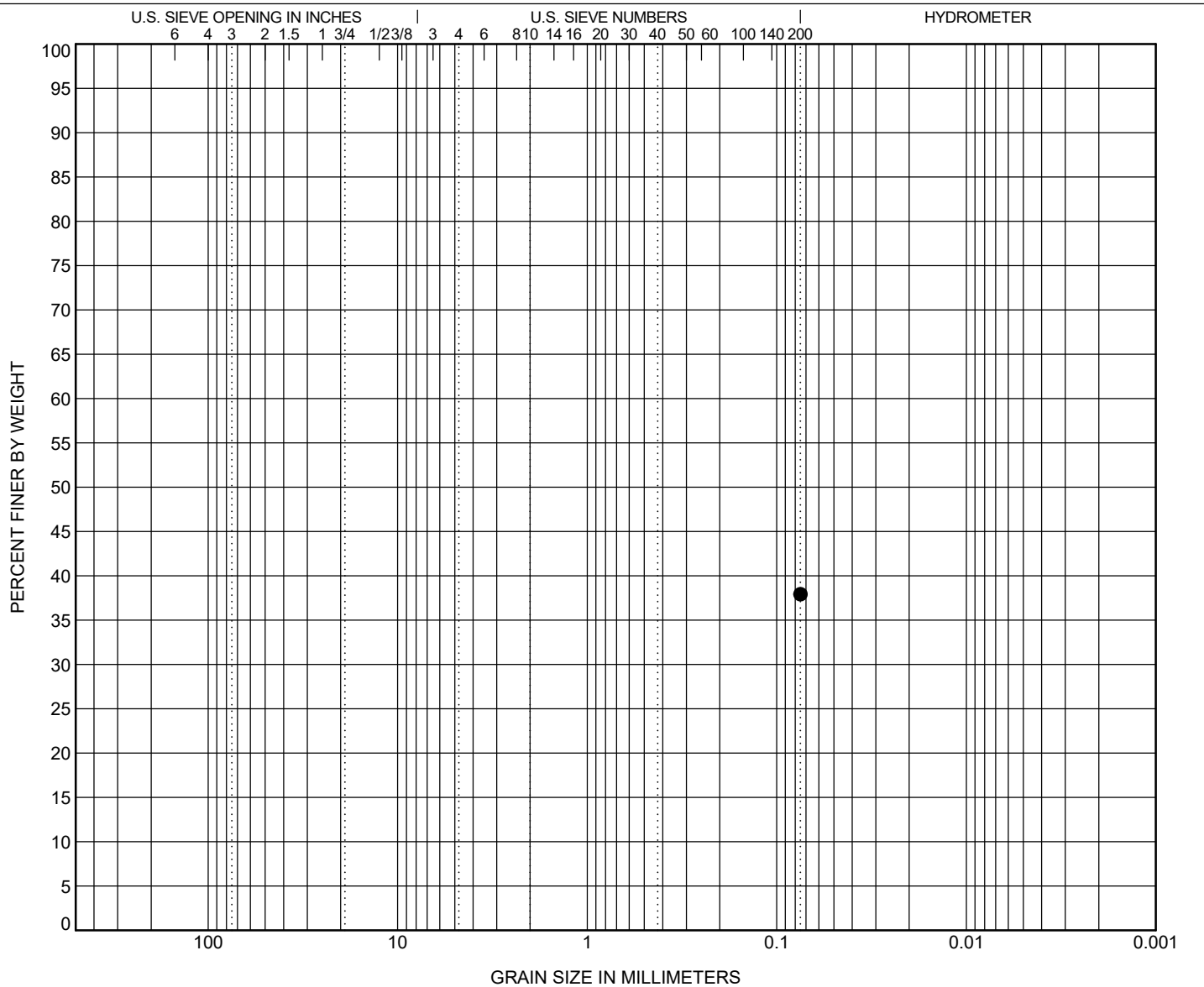




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GRAIN SIZE DISTRIBUTION

CLIENT Drexel, Barrel, & Co. PROJECT NAME Ralston Sewer Trunk Improvements
PROJECT NUMBER 23.22.029 PROJECT LOCATION Ward Road & W 69th Ave - Arvada, CO



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

BOREHOLE	DEPTH	Classification					LL	PL	PI	Cc	Cu
● 6	4.0	SILTY SAND(SM)					NP	NP	NP		

BOREHOLE	DEPTH	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● 6	4.0	0.075						37.9	

GRAIN SIZE - GINT STD US LAB.GDT - 6/28/23 17:04 - Y:\GINT BACKUPS\MAIN TRANSFER 10.28\PROJECTS GEO 2022\23.22.029 RALSTON SEWER TRUNK.GPJ



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SWELL/CONSOLIDATION TEST

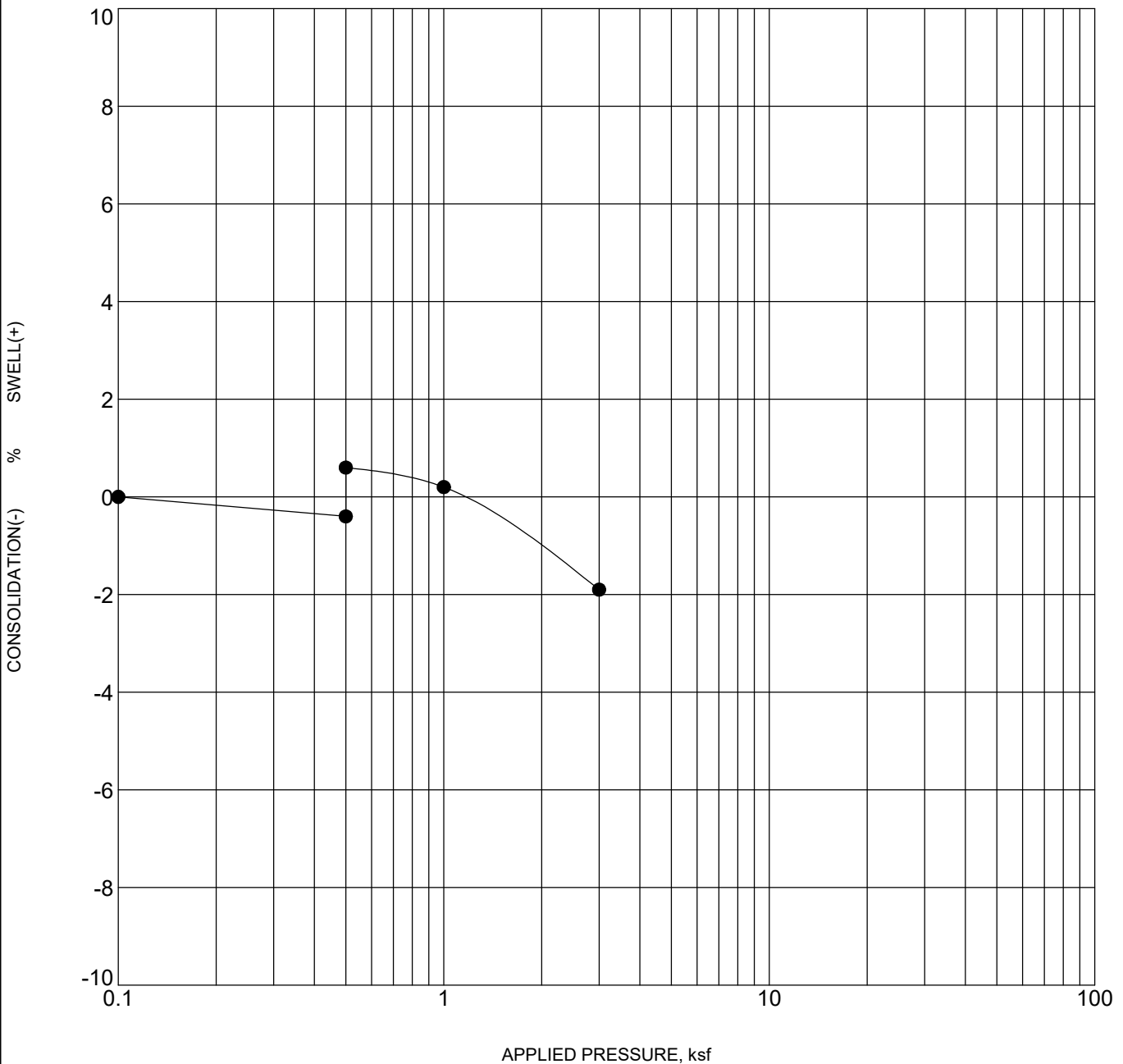
CLIENT Drexel, Barrel, & Co.

PROJECT NAME Ralston Sewer Trunk Improvements

PROJECT NUMBER 23.22.029

PROJECT LOCATION Ward Road & W 69th Ave - Arvada, CO

CONSOL STRAIN SINGLE - GINT STD US LAB.GDT - 6/28/23 17:11 - Y:\GINT BACKUPS\MAIN TRANSFER 10.28\PROJECTS GEO 2022\23.22.029 RALSTON SEWER TRUNK.GPJ



BOREHOLE	DEPTH	Classification	γ_d	MC%
● 1	4.0	FILL - SANDY LEAN CLAY to CLAYEY SAND	120	7

Note: Water Added to Sample at 500 psf.

Date: 6/13/23



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SWELL/CONSOLIDATION TEST

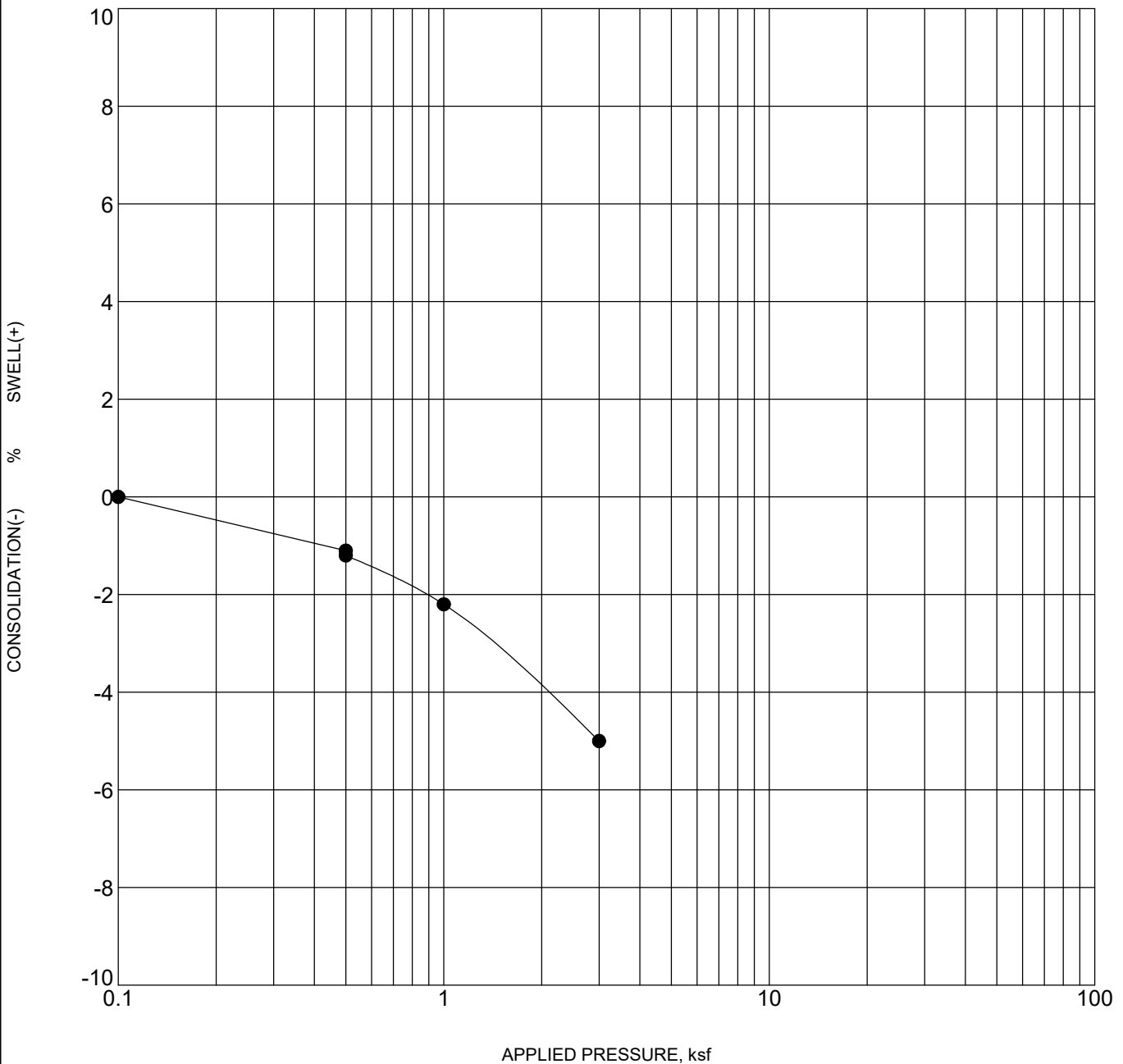
CLIENT Drexel, Barrel, & Co.

PROJECT NAME Ralston Sewer Trunk Improvements

PROJECT NUMBER 23.22.029

PROJECT LOCATION Ward Road & W 69th Ave - Arvada, CO

CONSOL STRAIN SINGLE - GINT STD US LAB.GDT - 6/28/23 17:11 - Y:\GINT BACKUPS\MAIN TRANSFER 10.28\PROJECTS GEO 2022\23.22.029 RALSTON SEWER TRUNK.GPJ



BOREHOLE	DEPTH	Classification	γ_d	MC%
● 2	9.0	SILTY SAND(SM)	99	13

Note: Water Added to Sample at 500 psf.

Date: 5/23/23



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SWELL/CONSOLIDATION TEST

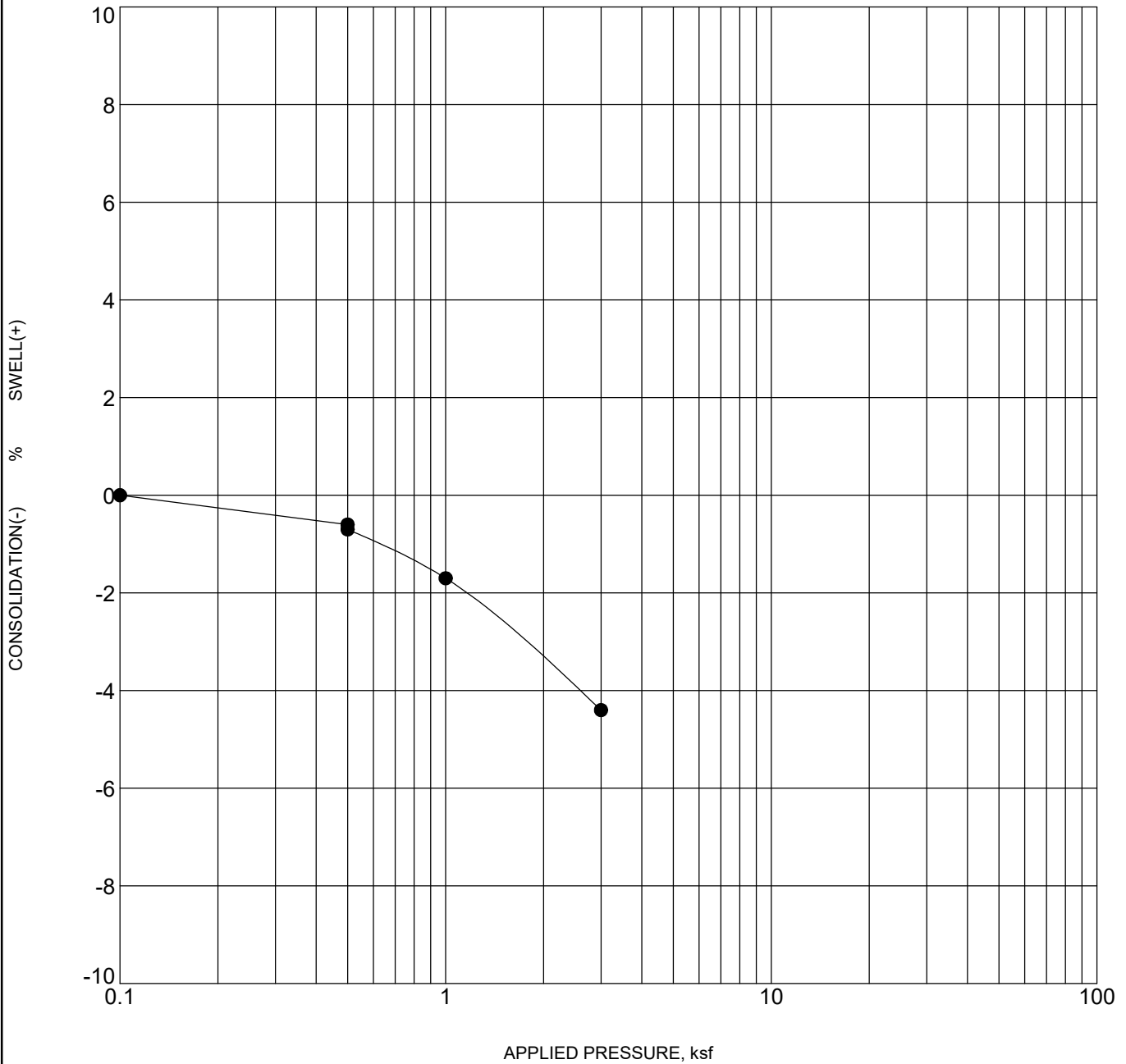
CLIENT Drexel, Barrel, & Co.

PROJECT NAME Ralston Sewer Trunk Improvements

PROJECT NUMBER 23.22.029

PROJECT LOCATION Ward Road & W 69th Ave - Arvada, CO

CONSOL STRAIN SINGLE - GINT STD US LAB.GDT - 6/28/23 17:11 - Y:\GINT BACKUPS\MAIN TRANSFER 10.28\PROJECTS GEO 2022\23.22.029 RALSTON SEWER TRUNK.GPJ



BOREHOLE	DEPTH	Classification	γ_d	MC%
● 3	4.0	FILL - SANDY LEAN CLAY	98	24

Note: Water Added to Sample at 500 psf.

Date: 6/13/23



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SWELL/CONSOLIDATION TEST

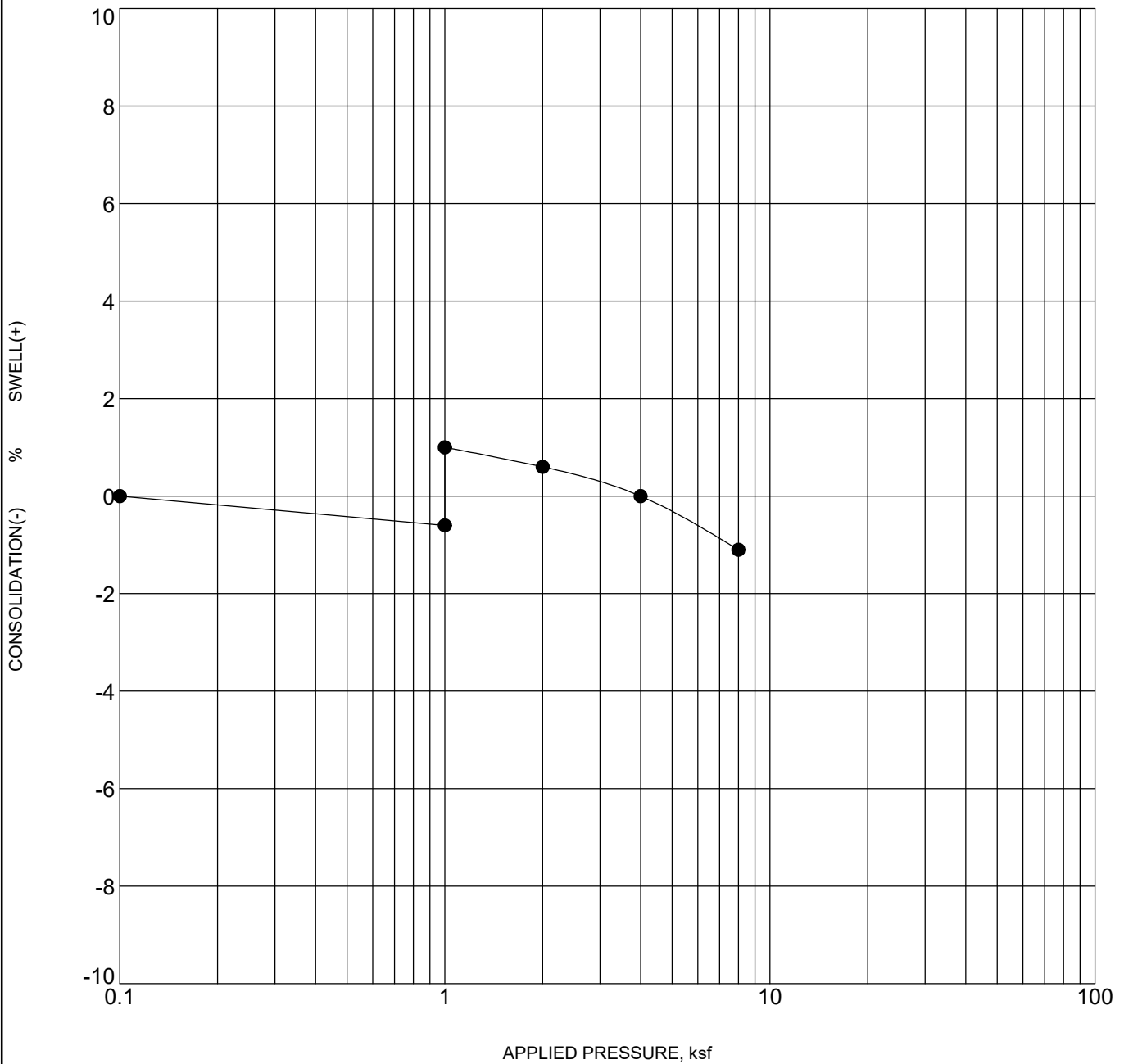
CLIENT Drexel, Barrel, & Co.

PROJECT NAME Ralston Sewer Trunk Improvements

PROJECT NUMBER 23.22.029

PROJECT LOCATION Ward Road & W 69th Ave - Arvada, CO

CONSOL STRAIN SINGLE - GINT STD US LAB.GDT - 6/28/23 17:11 - Y:\GINT BACKUPS\MAIN TRANSFER 10.28\PROJECTS GEO 2022\23.22.029 RALSTON SEWER TRUNK.GPJ



BOREHOLE	DEPTH	Classification	γ_d	MC%
● 3	14.0	CLAYSTONE BEDROCK	118	14

Note: Water Added to Sample at 1000 psf.

Date: 6/13/23



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SWELL/CONSOLIDATION TEST

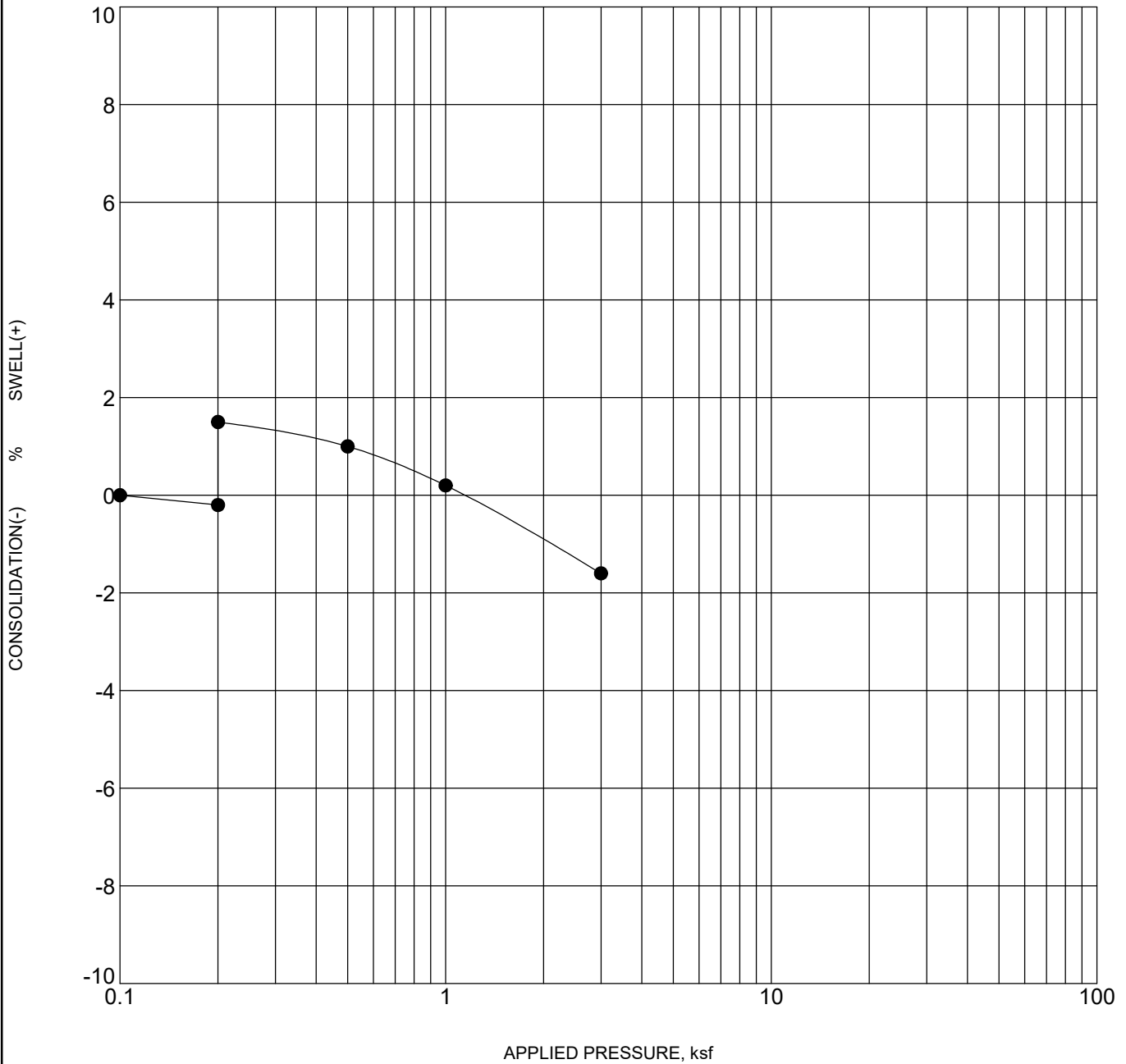
CLIENT Drexel, Barrel, & Co.

PROJECT NAME Ralston Sewer Trunk Improvements

PROJECT NUMBER 23.22.029

PROJECT LOCATION Ward Road & W 69th Ave - Arvada, CO

CONSOL STRAIN SINGLE - GINT STD US LAB.GDT - 6/28/23 17:11 - Y:\GINT BACKUPS\MAIN TRANSFER 10.28\PROJECTS GEO 2022\23.22.029 RALSTON SEWER TRUNK.GPJ



BOREHOLE	DEPTH	Classification	γ_d	MC%
● 6	2.0	SANDY LEAN CLAY to SILTY SAND	111	14

Note: Water Added to Sample at 200 psf.

Date: 6/13/23

R Value

ASTM D2844

CLIENT	Cole Garner Geotechnical	BORING NO.	--
JOB NO.	3009-049	DEPTH	0-5'
PROJECT	Ralston Sewer Trunk	SAMPLE NO.	3
PROJECT NO.	23.22.029	DATE SAMPLED	--
LOCATION	Arvada, CO	SAMPLED BY	--
DATE TESTED	06/26/23	DESCRIPTION	--
TECHNICIAN	JB		

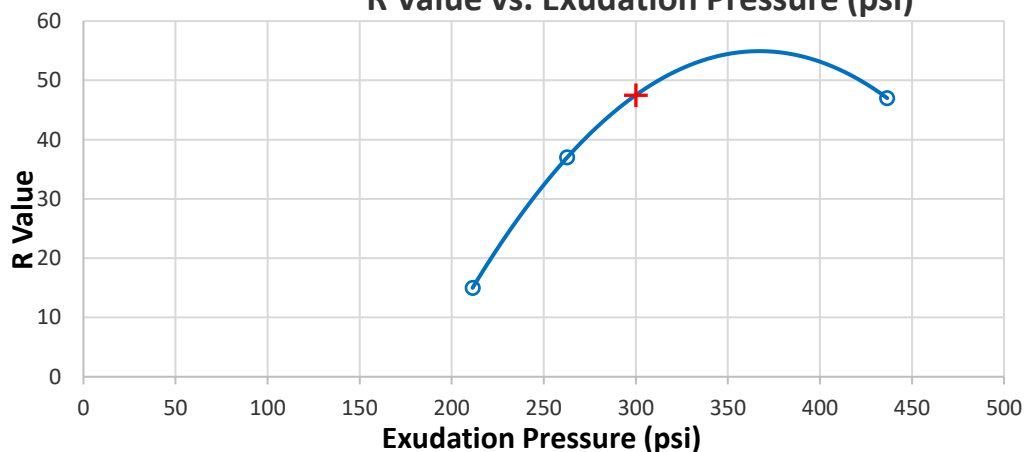
Sample Conditions

Mass of Wet Soil & Pan (g):	1194.2	1167.8	1164.0
Mass of Dry Soil & Pan (g):	1097.4	1087.6	1075.6
Mass of Pan (g):	13.8	13.8	13.8
Mass of Wet Soil & Mold (g):	3298.9	3268.8	3259.5
Mass of Mold (g):	2113.6	2109.5	2100.3
Sample Height (in):	2.50	2.40	2.44
Wet Density (pcf):	143.7	146.4	144.0
Dry Density (pcf):	131.9	136.3	133.0
Wet Density (kg/m³):	2302	2346	2307
Dry Density (kg/m³):	2114	2183	2130
Moisture (%):	8.9	7.5	8.3

R Value Data

Exudation Pressure (lbs):	2656	5486	3302
Exudation Pressure (psi):	211.4	436.6	262.8
2000 lbs. Dial Reading (psi):	112	54	72
Displacement Turns:	5.94	4.84	4.66
Uncorrected R Value:	15	50	40
Corrected R Value:	15	47	37

R Value vs. Exudation Pressure (psi)



Corrected R Value at 300 psi
Exudation Pressure

48

NOTES:

Data entry by: JB
 Checked by: BDF
 File name: 3009049_R Value ASTM D2844_0.xlsm

Date: 06/30/23
 Date: 06/30/23

R Value

ASTM D2844

CLIENT	Cole Garner Geotechnical	BORING NO.	--
JOB NO.	3009-049	DEPTH	0-5'
PROJECT	Ralston Sewer Trunk	SAMPLE NO.	3
PROJECT NO.	23.22.029	DATE SAMPLED	--
LOCATION	Arvada, CO	SAMPLED BY	--
DATE TESTED	06/26/23	DESCRIPTION	--
TECHNICIAN	JB		

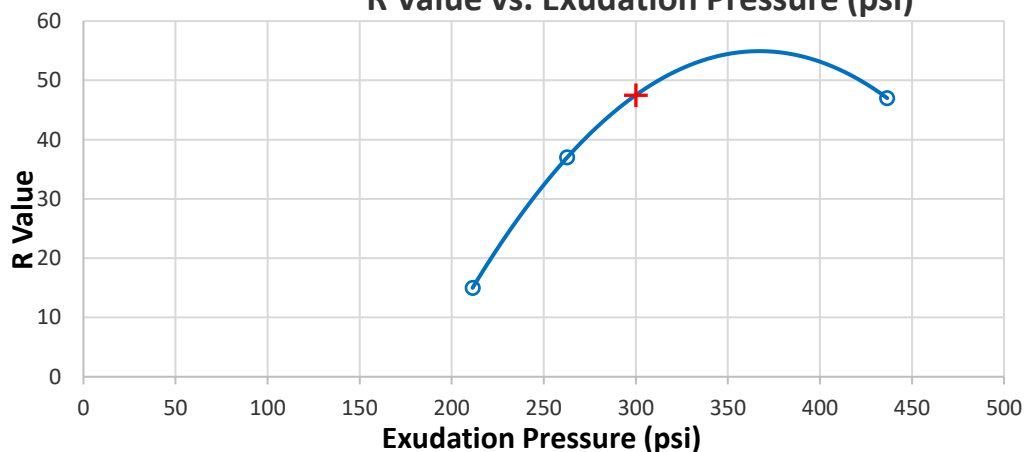
Sample Conditions

Mass of Wet Soil & Pan (g):	1194.2	1167.8	1164.0
Mass of Dry Soil & Pan (g):	1097.4	1087.6	1075.6
Mass of Pan (g):	13.8	13.8	13.8
Mass of Wet Soil & Mold (g):	3298.9	3268.8	3259.5
Mass of Mold (g):	2113.6	2109.5	2100.3
Sample Height (in):	2.50	2.40	2.44
Wet Density (pcf):	143.7	146.4	144.0
Dry Density (pcf):	131.9	136.3	133.0
Wet Density (kg/m³):	2302	2346	2307
Dry Density (kg/m³):	2114	2183	2130
Moisture (%):	8.9	7.5	8.3

R Value Data

Exudation Pressure (lbs):	2656	5486	3302
Exudation Pressure (psi):	211.4	436.6	262.8
2000 lbs. Dial Reading (psi):	112	54	72
Displacement Turns:	5.94	4.84	4.66
Uncorrected R Value:	15	50	40
Corrected R Value:	15	47	37

R Value vs. Exudation Pressure (psi)



Corrected R Value at 300 psi
Exudation Pressure

48

NOTES:

Data entry by: JB
 Checked by: BDF
 File name: 3009049_R Value ASTM D2844_0.xlsm

Date: 06/30/23
 Date: 06/30/23



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1070 W 124th Ave, Suite 300
Westminster, CO 80234

SUMMARY OF LABORATORY RESULTS

PAGE 1 OF 2

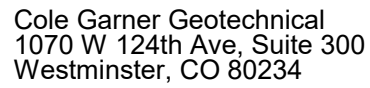
CLIENT Drexel, Barrel, & Co.

PROJECT NAME Ralston Sewer Trunk Improvements

PROJECT NUMBER 23.22.029

PROJECT LOCATION Ward Road & W 69th Ave - Arvada, CO

Borehole	Depth	Soil Description	AASHTO Class- ification	Group Index	Water Content (%)	Dry Density (pcf)	Swell (+) or Consolidation (-)/ Surcharge (%/psf)	Water Soluble Sulfates (ppm)	Passing #200 Sieve (%)	Atterberg Limits		
										Liquid Limit	Plastic Limit	Plasticity Index
1	2	FILL - CLAYEY SAND	A-2-6	1	12.3	111.6			33	27	14	13
1	4	FILL - SANDY LEAN CLAY to CLAYEY SAND			6.8	119.7	+1.0/500					
1	7	FINE to COARSE SAND with SILT			3.8	117.3		100				
1	9	FINE to COARSE SAND with SILT	A-1-b	0	7.3	123.4			12	NP	NP	NP
1	14	FINE to COARSE SAND with SILT			25.9	98.2						
1	19	FINE to COARSE SAND with GRAVEL			7.5	138.9						
1	24	CLAYSTONE BEDROCK			12.5	145.7						
2	2	FILL - SANDY LEAN CLAY to CLAYEY SAND			6.8	141.9		0				
2	4	FILL - CLAYEY SAND	A-4	0	17.3	112.6			42	28	20	8
2	7	SILTY SAND			15.4	117.4						
2	9	SILTY SAND(SM)	A-2-4	0	12.8	98.6	-1.2/500		20	NP	NP	NP
2	14	FINE to COARSE SAND with GRAVEL			9.4	136.4						
3	2	FILL - SANDY LEAN CLAY	A-7-6	16	21.3	107.4			67	42	14	28
3	4	FILL - SANDY LEAN CLAY			23.5	97.6	-0.7/500					
3	7	SILTY SAND(SM)	A-4	0	19.5	105.6			44	NP	NP	NP
3	9	SILTY SAND			7.0	121.0		1500				
3	14	CLAYSTONE BEDROCK			14.5	118.3	+1.6/1000					
3	19	CLAYSTONE BEDROCK			14.1	120.2						
4	2	FILL - SILTY SAND	A-4	0	16.4	99.2		0	36	NP	NP	NP
4	4	FILL - SILTY SAND			9.8	105.6						
4	7	SILTY SAND(SM)	A-4	0	23.7	103.6			40	NP	NP	NP
4	12	FINE to COARSE SAND with GRAVEL			11.9	125.6						
4	14	FINE to COARSE SAND with GRAVEL			11.2	135.1						
4	19	FINE to COARSE SAND with GRAVEL										
5	2	FILL - SILTY SAND	A-2-4	0	12.5	121.2			33	NP	NP	NP
5	4	FILL - SILTY SAND			11.6	120.4						
5	9	FINE to COARSE SAND with SILT			2.5	75.4						
5	12	SILTY SAND(SM)	A-2-4	0	13.4	121.8			21	NP	NP	NP
6	2	SANDY LEAN CLAY to SILTY SAND			14.3	111.2	+1.7/200					
6	4	SILTY SAND(SM)	A-4	0	14.0	117.8			38	NP	NP	NP

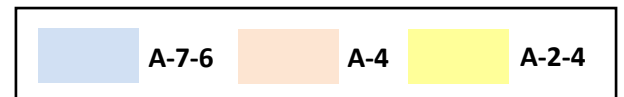
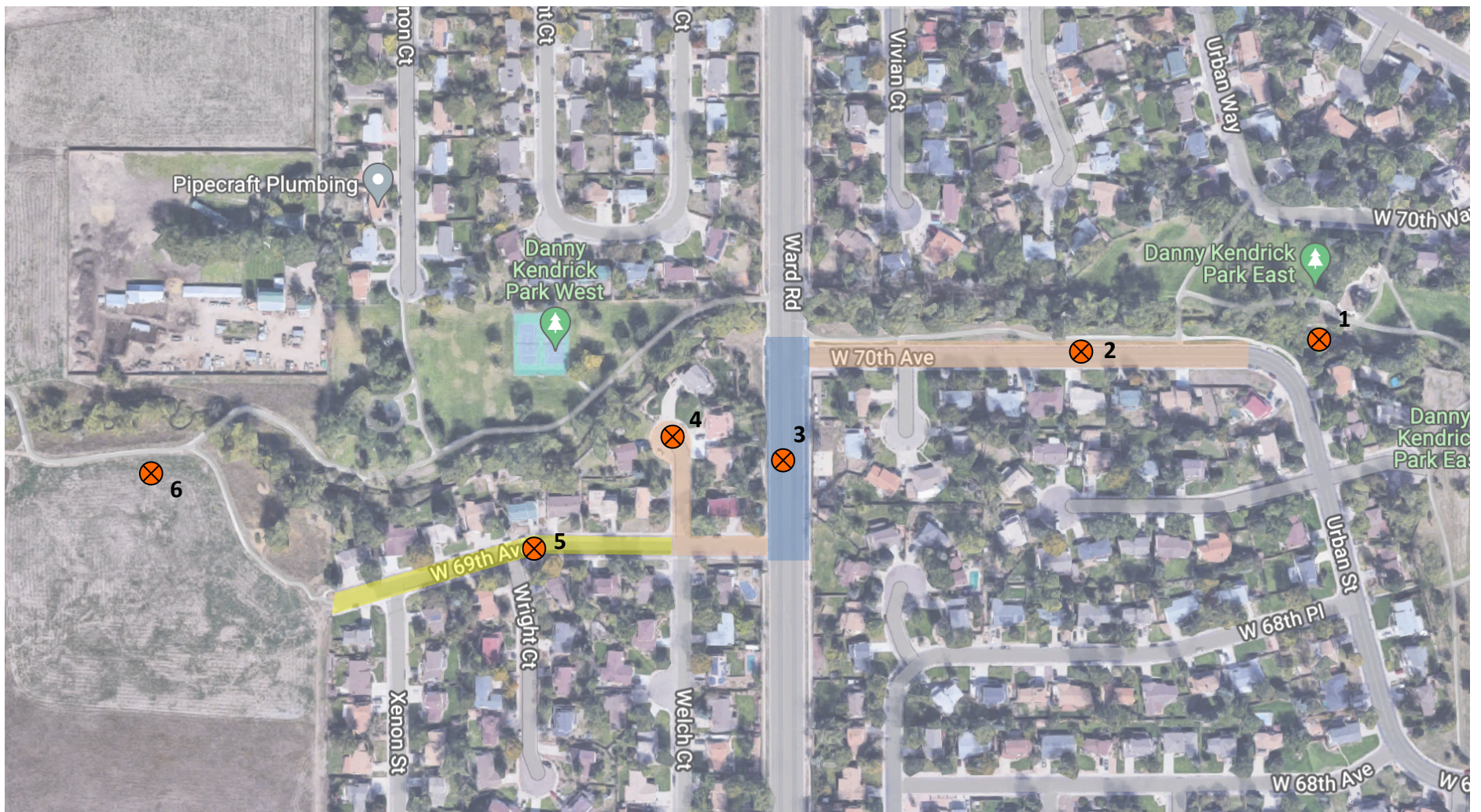


PAGE 2 OF 2

PROJECT NAME Ralston Sewer Trunk Improvements

PROJECT LOCATION Ward Road & W 69th Ave - Arvada, CO

Borehole	Depth	Soil Description	AASHTO Class-ification	Group Index	Water Content (%)	Dry Density (pcf)	Swell (+) or Consolidation (-)/ Surcharge (%/psf)	Water Soluble Sulfates (ppm)	Passing #200 Sieve (%)	Atterberg Limits		
										Liquid Limit	Plastic Limit	Plasticity Index
6	9	FINE to COARSE SAND with GRAVEL			5.9							
6	19	CLAYSTONE BEDROCK			16.5	116.6						



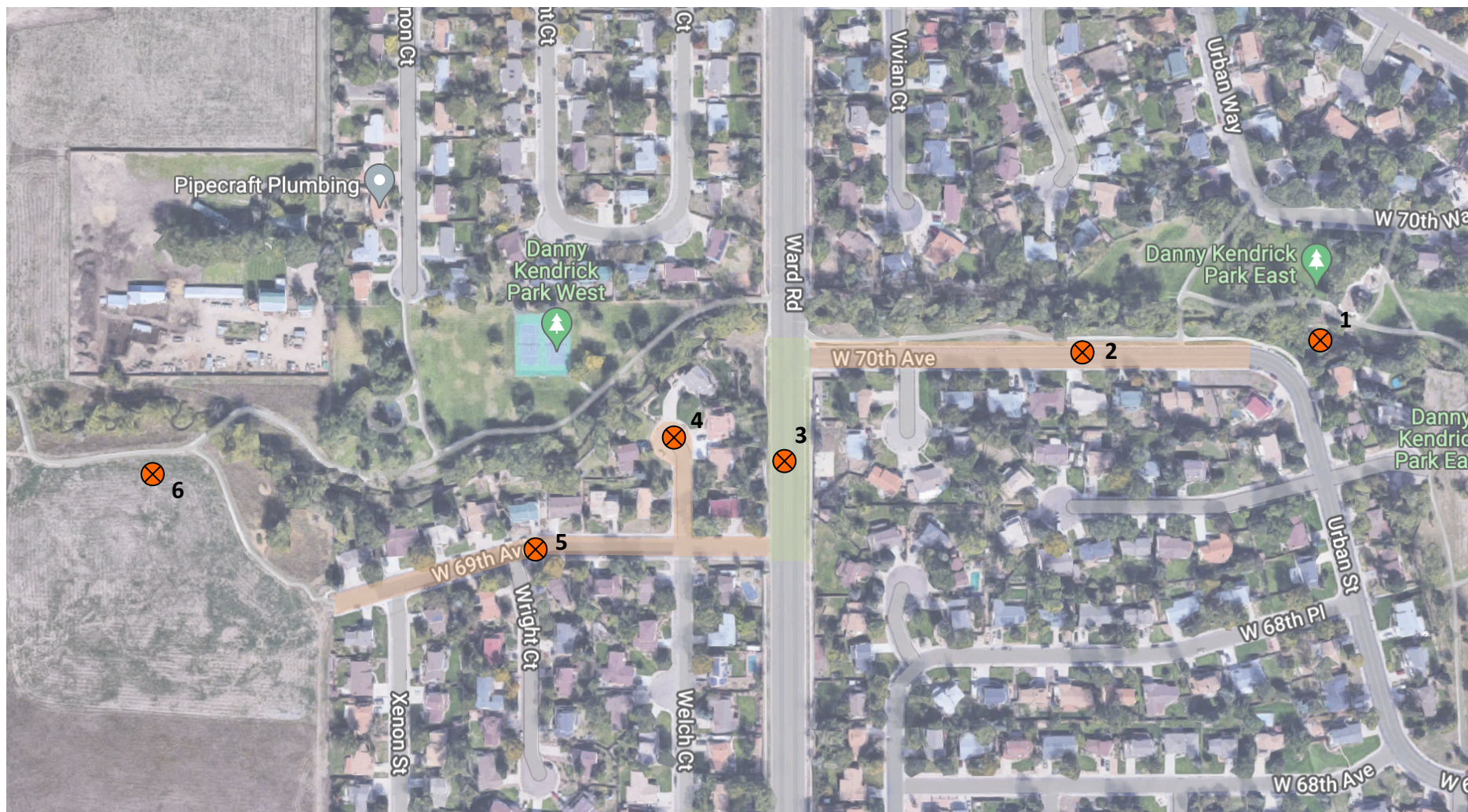

 APPROXIMATE BORING LOCATIONS



FIGURE 3 – PAVEMENT SUBGRADE SOIL TYPE DIAGRAM
RALSTON SEWER TRUNK
WARD ROAD AND WEST 70TH AVENUE
ARVADA, COLORADO
CGG PROJECT NO. 23.22.029



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ARTERIAL	COLLECTOR	LOCAL
2,200,000	1,500,000	73,000

APPROXIMATE BORING LOCATIONS

DESIGN ESAL₂₀



FIGURE 4 – ESAL₂₀ DIAGRAM
 RALSTON SEWER TRUNK
 WARD ROAD AND WEST 70TH AVENUE
 ARVADA, COLORADO
 CGG PROJECT NO. 23.22.029



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APPENDIX C
GENERAL NOTES

GENERAL NOTES

DRILLING & SAMPLING SYMBOLS:

SS:	Split Spoon - 1½" I.D., 2" O.D., unless otherwise noted	HS:	Hollow Stem Auger
ST:	Thin-Walled Tube – 2.5" O.D., unless otherwise noted	PA:	Power Auger
RS:	Ring Sampler - 2.42" I.D., 3" O.D., unless otherwise noted	HA:	Hand Auger
CB:	California Barrel - 1.92" I.D., 2.5" O.D., unless otherwise noted	RB:	Rock Bit
BS:	Bulk Sample or Auger Sample	WB:	Wash Boring or Mud Rotary

The number of blows required to advance a standard 2-inch O.D. split-spoon sampler (SS) the last 12 inches of the total 18-inch penetration with a 140-pound hammer falling 30 inches is considered the "Standard Penetration" or "N-value". For 2.5" O.D. California Barrel samplers (CB) the penetration value is reported as the number of blows required to advance the sampler 12 inches using a 140-pound hammer falling 30 inches, reported as "blows per inch," and is not considered equivalent to the "Standard Penetration" or "N-value".

WATER LEVEL MEASUREMENT SYMBOLS:

WL:	Water Level	WS:	While Sampling
WCI:	Wet Cave in	WD:	While Drilling
DCI:	Dry Cave in	BCR:	Before Casing Removal
AB:	After Boring	ACR:	After Casing Removal

Water levels indicated on the boring logs are the levels measured in the borings at the times indicated. Groundwater levels at other times and other locations across the site could vary. In pervious soils, the indicated levels may reflect the location of groundwater. In low permeability soils, the accurate determination of groundwater levels may not be possible with only short-term observations.

DESCRIPTIVE SOIL CLASSIFICATION: Soil classification is based on the Unified Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

FINE-GRAINED SOILS

<u>(CB)</u> <u>Blows/Ft.</u>	<u>(SS)</u> <u>Blows/Ft.</u>	<u>Consistency</u>
< 3	0-2	Very Soft
3-5	3-4	Soft
6-10	5-8	Medium Stiff
11-18	9-15	Stiff
19-36	16-30	Very Stiff
> 36	> 30	Hard

COARSE-GRAINED SOILS

<u>(CB)</u> <u>Blows/Ft.</u>	<u>(SS)</u> <u>Blows/Ft.</u>	<u>Relative</u> <u>Density</u>
0-5	< 3	Very Loose
6-14	4-9	Loose
15-46	10-29	Medium Dense
47-79	30-50	Dense
> 79	> 50	Very Dense

BEDROCK

<u>(CB)</u> <u>Blows/Ft.</u>	<u>(SS)</u> <u>Blows/Ft.</u>	<u>Consistency</u>
< 24	< 20	Weathered
24-35	20-29	Firm
36-60	30-49	Medium Hard
61-96	50-79	Hard
> 96	> 79	Very Hard

RELATIVE PROPORTIONS OF SAND AND GRAVEL

<u>Descriptive Terms of</u> <u>Other Constituents</u>	<u>Percent of</u> <u>Dry Weight</u>
Trace	< 15
With	15 – 29
Modifier	> 30

GRAIN SIZE TERMINOLOGY

<u>Major Component</u> <u>of Sample</u>	<u>Particle Size</u>
Boulders	Over 12 in. (300mm)
Cobbles	12 in. to 3 in. (300mm to 75 mm)
Gravel	3 in. to #4 sieve (75mm to 4.75 mm)
Sand	#4 to #200 sieve (4.75mm to 0.075mm)
Silt or Clay	Passing #200 Sieve (0.075mm)

RELATIVE PROPORTIONS OF FINES

<u>Descriptive Terms of</u> <u>Other Constituents</u>	<u>Percent of</u> <u>Dry Weight</u>
Trace	< 5
With	5 – 12
Modifiers	> 12

PLASTICITY DESCRIPTION

<u>Term</u>	<u>Plasticity Index</u>
Non-plastic	0
Low	1-10
Medium	11-30
High	30+

UNIFIED SOIL CLASSIFICATION SYSTEM

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests^A

				Soil Classification	
				Group Symbol	Group Name ^B
Coarse Grained Soils More than 50% retained on No. 200 sieve	Gravels More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels Less than 5% fines ^C	$Cu \geq 4$ and $1 \leq Cc \leq 3^E$	GW	Well graded gravel ^F
			$Cu < 4$ and/or $1 > Cc > 3^E$	GP	Poorly graded gravel ^F
		Gravels with Fines More than 12% fines ^C	Fines classify as ML or MH	GM	Silty gravel ^{F,G,H}
			Fines classify as CL or CH	GC	Clayey gravel ^{F,G,H}
	Sands 50% or more of coarse fraction passes No. 4 sieve	Clean Sands Less than 5% fines ^D	$Cu \geq 6$ and $1 \leq Cc \leq 3^E$	SW	Well graded sand ^I
			$Cu < 6$ and/or $1 > Cc > 3^E$	SP	Poorly graded sand ^I
Fine-Grained Soils 50% or more passes the No. 200 sieve	Sils and Clays Liquid limit less than 50	Inorganic	$PI > 7$ and plots on or above "A" line ^J	CL	Lean clay ^{K,L,M}
			$PI < 4$ or plots below "A" line ^J	ML	Silt ^{K,L,M}
		Organic	Liquid limit - oven dried	< 0.75	OL
			Liquid limit - not dried		
					Organic clay ^{K,L,M,N}
					Organic silt ^{K,L,M,O}
	Sils and Clays Liquid limit 50 or more	Inorganic	PI plots on or above "A" line	CH	Fat clay ^{K,L,M}
			PI plots below "A" line	MH	Elastic silt ^{K,L,M}
		Organic	Liquid limit - oven dried	< 0.75	OH
			Liquid limit - not dried		
					Organic clay ^{K,L,M,P}
					Organic silt ^{K,L,M,Q}
Highly organic soils		Primarily organic matter, dark in color, and organic odor		PT	Peat

^ABased on the material passing the 3-in. (75-mm) sieve

^BIf field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

^CGravels with 5 to 12% fines require dual symbols: GW-GM well graded gravel with silt, GW-GC well graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

^DSands with 5 to 12% fines require dual symbols: SW-SM well graded sand with silt, SW-SC well graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay

$$^E Cu = D_{60}/D_{10} \quad Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$$

^FIf soil contains $\geq 15\%$ sand, add "with sand" to group name.

^GIf fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

^HIf fines are organic, add "with organic fines" to group name.

^IIf soil contains $\geq 15\%$ gravel, add "with gravel" to group name.

^JIf Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

^KIf soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

^LIf soil contains $\geq 30\%$ plus No. 200 predominantly sand, add "sandy" to group name.

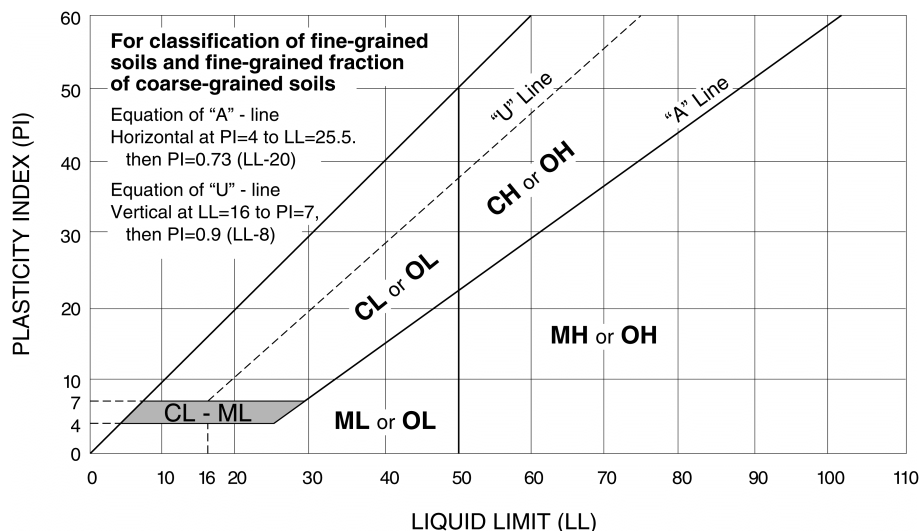
^MIf soil contains $\geq 30\%$ plus No. 200, predominantly gravel, add "gravelly" to group name.

^N $PI \geq 4$ and plots on or above "A" line.

^O $PI < 4$ or plots below "A" line.

^P PI plots on or above "A" line.

^Q PI plots below "A" line.



ROCK CLASSIFICATION

(Based on ASTM C-294)

Sedimentary Rocks

Sedimentary rocks are stratified materials laid down by water or wind. The sediments may be composed of particles or pre-existing rocks derived by mechanical weathering, evaporation or by chemical or organic origin. The sediments are usually indurated by cementation or compaction.

Chert	Very fine-grained siliceous rock composed of micro-crystalline or cryptocrystalline quartz, chalcedony or opal. Chert is various colored, porous to dense, hard and has a conchoidal to splintery fracture.
Claystone	Fine-grained rock composed of or derived by erosion of silts and clays or any rock containing clay. Soft massive and may contain carbonate minerals.
Conglomerate	Rock consisting of a considerable amount of rounded gravel, sand and cobbles with or without interstitial or cementing material. The cementing or interstitial material may be quartz, opal, calcite, dolomite, clay, iron oxides or other materials.
Dolomite	A fine-grained carbonate rock consisting of the mineral dolomite $[\text{CaMg}(\text{CO}_3)_2]$. May contain noncarbonate impurities such as quartz, chert, clay minerals, organic matter, gypsum and sulfides. Reacts with hydrochloric acid (HCL).
Limestone	A fine-grained carbonate rock consisting of the mineral calcite (CaCO_3). May contain noncarbonate impurities such as quartz, chert, clay minerals, organic matter, gypsum and sulfides. Reacts with hydrochloric acid (HCL).
Sandstone	Rock consisting of particles of sand with or without interstitial and cementing materials. The cementing or interstitial material may be quartz, opal, calcite, dolomite, clay, iron oxides or other material.
Shale	Fine-grained rock composed of or derived by erosion of silts and clays or any rock containing clay. Shale is hard, platy, of fissile may be gray, black, reddish or green and may contain some carbonate minerals (calcareous shale).
Siltstone	Fine grained rock composed of or derived by erosion of silts or rock containing silt. Siltstones consist predominantly of silt sized particles (0.0625 to 0.002 mm in diameter) and are intermediate rocks between claystones and sandstones and may contain carbonate minerals.

ROCK CLASSIFICATION

(Based on ASTM C-294)

Metamorphic Rocks

Metamorphic rocks form from igneous, sedimentary, or pre-existing metamorphic rocks in response to changes in chemical and physical conditions occurring within the earth's crust after formation of the original rock. The changes may be textural, structural, or mineralogic and may be accompanied by changes in chemical composition. The rocks are dense and may be massive but are more frequently foliated (laminated or layered) and tend to break into platy particles. The mineral composition is very variable depending in part on the degree of metamorphism and in part on the composition of the original rock.

Marble	A recrystallized medium- to coarse-grained carbonate rock composed of calcite or dolomite, or calcite and dolomite. The original impurities are present in the form of new minerals, such as micas, amphiboles, pyroxenes, and graphite.
Metaquartzite	A granular rock consisting essentially of recrystallized quartz. Its strength and resistance to weathering derive from the interlocking of the quartz grains.
Slate	A fine-grained metamorphic rock that is distinctly laminated and tends to split into thin parallel layers. The mineral composition usually cannot be determined with the unaided eye.
Schist	A highly layered rock tending to split into nearly parallel planes (schistose) in which the grain is coarse enough to permit identification of the principal minerals. Schists are subdivided into varieties on the basis of the most prominent mineral present in addition to quartz or to quartz and feldspars; for instance, mica schist. Greenschist is a green schistose rock whose color is due to abundance of one or more of the green minerals, chlorite or amphibole, and is commonly derived from altered volcanic rock.
Gneiss	One of the most common metamorphic rocks, usually formed from igneous or sedimentary rocks by a higher degree of metamorphism than the schists. It is characterized by a layered or foliated structure resulting from approximately parallel lenses and bands of platy minerals, usually micas or prisms, usually amphiboles, and of granular minerals, usually quartz and feldspars. All intermediate varieties between gneiss and schist and between gneiss and granite are often found in the same areas in which well-defined gneisses occur.

ROCK CLASSIFICATION

(Based on ASTM C-294)

Igneous Rocks

Igneous rocks are formed by cooling from a molten rock mass (magma). Igneous rocks are divided into two classes (1) plutonic, or intrusive, that have cooled slowly within the earth; and (2) volcanic, or extrusive, that formed from quickly cooled lavas. Plutonic rocks have grain sizes greater than approximately 1 mm, and are classified as coarse- or medium-grained. Volcanic rocks have grain sizes less than approximately 1 mm, and are classified as fine-grained. Volcanic rocks frequently contain glass. Both plutonic and volcanic rocks may consist of porphyries that are characterized by the presence of large mineral grains in a fine-grained or glassy groundmass. This is the result of sharp changes in rate of cooling or other physico-chemical conditions during solidification of the melt.

Granite

Granite is a medium- to coarse-grained light-colored rock characterized by the presence of potassium feldspar with lesser amounts of plagioclase feldspars and quartz. The characteristic potassium feldspars are orthoclase or microcline, or both; the common plagioclase feldspars are albite and oligoclase. Feldspars are more abundant than quartz. Dark-colored mica (biotite) is usually present, and light-colored mica (muscovite) is frequently present. Other dark-colored ferromagnesian minerals, especially hornblende, may be present in amounts less than those of the light-colored constituents.

Quartz-Monzonite and Grano-Diorite

Rocks similar to granite but contain more plagioclase feldspar than potassium feldspar.

Basalt

Fine-grained extrusive equivalent of gabbro and diabase. When basalt contains natural glass, the glass is generally lower in silica content than that of the lighter-colored extrusive rocks.

**LABORATORY TEST
SIGNIFICANCE AND PURPOSE**

TEST	SIGNIFICANCE	PURPOSE
<i>California Bearing Ratio</i>	Used to evaluate the potential strength of subgrade soil, subbase, and base course material, including recycled materials for use in road and airfield pavements.	<i>Pavement Thickness Design</i>
<i>Consolidation</i>	Used to develop an estimate of both the rate and amount of both differential and total settlement of a structure.	<i>Foundation Design</i>
<i>Direct Shear</i>	Used to determine the consolidated drained shear strength of soil or rock.	<i>Bearing Capacity, Foundation Design, and Slope Stability</i>
<i>Dry Density</i>	Used to determine the in-place density of natural, inorganic, fine-grained soils.	<i>Index Property Soil Behavior</i>
<i>Expansion</i>	Used to measure the expansive potential of fine-grained soil and to provide a basis for swell potential classification.	<i>Foundation and Slab Design</i>
<i>Gradation</i>	Used for the quantitative determination of the distribution of particle sizes in soil.	<i>Soil Classification</i>
<i>Liquid & Plastic Limit, Plasticity Index</i>	Used as an integral part of engineering classification systems to characterize the fine-grained fraction of soils, and to specify the fine-grained fraction of construction materials.	<i>Soil Classification</i>
<i>Permeability</i>	Used to determine the capacity of soil or rock to conduct a liquid or gas.	<i>Groundwater Flow Analysis</i>
<i>pH</i>	Used to determine the degree of acidity or alkalinity of a soil.	<i>Corrosion Potential</i>
<i>Resistivity</i>	Used to indicate the relative ability of a soil medium to carry electrical currents.	<i>Corrosion Potential</i>
<i>R-Value</i>	Used to evaluate the potential strength of subgrade soil, subbase, and base course material, including recycled materials for use in road and airfield pavements.	<i>Pavement Thickness Design</i>
<i>Soluble Sulfate</i>	Used to determine the quantitative amount of soluble sulfates within a soil mass.	<i>Corrosion Potential</i>
<i>Unconfined Compression</i>	To obtain the approximate compressive strength of soils that possess sufficient cohesion to permit testing in the unconfined state.	<i>Bearing Capacity Analysis for Foundations</i>
<i>Water Content</i>	Used to determine the quantitative amount of water in a soil mass.	<i>Index Property Soil Behavior</i>

REPORT TERMINOLOGY (Based on ASTM D653)

<i>Allowable Soil Bearing Capacity</i>	The recommended maximum contact stress developed at the interface of the foundation element and the supporting material.
<i>Alluvium</i>	Soil, the constituents of which have been transported in suspension by flowing water and subsequently deposited by sedimentation.
<i>Aggregate Base Course</i>	A layer of specified material placed on a subgrade or subbase usually beneath slabs or pavements.
<i>Backfill</i>	A specified material placed and compacted in a confined area.
<i>Bedrock</i>	A natural aggregate of mineral grains connected by strong and permanent cohesive forces. Usually requires drilling, wedging, blasting or other methods of extraordinary force for excavation.
<i>Bench</i>	A horizontal surface in a sloped deposit.
<i>Caisson (Drilled Pier or Shaft)</i>	A concrete foundation element cast in a circular excavation which may have an enlarged base. Sometimes referred to as a cast-in-place pier or drilled shaft.
<i>Coefficient of Friction</i>	A constant proportionality factor relating normal stress and the corresponding shear stress at which sliding starts between the two surfaces.
<i>Colluvium</i>	Soil, the constituents of which have been deposited chiefly by gravity such as at the foot of a slope or cliff.
<i>Compaction</i>	The densification of a soil by means of mechanical manipulation
<i>Concrete Slab-on-Grade</i>	A concrete surface layer cast directly upon a base, subbase or subgrade, and typically used as a floor system.
<i>Differential Movement</i>	Unequal settlement or heave between, or within foundation elements of structure.
<i>Earth Pressure</i>	The pressure exerted by soil on any boundary such as a foundation wall.
<i>ESAL</i>	Equivalent Single Axle Load, a criteria used to convert traffic to a uniform standard, (18,000 pound axle loads).
<i>Engineered Fill</i>	Specified material placed and compacted to specified density and/or moisture conditions under observations of a representative of a geotechnical engineer.
<i>Equivalent Fluid</i>	A hypothetical fluid having a unit weight such that it will produce a pressure against a lateral support presumed to be equivalent to that produced by the actual soil. This simplified approach is valid only when deformation conditions are such that the pressure increases linearly with depth and the wall friction is neglected.
<i>Existing Fill (or Man-Made Fill)</i>	Materials deposited throughout the action of man prior to exploration of the site.
<i>Existing Grade</i>	The ground surface at the time of field exploration.

REPORT TERMINOLOGY (Based on ASTM D653)

<i>Expansive Potential</i>	The potential of a soil to expand (increase in volume) due to absorption of moisture.
<i>Finished Grade</i>	The final grade created as a part of the project.
<i>Footing</i>	A portion of the foundation of a structure that transmits loads directly to the soil.
<i>Foundation</i>	The lower part of a structure that transmits the loads to the soil or bedrock.
<i>Frost Depth</i>	The depth at which the ground becomes frozen during the winter season.
<i>Grade Beam</i>	A foundation element or wall, typically constructed of reinforced concrete, used to span between other foundation elements such as drilled piers.
<i>Groundwater</i>	Subsurface water found in the zone of saturation of soils or within fractures in bedrock.
<i>Heave</i>	Upward movement.
<i>Lithologic</i>	The characteristics which describe the composition and texture of soil and rock by observation.
<i>Native Grade</i>	The naturally occurring ground surface.
<i>Native Soil</i>	Naturally occurring on-site soil, sometimes referred to as natural soil.
<i>Optimum Moisture Content</i>	The water content at which a soil can be compacted to a maximum dry unit weight by a given compactive effort.
<i>Perched Water</i>	Groundwater, usually of limited area maintained above a normal water elevation by the presence of an intervening relatively impervious continuous stratum.
<i>Scarify</i>	To mechanically loosen soil or break down existing soil structure.
<i>Settlement</i>	Downward movement.
<i>Skin Friction (Side Shear)</i>	The frictional resistance developed between soil and an element of the structure such as a drilled pier.
<i>Soil (Earth)</i>	Sediments or other unconsolidated accumulations of solid particles produced by the physical and chemical disintegration of rocks, and which may or may not contain organic matter.
<i>Strain</i>	The change in length per unit of length in a given direction.
<i>Stress</i>	The force per unit area acting within a soil mass.
<i>Strip</i>	To remove from present location.
<i>Subbase</i>	A layer of specified material in a pavement system between the subgrade and base course.
<i>Subgrade</i>	The soil prepared and compacted to support a structure, slab or pavement system.

APPENDIX D

PAVEMENT DESIGN CALCULATIONS

FIGURE 5 - PAVEMENT SECTION ALTERNATIVES DIAGRAM

AASHTO FLEXIBLE PAVEMENT DESIGN

Project: Ralston Sewer Trunk
 Location: West 69th Avenue, Welch Court, West 70th Avenue - Arvada, Colorado

CGG Project No.: 23.22.029
 Scenario: Public Pavement Areas - Local Traffic Classification



SN Determination

ESAL ₂₀ =	73,000	ESALs Applications Over Design Period	Typ. Range 0.1 to 80 million
R =	85 %	Reliability	Typ. Range 80 to 95%
S _o =	0.44	Standard Deviation	Typ. Range 0.3 to 0.5
M _r =	4,940 psi	Subgrade Resilient Modulus	Typ. Range 3000 to 9000 psi
P _i =	4.5	Initial Serviceability	Typ. Range 4.4 to 4.8
P _t =	2.0	Terminal Serviceability	Typ. Range 2.0 to 3.0

Design SN 2.45

Full-Depth HMA Alternative

Layer No.	Description	Layer Coefficient, ai	Drainage Coefficient, mi	Layer Thickness, in	SN
1	HMA	0.44	1.00	6.00	2.64
Trial SN					2.64

Design SN to Match 2.45
 Design is sufficient

Composite HMA+ABC Alternative

Layer No.	Description	Layer Coefficient, ai	Drainage Coefficient, mi	Layer Thickness, in	SN
1	HMA	0.44	1.00	4.00	1.76
2	ABC	0.12	1.00	6.00	0.72
Trial SN					2.48

Design SN to Match 2.45
 Design is sufficient

AASHTO RIGID PAVEMENT DESIGN

Project: Ralston Sewer Trunk
Location: West 69th Avenue, Welch Court, West 70th Avenue - Arvada,
Colorado
CGG Project No.: 23.22.029
Scenario: Public Pavement Areas - Local Traffic Classification



ESAL ₂₀ =	73,000	ESALs Applications Over Design Period	Typ. Range 0.5 to 100 million
PCC MR =	650 psi	Concrete Modulus of Rupture	Typ. Range 550 to 750 psi
E =	3,400,000 psi	Concrete Elastic Modulus	Typ. Range 3 to 6 million psi
k-value =	50 psi/in	Modulus of Subgrade Reaction	Typ. Range 100 to 500 psi/in
R =	85 %	Reliability	Typ. Range 80 to 95%
S _o =	0.44	Standard Deviation	Typ. Range 0.3 to 0.5
J =	3.8	Load Transfer Coefficient	Typ. Range 2.2 to 4.4
C _d =	1.0	Drainage Coefficient	Typ. Range 0.9 to 1.1
P _i =	4.5	Initial Serviceability	Typ. Range 4.5 to 4.8
P _t =	2.0	Terminal Serviceability	Typ. Range 2.0 to 3.0

DESIGN D, inches, = 5.1

AASHTO FLEXIBLE PAVEMENT DESIGN

Project: Ralston Sewer Trunk
Location: Ward Road - Arvada, Colorado

CGG Project No.: 23.22.029
Scenario: Public Pavement Areas - Collector Traffic Classification



SN Determination

ESAL ₂₀ =	1,500,000	ESALs Applications Over Design Period	Typ. Range 0.1 to 80 million
R =	90 %	Reliability	Typ. Range 80 to 95%
S _o =	0.44	Standard Deviation	Typ. Range 0.3 to 0.5
M _r =	4,940 psi	Subgrade Resilient Modulus	Typ. Range 3000 to 9000 psi
P _i =	4.5	Initial Serviceability	Typ. Range 4.4 to 4.8
P _t =	2.5	Terminal Serviceability	Typ. Range 2.0 to 3.0

Design SN 4.13

Full-Depth HMA Alternative

Layer No.	Description	Layer Coefficient, ai	Drainage Coefficient, mi	Layer Thickness, in	SN
1	HMA	0.44	1.00	9.50	4.18
Trial SN					4.18

Design SN to Match 4.13
Design is sufficient

Composite HMA+ABC Alternative

Layer No.	Description	Layer Coefficient, ai	Drainage Coefficient, mi	Layer Thickness, in	SN
1	HMA	0.44	1.00	7.00	3.08
2	ABC	0.12	1.00	10.00	1.20
Trial SN					4.28

Design SN to Match 4.13
Design is sufficient

AASHTO RIGID PAVEMENT DESIGN

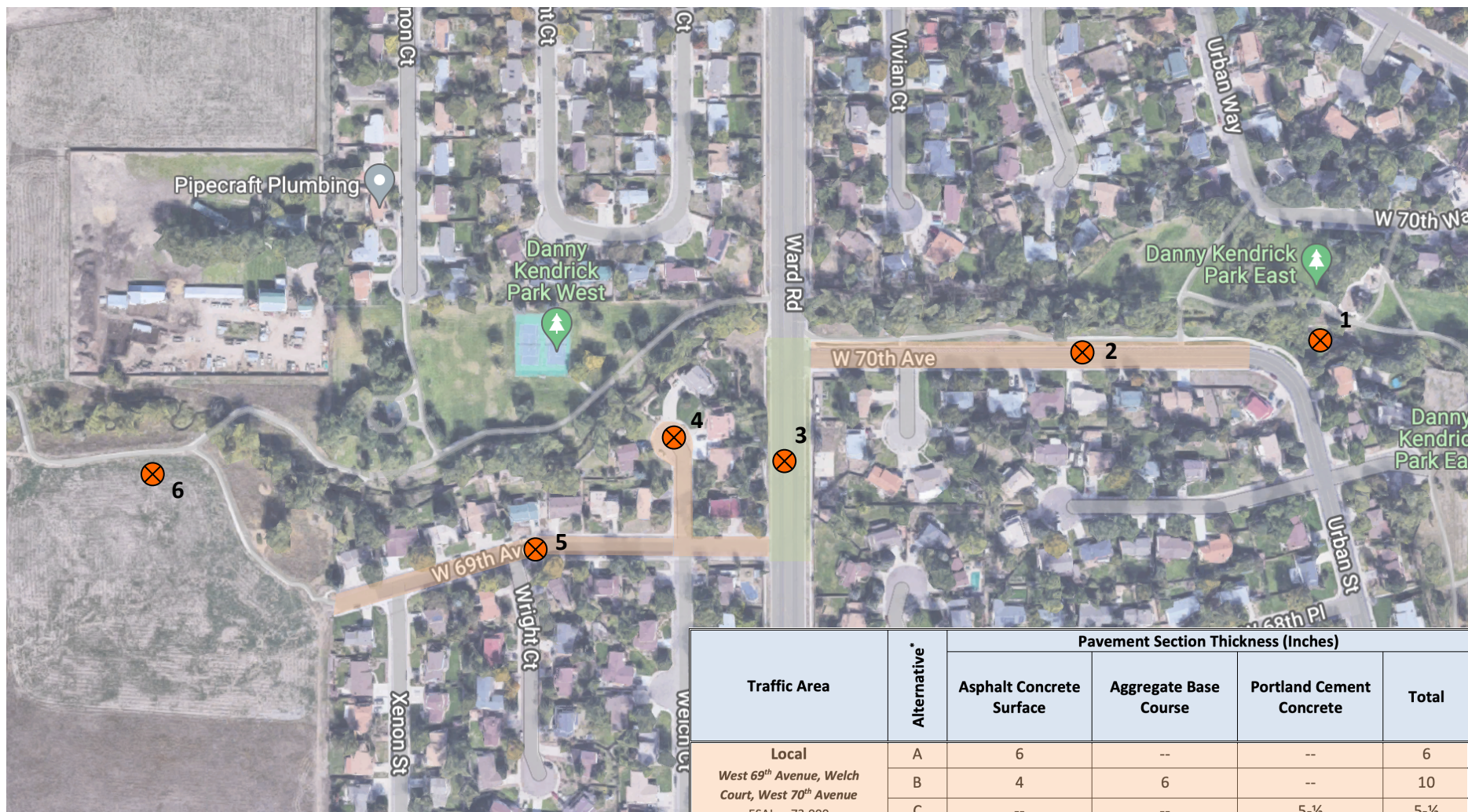
Project: Ralston Sewer Trunk
Location: Ward Road - Arvada, Colorado

CGG Project No.: 23.22.029
Scenario: Public Pavement Areas - Collector Traffic Classification



ESAL ₂₀ =	1,500,000	ESALs Applications Over Design Period	Typ. Range 0.5 to 100 million
PCC MR =	650 psi	Concrete Modulus of Rupture	Typ. Range 550 to 750 psi
E =	3,400,000 psi	Concrete Elastic Modulus	Typ. Range 3 to 6 million psi
k-value =	100 psi/in	Modulus of Subgrade Reaction	Typ. Range 100 to 500 psi/in
R =	90 %	Reliability	Typ. Range 80 to 95%
S _o =	0.44	Standard Deviation	Typ. Range 0.3 to 0.5
J =	3.8	Load Transfer Coefficient	Typ. Range 2.2 to 4.4
C _d =	1.0	Drainage Coefficient	Typ. Range 0.9 to 1.1
P _i =	4.5	Initial Serviceability	Typ. Range 4.5 to 4.8
P _t =	2.5	Terminal Serviceability	Typ. Range 2.0 to 3.0

DESIGN D, inches, = 8.6



Traffic Area	Alternative*	Pavement Section Thickness (Inches)			
		Asphalt Concrete Surface	Aggregate Base Course	Portland Cement Concrete	Total
Local West 69 th Avenue, Welch Court, West 70 th Avenue ESAL ₂₀ =73,000	A	6	--	--	6
	B	4	6	--	10
	C	--	--	5-½	5-½
Collector Ward Road ESAL ₂₀ =1,500,000	A	9-½	--	--	9-½
	B	7	10	--	17
	C	--	--	9	9

✕ APPROXIMATE BORING LOCATIONS



FIGURE 5 – PAVEMENT ALTERNATIVES DIAGRAM
RALSTON SEWER TRUNK
WARD ROAD AND WEST 70TH AVENUE
ARVADA, COLORADO
CGG PROJECT NO. 23.22.029



Cole Garner Geotechnical
 1070 W. 124th Ave., Suite 300
 Westminster, CO 80234
 (303) 996-2999

Contractor's Response

An Agreement By And Between The City Of Arvada And
Native Sun Construction, Inc. For Ralston Trunk Sewer
Improvements – Ward And 69th – Project No. 17-SR-07 In An
Amount Not To Exceed \$5,695,587.67

BID BOND

We, the undersigned Native Sun Construction, Inc. as Principal, and Atlantic Specialty 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 Amount Bid--(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. 17-SR-07, RALSTON TRUNK SEWER IMPROVEMENTS – WARD AND 69TH

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 20th day of September, 2023, 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: Native Sun Construction, Inc.
Address: 400 S. Sierra Madre,
Colorado Springs, CO 80904

By: Ernest Jearof

Title: President

SURETY

Atlantic Specialty Insurance Company

By: Kathryn E. Kade

Title: Kathryn E. Kade, Attorney-in-Fact

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.



Power of Attorney

KNOW ALL MEN BY THESE PRESENTS, that ATLANTIC SPECIALTY INSURANCE COMPANY, a New York corporation with its principal office in Plymouth, Minnesota, does hereby constitute and appoint: **Anuj Jain, Mona D. Weaver, Angela M. Tindol, Kathryn E. Kade, Sheila J. Montoya**, each individually if there be more than one named, its true and lawful Attorney-in-Fact, to make, execute, seal and deliver, for and on its behalf as surety, any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof; provided that no bond or undertaking executed under this authority shall exceed in amount the sum of: **unlimited** and the execution of such bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof in pursuance of these presents, shall be as binding upon said Company as if they had been fully signed by an authorized officer of the Company and sealed with the Company seal. This Power of Attorney is made and executed by authority of the following resolutions adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the twenty-fifth day of September, 2012:

Resolved: That the President, any Senior Vice President or Vice-President (each an "Authorized Officer") may execute for and in behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and affix the seal of the Company thereto; and that the Authorized Officer may appoint and authorize an Attorney-in-Fact to execute on behalf of the Company any and all such instruments and to affix the Company seal thereto; and that the Authorized Officer may at any time remove any such Attorney-in-Fact and revoke all power and authority given to any such Attorney-in-Fact.

Resolved: That the Attorney-in-Fact may be given full power and authority to execute for and in the name and on behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and any such instrument executed by any such Attorney-in-Fact shall be as binding upon the Company as if signed and sealed by an Authorized Officer and, further, the Attorney-in-Fact is hereby authorized to verify any affidavit required to be attached to bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof.

This power of attorney is signed and sealed by facsimile under the authority of the following Resolution adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the twenty-fifth day of September, 2012:

Resolved: That the signature of an Authorized Officer, the signature of the Secretary or the Assistant Secretary, and the Company seal may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing an Attorney-in-Fact for purposes only of executing and sealing any bond, undertaking, recognizance or other written obligation in the nature thereof, and any such signature and seal where 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.

IN WITNESS WHEREOF, ATLANTIC SPECIALTY INSURANCE COMPANY has caused these presents to be signed by an Authorized Officer and the seal of the Company to be affixed this twenty-seventh day of April, 2020.

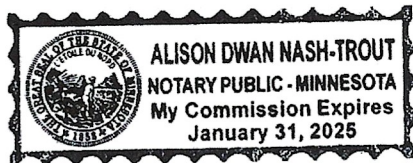
STATE OF MINNESOTA
HENNEPIN COUNTY



By

Paul J. Brehm, Senior Vice President

On this twenty-seventh day of April, 2020, before me personally came Paul J. Brehm, Senior Vice President of ATLANTIC SPECIALTY INSURANCE COMPANY, to me personally known to be the individual and officer described in and who executed the preceding instrument, and he acknowledged the execution of the same, and being by me duly sworn, that he is the said officer of the Company aforesaid, and that the seal affixed to the preceding instrument is the seal of said Company and that the said seal and the signature as such officer was duly affixed and subscribed to the said instrument by the authority and at the direction of the Company.



Notary Public

I, the undersigned, Secretary of ATLANTIC SPECIALTY INSURANCE COMPANY, a New York Corporation, do hereby certify that the foregoing power of attorney is in full force and has not been revoked, and the resolutions set forth above are now in force.

Signed and sealed. Dated 20th day of September, 2023.

This Power of Attorney expires
January 31, 2025



Kara Barrow, Secretary

BID PROPOSAL

TO: City of Arvada, Colorado (hereinafter called "CITY").

FROM: Native Sun Construction (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. **17-SR-07** entitled **Ralston Trunk Sewer Improvements – Ward & 69th** 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

Bidder states that his:

Major Material Suppliers are:

Denver Winwater
Oldcastle Precast
Martin Marietta Materials

Material They Will Supply

Pipe and Fittings
Manholes
Concrete and Aggregates

Major Subcontractors are:

Martin Marietta Materials
Colorado Barricade
Global Underground

Work They Will Perform

AC Paving
Traffic Control
Underground Boring

CONTRACT TIME AND LIQUIDATED DAMAGES: All work shall be completed, including clean-up, within **240** 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 **November 15, 2023**. For each calendar day that the work exceeds the allotted contract time, the Contractor shall agree to pay the owner Liquidated Damages per section 1121.07 of the City of Arvada Engineering Code Standards and Specifications, 2022 Edition. Contract time may be adjusted by Change Order.

Total from included Bid Schedule:

TOTAL BID \$ 5,695,587.67

SUBMITTED BY:

Company Name: Native Sun Construction

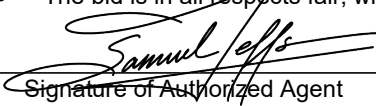
Contact Names: Samuel Jeffs, Senior Estimating Manager

Address: 3107 West Colorado Ave. #312, Colorado Springs, CO 80904

Phone: (719) 593-5874 Email(s): Samuel.Jeffs@nscteam.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:  September 20, 2023 26-3609046
Signature of Authorized Agent Date FEIN
Samuel Jeffs Senior Estimating Manager Samuel.Jeffs@nscteam.com
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. 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..



Drexel, Barrell & Co.
1376 Miners Drive, Ste 107
Lafayette, CO 80026
T: (303) 442-4338
drexelbarrell.com

Project: City of Arvada Ralston Trunk Sewer Improvements: Ward and 69th
Bid No. CSB 23-ENG-074

Contractor:

Date:

Bid Schedule

ITEM NO.	CONTRACT ITEM	UNIT	QUANTITY	UNIT COST	COST
1	EXPLORATORY POTHOLING	LS	1	\$ 86,571.26	\$ 86,571.26
2	PROTECT TREE	EA	34	\$ 747.39	\$ 25,411.26
3	TRAFFIC CONTROL AND STREET RESTRICTIONS (BARRICADES & WARNING SIGNS) (INCLUDES TRAIL DETOURING)	LS	1	\$ 326,675.92	\$ 326,675.92
4	RECORD DRAWINGS	LS	1	\$ 8,084.96	\$ 8,084.96
5	REMOVAL OF SANITARY SEWER MANHOLE	EA	10	\$ 1,509.48	\$ 15,094.80
6	EXISTING SANITARY UNDERDRAIN SYSTEM REPLACEMENT	LF	1000	\$ 68.41	\$ 68,410.00
7	ABANDON SANITARY SEWER MANHOLE	EA	5	\$ 3,109.60	\$ 15,548.00
8	ABANDON SANITARY SEWER PIPE	LF	1419	\$ 10.05	\$ 14,260.95
9	ABANDON WATERLINE	LF	192	\$ 10.26	\$ 1,969.92
10	ABANDON GATE VALVE	EA	1	\$ 1,181.65	\$ 1,181.65
11	REMOVAL OF SANITARY SEWER PIPE	LF	2102	\$ 2.88	\$ 6,053.76
12	REMOVE & DISPOSE OF ASBESTOS CEMENT WATER PIPE	LF	2154	\$ 47.28	\$ 101,841.12
13	REMOVAL OF GATE VALVE	EA	12	\$ 746.30	\$ 8,955.60
14	REMOVAL OF FIRE HYDRANT ASSEMBLY	EA	3	\$ 3,109.60	\$ 9,328.80
15	REMOVE & DISPOSE OF ASPHALT PAVEMENT	SY	5290	\$ 33.69	\$ 178,220.10
16	REMOVAL OF PLAYGROUND EQUIPMENT & DISPOSE	LS	1	\$ 8,706.88	\$ 8,706.88
17	REMOVE, RESET & REPLACE IRRIGATION SYSTEM	LS	1	\$ 41,046.72	\$ 41,046.72
18	REMOVAL OF BOULDER AND RETURN TO CITY	EA	2	\$ 1,181.65	\$ 2,363.30
19	RESET STREET LIGHT & PULL BOX	EA	1	\$ 6,841.12	\$ 6,841.12
20	RESET FENCE	LF	128	\$ 80.85	\$ 10,348.80
21	RESET GROUND SIGN	EA	2	\$ 808.50	\$ 1,617.00
22	REMOVAL OF TRASH RECEPTACLE AND RETURN TO CITY	EA	2	\$ 621.92	\$ 1,243.84
23	REMOVAL OF BUS STOP ENCLOSURE AND CONCRETE PAD	EA	1	\$ 3,771.16	\$ 3,771.16
24	REMOVAL OF BENCH AND RETURN TO CITY	EA	2	\$ 621.92	\$ 1,243.84
25	REMOVE & DISPOSE OF CONCRETE FLATWORK	SY	870	\$ 25.10	\$ 21,837.00
26	CLEARING AND GRUBBING	LS	1	\$ 31,526.00	\$ 31,526.00
27	REMOVAL OF TREE	EA	10	\$ 2,211.33	\$ 22,113.30
28	EROSION CONTROL	LS	1	\$ 68,411.20	\$ 68,411.20
29	DEWATERING	LS	1	\$ 71,796.61	\$ 71,796.61
30	FLOWABLE FILL	CY	100	\$ 261.21	\$ 26,121.00
31	SELECT BACKFILL	CY	8800	\$ 35.44	\$ 311,872.00
32	TRENCH MAINTENANCE PROJECT SITE CLEAN UP	LS	1	\$ 54,303.06	\$ 54,303.06
33	WATERLINE 8" PVC PIPE (COMPLETE-IN-PLACE)	LF	2215	\$ 108.65	\$ 240,659.75
34	WATERLINE 6" PVC PIPE (COMPLETE-IN-PLACE)	LF	83	\$ 125.90	\$ 10,449.70
35	8" PLUG	EA	2	\$ 1,267.95	\$ 2,535.90
36	8" X 6" REDUCER	EA	3	\$ 914.76	\$ 2,744.28
37	8" GATE VALVE AND VALVE BOX	EA	15	\$ 3,222.84	\$ 48,342.60
38	6" GATE VALVE AND VALVE BOX	EA	5	\$ 2,234.20	\$ 11,171.00
39	FIRE HYDRANT ASSEMBLY	EA	5	\$ 9,220.19	\$ 46,100.95
40	RECONNECT WATER SERVICE (3/4" DIA.)	EA	28	\$ 1,653.71	\$ 46,303.88
41	CONNECT TO EXISTING FACILITIES	EA	7	\$ 1,485.64	\$ 10,399.48
42	4" SANITARY SEWER SERVICE TAP & RECONNECTION	EA	22	\$ 2,347.87	\$ 51,653.14
43	SEWER MAIN LINE PIPE (8" PVC) (COMPLETE-IN-PLACE)	LF	1767	\$ 117.94	\$ 208,399.98
44	SEWER MAIN LINE PIPE (27" PVC) (COMPLETE-IN-PLACE)	LF	2997	\$ 255.47	\$ 765,643.59
45	SEWER MAIN LINE PIPE (30" PVC) (COMPLETE-IN PLACE)	LF	175	\$ 323.25	\$ 56,568.75
46	MANHOLES 4' DIA (COMPLETE-IN-PLACE)	EA	11	\$ 8,144.79	\$ 89,592.69
47	MANHOLES 5' DIA (COMPLETE-IN-PLACE)	EA	18	\$ 12,383.41	\$ 222,901.38
48	42" STEEL CASING (BORE) INCLUDES SEWER MAIN LINE PIPE (30" PVC)	LF	115	\$ 3,042.73	\$ 349,913.95
49	SANITARY SEWER BYPASS PUMPING	LS	1	\$ 500,726.45	\$ 500,726.45
50	PAVEMENT MARKINGS	LS	1	\$ 34,827.52	\$ 34,827.52
51	VERTICAL CURB AND GUTTER	LF	83	\$ 198.99	\$ 16,516.17
52	MOUNTABLE CURB, GUTTER & SIDEWALK	SY	38	\$ 230.06	\$ 8,742.28
53	CONCRETE CURB RAMP WITH DETECTABLE WARNINGS	SY	32	\$ 472.28	\$ 15,112.96
54	CONCRETE SIDEWALK	SY	5	\$ 687.26	\$ 3,436.30
55	CONCRETE CROSSPANS & CURB RETURN FILLET REPLACEMENT	SY	116	\$ 296.14	\$ 34,352.24
56	MULTI-USE PATHWAY	SY	269	\$ 202.73	\$ 54,534.37
57	HOT MIX ASPHALT (PATCHING) (ASPHALT) 6-INCH DEPTH (LOCAL STREETS)	SF	43800	\$ 10.29	\$ 450,702.00
58	HOT MIX ASPHALT (PATCHING) (ASPHALT) 9-INCH DEPTH (WARD ROAD)	SF	3778	\$ 16.20	\$ 61,203.60
59	TEMPORARY ASPHALT SURFACING (2 INCH)	SF	4000	\$ 6.49	\$ 25,960.00
60	NON-IRRIGATED NATIVE LANDSCAPING & RESTORATION (INCLUDES SEEDING, TOPSOIL & MULCH)	SF	36200	\$ 0.39	\$ 14,118.00
61	IRRIGATED LANDSCAPING & RESTORATION (INCLUDES SOD AND TOPSOIL)	SF	35580	\$ 1.21	\$ 43,051.80
62	SOFT TRAIL (4 INCH)	SY	505	\$ 3.44	\$ 1,737.20
63	EQUESTRIAN TRAIL (4 INCH)	SY	300	\$ 30.98	\$ 9,294.00
64	RIVER ROCK MULCH (4 INCH)	SY	6.0	\$ 74.60	\$ 447.60
65	CONSTRUCTION SURVEY & STAKING	LS	1	\$ 24,727.00	\$ 24,727.00
66	COMPACTION AND MATERIALS TESTING	LS	1	\$ 46,830.58	\$ 46,830.58
67	MOBILIZATION, PERMITS,FEES, LICENSES AND ADMINISTRATION	LS	1	\$ 263,115.65	\$ 263,115.65
68	MINOR CONTRACT REVISIONS	F/A	1	\$ 370,000.00	\$ 370,000.00
				CONSTRUCTION COST TOTAL	\$ 5,695,587.67

REQUIRED CONTRACTOR SUBMITTAL FORM

VARIATIONS: The vendor shall identify all variations and exceptions to this CSB. 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 _____

SUBMITTAL CHECKLIST:

Bid Proposals shall be submitted in the order listed below with each section clearly identified. _____
a result n su ss on e ng dee ed non respons e

- ☒ Submit completed City Submittal Forms including this sheet, Bid Bond, Bid Proposal, Bid Schedule (Please use attached Excel File Bid Schedule), and any other attachments requested.
- ☒ Completed Performance Measures Form
- ☒ 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 *g* #2 _____ #3 _____

MINIMUM REQUIRED QUALIFICATIONS:

Evidence of these qualifications must be submitted.

- ☒ Two (2) successful projects of **18-inch PVC** or larger gravity sewer main, sanitary sewer or storm sewer similar to this project, in the Front Range of Colorado in the last five calendar years. Front Range Colorado is defined as Fort Collins to Pueblo. Owner contact information for all submitted projects must be provided.
- ☒ Two (2) successful projects of **8-12 inch PVC** waterline in the Front Range of Colorado in the last five calendar years. Front Range Colorado is defined as Fort Collins to Pueblo. Owner contact information for all submitted projects must be provided.
- ☒ Three (3) project references: two of which must be for the proposed Project Manager and one (1) of which must be for the proposed Superintendent. All references must be from Colorado entities.
- ☒ Resumes for the proposed Superintendent and Project Manager must be provided.

REFERENCES:

☐ Check here if Contractor's standard reference sheet is attached, otherwise, use the spaces below.

Name: Palmer Lake Sanitation District Contact Person: Becky Orcutt

Address: 120 Middle Glenway, Palmer Lake, CO 80133

Telephone No: (719) 481-2732 Email: becky.orcutt@plsd.org

Describe type of work/service performed or itemssupplied: Prime Contractor and majority self performed for two 18" Sewer

Trunk Line Projects.

Name: City of Boulder Contact Person: Chris Olson

Address: P.O. Box 791, Boulder, CO 80306

Telephone No: (303) 345-8637 Email: olsonc@bouldercolorado.gov

Describe type of work/service performed or itemssupplied: Prime Contractor and majority self performed for a 36" to 10"

Trunk Sewer Line Replacement Project.

Name: GMS Consulting Engineers Contact Person: Mark A. Leasure

Address: 611 North Weber Street, Suite 300, Colorado Springs, CO 80903

Telephone No: (719) 475-2935 Email: maleasure@gmsengr.com

Describe type of work/service performed or itemssupplied: Prime Contractor for two large sewer trunk line projects that
these guys were the engineer on.

QUALIFICATION PROJECTS:

☐ Check here if qualifications are attached separately, otherwise, use the spaces below.

Project Name: Baseline and Foothills Trunk Sewer Replacment Owner: City of Boulder

Project Location: Baseline Rd and Foothills Pkwy, Boulder, Colorado Date Completed: August 1, 2022

Project Description: This project consisted of more than 7,000 feet of large diameter sewer pipe. There was also over
1,000 feet of 12" water line relocation. Please see the attached project profile (Exhibit A)

Sizes of Pipe Installed: 36" - 10" SDR35 PVC and C900 PVC Length Installed: 7,350 Linear Feet

Project Manager: Joseph N. Jessop Superintendent: Jeremiah Jessop

Project Name: Wastewater System Improvements - 2019 Owner: Palmer Lake Sanitation District

Project Location: Palmer Lake, Colorado Date Completed: February 12, 2020

Project Description: This project consisted of the removal and replacement of 863 LF of 12" Sanitary Sewer Trunk Line
up-sizing it to 18" SDR35 pipe.

Sizes of Pipe Installed: 18" SDR35 PVC Length Installed: 863 Linear Feet

Project Manager: Samuel Jeffs Superintendent: Abram Jessop

Project Name: Wastewater System improvements - 2021 Owner: Palmer Lake Sanitation District
Project Location: Palmer Lake, Colorado Date Completed: May 19, 2023
Project Description: This project consisted of the removal and replacement of 8,047 LF of 12" Sanitary Sewer Trunk Line up-sizing it to 18" SDR35 pipe.
Sizes of Pipe Installed: 18" SDR35 PVC Length Installed: 8,047 Linear Feet
Project Manager: Joseph N. Jessop Superintendent: Jeremiah Jessop

Project Name: East 64th Ave Water Line at E-470 Construction Project Owner: 64th ARI Authority
Project Location: East 64th Ave and E-470, Aurora, Colorado Date Completed: July 31, 2021
Project Description: This project consisted installing 3,204 LF of 24" PVC and DIP water line. This also included an 838 LF bore with 53" steel casing pipe utilizing TBM boring methods.
Sizes of Pipe Installed: 24" C900 PVC and 53" Steel Casing Length Installed: 3,204 Linear Feet
Project Manager: Joseph N. Jessop Superintendent: Jeremiah Jessop

Project Name: _____ Owner: _____
Project Location: _____ Date Completed: _____
Project Description: _____

Sizes of Pipe Installed: _____ Length Installed: _____
Project Manager: _____ Superintendent: _____

Project Name: _____ Owner: _____
Project Location: _____ Date Completed: _____
Project Description: _____

Sizes of Pipe Installed: _____ Length Installed: _____
Project Manager: _____ Superintendent: _____

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 the City will monitor and report on the Vendor’s 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 be evaluated by the City per these defined metrics 2 months prior to contract renewal. The department will review with the vendor any measures needing improvement.

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. We will submit invoices with unit costs per the bid items each month.
- 2. Our superintendent will measure work performed each billing cycle with owner's representative to ensure accuracy.

(b) Punctuality/Responsiveness

Example Measure: Reporting of project status will occur monthly with the City and consultant’s Project Manager.

- 1. We will maintain a running CPM schedule throughout the project which will be updated and reported to the owner every month.
- 2. Progress meetings will be held monthly to discuss project progress and any issues or concerns that may arise.

(c) Quality/Reliability

Example Measure: Revisions are drafted within two weeks, and no more than 3 revisions prior to final draft.

- 1. We will have an onsite quality control manager.
- 2. We will use state-of-the-art GPS positioning equipment to ensure exact grade placement of underground facilities.

(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. Digital communication will be utilized 90% of the time to reduce the use of paper.
- 2. _____

Performance measures will be queried for every year of the contract. Performance measures reporting will be considered when renewing or awarding a contract with a vendor.

PROJECT PREQUALIFICATION

January 28, 2023

Project Prequalification for:

City of Arvada

Project: Ralston Trunk Sewer Improvements – Ward & 69th

PROJECT WITH SIMILAR SCOPE

Project Name	
Baseline and Foothills Trunk Sewer Line Replacement	
Customer or Agency	Point of Contact
City of Boulder Division 1777 Broadway P. O. Box 791 Boulder, Colorado 80306	Name: Chris Olson Phone: (303) 345-8637 Email: olsonc@bouldercolorado.gov
Contract Number	Period of Performance
17022	September 10, 2021 – August 1, 2022
Contract Amount	Place of Performance
\$5,269,019.83	City of Boulder, Colorado
Project Manager	Superintendent
Joseph N. Jessop	Jeremiah Jessop

PROJECT TIMELINE

- Bid Date: September 1, 2021
- Contract Date: September 10, 2021
- Start Date: January 1, 2021
- Completed Date: August 1, 2022: Although this project had a 4 month delayed start due to material supply-chain issues, we were able to complete the project within the original estimated completion time.

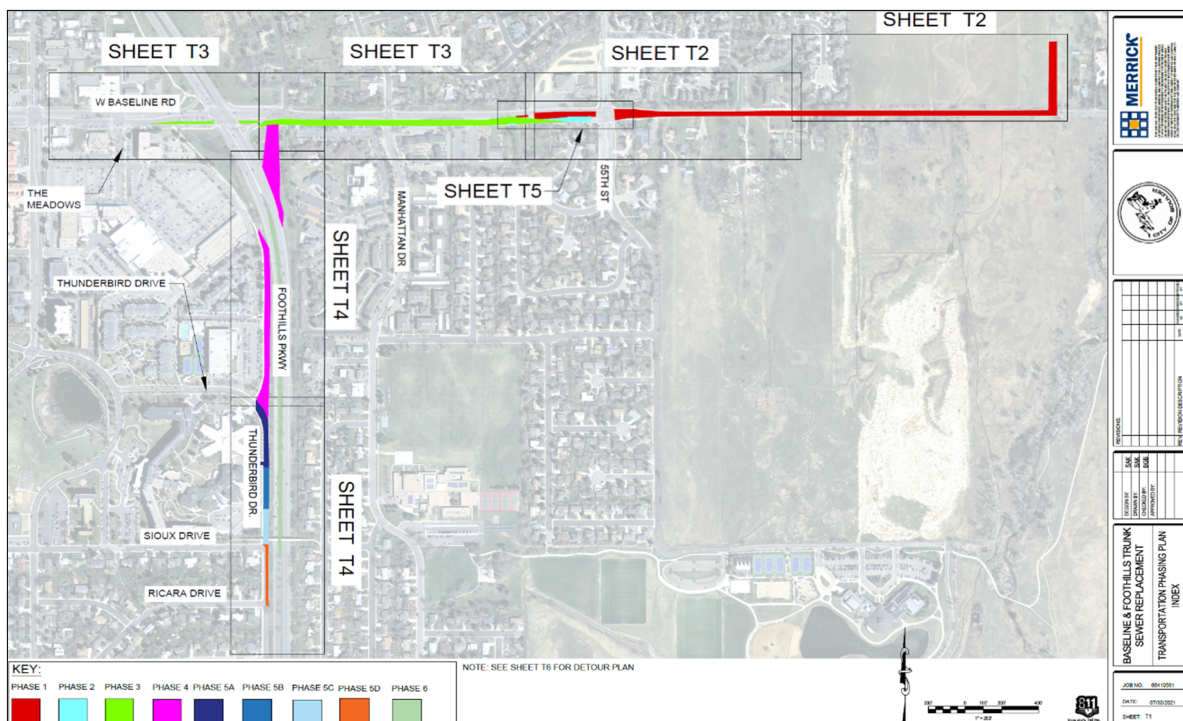
PROJECT OVERVIEW

The project primarily consisted of construction of approximately 7,350 linear feet (lf) of gravity sanitary sewer piping ranging from 10- inch to 36- inch pipe sizes, along with associated manholes, service lines, and other components for the system. The sewer line would pass through waterways, an existing detention basin and several high traffic intersections and roadways. The sewer scope generally consisted of the following quantities of open cut sanitary sewer pipe:

- 36 inch: 400 lf
- 27 inch: 2,350 lf
- 24 inch: 2,050 lf
- 15 inch: 2,400 lf
- 10 inch: 150 lf

In addition to the sanitary sewer piping, the project also included:

- Complex and constantly changing traffic control throughout project duration
- Redesign and Repair Existing Irrigation System
- Installation of 27" diameter sewer mains through existing detention basin and waterways
- Trenchless crossing of existing box culvert
- Relocation of existing waterlines, including wet tap of existing 24" prestressed concrete cylinder pipe (PCCP) transmission main
- Rehabilitation of existing sanitary sewer manholes
- Abandonment of existing sanitary sewer pipes and manholes
- Deep excavations, erosion control, dewatering, sanitary sewer bypassing, site restoration, and other ancillary items necessary to complete the work



At the beginning of this project, sewer pipe was on back order with the manufacturers refusing to give a timeline on delivery. Native Sun's connections with pipe supply chain sources allowed us to get a special shipment of the sewer pipe to allow this project to move forward. This effort was miraculous, especially for this economic timeframe. This delay in pipe availability caused a several month delay. Even with this delay, we were able to complete the work ahead of the anticipated deadline set forth in the bid documents.

January 3, 2022, was the beginning of construction on the project. Hydro Turf, the SWPPP subcontractor, installed the silt fence and other SWPPP requirements. Track-out pads were installed at our staging area.



Potholing using a vac-truck was vital for worker safety and protection of a high-pressure gas line and other utilities.



Deep excavation for the installation of two manholes with 36" sewer pipe required specially engineered shoring.

We began work with the installation of a 400 ft reach of 36" sewer main through an open space area which included two tie-in 36" sewer main manholes along with two transfer manholes. The trenching was 9' deep in the open space. When we got into the roadway, the existing elevation was 6' higher than the open space which immediately made the trench 15' deep. This, along with a large amount of existing utilities, allowed very little room for excavation resulting in tight trench congestion. Due to the deep excavation and soil instability, special engineered trench shoring was required to protect a 16" high-pressure gas line, fiber optics and concrete-encased phone line. To add a further complication, our work moved from Boulder City jurisdiction to rights-of-way owned by Boulder County. This required working closely with both governmental agencies through this process.



Trenching and installing multiple manholes and a 27" sewer line crossing a high-pressure 16" gas line, a concrete encased phone bank, fiber optics, and other utilities required careful planning of shoring equipment. Mitigation of an abundance of ground water in the trench was required during the entire process.

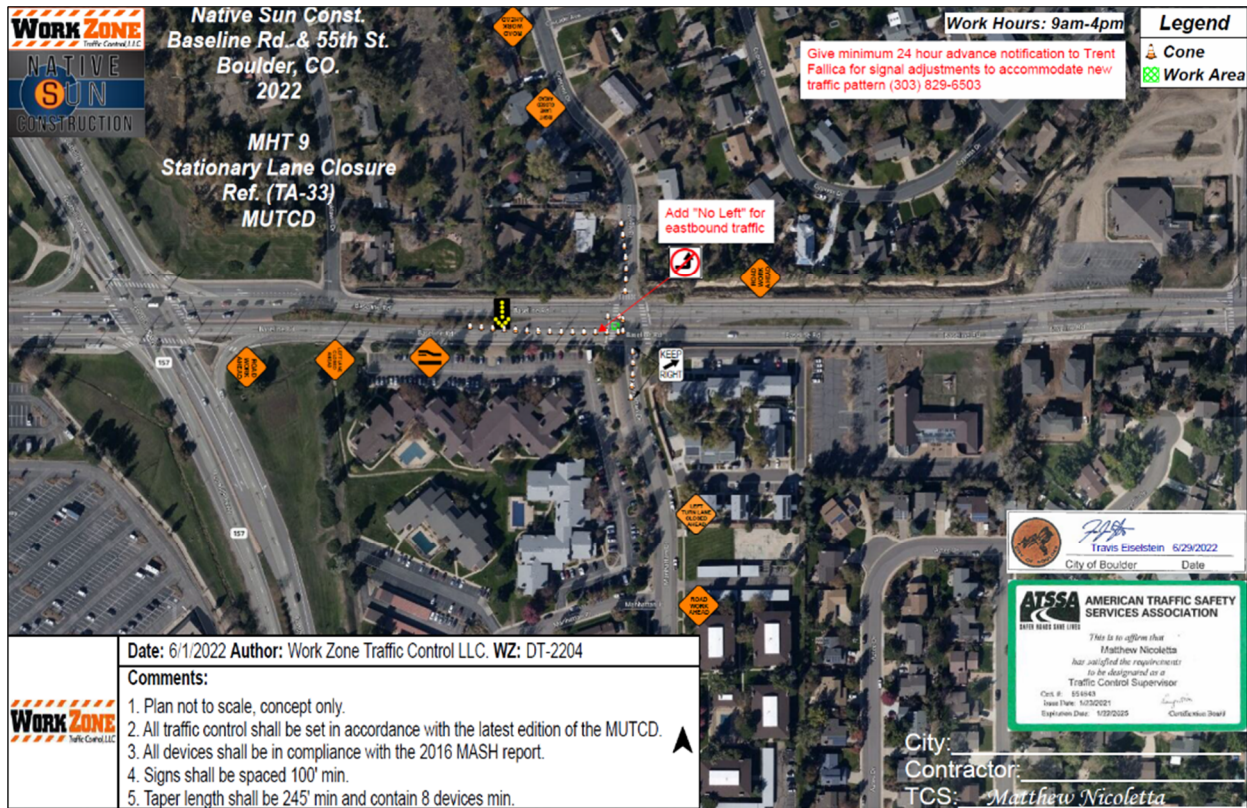
The next segment was 2,350 lf of 27" sewer line. The first 1,000 lf of this project was in Boulder County. Boulder County specs were more stringent than Boulder City. There was considerably more ground water than was originally specified in the bid package and trench cave-ins were a common occurrence. Due to the water saturation, we exported the original soil and hauled in new soil that met Boulder County compaction specifications.

The 27" sewer line ran between a 16" high-pressure gas line and 24" water line through the full length of this segment. Native Sun worked closely with the gas line company reps as well as city and county officials to ensure none of these utilities were hit.

The second half of this segment was in Boulder City limits. We were under a time-constraint to have crossed through an open irrigation ditch before the irrigation water was turned on for the season. Due to the age of the irrigation system, the existing pipe deteriorated upon exposure. We replaced the irrigation pipe where it crossed the roadways. This added to an already tight time schedule. We successfully met these requirements in good time.



City officials were unaware of the condition of an existing irrigation line the sewer line crossed under. Due to its deteriorated condition, the irrigation line had to be replaced at every location that it was exposed.



Our next phase was crossing 55th Avenue. 55th Avenue and Baseline is an extremely busy traffic intersection. Traffic control complexity required constant vigilance requiring traffic to move to one half of the intersection while work was performed. Traffic was then transferred to the newly completed section of the intersection while the process was repeated on the other half of the intersection. By the end of this project over 15 unique traffic control plans were used.



Work continued down Baseline Road from 55th Avenue to Manhattan with the 24" sewer line. The Manhattan intersection had the same scenario as 55th Avenue with traffic control complexity. Using Work Zone, our traffic control subcontractor, we managed the same complexity of traffic along with tapering of both east and west bound traffic on the divided Baseline Road.



East Boulder Creek Ditch: This was an active waterway especially during the spring runoff season. Careful SWPPP mitigation and a temporary 18" bypass carrier pipe was used while Native Sun installed a sewer line underneath the waterway and replaced the concrete base of the ditch.

Simultaneous to the sewer line being installed down Baseline Road, a second crew started at the intersection of Baseline and Foothills. Work consisted of installing a sewer line through a live waterway, East Boulder Creek Ditch. We had to provide means to keep the waterway flowing while we crossed it. We installed an 18" temporary carrier pipe to carry the flowing creek water while we excavated through the waterway.

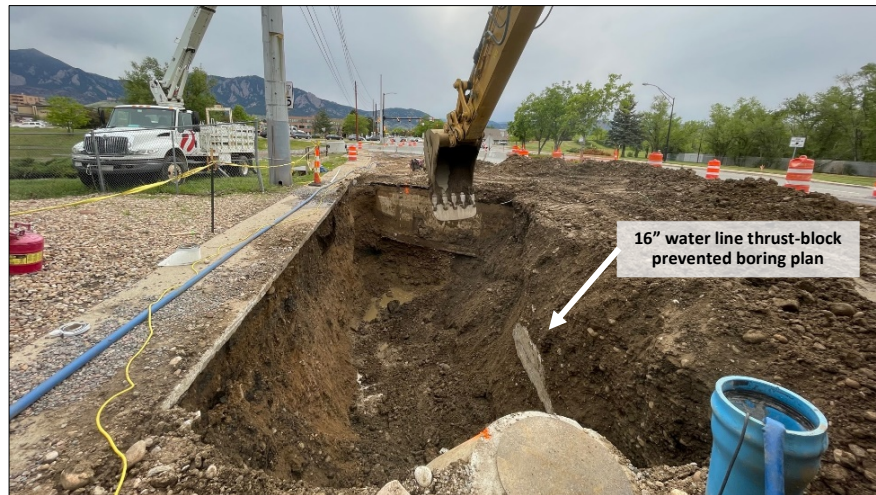
Additional SWPPP and groundwater control efforts were put in place to protect the waterway. Our equipment and dump truck access to the retention basin was through the waterway which required constant SWPPP and carrier pipe maintenance during this phase of the project. This waterway had a concrete bottom which required us to leave the temporary carrier pipe in place while the concrete bottom was replaced through the waterway.

There were live-sewer manhole tie-ins happening throughout the duration of this project. Residential home live-sewer tie-ins were also required along Baseline Road. Several scenarios required temporary sewer bypass pumping.



Installing 15" sewer line through East Boulder Creek Ditch and retention basin. Additional SWPPP and groundwater control efforts were put in place to protect the waterway through this process.

As grading and paving began on Baseline Road, the sewer-line installation crew continued installing 24" sewer through Manhattan up to a box culvert crossing 300 ft east of Foothills. We hired a subcontractor, Global Underground, to bore under the box culvert. However, an undisclosed 16" water line was discovered in the way of the bore. Due to this, Global Underground's boring plan was ineffective.



High volume of groundwater was present at box culvert boring site. Constant groundwater mitigation was required through the boring process.



This unexpected change in the boring plan would have resulted in a large increase in costs to the City of Boulder, but with the ingenuity of Native Sun's team, we devised a special boring plan and (using our own crew) successfully performed the boring using an improvised track system under the box culvert at a much less cost than by using the boring subcontractor. Again, the mitigation of a large amount of groundwater was required during the process.

"Native Sun identified field concerns and came up with innovative solutions to address utility conflicts, maintain public safety, and were very workable with the public in the area."

– Chris Olson, PE, City of Boulder

After grading and paving, we performed road striping, raising manhole collars and water valve cans. Grading and cleanup on roadway shoulders.



Waterway and Retention Basin Reclamation: Reseeding and landscape repair along roadways and retention basin was required.



CONTACT INFO



972.439.6915



joe.jessop@nscteam.com



Parker, CO 80134

SKILLS

- Public Works Projects
- Private & Commercial Heavy Civil Projects
- Concrete Knowledge Expert
- Critical Path Development and Management
- Team Building
- Negotiations
- Equipment Management
- Trimble GPS
- Procore
- Autodesk BUILD

JOSEPH JESSOP

PROJECT MANAGER

PROFESSIONAL PROFILE

Joseph Jessop, a highly skilled construction project manager, brings over 20 years of invaluable experience to the field. With an exceptional grasp of project management and critical path development, coupled with his keen eye for detail, he consistently drives successful outcomes for numerous construction projects.

His ability to adeptly navigate construction complexities is unmatched, as evidenced by his remarkable track record of delivering projects on time and within budget.

Having honed his craft across diverse construction domains, including street and site development, bridgework, structural concrete, and underground utilities, Joseph possesses a deep well of knowledge in the industry. This profound understanding enables him to confidently lead his teams through intricate projects, ensuring unwavering commitment to top-tier quality and safety standards.

Joseph's professional journey also includes a notable history of managing public-works projects for governmental municipalities and water districts. His familiarity with the distinctive intricacies and regulations governing such endeavors has consistently translated into highly successful outcomes for these clients.

Beyond his technical proficiency, Joseph stands out as a truly inspiring team leader. He possesses a rare talent for fostering the growth and development of his team members. By identifying and nurturing individual strengths, Joseph cultivates a collaborative work environment that upholds a culture of excellence and innovation.

WORK EXPERIENCE

Project Manager / General Superintendent

Native Sun Construction - 2009 until present

Holding roles as superintendent and project manager, has successfully completed projects ranging from \$1 Million to \$6 Million. Types of projects completed ranged from multiple high-profile public work projects consisting of utility work, street work, earthwork, parks, and bridges.

Also completed many private work projects consisting of structural concrete for multi-family apartments, elevator cores, parking garages, site development, earthwork, and utilities.

Successfully completed many utility and street improvement projects for over 30 municipalities and districts along Colorado's Front Range.

Superintendent

General Rock & Related Companies - 2000 to 2008

Having grown up in construction, joined the family business in 2000 working alongside his brothers in utility work, earthwork, and structural concrete. Proven expertise from pipe-setter, concrete specialist, to general superintendent. Also, assisted in developing a division of company providing aggregate and ready-mix materials for state DOT and Navajo Nation DOT.

Jeremiah Jessop

Project Superintendent

Contact

✉ jeremiah.jessop@nscteam.com

☎ (435) 559-4228

Education

- High School
- Journeyman Apprentice
- Autodesk Project Management

Skills

- Field Superintendent
- Microsoft Project
- GPS Technician
- Total Station Technician
- Equipment Operator
- Journeyman Carpenter
- Concrete Finisher

Profile

Worked for Native Sun Construction since 2018. Moved up through the ranks of the company performing roles as concrete finisher, excavator operator, GPS technician, and Field Superintendent.

Ability to effectively manage and motivate his crews, has earned Jeremiah a reputation as a problem solver and across Native Sun and the municipalities and clients they work with.

Completed Projects

- Paseo Bridge Replacement & Trail Improvement - City of Colorado Springs
- Tap 18 Phase 1 Galena Sidewalk Project - Cripple Creek
- Colorado Front Range Trail - Town of Castle Rock



REPORT TO CITY COUNCIL RESOLUTION

AGENDA ITEM
8.A.4.

TO: THE HONORABLE CITY COUNCIL

DATE: November 27, 2023

SUBJECT: R23-104, A Resolution Authorizing Amendment No. 1 To “An Agreement Between The City Of Arvada and Kennedy/Jenks Consultants, Inc. for Professional Design Services” for Additional Engineering Design and Construction Phase Services, Thereby Increasing the Contract Amount From \$425,472.00 to an Amount not to Exceed \$932,028.00

Report in Brief

Amendment No 1 to the existing design engineering contract between the City of Arvada and Kennedy/Jenks Consultants for the NTL10 - Tennyson and 58th project will increase the existing contract amount by \$506,556.00 to a new contract total of \$932,028.00. This total is broken down between two Exhibits as follows.

Exhibit 1 is a change order (in an amount of \$191,366.00) which includes services performed by the consultant that were not originally contracted, including scope changes as follows:

- A pipeline alignment change following the discovery of a raw water line that was not originally surveyed;
- An increase of the total number of test holes for subsurface utility engineering from 20 to 58;
- Additional requirements for test holes in the railroad rights of way;
- Additional water quality testing, and;
- Additional environmental testing of sampled subsurface materials.

Exhibit 2 is an amendment to the original contract (in an amount of \$315,190.00) that includes the services that will be performed by the consultant during construction of the NTL10 - Tennyson and 58th project.

The Arvada team recommends that the City Council approve R23-104, A Resolution By and Between the City of Arvada and Kennedy/Jenks Consultants, Inc for Amendment No 1 to the Engineering Design Contract for the NTL 10 - Tennyson and 58th Sewer Upgrades Project, Including Change Orders for Additional Design Services and Construction Phase Engineering Services, in an Amount of \$506,556.00 for a Revised Total Contract Amount not to Exceed \$932,028.00.

Financial Impact

CIP Project: XX-ENG-XXX North Trunk Sewer Improvements (NTSI) - Tennyson and 61st

Financial Impact: \$506,556.00

Funding Source: Wastewater Enterprise

CIP Account Number: 98551

Background

In 2023, the City of Arvada completed a Sanitary Sewer Master Plan that provided the hydraulic modeling results of the existing sanitary sewer infrastructure servicing northern Arvada. This report highlighted several areas of capacity concerns under existing and build-out conditions. NTL10 was identified as one of the four priority areas and the most time sensitive portion, and City staff contracted with Kennedy/Jenks Consultants (KJ) to design the sewer improvements in Tennyson St between 61st Pl and Interstate 76. The project was pursued as a CM/GC, and at 30% design BT Construction was selected as the contractor. The design process is now between 60% and 90% with an estimated construction start date in February 2024.

SUBJECT: R23-104, A Resolution Authorizing Amendment No. 1 To “An Agreement Between The City Of Arvada and Kennedy/Jenks Consultants, Inc. for Professional Design Services” for Additional Engineering Design and Construction Phase Services, Thereby Increasing the Contract Amount From \$425,472.00 to an Amount not to Exceed \$932,028.00

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ITEM: 8.A.4.

During the design process, KJ has completed additional design items that were not part of the original contract between the City and KJ. These have resulted in a change order in the amount of \$191,366.00 and include the following:

- A pipeline alignment change following the discovery of a raw water line that was not originally surveyed;
- An increase of the total number of test holes for subsurface utility engineering from 20 to 58;
- Additional requirements for test holes in the railroad right of way;
- Additional water quality testing, and;
- Additional environmental testing of sampled subsurface materials.

The City also seeks to retain KJ for engineering services during construction, which amount to \$315,190.00.

Discussion

Kennedy/Jenks (KJ) was originally contracted for an amount of \$425,472.00 for design phase services. Following various scope changes as the design process developed, KJ performed work in excess of that which was originally contracted. This amounted to a total of \$191,366.00 (Exhibit 1). The City would like to retain KJ as the construction phase design engineer, as the consultant has a thorough understanding of the design. Construction phase services amount to \$315,190.00 (Exhibit 2).

The City recommends that R23-104, A Resolution Authorizing Amendment No. 1 To “An Agreement Between The City Of Arvada and Kennedy/Jenks Consultants, Inc. for Professional Design Services” for Additional Engineering Design and Construction Phase Services, Thereby Increasing the Contract Amount From \$425,472.00 to an Amount not to Exceed \$932,028.00 be approved. This work is funded by the 2022 Sewer Bond.

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 included in the Infrastructure Priority Area:

Provides the community with a safe, reliable high quality water supply, drainage system, and wastewater disposal services for full city build-out, as defined in the Comprehensive Plan. This includes maintaining utility rates at the 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 R23-104, A Resolution Authorizing Amendment No. 1 To “An Agreement Between The City Of Arvada and Kennedy/Jenks Consultants, Inc. for Professional Design Services” for Additional Engineering Design and Construction Phase Services, Thereby Increasing the Contract Amount From \$425,472.00 to an Amount not to Exceed \$932,028.00.

SUBJECT: R23-104, A Resolution Authorizing Amendment No. 1 To “An Agreement Between The City Of Arvada and Kennedy/Jenks Consultants, Inc. for Professional Design Services” for Additional Engineering Design and Construction Phase Services, Thereby Increasing the Contract Amount From \$425,472.00 to an Amount not to Exceed \$932,028.00

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Suggested Motion:

I move that R23-104, A Resolution Authorizing Amendment No. 1 To “An Agreement Between The City Of Arvada and Kennedy/Jenks Consultants, Inc. for Professional Design Services” for Additional Engineering Design and Construction Phase Services, Thereby Increasing the Contract Amount From \$425,472.00 to an Amount not to Exceed \$932,028.00, be (approved) (rejected).

Prepared by:
Amber Brooks, Civil Engineer II

Reviewed by:

Approved by:

Mary Stahl, Senior Civil Engineer	11/6/2023
Jenny Wolfschlag, City Engineer	11/6/2023
Jacqueline Rhoades, Public Works Director	11/8/2023
Bryan Archer, Director of Finance	11/8/2023
Tammy Hedlund, Legal Specialist	11/8/2023
Jessica Morales, Assistant City Attorney	11/9/2023
Rachel Morris, City Attorney	11/15/2023
Don Wick, Deputy City Manager	11/15/2023
Lorie Gillis, City Manager	11/15/2023

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R23-104

A RESOLUTION AUTHORIZING AMENDMENT NO. 1
TO "AN AGREEMENT BETWEEN THE CITY OF ARVADA AND KENNEDY/JENKS
CONSULTANTS, INC. FOR PROFESSIONAL DESIGN SERVICES" FOR ADDITIONAL
ENGINEERING DESIGN AND CONSTRUCTION PHASE SERVICES, THEREBY
INCREASING THE CONTRACT AMOUNT FROM \$425,472.00 TO AN AMOUNT NOT TO
EXCEED \$932,028.00

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, Amendment No. 1 to an Agreement, which is in substantially the same form as that attached hereto, by and between the City of Arvada and Kennedy/Jenks Consultants, Inc., for additional engineering design and construction phase services, thereby increasing the contract amount from \$425,472.00, to an amount not to exceed \$932,028.00.

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

APPROVED AND ADOPTED this 27th day of November, 2023.

Lauren Simpson, Mayor

ATTEST:

City Clerk

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

By: _____

AMENDMENT NO. 1
TO “AN AGREEMENT BETWEEN THE CITY OF ARVADA AND
KENNEDY/JENKS CONSULTANTS, INC. FOR PROFESSIONAL
DESIGN SERVICES” FOR ADDITIONAL ENGINEERING
DESIGN AND CONSTRUCTION PHASE SERVICES, THEREBY
INCREASING THE CONTRACT AMOUNT FROM \$425,472.00 TO
AN AMOUNT NOT TO EXCEED \$932,028.00

1. PARTIES.

- 1.1. The Parties to this Agreement are the City of Arvada, a Colorado home rule municipal corporation, whose mailing address is 8101 Ralston Road, Arvada, Colorado 80002 (“Arvada” or the “City”) and Kennedy/Jenks Consultants, Inc., a California Foreign Corporation whose principal place of business is located at 275 Battery Street, Suite 550, San Francisco, California 94111 (“Consultant” or “Contractor”). The Parties may be referred to individually as a “Party” and collectively as the “Parties.”

2. RECITALS AND PURPOSE.

- 2.1. Arvada required a qualified engineering consulting firm to provide design and construction phase services for the replacement of approximately 3,600 feet of sanitary trunk sewer, for the North Trunk Sewer Improvements – Tennyson and 58th (the “Project”).
- 2.2. On or about September 23, 2023, Arvada and Consultant entered into an agreement for these engineering design services in an amount not to exceed \$425,472.00 (“Original Agreement”).
- 2.3. For the convenience of the parties, (due to the voluminous nature of the Original Agreement), the Original Agreement is not attached hereto but is incorporated herein by reference.
- 2.4. While the Original Agreement was only for the cost of the initial design services, it made clear the City intended to award Consultant construction phase engineering services, which would be negotiated at a later date.
- 2.5. This First Amendment to the Original Agreement (“Amendment No. 1”) is necessary for (1) additional design services that have been encountered during the execution of the preliminary and final design phases of the Project; and (2) the addition of construction phase engineering services for the Project.

3. CONTRACT DOCUMENTS AND EXHIBITS. The Contract Documents shall consist of this Amendment No. 1 and the Original Agreement together with the following:

Exhibit 1: Consultant’s Proposal for Additional Design Services; and

Exhibit 2: Consultant's Proposal for Construction Phase Services.

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 Consultant shall secure the written instructions from Arvada before proceeding with the performance of the services affected by such conflicts, omissions, or discrepancies.

4. COST OF AMENDMENT NO. 1.

4.1. Amendment No. 1 increases the contract amount by \$506,556.00, from an Original Contract amount not to exceed \$425,472.00 to a new contract amount not to exceed **\$932,028.00** for the contracted services.

4.2. The \$506,556.00 increase is broken down as follows: (1) \$191,366.00 for the additional design services in Exhibit 1; and (2) \$315,190.00 for the construction phase engineering services in Exhibit 2.

5. PROJECT SCHEDULE IMPACTS.

5.1. The original Project schedule will be impacted by the additional design services, as indicated in Exhibit 1.

6. FULL FORCE AND EFFECT.

6.1. All other terms and conditions shall be as set forth in the Original Agreement.

(Remainder of page intentionally left blank. Signatures on next page.)

DATED this _____ day of _____, 2023.

CITY OF ARVADA, a Colorado home rule
municipal corporation

Lauren Simpson
Mayor
8101 Ralston Road
Arvada, Colorado 80002

ATTEST:

City Clerk

APPROVED AS TO FORM:

Rachel A. Morris, City Attorney

By: _____

KENNEDY/JENKS CONSULTANTS, INC.

Emily C. Hudish
Vice President
275 Battery Street, Suite 550
San Francisco, California 94111
EmilyHudish@kennedyjenks.com

Exhibit 1

Amendment No. 1

To “An Agreement Between The City Of Arvada And Kennedy/Jenks Consultants, Inc. For Professional Design Services” For Additional Engineering Design And Construction Phase Services, Thereby Increasing The Contract Amount From \$425,472.00 To An Amount Not To Exceed \$932,028.00

October 6, 2023

Mr. Kris Gardner, P.E.
Project Manager
City of Arvada
8101 Ralston Road
Arvada, CO 80002

**Subject: Request for Amendment No. 1: Additional Design Services
North Trunk Sewer Improvements – Tennyson and 58th
JN 2246059*00**

Dear Mr. Gardner,

Kennedy/Jenks Consultants (KJ) is submitting this proposal for additional design services that have been encountered during the execution of the preliminary and final design phases of the North Trunk Sewer Improvements – Tennyson and 58th (Project) for the City of Arvada (City). During the execution of the Project, KJ encountered various Project conditions that were not anticipated when the original project scope was developed, and we are seeking the City's consideration of these additional services and associated costs through this amendment request. The additional services have been discussed with the City as the Project has progressed, but it was determined between the City and KJ that an amendment request would not be submitted until the Project approached 70 – 75% completion. The details of the additional services are provided as follows:

ADDITIONAL DESIGN SERVICES

1. *Re-Evaluation of Project Alignment*

In conformance with Colorado's subsurface utility engineering (SUE) law, KJ initiated an 811 records request of the utilities within the Project area. This 811 request was separate from the effort that the City's Surveying Department performed in order to get locates marked in the field. KJ reviewed the utility mapping provided through the 811 request and discovered that a 14-inch diameter raw water line from the City of Westminster was not included in the utility base mapping prepared for the Project by the City's surveying group. KJ coordinated with the City to get the utility located and included in the Project mapping. Unfortunately, the location of Westminster's 14-inch water reuse line conflicted with the preferred Project alignment, along the east side of Tennyson Street south of the RTD/railroad right-of-way (ROW) and required a re-evaluation of the Project alignment to identify appropriate space in a very congested Tennyson Street corridor. This additional alignment re-evaluation effort was not anticipated and came after the Alignment Workshop had been conducted and a preferred Project alignment selected.

2. *Final Utility Potholing & Coordination*

The Project was originally scoped with the assumption that 20 potholes would be performed during the final design phase, in accordance with the requirements that the City stated in its RFP for the Project. Due to the critical nature of the Project's vertical alignment (upsizing from 30-inch diameter to 42-inch diameter, limited sewer service connection elevations on both upstream and downstream ends, calculated minimum pipeline slope to convey design flows and limited cover over the pipe), it was determined that it would be most cost-effective to perform additional utility potholing during the final design phase to identify any potential conflicts prior to

construction. KJ, the City and the City's CM/GC Contractor, BT Construction (BTC), discussed the benefits of potholing all utilities along the project alignment. After finalizing the alignment, KJ identified 58 utility crossings outside of the RTD/railroad ROW that needed to be potholed. The additional scope of work associated with this effort is summarized as follows:

- a. Perform an additional 38 utility potholes, for a total of 58 potholes (outside of RTD/Railroad ROW), beyond the 20 potholes included in the original scope of work.
- b. Increase the amount of traffic control required to complete the potholing activities by 11 days (from 3 days assumed in the original scope of work, to 14 days total).
- c. Obtain the appropriate permit from Adams County to allow the work to be completed within Tennyson Street ROW. Our teaming partner, performing the utility potholing, assumed that the City was the only agency which required a permit and did not include obtaining a permit from Adams County in the original scope of work.

3. Required Potholing in RTD/Railroad Right-of-Way

KJ has been in communication with the Regional Transportation District (RTD) during both the preliminary and final design of the Project attempting to gather as-built information on the three (3) duct banks adjacent to their Gold Line tracks, crossing Tennyson Street just south of 60th Avenue. The RTD representative informed KJ that they did not have any as-built information on those duct banks and due to the limited vertical space available to "thread" the City's trenchless sanitary sewer alignment under their tracks, they were requiring us to pothole their duct banks, identifying elevations of both top and bottom of these assets. RTD required that the Project submit a right-of-entry (ROE) application to gain access to their ROW, sign a ROE agreement, and perform the necessary potholing operations during a night-time window from 12:00am to 4:30am. This requirement was not anticipated or included in our original scope of work. The City, KJ and BTC discussed this requirement and determined that BTC could perform the specialized utility potholing and that BTC should also complete other utility potholing within RTD/railroad ROW. The scope of work associated with this additional task is summarized as follows:

- a. Coordinate with RTD, UP & BNSF to determine the necessary steps required to gain ROE access to the RTD/railroad ROW to perform potholing operations.
- b. Develop an exhibit locating the eight (8) utility potholes to be completed within the RTD/railroad ROW; labeling of the RTD, UP & BNSF tracks; planned locations of Vac-trucks for potholing operations and associated staging areas; and inclusion of required pothole/surveying notes as provided by RTD, UP & BNSF.
- c. Completion and submittal of the ROE application, along with the exhibit above, to RTD, UP & BNSF for review.
- d. Submittal of the appropriate ROE application/agreement fees for RTD, UP & BNSF (\$500; \$2,045 & \$2,067 respectively).
- e. Once review of the three (3) applications has been approved and permits obtained, schedule a timeframe to conduct the potholing operations.
- f. BTC will perform the potholing operations and locate the eight (8) utilities discussed above. Work will be completed under one mobilization and will be completed within a maximum timeframe of three (3) nights work. BTC will utilize certified flaggers/observers (RailPros) per RTD, UP & BNSF requirements and will temporarily install sound panels along the north end of the work area to keep construction noise within the City's required levels.

4. Water Quality Testing of Groundwater for Metro Water Recovery Disposal

During the original project scoping, KJ and the City discussed concerns about the water quality of the groundwater in the Project area and the potential for contaminants due to nearby industrial users. We included provisions in our original scope of work to collect water quality samples and analyze those samples for groundwater contaminants that may evoke specific discharge requirements by CDPHE. The analysis of the water quality samples collected indicated slightly

elevated levels for metals which would require on-site treatment of the dewatering effluent before it could be discharged into Clear Creek. In discussions with BTC, the on-site treatment for dewatering effluent and the maintenance of this system over the life of Project construction is very costly. Through continued discussions with the City and BTC on this issue, it was determined that we would engage with Metro Water Recovery (MWR) and see if they would allow the dewatering effluent to be discharged into their interceptor system for eventual treatment which would provide a more cost-effective solution. KJ discussed the possibility of discharging the dewatering effluent into the interceptor with MWR staff and they were receptive to this situation as long as the effluent met certain water quality standards that were in development. MWR provided a listing of water quality tests that needed to be conducted and the criteria that needed to be met for discharge into their system. The water quality constituents that MWR required was more extensive than what is required by CDPHE to discharge into Clear Creek and a listing of the required constituents is included in the Special Discharge Request Form, provided as Figure 1. Additional effort was required to perform this work as summarized below:

- a. Coordinate with MWR staff and determine the water quality requirements that need to be met in order to discharge the dewatering effluent into MWR's system.
- b. Collect the necessary water quality samples in accordance with testing standards.
- c. Conduct laboratory analysis of the collected samples for the tests required by MWR.
- d. Prepare and submit the application, inclusive of the analysis results, for MWR review and potential approval.

5. Environmental Testing of Insitu Soils

During the 60% Design Review meeting, KJ discussed the water quality results associated with Item 4 above, which indicated slightly elevated levels for Radium-228 and a detection level for PFAS. The City stated a concern with the Radium-228 levels in the GW and the potential that existing soils may also be contaminated with radium. It is anticipated that import fill will be utilized during backfill operations associated with open-cut construction portions of the Project, which implies that spoil material will be hauled offsite. With this anticipated methodology, the City thought it would be wise to perform environmental testing of the insitu soils for potential contaminants before hauling material offsite. The City suggested that we could possibly utilize the soils samples gathered during the geotechnical investigation, which are maintained in storage, for environmental testing. Unfortunately, the soil samples were stored in a manner typical for future geotechnical reference but not stored with the necessary control measures to ensure accurate environmental testing since that was not the intended use. Therefore, it was determined that an environmental subsurface investigation will need to be conducted, at a proposed four locations, to ascertain the environmental conditions of the existing soil conditions. Our environmental teaming partner reviewed the available databases of historical spills and hotspots in the Project area and determined that there was nothing to warrant concerns of radium-contaminated soils and suggested a soil testing plan which will allow the City and BTC to plan out our options for reuse of soils onsite, reuse of soils offsite and potential disposal. This additional out-of-scope effort will include the following services, as summarized below:

- a. Conduct subsurface investigation to collect representative soil samples, at four separate locations, along the Project alignment; inclusive of utility locates, ROW permits in both City and Adams County, and associated traffic control.
- b. Perform field screening of soil samples for non-specific volatile organic compounds (VOCs) utilizing a photoionization detector and the headspace technique.
- c. Perform laboratory analysis of the collected soil samples to determine if the site soil is suitable for reuse, or to support a waste profile application at a permitted landfill should soil need to be disposed of during construction. The following analysis will be conducted:
 - o VOCs by EPA Method 8260D
 - o Polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270SIM

- Polychlorinated biphenyls (PCBs) by EPA Method 8082
 - RCRA 8 metals by EPA Methods 6010C and 7471
 - Toxicity characteristic leachate procedure (TCLP) (as needed based on total results)
- d. Develop an Environmental Sampling Technical Memorandum based on the information gathered during the limited soil sampling and the associated testing results.

PROJECT SCHEDULE IMPACTS

The time associated with coordination/permitting to enter the RTD/railroad ROW and development of application exhibits to pothole utilities, locating the Westminster water reuse line and subsequent re-evaluation and design of the Project alignment, and the additional time associated with water quality testing of the groundwater for potential dewatering discharge in the MWR system have impacted the original Project schedule, adding approximately 10 weeks to the major Project milestones. Below is a summary of the anticipated schedule to complete the Project:

Project Milestone	Date
60% Design Submittal (Complete)	July 28, 2023
60% Review Meeting (Complete)	August 16, 2023
90% Design Submittal	November 29, 2023
90% Review Meeting	January 3, 2024
Contract Documents	January 31, 2024

KJ has revised the Project baseline schedule, incorporating these additional design impacts, and it is attached as Figure 2. The revised baseline schedule also includes the projected construction schedule, based on input provided by BTC.

PROJECT COMPENSATION

A summary of the additional costs associated with the items noted above is provided below and the detailed estimate is provided in Figure 3 (attached):

Table 1: Proposed Amendment No. 1 Costs

Additional Tasks	Additional Costs
Re-Evaluation of Project Alignment	\$ 19,864.00
Final Utility Potholing & Coordination	\$ 57,367.00
Required Potholing in RTD/Railroad Right-of-Way	\$ 77,496.00
CDPHE Submittal per Regulation 22 (Credit)	(\$ 5,504.00)
WQ Testing of GW for MWR Disposal	\$ 13,899.00
Environmental Testing of Insitu Soils	\$ 20,918.00
Project Management	\$ 7,326.00
TOTAL:	\$ 191,366.00

KJ has included a partial credit for the effort we originally budgeted for the "CDPHE Submittal per Regulation 22" permit since the City has initiated the submittal of the permit for the entire North Trunk Sewer. Through discussions with CDPHE, it has been determined that KJ will still need to submit a self-certification for the portion of the North Trunk Sewer, from 61st Avenue to the connection with MWR's Clear Creek Interceptor. The personnel rates included in this proposed amendment are the same rates used in the original Project budget. The estimates provided by UCS for the additional

potholing, BTC's estimate for potholing in RTD/railroad ROW, the RailPros rate sheet for certified flaggers/observers, the invoice for Eurofins WQ analyses, and Lithos' proposal for environmental soil testing have been attached for the City's reference:

A summary of the proposed costs by task is provided below:

Table 2: Proposed Project Costs, by Task

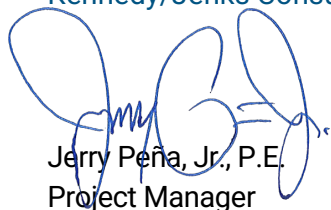
Tasks	Budgeted Labor and Expenses	Amendment No. 1 Request	Amended Total
Task 1 – Project Management	\$ 39,820.00	\$ 7,326.00	\$ 47,146.00
Task 2 – Preliminary Design	\$ 129,970.00	-	\$ 129,970.00
Task 3 – Final Design	\$ 255,682.00	\$ 184,040.00	\$ 439,722.00
TOTALS:	\$ 425,472.00	\$ 191,366.00	\$ 616,838.00

CONCLUSION

KJ appreciates the opportunity to submit this proposal to the City of Arvada and look forward to your consideration of these additional service ramifications on the Project. Please contact me with any questions regarding our proposal.

Sincerely,

Kennedy/Jenks Consultants, Inc.

A handwritten signature in blue ink, appearing to read "Jerry Peña, Jr.", is positioned above the printed name and title.

Jerry Peña, Jr., P.E.
Project Manager

Figure 1: MWR Special Discharge Request Form



**INDUSTRIAL PRETREATMENT PROGRAM
SANITARY SEWER SPECIAL DISCHARGE REQUEST**

This form is a request for Metro Water Recovery (Metro) to authorize a proposed sanitary sewer discharge of sewage, water, substances, materials or waste listed in or related to Section 6.13 of Metro's [Rules and Regulations Governing the Operation, Use and Services of the System \(Rules and Regulations\)](#). All decisions regarding Special Discharge Requests are provided in writing. Approvals are issued solely at the discretion of Metro and shall not constitute future approval of the same or any additional or similar discharges.

This **completed** form and required information must be submitted **no later than six (6) calendar weeks prior to the date that the requestor would like to commence discharge**.

Incomplete requests cannot be processed, and review work will be placed on hold until a complete request is submitted. Complete requests must include all information required on the form, including all analytical results and applicable material safety data sheets (SDS).

Before submitting this request, please note that the following sanitary sewer discharges will not be approved and are prohibited:

- **Wastewater containing one or more PFAS analytes listed in Appendix A at a level above detection for the specified analytical method.**
- **Wastewater containing Radium 226 and/or Radium 228 above 5 pCi/g.**

Please note that all Industrial Pretreatment Program submittals made to Metro must be in hard copy format; that is via US Mail, FedEx/UPS or similar, courier or hand-delivery. Metro does not currently have EPA approval to receive Industrial Pretreatment Program submittals electronically. **Redundant** electronic submittals (**in addition to hard copy submittals**) can be transmitted to Metro via e-mail (mparker@metrowaterrecovery.com) but cannot be used to meet the 6-week request submittal deadline or any other requirements.

For hard copy submittals:

Via Mail:

Metro Water Recovery
Industrial Pretreatment Program
Special Discharge Request
Attn: Meg Parker
6450 York Street
Denver, CO 80229-7499

Via Hand-Delivery to Metro (at the address provided above). On the cover or first page of the submittal, include the following information:

Business Name
Industrial Pretreatment Program Special Discharge Request
Attn: Meg Parker

1.0 CONTACT INFORMATION

Requestor: _____

Facility Contact(s) [Name/Title]: _____

Email Address: _____ Phone: _____

Mailing Address: _____

City: _____ Zip Code: _____

2.0 LOCATION OF DISCHARGE

Source Address: _____

City: _____ Zip Code: _____

3.0 TYPE OF DISCHARGE

Anticipated Start Date of Discharge? _____

Duration of Discharge? _____

Discharge Pattern? (One-time Discharge, Multiple Discharges, Continuous Discharge) _____

Volume of Discharge? _____

Average Discharge (gallons per minute) _____

Minimum (gpm) _____

Maximum (gpm) _____

Describe the nature and scope of the project requiring discharge of non-permitted waste to the sanitary sewer:

--

Describe the substance or waste proposed for discharge and the process generating the waste:

How was the waste disposed of previously?

Will the waste discharge receive any treatment? Yes ☐ No ☐

If yes, please describe.

Provide complete copies of all analytical reports for parameters listed in Appendix A.

Did you provide the appropriate analytical data? Yes ☐ No ☐

If No, this request is incomplete and will not be processed.

4.0 OTHER INFORMATION

Please describe how the proposed waste stream will be physically discharged to the sanitary sewer. Please include a brief site plan/schematic/sewer plan showing piping/hoses/pumps and discharge location(s), including manholes if the requested discharge would be discharged directly into a manhole.

Will the proposed discharge utilize mobile or installed pumps? Yes ☐ No ☐

Number of pumps and the capacity of each:

Will the pumps be metered? Yes ☐ No ☐

If No, how will daily average, total and maximum flows be measured and recorded?

How will any stormwater runoff be handled and precluded from inclusion in the discharge?

Not including the discharge requested above, what is the average amount of wastewater discharged daily from the facility: _____ gallons per day (gpd)

Not including the discharge requested above, what is typically/normally discharged from the facility?

Domestic Only (bathrooms, hand sinks, employee kitchen/breakroom, showers): Yes ☐ No ☐

Boiler or Cooling Tower Blow Down: Yes ☐ No ☐

Other Processes: Yes ☐ No ☐

If yes, please describe the other processes:

Does the waste stream proposed for discharge include any listed or characteristic (ignitable, corrosive, reactive, toxic) hazardous wastes pursuant to state and federal Hazardous Waste Regulations?

Yes ☐ No ☐

If yes, please list each:

Does the waste stream proposed for discharge contain any of the prohibited substances/characteristics listed in Metro's Rules and Regulations, Section 6.14?

Yes ☐ No ☐

If yes, please list each:

Attach SDSs for all materials associated with this request. **If there are proprietary chemicals on the SDS, reach out to the vendor for the information.**

I have read the enclosed information and believe that it is accurate and complete. This form must be signed by an Authorized Representative of the facility or project requesting this discharge request.

Name: _____ Title: _____

Signature: _____ Date: _____

Appendix A:

Below is the list of pollutants that must be analyzed for **all discharge requests**. Sampling for the criteria listed is a minimum requirement; you may be asked to provide more. All analytical methods must follow 40 CFR 136, unless otherwise specified.

No.	Compound	Units	Method	CAS #
Local Limits				
1	Arsenic, Total	mg/L		
2	Cadmium, Total	mg/L		
3	Chromium, Total	mg/L		
4	Copper, Total	mg/L		
5	Cyanide, Total	mg/L		
6	Lead, Total	mg/L		
7	Mercury, Total	mg/L		
8	Molybdenum, Total	mg/L		
9	Nickel, Total	mg/L		
10	Selenium, Total	mg/L		
11	Silver, Total	mg/L		
12	Zinc, Total	mg/L		
Other Pollutants				
13	1,4-Dioxane	mg/L		123-91-1
14	Benzene	ug/L		71-43-2
15	Beta-BHC	ug/L		319-85-7
16	Bis(2-Ethylhexyl)Phthalate	ug/L		117-81-7
17	BOD ₅	mg/L		
18	Butyl Benzyl Phthalate	ug/L		85-68-7
19	Chloride	mg/L		
20	Chloroethane	ug/L		75-00-3
21	Chloroform	ug/L		67-66-3
22	COD	mg/L		
23	Delta-BHC	ug/L		319-86-8
24	Diethylphthalate	ug/L		84-66-2
25	Ethyl Benzene	ug/L		100-41-4
26	Formaldehyde	ug/L		50-00-0
27	Iron (Total and Dissolved)	mg/L		
28	Manganese (Total and Dissolved)	mg/L		
29	Methyl Chloride	ug/L		74-87-3
30	Methylene Chloride	ug/L		75-09-2
31	Nitrate-Nitrite	mg/L		
32	Nitrogen, Ammonia Total (As N)	mg/L		

33	Nonylphenol	ug/L		25154-52-3
34	pH	S.U.		
35	Phenol	ug/L		108-95-2
36	Phosphorus (Total)	mg/L		
37	Styrene	ug/L		100-42-5
38	Sulfate	mg/L		
39	Toluene	ug/L		108-88-3
40	Total Dissolved Solids (TDS)	mg/L		
41	Total Inorganic Nitrogen (TIN)	mg/L		
42	Total Kjeldhal Nitrogen	mg/L		
43	Total Suspended Solids (TSS)	mg/L		
44	Xylene	ug/L		1330-20-7
Radiological analysis (TENORM)				
45	Radium 226 ¹	pCi/g	EPA 903.1, EPA 901.1	
46	Radium 228 ¹	pCi/g	EPA 904.0, EPA 901.1	
47	Natural Uranium (234, 235, and 238)	pCi/g	Standard Method – SM 7500 U-C; EPA 908	
48	Natural Thorium (228, 230, 232)	pCi/g	HASL 300, ASTM D3972; DOE A-R-01	
PFAS and PFOAS COMPOUNDS²		Units	Method	Quantification Limits (ng/L)
49	Perfluorooctanoic Acid [PFOA]	ng/L	EPA 537.1	≤20
50	Perfluorobutanoic Acid [PFBA]	ng/L	EPA 537.1	≤55
51	Perfluorooctanesulfonamide [PFOSA or FOSA]	ng/L	EPA 537.1	≤20
52	Perfluoropentanoic acid [PFPeA]	ng/L	EPA 537.1	≤6
53	Perfluorohexanoic acid [PFHxA]	ng/L	EPA 537.1	≤20
54	Perfluoroheptanoic acid [PFHpA]	ng/L	EPA 537.1	≤20
55	Perfluorononanoic acid [PFNA]	ng/L	EPA 537.1	≤7
56	Perfluorodecanoic acid [PFDA]	ng/L	EPA 537.1	≤2
57	Perfluoroundecanoic acid [PFUnA or PFUdA]	ng/L	EPA 537.1	≤2
58	Perfluorododecanoic acid [PFDoA]	ng/L	EPA 537.1	≤2
59	Perfluorotridecanoic acid [PFTrDA (or RFTriA)]	ng/L	EPA 537.1	≤2
60	Perfluorotetradecanoic acid [PFTeDA (or PFTA or PFTeA)]	ng/L	EPA 537.1	≤3
61	2-[N-ethylperfluorooctanesulfonamido] acetic acid [NEtFOSAA]	ng/L	EPA 537.1	≤2
62	2-[N-methylperfluorooctanesulfonamido] acetic acid [NMeFOSAA]	ng/L	EPA 537.1	≤10
63	Perfluorobutanesulfonic acid [PFBS]	ng/L	EPA 537.1	≤2

64	Perfluorododecanesulfonic acid [PFDS]	ng/L	EPA 537.1	≤2
65	Perfluoroheptanesulfonic acid [PFHpS]	ng/L	EPA 537.1	≤2
66	Perfluorohexanesulfonic acid [PFHxS]	ng/L	EPA 537.1	≤2
67	Perfluorooctanesulfonic acid [PFOS]	ng/L	EPA 537.1	≤2
68	4:2 Fluorotelomer sulfonic acid [4:2 FTS]	ng/L	EPA 537.1	≤2
69	6:2 Fluorotelomer sulfonic acid [6:2 FTS]	ng/L	EPA 537.1	≤3
70	8:2 Fluorotelomer sulfonic acid [8:2 FTS]	ng/L	EPA 537.1	≤2
71	Perfluoropentane sulfonic acid [PFPeS]	ng/L	EPA 537.1	≤2
72	Perfluorononane sulfonic acid [PFNS]	ng/L	EPA 537.1	≤2
73	Hexafluoropropylene oxide dimer acid [Gen-X (or HFPO-DA or HPFA-DA)]	ng/L	EPA 537.1	≤2
74	PFAS Sum ³	ng/L		

Notes:

1. The radionuclide concentration in liquid samples is converted to dry weight concentration using the following equation:

$$\text{Concentration (pCi/g)} = \text{Concentration (pCi/L)} / [\text{TDS (g/L)} + \text{TSS (g/L)}]$$

2. The analytical method for the PFAS/PFOAS parameters in the table above shall be compliant with the requirements set forth in the Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories (DoD QSM 5.1 or later [Table B-15: Per- and Polyfluoroalkyl Substances (PFAS) Using Liquid Chromatography Tandem Mass] Spectrometry (LC/MS/MS) With Isotope Dilution or Internal Standard Quantification in Matrices Other Than Drinking Water]). At a minimum, the laboratory selected shall be able to analyze and quantify the PFAS listed in the table below at or below the associated PFAS quantification limits (PFAS QL). If the laboratory selected is capable of achieving a quantification limit for a specific PFAS that is lower than the PFAS QL listed below, analytical results should be reported to the department relative to the lower laboratory quantification limit, and not reported as "less than" the PFAS QL in the table below. Currently approved analytical methods are also included in the table below.
3. The PFAS sum is calculated using the following equation: $\text{PFAS Sum (ng/l)} = [\text{PFOA}] \text{ (ng/l)} + [\text{PFOSA}] \text{ (ng/l)} + [\text{PFNA}] \text{ (ng/l)} + ([\text{NETFOSAA}] \text{ (ng/l)} * 0.85) + ([\text{NMeFOSAA}] \text{ (ng/l)} * 0.88) + [\text{PFOS}] \text{ (ng/l)} + ([\text{8:2 FTS}] \text{ (ng/l)} * 0.78)$

Figure 2: Revised Baseline Schedule

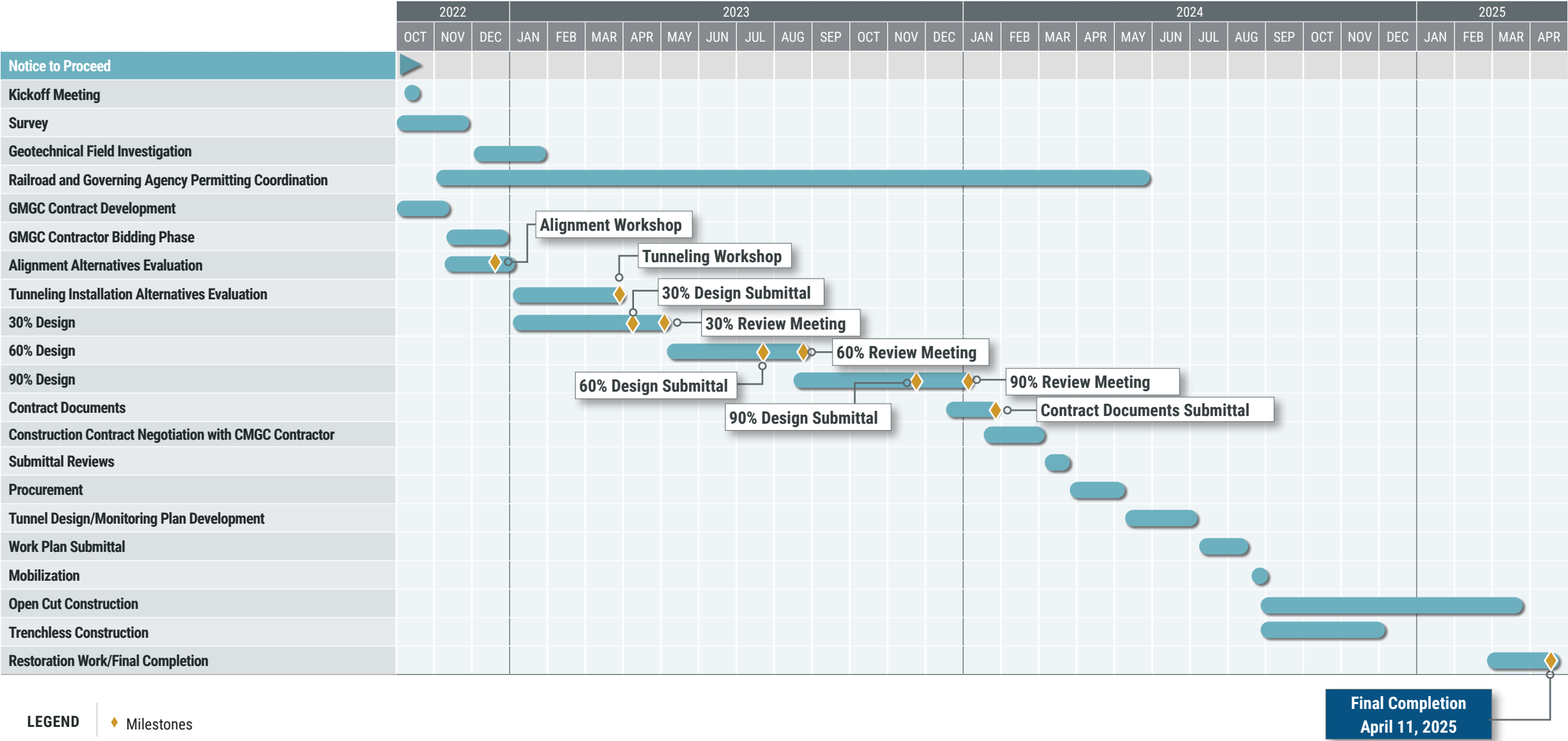


Figure 3: Amendment No. 1 - Design Proposal Fee Estimate



CLIENT Name: City of Arvada

PROJECT Description: NTSI, Tennyson and 58th - Amendment No. 1

Proposal/Job Number: 2246059*00

	Eng-Sci-7 Lisa Schwien QA/QC	Eng-Sci-8 Jerry Pena Project Manager	Eng-Sci-6 Staff Engineer	Eng-Sci-5 Travis Stevens Project Engineer	Eng-Sci-4 Staff Engineer	Eng-Sci-3 Staff Engineer	Eng-Sci-2 Erica Wirski Staff Engineer	CAD-Design	CAD-Tech	Project Administrator		KJ	KJ	KJ	KJ	Sub	Sub	Sub	KJ	KJ				
Classification:	Eng-Sci-7 Lisa Schwien QA/QC	Eng-Sci-8 Jerry Pena Project Manager	Eng-Sci-6 Staff Engineer	Eng-Sci-5 Travis Stevens Project Engineer	Eng-Sci-4 Staff Engineer	Eng-Sci-3 Staff Engineer	Eng-Sci-2 Erica Wirski Staff Engineer	CAD-Design	CAD-Tech	Project Administrator	Total	Labor	Escalation	Communications Charge	2023 Rate Escalation	Lithos - Geotechnical	UCS - Potholing	BT Construction	Sub-Markup	ODCs	Total Labor	Total Subs	Total Expenses	Total Labor + Subs + Expenses
Hourly Rate:	\$236	\$258	\$213	\$190	\$165	\$146	\$130	\$165	\$121	\$91	Hours	Fees	0%	4%	0%	Fees	Fees	Fees	5%	Fees				Fees
Task 1 - Project Management																								
Project Management, Progress Meetings		16		8							24	\$5,648	\$0	\$226	\$0				\$0		\$5,874	\$0	\$0	\$5,874
Invoice Submittals		4								4	8	\$1,396	\$0	\$56	\$0				\$0		\$1,452	\$0	\$0	\$1,452
Task 1 - Subtotal	0	20	0	8	0	0	0	0	0	4	32	\$7,044	\$0	\$282	\$0	\$0	\$0	\$0	\$0	\$0	\$7,326	\$0	\$0	\$7,326
Task 3 -Final Design																								
Re-Evaluate Project Alignment	2	4		24	4	16	40		40		130	\$19,100	\$0	\$764	\$0				\$0		\$19,864	\$0	\$0	\$19,864
Final Utility Research, Potholing & Coordination (Add'l 38 Potholes)	4	4		20			32		40		100	\$14,776	\$0	\$591	\$0		\$40,000		\$2,000		\$15,367	\$42,000	\$0	\$57,367
RTD, BNSF and UP Permit and Design Coordination											0	\$0	\$0	\$0	\$0				\$0		\$0	\$0	\$0	\$0
Develop ROE Documents for Required Potholing	4	8		24	6		48		32		122	\$18,670	\$0	\$747	\$0				\$0		\$19,417	\$0	\$0	\$19,417
ROE Appication Fees		4		8			16				28	\$4,632	\$0	\$185	\$0				\$0	\$4,612	\$4,817	\$0	\$4,612	\$9,429
Potholing in ROW (Assuming 3 nights to complete)											0	\$0	\$0	\$0	\$0			\$46,333	\$2,317		\$0	\$48,650	\$0	\$48,650
CDPHE Submittal per Regulation 22			-4	-8		-20					-32	-\$5,292	\$0	-\$212	\$0				\$0		(\$5,504)	\$0	\$0	(\$5,504)
Dewatering Permit Coordination (Item No. 4)											0	\$0	\$0	\$0	\$0				\$0		\$0	\$0	\$0	\$0
Coordination with Metro Water Recovery (MWR)		4		20			32				56	\$8,992	\$0	\$360	\$0				\$0		\$9,352	\$0	\$0	\$9,352
WQ Analyses Required by MWR				2			4				6	\$900	\$0	\$36	\$0				\$0	\$3,611	\$936	\$0	\$3,611	\$4,547
Environmental Testing of Insitu Soils (Item No. 5)	2			2			4				8	\$1,372	\$0	\$55	\$0	\$18,563			\$928		\$1,427	\$19,491	\$0	\$20,918
Task3 - Subtotal	12	24	-4	92	10	-4	176	0	112	0	418	\$63,150	\$0	\$2,526	\$0	\$18,563	\$40,000	\$46,333	\$5,245	\$8,223	\$65,676	\$110,141	\$8,223	\$184,040
All Tasks Total	12	44	-4	100	10	-4	176	0	112	4	450	\$70,194	\$0	\$2,808	\$0	\$18,563	\$40,000	\$46,333	\$5,245	\$8,223	\$73,002	\$110,141	\$8,223	\$191,366



UNDERGROUND CONSULTING SOLUTIONS

COST PROPOSAL

Dated 7/29/2022

Proposal Requested By

Kennedy Jenks
165 S Union Blvd Ste 570
Lakewood, Co 80228

Contact Jerry Pena

Job Name City of Arvada North Trunk Sewer Improvements **Revised** 7/7/2023

Reference/Attachment



We propose hereby to furnish services for the project described herewith:

Inclusions:

- Calling in One Call locates after the preliminary pothole locations are staked;
- Obtaining necessary permits;
- Scheduling/ Coordination with Traffic Control;
- Performing utility potholes in accordance with SUE standards.
- Identifying the top, bottom, and width of each utility to the extent possible;
- Backfilling/plugging holes in accordance with requirements;
- Marking the pothole name, utility size/type, and depth to top of utility when completed
- Providing pothole data sheets upon completion.
- Subsurface Utility Coordination Locating;

Exclusions:

- Potholes over 10ft in depth.
- Type C soil conditions; unstable, ground water, 8in and larger rocks.
- Disrupting existing landscaping; damaging vegetation that requires repair after work completed.
- Weather below 32 deg/ Rain, sleet or snow.
- Accessing rough terrain; remote access causing downtime.
- Hot patch surface restoration unless specified in cost.
- Uniformed officer in high traffic areas.

Utility Test Holes \$230/hole x 58	\$13,340.00
Hard Surface Coring & Restoration \$200/hole x 58	\$11,600.00
Spoils Disposal \$200/day x 14	\$2,800.00
Utility Coordination \$150/hr x 10	\$1,500.00
Traffic MHT's \$150/sheet x 15	\$2,250.00
Traffic Control \$1400/day x 14	\$19,600.00
Records Research & Deliverable Setup \$150/hr x 4	\$600.00
Permitting	Assumed N/C
Total	\$51,690.00

PERMITTING IS NOT INCLUDED IN THIS BID.
PERMITTING WILL BE CHARGED AT COST PLUS 15%

Additional Test Hole Cost

Test Hole \$230/hole
Coring & Restoration \$120/hole
Spoil Disposal \$100/load
MHT'S \$100/sheet
Traffic Control \$1400/Day

Underground Consulting Solutions holds the following Certifications:

DBE – Disadvantaged Business Enterprise
WBE – Woman-Owned Business Enterprise
WOSB – Woman-Owned Small Business
SBE – Small Business Enterprise
EBE – Emerging Business Enterprise
ESB Level 1 – with Colorado Department of Transportation

All work shall be performed in professional workmanlike manner to meet or exceed industry standards. Any alteration or deviation from specifications within this Proposal (statements, attachments) shall incur reasonable price change per rates listed above. Regular work hours 8:00AM-5:00PM, Monday through Friday. Overtime shall be rated at time and one half the price stated above, and Holiday work shall be at twice the price stated above. Note that these rates will be considered if feasible for work to continue, and it may save costs on this Proposal quote. Our services are performed by electronic devices; there are no guarantees, written or implied. Additional work or scope changes must be made in writing to UCS.

Authorized

Note: this proposal may be withdrawn if

Signature



Jacquelyn Einspahr, Potholing Manager

not accepted within 60 days.

ACCEPTANCE OF PROPOSAL

Signed by person authorized by Company stated below, to enter into this Agreement;

Company

Signature

Print Name/Title

Date of Acceptance

UNDERGROUND CONSULTING SOLUTIONS • Utility Locating/Designation Utility Mapping
5778 Kelly Ave • Littleton, Colorado • 80125
Phone (303) 904-7422 • FAX (720) 554-7889 • UCS@totalspeed.net



BT Construction, Inc
9885 Emporia Street
Henderson, CO 80640
www.BTConstruction.com

May 4, 2023

REVISION 0

RE: Arvada Railroad Potholing

BT Construction, Inc. (BTC) is pleased to provide this proposal to supply all labor, equipment, materials, and supervision necessary to complete the site utilities pertaining to the above referenced project per the price schedule below.

One Time Fixed Cost

1	Mobilization & Delivery & Pick Up of Sound Panels	1	LS	\$2,320.00
---	---	---	----	-------------------

Daily Rate

1	Potholing Crew & Truck	1	Day	
2	Small Crew	1	Day	
3	Light Plant	1	Day	
4	Sound Panels North of RR Tracks	1	Day	
5	Superintendent	.5	Day	
6	Traffic Control	1	Day	
	Total Daily Rate	1	Day	\$11,200.00

The following notations apply to this proposal:

1. All work has been bid assuming we can work in a full road closure.
2. Work is to be performed at night between 12 AM and 4:30 AM per RTD guidelines.
3. BTC is quoting the line items per the attached unit price schedule. Any bid item that does not have associated pricing is excluded.
4. Obtaining permits, and any associated costs, will be the responsibility of others
5. All potholes to be backfilled with squeegee.
6. Erosion control including permits, installation, maintenance, and removals of BMP's, and inspection/reporting are excluded.
7. Excess materials will be hauled off site and disposed of properly.
8. Professional services, such as survey and material/compaction testing is by others.
9. Work will be completed under one mobilization. If required, additional mobilizations will be negotiated on a T&M basis as necessary.

Standard Terms and Conditions:

1. This quotation may be withdrawn or modified if not accepted within thirty (30) days from date of issue.
2. Delivery of products or performance of services herein quoted are subject to delays occasioned by circumstances beyond our control. Any agreed to completion dates or milestones are subject to weather conditions, mechanical failures, labor difficulties, fuel or material shortages, fire, governmental authority or regulation, acts of God, engineering changes, contractors not included in this contract, or any cause beyond our control.
3. Owner/General Contractor to furnish all easements and adequate right-of-ways to allow the Contractor to work in compliance with OSHA regulations and requirements.
4. Extra work not covered by the items of Contract shall be negotiated, evidenced in writing, and signed by the parties involved in this contract.
5. All quantities shall be verified by in-field measurements after construction unless bid is a lump-sum bid and is so determined.
6. The owner or owner's representative, by accepting this proposal, agree to pay the Contractor the full quoted price, with any agreed-to adjustments, provided for the work specified herein. Invoices or progress estimates will be due 30 days from the date submitted. Payment shall be overdue and delinquent if not received by the Contractor by due date. The Contractor will be entitled to a 1.75% per month late payment charge. In addition, if payment is not made as due, the Contractor may employ an attorney to file a lien against said property, or take any other action to enforce collection of payment due. Owner will be responsible for any and all collection costs, including reasonable attorney fees and collection fees.
7. Contractor shall not be responsible for owner's acts or omissions, or those of any other person or entity not an employee or subcontractor of the Contractor. To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor from any and all claims, demands, suits, liabilities, losses and expenses (including reasonable attorney's fees) arising from or relating to any act or omission of the owner, the Owner's agents, or any third party. In no event shall the Contractor be liable for any consequential, incidental, special, punitive or indirect losses or damages with the Owner may incur or suffer from in connection with this agreement.
8. All work shall be performed in a good and workmanlike manner and in accordance with the applicable ordinances of the City or County in which it is performed. All warranties will be as per the City, County, or District in which the work is performed, as stated by their code. All other warranties will be stated in this proposal.
9. The person or persons accepting this proposal represent that they are the owner of the premises on which the work is to be done, or that they are authorized representative of

the owner, and that permission and authority is hereby granted to the Contractor to perform such work on those premises.

10. Acceptance of this proposal by the Contractor and performance of the work is contingent upon proof of financing. The parties further understand and agree that if payments are not made as due, the Contractor may at its option refuse to proceed with the work and refuse to make deliveries, and the Contractor shall in no way be liable for any damages whatsoever by reason of such refusal. In the event the Contractor abandons the work for non-payment, the Contractor may at its option be compensated for the materials supplied and work completed to date on a time and materials basis. All late payment charges and attorney's fees shall be paid to the Contractor.
11. Hazardous Materials shall mean any substances defined as hazardous in any federal, state, or other applicable law or regulation. The Contractor shall not be responsible for removing or otherwise dealing with in any manner any hazardous materials. If the Contractor becomes aware of any hazardous materials at the project location, the Contractor has the right to discontinue work until the hazardous material is removed or dealt with in accordance with the applicable law. The Contractor has no responsibility to inspect the property for hazardous materials. The owner of the property shall indemnify the Contractor for any loss, damages or expenses that may be incurred (including attorney's fees) by the Contractor which is caused by or attributable to the hazardous materials.
12. The most current BTC proposal will become an exhibit to the contract.

Thank you for giving us the opportunity to provide this proposal. Please do not hesitate to call if you have any questions or need more information.

Sincerely,

Kyle Cope
Estimator

Observation Rates:

The daily rates for Observation services to be provided under this Agreement are based on eight (8) hours per day and will be as follows:

- **Mobilization/Administrative Fee**.....\$1,000 per Observer Required (each project will incur a fee for travel and administrative costs per Observer). 24 Hour continuous work requires two Observers. Project must be cancelled 4 business days prior to the scheduled start date to avoid additional mobilization fee. Multiple mobilization fees or additional labor fees will be charged if the project cannot be constructed in consecutive days (Monday through Saturday at a minimum) or if there is a delay during installation.
- **Construction Observation Fees**.....\$1,400/Standard 8-hour day. Overtime rate after 8 hours is \$200 per hour (all scheduling requests require a minimum 10-business days' notification).
- **Surcharge Fee**.....Activity in certain regions of the U.S. has created high demand for hotel rooms and increased related travel costs. The Project falls within such a region, therefore a surcharge of **\$200.00 per day** will be added to the invoice.

Flagging Rates:

The rates for Flagging services are as follows:

Standard WorkDay:	
Standard 8 hour day	\$1,018.00
Overtime rate per hour after 8 hours	\$135.00
Nights, Weekends, and Holidays:	
Standard 8 hour day	\$1,285.00
Overtime rate per hour after 8 hours	\$154.00

In the event of cancellation, if RailPros Management is given less than 24 hours' notice, it is considered a billable day. Cancellations must be made in writing to UP.Info@RailPros.com.

This quote is based on RailPros standard labor rates and does not take into any account prevailing wage requirements. If prevailing wages are applicable for this project, RailPros will re-quote based on the prevailing wage requirements.

Invoices are submitted upon completion of the job or at month's end. On-going jobs are billed on a monthly basis. Payments of invoices are due upon receipt. Invoices are subject to a 1.5% fee for every 30 days the payment is delinquent. RailPros accepts payment for services via Visa, MasterCard, Discover and American Express without additional fees. We encourage you to use this free and convenient service with no processing fees. Please refer to the second page of this document for credit card payments. Please contact RailPros at 877-315-0513 X116 or UP.Info@railpros.com for more information.

This quote is valid for 30 days and is subject to the attached Services Agreement (SA).

You may indicate your acceptance of this quote and the SA by signing and returning both documents via email.

****Regional Surcharge for additional travel and Per Diem costs (effective February 10, 2018):**

Activity in the Permian Basin and nearby area has created a high demand for hotel rooms and increased other related travel expenses. As a result, we have instituted a regional surcharge to recover a portion of the increased costs. The regional surcharge is applied as follows:

- *Per Diem – An additional \$240 will be charged for each flagging day. In the event of a late notice cancellation (described in detail below) the additional Per Diem cost will also apply.*
- *Mobilization and Demobilization – An additional \$180 will be assessed for each mobilization or demobilization event in which there is a cessation of flagging services (non-continuous flagging days).*

Jerry Pena

From: Sean Weddingfeld <Sean.Weddingfeld@btconstruction.com>
Sent: Friday, October 6, 2023 11:18 AM
To: Jerry Pena; Shawn August; Andy Clem
Subject: Re: [EXTERNAL] Arvada Amendment to Perform Potholing in RTD/Railroad ROW
Attachments: RailPros Observer with Surcharge and Flagging Rates.pdf

EXTERNAL EMAIL

This email includes an ATTACHMENT from outside of KJ and could contain malicious links.

Ensure email is from a **trusted** sender before opening the attachment.

Never enter your login credentials if prompted. Contact **IST** if you have any questions.

Jerry,

The pricing below for the Mobe (\$2,320.00) & Potholing (\$33,600.00) is correct.

However, the pricing for RailPros is not. We have a rate sheet and based off of that, this is the anticipated pricing:

Day time work:

Mobe - 1 Ea * \$1,000 = \$1,000

Const. Observation - 3 Days * \$1,400 = \$4,200

Flagging Day Rate - 3 Days * \$1,018 = \$3,054

Subtotal = \$8,254.00

Markup at 15% = \$1,238.10

Total = \$9,492.10

Night time work:

Mobe - 1 Ea * \$1,000 = \$1,000

Const. Observation - 3 Days * \$1,400 = \$4,200

Flagging Night Rate - 3 Days * \$1,285 = \$3,855

Subtotal = \$9,055.00

Markup at 15% = \$1,358.25

Total = \$10,413.25

We are still having correspondence with RTD to find out if the daytime work is a possibility. For now I think we need to assume it will be night work, and if we are able to get it changed to daytime, we can then go with the lower pricing.

Sean

From: Jerry Pena <JerryPena@kennedyjenks.com>

Sent: Thursday, October 5, 2023 1:25 PM

To: Shawn August <shawn.august@btconstruction.com>; Andy Clem <andy.clem@btconstruction.com>; Sean Weddingfeld <Sean.Weddingfeld@btconstruction.com>

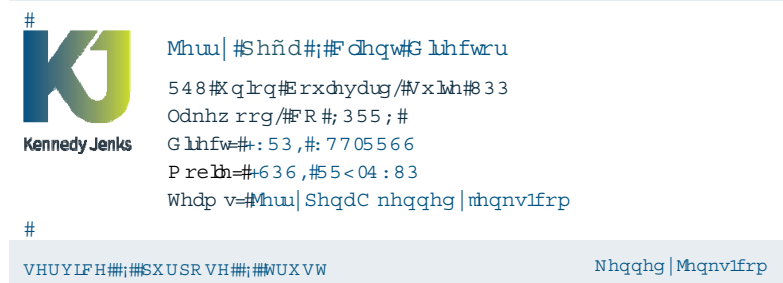
Subject: RE: [EXTERNAL] Arvada Amendment to Perform Potholing in RTD/Railroad ROW

Hey Gentlemen,

Just wanted to circle back with you and see what your thoughts are regarding this issue. As I stated yesterday at the progress meeting, I plan to get our finalized amendments to the City by tomorrow (10/6), so would like to make sure that you are comfortable with the numbers for potholing in RTD/railroad ROW, including the cost for RailPros. Would

also like to verify if the RailPros cost number includes BTC markup? Please let me know your thoughts no later than tomorrow morning. Thanks.

JP



From: Jerry Pena

Sent: Friday, September 29, 2023 12:10 PM

To: Shawn August <shawn.august@btconstruction.com>; Andy Clem <andy.clem@btconstruction.com>; Sean Weddingfeld <Sean.Weddingfeld@btconstruction.com>

Subject: Arvada Amendment to Perform Potholing in RTD/Railroad ROW

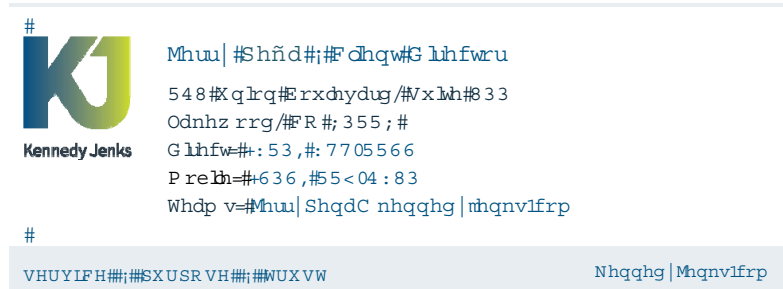
Good Afternoon Gents,

The City has reviewed our amendment proposal and I had a meeting yesterday afternoon to discuss their comments. Nothing major came up regarding this aspect of the proposal, they just want to make sure that we are including everything needed for this portion of the amendment. So I just want to circle back and make sure we are including everything needed for the potholing in RTD/railroad ROW. The following is a summary of costs that Shawn and I discussed previously (per BTC's 5/4/23 proposal) but just wanted to verify:

- Mobilization \$ 2,320.00
- Potholing \$ 33,600.00 (based on \$11,200.00 daily rate and assuming 3 nights)
- Flagging/Observation \$ 6,650.00 (RailPros)

The one thing that I was not sure about if BTC had any markup on RailPros?? Let me know if you think this covers everything or if I need to adjust a bit. Again, we have this one chance to adjust and I want to make sure we have it covered. I would appreciate your thoughts at your earliest convenience. Thanks.

JP



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Environment Testing

Invoice No.	2800073817	Invoice Date	August 10, 2023
Terms	Net 30 days	Federal Tax ID	23-2919996
Remit to	TestAmerica Laboratories, Inc. PO BOX 3891 Carol Stream, IL 60132-3891		
Wire	Citibank ABA: 031100209 Acct# 31429811 SWIFT Code: CITIUS33		
ACH	Citibank ABA: 031100209 Acct# 31429811 SWIFT Code: CITIUS33		

Bill to:
Kennedy/Jenks Consultants Attn: Accounts Payable 421 SW 6th Ave Suite 1000 Portland, OR 97204

Ship to:
Kennedy/Jenks Consultants 143 Union Blvd Lakewood, CO 80228

P.O. Number	W.O. Number	Contract Number	Work Ordered by
Pay by Check			Erica Wirski
Job Description	Site Name	SDG Number	Invoice Contact
See below			Erica Wirski

Job No.	Job Description	Receipt Date	Quantity	Unit Price	Amount
	Method/Test Description				
J178681-1	Arvada NTS Metro Water Quality Analysis	07/06/2023			
	903.0 - Radium 226		1.00	150.00	150.00
	904.0 - Radium 228		1.00	150.00	150.00
	A-01-R - Isotopic Thorium		1.00	185.00	185.00
	A-01-R - Isotopic Uranium		1.00	185.00	185.00
	Draft 1633 - 1633 PFAS B24 Standard List		2.00	450.00	900.00
	200.8 - Total Manganese		1.00	25.00	25.00
	SM 2540C - Solids, Total Dissolved (TDS)		1.00	18.00	18.00
	SM 2540D - Solids, Total Suspended (TSS)		1.00	18.00	18.00
	300.0 - Chloride and Sulfate		1.00	40.00	40.00
	350.1 - Nitrogen, Ammonia		1.00	35.00	35.00
	351.2 - Nitrogen, Total Kjeldahl		1.00	35.00	35.00
	353.2 - Nitrogen, Nitrate-Nitrite		1.00	35.00	35.00
	365.1 - Phosphorus, Total		1.00	35.00	35.00
	410.4 - COD		1.00	30.00	30.00
	8081B - OC Pesticides - beta & delta BHC		1.00	95.00	95.00
	8270E - Butyl Benzyl Phthalate		1.00	110.00	110.00
	9040C - pH		1.00	15.00	15.00
	D7065-11 - Nonylphenol		1.00	350.00	350.00
	Inorganic N - Nitrogen, Total Inorganic		1.00	10.00	10.00
	SM5210B - BOD		1.00	55.00	55.00
	(Charge for quant. 5) 8315A - Formaldehyde		1.00	1,100.00	1,100.00
	Safe and Environmentally Responsible Waste Management (per sample)		2.00	2.50	5.00
	Excel EDD, MyEOL®		1.00	0.00	0.00
	If requested, PFAS Free Water, cost per Liter		2.00	15.00	30.00

Eurofins Denver - 4955 Yarrow Street, Arvada, CO 80002

This invoice falls under Eurofins TestAmerica Standard T&C's of Net 30 Days unless superseded by another valid contract vehicle in place at the time these services were rendered.

Invoice No.	2800073817	Invoice Date	August 10, 2023
Terms	Net 30 days	Federal Tax ID	23-2919996
Remit to	TestAmerica Laboratories, Inc. PO BOX 3891 Carol Stream, IL 60132-3891		
Wire	Citibank ABA: 031100209 Acct# 31429811 SWIFT Code: CITIUS33		
ACH	Citibank ABA: 031100209 Acct# 31429811 SWIFT Code: CITIUS33		

Project Number	Client Number	Project Manager	Subtotal (USD)	\$3,611.00
28024970	99442	Natalie Stone		
Latest Sample Receipt Date	Latest Report Date	Phone Number	Total (USD)	\$3,611.00
07/06/2023	08/10/2023	(303) 736-0100		

For proper credit, please include invoice number on all remittance.

Eurofins Denver - 4955 Yarrow Street, Arvada, CO 80002

This invoice falls under Eurofins TestAmerica Standard T&C's of Net 30 Days unless superseded by another valid contract vehicle in place at the time these services were rendered.



October 2, 2023
Project No. 22134

Kennedy Jenks
165 South Union Boulevard
Suite 570, Lakewood, Co 80228-1828

2750 S Wadsworth Blvd, Suite D200
Denver, Colorado 80227
303.625.9502
www.LithosEng.com

Attention: Jerry Pena, PE
Client Relations Manager

Subject: Proposal for Tunnel Engineering Services – Addendum 1 – Environmental Testing
North Trunk Sewer Improvements – Tennyson and 58th
Arvada, Colorado

Mr. Pena,

Lithos Engineering (Lithos) is pleased to provide this addendum to Kennedy Jenks (KJ) for continuation of the subject project.

Project Understanding

The City of Arvada (City) is currently completing a Sanitary Sewer Master Plan and the modeling efforts have identified hydraulic capacity issues in the vicinity of Tennyson Street and 58th Avenue. The primary goal of this project is to upsize approximately 3,600 feet of sanitary sewer main in the North Trunk Sewer (NTS) system to remedy the capacity challenges. Based on current conversation with KJ, the City and BT Construction the project is moving forward to 90% design with a CM/GC construction delivery approach. The CM/GC project delivery method consists of two phases, design and construction.

Lithos understanding of a CM/GC contact includes design completion followed by bid submission by the construction manager. In this case, if the owner, designer, and independent cost estimator agree that the contractor has submitted an acceptable price, a construction contract is issued and the construction manager then becomes the general contractor.

As part of continued design work, it is our understanding additional soil samples are needed to establish an environmental record for proper disposal of potentially contaminated soils and groundwater. This addendum provides a scope of work for gathering additional soil samples for laboratory testing and associated environmental report. The majority of the following scope of work will be completed by Pinyon Environmental (Pinyon), who will be managed by Lithos.

Proposed Scope of Services

Based on our understanding of the project, and review with KJ, Lithos proposes the following scope of services under this contract addendum. Lithos will assist KJ, the City and BT Construction in support of the project design associated with the environmental investigation on the project.

Task – 1: Project Management and Quality Control

Project management and quality control for the project will include the coordination of specialty subcontractors for the environmental investigation.

Task – 2: Environmental Investigation

Lithos proposes to subcontract Pinyon to complete the environmental investigation. Pinyon will complete the following detailed work scope:

- Arrange for underground public utility locates through the Utility Notification Center of Colorado (UNCC).
- In addition to utility locates, Pinyon and/or the driller will coordinate traffic control and right-of-way (ROW) permits from both the City of Arvada and Adams County.
- Site Services of Golden, Colorado, will complete the soil boring using direct-push drilling methods.
- Soil samples will be collected on a continuous basis utilizing a continuous core sampler. The soil core will be visually described according to the Visual-Manual Method. Information regarding subsurface conditions will be recorded on a boring log.
- Soil samples will be field screened for non-specific volatile organic compounds (VOCs) using a photoionization detector (PID) and the headspace technique in accordance with Pinyon's standard operating procedures.
- Pinyon will collect up to three representative soil samples – one from each boring location. The samples will be collected, and lab analyzed to evaluate whether the site soil is suitable for reuse, or to support a waste profile application at a permitted landfill should soil need to be disposed of during construction.
- Soil samples will be submitted to Origins Laboratory, Inc. (Origins), of Denver, Colorado, for the following analysis:
 - VOCs by Environmental Protection Agency (EPA) Method 8260D
 - Polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270SIM
 - Polychlorinated biphenyls (PCBs) by EPA Method 8082
 - Total Resource Conservation and Recovery Act (RCRA) 8 metals by EPA Methods 6010C and 7471
 - Toxicity Characteristic Leachate Procedure (TCLP) (as needed based on total results).
- An Environmental Sampling Technical Memorandum will be prepared based on the information collected during the limited sampling as well as the groundwater sampling results obtained from the client.

For clarity and transparency, Pinyon's proposal has been attached to this letter proposal.

Assumptions and Exclusions

Lithos and Pynon have assumed the following in preparing our scope and fee for the project. If any of the assumptions below are incorrect, a change in scope and fee may result.

- Drilling will be completed with a direct-push drill rig and therefore no investigation-derived waste will need to be drummed and disposed of off Site. If grossly contaminated soil, requiring drumming, is encountered, additional funding will be needed for disposal. Pinyon will communicate the situation through Lithos for approval by KJ before deviating from the scope.
- It is assumed that the geologic conditions at the Site will allow for drilling to be completed with a direct push drill rig. If the geologic conditions do not allow completion of the borings with a direct-push rig (i.e., tight clay formations or large cobbles or deep groundwater), the borings may need to be completed with a hollow-stem auger rig. Additional costs will be incurred if a different drill rig is necessary to complete the work; Pinyon will communicate the situation through Lithos for approval by KJ before deviating from the scope.

- Access to the drilling locations, including moving of vehicles and other materials stored on site, must be provided by the client prior to implementation of any field activities.
- As part of the environmental memorandum, Pinyon will provide field notes, lab analytical report, boring logs, figures, and a photographic log.
- Pinyon will utilize the existing groundwater sampling results obtained from Lithos Engineering in the summary memo. Note that these sampling results were obtained prior to this current drilling event.
- The summary memo will be delivered electronically via email.

Fee Estimate

Based on our proposed Scope of Services outlined above, we estimate a total fee for our services in accordance with the attached fee estimate. Lithos proposes to provide these services on a time and expense basis in accordance with our existing contract for the project. Additional work beyond the scope of this proposal will be billed on a time and expense basis upon receipt of written approval to perform additional scope.

Closing

We appreciate the opportunity to submit a proposal for this project and look forward to the opportunity to work with you and your team on this project. For this project, James Carroll will be the Project Manager and key contact with principal oversight by Robin Dornfest. If you have any questions regarding the contents of this proposal, please contact the undersigned.

Sincerely,

Lithos Engineering



James Carroll, PE
Project Manager



Lance Heyer, P
Project Manager

Attachments

Fee Estimate

Fee Schedule

Pinyon Proposal

Detailed Fee Estimate

Project - Arvada Tennyson RR Crossing - Addendum 1 - Rev 1

Project Number - 22134

Date - 10/02/2023

LABOR

No.	Phase	Rate/Hr	Senior Consultant	Principal	Senior Professional II	Senior Professional I	Professional II	Professional I	Staff Professional III	Staff Professional II	Staff Professional I	Administrative	Hours per Task	Labor Fees per Task
			\$ 245	\$ 225	\$ 210	\$ 190	\$ 165	\$ 155	\$ 140	\$ 125	\$ 110	\$ 80		
1	Project Management and Quality Control				1							1	2	\$ 290
2	Environmental Investigation				4					8			12	\$ 1,840
	Fee Schedule (22T.1)													
	Labor Fees per Position		\$ -	\$ -	\$ 1,050	\$ -	\$ -	\$ -	\$ -	\$ 1,000	\$ -	\$ 80	Total Hours 14	Total Labor \$ 2,130

* Cost of supplemental services are included in total project cost.

SUBCONSULTANTS and DIRECT COSTS

No.	Phase	Environmental	Lab Testing	Traffic Control		Fees per Task	Mileage \$0.75/mi	Per Diem	Lodging	Airline	Other	Fees per Task
1	Project Management and Quality Control					\$ -						\$ -
2	Environmental Investigation	\$ 14,652				\$ 14,652	30					\$ 23
						\$ -						\$ -
						\$ -						\$ -
	Subtotal	\$ 14,652	\$ -	\$ -	\$ -	\$ 14,652	\$ 23	\$ -	\$ -	\$ -	\$ -	\$ 23
	Markup 12%	\$ 1,758	\$ -	\$ -	\$ -	\$ 1,758		\$ -	\$ -	\$ -	\$ -	\$ -
	Total	\$ 16,411	\$ -	\$ -	\$ -		\$ 23	\$ -	\$ -	\$ -	\$ -	
				Total Subconsultants								
				\$ 16,411				Total Direct Costs \$ 23				

SUMMARY

No.	Phase	Labor	Subconsultants	Direct Costs	Total
1	Project Management and Quality Control	\$ 290			\$ 290
2	Environmental Investigation	\$ 1,840	\$ 14,652	\$ 23	\$ 16,515
	Markup 12%		\$ 1,758	\$ -	\$ 1,758
	Total	\$ 2,130	\$ 16,411	\$ 23	\$ 18,563

**FEE SCHEDULE
2022**

1. Services will be billed on the time worked by staff personnel as follows unless noted otherwise in the proposal or contract. Overtime hours will be charged a straight time rates.

Senior Consultant	\$245
Principal	\$225
Senior Professional II	\$210
Senior Professional I	\$190
Professional II	\$165
Professional I	\$155
Staff Professional III	\$140
Staff Professional II	\$125
Staff Professional I	\$110
Administrative	\$80

2. Direct non-salary expenses will be billed at Lithos Engineering's cost plus a twelve (12) percent markup for the following:
 - a. Reproduction and printing costs for project-related documents
 - b. Transportation and subsistence costs for travel including: rental cars, truck, boats, trains, and other public carriers.
 - c. Express delivers such as UPS.
3. Mileage for use of personal or company vehicles will be billed at \$0.75/mile.
4. Subcontractors retained by Lithos Engineering for project-related services will be billed at our cost plus 12 (twelve) percent.
5. Payment: Invoices will be submitted about once a month unless otherwise noted in the proposal or contract for services performed. Payment is due upon receipt of the invoice. Interest of two (2) percent per month may be added to the outstanding balance on invoices older than 30 days. In the event that Lithos Engineering must engage collection services to receive payment, Client will reimburse Lithos Engineering for all reasonable collection, attorney's, and court fees.
6. Billing rates are subject to change at any time unless otherwise noted in the proposal or contract.



Corporate Headquarters
3222 South Vance Street, Suite 200, Lakewood, CO 80227
T: 303.980.5200 F: 303.980.0089
www.pinyon-env.com

October 2, 2023

James Carroll
Lithos Engineering
2750 S Wadsworth Blvd Suite D-200
Denver, CO 80227

Via email: James@LithosEng.com

Subject: Proposal to Complete a Limited Site Investigation, City of Arvada 58th and Tennyson
North Truck Sewer Upgrades, 58th and Tennyson, Arvada, CO

Dear Mr. Carroll:

Pinyon Environmental, Inc. (Pinyon), is pleased to present this proposal to complete a Limited Site Investigation for the above-referenced site.

The Tennyson and 58th North Trunk Sewer Upgrades (Project) involves laying roughly 3,600 linear feet of new sanitary sewer lines to cater to the growing capacity needs. This project is spearheaded by the City of Arvada.

A new gravitational sanitary sewer pipeline is being introduced to accommodate anticipated capacity growth. The planned pipeline will connect to an existing 30-inch sewer line at the junction of N. 61st Place and Tennyson St. It will then extend south under Tennyson St, stopping at a chamber slightly north of the I-76 underpass. The pipeline's path requires it to pass under five railway tracks owned by the Regional Transportation District (RTD), Union Pacific (UP), and Burlington Northern and Santa Fe (BNSF). While most of this route will be established using open cut trenches, non-trench methods are essential to lay the pipeline under the railway tracks without affecting train activities. The planned pipelines are 30-inch and 42-inch diameter PVC.

The scope of services and schedule details for the proposed project are outlined in Attachment A.

Pinyon estimates the cost to complete this project, in accordance with the outlined services, will be \$14,652.35. Pinyon will invoice on a time and materials basis, in accordance with the attached Schedule of Unit Rates (Attachment B).

Pinyon will complete the proposed services within eight weeks of notice to proceed. The project may be completed in less time; however, additional fees would be incurred.

To authorize the outlined scope of services, please sign and return one full copy of the attached Consulting Services Agreement, including the General Conditions (initial all pages) and this cover letter. Should you have any questions or require additional information, please do not hesitate to contact me at (303) 980-

James Carroll
Lithos Engineering
Page 2

5200 or via email at fanello@pinyon-env.com. Thank you for considering Pinyon for your environmental consulting needs.

Sincerely,

PINYON ENVIRONMENTAL, INC.

Scott Fanello, PE
Environmental Engineer

Client: Address: Phone: Email: Client Contact:	Lithos Engineering 2750 S Wadsworth Blvd Suite D-200 Denver, CO 80227 970.689.6582 James@LithosEng.com James Carroll
PROJECT DESCRIPTION	
Site Name: Site Location: Scope of Work:	City of Arvada 58th and Tennyson North Truck Sewer Upgrades 58th and Tennyson Arvada, CO Limited Site Investigation
Fee:	\$14,652.35
The following attachments are hereby made a part of this AGREEMENT:	
☒ ☒ ☒ ☒	Pinyon Environmental, Inc. Proposal dated October 2, 2023 Attachment A – Scope and Fee Attachment B – 2023 Schedule of Unit Rates Attachment C – General Terms and Conditions
Lithos Engineering Pinyon Environmental, Inc.	
Signature:	Signature:
Name:	Name:
Title:	Title:
Date:	Date:

Task – Subsurface Limited Site Investigation and Reporting

Pinyon will conduct an environmental subsurface investigation at three locations to better understand soil conditions.

The following are proposed:

- Prior to drilling activities, Pinyon will arrange for underground public utility locates through the Utility Notification Center of Colorado (UNCC).
- In addition to utility locates, Pinyon and/or the driller will coordinate traffic control and right-of-way (ROW) permits from both the City of Arvada and Adams County.
- Site Services of Golden, Colorado, will complete the soil boring using direct-push drilling methods.
- Soil samples will be collected on a continuous basis utilizing a continuous core sampler. The soil core will be visually described according to the Visual-Manual Method. Information regarding subsurface conditions will be recorded on a boring log.
- Soil samples will be field screened for non-specific volatile organic compounds (VOCs) using a photoionization detector (PID) and the headspace technique in accordance with Pinyon's standard operating procedures.
- Pinyon will collect up to three representative soil samples – one from each boring location. The samples will be collected, and lab analyzed to evaluate whether the site soil is suitable for reuse, or to support a waste profile application at a permitted landfill should soil need to be disposed of during construction.
- Soil samples will be submitted to Origins Laboratory, Inc. (Origins), of Denver, Colorado, for the following analysis:
 - VOCs by Environmental Protection Agency (EPA) Method 8260D
 - Polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270SIM
 - Polychlorinated biphenyls (PCBs) by EPA Method 8082
 - Total Resource Conservation and Recovery Act (RCRA) 8 metals by EPA Methods 6010C and 7471
 - Toxicity Characteristic Leachate Procedure (TCLP) (as needed based on total results).
- An Environmental Sampling Technical Memorandum will be prepared based on the information collected during the limited sampling as well as the groundwater sampling results obtained from the client.

Assumptions

The following assumptions have been made to develop the level of effort, fee, and schedule for this scope of work:

1. Because drilling will be completed with a direct-push drill rig, no investigation-derived waste will need to be drummed and disposed of off-Site. If grossly contaminated soil, requiring drumming, is encountered, additional funding will be needed for disposal.
2. It is assumed that the geologic conditions at the Site will allow for drilling to be completed with a direct push drill rig. If the geologic conditions do not allow completion of the borings with a direct-push rig (i.e., tight clay formations or large cobbles or deep groundwater), the borings may need to be completed with a hollow-stem auger rig. Additional costs will be incurred if a different drill rig is necessary to complete the work; Pinyon will communicate the situation with the client before deviating from the scope.
3. Access to the drilling locations, including moving of vehicles and other materials stored on site, must be provided by the client prior to implementation of any field activities.
4. As part of the memo, Pinyon will provide the client with our field notes, lab analytical report, boring logs, figures, and a photographic log.
5. Pinyon will utilize the existing groundwater sampling results obtained from the client in the summary memo. Note that these sampling results were obtained prior to this current drilling event.
6. The summary memo will be delivered electronically via email.

Table I. Summary of Estimated Costs

Task – Subsurface Investigation and Reporting				
Description	Quantity	Unit	Rate	Extension
Labor Rates				
Project Controller	1.0	hour	\$116.00	\$116.00
Field Specialist / Project Assistant	2.0	hours	\$102.00	\$204.00
Project Manager I	6.0	hours	\$187.00	\$1,122.00
Engineer III	1.0	hour	\$222.00	\$222.00
Engineer I	20.0	hours	\$149.00	\$2,980.00
Field Engineer/ Scientist	15.0	hours	\$112.00	\$1,680.00
CAD/GIS Specialist I	4.0	hours	\$133.00	\$532.00
Equipment/Material Unit Rates				
Truck/Van Mileage	150.0	miles	\$0.66	\$98.25
Soil Logging/Screening	3.0	each	\$250.00	\$750.00
Drilling Subcontractor (x10%)	1.0	lump sum	\$4,869.70	\$4,869.70
Laboratory Rates				
Soil - VOCs	3.0	samples	\$133.10	\$399.30
Soil - PAHS (SIM)	3.0	samples	\$139.70	\$419.10
Soil - RCRA 8 Metals	3.0	samples	\$115.50	\$346.50
Soil - Lead by TCLP	3.0	samples	\$181.50	\$544.50
Soil - PCBs	3.0	samples	\$121.00	\$363.00
Environmental Disposal Fee	3.0	samples	\$2.00	\$6.00
Task Subtotal				\$14,652.35
Project Total				\$14,652.35

Employee Type	Rate
General Labor Categories	
Administration	\$77
Assistant Technical Specialist	\$65
Field Specialist / Project Assistant	\$102
Field Specialist / Project Assistant I	\$109
Project Controller	\$116
Field Engineer/ Scientist	\$112
Field Engineer/ Scientist I	\$118
Field Engineer/ Scientist II	\$123
Drafting/CAD/GIS	
CAD/GIS Specialist	\$116
CAD/GIS Specialist I	\$133
CAD/GIS Specialist II	\$143
CAD/GIS Specialist III	\$166
Cultural Resources	
Assistant Historian	\$65
Archaeology Technician	\$65
Cultural Field Specialist	\$97
Cultural Field Specialist I	\$102
Cultural Resource Specialist	\$110
Cultural Resource Specialist I	\$128
Cultural Resource Specialist II	\$139
Cultural Resource Specialist III	\$173
Cultural Resource Specialist IV	\$197
Industrial Hygiene	
Regulated Materials Specialist	\$87
Regulated Materials Specialist I	\$97
Industrial Hygienist	\$130
Industrial Hygienist I	\$141
Industrial Hygienist II	\$173
Industrial Hygienist III	\$206
Landscape Architecture	
Landscape Designer	\$98
Landscape Designer I	\$113
Landscape Designer II	\$125
Landscape Architect	\$135
Landscape Architect I	\$146
Landscape Architect II	\$173
Landscape Architect III	\$206
General Science and Engineering (Air Quality, Biological Resources, Due Diligence & Site Characterization, Engineering, NEPA & Planning, Regulatory Compliance, Remediation)	
Engineer / Scientist	\$138
Engineer / Scientist I	\$149

Employee Type	Rate
Engineer / Scientist II	\$177
Engineer / Scientist III	\$222
Engineer / Scientist IV	\$245
Project Management	
Task Manager	\$159
Project Manager	\$177
Project Manager I	\$187
Project Manager II	\$204
Program Manager	\$220

<i>Lump Sum Equipment Charges</i>	
General Field Visits (general projects, asbestos sampling kit [bulk sampling])	\$50/day
Biological Field Visit (includes sub-meter GPS, wetland flags, field notebook, and other incidentals)	\$250/day
Soil Logging/Screening (during drilling/test pits; includes PID or other instruments, GPS, and other incidentals)	\$250/day
Groundwater Sampling (includes YSI field measurements, water level meter, bailers, and other incidentals)	\$250/day
Noise Monitoring	\$250/day
Asbestos Air Monitoring Field Kit	\$115/day
Mileage (passenger car)	Current IRS rate
Outside Expenses (e.g., shipping, rental equipment, travel, subcontractor/subconsultant, laboratory fees)	Cost + 10%
Specialty In-House Equipment Billed as Indicated in Project-specific Proposals	

Exhibit 2

Amendment No. 1

To “An Agreement Between The City Of Arvada And Kennedy/Jenks Consultants, Inc. For Professional Design Services” For Additional Engineering Design And Construction Phase Services, Thereby Increasing The Contract Amount From \$425,472.00 To An Amount Not To Exceed \$932,028.00

October 9, 2023

Mr. Kris Gardner, P.E.
Project Manager
City of Arvada
8101 Ralston Road
Arvada, CO 80002

**Subject: Request for Amendment No. 2: Engineering Services During Construction
North Trunk Sewer Improvements – Tennyson and 58th
JN 2246059*00**

Dear Mr. Gardner,
Kennedy/Jenks Consultants (KJ) is submitting this proposal for engineering services associated with the construction phase of the North Trunk Sewer Improvements – Tennyson and 58th (Project) for the City of Arvada (City). The City is in the process of initiating early procurement of electrical and instrumentation materials to construct the Project and it was determined that KJ should prepare our proposal to assist the City with this phase of the work. The City's CM/GC Contractor, BT Construction (BTC), has developed a preliminary construction schedule (see Figure 1) for the Project and KJ is utilizing this timeframe for certain aspects of our proposal. BTC's preliminary construction schedule includes approximately 13 months (60 weeks) of total contract construction time, 30 weeks of open-cut construction, 9 weeks of trenchless construction that will run concurrently with the starting period of planned open-cut construction and approximately 8 weeks of restoration work. The details of the engineering services during construction are provided as follows:

ENGINEERING SERVICES DURING CONSTRUCTION (ESDC)

Task 4.1 Project Management

KJ will provide project management services throughout the construction phase of the Project. This task shall consist of project accounting set-up, development of health and safety plan for KJ staff, supervision of in-house staff, planning and monitoring of contract budget and schedule, preparing and reviewing monthly invoices, development of monthly summary reports, and coordination with the City's Project Manager.

Deliverables:

- *Monthly Invoices (electronic, PDF format)*

Task 4.2 Construction Services

During the construction phase of the Project, KJ will provide administrative, technical and construction observation assistance to the City from the start of construction through final completion. KJ will provide a part-time Construction Inspector to assist the City with observation of construction progress. The ESDC services associated with this effort are summarized as follows:

Task 4.2.1 – Pre-Construction Kickoff Meeting

It is assumed that the City will facilitate a pre-construction kickoff meeting with the Contractor and discuss Project requirements associated with the construction phase of work. It is also anticipated that the Contractor will provide a Project construction schedule at the

meeting identifying key dates, milestones, long lead time items and key submittals. This meeting is assumed to be an in-person meeting.

The budget was established based on the assumption that KJ's Project Manager and Construction Inspector will attend this meeting.

Task 4.2.2 – Submittal Review

KJ will lead the review of contractor-prepared submittals and re-submittals on behalf of the City, including shop drawings and operations and maintenance (O&M) manuals. Submittal responses will be delivered to the City within 14 calendar days from the date that KJ receives the submittal. Some submittals will require jurisdictional coordination (City, Adams County, MWR, etc) and KJ will coordinate with the City and plan to deliver these submittals within 21 calendar days from the date that KJ receives the submittal.

For budgeting purposes, 42 submittals (including resubmittals and O&M manuals) will be processed for review by KJ. Each submittal is estimated to require approximately six (6) labor hours to process and review depending on complexity and completeness.

Deliverables

- *Submittal Responses (electronic, Word format)*

Task 4.2.3 – RFI and Clarification Review

KJ will lead the review and responses to Requests for Information (RFIs), providing design clarification to the contractor as needed. RFI/Clarification responses will be delivered to the City within 10 calendar days from the date that KJ receives the submittal.

The allocated budget provides for up to twelve (12) RFI's/Clarifications at approximately six (6) labor hours per RFI/Clarification.

Deliverables

- *RFI/Clarification Responses (electronic, Word format)*

Task 4.2.4 – Change Orders

KJ will prepare and review Request for Quotations (RFQs) for potential change order work that includes dealing with differing site conditions discovered during construction, additional work requested by the City, and design refinements and enhancements. KJ will review change order scopes and costs and will prepare contract change orders as needed.

This budget assumes KJ will prepare and review up to three (3) RFQs/COs at approximately 12 hours per RFQ/CO execution.

Task 4.2.5 – Part-Time Construction Observation

Part-time construction observation will be provided by a KJ Construction Inspector during the period when the Contractor is expected to be on-site. KJ will also utilize this time to review as-built information being recorded by the Contractor and to coordinate with the City Inspector. It is anticipated that the Construction Inspector will be on-site an average of 16 hours per week for an estimated 34 weeks during the open-cut construction and restoration phases of the construction period, estimated to be between August 2024 and April 2025. We have also included time (12 hours total) for three (3) site visits by KJ's electrical/I&C engineer during construction of the MWR metering facility to inspect the installation and testing of the electrical/instrumentation equipment.

Deliverables

- *Daily Field Reports (DFRs, format coordinated with the City)*

Task 4.2.6 – Specialty Assistance, Trenchless Construction

KJ will utilize our teaming partner, Lithos Engineering (Lithos), to provide specialty technical assistance and observation associated with the trenchless construction operations. Lithos' specialty support will include the following tasks:

- a. Review of submittals related to trenchless construction
- b. Assist the City in responding trenchless related RFIs
- c. Observation during shaft excavation and tunnel advancement
- d. Observe and document tunneling casing installation, contact grouting and backfill grouting of installed tunnel pipe
- e. Provide daily field reports summarizing trenchless construction activities, site conditions encountered, changes to plans, communications, etc
- f. Provide closeout memorandum summarizing observed construction, including collected observation data following construction

Deliverables

- *Daily Field Reports (DFRs)*
- *Closeout Memorandum Summarizing Trenchless Construction*

Task 4.2.7 – Bi-Weekly Construction Progress Meetings

KJ will attend weekly construction progress meetings during construction with the City and Contractor. Progress meetings are anticipated to review construction status, construction-related issues and upcoming activities. KJ assumes that these meetings will be facilitated by the Contractor and that they will keep meeting minutes.

For budgeting purposes, KJ has assumed 20 bi-weekly progress meetings. Attendees will include the Project Manager (or Project Engineer) and the Construction Inspector. We have also budgeted four (4) hours for KJ's electrical engineer to participate in progress meetings as-needed.

Task 4.2.8 – Final Punch List

KJ anticipates that our Project Engineer and the Construction Inspector will be present for the project punch list review and final punch list inspection. We have budgeted eight (8) hours each for the Project Engineer and Construction Inspector to participate in these final Project walkthroughs.

Deliverables

- *Document Punch List (PDF format)*

Task 4.2.9 – Record Drawings

KJ will prepare Record Drawings based on marked-up as-built drawings received from the Contractor at the end of construction. These mark-ups should be in the form of a red-line set of contract drawings maintained during construction by the Contractor, as required in the contract documents. KJ will incorporate the redline mark-ups received from the Contractor into this Project's contract drawings to develop the Record Drawings.

KJ will provide the City with an electronic copy of the Record Drawings.

Deliverables

- *Record Drawings (electronic, PDF format)*

PROJECT COMPENSATION

A summary of the additional costs associated with the ESDC service tasks noted above is provided below and the detailed estimate is provided in Figure 2 (attached):

Table 1: Proposed Amendment No. 2 Costs

Additional Tasks	Additional Costs
Task 4.1 - Project Management	\$ 39,162.00
Task 4.2 - Construction Services	\$ 276,028.00
TOTAL:	\$ 315,190.00

The personnel rates included in this proposed ESDC amendment are the same 2023 rates used in the original Project budget plus an escalation rate of 5% to account for the ESDC services which will primarily be performed in 2024. There are a few tasks (Task Nos. 4.1, 4.2.5, 4.2.7, 4.2.8 and 4.2.9) that are anticipated to extend into 2025 and will incur additional escalation (5%) costs. The estimate provided by Lithos to provide ESDC services associated with trenchless construction observation has been attached for the City's reference.

A summary of the proposed costs by task is provided below:

Table 2: Proposed Project Costs, by Task

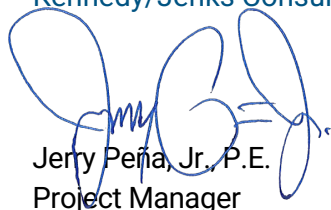
Tasks	Budgeted Labor and Expenses	Amendment No. 1 Request	Amendment No. 2 Request	Amended Total
Task 1 – Project Management	\$ 39,820.00	\$ 7,326.00	-	\$ 47,146.00
Task 2 – Preliminary Design	\$ 129,970.00	-	-	\$ 129,970.00
Task 3 – Final Design	\$ 255,682.00	\$ 184,040.00	-	\$ 439,722.00
Task 4 – ESDC Services	-	-	\$ 315,190.00	\$ 315,190.00
TOTALS:	\$ 425,472.00	\$ 191,366.00	\$ 315,190.00	\$ 932,028.00

CONCLUSION

KJ appreciates the opportunity to submit this proposal to the City of Arvada and look forward to your consideration of these construction related services. Please contact me with any questions regarding our proposal.

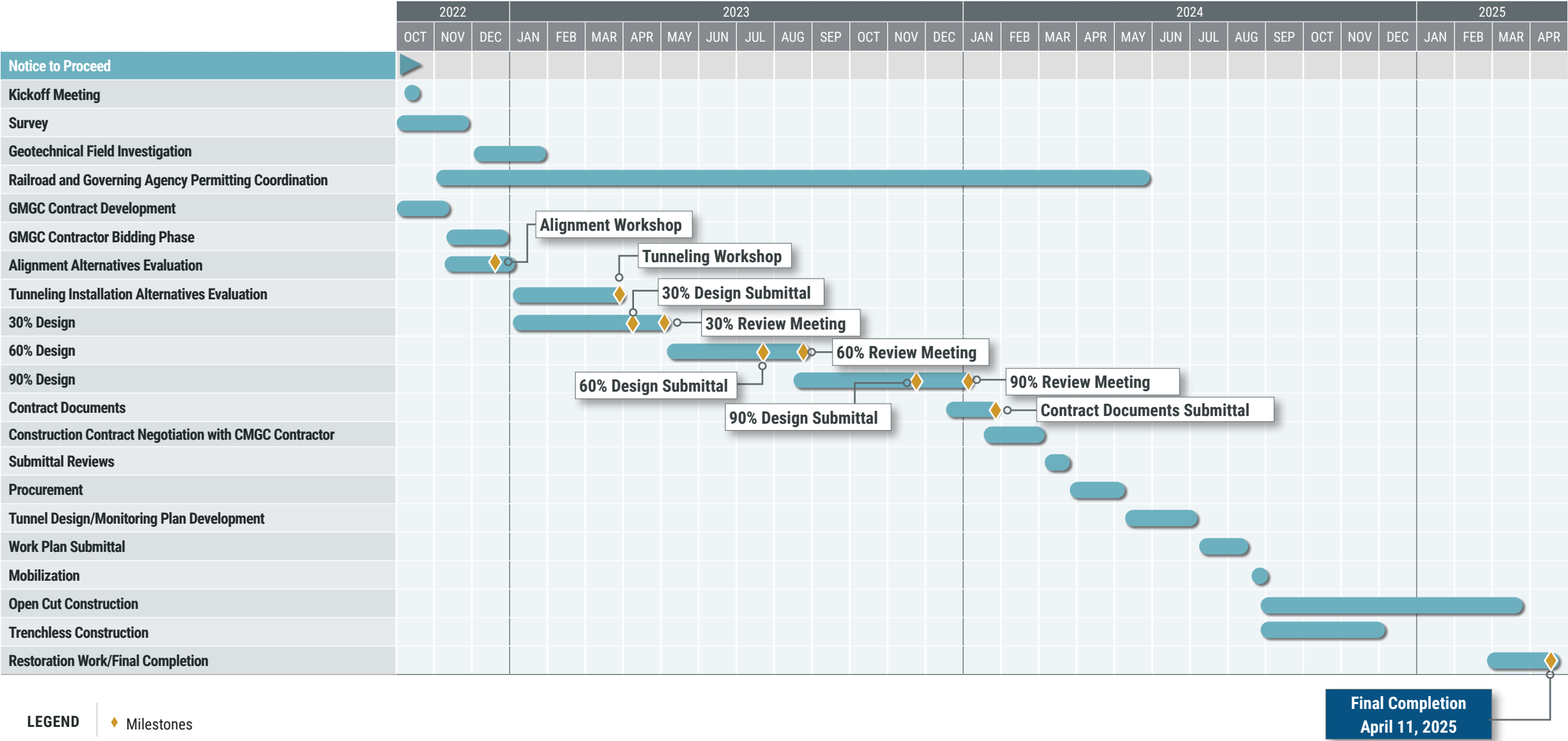
Sincerely,

Kennedy/Jenks Consultants, Inc.



Jerry Peña, Jr., P.E.
Project Manager

Figure 1: Revised Baseline Schedule



Date: 10/09/2023

© 2008 Kennedy/Jenks Consultants, Inc.



October 2, 2023
Project No. 22134

Kennedy Jenks
165 South Union Boulevard
Suite 570, Lakewood, Co 80228-1828

2750 S Wadsworth Blvd, Suite D200
Denver, Colorado 80227
303.625.9502
www.LithosEng.com

Attention: Jerry Pena, PE
Client Relations Manager

Subject: Contract Addendum
Tunnel Engineering Services – Addendum 2 – Construction Management Services
North Trunk Sewer Improvements – Tennyson and 58th
Arvada, Colorado

Mr. Pena,

Lithos Engineering (Lithos) is pleased to provide this proposal to Kennedy Jenks (KJ) for the subject project.

Project Understanding

The City of Arvada (City) is currently completing a Sanitary Sewer Master Plan and the modeling efforts have identified hydraulic capacity issues in the vicinity of Tennyson Street and 58th Avenue. The primary goal of this project is to upsize approximately 3,600 feet of sanitary sewer main in the North Trunk Sewer (NTS) system to remedy the capacity challenges. Based on current conversation with KJ, the City and BT Construction of the project will be under the CM/GC construction delivery approach.

Lithos understanding of a CM/GC contract includes design completion followed by bid submission by the construction manager. In this case, if the owner, designer, and independent cost estimator agree that the contractor has submitted an acceptable price, a construction contract will be issued, and the construction manager then becomes the general contractor.

As part of our continued work, it is our understanding that the City will be moving into the construction phase with the existing CM/GC project team. We understand from discussion with KJ and BT that tunnel related construction activities will take approximately nine weeks. This time includes excavation of the launch and retrieving shafts, advancement of the tunnel casing and placement of the final carrier pipe within the tunnel. This addendum provides a scope of work for Lithos to provide construction management services for the tunnel related construction efforts on the project.

Proposed Scope of Services

Based on our understanding of the project, and review with KJ, Lithos proposes the following scope of services. Lithos will assist the City, KJ and BT in support of the construction management activities associated with the tunneled crossing of the five railroad lines on the project and for the Geotechnical design considerations for the open cut portion of the projects.

Task – 1: Project Management and Construction Meetings

Project management and construction meetings control for the project will include the following items:

- A. Task associated with time keeping, invoicing and other project management associated task.
- B. Construction Kickoff Meeting, assumed to be two hours for two Lithos representatives, in person.
- C. Attend weekly construction meetings, to be held onsite throughout the tunnel construction, lasting one hour each. To be attended in person by the Lithos project manager.

Task 2 – Requests for Information (RFI) and Submittal Review

Lithos will provide support to the CM/GC project team for document requests and control through construction, the task include:

- Review Contractor submittals related to tunnel construction,
- As needed, assist the City in responding to Contractor RFI's and modifications to the Specifications and Construction Drawings.

Task 3 – Construction Observation

Lithos will provide onsite construction observation during excavation of the two shafts, tunnel installation and carrier pipe installation with back fill grouting operations. Lithos will not conduct specific site visits to observe welding of casing pipe string when tunneling is not planned for the remainder of the workday.

- Provide construction observation during shaft excavation.
- Provide construction observation during tunnel advancement.
- Observe and document tunneling casing installation, contact grouting and backfill grouting of installed tunnel pipe.
- Provide daily field reports (DFR's) during construction observation. DFR's will include a summary of all observed tunnel construction activities, site conditions encountered during tunnel construction, changes to construction plans, communications with tunneling contractor, etc.
- We have assumed tunnel construction will be completed in an additional nine weeks including: tunnel casing installation completion and contact grouting.
- Lithos will provide a brief closeout memorandum summarizing the observed construction including collected observation data following construction.

Fee Estimate

Based on our proposed Scope of Services outlined above, we estimate a total fee for our services in accordance with the attached fee estimate. Lithos proposes to provide these services on a time and expense basis. Additional work beyond the scope of this proposal will be billed on a time and expense basis utilizing our existing contract for the project upon receipt of written approval to perform additional scope.

Closing

We appreciate the opportunity to submit a proposal for this project and look forward to the opportunity to work with you and your team on this project. For this project, James Carroll will be the Project Manager and key contact with principal oversight by Robin Dornfest. If you have any questions regarding the contents of this proposal, please contact the undersigned.

Sincerely,

Lithos Engineering



James Carroll, PE
Project Manager



Robin Dornfest, PG
President

Attachments

Fee Estimate
Fee Schedule

Detailed Fee Estimate

Project - Arvada Tennyson RR Crossing - Addendum 2 - Constuction Management

Project Number - 22134

Date - 10/04/2023

LABOR

No.	Phase	Rate/Hr	Senior Consultant	Principal	Senior Professional II	Senior Professional I	Professional II	Professional I	Staff Professional III	Staff Professional II	Staff Professional I	Administrative	Hours per Task	Labor Fees per Task
			\$ 260	\$ 265	\$ 240	\$ 225	\$ 180	\$ 170	\$ 160	\$ 145	\$ 125	\$ 90		
1	Project Management and Construction Meetings			2	40							3	45	\$ 10,400
2	Requests for Information (RFI) and Submittal Review				8					24			32	\$ 5,400
3	Construction Observation			2	16					384			402	\$ 60,050
	Fee Schedule (24 WAG)												Total Hours	Total Labor
	Labor Fees per Position	\$ -	\$ 1,060	\$ 15,360	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 59,160	\$ -	\$ 270	479	\$ 75,850

* Cost of supplemental services are included in total project cost.

SUBCONSULTANTS and DIRECT COSTS

No.	Phase	Environmental	Lab Testing	Traffic Control		Fees per Task	Mileage \$0.75/mi	Per Diem	Lodging	Airline	Other	Fees per Task
1	Project Management and Construction Meetings					\$ -	1200					\$ 960
2	Requests for Information (RFI) and Submittal Review					\$ -						\$ -
3	Construction Observation					\$ -	2070					\$ 1,656
	Subtotal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,616	\$ -	\$ -	\$ -	\$ -	\$ 2,616
	Markup 12%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,616	\$ -	\$ -	\$ -	\$ -	\$ 2,616
				Total Subconsultants			\$ -					
								Total Direct Costs				
								\$ 2,616				

SUMMARY

No.	Phase	Labor	Subconsultants	Direct Costs	Total
1	Project Management and Construction Meetings	\$ 10,400		\$ 960	\$ 11,360
2	Requests for Information (RFI) and Submittal Review	\$ 5,400			\$ 5,400
3	Construction Observation	\$ 60,050		\$ 1,656	\$ 61,706
4					
	Markup 12%		\$ -	\$ -	\$ -
	Total	\$ 75,850	\$ -	\$ 2,616	\$ 78,466

**FEE SCHEDULE
2024**

1. Services will be billed on the time worked by staff personnel as follows unless noted otherwise in the proposal or contract. Overtime hours will be charged at straight time rates.

Principal	\$265
Senior Consultant	\$260
Senior Professional II	\$240
Senior Professional I	\$225
Professional II	\$180
Professional I	\$170
Staff Professional III	\$160
Staff Professional II	\$145
Staff Professional I	\$125
Administrative	\$90

2. Direct non-salary expenses will be billed at Lithos Engineering's cost plus a twelve (12) percent markup for the following:
 - a. Reproduction and printing costs for project-related documents
 - b. Transportation and subsistence costs for travel including rental cars, truck, boats, trains, and other public carriers.
 - c. Express delivers such as UPS.
3. Mileage for use of personal or company vehicles will be billed at \$0.80/mile.
4. Subcontractors retained by Lithos Engineering for project-related services will be billed at our cost plus 12 (twelve) percent.
5. Payment: Invoices will be submitted about once a month unless otherwise noted in the proposal or contract for services performed. Payment is due upon receipt of the invoice. Interest of two (2) percent per month may be added to the outstanding balance on invoices older than 30 days. If Lithos Engineering must engage collection services to receive payment, Client will reimburse Lithos Engineering for all reasonable collection, attorneys, and court fees.
6. Billing rates are subject to change at any time unless otherwise noted in the proposal or contract.



REPORT TO CITY COUNCIL RESOLUTION

AGENDA ITEM
8.A.5.

TO: THE HONORABLE CITY COUNCIL

DATE: November 27, 2023

SUBJECT: R23-105, A Resolution Authorizing Change Order No. 4 to 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 \$805,166.86 for a revised total contract amount not to exceed \$17,089,634.49

Report in Brief

Change Order No. 4 will increase the scope of services of the Original Agreement to include revisions and additions to the planned waterline work, additional soft soil stabilization and contaminated soil removal by Hamon Infrastructure, Inc. for Ralston Road Phase 2. Additionally, Change Order No. 4 will increase the compensation amount by \$805,166.86 for a revised total contract amount not to exceed \$17,089,634.49.

The Arvada team recommends that the City Council approve, A Resolution Authorizing Change Order No. 4 to "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 \$805,166.86 for a revised total contract amount not to exceed \$17,089,634.49.

Financial Impact

Financial Impact: \$805,166.86

This is a one-time request for construction.

Funds are available in Oracle number CIP 91810 - Ralston Rd Yukon-Gar 2023 Bond.

Background

On March 1, 2021, Arvada and Contractor entered into an agreement (the "Original Agreement") whereby Hamon Infrastructure, Inc. (Contractor) would complete 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. During construction, the need for revisions to the planned waterline work, including additional work related to fusible PVC pipe, stabilization of soft soil areas and removal of contaminated material from the project site were identified.

Discussion

Discussion

Contaminated Soil:

On Ralston Rd II project, a contractor encountered some gas smell during the soil excavation. Immediately, Hamon informed the city and team and requested Cascade Environmental mobilize to the project site located along the south side of Ralston to assess suspect soil which exhibited petroleum odors at several discrete trench locations along the project corridor. After monitoring the atmosphere to assess the potential impact to Hamon personnel health and safety, Cascade collected several soil samples to screen the soil for the presence of volatile organic compounds. The summary of this testing indicates that the soil on the south side of the project contains some organic compounds and metals that are not suitable for reuse. According to Colorado Department of Transportation (CDOT) Section 250 Specifications, this soil is not used and should be disposed of properly. To dispose of this manifested soil to Denver Arapahoe Disposal Site (DADS), a waste management site was identified. The force account budget allotted for the environmental health and safety hazard category is \$75,000. However, All

SUBJECT: R23-105, A Resolution Authorizing Change Order No. 4 to 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 \$805,166.86 for a revised total contract amount not to exceed \$17,089,634.49

PAGE: 2
ITEM: 8.A.5.

the excavated soil on the south side of the project was collected and needs to be transported to DADS waste management site for proper disposal. This much amount of contaminated soil was not anticipated during the planning stage, so the scope of work and budget exceeded significantly in this category for a total of \$491,593.06. Soil testing report and monthly expenditure for this work and overruns are provided in Exhibit A and B.

Soft Soil:

During the soil excavation process on the north side and several other locations on the site Hamon crew encountered several spot areas. The longer section where soft soil was present was mainly on the northside in front of central park. Since this area is irrigated for long time the soft soil spots are not very uncommon. However, this road base is not suitable for pavement construction. Since this additional soft soil was not anticipated during the planning process City team negotiated with Hamon to remove all the unsuitable materials and stabilize them with aggregate material. The approximate amount of unsuitable material estimated on this project stretch is 1500 cubic yards. The negotiated unit rate for this work is \$120 per cubic yard (CY). However, the actual quantity of the soft soil stabilization after the work is completed is at 1703 CY. The total amount for this work at \$120/CY is \$204,388.80. Soft soil unit price information is provided in Exhibit C

Fusible Pipe Work (The water line revisions from Garrison to Estes)

Due to the water line redesign implemented during the construction process from Garrison to Everett, it has become necessary to incorporate an increased quantity of fusible pipe. This adjustment aims to prevent any potential conflicts with the existing underground utilities. Initially, the plan involved Hamon engaging in an open trench method for installing the water line. However, considering the section from Field Street to Everett Street, as illustrated in Exhibit D, the fusible pipe approach decision was made to circumvent utility conflicts. The approved additional length of fusible pipe is 315 linear feet, with a unit rate of \$299 per linear foot. The other water line revisions on the north side incurred additional over runs of \$15,000. Consequently, the revisions to the water line on this project incurred an extra cost of \$109,185.

The following table presents a summary of the added costs and the total amount for the above mentioned items.

Item	Description	Amount (\$)	Current Hamon's Contract PO	Total with this change order
1	Contaminated soil	\$491,593.06	\$16,284,467.63	\$17,089,634.49
2	Soft soil	\$204,388.80		
3	Fusible pipe and Waterline Work overruns	\$109,185		
	Total	805,166.86		

Public Contact

Commission Recommendation

Strategic Alignment

This action aligns with the City Council Strategic Plan Priority Area of Infrastructure, Strategic Result 5: By 12/25 effectively utilize voter approved bond funds for the completion of Ralston Road phase 2 and the expansion of W.72nd Avenue.

Alternative Courses of Action

Recommendation for Action

The Arvada team recommends that the City Council approve R23-105, A Resolution Authorizing Change Order No. 4 to An Agreement by and between the City of Arvada and Hamon Infrastructure, Inc. for Construction of 18-ST-40 Ralston Road –

SUBJECT: R23-105, A Resolution Authorizing Change Order No. 4 to 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 \$805,166.86 for a revised total contract amount not to exceed \$17,089,634.49

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Yukon Street to Garrison Street in an Amount not to Exceed \$805,166.86 for a revised total contract amount not to exceed \$17,089,634.49.

Suggested Motion:

I move that R23-105, A Resolution Authorizing Change Order No. 4 to 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 \$805,166.86 for a revised total contract amount not to exceed \$17,089,634.49, be (approved) (rejected).

Prepared by:
Padmini Gudipudi, Civil Engineer III

Reviewed by:

Approved by:

Jenny Wolfschlag, City Engineer	11/8/2023
Jacqueline Rhoades, Public Works Director	11/15/2023
Bryan Archer, Director of Finance	11/15/2023
Tammy Hedlund, Legal Specialist	11/16/2023
Kelsy Sargent, Assistant City Attorney	11/16/2023
Brad Moloney, Deputy City Attorney	11/16/2023
Rachel Morris, City Attorney	11/16/2023
Don Wick, Deputy City Manager	11/16/2023
Lorie Gillis, City Manager	11/17/2023

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R23-105

A RESOLUTION AUTHORIZING CHANGE ORDER NO. 4 TO “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 \$805,166.86 FOR A REVISED TOTAL CONTRACT AMOUNT NOT TO EXCEED \$17,089,634.49

WHEREAS, on or about March 10, 2021, the City of Arvada and Hamon Infrastructure, Inc. entered into an Agreement whereby Contractor would provide construction services related to the expansion of Ralston Road from Yukon Street (“the Project”); and

WHEREAS, during the widening and reconstruction of the Project, the City construction team identified the need for revisions to the planned waterline work, including additional work related to fusible PVC pipe, stabilization of soft soil areas, and the removal of contaminated material from the Project site; and

WHEREAS, pursuant to Section 4.5 of the Original Agreement, 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”; and

WHEREAS, the purpose of this Change Order No. 4 is to expand the scope of work and increase the not to exceed amount to account for: (1) the testing, collection, and transportation of contaminated soil along the south side of Ralston Road; (2) the removal of unsuitable soft soil materials and stabilization with aggregate material; and (3) the increased quantity of fusible pipe due to water line revisions from Garrison to Estes Street; and

WHEREAS, Arvada desires to increase the Original Agreement’s not to exceed amount by \$805,166.86 for a revised total not to exceed amount of \$17,089,634.49 while noting Contractor must comply with the requirements of the Original Agreement’s Section 6.2, Payment for Services, to obtain payment.

NOW, THEREFORE, 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 Change Order No. 4, which is in substantially the same form as that attached hereto, to 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.

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

APPROVED AND ADOPTED this 27th day of November, 2023.

Lauren Simpson, Mayor

ATTEST:

City Clerk

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

By: _____

CHANGE ORDER NO. 4
TO “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 \$805,166.86 FOR A REVISED TOTAL CONTRACT AMOUNT NOT TO
EXCEED \$17,089,634.49

This Change Order made this ____ day of _____, 2023, by the City of Arvada, a home rule municipal corporation (“Arvada” and/or “City”) regarding the March 10, 2021 Agreement with Hamon Infrastructure, Inc. (“Contractor”), jointly (“the Parties.”)

WITNESSETH: That upon City Approval, the Work and Contract Documents for City of Arvada, Project No. 18-ST-40, entitled Ralston Road - Yukon Street to Garrison Street, shall be adjusted as provided herein:

1.0 RECITALS AND PURPOSE.

1.1 On or about March 10, 2021, the City of Arvada (“Arvada” or “City”) and Hamon Infrastructure, Inc. (“Contractor”) entered into an Agreement (“the Original Agreement”) whereby Contractor would provide construction services related to the expansion of Ralston Road from Yukon Street (“the Project”).

1.2 On or about August 31, 2021, the City agreed to a proposal from Contractor dated August 19, 2021, which resulted in a net savings to the Project of \$52,930.00 (referred to herein as “Change Order No. 1”). On or about May 19, 2022, the Parties executed an agreement titled “Change Order No. 2” whereby Contractor would perform delineated utility construction improvements for the Van Horn Development for a cost of \$400,000.00 and Van Horn Development would pay Arvada the full cost within 60 days of completion of the improvements.

1.3 On or about October 23, 2023, the City executed Change Order No. 3 to address the modifications and additions to the storm sewer design that Contractor constructed between July 2022 and September 2023 with documentation through use of Force Account methods thereby expanding the scope of work and increasing the Original Agreement’s not to exceed amount by \$3,577,701.82.

1.4 The Original Agreement and Change Orders No. 1, No. 2, and No. 3 are not attached herein but incorporated by reference.

1.5 Pursuant to Section 4.5 of the Original Agreement, 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.”

1.6 As such, during the widening and reconstruction of the Project, the City construction team identified the need for revisions to the planned waterline work,

including additional work related to fusible PVC pipe, stabilization of soft soil areas, and the removal of contaminated material from the Project site.

1.7 The purpose of this Change Order No. 4 is to expand the scope of work and increase the not to exceed amount to account for: (1) the testing, collection, and transportation of contaminated soil along the south side of Ralston Road in the amount of \$491,593.06; (2) the removal of unsuitable soft soil materials and stabilization with aggregate material in the amount of \$204,388.80; and (3) the increased quantity of fusible pipe due to water line revisions from Garrison to Estes in the amount of \$109,185.00.

1.8 The following Table 1 shows the additional cost and amount for each of the above-mentioned items addressed in this Change Order No. 4.

Table 1. Change Order No. 4 Scope of Work & Cost Summary

Item	Description	Amount (\$)	Current Not To Exceed	Revised Not to Exceed
1	Contaminated soil	\$491,593.06	\$16,284,467.63	\$17,089,634.49
2	Soft soil	\$204,388.80		
3	Fusible pipe and Waterline Work overruns	\$109,185.00		
	Total	\$805,166.86		

1.9 Pursuant to Section 4.5, Arvada now desires to amend the Original Agreement to expand the scope of work to include the testing, collection, and transportation of contaminated soil along the south side of Ralston Road, as detailed in **Exhibit A & B**, the removal of unsuitable soft soil materials and stabilization with aggregate material as detailed in **Exhibit C**, and the water line revisions and increased quantity of fusible pipe as detailed in **Exhibit D** to this Change Order No. 4.

2.0 CONTRACT DOCUMENTS AND EXHIBITS. The Contract Documents shall consist of the Original Agreement, Change Order No. 1, No. 2, No. 3, and this Change Order No. 4 together with the following:

Exhibit A: Contaminated Soil Report Letter (4 pages);

Exhibit B: Contaminated Soil Cost (1 page);

Exhibit C: Soft Soil Quantity & Unit Price (3 pages); and

Exhibit D: Water Line Revisions Cost & Plan (2 pages).

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 future dispute or differences between the respective documents that constitute the Contract Documents, then Contractor shall secure the written instructions from Arvada before proceeding with the performance of the services affected by such conflicts, omissions, or discrepancies.

3.0 COMPLETION DATE UNDER CHANGE ORDER NO. 4. The project completion date is not being modified by this Change Order No. 4.

4.0 COMPENSATION FOR SERVICES UNDER CHANGE ORDER NO. 4. The Agreement terms are amended to increase the Original Agreement's not to exceed amount by **\$805,166.86** for a revised total not to exceed amount of **\$17,089,634.49**. While Arvada is increasing the overall not to exceed amount, Contractor must comply with the requirements of the Original Agreement's Section 6.2, Payment for Services, to obtain payment.

5.0 FULL FORCE AND EFFECT. All other terms and conditions shall be as set forth in the Original Agreement executed by the Parties on March 10, 2021. As such, all existing components of the Original Agreement and Contract Documents referenced and incorporated in this Change Order No. 4, shall be adhered to and are fully enforceable by the City Project Inspector, City Project Manager, Deputy City Project Manager, Engineering Manager, or any other representative of the City that the City Engineer designates in writing.

6.0 SEVERABILITY. If any other provision of this Change Order No. 4 is held invalid or unenforceable, no other provision shall be affected by such holding, and all of the remaining provisions of this Change Order No. 4 shall continue in full force and effect.

7.0 COUNTERPARTS, ELECTRONIC SIGNATURES AND ELECTRONIC RECORDS. This Change Order No. 4 may be executed in counterparts, each of which shall be deemed to be an original, but all of which shall together constitute one and the same document. Facsimile signatures shall be accepted as originals. Arvada consents to the use of electronic signatures by Arvada. Arvada does not object to the admissibility of this Change Order No. 4 in the form of an electronic record, a paper copy of an electronic document, or a paper copy of a document bearing an electronic signature, on the grounds that it is an electronic record or an electronic signature or that it is not in its original form or is not an original.

8.0 EXHIBITS INCORPORATED. All exhibits attached hereto are incorporated herein by this reference.

9.0 EFFECTIVE DATE. This Agreement shall be effective on the date of execution below.

EFFECTIVE this _____ day of _____, 2023.

Signatures on the following page.

CITY OF ARVADA, a Colorado home rule
municipal corporation

Lauren Simpson, Mayor
8101 Ralston Road
Arvada, CO 80002

ATTEST:

City Clerk

APPROVED AS TO FORM:

Rachel A. Morris, City Attorney

By: _____

Exhibit A

Change Order No. 4 To “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 \$805,166.86 For
A Revised Total Contract Amount Not To Exceed
\$17,089,634.49



CASCADE ENVIRONMENTAL

7393 S. ALTON WAY, CENTENNIAL, CO 80112
TELEPHONE: 303-515-2700 FAX: 303-515-2799

September 9, 2022
Project #4807

via electronic transmittal

Brad Davis
Hamon Infrastructure
5670 Franklin Street
Denver, CO 80216

Re: **City of Arvada Project No. CSB-18-ST-40**
Ralston Rd – Yukon to Garrison St.
Suspect Soil Screening

Dear Brad:

As you are aware, Hamon Infrastructure (Hamon) requested Cascade Environmental (Cascade) mobilize to the project site located along the south side of Ralston Rd on July 18, July 29, and August 15 of 2022 to assess suspect soil which exhibited petroleum odors at several discrete trench locations along the project corridor (See Attachment 1). Additionally, Hamon Personnel notified Cascade Environmental suspect soils were encountered on September 7 and requested additional environmental monitoring. After monitoring the atmosphere to assess the potential impact to Hamon personnel health and safety, Cascade collected several soil samples to screen the soil for the presence of volatile organic compounds (VOCs) using a photoionization detector (PID). VOCs and carbon monoxide (CO) were detected at concentrations less than 4 ppm in and around trenches during atmospheric environmental monitoring. Elevated readings of VOCs were detected in sub-sampled soil during each mobilization and samples were submitted to SGS Laboratory for analysis of VOCs, total petroleum hydrocarbons (TPH), and Resource Conservation and Recovery Act (RCRA) Metals. Most recently, samples were submitted for analysis of polycyclic aromatic hydrocarbon (PAHs).

Results

Results were compared against the Environmental Protection Agency (EPA) Regional Screening Levels (RSLs) Table (May 2022) and the EPA Toxicity Characteristic Leaching Procedure (TCLP) limit to evaluate the soil's suitability for reuse or disposal, respectively.¹

¹ A Subtitle D landfill will usually accept soils where the contaminant concentration is less than 20 times the EPA Toxicity Characteristic Leaching Procedure (TCLP) limit for characteristic waste (i.e. the 20 Times Rule). (Since the TCLP utilizes a 20x dilution, it is not possible to exceed the TCLP limit unless the total contaminant concentration is greater than 20x the TCLP limit). If the total concentration of a constituent is greater than 20x the TCLP limit, analysis for TCLP is required using EPA Method 1311.

No metal results, which were detected above reporting limits, were reported at concentrations exceeding applicable EPA RSLs or EPA TCLP Limits. Only half of the metal results have been released at the time of issuing this report.

The 7/29 TPH Oil Range Organics results were reported to range from 1,200 to 3,700 mg/kg, which is above the Tier I Screening Levels established for site characterization in the Division of Oil and Public Safety Storage Tank Regulations (7 CCR 1101-14). Additionally, TPH Diesel Range Organics were detected in two of the three 7/29 samples submitted to the laboratory, reported at 231 and 389 mg/kg. Full Range TPH results from 7/18 were detected above reporting limits, but below Tier I Screening Levels. TPH does not have a corresponding RSL or TCLP limit; however, these results indicate the soil has been impacted by petroleum spillage. These TPH results are not surprising given the project site's proximity to an underground storage tank (UST) release. The storage tank release is discussed below. Additional samples have been submitted for PAH analysis to further characterize the material; the PAH results have not been released at the time of issuing this report.

On 8/15, Naphthalene was detected in the submitted sample of stockpiled material at a concentration of 12.2 mg/kg, exceeding the corresponding EPA Residential and Industrial RSLs. The 8/15 suspect material generated from the Ralston Rd / Field St intersection should be segregated and cannot be reused onsite. No other VOC results were reported above EPA RSLs. No VOCs were reported above EPA TCLP limits.

An analytical results summary table is presented in Attachment 2. VOC results not presented in the table were reported as non-detect. The laboratory analytical reports are provided in Attachment 3.

Materials Management

Hamon has requested that Cascade outline the requirements for material reuse and disposal. Material should be managed in accordance with the Colorado Department of Transportation (CDOT) Section 250 Specifications.

To reuse the material on a City and County of Denver (CCOD) project, CCOD has established a guidance document dated May 8, 2019 which outlines the requirements for sampling protocol, analytical parameters, and documentation. To reuse this material on a CCOD project, a Materials Management Plan (MMP) would be required to specify the procedure for managing and characterizing the suspect media. The MMP would also detail the following requirements specified in the CCOD soil reuse guidance document:

- Soil must be stockpiled and segregated into 500 cubic yard management units
- Each 500 cubic yard soil management units will be tested for:
 - VOCs
 - SVOCs (PAHs are analyzed under SVOCs)

- TPH
- Pesticides
- Herbicides
- Polychlorinated biphenyls
- RCRA-8 Metals
- Asbestos (if suspect asbestos containing material debris is found)
- Stockpiled soil results will be compared against EPA RSLs (applicable reuse acceptance criteria dependent on reuse site)
- CCOD will not accept material that looks or smells bad, suspect material will require characterization and disposal at a treatment, storage, and disposal facility (TSDF).

To dispose of this material at a Subtitle D TSDF, such as Denver Arapahoe Disposal Site (DADS), a waste profile form will be required for approval by the TSDF. To support the waste profile form, sampling procedures and analytical results will be documented to verify the material is suitable for disposal at a Subtitle D TSDF. Based on completed sampling activities and analytical results, the impacted material on this project is not characteristically hazardous, per the EPA TCLP test. It appears this material is suitable for disposal at a Subtitle D TSDF; however, it is recommended that environmental monitoring be conducted during excavation activities. If suspect materials are encountered during excavation, suspect materials should be segregated, stockpiled, and characterized by an environmental professional.

UST Release

In the process of researching potential sources of petroleum contamination in proximity to the site, Cascade discovered that a release from an UST at the Ralston Convenience Store was discovered on December 1, 2021. Monitoring and remediation activities are currently being conducted under the supervision of the Colorado Department of Labor and Employment (CDLE) Division of Oil and Public Safety (OPS). Two remediation reports were reviewed: one Site Characterization Report dated April 15, 2022 and one Monitoring and Remediation Report dated September 8, 2022. These reports indicate a plume of regular unleaded gasoline exists at the SW corner of the Ralston Rd / Field St intersection. Maps from each report indicating the approximate plume location and elevated benzene & xylene concentrations in groundwater are presented in Attachment 1. Per the Monitoring and Remediation Report, during August 2022 monitoring events, it was observed that the groundwater table had risen 3 feet and petroleum impacted soil above the water table is continuing to contribute to elevated benzene concentrations at monitoring points. It appears construction activities are intercepting the petroleum impacted soil and groundwater plumes. This petroleum UST release is documented as Event ID 17016. The Ralston Convenience Store Facility ID is 2392. A former release occurred at the facility in 1995; a Tier III No Further Action determination was issued on February 11, 2022 and the monitoring well network for this release still remains in place.

Due to the project's proximity to an UST release, it is recommended a MMP be prepared for either material management option. Additionally, it is recommended that Cascade review and revise the existing Health and Safety Plan (HASP) for this project (City of Arvada Project No. CSB-18-ST-40), as the UST release has occurred since the first issuance of the HASP.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Matthew Koch', with a long horizontal flourish extending to the right.

Matthew Koch, P.E.
Environmental Engineer

attachment(s)

Exhibit B

Change Order No. 4 To “An Agreement By And Between
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Garrison Street” In An Amount Not To Exceed \$805,166.86 For
A Revised Total Contract Amount Not To Exceed
\$17,089,634.49

Exhibit B

Contaminated Soil (Monthly Expenses):

On Ralston Rd II project contractor encountered some gas smell during the soil excavation. Immediately Hamon informed the city and team and requested Cascade Environmental mobilize to the project site located along the south side of Ralston to assess suspect soil which exhibited petroleum odors at several discrete trench locations along the project corridor. After monitoring the atmosphere to assess the potential impact to Hamon personnel health and safety, Cascade collected several soil samples to screen the soil for the presence of volatile organic compounds. The summary of this testing indicates that the soil on the south side of the project contains some organic compounds and metals that are not suitable for reuse. According to Colorado Department of Transportation (CDOT) Section 250 Specifications this soil is not used and should be disposed properly. To dispose of this manifested soil to Denver Arapahoe Disposal Site (DADS), a waste management site was identified. All the excavated soil on the south side of the project was collected and transported to DADS waste management site for proper disposal. This much amount of contaminated soil was not anticipated during the planning stage so the following table shows the amount of funds spent on transporting the contaminated soil to waste management.

Item	Health and safety billings for soil tests & material sampling	Cascade environmental billing for testing and loading	Manifested soil haul off	Allotted amount in bid
August	\$4,247.69			\$75,000.00
September	\$3,255.02			
October	\$1,104.43	\$3,158.27		
November		\$4,126.50	\$84,007.89	
December		\$493.50	\$19,492.58	
January		\$5,097.12	\$6,651.65	
February			\$13,967.91	
March			\$25,789.50	
April			\$14,497.06	
May			\$3,200.52	
June			\$63,059.46	
July			\$85,218.07	
August			\$126,802.04	
September			\$62,377.38	
October			\$20,046.47	
Contingency			\$20,000.00	
Total per Item	\$8,607.14	\$12,875.39	\$545,110.53	\$566,593.06
Overrun				\$491,593.06

Exhibit C

Change Order No. 4 To “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 \$805,166.86 For
A Revised Total Contract Amount Not To Exceed
\$17,089,634.49

July 13, 2023

Padmini Gudipudi
Project Manager
City of Arvada
8101 Ralston Road
Arvada, CO 80002

Sent : Via e-mail : pgudipudi@arvada.org

Re: Ralston Road – Yukon to Garrison
Request for Change Order – Sub excavation Unit Price

Dear Padmini,

Please allow for this letter to serve as our Request for a Change Order from Hamon Infrastructure for the additional cost of providing the work for additional sub excavation throughout the project limits. The additional limits of sub excavation work is directed Arvada based on proof rolls. Hamon would like to offer a price of **\$120.00** per cubic yard.

The pricing provided was established based on the production rates and quantities observed while performing this work from June 19th to June 20th. The production rates include possible hand digging around utilities and replacing unsuitable materials with 3" minus stabilizing material. Hamon estimates another 1,500 cubic yards of sub excavation may be required to complete the project.

Per the 2016 Engineering Code of Standards and Specifications under Section 2.16 – Changes in the Work this additional workscope would be allowed and compensation for this work would be under Section 2.17 – Changes in Contract Price.

Attached to this letter is the pricing breakdown of the work.

Should you have any questions regarding this Change Order request please let us know.

Respectfully,



Austin Konkel
Hamon Infrastructure

Cc: Chris Lisberg
Jacqueline Rhoades

Soft Soil:

During the soil excavation process on the north side and several other locations on the site Hamon crew encountered several spot areas. The longer section where soft soil was present was mainly on the northside in front of central park. Since this area is irrigated for long time the soft soil spots are not very uncommon. However, this road base is not suitable for pavement construction. Since this additional soft soil was not anticipated during the planning process City team negotiated with Hamon to remove all the unsuitable materials and stabilize them with aggregate material. The approximate amount of unsuitable material estimated on this project stretch is 1500 cubic yards. The negotiated unit rate for this work is \$120 CY. However, the actual quantity of the soft soil stabilization after the work is completed is at 1703 CY. The total amount for this work (@120/CY) is \$204,388.80.

Soft soil quantity (Actual, CY)	Unit price (per CY)	Total
1703.24	\$120	\$204,388.80

Exhibit D

Change Order No. 4 To “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 \$805,166.86 For
A Revised Total Contract Amount Not To Exceed
\$17,089,634.49

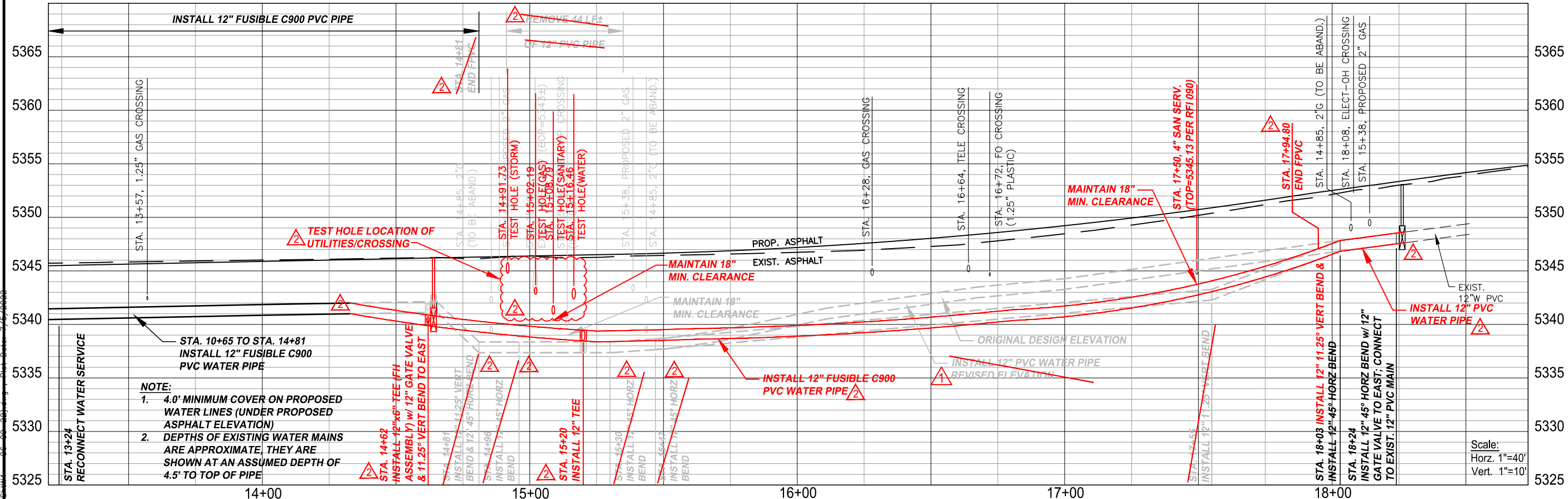
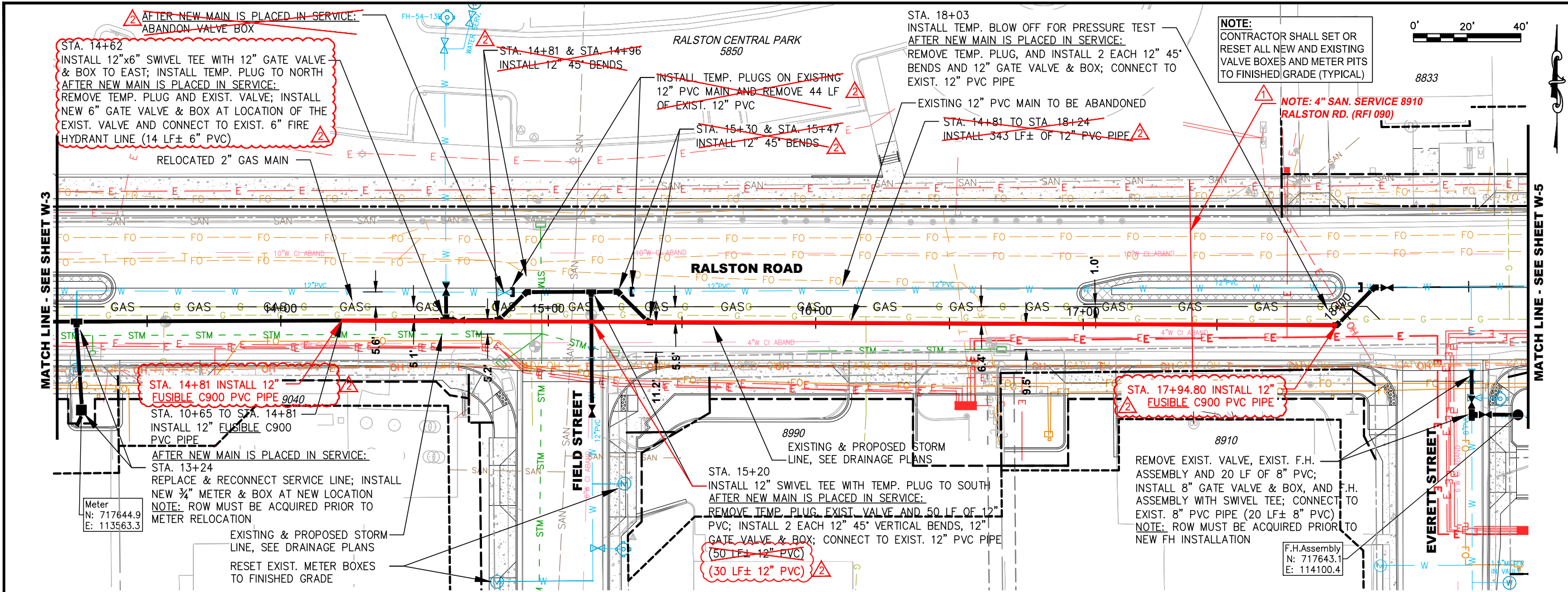
Fusible Pipe Work:

The water line revisions from garrison to Estes

Due to the water line redesign implemented during the construction process from Garrison to Everett, it has become necessary to incorporate an increased quantity of fusible pipe. This adjustment aims to prevent any potential conflicts with the existing underground utilities. Initially, the plan involved Hamon engaging in an open trench method for installing the water line. However, considering the section from Field Street to Everett Street, as illustrated in Exhibit D , the fusible pipe approach decision was made to circumvent utility conflicts. The approved additional length of fusible pipe is 315 linear feet, with a unit rate of \$299. The other water line revisions on the north side incurred additional over runs of 15,000. Consequently, the revisions to the water line on this project incurred an extra cost of \$109,185.

Fusible Pipe (LF)	Unit price (per LF)	Fusible pipe cost	Other waterline revisions overruns	Total
315	\$299	\$94,185	\$15,000	\$109,185

G:\PROJECTS\STREET\18ST40-Ralston Road - Yukon St To Garrison ST\CAD Files\WaterMainDesign-lbc\Waterline Rev #2 Sheet W-4 (06-09-22.m) 18ST40-Ralston, Prop Water(Rel#2



NO.	REVISION	DATE	BY
1	RFI 090, LOWER WATER LINE	2-2022	KBC
2	REVISE PIPE FOR CROSSING	6-2022	RN
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.
12" WATER MAIN REPLACEMENT
PLAN & PROFILE

ENGINEER
TTT
CHECKED BY
KBC
DESIGN BY
KBC
SUBSET
SHEET
W-4
SHEET
NUMBER
254



REPORT TO CITY COUNCIL RESOLUTION

**AGENDA ITEM
8.A.6.**

TO: THE HONORABLE CITY COUNCIL

DATE: November 27, 2023

SUBJECT: R23-106, A Resolution Granting a Non-Exclusive Public Utility Easement to the Public Service Company of Colorado (D/B/A Xcel Energy) for the Construction of Utility Lines for the Meyers' Pool Replacement Facility Located at 7904 Carr Drive

Report in Brief

Xcel Energy has requested a utility easement to provide electrical service to the George Meyers Pool replacement facility and EV charging stations. The paths of the easement have been reviewed by the design team in consideration of other utilities serving the new facility. The team has found the routing acceptable.

The Arvada team recommends that the City Council approve R23-106, A Resolution Granting a Non-Exclusive Public Utility Easement to the Public Service Company of Colorado (D/B/A Xcel Energy) for the Construction of Utility Lines for the Meyers' Pool Replacement Facility Located at 7904 Carr Drive.

Financial Impact

No financial impact for the primary service to the transformer.

Background

Due to the construction schedule and the necessity to get power to the new aquatics center facility that will replace the George Meyers Pool, and in order to complete construction and avoid delay, the City team requests the easement be approved.

Discussion

City Council approval will secure the installation of temporary and permanent power for the construction and operations of Meyers Pool replacement facility.

The cost of secondary feeders to the new facility is accounted for in the project cost and budget.

Public Contact

Posting of the City Council agenda.

Commission Recommendation

N/A

Strategic Alignment

This action aligns with the City Council's goal of replacing the George Meyers Pool.

Alternative Courses of Action

Recommendation for Action

The Arvada team recommends that the City Council approve the Resolution Granting a Non-Exclusive Public Utility Easement to the Public Service Company of Colorado (D/B/A Xcel Energy) for the Construction of Utility Lines for the Meyers' Pool Replacement Facility Located at 7904 Carr Drive

Suggested Motion:

I move that R23-106, A Resolution Granting a Non-Exclusive Public Utility Easement to the Public Service Company of Colorado (D/B/A Xcel Energy) for the Construction of Utility Lines for the Meyers' Pool Replacement Facility Located at 7904 Carr Drive, be (approved) (rejected).

Prepared by:

Kim Vagher, Manager of City Facilities

Reviewed by:

Approved by:

Kim Vagher, Manager of City Facilities	11/8/2023
Jacqueline Rhoades, Public Works Director	11/9/2023
Bryan Archer, Director of Finance	11/9/2023
Tammy Hedlund, Legal Specialist	11/9/2023
Gail Walker, Legal Specialist-Contracts	11/9/2023
Kylie Justus, Assistant City Attorney	11/9/2023
Rachel Morris, City Attorney	11/15/2023
Don Wick, Deputy City Manager	11/15/2023
Lorie Gillis, City Manager	11/15/2023

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R23-106

A RESOLUTION GRANTING A NON-EXCLUSIVE PUBLIC UTILITY EASEMENT TO THE
PUBLIC SERVICE COMPANY OF COLORADO (D/B/A XCEL ENERGY) FOR THE
CONSTRUCTION OF UTILITY LINES FOR THE MEYERS' POOL REPLACEMENT
FACILITY LOCATED AT 7904 CARR DRIVE

WHEREAS, Arvada has collaborated with Jefferson County Public School District R-1 and Apex Parks and Recreation District to design and construct a replacement pool facility for George Meyers' Pool located at 7904 Carr Drive; and

WHEREAS, the replacement pool facility requires utility lines and services from the Public Service Company of Colorado (d/b/a Xcel Energy).

NOW, THEREFORE, 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 a form approved by the City Attorney, a *Public Service Company of Colorado Easement*, which is in substantially the same form as that attached hereto.

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

APPROVED AND ADOPTED this 27th day of November, 2023.

Lauren Simpson, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:

Rachel Morris, City Attorney

By: _____

STR: NE1/4-S34-T2S-R69W, NW1/4-S35-T2S-69W

County: Jefferson

Division-City/Town: NMD - Arvada

Division Agent: Brett McGrath

LAT & LONG GPS:

Grantor: City of Arvada

Address/Intersection: 7904 Carr Dr.

Dist./Tran.: Distribution

Contract Agent/Co: N/A

LAT: 39°50'22.24"N

Doc No.: 536296

Reception Number:

Surveyor: P. Jernigan – PLS # 37042

Survey Company: SEH

LONG: 105° 5'27.33"W

PUBLIC SERVICE COMPANY OF COLORADO EASEMENT

The undersigned Grantor hereby acknowledges receipt of good and valuable consideration from PUBLIC SERVICE COMPANY OF COLORADO (Company), 1800 Larimer Street, Suite 1100, Denver, Colorado, 80202, in consideration of which Grantor(s) hereby grants unto said Company, its successors and assigns, a non-exclusive easement to construct, operate, maintain, repair, and replace utility lines and all fixtures and devices, used or useful in the operation of said lines, through, under, across, and along a course as said lines may be hereafter constructed in Parcel of Land in the NE 1/4 of Section 34, and NW 1/4 of Section 35, Township 2 South, Range 69 West of the 6th Principal Meridian in the County of Jefferson, State of Colorado, the easement being described as follows:

See “Exhibit A” attached hereto and made a part hereof.

The easement width varies.

Together with the right to enter upon said premises, to survey, construct, maintain, operate, repair, replace, control, and use said utility lines and related fixtures and devices, and to remove objects interfering therewith, including the trimming and felling of trees and bushes, and together with the right to use so much of the adjoining premises of Grantor during surveying, construction, maintenance, repair, removal, or replacement of said utility lines and related fixtures and devices as may be required to permit the operation of standard utility construction or repair machinery. The Grantor reserves the right to use and occupy the easement for any purpose consistent with the rights and privileges above granted and which will not interfere with or endanger any of the said Company's facilities therein or use thereof. Such reservations by the Grantor shall in no event include the right to erect or cause to be erected any buildings or structures upon the easement granted or to locate any mobile home or trailer units thereon. In case of the permanent abandonment of the easement, all right, privilege, and interest granted shall terminate.

The work of installing and maintaining said lines and fixtures shall be done with care; the surface along the easement shall be restored substantially to its original level and condition.

Signed this _____ day of _____, 2023.

(Type or print name below each signature line with official title if corporation, partnership, etc.):

GRANTOR: CITY OF ARVADA, a Colorado home rule municipal corporation

BY: _____
_____ (print name)

ITS: _____

STATE OF _____)
_____)ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 2023 by [Grantor name(s) from above]:

Witness my hand and official seal.

My commission Expires _____

Notary Public

EXHIBIT A

NON-EXCLUSIVE PUBLIC UTILITY EASEMENT TO THE PUBLIC SERVICE COMPANY OF COLORADO (D/B/A XCEL ENERGY) FOR THE CONSTRUCTION OF UTILITY LINES FOR THE MEYERS' POOL REPLACEMENT FACILITY LOCATED AT 7904 CARR DRIVE



**EXHIBIT A – 7904 CARR DRIVE
PARCEL A**

A tract of land being a portion of that Commissioners Deed recorded June 27, 1977 in the Records of the Clerk and Recorder of Jefferson County in Book 3026 at Page 296, located in the Northeast One-Quarter (NE 1/4) of Section 34 and the Northwest One-Quarter (NW 1/4) of Section 35, Township 2 South, Range 69 West of the 6th Principal Meridian, County of Jefferson, State of Colorado, being more particularly described as follows:

Commencing at the Southwesterly corner of said Commissioners Deed, being also a point on the Easterly Right-of-Way of Carr Drive; thence on the exterior of said Commissioners Deed, said Easterly Right-of-Way and the arc of a 595.86 foot radius curve to the left whose center bears N61°59'42"W, having a central angle of 05°11'05", an arc length of 53.92 feet to the Point of Beginning;

thence continue on said exterior, said Easterly Right-of-Way and said 595.86 foot radius curve to the left through a central angle of 00°58'59", an arc length of 10.22 feet;

thence S79°38'00"E a distance of 29.43 feet;

thence N86°12'07"E a distance of 24.42 feet;

thence N01°39'29"E a distance of 269.29 feet;

thence S88°20'31"E a distance of 10.00 feet;

thence S01°39'29"W a distance of 268.34 feet;

thence N86°12'07"E a distance of 31.64 feet;

thence S89°45'05"E a distance of 218.15 feet;

thence S02°05'09"E a distance of 51.17 feet;

thence N90°00'00"E a distance of 4.99 feet;

thence S00°00'00"E a distance of 15.00 feet;

thence N90°00'00"W a distance of 15.00 feet;

thence N00°00'00"E a distance of 15.00 feet;

thence N02°05'09"W a distance of 41.21 feet;

thence N89°45'05"W a distance of 208.19 feet;

thence S86°12'07"W a distance of 66.99 feet;

thence N79°38'00"W a distance of 32.79 feet to the Point of Beginning.

Containing 6,483 square feet (0.149 acres), more or less.

All lineal distances shown hereon are in U.S. Survey Feet.

As shown on Exhibit A, Sheet 3 of 3, attached hereto and made part of.

For purposes of this description, bearings are based on the Southwesterly line of said Commissioners Deed and is assumed to bear N39°05'23"W.



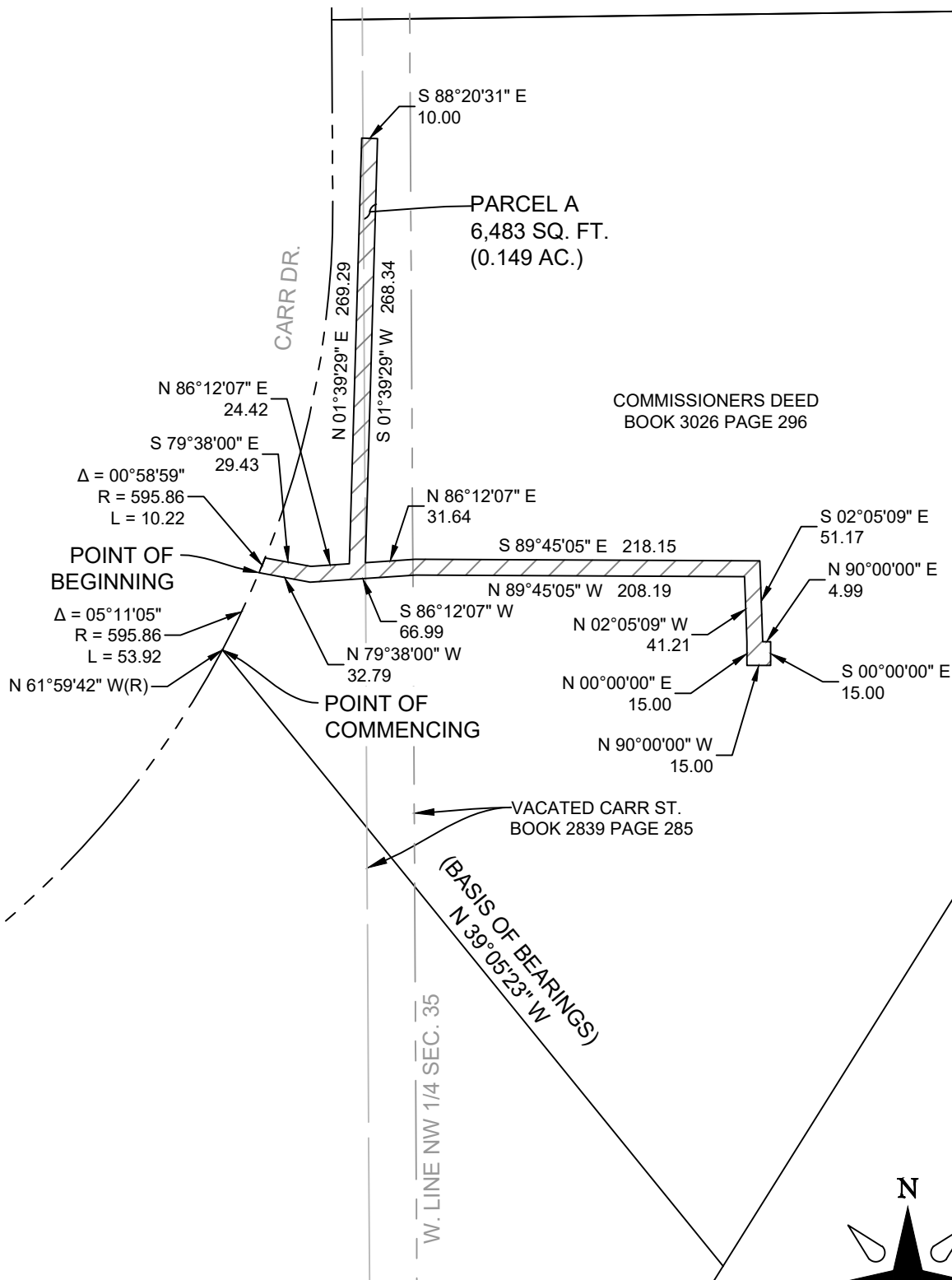
The author of this description is Patrick S. Jernigan, PLS 37042, prepared on behalf of SEH, 2000 S. Colorado Blvd, Suite 6000, Denver, CO 80222, on October 11, 2023, under Job No. 173897-9.0, for Public Service Company of Colorado, and is not to be construed as representing a monumented land survey.



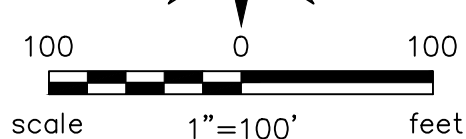
Patrick S. Jernigan, PLS 37042
For and on behalf of SEH Inc.

EXHIBIT A - 7904 CARR DR. PARCEL A

SHEET 3 OF 3



2000 S. Colorado Blvd
Suite 6000
Denver, Colorado 80222
Phone: 303-586-5800
FAX: 303-586-5801
www.sehinc.com





REPORT TO CITY COUNCIL RESOLUTION

AGENDA ITEM
8.A.7.

TO: THE HONORABLE CITY COUNCIL

DATE: November 27, 2023

SUBJECT: R23-107, A Resolution Authorizing A Lease Agreement By And Between the City of Arvada And The Arvada Gardeners for the Property Located At 9195 West 57th Avenue, Also Known As The Arvada Community Garden

Report in Brief

The City of Arvada owns the property where the Arvada Community Garden has been located for the last 48 years. The property is located at 9195 W 57th Avenue, Arvada, CO 80002. Arvada wishes to continue using the property as a community garden to benefit the residents of Arvada. The Arvada Gardeners agree to be bound by the terms and conditions of the attached lease.

The Arvada team recommends that the City Council approve R23-107, A Resolution Authorizing A Lease Agreement By And Between the City of Arvada And The Arvada Gardeners for the Property Located At 9195 West 57th Avenue, Also Known As The Arvada Community Garden.

Financial Impact

The Arvada Gardeners will not be charged rent for the lease of the property. The Arvada Gardeners will be responsible for the cost of all utilities and other assessments levied against the property. The Arvada Gardeners will also be responsible for paying for the water used from the Swadley Ditch for garden operations and events. The Arvada Gardeners will also pay for and provide grounds maintenance or perform such services. There is no financial impact to the city associated with the approval of this resolution.

Background

Discussion

In partnership with AURA, the City of Arvada has been working with the Arvada Gardeners to develop a formal, long-term lease agreement for the use of the city-owned property located at W 57th Ave and Garrison St.

The Arvada Gardeners have been active in Arvada for over 40 years and have established themselves as an important part of the Arvada community. They have been gardening at their current location since 1975. The Arvada Gardeners began in 1967 as the Arvada Men's Garden Club. The Arvada Men's Garden Club focused its early work on developing a Children's Community Garden in Arvada. In 1990, the national garden club organization allowed women to be admitted as members and the group changed its name to the Arvada Gardeners of America.

Unlike other community partners who utilize city-owned land, the Arvada Gardeners have not previously had a lease agreement in place to define rights, duties, and liabilities of both parties. Construction activity related to the Garrison Garden Paseo, as well as future community use of the new park, has elevated the need for clarity and formalization of a lease agreement for the first time. The final lease agreement considers community safety, liability, maintenance responsibilities and other key terms.

The Arvada Gardeners has provided information about their operations and needs and the City is committed to developing a mutually beneficial lease agreement that establishes clarity and consistency for all parties involved while protecting public safety and efficiently managing resources. Under the terms of the agreement, Arvada will lease the property to the Arvada

Gardeners for a period of 5 years beginning on the date of execution of the agreement by both parties. The lease will be automatically renewed for 2 additional five-year periods unless either party provides notice of their intent to terminate in accordance with the terms and conditions contained in this Lease.

As a condition precedent to future renewals, the Arvada Gardeners agree to meet annually, no later than December 10th, to discuss the operation and management of the property and how well the property has met established performance measures and goals. Based on such meetings, the Parties agree that new terms and conditions may be added by amendment as a condition for future lease renewals.

Public Contact

Posting of the City Council agenda.

Commission Recommendation

Strategic Alignment

This work supports the Vibrant Community and Neighborhoods Priority Area of the City Council Strategic Plan and the following Principles:

"Fosters strategic partnerships to advance quality of life and achieve an inclusive, equitable, diverse, resilient and sustainable community."

Alternative Courses of Action

Alternative No. 1: Approve R23-107, A Resolution Authorizing A Lease Agreement By And Between the City of Arvada And The Arvada Gardeners for the Property Located At 9195 West 57th Avenue, Also Known As The Arvada Community Garden.

Alternative No. 2: Do not approve R23-107, A Resolution Authorizing A Lease Agreement By And Between the City of Arvada And The Arvada Gardeners for the Property Located At 9195 West 57th Avenue, Also Known As The Arvada Community Garden.

Recommendation for Action

The Arvada team recommends that the City Council approve Alternative No. 1:

Approve R23-107, A Resolution Authorizing A Lease Agreement By And Between the City of Arvada And The Arvada Gardeners for the Property Located At 9195 West 57th Avenue, Also Known As The Arvada Community Garden.

Suggested Motion:

I move that R23-107, A Resolution Authorizing A Lease Agreement By And Between the City of Arvada And The Arvada Gardeners for the Property Located At 9195 West 57th Avenue, Also Known As The Arvada Community Garden, be (approved) (rejected).

Prepared by:

Enessa Janes, Director of Vibrant Community and Neighborhoods

Reviewed by:

SUBJECT: R23-107, A Resolution Authorizing A Lease Agreement By And Between the City of Arvada And The Arvada Gardeners for the Property Located At 9195 West 57th Avenue, Also Known As The Arvada Community Garden

PAGE: 3
ITEM: 8.A.7.

Approved by:

Enessa Janes, Director of Vibrant Community and Neighborhoods	11/7/2023
Bryan Archer, Director of Finance	11/9/2023
Gail Walker, Legal Specialist-Contracts	11/9/2023
Kylie Justus, Assistant City Attorney	11/9/2023
Rachel Morris, City Attorney	11/14/2023
Don Wick, Deputy City Manager	11/14/2023
Lorie Gillis, City Manager	11/15/2023

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R23-107

A RESOLUTION AUTHORIZING A LEASE AGREEMENT BY AND BETWEEN THE CITY OF ARVADA AND THE ARVADA GARDENERS FOR THE PROPERTY LOCATED AT 9195 WEST 57TH AVENUE, ALSO KNOWN AS THE ARVADA COMMUNITY GARDEN

WHEREAS, Arvada owns the property where the Arvada Community Garden has been located for the last 48 years at 9195 W 57th Avenue, Arvada, CO 80002 (the “Property”); and

WHEREAS, Arvada wishes to continue using the Property as a community garden to benefit the residents of Arvada; and

WHEREAS, the Arvada Gardeners agree to be bound by the terms and conditions of the attached lease.

NOW, THEREFORE, 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 Lease Agreement with the Arvada Gardeners that is in substantially the same form as that attached hereto.

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

APPROVED AND ADOPTED this 27th day of November, 2023.

Lauren Simpson, Mayor

ATTEST:

City Clerk

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

BY: _____

Attention: Project Owner
Contract Review

This agreement is being submitted for your review, approval or comments. Please ensure the contract captures the project details.

Approved by:

Project Owner

Darin Delay
Name: Darin Delay

This cover page confirms you have reviewed the contract being submitted to the vendor and provides an opportunity for you to return the contract to the City Attorney's Office with any comments and/or suggested revisions.

If the contract captures the project details, please initial to complete this transaction to send the contract to the vendor. However, if you have comments and/or suggested revisions, please select the "Add Comment" icon. You will be provided a text box to include any comments/suggested revisions. Once complete hit "Post."

Please contact Gail Walker at (720) 898-7187 if you have any questions.

**LEASE AGREEMENT BY AND BETWEEN THE CITY OF ARVADA AND THE
ARVADA GARDENERS FOR THE PROPERTY LOCATED AT 9195 WEST 57TH
AVENUE, ALSO KNOWN AS THE ARVADA COMMUNITY GARDEN**

- 1. PARTIES.** The parties to this Lease Agreement (“Lease” or “Agreement”) are the City of Arvada, (“Arvada” or “Lessor”) a Colorado home rule municipal corporation, 8101 Ralston Road, Arvada, Colorado 80002 (“Arvada” or “Lessor”), and the Arvada Gardeners, a Colorado non-profit corporation with its principal place of business at 7924 W 54th Avenue, Arvada, CO 80002, CO (“Lessee”) and collectively referred to as “the Parties.” This Agreement shall be effective upon its mutual approval and execution by the Parties.
- 2. RECITALS AND PURPOSE.**
 - 2.1** Arvada owns the property where the Arvada Community Garden has been located for the last 48 years at 9195 W 57th Avenue, Arvada, CO 80002 (the “Property”).
 - 2.2** Arvada wishes to lease the Property further described in **Exhibits A** and **B** to Lessee.
 - 2.3** The Parties desire to enter into this Lease to define all rights, duties, and liabilities of the Parties during the term described herein.
- 3. CONTRACT DOCUMENTS AND EXHIBITS.** The Contract Documents shall consist of this Lease together with the following:

Exhibit A:	Legal Description of Property:
Exhibit B:	Map of the Property:
Exhibit C:	Arvada Maintenance Standards: and
Exhibit D:	Volunteer Waiver.

All exhibits referred to in this Agreement are attached hereto and are, by reference, incorporated herein for all purposes.
- 4. RENT.** Lessee agrees to pay all utilities levied against the Property when due, this includes, but is not limited to all water leased (as described in **Sec. 6.**), All past due installments shall bear interest at the rate of 12% per annum until paid.
- 5. TERM.**
 - 5.1** Arvada leases to Lessee the Property for a period of 5 years beginning on the date of execution of this Agreement by both parties. This Lease will be automatically renewed for 2 additional five-year periods unless either Party provides notice of

their intent to terminate in accordance with the terms and conditions contained in this Lease.

- 5.2 As a condition precedent to future renewals, the Lessee agrees to meet annually in no later than December 10th, to discuss the operation and management of the Property and how well the Property has met established performance measures and goals. Based on such meetings, the Parties agree that new terms and conditions may be added by amendment as a condition for future lease renewals.
- 5.3 This Lease may be extended for a longer term by written Amendment between Arvada and Lessee.
- 5.4 **Holdover.** Should Lessee remain in possession of the Property with the consent of Arvada after the natural expiration of this Lease, a new tenancy from month-to-month shall be created between Arvada and Lessee which shall be subject to all the terms and conditions of this Lease, provided however, such tenancy shall be terminable by either party upon 30 days written notice served by either Arvada or Lessee. It is expressly understood and agreed that the rent for any holdover under this paragraph shall be at the rate set by **Sec. 4.**

6. WATER LEASE TERMS.

- 6.1 Arvada will lease 1 inch of water from Arvada's Swadley Ditch inches to Lessee for a period of 5 years from the date of the execution of this Agreement, or until such time as Lessee is able to procure its own Swadley Ditch water rights for irrigation. This provision is subject to automatic renewal in accordance with **Sec. 5.1**, but may be terminated upon 60 days' notice by Arvada to Lessee.
- 6.2 It is understood by Arvada and Lessee that 1 inch of Swadley Ditch water can yield up to 3 acre feet (AF) of water.
- 6.3 Arvada does not and cannot guarantee any specific water yield or timing. Water yield and timing is solely in the control of the Swadley Ditch and can be impacted by other factors, including but not limited to, weather, ditch outages, and maintenance. If water is, for any reason, unavailable from the Swadley Ditch, Arvada will not provide supplemental water to Lessee.
- 6.4 No tap will be added to the property.
- 6.5 Subject to written approval by Arvada, at Lessee's expense, Lessee may install its own Arvada approved water measuring equipment.
- 6.6 Payment and Rates.
 - 6.6.1 Lessee will pay Arvada annually for 1 inch of Arvada owned Swadley Ditch water, due **December 1st** of each year for that year's use.

6.6.2 Arvada shall invoice Lessee for the leased water, as described in **Sec. 6.6.3** below, by **November 1st** of each year at John Ruckman at 5206 Allison Street, Arvada CO, 80002 westsidejdr@gmail.com.

6.6.3 The rate for the leased water shall be the sum of the following:

6.6.3.1 Water Charge – the cost of 3 AF of water (unless measured by Lessee to be a lesser amount) billed at a discounted rate of 50% off of Arvada’s Denver Raw Water Rate, adjusted on an annual basis in accordance with Arvada’s Denver Raw Water Rate; and

6.6.3.2 Water Assessments – on an annual pass-through basis from the Swadley Ditch Company.

6.7 Lessee’s Water Use Responsibilities.

6.7.1 Lessee is responsible for coordinating delivery of water with the Swadley Ditch Company’s Superintendent.

6.7.2 Lessee is responsible for maintaining its own conveyance and distribution infrastructure, including but not limited to irrigation lines, cisterns, and pumps.

6.7.3 Lessee shall ensure the leased water is (1) only used for its legally decreed purpose of irrigation; and (2) only used in the Swadley Ditch historic use area.

6.8 Lessee is prohibited from subleases the water.

7. ARVADA’S RESPONSIBILITIES.

7.1 Arvada will provide the Property at no cost to the Lessee.

7.2 Arvada agrees to provide the Property as is.

7.3 Arvada covenants and agrees that Lessee shall and may, at all times, peaceably and quietly have, hold, and enjoy the Property during the term of the Lease. However, Lessee understands that construction for a new park along Garrison Street as well as construction of multi-family developments in the area may disrupt operations. Lessee releases Arvada from any liability due to park use or construction, development use or construction, or disruption.

8. LESSEE’S RESPONSIBILITIES.

8.1 Lessee, in consideration of the leasing of said Property, hereby covenants and agrees to the following:

8.1.1 Lessee must manage and operate the Property as a community garden open for rental to the general public.

8.1.2 Lessee will adhere to Arvada's visual and aesthetic guidelines as provided in **Exhibit C** and the City Code.

8.1.3 By December 1st of each year, Lessee will pay the annual Swadley Ditch water lease fee as described in **Sec. 6**.

8.1.4 Lessee will be the single point of contact and sole liaison for the Arvada on all matters related to the management and operation of the Property including day-to-day communication, management, and the resolution of issues.

8.1.5 Lessee agrees that it will not change its not for profit status during the term of this lease and that any food or goods or labor offered from the Lessee or its members shall be strictly for the use of the not for profit organization.

8.1.6 Lessee agrees that the Property will be used for the community's benefit. By the annual meeting described in **Sec. 5.2**, Lessee agrees to prepare a report for Arvada that outlines the following performance measures:

8.1.6.1 Community Access Performance Measures:

8.1.6.1.1 Public Hours and Access. The Property must be open and accessible to the public during consistent and posted times. During those publically accessible times time, access to the Property may not be restricted by keypads, gates, or codes. Documentation of this performance measure must be included in the annual report.

8.1.6.1.2 Community Outreach. Lessee must reach out and advertise to the residents of the multi-family housing developments adjacent to the Property (Ralston Gardens, 5772 Garrison St., and Arvada Place Apartments, 9255 W 57th Ave). Lessee shall report on how many residents of adjacent housing developments have plots at the Property.

8.1.6.1.3 Food Donation and Community Service Performance Measures:

8.1.6.1.3.1 A summary and documentation of the pounds of food donated in Arvada during the year and a list

of specific Arvada organizations served must be included in the annual report.

8.1.6.1.3.2 A summary of garden events, training and capacity-building activities completed during the year must be included in the annual report.

8.1.6.1.4 Financial Performance Measures. A summary of annual costs and revenues associated with the operation of the Arvada Gardeners organization must be included in the annual report.

8.1.6.1.5 Water Conservation Performance Measures. Each year Lessee shall present a class available to the entire community regarding Water Conservation Performance Measures.

8.1.7 Lessee must familiarize itself with Titles I, II, and III of the Americans with Disabilities Act of 1990 (“ADA”), 42 USC § 12111-12117, § 12131-12165, and § 12181-12189, and comply with all regulations therein or as amended.

8.1.8 Lessee agrees that its website will be ADA compliant by July 1, 2024. Lessee’s website will remain ADA compliant after that date through the expiration or termination of this Agreement.

8.1.9 Lessee agrees it is legally responsible for any injury to people or property that may occur at the Property during the pendency of this lease Lessee acknowledges that it is legally responsible for all the food grown and produced.

8.1.10 Lessee must pay the Rent described in **Sec. 4** by December 1st of each year.

8.1.11 Lessee shall timely pay all utility charges for heat, electric, gas, internet, telecom, or other assessments levied against the Property.

8.1.12 Lessee is responsible for providing port-o-lets and any costs associated with the delivery, servicing, and maintenance of the port-o-lets.

8.1.13 Lessee is responsible for providing dumpsters at the Property and for organizing waste collection and removal. Lessee shall pay for all costs associated with the dumpsters, waste collection, and waste removal.

8.1.14 Lessee is responsible for routine maintenance and repair of any fencing that delineates the Property’s space from the surrounding area, including costs associated with such maintenance and repair. This includes the fence along the west side of the property running from W 57th Ave to the south, to the

Ralston Gardens Affordable Housing property to the north. Arvada shall remove or paint over graffiti within a reasonable time after Lessee reports the occurrence of graffiti to Arvada.

- 8.1.15** Lessee agrees to repair and maintain the electrical and irrigation systems on the Property. Should repairs or maintenance require a contractor, Lessee must ensure that the contractor obtains all necessary permits and licenses prior to beginning the work.
- 8.1.16** Lessee must pay for and provide grounds maintenance or perform such services itself.
- 8.1.17** Lessee must pay for all alterations, changes, and property improvements. Any improvements on the Property (absent movable personal property), become property of Arvada.
- 8.1.18** Lessee will not smoke or vape on the premises or allow any member of the public to smoke or vape pursuant to §70-149 and §38-304 of Arvada Municipal Code.
- 8.1.19** Lessee agrees that all alterations, changes, and improvements built, constructed, or placed on the Property by Lessee, with the exception of fixtures removable without damage to the Property and movable personal property, shall be the property of Arvada and remain on the Property at the expiration or sooner termination of this Lease.
- 8.1.20** Lessee acknowledges that all personal property of any kind in the Property is at the sole risk of the Lessee, and Arvada is not liable for any damage or loss of such personal property.
- 8.1.21** Lessee shall not permit a nuisance on the Property;
- 8.1.22** All vehicular access to the garden property by non-city vehicles must occur through the double gates located on the south fence line of the property along W 57th Ave. Vehicular access on or through the Garrison Garden Paseo Park will be restricted to Arvada Park Maintenance personnel and emergency personnel only.
- 8.1.23** Lessee agrees to remove snow on the Property in accordance with Arvada's rules and ordinances;
- 8.1.24** Lessee will remove and control noxious weeds.
- 8.1.25** The parties agree that the orchard trees on the property that have been planted by the Lessee may be trimmed, maintained, moved, removed,

replanted, and planted at the sole discretion of Lessee. Lessee will not remove or damage any Arvada-owned trees on the Property without written permission from Arvada.

- 8.1.26** Lessee shall use Property for a community garden and no other purpose. Lessee will not use Property in an unlawful manner.
- 8.1.27** Lessee will use and care for the Property in a good and responsible manner consistent with Arvada's maintenance standards, **Exhibit C**, and with the standard of care applicable to other community gardens within the Denver metro area.
- 8.1.28** Lessee agrees it must keep Property, premises, fences, and appurtenances in good condition and repair. Lessee must notify Arvada of any graffiti painted on the fences that requires removal.
- 8.1.29** Lessee agrees not to commit or cause to be committed any waste in or upon said Property or any part thereof, nor will Lessee degrade the condition of the Property in any way. For purposes of this section, "waste" shall mean harmful or destructive use of the property by Lessee.
- 8.1.30** At the expiration of this Lease, Lessee will promptly surrender and deliver up said Property in like good order and condition to Arvada.
- 8.1.31** Lessee agrees it will not add, modify, move, or remove any structures, fences, or site elements without prior written approval by Arvada. The specific use of the structures shall be subject to approval by Arvada. Arvada reserves the right to prohibit use or access by the Lessee of any of the structures if the proposed use is inconsistent with the purpose of the Lease.
- 8.1.32** Lessee agrees that Lessee, and any persons Lessee permits on the Property, shall not obtain, possess, use, administer, dispense, cultivate, or distribute any drug or controlled substances on the Property in violation of Colorado state law. Lessee agrees that this Lease may be terminated if Arvada becomes aware of Lessee noncompliance with this provision.
- 8.1.33** Lessee shall, at the time of the execution of this Agreement, provide to Arvada's Director of Vibrant Community and Neighborhoods and Director of Utilities the names, phone number, and e-mail addresses of Lessee's representative(s). Lessee shall notify Arvada in writing, of any and all subsequent changes in such information, and shall, on an annual basis, update and confirm the accuracy of such information. Arvada shall likewise keep the Arvada Garden's updated on any change of personnel in the Director position stated above.

9. ARVADA'S ACCESS TO THE PROPERTY.

9.1 Arvada may access all parts of the Property in such a manner as will minimize disruption to events or activities to the extent reasonably practicable, for the purposes of:

9.1.1 Performing, administering, or enforcing this Lease.

9.1.2 Examining, inspecting, evaluating, planning, making any agreed upon repairs or maintenance, designing, showing, or otherwise administering the building or grounds.

9.1.3 Performing Arvada's regulatory, law enforcement, and other governmental duties.

9.2 Arvada reserves the right to conduct health/safety inspections of the building and grounds.

10. TERMINATION.

10.1 Either party may terminate this Lease, at any time, for convenience upon 90 days' written notice to the other party.

10.2 In the event the Property is rendered untenable by fire or other casualty, Arvada shall have the right to terminate this Lease on the date of such occurrence.

10.3 If the Lessee is in default in any of the covenants or agreements herein to be performed by such Lessee, which default remains uncorrected for a period of 14 calendar days after Arvada has provided the Lessee with written notice thereof, Arvada shall have the option, without liability for trespass or for damages, to enter onto the Property and declare the term of the defaulting Lessee's lease terminated, repossess the Property, and expel the Lessee, all without prejudice to any other remedies available to Arvada for breach of covenant. Arvada may also sue monthly to recover all rent, damages, litigation costs, and attorney's fees.

11. PROJECT MANAGER. Arvada designates the Director Vibrant of Community and Neighborhoods, Enessa Janes, ejanes@arvada.org, as Arvada's project manager. Should Ms. Janes be reassigned, Arvada will provide notice to Lessee of Arvada's current representatives as it relates to correspondence involving the Property.

12. INDEMNIFICATION. To the fullest extent permitted by law, Lessee will defend, indemnify and hold Arvada, its employees, agents and assignees ("Indemnified Parties") harmless from and against all costs, expenses, claims, damages, liabilities, court awards, losses and other amounts (including attorneys' fees and related costs) ("Claims") arising out of or relating (directly or indirectly) to: (i) the conduct or management of the Property or of any business therein, or any work or thing whatsoever done, or any condition creating

in or about the Property during the term; (ii) any act, omission, breach of any provision of this Lease, or negligence of Lessee or any of Lessee's licensees or the partners, directors, officers, agents, employees, invitees or contractors of Lessee, or of Lessee's sublessees, invitees, or licensees; and (iii) any accident, injury or damage whatsoever occurring in or at the Property, including food grown and produced at the Property. Lessee hereby expressly indemnifies Arvada, unless the Claim is caused by the sole negligence of Arvada.

13. INSURANCE.

13.1 Insurance Required. Unless higher limits or additional coverages are required by Arvada, Lessee shall secure, purchase, and maintain, at its own expense, the following types of insurance coverage and limits of liability throughout the duration of the Lease or any authorized extension:

13.1.1 Property Insurance. Lessee shall provide a property insurance policy that covers the entire Property premises (including, without limitation, inventory, trade fixtures, furniture, and other property removable by Lessee under the provisions of this Lease). Lessee's policy shall include the following policy terms and conditions: 1) Special Causes of Loss; 2) Replacement Cost Coverage equal to 100% of the replacement cost of aforementioned property; 3) No coinsurance; 4) Business income & extra expense including rental value equal to the expected gross annual revenue. It may also be provided on a 12-month actual loss sustained basis.

13.1.2 General Liability Insurance. Commercial General Liability insurance covering bodily injury, including death, property damage arising out of premises, operations, products, and completed operations, advertising and personal injury liability, contractual liability assumed liability coverage, and if applicable, molestation, assault, battery, and communicable diseases. The Commercial General Liability insurance policy shall provide coverage on an occurrence basis and shall include explosion, collapse, and underground hazard coverage. The Commercial General Liability insurance policy shall also provide Additional Insured status, effective as of the date of the execution of this Agreement, to Arvada and any other party required by Arvada, throughout the term stated in **Sec. 5**. Additional Insured status shall cover both completed and ongoing operations. Minimum limits of liability provided by this coverage shall be as follows:

General aggregate: \$2,000,000.00.

Products/completed operations aggregate: \$2,000,000.00.

Personal and advertising injury: \$1,000,000.00.

Each occurrence: \$1,000,000.00.

Fire and Legal Liability: \$1,000,000.00

13.2 Volunteer Waiver. Lessee affirmatively represents that it does not have and will not have any employees. Lessee agrees that each of its volunteers shall execute the attached, Exhibit D, waiver of workers' compensation and liability.

13.3 Policy Requirements. Any coverage required under **Sec. 13.1** may be met through the use of primary and excess policies so long as the total amount of insurance coverage provided is equal to or greater than the amount specified in this agreement.

13.3.1 All policies required under **Sec. 13** must:

13.3.1.1 Be written through a company duly entered and authorized to transact that class of insurance in the State of Colorado. All policies written through private carriers are to be written with insurance carriers with an A.M. Best rating of "A-VII" or better;

13.3.1.2 Be primary to any insurance of, or available to, Arvada;

13.3.1.3 Provide a waiver of subrogation in favor of Arvada.

13.3.1.4 Be endorsed to provide Arvada with a 30 day Notice of Cancellation for reasons other than nonpayment of premium, and a 10 day Notice of Cancellation for the reason of nonpayment of premium. Such endorsements shall be attached to the Certificate of Insurance. If any insurer does not make available such endorsement(s), as an alternative, Lessee or Lessee's insurance agent or broker shall provide a written statement that the responsible party will endeavor to provide the required Notices of Cancellation. Acceptance of such alternative notice is subject to the sole discretion of the Arvada.

13.3.1.5 Provide a waiver of subrogation in favor of Arvada.

13.3.1.6 Be endorsed to provide Arvada with a 30-day Notice of Cancellation for reasons other than nonpayment of premium, and a 10 day Notice of Cancellation for the reason of nonpayment of premium. Such endorsements shall be attached to the Certificate of Insurance. If any insurer does not make available such endorsement(s), as an alternative, Lessee or Lessee's insurance agent or broker shall provide a written statement that the responsible party will endeavor to provide the required Notices of Cancellation. Acceptance of such alternative notice is subject to the sole discretion of the Arvada.

13.4 Approval, disapproval, or failure to act by Arvada or Arvada's agents regarding any insurance required of the Lessee shall not relieve Lessee of full responsibility

for its obligations under this Lease, and the bankruptcy, insolvency or denial of coverage by the insurance company shall not exonerate the Lessee from liability. In the event any Insurer issues a reservation of rights for Arvada as an Additional Insured, Arvada shall be entitled to employ independent counsel at Lessee's expense.

- 13.5 Vendors, Subcontractors, or Other Parties Hired by Lessee.** All parties hired by Lessee shall provide evidence of and maintain General Liability coverage, Automobile Liability coverage, Workers' Compensation and Employer's Liability coverage, and other coverages as deemed necessary by Arvada. Coverage shall include, in favor of Lessee and Arvada, but shall not be limited to include, Additional Insured Status, Primary and Non-Contributory coverage, and Waiver of Subrogation. All parties hired by Lessee shall include an indemnification obligation as evidenced in **Sec. 12** of this Agreement, including Lessee, Arvada, and other indemnified parties as indemnitees.
- 14. COMPLIANCE WITH ALL LAWS.** Lessee shall comply with all applicable federal, Colorado, and Arvada laws, rules, regulations, policies and procedures in effect of hereinafter established, including, without limitation, laws applicable to discrimination and unfair employment practices and the Americans with Disabilities Act of 1990, 42 U.S.C. §12101 *et seq.* ("ADA").
- 15. ADA Compliance.** Lessee must maintain compliance with all applicable provisions of the ADA, including but not limited to, Title II and Title III provisions relating to physical access to the Property, effective communication, and access to any Lessee's programs, services, or activities provided through the use of the Property or funded, in whole or in part, by Arvada.
- 16. ADA Complaints.** In the event Lessee receives an ADA complaint, Lessee shall notify Arvada's ADA Coordinator in writing within 7 calendar days of receiving the complaint. The Parties agree to cooperate in resolving any ADA complaint.
- 17. ASSIGNMENT & SUBLEASE.** This Agreement shall not be assigned by Lessee without the prior written consent of Arvada, nor shall Lessee sublease the Property, or any portion thereof (except as otherwise provided for herein), or otherwise allow the utilization thereof by any other party without the express written consent of Arvada.
- 18. 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 reported as delivered by the United States mail.

19. **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 Lease.
20. **ADDITIONAL DOCUMENTS OR ACTION.** The parties agree to execute any additional documents or take any additional action that is necessary to carry out this Lease.
21. **INTEGRATION AND AMENDMENT.** This Lease represents the entire agreement between the parties and there are no oral or collateral agreements or understandings. This Lease may be amended only by an instrument in writing signed by the parties. If any other provision of this Lease is held invalid or unenforceable, no other provision shall be affected by such holding, and all of the remaining provisions of this Lease shall continue in full force and effect.
22. **WAIVER OF BREACH.** A waiver by any party to this Lease of the breach of any term or provision of this Lease shall not operate or be construed as a waiver of any subsequent breach by either party.
23. **BINDING EFFECT.** This Lease 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 Lease except as otherwise expressly authorized herein.
24. **NO THIRD PARTY BENEFICIARIES.** It is expressly understood and agreed that enforcement of the terms and conditions of this Lease, and all rights of action relating to such enforcement, shall be strictly reserved to the Parties hereto, and nothing contained in this Lease shall give or allow any such claim or right of action by any other third party on such Lease. It is the express intention of the Parties that any person or entity other than the Parties receiving services or benefits under this Lease shall be deemed to be an incidental beneficiary only.
25. **CORA.** Notwithstanding any provision in the response to solicitation or proposed contract, Lease, escrow Lease, or any other type of Lease to the contrary, Arvada is obligated to comply with the Colorado Open Records Act (C.R.S. §§24-72-101 *et seq.*) (“CORA”), which may require Arvada to disclose all or a portion of communications relating to the Lease, or terms of the same, or of any transaction under the Lease, and other related matters. Lessee has been advised to familiarize itself with CORA. Therefore, any confidentiality provisions in the contract, Lease, escrow Lease, or any other type of Lease are subject to the provisions of CORA.
26. **SUBCONTRACTING.** Lessee shall not subcontract any of its responsibilities under this Agreement without Arvada’s prior written approval, which may be withheld in Arvada’s sole discretion.
 - 26.1 Prior to entering into a subcontract with a third-party for any services required under the Lease, the Lessee shall:

- 26.1.1** Give Arvada reasonable prior written notice specifying the components of the services affected, the scope of the proposed subcontract, the identity and qualifications of the proposed subcontractor, and the reasons for subcontracting the work in question; and
- 26.1.2** Obtain Arvada's prior written approval of such subcontractor.
- 26.2** Arvada shall have the right to revoke its prior approval of a subcontractor and direct Lessee to replace such subcontractor as soon as possible.
- 26.3** Lessee shall be responsible for any failure by any subcontractor or subcontractor personnel to perform in accordance with the Lease or to comply with any duties or obligations imposed on Lessee under the Lease to the same extent as if such failure to perform or comply was committed by Lessee or Lessee's personnel.
- 26.4** Lessee shall be Arvada's sole point of contact regarding the services, including with respect to payment.
- 27. 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.*
- 28. GOVERNING LAW AND VENUE.** Notwithstanding any provision in the response to a solicitation or proposed contract, lease, escrow Lease, or any other type of Lease to the contrary, the Lease shall be governed by the laws of the State of Colorado. Venue for any action arising under the Lease or for the enforcement of the Lease shall be in the appropriate court for Jefferson County, Colorado.
- 29. FORCE MAJEURE.** Any delays in or failure of performance by any party of his or its obligations under the Lease shall be excused if such delays or failure are a result of acts of God, fires, floods, strikes, labor disputes, accidents, pandemics, 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.
- 30. BINDING AUTHORITY.** Lessee represents and affirms that the signature page hereof accurately states the full legal name of Lessee (whether as a corporation, partnership, limited liability company, sole proprietorship, or other), contains all requisite signature(s) on behalf of Lessee, has been properly acknowledged and in all other respects is effective to bind Lessee, in accordance with all applicable statutes, regulations, resolutions, rules, bylaws, Leases, or similar sources of authority or limitation.

DATED THIS _____ day of _____, 2023.

CITY OF ARVADA

Lauren Simpson, Mayor
8101 Ralston Road
Arvada, CO 80002

ATTEST:

City Clerk

APPROVED AS TO FORM:

Rachel A. Morris, City Attorney by:

Kylie Justus

ARVADA GARDENERS, INC.

Heather Fiedler

Heather Fiedler, President
Heather_fiedler@yahoo.com

ATTEST:

Alex Burns

Alex Burns, Vice President
Aburns9632@gmail.com

EXHIBIT A
LEASE AGREEMENT BY AND BETWEEN THE CITY OF ARVADA AND THE
ARVADA GARDENERS FOR THE PROPERTY LOCATED AT 9195 WEST 57TH
AVENUE, ALSO KNOWN AS THE ARVADA COMMUNITY GARDEN

**CITY OF ARVADA
REAL PROPERTY**

DATE PREPARED OR REVISED: 11/09/2023

TO BE ACQUIRED

Lease Agreement

Owner(s)

City of Arvada 9195 W. 57th Ave. Rec#

FOR

The Arvada Gardeners

EXHIBIT A

LEGAL DESCRIPTION

A Lease Agreement, situated in Lot 2A, of the Ralston Gardens Minor Subdivision Plat, recorded in the records of Jefferson County, at Reception No. _____, in the Southwest $\frac{1}{4}$, Southeast $\frac{1}{4}$, Section 10, Township 3 South, Range 69 West, of the 6th Principal Meridian, City of Arvada, County of Jefferson, State of Colorado, said Lease Agreement being more particularly described as follows:

COMMENCING at the Northwest Corner, of the Southwest $\frac{1}{4}$, of the Southeast $\frac{1}{4}$, of said Section 10 as monumented by a found 2" aluminum cap stamped "Original 1973 S 1/16 Sec. 10 PLS 38359 2017" Flush with concrete, Thence along the West line of said Southwest $\frac{1}{4}$, Southeast $\frac{1}{4}$, of Section 10, South $00^{\circ}17'59''$ East a distance of 294.51 feet,

Thence North $89^{\circ}42'27''$ East, a distance of 30.00 feet to the East Right of Way of Garrison St. also being the Northwest corner of said Lot 2A Ralston Gardens Minor Subdivision Plat Reception No. _____.

Thence Departing Said Right of Way along the North boundary of said Lot 2A of Ralston Gardens Minor Plat South $89^{\circ}14'15''$ East, a distance of 14.40 feet; to the **POINT OF BEGINNING**:

1. Thence South $00^{\circ}00'40''$ East, a distance of 14.69 feet;
2. Thence North $89^{\circ}59'20''$ East, a distance of 25.04 feet;
3. Thence South $00^{\circ}00'38''$ East, a distance of 92.75 feet to a Point of Non-Tangent Curvature;
4. Thence along the arc of said Non-tangent curve being concave to Northwest, having a Radius of 103.00 feet, a central Angle of $25^{\circ}12'05''$, an Arc Length of 45.30 feet, and a Chord that bears South $13^{\circ}28'33''$ West, a distance of 44.94 feet to a point of Reverse Curvature;
5. Thence along the arc of said Reverse Curve being concave to East, having a Radius of 158.00 feet, a Central Angle of $68^{\circ}43'48''$, an Arc Length of 189.53 feet, and a Chord that bears South $08^{\circ}17'17''$ East, a distance of 178.37 feet, to a point of Tangency;
6. Thence South $42^{\circ}39'10''$ East, a distance of 7.92 feet, to a point on the North Right of Way of W. 57th Ave, and also being a point on the South boundary of said Lot 2A Ralston Gardens Minor Plat;

7. Thence along said North Right of Way of W. 57th Ave. and along the South boundary of said Lot 2A Ralston Gardens Minor Plat, North 89° 10'09" East a distance of 241.55 feet, to the Southeast corner of said Lot 2A;
8. Thence Departing said North Right of Way along the East boundary of said Lot 2A Ralston Gardens Minor Plat, North 00°18' 45" West 412.01 feet to the Northeast corner of said Lot 2A;
9. Thence along the North boundary of said Lot 2A Ralston Gardens Minor Plat, South 89°04'39" West a distance of 100.01 feet;
10. Thence South 05°47'07" East a distance of 53.64 feet;
11. Thence South 37°23'04" West a distance of 36.88 feet
12. Thence North 89°14'15" West a distance of 167.98 feet to the **POINT OF BEGINNING.**

The above described Lease Agreement *contains a total area of 97,972 square feet (2.249 acres)*, more or less.

Basis of Bearings: Bearings are based on the West line of the Southwest $\frac{1}{4}$, of the Southeast $\frac{1}{4}$, said Section 10, Township 3 South, Range 69 West, of the 6th Principal Meridian, bearing South 00°17'59" East, with their respective corners monumented by a found 2" aluminum cap stamped "Original 1973 S 1/16 Sec. 10 PLS 38359 2017" flush with concrete, at the Northwest Corner of the Southwest $\frac{1}{4}$, Southeast $\frac{1}{4}$, of Section 10, and a found 3 $\frac{1}{4}$ " Brass cap stamped "LS 13212 1984" in a range box, at the South $\frac{1}{4}$ of Section 10.

City of Arvada
8101 Ralston Road
Arvada CO 80002

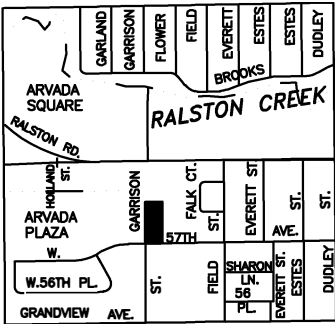
EXHIBIT B
LEASE AGREEMENT BY AND BETWEEN THE CITY OF ARVADA AND THE
ARVADA GARDENERS FOR THE PROPERTY LOCATED AT 9195 WEST 57TH
AVENUE, ALSO KNOWN AS THE ARVADA COMMUNITY GARDEN

EXHIBIT "B"

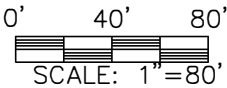
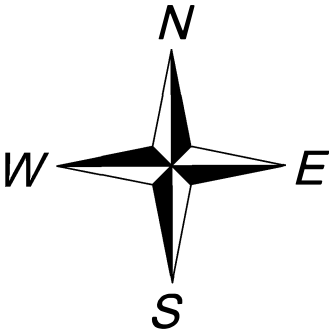
City of Arvada Lease Agreement

Located in the SW ¼, SE ¼, Section 10
Township 3 South, Range 69 West, 6th Principle Meridian

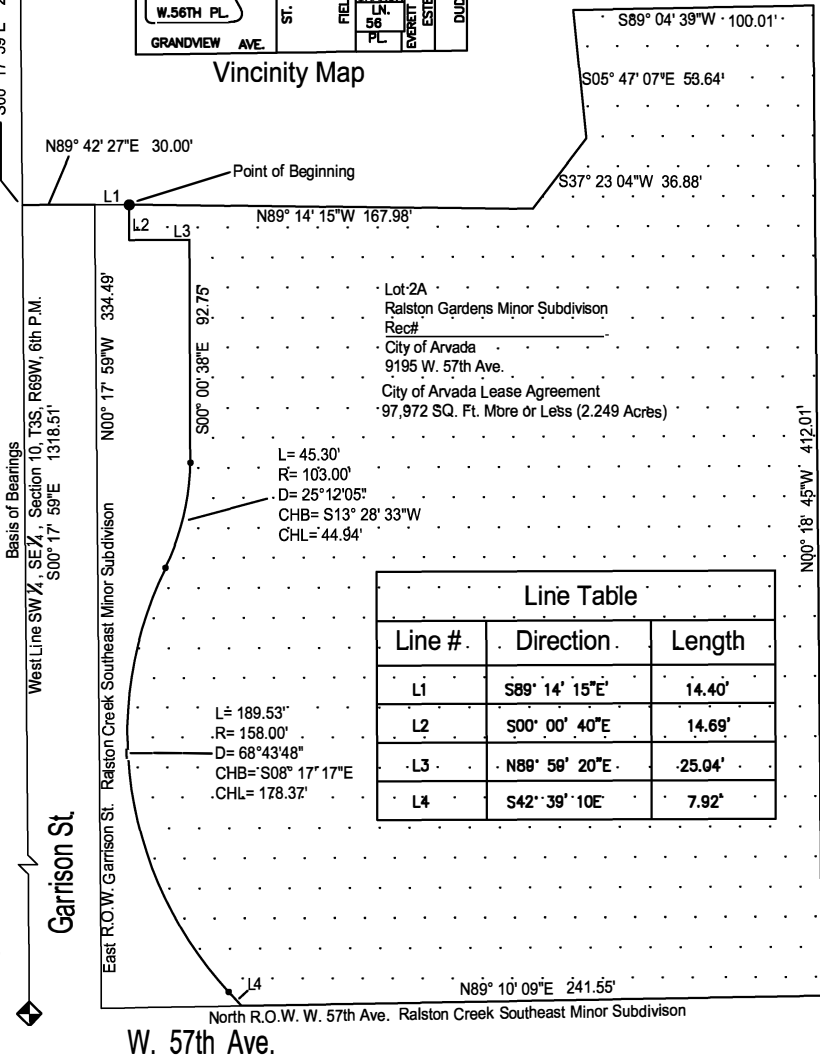
Point of Commencement
NW Corner SW ¼, SE ¼, Section 10, T3S, R69W
2" Alum. Cap Flush with concrete.
Stamped: Original 1973 S ¼ Sec. 10 PLS 38359 2017



Vincinity Map



South Quarter, Section 10, T3S, R69W
3 ¼" Brass cap in range box.
Stamped: LS 13212 1984



Line Table		
Line #.	Direction	Length
L1	S89° 14' 15"E	14.40'
L2	S00° 00' 40"E	14.69'
L3	N88° 58' 20"E	25.04'
L4	S42° 39' 10"E	7.92'

1. All Reception Nos. noted herein refer to the records of the Jefferson County Clerk & Recorder.
2. This Exhibit map does not represent a field survey. It is not a monumented land survey, or a land survey plat. It is intended only to depict the Lease Agreement as depicted hereon.
3. The bearings shown are based on the West line of the SW ¼, SE ¼, of Section 10, T3S, R69W, 6th P.M. S00° 17' 59"E a distance of 1318.51' monumented as depicted and labeled hereon.
4. This Exhibit map was prepared for and on behalf of the City of Arvada for the sole purpose of acquiring a Lease Agreement for City of Arvada property located at 9195 W. 57th Ave.
5. All distances are ground distances reported in U.S Survey Feet.



City of Arvada
8101 Ralston Road
Arvada, CO 80002

EXHIBIT C
LEASE AGREEMENT BY AND BETWEEN THE CITY OF ARVADA AND THE
ARVADA GARDENERS FOR THE PROPERTY LOCATED AT 9195 WEST 57TH
AVENUE, ALSO KNOWN AS THE ARVADA COMMUNITY GARDEN

City of Arvada

MAINTENANCE STANDARDS FOR PARKS

Focus
Spring & Summer Maintenance Specifications
(April 1st thru September 30th)

A. Turf Care

1. Turf Mowing

Frequency shall be once per week from April 1st through September 30th). All turf grass shall be mowed utilizing power rotary or reel type mowing equipment. Mower blades or reels shall be sharpened and maintained in order to provide a smooth, uniform cut without ridges or depressions. Operators are expected to use Rollover Protection Systems (ROPS) whenever mowing on a slope, mowing close to ditches, lakes or ponds or anytime that tipping or rolling over is a possibility. Turf grass shall be kept at a height of not less than two and three-quarter inches and not more than four inches. No more than one third of the total plant height shall be removed at one time. All mowing patterns are to be changed on a weekly basis to avoid rutting and uneven surfaces, operator shall also avoid running over valve boxes to prevent any damage to irrigation mainlines. Clippings shall not be removed or caught during the mowing operation unless considered unsightly or thatch build up becomes a problem. Mowing will be done to throw clippings away from road ways, drainage swales, inlets, curb and gutters, walkways, tree bowls, shrub beds and irrigation ditches. If necessary staff will crosscut, rake, or employ appropriate methods that will eliminate all “clumps” of grass left as a result of mowing wet or extremely long turf. Staff shall be responsible for cleaning all sidewalks, streets, curbs, etc. by blowing or sweeping after each mowing. Staff will utilize safety chutes on their equipment.

2. Sport field Mowing

Commencing date, seasons end, frequency and mowing height will be dependent upon the fields scheduled activities. Generally, sports fields will require twice a week mowing and a mowing height of two inches to three inches.

3. Native Area Mowing

Mowing frequency along walks shall be 5 times a year and property lines where deemed necessary 3 times a year. Mowing shall commence April 1st through October 31st. All native grass areas shall be mowed utilizing power rotary type mowing equipment. Mower blades shall be sharpened and maintained in order to provide a smooth, uniform cut free from ridges or depressions. Cutting Height shall not be less than five inches in large open areas and not less than four inches in height along walks, soft trails and fence lines. Clippings shall not be removed or caught during the mowing operation but mowing should be done to throw clippings in the direction that is away from drainage swales, inlets, curbs and gutters and irrigation ditches. Where possible native grasses will be mowed once a year after seed has dropped usually after the first hard frost.

4. Trimming and Edging

Concurrent with each mowing, string trimming shall be done around trees, shrub bed edging, curbs, concrete pads, fences, retaining walls, etc. This shall also be done to match the height of the mowed turf. Care is to be taken when trimming around trees making sure not to scar the trunk or any low hanging branches. If it is not possible to trim around a tree without damaging it, notify the immediate supervisor so that an appropriate sized tree bowl can be marked out or a proper pruning cut can be made. Keep string trimmers two feet away from the trunks of trees at a minimum. All turf is to be edged once a month From April 1st through September 31st. No growth extends over curbs and gutters, sidewalks, median edging, or into other improved areas at any time. This will be done with a steel blade edger, not a string trimmer.

5. Sports field edging

The edge of all skinned infields where the infield mix meets the turf (Lip) and foul lines if applicable will be edged twice a month from April 1st through September 30th.

6. Weed Control

All turf areas within the specified maintenance areas shall be kept 90% weed free. Weeding may be done manually or by the use of herbicides. Two applications per year of a broadleaf herbicide shall be applied to all turf areas, one application in the spring and one application in the fall. Additional spot applications may be necessary throughout the growing season. When applying broadleaf pesticides applicator shall avoid spraying within the drip zone of any trees or shrubs. All herbicides used shall be non-restricted use type pesticides unless previously approved by the City. A Colorado licensed Certified Operator or Qualified Supervisor must be on site or close by when the applicator is not certified. Applicators must notify any persons who appear on the Pesticide Sensitive Registry who have property in close proximity to where pesticides are to be applied within 24 hours of application as stated by the Department of Agriculture. All areas that are sprayed shall be flagged for public notification immediately before the spray operation begins at main entrance points. Staff is responsible for removing the flags after forty-eight hours have elapsed from the time of application. Staff is required to maintain a log of all pesticide applications performed that will show time, date, chemical used, and quantity of chemical used.

7. Aeration

Common turf areas shall be aerated once in the spring (March to early May) and once in the fall (September to November). Aeration shall be done so plugs are pulled from a depth of three to four inches. Sports fields may require four aerations per season dependent upon the activity scheduled. Staff will locate and flag all sprinkler heads and valve boxes prior to aeration. Staff shall remove all aeration plugs from all concrete surfaces.

8. Overseed/ Top dress

Over seeding and top dressing shall be done once a year in the early spring after aeration has been performed and as needed in high traffic areas such as goal mouths. Over seeding shall be done using a slit/drill seeder method. Seed rate will be five pounds per thousand square feet containing twenty-five percent of each grass species, (Compact, Midnight, American, and Aggressive Kentucky Blue Grass).

9. Fertilizing

Fertilization applications shall be performed once in the spring after the aeration has been performed. The formulation and application rate will be determined by a soil test. Fertilizer will be of a slow release type with a minimum of 120 days of activation.

Sports fields may require two applications throughout the growing season dependent upon the activity scheduled.

All fertilizer will be removed from all concrete surfaces to avoid staining.

B. Irrigation

Staff will be expected to energize the system in the spring, winterize in the fall, adjust heads as needed, repair breaks in a timely manner and prevent any interruptions in the watering cycles for all landscaping. When time allows staff will be expected to edge around valve boxes this will be done with sod knives and not string trimmers.

1. Maintenance

- a. The Staff shall perform routine maintenance on the system components on a weekly basis. Staff will make head adjustments for optimal coverage, make sure nozzles are free of debris and that valves are functioning properly. Staff will look for breaks in the system and make repairs. Any replacement parts must be of the same brand, model number, and nozzle size.
- b. The Staff will have a certified Backflow tester test the backflow device prior to charging the sprinkler system in the spring. This device must pass operation inspection before energizing the system. If the device does not pass it must be repaired by a certified backflow repair tech and then retested to ensure it is operating properly and passes the operation inspection test. Once the device has passed the test the system can be energized. Test documentation must be completed and submitted to the city representative.
- c. Energizing of the sprinkler system will commence in the early spring and be fully operational no later than April 15th. Backflow devices and any piping above ground will need to be insulated to protect them from freezing in the early spring. The system will be energized according to the following procedure:
 - Ensure that all manual drain valves are closed.
 - Insert quick coupling key at the end of the mainline.

- Open gate valve at P.O.C. slowly to allow filling of the mainline pipe. Purpose of slow filling is to minimize water hammer.
 - Energize each valve sequentially.
 - Check each sprinkler for proper operation. Repair as necessary.
 - Look for line breaks and check each valve for signs of leakage. The staff will be responsible for all backfill, sod or shrub repairs and clean-up. Upon completion of all clean-up the site.
 - Check to make sure that Master Valve is working properly.
 - Adjust irrigation schedule on controller to provide adequate irrigation for spring seasonal demand.
- d. Winterization of the sprinkler system will be completed by October 15th. Backflow devices and any piping above ground will need to be insulated to protect them from freezing in the late fall. The system will be winterized according to the following procedure:
- Close main shut off valve at the P.O.C.
 - Connect air compressor to the quick coupling key at the P.O.C.
 - Connect quick coupling key at the end of the mainline.
 - Open air compressor valve to allow air to enter the system and start forcing all of the water out of the mainline. Make sure not to allow the compressor to exceed 90 psi.
 - Open each valve sequentially through as many cycles as necessary until all of the water is forced out of each lateral line. This can usually be done in two cycles.
 - Open and close Bermad or Netafim Hydrometers separately after all zones have been gone through, to ensure solenoid has been blown out, usually open and close 4 to 6 times.
 - Open all drain valves to allow the main line to be completely drained.
 - Disconnect compressor and remove all quick coupling keys.
 - Turn all above ground drain valves, isolation valves and test cocks to a 45 degree angle

2. Watering Programs for Irrigation Controllers

- a. Staff is responsible for all scheduling and program changes to the irrigation controller's. The Staff must follow all appropriate watering practices for each specific type of plant material and turf species. In times of **DROUGHT** they must follow the watering practice set by the water purveyor. Staff is also responsible for letting the Supervisor know when to turn off the controller during a rain storm and turning them back on.

3. Computerized Irrigation

- a. Computerized irrigation will be installed and maintained to provide a more stable and efficient way of applying the proper amount of precipitation to parks and athletic complexes. When possible irrigation controllers will work in conjunction with weather stations.

C. Shrub and Plant Care

● Pruning

All plant material shall be maintained by the staff to ensure the health, vigor and aesthetic appearance according to accepted horticultural practices. Shrub growth shall be maintained in accordance with present space limitations to ensure natural appearance. This shall be done on an as needed basis throughout the growing season. Cut back ornamental grasses to approximately six inches prior to spring growth in March. Remove and dispose of the cuttings. Cut back herbaceous perennials to the ground in the fall, late October. Remove and dispose of the cuttings. Prune all dead, diseased and dying branches. Cut back taller growing herbaceous perennials when they become raggedy in appearance. Prune flowering shrubs within two weeks after flowers have expired. Prune ground covers to maintain a neat, well-kept appearance and to prevent ground covers from climbing shrubs. Pinch back dead flower heads on a weekly basis to promote greater flowering. Cut back bulbs after foliage has turned a 50 to 75% yellow and begun to exfoliate.

D. Trees

All trees shall be maintained by the Forestry staff in a manner that is consistent with the current Arboricultural practices at the time. Maintenance shall focus on safety, the health of the tree, and authentics. The following sections shall discuss the various maintenance responsibilities of the Forestry staff and the guidelines to follow while conducting the maintenance tasks.

1. Planting

Planting will follow the guidelines laid out in the Engineering Specifications Section 1044.04.

2. Pruning

Pruning will focus on Deciduous non-flowering trees in the summer months and on Conifers and flowering trees in the winter months.

The following pruning descriptions shall be used when determining the scope of work when pruning a tree:

- **Class I:** All dead removed from the canopy. All water sprouts removed from the canopy. All structural defects corrected (where appropriate). Canopy is appropriately thinned for species. Canopy

is raised and is as even as possible. Generally reserved for trees 4" DBH or smaller.

- **Class II:** All Dead 1" or greater removed from canopy. Canopy appropriately thinned for species and size of tree. Water sprouts removed as needed. Canopy is raised and is as even as possible.
- **Class III:** All deadwood 2" or greater removed from canopy. Minor thinning when necessary and appropriate for species. Canopy is raised and as even as possible.
- **Deadwood:** Remove all dead wood 2" or greater from the canopy.
- **Raise:** Raise canopy so that it clears the surrounding area for mowers, vehicles, pedestrians, bicyclists, signs, lights, etc. Minimum 14' over the road where possible. Minimum 8' over sidewalks/ trails where possible.
- **Safety Prune:** Remove all areas of concern from the canopy that pose a danger to the public such as large broken limbs, large deadwood (4" or greater), and large hanging limbs.
- **Structure Prune:** Correct structural defects in the tree such as codominate limbs, bark inclusions, and rubbing and crossing limbs, to the extent possible. Generally reserved for younger, smaller trees 8" DBH or smaller.

3. Tree Wrap

Trees will be wrapped starting November 1st and will be removed starting April 1st. Trees will be wrapped using the following guidelines:

- All trees that are two inches (2") or less in diameter and all smooth barked trees four inches (4") or less will be wrapped to the extent possible.
- The trunks of all trees shall be wrapped spirally from bottom to top, overlapping the seams and entirely covering the trunk from the ground up to the first branch. The tree wrap shall be neat, snug and secured with vinyl electrical tape at the top, middle and bottom sections of the wrap.

4. Tree Removal

Forestry staff will focus on removals that pose a risk to public safety, are dead, are having a detrimental effect on the integrity of hardscape infrastructure, are considered noxious or invasive by the Colorado Department of Agriculture, or have a negative effect on the aesthetics of a park. Other reasons for removing a tree will be addressed on a case by case basis. Emphasis will be placed on maintaining public safety, infrastructure integrity, and park/facility aesthetics.

5. Stump Grinding

Stumps will be ground out where possible. Stumps will be ground to a depth of six to eight inches (6"-8") and an additional four to six inches (4"-6") past the outside edge of the stump. The area will be thoroughly cleaned with the area the stump was ground out of left level with the grade of the surrounding area.

6. Plant Health Care

Tree watering

- Trees will receive 10 gallons of water per diameter inch where appropriate
- Trees planted in the current year will be watered twice a month or more, if necessary, from the time they are planted until September, time permitting. After September they will be watered as necessary. These trees are to be flood irrigated.
- Trees planted in the previous two years should be watered at least once a month when time permits and will be watered using a combination of flood irrigation and deep root watering.
- Any tree planted prior to this will be watered as deemed necessary by the Forestry staff and will be watered using deep root feeding.

Tree Mulching

Mulched tree rings shall be replenished as necessary and time permitting. Mulch will be placed no deeper than two (2) inches. Care will be taken not to pile mulch or "volcanoe" mulch around the trunk of the tree. Mulch should be spread out evenly around the trunk of the tree using hands or a rake. Mulch rings should have no larger than a 3 foot (3') radius from the trunk of the tree.

Air Spading

Air spading will be conducted on older trees to reestablish the mulch rings and reduce soil compaction as necessary and when time permits. Complete soil aeration around the trunk of the tree will have a radius no larger than three (3) feet from the trunk. Mulch will be placed in the freshly aerated ring immediately after air spading following mulching specifications.

Trees should be watered, when possible, following our water specifications after aeration occurs.

Nutrient management

Macro and micronutrient deficiencies, such as chlorosis from iron deficiency, will be addressed on a case by case basis. Foliage applications and/or deep root soil injections will be utilized to manage these deficiencies. Mycorrhizae will be added to each new tree at the time of planting.

7. Pest Management (IPM)

Pest management will focus on prevention of the spread of disease and insects that are harmful to the overall health of our urban canopy. This will be achieved through the use of:

- **Chemical controls:**

Techniques such as foliar applications, trunk injects, trunk sprays, and soil injections will be utilized to accomplish this.

- **Mechanical controls:**

- Timely removal of trees showing obvious signs of infestation from disease or insects.
- Pruning of diseased or infested tree parts before further spread to the rest of the tree or nearby trees occurs.
- Thorough cleanup after removal or pruning of diseased or infested trees
- Maintaining a healthy urban canopy through Proper PHC

- **Biological controls:**

Planting a diverse pallet of tree species and species that are resistant to common diseases or insects.

8. Demonstration Garden

Demonstration garden plants must be maintained as designated for proper care of each specific species. For designation of each species refer to the as-built planting plot legend. For other aspects of maintenance for the garden, sod and weed control, beds and mulch maintenance, and pruning techniques refer to the appropriate sections designated in the maintenance specification.

9. Weed Control

All shrub beds, annual and perennial plant beds, tree bowls, rock beds and pattern concrete shall be kept free from weeds at all times. Weed control will be performed on a weekly basis. All areas containing mulch will be kept at a depth

of four inches to discourage the growth of any plant material deemed undesirable. A two foot diameter ring around the base of all trees shall be kept free of weeds, grasses and debris. **The preferred methods of control of weeds in these areas is mechanical**, however, herbicides can be used if the following criteria is met. The applicator shall exercise extreme care in the use of herbicides so as to not damage desirable plants and will not spray directly over plant material and suckers. All herbicides used shall be non-restricted use type pesticides unless previously approved by the City. A Colorado licensed Certified Operator or Qualified Supervisor must be on site or reachable by phone when the applicator is not certified. Applicators must notify any persons who appear on the Pesticide Sensitive Registry with property in proximity to where pesticides are to be applied within 24 hours of application as stated by the Department of Agriculture. All areas that are sprayed shall be flagged for public notification immediately before the spray operation begins at main entrance points. Staff is responsible for removing the flags after forty-eight hours have elapsed from the time of application. Staff is required to maintain a log of all pesticide applications performed that will show time, date, chemical used, and quantity of chemical used.

10. Irrigation

Follow procedures and specification in the Irrigation Section, in addition to those irrigation requirements there will be winter watering of all trees and shrubs. This will be done once a month using a needle type root feeder.

11. Annual Flower Pots, Beds and Hanging Baskets

Annual Flower beds will have the soil turned once a year in the fall, before new flowers are planted. All flowers will be dead headed on an as needed basis. Watering will be done a daily during the growing season. Flowers will be displayed from May 1st thru September 31st.

12. Site Amenities

This section addresses the general care and up keep of amenities found around the site to include playground equipment, tennis courts, amphitheater, pavilion, baseball backstops, porta potty enclosure, benches, bike racks, trash receptacles, fencing, retaining walls, signs, drinking fountain, and pet pick up dispensers.

1. Playgrounds

Areas surrounding playgrounds shall be cleaned on a weekly basis. Careful attention should be placed on removing all twigs, rocks, litter, debris and sharp objects. Play area surface material will be kept weed free. Sweep or blow all playground material back into play areas once a week and as needed. Playground surface material shall be raked and fluffed up once a week paying close attention to fall zones. Surface shall be top dressed as needed to maintain the recommended twelve inch depth for safety. Safety inspections of equipment shall be performed weekly. All inspections will be recorded in a log. Repairs to playground will be immediate in accordance with manufactures guidelines and

accepted playground safety standards. Repairs shall be completed within 48 hours or immediately if deemed as a hazard.

2. Tennis Courts

Play surface area shall be swept or blown off once a week and as needed to keep this area free from debris. All litter will be picked up and removed. Staff shall make necessary adjustments to the net weekly to ensure the correct height of 3'6" at the end post and 3' at the center strap. Staff shall inspect the net, center strap, cable, end post, fencing and surface area weekly. Surface repairs shall be in accordance with court surface repair standards and should be completed quarterly all other repairs shall be completed within 48 hours, or immediately if deemed a hazard.

3. Baseball Backstop and Dugouts

Concrete area around backstop in the dugouts and under all benches shall be swept or blown off once a week and as needed to keep this area free from debris. All litter will be picked up and removed. Parks Staff shall inspect the backstop boards, fencing, dugout benches and spectator benches weekly and any repairs shall be completed within 48 hours or immediately if deemed a hazard.

4. Amphitheater

Staff will mow, aerate, fertilize and water the turf sloped area in the theater.

5. Pavilion

Area shall be swept or blown off once a week and as needed to keep this area free from debris. All litter will be picked up and removed. Picnic tables shall be washed once a week and as needed. Tape and decorations will be removed after rental is completed.

6. Port-o-Let Enclosure

Area shall be swept or blown off once a week and as needed to keep this area free from debris. All litter will be picked up and removed. Structure will be inspected once a week. Surrounding area will be power washed twice a year or as needed. Repairs shall be completed within 48 hours or immediately if deemed a hazard

7. Litter Removal

All areas shall have trash and all undesirable debris picked up daily and prior to all mowing, trimming or edging operations. The staff has the responsibility to remove all refuse from the site regardless of size. The staff is responsible for emptying receptacles before trash has reached past the ½ way mark or if liner is torn.

8. Pet Pick-Up Dispensers

Staff shall inspect dispensers once a week and repair or replace if needed.

9. Graffiti

Eradication shall include all surfaces throughout the site, including but not limited to: walkways, hard surfaces, benches, tables, boulders, retaining walls, signage, lighting and fencing. All materials and processes used in graffiti eradication shall be non-injurious to surfaces and adjacent property. If repainting is required, appropriate surface preparation shall be made on painted surfaces. Paint applied shall be the same shade or similar to that of the existing paint. Staff shall use special care and attention when removing graffiti from treated or sealed surfaces. Such surfaces shall not be painted.

10. Miscellaneous

All benches, bike racks, signs, fencing, retaining walls, drinking fountain shall be inspected once a week.

11. Fountain Display

Fountain will operate weather permitting from May to September with a daily schedule of (9:00 am to 11:00 am) (12:00 pm to 2:00pm) (4:00 pm to 6:00 pm) and (8:00 pm to 10:00 pm)

12. Seasonal Banners

Banners will be hung and switched out per season. And flags will be displayed on (President Day, Memorial Day, Flag Day, Independence Day, Labor Day and Veterans Day)

I. Sidewalk, Soft Trail and Hardscape

1. Sidewalks

Sidewalks shall be swept or blown off once a week and as needed to keep them free from debris. All litter will be picked up and removed. All sidewalk expansion joints and curb to sidewalk cracks shall be kept weed free at all times. Staff shall remove weeds mechanically or by use of herbicides. Trip hazards exceeding ½ an inch will be ground down.

2. Hardscapes

All concrete, cobble landscape areas, hard surface landscape areas and hard surface playing areas shall be swept or blown off once a week and as needed to keep them free from debris. All litter will be picked up and removed. All sidewalk expansion joints and hard surfaces shall be kept weed free at all times. Staff shall remove weeds mechanically or by use of herbicides.

3. Soft Trails

Crusher fine trails will require once a month spot treatment of weeds. Staff shall remove weeds mechanically or by use of herbicides. Portions of crusher fine trails may require top dressing, raking and compaction of new material which will be of like material originally installed. Staff shall top dress to achieve a four inch thick trail. Staff shall mow appropriately sized width on each side of

the trails. Mowing shall occur as needed and when possible from April 1st through November 1st.

4. Single Track Trails

Single Track trails are meant to follow the terrain of the land and are not generally maintained except when something is deemed hazardous by the Parks Maintenance Staff, such as washouts. Grass is kept down by use from bikes and foot traffic. No mechanical mowing will be done unless deemed necessary by the Parks Manager or an acting representative.

5. Winter Snow removal on Sidewalks

Snow removal shall be performed on all sidewalk arteries with any accumulation of snow. Snow removal will occur within twenty four hours after the snow fall. This will be conducted with pickup trucks and light duty equipment such as Groundsmaster, snow blowers, etc. School routes will hold top priority with other trails to follow accordingly based on usage traffic. All handicap area must be cleared completely at all times. (i.e.....handicap access point and parking spaces)

6. Vehicle and Equipment:

1. Trucks

All vehicles should be checked on a daily basis making sure all fluids are in the designated operating zone. These include: Engine oil, brake fluid, coolant/anti-freeze, transmission fluid and hydraulic fluid if applicable. Walk around inspection should include: windshield, tires, signals, lights, horn, body damage and windshield wipers. All trucks should have a fire extinguisher. If you have never operated a truck before let your immediate supervisor know so that you can be properly trained before operating on the road. Do not be afraid to ask for help. When pulling a trailer or driving a Commercial Vehicle a pre and post trip log book must be filled out by the operator.

2. Trailers

All trailers should be inspected prior to departure, this check includes: condition of tires, pressure in tires, condition of decking, lights, signals and safety chains. If hauling equipment makes sure proper tie downs are being used for the piece of equipment. If you have never pulled a trailer or a trailer that big let your immediate supervisor know, so that you can be properly trained before driving on the road. Do not be afraid to ask for help.

3. Equipment

Check engine oil and hydraulic fluid if applicable, grease all fittings, check fuel level, check that all bolts are tightened and all pins are in place. Familiarize yourself with operating. If you have never operated a piece of equipment let

your immediate supervisor know so that you can properly trained before operating out in the field. Do not be afraid to ask for help.

Focus Winter Maintenance Specifications (October 1st thru March 31st)

A. Trimming and Edging

All turf is to be edged once a month from October 1st to March 31st to ensure that no growth extends over curbs and gutters, sidewalks, median edging, or into other improved areas at any time. This will be done with a steel blade edger, not a string trimmer. Staff shall be responsible for cleaning all sidewalks, streets, curbs, etc. by blowing or sweeping after trimming and edging.

1. Sports field edging

The edge of all skinned infields where the infield mix meets the turf (Lip) and foul lines if applicable will be edged as needed.

2. Aeration

Common turf areas shall be aerated once in the spring (March to early May) and once in the fall (September to November). Aeration shall be done in a cross type pattern (two different directions) with a commercial type aerator. Aeration shall be done so plugs are pulled from a depth of three to four inches.

Sports fields may require four aerations per season dependent upon the activity scheduled. Staff will locate and flag all sprinkler heads and valve boxes prior to aeration. Staff shall remove all aeration plugs from all concrete surfaces.

3. Over seed/ Top dress

Over seeding and top dressing shall be done once a year in the early spring after aeration has been performed and as needed in high traffic areas such as goal mouths. Over seeding shall be done using a slit/drill seeder method. Seed rate will be five pounds per thousand square feet containing twenty-five percent of each grass species, (Compact, Midnight, American, and Aggressive Kentucky Blue Grass).

B. Shrub and Plant Care

1. Pruning

All

plant material shall be maintained by the staff to ensure the health, vigor and aesthetic appearance according to accepted horticultural practices. Shrub shall be done on an as needed basis throughout the season. Cut back ornamental grasses to approximately six inches prior to spring growth in March. Remove and dispose the

cuttings. Cut back herbaceous perennials to the ground in the fall, late October. Remove and dispose the cuttings. Prune all dead, diseased and dying branches. Cut back taller growing herbaceous perennials when they become raggedy in appearance. Prune flowering shrubs within two weeks after flowers have expired. Prune ground covers to maintain a neat, well-kept appearance and to prevent ground covers from climbing shrubs. Pinch back dead flower heads on a weekly basis to promote greater flowering. Cut back bulbs after foliage has turned a 50 to 75% yellow and begun to exfoliate.

C. Trees

See spring and summer specifications

D. Site Amenities

1. Playgrounds

Areas surrounding playgrounds shall be cleaned on a weekly basis. Careful attention should be placed on removing all twigs, rocks, litter, debris and sharp objects. Play area surface material will be kept weed free. Sweep or blow all playground material back into the play areas once a week and as needed. Playground surface material shall be raked and fluffed up once a week paying close attention to fall zones. Surface shall be top dressed as needed to maintain the recommended twelve inch depth for safety. Safety inspections of equipment shall be performed weekly. All inspections will be recorded in a log. Repairs to playground will be immediate in accordance with manufactures guidelines and accepted playground safety standards. Repairs shall be completed within 48 hours or immediately if deemed a hazard.

2. Tennis Courts

Play surface area shall be swept or blown off once a week weather permitting as needed to keep this area free from debris. All litter will be picked up and removed. Staff shall make necessary adjustments to the net weekly to ensure the correct height of 3'6" at the end post and 3' at the center strap. Staff shall inspect the net, center strap, cable, end post, fencing and surface area weekly. Surface repairs shall be in accordance with court surface repair standards and should be completed quarterly all other repairs shall be completed within 48 hours, or immediately if deemed a hazard.

3. Baseball Backstop and Dugouts

Concrete area around backstop in the dugouts and under all benches shall be swept or blown off once a week and as needed to keep this area free from debris. All litter will be picked up and removed. Staff shall inspect the backstop boards, fencing, dugout benches and spectator benches weekly. Repairs shall be completed within 48 hours or immediately if deemed a hazard.

4. Port-o-Let Enclosure

Area shall be swept or blown off once a week and as needed to keep this area free from debris. All litter will be picked up and removed. Structure will be inspected once a week. Surrounding area will be power washed twice a year or as needed. Repairs shall be completed within 48 hours or immediately if deemed a hazard.

5. Litter Removal

All areas shall have trash and all undesirable debris picked up once per week and prior to all mowing, trimming or edging operations. The staff has the responsibility to remove all refuse from the site regardless of size. The staff is responsible for emptying receptacles before trash has reached past the ½ way mark or if liner is torn.

6. Pet Pick-Up Dispensers

Staff shall inspect dispensers once a week and repair or replace if needed.

7. Graffiti

Eradication shall include all surfaces throughout the site, including but not limited to: walkways, hard surfaces, benches, tables, boulders, retaining walls, signage, lighting and fencing. All materials and processes used in graffiti eradication shall be non-injurious to surfaces and adjacent property. If re-painting is required, appropriate surface preparation shall be made on painted surfaces. Paint applied shall be the exact shade of color as existing paint. Staff shall use special care and attention when removing graffiti from treated or sealed surfaces. Such surfaces shall not be painted.

8. Infrastructure

All benches, bike racks, signs, fencing, retaining walls, drinking fountain shall be inspected once a week.

E. Sidewalk, Soft Trail and Hardscape

1. Sidewalks

Sidewalks shall be swept or blown off once a week and as needed to keep them free from debris. All litter will be picked up and removed. Trip hazards exceeding ½ an inch will be ground down.

2. Hardscapes

All concrete, cobble landscape areas, hard surface landscape areas and hard surface playing areas shall be swept or blown off as needed to keep them free from debris. All litter will be picked up and removed.

3. Soft Trails

Crusher fine trails will require once a month spot treatment of weeds. Staff shall remove weeds mechanically or by use of herbicides. Portions of crusher

fine trails may require top dressing, raking and compaction of new material which will be of the same material originally installed. Staff shall top dress to achieve a four inch thick trail. Staff shall mow a four-foot wide swath on each side of the trails. Mowing shall occur as needed and when possible from April 1st through November 1st.

F. Holiday Lights

1. Holiday Street Lights

Holiday street lights will be installed and maintained from November 1st thru April 1st.

2. Large Holiday Tree in Plaza

Tree lights will be decorated from December 1st thru January 15th

G. Winter Snow removal on Sidewalks

1. Snow removal

Snow removal shall be performed on all sidewalk arteries with any accumulation of snow. Snow removal will occur within twenty four hours after the snow fall. This will be conducted with pickup trucks lite duty equipment such as Groundsmaster, snow blowers, etc. School routes will hold top priority with other trails to follow accordingly to usage traffic. All handicap area must be cleared completely at all times. (i.e.....handicap access point and parking spaces)

H. Vehicle and Equipment

1. Trucks

All vehicles should be checked on a daily basis making sure all fluids are in the designated operating zone. These include: Engine oil, brake fluid, coolant/anti-freeze, transmission fluid and hydraulic fluid if applicable. Walk around inspection should include: windshield, tires, signals, lights, horn, body damage and windshield wipers. All trucks should have a fire extinguisher. If you have never operated a truck before let your immediate supervisor know so that you can be properly trained before operating on the road. Do not be afraid to ask for help. When pulling a trailer or driving a Commercial Vehicle a pre and post trip log book must be filled out by the operator.

2. Trailers

All trailers should be inspected prior to departure, this check includes: condition of tires, condition of decking, lights, signals and safety chains. If hauling equipment makes sure proper tie downs are being used for the piece of equipment. If you have never pulled a trailer or a trailer that big let your immediate supervisor know, so that you can be properly trained before driving on the road. Do not be afraid to ask for help.

3. Equipment

Check engine oil and hydraulic fluid if applicable, grease all fittings, check fuel level, check that all bolts are tightened and all pins are in place. Familiarize yourself with operating. If you have never operated a piece of equipment let your immediate supervisors know so that you can be properly trained before operating out in the field. Do not be afraid to ask for help.

I. Irrigation

1. Maintenance

Weather permitting irrigation repairs, backflow installs, gate valve replacement, mainline re-routing, adding laterals or additional heads, replacing and repairing backflow enclosures.

2. Updating software and converting older systems from stand-alone controllers to controllers that are monitored, communicate and are controlled by our computerized irrigation system.

J. Turf Mowing

1. Equipment Readiness

Around late April weather permitting staff may convert some mowing equipment (Groundsmaster) over from snow attachments and add mower attachment and prepare other mowing equipment for the season. Around late September to middle October mowers will be readied for snow removal and plow, tracks and cabs will be installed.

EXHIBIT D
LEASE AGREEMENT BY AND BETWEEN THE CITY OF ARVADA AND THE
ARVADA GARDENERS FOR THE PROPERTY LOCATED AT 9195 WEST 57TH
AVENUE, ALSO KNOWN AS THE ARVADA COMMUNITY GARDEN

VOLUNTEER ASSUMPTION OF RISK, RELEASE OF LIABILITY AND INDEMNIFICATION

I wish to volunteer my time and services at the Arvada Community Garden for the Arvada Gardeners, a Colorado nonprofit corporation. I understand that my volunteer activities may involve inherent risks of property loss or damage, injury, and death, and that I may be exposed to hazards, including but not limited to: inclement weather (e.g., lightning, extreme temperatures); uneven terrain, poisonous or other dangerous insects or plants; wild or uncontrolled animals; vehicular traffic, and other inherent risks that come with gardening and manual labor. I understand that a full list of all risks associated with the activities at the Arvada Community Garden is not possible. **To the fullest extent allowed by law, the undersigned assume(s) all such risks.**

In consideration of my participation in activities at the Arvada Community Garden facilities or property, the undersigned, for myself, my heirs, personal representatives, and administrators, hereby, to the fullest extent allowed by law, **release, waive, discharge, agree to defend, indemnify and hold harmless** the Arvada Gardeners and the City of Arvada and their respective elected officials, employees, agents and assigns, from and against any and all claims, damages, losses, injuries and expenses, including costs and attorneys' fees, arising out of or attributable to use of the Arvada Community Garden facilities and properties, or participation in activities on the property.

I hereby understand that I am a volunteer for all purposes hereunder. As such, I am not covered by any workers' compensation insurance or any other insurance maintained by Arvada Gardeners or the City of Arvada except as would apply to members of the general public.

I expressly agree that this Volunteer assumption of risk, release of liability, and indemnification is intended to be as broad and inclusive as permitted by law. If any portion of this document is held invalid, it is agreed that the balance shall, notwithstanding, continue in full legal force and effect. Nothing contained herein shall be construed to limit any protections, immunities, or limits on liability provided the City of Arvada under the State's constitution or statutes, including, without limitation, the Colorado Governmental Immunity Act, §24-10-101, *et seq.*, Colorado Revised Statutes, and the Owners of Recreational Areas Liability Act, §33-41-101, *et seq.*, Colorado Revised Statutes.

Volunteer's Signature

Date _____

Printed Name of Volunteer

Address of Participant (street address, city, state, zip)



REPORT TO CITY COUNCIL RESOLUTION

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

TO: THE HONORABLE CITY COUNCIL

DATE: November 27, 2023

SUBJECT: R23-108, A Resolution Authorizing A Lease Agreement By And Between The City of Arvada And The Horse Protection League For Certain Portions Of The Property Located At Long Lake Ranch

Report in Brief

The City of Arvada owns certain grazing lands and farm buildings known generally as Long Lake Ranch. The Horse Protection League (HPL) has leased the Churches Ranch site (appx. 70 acres) of Long Lake Ranch from Arvada since 1998. Arvada and the Horse Protection League wish to continue using the property for grazing and helping care for neglected and abused equines. The existing lease with the Horse Protection League expired in July 2023, justifying the need for council action on this resolution.

The Arvada team recommends that the City Council approve R23-108, A Resolution Authorizing A Lease Agreement By And Between The City of Arvada And The Horse Protection League For Certain Portions Of The Property Located At Long Lake Ranch.

Financial Impact

The HPL pays the City \$400 per month for the use of the farm property. The lease is for a term of 5 years. This lease term began on the date of December 1, 2023 and will end on December 1, 2028. The monthly payment helps fund the minor repairs required to the structures at the ranch. The volunteers for HPL work to fundraise for the other expenses at the ranch. Most of the labor provided by the volunteers and most of the feed for the animals is donated and harvested from the fields. The HPL is responsible for the cost of all utilities and other assessments levied against the property. The HPL will also pay for and perform grounds maintenance. There is no financial impact to the city associated with the approval of this resolution.

Background

The City of Arvada has had a longstanding lease with the Horse Protection League (HPL) for the lease of the Churches Ranch site at 17999 W. 60th Ave. This approximately 70 acres site is located on the southeast corner of Long Lake Regional Park. HPL is a 501(c)3 non-profit organization that formed in 1994. The organization is dedicated to the welfare of equines in the greater Rocky Mountain region and is supported and run entirely by volunteers.

This resolution authorizes the renewal of a long standing lease agreement between the City and the Horse Protection League for the lease of the 70 acre Churches Ranch site at 17999 W. 60th Avenue. This group of volunteers has actively been involved and sponsored many community activities and fundraisers and functions with very little assistance from the city. HPL provides a needed service to save and find permanent homes for abused and neglected equines. The mission of HPL is consistent with the goals and recommendations of the 2016 Parks, Trails, and Open Space Master Plan.

The HPL has been an excellent tenant providing a valuable service to the community and region since 1998. This 5 year lease has been renewed by City Council resolution every 5 years since that time. The HPL has made presentations to City Council and the Park Advisory Committee. KATV has produced several programs on the activities of the HPL and the renovation of the historic structures on the Churches Ranch site. The HPL works in partnership with the City's Vibrant Community and Neighborhoods team and, in addition to their core mission, the HPL serves as a caretaker and barn manager of the site.

Discussion

The Churches Ranch has a rich history. The site was owned by John C. Churches who moved to the area and built his homestead in 1862, which consisted of a ranch house, stone barn, corral and various out buildings. The ranch is listed on the national register of public places. The Churches Ranch master plan was completed in January of 1992. The City, with the assistance of State historical fund grants, renovated the historic ranch house followed by the renovation of the barn. Additional structures on the site were identified in the master plan for stabilization and renovation.

The HPL and Churches Ranch feature prominently in the 2016 City of Arvada Parks, Open Space, and Trails Master Plan (POST) and the adopted goals of the plan. Authorization of this Resolution is consistent and supports the recommendations and goals of the City's Parks, Open Space, and Trails Master Plan.

Public Contact

Posting of the City Council agenda.

Commission Recommendation

Strategic Alignment

This work supports the Vibrant Community and Neighborhoods Priority Area of the City Council Strategic Plan and the following Principles:

"Fosters strategic partnerships to advance quality of life and achieve an inclusive, equitable, diverse, resilient and sustainable community."

Alternative Courses of Action

Alternative No. 1: Approve R23-108, A Resolution Authorizing A Lease Agreement By And Between The City of Arvada And The Horse Protection League For Certain Portions Of The Property Located At Long Lake Ranch.

Alternative No. 2: Do not approve R23-108, A Resolution Authorizing A Lease Agreement By And Between The City of Arvada And The Horse Protection League For Certain Portions Of The Property Located At Long Lake Ranch.

Recommendation for Action

The Arvada team recommends that the City Council approve Alternative No. 1: Approve R23-108, A Resolution Authorizing A Lease Agreement By And Between The City of Arvada And The Horse Protection League For Certain Portions Of The Property Located At Long Lake Ranch.

Suggested Motion:

I move that R23-108, A Resolution Authorizing A Lease Agreement By And Between The City of Arvada And The Horse Protection League For Certain Portions Of The Property Located At Long Lake Ranch, be (approved) (rejected).

Prepared by:

Enessa Janes, Director of Vibrant Community and Neighborhoods

Reviewed by:

Approved by:

SUBJECT: R23-108, A Resolution Authorizing A Lease Agreement By And Between The City of Arvada And The Horse Protection League For Certain Portions Of The Property Located At Long Lake Ranch

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ITEM: 8.A.8.

Enessa Janes, Director of Vibrant Community and Neighborhoods	11/6/2023
Bryan Archer, Director of Finance	11/7/2023
Gail Walker, Legal Specialist-Contracts	11/7/2023
Kylie Justus, Assistant City Attorney	11/8/2023
Rachel Morris, City Attorney	11/14/2023
Don Wick, Deputy City Manager	11/14/2023
Lorie Gillis, City Manager	11/15/2023

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R23-108

A RESOLUTION AUTHORIZING A LEASE AGREEMENT BY AND BETWEEN THE
CITY OF ARVADA AND THE HORSE PROTECTION LEAGUE FOR CERTAIN
PORTIONS OF THE PROPERTY LOCATED AT LONG LAKE RANCH

WHEREAS, Arvada owns certain grazing lands and farm buildings known generally as Long Lake Ranch; and

WHEREAS, the Horse Protection League has leased the Churches Ranch site (appx. 50 acres) of Long Lake Ranch from Arvada since 1998 (the "Property"); and

WHEREAS, Arvada and Lessee wish to continue using the Property for grazing and helping care for neglected and abused equines.

NOW, THEREFORE, 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 Lease Agreement, which is in substantially the same form as that attached hereto, by and between the City of Arvada and the Horse Protection League.

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

APPROVED AND ADOPTED this 27 day of November, 2023.

Lauren Simpson, Mayor

ATTEST:

City Clerk

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

By: _____

**LEASE AGREEMENT BY AND BETWEEN THE CITY OF ARVADA AND THE
HORSE PROTECTION LEAGUE FOR CERTAIN PORTIONS OF THE PROPERTY
LOCATED AT LONG LAKE RANCH**

- 1. PARTIES.** The parties to this Lease Agreement (“Lease” or “Agreement”) are the City of Arvada, a Colorado home rule municipal corporation, 8101 Ralston Road, Arvada, Colorado 80002 (“Arvada” or “Lessor”), and The Horse Protection League, a Colorado nonprofit corporation, whose address is 17999 W. 60th Avenue, Arvada, Colorado 80403 (“Lessee”) and collectively referred to as “the Parties.”
- 2. RECITALS AND PURPOSE.**
 - 2.1** Arvada owns certain grazing lands and farm buildings known generally as Long Lake Ranch.
 - 2.2** Lessee has leased the Churches Ranch site (appx. 70 acres) of Long Lake Ranch from Arvada since 1998 (the “Property”).
 - 2.3** Lessee wishes to continue using the Property for grazing and helping care for neglected and abused equines.
 - 2.4** Arvada wishes to continue leasing the Property further described in **Exhibits A and B**.
 - 2.5** The Parties desire to enter into this Lease to define all rights, duties, and liabilities of the Parties during the term described herein.
- 3. CONTRACT DOCUMENTS AND EXHIBITS.** The Contract Documents shall consist of this Lease together with the following:

Exhibit A: Legal Description of Property: and

Exhibit B: Map of the Property.

All exhibits referred to in this Agreement are attached hereto and are, by reference, incorporated herein for all purposes.
- 4. RENT.**
 - 4.1** Lessee agrees to pay rent in the amount of \$400.00 per month due on the first day of each month. If Arvada does not receive rent by the 5th day of the month, rent is considered late. If rent is late, a \$50 dollar fee per day shall be assessed in addition to the rent owed.
 - 4.2** Lessee also agrees to pay all utilities levied against the Property, including water used. All past due installments shall bear interest at the rate of 12% annum until paid.

5. TERM.

- 5.1** Arvada leases to Lessee the Property beginning December 1, 2023, and ending on December 1, 2028. This Lease will be automatically renewed for 5 additional one-year periods unless either Party provides notice of their intent to terminate in accordance with the terms and conditions contained in this Lease.
- 5.2** As a condition precedent to future renewals, the Lessee agrees to meet annually at Arvada's request in July, to discuss the operation and management of the Property and how well the Property has met Arvada's goals. Based on such meetings, the Parties agree that new terms and conditions may be added by amendment as a condition for future lease renewals.
- 5.3** This Lease may be extended for a longer term by written Amendment between Arvada and Lessee.
- 5.4** **Holdover.** Should Lessee remain in possession of the Property with the consent of Arvada after the natural expiration of this Lease, a new tenancy from month-to-month shall be created between Arvada and Lessee which shall be subject to all the terms and conditions of this Lease, provided however, such tenancy shall be terminable by either party upon 30 days written notice served by either Arvada or Lessee. It is expressly understood and agreed that the rent for any holdover under this paragraph shall be at the rate set by **Sec. 4**.

6. ARVADA'S RESPONSIBILITIES.

- 6.1** Arvada agrees to provide the Property as is.
- 6.2** Arvada covenants and agrees that Lessee shall and may, at all times, peaceably and quietly have, hold, and enjoy the Property during the term of the Lease.

7. LESSEE'S RESPONSIBILITIES.

- 7.1** Lessee, in consideration of the leasing of said Property, hereby covenants and agrees to the following:
- 7.1.1** To use said Property for grazing, haying, and housing horses, and associated administrative activities. Lessee may also have a chicken coop on the premises on the condition that the chickens and coop are well cared for. Lessee agrees to restore the Property to the former condition upon surrender, including removing the chickens and coop if Arvada should so request. Lessee may not use the property for any other purpose, and may not use or permit the same to be used for any unlawful purpose whatsoever;
- 7.1.2** Lessee must manage and operate the Property according to Arvada's standards and the Arvada City Code, including City Code Sec. 14-123

Animals, and animal shelters and structures. Lessee may not have more than 4 horses per acre land.

- 7.1.3** Lessee agrees that it must make the Property available to the public at large.
- 7.1.4** Lessee must familiarize itself with Titles I, II, and III of the Americans with Disabilities Act of 1990 (“ADA”), 42 USC § 12111-12117, § 12131-12165, and § 12181-12189, and comply with all regulations therein or as amended.
- 7.1.5** Lessee agrees that its website is, and will remain, ADA compliant during the term of this Lease.
- 7.1.6** Lessee must pay the Rent described in Sec. 4 on time every month. Lessee shall timely pay all utility charges for heat, electric, water, and any other assessments levied against the Property.
- 7.1.7** Lessee will use and care for the Property in a good and responsible manner, and not permit overgrazing of any part thereof according to accepted grazing practices.
- 7.1.8** Lessee must pay for and provide janitorial services or perform such services itself in order to maintain the Property in a clean manner.
- 7.1.9** Lessee will not smoke or vape on the premises or allow any member of the public to smoke or vape pursuant to §70-149 and §38-304 of Arvada City Code.
- 7.1.10** Lessee agrees that Lessee, and any persons Lessee permits on the Property, shall not obtain, possess, use, administer, dispense, cultivate, or distribute any drug or controlled substances on the Property in violation of Colorado state law. Lessee agrees that this Lease may be terminated if Arvada becomes aware of Lessee noncompliance with this provision.
- 7.1.11** Lessee agrees that all alterations, changes, and improvements built, constructed, or placed on the Property by Lessee, with the exception of fixtures removable without damage to the Property and movable personal property, must first be approved by Arvada in writing, and shall be the property of Arvada and remain on the Property at the expiration or sooner termination of this Lease.
- 7.1.12** Lessee acknowledges that all personal property of any kind kept in or on the Property is at the sole risk of the Lessee, and Arvada is not liable for any damage or loss of such personal property.
- 7.1.13** Lessee shall not permit a nuisance, as defined by Section 38-122 of the Arvada City Code, on the Property.

- 7.1.14** Lessee agrees to mow the grass, remove snow, remove and control noxious weeds, and otherwise maintain the Property in accordance with Arvada's City Code.
- 7.1.15** Lessee will not remove or damage any trees or landscaping on the Property without written permission from Arvada.
- 7.1.16** Lessee agrees Lessee must keep Property, premises, fences, and appurtenances in good condition and repair. Lessee shall perform all routine maintenance on the Property.
- 7.1.17** Lessee agrees not to commit or cause to be committed any waste or rubbish in or upon said Property or any part thereof, nor will Lessee degrade the condition of the Property in any way.
- 7.1.18** At the expiration of this Lease, Lessee will promptly surrender and deliver up said Property in like good order and condition to Arvada.
- 7.1.19** Lessee agrees it will not modify, move, or remove any structures, fences, or site elements without prior written approval by Arvada. The specific use of the structures shall be subject to approval by Arvada. Arvada reserves the right to prohibit use or access by the Lessee of any of the structures if the proposed use is inconsistent with the purpose of the Lease.
- 7.1.20** Lessee shall be responsible for all repairs, maintenance, and replacements valued at \$2,500.00 or less. For any repairs or replacements over \$2,500.00, Lessee shall notify Arvada in writing of any condition necessitating repair within seven calendar days of noticing such condition. Arvada shall make any necessary replacements or replacements within a reasonable timeline.
- 7.1.21** Lessee expressly agrees that for the minimal rent described in Sec. 4 of this Agreement, Lessee shall beneficially use the water rights listed on Exhibit B, clean and improve irrigation ditches on the Property, arid flood-irrigate the Property in such manner and at such times as may be prescribed by the Lessor.
- 7.1.22** Lessee agrees to prepare for Arvada an annual report by April 1 of each year this Agreement remains in effect that outlines the following performance measures:
- 7.1.22.1** Community Access
- 7.1.22.1.1** Open hours and engagement with the public.
- 7.1.22.2** Costs and revenues
- 7.1.22.3** Compliance with Sec. 14-123 of the Arvada municipal code, including details on how many horses were on the Property throughout the year.

7.1.23 The housing unit must be removed at the end of the tenancy without damage to the Property. Lessee agrees it will pay Lessor for any and all damage to the Property caused by the housing unit or its caretakers, or for the caretaker's or Lessee's failure to remove such unit from the Property at the end of the tenancy or as otherwise required. Any occupation of the housing unit shall be directly related to the functions of Lessee. If the housing unit becomes unnecessary at any time or for any reason or, in the sole determination of the Lessor, does not serve the best interests of the City of Arvada or the public health, safety, and welfare, Lessee agrees to take such steps as are necessary to remove the housing unit upon 6 weeks' notice.

8. ARVADA'S ACCESS TO THE PROPERTY.

8.1 Arvada may access all parts of the Property, in such a manner as will minimize disruption to events or activities to the extent reasonably practicable, for the purposes of:

8.1.1 Performing, administering, or enforcing this Lease.

8.1.2 Examining, inspecting, evaluating, planning, making any agreed upon repairs or maintenance, designing, showing, or otherwise administering the building or grounds.

8.1.3 Performing Arvada's regulatory, law enforcement, and other governmental duties.

8.2 Arvada reserves the right to conduct health/safety inspections of the building and grounds.

9. TERMINATION.

9.1 Either party may terminate this Lease, at any time, for convenience upon 90 days' written notice to the other party.

9.2 In the event the Property is rendered untenable by fire or other casualty, Arvada shall have the right to terminate this Lease on the date of such occurrence.

9.3 If the Lessee is in default in any of the covenants or agreements herein to be performed by such Lessee, which default remains uncorrected for a period of 14 calendar days after Arvada has provided the Lessee with written notice thereof, Arvada shall have the option, without liability for trespass or for damages, to enter onto the Property and declare the term of the defaulting Lessee's lease terminated, repossess the Property, and expel the Lessee, all without prejudice to any other remedies available to Arvada for breach of covenant. Arvada may also sue monthly to recover all rent, damages, litigation costs, and attorney's fees.

- 10. PROJECT MANAGER.** Arvada designates Enessa Janes, Director of Vibrant Community and Neighborhoods ejanes@arvada.org, as Arvada's project manager. Should Ms. Janes be reassigned, Arvada will provide notice to Lessee of Arvada's current representatives as it relates to correspondence involving the Property.
- 11. INDEMNIFICATION.** To the fullest extent permitted by law, Lessee will defend, indemnify and hold Arvada, its employees, agents and assignees ("Indemnified Parties") harmless from and against all costs, expenses, claims, damages, liabilities, court awards, losses and other amounts (including attorneys' fees and related costs) ("Claims") arising out of or relating (directly or indirectly) to: (i) the conduct or management of the Property or of any business therein, or any work or thing whatsoever done, or any condition creating in or about the Property during the term; (ii) any act, omission, breach of any provision of this Lease, or negligence of Lessee or any of Lessee's licensees or the partners, directors, officers, agents, employees, invitees or contractors of Lessee, or of Lessee's sublessees or licensees; and (iii) any accident, injury or damage whatsoever occurring in or at the Property. Lessee hereby expressly indemnifies Arvada, unless the Claim is caused by the sole negligence of Arvada.
- 12. INSURANCE.**
- 12.1 Insurance Required.** Unless higher limits or additional coverages are required by Arvada, Lessee shall secure, purchase and maintain, at its own expense, the following types of insurance coverage and limits of liability throughout the duration of the Lease or any authorized extension:
- 12.1.1 Property Insurance.** Lessee shall provide a property insurance policy that covers the entire Property premises (including, without limitation, inventory, trade fixtures, furniture, and other property removable by Lessee under the provisions of this Lease)]. [Remove following paragraph from residential leases. Lessee's policy shall include the following policy terms and conditions: 1) Special Causes of Loss; 2) Replacement Cost Coverage equal to 100% of the replacement cost of aforementioned property; 3) No coinsurance; 4) Business income & extra expense including rental value equal to the expected gross annual revenue. It may also be provided on a 12-month actual loss sustained basis.
- 12.1.2 General Liability Insurance.** Commercial General Liability insurance covering bodily injury, including death, property damage arising out of premises, operations, products, and completed operations, advertising and personal injury liability, contractual liability assumed liability coverage, and if applicable, molestation, assault, battery, and communicable diseases. The Commercial General Liability insurance policy shall provide coverage on an occurrence basis and shall include explosion, collapse, and underground hazard coverage. The Commercial General Liability insurance policy shall also provide Additional Insured status, effective as of the date stated in Section 1, to Arvada and any other party required by

Arvada, throughout the term stated in Section 5. Additional Insured status shall cover both completed and ongoing operations. Minimum limits of liability provided by this coverage shall be as follows:

General aggregate: \$2,000,000.00.
Products/completed operations aggregate: \$2,000,000.00.
Personal and advertising injury: \$1,000,000.00.
Each occurrence: \$1,000,000.00.
Fire and Legal Liability: \$1,000,000.00

12.1.3 Workers Compensation Insurance. Workers' compensation insurance for protection of Lessee, its owners, partners, employees, volunteers, and subcontractors as required by law and Employer's Liability insurance with the following minimum limits:

Each accident: \$1,000,000.00
Each occupational disease: \$1,000,000.00.
Occupational disease aggregate: \$1,000,000.00.

The workers' compensation and employer's liability insurance policies of Lessee shall contain a waiver of subrogation as to Arvada.

12.1.4 Automobile Liability Insurance. Automobile liability insurance covering the use, operation and maintenance of any automobiles, trucks, trailers or other vehicles owned, hired or non-owned by Lessee providing bodily injury, including death, and property damage coverage. The Automobile Liability insurance policy shall also provide Additional Insured status, effective as of the date stated in Section 1, to Arvada and any other party required by Arvada, throughout the term stated in Section 5. Minimum limits of liability provided by this coverage shall be a combined single limit of \$1,000,000.00.

12.2 Policy Requirements.

12.2.1 Any coverage required under Section 12.1 may be met through the use of primary and excess policies so long as the total amount of insurance coverage provided is equal to or greater than the amount specified in this agreement.

12.2.2 All policies required under Section 12 must:

12.2.2.1.1 Be written through a company duly entered and authorized to transact that class of insurance in the State of Colorado. All policies written through private carriers

are to be written with insurance carriers with an A.M. Best rating of "A-VII" or better;

12.2.2.1.2 Be primary to any insurance of, or available to, Arvada;

12.2.2.1.3 Provide a waiver of subrogation in favor of Arvada.

12.2.2.1.4 Be endorsed to provide Arvada with a 30 day Notice of Cancellation for reasons other than nonpayment of premium, and a 10 day Notice of Cancellation for the reason of nonpayment of premium. Such endorsements shall be attached to the Certificate of Insurance. If any insurer does not make available such endorsement(s), as an alternative, Lessee or Lessee's insurance agent or broker shall provide a written statement that the responsible party will endeavor to provide the required Notices of Cancellation. Acceptance of such alternative notice is subject to the sole discretion of the Arvada.

12.3 Approval, disapproval, or failure to act by Arvada or Arvada's agents regarding any insurance required of the Lessee shall not relieve Lessee of full responsibility for its obligations under this Lease, and the bankruptcy, insolvency or denial of coverage by the insurance company shall not exonerate the Lessee from liability. In the event any Insurer issues a reservation of rights for Arvada as an Additional Insured, Arvada shall be entitled to employ independent counsel at Lessee's expense.

12.4 Vendors, Subcontractors, or Other Parties Hired by Lessee. All parties hired by Lessee shall provide evidence of and maintain General Liability coverage, Automobile Liability coverage, Workers' Compensation and Employer's Liability coverage, and other coverages as deemed necessary by Arvada. Coverage shall include, in favor of Lessee and Arvada, but shall not be limited to include, Additional Insured Status, Primary and Non-Contributory coverage, and Waiver of Subrogation. All parties hired by Lessee shall include an indemnification obligation as evidenced in Section 11 of this Agreement, including Lessee, Arvada, and other indemnified parties as indemnitees.

13. COMPLIANCE WITH ALL LAWS. Lessee shall comply with all applicable federal, Colorado, and Arvada laws, rules, regulations, policies and procedures in effect of hereinafter established, including, without limitation, laws applicable to discrimination and unfair employment practices and the Americans with Disabilities Act of 1990, 42 U.S.C. §12101 *et seq.* ("ADA").

13.1 ADA Compliance. Lessee must maintain compliance with all applicable provisions of the ADA, including but not limited to, Title II and Title III provisions relating to physical access to the Property, effective communication, and access to

any Lessee's programs, services, or activities provided through the use of the Property or funded, in whole or in part, by Arvada.

- 13.2 ADA Complaints.** In the event Lessee receives an ADA complaint, Lessee shall notify Arvada's ADA Coordinator in writing within 7 calendar days of receiving the complaint. The Parties agree to cooperate in resolving any ADA complaint.
- 14. ASSIGNMENT & SUBLEASE.** This Agreement shall not be assigned by Lessee without the prior written consent of Arvada, nor shall Lessee sublease the Property, or any portion thereof (except as otherwise provided for herein), or otherwise allow the utilization thereof by any other party without the express written consent of Arvada.
- 15. 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.
- 16. 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 Lease.
- 17. ADDITIONAL DOCUMENTS OR ACTION.** The parties agree to execute any additional documents or take any additional action that is necessary to carry out this Lease.
- 18. INTEGRATION AND AMENDMENT.** This Lease represents the entire agreement between the parties and there are no oral or collateral agreements or understandings. This Lease may be amended only by an instrument in writing signed by the parties. If any other provision of this Lease is held invalid or unenforceable, no other provision shall be affected by such holding, and all of the remaining provisions of this Lease shall continue in full force and effect.
- 19. WAIVER OF BREACH.** A waiver by any party to this Lease of the breach of any term or provision of this Lease shall not operate or be construed as a waiver of any subsequent breach by either party.
- 20. BINDING EFFECT.** This Lease 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 Lease except as otherwise expressly authorized herein.
- 21. NO THIRD PARTY BENEFICIARIES.** It is expressly understood and agreed that enforcement of the terms and conditions of this Lease, and all rights of action relating to such enforcement, shall be strictly reserved to the Parties hereto, and nothing contained in this Lease shall give or allow any such claim or right of action by any other third party on

such Lease. It is the express intention of the Parties that any person or entity other than the Parties receiving services or benefits under this Lease shall be deemed to be an incidental beneficiary only.

22. **CORA.** Notwithstanding any provision in the response to solicitation or proposed contract, Lease, escrow Lease, or any other type of Lease to the contrary, Arvada is obligated to comply with the Colorado Open Records Act (C.R.S. §§24-72-101 *et seq.*) (“CORA”), which may require Arvada to disclose all or a portion of communications relating to the Lease, or terms of the same, or of any transaction under the Lease, and other related matters. Lessee has been advised to familiarize itself with CORA. Therefore, any confidentiality provisions in the contract, Lease, escrow Lease, or any other type of Lease are subject to the provisions of CORA.
23. **SUBCONTRACTING.** Lessee shall not subcontract any of its responsibilities under this Agreement without Arvada’s prior written approval, which may be withheld in Arvada’s sole discretion.
 - 23.1 Prior to entering into a subcontract with a third-party for any services required under the Lease, the Lessee shall:
 - 23.1.1 Give Arvada reasonable prior written notice specifying the components of the services affected, the scope of the proposed subcontract, the identity and qualifications of the proposed subcontractor, and the reasons for subcontracting the work in question; and
 - 23.1.2 Obtain Arvada’s prior written approval of such subcontractor.
 - 23.2 Arvada shall have the right to revoke its prior approval of a subcontractor and direct Lessee to replace such subcontractor as soon as possible.
 - 23.3 Lessee shall be responsible for any failure by any subcontractor or subcontractor personnel to perform in accordance with the Lease or to comply with any duties or obligations imposed on Lessee under the Lease to the same extent as if such failure to perform or comply was committed by Lessee or Lessee’s personnel.
 - 23.4 Lessee shall be Arvada’s sole point of contact regarding the services, including with respect to payment.
24. **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.*
25. **GOVERNING LAW AND VENUE.** Notwithstanding any provision in the response to a solicitation or proposed contract, lease, escrow Lease, or any other type of Lease to the contrary, the Lease shall be governed by the laws of the State of Colorado. Venue for any action arising under the Lease or for the enforcement of the Lease shall be in the appropriate court for Jefferson County, Colorado.

26. **FORCE MAJEURE.** Any delays in or failure of performance by any party of his or its obligations under the Lease shall be excused if such delays or failure are a result of acts of God, fires, floods, strikes, labor disputes, accidents, pandemics, 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.
27. **BINDING AUTHORITY.** Lessee represents and affirms that the signature page hereof accurately states the full legal name of Lessee (whether as a corporation, partnership, limited liability company, sole proprietorship, or other), contains all requisite signature(s) on behalf of Lessee, has been properly acknowledged and in all other respects is effective to bind Lessee, in accordance with all applicable statutes, regulations, resolutions, rules, bylaws, Leases, or similar sources of authority or limitation.

DATED THIS _____ day of _____, 2023.

CITY OF ARVADA

Lauren Simpson, Mayor
8101 Ralston Road
Arvada, CO 80002

ATTEST:

City Clerk

APPROVED AS TO FORM:

Rachel A. Morris, City Attorney

By: Kylie Justus

THE HORSE PROTECTION LEAGUE

Robert D. Ridgeway
Robert D. Ridgeway, Treasurer
treasurer@thehorseprotectionleague.org

EXHIBIT A
LEASE AGREEMENT BY AND BETWEEN THE CITY OF ARVADA AND THE
HORSE PROTECTION LEAGUE FOR CERTAIN PORTIONS OF THE PROPERTY
LOCATED AT LONG LAKE RANCH

EXHIBIT "A"

Description:

SEVERAL PARCELS SITUATED IN THE NE ¼ OF SECTION 10 AND THE SW ¼ OF THE NW ¼ OF SECTION 11, ALL IN TOWNSHIP 3 SOUTH, RANGE 70 WEST, OF THE SIXTH PRINCIPAL MERIDIAN, IN THE CITY OF ARVADA, COUNTY OF JEFFERSON, STATE OF COLORADO, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

PARCEL NOS. 4 AND 6, AS DESCRIBED IN COMMISSIONERS DEED RECORDED AT RECEPTION NO. F0788747, OF THE JEFFERSON COUNTY RECORDS; ALSO, THAT PORTION OF PARCEL NO. 5, AS DESCRIBED AT SAID RECEPTION NO. F0788747, LYING IN THE NE ¼ OF SAID SECTION 10 AND SOUTH OF THE SOUTHERLY BANK OF VAN BIBBER CREEK; ALSO, ANY PORTION OF SAID PARCEL NO. 5 SITUATED IN THE SW ¼ OF THE NW ¼ OF SAID SECTION 11.

A PARCEL OF LAND IN THE SOUTHEAST ONE-QUARTER OF SECTION 10, TOWNSHIP 3 SOUTH, RANGE 70 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF JEFFERSON, STATE OF COLORADO, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

PARCEL 9 OF TABLE MOUNTAIN HEIGHTS IN VAN BIBBER CREEK SUBDIVISION, ACCORDING TO THE PLAT THEREOF RECORDED DECEMBER 23, 1983 AT RECEPTION NO. 83122118, COUNTY OF JEFFERSON, STATE OF COLORADO.

COMMENCING AT THE EAST ONE-QUARTER CORNER OF SAID SECTION 10, THENCE S 39°54'46" W ALONG THE NORTH LINE OF SAID SOUTHEAST ONE-QUARTER OF SECTION 10, A DISTANCE OF 191.04 FEET TO THE TRUE POINT OF BEGINNING; THENCE S 00°10'44" E, A DISTANCE OF 126.92 FEET TO A POINT ON THE NORTHWESTERLY RIGHT OF WAY LINE OF WEST 58TH DRIVE; THENCE S 57°17'09" W ALONG SAID NORTHWESTERLY RIGHT OF WAY LINE, A DISTANCE OF 230.58 FEET TO A POINT ON THE NORTHEASTERLY RIGHT OF WAY LINE OF SOUTH BOULDER DIVERSION CANAL; THENCE N 50°14'28" W, ALONG SAID NORTHEASTERLY RIGHT OF WAY LINE A DISTANCE OF 392.13 FEET TO A POINT ON THE NORTH LINE OF SAID SOUTHEAST ONE-QUARTER; THENCE N 89°54'46" E ALONG SAID NORTH LINE, A DISTANCE OF 495.05 FEET TO THE TRUE POINT OF BEGINNING.

CONTAINING 74,525 SQUARE FEET OR 1.711 ACRES MORE OR LESS.

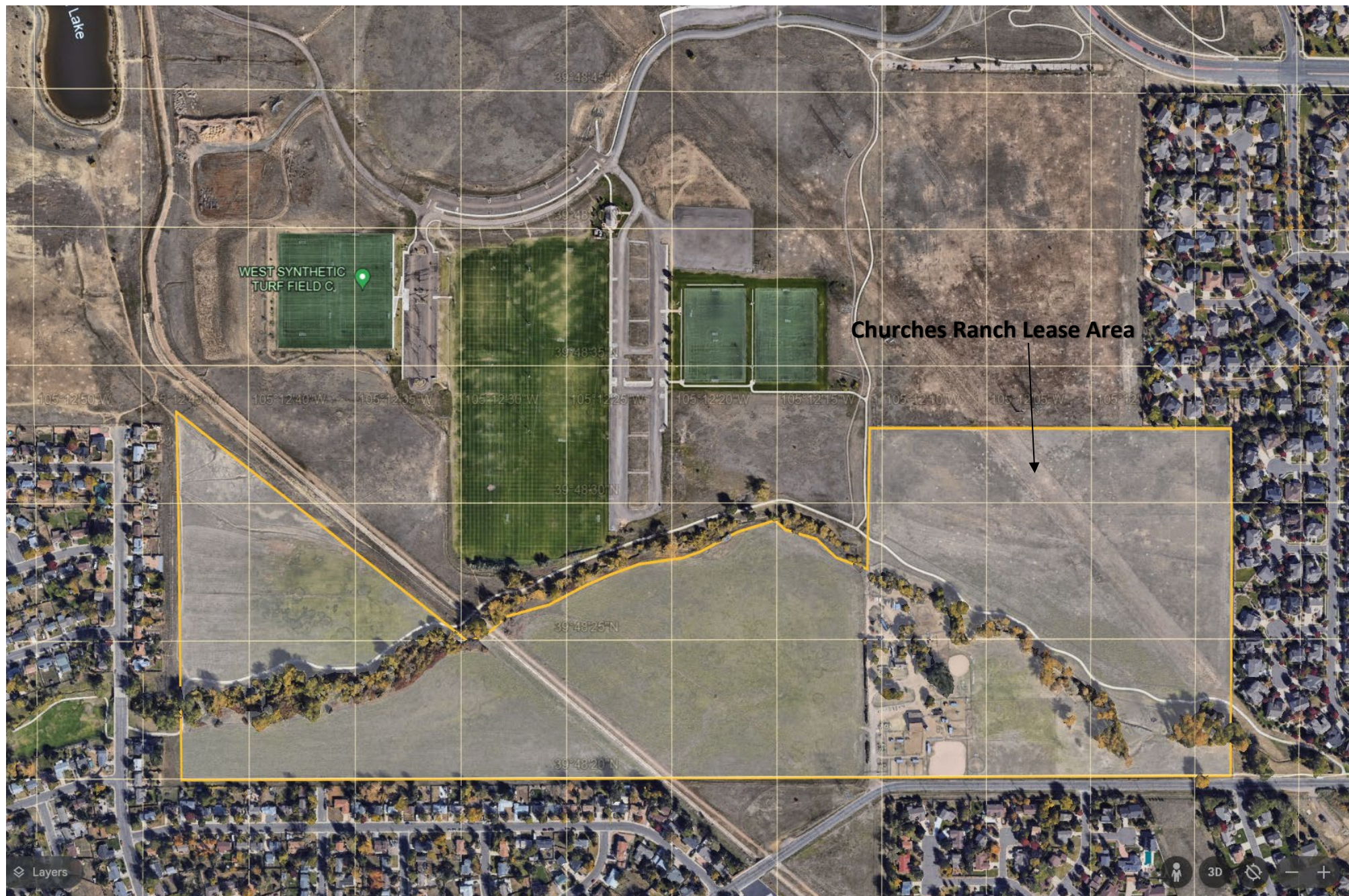
BASIS OF BEARINGS: NORTH LINE OF THE SOUTHEAST ONE-QUARTER OF SECTION 10, TOWNSHIP 3 SOUTH RANGE 70 WEST OF THE SIXTH PRINCIPAL

MERIDIAN, AS BEARING S 89°54'46" W AS SHOWN ON THE RECORDED PLAT
OF TABLE MOUNTAIN HEIGHTS IN VAN BIBBER CREEK SUBDIVISION,
RECORDED DECEMBER 23, 1983 AT RECEPTION NO. 83122118 -
MONUMENTED AS SHOWN, COUNTY OF JEFFERSON, STATE OF COLORADO.

EXHIBIT B
LEASE AGREEMENT BY AND BETWEEN THE CITY OF ARVADA AND THE
HORSE PROTECTION LEAGUE FOR CERTAIN PORTIONS OF THE PROPERTY
LOCATED AT LONG LAKE RANCH

Exhibit B

Map of the Property





REPORT TO CITY COUNCIL RESOLUTION

AGENDA ITEM
8.A.9.

TO: THE HONORABLE CITY COUNCIL

DATE: November 27, 2023

SUBJECT: R23-109, A Resolution Approving An Agreement By And Between The City of Arvada And R.G. Brinkmann Company (D/B/A Brinkmann Constructors) For Construction Of The Garrison Garden Paseo In An Amount Not To Exceed \$3,608,191.87

Report in Brief

The City team recently solicited bids for the construction of the Garrison Garden Paseo, a new City park located on Garrison Street, between Ralston Rd. and W 57th Avenue. Brinkmann Constructors has been selected for the park construction project.

The new park is located in the Ralston Fields Urban Renewal Area and the park design efforts were paid for and led by the Arvada Urban Renewal Authority (AURA). Landscape Architects from the City's Parks & Urban Design (PUD) division have been providing support to AURA throughout the park development process, and will continue to do so during construction. AURA is financing the construction of the Garrison Garden Paseo park in an amount not to exceed \$3,608,191.87.

The Arvada team recommends that the City Council approve R23-109, A Resolution Approving An Agreement By And Between The City of Arvada And R.G. Brinkmann Company (D/B/A Brinkmann Constructors) For Construction Of The Garrison Garden Paseo In An Amount Not To Exceed \$3,608,191.87.

Financial Impact

The Arvada Urban Renewal Authority (AURA) has funded the design and preparation of construction documents for the Garrison Garden Paseo park. AURA is providing funding to the City of Arvada to complete the park construction.

Once the park is constructed, the city will pay for the annual cost of maintaining the park (watering, mowing, trash removal and snow plowing operations), which is estimated at approximately \$8,850 per year. These funds will be requested for Fund 14 (the Parks Fund) during the 2025-2026 budget process.

The City of Arvada will issue an Initial Warranty Commencement letter upon acceptance of the Garrison Garden Paseo park into the warranty period. The two (2) year warranty period will begin on the date of issue of the Memorandum of Construction Acceptance. Upon issuance of the Initial Warranty Commencement letter, maintenance of the park will become the responsibility of the City, as outlined in Section 224.00 of the city's Standards and Specifications.

City of Arvada's Parks Irrigation and Landscaping maintenance during the warranty period is generally limited to mowing, watering, trash removal, and snow plowing of the park sidewalks and structures. Irrigation and landscaping preservation operations, including irrigation system blow out at winter shut down, spring turn on, and the replacement of dead plant material & trees are considered repair operations and are the responsibility of the Contractor. Before the issuance of Final Acceptance/Release from Warranty, those preservation operations will be checked and, if needed, done at that time.

Background

The City, in collaboration with the Arvada Urban Renewal Authority (AURA), identified the opportunity to construct a new linear park within the Garrison Street corridor, between W. 57th Avenue/Ralston Road and W. 58th Avenue, in the Ralston Fields Urban Renewal Area. The new park directly aligns with and contributes to the City Council's Strategic Result of completing strategic investments and initiatives to ensure parks, trails, open space, and amenities are in alignment with our

diverse, changing, and growing community.

Through an agreement with the developer of the adjacent Paseo Place Apartments, AURA obtained the 25 feet of right-of-way (ROW) critical to the successful development of the Garrison Garden Paseo. The City of Arvada has sought this ROW for many years. AURA's purchase of the space meets a long-time goal.

The design of the Garrison Garden Paseo includes a bucolic walkway that connects residents south of 58th Ave. with transit, groceries and other amenities along Ralston Road. The Garrison Garden Paseo also offers a safer pedestrian connection to the Ralston Creek Trail and Ralston Central Park to the north. The new park will bring a gentler slope to the existing corridor, making the space more accessible for many users.

The Arvada Community Garden is directly to the east of the park space. The Garrison Garden Paseo will provide a new vantage point of the city from the northwest corner of the community garden, allowing visitors to look out over the park, adjacent gardens, and into the Arvada landscape.

Discussion

In addition to funding the development of the new park, AURA is also funding the income-based housing project, Ralston Gardens, located at the north end of the Garrison Garden Paseo park. The project is a multi-family building with approximately 102 affordable units targeted at households with incomes between 30 and 70% of the area median income (AMI).

Additionally, both of these projects further advance the goals of the Ralston Fields Urban Renewal Plan to remediate blight through mixed-use redevelopment. The Ralston Creek redevelopment area encompasses both commercial and residential uses, shortening the distance between services and homes and connecting existing neighborhoods from the north and south.

Public Contact

Posting of the City Council agenda.

Commission Recommendation

Strategic Alignment

This project directly aligns with and contributes to the following City Council Strategic Result: "By 12/22, complete strategic investments and initiatives to ensure parks, trails, open space, and amenities are in alignment with our diverse, changing, and growing community."

Additionally, the City's 2016 Parks, Trails and Open Space Master Plan identified this location as a park improvement priority area. Construction of the Garrison Garden Paseo Park achieves the goals of activating parks, trails and open spaces; providing new parks and improvements to existing parks; and encouraging access to healthy living for all.

Alternative Courses of Action

Alternative No. 1: Approve R23-109, A Resolution Approving An Agreement By And Between The City of Arvada And R.G. Brinkmann Company (D/B/A Brinkmann Constructors) For Construction Of The Garrison Garden Paseo In An Amount Not To Exceed \$3,608,191.87

Alternative No. 2: Do not approve R23-109, A Resolution Approving An Agreement By And Between The City of Arvada And R.G. Brinkmann Company (D/B/A Brinkmann Constructors) For Construction Of The Garrison Garden Paseo In An Amount Not To Exceed \$3,608,191.87

Recommendation for Action

SUBJECT: R23-109, A Resolution Approving An Agreement By And Between The City of Arvada And R.G. Brinkmann Company (D/B/A Brinkmann Constructors) For Construction Of The Garrison Garden Paseo In An Amount Not To Exceed \$3,608,191.87

PAGE: 3
ITEM: 8.A.9.

The Arvada team recommends that the City Council approve Alternative No. 1:

Alternative No. 1: Approve R23-109, A Resolution Approving An Agreement By And Between The City of Arvada And R.G. Brinkmann Company (D/B/A Brinkmann Constructors) For Construction Of The Garrison Garden Paseo In An Amount Not To Exceed \$3,608,191.87.

Suggested Motion:

I move that R23-109, A Resolution Approving An Agreement By And Between The City of Arvada And R.G. Brinkmann Company (D/B/A Brinkmann Constructors) For Construction Of The Garrison Garden Paseo In An Amount Not To Exceed \$3,608,191.87, be (approved) (rejected).

Prepared by:

Enessa Janes, Director of Vibrant Community and Neighborhoods

Reviewed by:

Approved by:

Enessa Janes, Director of Vibrant Community and Neighborhoods	11/6/2023
Bryan Archer, Director of Finance	11/7/2023
Gail Walker, Legal Specialist-Contracts	11/9/2023
Kylie Justus, Assistant City Attorney	11/9/2023
Rachel Morris, City Attorney	11/14/2023
Don Wick, Deputy City Manager	11/14/2023
Lorie Gillis, City Manager	11/15/2023

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R23-109

A RESOLUTION APPROVING AN AGREEMENT BY AND BETWEEN THE CITY OF ARVADA AND R. G. BRINKMANN COMPANY (D/B/A BRINKMANN CONSTRUCTORS) FOR CONSTRUCTION OF THE GARRISON GARDEN PASEO IN AN AMOUNT NOT TO EXCEED \$3,608,191.87

WHEREAS, the City of Arvada, in partnership with the Arvada Urban Renewal Authority (“AURA”), seeks to construct a new park, the Garrison Garden Paseo, located along Garrison Street between Ralston Road and 57th Avenue; and

WHEREAS, the City and AURA have determined that Brinkmann Company has the requisite background, skill, and expertise to construct the new park.

NOW, THEREFORE, 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 with Brinkmann Company that is in substantially the same form as that attached hereto.

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

APPROVED AND ADOPTED this 27th day of November, 2023.

Lauren Simpson, Mayor

ATTEST:

City Clerk

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

BY: _____

**AN AGREEMENT BY AND BETWEEN THE CITY OF ARVADA AND
R. G. BRINKMANN COMPANY (D/B/A BRINKMANN CONSTRUCTORS) FOR
CONSTRUCTION OF THE GARRISON GARDEN PASEO IN AN AMOUNT
NOT TO EXCEED \$3,608,191.87**

This Agreement made this _____ day of _____, 2023, by and between the City of Arvada, a home rule municipal corporation (“Arvada” and/or “City”) and R.G. Brinkmann Company (d/b/a Brinkmann Constructors), a Missouri Corporation with its principal place of business located at 16650 Chesterfield Grove Rd., Suite 100, Chesterfield, MO 63005 (“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 construction of the Garrison Garden Paseo as described in the Contract Documents (the “Project” or the “Work”); 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.** 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 Agreement 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. **Preparation/Sufficiency of Site.** Before commencing the Project, 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 (vii) 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.
- 1.4. **Contract Documents.** The Contract Documents are incorporated herein by reference. The term "Contract Documents" means and includes the following:
 - A. Arvada's solicitation entitled Competitive Sealed Bid, 23-VCN-072, Garrison Garden Paseo ("CSB"), including all exhibits and/or addenda;
 - B. Contractor's Response to 23-VCN-072, Advertisement for Bid, Bid Proposal, Bid Schedule, Bid Bond ("Contractor's Response");
 - 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 dated July 26, 2022;
 - 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 (if applicable).
- 1.5. **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 CSB 23-VCN-072; (3) City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements; (4) Contractor's Response; (5) Change Orders; (6) Requests for Information and Response.

ARTICLE 2. ARVADA'S DUTIES, OBLIGATIONS AND RESPONSIBILITIES

- 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.
- 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 designates Chad Hollingsworth chollingsworth@arvada.org as Arvada's representative authorized to act on Arvada's behalf with respect to the Project. In the event Arvada changes its representative, Arvada will notify Contractor of the new contract information.
- 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. Arvada will provide and be responsible for all material testing and all other testing if needed.
- 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 calendar 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 a 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 in the Denver Metropolitan area similar in size, timing, 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.** 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. **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.

- 4.2. **Pre-Construction Meetings.** Contractor agrees to assist in the preparation for and to participate in any pre-construction meetings with Arvada.
- 4.3. **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.
- 4.4. **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.
- 4.5. **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.
- 4.6. **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 changes; (c) unforeseeable constructability issue; (d) unforeseeable geotechnical issue. The following will not be considered a valid basis for requesting a Change Order absent unforeseen circumstances: (a) utility relocation; (b) utility conflicts; (c) foreseeable geotechnical issue; (d) foreseeable constructability issue; (e) defective construction.
- 4.7. **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 set forth below:
- 6.1.1. Contractor shall commence the Work required by the Contract Documents within seven calendar days after the date of the Notice to Proceed unless otherwise mutually agreed-upon by the Parties in writing;
 - 6.1.2. Contractor shall complete the Work required by the Contract Documents by **September 30, 2024 or 270 days after Arvada issues the Notice to Proceed, whichever is later**, unless the period for completion is extended otherwise by the Contract Documents; and
 - 6.1.3. Compensation Amount. Contractor agrees to perform the Work for an amount not to exceed **\$3,608,191.87**.
- 6.2. **Term.** The term of the Agreement shall be from the Parties' execution of this Agreement until September 30, 2026. This term includes the time for Contractor to complete the Work as described in **Sec. 6.1.2**, and a two-year warranty period as described below. Contractor shall not be released from its obligations under this Agreement unless and until all Work complies with Arvada's standards as described in the Engineering Specifications book. The term of this agreement may be amended by mutual written agreement of the Parties, is subject to availability of funds, or is subject to Arvada's termination for convenience under the Contract Documents.
- 6.3. **Warranty Period.** Contractor warrants and guarantees all Work for two years from the date of completion. Should any Work be determined by Arvada to be defective, inaccurate, or lacking professional quality during the warranty period, Arvada shall notify Contractor. Contractor agrees to amend the Work to Arvada's contract documents, ordinances, and engineering specification book within 30 days of Arvada's notification, unless such longer period is necessary.
- 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) calendar 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 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 **\$3,608,191.87**, 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 Basis of 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 generally accepted industry standards for the Denver Metro Area.
- 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.

ARTICLE 7. MISCELLANEOUS.

- 7.1. **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.
- 7.2. **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.
- 7.3. **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 parties 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.
- 7.4. **Additional Documents.** The parties agree to execute any additional documents and to take any additional action that is reasonably necessary to carry out this Agreement.
- 7.5. **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.

- 7.6. **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.
- 7.7. **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.
- 7.8. **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.
- 7.9. **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, 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.
- 7.10. **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:

7.10.1. Colorado labor shall be employed to perform eighty percent (80%) of the work.

7.10.2. 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.

[signatures on next page]

CITY OF ARVADA, a Colorado home
rule municipal corporation

Lauren Simpson, Mayor
8101 Ralston Road
Arvada, CO 80002

ATTEST:

City Clerk

APPROVED AS TO FORM:

Rachel A. Morris, City Attorney

By: _____

**R.G. BRINKMANN COMPANY, A
MISSOURI CORPORATION (D/B/A
BRINKMANN CONSTRUCTORS)**

Lucas Rottler, Vice President of Preconstruction
lrottler@brinkmannconstructors.com

EXHIBIT A
AN AGREEMENT BY AND BETWEEN THE CITY OF ARVADA ANDR. G.
BRINKMANN COMPANY (D/B/A BRINKMANN CONSTRUCTORS) FOR
CONSTRUCTION OF THE GARRISON GARDEN PASEO IN AN AMOUNT
NOT TO EXCEED \$3,608,191.87

CITY OF ARVADA

COMPETITIVE SEALED BID

BID #: 23-VCN-072

Title: Garrison Garden Paseo

CSB Issued: 8/9/2023

MANDATORY Pre-bid Meeting: 8/15/2023 - 10:00 am MT
On-Site Location: 9222 West 58th Ave, Arvada, CO 80002

Questions Deadline: 8/22/2023 2:00 pm MT
Submit questions on BidnetDirect.com. Responses will be posted via addendum.

Bids Due By: 9/6/2023 2:00 pm MT

Bid Delivery address: Online at bidnetdirect.com

Questions and submission documents must be uploaded to
<https://www.bidnetdirect.com>.

Submit bid as one (1) PDF file. Company name must start the file name.
Late responses will not be considered for award.

For additional administrative information NOT related to the project, contact: Cheryl Dye, cdye@arvada.org

Documents included in this BID:

Cover Page	page 1
Advertisement for Bidders	page 2
General Terms and Conditions	page 4
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	page 17
• Bid Proposal	page 18
• Required Contractor Submittal Form	page 19
• Performance Measures Form	page 20
• Preview of Documents, if Awarded	page 21
• Documents & Reports attached separately in BidNet:	
Drawing/Bid Set, Bid Schedule, Drainage Report, & Geotech Report	

ARVADA'S VISION MISSION AND VALUES

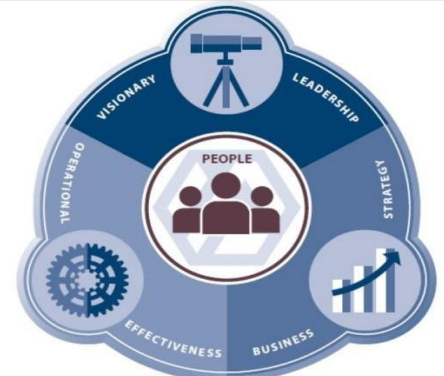
VISION: We dream big and deliver.

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, Bid No: 23-VCN-072

Project Title: GARRISON GARDEN PASEO

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 8/8/2023.

ESTIMATED APPROXIMATE QUANTITIES OF THE MAJOR ITEMS OF WORKARE:

Mobilization	1	LS
Erosion Control	1	LS
Construction Surveying & Staking	1	LS
Storm Water Management	1	LS
Demo, Removal and Site Protection	1	LS
Site Grading, Earthwork, and Drainage Improvements	1	LS
Traffic Control	1	LS
Traffic - Patching	132	SY
Traffic - Striping	101	LF
Traffic - Pavement Markings	4	EA
Traffic - Signage	4	EA
Utilities - Fire Line	12	LF
Utilities - Fire Hydrant	1	EA
Utilities - Inlets	1	EA
Utilities - Manholes	3	EA
Utilities - Street Subgrade/Fill	185	SY
Utilities - Street Subbase	185	SY
Utilities - Storm Sewer	265	LF
6" Concrete Paving	8,600	SF
ADA Curb Ramp	1	EA
Concrete Curb and Gutter	408	LF
Concrete Edger - Flush	350	LF
Decomposed Granite	3,700	SF
Stone Slab Stairs with Railing	45	LF
Stone Slab Retaining Walls	800	LF
Concrete Seat Wall	210	LF
Dry Stack Sandstone Slab Seat Walls	120	LF
Custom Cut Stone Boulder with Sawn Top	5	EA
Buff Sandstone Boulder	60	EA
Complete Lighting System	1	LS
Custom Fabricated Gates	2	EA
Wire Mesh Fence	650	LF

Custom Hexagon Trellis	1	LS
Trellis Guardrailing	25	LF
Play Structures	3	EA
Welcome Signage	1	LS
Drinking Fountain	1	LS
Raised Plate Steel Planters	1	LS
Mortar Set Stream Bed / Water Feature	1	LS
Kentucky Bluegrass Sod	1,760	SF
Native Seeding w/ Hydromulch	4,275	SF
Top Soil	14	CY
Deciduous Shade Trees	13	EA
Deciduous Ornamental Trees	20	EA
Evergreen Trees	9	EA
Deciduous Shrubs	219	EA
Ornamental Grasses	423	EA
Perennials	231	EA
Groundcover	112	EA
4"-6" Cobble	10	CY
Shredded Cedar Wood Mulch	105	CY
Complete Irrigation System	1	LS
Structural Engineering	1	LS

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 July 26, 2022, 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: 8-7-2023

CITY OF ARVADA



Enessa Janes

Director

Department of Vibrant Community and Neighborhoods
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 upon payment to Contractor. 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 may award work to subcontractor(s) in excess of fifty percent of the total contract price. 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. 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.*

13. 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.

14. 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.

15. 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.

16. 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.

17. FORCE MAJEURE. Any delays in or failure of performance by any party of 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.

18. 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.

19. 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.

20. 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.

21. 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.

22. 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.

23. ACCESSIBILITY COMPLIANCE.

- 23.1 Arvada is obligated to comply with the Colorado Anti-Discrimination Act (C.R.S. §§24-34-300 *et seq.*) ("CADA"), which requires all digital and online platform and content providers to comply with the minimum *Accessibility Standards for Individuals with a Disability*, adopted by the Colorado Office of Information Technology ("OIT") under C.R.S §24-85-103(2.5). Contractor has been advised to familiarize itself with CADA.
- 23.2 To the extent the Work or any of Contractor's services provided under the Agreement involves digital, technological components, including but not limited to software, websites, applications, digital documents (the "Material"), all Material shall comply with the OIT's currently adopted minimum *Accessibility Standards for Individuals with a Disability* at all times.
- 23.3 Contractor shall indemnify, save, 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) incurred by any of the Indemnified Parties in relationship to Contractor's failure to comply with Section (23.2) above.
- 23.4 Upon Arvada's request, Contractor shall certify to Arvada that its service(s) and digital documents are compliant with Section (23.2) above. Arvada may require Contractor's compliance to the OIT's currently adopted minimum standards of accessibility to be determined by a third party selected by Arvada to attest to Contractor's compliance.

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 issue 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 their 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, 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 its 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 July 26, 2022, 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 Bid;
 - 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 government 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 their 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.

22. 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.

- ☐ ☒ **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.
- ☐ ☒ **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 \$2,000,000 aggregate.
- ☐ ☒ **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.
- ☐ ☐ **Umbrella Liability** of \$5,000,000.00, following form to the Commercial General Liability.
- ☐ ☐ **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.
- ☐ ☐ **Professional Liability** Professional Liability insurance in an amount of not less than \$1,000,000 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.
- ☐ ☐ **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.
- ☐ ☐ **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 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.

SPECIAL PROVISIONS

City of Arvada, Bid No: 23-VCN-072, Project Title: GARRISON GARDEN PASEO

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 (latest edition).

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.

SC-2 SERVICE INTERRUPTION:

The Contractor shall notify all parties that will be affected, two 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 service so interrupted or damaged shall be immediately repaired and service restored. No service shall be left inoperative overnight.

SC-3 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 Highways Standard Specifications.

SC-4 PRE-BID CONFERENCE:

A mandatory Pre-Bid Conference will be held at 9222 West 58th Ave, Arvada, CO 80002 on August 15, 2023 at 10:00 am (MT) for the purpose of disseminating additional information and clarifying existing information about the project.

SC-5 PRE-CONSTRUCTION MEETING:

Within two weeks following the date of the Notice of Award, a Pre-Construction Conference will be held per the Project Manager's instructions to review the Contractor's Construction Schedule. The Contractor and all available subcontractors will attend.

SC-6 PROJECT MANAGER/OWNER'S REPRESENTATIVE:

The Project Manager or Owner's Representative is the authorized representative of the Owner assigned to the project site or any part thereof. Project Manager will be interchanged for Project Engineer in the City Standard Specifications.

SC-7 PROTECTION:

Water Protection: Contractor shall, at all times, protect excavation, trenches, and structures from damage from rain water, spring water, ground water, backing up of drains and sewers, and all other water. He/she shall provide all pumps and equipment to provide this protection.

Temporary Drainage: Contractor shall construct and maintain all necessary temporary drainage and do all pumping necessary to keep excavations free of water. Water may be drained to adjacent properties only upon approval from the Owner.

SWMP: Contractor to follow all requirements set out in the storm water management plan and as agreed to when obtaining permit with no exceptions unless approved by Owner.

SC-8 LOSSES FROM NATURAL CAUSES:

All loss and damage arising out of the nature of the work to be done, or from the action of the elements or from floods or overflows, or from ground water or from unusual obstruction or difficulties, which may be encountered in the prosecution of the said work, shall be sustained and borne by the Contractor at his own expense.

SC-9 ESTIMATED QUANTITIES:

The Contractor agrees that the quantities of work as stated in his/her proposal and bid, or indicated on the plans, are only approximate, and that during the progress of the work the Owner may find it advisable and shall have the right to omit portions of the work and to increase or decrease the quantities; and the Owner reserves the right to add to or subtract from any items as may be deemed necessary or desirable. Under no circumstances or conditions will the Contractor be paid anything on account of anticipated profits upon the work or any portion thereof covered by this contract, which is not actually performed, and which has not actually entered into the construction of said improvement.

SC-10 TAXES:

The Contractor will pay all applicable sales, use and other similar taxes required by the laws of the State of Colorado. Notwithstanding the above, the Contractor shall obtain from the Department of Revenue a Certificate of Exemption indicating, where applicable, that the Contractor's purchase of construction or building materials is for use in the building erection, alteration or repair of public works owned and used by the City of Arvada, in its governmental capacity. Where a transaction is exempt from such tax, the amount of such tax shall not be included in any bid proposal.

Where taxes are required 30 days or more before the date set forth for final payment, the Contractor shall furnish the Project Manager, in triplicate, and on City of Arvada Engineering Department Form ED-A-76 and ED-5-76, certified receipts of sales, use and other similar taxes, required by law, paid on all materials and equipment incorporated in or used in the performance of the work.

SC-11 STORAGE:

A storage trailer and/or construction staging area will be allowed on the site. This facility will only be allowed during the period of active construction by the General Contractor and his/her subcontractors. The location of the trailers and/or construction yards must be approved by the Project Manager prior to the contractor moving onto the site.

SC-12 SUPERVISION & EXPEDITING:

Unless noted otherwise, all Contractors shall place orders for materials and equipment immediately upon receipt of contracts, and follow-up vigorously to insure adequate and timely supply to the work and shall perform all tracing and expediting operations. The General Contractor shall arrange to have all subcontractors on the job at the proper times to avoid delays and they shall attend any scheduled job meetings.

SC-13 SIGNS:

The General Contractor shall maintain the premises free from advertising and see that no signs are erected except those mandated by Federal or State agencies. The Owner reserves the right to put up such signs or notices as deemed proper.

SC-14 FINAL CLEANING:

The Contractor shall remove all marks, stains, fingerprints, and other soil or dirt from all painted, decorated, and stained work. Contractor shall remove all temporary protections and shall clean and polish all resilient surfaces at completion. All concrete surfaces are to be left clean and free of any tire marks or rubbings. All site furniture, playground equipment, site structures, and site signage shall be cleaned and free of any marks, stains, graffiti, scuffing, and blemishes.

SC-15 ROUGH GRADING:

The following requirements are to be considered as supplementary to City of Arvada Standard Specifications: Excavation and Grading.

General Site Grading: All designated areas are to be graded to true and even surfaces, to uniform slopes between grade elevations given. No excess material will exist from excavations and grading.

Compaction: Soil under all concrete pavements is to be compacted to 95% Standard Proctor Density unless noted otherwise and in open park areas to 85% Standard Proctor Density with 2% of optimum moisture content.

The Contractor will mow and remove the top 8" of existing grasses from the site. Any remaining grasses may be buried in approved non-structural fill section, minimum 12" cover. Stockpile topsoil on the project site in area approved by Owner. After all structural elements (e.g. walls, paving, edging, etc.) have been installed, the first priority for this soil will be the planting beds. The Contractor will be required to remove any debris encountered interfering with construction, if encountered. All excess dirt removed during construction will be disposed of at the contractors' expense on-site and included in the Rough Grading bid item.

The Contractor shall place stockpiled topsoil back over the site upon grading of subgrade to approximate grades and after installation of structural elements. Topsoil shall be spread evenly and uniformly to final rough grade. If excess topsoil remains, it will be spread evenly throughout the grass areas.

All areas are to be raked by hand or mechanical means after soil improvement, to smooth and uniform conditions, free from bumps, rocks and clods over 2" in diameter. Puddling or negative drainage occurring up to one year after the date of acceptance must be promptly adjusted by Contractor, at no additional cost. Final rough grade will be within 1/10th of a foot of proposed contours as shown on plans. Grades under proposed hard surfaces will be $\pm .05$ of a foot. Surfaces shall be left smooth, clean and even, graded to drain and to fit into any undisturbed surrounding terrain. All trash and debris shall be removed from site by the Contractor at the Contractor's expense.

Earth that has been rendered unfit to receive planting due to concrete, water, mortar, limewater, or other deleterious substances dumped on it, shall be removed and replaced with clean topsoil at the Contractor's expense.

SC-16 FINE GRADING:

The following requirements are to be considered as supplementary to City of Arvada Standard Specifications: Excavation and Grading.

General Site Grading: All designated areas are to be graded to true and even surfaces, to uniform slopes between grade elevations given. No excess material will exist from excavations and grading.

Any areas upon completion of grading that contain weeds or undesired grasses will be tilled to eliminate all vegetation prior to fine grading and seeding.

Fine grading is considered to be preparation for installation of seed or shrub planting in beds after the rough grading and soil preparation is completed. The Contractor will complete the topsoil installation, spread the topsoil (rough grading), install the irrigation system, install soil amendments and till (see soil amendment and bed preparation). The Contractor will then rake to grade and remove rocks over 1" in diameter from the soil mix.

All areas are to be raked by hand or mechanical means after trenching and soil improvement, to smooth and uniform conditions, free from bumps, rocks and clods over 1" in diameter. Puddling or negative drainage occurring up to one year after the date of acceptance must be promptly adjusted by Contractor, at no additional cost. Finish grade will conform to the proposed contours and elevations as shown on plans. Surfaces will be left smooth, clean and even, graded to drain and to fit into any undisturbed surrounding terrain. All trash and debris shall be removed daily from all work areas within the right-of-way by Contractor at his/her own expense. All irregularities in the ground surface shall be removed. Sticks, stones, debris and other similar material more than 1" in diameter shall be removed. Any objectionable depressions or other variances from a smooth grade shall be corrected.

Earth that has been rendered unfit to receive planting due to concrete, water, mortar, limewater, or other deleterious substances dumped on it, shall be removed and replaced with clean topsoil at the Contractor's expense.

SC-17 SOIL PREPARATION:

Separate areas are identified on the plans for specific soil amendment treatments and fine grading procedures. These procedures and materials area as follows:

MATERIALS:

Soil Amendments:

Submit laboratory affirmation on any soil amendments specified.

Compost:

A-1 Organics Compost, BIO Comp-Class 1, available from A-1 Compost, Eaton, Colorado, (303) 454-2213. Submit analysis for approval prior to delivery.

Gravel Backfill:

Clean washed 1" – 1½" crushed rock backfill.

Preparation of Shrub Bed Areas:

1. All bed areas will be over-excavated and will receive a minimum of 6" of on-site topsoil mixed with the specified soil amendments as specified. (Refer to landscape plan.)
2. Loosen subgrade of lawn areas to a minimum, depth of 6" by rototilling. Remove stones over 1" in any dimension, sticks, roots, rubbish and other extraneous matter. Limit preparation to areas which will be planted immediately.
3. For planting areas, apply "Roundup" or equal short-term herbicide to inhibit unwanted plant growth prior to topsoil distribution. Apply in accordance with manufacturer's recommendations for this purpose and sufficiently in advance of planting to avoid damage to new lawns.
4. Spread compost at a rate of 5 CY per 1000 SF in turf and shrub beds and 3 CY per 1000 SF in native areas (per code 1022.01) after topsoil is spread, till in thoroughly to a depth of 6", and bring to minimum depth required to meet lines, grades and elevations shown after natural settlement.
5. Where topsoil is required, add soil amendments and place approximately one-half of total amount of topsoil required. Work into top of loosened subgrade to create a transition layer and then place remainder.

SC-18 CONCRETE:

Scope of Work:

This section includes but is not limited to furnishing all labor materials and equipment necessary for the completion of the following:

1. All concrete flatwork
2. All miscellaneous concrete such as footings, edging, supports, etc.

Winter Protection:

Provide approved blankets and covers for all concrete work to adequately protect surfaces and materials from frost damage. Refer to the City's Engineering Specifications for further requirements.

Materials:

The Contractor will provide materials of the same brand and source throughout the project unless otherwise noted. Concrete will include the following materials:

- A. Portland cement - ASTM C150, Type II, gray color.
- B. Aggregates for concrete - ASTM C33 normal weight. In addition, the combined aggregate shall comply with the following gradation, shown in percent passing.

Aggregate Size

Sieve Size	3/4 Inch Maximum
3/4 Inch	90 – 100
3/8 Inch	60 – 80
No. 4	40 – 60
No. 8	30 - 45
No. 16	20 - 35
No. 30	13 - 23
No. 50	5 - 15
No. 100	0 – 5

More than two aggregates may be combined to meet this gradation requirement.

- C. Water - Clean and not detrimental to concrete.

Admixtures:

- A. General - Unless specified in the mix or directed otherwise, no admixtures shall be used without approval of the Owner's Representative. Do not use admixtures that would result in mixing water with a concentration of more than 150 ppm of chloride ion.
- B. Air Entraining - ASTM C260.
- C. Water Reducing - ASTM C494, Type A.
- D. Accelerator - Nonchloride, ASTM C494, Type C or E.
- E. Retarder - ASTM C494, Type B or D.

Concrete Mix:

- A. Mix concrete in accordance with ASTM C94. Provide concrete for the following characteristics:

<u>Unit</u>	<u>Measurement</u>
Compressive strength at 28 days	4,000 psi
Minimum cement	564 lb./cy
Maximum aggregate size for foundations and standard concrete paving	3/4 inches
Maximum aggregate size for exposed concrete	3/8 inches
Air entrainment for standard concrete	5 to 7 percent
Maximum water cement ratio	0.50
Coloring agent	None

- B. Pozzolanic mineral admixture is not permitted.
- C. Use accelerating admixtures in cold weather as directed in City Standard Specifications.
- D. Use set-retarding admixture during hot weather as directed in City Standard Specifications.
- E. Water reducing agent is permitted.
- F. Slump limits 2 inch to 4 inches.

Form Materials:

- A. Accepted Materials - Forms for surfaces exposed to view in the finished work shall be "plyform" grade plywood, metal forms, or concrete-form grade hardboard. Forms for surfaces not exposed to view and keys may be 2x lumber or any of the previously mentioned materials. Forms shall be straight and sufficiently stiff, and well braced to meet line tolerance specified. 1x material may be used for curves.
- B. Keyed Joint Form - Wooden key or leave-in-place metal construction joint form. In addition to the locations shown on the drawings, construction keys may be used in any location where the construction joint created by the key will not be exposed to view. Keys shall have beveled sides for each removal.
- C. Form Coatings - Commercial form-coating compounds that will not bond with, stain, or adversely affect concrete surfaces, and will not impair subsequent treatments of concrete surfaces.
- D. Ties and Spreaders - Use combined tie spreaders. Ties shall snap off minimum one inch below surface and leave a truncated cone home for patching. Do not use wire ties or wood spreaders where they would be incorporated into the final work.

Reinforcement:

- A. Reinforcing Steel - ASTM A615; 60 ksi yield grade; deformed billet-steel bars, epoxy coated finish.
 - 1. Fabricate, position, and secure reinforcement bars, dowels, wire mesh and embedded items according to ACI 301 & ACI 315.
 - Coordinate with other sections for locations, instructions, or equipment for embedded items.
 - 2. Welding reinforcement is not permitted.
 - 3. In the event of discrepancy, immediately notify the Owner's Representative. Do not proceed with installation in areas of discrepancy until discrepancy has been fully resolved.
 - 4. Reinforcement partially embedded in concrete shall not be field bent, except as shown on the drawings or specifically permitted by the Owner's Representative.
 - 5. After installation of concrete reinforcement is complete, coordinate review by the Owner's Representative before depositing concrete.
- B. Dowels - ASTM A615; 40 ksi yield grade, plain steel, uncoated finish, matched sleeve and cap one end. Provide dowel basket to hold dowels in parallel alignment.
 - 1. Grease sleeves, insert dowels and through form, secure dowel basket against movement.

Related Materials:

- A. Patching Mortar - Use same materials and proportionate as concrete to be patched, except:
 - 1. Omit coarse aggregate.
 - 2. Where surface is exposed to view, substitute White Portland Cement for a portion of gray cement and adjust amount of color agent to match the surrounding concrete
 - 3. Cement to sand ratio shall not exceed 1:2 1/2 by volume.
- B. Bonding Grout - One-part cement to one-part fine sand passing a No. 30 sieve, mixed to the consistency of thick cream.
- C. Expansion Joint Filler - ASTM D1752, closed cell polyethylene, 1/2-inch thickness.
- D. Expansion Joint Board - Non-bituminous, non-extruding expansion joint material. Use where specified conforming to ASTM 01752 (Homex 300, Grayflex).
- E. Curing Compound
 - 1. For standard concrete: white pigmented, wax-resin based compound, ASTM C309, Type II, Class B.
- F. Joint Sealant –
 - 1. Non-staining Polysulfide, Silicon, or Polyurethane Sealant: FS TT-S00227, Type II, nonsag, Class A; color to match adjacent concrete.
 - 2. Primer: Non-staining type, recommended by sealant manufacturer to suit application.
 - 3. Joint Cleaner: Noncorrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
 - 4. Joint Backing: ASTM D1565; round, closed cell, polyethylene foam rod; oversized 30% to 50% larger than joint width.
 - 5. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

Joints:

- A. General - Place joints in accordance with ACI 301. Conform to the tolerances listed in the Specifications.
- B. Isolation/Expansion Joints - Isolation joint and expansion joint are synonymous for work covered in this section.
 - 1. Place caulked isolation joints where work abuts existing walls, curbs and structures, and where shown on the drawings.
 - 2. Interrupt reinforcement at isolation joint. Install dowels only where indicated on drawings.
 - 3. Joint filler shall extend full width of the member, except as required for sealant. Attach joint filler to first placement.
 - 4. Follow sealant manufacturer's recommendations for cleaning joint, placing backup rod and bond break, placing and finishing sealant. Sealant depth shall be half the width of the joint. Sealant shall be recessed below the edge of concrete joint. Install sealant only when temperatures are between 40° and 90°F.
- C. Keyed Construction Joints - Keyed joint and construction joint are synonymous for work covered in this section. Keyed joints may be placed at Contractor's option within the limits given in the form work paragraph of this section.
 - 1. Use 1 1/2" x 3 1/2" key, beveled to 15° for removal
 - 2. Continue reinforcing across joint
 - 3. Prior to placement of adjoining concrete, roughen surface to expose aggregate. Clean surface.
- D. Control Joint -
 - 1. Control joint shall penetrate 1/4 of slab thickness
 - 2. Tooled joints: Where permitted or required, control joints may be cut into the plastic concrete during finishing operations. Tooled joints shall be 1/4" radius, and shall not incorporate a troweled edge unless specifically noted on the drawings
 - 3. Formed control joints are permitted only in conjunction with keyed joints or as otherwise specified.

Finishes:

- A. Refer to drawing and pavement schedule in this part for locations of finish treatments.
- B. Float Finish - After surface stiffens enough to support the operation, float with hand floats or powered disc floater. Use magnesium float; do not use wood float on air entrained concrete, check surface planeness with a 10-foot straight edge, applied at not less than two different angles. Cut down high spots and fill low spots to produce a surface with Class B tolerance. Refloat the slab to a uniform sandy texture.
- C. Broom Finish - Immediately after the concrete has received a float finish, produce a coarse transverse scored texture by drawing a broom across the surface. Striations shall be perpendicular to the direction of traffic unless otherwise specified
- D. Surface Retarder – Contractor to use Dayton Superior "Top Cast" top surface retarder as supplied by Rio Grande Materials

303-825-2211. Contractor to install per manufacturer's recommendations

- E. Formed Finishes -
 - 1. Surfaces Not Exposed to View: Patch tie holes and defects. Chip off fins greater than 1/4 inch in height.
- F. Edges - Exposed edges of all surfaces shall be honed tooled with a 1/4-inch radius, unless otherwise specified
- G. Repair of Formed Surface - Repair surface defects, including tie holes, immediately after form removal.
 - 1. Remove honeycombed and defective concrete. Provide slightly undercut edges. Moisten patch area and 6 inches surrounding. Apply bonding grout. Mix patching mortar at stiffest consistency that will permit patching. When bonding coat begins to lose its water sheen, place and strike off patch slightly higher than surrounding surface. Let stand for one hour prior to finishing. Cure for 7 days. Patches shall not exceed 2 SF in 1,000 SF of surfaces exposed to view. On surfaces exposed to view, test and adjust patching mortar for color match with the surrounding surface when cured and dry. If surface is to receive a sandblast or tooled finish, add coarse aggregate to patching mortar in same course to final aggregate ratio as the surrounding concrete. Do not use metal tools for finishing a patch in a surface exposed to view.
 - 2. Tie Holes: Clean, dampen and fill with patching mortar.
- H. As-Case Finishes -
 - 1. Rough Form Finish: Patch defects and tie holes. Break off fins exceeding 1/4 inch.
 - 2. Smooth Form Finish - Ensure form work is symmetrical and composed of large, sound panels. Patch defects and tie holes. Remove fins.

SC-19 CONTROL WIRE / EXTRA WIRE:

The Contractor will furnish and install a #14 copper UF red common control wire to each automatic control valve location on the drawings, a #12 UF white control wire continuous from the controller to each automatic valve location. The Contractor to furnish four (4) black #14 Copper UF spare control wires and two (2) Yellow #12 Copper UF spare common wires (Total of 6 spares) from the controller to the end of each capped main. (See irrigation specifications for further detail.) Master valve wires shall be run sub grade, in continuous PVC schedule 40, 1.25 inch conduit, from irrigation controller pad to backflow/master valve assembly pad.

SC-20 IRRIGATION CONTROLLERS, FLOW SENSORS, R.P.B.P.:

An electric irrigation controller (or "clock") 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 the project, the Contractor will remove the installed electric controller and install the city's Motorola controller(s), unless otherwise specified. The Motorola irrigation controller(s) will be purchased by the City out of the project budget and supplied to the contractor to install at project completion.

The Contractor will provide all materials and labor including, but not limited to, install of city-furnished controller, all electrical connections, foundation pads, conduit and necessary installation (and materials) wiring connections, etc. to provide a fully operational irrigation controller. The Contractor will install the City-provided Hydrometer/Master Valve with (2) Blue #14 UF, (2) Green #14 UF, and (2) Orange #14 UF control wires. Contractor will also install four (4) black #14 Copper UF spare control wires and two (2) Yellow #12 Copper UF spare common wires (Total of 6 spares) throughout the system for future additions. The Contractor is responsible for all winterization and spring start-up procedures, if applicable. (Refer to the drawings and specifications for further detail.)

SC-21 NEW SLEEVE CONSTRUCTION:

The Contractor will furnish and install new sleeving where shown on the drawings. The sleeves will be installed to the pipe diameter and depth shown on the drawings and specifications prior to installation of new flatwork. Each new sleeve will extend eighteen inches past each edge of the new surface. Each sleeve location will be marked by a one-inch deep, two-inch long notch in the concrete (Consult irrigation section for additional detail.) The Contractor is responsible for locating all utilities.

SC-22 SHELTER:

Supplier to provide preliminary design drawings for approval by Landscape Architect and/or owner's representative prior to submitting final stamped engineering drawings. Submittal to include final configuration, equipment, and color selection:

SYSTEM DESCRIPTION

- A. Column to footing connection to be in compliance with OSHA Steel Erection Standard CFR 1926.750 Part R, which requires a minimum of four (4) anchor bolts per column. No single anchor bolt column base connection allowed.
- B. Design Method shall be per applicable The City of Arvada Engineering Code of Standards and Specifications for the design and construction of public improvements. Manufacturer's design shall utilize a three-dimensional structural analysis to determine all member loads and forces. Design and detailing shall be in compliance with AISC 341, Part I or III.
- C. Field labor shall be only for the assembly of the pre-fabricated parts. No onsite welding shall be required or permitted. Tube frame connection bolts and fasteners shall be concealed, within the tubing or hidden. All rafter tails shall be factory welded into place as well as all compression ring/tube covers. On multi-tiered buildings the rafter risers shall be welded to the lower rafters for ease of installation. No openings near the base of the column with screwed on cover plates. No through bolting shall be allowed for any connections due to the possibility of the deformation of the tube steel parts.

SUBMITTALS

- A. Submit a minimum of 2 sets of shop drawings and 2 sets of structural calculations signed and sealed by a Professional Engineer in the state of Colorado.
- B. Manufacturer shall provide site specific foundation design signed and sealed by a Professional Engineer in the state of Colorado. Generic or "typical" foundation details and design shall not be acceptable.

C. Structural calculations shall show the conformance to the International Building Code (IBC latest Edition).

DELIVERY, STORAGE, AND HANDLING

- A. Coordinate delivery requirements with Owner and other installers. Contractor is responsible for protection of site amenities, including Trolley and pavement and rails, pre-existing the delivery of structure.
- B. Store products in manner to prevent damage prior to installation. Where products need to be stored outdoors, store off the ground and place so that water will drain
- C. Inspect parts within 48 hours of delivery, compare with manufacturer's bill of materials and report any missing or non-conforming parts to the manufacturer within this time frame.

SC-23 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 accepted work performed under this item will be made in accordance with General Condition 2.16 and 2.17 of the City of Arvada Engineering Code of Standards and Specifications for the Design and Construction of Public Improvements.

SC-24 COMPLETION OF SERVICES:

The date of beginning and the time for completion of the work on City projects are essential conditions of the contract documents and the work embraced shall be commenced on the date specified in the Notice to Proceed.

The Contractor will proceed with the work at such rate of progress to ensure full completion within the contract time. It is expressly understood and agreed, by and between the Contractor and the Owner, that the contract time for the completion of the work described in the contract documents is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the work.

A daily charge will be made against the Contractor for each calendar day, including free time that any work remains uncompleted after the expiration of contract time. This daily charge, determined by the original contract amount for the project from the table herein below, will be deducted from any money due the Contractor. This deduction will be considered liquidated damages, not a penalty.

The general schedule of liquidated damages set forth below is an amount, agreed to by the Contractor and the Owner, as reasonably representing additional construction engineering costs incurred by the Owner if the Contractor fails to complete performance within the contract time on City or Arvada projects. Final determination of Liquidated Damages shall be determined by the Owner's Project Manager and will reside within the executed contract documents.

Liquidated Damages Schedule

Original Contract Amount		Daily Charge
From More Than	To and Including	
\$0	\$150,000	\$500
150,001	250,000	600
250,001	500,000	800
500,001	1,000,000	1,400
1,000,001	2,000,000	2,000
2,000,001	4,000,000	3,300
4,000,001	10,000,000	3,900

Over \$10,000,000 - daily charge will increase by \$300 increments for each \$1,000,000 over \$10,000,000.

Permitting the Contractor to continue and finish the work or any part thereof after elapse of contract time will not operate as a waiver on the part of the Owner of any of its rights under the contract.

Any deduction assessed as liquidated damages under this section shall not relieve the Contractor from liability for any damages or costs resulting from delays to other Contractors on the project or other projects caused by a failure of the assessed Contractor to complete the work according to contract times.

The Contractor shall not be charged with liquidated damages or any excess cost when a change in contract time is approved as outlined in Section 1121.07 - Time for Completion and Liquidated Damages, of the Engineering Code of Standards and Specifications, dated July 26, 2022.

The Owner shall have the right to deduct the amount of liquidated damages from any monies due or to become due to the Contractor, or to sue for and recover compensation for damages for non-performance of the work, from the Contractor and his surety, as stipulated in the contract documents.

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. _____.

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 _____, 2023, 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. _____ entitled _____ 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 their (add additional sheet if space below doesn't suffice):

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 calendar** days after the date to be specified in the Notice to Proceed. A Notice to Proceed is anticipated to be issued on or about **September 11, 2023**. The bidder shall agree to pay the owner the sum as identified in Section 1121.07 on the Engineering Code of Standards & Specifications dated July 26, 2022, for each calendar day that the work exceeds the executed contract time. Contract time may be adjusted by Change Order as approved by the Project Manager.

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. 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. **Missing information or required documents may result in submission being deemed non-responsive.**

- ☐ Submit completed City Submittal Forms including this sheet, Bid Bond, Bid Proposal, Bid Schedule, Performance Measures Form, and any other attachments requested.
- ☐ Submit proposed Construction Schedule
- ☐ 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 _____ #3 _____

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: _____

VENDOR NAME: _____

SOLICITATION #: 23-VCN-072

REQUIRED 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.

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 _____, 2023, a copy of which is hereto attached and made a part hereof, for the performance of City of Arvada Project No.'s _____.

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 _____, 2023.

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 Bid No. _____, _____

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 Parks & Urban Design Manager,

CITY OF ARVADA, COLORADO

Parks & Urban Design Manager

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 Bid No. _____, _____

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

Parks & Urban Design Manager

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>
--------------------	---------------------------	--------------------	--------------------	-------------------------	--------------------------

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

APPROVED AS TO FORM:

ACCEPTED FOR CONTRACTOR

For Rachael Morris, City Attorney

By: _____

Title: _____

Date: _____

By: _____



CITY OF ARVADA

PURCHASING DIVISION
FACSIMILE: 720-898-7098 ▲ TDD: 720-898-7869
PHONE: 720-898-7099

COMPETITIVE SEALED BID (CSB)- ADDENDUM NO. 1

CSB #: 23-VCN-072
Title: Garrison Garden Paseo Construction Services
RFP Issued: 8/9/2023
Addendum #: 1
Today's Date: 08/17/2023

Solicitation and all related addenda and communications are available at WWW.BIDNETDIRECT.COM.

The following Questions and Answers are from the pre-Bid meeting are provided here and to be incorporated into the CSB. The Pre-bid meeting agenda and attendance sheet is also attached here as part of the addendum.
All other information shall remain unchanged.

QUESTION + ANSWER
Q. Will the temporary fencing that is currently around the project site remain? <i>A. Brinkmann Constructors has a ROW fencing permit to prevent the public from entering the construction site. The contractor that is awarded the project will need their own permit for construction fencing, and Brinkmann will adjust theirs accordingly. There is also an existing chain link fence near the Community Gardens that the contractor will need to remove prior to construction. Coordination with the Community Garden group and Brinkmann staff will be essential for the project.</i>
Q. Will the Garrison Garden Paseo project start after the adjacent apartment complexes are completed? <i>A. No. The project will be built at the same time and will require coordination with Brinkmann Constructors. It will also be necessary for Brinkmann to tie into the storm sewer improvements within the project limits. Refer to the civil plans provided in the original Bid packet.</i>
Q. Please clarify the limit of work between the project and the Ralston Gardens apartment complex. <i>A. The property lines are shown on the bid plans, but the project landscape architect will be providing an exhibit to help clarify the project limits. The City will include the exhibit in an addendum once it is received.</i>



CITY OF ARVADA

PURCHASING DIVISION
FACSIMILE: 720-898-7098 ▲ TDD: 720-898-7869
PHONE: 720-898-7099

Q. Will the ditch water be redirected or shut off during construction?

A. Yes. The Swadley Ditch will need to temporarily closed during construction. The City of Arvada will assist the contractor with this process after the project is awarded.

Q. How long after the bid deadline will the project be awarded?

A. Arvada Parks and AURA will be reviewing the bid submittals and intend to make a decision within a day or two after the bid deadline. The City will award the project to the lowest qualified bidder and will send the intent to award letter to the contractor at that time.

Q. Can a construction trailer be installed on site?

A. The available space on the site is limited, but the City Parks Division will assist the contractor with locating a construction trailer, if needed. It may be necessary to locate it on the Community Gardens (City owned) property or in the ROW along 57th Place. The City Parks Department will help coordinate the ROW Access Only Permit Application with Public Works on behalf of the contractor.

Q. Who should we contact if we need access to the site in preparation of our bid?

A. If the bidder needs to take measurements or verify any existing conditions on site, they should contact Jeremy Hamm or Baptiste Debuire at Brinkmann to arrange for access. Their contact information is listed on the pre-bid meeting's attendance sheet that is included in addendum #1.

Q. The key notes on the plans specify both a gray concrete with medium broom finish (1.1A) and a sandscape concrete finish (1.1B), but the labels on the plans are just keyed 1.1. What type of finish is intended for the concrete flatwork?

A. All of the concrete flatwork should be bid as a gray concrete with a medium broom finish.

END OF Q & A



Pre-Bid Meeting Agenda

PROJECT NAME: 23-VCN-072 CSB - Garrison Garden Paseo

MEETING DATE/TIME: Date: August 15, 2023
Time: 10:00 – 11:00 am
Meeting Location: Project Site

1. Sign-in list for Pre-Bid attendee's
 - a. This meeting is mandatory
2. Introductions
 - a. Chad Hollingsworth – City of Arvada
 - b. Darin DeLay – City of Arvada
 - c. Cheryl Dye – City of Arvada
 - d. Carrie Briscoe – AURA
 - e. Chris Sutterfield – Confluence (landscape architect)
3. Project Overview
 - a. Area and limits of construction
 - b. Project scope - Items include, but not limited to:
 1. Demolition
 2. Erosion control
 3. Surveying and Staking
 4. Storm Water Management
 5. Demo, Removal and Site Protection
 6. Site Grading, Earthwork, and Drainage Improvements
 7. Traffic:
 - a. Control
 - b. Patching
 - c. Striping
 - d. Pavement Markings
 - e. Signage
 8. Utilities:
 - a. Fire Line
 - b. Fire Hydrant
 - c. Inlets
 - d. Manholes
 - e. Street Subgrade/Fill
 - f. Street Subbase
 - g. Storm Sewer
 9. Concrete Paving
 10. ADA Curb Ramp
 11. Concrete Curb and Gutter
 12. Concrete Edger - Flush
 13. Decomposed Granite
 14. Stone Slab Stairs with Railing
 15. Stone Slab Retaining Walls
 16. Concrete Seat Wall



17. Dry Stack Sandstone Slab Seat Walls
18. Custom Cut Stone Boulder with Sawn Top
19. Buff Sandstone Boulder
20. Complete Lighting System
21. Custom Fabricated Gates
22. Wire Mesh Fence
23. Interpretive Fence Panels
24. Interpretive Trellis Panels
25. Custom Hexagon Trellis
26. Trellis Guardrail
27. Play Structures
28. Welcome Signage
29. Drinking Fountain
30. Raised Plate Steel Planters
31. Mortar Set Stream Bed / Water Feature
32. Landscaping
33. Complete Irrigation System
34. Structural Engineering

4. Coordination Items:

- a. **Contractor to bid plans "As-is"**. No pre-approved substitutes prior to bidding.
 1. If no bid item exists for a portion of work, include the costs in a related bid item.
- b. Bidders, sub-contractors 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 July 26, 2022
- c. Bidding Dates:
 1. Question deadline: 8/22/2023 – 2:00 pm MT
 2. Bid due: 9/6/2023 – 2:00 pm MT
- d. Bid Security:
 1. 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 issue 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.
- e. Contract Security:
 1. 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.
- f. Contract Time: 270 calendar days after the Notice to Proceed
- g. Liquidated Damages: Refer to the Schedule in Section SC-24 of CSB
- h. Materials Testing: Provided and paid for by Contractor

5. Contractor questions

ATTENDANCE SHEET

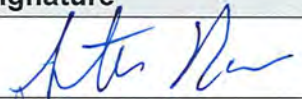
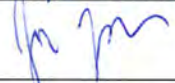
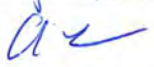
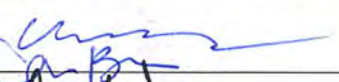
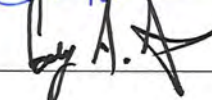
Bid # 23-VCN-072 Garrison Garden Paseo

Meeting Date/Time: 8/15/2023 – 10:00 am

Facilitator: Chad Hollingsworth

Place: 9222 West 58th

92

COMPANY NAME	Representative Name	Phone	E-Mail	Signature
CALAHAN	STEVEN H ROWE	303-960-5432	STEVE@CALAHAN.COM	
ACC	Justin Yarbrough	303-210-4228	justin.yarbrough@accbuilt.com	
KCI	Aaron Fenz	720 818 0403 303-776-5436	Bids@kciconst.com	
Brinkmann	Zach Flagler	710 289 5524		
BRINKMANN	BAPTISTE DEBRUIRE	720 296 0236	bdebruire@brinkmannconstructors.com	
ARVADA	MARIN DELAT	[REDACTED]	[REDACTED]	
Brinkmann	Jeremy Homan	720-326-4930	jhoman@brinkmannconstructors.com	
Confluence	Chris Sutterfield	720.334.3128	csutterfield@thinkconfluence.com	
AURA	Carrie Briscoe	[REDACTED]	[REDACTED]	
ECI	CODY SMITH	(970) 744-0209	CODY.SMITH@ECISITE.NET	
CHAD HOLLINGSWORTH - PM - ARVADA				
CHERYL DYE - PURCHASING - ARVADA			CDYE@ARVADA.ORG	



CITY OF ARVADA

PURCHASING DIVISION
FACSIMILE: 720-898-7098 ▲ TDD: 720-898-7869
PHONE: 720-898-7099

COMPETITIVE SEALED BID (CSB)- ADDENDUM NO. 2

CSB #: 23-VCN-072
Title: Garrison Garden Paseo Construction Services
RFP Issued: 8/9/2023
Addendum #: 2
Today's Date: 08/25/2023

Solicitation and all related addenda and communications are available at WWW.BIDNETDIRECT.COM.

The following: "Exhibit – Limit of Work" is provided here and to be incorporated into the CSB.

Due to the large number of bid questions received by the deadline, Arvada Parks anticipates that the answers to those questions will be posted in Addendum #3 by Wednesday, August 30th.

All other information shall remain unchanged.

GARRISON STREET PASEO
CONSTRUCTION DRAWINGS
GARRISON STREET - ARVADA, CO 80002

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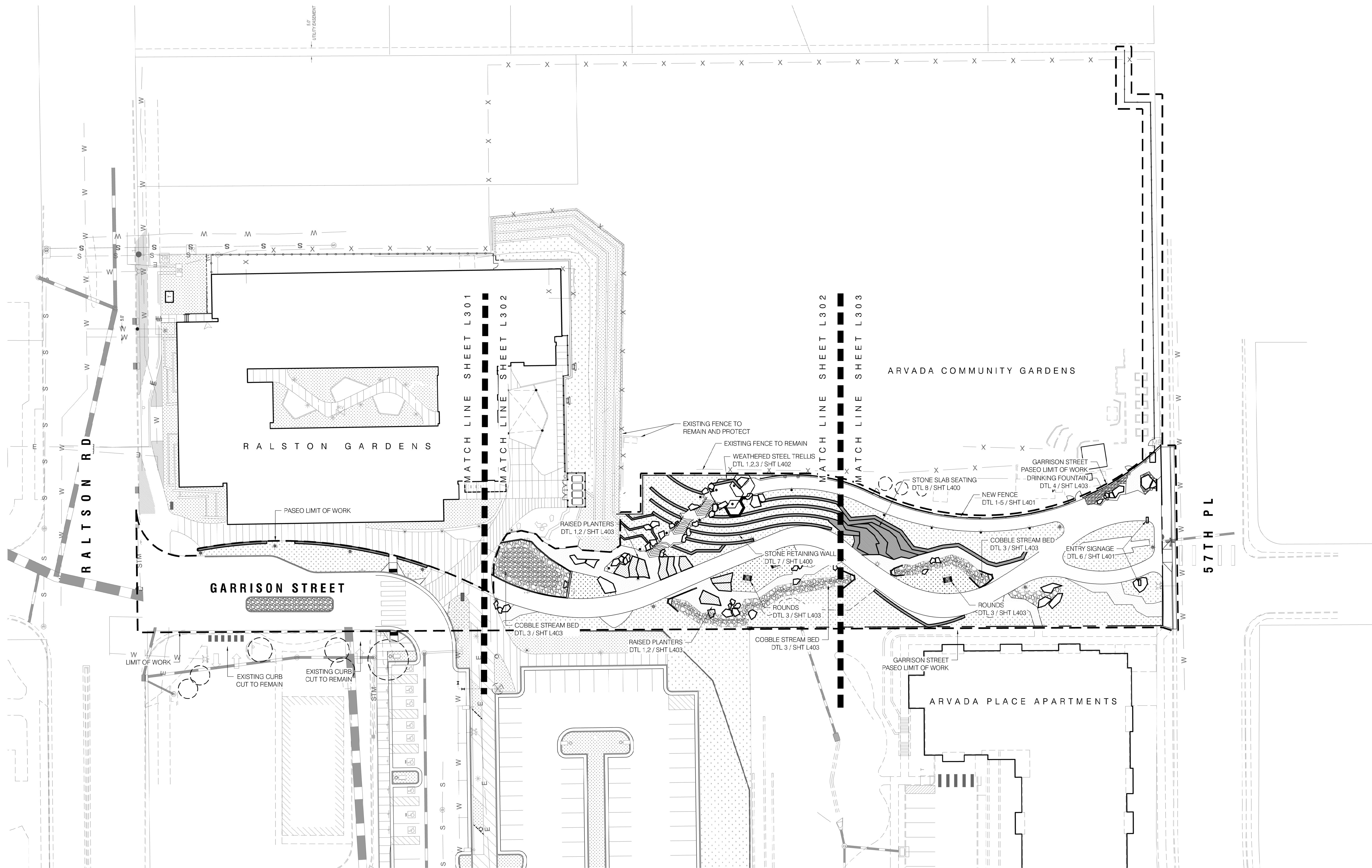
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DATE:	07.21.2023
DRAWN BY:	ED
CHECKED BY:	CS

OVERALL
LANDSCAPE PLAN

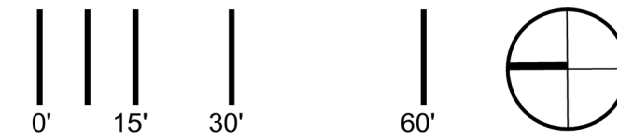
L100

SHEET 2 OF 15



1
L100 OVERALL LANDSCAPE PLAN

SCALE: 1"=30'



Please note that solicitations issued prior to September 07, 2016 can be found here: <http://legacy.rockymountainbidsystem.com>



Addendum Description

Addendum No 2 contains the document - "Exhibit - Limit of Work"

Notice Modifications

Notice Information	From Value	To Value
No entries		

Category Modifications

Added Categories
No Categories Added

Removed Categories
No Categories Removed

Added Documents[A]

Document	Size	Uploaded Date	Language
Addendum 2 - 23-VCN-072 Exhibit - Limit of Work [pdf]	3 Mb	08/25/2023 10:39 AM MDT	English

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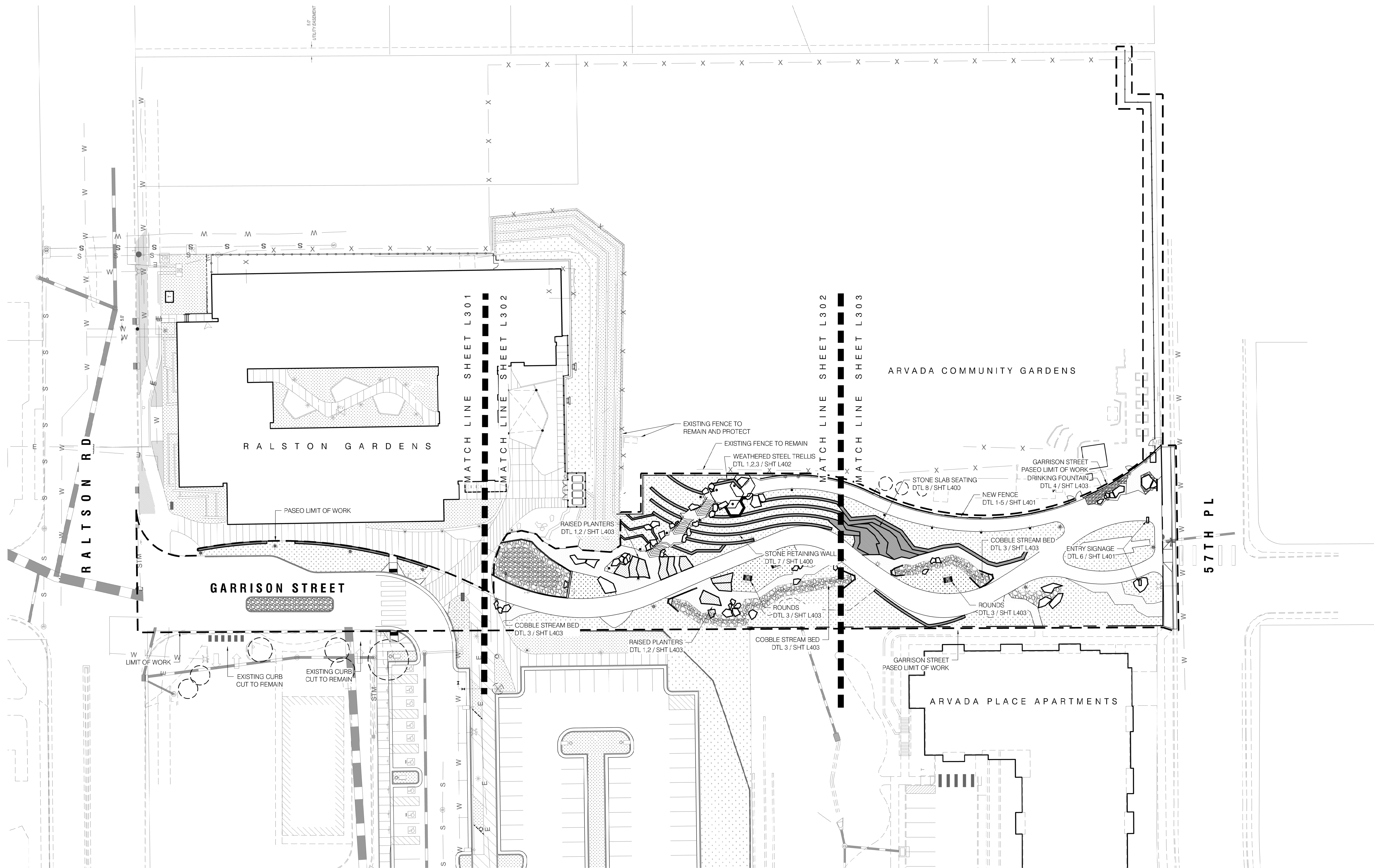
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CHECKED BY:	CS

OVERALL
LANDSCAPE PLAN

L100

SHEET 2 OF 15



1
L100 OVERALL LANDSCAPE PLAN



CITY OF ARVADA

PURCHASING DIVISION
FACSIMILE: 720-898-7098 ▲ TDD: 720-898-7869
PHONE: 720-898-7099

COMPETITIVE SEALED BID (CSB)- ADDENDUM NO. 3

CSB #: 23-VCN-072
Title: Garrison Garden Paseo Construction Services
RFP Issued: 8/9/2023
Addendum #: 3
Today's Date: 08/31/2023

Solicitation and all related addenda and communications are available at WWW.BIDNETDIRECT.COM.

The due date for bids has been changed to **September 28, 2023 at 11:00 am MT**.

After reviewing the questions sent by the bidders, it was determined that the bid plans will need to be revised accordingly. Barring any unforeseen circumstances, the City of Arvada will issue the answers to the bid questions along with the revised plans in Addendum #4 by September 15, 2023.

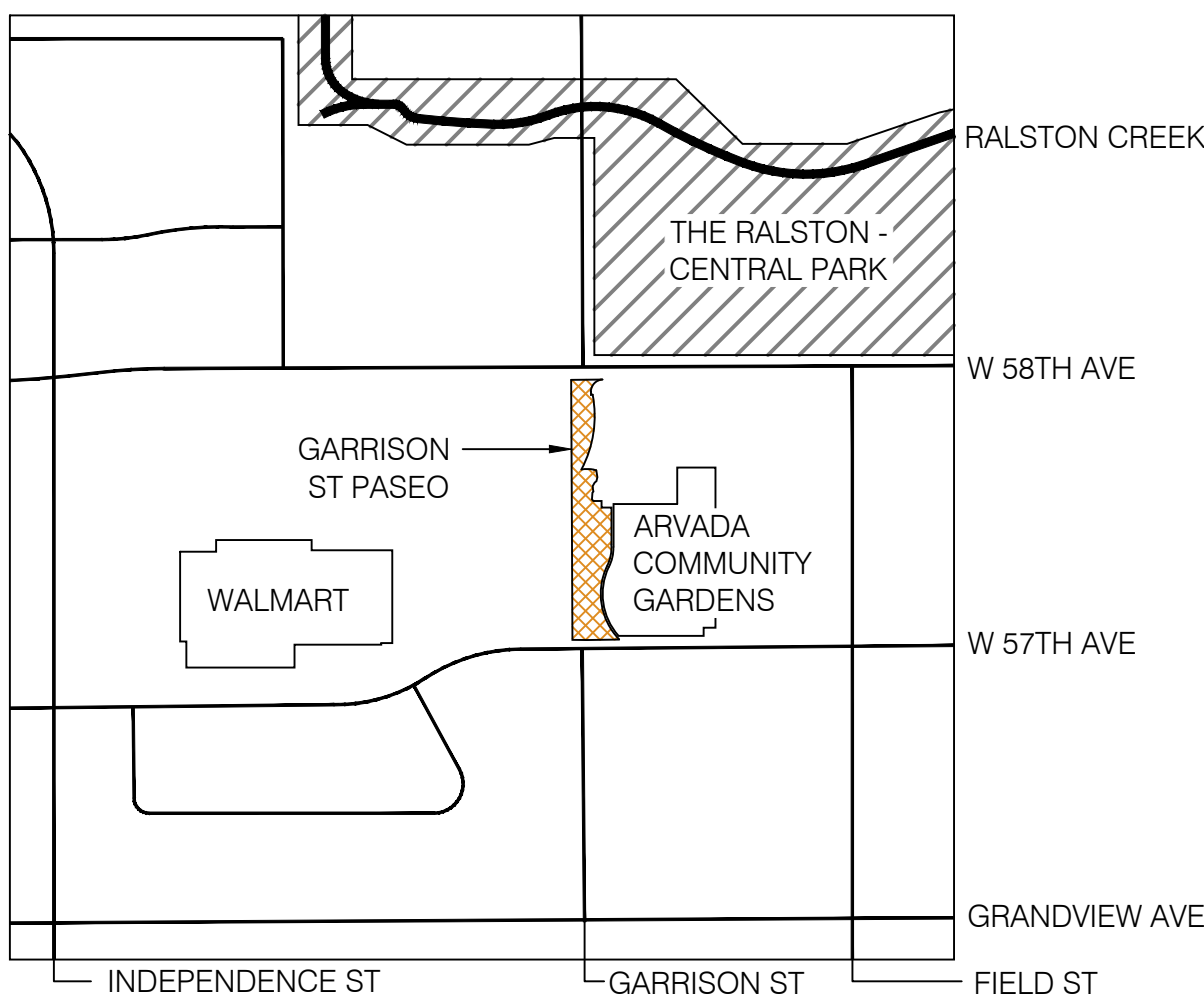
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SHEET LIST

SHT NUMBER	SHEET TITLE	CD4.1	INTERIM EROSION CONTROL PLAN	CD7.4	DRAINAGE DETAILS
000	COVER SHEET	CD4.2	FINAL EROSION CONTROL PLAN	CD8.0	UTILITY PLAN
L000	LANDSCAPE COVER SHEET	CD4.3	EROSION CONTROL DETAILS	CD9.0	SIGNAGE & STRIPING PLAN
L100	OVERALL LANDSCAPE PLAN	CD4.4	EROSION CONTROL DETAILS	CD9.1	SIGNAGE & STRIPING PLAN
L200	LAYOUT AND MARTIAL PLAN - NORTH	CD5.0	SITE PLAN	IR100	IRRIGATION NOTES AND SCHEDULE
L201	LAYOUT AND MARTIAL PLAN - CENTRAL	CD5.1	SITE PLAN	IR200	IRRIGATION PLAN NORTH
L202	LAYOUT AND MARTIAL PLAN - SOUTH	CD5.2	SITE PLAN DETAILS	IR201	IRRIGATION PLAN CENTRAL
L203	FENCE AND GATE LAYOUT	CD5.3	SITE PLAN DETAILS	IR202	IRRIGATION PLAN SOUTH
L300	OVERALL PLANTING PLAN	CD5.4	SITE PLAN DETAILS	IR300	IRRIGATION DETAILS
L301	PLANTING PLAN - NORTH	CD6.0	GRADING PLAN	IR301	IRRIGATION DETAILS
L302	PLANTING PLAN - CENTRAL	CD6.1	GRADING PLAN	S-001	STRUCTURAL NOTES
L303	PLANTING PLAN - SOUTH	CD6.2	R.O.W. & ADA RAMP GRADING PLAN	S-101	STRUCTURAL PLANS
L400	LANDSCAPE DETAILS	CD6.3	PASEO CROSS SECTION PLAN	S-201	PARTIAL PLANS
L401	LANDSCAPE DETAILS	CD6.4	PASEO CROSS SECTION PLAN	S-301	STRUCTURAL DETAILS
L402	LANDSCAPE DETAILS	CD6.5	SIDEWALK PROFILE	E0.00	ELECTRICAL PLAN, ONELINE, NOTES & SCHEDULES
L403	LANDSCAPE DETAILS	CD6.6	WALL PROFILE	E1.00	ELECTRICAL PLAN
L404	LANDSCAPE DETAILS	CD6.7	WALL PROFILE	WF1.0	WATER FEATURE COVER SHEET
CD1.0	COVER SHEET	CD6.8	WALL PROFILE	WF2.0	WATER FEATURE PLAN
CD2.0	NOTES	CD7.0	DRAINAGE PLAN & PROFILE	WF2.1	WATER FEATURE PLAN
CD3.0	DEMOLITION PLAN	CD7.1	DRAINAGE PLAN & PROFILE	WF3.0	WATER FEATURE DETAILS
CD3.1	DEMOLITION PLAN	CD7.2	DRAINAGE PLAN & PROFILE	WF3.1	WATER FEATURE DETAILS
CD4.0	INITIAL EROSION CONTROL PLAN	CD7.3	DRAINAGE PLAN & PROFILE		

CONTEXT MAP



CONFLUENCE

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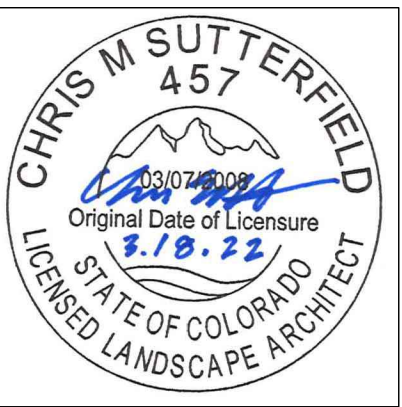
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COVER SHEET

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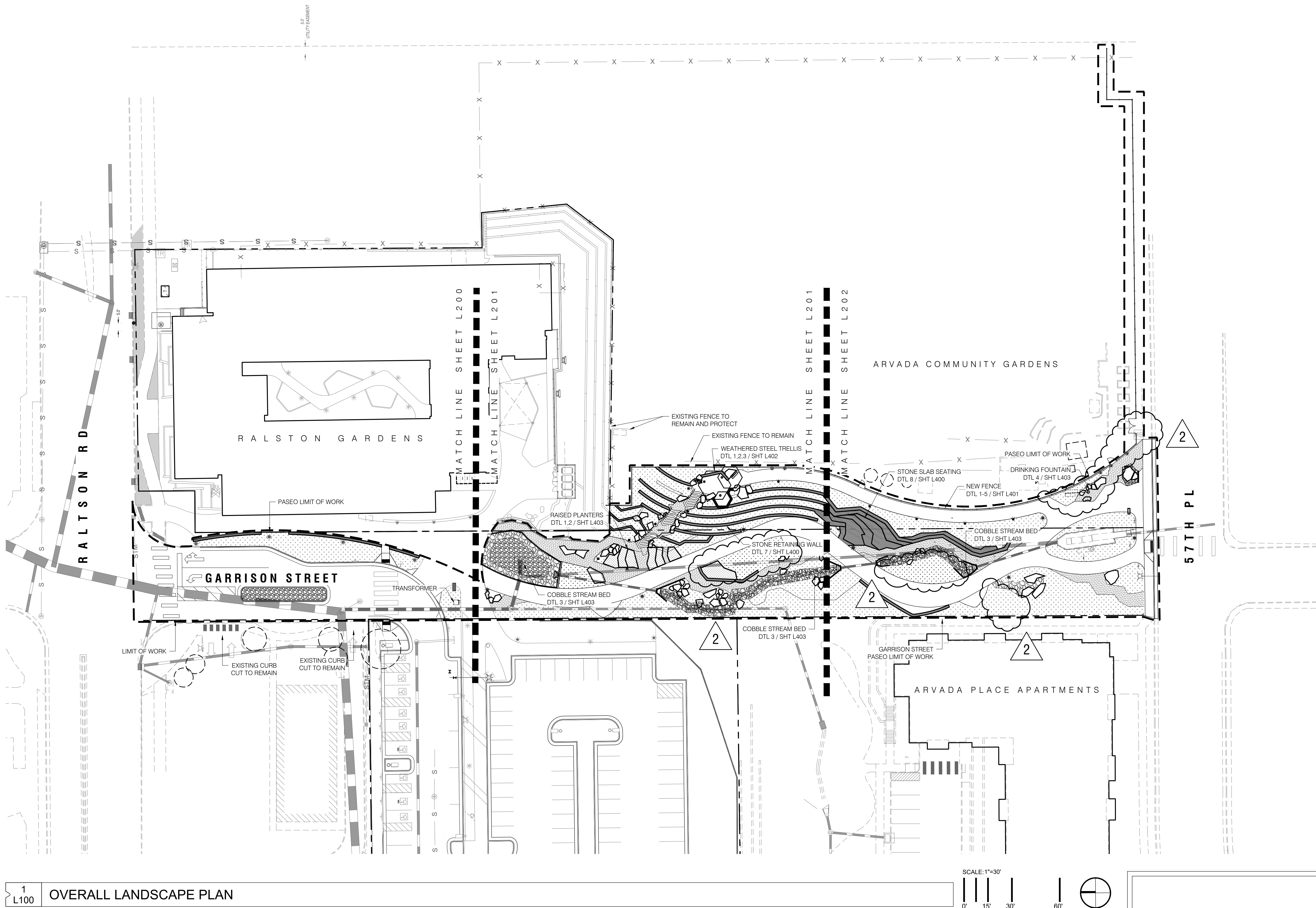
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NO.	DATE	BY
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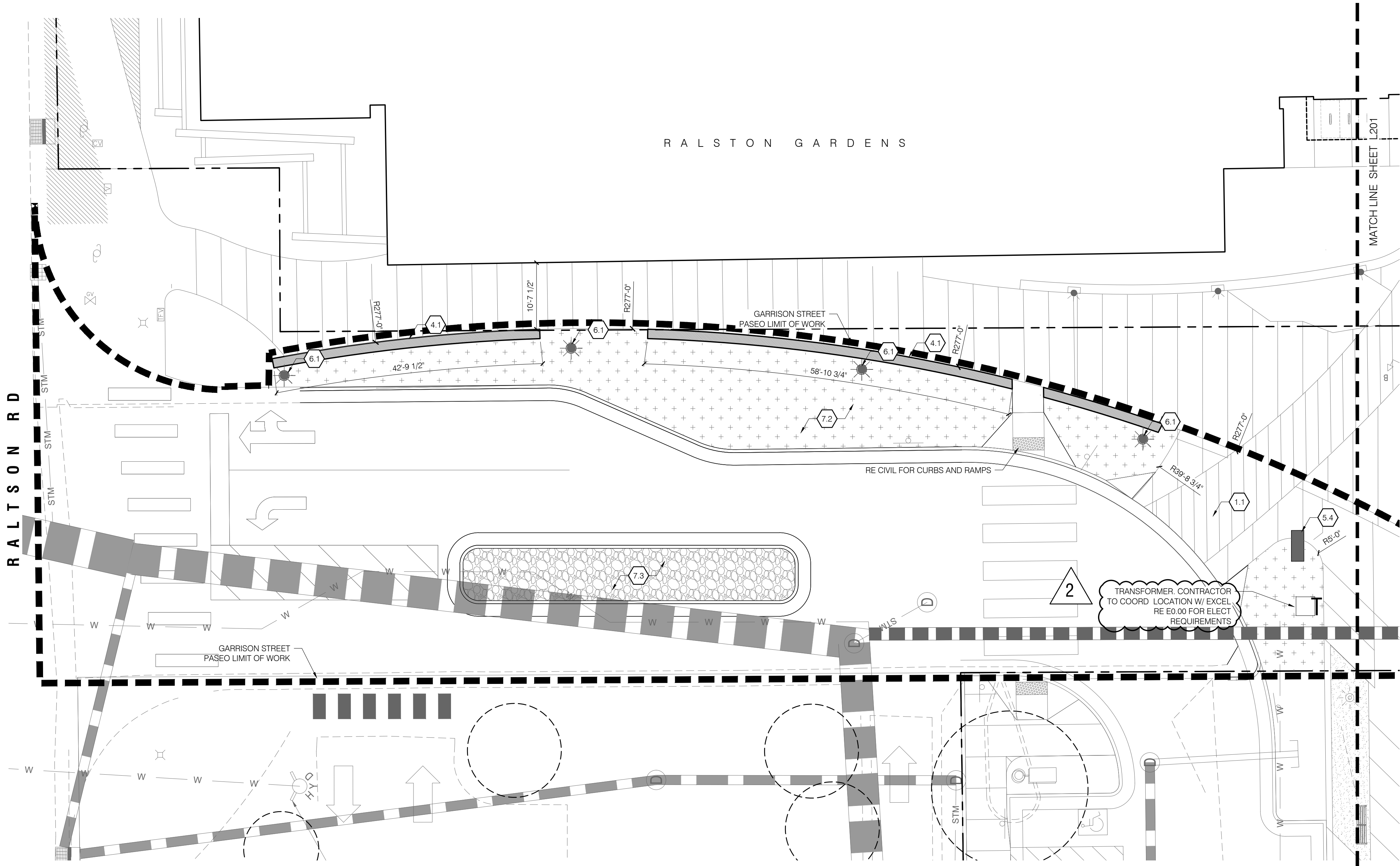
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OVERALL
LANDSCAPE PLAN

L100

SHEET 2 OF 15





M A T E R I A L L E G E N D

- CIP CONC PVMT, GRAY, MEDIUM BROOM FIN
SAWN JTS
- DECOMPOSED GRANITE
- PLANTING AREA
- BUFFALOGRASS TURF
- WATER FEATURE STREAMBED

M A T E R I A L K E Y N O T E S

- EXISTING CONDITIONS
 - EXISTING CURB & GUTTER TO REMAIN PROTECT
 - EXISTING STREET LIGHT TO REMAIN PROTECT
- PAVING
 - CIP CONC PAVING, GRAY, SAWN JTS, MED BROOM FIN
 - DECOMPOSED GRANITE
- PAVEMENT JOINTING
 - EXPANSION JOINT
 - SAWN CONTROL JOINT
- CURBS, EDGES, STEPS
 - CIP CONC EDGER FLUSH
 - STONE SLAB STAIRS
- WALLS
 - CIP CONC SEAT WALL
 - STONE RETAINING WALL
 - STONE SLAB SEAT WALL
- SITE FURNISHINGS AND SITE ELEMENTS
 - CUSTOM FABRICATED GATE
 - WIRE MESH FENCING
 - PUNCHED METAL PANELS - INTERPRETIVE PANELS
 - WELCOME SIGN
 - CUSTOM SHADE STRUCTURE
 - RAISED PLATE STEEL PLANTERS
 - PLAY STRUCTURE
 - DRINKING FOUNTAIN
 - RAILING
- SITE LIGHTING
 - PED LIGHT TYPE 1
 - ALCOTT BY LANDSCAPE FORMS
 - BOLLARD LIGHT
 - RUSTY SLOT 80 BY SLV LIGHTING
 - PATH LIGHT
 - PATHLIGHT 70 BY SLV LIGHTING
 - DOWN LIGHT
 - 9002-W1-RW-LED3090-M-BZ-L1-UNV BY LUMIERE
 - IN GRADE UP-LIGHT
 - 3002A-RD-18LED3000-MFL-NSL-UNV-BZ BY LUMIERE
 - RECESSED WALL LIGHT
- PLANTING
 - DECIDUOUS TREE
 - ORNAMENTAL TREE
 - EVERGREEN TREE
 - PLANTING AREA
 - ROCK MULCH - LARGE
 - ROCK MULCH - SMALL
 - IRRIGATED TURF
 - BUFF SANDSTONE BOULDER
 - BUFF SANDSTONE BOULDER - SAWN

CONFLUENCE

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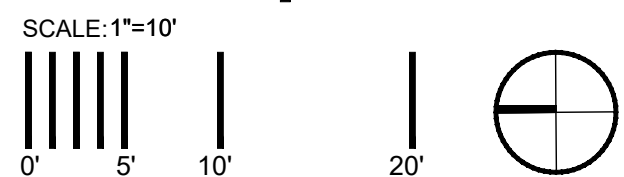
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LAYOUT AND MATERIAL PLAN - NORTH

L200

SHEET 3 OF 15





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LAYOUT AND
MATERIAL PLAN -
CENTRAL

L201

SHEET 4 OF 15

M A T E R I A L K E Y N O T E S

- | | | |
|------|--|----------------|
| 0.0 | EXISTING CONDITIONS | |
| 0.1 | EXISTING CURB & GUTTER TO REMAIN PROTECT | |
| 0.2 | EXISTING STREET LIGHT TO REMAIN PROTECT | |
| 1.0 | PAVING | |
| 1.1 | CIP CONC PAVING, GRAY, SAWN JTS, MED BROOM FIN | DTL 1/L400 |
| 1.2 | DECOMPOSED GRANITE | DTL 4/L400 |
| 2.0 | PAVEMENT JOINTING | |
| 2.1 | EXPANSION JOINT | DTL 2/L400 |
| 2.2 | SAWN CONTROL JOINT | DTL 2/L400 |
| 3.0 | CURBS, EDGES, STEPS | |
| 3.1 | CIP CONC EDGER FLUSH | DTL 4/L400 |
| 3.2 | STONE SLAB STAIRS | DTL 5/L400 |
| 4.0 | WALLS | |
| 4.1 | CIP CONC SEAT WALL | DTL 6/L400 |
| 4.2 | STONE RETAINING WALL | DTL 7/L400 |
| 4.3 | STONE SLAB SEAT WALL | DTL 8/L400 |
| 5.0 | SITE FURNISHINGS AND SITE ELEMENTS | |
| 5.1 | CUSTOM FABRICATED GATE | DTL 1/L401 |
| 5.2 | WIRE MESH FENCING | DTL 2.3/L401 |
| 5.3 | PUNCHED METAL PANELS - INTERPRETIVE PANELS | DTL 4/L401 |
| 5.4 | WELCOME SIGN | DTL 5/L401 |
| 5.5 | CUSTOM SHADE STRUCTURE | DTL 1.2.3/L402 |
| 5.6 | RAISED PLATE STEEL PLANTERS | DTL 1.2/L403 |
| 5.7 | PLAY STRUCTURE | DTL 3/L403 |
| 5.8 | DRINKING FOUNTAIN | DTL 4/L403 |
| 5.9 | RAILING | DTL 1/L402 |
| 6.0 | SITE LIGHTING | |
| 6.1 | PED LIGHT TYPE 1 | RE ELECT |
| 6.2 | ALCOTT BY LANDSCAPE FORMS | RE ELECT |
| 6.3 | BOLLARD LIGHT | RE ELECT |
| 6.4 | RUSTY SLOT 80 BY SLV LIGHTING | RE ELECT |
| 6.5 | PATH LIGHT | RE ELECT |
| 6.6 | PATHLIGHT 70 BY SLV LIGHTING | RE ELECT |
| 6.7 | DOWN LIGHT | RE ELECT |
| 6.8 | 3002-W1-RW-LED3090-M-BZ-L1-UNV BY LUMIERE | RE ELECT |
| 6.9 | IN GRADE UP-LIGHT | RE ELECT |
| 6.10 | 3002A-RD-18LED3000-MFL-NSL-UNV-BZ BY LUMIERE | RE ELECT |
| 6.11 | RECESSED WALL LIGHT | RE ELECT |
| 7.0 | PLANTING | |
| 7.1A | DECIDUOUS TREE | DTL 1/L404 |
| 7.1B | ORNAMENTAL TREE | DTL 3/L404 |
| 7.1C | EVERGREEN TREE | DTL 2/L404 |
| 7.2 | PLANTING AREA | DTL 5/L404 |
| 7.3 | ROCK MULCH - LARGE | DTL 6/L404 |
| 7.4 | ROCK MULCH - SMALL | DTL 6/L404 |
| 7.5 | IRRIGATED TURF | DTL 7/L404 |
| 7.6A | BUFF SANDSTONE BOULDER | DTL 9/L404 |
| 7.6B | BUFF SANDSTONE BOULDER - SAWN | DTL 9/L404 |

M A T E R I A L L E G E N D

CIP CONC P/MT, GRAY, MEDIUM BROOM FIN
SAWN JTS

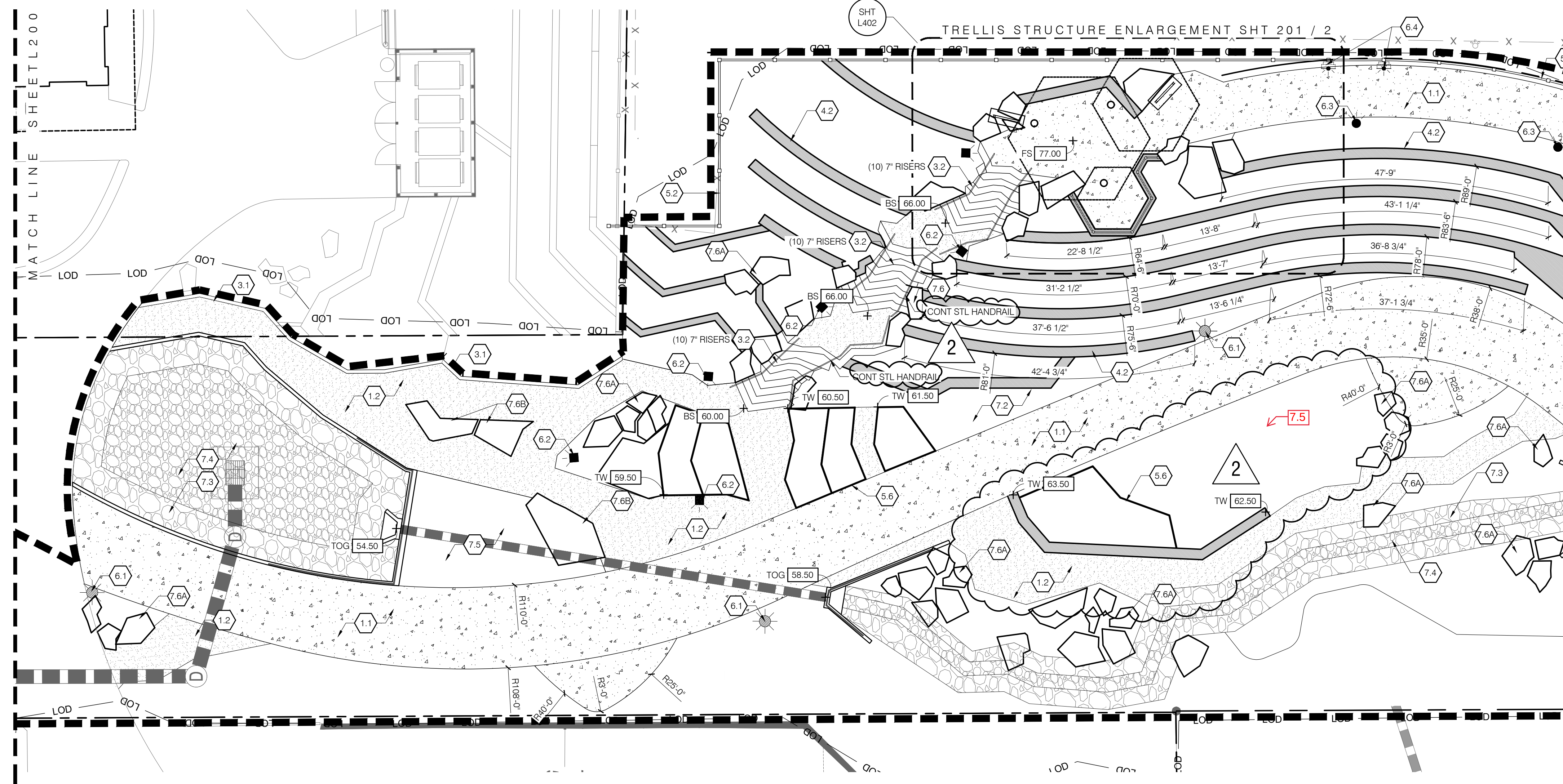
DECOMPOSED GRANITE

WATER FEATURE STREAMBED

SCALE: 1"=10'



SCALE: 1"=4'

2
L201 SHADE STRUCTURE ENLARGEMENT1
L201 LAYOUT AND MATERIAL PLAN - CENTRAL

GARRISON STREET PASEO
CONSTRUCTION DRAWINGS
GARRISON STREET - ARVADA, CO 80002

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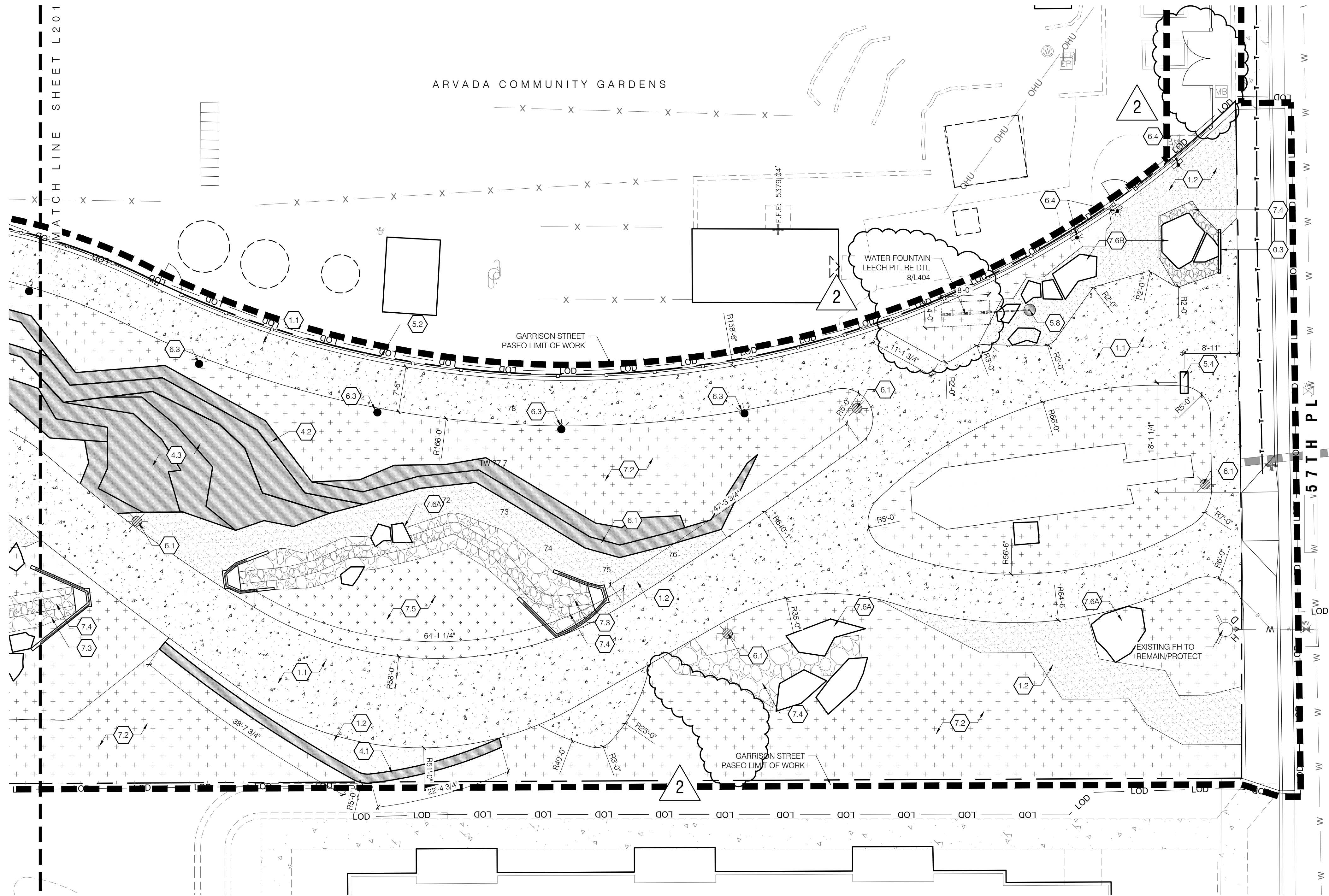
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2	09.15.2023	

DATE: 07.21.2023
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LAYOUT AND MATERIAL PLAN - SOUTH

L202

SHEET 5 OF 15



MATERIAL KEYNOTES

0.0	EXISTING CONDITIONS	
0.1	EXISTING CURB & GUTTER TO REMAIN/PROTECT	
0.2	EXISTING STREET LIGHT TO REMAIN/PROTECT	
1.0	PAVING	
1.1	CIP CONC PAVING, GRAY, SAWN JTS, MED BROOM FIN	DTL 1/L400
1.2	DECOMPOSED GRANITE	DTL 4/L400
2.0	PAVEMENT JOINTING	
2.1	EXPANSION JOINT	DTL 2/L400
2.2	SAWN CONTROL JOINT	DTL 2/L400
3.0	CURBS, EDGES, STEPS	
3.1	CIP CONC EDGER FLUSH	DTL 4/L400
3.2	STONE SLAB STAIRS	DTL 5/L400
4.0	WALLS	
4.1	CIP CONC SEAT WALL	DTL 6/L400
4.2	STONE RETAINING WALL	DTL 7/L400
4.3	STONE SLAB SEAT WALL	DTL 8/L400
5.0	SITE FURNISHINGS AND SITE ELEMENTS	
5.1	CUSTOM FABRICATED GATE	DTL 1/L401
5.2	WIRE MESH FENCING	DTL 2/L401
5.3	PUNCHED METAL PANELS - INTERPRETIVE PANELS	DTL 4/L401
5.4	WELCOME SIGN	DTL 5/L401
5.5	CUSTOM SHADE STRUCTURE	DTL 1.2.3/L402
5.6	RAISED PLATE STEEL PLANTERS	DTL 1.2/L403
5.7	PLAY STRUCTURE	DTL 3/L403
5.8	DRINKING FOUNTAIN	DTL 4/L403
5.9	RAILING	DTL 1/L402
6.0	SITE LIGHTING	
6.1	PED LIGHT TYPE 1	RE ELECT
6.2	ALCOTT BY LANDSCAPE FORMS	RE ELECT
6.3	BOLLARD LIGHT	RE ELECT
6.4	RUSTY SLOT 80 BY SLV LIGHTING	RE ELECT
6.5	PATH LIGHT	RE ELECT
6.6	PATHLIGHT 70 BY SLV LIGHTING	RE ELECT
6.7	DOWN LIGHT	RE ELECT
6.8	3002-WV1-RW-LED3090-M-BZ-L1-UNV BY LUMIERE	RE ELECT
6.9	IN GRADE UP-LIGHT	RE ELECT
6.10	3002A-RD-18LED3000-MFL-NSL-UNV-BZ BY LUMIERE	RE ELECT
6.11	RECESSED WALL LIGHT	RE ELECT
7.0	PLANTING	
7.1A	DECIDUOUS TREE	DTL 1/L404
7.1B	ORNAMENTAL TREE	DTL 3/L404
7.1C	EVERGREEN TREE	DTL 2/L404
7.2	PLANTING AREA	DTL 5/L404
7.3	ROCK MULCH - LARGE	DTL 6/L404
7.4	ROCK MULCH - SMALL	DTL 6/L404
7.5	IRRIGATED TURF	DTL 7/L404
7.6A	BUFF SANDSTONE BOULDER	DTL 9/L404
7.6B	BUFF SANDSTONE BOULDER - SAWN	DTL 9/L404

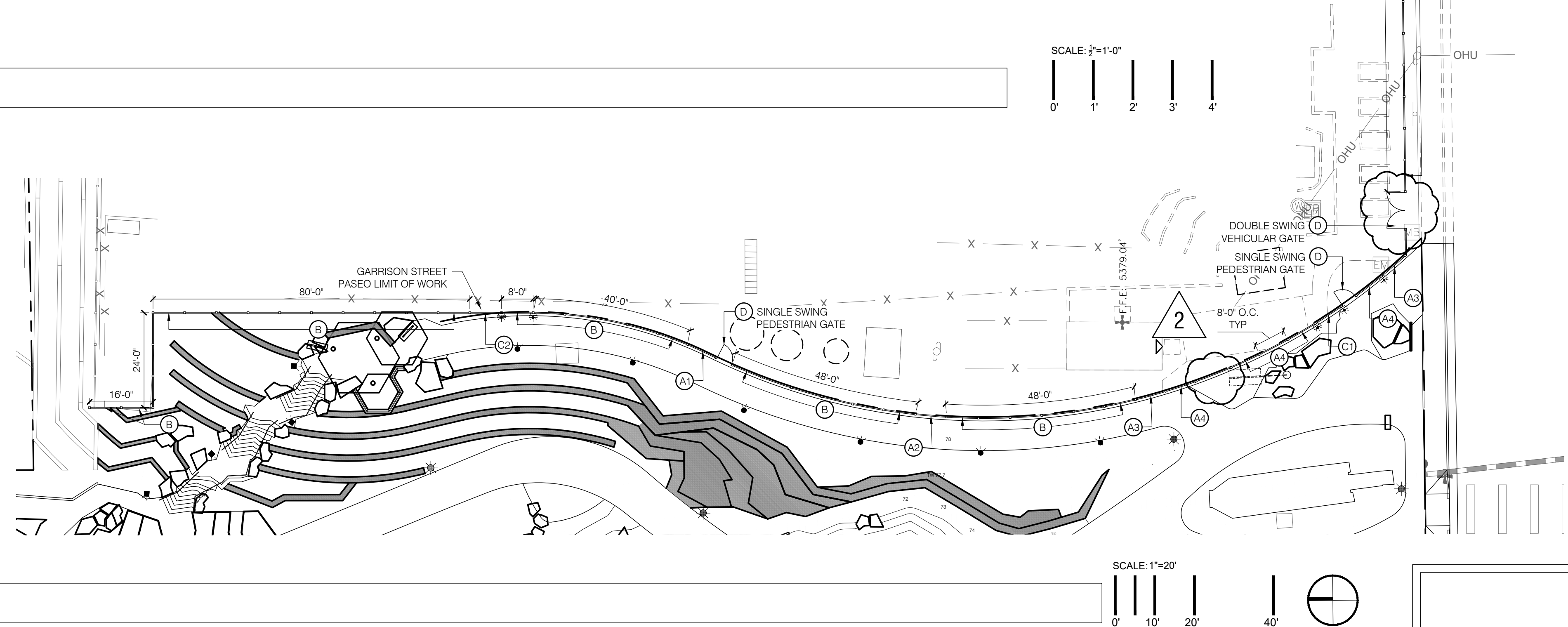
MATERIAL LEGEND

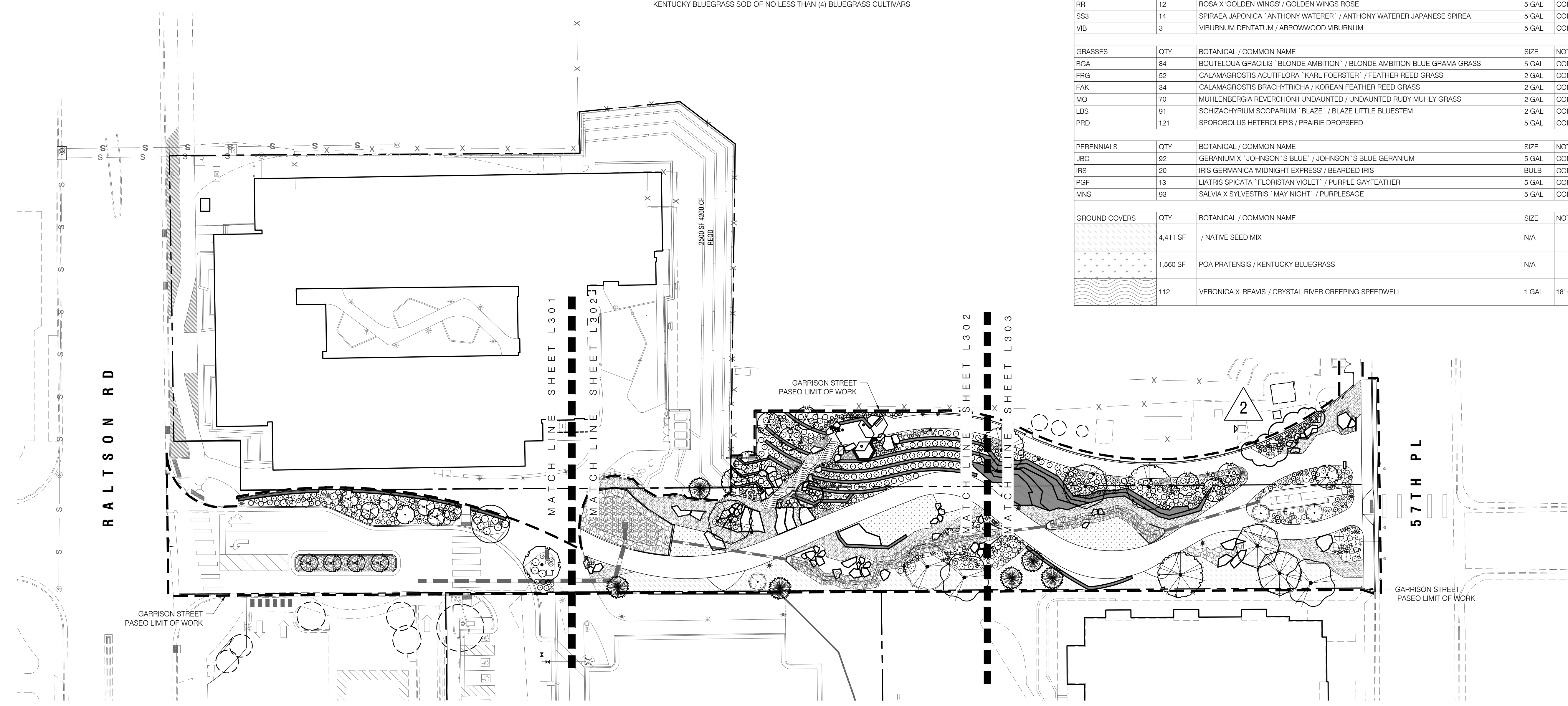
	CIP CONC PAVING, GRAY, MEDIUM BROOM FIN SAWN JTS
	DECOMPOSED GRANITE
	PLANTING AREA
	IRRIGATED TURF
	WATER FEATURE STREAMBED





SHEET 6 OF 15





1
L300 OVERALL PLANTING PLAN

NATIVE SEED MIX

COMMON NAME	BOTANICAL NAME
20% TETRAPLOID PERENNIAL	LOLIUM PRENNE
20% SMOOTH BROME	BROMUS INERMIS
15% PAIUTE ORCHARDGRASS	DACTYLIS GLOMERATA
15% HYCREST CRESTED WHEATGRASS	AGROPYRON CRISTATUM
15% PUBESCENT WHEATGRASS	AGROPYRON TRICHOPIHORUM
15% DAHURIAN WILDRYE	ELYMUS DAHURICUS

DRILL SEED RATE: 6.88 PLS#/ACRE
BROADCAST RATE: 13.76 PLS#/ACRE
SMALL AREAS RATE: 27.52 PLS#/ACRE

TURFGRASS

KENTUCKY BLUEGRASS SOD OF NO LESS THAN (4) BLUEGRASS CULTIVARS

PLANTING SCHEDULE

PLANT SCHEDULE				
DECIDUOUS TREES	QTY	BOTANICAL / COMMON NAME	SIZE	NOTES
AT	2	ACER RUBRUM 'RED SUNSET' / RED SUNSET MAPLE	B & B	2' CAL
SWO	1	QUERCUS BICOLOR / SWAMP WHITE OAK	B & B	2' CAL
CSO	1	QUERCUS ROBUR 'CRIMSCHMIDT' / CRIMSON SPIRE OAK	B & B	2' CAL
SMO	2	QUERCUS ROBUR 'SKYMASTER' / SKYMASTER ENGLISH OAK	B & B	2' CAL
QG2	3	QUERCUS X MACDANIELI 'CLEMONS' / HERITAGE® OAK	B & B	2' CAL
FRE	4	ULMUS X 'FRONTIER' / FRONTIER ELM	B & B	2' CAL
EVERGREEN TREES				
SHO	6	PICEA PUNGENS 'HOOPSII' / HOOPSI BLUE SPRUCE	B & B	8'
BP	3	PINUS LEUCODERMIS / BOSNIAN PINE	B & B	8'
ORNAMENTAL TREES				
AM	10	AMELANCHIER CANADENSIS / SHADBLOW SERVICEBERRY	B & B	8' CLMP
SAB	7	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE' / AUTUMN BRILLIANCE SERVICEBERRY	B & B	8' CLMP
AMC	1	MALUS X 'MCINTOSH' / MCINTOSH APPLE	B & B	2' CAL
AJO	1	MALUS X 'PUMILA' / JONATHAN APPLE	B & B	2' CAL
BTC	1	PRUNUS AVIUM 'BLACK TARTARIAN' / BLACK TARTARIAN CHERRY	B & B	2' CAL
DECIDUOUS SHRUBS				
DN	19	CHRYSOETHAMNUS NAUSEOSUS NAUSEOSUS / DWARF BLUE BARBERRY	5 GAL	CONT
PL	4	PHYSOCARPUS OPULIFOLIUS 'LITTLE DEVIL' / LITTLE DEVIL DWARF NINEBARK	5 GAL	CONT
DEC	1	PRUNUS BESSEYI 'PAWNEE BUTTES' / CREEPING WESTERN SAND CHERRY	5 GAL	CONT
GLS	166	RHUS AROMATICA 'GRO-LOW' / GRO-LOW FRAGRANT SUMAC	5 GAL	CONT
RR	12	ROSA X 'GOLDEN WINGS' / GOLDEN WINGS ROSE	5 GAL	CONT
SS3	14	SPIRAEA JAPONICA 'ANTHONY WATERER' / ANTHONY WATERER JAPANESE SPIREA	5 GAL	CONT
VIB	3	VIBURNUM DENTATUM / ARROWWOOD VIBURNUM	5 GAL	CONT
GRASSES				
BGA	84	BOUTELOUA GRACILIS 'BLONDE AMBITION' / BLONDE AMBITION BLUE GRAMA GRASS	5 GAL	CONT
FRG	52	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER' / FEATHER REED GRASS	2 GAL	CONT
FAK	34	CALAMAGROSTIS BRACHYTRICHA / KOREAN FEATHER REED GRASS	2 GAL	CONT
MO	70	MUHLENBERGIA REVERCHONII UNDAUNTED / UNDAUNTED RUBY MUHLY GRASS	2 GAL	CONT
LBS	91	SCHIZACHYRIUM SCOPARIUM 'BLAZE' / BLAZE LITTLE BLUESTEM	2 GAL	CONT
PRD	121	SPOROBOLUS HETEROLEPIS / PRAIRIE DROPSEED	5 GAL	CONT
PERENNIALS				
JBC	92	GERANIUM X 'JOHNSON'S BLUE' / JOHNSON'S BLUE GERANIUM	5 GAL	CONT
IRS	20	IRIS GERMANICA 'MIDNIGHT EXPRESS' / BEARDED IRIS	BULB	CONT
PGF	13	LIATRIS SPICATA 'FLORISTAN VIOLET' / PURPLE GAYFEATHER	5 GAL	CONT
MNS	93	SALVIA X SYLVESTRIS 'MAY NIGHT' / PURPLESAGE	5 GAL	CONT
GROUND COVERS				
	QTY	BOTANICAL / COMMON NAME	SIZE	NOTES
	4,411 SF	/ NATIVE SEED MIX	N/A	
	1,560 SF	POA PRATENSIS / KENTUCKY BLUEGRASS	N/A	
	112	VERONICA X REAVIS / CRYSTAL RIVER CREEPING SPEEDWELL	1 GAL	18" O.C.



GARRISON STREET PASEO
CONSTRUCTION DRAWINGS
GARRISON STREET - ARVADA, CO 80002

20-147



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NO.	DATE	BY
2	09.15.2023	

DATE: 07.21.2023
DRAWN BY: ED
CHECKED BY: CS

OVERALL PLANTING
PLAN

L300

SHEET 7 OF 15

GARRISON STREET PASEO
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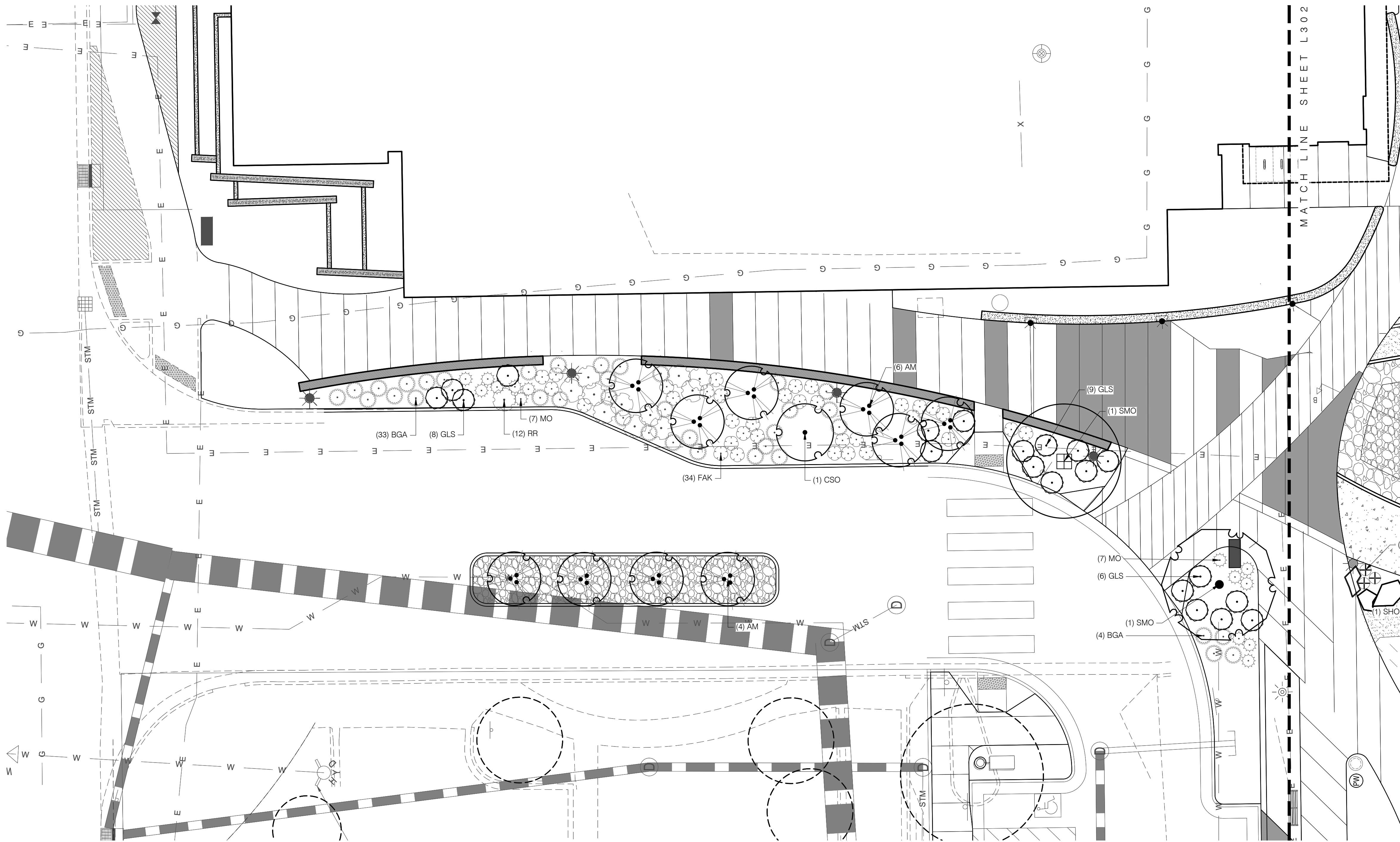
REVISION:		
NO.	DATE	BY

DATE:	07.21.2023
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CHECKED BY:	CS

PLANTING PLAN -
NORTH

L301

SHEET 8 OF 15



1
L301 PLANTING PLAN - NORTH



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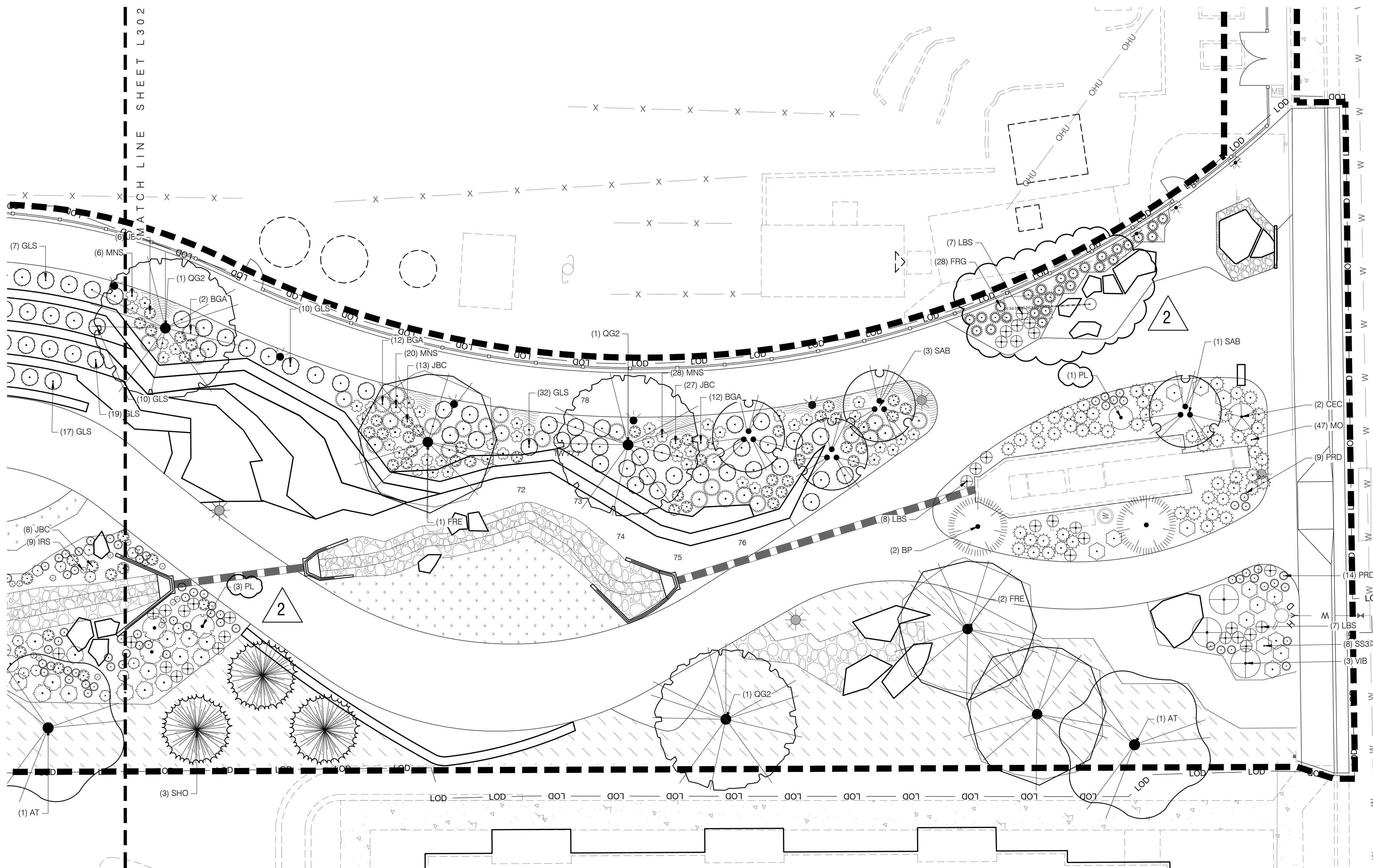
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NO.	DATE	BY
2	09.15.2023	

DATE: 07.21.2023
DRAWN BY: ED
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PLANTING PLAN -
SOUTH

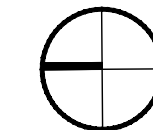
L303

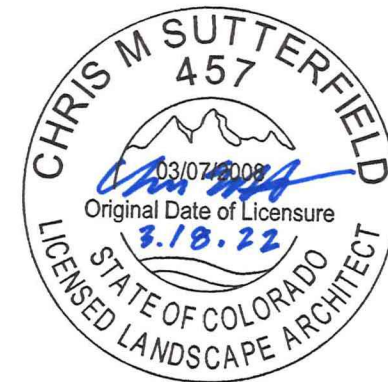
SHEET 10 OF 15



1
L303 PLANTING PLAN - SOUTH

SCALE: 1"=10'





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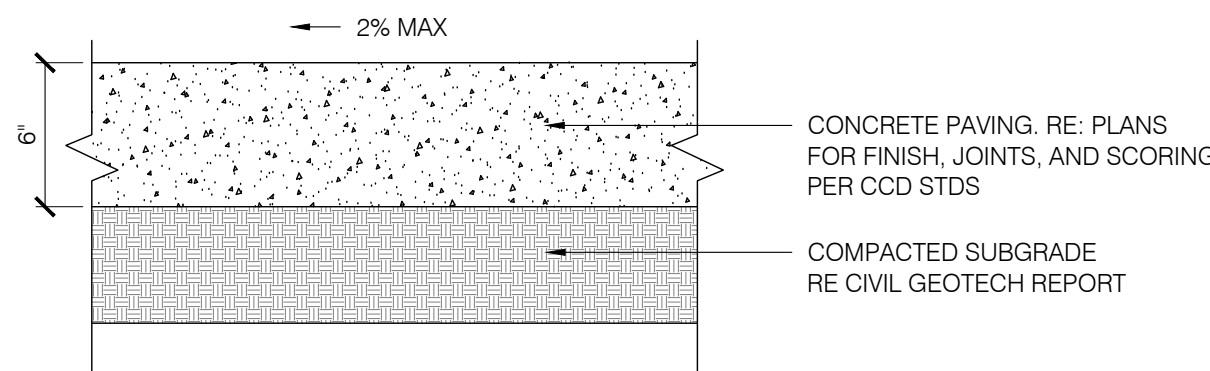
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NO.	DATE	BY	
2	08.29.2023		

DATE: 07.21.2023
DRAWN BY: ED
CHECKED BY: CS

LANDSCAPE
DETAILS

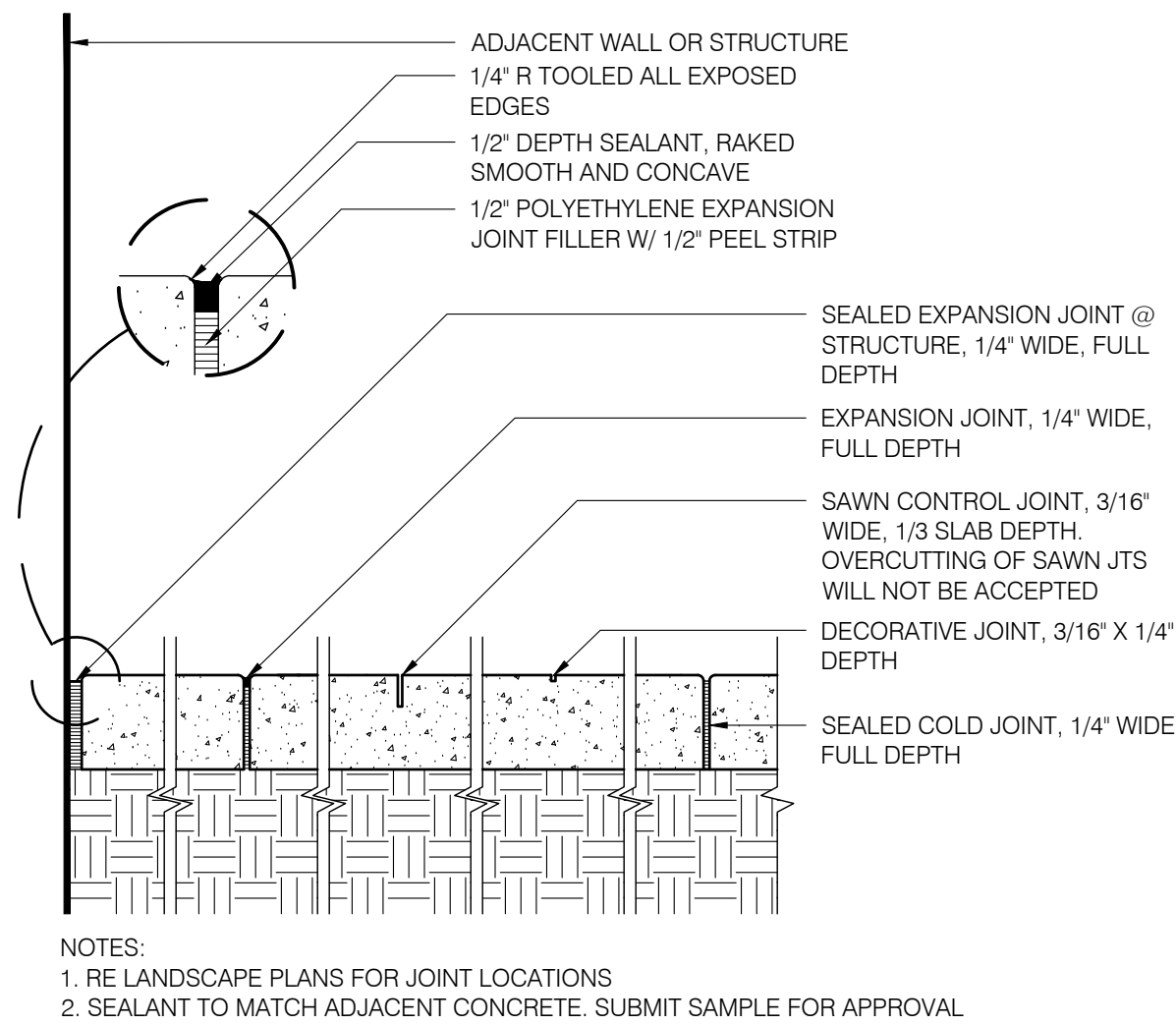
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SHEET 11 OF 15



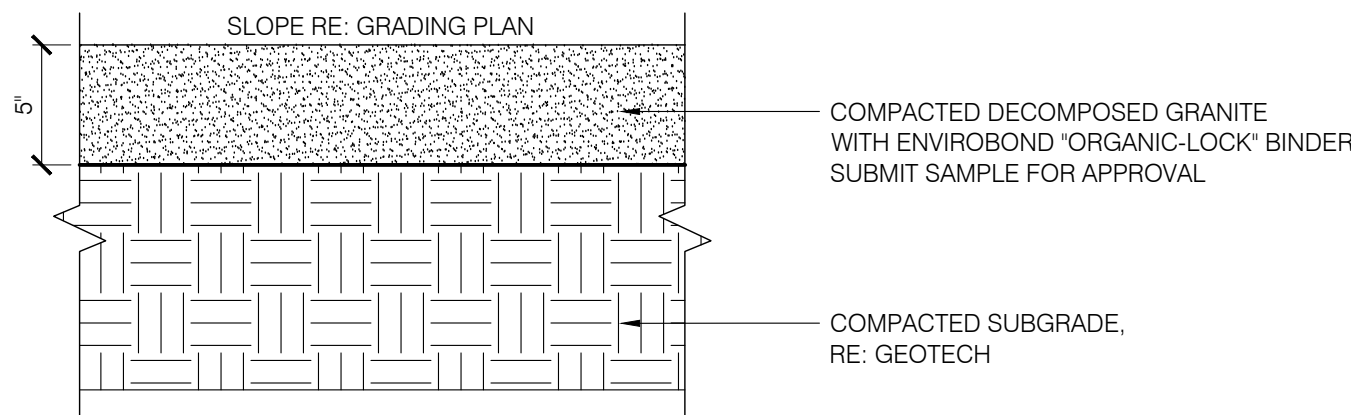
1 CONC ON-GRADE

1 1/2" = 1'-0"



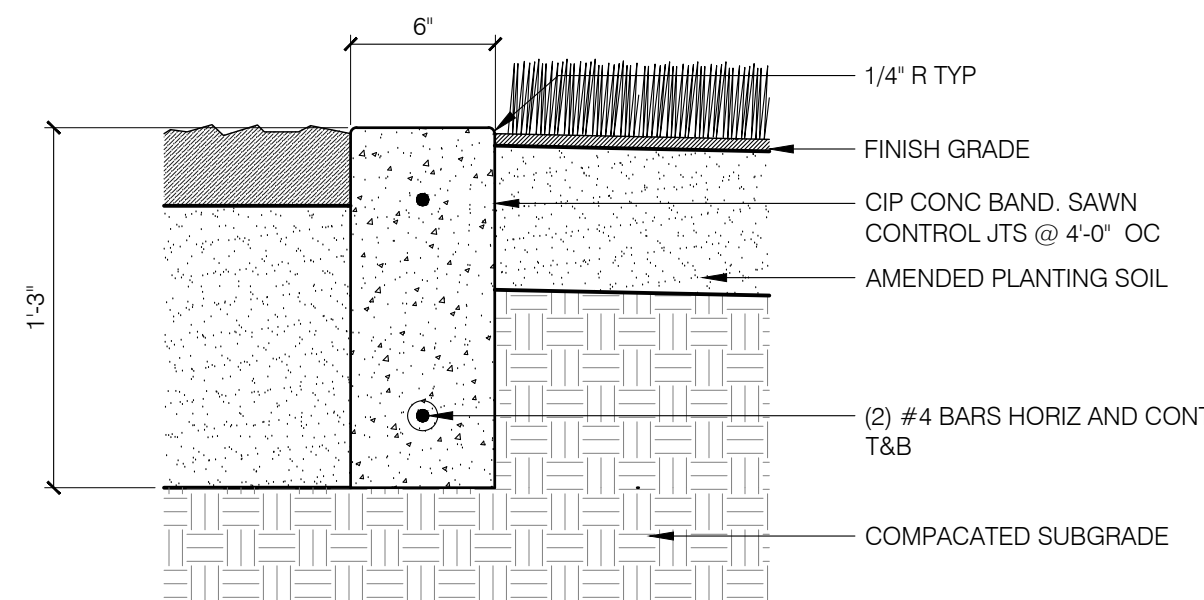
2 CONC JOINTING

1 1/2" = 1'-0"



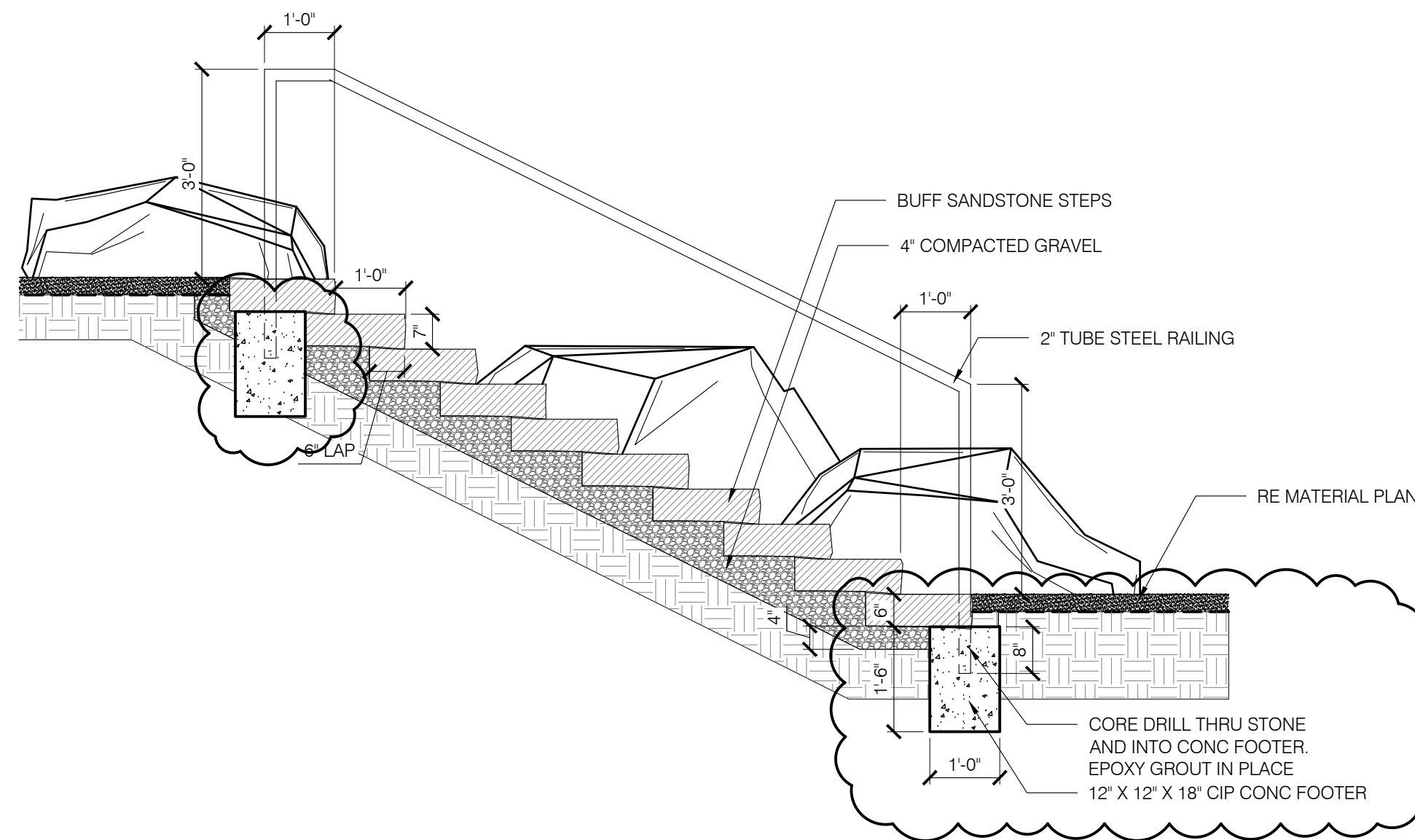
3 DECOMPOSED GRANITE

1 1/2" = 1'-0"



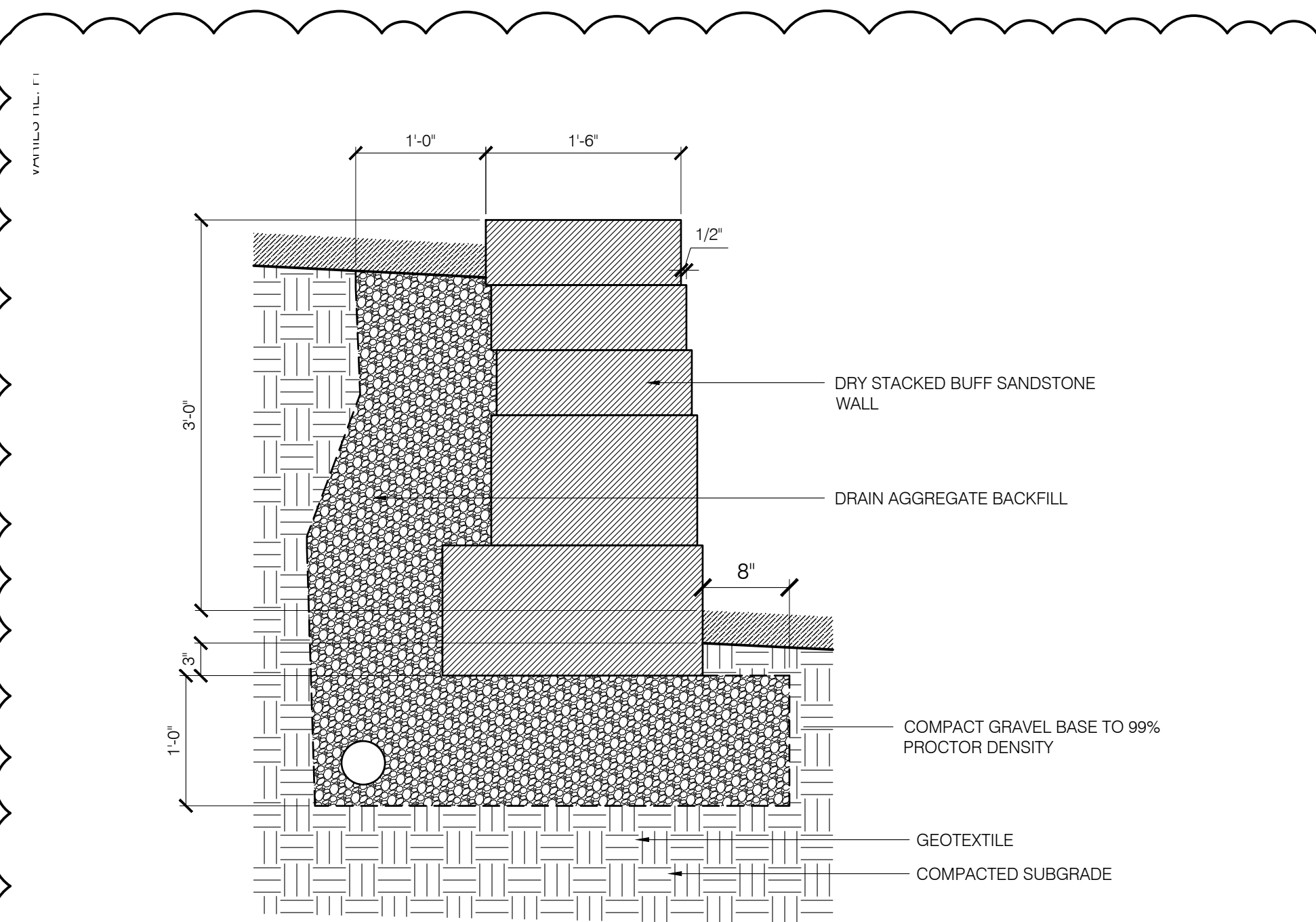
4 CIP CONC EDGER

1 1/2" = 1'-0"



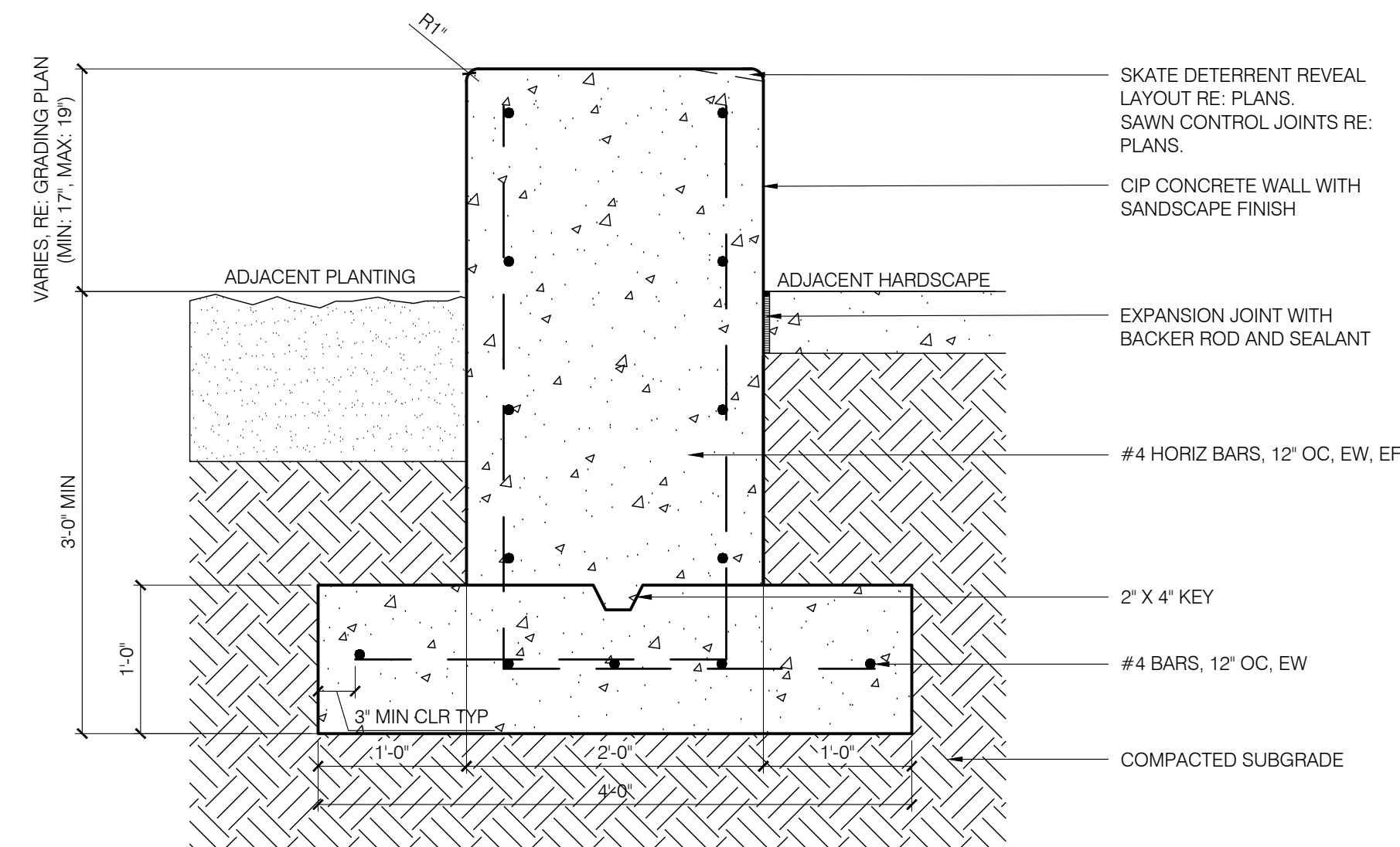
5 STONE SLAB STEPS

1/2" = 1'-0"



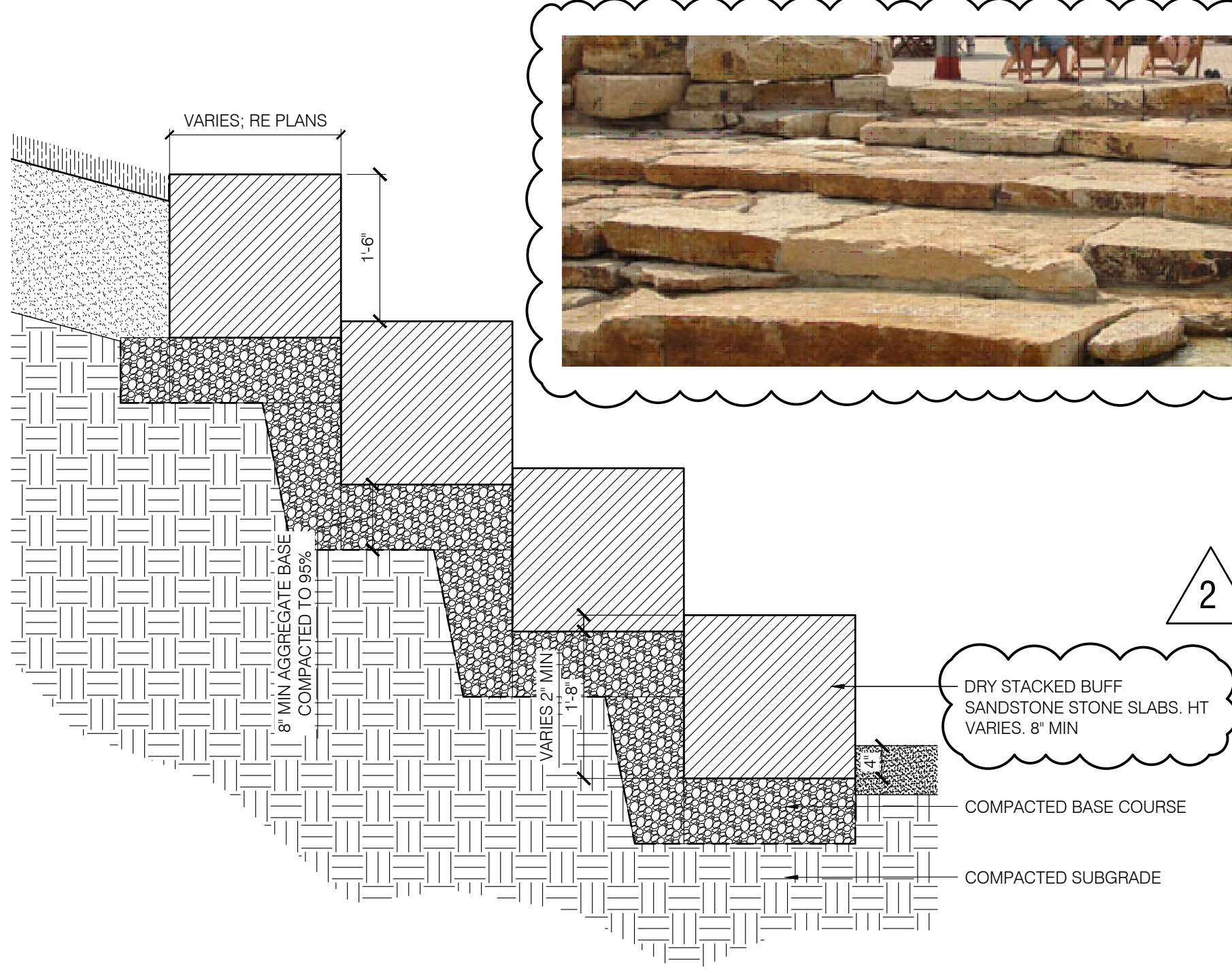
7 STONE RETAINING WALL

3/4" = 1'-0"



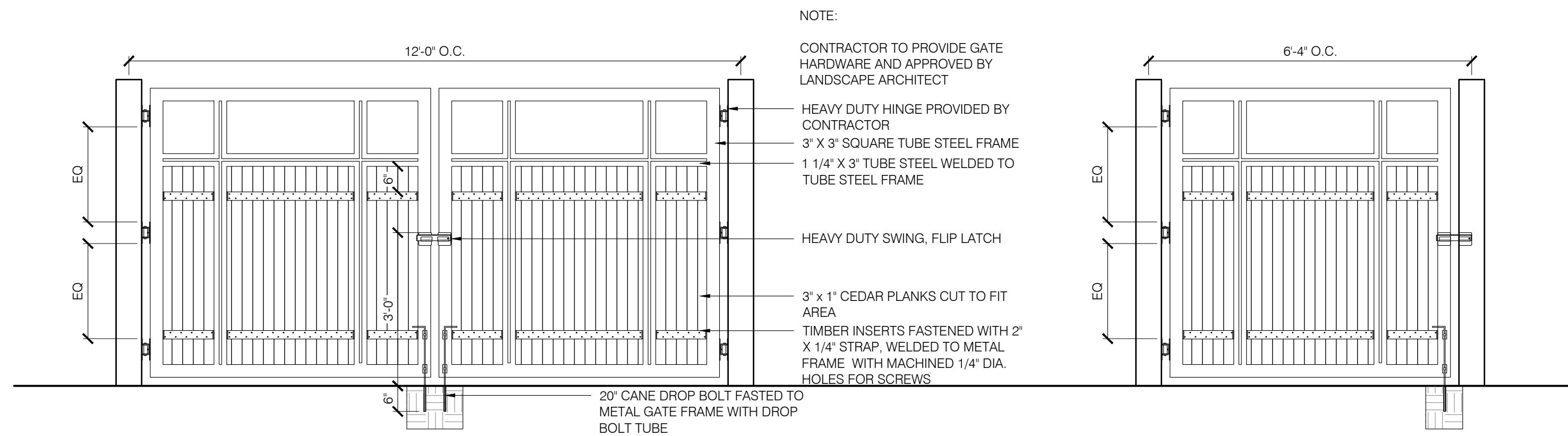
6 CIP CONC SEAT WALL

1" = 1'-0"



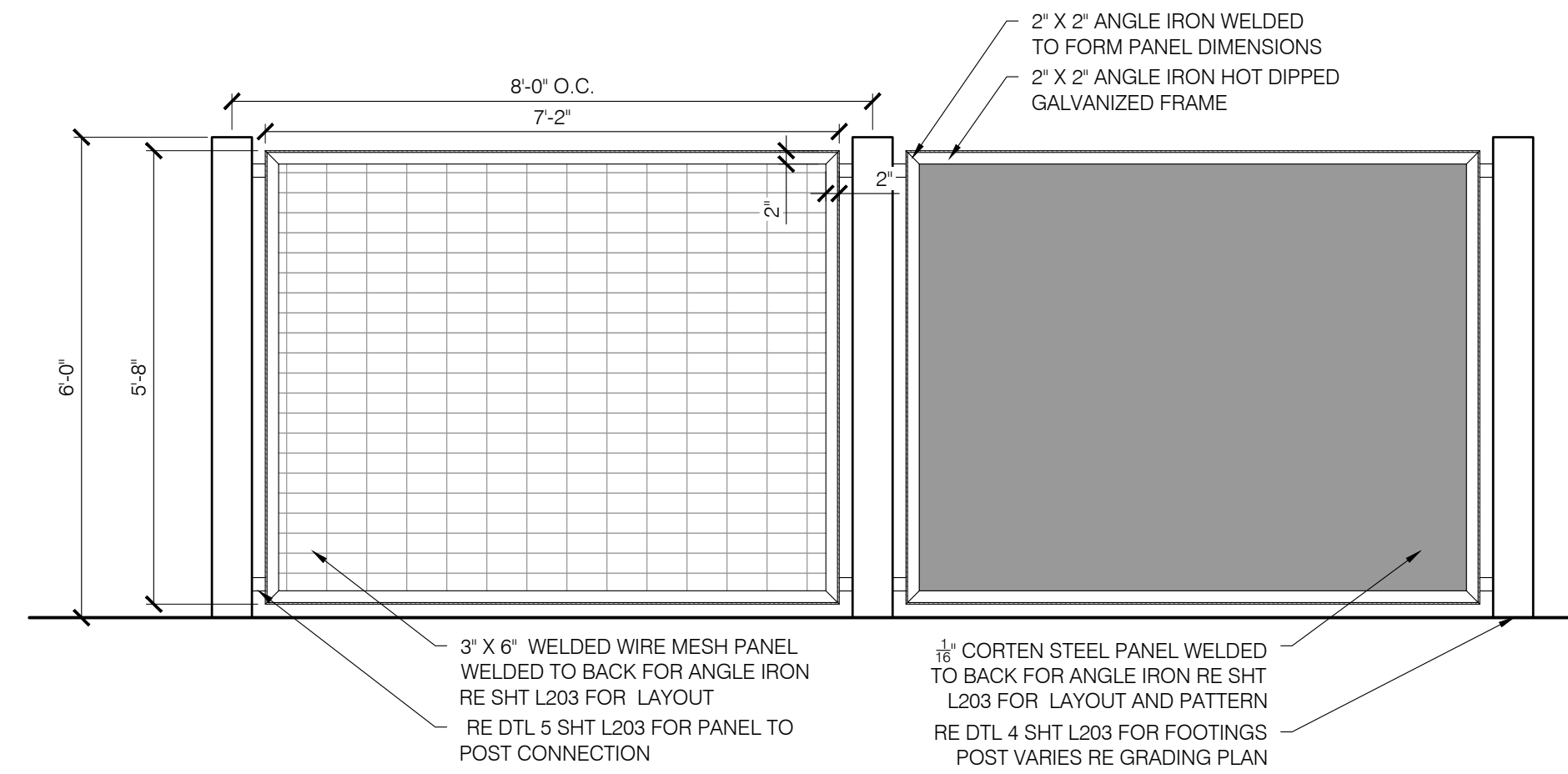
8 STONE SLAB SEAT WALL

3/4" = 1'-0"



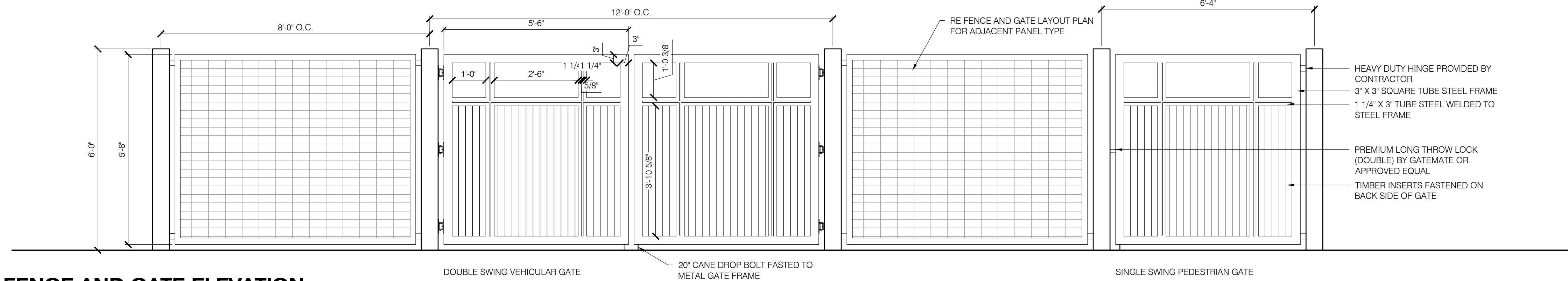
1 DOUBLE & SINGLE SWING GATE

1/2" = 1'-0"



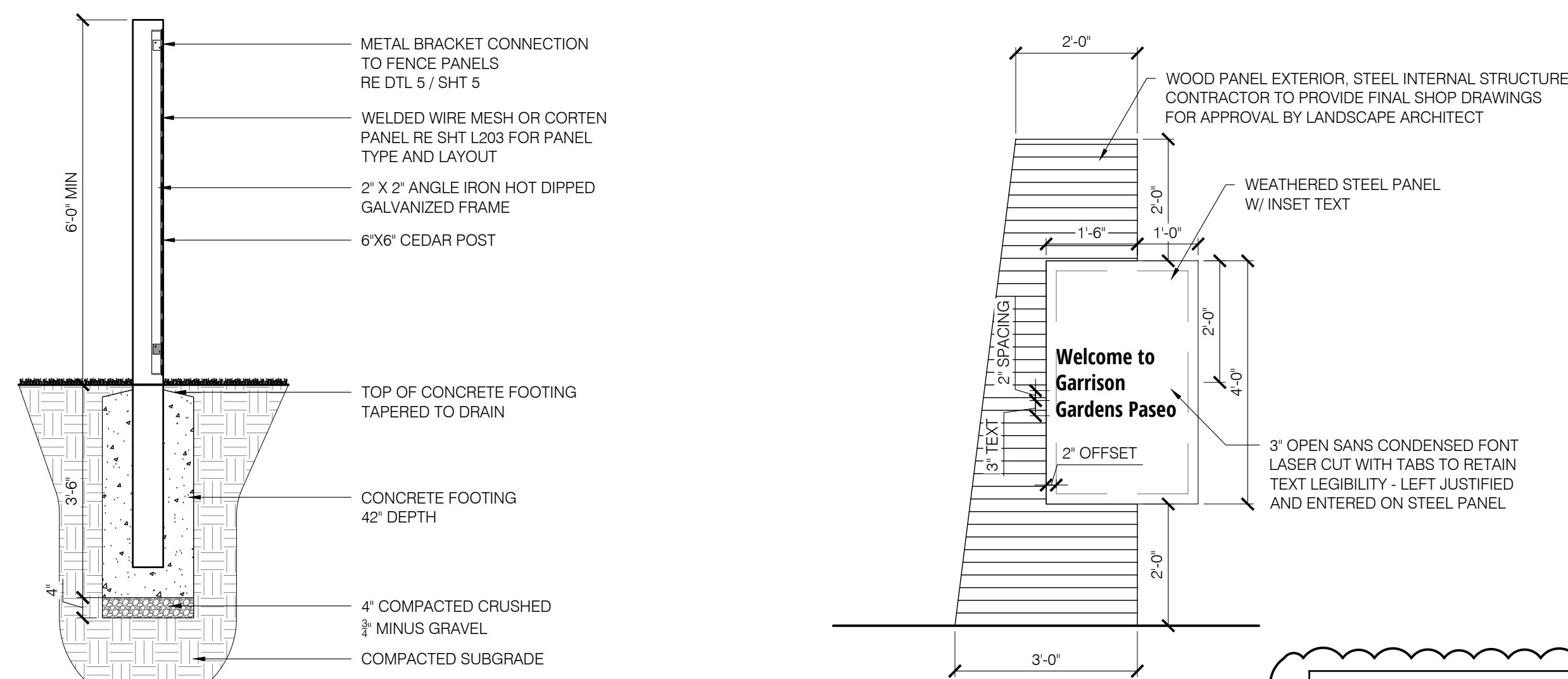
2 FENCE PANELS

1/2" = 1'-0"



3 FENCE AND GATE ELEVATION

1/2" = 1'-0"

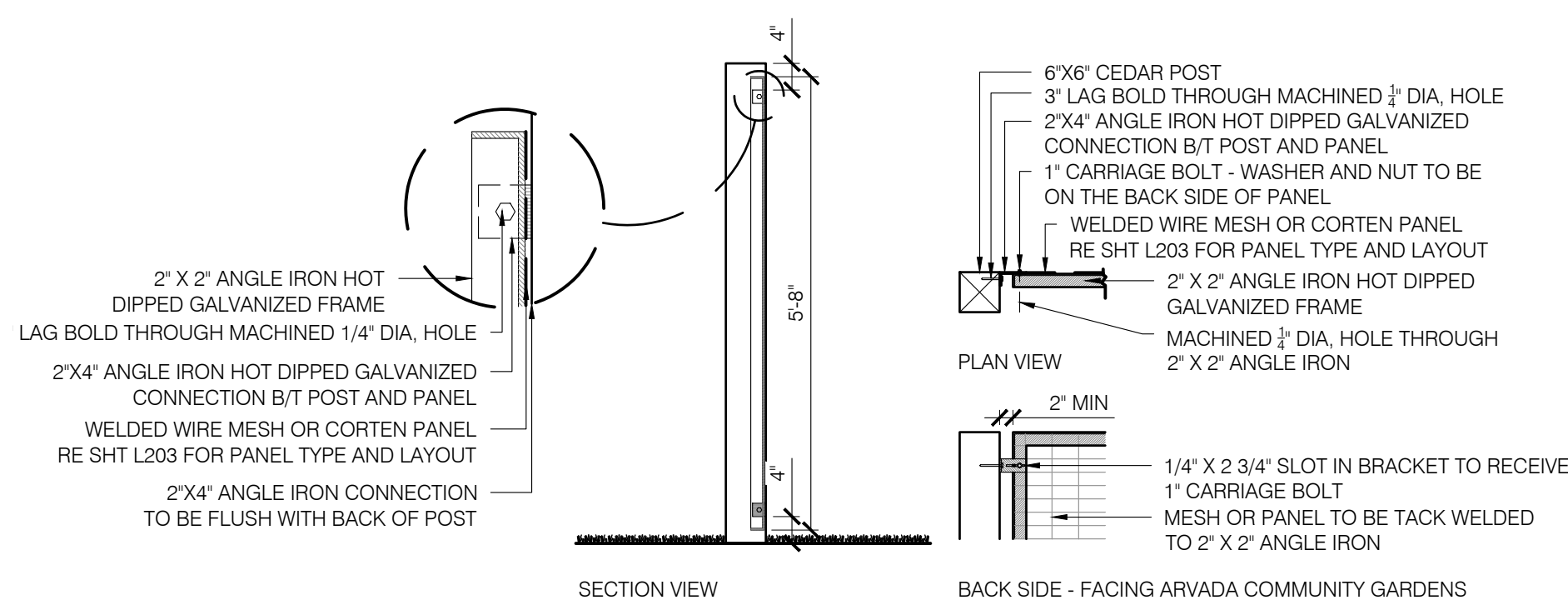


4 FENCE POST FOOTING

1/2" = 1'-0"

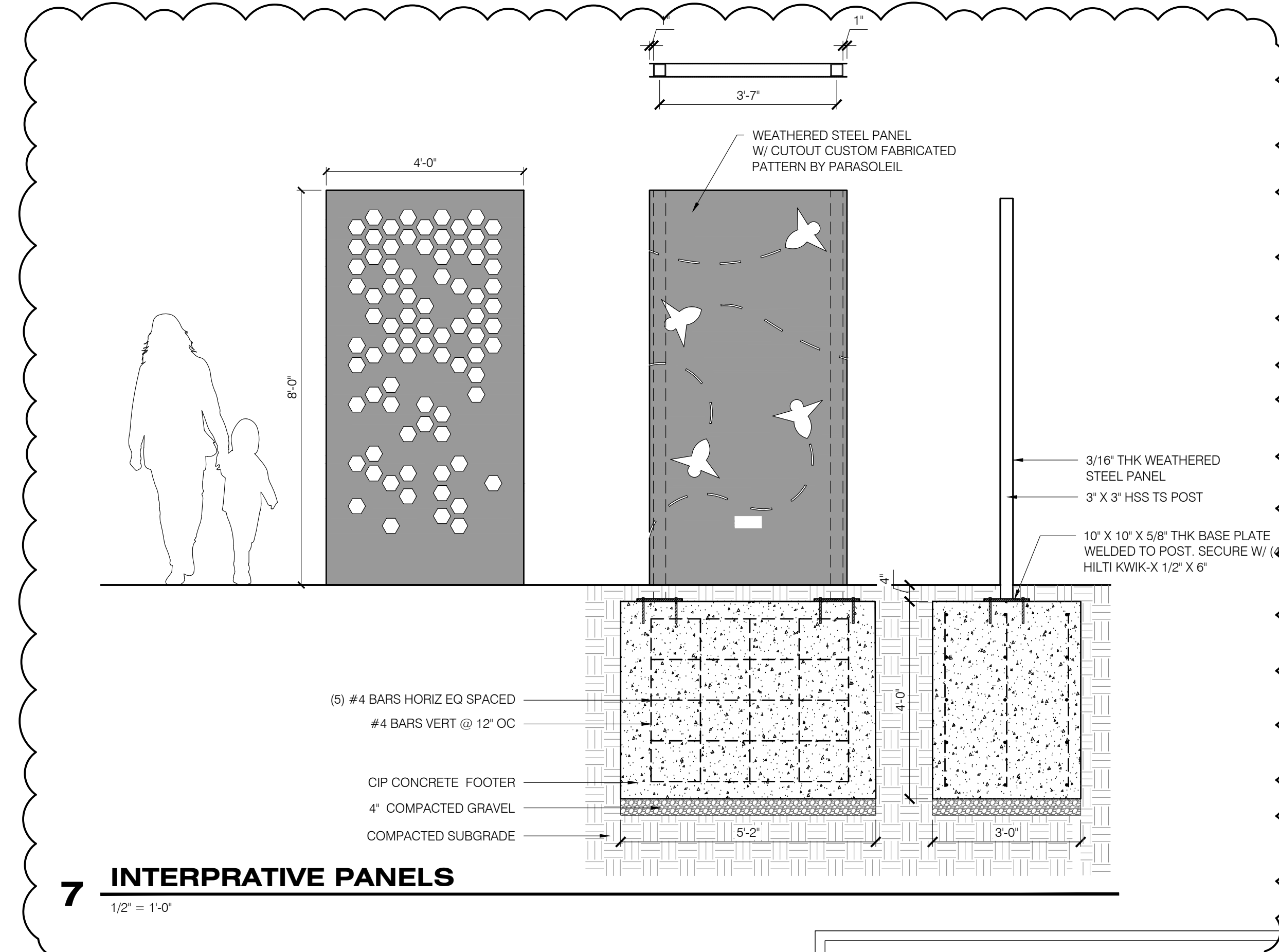
6 WELCOME SIGN

1/2" = 1'-0"



5 PANEL TO POST CONNECTION

1/2" = 1'-0"



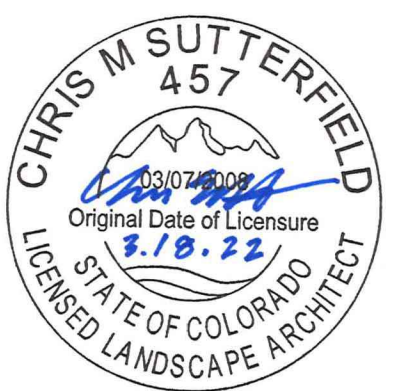
7 INTERPRATIVE PANELS

1/2" = 1'-0"

CONFLUENCE

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CONSTRUCTION DRAWINGS
GARRISON STREET - ARVADA, CO 80002

20-147



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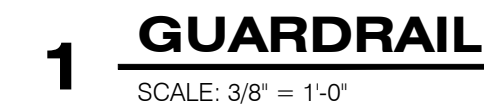
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NO. DATE BY
2 08.29.2023

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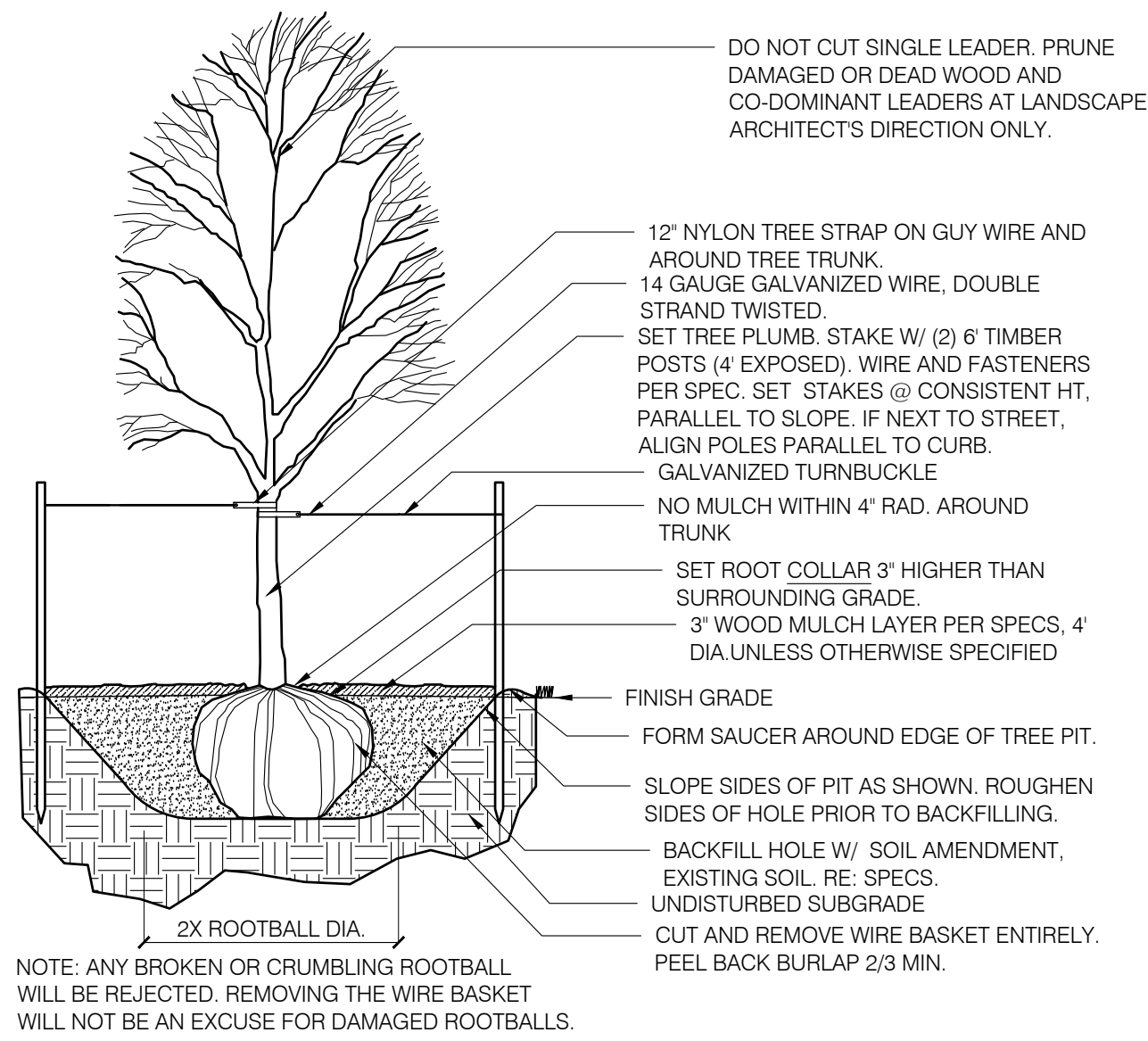
LANDSCAPE
DETAILS

L401

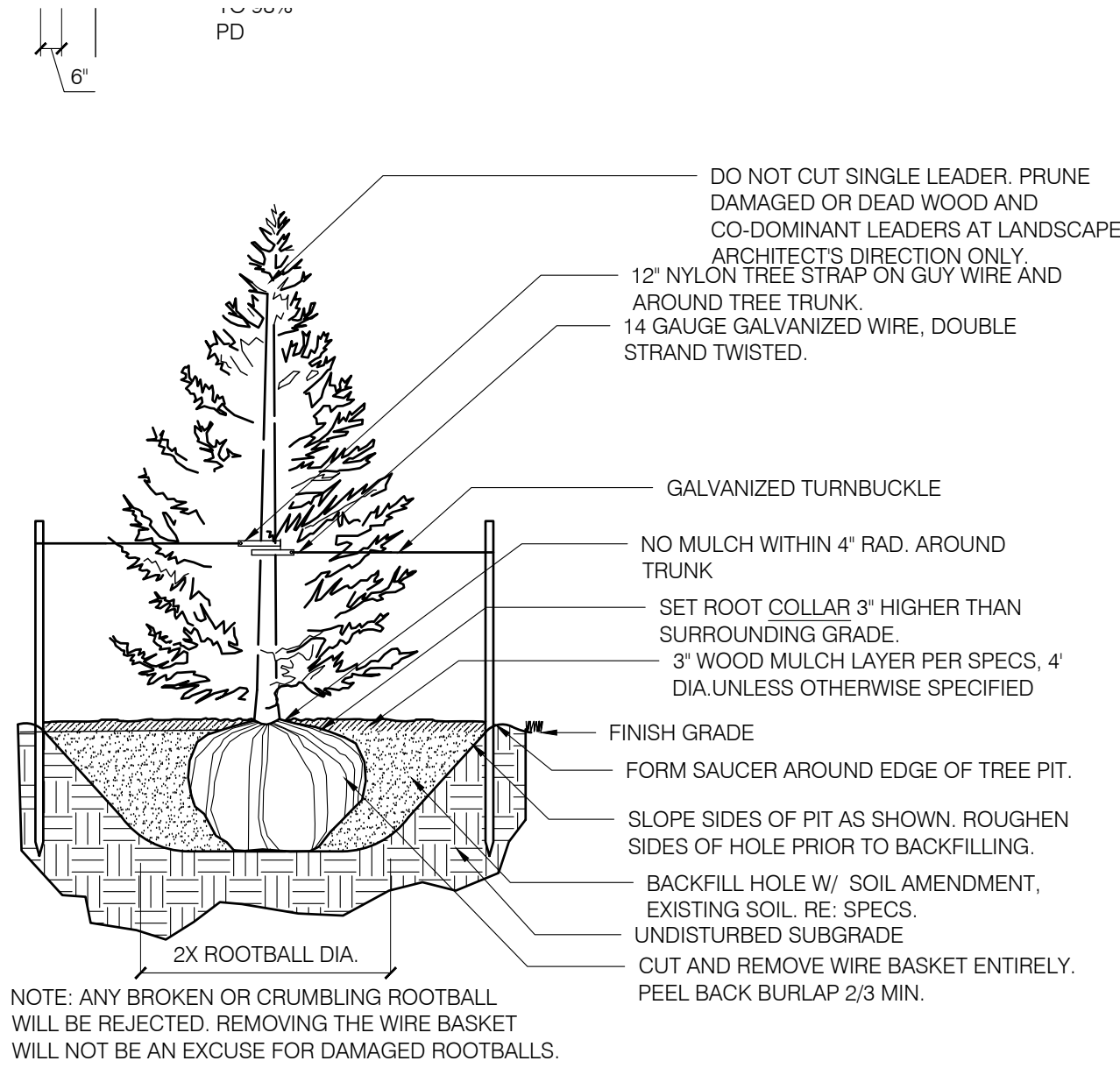
SHEET 12 OF 15



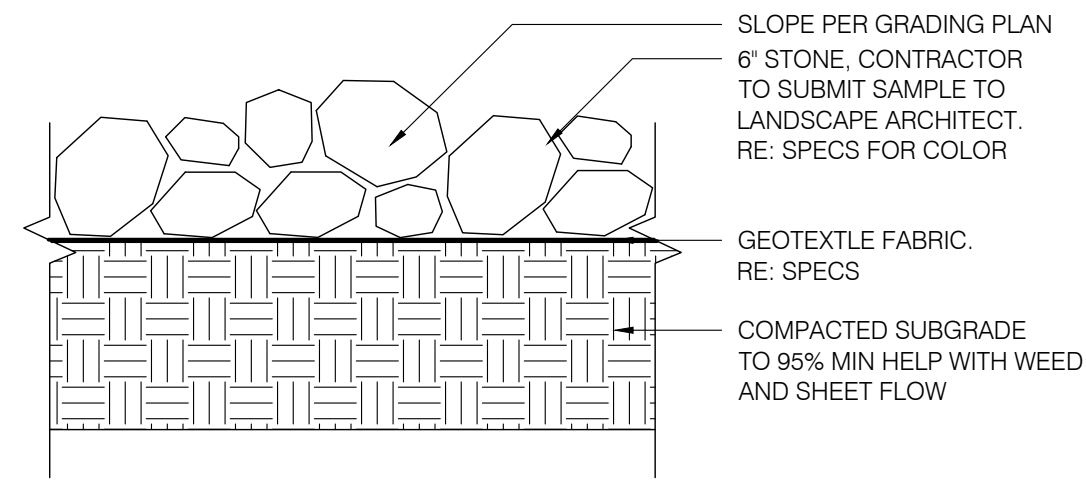




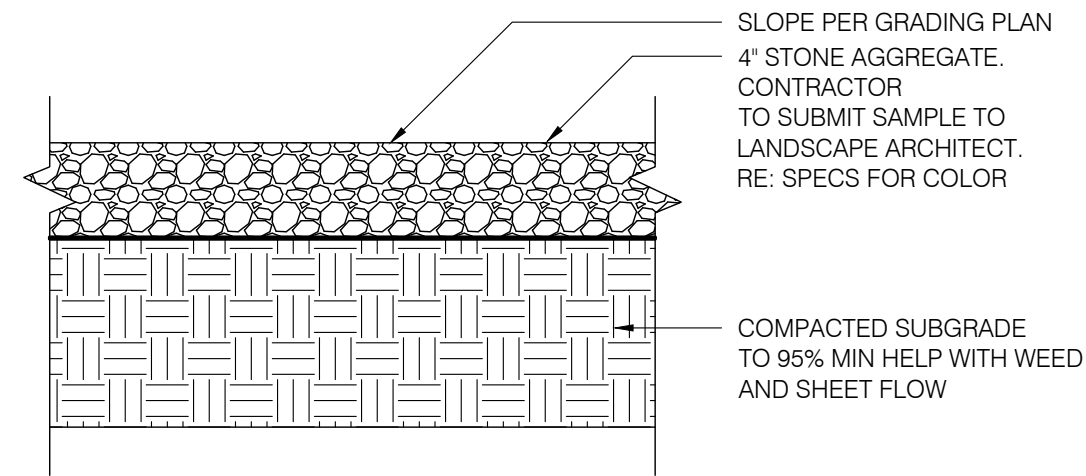
1 DECIDUOUS TREE PLANTING
1 1/2" = 1'-0"



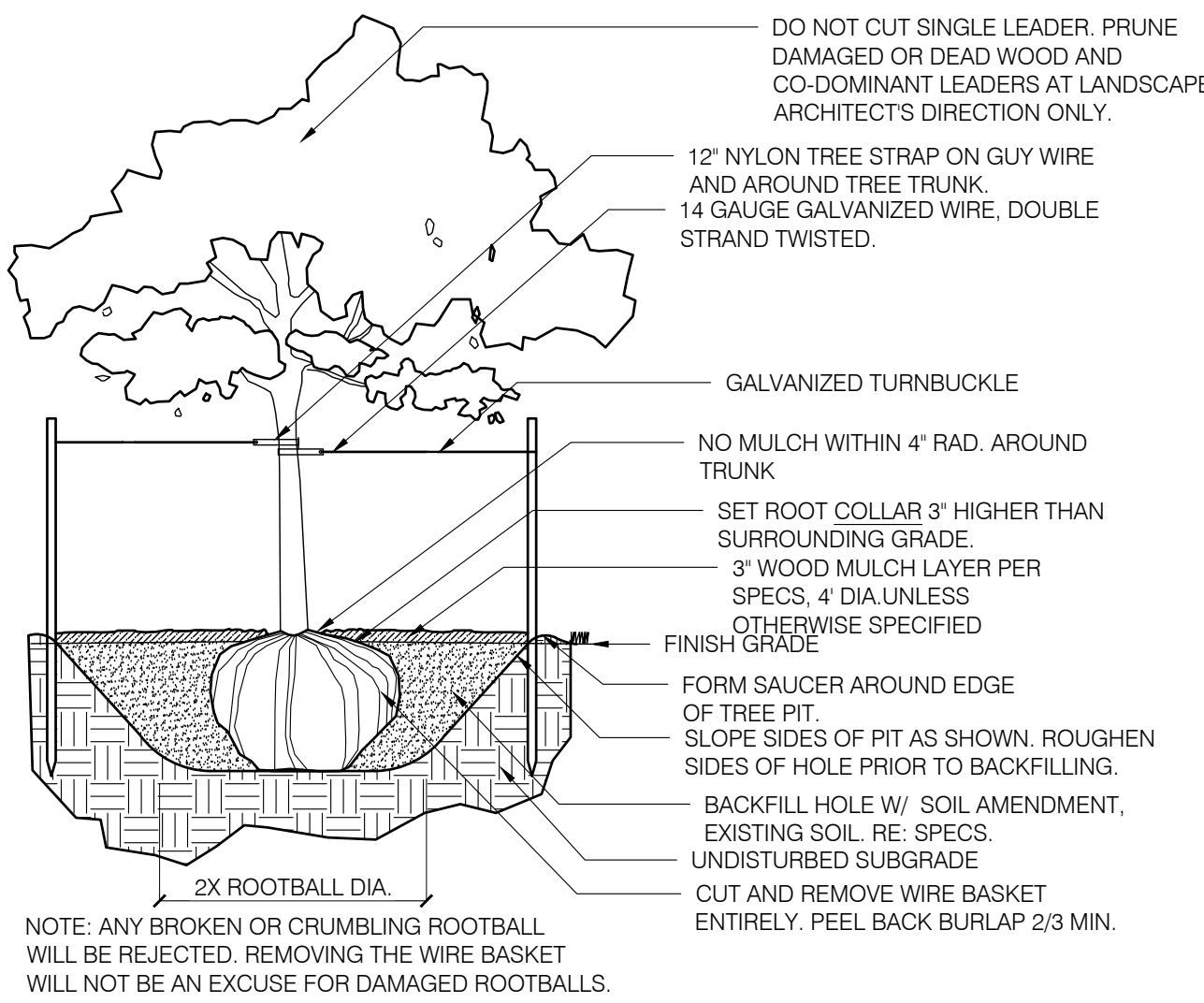
2 CONIFEROUS TREE PLANTING
1 1/2" = 1'-0"



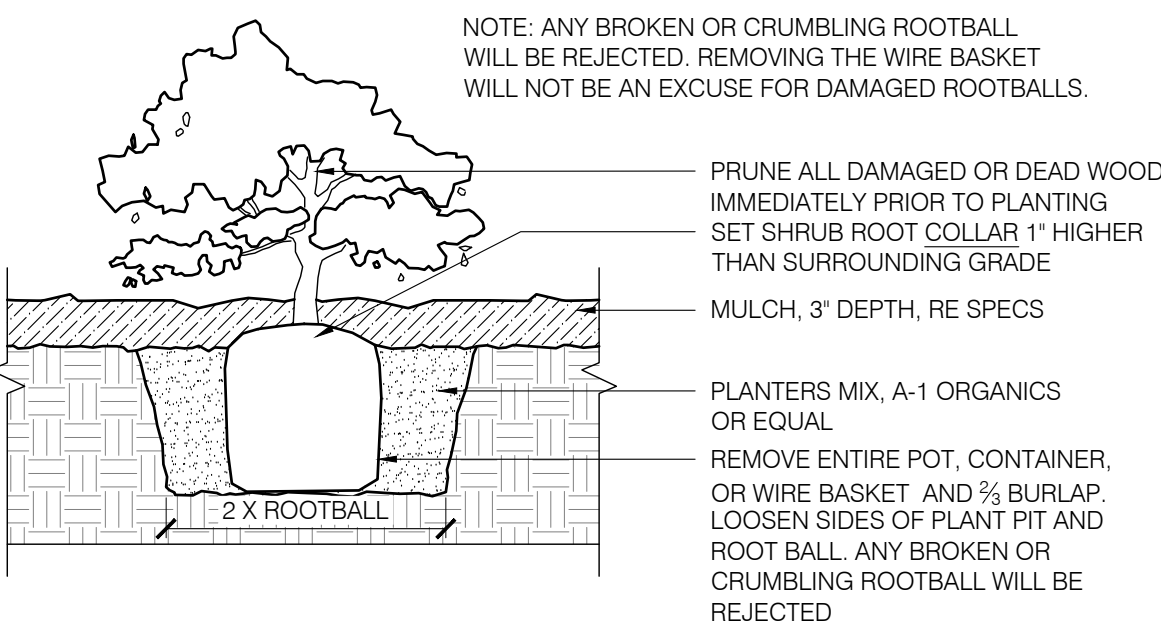
5 6 IN ROCK MULCH
1 1/2" = 1'-0"



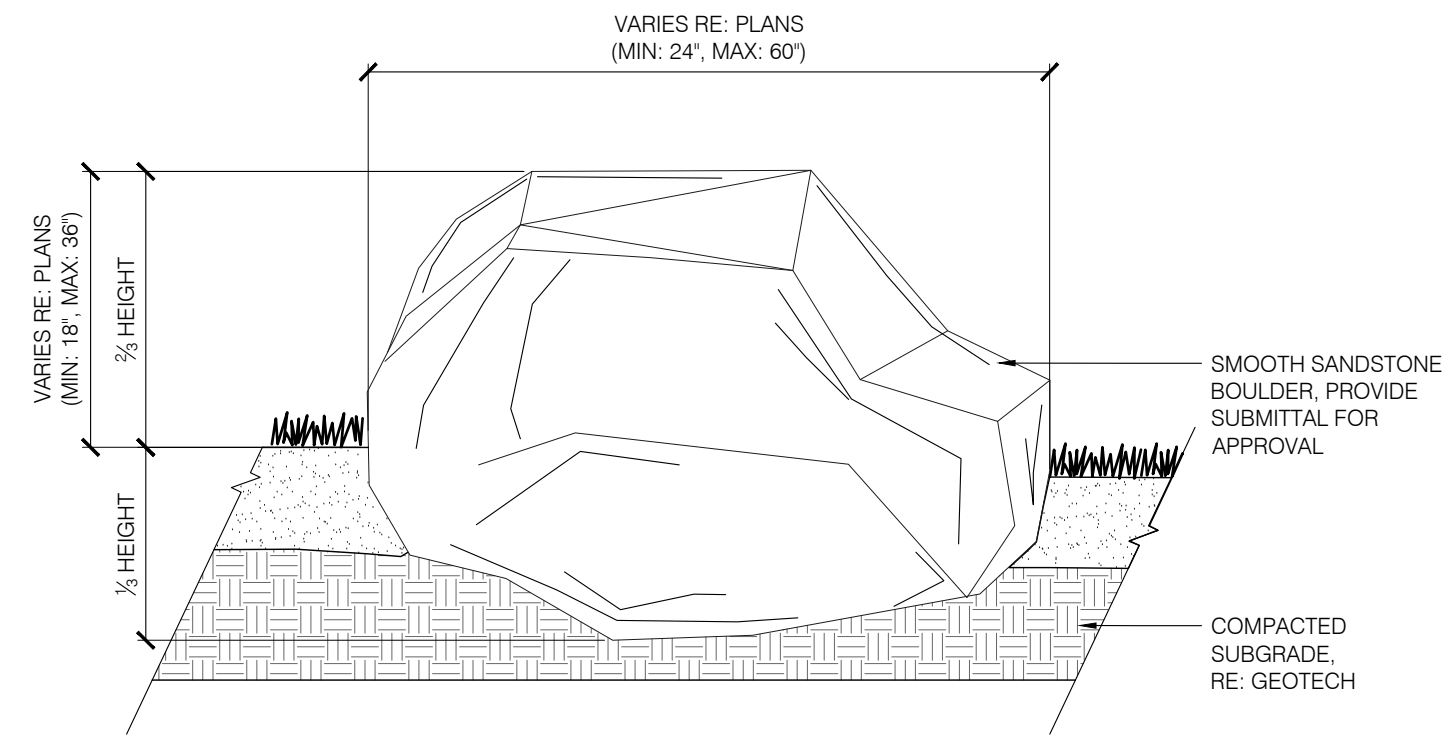
6 4 IN ROCK MULCH
1 1/2" = 1'-0"



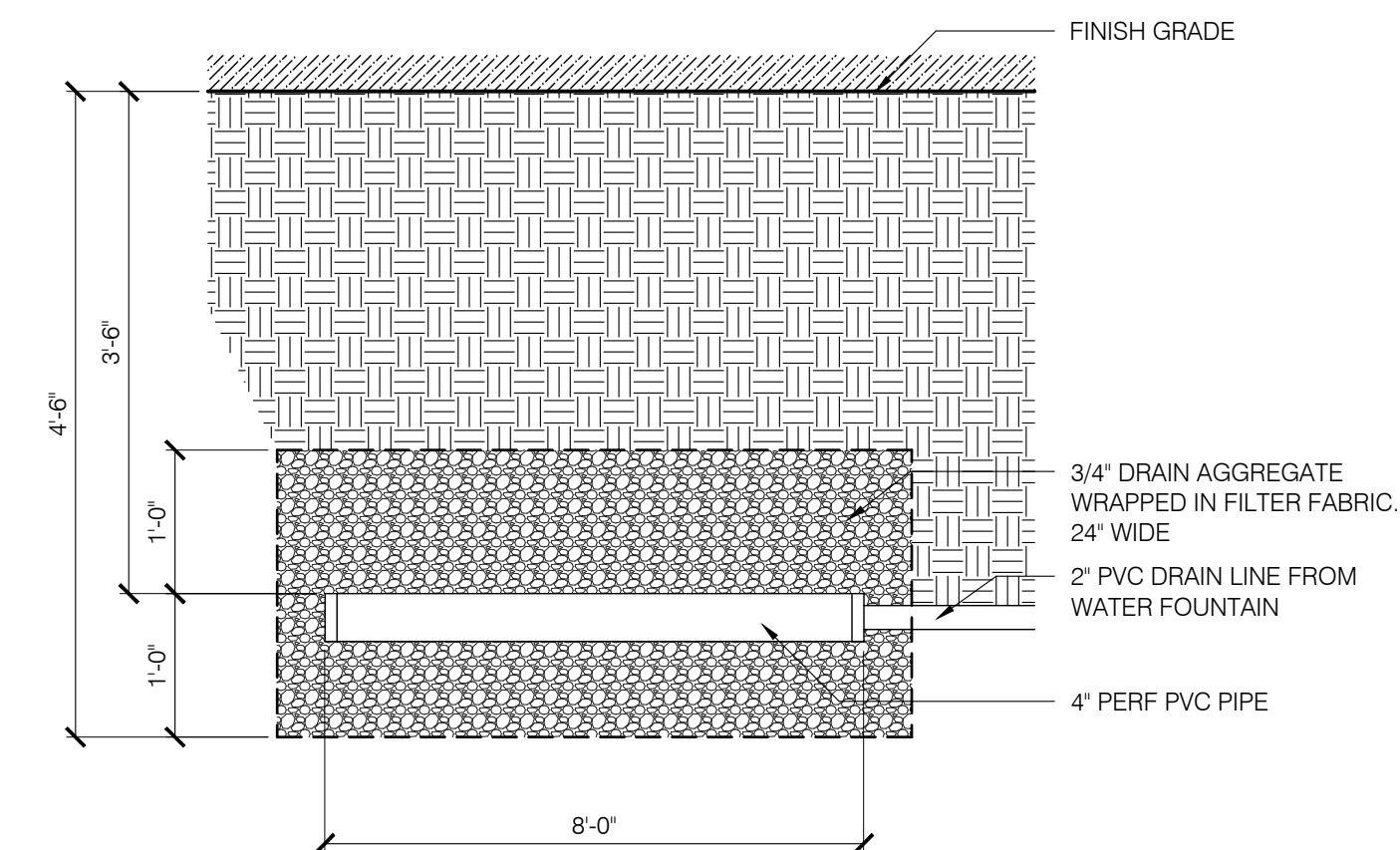
3 ORNAMENTAL TREE PLANTING
1 1/2" = 1'-0"



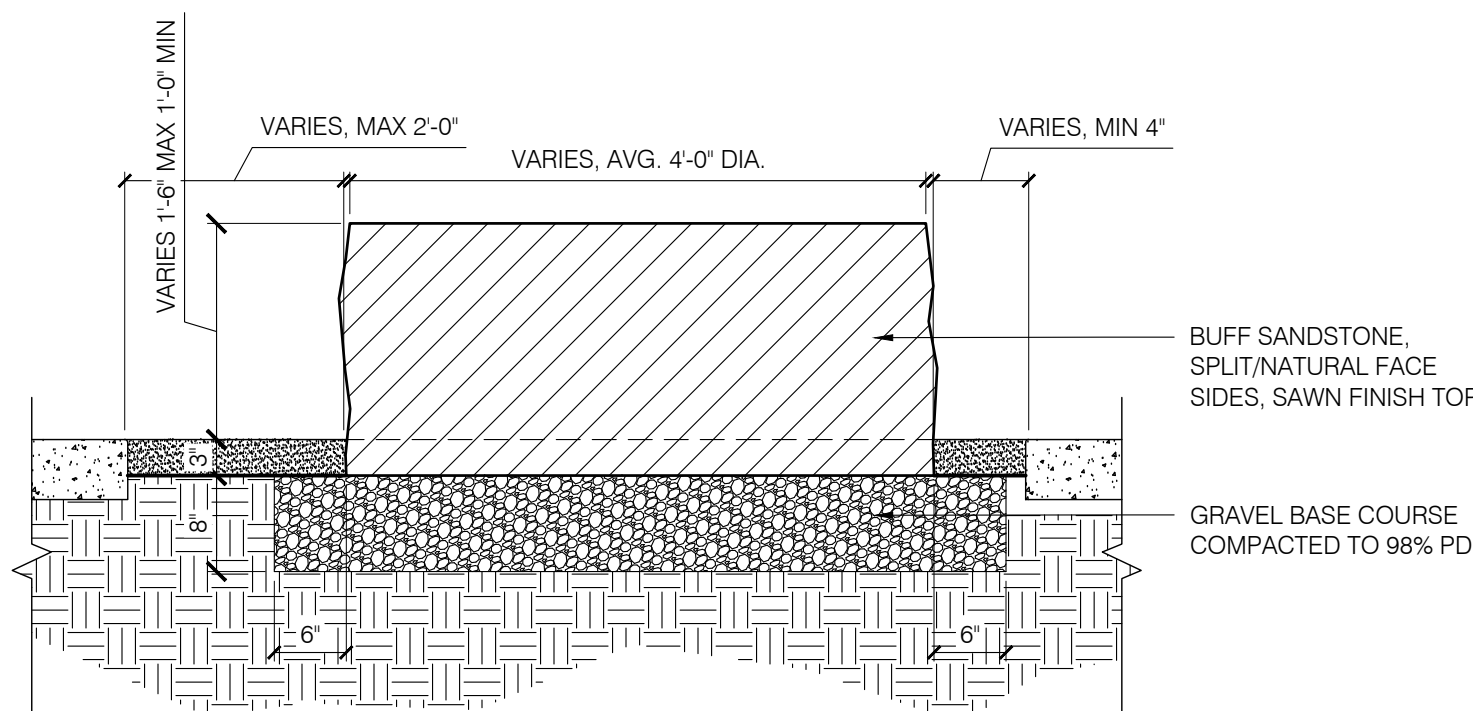
4 SHRUB PLANTING
1 1/2" = 1'-0"



6 BUFF SANSTONE BOULDER
3/4" = 1'-0"



8 WATER FOUNTAIN LEECH PIT
3/4" = 1'-0"



9 BUFF SANSTONE BOULDER - SAWN
3/4" = 1'-0"



2

GARRISON STREET PASEO CONSTRUCTION DRAWINGS

LOCATED IN THE SOUTHWEST ¼ OF SECTION 10, TOWNSHIP 3 SOUTH, RANGE 69 WEST OF THE 6TH P.M.
CITY OF ARVADA AND COUNTY OF JEFFERSON, STATE OF COLORADO.
ARVADA, CO 80002



3461 RINGSBY CT., SUITE #125
DENVER, CO 80216

720.594.9494
INFO@ALTITUDELANDCO.COM
WWW.ALTITUDELANDCO.COM

BASIS OF BEARINGS:

BASIS OF BEARING USED IS GPS DERIVED BEARINGS BASED ON A BEARING OF NORTH 00°17'31" WEST, ALONG THE EAST LINE OF THE SOUTHWEST ¼ OF SECTION 10 BETWEEN A FOUND 3-1/4" BRASS CAP "CITY OF WHEAT RIDGE SURVEY MONUMENT LS 13212 T3S R69W S10 S13 1984 UNLAWFUL TO DISTURB" AT THE SOUTH CORNER OF SECTION 10 AND A FOUND #5 REBAR WITH 2" ALUMINUM CAP IN RANGE BOX "CONTRA LTD CCS 1/16" S 10 1985 LS 5447" AT THE CENTER-SOUTH ¼ CORNER OF SECTION 10 AS SHOWN HEREON. COLORADO STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, NORTH AMERICAN DATUM (NAD83). ALL BEARINGS SHOWN HEREON ARE RELATIVE THERETO.

BENCHMARK:

A CITY OF ARVADA 2" BRASS CAP #986 LOCATED AT THE NORTHWEST CORNER OF FLOWER ST AND BROOKS DR, PUBLISHED ELEVATION = 5343.57' ARVADA DATUM.

CITY OF ARVADA RESPONSIBILITY STATEMENT:

THE CITY OF ARVADA IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN OR DIMENSIONS AND ELEVATIONS ON THE PLANS. THE CITY OF ARVADA'S REVIEW IS FOR GENERAL COMPLIANCE WITH THE CITY OF ARVADA "ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS". THE CITY OF ARVADA, THROUGH THE ACCEPTANCE OF THE CONSTRUCTION PLAN OR DRAINAGE REPORT, ASSUMES NO RESPONSIBILITY FOR THE COMPLETENESS AND/OR ACCURACY OF THE CONSTRUCTION PLAN OR DRAINAGE REPORT. THE CITY DOES NOT ACCEPT LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

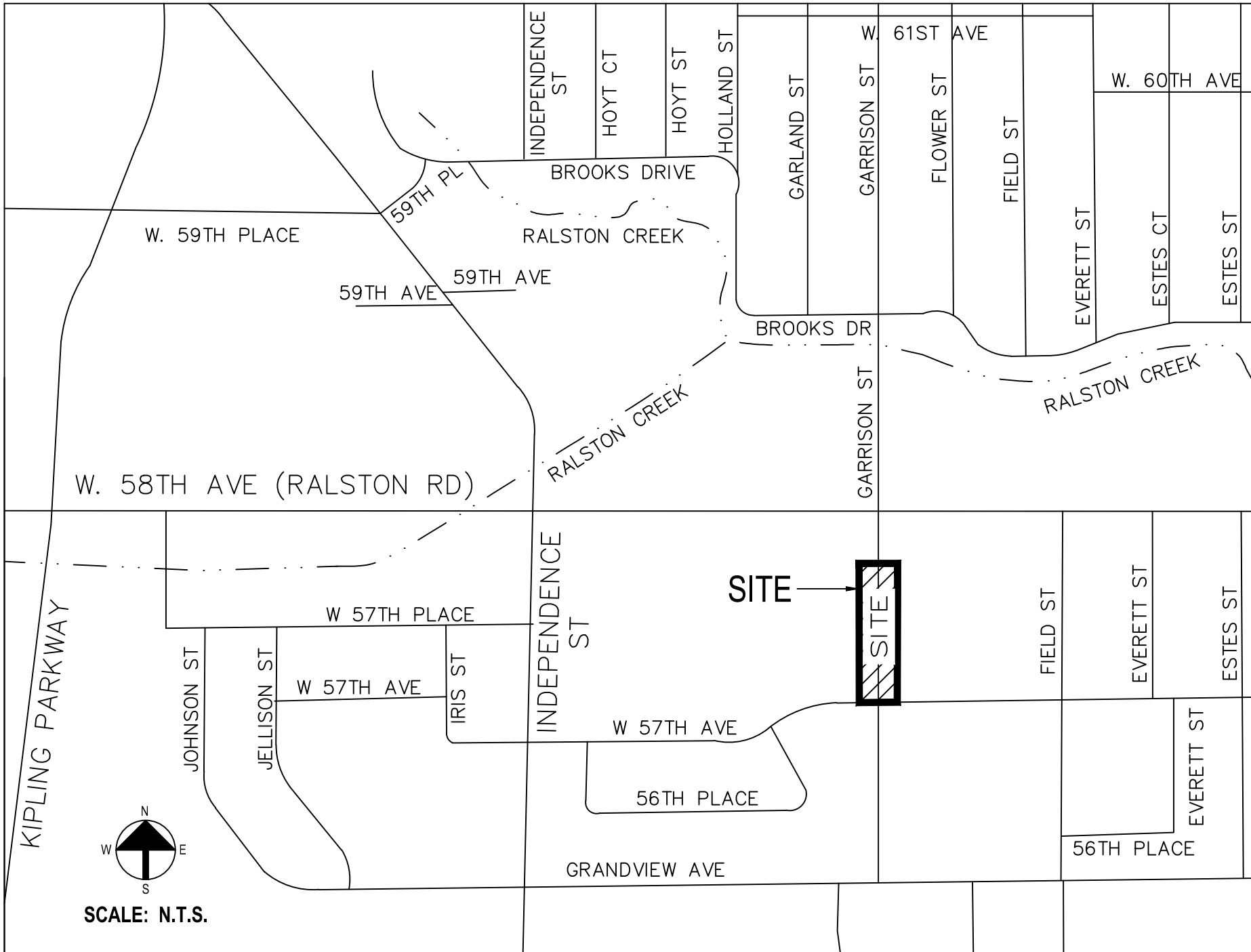
NOTE:

THE MATERIALS QUANTITIES TABLE'S UNIT PRICES ARE DERIVED FROM THE CITY OF ARVADA'S RIGHT OF WAY PERMIT FEE SCHEDULE PER THE CONSTRUCTION DRAWINGS CHECKLIST ON THE CITY OF ARVADA'S WEBSITE.

"THESE CONSTRUCTION PLANS FOR THE RESIDENCE AT RALSTON COMMONS 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"

SAL C. CAMBRIA
ALTITUDE LAND CONSULTANTS, INC.

VICINITY MAP:



Materials Quantities Table:

Item	Unit	Quantity
Public		
Utilities		
Fire Line	LF	12
Fire Hydrant	EA	1
Inlets	EA	1
Manholes (Storm & San.)	EA	2
Storm Sewer	LF	265
Street Subgrade/Fill	SY	185
Street Subbase	SY	185
Water Demo / Disconnect	EA	0
Sewer Demo / Disconnect	EA	0
Water Main	LF	0
Sewer Main	LF	0
Flatwork		
ADA Curb Ramps	EA	1
Bike Trail	LF	450
Combo Curb, Gutter, Walk	LF	112
Crossspan	EA	0
Curb Cut	EA	1
Detached Walk	LF	875
Vertical Curb & Gutter	LF	296
Traffic		
Patching	SY	132
Signage	EA	4
Striping	LF	101
Pavement Markings	EA	2

SHEET INDEX:

DRAWING NO.	DRAWING NAME	SHEET NO.	DRAWING NO.	DRAWING NAME	SHEET NO.	DRAWING NO.	DRAWING NAME	SHEET NO.
CD1.0	COVER SHEET	01 OF 31	CD5.2	SITE PLAN DETAILS	12 OF 31	CD6.8	WALL PROFILE	23 OF 31
CD2.0	NOTES	02 OF 31	CD5.3	SITE PLAN DETAILS	13 OF 31	CD7.0	DRAINAGE PLAN & PROFILE	24 OF 31
CD3.0	DEMOLITION PLAN	03 OF 31	CD5.4	SITE PLAN DETAILS	14 OF 31	CD7.1	DRAINAGE PLAN & PROFILE	25 OF 31
CD3.1	DEMOLITION PLAN	04 OF 31	CD6.0	GRADING PLAN	15 OF 31	CD7.2	DRAINAGE PLAN & PROFILE	26 OF 31
CD4.0	INITIAL EROSION CONTROL PLAN	05 OF 31	CD6.1	GRADING PLAN	16 OF 31	CD7.3	DRAINAGE PLAN & PROFILE	27 OF 31
CD4.1	INTERIM EROSION CONTROL PLAN	06 OF 31	CD6.2	R.O.W. & ADA RAMP GRADING PLAN	17 OF 31	CD7.4	DRAINAGE DETAILS	28 OF 31
CD4.2	FINAL EROSION CONTROL PLAN	07 OF 31	CD6.3	PASEO CROSS SECTION PLAN	18 OF 31	CD8.0	UTILITY PLAN	29 OF 31
CD4.3	EROSION CONTROL DETAILS	08 OF 31	CD6.4	PASEO CROSS SECTION PLAN	19 OF 31	CD9.0	SIGNING & STRIPING PLAN	30 OF 31
CD4.4	EROSION CONTROL DETAILS	09 OF 31	CD6.5	SIDEWALK PROFILE	20 OF 31	CD9.1	SIGNING & STRIPING PLAN	31 OF 31
CD5.0	SITE PLAN	10 OF 31	CD6.6	WALL PROFILE	21 OF 31			
CD5.1	SITE PLAN	11 OF 31	CD6.7	WALL PROFILE	22 OF 31			

LANDSCAPE CONSULTANT:

CONFLUENCE

ATTN: CHRIS SUTTERFIELD
ADD: 3457 RINGSBY COURT
DENVER, CO 80216
PH: (303) 433-7100

CIVIL ENGINEER CONSULTANT:

ALTITUDE LAND CONSULTANTS, INC.



ATTN: ADAM DIMATTEO
ADD: 3461 RINGSBY COURT, #125
DENVER, CO 80216
PH: (720) 840-2749

GARRISON STREET PASEO
CONSTRUCTION DRAWINGS
GARRISON STREET - ARVADA, CO 80002

20-131

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REVISION:

NO. DATE BY
1 09.14.2023 ADD

DATE: 06.21.2023
DRAWN BY: AD
CHECKED BY: SC

COVER SHEET

CD1.0

SHEET 1 OF 31

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', LATEST EDITION, 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- 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. 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.
- I. 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. CERTIFICATES OF OCCUPANCY FOR ANY BUILDINGS OR STRUCTURES WITHIN THE DEVELOPMENT WILL NOT BE ISSUED UNTIL THIS FORM HAS BEEN RECEIVED, REVIEWED AND APPROVED BY THE CITY OF ARVADA ENGINEERING DIVISION.
- J. OWNER/DEVELOPER 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 SITE OF ONE (1) ACRE OR MORE OR LESS THAN ONE ACRE AND PART OF A LARGER DEVELOPMENT. A COPY OF THE APPROVED CITY OF ARVADA 95.7 $\frac{1}{2}$ 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.
- K. 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.
- L. ALL CURB RAMPS SHALL COMPLY WITH THE LATEST CITY OF ARVADA AND ADA STANDARD. CONTRACTOR TO CHECK WITH THE CITY OF ARVADA ENGINEERING DIVISION TO VERIFY THE LATEST CURB RAMP STANDARD PRIOR TO CONSTRUCTION OF ANY RAMP.
- M. 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'.
- N. 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.

EROSION CONTROL NOTES:

- 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:
- G.A. 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.
- G.B. 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.
- G.C. 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.

STREET NOTES:

- 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 REMOVED TO A DEPTH REQUIRED BY THE CITY OF ARVADA ACCORDING TO INFORMATION OBTAINED FROM LABORATORY TESTS AND/OR 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 T199 AND IN ACCORDANCE WITH CDOT STANDARD SPECIFICATIONS SECTION 203.07.
- D. 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.
- E. 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 NOTES:

- A. CONTRACTOR IS TO NOTIFY AFFECTED IRRIGATION COMPANY A MINIMUM OF 24 HOURS PRIOR TO BEGINNING ANY CONSTRUCTION IRRIGATION EASEMENTS OR ON IRRIGATION DITCHES.
- B. ALL IRRIGATION PIPE JOINTS SHALL BE WATERTIGHT AND PASS A LOW AIR PRESSURE TEST

UTILITY NOTES:

- 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 C809 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 PLACEMENT AND PRIOR TO REQUIRED TELEVISION INSPECTION BY THE CITY'S WASTEWATER DIVISION.



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GARRISON STREET PASEO
CONSTRUCTION DRAWINGS
GARRISON STREET - ARVADA, CO 80002

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NOTES

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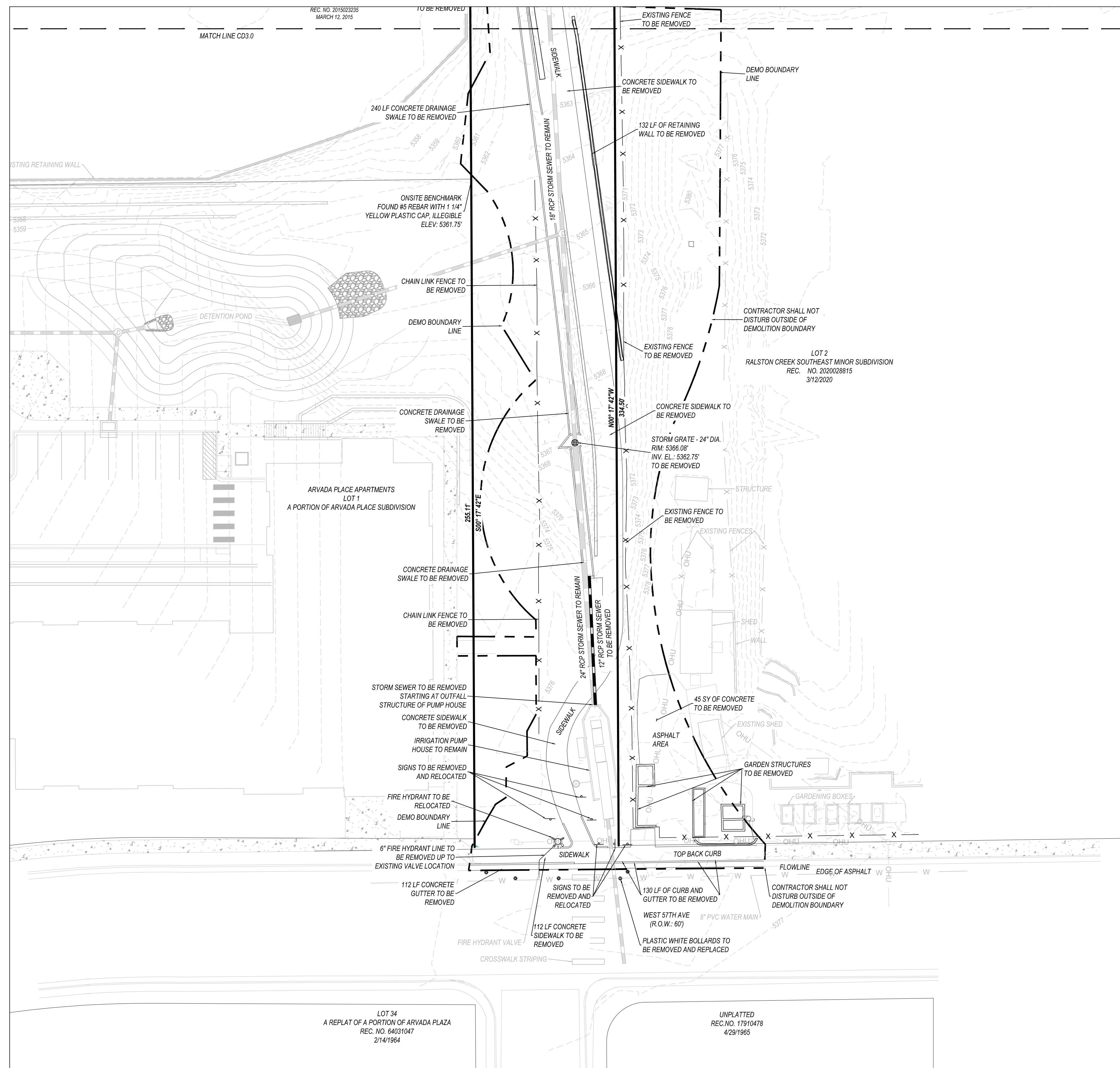
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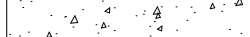
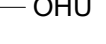
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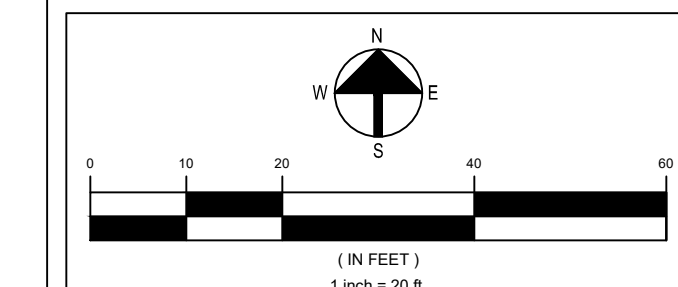
GENERAL NOTES:

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1. SECTIONS OF SIDEWALK BEING REMOVED/REPLACED NEED TO BE REMOVED AND REPLACED TO THE NEAREST JOINT
 2. SERVICE LINES BEING ABANDONED NEED TO BE REMOVED AND CAPPED AT THE MAIN.

LEGEND:

	PROPERTY LINE
	ADJACENT PROPERTY LINE
	DEMOLITION BOUNDARY
	EXISTING CONCRETE
	EXISTING CONTOUR
	FIRE HYDRANT
	BOLLARD
	FENCE
	SIGN
	UTILITY POLE
	OVERHEAD UTILITY
	FIBER OPTIC
	GAS LINE
	ELECTRIC LINE
	SANITARY SEWER MANHOLE
	SANITARY SEWER
	STORM SEWER MANHOLE
	STORM SEWER
	WATER LINE
	WATER VALVE

ALL PLANIMETRIC LINEWORK THAT IS FADED BACK SHOWN HEREIN INDICATES AN EXISTING FEATURE (IMPROVEMENT, TOPOGRAPHY, UTILITY, ETC.). ALL PLANIMETRIC TEXT THAT IS FADED BACK AND ITALICIZED SHOWN HEREIN INDICATES A CALLOUT TO AN EXISTING FEATURE.



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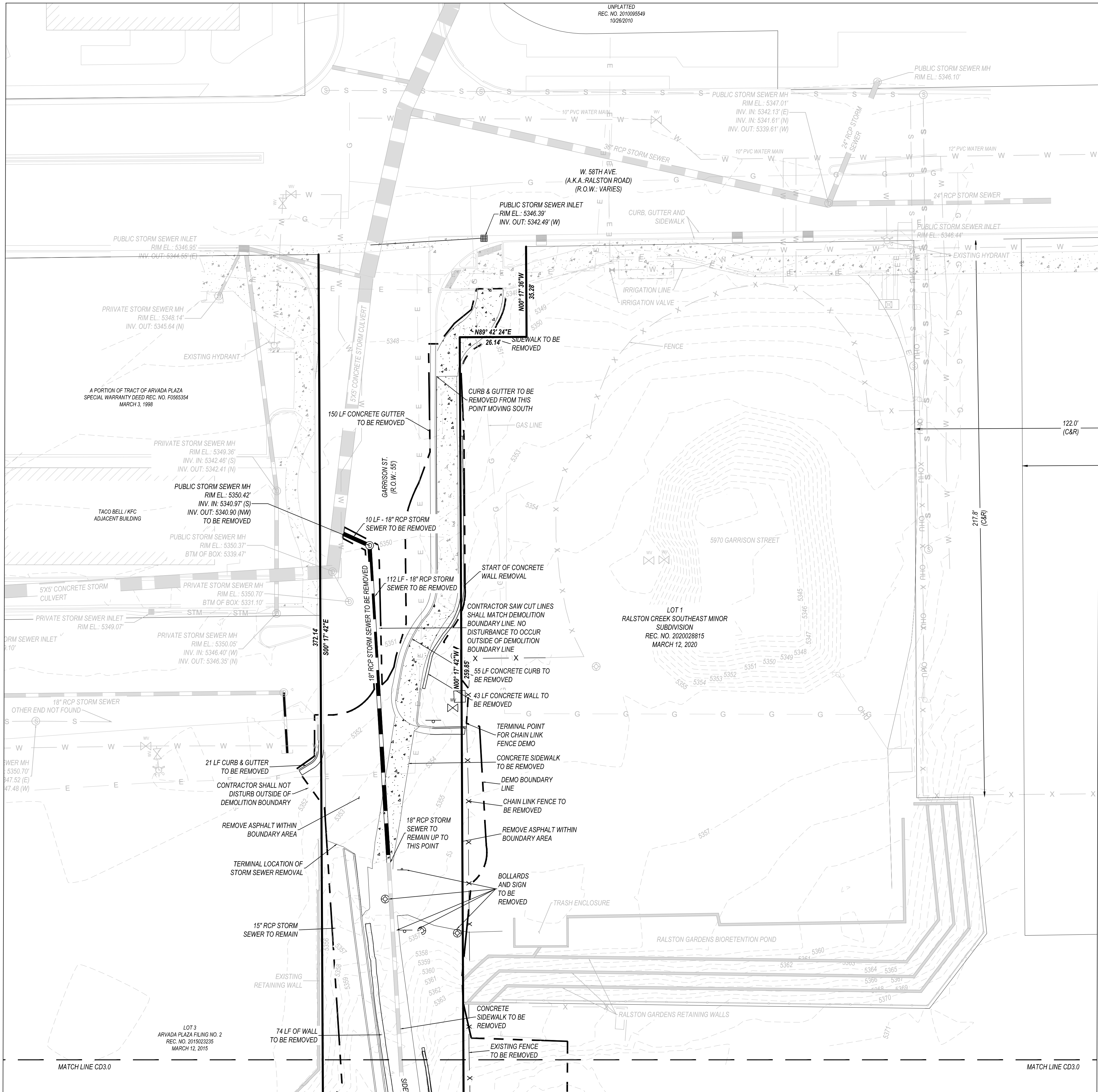
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DEMOLITION PLAN

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SHEET 4 OF 31

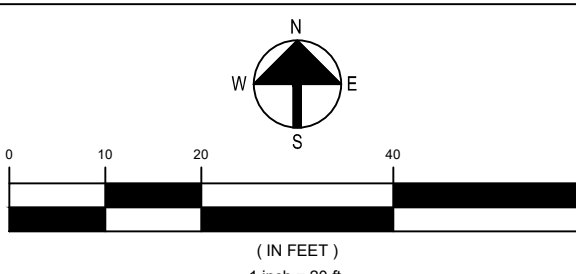


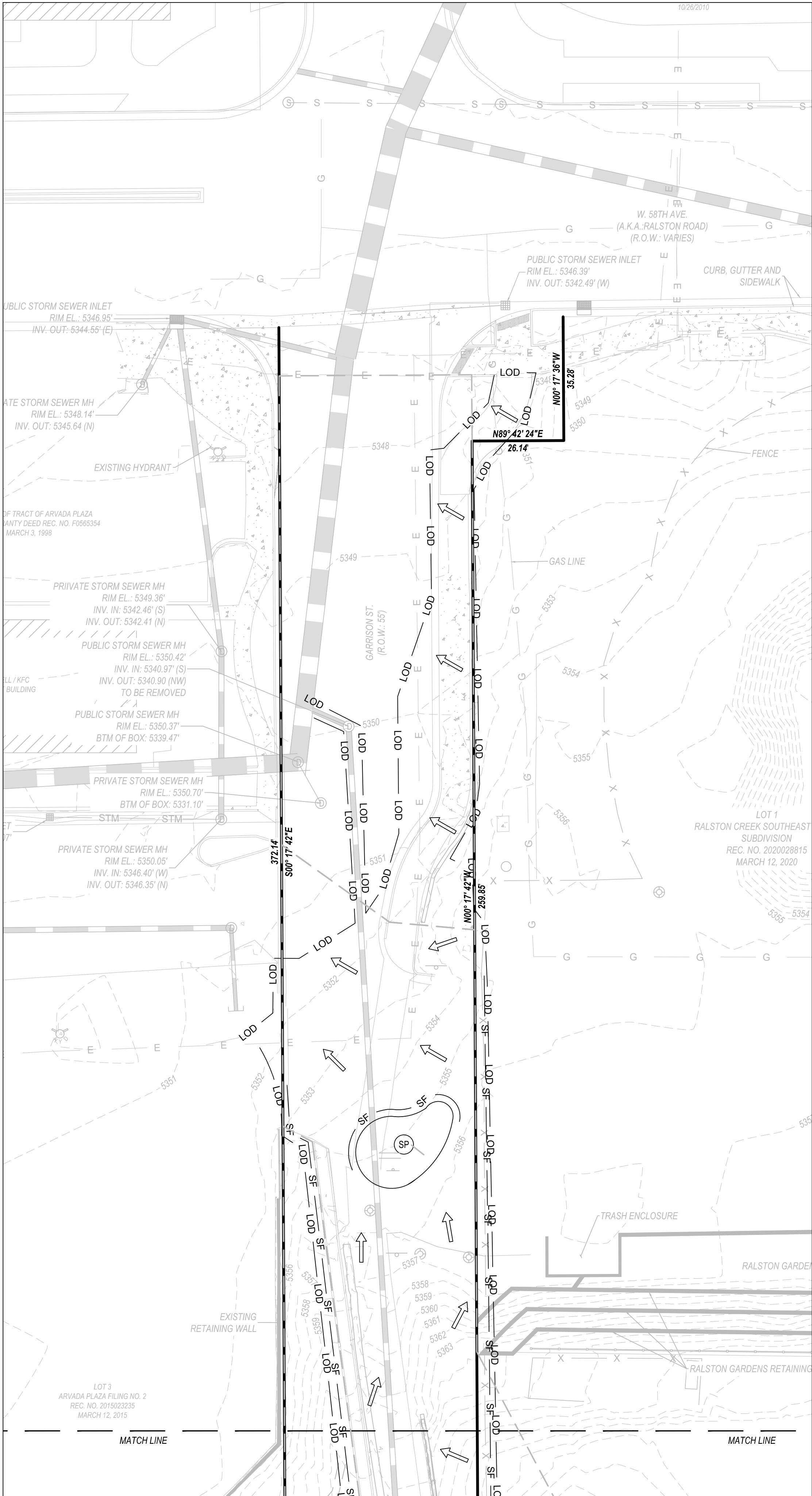
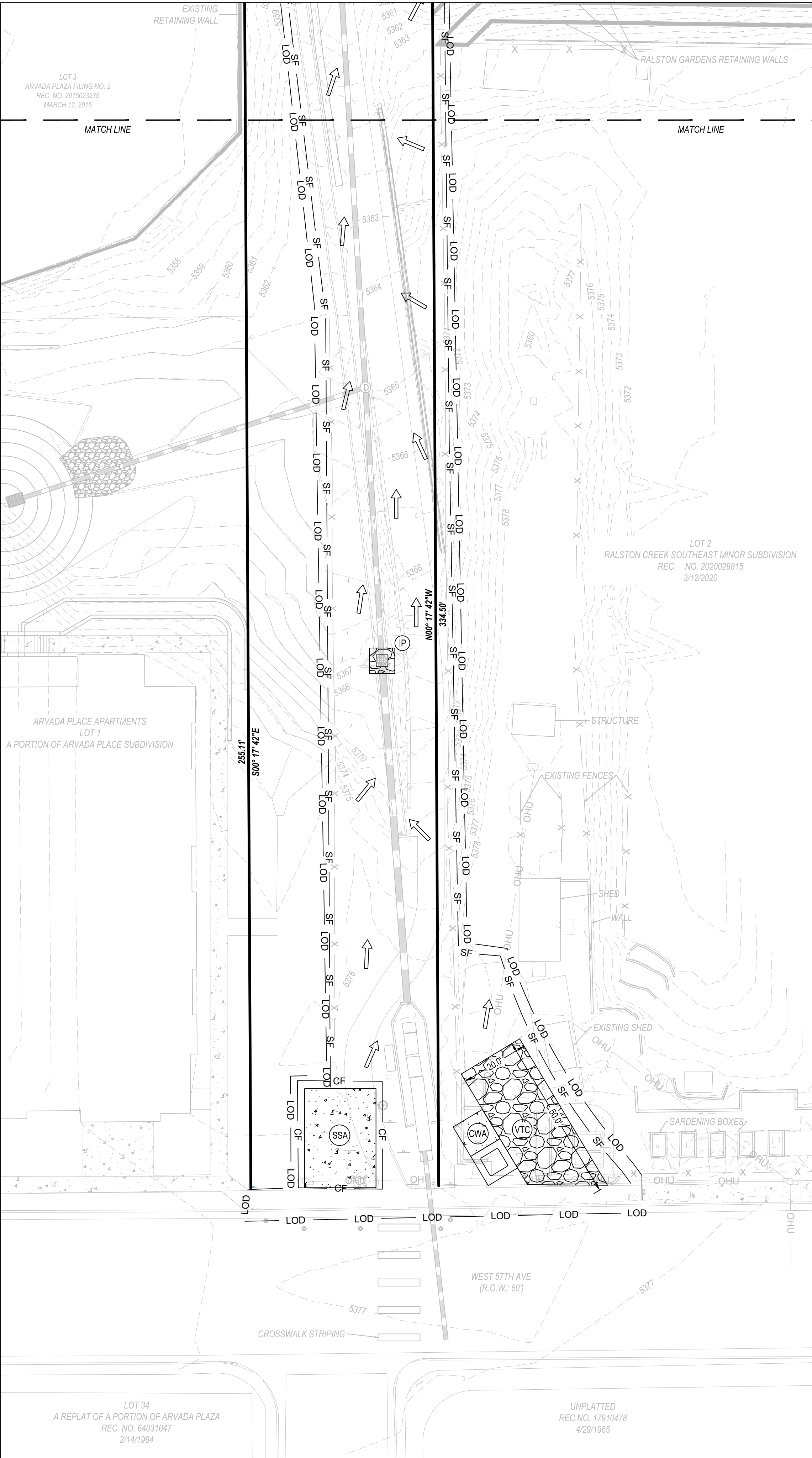
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LEGEND:

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- DEMOLITION BOUNDARY
- EXISTING CONCRETE
- EXISTING CONTOUR
- FIRE HYDRANT
- BOLLARD
- FENCE
- SIGN
- UTILITY POLE
- OHU OVERHEAD UTILITY
- F/O FIBER OPTIC
- G GAS LINE
- E ELECTRIC LINE
- (S) SANITARY SEWER MANHOLE
- (D) STORM SEWER MANHOLE
- STORM SEWER
- W WATER LINE
- WATER VALVE

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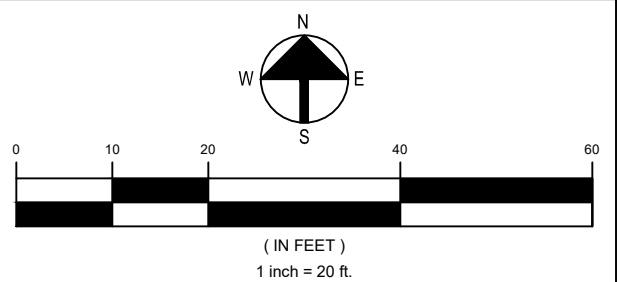


EROSION CONTROL NOTES:
TOTAL AREA OF DISTURBANCE
INITIAL - 27,647 SQ. FT. OR 0.63 AC.
INTERIM - 40,506 SQ. FT. OR 0.93 AC
FINAL - 38,035 SQ. FT. OR 0.87 AC

LEGEND:

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- LOD LIMITS OF DISTURBANCE / LIMITS OF CONSTRUCTION
- FLOW ARROW
- SP STOCKPILE AREA
- CWA CONCRETE WASHOUT AREA
- IP INLET PROTECTION
- SSA STABILIZED STAGING AREA
- VTC VEHICLE TRACKING CONTROL
- CF CONSTRUCTION FENCE
- SF SILT FENCE
- DEMOLITION BOUNDARY
- EXISTING CONCRETE
- EXISTING CONTOUR
- FIRE HYDRANT
- EXISTING AREA INLET
- STORM SEWER MANHOLE
- EXST. STORM SEWER PIPE

ALL PLANIMETRIC LINEWORK THAT IS FADED BACK SHOWN HEREIN INDICATES AN EXISTING FEATURE (IMPROVEMENT, TOPOGRAPHY, UTILITY, ETC.). ALL PLANIMETRIC TEXT THAT IS FADED BACK AND ITALICIZED SHOWN HEREIN INDICATES A CALLOUT TO AN EXISTING FEATURE.



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INITIAL EROSION CONTROL PLAN

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INTERIM EROSION
CONTROL PLAN

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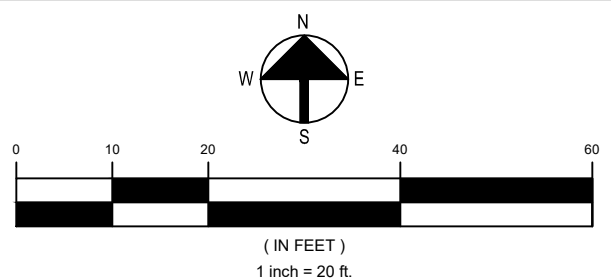
SHEET 6 OF 31

EROSION CONTROL NOTES:
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LEGEND:

	PROPERTY LINE
	ADJACENT PROPERTY LINE
	LIMITS OF DISTURBANCE / LIMITS OF CONSTRUCTION
	FLOW ARROW
	SEDIMENT BASIN
	STOCKPILE AREA
	CONCRETE WASHOUT AREA
	INLET PROTECTION
	STABILIZED STAGING AREA
	VEHICLE TRACKING CONTROL
	CONSTRUCTION FENCE
	SILT FENCE
	DRAINAGE SWALE
	EXISTING CONCRETE
	EXISTING CONTOUR
	FIRE HYDRANT
	PROP. STORM SEWER MH
	PROP. STORM SEWER PIPE
	PROP. STORM SEWER MH
	EXST. STORM SEWER PIPE

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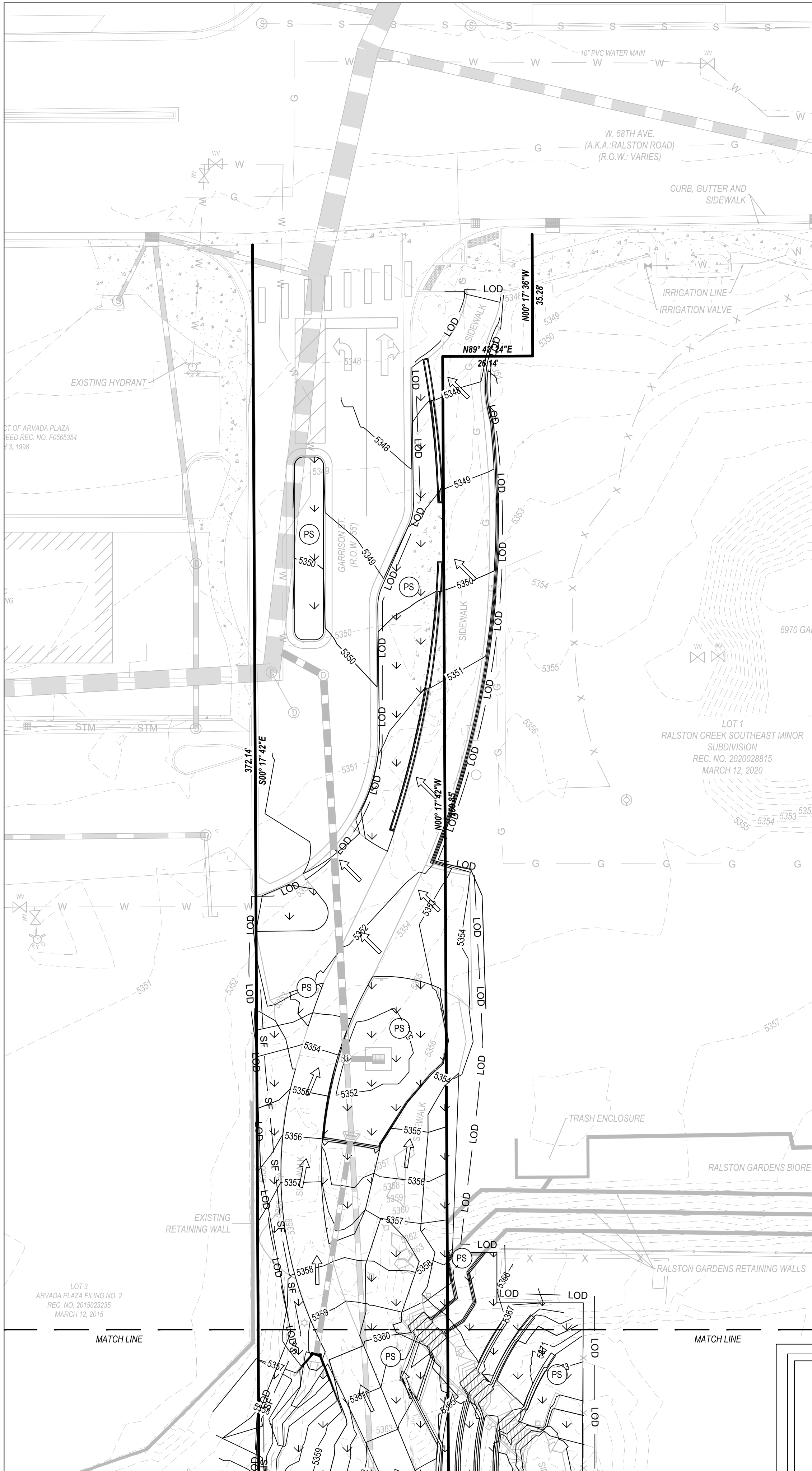
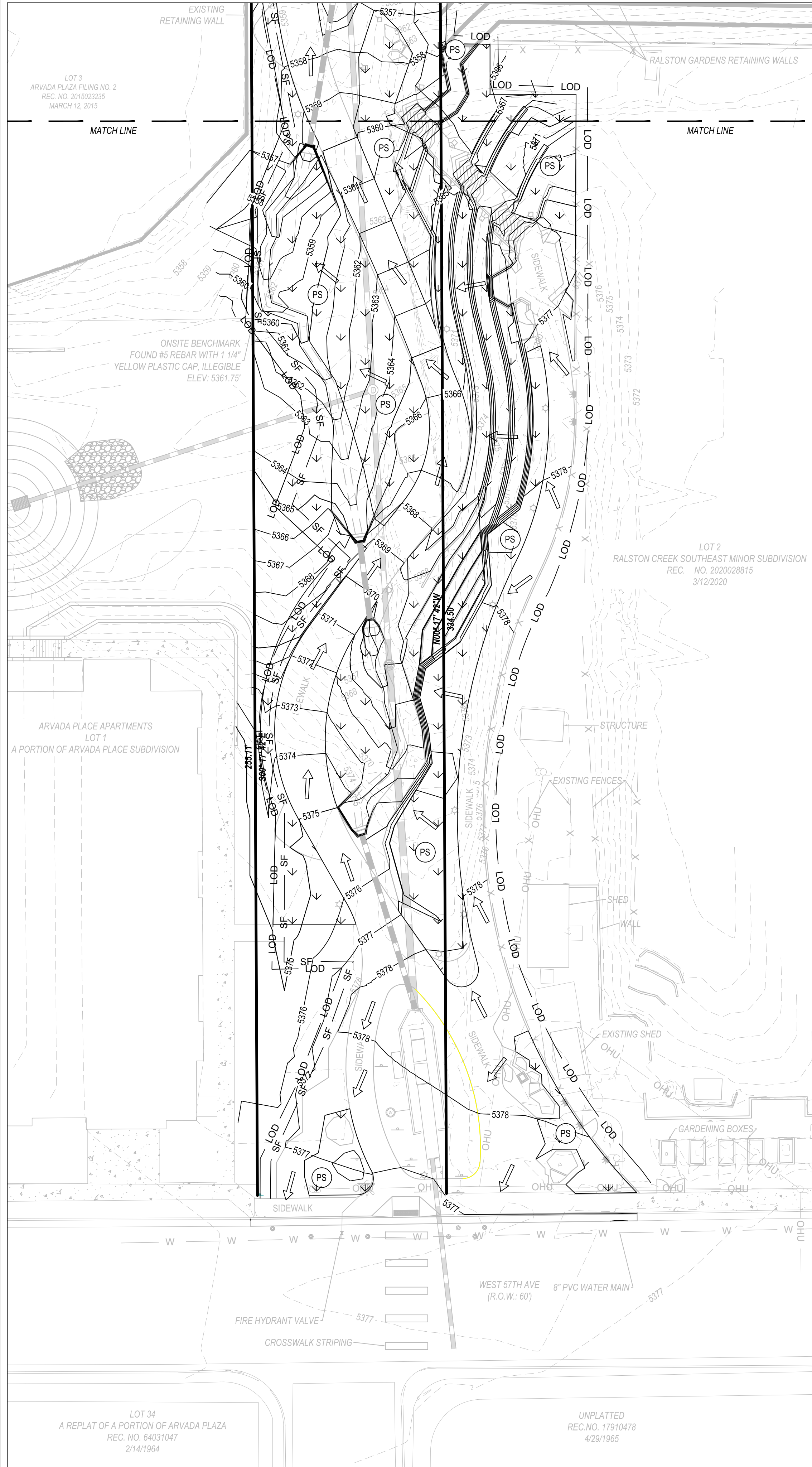
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DATE: 06.21.2023
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FINAL EROSION CONTROL PLAN

CD4.2

SHEET 7 OF 31

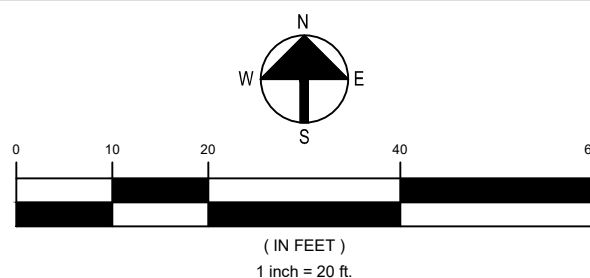


EROSION CONTROL NOTES:
TOTAL AREA OF DISTURBANCE
INITIAL - 27,647 SQ. FT. OR 0.63 AC.
INTERIM - 40,506 SQ. FT. OR 0.93 AC
FINAL - 38,035 SQ. FT. OR 0.87 AC

LEGEND:

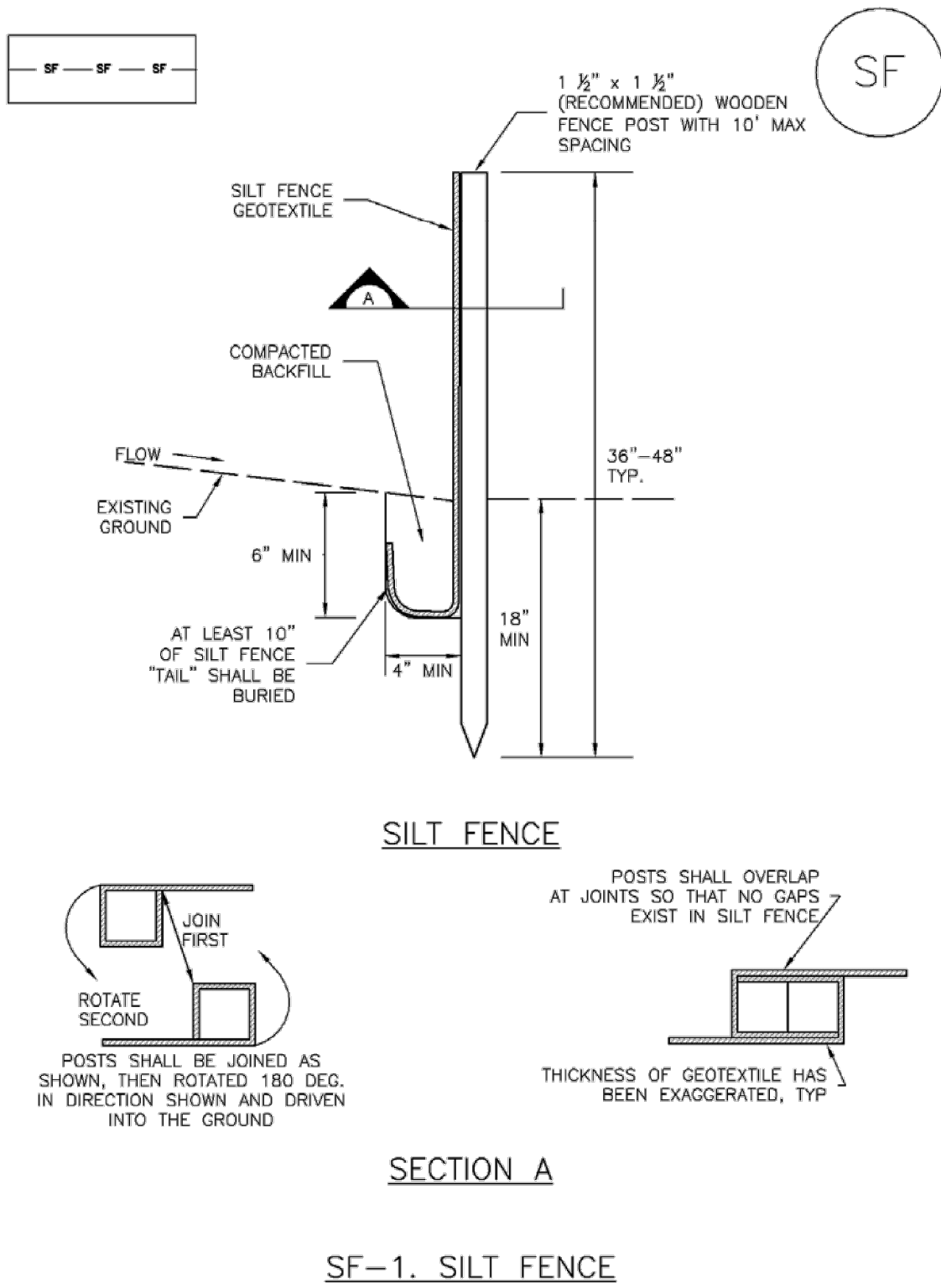
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- LOD LIMITS OF DISTURBANCE / LIMITS OF CONSTRUCTION
- FLOW ARROW
- CF CONSTRUCTION FENCE
- SF SILT FENCE
- PS PERMANENT SEEDING
- EXISTING CONCRETE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- FIRE HYDRANT
- PROP. STORM SEWER MH
- PROP. STORM SEWER PIPE
- STORM SEWER MANHOLE
- EXST. STORM SEWER PIPE

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Silt Fence (SF)

SC-1



November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SF-3

SC-1

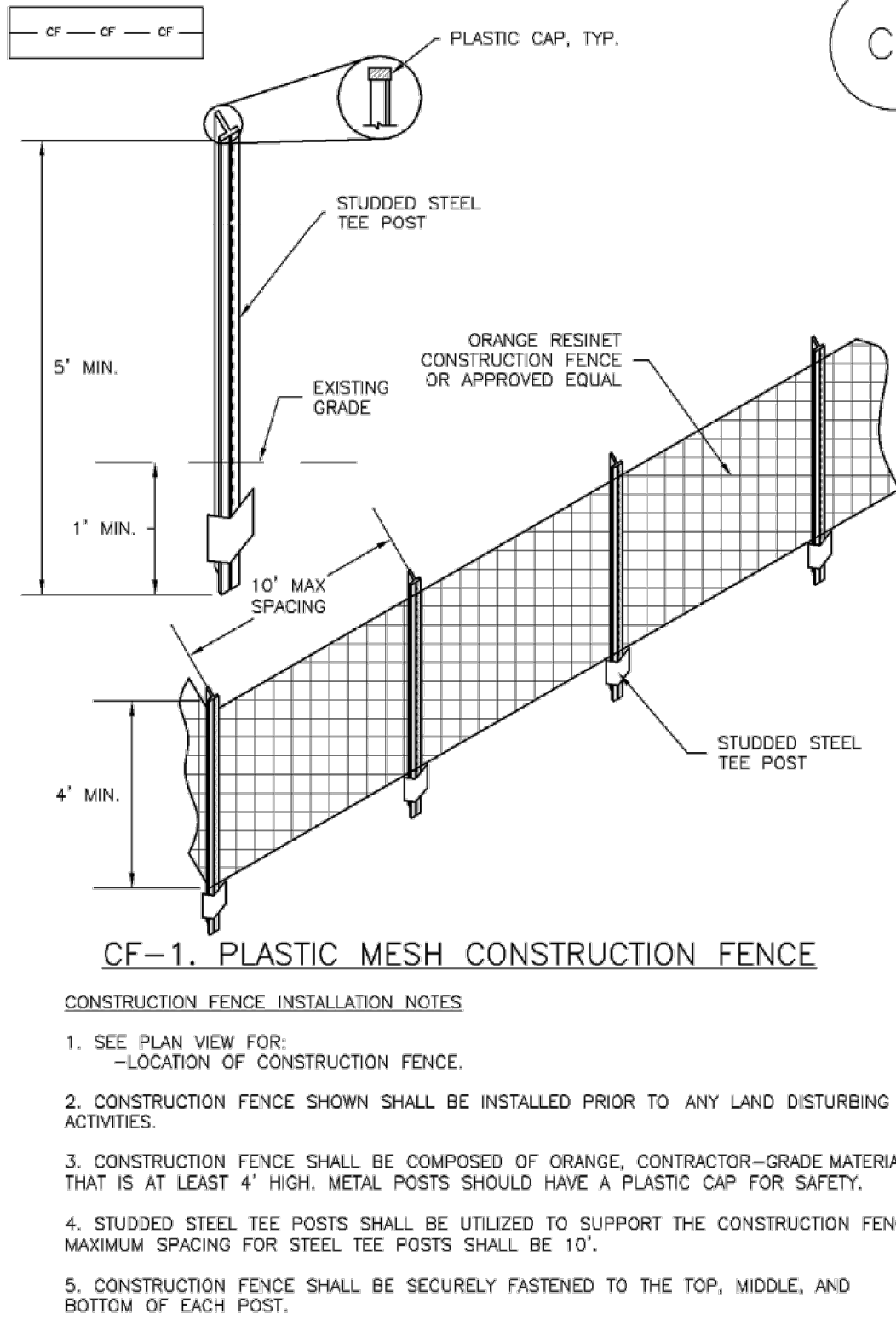
Silt Fence (SF)

- SILT FENCE INSTALLATION NOTES**
1. SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2-5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.
 2. A UNIFORM 6" X 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.
 3. COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
 4. SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.
 5. SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3" ALONG THE FABRIC DOWN THE STAKE.
 6. AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "J-HOOK." THE "J-HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' - 20').
 7. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- SILT FENCE MAINTENANCE NOTES**
1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 4. SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".
 5. REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.
 6. SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.
 7. WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.
- (DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, NOT AVAILABLE IN AUTOCAD)
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

SF-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

SM-3

Construction Fence (CF)



CF-2 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

Construction Fence (CF)

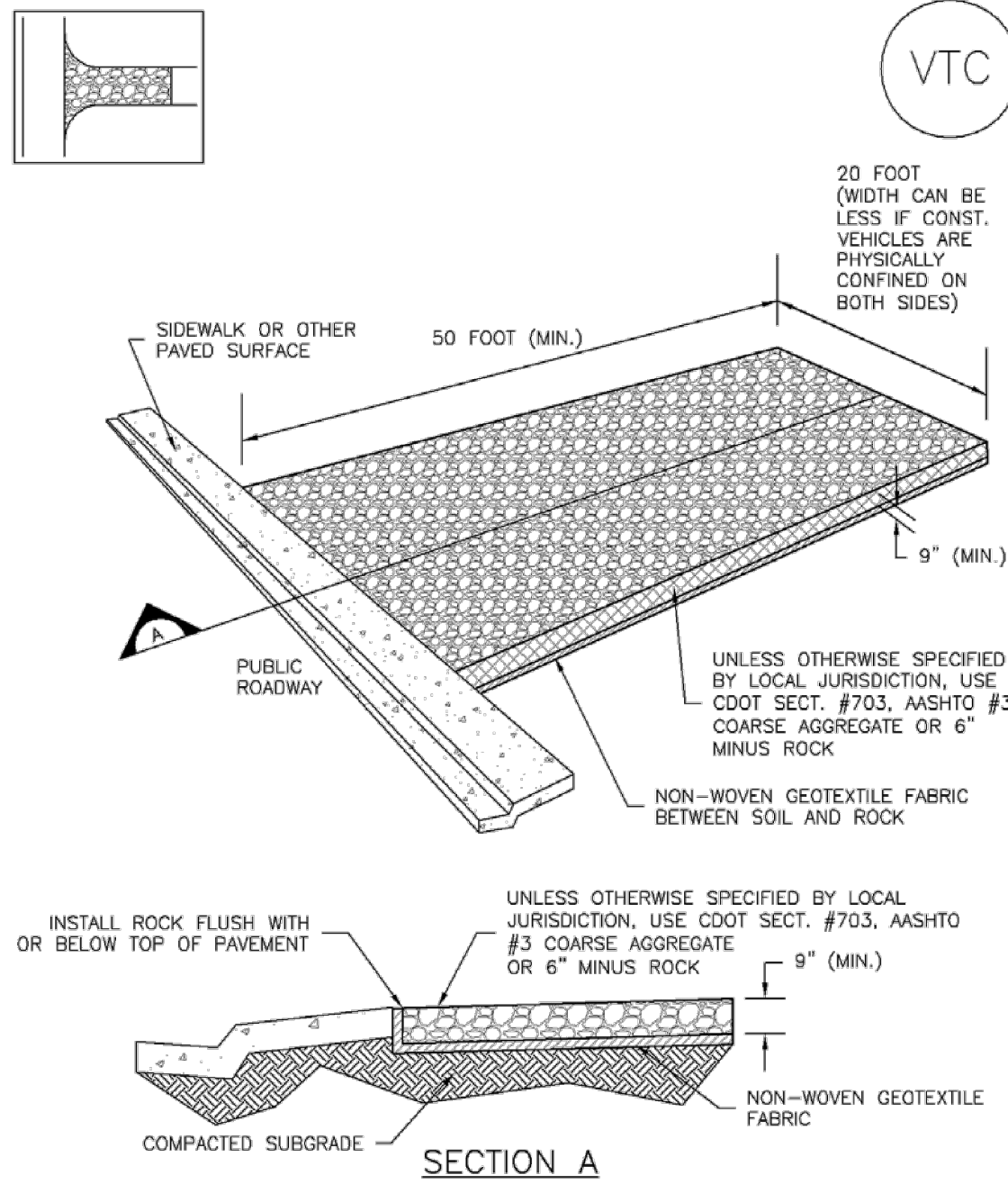
SM-3

- CONSTRUCTION FENCE MAINTENANCE NOTES**
1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 4. CONSTRUCTION FENCE SHALL BE REPAIRED OR REPLACED WHEN THERE ARE SIGNS OF DAMAGE SUCH AS RIPS OR SAGS. CONSTRUCTION FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
 5. WHEN CONSTRUCTION FENCES ARE REMOVED, ALL DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND/OR REMOVAL OF THE FENCE SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.
- (DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 CF-3

Vehicle Tracking Control (VTC)

SM-4



VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

VTC-3 November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

SM-4 Vehicle Tracking Control (VTC)

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

1. SEE PLAN VIEW FOR
-LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S).
-TYPE OF CONSTRUCTION ENTRANCE(S)/EXIT(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).
2. CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.
3. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.
4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
5. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.
6. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES

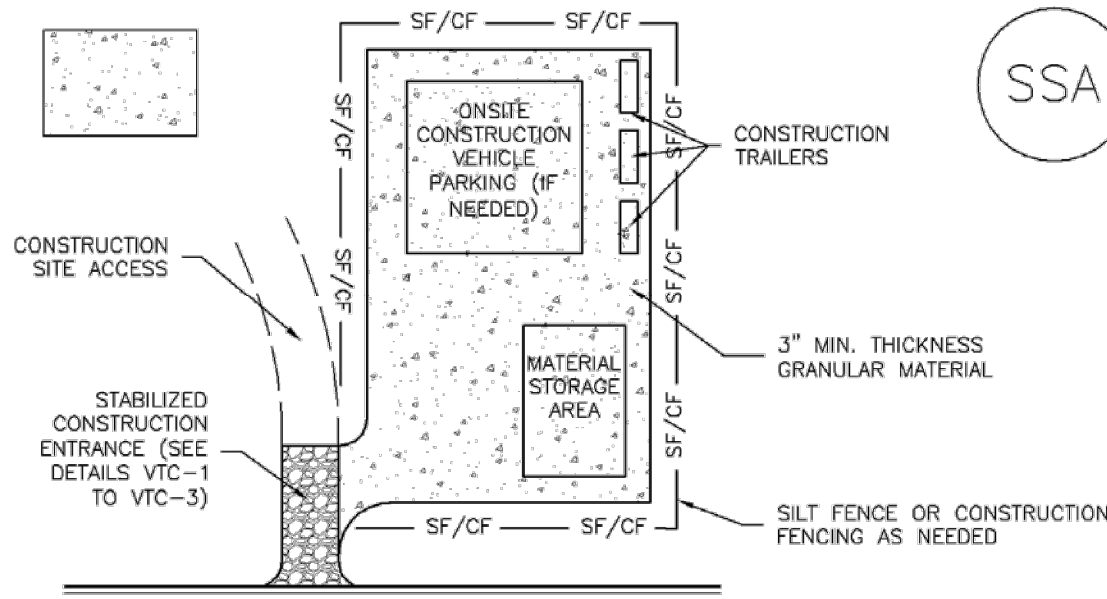
1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.
5. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM CITY OF BROOMFIELD, COLORADO, NOT AVAILABLE IN AUTOCAD)

VTC-6 Urban Drainage and Flood Control District November 2010
Urban Storm Drainage Criteria Manual Volume 3

Stabilized Staging Area (SSA) SM-6



SSA-1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

1. SEE PLAN VIEW FOR
-LOCATION OF STAGING AREA(S).
-CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
2. STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.
3. STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.
4. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.
5. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.
6. ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

STABILIZED STAGING AREA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

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SM-6 Stabilized Staging Area (SSA)

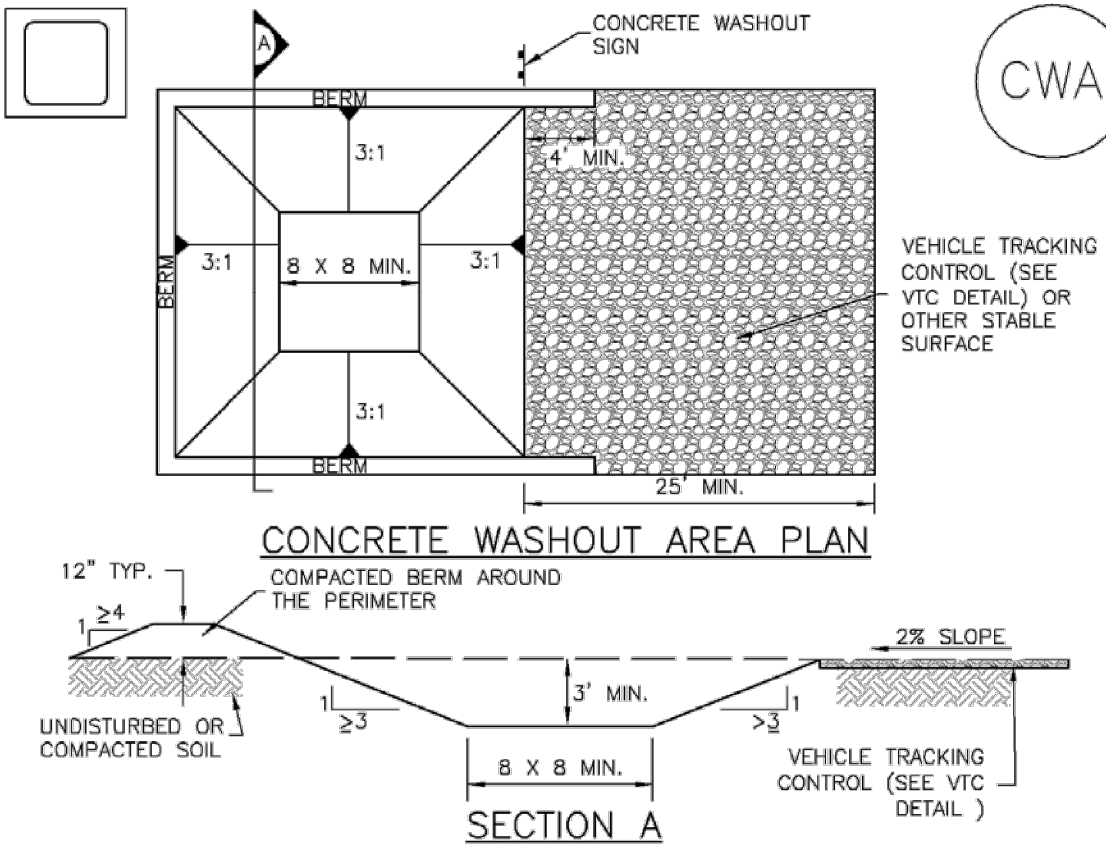
STABILIZED STAGING AREA MAINTENANCE NOTES

5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
 6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.
- NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

SSA-4 Urban Drainage and Flood Control District November 2010
Urban Storm Drainage Criteria Manual Volume 3

Concrete Washout Area (CWA) MM-1



CWA-1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
-CWA INSTALLATION LOCATION.
2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.
3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

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MM-1 Concrete Washout Area (CWA)

CWA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS, ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.
5. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD).

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EROSION
CONTROL
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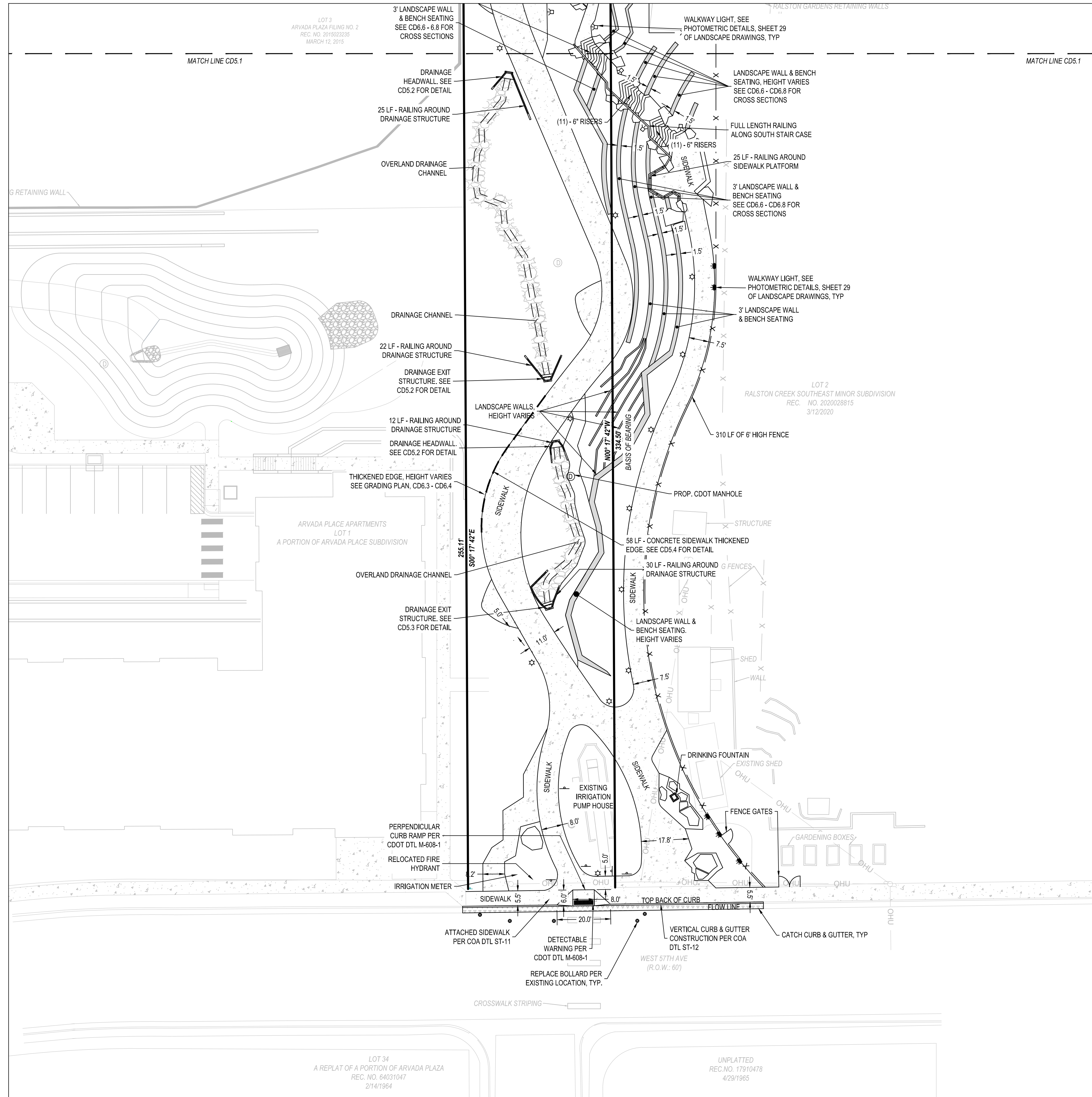
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SITE PLAN

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SHEET 10 OF 31



- GENERAL NOTES:
- SECTIONS OF SIDEWALK BEING REMOVED/REPLACED NEED TO BE REMOVED AND REPLACED TO THE NEAREST JOINT
 - SERVICE LINES BEING ABANDONED NEED TO BE REMOVED AND CAPPED AT THE MAIN.

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SITE PLAN

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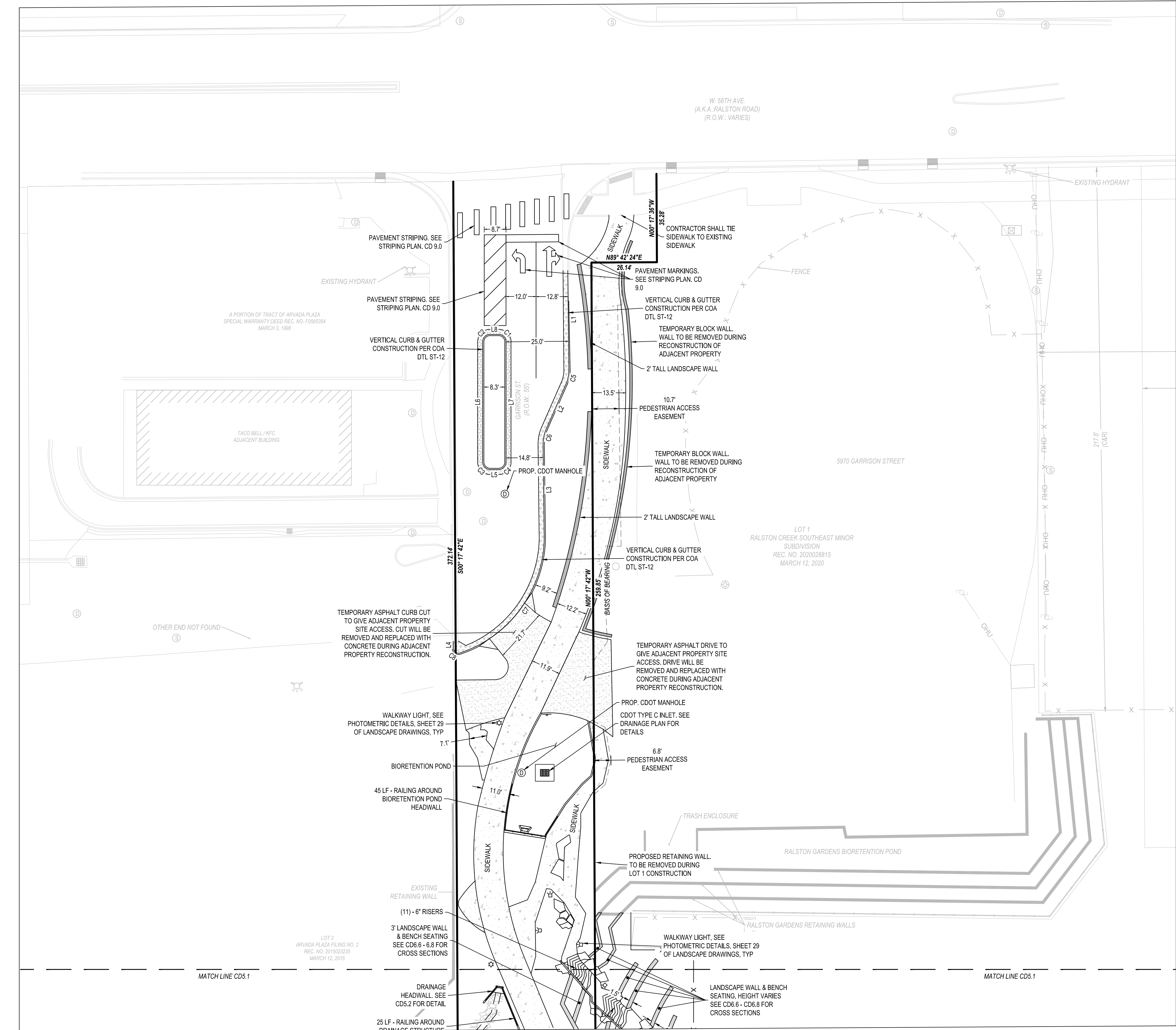
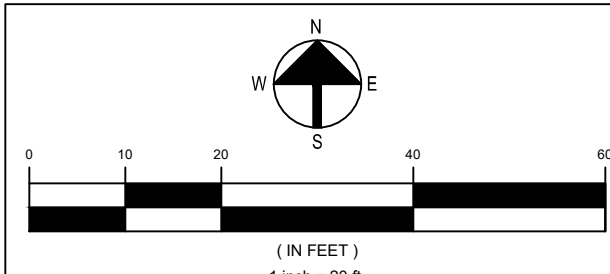
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L5	3.341	N90° 00' 00.00"W
L7	48.018	S00° 00' 00.00"E
L8	3.341	N90° 00' 00.00"E
L3	36.052	S00° 43' 03.47"E
L2	19.365	S23° 41' 38.52"W
L1	39.455	S00° 38' 08.84"E

Curve Table			
Curve #	Length	Radius	Delta
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C8	3.758	2.000	107.6566
C2	4.712	3.000	090.0000
C1	4.712	3.000	090.0000
C3	4.712	3.000	090.0000
C4	4.712	3.000	090.0000
C5	6.370	15.000	024.3298
C6	6.391	15.000	024.4117

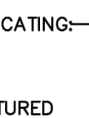
LEGEND:

	PROPERTY LINE
	ADJACENT PROPERTY LINE
	FIRE HYDRANT
	PROPOSED CURB & GUTTER
	EXISTING CURB & GUTTER
	SPILL CURB
	CATCH CURB
	SIDEWALK CHASE
	PROPOSED CONCRETE
	DRAINAGE CHANNEL
	STORM SEWER MANHOLE
	EXST. STORM SEWER MH
	UTILITY POLE
	OVERHEAD UTILITY
	FENCE
	EXST. FENCE
	FENCE MOUNTED LIGHT
	POLE MOUNTED LIGHT
	SIGN
	EXST. BOLLARD

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 - SERVICE LINES BEING ABANDONED NEED TO BE REMOVED AND CAPPED AT THE MAIN.

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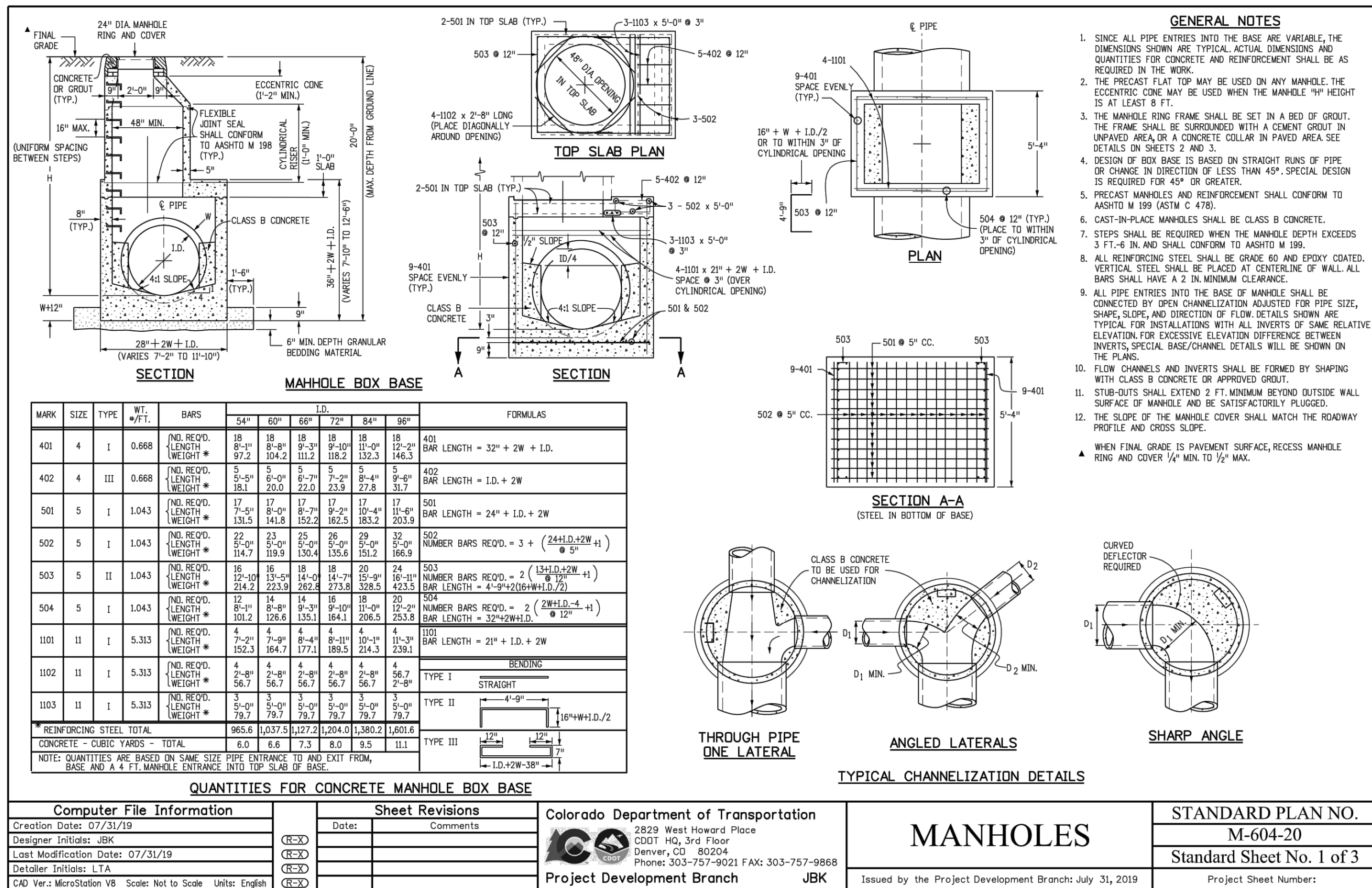
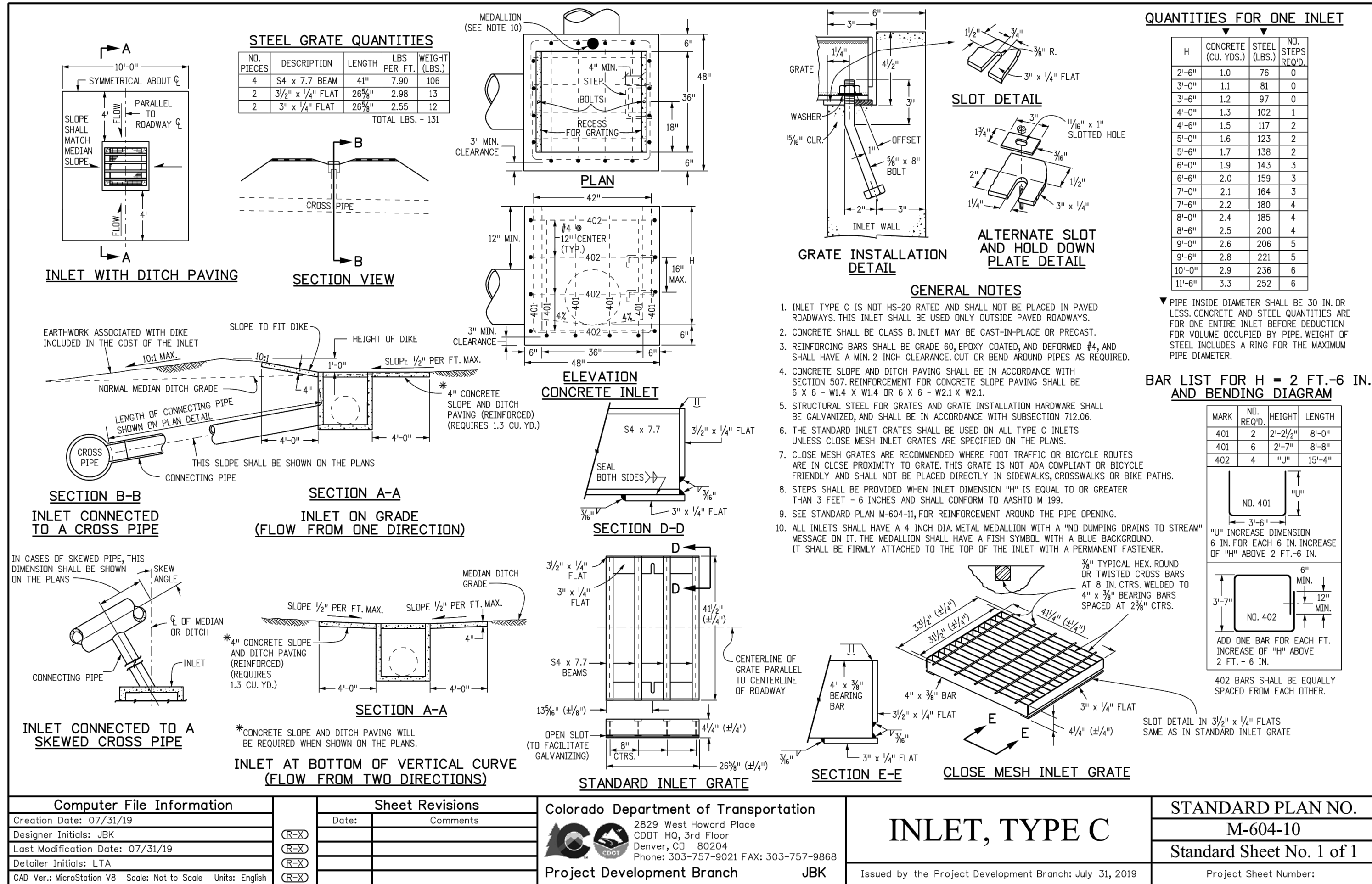
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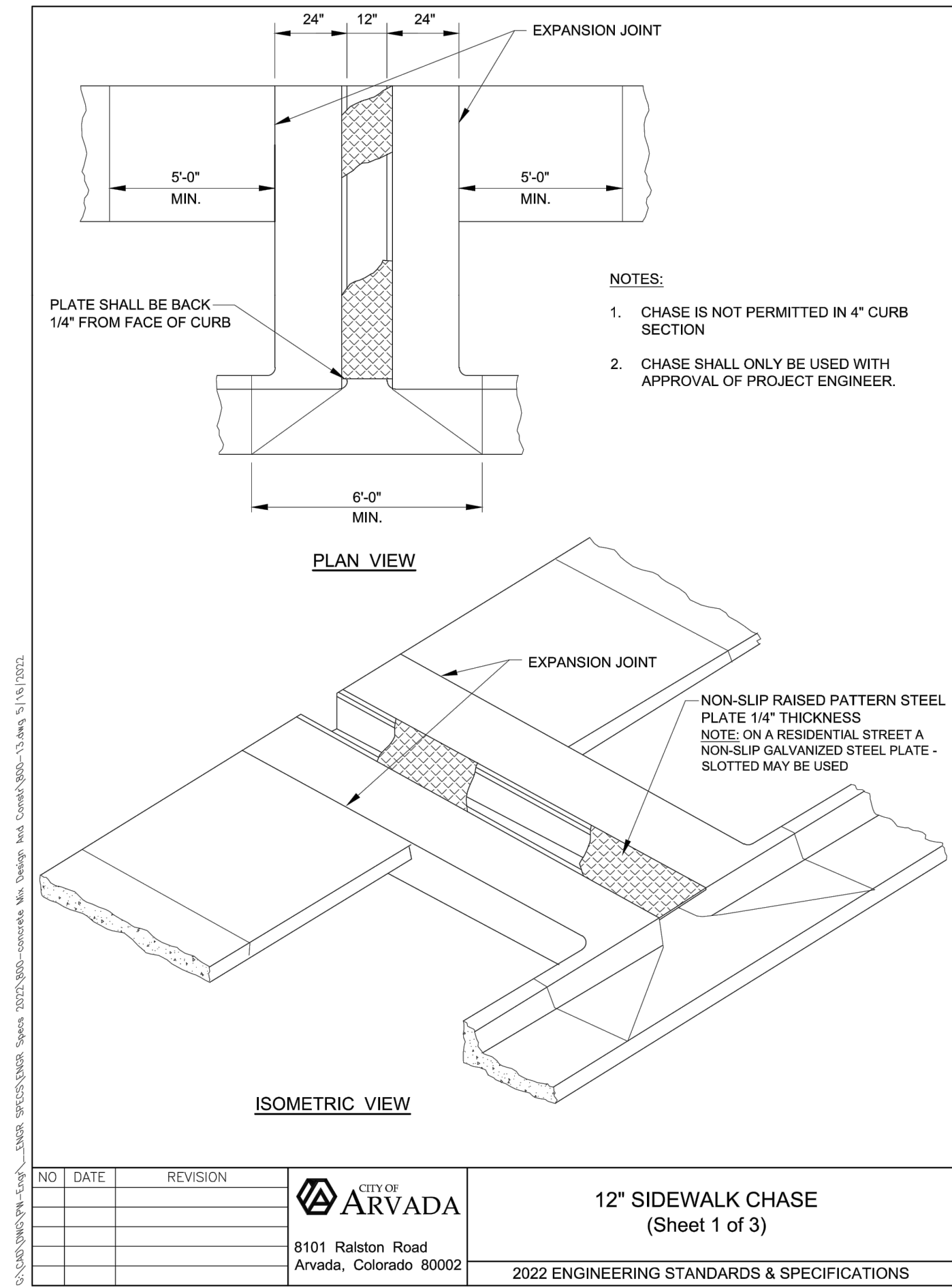
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SITE PLAN DETAILS

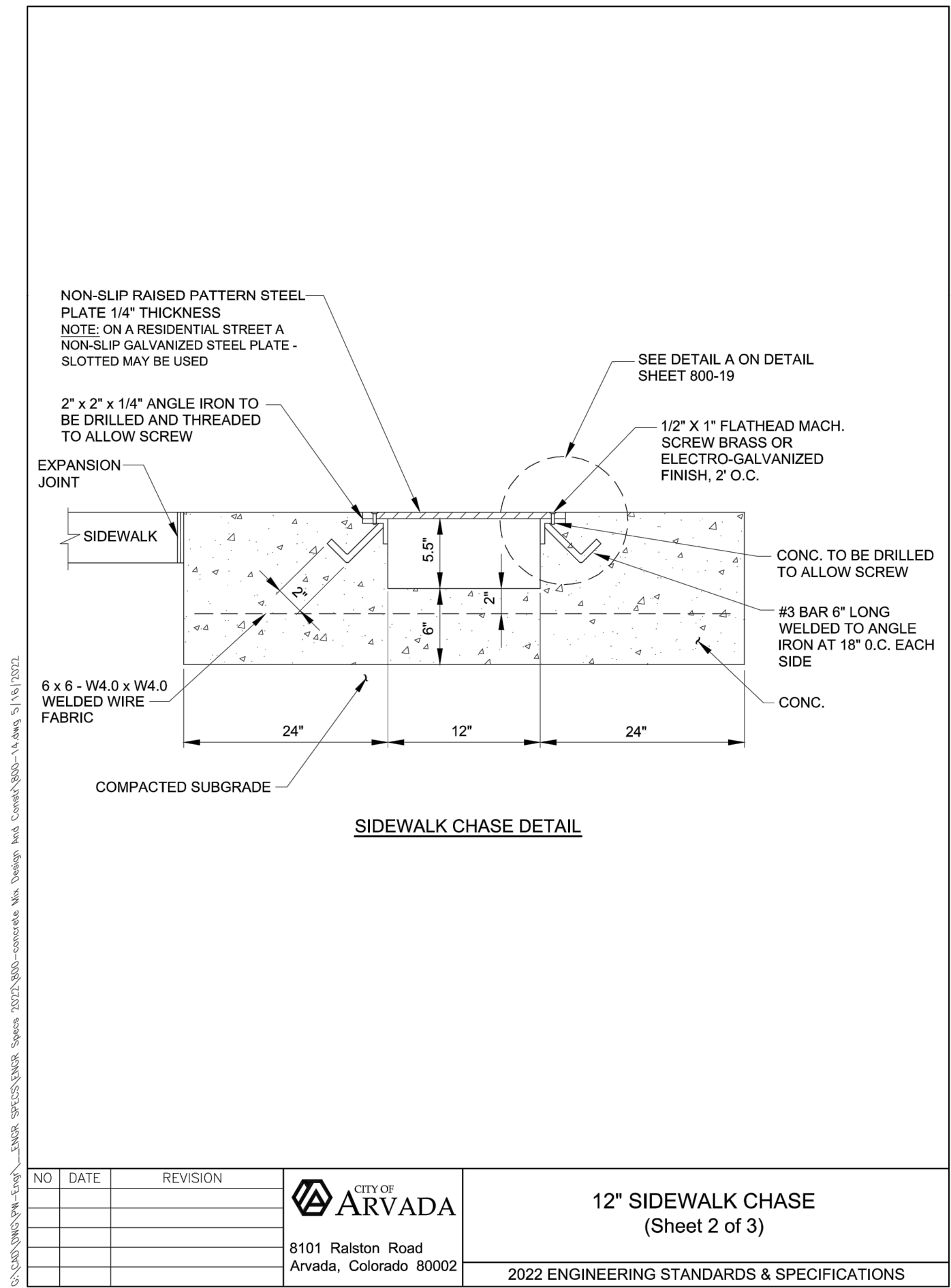
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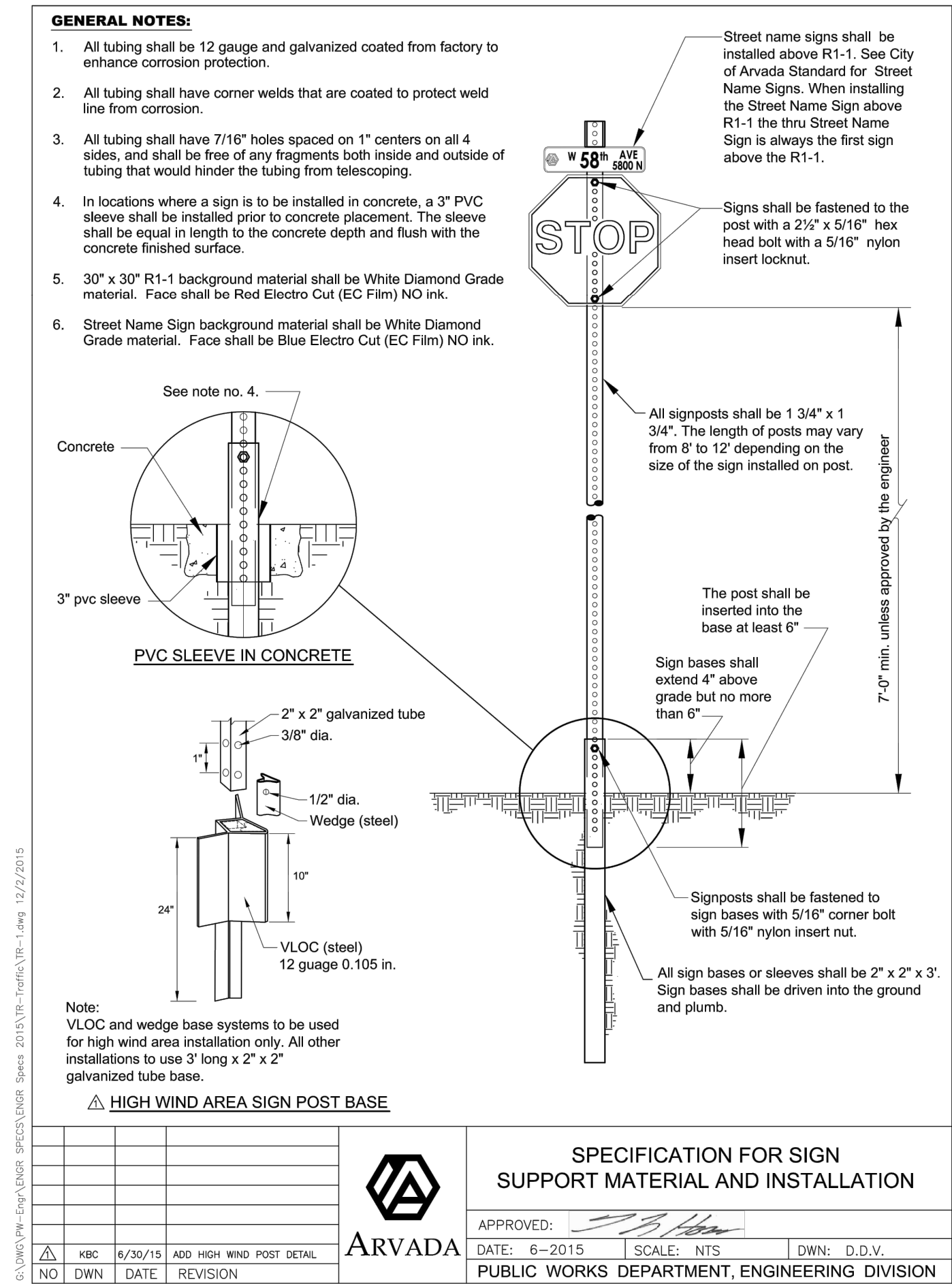




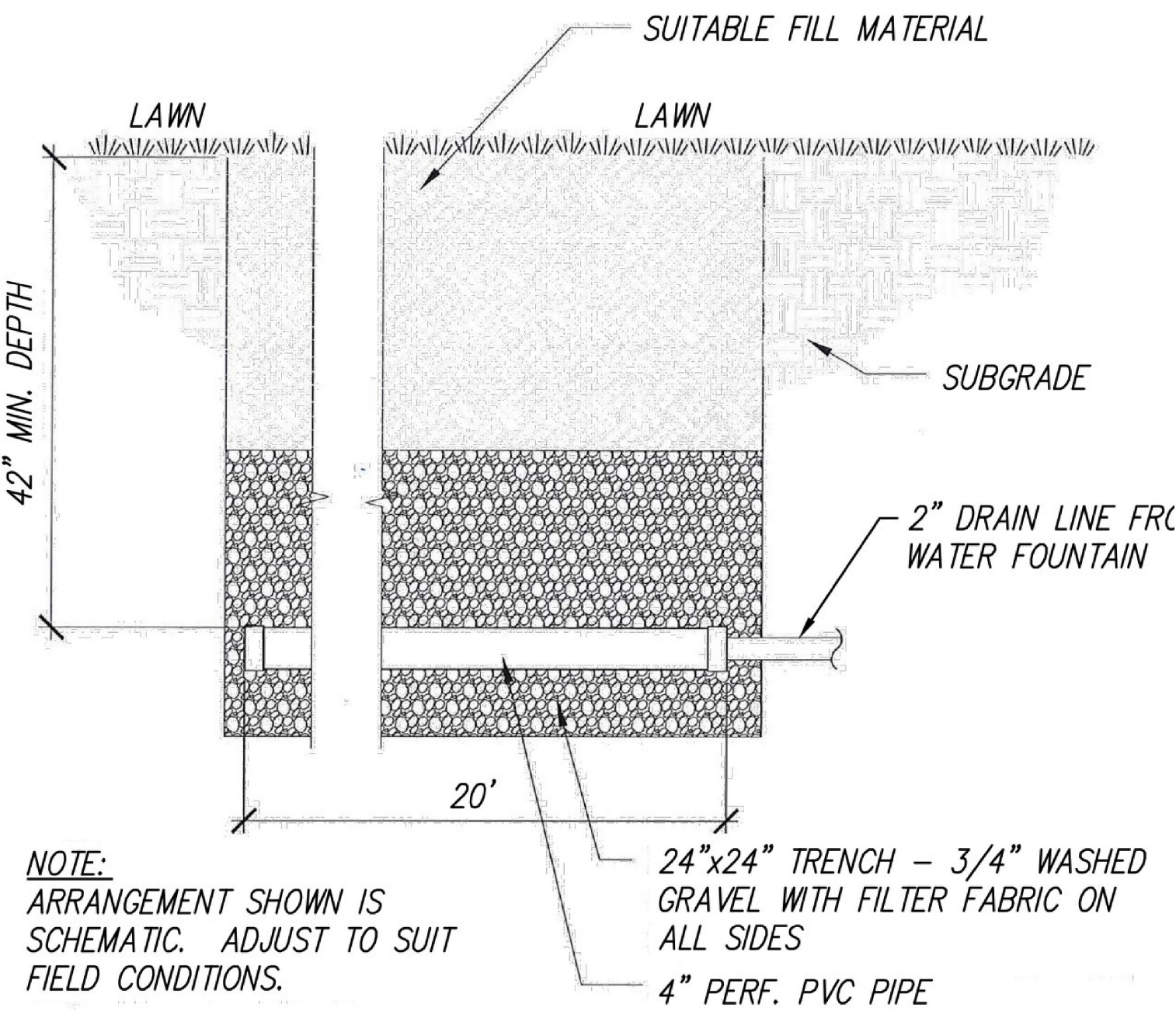
800-13



800-14



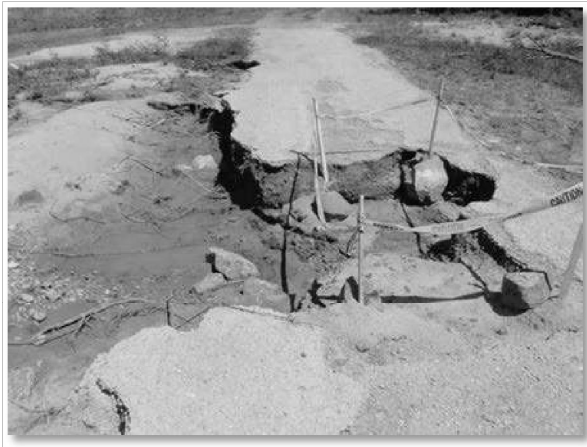
TR-1



NEW LEECH PIT DETAIL
N.T.S.

3.3.3 Path Overtopping Protection

Provide adequate protection to avoid damage caused when flows overtop the path. As a path turns perpendicular to the stream, or anywhere significant overland flows are likely to cross the path (e.g., downstream of side-channel spillways or at undersized culvert crossings), scour can occur along the downstream edge. This causes the path to act like a drop structure. Flows across the path accelerate, potentially damaging the upstream edge of the path, while scour downstream can eventually undermine the path (see Photo 10-11). For these reasons, a thickened edge on both the upstream and downstream sides of a path approaching a low crossing is recommended. The edge should extend a minimum of two feet below the surface of the path (see Figure 10-1). Soil riprap placed adjacent to the path can be used to provide additional protection.



Photograph 10-11. A soil cement path approaching a crossing on Sand Creek is undermined on the downstream side due to overtopping. Overtopping protection was not adequate to stop scour damage before losing a section of the path.

The length of the overtopping protection is site specific. If the bank of the channel is well defined, protection should extend from the crossing into the bank. If the bank is not well defined, extend the protection to a point where the path is more parallel with the stream than it is perpendicular. In either case, the length of overtopping protection typically does not need to extend higher than the 10-year surface elevation.

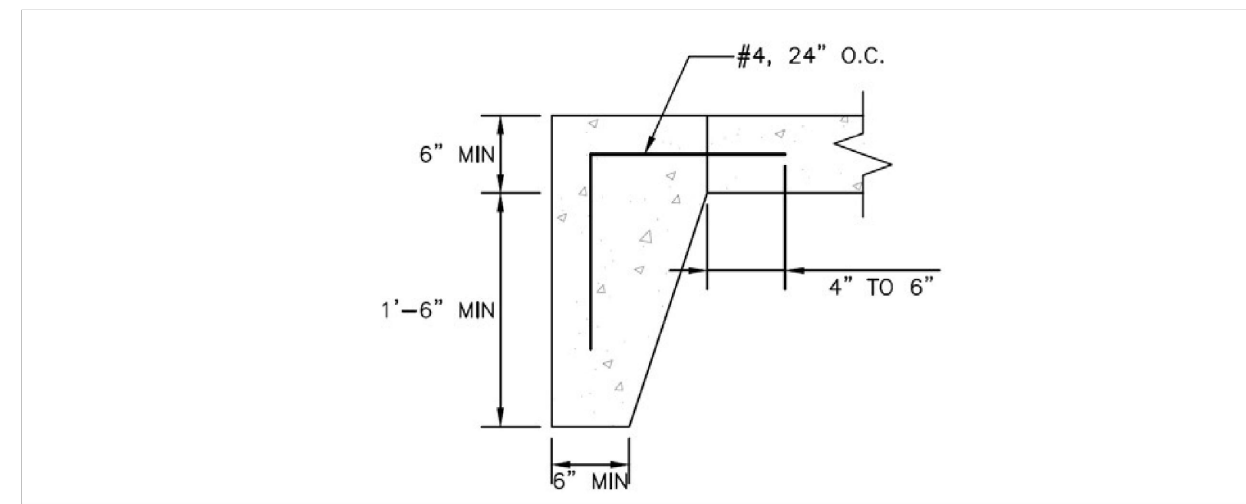


Figure 10-1. Thickened edge detail

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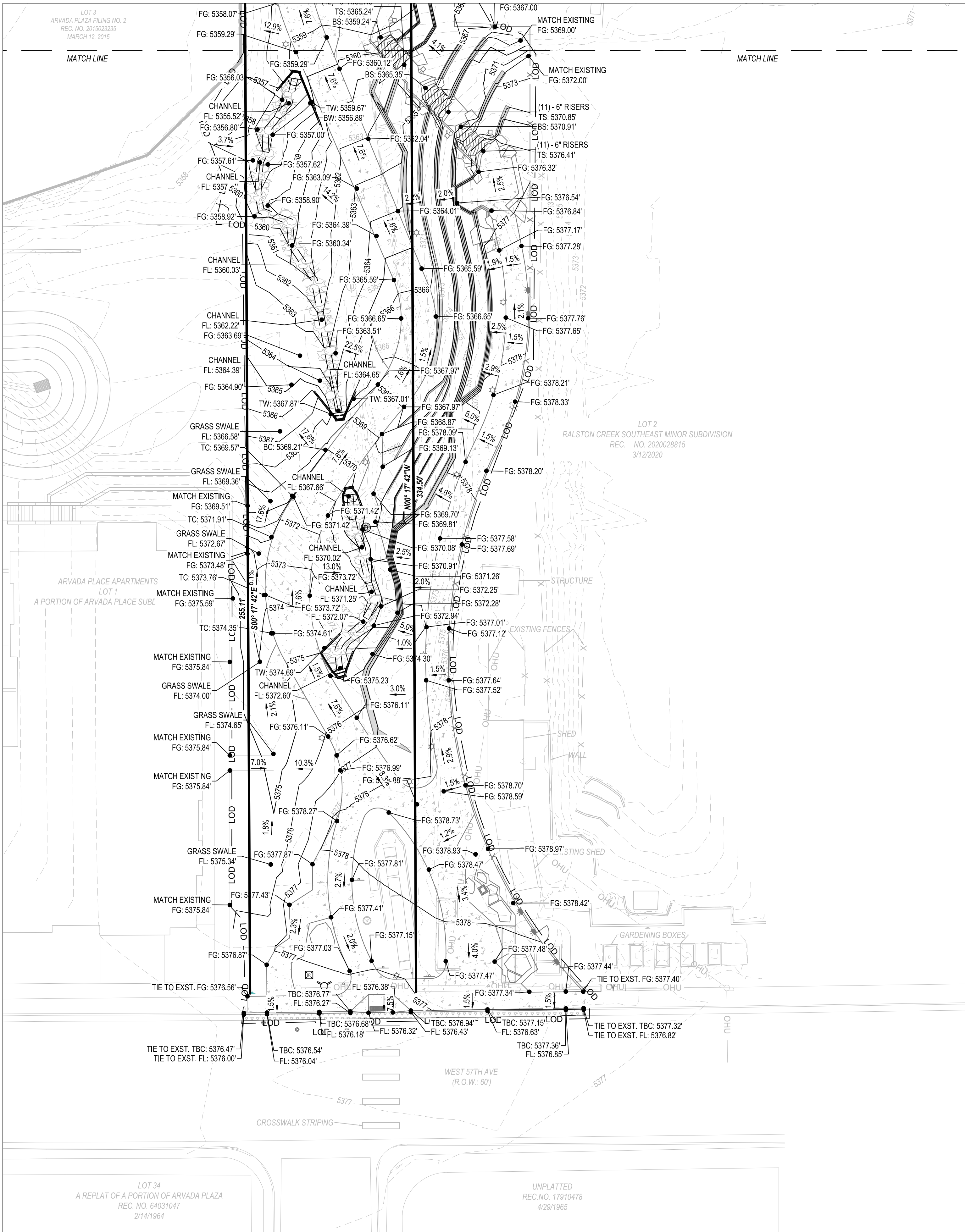
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GRADING PLAN

CD6.0

SHEET 15 OF 31



GENERAL NOTES:

1. IF THE SIDEWALK IS BEING REMOVED, IT NEEDS TO BE REMOVED AND REPLACED TO THE NEAREST JOINT
2. MAX 4:1 SLOPES IN AREAS TO BE MOWED OR MAINTAINED
3. ALL ADA RAMPS ARE TO MEET ADA STANDARDS

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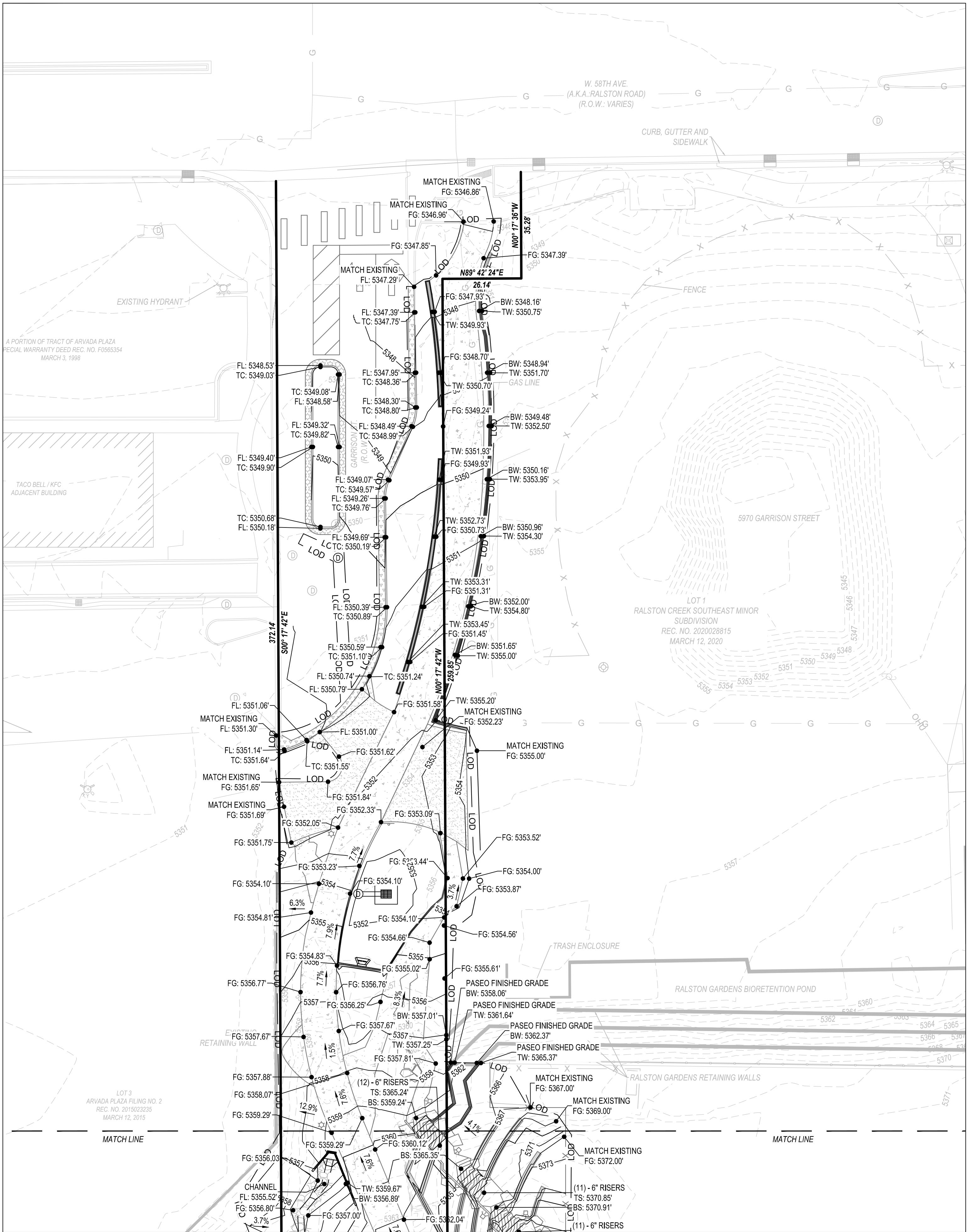
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SHEET 16 OF 31



GENERAL NOTES:

1. IF THE SIDEWALK IS BEING REMOVED, IT NEEDS TO BE REMOVED AND REPLACED TO THE NEAREST JOINT
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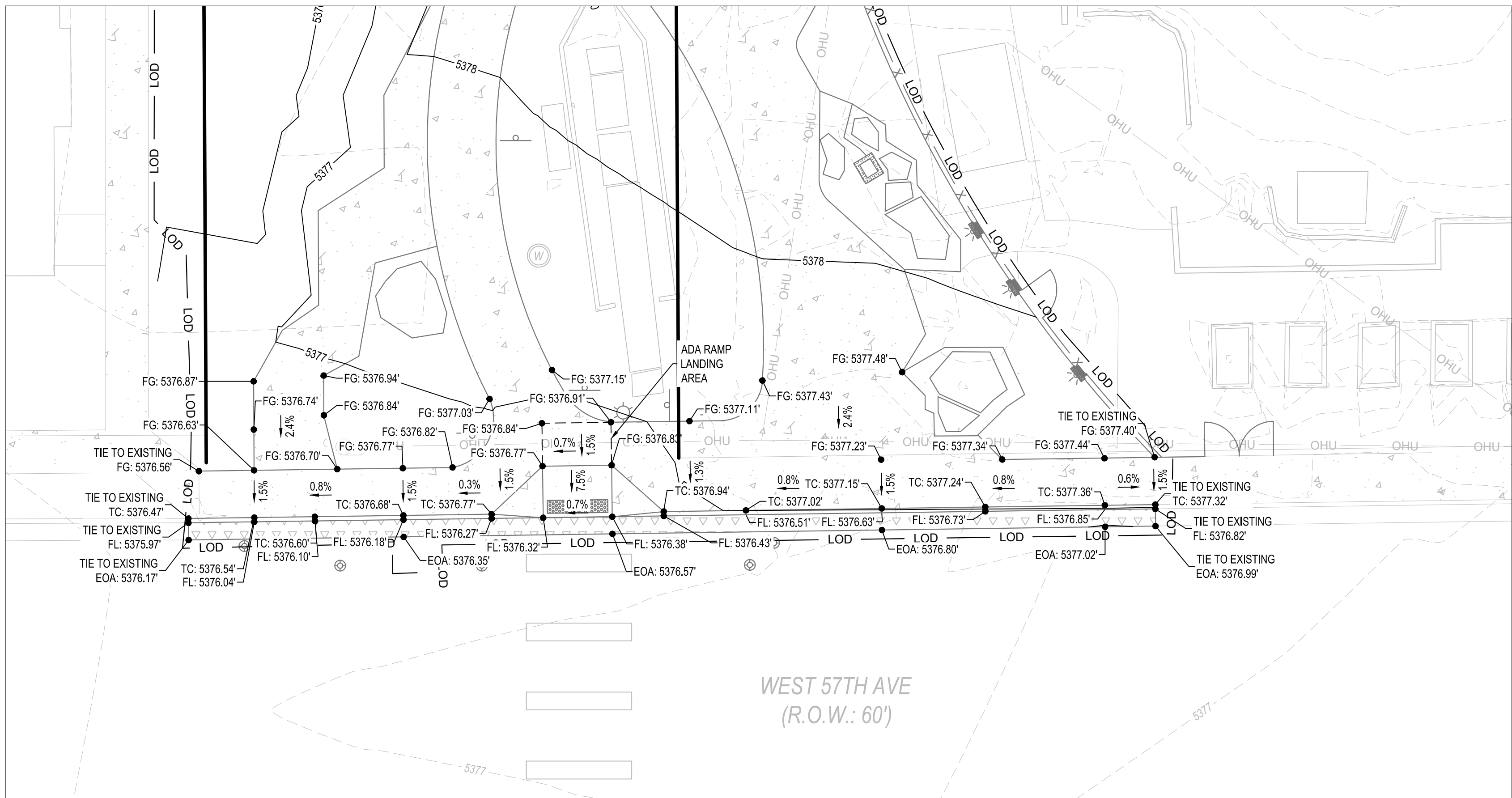
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R.O.W. & ADA RAMP
GRADING PLAN

CD6.2

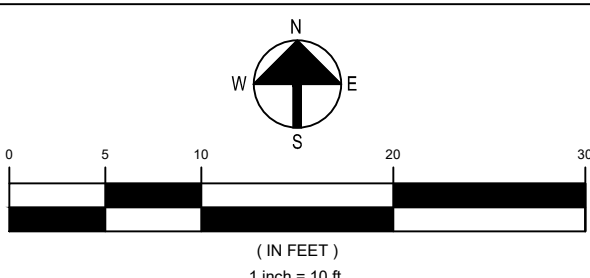
SHEET 17 OF 31



LEGEND:

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- LOD LIMITS OF DISTURBANCE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- SPOT ELEVATION
- PROPOSED CONCRETE
- EXISTING CONCRETE
- PROPOSED CURB & GUTTER
- EXISTING CURB & GUTTER
- UTILITY POLE
- OHU OVERHEAD UTILITY
- DETECTABLE WARNING
- FENCE

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GENERAL NOTES:

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- ALL ADA RAMPS ARE TO MEET ADA STANDARDS

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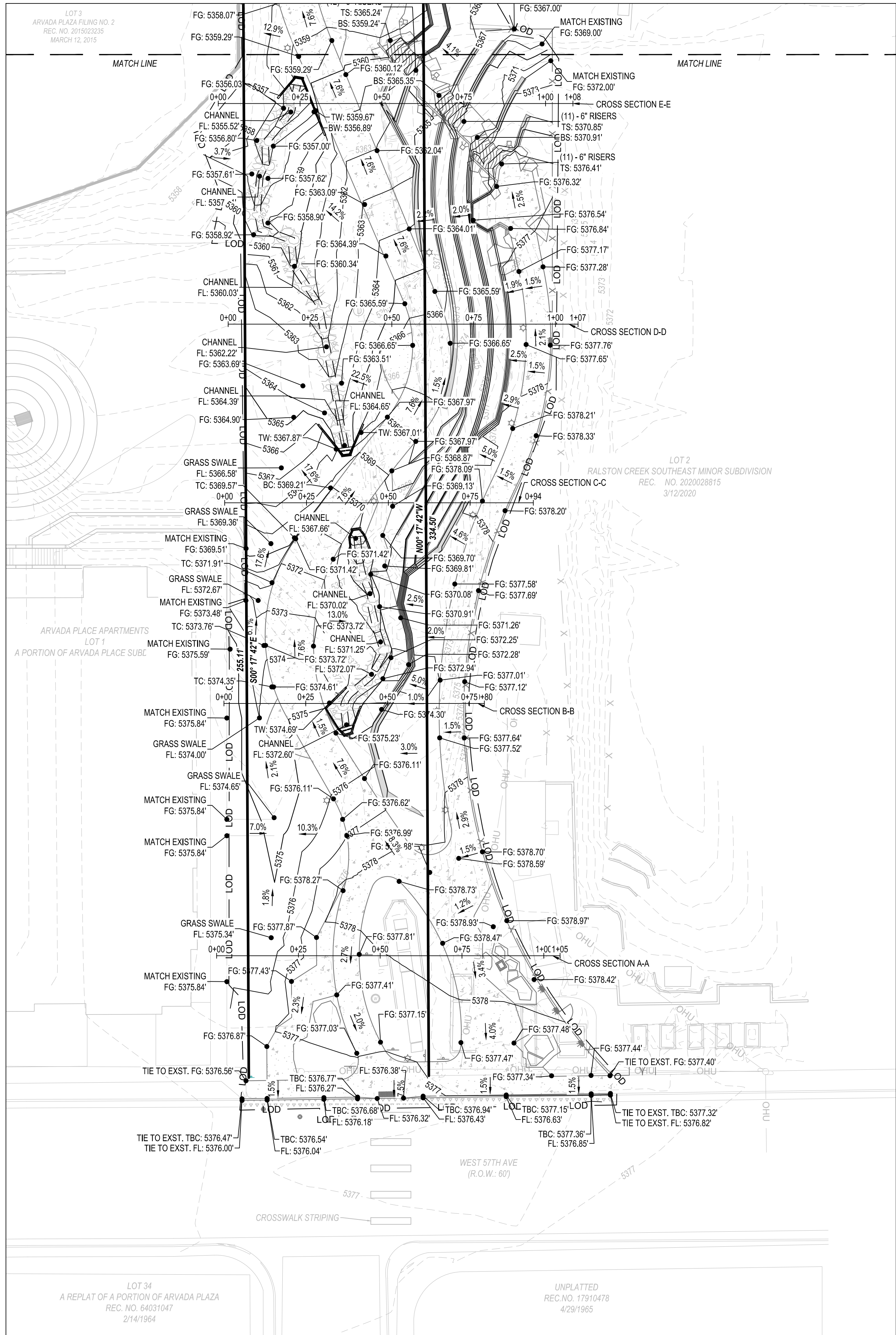
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DATE: 06.21.2023
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PASEO CROSS
SECTION PLAN

CD6.3

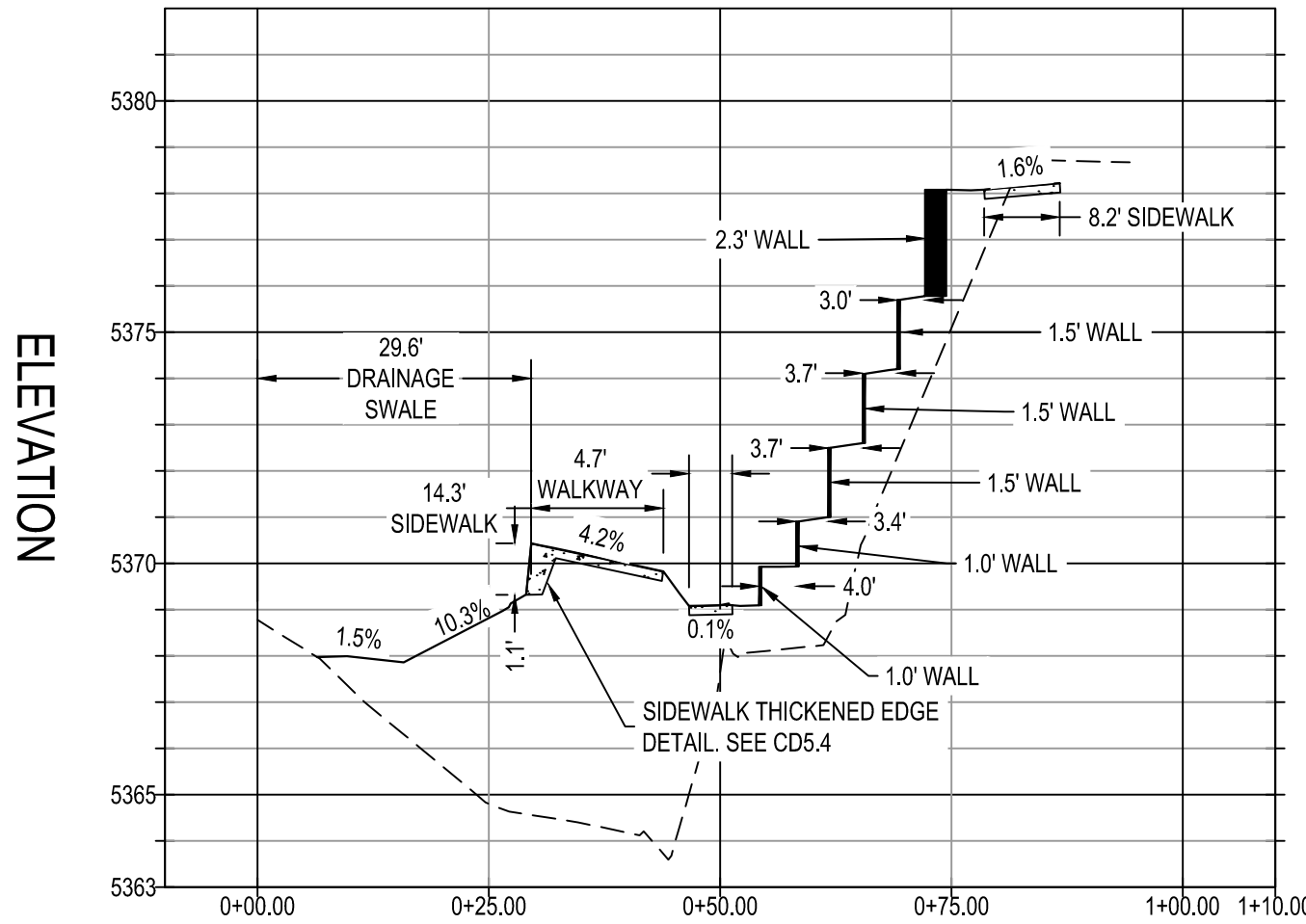
SHEET 18 OF 31



- GENERAL NOTES:
1. IF THE SIDEWALK IS BEING REMOVED, IT NEEDS TO BE REMOVED AND REPLACED TO THE NEAREST JOINT
 2. MAX 4:1 SLOPES IN AREAS TO BE MOWED OR MAINTAINED
 3. ALL ADA RAMPS ARE TO MEET ADA STANDARDS

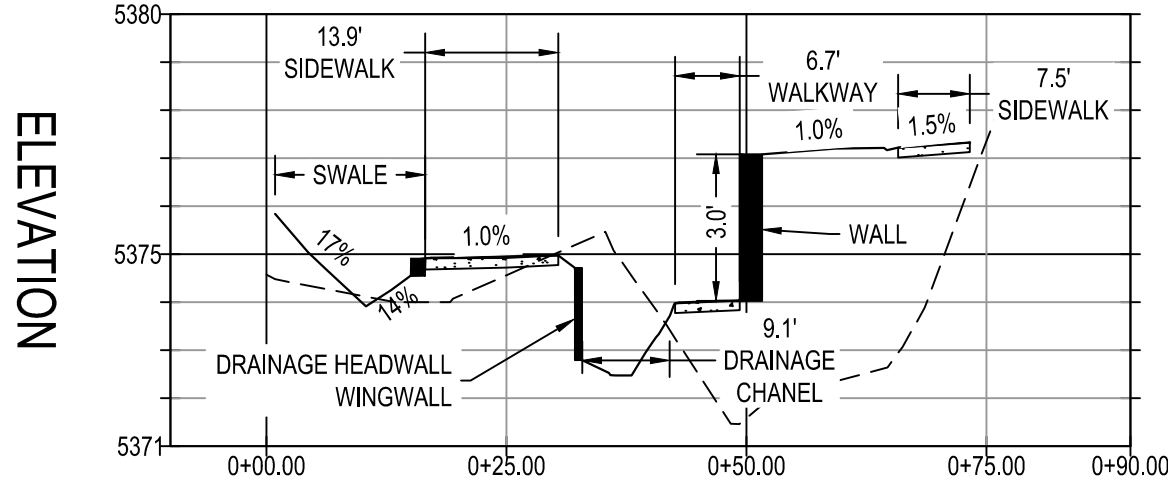
CROSS SECTION C-C

VERTICAL SCALE: 1"=4'
HORIZONTAL SCALE: 1"=20'



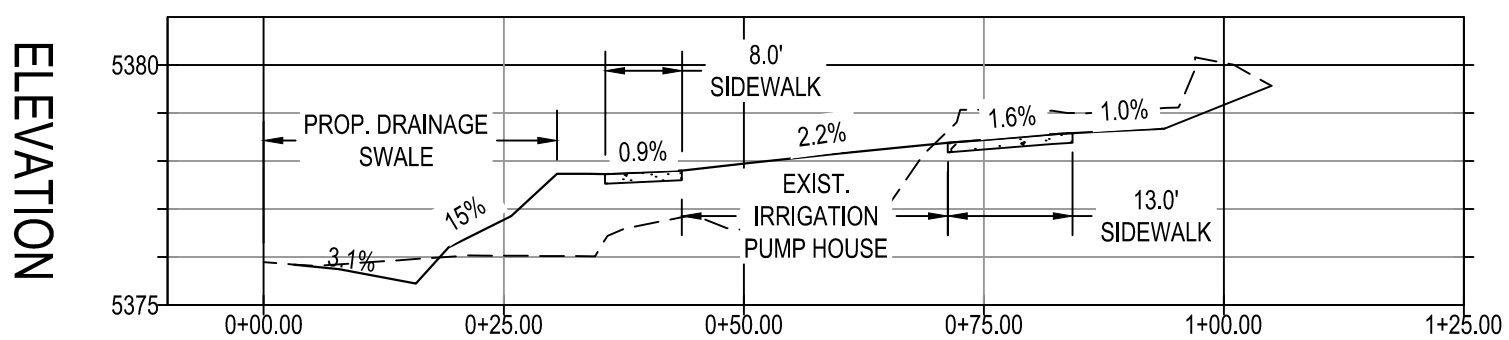
CROSS SECTION B-B

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HORIZONTAL SCALE: 1"=20'



CROSS SECTION A-A

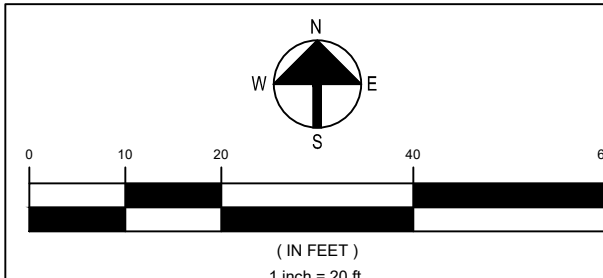
VERTICAL SCALE: 1"=4'
HORIZONTAL SCALE: 1"=20'



LEGEND:

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- LOD
- LIMITS OF DISTURBANCE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- SPOT ELEVATION
- PROPOSED CONCRETE
- EXISTING CONCRETE
- PROPOSED CURB & GUTTER
- EXISTING CURB & GUTTER
- OHU
- OVERHEAD UTILITY
- UTILITY POLE
- DRAINAGE CHANNEL
- FIRE HYDRANT
- STORM SEWER MANHOLE
- STORM SEWER MANHOLE

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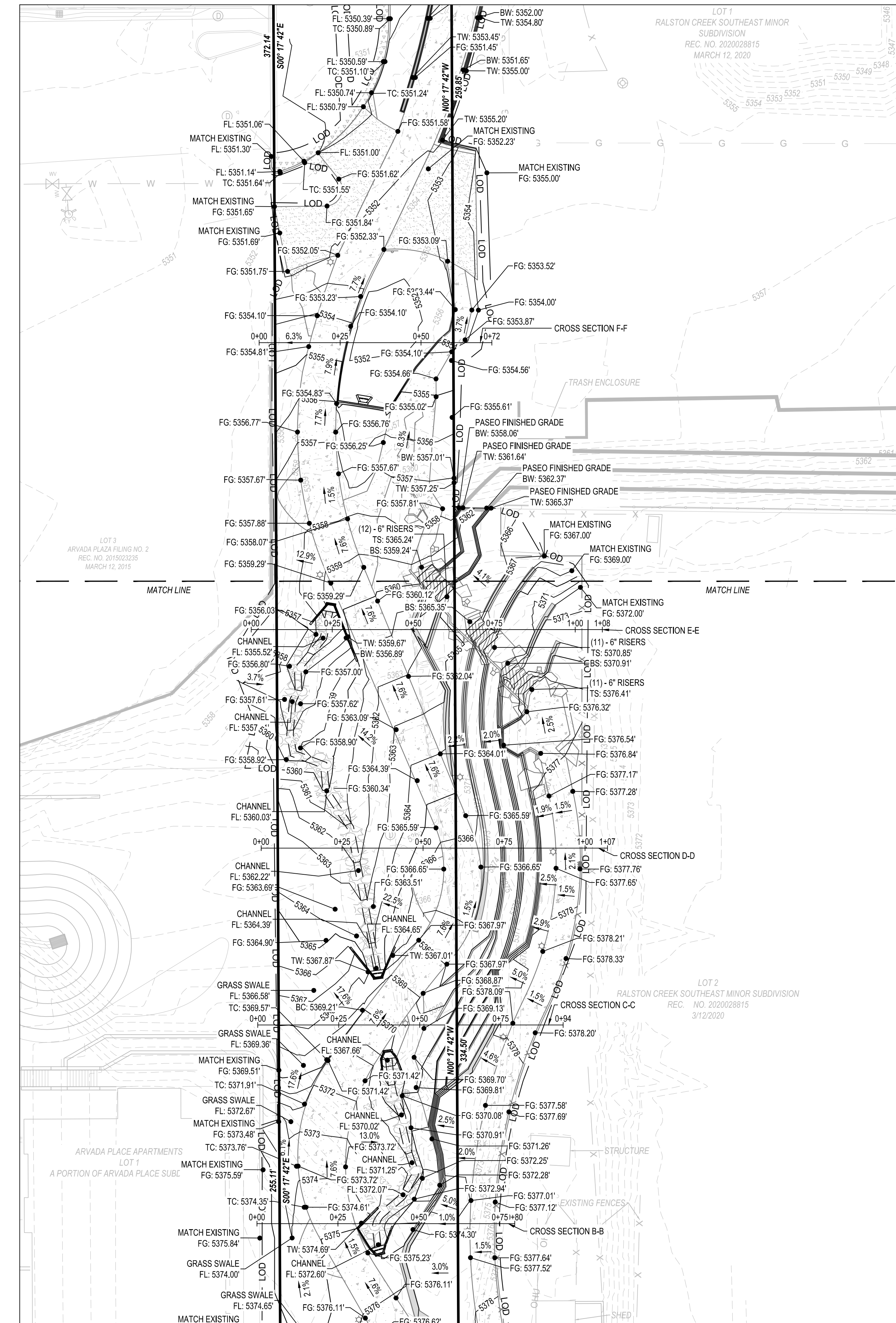
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PASEO CROSS
SECTION PLAN

CD6.4

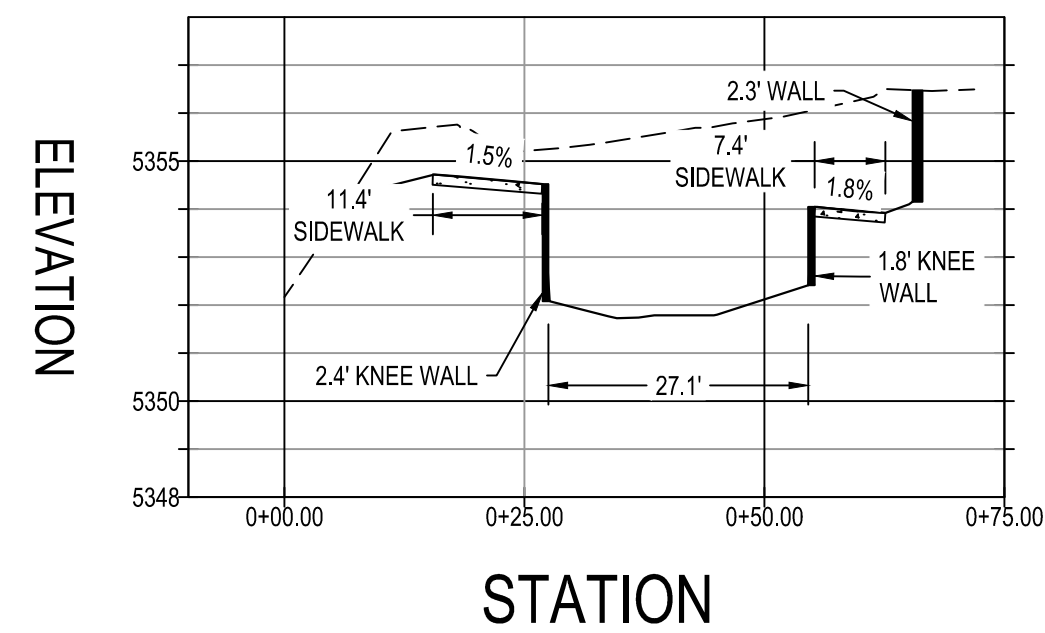
SHEET 19 OF 31



- GENERAL NOTES:
1. IF THE SIDEWALK IS BEING REMOVED, IT NEEDS TO BE REMOVED AND REPLACED TO THE NEAREST JOINT
 2. MAX 4:1 SLOPES IN AREAS TO BE MOWED OR MAINTAINED
 3. ALL ADA RAMPS ARE TO MEET ADA STANDARDS

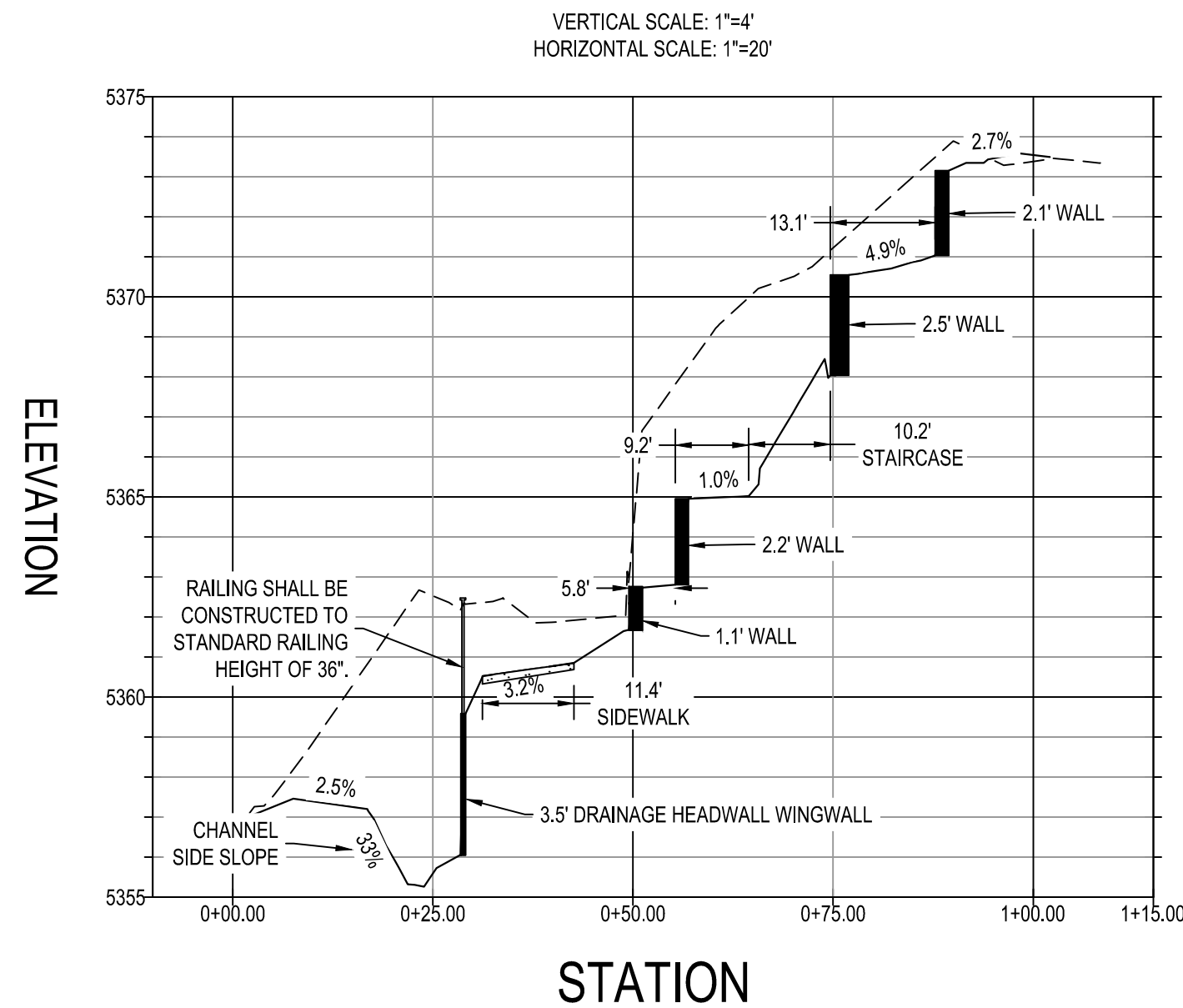
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HORIZONTAL SCALE: 1"=20'



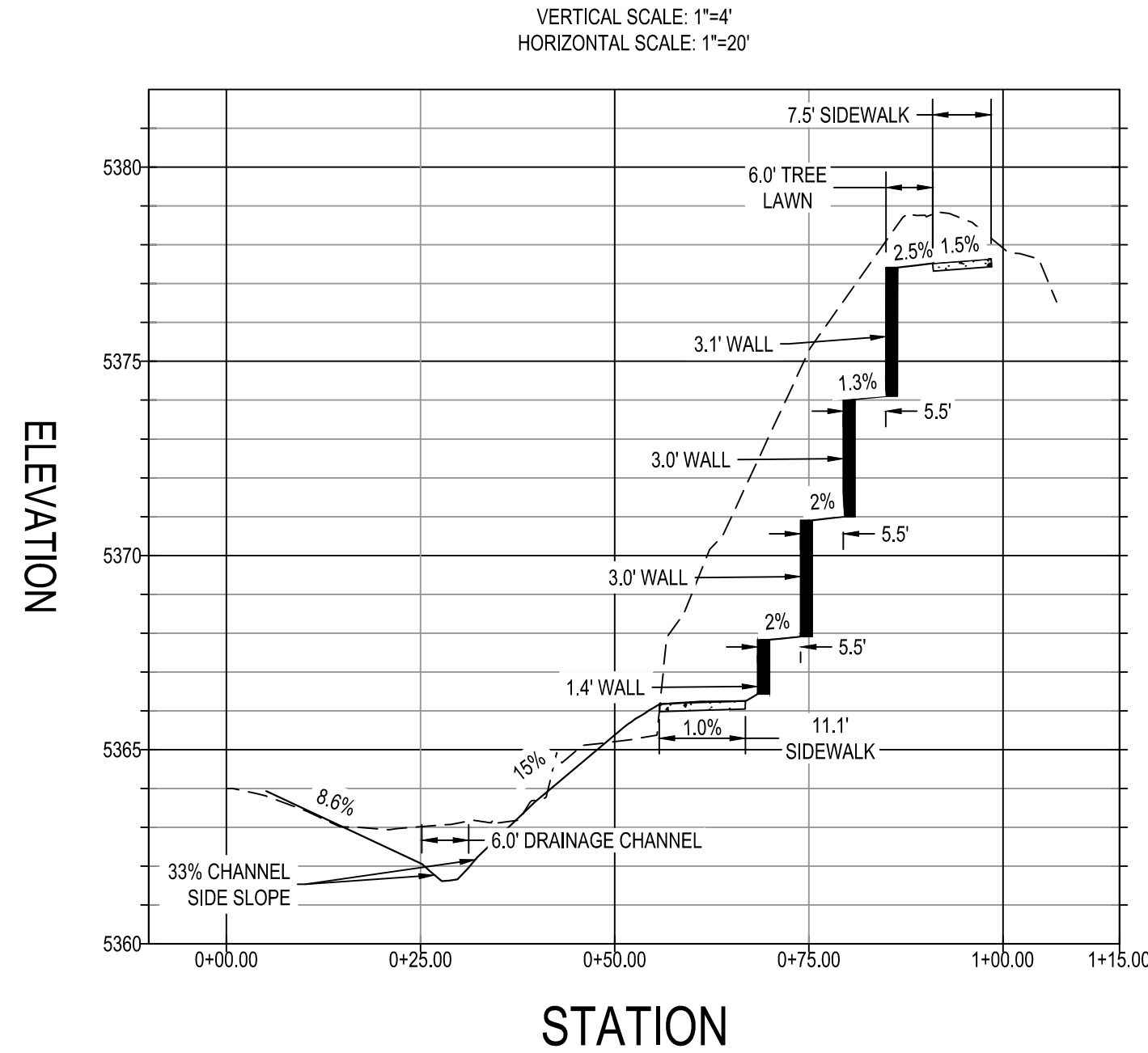
CROSS SECTION E-E

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HORIZONTAL SCALE: 1"=20'



CROSS SECTION D-D

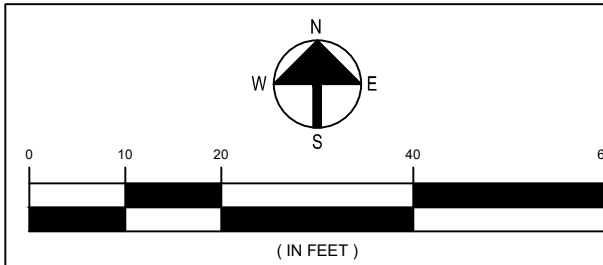
VERTICAL SCALE: 1"=4'
HORIZONTAL SCALE: 1"=20'



LEGEND:

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- LOD
- LIMITS OF DISTURBANCE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- SPOT ELEVATION
- PROPOSED CONCRETE
- EXISTING CONCRETE
- PROPOSED CURB & GUTTER
- EXISTING CURB & GUTTER
- OHU
- OVERHEAD UTILITY
- UTILITY POLE
- DRAINAGE CHANNEL
- FIRE HYDRANT
- STORM SEWER MANHOLE
- STORM SEWER MANHOLE

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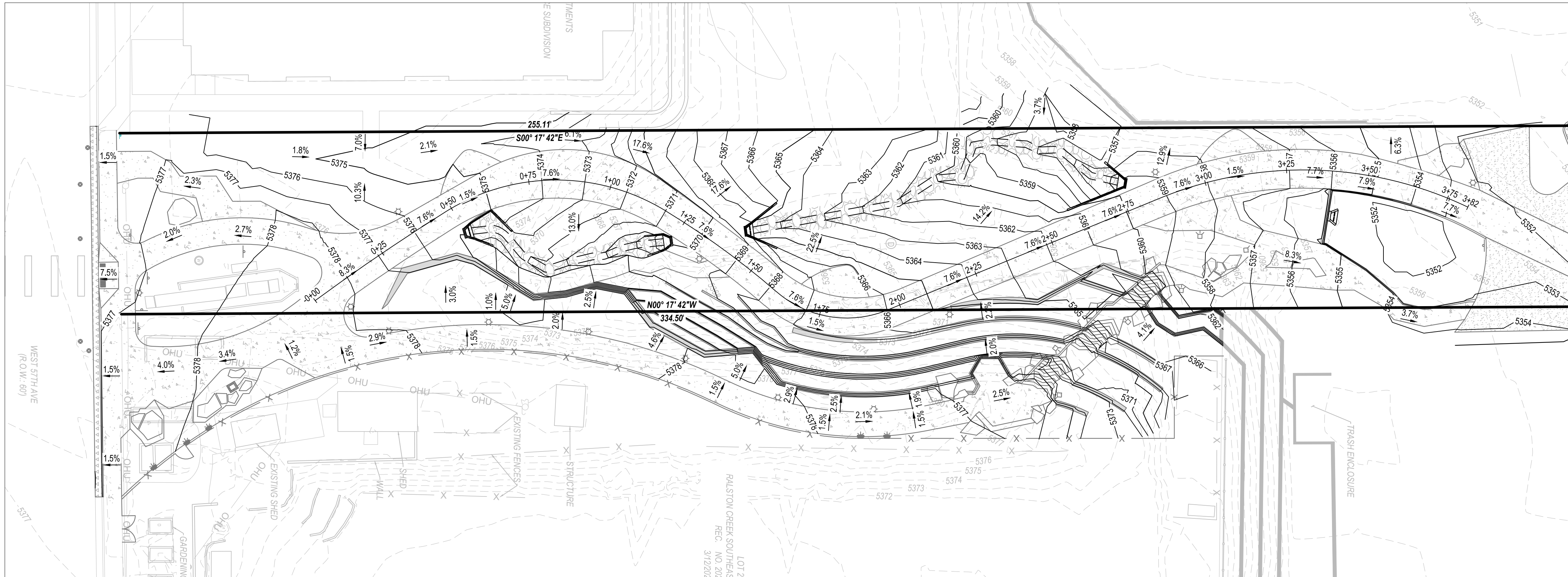
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SIDEWALK
PROFILE

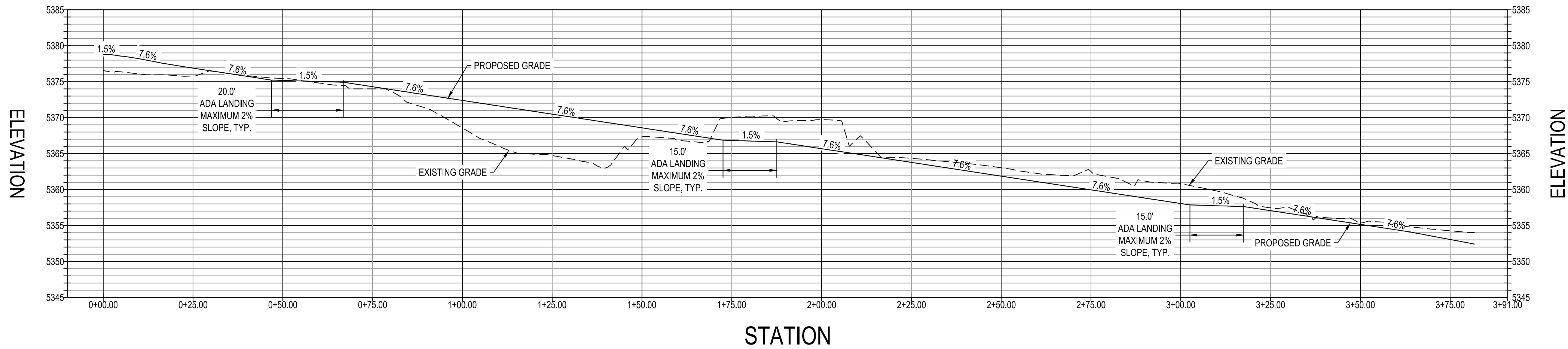
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SHEET 20 OF 31



SIDEWALK PROFILE

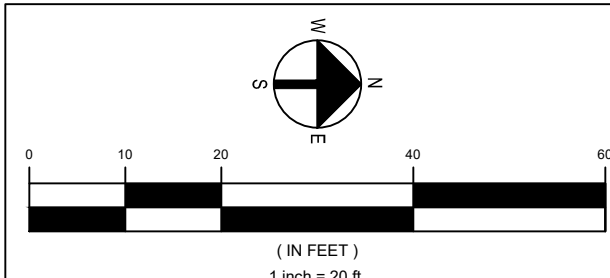
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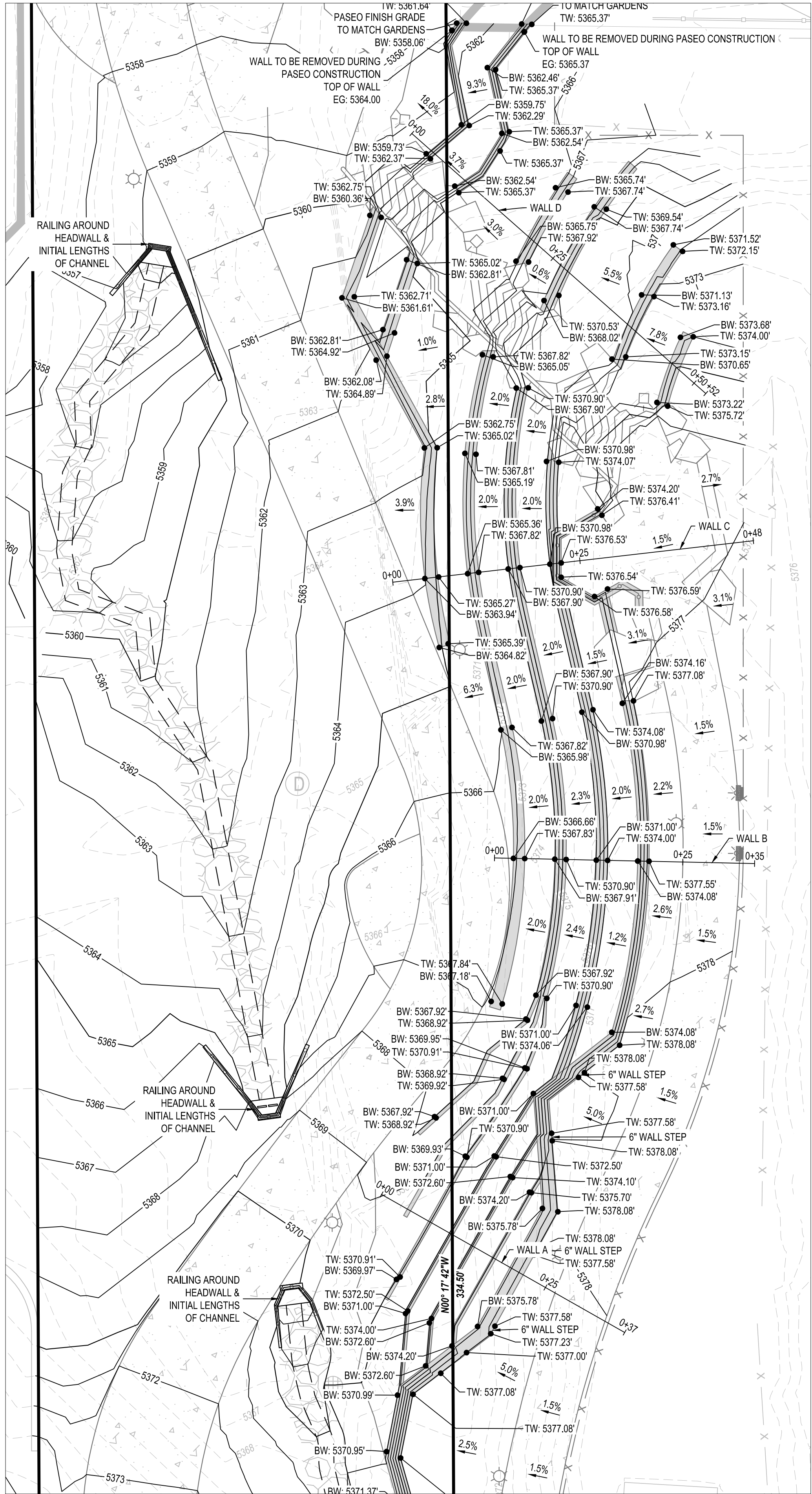
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- CATCH CURB
- SPILL CURB
- EXISTING CONTOUR
- PROPOSED CONTOUR
- SPOT ELEVATION
- PROPOSED CONCRETE
- EXISTING CONCRETE
- PROPOSED CURB & GUTTER
- EXISTING CURB & GUTTER
- EXISTING CURB INLET
- PROPOSED CURB INLET
- PROPOSED AREA INLET
- FIRE HYDRANT
- SANITARY SEWER MANHOLE
- STORM SEWER MANHOLE

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ITALICIZED SHOWN HEREIN INDICATES A CALLOUT
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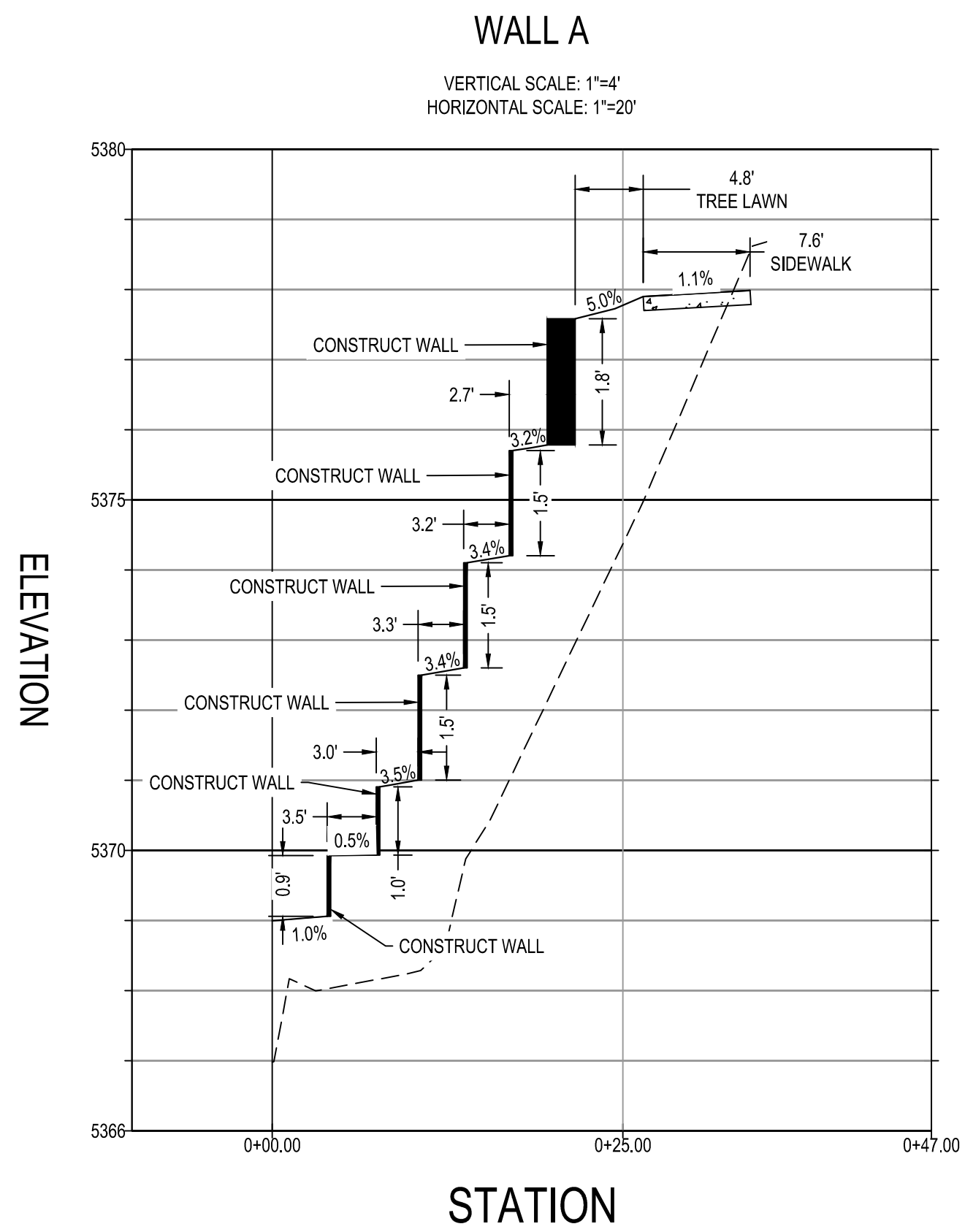
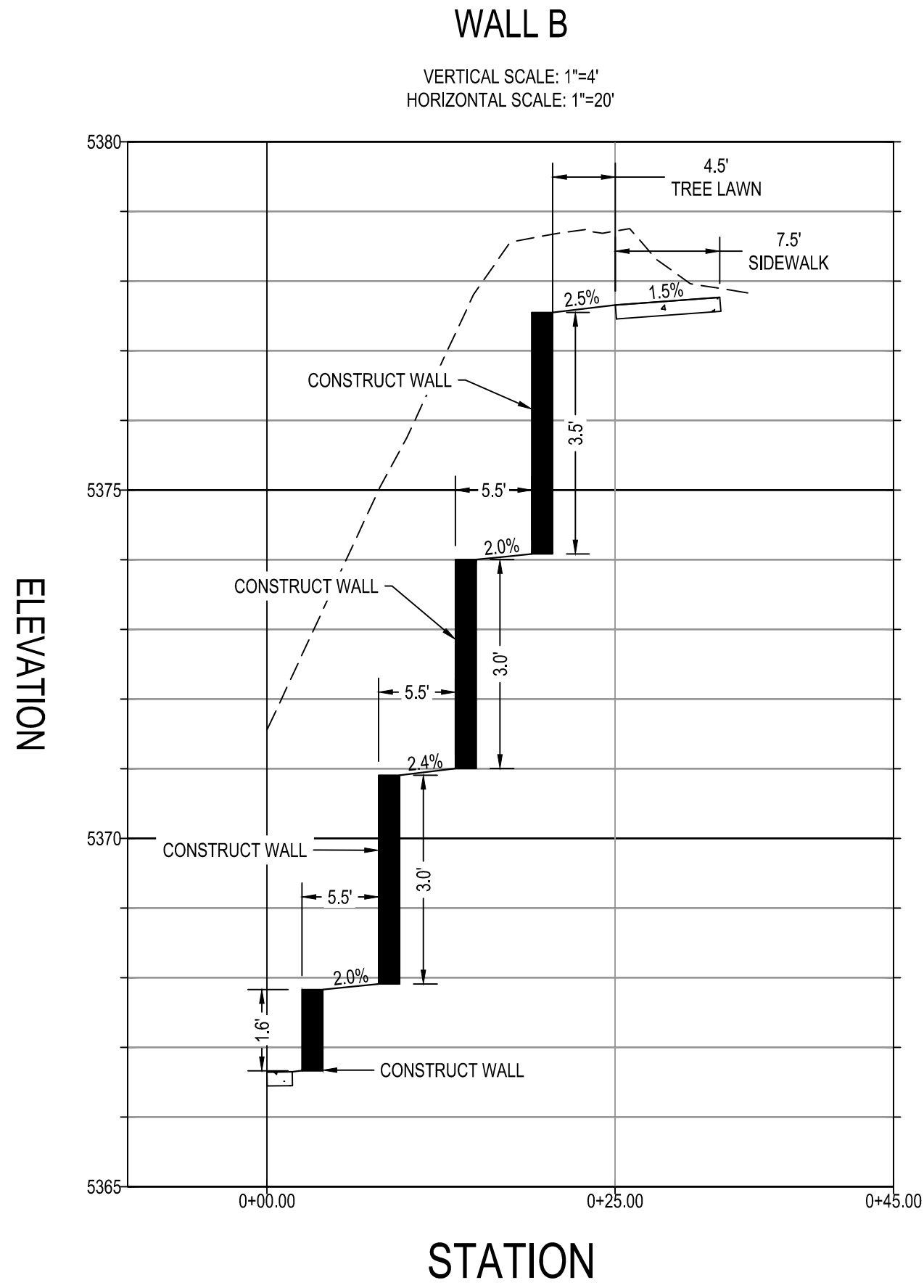
GENERAL NOTES:

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- MAX 4:1 SLOPES IN AREAS TO BE MOWED OR MAINTAINED
- ALL ADA RAMPS ARE TO MEET ADA STANDARDS



GENERAL NOTES:

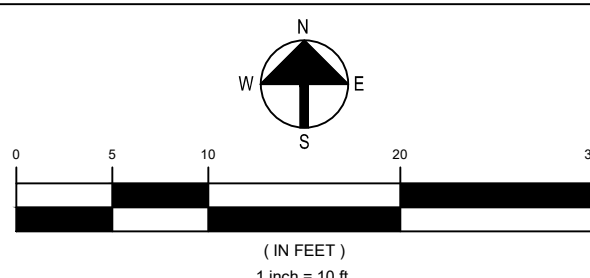
1. IF THE SIDEWALK IS BEING REMOVED, IT NEEDS TO BE REMOVED AND REPLACED TO THE NEAREST JOINT
2. MAX 4:1 SLOPES IN AREAS TO BE MOWED OR MAINTAINED
3. ALL ADA RAMPS ARE TO MEET ADA STANDARDS



LEGEND:

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- SPOT ELEVATION
- DRAINAGE CHANNEL
- PROPOSED CONCRETE
- STORM SEWER MANHOLE

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WALL
PROFILE

CD6.6

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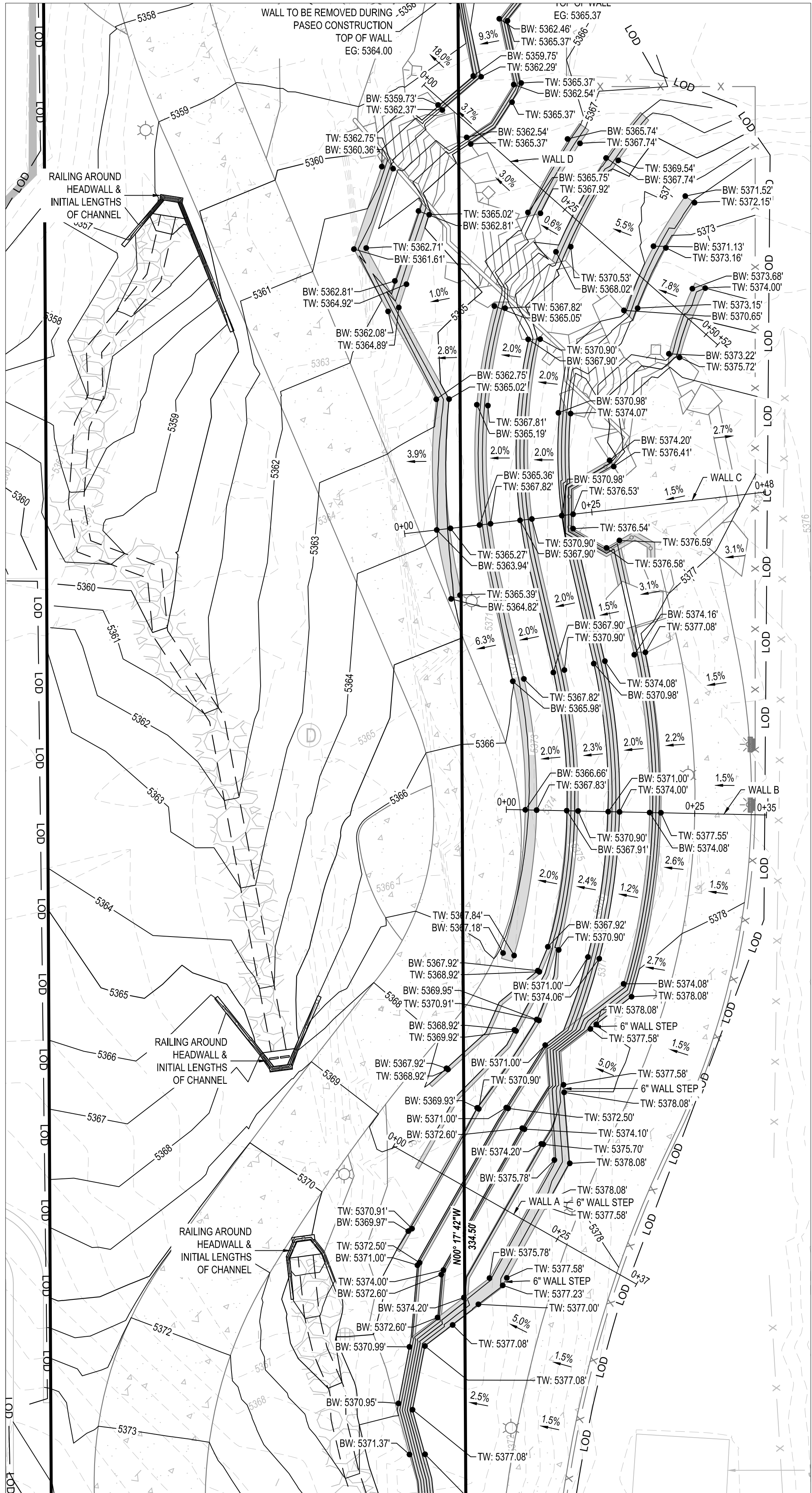
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WALL
PROFILE

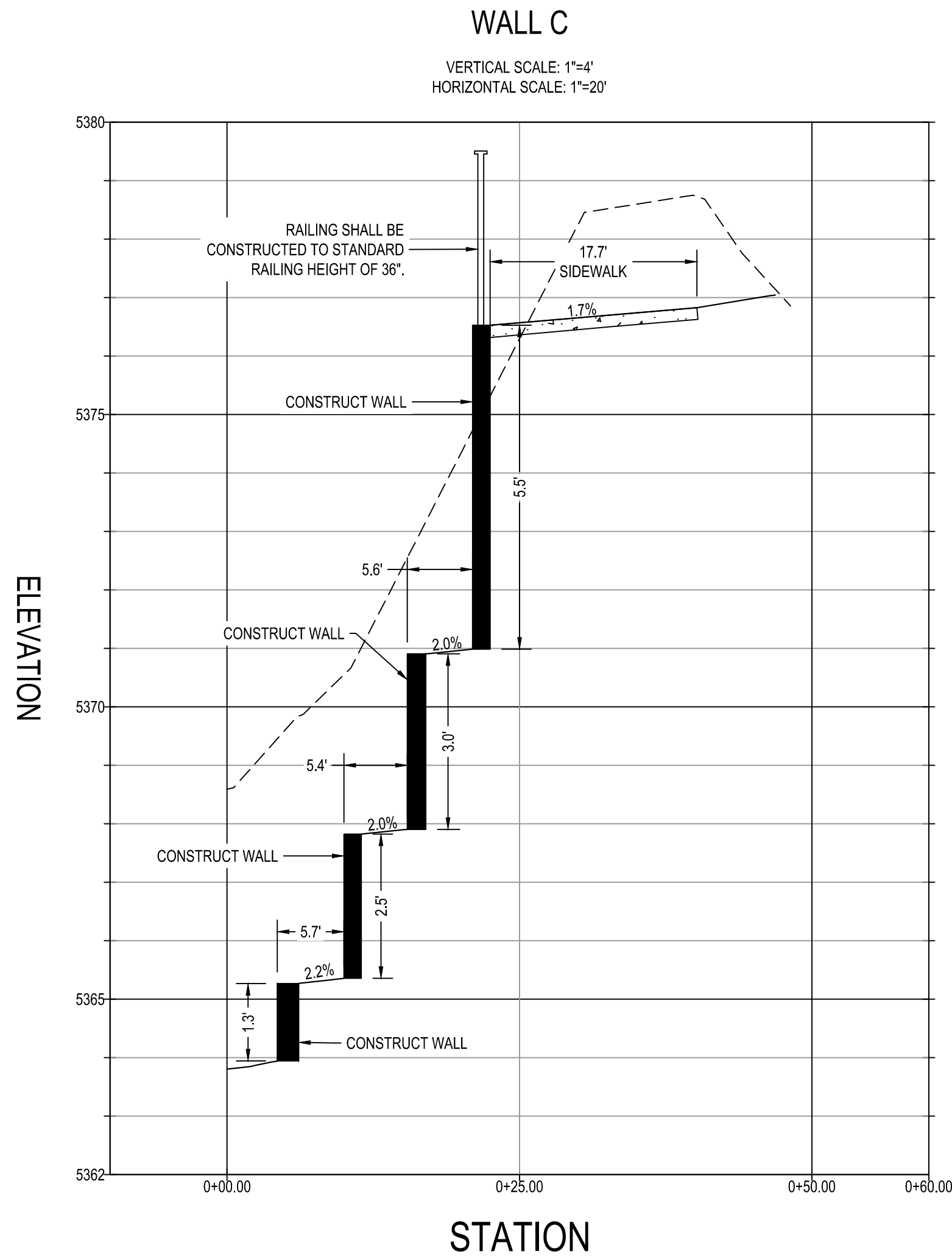
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SHEET 22 OF 31



GENERAL NOTES:

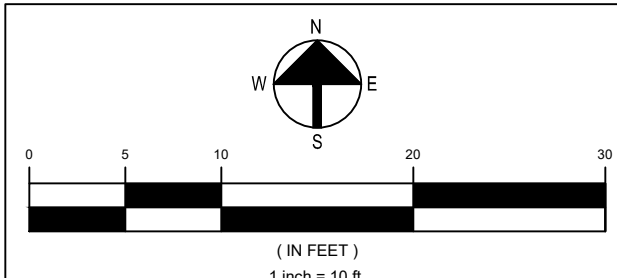
- IF THE SIDEWALK IS BEING REMOVED, IT NEEDS TO BE REMOVED AND REPLACED TO THE NEAREST JOINT
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LEGEND:

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- SPOT ELEVATION
- DRAINAGE CHANNEL
- PROPOSED CONCRETE
- STORM SEWER MANHOLE

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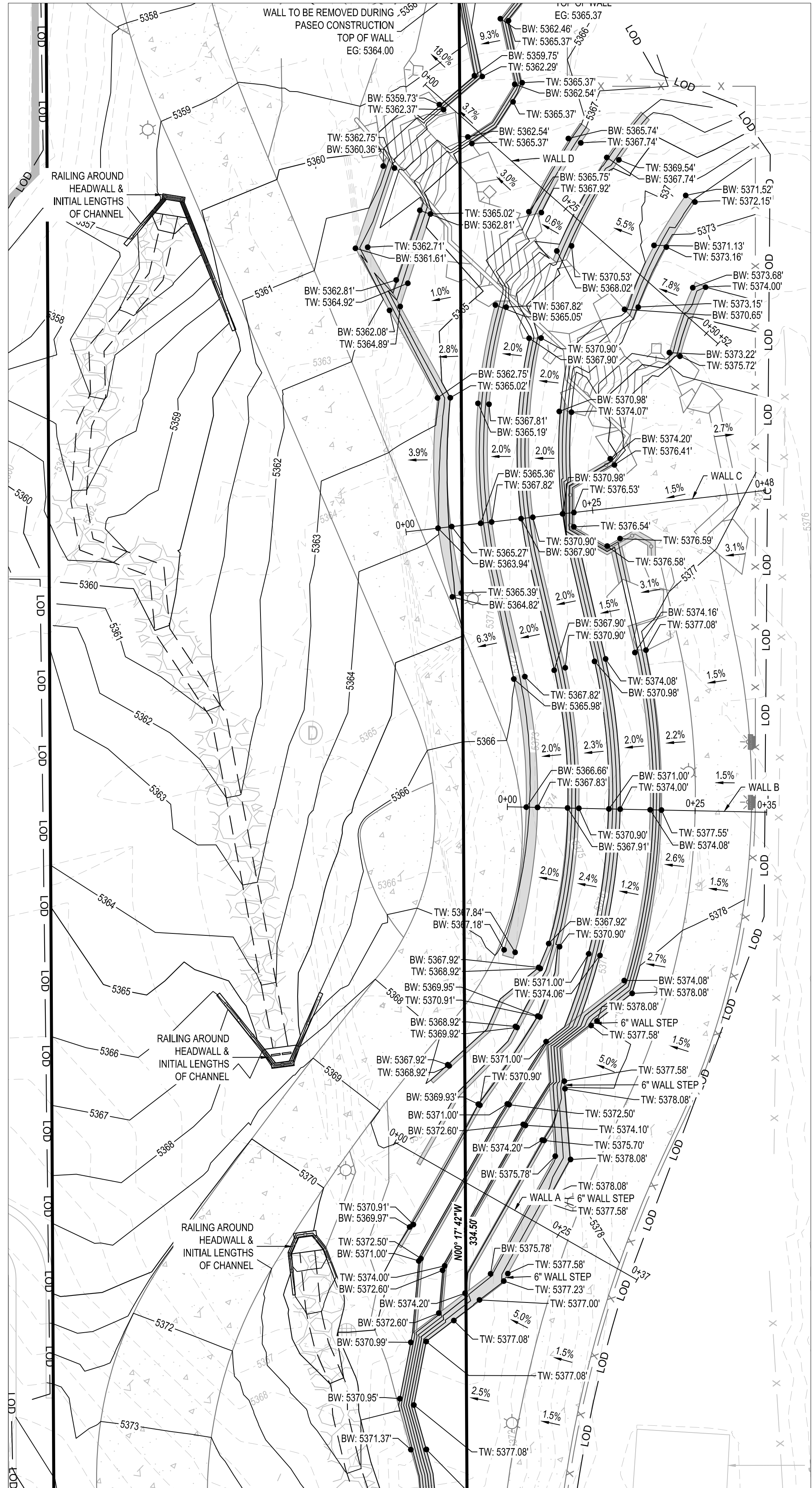
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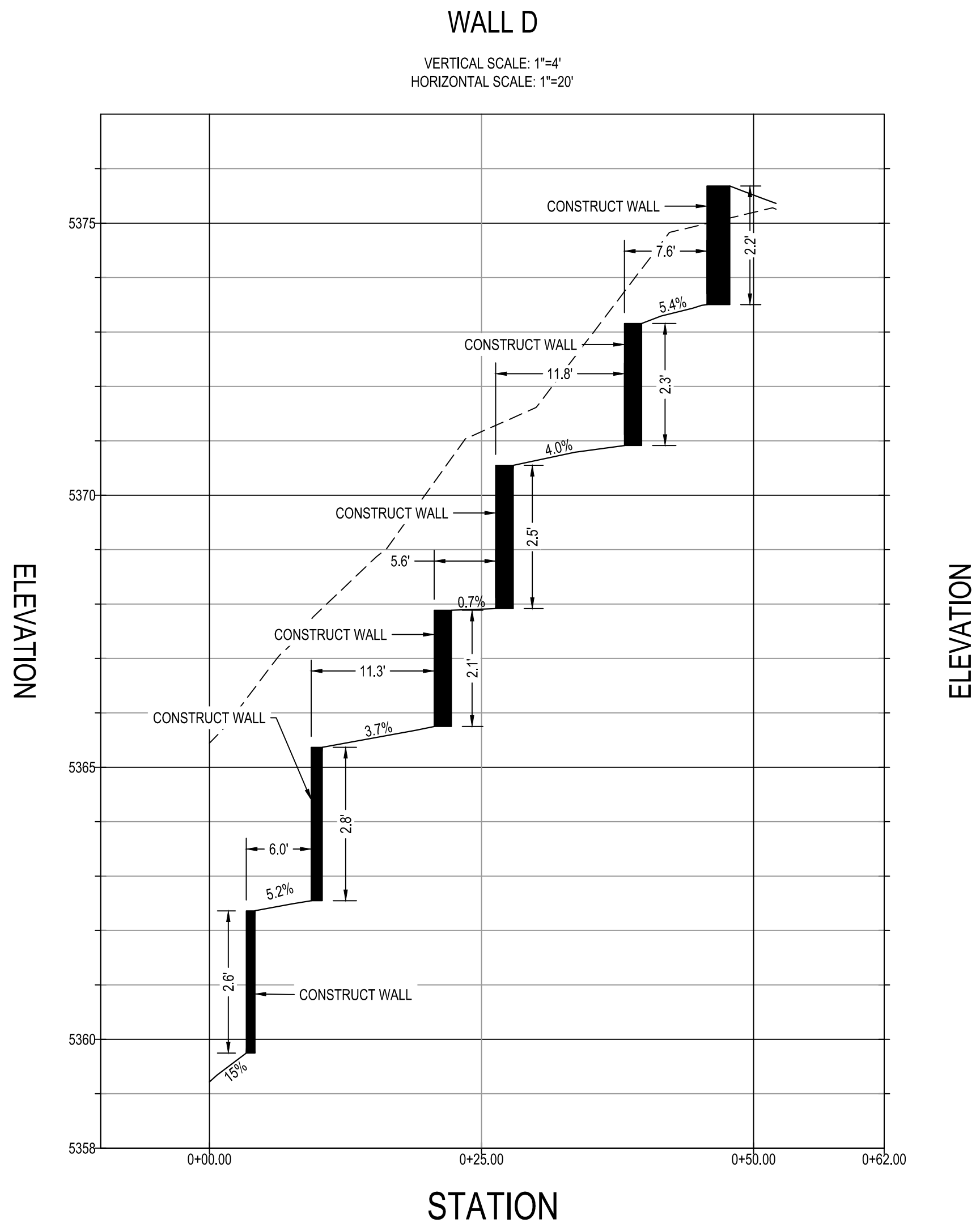
WALL
PROFILE

CD6.8

SHEET 23 OF 31



- GENERAL NOTES:
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 - ALL ADA RAMPS ARE TO MEET ADA STANDARDS



LEGEND:

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- SPOT ELEVATION
- DRAINAGE CHANNEL
- PROPOSED CONCRETE
- STORM SEWER MANHOLE

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0 5 10 20 30
(IN FEET)
1 inch = 10 ft

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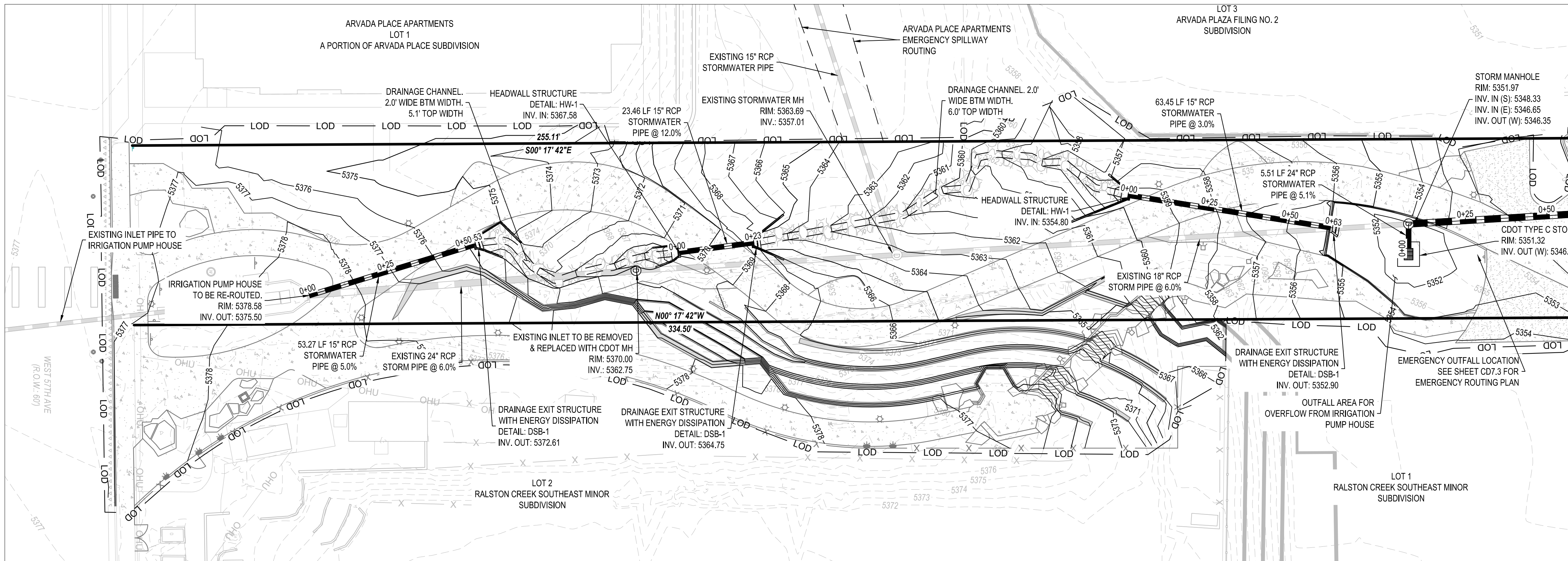
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DATE: 06.21.2023
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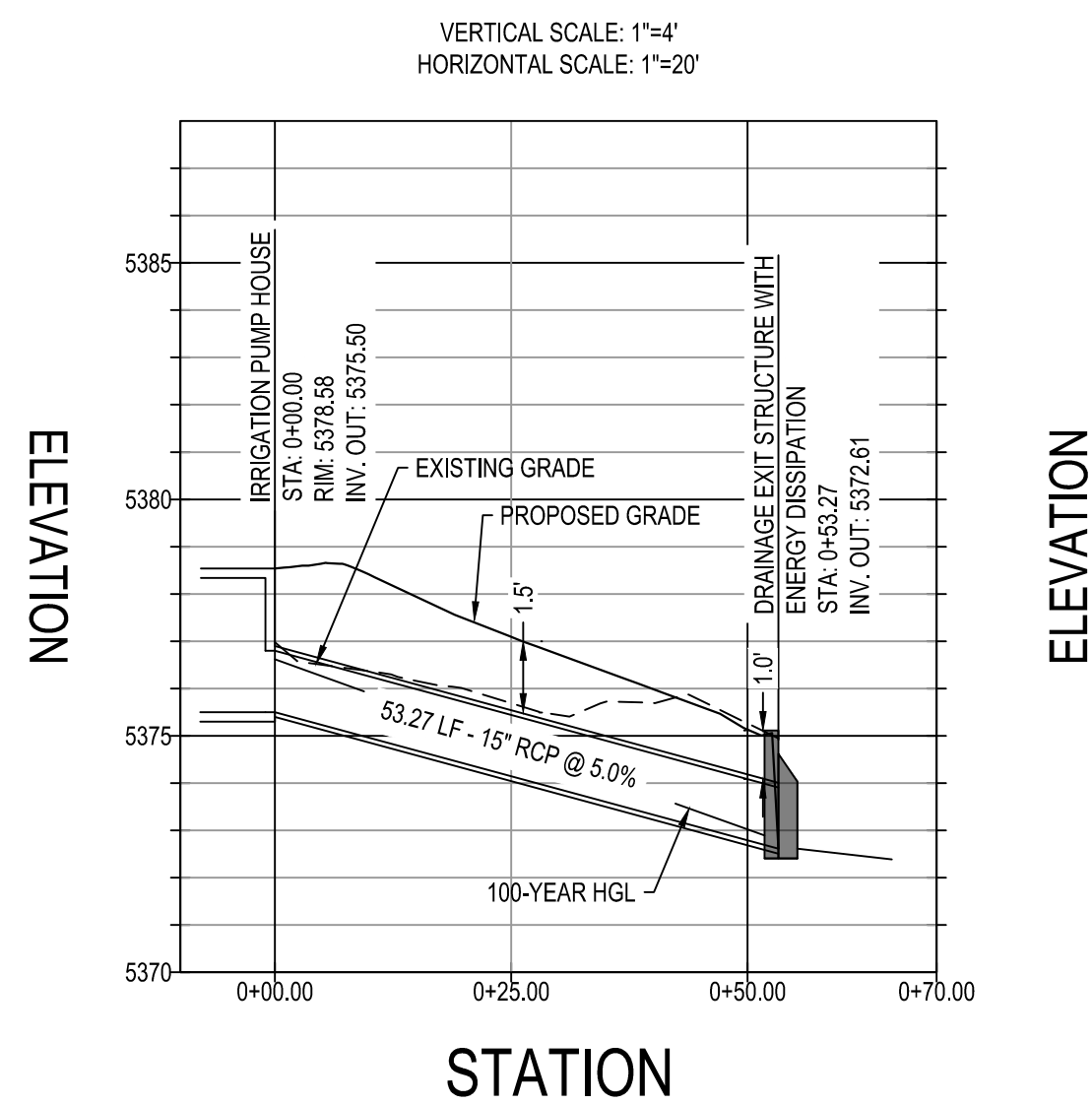
DRAINAGE PLAN
&
PROFILE

CD7.0

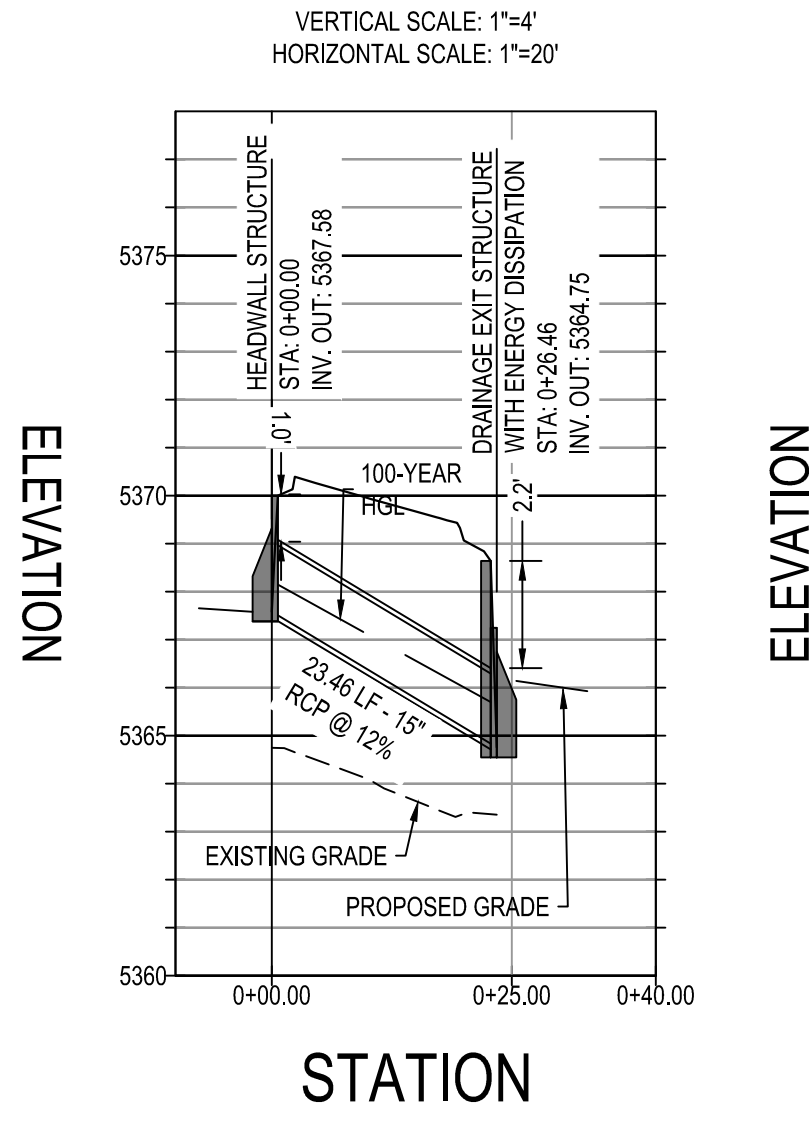
SHEET 24 OF 31



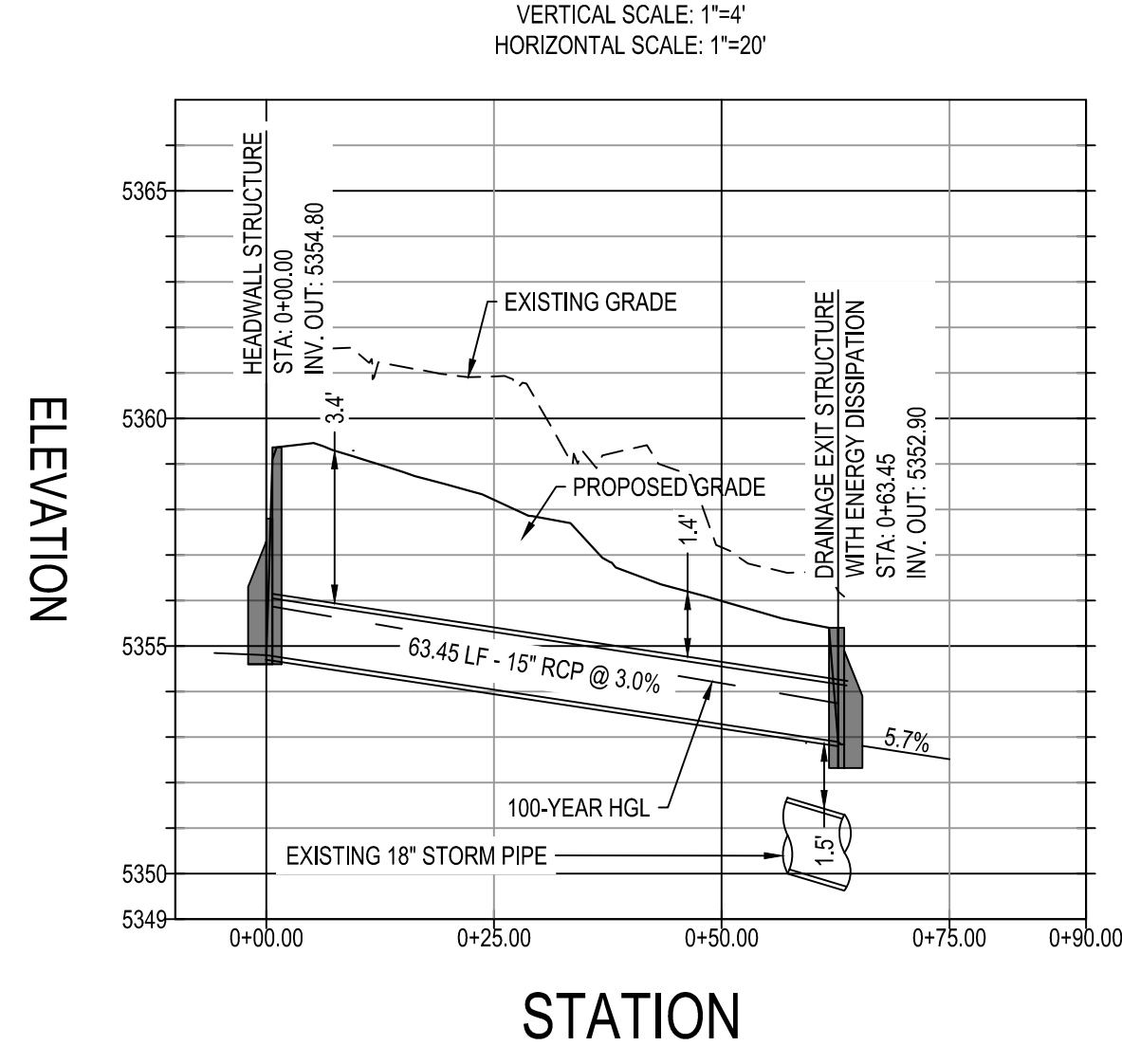
OUTFALL FROM IRRIGATION PUMP HOUSE (PUBLIC)



STORM PIPE PROFILE (PUBLIC)



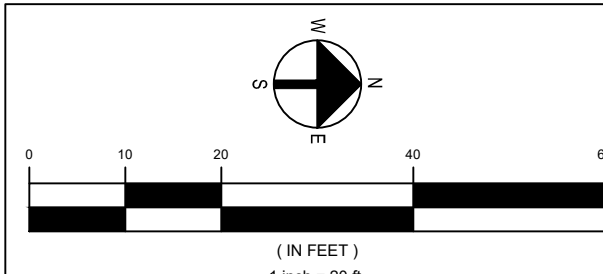
OUTFALL TO BIORETENTION POND (PUBLIC)



LEGEND:

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED CONCRETE
- EXISTING CONCRETE
- PROPOSED CURB & GUTTER
- EXISTING CURB & GUTTER
- EXISTING STORM MANHOLE
- STORM SEWER MANHOLE
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- OUTLET STRUCTURE
- FIRE HYDRANT

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- ALL ADA RAMPS ARE TO MEET ADA STANDARDS



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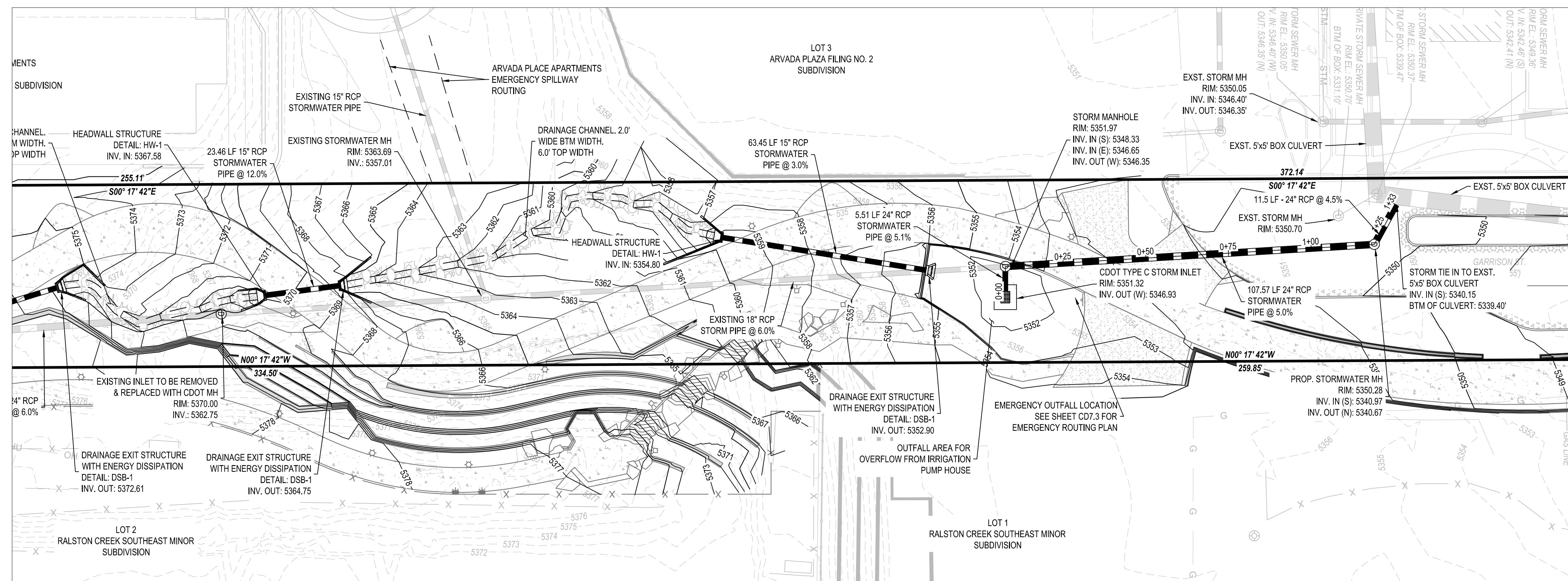
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CHECKED BY:

DRAINAGE PLAN & PROFILE

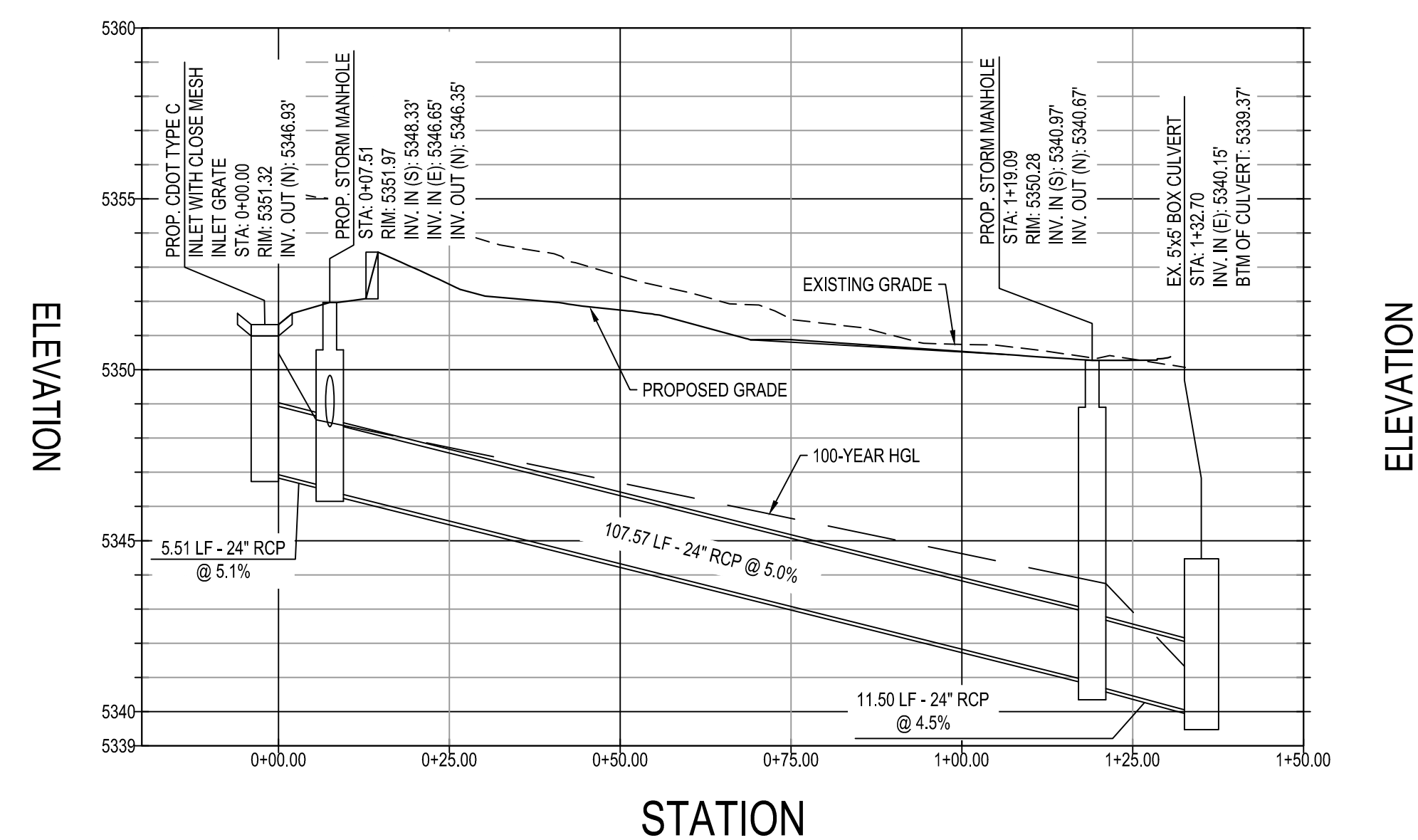
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SHEET 25 OF 31

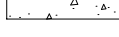


STORM OUTFALL TO CONCRETE CULVERT

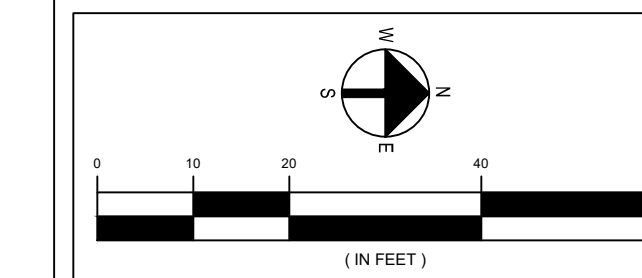
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HORIZONTAL SCALE: 1"=20'



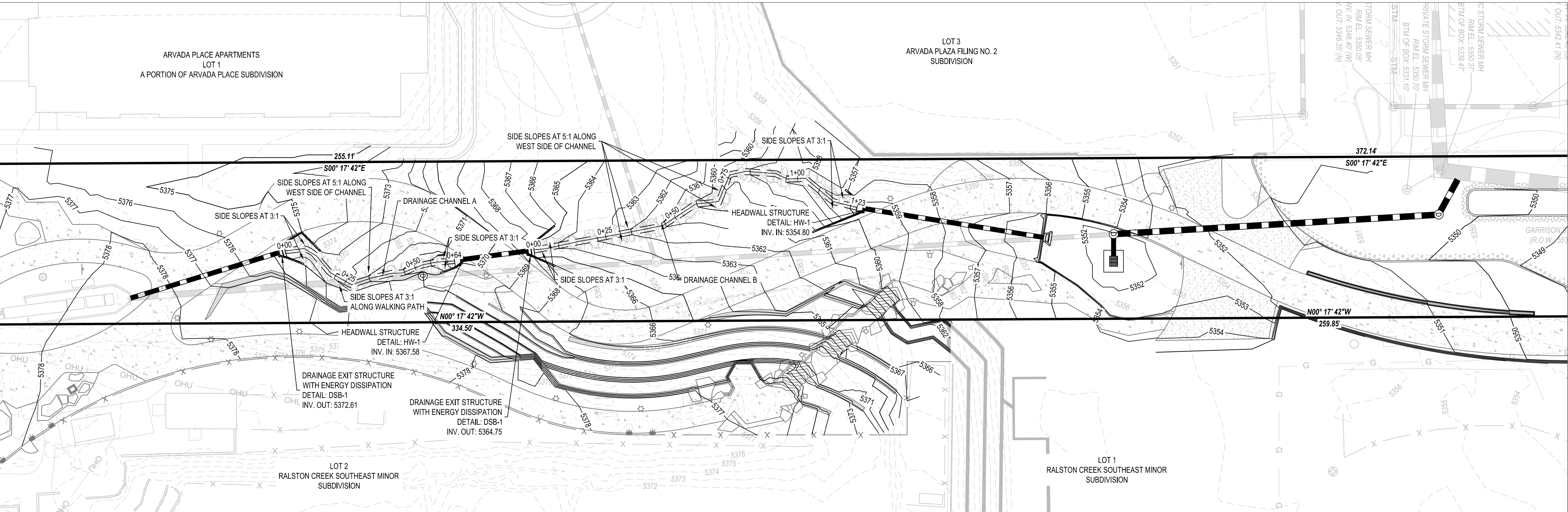
LEGEND:

 PROPERTY LINE
 ADJACENT PROPERTY LINE
 EXISTING CONTOUR
 PROPOSED CONTOUR
 PROPOSED CONCRETE
 EXISTING CONCRETE
 PROPOSED CURB & GUTTER
 EXISTING CURB & GUTTER
 EXISTING STORM MANHOLE
 STORM SEWER MANHOLE
 EXISTING STORM SEWER
 PROPOSED STORM SEWER
 OUTLET STRUCTURE
 FIRE HYDRANT

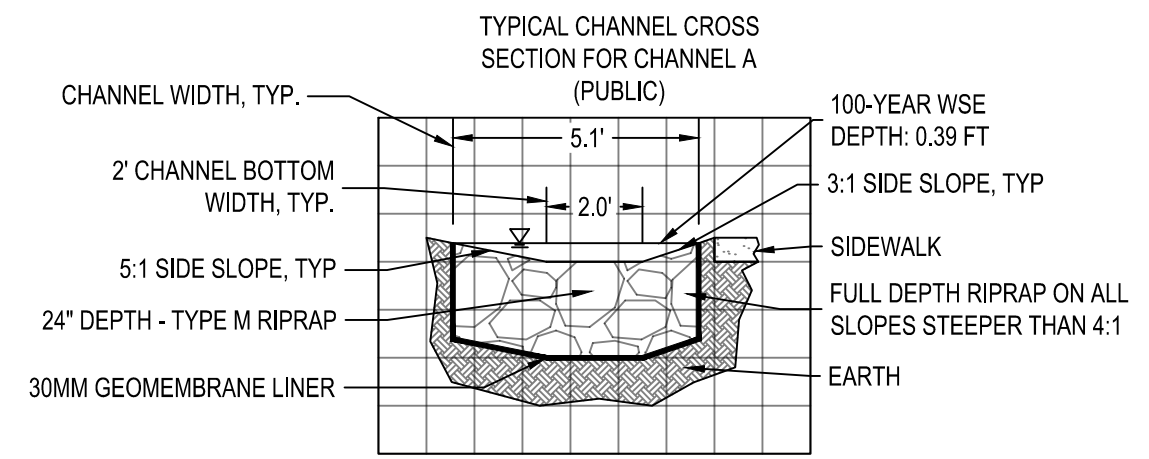
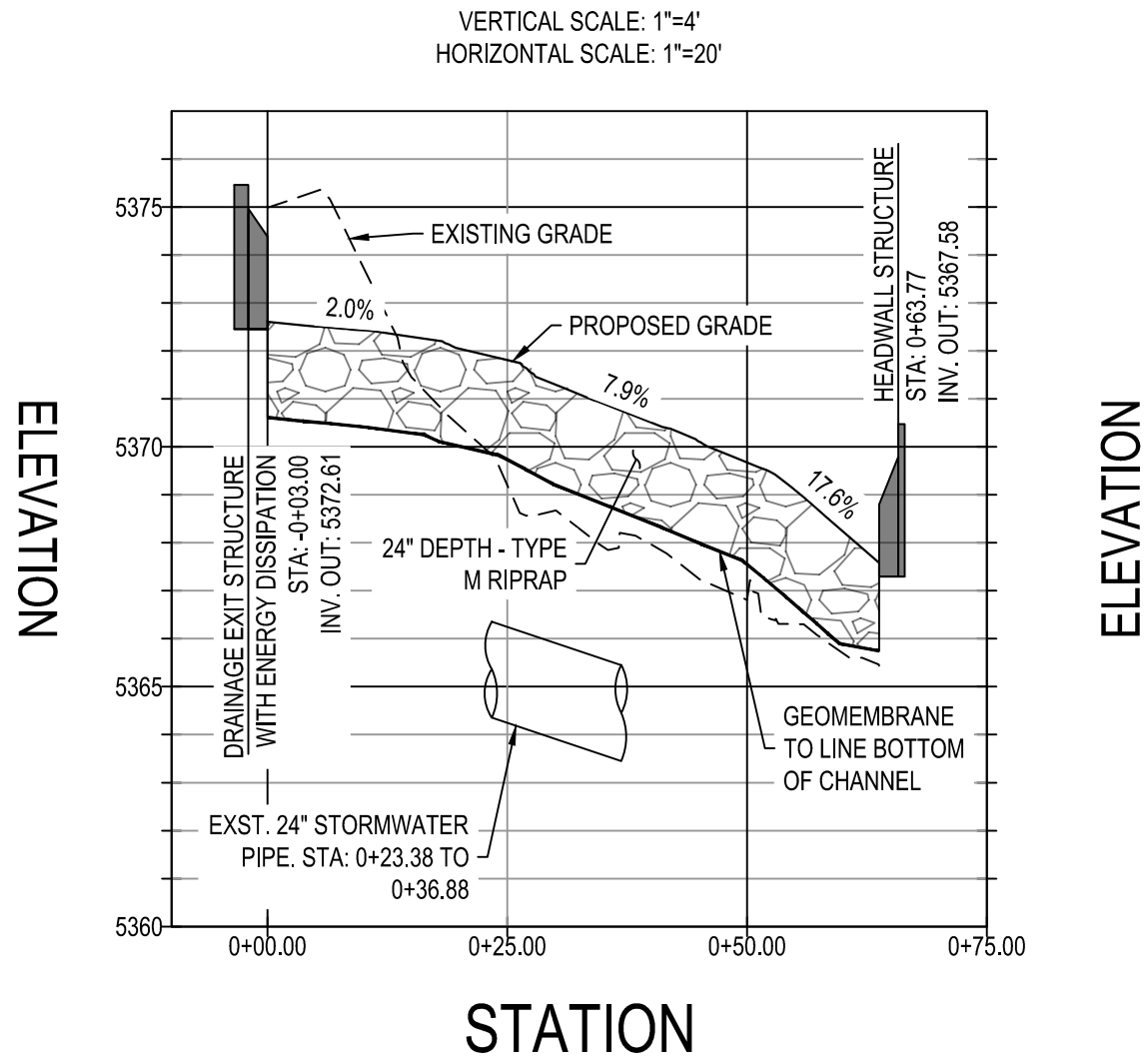
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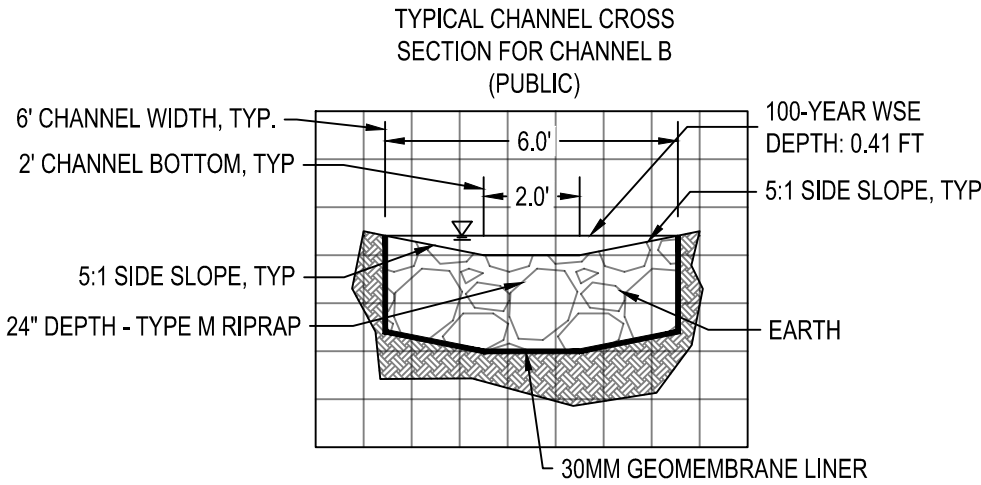
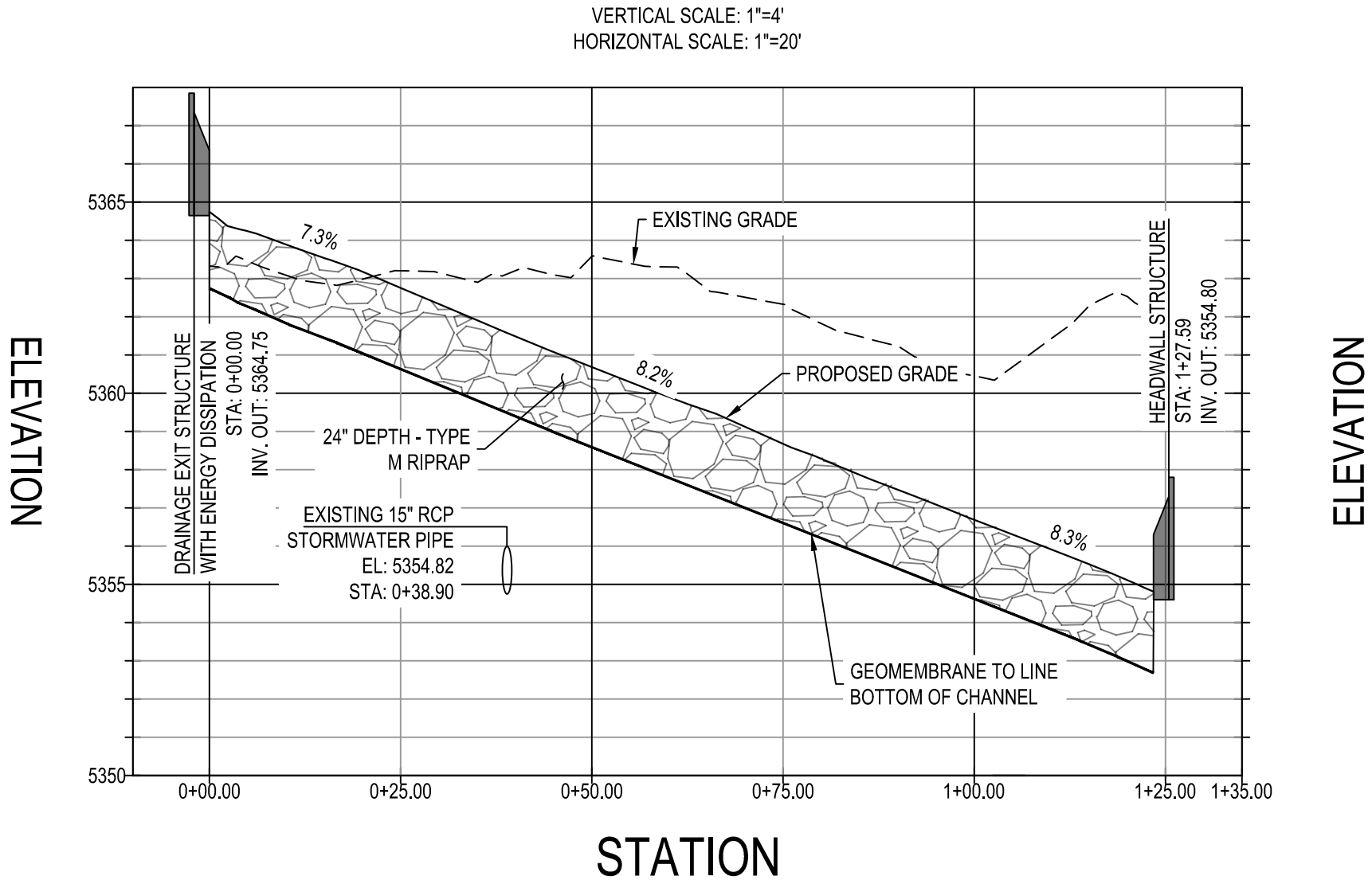
- GENERAL NOTES:**
1. IF THE SIDEWALK IS BEING REMOVED, IT NEEDS TO BE REMOVED AND REPLACED TO THE NEAREST JOINT
 2. MAX 4:1 SLOPES IN AREAS TO BE MOWED OR MAINTAINED
 3. ALL ADA RAMPS ARE TO MEET ADA STANDARDS



DRAINAGE CHANNEL A (PUBLIC)



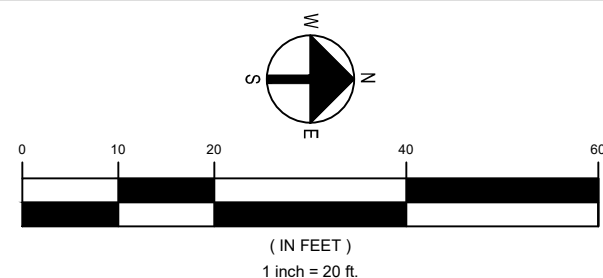
DRAINAGE CHANNEL B (PUBLIC)



LEGEND:

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED CONCRETE
- EXISTING CONCRETE
- PROPOSED CURB & GUTTER
- EXISTING CURB & GUTTER
- EXISTING STORM MANHOLE
- STORM SEWER MANHOLE
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- OUTLET STRUCTURE
- FIRE HYDRANT

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- GENERAL NOTES:
- IF THE SIDEWALK IS BEING REMOVED, IT NEEDS TO BE REMOVED AND REPLACED TO THE NEAREST JOINT
 - MAX 4:1 SLOPES IN AREAS TO BE MOWED OR MAINTAINED
 - ALL ADA RAMPS ARE TO MEET ADA STANDARDS

NOTE: FULL DEPTH RIP RAP SHALL BE CONSTRUCTED ON SIDE SLOPES STEEPER THAN 4:1, TYP.

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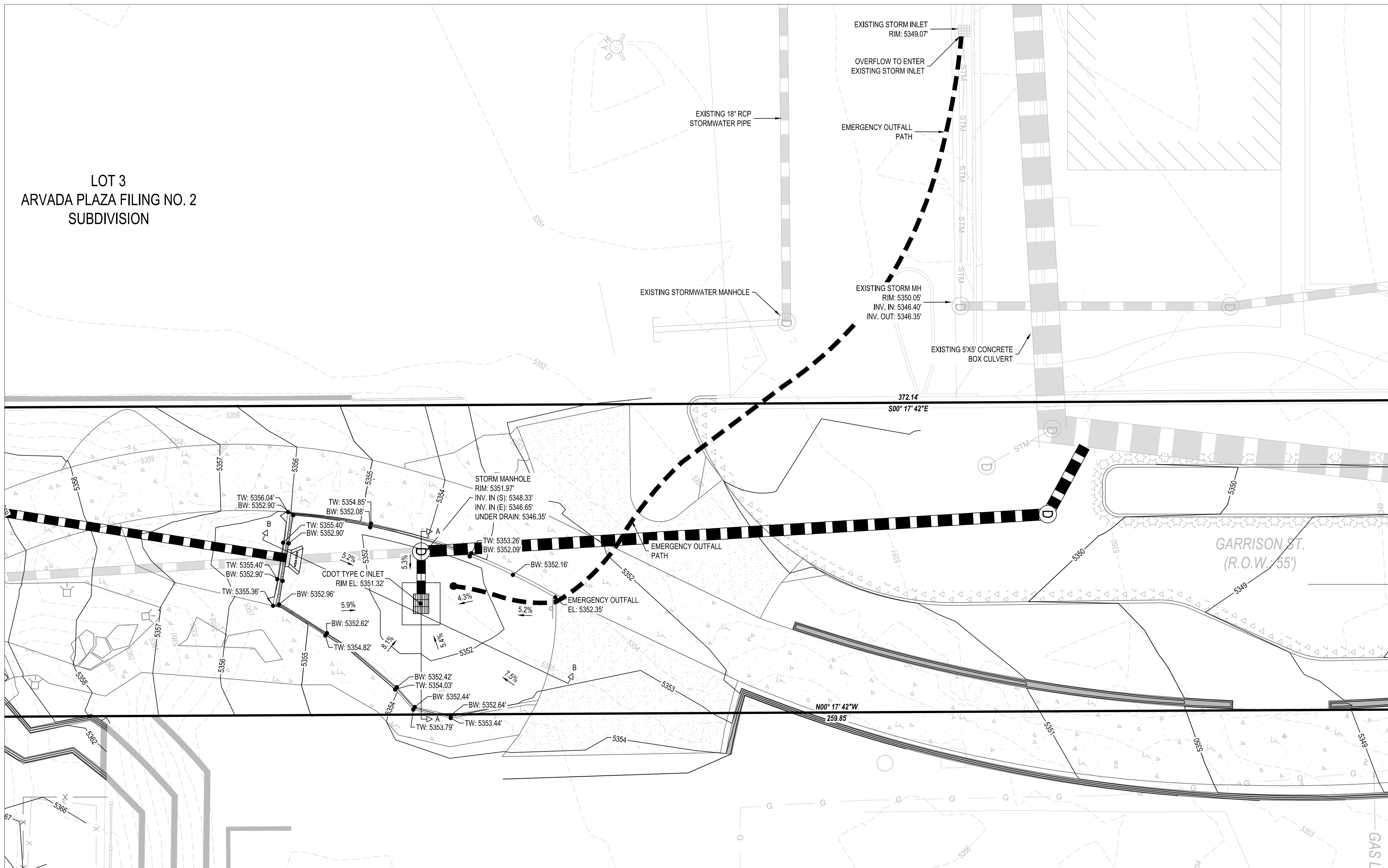
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DATE: 06.21.2023
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CHECKED BY: SC

DRAINAGE PLAN
&
PROFILE

CD7.3

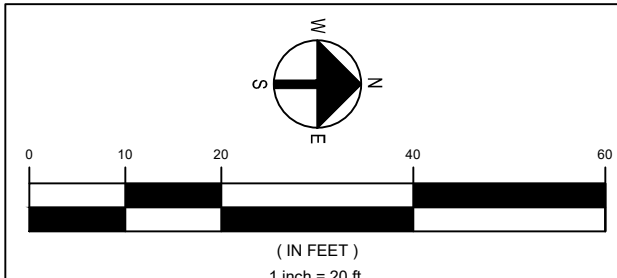
SHEET 27 OF 31



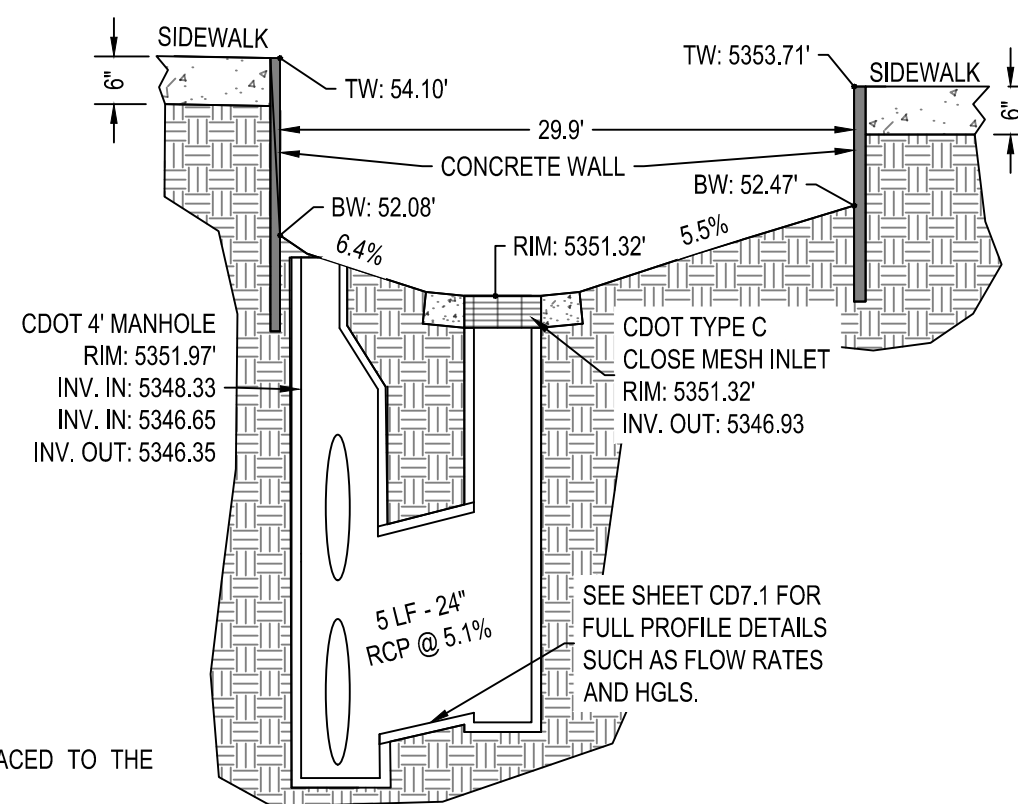
LEGEND:

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	ADJACENT PROPERTY LINE
	EXISTING CONTOUR
	PROPOSED CONTOUR
	PROPOSED CONCRETE
	EXISTING CONCRETE
	PROPOSED CURB & GUTTER
	EXISTING CURB & GUTTER
	EXISTING STORM MANHOLE
	STORM SEWER MANHOLE
	EXISTING STORM SEWER
	PROPOSED STORM SEWER
	OUTLET STRUCTURE
	FIRE HYDRANT

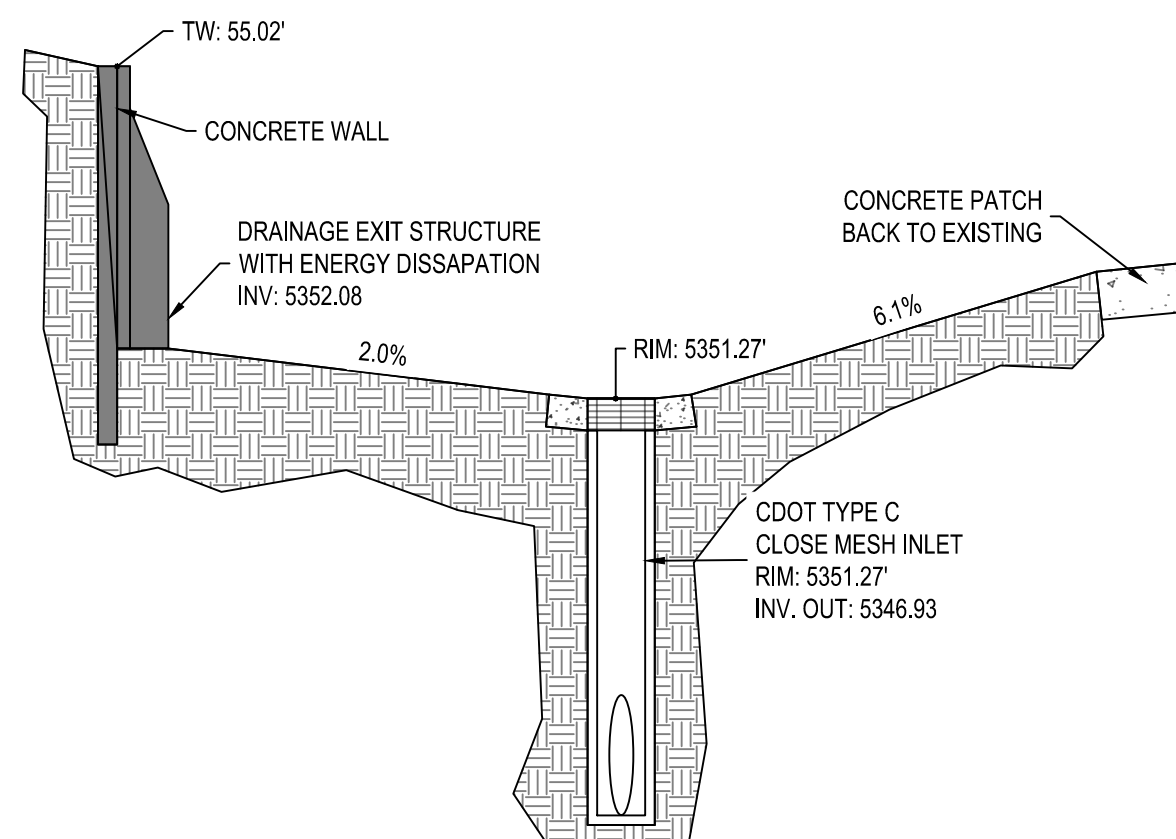
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SECTION A-A
VERTICAL SCALE: 1" = 2'
HORIZONTAL SCALE: 1" = 10'

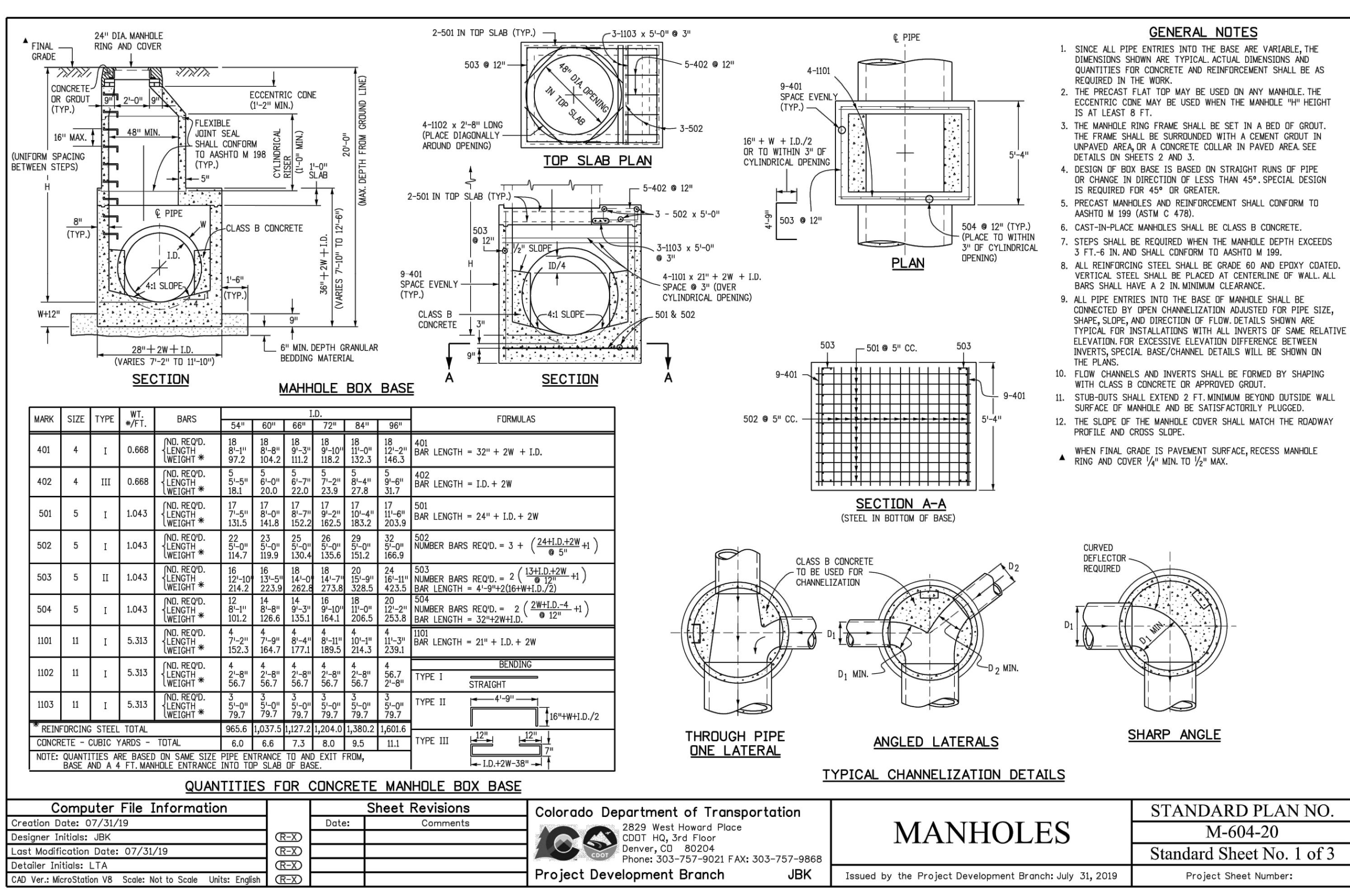
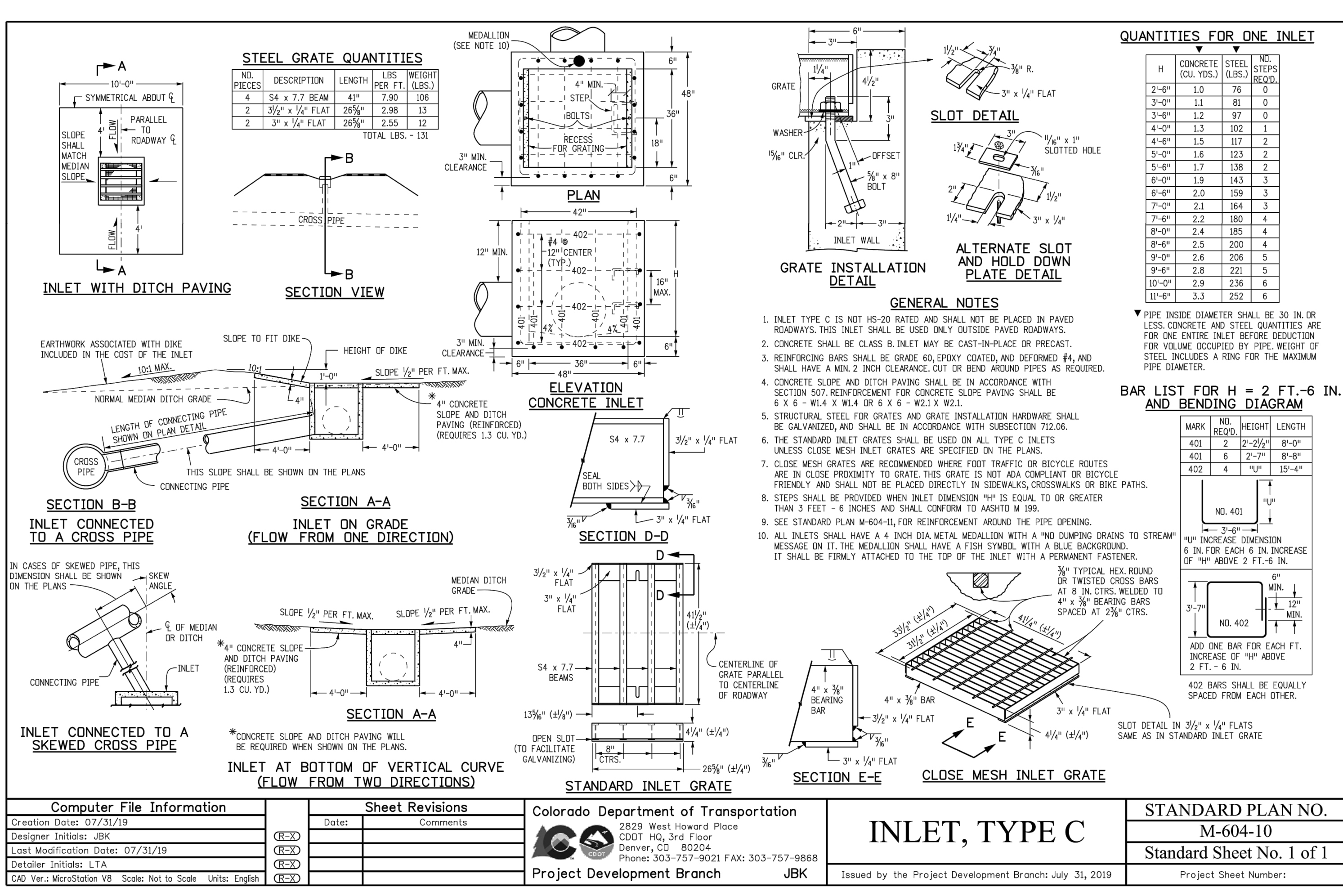
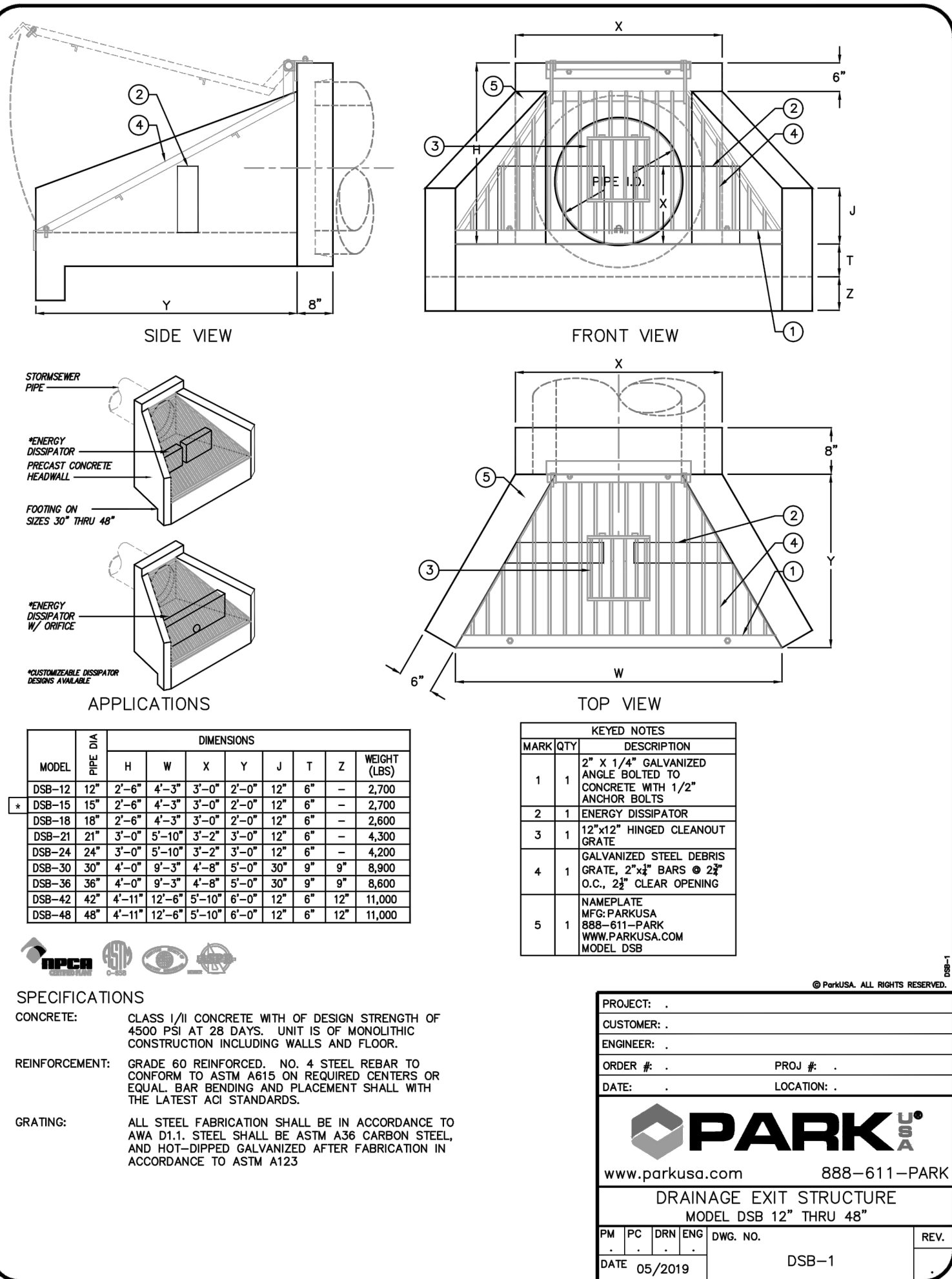
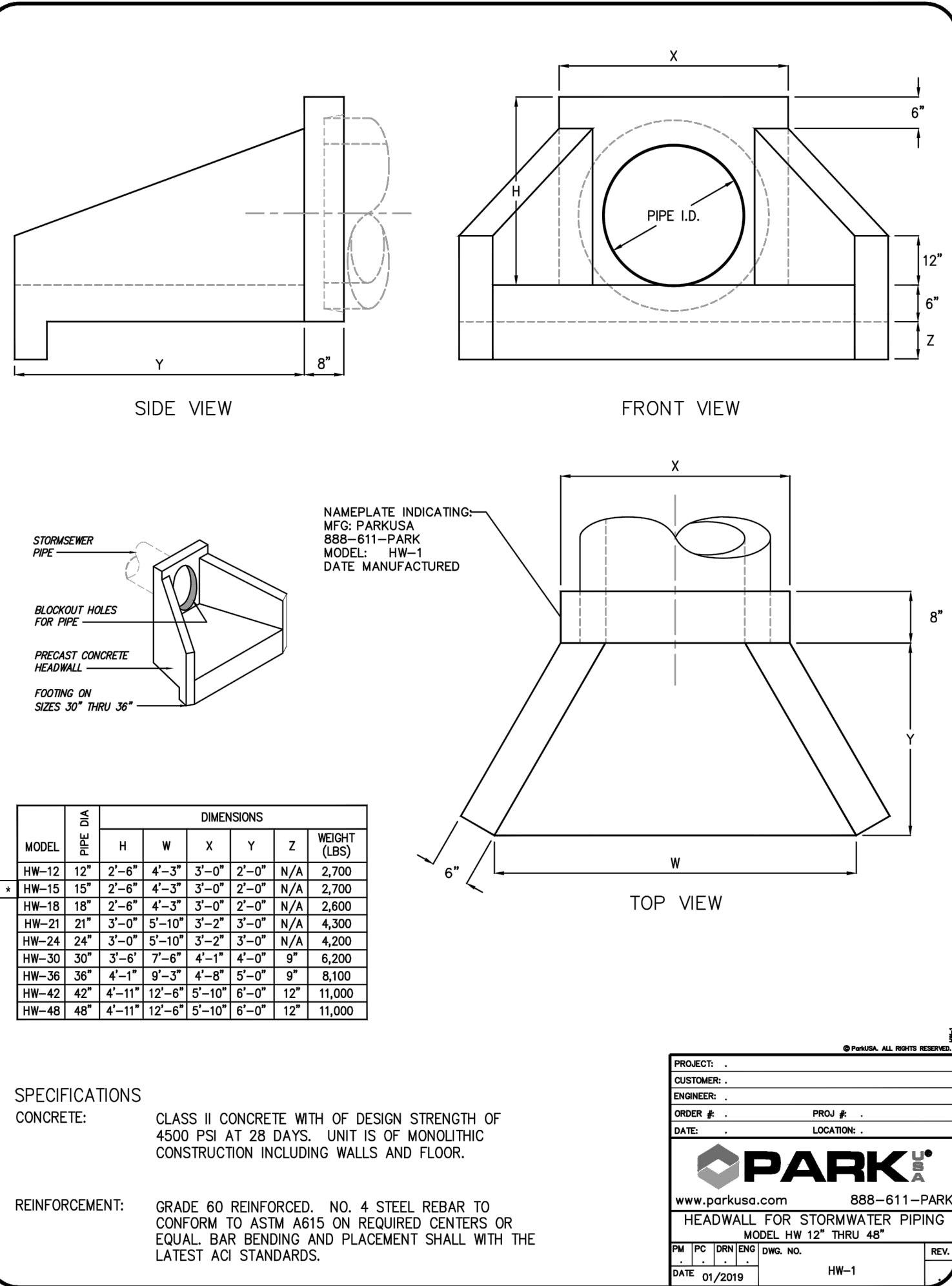


SECTION B-B
VERTICAL SCALE: 1" = 2'
HORIZONTAL SCALE: 1" = 10'



GENERAL NOTES:

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- MAX 4:1 SLOPES IN AREAS TO BE MOVED OR MAINTAINED
- ALL ADA RAMPS ARE TO MEET ADA STANDARDS





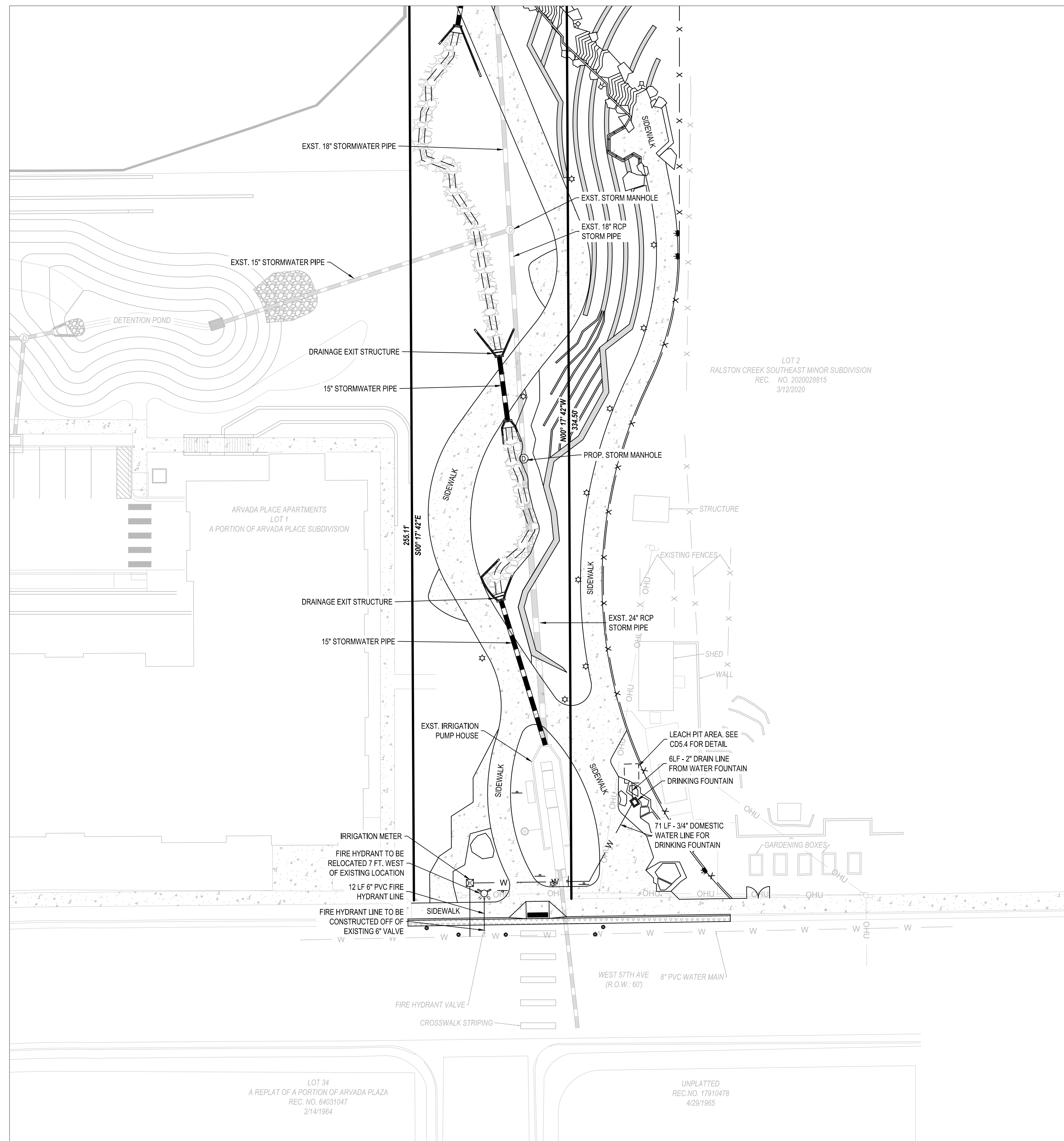
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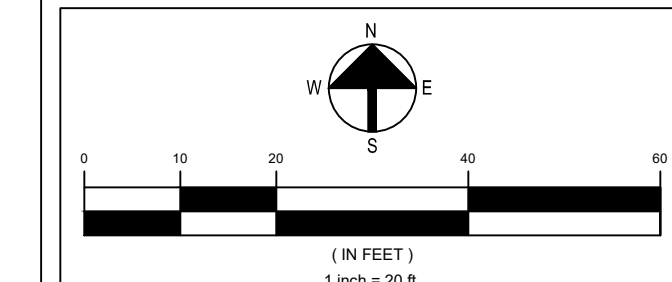
SHEET 29 OF 31



ELECTRICAL NOTES:
1. EXISTING OVERHEAD LINES ALONG W. 57TH AVENUE SHALL BE RUN UNDERGROUND. SEE DEMO PLAN FOR REMOVAL.
2. ELECTRICAL DESIGN DONE BY OTHERS.

 PROPERTY LINE
 ADJACENT PROPERTY LINE
 PROPOSED CONCRETE
 EXISTING CONCRETE
 PROPOSED CURB & GUTTER
 EXISTING CURB & GUTTER
 FIRE HYDRANT
 W EXST. WATER LINE
 WATER VALVE
 EXST. STORM SEWER PIPE
 STORM SEWER PIPE
 (D) STORM SEWER MANHOLE

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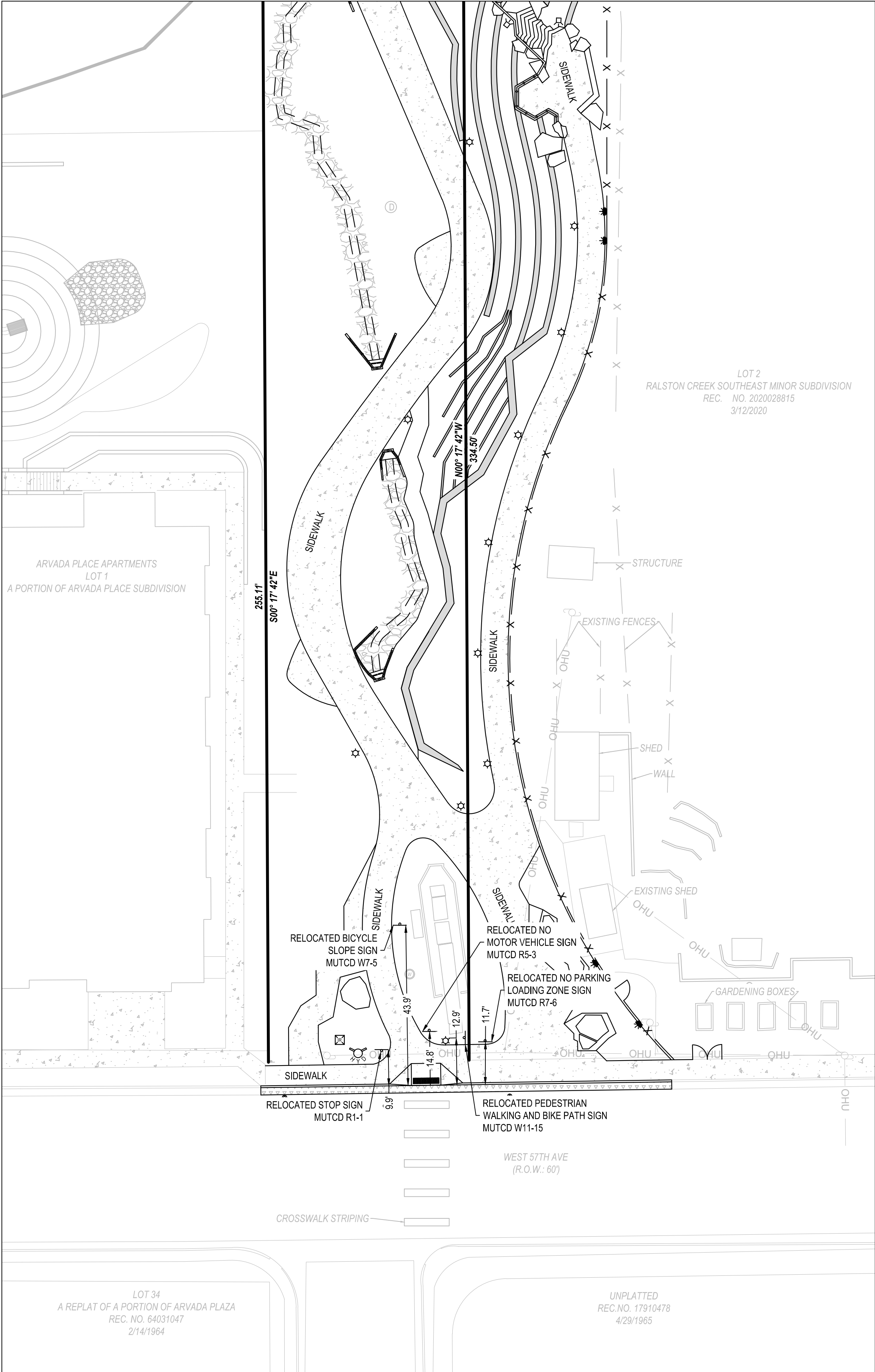
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SIGN & STRIPING PLAN

CD9.0

SHEET 30 OF 31



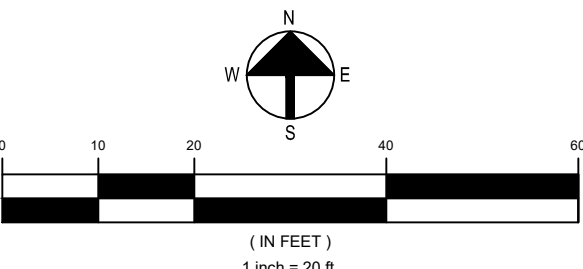
SIGN INVENTORY TABLE:

MUTCD SIGN NUMBER	QUANTITY	SIZE	HEIGHT	DISTANCE FROM CURB
R1-1	1	30"	7'-0"	9.9'
W7-5	1	24"x24"	7'-0"	43.9'
R5-3	1	24"x24"	7'-0"	43.9'
W11-15	1	24"x24"	7'-0"	12.9'
R7-6	1	12"x18"	7'-0"	11.7'

LEGEND:

	PROPERTY LINE
	ADJACENT PROPERTY LINE
	OVERHEAD UTILITY
	UTILITY POLE
	SIGN
	PROPOSED CONCRETE
	EXISTING CONCRETE
	PROPOSED CURB & GUTTER
	EXISTING CURB & GUTTER
	FIRE HYDRANT
	STORM SEWER MANHOLE

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GENERAL NOTES:

- ALL SIGNING AND STRIPING SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ARVADA STANDARDS
- ALL PARKING STRIPING SHALL BE STRIPED IN ACCORDANCE WITH THE CITY OF ARVADA STANDARDS.
- PLEASE REFER TO THE HORIZONTAL CONTROL PLAN FOR PARKING DIMENSIONS AND STRIPE LENGTHS (CD4.0 - CD 4.3)

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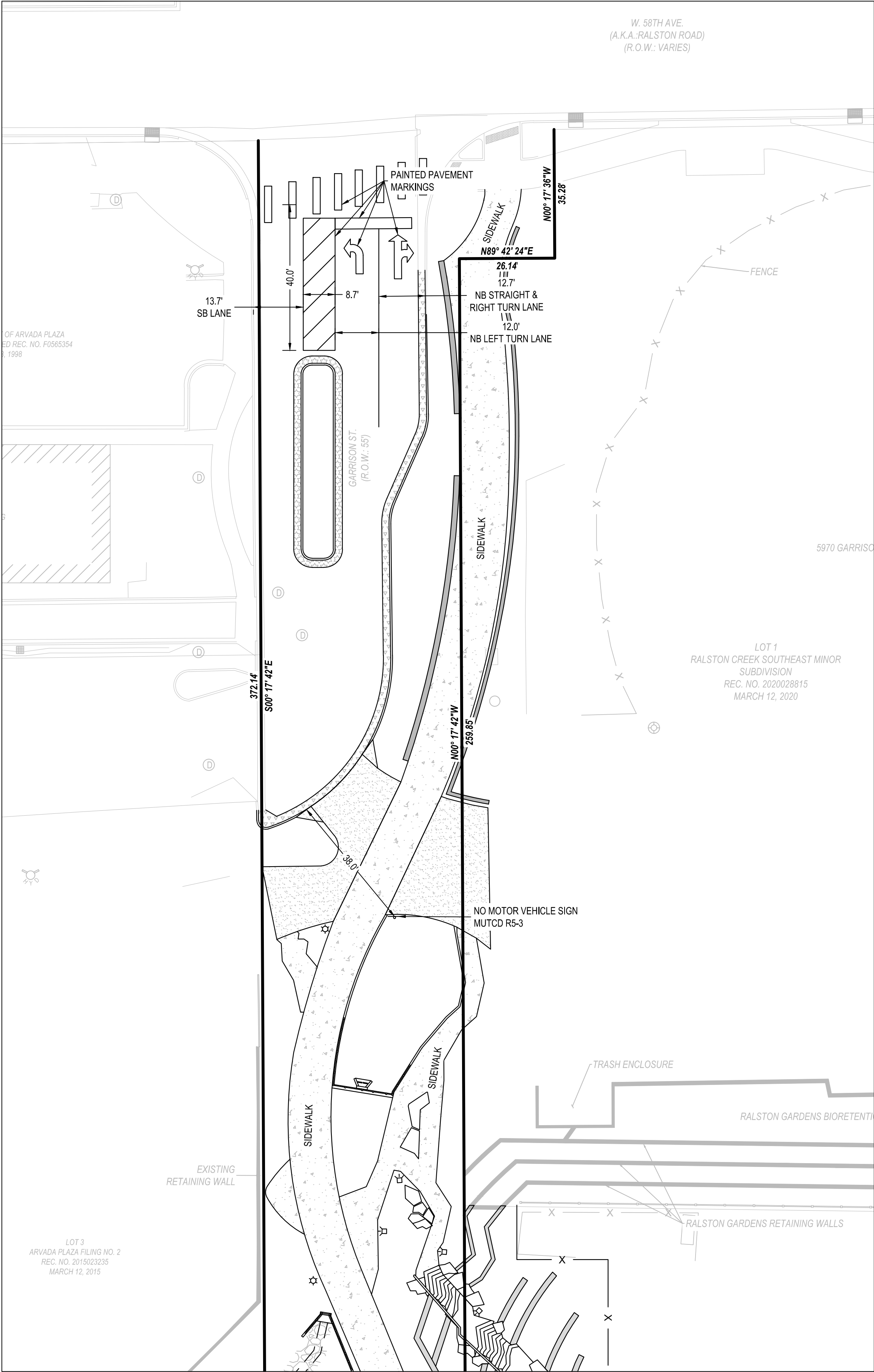
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NO. DATE BY
1 09.14.2023 AD

DATE: 06.21.2023
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SIGN & STRIPING
PLAN

CD9.1

SHEET 31 OF 31



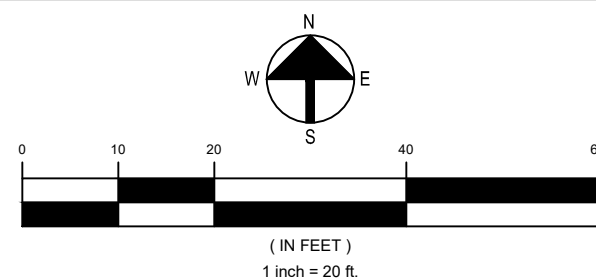
SIGN INVENTORY TABLE:

MUTCD SIGN NUMBER	QUANTITY	SIZE	HEIGHT	DISTANCE FROM CURB
R5-3	1	24"x24"	7'-0"	38.0'

LEGEND:

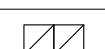
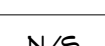
	PROPERTY LINE
	ADJACENT PROPERTY LINE
	OVERHEAD UTILITY
	UTILITY POLE
	SIGN
	PROPOSED CONCRETE
	EXISTING CONCRETE
	PROPOSED CURB & GUTTER
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IRRIGATION SCHEDULE				
SYMBOL	MANUFACTURER	MODEL NO.	DESCRIPTION	DETAIL NO.
	RAIN BIRD	RD-06-S-P30 WITH MPR (MATCHED PRECIPITATION RATE) NOZZLE	POPUP SPRAY HEAD	1000-9
	RAIN BIRD	RD-12-S-P30 WITH MPR (MATCHED PRECIPITATION RATE) NOZZLE	HI-POP SPRAY HEAD	1
	RAIN BIRD	RD-12-S-P30- WITH SST, CORNER SERIES NOZZLE	HI-POP SPRAY HEAD	1
	RAIN BIRD	EFB-CP IV TRUE-UNION	ELECTRIC CONTROL VALVE	1000-7a
	RAIN BIRD	44-LRC	QUICK COUPLING VALVE	1000-13
	FEBCO	825YA	RP BACKFLOW PREVENTER	1000-2
		TYPE K COPPER	HARD COPPER PIPE	1000-2
N/S	ARAD	BM 1.5 NPT EV 10USG BLU SOL COPPER NUMBERED (1.5")	HYDROMETER	1000-2
N/S	GUARDSHACK	GS-5	BACKFLOW PREVENTER ENCLOSURE	1000-2a
N/S	AY MACDONALD	T6001 - 1/4 TURN - 1"	MANUAL DRAIN VALVE	1000-14
		LINE SIZE	GATE VALVE	1000-15
		CLASS 200 BE - 2 1/2" & SMALLER	PVC MAINLINE	1000-12
		CLASS 200 BE	PVC LATERAL	1000-12
		CLASS 160	PVC SLEEVING	2
	MOTOROLA	TO BE PROVIDED BY ARVADA PARKS	ELECTRIC CONTROLLER	1000-22
	M.D.F.	440	DRINKING FOUNTAIN	3
			WATER METER	BY OTHERS
N/S	OLDCASTLE / CARSON	REFER TO SPECIFICATIONS AND DETAILS	VALVE BOXES	VARIOUS
CONTROLLER & STATION NO. CONTROL VALVE SIZE				
NUMBER OF SPARE WIRES - 2 CONTROL AND 1 SPARE WIRES TO INDICATED CONTROLLER - SEE CONSTRUCTION NOTES				

CITY OF ARVADA - IRRIGATION 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 REMOVE 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).

IRRIGATION CONSTRUCTION NOTES

1. DRAWINGS AND BASE INFORMATION - ALL BASE AND PLANTING INFORMATION HAVE BEEN PROVIDED BY CONFLUENCE. THE CONTRACTOR IS RESPONSIBLE TO NOTIFY HYDROSYSTEMS*KDI OF ANY DISCREPANCIES BETWEEN THE UTILITY AND THE PLANTING PLANS AND THE IRRIGATION PLAN. IF CONTRACTOR FAILS TO NOTIFY HYDROSYSTEMS*KDI AND MAKES CHANGES TO THE IRRIGATION SYSTEM DESIGN, THEY ASSUME 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 12 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 THEY ASSUME ALL CONSTRUCTION AND ENGINEERING COSTS ASSOCIATED WITH SYSTEM MODIFICATIONS REQUIRED TO ACCOMMODATE ACTUAL SITE PRESSURE. THIS SYSTEM HAS BEEN DESIGNED FOR A REQUIRED STATIC PRESSURE OF 61 PSI MINIMUM.

BLUEGRASS TURF

SHRUBS & TREES

NATIVE SEED MIXES

2.23" PER WEEK PEAK SEASON

0.89" PER WEEK PEAK SEASON

0.74" PER WEEK PEAK SEASON (TWO SEASONS)

NOTE: IT IS THE INTENT OF THIS DESIGN THAT NATIVE AREAS WOULD ONLY BE IRRIGATED FOR ESTABLISHMENT. SYSTEM WILL REMAIN FOR USE DURING YEARS WITH LESS THAN NORMAL RAINFALL.
3. IRRIGATION SYSTEM OPERATION INTENT - THIS IRRIGATION SYSTEM HAS BEEN DESIGNED TO IRRIGATE THE ESTABLISHED LANDSCAPE WITHIN A THREE NIGHT PER WEEK, THREE 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.
4. EQUIPMENT INSTALLATION - IT IS THE INTENT OF THIS DESIGN THAT ALL IRRIGATION EQUIPMENT BE INSTALLED WITHIN PROPERTY LIMITS AND WITHIN LANDSCAPED AREAS. INSTALLATION SHALL BE COORDINATED WITH OTHER UTILITY WORK. ALL OTHER UTILITIES SHALL TAKE PRECEDENCE OVER IRRIGATION LOCATION. 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. WHERE MORTAR PAVING LIDS ARE INSTALLED ABOVE BOXES, IRRIGATION BOX WITH LID SHALL BE LOWERED TO ACCOMMODATE PAVING LID. REFER TO LANDSCAPE FOR ADDITIONAL INFORMATION, TO BE INSTALLED PER MANUFACTURE RECOMMENDATIONS.
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 SERVING THESE AREAS. ALL IRRIGATION PIPING AND EMISSION DEVICES LOCATED 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)

3/4" - 1 1/4" PIPING

2" PVC (1)

1 1/2" - 2" PIPING

4" PVC (1)

2 1/2" - 3" PIPING

6" PVC (1)

1-25 CONTROL WIRES

2" PVC (1)

26-50 CONTROL WIRES

3" PVC (1)
10. SPARE CONTROL WIRES - CONTRACTOR SHALL EXTEND THREE SPARE WIRES (ONE COMMON AND 2 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. DO NOT CONSTRUCT ANY PORTIONS OF THE IRRIGATION OFF OF PLANS MARKED NOT FOR CONSTRUCTION OR FOR REVIEW ONLY. FAILURE TO VERIFY CURRENT PLANS MAY RESULT IN RECONSTRUCTION AT CONTRACTOR'S EXPENSE. 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. 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.
14. BACKFLOW DEVICES: ALL CONNECTION COMPONENTS AND BACKFLOW DEVICES SHALL BE LEAD-FREE. CONTRACTOR SHALL CONTACT WATER SERVICE PROVIDER FOR ANY ADDITIONAL REQUIREMENTS REGARDING BACKFLOW TESTING.
15. CITY DETAILS - HYDROSYSTEMS-KDI WILL BE RESPONSIBLE FOR THE IRRIGATION DESIGN ITSELF. DETAILS #1000-2, 1000-2a,1000-5, 1000-6, 1000-7a, 1000-7b, 1000-9, 1000-10a, 1000-10b, 1000-12, 1000-13, 1000-14 & 1000-16 ARE STANDARD DETAILS DESIGNED AND SPECIFIED BY ARVADA PARKS. HYDROSYSTEMS*KDI DID NOT DESIGN AND SPECIFY THIS DETAIL. HYDROSYSTEMS*KDI IS NOT RESPONSIBLE, AND ACCEPTS NO RESPONSIBILITY, FOR THE SELECTION AND SPECIFICATION OF THIS DETAIL, AND HYDROSYSTEMS*KDI MAKES NO REPRESENTATIONS WITH REGARD TO THIS DETAIL.
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. PRESSURE TESTING - CONDUCT MAINLINE TEST IN PRESENCE OF CONSULTANT. ARRANGE FOR PRESENCE OF CONSULTANT 48 HOURS IN ADVANCE OF TESTING. SUPPLY FORCE PUMP AND ALL OTHER TEST EQUIPMENT. COMPRESSED AIR SHALL NOT BE USED FOR PRESSURE TESTING SYSTEM.

27.1 AFTER BACKFILLING, AND INSTALLATION OF ALL CONTROL VALVES, FILL PRESSURE SUPPLY LINE WITH WATER, AND PRESSURIZE TO 40 PSI OVER THE DESIGNATED STATIC PRESSURE OR 120 PSI, WHICHEVER IS GREATER, FOR A PERIOD OF 2 HOURS.

27.2 LEAKAGE, PRESSURE LOSS - TEST IS ACCEPTABLE IF NO LOSS OF PRESSURE IS EVIDENT DURING THE TEST PERIOD.

27.3 LEAKS - DETECT AND REPAIR LEAKS.

27.4 RETEST SYSTEM UNTIL TEST PRESSURE CAN BE MAINTAINED FOR DURATION OF TEST.

27.5 BEFORE FINAL ACCEPTANCE, PRESSURE SUPPLY LINE SHALL REMAIN UNDER PRESSURE FOR A PERIOD OF 48 HOURS.

27.6 PRESSURE TEST SHALL BE SCHEDULED AND PASSED PRIOR TO SCHEDULING OF SUBSTANTIAL COMPLETION WALK-THROUGH.

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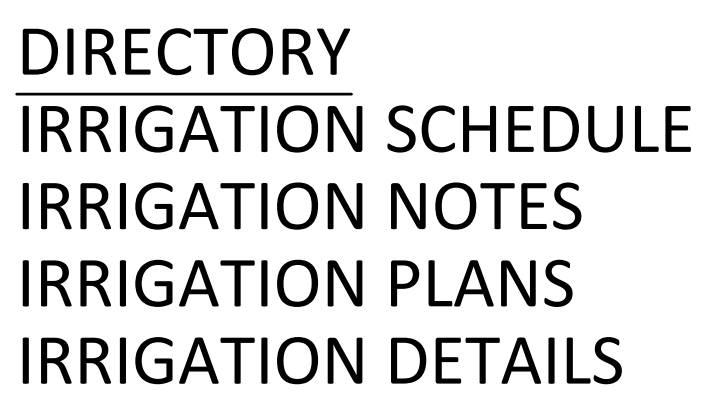
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IRRIGATION NOTES
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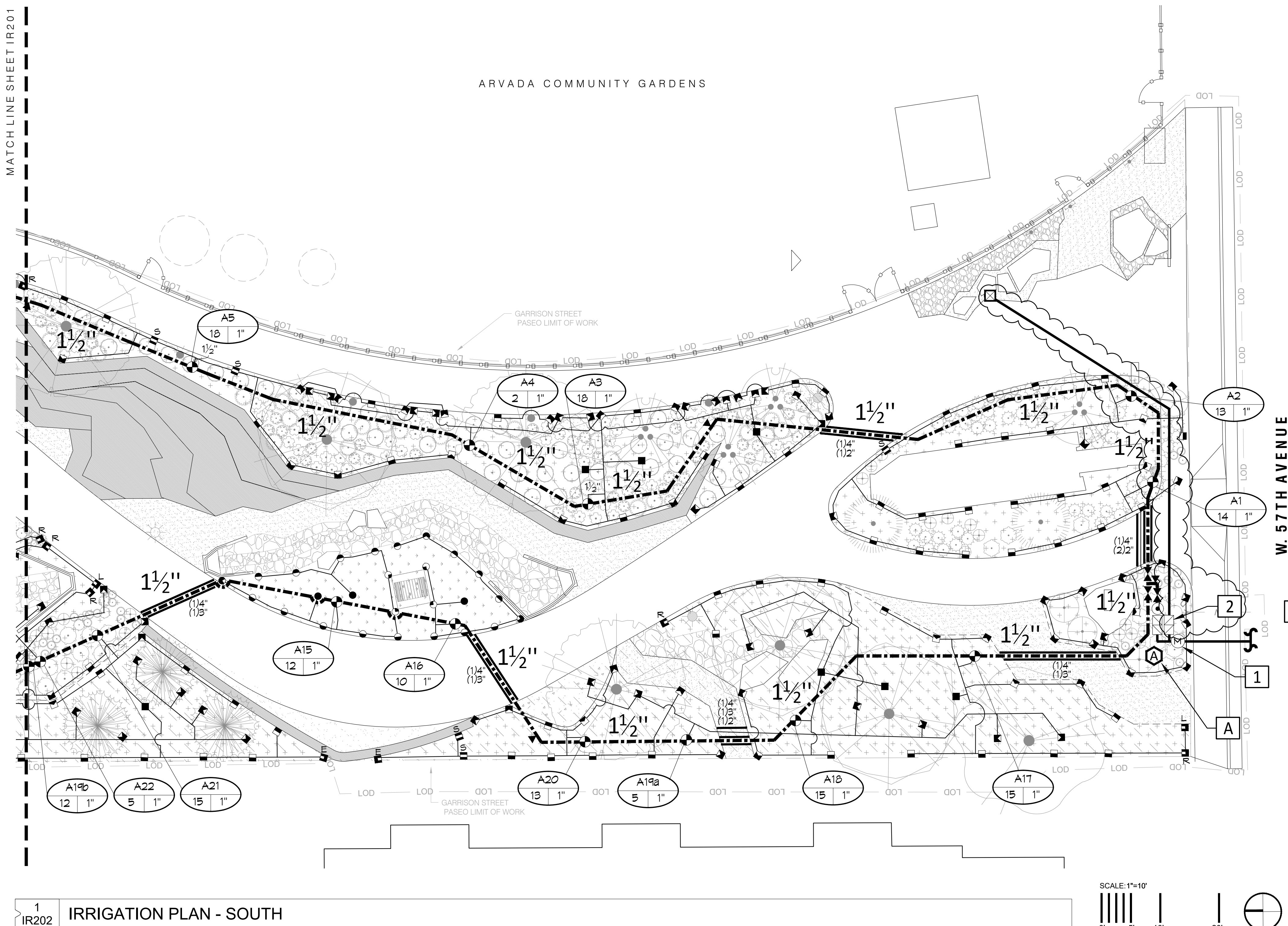
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IRRIGATION PLAN
NORTH

IR200

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MATCH LINE SHEET IR201



1 IRRIGATION PLAN - SOUTH

A CONTROLLER LOCATION "A"
PEDESTAL MOUNT ONE CONTROLLER (REFER TO SCHEDULE FOR MODEL & STATION COUNT), REMOTE READY, AT INDICATED LOCATION. 120 VOLT POWER IS AVAILABLE WITHIN 100 LF. OF CONTROLLER LOCATION FROM TRANSFORMER, BY OTHERS REELECTRICAL PLAN, 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 SHIELDED CABLE FROM FLOW SENSOR AND CONNECT TO DATA RETRIEVAL UNIT LOCATED IN ASSOCIATED CONTROLLER. LOCATE MASTER VALVE 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.

1 POINT OF CONNECTION - 1"
PEAK FLOW REQUIREMENT: 18 GPM. REQUIRED STATIC PRESSURE: 67 PSI 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 RES-CIVIL. INSTALL ONE 1" METER PER CITY OF ARVADA SPECIFICATIONS AND STANDARDS. CONNECT TO STUB AND EXTEND 1" TYPE K SOFT COPPER AT 54" MINIMUM DEPTH TO BACKFLOW PREVENTER LOCATION. INSTALL ONE 1" STOP AND WASTE VALVE, ONE 1" REDUCED PRESSURE BACKFLOW PREVENTER WITH PROTECTIVE ENCLOSURE, ONE MANUAL DRAIN VALVE, ONE HYDROMETER, ONE GATE VALVE, ONE QUICK COUPLING VALVE AND EXTEND PVC MAINLINE AS SHOWN. EXTEND ONE PE89 SHIELDED CABLE FROM FLOW SENSOR TO DATA RETRIEVAL UNIT LOCATED IN ASSOCIATED CONTROLLER. EXTEND 4 UFUL14# WIRE (TWO ORANGE AND TWO BLUE) AND CONNECT 2 OF THE WIRES FROM THE MASTER VALVE 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 APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.

2 DRINKING FOUNTAIN
CONTRACTOR SHALL TIE ONTO 1" COPPER STUB-OUT DOWNSTREAM OF METER PIT AT 54" DEPTH IN THIS APPROXIMATE LOCATION. CONNECT TO STUB AND EXTEND 1" TYPE K SOFT COPPER AT 54" MINIMUM DEPTH TO BACKFLOW PREVENTER LOCATION. INSTALL ONE 1" STOP AND WASTE VALVE, ONE 1" REDUCED PRESSURE BACKFLOW PREVENTER WITH PROTECTIVE ENCLOSURE, ONE MANUAL DRAIN VALVE AND EXTEND TYPE K COPPER LINE AS SHOWN. INSTALL ONE DRINKING FOUNTAIN PER DETAIL #3 AND PER ARVADA PARKS STANDARDS. WORK SHALL CONFORM TO LOCAL CODE, FEES, PERMITS AND INSPECTIONS ASSOCIATED WITH WORK ARE TO BE OBTAINED AND PAID FOR BY CONTRACTOR. FINAL DRINKING LOCATION SHALL BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.

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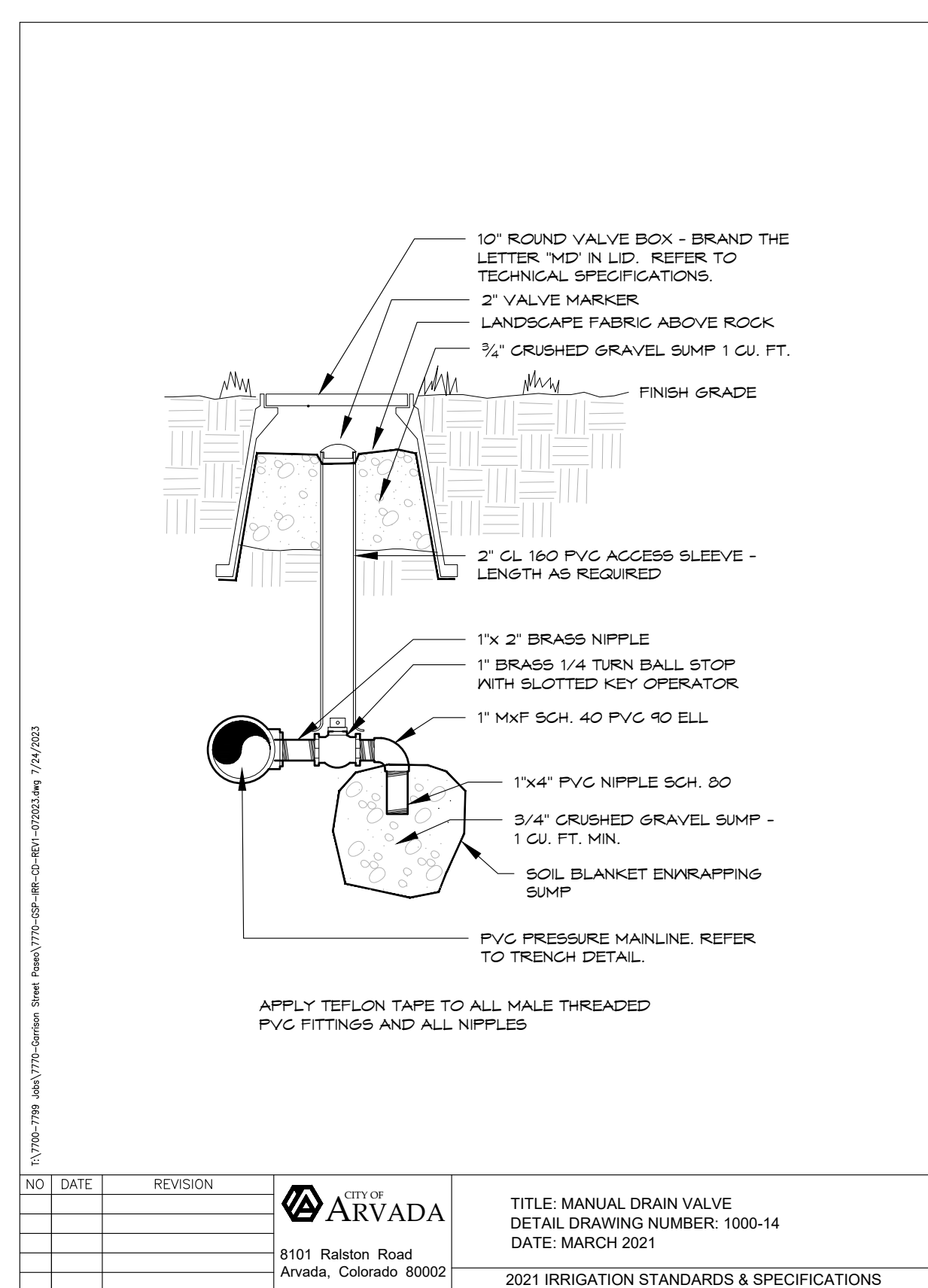
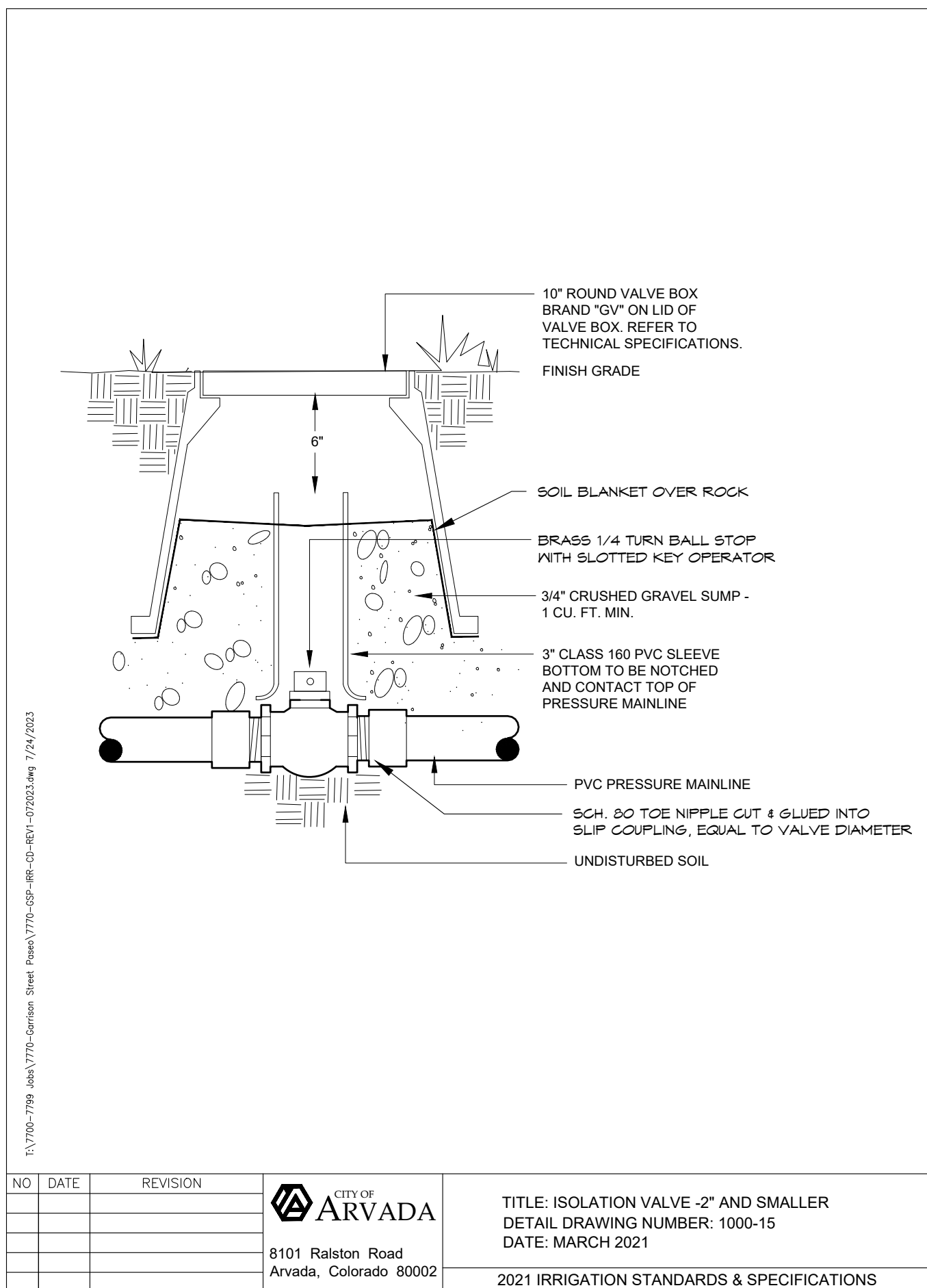
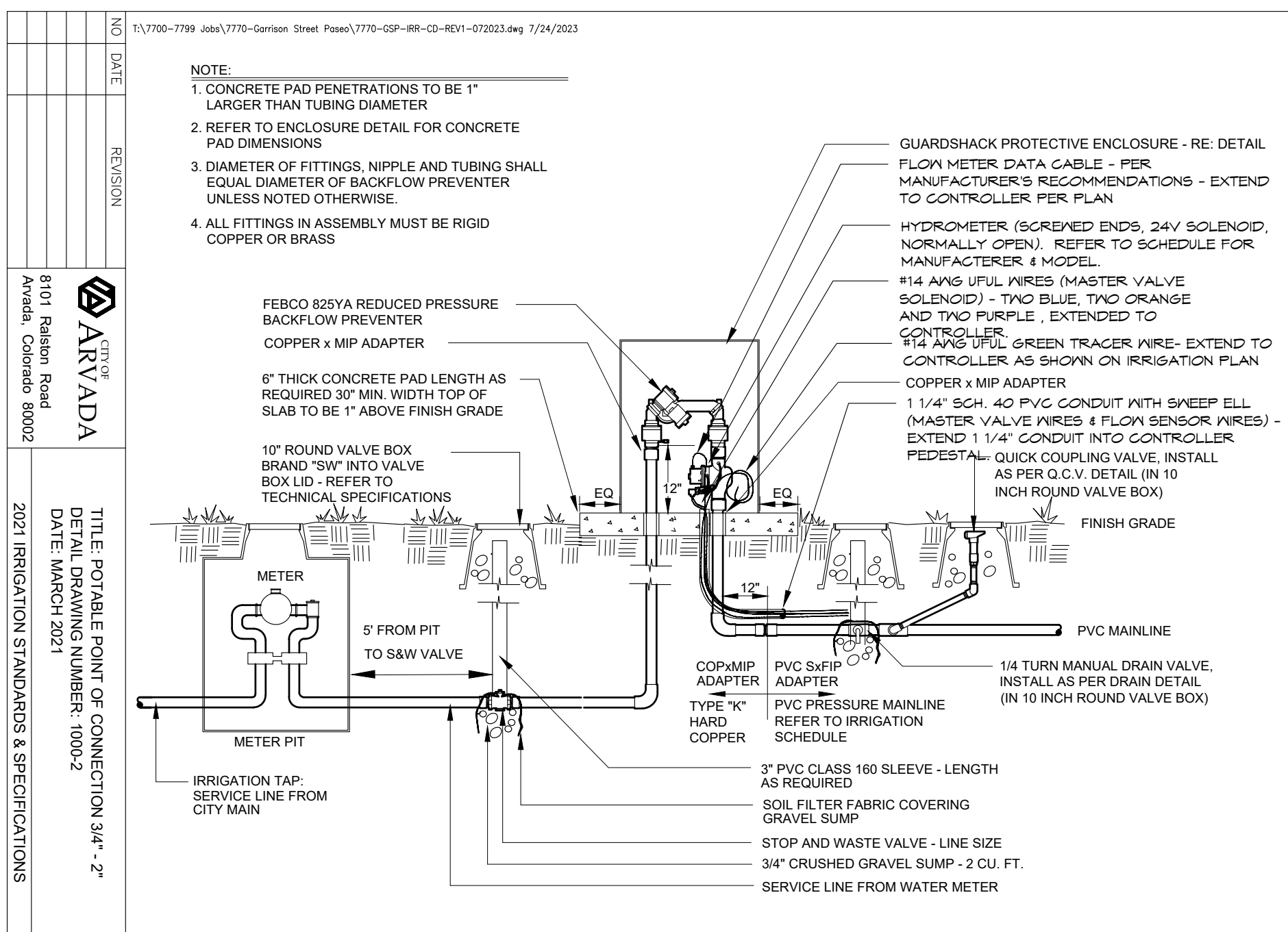
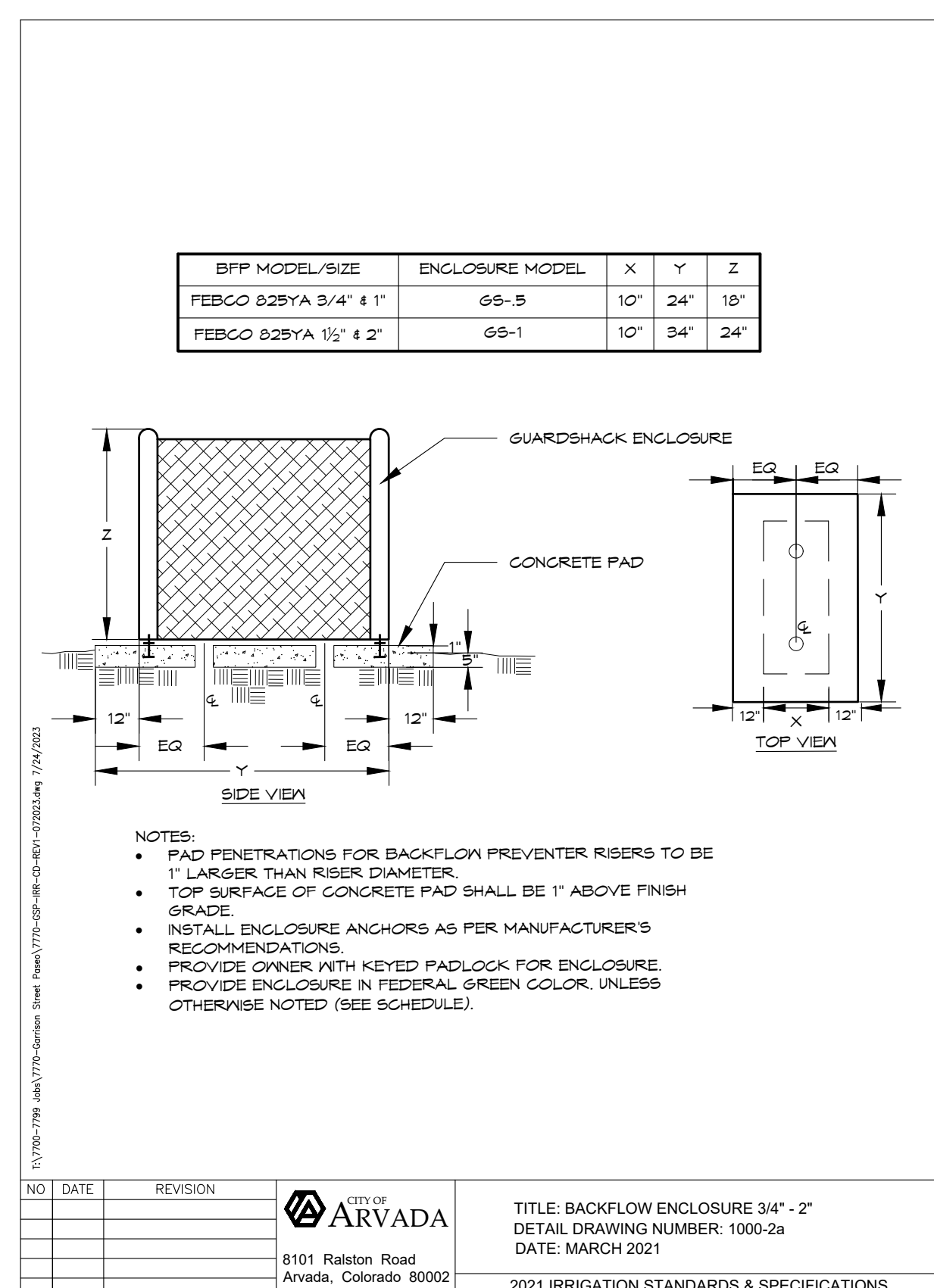
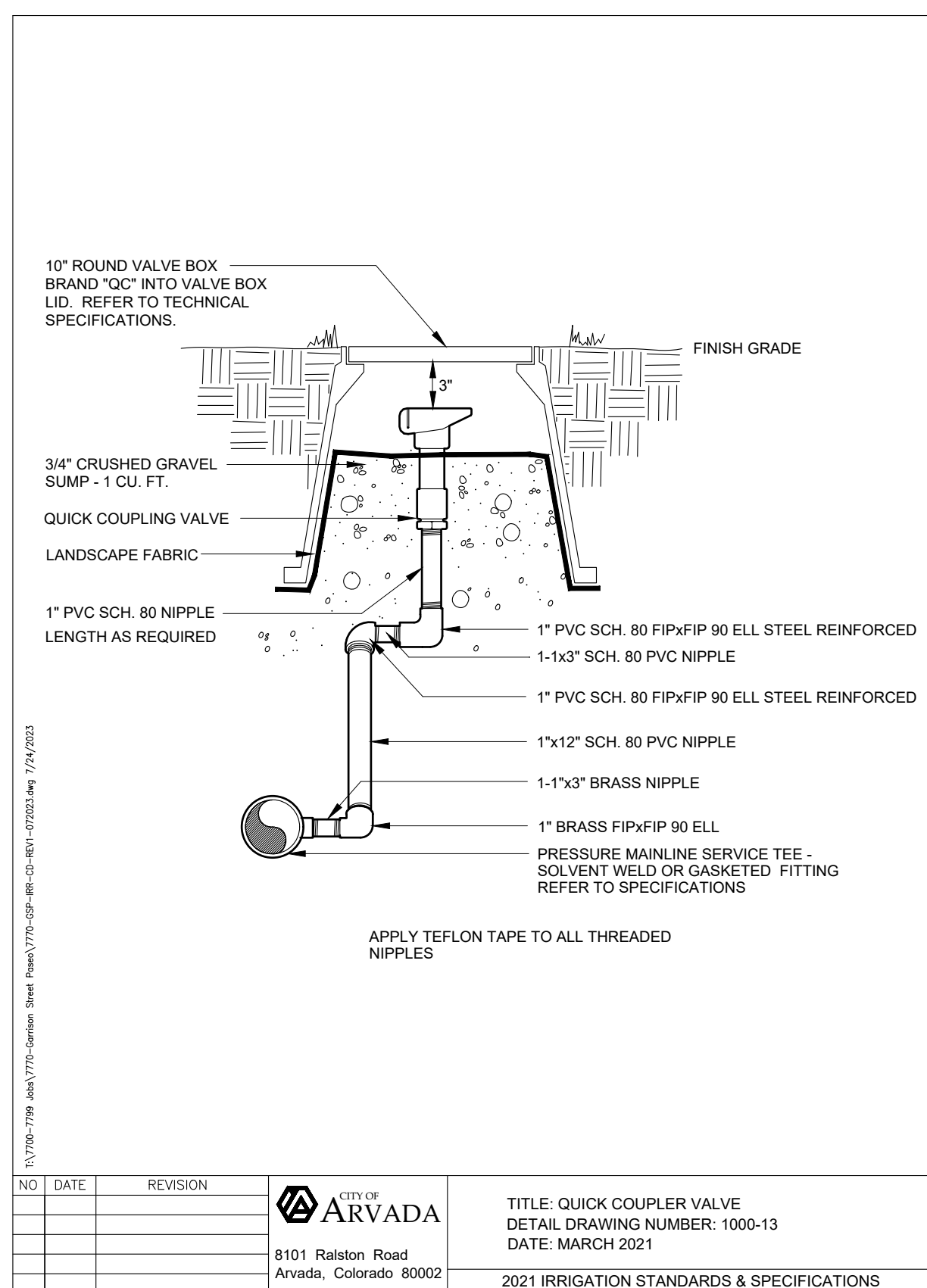
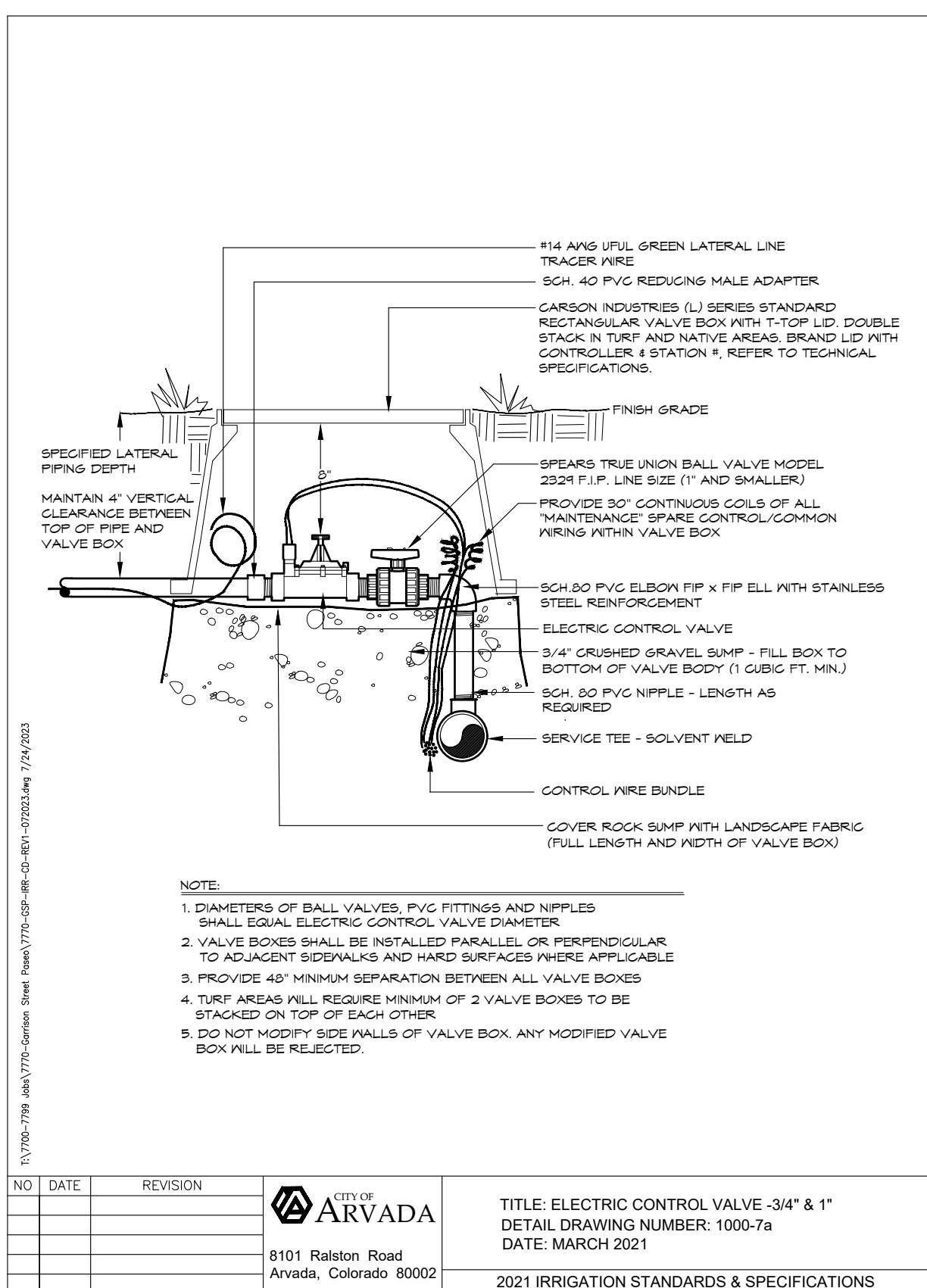
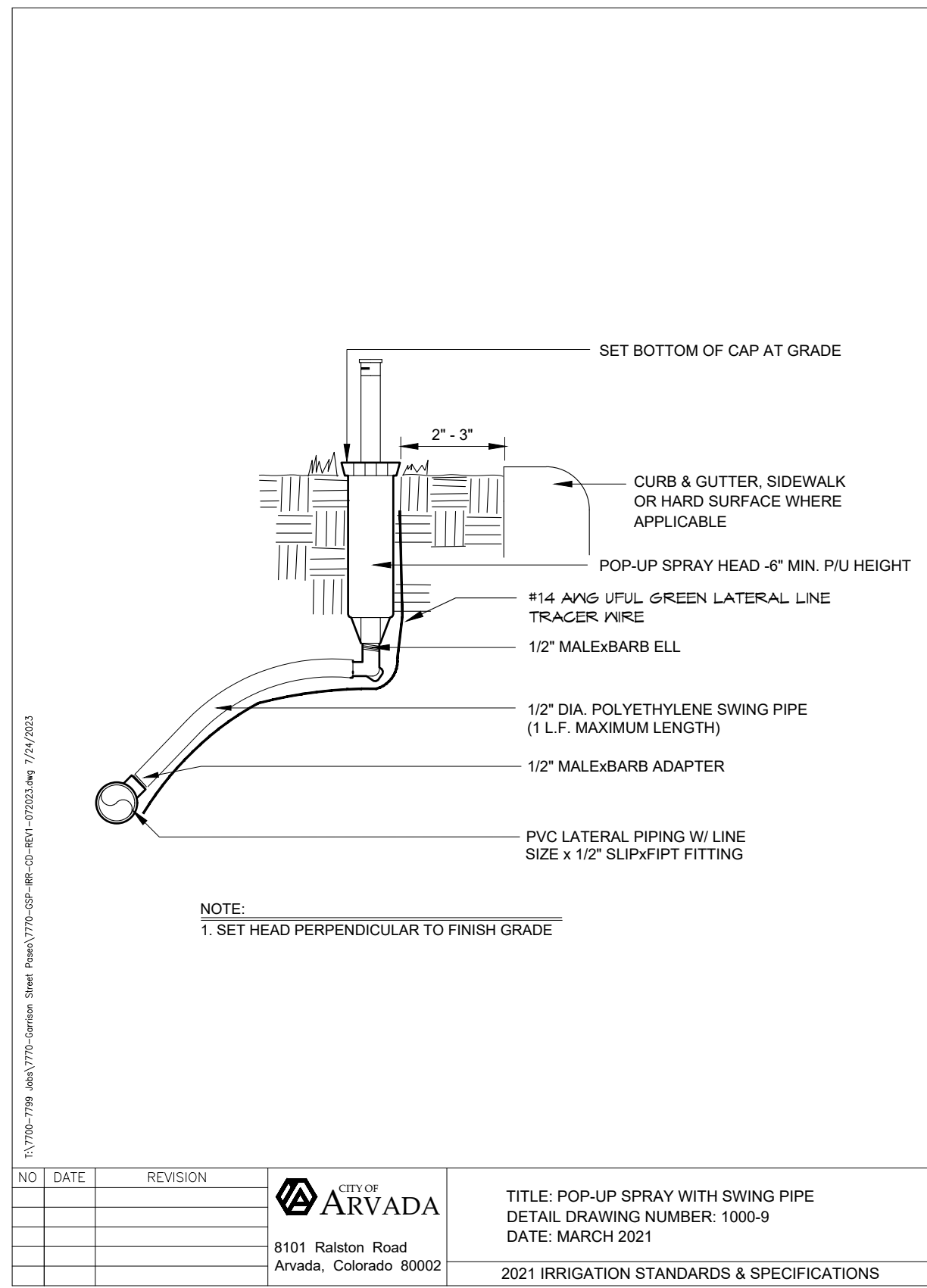
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IRRIGATION PLAN
SOUTH

IR202

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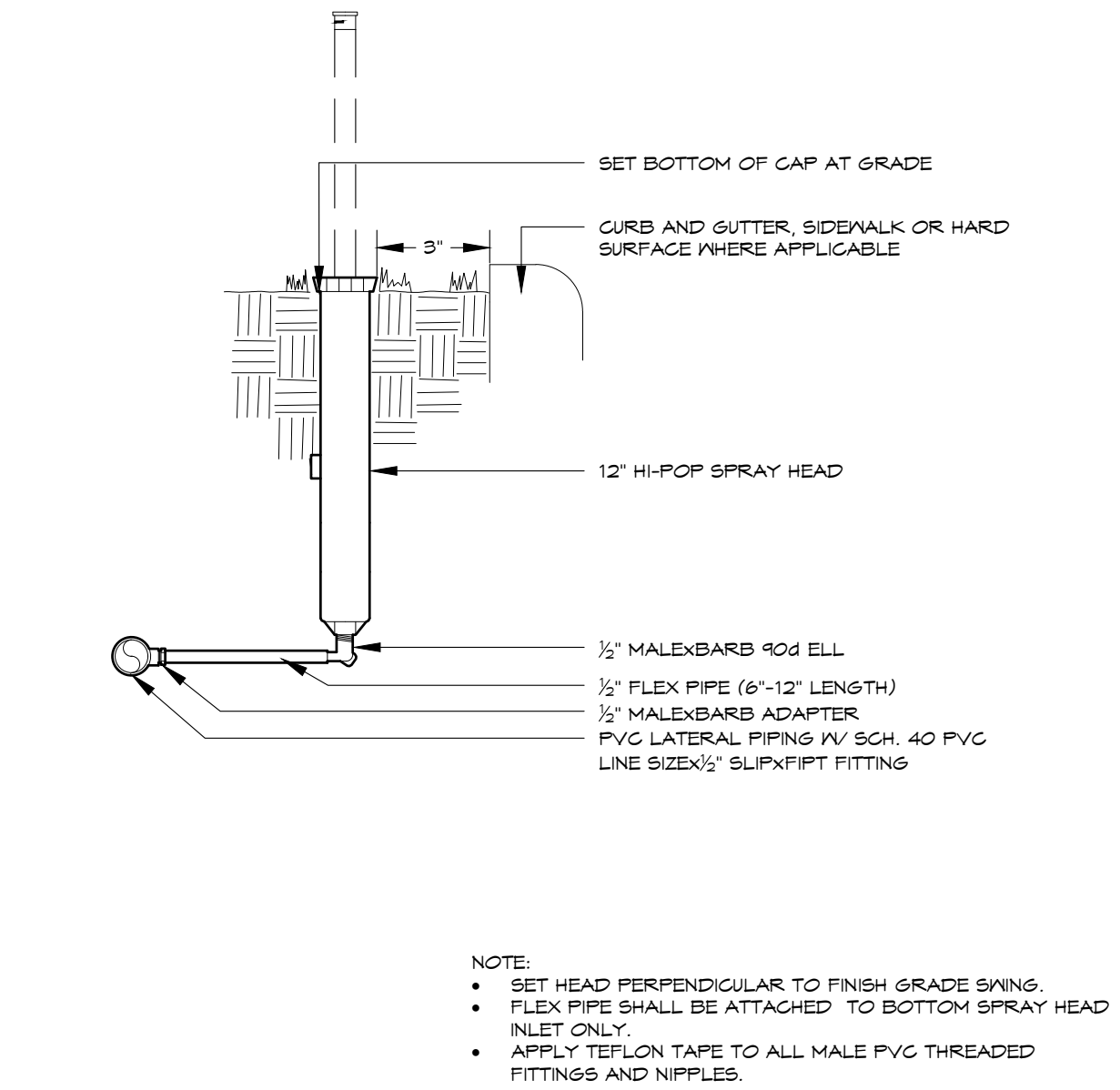
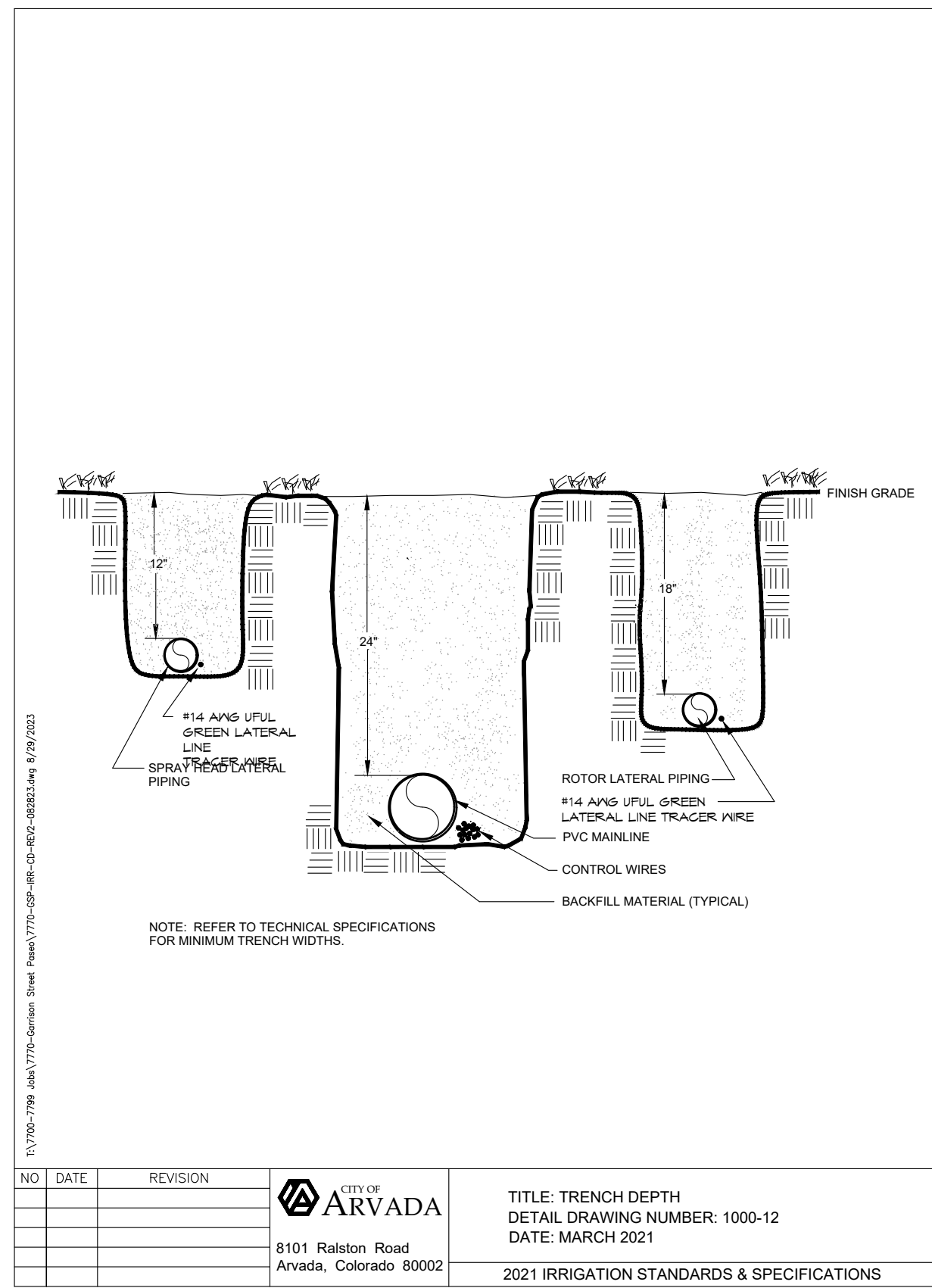
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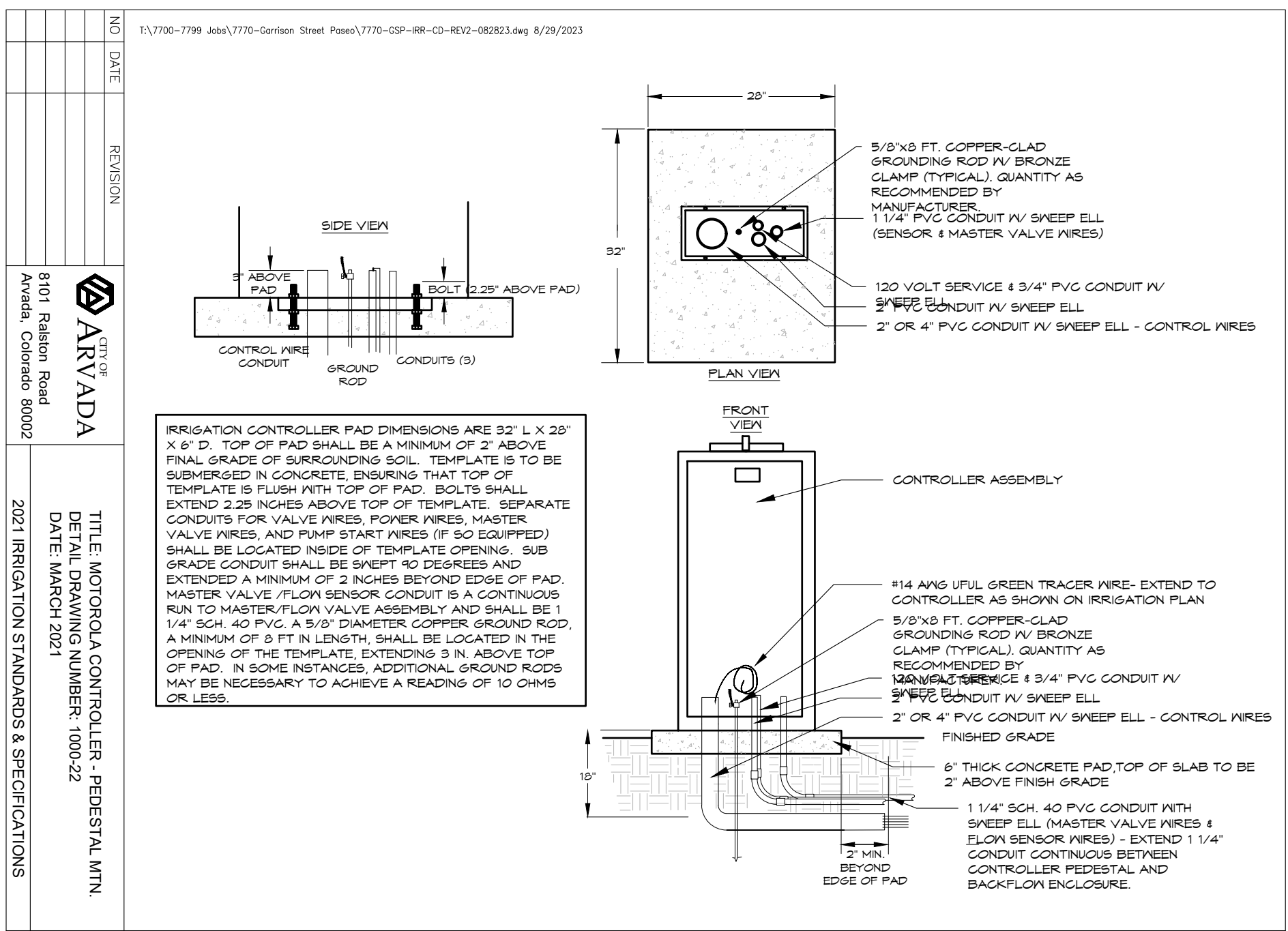
IR300

SHEET 5 OF 6



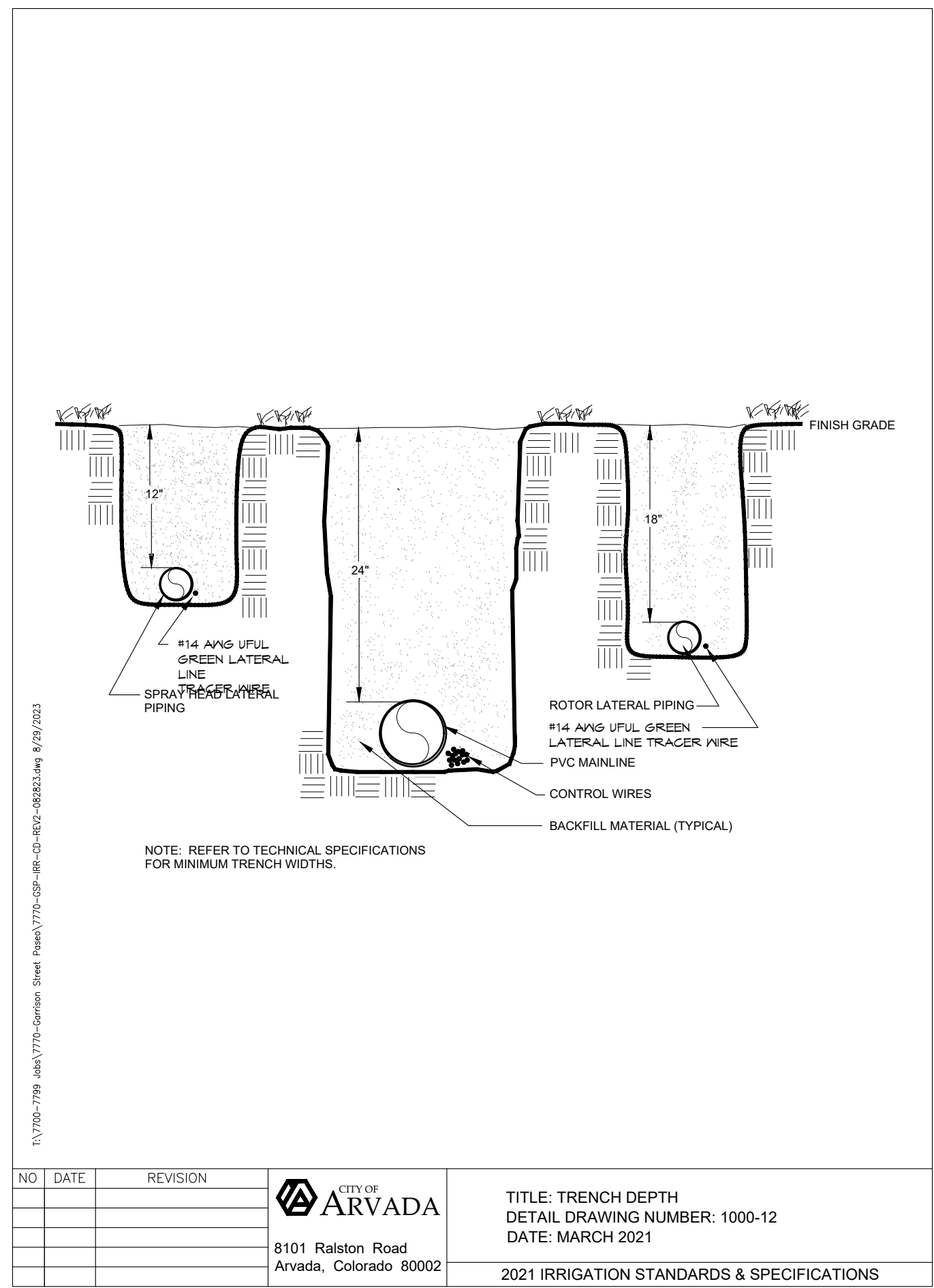
HI-POP SPRAY HEAD
SWING PIPE - PVC

1



IRRIGATION SLEEVING
TYPICAL

2



DRINKING FOUNTAIN
PER ARVADA PARKS STANDARDS

3

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GP1	GENERAL DRAWINGS ARE A PORTION OF THE CONTRACT DOCUMENTS AND ARE INTENDED TO BE USED WITH ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE REQUIREMENTS FROM THESE DRAWINGS INTO THEIR SHOP DRAWINGS AND WORK.	SU1	SUBMITTALS GENERAL CONTRACTOR TO PROVIDE A SHOP DRAWING SUBMITTAL LOG ITEMIZING ALL PROPOSED SUBMITTALS FOR APPROVAL BY STRUCTURAL ENGINEER OF RECORD.	SP1	SPECIAL INSPECTION GENERAL INSPECTION PROGRAM SHALL CONFORM TO CHAPTER 17 OF THE IBC.	SE	SPECIAL INSPECTION (CONT'D)	CN1	CONCRETE NOTES CONCRETE WORK SHALL CONFORM TO CHAPTER 19 OF THE IBC.																																
GP2	VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO FABRICATION OF ANY ITEMS.	SU2	ALL SHOP DRAWINGS SHALL BE CHECKED BY THE FABRICATOR AND APPROVED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTAL TO THE STRUCTURAL ENGINEER OF RECORD. SHOP DRAWING REVIEW BY ENGINEER IS LIMITED TO VERIFYING GENERAL CONFORMANCE TO THE CONTRACT DOCUMENTS. CONTRACTOR IS RESPONSIBLE FOR ANY CHANGES FROM THE CONTRACT DOCUMENTS, DIMENSIONAL ERRORS, COORDINATION ERRORS, OR OMISSIONS IN DRAWINGS.	SP2	THE OWNER SHALL EMPLOY A SPECIAL INSPECTOR TO PERFORM THE REQUIRED TESTS AND SPECIAL INSPECTIONS WITH QUALIFICATIONS DESCRIBED PER IBC CHAPTER 17 AND THE PROJECT SPECIFICATIONS.	CN2	WHERE NEW CONCRETE IS PLACED AGAINST EXISTING CONCRETE, THE EXISTING CONCRETE SURFACE SHALL BE CLEANED AND ROUGHENED TO A MINIMUM OF 1/4" AMPLITUDE.	CN3	ALL EXPOSED EDGES OF CONCRETE MEMBERS SHALL BE CHAMFERED 3/4" U.N.O.																																
GP3	DRAWINGS SHALL BE COORDINATED WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL OPENINGS, ELECTRICAL COMPONENTS, FLOOR DEPRESSIONS, ETC. NOT SHOWN ON DRAWINGS. COORDINATION LOCATIONS, SIZES, AND REINFORCEMENT SHALL BE SPECIFIED WITH RESPECTIVE TRADES BEFORE FABRICATION. REPORT ANY DISCREPANCIES AND/OR INTERFERENCE PROBLEMS TO THE ARCHITECT AND STRUCTURAL ENGINEER OF RECORD.	SU3	SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION AND CONSTRUCTION REGARDING ALL STRUCTURAL ITEMS, INCLUDING THE FOLLOWING: • CONCRETE MIX DESIGNS (5 DAYS BEFORE POUR, MIN.) • CONCRETE REINFORCEMENT • EMBEDDED STEEL TIE ITEMS • STRUCTURAL STEEL • STEEL DECK	SP3	SPECIAL INSPECTION REPORTS SHALL BE FURNISHED TO BUILDING OFFICIAL, OWNER, ARCHITECT, STRUCTURAL ENGINEER, AND CONTRACTOR.																																				
GP4	THESE GENERAL NOTES SUPPLEMENT THE PROJECT SPECIFICATIONS. REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. NOTES AND DETAILS ON THE STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER THE GENERAL NOTES AND TYPICAL DETAILS, WHERE NO DETAIL IS ARE PROVIDED, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.	SU4	SHOP DRAWINGS SHALL INCLUDE CONNECTIONS AS WELL AS SIZE, SPACING, AND ARRANGEMENT OF ALL MEMBER DETAILS. CALCULATIONS SHALL BE INCLUDED FOR DETERMINING FIT AND PLACEMENT SHALL ALSO BE INCLUDED.	SP4	SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT STATING THAT THE STRUCTURAL WORK WAS TO THE BEST OF THE SPECIAL INSPECTOR KNOWLEDGE, PERFORMED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.	CN4	CONCRETE FORMWORK: SLEEVES, OPENINGS, CONDUIT, AND OTHER EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO POURING CONCRETE. CONDUITS EMBEDDED IN SLABS SHALL NOT BE LARGER IN OUTSIDE DIMENSION THAN ONE THIRD OF THE THICKNESS OF THE SLAB AND SHALL NOT BE SPACED CLOSER THAN THREE DIAMETERS ON CENTER. VERIFY ALL BLOCK OUTS WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING REQUIREMENTS PRIOR TO POURING.	CN5	CONCRETE REINFORCEMENT: CN5.1 DETAILING, FABRICATION, AND PLACEMENT OF REINFORCEMENT SHALL CONFORM TO AC308.1. CN5.2 ALL REINFORCEMENT TO BE ASTM A615 GRADE 60 U.N.O. WELDED WIRE FABRIC TO BE ASTM A185 WITH WIRE CONFORMING TO ASTM A62. REINFORCING STEEL SHALL BE EPOXY ADHESIVE TYPE 1. ALL REINFORCING SHALL BE ANNEALED IRON WIRE. REINFORCEMENT SHALL BE CONTINUOUS THROUGH ALL CONSTRUCTION JOINTS. U.N.O. ALL CONTINUOUS REINFORCING SHALL BE SPLICED USING CLASS B TENSION SPLICES. U.N.O. CN5.4 BARS IN BEAMS AND SLABS SHALL BE SUPPORTED ON WELL-CURED CONCRETE BLOCKS OR APPROVED METAL CHAIRS, AS SPECIFIED BY THE CRSI MANUAL OF STANDARD PRACTICE, MSP-1. CN5.5 INTERSECTING WALLS AND INTERSECTING FOUNDATIONS, REFER TO TYPICAL DETAILS FOR LAYOUT OF CORNER BARS AND BARS IN SMALL WALL SECTIONS. SUPPORT BARS SHALL BE HOOKED INTO WALLS OR HOOKED DOWELS SHALL BE PROVIDED TO MATCH SLAB REINFORCING. PROVIDE HOOKED DOWELS FROM FOOTINGS TO MATCH VERTICAL WALL REINFORCING. CN5.6 ADD TWO DIAGONAL #5 BARS, FOUR FEET LONG, CENTERED, AT EACH CORNER OF FOUNDATION OR SLAB OPENING. U.N.O. CN5.7 INSTALL WVF 1 1/2" FROM TOP OF SLAB ON GRADE, TOPPING SLABS ON DECK, OR TOPPING SLABS ON PRECAST LAP JOINTS TWO INCHES BUT NOT LESS THAN 8" AT CONSTRUCTION JOINTS. LOCATE WVF AT MID DEPTH OF SLAB.																																
GP5	THE BUILDING IS NOT STRUCTURALLY STABLE UNTIL ALL CONNECTIONS, FRAMING, SHEAR WALLS, X-BRACING, AND EXTERIOR WALLS ARE COMPLETE AND HAVE ACHIEVED FINAL DESIGN STRENGTH. CONTRACTOR IS SOLELY RESPONSIBLE FOR MAINTAINING STRUCTURAL STABILITY OVERALL AND TO ALL PORTIONS OF THE BUILDING DURING DEMOLITION, ERECTION AND CONSTRUCTION. TEMPORARY SUPPORT SYSTEMS, TEMPORARY BRACING SYSTEMS ARE NOT TO BE REMOVED UNTIL STRUCTURAL WORK IS COMPLETE OR CONTRACTOR DEEMS THE AREA UNDER CONSIDERATION TO BE STABLE.	SU5	IF SHOP DRAWINGS DIFFER FROM OR ADD TO THE DESIGN OF THE STRUCTURAL DRAWINGS, THEY SHALL BEAR THE SEAL AND SIGNATURE OF AN ENGINEER REGISTERED IN THE APPROPRIATE STATE. ANY CHANGES TO THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND ARE SUBJECT TO REVIEW AND APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.	SP5	SPECIAL INSPECTION PROGRAM: • JOINT PREPARATION • DIMS (ALIGNMENT, JOINT OPENING, ROOT FACE, BEVEL) • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY & LOCATION) • BACKING TYPE & FIT (IF APPLICABLE) F. CONFIGURATION & FINISH OF ACCESS HOLES. G. FIT UP OF FILLET WELDS • DIMS (ALIGNMENT, JOINT AT ROOT) • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY & LOCATION)				CN6	COVERAGE FOR REINFORCEMENT: CN6.1 CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3" CN6.2 CONCRETE EXPOSED TO EARTH AND WEATHER: #6 THRU #18 BARS 2" #5 BAR, W3 OR C31 WIRE 1 1/2" AND SMALLER 1 1/2" CN6.3 CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: SLABS, WALLS, JOISTS #14 AND #18 1 1/2" #11 BAR AND SMALLER 3/4" BEAMS, COLUMNS PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS 1 1/2"																															
GP6	CONTRACTOR'S CONSTRUCTION AND/OR ERECTION SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD.	SU6	DESIGN DRAWINGS, SHOP DRAWINGS, AND CALCULATIONS FOR THE DESIGN AND FABRICATION OF ITEMS THAT ARE DESIGNED BY THE CONTRACTOR, INCLUDING: • RAILINGS • STONE PANELS • TEMPORARY SHORING	SP6	ITEMS THAT ARE DESIGNED BY THE CONTRACTOR SHALL INCLUDE ANY RELEVANT TECHNICAL LITERATURE FROM MANUFACTURER. ALSO PROVIDE A CERTIFICATION FROM THE MANUFACTURER SHOWING THE PRODUCT IS IN COMPLIANCE WITH ALL APPLICABLE CODES AND STANDARDS.																																				
GP7	RETAINING WALLS AND BASEMENT WALLS WHICH TIE TO UPPER SLABS SHALL NOT BE BACKFILLED UNTIL THE UPPER SLABS REACH FULL DESIGN STRENGTH, UNLESS ADEQUATE BRACING IS PROVIDED AT THE TOP OF THE WALL.	SU7	ITEMS THAT ARE DESIGNED BY THE CONTRACTOR SHALL BE DESIGNED TO RESIST THE LIVE LOADS INDICATED IN THE STRUCTURAL NOTES, DEAD LOAD, SELF WEIGHT, ANY ADDITIONAL LOADING INDICATED ON PLANS AND DETAILS, SNOW DRIFT, AND A NET WIND UPLIFT.	SP7	ITEMS THAT ARE DESIGNED BY THE CONTRACTOR SHALL INCLUDE ANY RELEVANT TECHNICAL LITERATURE FROM MANUFACTURER. ALSO PROVIDE A CERTIFICATION FROM THE MANUFACTURER SHOWING THE PRODUCT IS IN COMPLIANCE WITH ALL APPLICABLE CODES AND STANDARDS.	CN7	CONCRETE COMPRESSIVE STRENGTHS SHALL BE VERIFIED BY STANDARD 28-DAY CYLINDER TESTS PER ASTM C39 AND SHALL BE AS FOLLOWS: FOOTINGS fc = 4,000 PSI WALLS/PIERS/COLUMNS fc = 4,000 PSI SPECIAL INSPECTOR SHALL BE NOTIFIED IF ANY WATER IS TO BE ADDED IN FIELD.	CN8	CONCRETE FOUNDATIONS: CN8.1 ALL FOUNDATION EXCAVATIONS MUST BE REVIEWED AND APPROVED BY THE SOILS ENGINEER PRIOR TO PLACEMENT OF CONCRETE. CN8.2 ACCURATELY SET AND SECURELY SUPPORT REINFORCING DOWELS AND ANCHOR BOLTS PRIOR TO PLACEMENT OF CONCRETE. WET- STICKING OR FLOATING OF REINFORCING DOWELS AND ANCHOR RODS IS NOT ALLOWED. CN8.3 PROVIDE CONSTRUCTION JOINTS, INSERTS, SLEEVES, DOWELS, ANCHORS, ETC., AS SHOWN. THEY SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS AND ACCORDING TO USUAL ACCEPTED STANDARDS OF THE TRADE. ANCHOR RODS PER ASTM F1554 AS SHOWN. CN8.4 ALL FOUNDATION COLD JOINTS SHALL BE KEPT, CONTINUOUS REINFORCING SHALL EXTEND ONE DEVELOPMENT LENGTH PLUS 6" LOCATE FOUNDATION COLD JOINTS AT EXPANSION JOINTS IN MASONRY. CN8.5 REINFORCING SHOWN ON DETAILS IS THE REQUIRED MINIMUM. AT CONTRACTOR'S OPTION AND AT EXPENSE, ADDITIONAL REINFORCING MAY BE PERMITTED TO ASSIST IN EASE OF CONSTRUCTABILITY ADDITIONAL REINFORCING MUST BE SUBMITTED FOR REVIEW ON SHOP DRAWINGS.																																
GP8	AS USED IN GENERAL NOTES AND THROUGHOUT STRUCTURAL DRAWINGS, THE TERM "CONTRACTOR" IS DEFINED TO INCLUDE ANY OR ALL OF THE FOLLOWING: GENERAL CONTRACTOR AND THEIR SUBCONTRACTORS, CONSTRUCTION MANAGER AND THEIR SUBCONTRACTORS, FABRICATORS, INSTALLERS, DELEGATED DESIGNERS/ENGINEERS AND ERECTORS.	SU8	ITEMS THAT ARE DESIGNED BY THE CONTRACTOR SHALL BE DESIGNED TO RESIST THE LIVE LOADS INDICATED IN THE STRUCTURAL NOTES, DEAD LOAD, SELF WEIGHT, ANY ADDITIONAL LOADING INDICATED ON PLANS AND DETAILS, SNOW DRIFT, AND A NET WIND UPLIFT.	SP8	ITEMS THAT ARE DESIGNED BY THE CONTRACTOR SHALL INCLUDE ANY RELEVANT TECHNICAL LITERATURE FROM MANUFACTURER. ALSO PROVIDE A CERTIFICATION FROM THE MANUFACTURER SHOWING THE PRODUCT IS IN COMPLIANCE WITH ALL APPLICABLE CODES AND STANDARDS.																																				
DP1	DESIGN PARAMETERS THE STRUCTURE IS DESIGNED IN ACCORDANCE WITH THE ICC INTERNATIONAL BUILDING CODE, 2018 EDITION.	DP2	UNIFORM LIVE LOADS: TYPICAL ROOF (GOVERNED BY SNOW) 35 PSF+DRIFT TYPICAL HANDRAIL 50 PLF	DP3	CONCENTRATED LIVE LOADS: TYPICAL OFFICE (OVER 2.5 FT. x 2.5 FT.) 2000 LB TYPICAL STAIRS (OVER 2 IN. x 2 IN.) 2000 LB TYPICAL HANDRAIL 400 LB	DP4	SNOW DESIGN PARAMETERS: GROUND SNOW LOAD (p) 40 PSF FLAT ROOF SNOW LOAD (p) 35 PSF SNOW EXPOSURE FACTOR (Ce) 1.0 SNOW LOAD IMPORTANCE FACTOR (I) 1.0 SNOW LOAD THERMAL FACTOR (Ct) 1.0	DP5	EARTHQUAKE DESIGN PARAMETERS: SEISMIC IMPORTANCE FACTOR (I) 1.0 SEISMIC DESIGN CATEGORY 1 SHORT-PERIOD SITE COEFFICIENT (F _s) 1.0 LONG-PERIOD SITE COEFFICIENT (F _l) 1.0 SEISMIC DESIGN CATEGORY 1 SEISMIC RESPONSE COEFFICIENT (C _s) N-S 0.07 SEISMIC RESPONSE COEFFICIENT (C _s) E-W 0.07 RESPONSE MODIFICATION FACTOR (R) N-S 1.0 RESPONSE MODIFICATION FACTOR (R) E-W 1.0 REDUNDANCY FACTOR (φ) N-S 1.0 REDUNDANCY FACTOR (φ) E-W 1.0 SEISMIC ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE ANALYSIS	DP6	WIND DESIGN PARAMETERS: BASIC WIND SPEED (V) (3 SECOND GUST) 115 MPH RISK CATEGORY B WIND EXPOSURE CATEGORY B INTERNAL PRESSURE COEFFICIENT +1.8 BASIC DESIGN PRESSURE @ ROOF 25 PSF (SERVICE) NET WIND UPLIFT @ ROOF 25 PSF (SERVICE)	DP7	N/A	DP8	ALLOWABLE WALL DEFLECTIONS: EXTERIOR (CLADDING DESIGN) L/360 (BRICK VENEER DESIGN) L/600 ≤ 0.3" INTERIOR L/360	DP9	ALLOWABLE FRAMING DEFLECTIONS: ROOF LIVE LOAD L/360 ROOF TOTAL LOAD L/240 FLOOR LIVE LOAD L/360 FLOOR TOTAL LOAD L/240	DP10	ASSUMED FUTURE CONSTRUCTION: VERTICAL NONE HORIZONTAL NONE	FP	FOUNDATION PARAMETERS SIZE AND BOTTOM ELEVATIONS OF FOOTINGS HAVE BEEN ESTABLISHED BASED ON THE ASSUMED MINIMUM ALLOWABLE BEARING PRESSURE OF 1500 PSF AS SHOWN IN BC TABLE 1806.2 AS EXCAVATION PROGRESSES. UNANTICIPATED SOIL CONDITIONS MAY REQUIRE CHANGES. CONTACT STRUCTURAL ENGINEER OF RECORD FOR EVALUATION OF THESE CHANGES.	FP2	ALLOWABLE SOIL BEARING PRESSURE CONTINUOUS FOOTINGS 1500 PSF SQUARE FOOTINGS 1500 PSF	FP2.1	OVEREXCAVATION IS REQUIRED TO ACHIEVE THE BEARING PRESSURES INDICATED IN NOTE FP2. CONTRACTOR TO REFER TO LICENSED GEOTECHNICAL ENGINEER FOR ADDL INFORMATION.	FP2.2	AGGREGATE/STONE PIERS (EX. GEOPIERS) ARE REQUIRED TO ACHIEVE THE BEARING PRESSURES INDICATED IN NOTE FP2. PIER LAYOUT ON PLAN AND DETAILS IS FOR REFERENCE ONLY. FINAL SIZE, QUANTITY AND LOCATION OF PIERS SHALL BE DETERMINED BY PIER DESIGNER.	FP3	MINIMUM FOOTING DEPTH FOR FROST PROTECTION (BELOW FINISHED GRADE) 30 IN.	FP4	DESIGN EARTH PRESSURES: ACTIVE 35 PCF PASSIVE 260 PCF AT REST 60 PCF	FP5	GEOTECHNICAL ENGINEER IS SOLE JUDGE OF THE SUITABILITY OF UNDERLYING MATERIAL TO SUPPORT FOUNDATIONS. BEARING MATERIAL SHALL BE APPROVED BY GEOTECHNICAL ENGINEER BEFORE FOUNDATION INSTALLATION. DO NOT PROCEED WITHOUT APPROVAL.	FP6	PRIOR TO COMMENCING EARTHWORK, CONTRACTOR SHALL REVIEW AND BE FAMILIAR WITH ALL ASPECTS OF THE GEOTECHNICAL REPORT. CONTACT GEOTECHNICAL ENGINEER IF QUESTIONS OR DISCREPANCIES.	FP16	SHEAR STUDS: SF16.1 SHEAR STUDS SHALL BE NELSON S3L 3/4" x (DECK HEIGHT + 1.58") LONG SOLID FUSED, OR APPROVED EQUAL.	FP17	WHEN PLACING CONCRETE ON CAMBERED FRAMING MEMBERS, IT IS GENERALLY ADVISABLE TO ORIENT CONSTRUCTION JOINTS PARALLEL TO THE SECONDARY FRAMING MEMBERS. CONSTRUCTION JOINT LOCATIONS SHALL BE APPROVED BY STRUCTURAL ENGINEER OF RECORD PRIOR TO SLAB PLACEMENT.	SE	VERIFICATION AND INSPECTION STEEL & DECKING - CONFORM TO AISC 360 REQUIREMENTS 1. VERIFY COMPLIANCE OF DECK & ALL DECK ACCESSORIES WITH CONSTRUCTION DOCUMENTS, INCLUDING PROFILES, PROPERTIES & THICKNESS. 2. INSPECTION TASKS PRIOR TO WELDING: A. WELDING PROCEDURE SPECIFICATIONS (WPS) AVAILABLE. B. MANUFACTURER'S CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE. C. MATERIAL IDENTIFICATION (TYPE/GRADE). D. WELDER IDENTIFICATION SYSTEM. E. FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY): • JOINT PREPARATION • DIMS (ALIGNMENT, JOINT OPENING, ROOT FACE, BEVEL) • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY & LOCATION) • BACKING TYPE & FIT (IF APPLICABLE) F. CONFIGURATION & FINISH OF ACCESS HOLES. G. FIT UP OF FILLET WELDS • DIMS (ALIGNMENT, JOINT AT ROOT) • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY & LOCATION) 3. INSPECTION TASKS DURING WELDING: A. STRUCTURAL STEEL & COLD-FORMED STEEL DECK: 1) COMPLETE & PARTIAL PENETRATION GROOVE WELDS. 2) MULTIPASS FILLET WELDS. 3) SINGLE-PASS FILLET WELDS > 5/16". 4) PLUG & SLOT WELDS. 5) SINGLE-PASS FILLET WELDS ≤ 5/16". 6) FLOOR & ROOF DECK WELDS. B. USE OF QUALIFIED WELDERS. C. CONTROL A HOLDING OF WELDING CONSUMABLES: • EXPOSURE CONTROL • PACKAGING D. NO WELDING OVER CRACKED TACK WELDS. E. ENVIRONMENTAL CONDITIONS: • WIND SPEED WITHIN LIMITS • PRECIPITATION & TEMP. F. WPS FOLLOWED: • SETTINGS ON WELDING EQPT. • SELECTED WELDING MATERIALS • SHIELDS GAS TYPE/LOW RATE • INTERPASS TEMP. MAINTAINED (MIN / MAX) G. WELDING TECHNIQUES: • INTERPASS & FINAL CLEANING • EACH PASS WITHIN PROFILE LIMITATIONS • EACH PASS MEETS QUALITY REQUIREMENTS 4. INSPECTION TASKS AFTER WELDING: A. WELDS CLEANED. B. SIZE, LENGTH, & LOCATION OF WELDS. C. WELDS MEET VISUAL ACCEPTANCE CRITERIA: • CRACK PROHIBITION • WELD / BASE METAL FUSION • UNDERCUT • CRATER CROSS SECTION • WELD PROFILES D. ULTRASONIC TESTING TO BE PERFORMED ON COMPLETE JOINT PENETRATION WELDS PER AWS D1.1-2010. E. ARC STRIKES F. K-AREA G. BACKING & WELD TABS REMOVED (IF REQ'D). H. REPAIR ACTIVITIES. I. DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER. 5. INSPECTION TASKS PRIOR TO BOLTING: A. MFR. CERTS. AVAILABLE FOR FASTENER MATERIALS. B. FASTENERS MARKED IN ACCORDANCE W/ ASTM RQMTS. C. PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH, EXCLUDED THREADS). D. PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL. E. CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION & HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE RQMTS. F. PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED & DOCUMENTED FOR FASTENER ASSEMBLIES & LOCATIONS SHALL BE AS FOLLOWS: G. PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS & OTHER FASTENER COMPONENTS. 6. INSPECTION TASKS DURING BOLTING: A. FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES & WASHERS (IF REQ'D) ARE POSITIONED AS REQ'D. B. JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION. C. FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING. D. FASTENERS ARE PRETENSIONED IN ACCORDANCE W/ THE RQMT SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES. 7. INSPECTION TASKS AFTER BOLTING: A. DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNS. 8. INSPECTION OF STEEL ELEMENTS OF COMPOSITE CONST. PRIOR TO CONC. PLACEMENT: A. PLACEMENT & INSTALLATION OF STEEL DECK. B. PLACEMENT & INSTALLATION OF STEEL HEADED STUD ANCHORS. C. DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEMENTS. 9. INSPECTION TASKS PRIOR TO MECHANICAL FASTENING OF DECK: A. MANUFACTURER INSTALLATION INSTRUCTIONS AVAILABLE. B. PROPER TOOLS AVAILABLE FOR FASTENER INSTALLATION. C. PROPER STORAGE FOR MECHANICAL FASTENERS. 10. INSPECTION TASKS DURING MECHANICAL FASTENING OF DECK: A. FASTENERS ARE POSITIONED AS REQUIRED. B. FASTENERS INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RQMTS. 11. INSPECTION TASKS AFTER MECHANICAL FASTENING OF DECK: A. CHECK SPACING, TYPE AND INSTALLATION OF SUPPORT, SIDELAP & PERIMETER FASTENERS. B. VERIFY REPAIRS & DOCUMENT ACCEPTANCE/REJECTION OF FASTENERS.

CONCRETE

VERIFICATION AND INSPECTION

STEEL & DECKING - CONFORM TO AISC 360 REQUIREMENTS

1. VERIFY COMPLIANCE OF DECK & ALL DECK ACCESSORIES WITH CONSTRUCTION DOCUMENTS, INCLUDING PROFILES, PROPERTIES & THICKNESS.

2. INSPECTION TASKS PRIOR TO WELDING:

A. WELDING PROCEDURE SPECIFICATIONS (WPS) AVAILABLE.

B. MANUFACTURER'S CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE.

C. MATERIAL IDENTIFICATION (TYPE/GRADE).

D. WELDER IDENTIFICATION SYSTEM.

E. FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY):

• JOINT PREPARATION

• DIMS (ALIGNMENT, JOINT OPENING, ROOT FACE, BEVEL)

• CLEANLINESS (CONDITION OF STEEL SURFACES)

• TACKING (TACK WELD QUALITY & LOCATION)

• BACKING TYPE & FIT (IF APPLICABLE)

F. CONFIGURATION & FINISH OF ACCESS HOLES.

G. FIT UP OF FILLET WELDS

• DIMS (ALIGNMENT, JOINT AT ROOT)

• CLEANLINESS (CONDITION OF STEEL SURFACES)

• TACKING (TACK WELD QUALITY & LOCATION)

3. INSPECTION TASKS DURING WELDING:

A. STRUCTURAL STEEL & COLD-FORMED STEEL DECK:

1) COMPLETE & PARTIAL PENETRATION GROOVE WELDS.

2) MULTIPASS FILLET WELDS.

3) SINGLE-PASS FILLET WELDS > 5/16".

4) PLUG & SLOT WELDS.

5) SINGLE-PASS FILLET WELDS ≤ 5/16".

6) FLOOR & ROOF DECK WELDS.

B. USE OF QUALIFIED WELDERS.

C. CONTROL A HOLDING OF WELDING CONSUMABLES:

• EXPOSURE CONTROL

• PACKAGING

D. NO WELDING OVER CRACKED TACK WELDS.

E. ENVIRONMENTAL CONDITIONS:

• WIND SPEED WITHIN LIMITS

• PRECIPITATION & TEMP.

F. WPS FOLLOWED:

• SETTINGS ON WELDING EQPT.

• SELECTED WELDING MATERIALS

• SHIELDS GAS TYPE/LOW RATE

• INTERPASS TEMP. MAINTAINED (MIN / MAX)

G. WELDING TECHNIQUES:

• INTERPASS & FINAL CLEANING

• EACH PASS WITHIN PROFILE LIMITATIONS

• EACH PASS MEETS QUALITY REQUIREMENTS

4. INSPECTION TASKS AFTER WELDING:

A. WELDS CLEANED.

B. SIZE, LENGTH, & LOCATION OF WELDS.

C. WELDS MEET VISUAL ACCEPTANCE CRITERIA:

• CRACK PROHIBITION

• WELD / BASE METAL FUSION

• UNDERCUT

• CRATER CROSS SECTION

• WELD PROFILES

D. ULTRASONIC TESTING TO BE PERFORMED ON COMPLETE JOINT PENETRATION WELDS PER AWS D1.1-2010.

E. ARC STRIKES

F. K-AREA

G. BACKING & WELD TABS REMOVED (IF REQ'D).

H. REPAIR ACTIVITIES.

I. DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER.

5. INSPECTION TASKS PRIOR TO BOLTING:

A. MFR. CERTS. AVAILABLE FOR FASTENER MATERIALS.

B. FASTENERS MARKED IN ACCORDANCE W/ ASTM RQMTS.

C. PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH, EXCLUDED THREADS).

D. PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL.

E. CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION & HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE RQMTS.

F. PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED & DOCUMENTED FOR FASTENER ASSEMBLIES & LOCATIONS SHALL BE AS FOLLOWS:

G. PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS & OTHER FASTENER COMPONENTS.

6. INSPECTION TASKS DURING BOLTING:

A. FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES & WASHERS (IF REQ'D) ARE POSITIONED AS REQ'D.

B. JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION.

C. FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING.

D. FASTENERS ARE PRETENSIONED IN ACCORDANCE W/ THE RQMT SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES.

7. INSPECTION TASKS AFTER BOLTING:

A. DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNS.

8. INSPECTION OF STEEL ELEMENTS OF COMPOSITE CONST. PRIOR TO CONC. PLACEMENT:

A. PLACEMENT & INSTALLATION OF STEEL DECK.

B. PLACEMENT & INSTALLATION OF STEEL HEADED STUD ANCHORS.

C. DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEMENTS.

9. INSPECTION TASKS PRIOR TO MECHANICAL FASTENING OF DECK:

A. MANUFACTURER INSTALLATION INSTRUCTIONS AVAILABLE.

B. PROPER TOOLS AVAILABLE FOR FASTENER INSTALLATION.

C. PROPER STORAGE FOR MECHANICAL FASTENERS.

10. INSPECTION TASKS DURING MECHANICAL FASTENING OF DECK:

A. FASTENERS ARE POSITIONED AS REQUIRED.

B. FASTENERS INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RQMTS.

11. INSPECTION TASKS AFTER MECHANICAL FASTENING OF DECK:

A. CHECK SPACING, TYPE AND INSTALLATION OF SUPPORT, SIDELAP & PERIMETER FASTENERS.

B. VERIFY REPAIRS & DOCUMENT ACCEPTANCE/REJECTION OF FASTENERS.

CONCRETE

VERIFICATION AND INSPECTION

STEEL & DECKING - CONFORM TO AISC 360 REQUIREMENTS

1. VERIFY COMPLIANCE OF DECK & ALL DECK ACCESSORIES WITH CONSTRUCTION DOCUMENTS, INCLUDING PROFILES, PROPERTIES & THICKNESS.

2. INSPECTION TASKS PRIOR TO WELDING:

A. WELDING PROCEDURE SPECIFICATIONS (WPS) AVAILABLE.

B. MANUFACTURER'S CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE.

C. MATERIAL IDENTIFICATION (TYPE/GRADE).

D. WELDER IDENTIFICATION SYSTEM.

E. FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY):

• JOINT PREPARATION

• DIMS (ALIGNMENT, JOINT OPENING, ROOT FACE, BEVEL)

• CLEANLINESS (CONDITION OF STEEL SURFACES)

• TACKING (TACK WELD QUALITY & LOCATION)

• BACKING TYPE & FIT (IF APPLICABLE)

F. CONFIGURATION & FINISH OF ACCESS HOLES.

G. FIT UP OF FILLET WELDS

• DIMS (ALIGNMENT, JOINT AT ROOT)

• CLEANLINESS (CONDITION OF STEEL SURFACES)

• TACKING (TACK WELD QUALITY & LOCATION)

3. INSPECTION TASKS DURING WELDING:

A. STRUCTURAL STEEL & COLD-FORMED STEEL DECK:

1) COMPLETE & PARTIAL PENETRATION GROOVE WELDS.

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4) PLUG & SLOT WELDS.

5) SINGLE-PASS FILLET WELDS ≤ 5/16".

6) FLOOR & ROOF DECK WELDS.

B. USE OF QUALIFIED WELDERS.

C. CONTROL A HOLDING OF WELDING CONSUMABLES:

• EXPOSURE CONTROL

• PACKAGING

D. NO WELDING OVER CRACKED TACK WELDS.

E. ENVIRONMENTAL CONDITIONS:

• WIND SPEED WITHIN LIMITS

• PRECIPITATION & TEMP.

F. WPS FOLLOWED:

• SETTINGS ON WELDING EQPT.

• SELECTED WELDING MATERIALS

• SHIELDS GAS TYPE/LOW RATE

• INTERPASS TEMP. MAINTAINED (MIN / MAX)

G. WELDING TECHNIQUES:

• INTERPASS & FINAL CLEANING

• EACH PASS WITHIN PROFILE LIMITATIONS

• EACH PASS MEETS QUALITY REQUIREMENTS

4. INSPECTION TASKS AFTER WELDING:

A. WELDS CLEANED.

B. SIZE, LENGTH, & LOCATION OF WELDS.

C. WELDS MEET VISUAL ACCEPTANCE CRITERIA:

• CRACK PROHIBITION

• WELD / BASE METAL FUSION

• UNDERCUT

• CRATER CROSS SECTION

• WELD PROFILES

D. ULTRASONIC TESTING TO BE PERFORMED ON COMPLETE JOINT PENETRATION WELDS PER AWS D1.1-2010.

E. ARC STRIKES

F. K-AREA

G. BACKING & WELD TABS REMOVED (IF REQ'D).

H. REPAIR ACTIVITIES.

I. DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER.

5. INSPECTION TASKS PRIOR TO BOLTING:

A. MFR. CERTS. AVAILABLE FOR FASTENER MATERIALS.

B. FASTENERS MARKED IN ACCORDANCE W/ ASTM RQMTS.

C. PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH, EXCLUDED THREADS).

D. PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL.

E. CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION & HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE RQMTS.

F. PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED & DOCUMENTED FOR FASTENER ASSEMBLIES & LOCATIONS SHALL BE AS FOLLOWS:

G. PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS & OTHER FASTENER COMPONENTS.

6. INSPECTION TASKS DURING BOLTING:

A. FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES & WASHERS (IF REQ'D) ARE POSITIONED AS REQ'D.

B. JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION.

C. FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING.

D. FASTENERS ARE PRETENSIONED IN ACCORDANCE W/ THE RQMT SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES.

7. INSPECTION TASKS AFTER BOLTING:

A. DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNS.

8. INSPECTION OF STEEL ELEMENTS OF COMPOSITE CONST. PRIOR TO CONC. PLACEMENT:

A. PLACEMENT & INSTALLATION OF STEEL DECK.

B. PLACEMENT & INSTALLATION OF STEEL HEADED STUD ANCHORS.

C. DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEMENTS.

9. INSPECTION TASKS PRIOR TO MECHANICAL FASTENING OF DECK:

A. MANUFACTURER INSTALLATION INSTRUCTIONS AVAILABLE.

B. PROPER TOOLS AVAILABLE FOR FASTENER INSTALLATION.

C. PROPER STORAGE FOR MECHANICAL FASTENERS.

10. INSPECTION TASKS DURING MECHANICAL FASTENING OF DECK:

A. FASTENERS ARE POSITIONED AS REQUIRED.

B. FASTENERS INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RQMTS.

11. INSPECTION TASKS AFTER MECHANICAL FASTENING OF DECK:

A. CHECK SPACING, TYPE AND INSTALLATION OF SUPPORT, SIDELAP & PERIMETER FASTENERS.

B. VERIFY REPAIRS & DOCUMENT ACCEPTANCE/REJECTION OF FASTENERS.

CONCRETE

VERIFICATION AND INSPECTION

STEEL & DECKING - CONFORM TO AISC 360 REQUIREMENTS

1. VERIFY COMPLIANCE OF DECK & ALL DECK ACCESSORIES WITH CONSTRUCTION DOCUMENTS, INCLUDING PROFILES, PROPERTIES & THICKNESS.

2. INSPECTION TASKS PRIOR TO WELDING:

A. WELDING PROCEDURE SPECIFICATIONS (WPS) AVAILABLE.

B. MANUFACTURER'S CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE.

C. MATERIAL IDENTIFICATION (TYPE/GRADE).

D. WELDER IDENTIFICATION SYSTEM.

E. FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY):

• JOINT PREPARATION

• DIMS (ALIGNMENT, JOINT OPENING, ROOT FACE, BEVEL)

• CLEANLINESS (CONDITION OF STEEL SURFACES)

• TACKING (TACK WELD QUALITY & LOCATION)

• BACKING TYPE & FIT (IF APPLICABLE)

F. CONFIGURATION & FINISH OF ACCESS HOLES.

G. FIT UP OF FILLET WELDS

• DIMS (ALIGNMENT, JOINT AT ROOT)

• CLEANLINESS (CONDITION OF STEEL SURFACES)

• TACKING (TACK WELD QUALITY & LOCATION)

3. INSPECTION TASKS DURING WELDING:

A. STRUCTURAL STEEL & COLD-FORMED STEEL DECK:

1) COMPLETE & PARTIAL PENETRATION GROOVE WELDS.

2) MULTIPASS FILLET WELDS.

3) SINGLE-PASS FILLET WELDS > 5/16".

4) PLUG & SLOT WELDS.

5) SINGLE-PASS FILLET WELDS ≤ 5/16".

6) FLOOR & ROOF DECK WELDS.

B. USE OF QUALIFIED WELDERS.

C. CONTROL A HOLDING OF WELDING CONSUMABLES:

• EXPOSURE CONTROL

• PACKAGING

D. NO WELDING OVER CRACKED TACK WELDS.

E. ENVIRONMENTAL CONDITIONS:

• WIND SPEED WITHIN LIMITS

• PRECIPITATION & TEMP.

F. WPS FOLLOWED:

• SETTINGS ON WELDING EQPT.

• SELECTED WELDING MATERIALS

• SHIELDS GAS TYPE/LOW RATE

• INTERPASS TEMP. MAINTAINED (MIN / MAX)

G. WELDING TECHNIQUES:

• INTERPASS & FINAL CLEANING

• EACH PASS WITHIN PROFILE LIMITATIONS

• EACH PASS MEETS QUALITY REQUIREMENTS

4. INSPECTION TASKS AFTER WELDING:

A. WELDS CLEANED.

B. SIZE, LENGTH, & LOCATION OF WELDS.

C. WELDS MEET VISUAL ACCEPTANCE CRITERIA:

• CRACK PROHIBITION

• WELD / BASE METAL FUSION

• UNDERCUT

• CRATER CROSS SECTION

• WELD PROFILES

D. ULTRASONIC TESTING TO BE PERFORMED ON COMPLETE JOINT PENETRATION WELDS PER AWS D1.1-2010.

E. ARC STRIKES

F. K-AREA

G. BACKING & WELD TABS REMOVED (IF REQ'D).

H. REPAIR ACTIVITIES.

I. DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER.

5. INSPECTION TASKS PRIOR TO BOLTING:

A. MFR. CERTS. AVAILABLE FOR FASTENER MATERIALS.

B. FASTENERS MARKED IN ACCORDANCE W/ ASTM RQMTS.

C. PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH, EXCLUDED THREADS).

D. PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL.

E. CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION & HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE RQMTS.

F. PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED & DOCUMENTED FOR FASTENER ASSEMBLIES & LOCATIONS SHALL BE AS FOLLOWS:

G. PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS & OTHER FASTENER COMPONENTS.

6. INSPECTION TASKS DURING BOLTING:

A. FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES & WASHERS (IF REQ'D) ARE POSITIONED AS REQ'D.

B. JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION.

C. FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING.

D. FASTENERS ARE PRETENSIONED IN ACCORDANCE W/ THE RQMT SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES.

7. INSPECTION TASKS AFTER BOLTING:

A. DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNS.

8. INSPECTION OF STEEL ELEMENTS OF COMPOSITE CONST. PRIOR TO CONC. PLACEMENT:

A. PLACEMENT & INSTALLATION OF STEEL DECK.

B. PLACEMENT & INSTALLATION OF STEEL HEADED STUD ANCHORS.

C. DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEMENTS.

9. INSPECTION TASKS PRIOR TO MECHANICAL FASTENING OF DECK:

A. MANUFACTURER INSTALLATION INSTRUCTIONS AVAILABLE.

B. PROPER TOOLS AVAILABLE FOR FASTENER INSTALLATION.

C. PROPER STORAGE FOR MECHANICAL FASTENERS.

10. INSPECTION TASKS DURING MECHANICAL FASTENING OF DECK:

A. FASTENERS ARE POSITIONED AS REQUIRED.

B. FASTENERS INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RQMTS.

11. INSPECTION TASKS AFTER MECHANICAL FASTENING OF DECK:

A. CHECK SPACING, TYPE AND INSTALLATION OF SUPPORT, SIDELAP & PERIMETER FASTENERS.

B. VERIFY REPAIRS & DOCUMENT ACCEPTANCE/REJECTION OF FASTENERS.

CONCRETE

VERIFICATION AND INSPECTION

STEEL & DECKING - CONFORM TO AISC 360 REQUIREMENTS

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2. INSPECTION TASKS PRIOR TO WELDING:

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B. MANUFACTURER'S CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE.

C. MATERIAL IDENTIFICATION (TYPE/GRADE).

D. WELDER IDENTIFICATION SYSTEM.

E. FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY):

• JOINT PREPARATION

• DIMS (ALIGNMENT, JOINT OPENING, ROOT FACE, BEVEL)

• CLEANLINESS (CONDITION OF STEEL SURFACES)

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• BACKING TYPE & FIT (IF APPLICABLE)

F. CONFIGURATION & FINISH OF ACCESS HOLES.

G. FIT UP OF FILLET WELDS

• DIMS (ALIGNMENT, JOINT AT ROOT)

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C. CONTROL A HOLDING OF WELDING CONSUMABLES:

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E. ENVIRONMENTAL CONDITIONS:

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• CRATER CROSS SECTION

• WELD PROFILES

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E. ARC STRIKES

F. K-AREA

G. BACKING & WELD TABS REMOVED (IF REQ'D).

H. REPAIR ACTIVITIES.

GARRISON STREET PASEO
CONSTRUCTION DRAWINGS
GARRISON STREET - ARVADA, CO 80002

20-147



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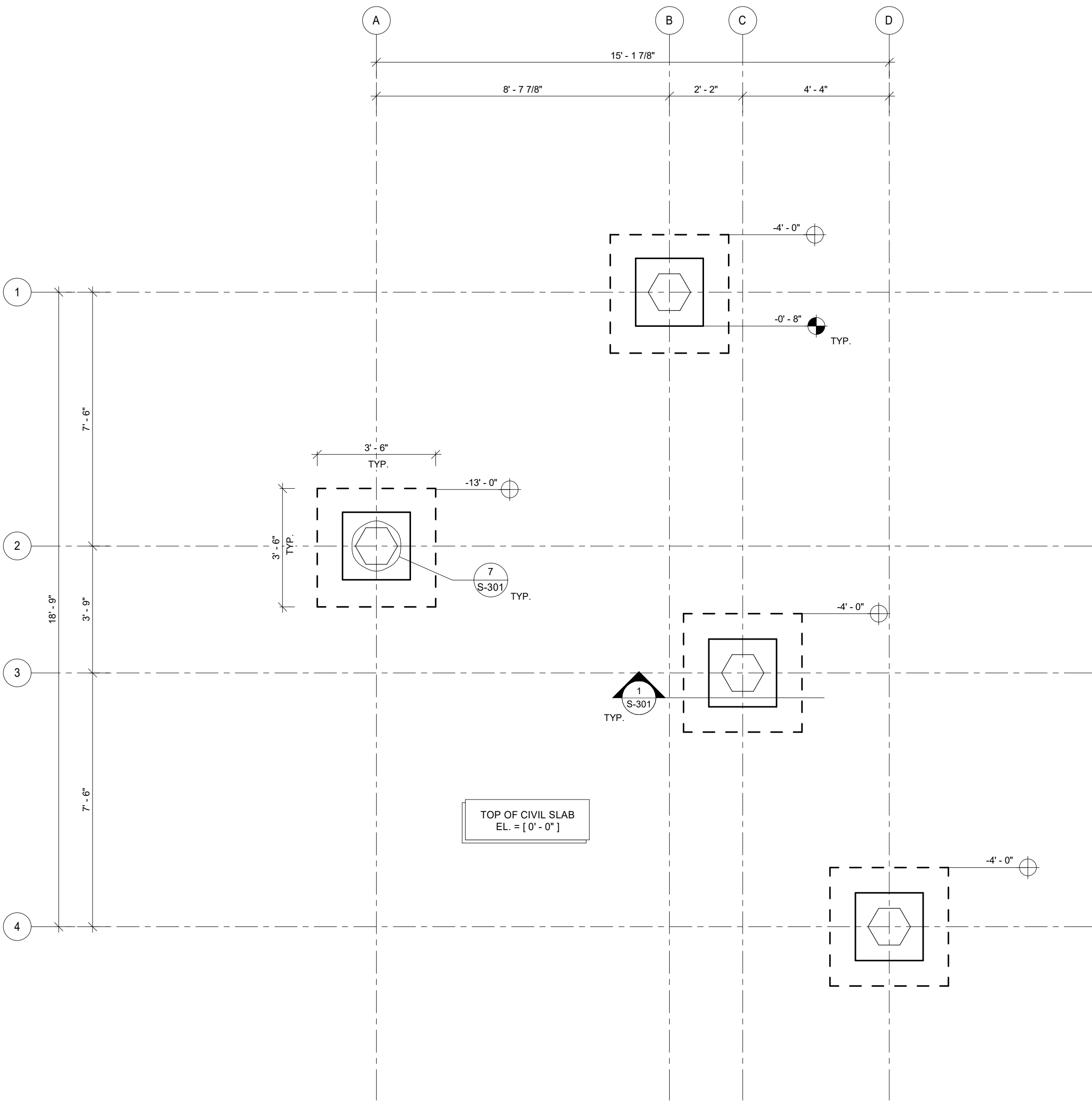
REVISION:			
NO.	DATE	BY	

DATE: 12.23.2022
DRAWN BY: JB
CHECKED BY: ND

STRUCTURAL
PLANS

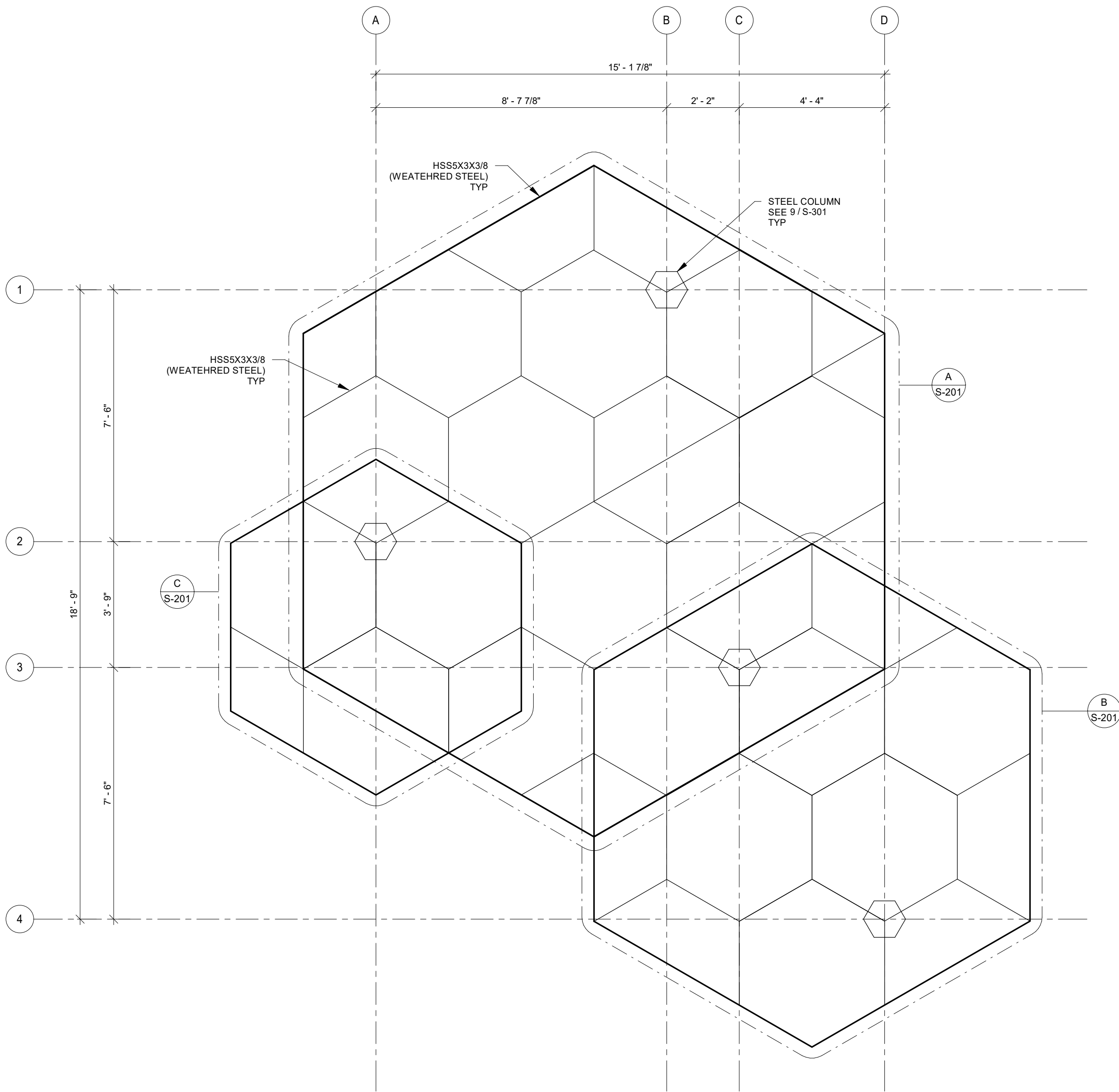
S-101

SHEET OF



A FOUNDATION PLAN
3/8" = 1'-0"

- PLAN NOTES:
- CONTRACTOR TO FIELD VERIFY ALL RELEVANT EXISTING INFORMATION, INCLUDING EXISTING DIMENSIONS, CONDITIONS AND FRAMING
 - SEE SHEET S301 FOR TYPICAL FOUNDATION DETAILS
 - A LICENSED GEOTECHNICAL ENGINEER SHALL PROVIDE AN OPEN PIT REVIEW OF THE SOILS PRIOR TO PLACEMENT OF FOUNDATIONS. SEE STRUCTURAL NOTES FOR ADDITIONAL INFORMATION
 - FOOTING ELEVATIONS TO BE COORDINATED WITH THE FINAL GRADING PLAN



B FRAMING PLAN
3/8" = 1'-0"

- PLAN NOTES:
- SEE SHEET S301 FOR TYPICAL FRAMING DETAILS.

FOUNDATION SYMBOL KEY	
	T/ PIER
	T/ FOOTING
	JOIST BEARING
	T/ BRICK LEDGE
	FDN. STEP
	EXIST. BLDG.

GARRISON STREET PASEO
CONSTRUCTION DRAWINGS
GARRISON STREET - ARVADA, CO 80002

20-147



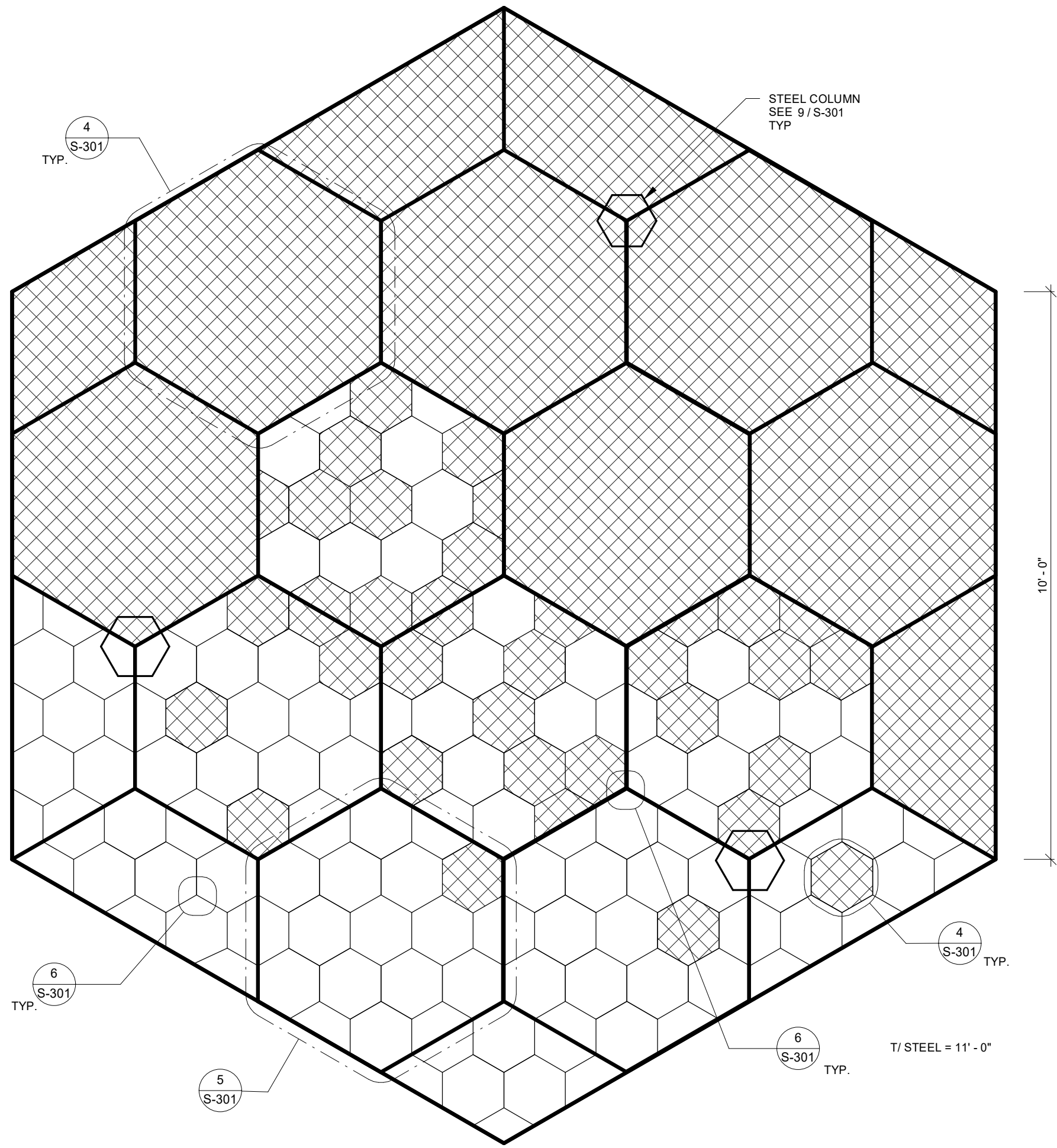
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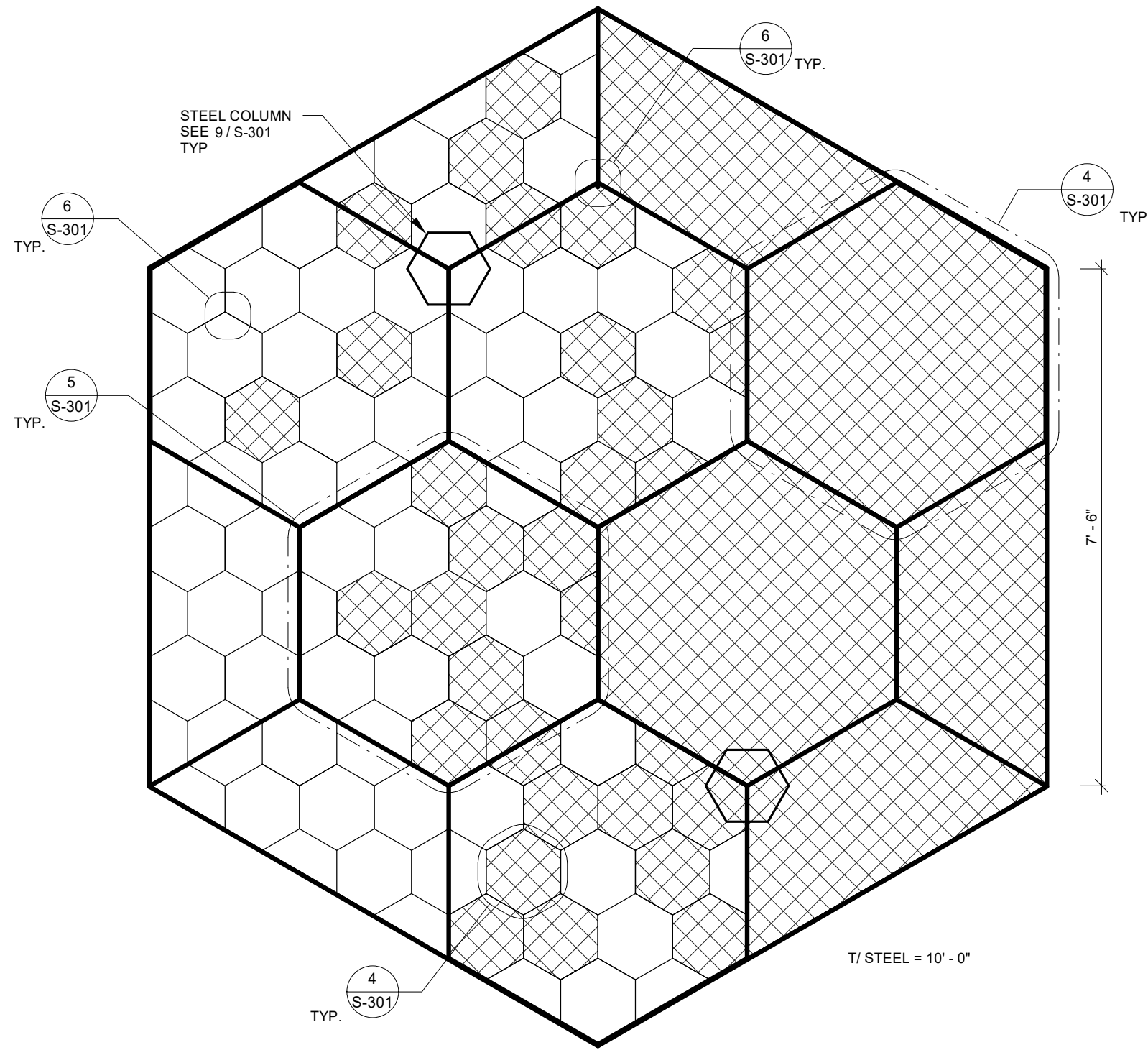
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DRAWN BY:	JB
CHECKED BY:	ND

PARTIAL
PLANS

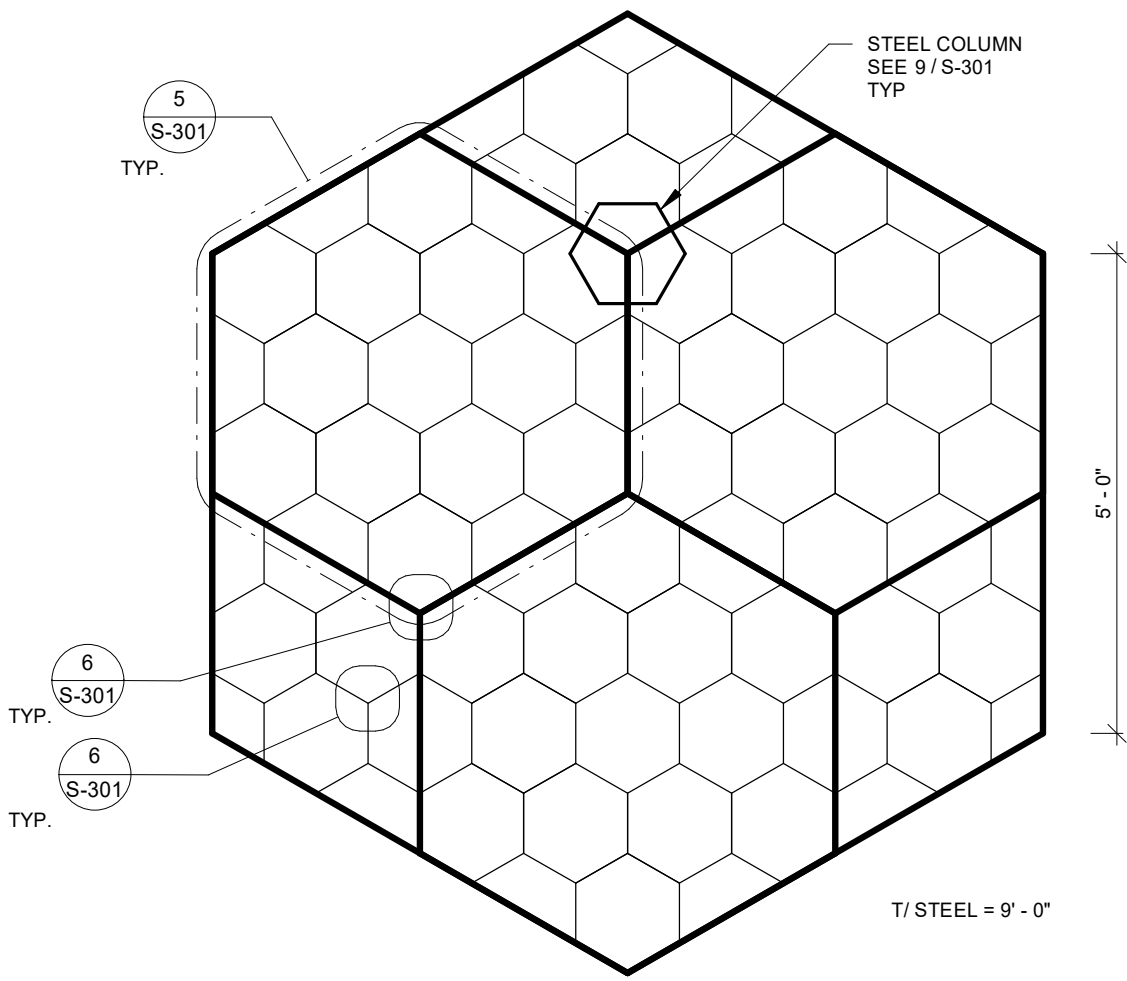
S-201
SHEET OF



A PARTIAL PLAN - LARGE HEXAGON
1/2" = 1'-0"



B PARTIAL PLAN - MEDIUM HEXAGON
1/2" = 1'-0"



C PARTIAL PLAN - SMALL HEXAGON
1/2" = 1'-0"

GARRISON STREET PASEO
CONSTRUCTION DRAWINGS
GARRISON STREET - ARVADA, CO 80002

20-147



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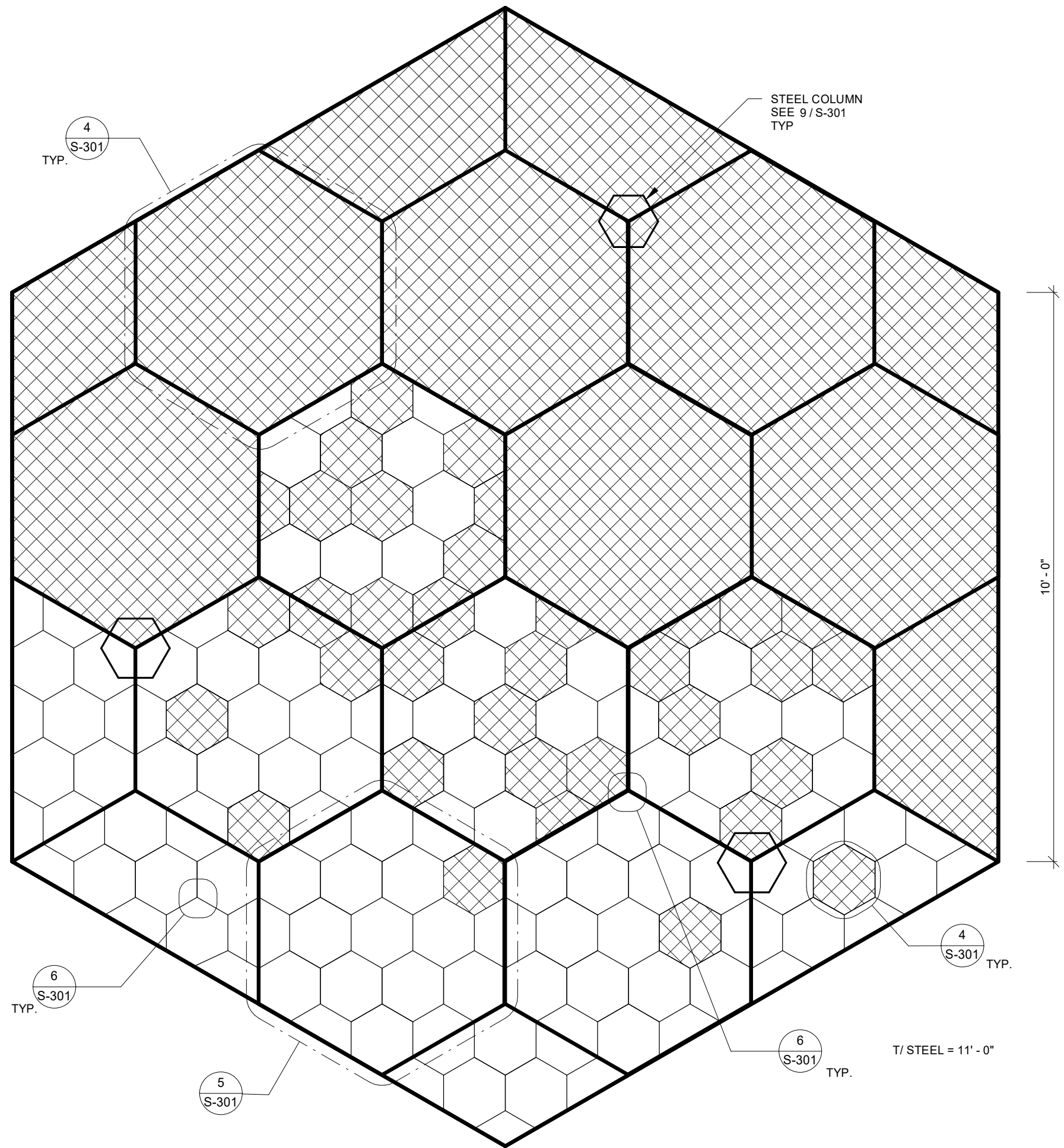
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DATE: 12.23.2022
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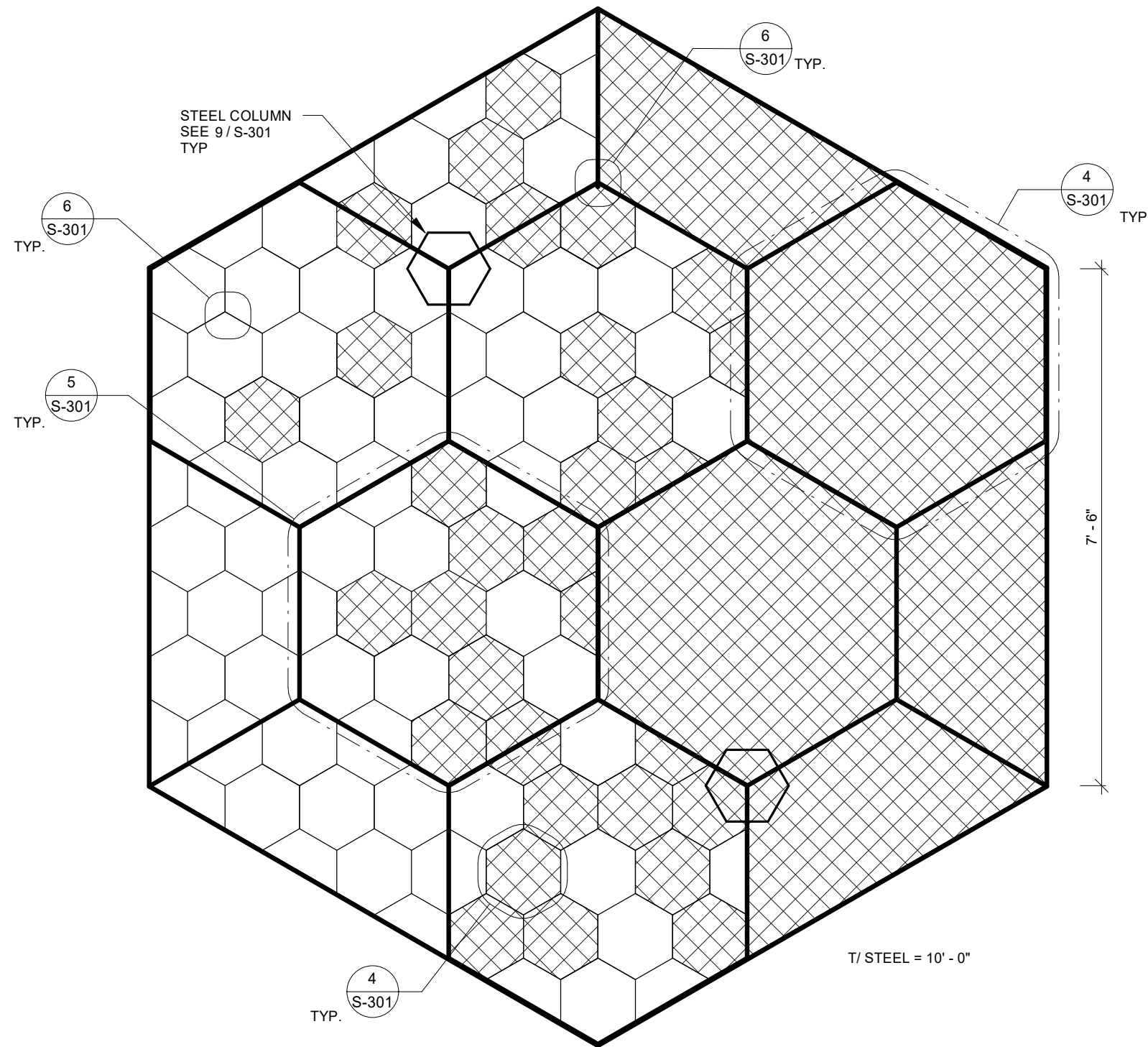
PARTIAL PLANS

S-201

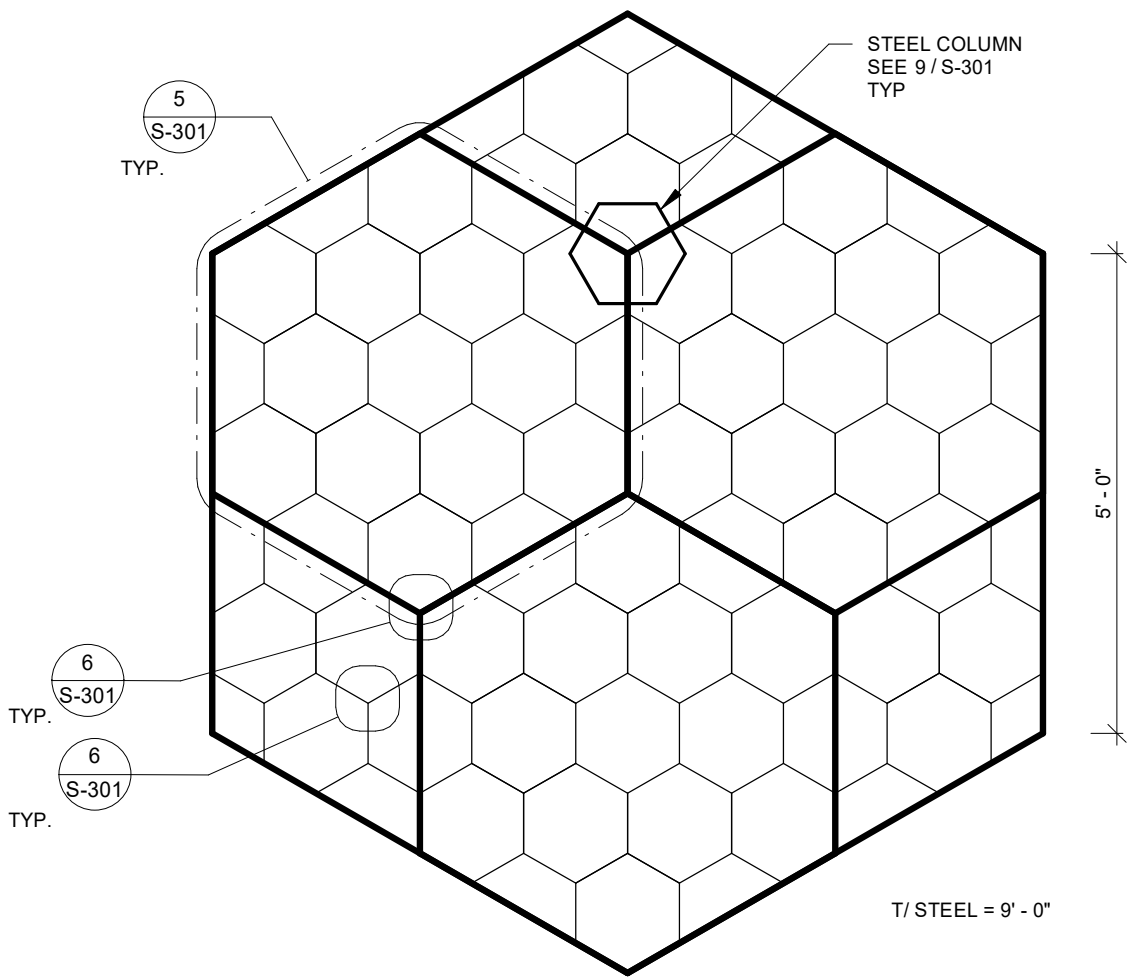
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A PARTIAL PLAN - LARGE HEXAGON
1/2" = 1'-0"



B PARTIAL PLAN - MEDIUM HEXAGON
1/2" = 1'-0"



C PARTIAL PLAN - SMALL HEXAGON
1/2" = 1'-0"



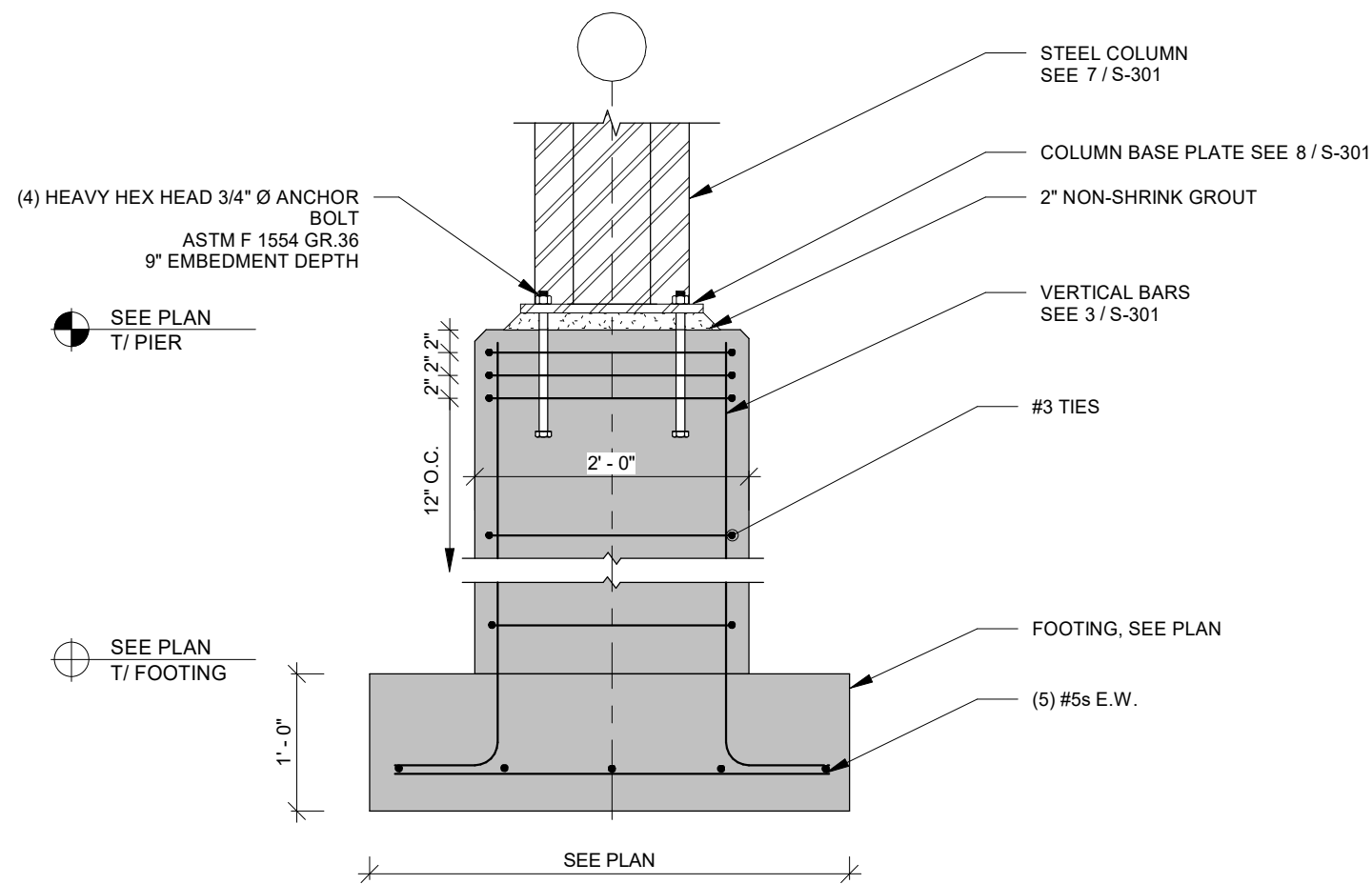
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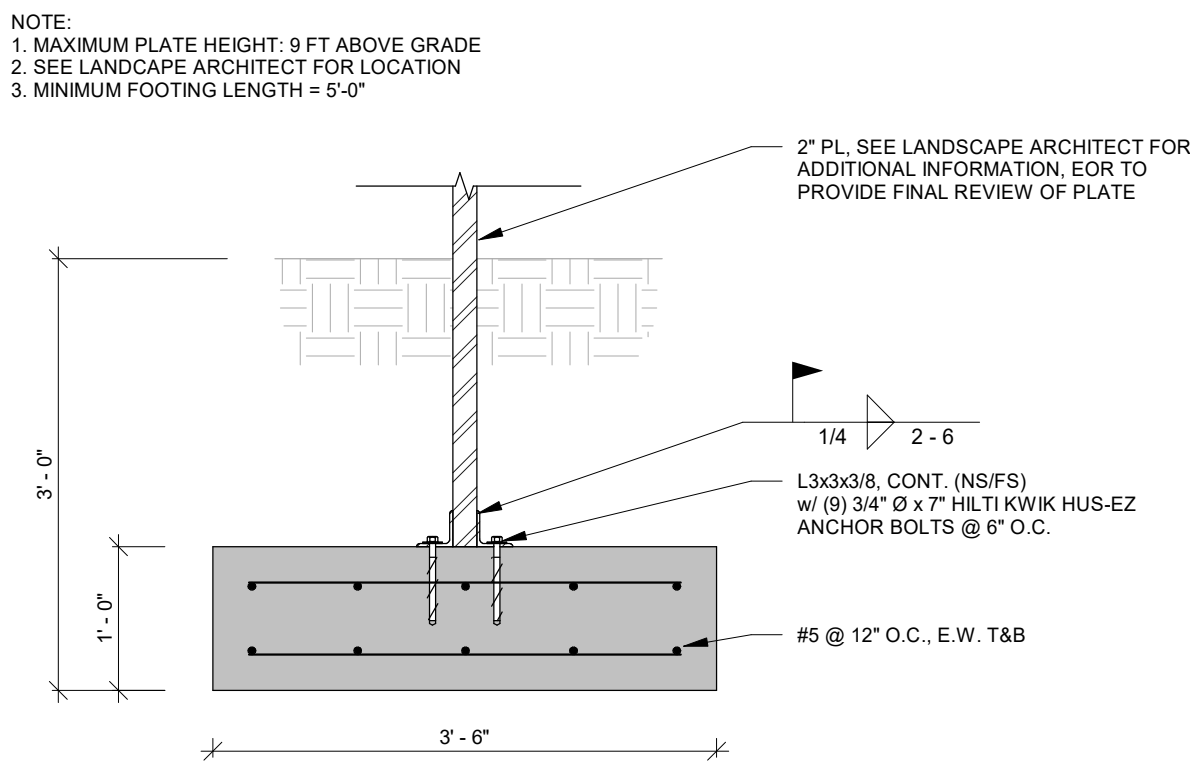
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CHECKED BY: ND

STRUCTURAL
DETAILS

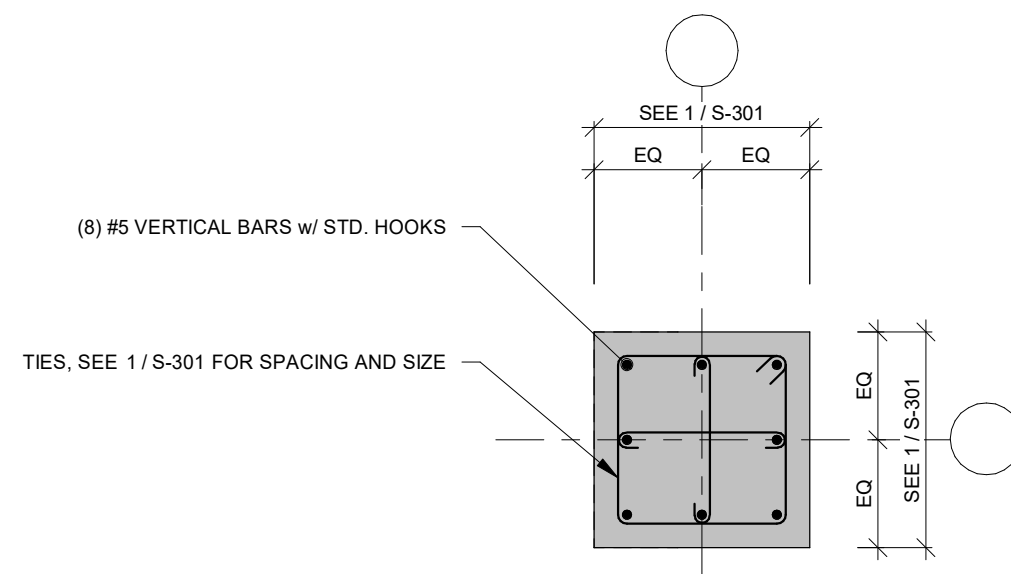
S-301
SHEET OF



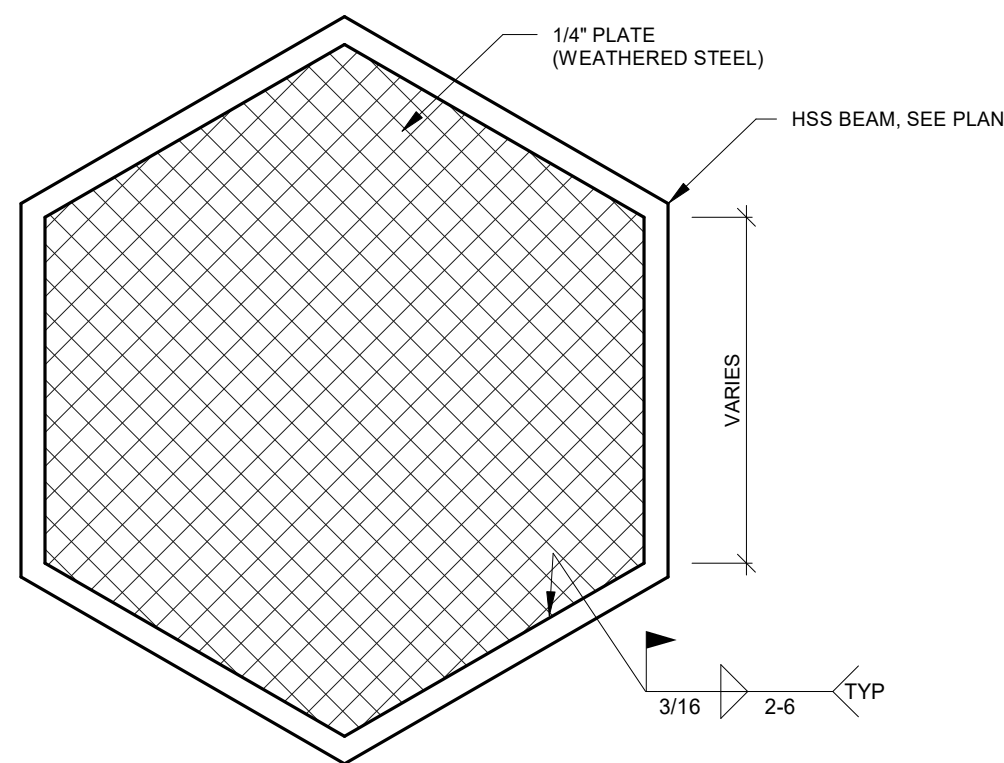
1 TYP. COLUMN FOOTING
3/4" = 1'-0"



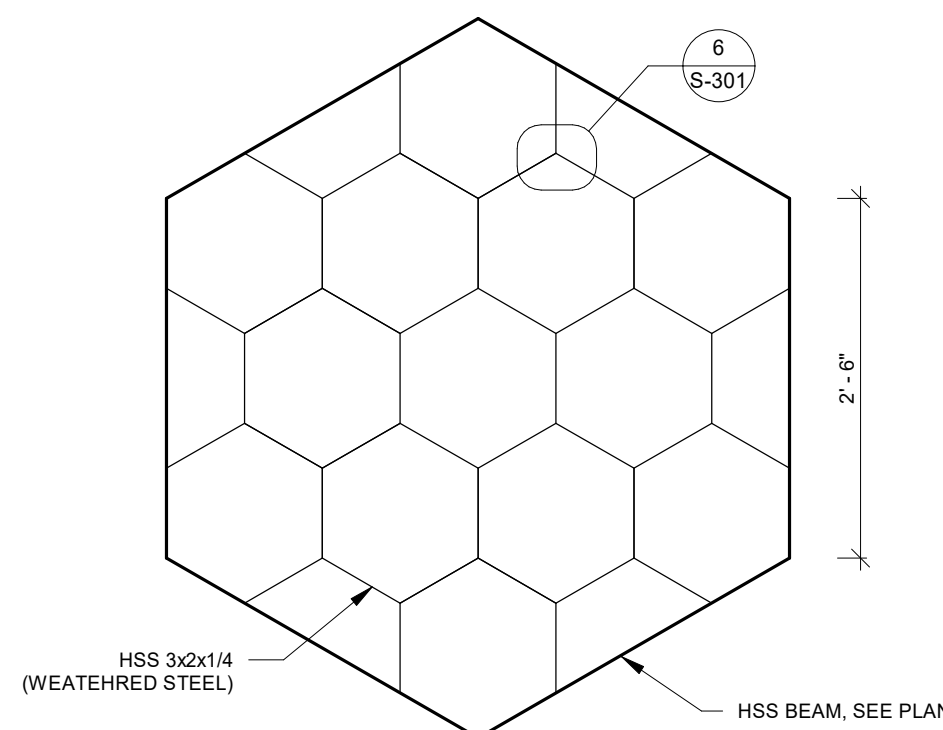
2 VERTICAL PLATE FOOTING
3/4" = 1'-0"



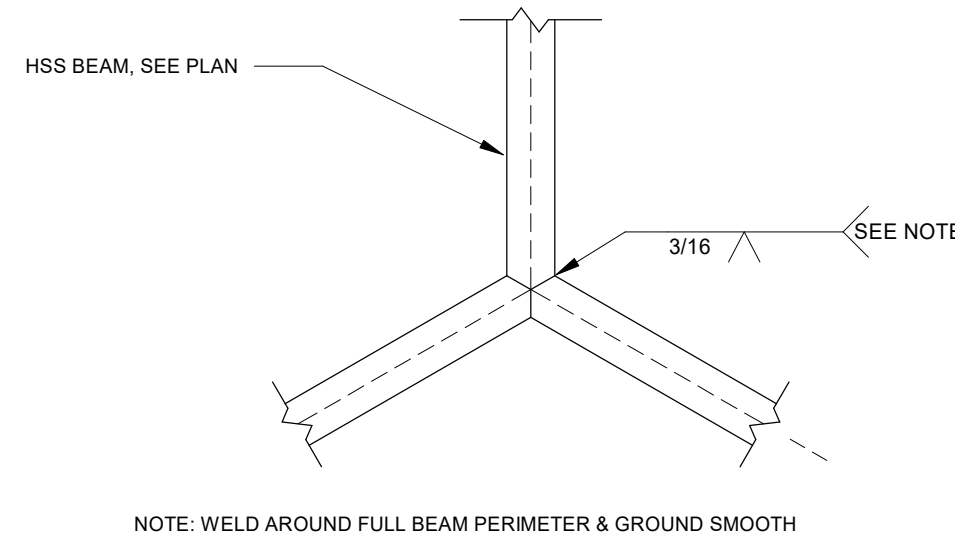
3 TYP. CONCRETE PIER PLAN
3/4" = 1'-0"



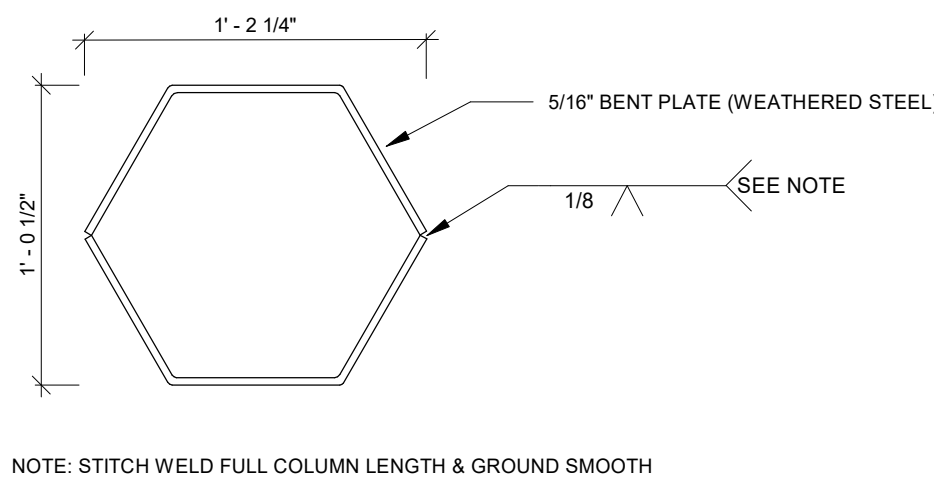
4 TYP. INTERIOR PLATE HEXAGON
3/4" = 1'-0"



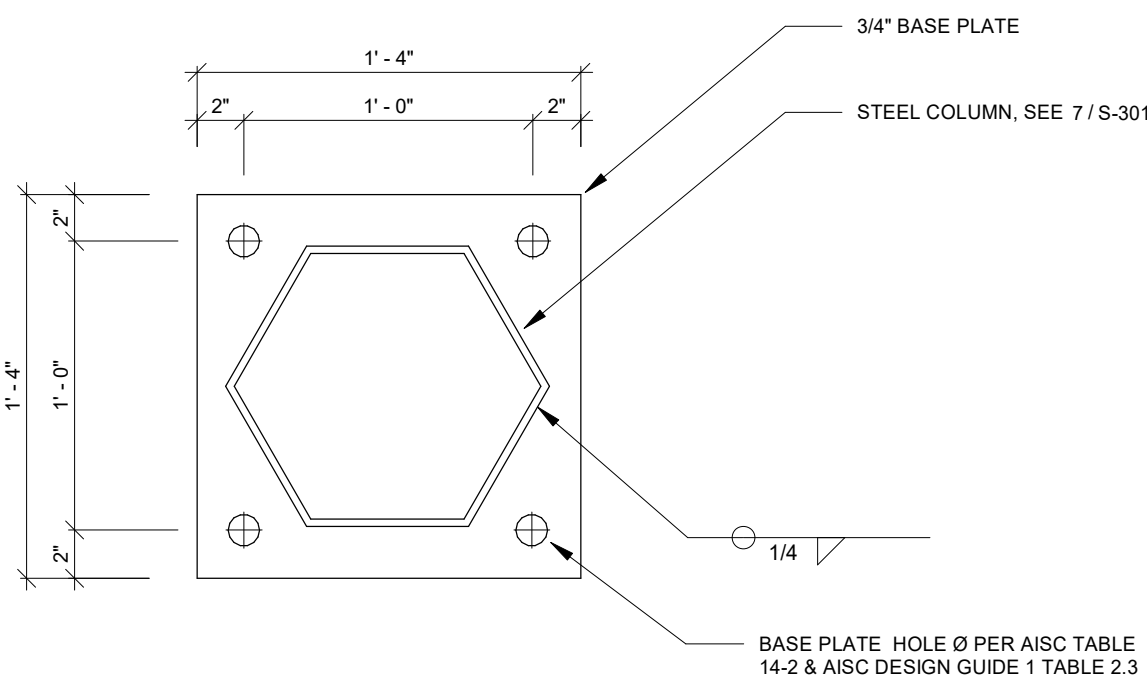
5 TYP. INTERIOR FRAMED HEXAGON
3/4" = 1'-0"



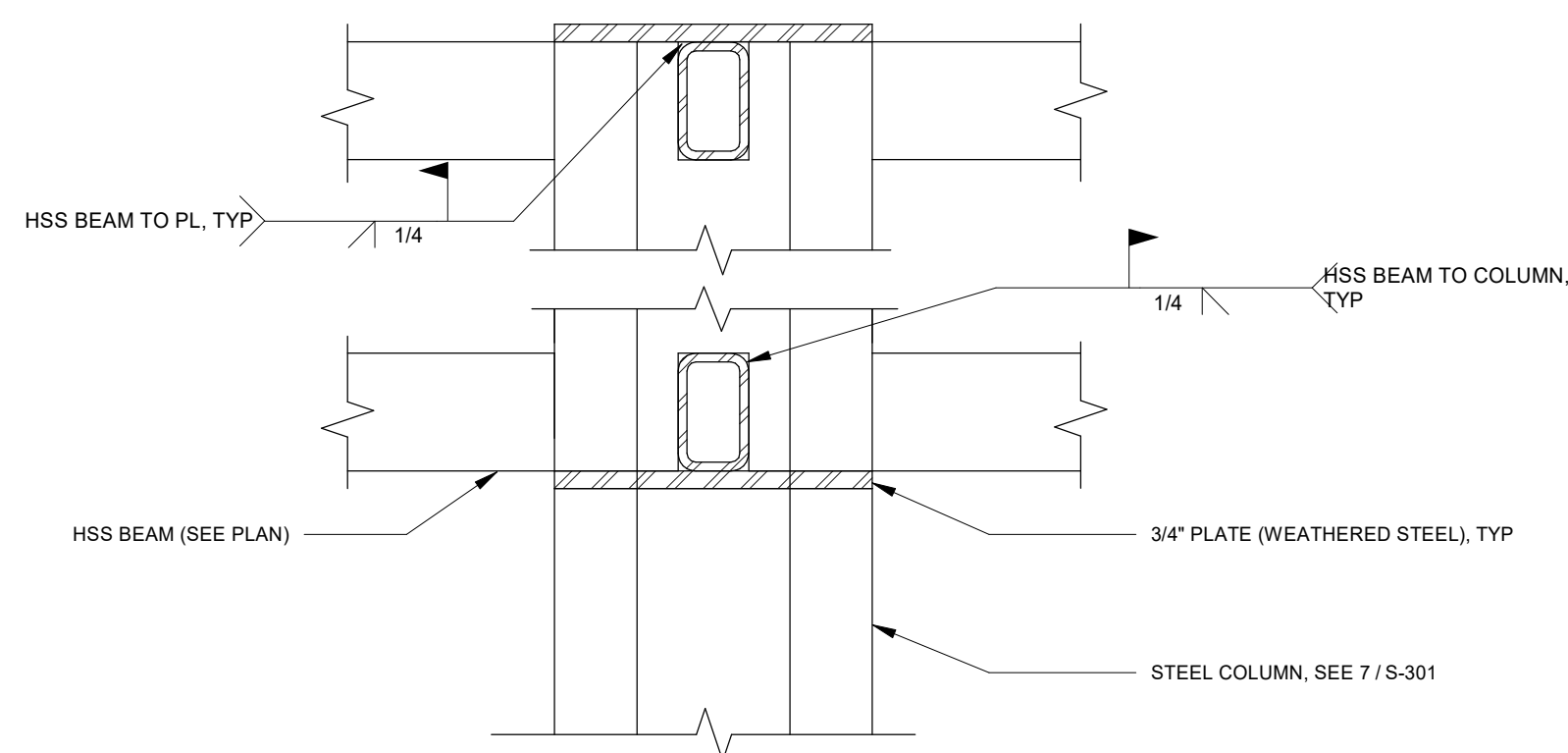
6 BEAM INTERSECTION
1 1/2" = 1'-0"



7 COLUMN SECTION
1 1/2" = 1'-0"



8 COLUMN BASE PLATE
1 1/2" = 1'-0"



9 BEAM COLUMN CONNECTION
1 1/2" = 1'-0"

GENERAL PROJECT NOTES

NOTE: SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL CONSTRUCTION REQUIREMENTS

- THE CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIAL NECESSARY FOR A COMPLETE, OPERATIONAL AND PROPERLY FUNCTIONING ELECTRICAL SYSTEM
- MATERIALS AND INSTALLATION SHALL COMPLY WITH CODES, LAWS AND ORDINANCES OF FEDERAL, STATE AND LOCAL GOVERNING BODIES HAVING JURISDICTION.
- MATERIALS AND EQUIPMENT SHALL BE LISTED AND/OR LABELED BY U.L., ETL, CSA OR ANOTHER RECOGNIZED TESTING LAB. ALL MATERIAL, EQUIPMENT, WIRING DEVICES, ETC. SHALL BE NEW, UNLESS SPECIFICALLY INDICATED AS EXISTING TO BE REUSED.
- THE CONTRACTOR SHALL PREPARE AND SUBMIT TO GOVERNMENTAL AGENCIES AND UTILITY COMPANIES SHOP DRAWINGS REQUIRED BY THESE AGENCIES FOR APPROVAL. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, GOVERNMENTAL FEES, TAXES AND LICENSES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE ELECTRICAL WORK. THIS CONTRACTOR SHALL SECURE AND PAY ALL FEES AND PERMITS PERTAINING TO THIS CONTRACT. SHALL BE RESPONSIBLE FOR WORKERS IDENTIFICATION AND BADGING, SAFETY, AND LIABILITY INSURANCE. PROVIDE BARRICADES, WARNING SIGNS, AND TRASH REMOVAL FOR THE SAFETY OF THE WORKERS UNDER THIS CONTRACTOR'S EMPLOY.
- THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER/OWNER OF ANY MATERIALS OR APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE, IN VIOLATION OF LAWS, ORDINANCES, RULES OR REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
- THE CONTRACTOR SHALL PREPARE THE DOCUMENTS, INCLUDING DRAWINGS, REQUIRED TO OBTAIN APPROVAL OF THE EQUIPMENT AND LOCATIONS OF THE DEVICES THAT COMPOSE THE BUILDING FIRE ALARM LIFE SAFETY SYSTEM. THE DRAWINGS AND CUT SHEETS SHALL BE PROVIDED TO A PROFESSIONAL ENGINEER FOR REVIEW AND APPROVAL. THE APPROVED DRAWINGS WILL BE STAMPED, SIGNED AND RETURNED TO E.C. TO SUBMIT TO THE BUILDING DEPARTMENT.
- THE CONTRACTOR SHALL CAREFULLY EXAMINE THE CONTRACT DOCUMENTS, VISIT THE SITE, AND THOROUGHLY BECOME FAMILIAR WITH THE BUILDING STANDARDS, LOCAL JURISDICTIONAL CODES AND REQUIREMENTS, AND LOCAL CONDITIONS RELATING TO THE WORK. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT. SUBMISSION OF PROPOSAL, IN CONNECTION WITH THIS WORK SHALL IMPLY THAT THE BIDDER HAS EXAMINED THE JOB SITE. NO EXTRA CHARGE WILL BE ALLOWED FOR CHANGES AS A RESULT FROM FAILURE TO EXAMINE THE JOB SITE.
- THE CONTRACTOR SHALL PROVIDE TEMPORARY POWER AND WIRING FOR THE PERFORMANCE OF ALL TRADES, FOR THE ENTIRE PERIOD OF CONSTRUCTION AND SHALL REMOVE ALL TEMPORARY WIRING AT THE COMPLETION OF CONSTRUCTION.
- THE EXISTING POWER, SIGNAL AND COMMUNICATION SYSTEMS ARE TO REMAIN IN SERVICE TO PROVIDE FOR THE OWNER'S FUNCTION. SHOULD IT BECOME NECESSARY TO SHUT-DOWN ANY SYSTEM OR PORTION OF A SYSTEM, APPROVAL IN WRITING MUST BE OBTAINED FROM THE OWNER AND SHALL ONLY APPLY FOR THE PERIOD AND TIME AGREED UPON. THE BID IS TO INCLUDE THE COST OF ANY TEMPORARY WIRING AND PREMIUM TIME REQUIRED FOR THE SHUTDOWN.
- ALL MATERIALS AND EQUIPMENT SHALL BE ERECTED, INSTALLED, CONNECTED, CLEANED, ADJUSTED, TESTED, CONDITIONED, AND PLACED IN SERVICE IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS.
- ALL CUTTING, DRILLING AND PATCHING OF MASONRY, STEEL OR IRON WORK BELONGING TO THE BUILDING MUST BE DONE BY THIS CONTRACTOR IN ORDER THAT HIS WORK MAY BE PROPERLY INSTALLED, BUT UNDER NO CONDITIONS MAY STRUCTURAL WORK BE CUT, EXCEPT AT THE DIRECTION OF THE ARCHITECT-DESIGNER OR THEIR REPRESENTATIVE.
- REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF ELECTRICAL FIXTURES AND ELECTRICAL DEVICES. DEVICE LOCATIONS SHALL CONFORM TO ADA/CAN/ANSI STANDARDS.
- ALL WORK REQUIRED FOR THE INSTALLATION AS SHOWN ON DRAWINGS INCLUDING LABOR, EQUIPMENT AND MATERIALS SHALL BE IN STRICT COMPLIANCE WITH THE BUILDING STANDARDS.
- PROVIDE COMPLETE METAL RACEWAY SYSTEMS AND ENCLOSURES FOR ALL WIRING THROUGHOUT THE EXTENT OF THE REQUIRED SYSTEM UNLESS OTHERWISE PERMITTED BY THE NEC.
- 14.a. TYPE III, IV OR V CONSTRUCTION - WHERE PERMITTED PER NEC ARTICLE 334 NONMETALLIC SHEATHED CABLE AND NONMETALLIC BOXES MAY BE USED.
- 14.b. TYPE MC AND AC CABLE MAY BE USED WHERE PERMITTED BY THE NEC (ARTICLE 330)
- ALL TELE DATA BOXES SHALL BE PROVIDED WITH A 1/2" CONDUIT AND BUSHING WITH PULL STRING RUN 6" ABOVE FINISHED CEILING OR CEILING GRID. ELECTRICAL METALLIC TUBING (EMT) SHALL BE USED FOR ALL WALL OUTLETS & TELEPHONE WIRING RUNNING BELOW RAISED FLOOR OR ABOVE HARD CEILINGS.
- ALL RECEPTACLES NOTED AS ISOLATED GROUND (IG) OR DEDICATED OR CIRCUITED AS DEDICATED SHALL BE PROVIDED WITH A DEDICATED GROUND AND NEUTRAL.
- MINIMUM CONDUIT SIZE SHALL BE 3/4" UNLESS OTHERWISE INDICATED. CONDUITS LARGER THAN 2" DIAMETER OR CONDUITS OF ANY SIZE ROUTED OUTDOORS SHALL BE INTERMEDIATE METAL CONDUIT (IMC).
- FLEXIBLE CONDUIT CONNECTIONS TO RECESSED LIGHTING FIXTURES SHALL BE MADE WITH FLEXIBLE STEEL CONDUIT, 3/8 INCH MINIMUM.
- FINAL CONNECTIONS TO MOTORS SHALL BE MADE WITH LIQUID TIGHT FLEXIBLE STEEL CONDUIT, 1/2 INCH MINIMUM.
- WIRE NO. 8 AND SMALLER INSTALLED IN DRY LOCATIONS SHALL BE TYPE THWN OR THHN THERMOPLASTIC 600V INSULATED COPPER CONDUCTORS. NO WIRE SMALLER THAN NO.12 SHALL BE USED FOR LIGHTING OR POWER WIRING. WIRE NO. 8 AND LARGER SHALL BE STRANDED. ALL CONDUCTORS INSTALLED IN EXTERIOR OR WET LOCATIONS SHALL BE TYPE THWN 600V INSULATED COPPER CONDUCTORS.
- ALL NEW CIRCUIT BREAKERS FOR NEW OR EXISTING PANELBOARDS SHALL MATCH EXISTING OR NEW BUILDING STANDARD PANELBOARD MANUFACTURER AND BREAKER TYPE. THE CONTRACTOR SHALL PROVIDE NEW ACCURATE AND DETAILED TYPE WRITTEN PANEL DIRECTORYS PER NEC 406.4 FOR ALL NEW OR MODIFIED PANELS. NUMBERED CIRCUITS FOR CONVENIENCE OF DESIGN ONLY. E.C. TO FIELD VERIFY ACTUAL CIRCUIT NUMBERS USED AND CORRECTLY INDICATE ON "AS-BUILT" DRAWINGS. THE E.C. SHALL REMOVE ALL ABANDONED CIRCUITS.
- PROVIDE MINIMUM #10 FOR BRANCH CIRCUITS OVER 75 AT 120V AND OVER 150 AT 277V. E.C. TO FIELD VERIFY BRANCH CIRCUIT LENGTHS AND INCREASE CONDUCTOR SIZES AS REQUIRED TO COMPENSATE FOR VOLTAGE DROP.
- EACH SWITCH, LIGHT, RECEPTACLE AND ALL OTHER DEVICES SHALL BE PROVIDED AND INSTALLED WITH A GALVANIZED OR SHERARDIZED PRESSED STEEL JUNCTION BOX OF NOT LESS THAN NO. 14 U.S. GAUGE STEEL. CONDUITS SHALL BE FASTENED WITH LOCKNUTS AND BUSHINGS AND ALL UNUSED KNOCKOUTS MUST BE LEFT SEALED. THERE MUST BE SUFFICIENT ROOM FOR WIRES AND BUSHINGS AND DEEP BOXES SHALL BE INSTALLED WHERE REQUIRED. BOXES SHALL BE SECURELY AND ADEQUATELY SUPPORTED. PROVIDE CIRCUIT NUMBERS PRINTED ON FACE/PLATE OF EACH DEVICE.
- 23.a. EXCEPTION: TYPE III, IV OR V CONSTRUCTION - WHERE PERMITTED PER NEC ARTICLE 334 NONMETALLIC BOXES MAY BE USED.
- ELECTRICAL CONTRACTOR SHALL PROVIDE ALL SPECIAL OUTLET BOXES THAT MAY BE REQUIRED TO ENCLOSE RECEPTACLES.
- IN SUSPENDED CEILINGS SUPPORT CONDUIT AND JUNCTION BOXES DIRECT FROM THE STRUCTURAL SLAB, DECK, OR FRAMING PROVIDED FOR THAT PURPOSE. LIGHTING BRANCH CIRCUIT CONDUITS SHALL NOT BE CLIPPED TO THE CEILING SUPPORT WIRES OR SPLINE UNLESS THE CEILING SYSTEM HAS BEEN SPECIFICALLY DESIGNED FOR THAT PURPOSE.
- PROVIDE LOCAL DISCONNECT SWITCHES FOR ALL MOTORS (PLENUM APPROVED WHERE REQUIRED).
- THE E.C. SHALL INCLUDE IN HIS COST THE REMOVAL OF ALL EXISTING ELECTRICAL DEVICES, CONDUITS, FIXTURES AND EQUIPMENT THAT IS NOT TO BE REUSED. DISCARD ALL EQUIPMENT AS REQUIRED. E.C. SHALL BE RESPONSIBLE FOR DISCONNECTING PRIMARY SERVICE AND TEMPORARY POWER.
- PROVIDE WARRANTY GUARANTEED FOR A PERIOD OF ONE YEAR AFTER COMPLETION AND ACCEPTANCE. REPLACE ALL DEFECTIVE WORKMANSHIP, EQUIPMENT AND MATERIALS WITHOUT ADDITIONAL CHARGES.
- THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFEKEEPING OF HIS/HER OWN PROPERTY ON THE JOB SITE. THE OWNER OR TENANT ASSUMES NO RESPONSIBILITY FOR PROTECTION OF THIS CONTRACTOR'S PROPERTY AGAINST FIRE, THEFT, OR ENVIRONMENTAL CONDITIONS.
- WHERE CONDUIT, CABLES, DUCTWORK OR PIPING PASSES THROUGH FIRE RATED FLOORS, WALLS, OR PARTITIONS, THE SLEEVES SHALL BE COMPLETELY SEALED WITH A FIRE STOP MATERIAL THAT IS U.L. LISTED (EQUAL TO DOW CORNING) AND ACCEPTED BY THE BUILDING DEPARTMENT AND FIRE DEPARTMENT AS BEING SUITABLE FOR THE SERVICE. THIS MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED INSTRUCTIONS IN ORDER TO MAINTAIN THE FIRE RATING OF THE PENETRATED WALL, FLOOR, OR PARTITION. INSTALLATION SHALL BE A THROUGH-PENETRATION FIRESTOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH ASTM AND UL. THE FIRE RATINGS SHALL MATCH THE RATINGS OF THE BARRIER BEING PENETRATED.
- SUBMIT AN ELECTRONIC COPY OR SIX (6) SETS OF SHOP DRAWINGS, CONTROL DIAGRAMS, AND EQUIPMENT CUTS TO THE ENGINEER FOR APPROVAL PRIOR TO STARTING RELATED WORK. SHOP DRAWINGS SHALL INCLUDE MANUFACTURER'S NAMES, CATALOG NUMBERS, CUTS, DIAGRAMS AND OTHER SUCH DESCRIPTIVE DATA AS MAY BE REQUIRED TO IDENTIFY AND REVIEW THE EQUIPMENT. SUBMITTALS SHALL BE IN LOGICAL GROUPS. PARTIAL SUBMITTALS WILL NOT BE REVIEWED.
- UPON COMPLETION OF CONSTRUCTION, SUPPLY THE ENGINEER WITH ONE COMPLETE SET OF FULL SIZE AS-BUILT DRAWINGS. PROVIDE THE OWNER WITH THREE (3) SETS OF OPERATION AND MAINTENANCE MANUALS FOR EACH TYPE OF EQUIPMENT INSTALLED.
- THIS CONTRACTOR SHALL ASSUME ALL ADDED EXPENSES TO ALL TRADES ASSOCIATED WITH THE INSTALLATION OF SUBMITTED AND APPROVED ALTERNATE EQUIPMENT.
- THE CONTRACTOR SHALL COORDINATE THE LAYOUT OF THE FIRE ROOM WITH ALL OTHER DISCIPLINES, ESPECIALLY THE FIRE ALARM AND FIRE PROTECTION DESIGN-BUILD CONTRACTORS PRIOR TO ANY WORK.
- IF ANY CHANGES ARE MADE TO ACCOMMODATE FIELD CONDITIONS NOTIFY THE ENGINEER IMMEDIATELY OF WHAT THE CHANGES WERE, THE REASON FOR THE CHANGES, AND THE COST IMPACTS.
- LOCATE ALL ELECTRICAL SWITCHBOARDS, PANELBOARDS AND ELECTRICAL DISTRIBUTION EQUIPMENT IN DEDICATED SPACES AND PROTECTED FROM DAMAGE WITH ADEQUATE WORKING CLEARANCE ACCORDANCE WITH NEC 110 REQUIREMENTS. PROVIDE PROTECTION FROM ANY FOREIGN SYSTEM INSTALLED ABOVE THE DEDICATED EQUIPMENT SPACE PER NEC 110.26(E).
- SERVICE EQUIPMENT SHALL BE MARKED TO IDENTIFY IT AS BEING SUITABLE FOR USE AS SERVICE EQUIPMENT PER NEC 230.66.
- ELECTRICAL ROOM DOORS SHALL BE EQUIPPED WITH PANIC BARS, PRESSURE PLATES, OR OTHER DEVICES THAT ARE NORMALLY LATCHED BUT OPEN UNDER SIMPLE PRESSURE IN ACCORDANCE WITH NEC 110.26(C)(3).

FIRE ALARM SYSTEM NOTES

FIRE ALARM SYSTEM IS TO BE DESIGN/BUILD BY THE CONTRACTOR.

ELECTRICAL LEGEND

NOTE: NOT ALL ITEMS APPEAR ON DRAWINGS. SYMBOLS MAY DIFFER FROM EXISTING AND DEMO WORK OR DEVICES REFERENCED OR SYMBOLS USED FROM DRAWINGS BY OTHERS.

POWER AND LIGHTING

- GROUNDING SWITCHED DUPLEX RECEPTACLE
- GROUNDING SPLIT WIRED RECEPTACLE
- GROUNDING DUPLEX RECEPTACLE
- GROUNDING QUADRIPLEX RECEPTACLE
- SPECIAL PURPOSE RECEPTACLE
- FLOORCEILING MOUNTED RECEPTACLE
- JUNCTION BOX
- WALL MOUNTED JUNCTION BOX
- DISCONNECT SWITCH
- FUSED DISCONNECT SWITCH
- THERMAL OVERLOAD SWITCH
- ELECTRICAL PANEL BOARD
- TRANSFORMER
- CIRCUIT BREAKER TO PANEL 'X' (ARROWS NOT USED IF CIRCUIT NUMBERS APPEAR NEXT TO DEVICES)
- PORCELAIN LAMP HOLDER
- RECESSED FLUORESCENT LIGHT FIXTURE
- SURFACE MOUNTED FLUORESCENT FIXTURE
- CEILING FIXTURE
- WALL WASHER or ADJUSTABLE DOWNLIGHT
- SINGLE POLE SWITCH OR 3-POLE
- EMERGENCY SWITCH
- EXIT SIGN
- EMERGENCY FIXTURE - SHADED
- BATTERY PACK EMERGENCY LIGHT or COMB. EXT. - SEE SCHEDULE
- MOTOR

- TELEPHONE TERMINAL BOARD
- FLOORCEILING MOUNTED DATA OUTLET
- FLOORCEILING MOUNTED TELEPHONE OUTLET
- DATA OUTLET
- TELEPHONE/DATA OUTLET PROJECT STANDARD
- TELEPHONE OUTLET
- CAT/MONITOR AV OUTLET
- SPEAKER
- FIRE ALARM PANEL
- FIRE ALARM RETRIEVAL ANNUNCIATOR PANEL
- SMOKE, 1-HEAT DETECTOR
- DUCT FIRE DETECTOR
- ABBREVIATIONS
- EWC ELECTRIC WATER COOLER
- EX EXHAUST FAN
- GFI GROUND FAULT INTERRUPTING
- AFCI ARC FAULT INTERRUPTING
- E.C. ELECTRICAL CONTRACTOR
- AG ABOVE COUNTER (GFI-VERIFY HEIGHT)
- AW ABOVE COUNTER - VERIFY HEIGHT
- WP WEATHER PROOF
- TTB TELEPHONE TERMINAL BOARD
- AFR ABOVE FINISH FLOOR
- AH AUTHORITY HAVING JURISDICTION
- (E) EXISTING TO REMAIN
- (EX) EXISTING TO BE REMOVED
- (ER) EXISTING TO BE RELOCATED
- (P) (UL) RELOCATED/RELOCATED LOCATION
- REFERENCE SYMBOLS
- KEYED NOTE
- EQUIPMENT - SEE SCHEDULE
- FEEDER - SEE SCHEDULE
- TRANSFORMER WITH GROUNDING AND OVERCURRENT DEVICES SEE TRANSFORMER SCHEDULE

Feeder Schedule - Copper

3000W	8W-500kcmil, 400kcmil, 3-1/2"
2200W	8W-400kcmil, 250kcmil, 3"
1600W	5W-400kcmil, 40G, 3"
1200W	4W-350kcmil, 30G, 3"
1000W	3W-400kcmil, 20G, 3"
800W	3W-300kcmil, 10G, 3"
760W	2W-500kcmil, 10G, 3-1/2"
600W	2W-350kcmil, #1G, 3"
500W	2W-250kcmil, #2G, 3"
400W	2W-30, #3G, 2"
380W	W-500kcmil, #3G, 3-1/2"
300W	W-350kcmil, #4G, 3"
250W	W-250kcmil, #4G, 3"
225W	W-40, #4G, 2-1/2"
200W	W-30, #6G, 2"
175W	W-20, #6G, 2"
150W	W-10, #6G, 2"
125W	W#1, #6G, 1-1/2"
110W	W#2, #6G, 1-1/4"

100W	W#1, #6G, 1-1/2"	W#3, #6G, 1-1/4"
90W	W#2, #6G, 1-1/4"	W#5, #6G, 1-1/4"
80W	W#3, #6G, 1-1/4"	W#4, #6G, 1-1/4"
70W	W#4, #6G, 1-1/4"	W#4, #6G, 1-1/4"
60W	W#4, #10G, 1-1/4"	W#6, #10G, 1"
50W	W#6, #10G, 1"	W#8, #10G, 1"
40W	W#8, #10G, 1"	W#8, #10G, 1"
30W	W#10, #10G, 3/4"	W#10, #6G, 3/4"
20W	W#12, #12G, 3/4"	W#12, #12G, 3/4"

This table indicates minimum conductor size for feeders of the ampacity indicated where #W indicates the #Ampacity and W-numbers of wire, #SW indicates no ground. All conductors shall be Copper unless noted otherwise.

* Conductor Ampacities shall be based on table 310.15(B)(16) 60 degree column up to 100 Amps and 75 degree column above 100 Amps unless otherwise permitted by NEC. Ampacity rating shall be selected in accordance NEC 110.14 (C).

The master electrician shall be responsible for ensuring that no feeders or branch circuits are installed in a manner or sized in such a way as to violate the NEC.

Service Ground Table	Equipment Ground Table
150G #6	20EG #12
200G #4	60EG #8
300G #2	100EG #6
500G 1/0	200-1200A per Above
800G 2/0	1600EG 4/0
>800G 3/0	2000EG 250kcmil

Service Ground Conductors sized Per NEC Table 250.66 Equipment Ground Conductors sized Per NEC Table 250.122 All conductors shall be Aluminum unless noted otherwise.

The service ground chart indicates the minimum Service Ground Conductor based on #G where # is the ampacity from the chart above, and the equipment ground chart indicates the minimum equipment grounding conductor size #EG where # is the rating/setting of the overcurrent device protecting the conductors and equipment.

Where discrepancies occur between the Feeder Schedule and the Grounding Tables, the larger conductor shall be used unless otherwise permitted by the NEC.

The installation shall meet all NEC 250 grounding and bonding requirements including 250.4 Path for Fault Current. Provide complete bonding systems metallurgically joined, connected, and fittings as required for electrical continuity per NEC 300.10.

Feeder Schedule - Aluminum

3000SW	14W-350kcmil, 3"
2200SW	7W-500kcmil, 400kcmil G, 3-1/2"
1600SW	8W-250kcmil, 350kcmil G, 3"
1200SW	4W-500kcmil, 250kcmil G, 3-1/2"
1000SW	4W-350kcmil, 40G, 3"
800SW	3W-400kcmil, 30G, 3"
750W	3W-350kcmil, 20G, 3"
600W	2W-500kcmil, 20G, 3-1/2"
500W	2W-350kcmil, 10G, 3"
400W	2W-250kcmil, #1G, 3"
350W	2W-40, #1G, 2-1/2"
300W	W-500kcmil, #2G, 3-1/2"
250W	W-350kcmil, #2G, 3"
225W	W-300kcmil, #2G, 3"
200W	W-250kcmil, #4G, 2-1/2"
175W	W-40, #4G, 2"
150W	W-30, #4G, 2"
125W	W-20, #4G, 2"
110W	W-10, #4G, 2"

100W	W-10, #6G, 2"	W#1, #6G, 1-1/2"
90W	W-10, #6G, 2"	W#2, #6G, 1-1/4"
80W	W#1, #6G, 1-1/2"	W#2, #6G, 1-1/4"
70W	W#2, #6G, 1-1/4"	W#3, #6G, 1-1/4"
60W	W#2, #6G, 1-1/4"	W#4, #6G, 1-1/4"
50W	W#4, #6G, 1-1/4"	W#6, #6G, 1"
40W	W#6, #6G, 1"	W#8, #6G, 1"
30W	W#8, #6G, 3/4"	W#10, #6G, 3/4"
20W	W#10, #10G, 3/4"	W#12, #10G, 3/4"

This table indicates minimum conductor size for feeders of the ampacity indicated where #W indicates the #Ampacity and W-numbers of wire, #SW indicates no ground. All conductors shall be Aluminum unless noted otherwise.

* Conductor Ampacities shall be based on table 310.15(B)(16) 60 degree column up to 100 Amps and 75 degree column above 100 Amps unless otherwise permitted by NEC. Ampacity rating shall be selected in accordance NEC 110.14 (C).

The master electrician shall be responsible for ensuring that no feeders or branch circuits are installed in a manner or sized in such a way as to violate the NEC.

Service Ground Table	Equipment Ground Table
150G #4	20EG #10
200G #2	60EG #8
300G 1/0	100EG #6
500G 3/0	200-1200A per Above
1000G 4/0	1600EG 350kcmil
>1000G 250	2000EG 400kcmil

Service Ground Conductors sized Per NEC Table 250.66 Equipment Ground Conductors sized Per NEC Table 250.122 All conductors shall be Aluminum unless noted otherwise.

The service ground chart indicates the minimum Service Ground Conductor based on #G where # is the ampacity from the chart above, and the equipment ground chart indicates the minimum equipment grounding conductor size #EG where # is the rating/setting of the overcurrent device protecting the conductors and equipment.

Where discrepancies occur between the Feeder Schedule and the Grounding Tables, the larger conductor shall be used unless otherwise permitted by the NEC.

The installation shall meet all NEC 250 grounding and bonding requirements including 250.4 Path for Fault Current. Provide complete bonding systems metallurgically joined, connected, and fittings as required for electrical continuity per NEC 300.10.

LUMINAIRE SCHEDULE

Label	Light Fixture Description	Specification	Lamping	Voltage	Mounting	Comment
SB1	Bollard Pathways	SLV Lighting Rusty Slot 80	9W LED	120	Surface 80CM AFG	1,2
SB2	Pathway Light Pathways	SLV Lighting Pathlight 70	8.9W LED	120	Surface 70CM AFC	1,2
SP	Pedestrian Pole Pathways	Landscape Forms AC-048L3-035F-30K-UV1-12	57.4W LED	120	Surface 12'-0" AFG	1,2
SW	Downtown Gate Entry	Lumiere 9002-W1-RW-LED3090-M-BZ-L1-UNV	10W LED	120	Surface 5'-0" AFG	1,2
SU	Ingrade Uplight Plantings	Lumiere 3002A-RD-18-ED3000-MFL-NSL-UNV-BZ	16.6W LED	120	Ground	1,2

GENERAL LIGHT FIXTURE NOTES: Apply to all fixtures wherever applicable.

- EMERGENCY FIXTURES - All Fixtures Indicated as Emergency shall be provided with a 90-Minute Battery Pack with minimum 1300 Lumen output.
- VERIFY VOLTAGES - The E.C. shall verify voltages on drawings prior to ordering or any work. The engineer shall be notified of any discrepancies in the voltage of the circulating on the drawings and the luminaire schedule prior to any purchase or work.
- VERIFY LAMPING - The E.C. shall verify lamping with the manufacturer prior to ordering and notify the engineer of any lamping discrepancies.
- PROVIDE A COMPLETE INSTALLATION - The E.C. shall provide all labor and material to provide a complete and functional system per the design intent as dictated by the switching type and location (including dimmer switches and compatible drivers, ballasts or transformers), ceiling type and location, circulating, voltages, and lamping types.
- BALLAST DISCONNECT - All electric discharge luminaires shall comply with NEC 410.130 and shall have a means of disconnect for the ballast.
- DUAL LEVEL SWITCHING - For fixtures with more than one switch designation shown on plans provide fixtures with additional ballasts for dual level light control by separate switching of inboard and outboard lamps as required to conform to IECC Requirements.
- OWNER APPROVAL - Approve all light fixture types with tenant/work before ordering any materials or any work.
- EXTERIOR LIGHTING - Fixtures installed outdoors shall be U.L. listed Wet Location and provided with cold weather drivers/ballast/battery as required for proper operation.
- DIMMING COMPATIBILITY - Fixtures noted as dimmable on plans shall be provided with dimmable drivers paired with compatible dimming controls approved by the fixture manufacturer. The E.C. shall be responsible for providing compatible LED Drivers and dimming control devices rated for connected load.

SPECIFIC FIXTURE COMMENTS: Apply to specific fixture types as noted on schedule

- WET LOCATION - Provide fixture with U.L. Wet Location Label.
- COLD WEATHER - Provide fixture with Cold-Weather Driver/Ballasts/Battery for fixtures installed outdoors.

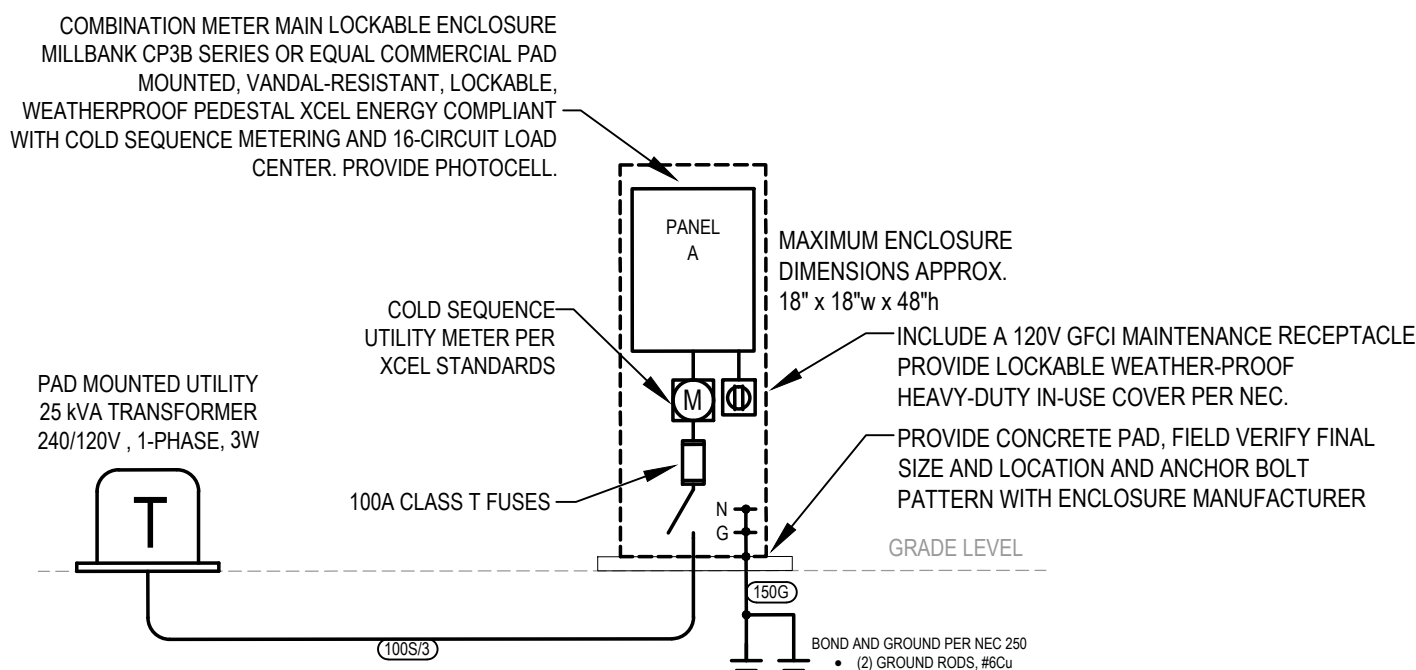
PANEL SCHEDULE: A

May 5, 2023									
BUS RATING:		100 Amperes 30, 4-WIRE		VOLTAGE L-L:		240			
MAIN PANEL:		or M.L.O. 100A		VOLTAGE L-G:		120			
MOUNTING:		Surface		S.C.RMS RATINGS (AIC):		10,000			
COMMENTS:									
NO.	AMPS	POLE	LOAD (VA)	NEC Demand	LOAD DESCRIPTION	Phase	LOAD DESCRIPTION	NEC Demand	LOAD (VA)
1	20	1	588	1.25	Site Lighting	A	Bussed Space		
2	30	1	400	1.25	Site Lighting	B	Maintenance Receptacle	1.00	180
3					Bussed Space	C	Irrigation Controller	1.00	500
4					Bussed Space	A	Bussed Space		
5					Bussed Space	B	Bussed Space		
6					Bussed Space	C	Bussed Space		
7					Bussed Space	A	Bussed Space		
8					Bussed Space	B	Bussed Space		
9					Bussed Space	C	Bussed Space		
10					Spare	A	Spare		
11					Spare	B	Spare		
12					Spare	C	Spare		
13	20	1							
14	20	1							
15	20	1							
CONNECTED LOAD:				CALCULATED DEMAND LOAD:					
PHASE A (VA): 588				PHASE A (VA): 735					
PHASE B (VA): 580				PHASE B (VA): 680					
PHASE C (VA): 500				PHASE C (VA): 500					
TOTAL LOAD (VA): 1,668				CALCULATED DEMAND LOAD (VA): 1,915					
				4.61 A					
NOTES:									
1. Not Used.									

FAULT CURRENT CALCULATION TABLE - SINGLE PHASE

May 5, 2023									
25 kVA Utility Transformer		240 120		AVAILABLE FAULT CURRENT (FI):		F(L)-L			
						7,400			
LOCATION (in)	# of RUNS	CONDUCTOR	V(L)-L	V(L)-N	2=Non-Mag	L (in)	C	F(L)-L	F(L)-N
100A Main	1	1	240	120	2	15	4.678	0.20	0.38
Panel A	1	1	240	120	1	1	4.645	0.01	0.02

- NOTES:
- All Calculations utilize Bussman "Point-To-Point" Method.
 - Variables:
L=Feeder Length (LF)
M(n)=1+(1+L(n))
F(n)=F(n-1) x M(n)
F(L)-L = (2 x L x F(L)-N(n-1))/(C x # of runs x VOLTAGE) in Amperes
F(L)-N = (2 x L x F(L)-N(n-1))/(C x # of runs x VOLTAGE) in Amperes
 - The E.C. shall field report any discrepancies to the Engineer.
 - Conductor lengths shall not be less than the values listed. The E.C. shall field verify conductor lengths and contact engineer immediately if conductor lengths are less than the values shown.
 - Conductor Lengths listed in this table are for fault study purposes only and shall not be used for bidding or other calculations.
 - All in-line Utility Meters shall be protected to limit the Fault Current to no more than 10KA at the Meter per the Utility Company requirements.
 - Label and date available fault current value at the main service disconnect per NEC 110.24(A).
 - Provide Arc-Flash Hazard study and labeling for personnel and protective equipment prior to energizing equipment in accordance with NEC 110.16 and NFPA 70E.



ONE LINE DIAGRAM

SCALE: NTS

ONE LINE DIAGRAM GENERAL NOTES:

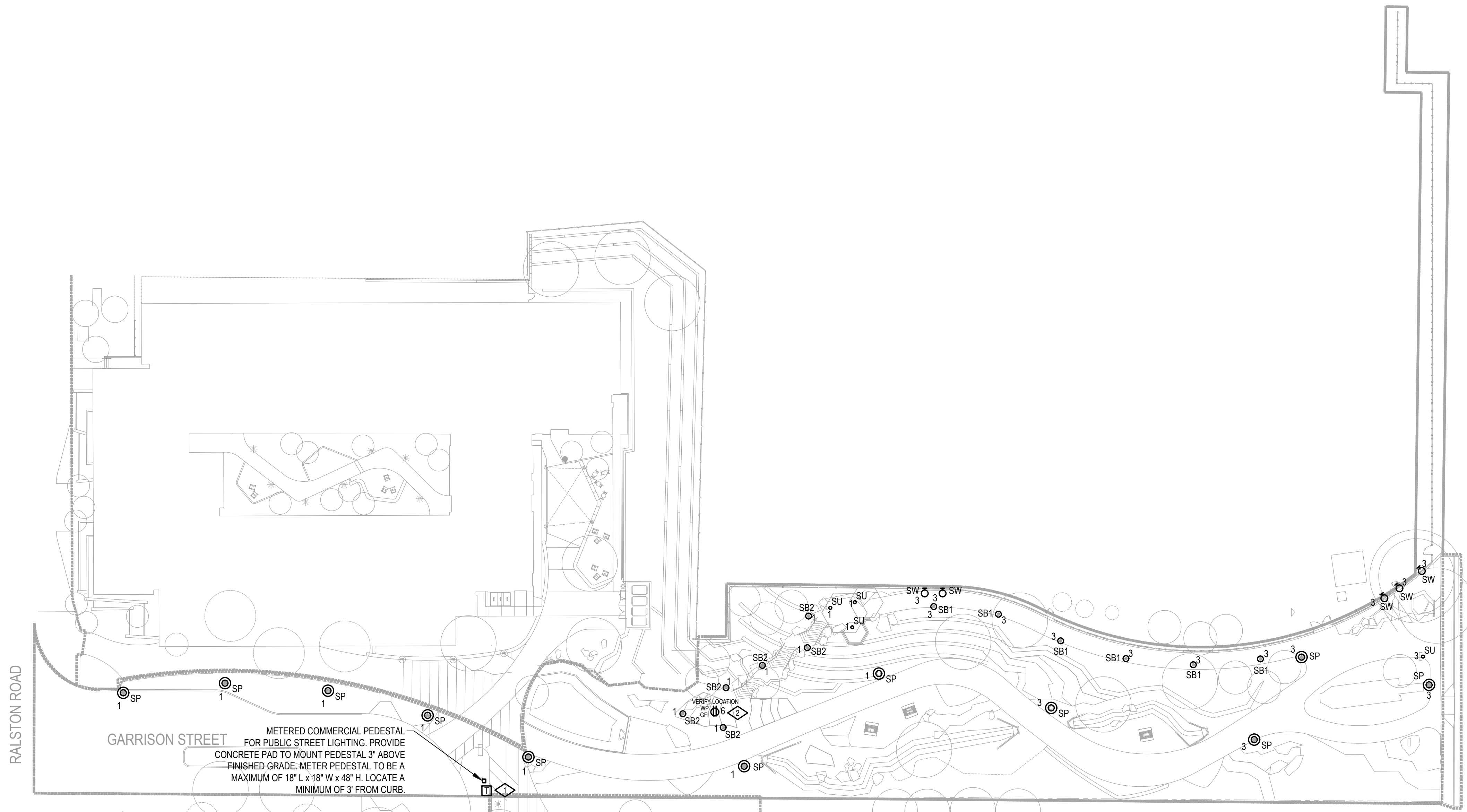
- E.C. TO FIELD VERIFY EXISTING CONDITIONS
- ALL EQUIPMENT IS NEW UNLESS NOTED AS EXISTING (E).
- ALL EXTERIOR EQUIPMENT TO BE WEATHERPROOF, NEMA 3R.
- FIELD VERIFY INSTALLATION REQUIREMENTS WITH UTILITY PRIOR TO ANY ROUGH-IN.
- THE E.C. SHALL PROVIDE LABELING OF ALL DISCONNECTING MEANS IN ACCORDANCE WITH NEC 110.22:
- 5.a. PROVIDE LABEL ON EACH DISCONNECTING MEANS PER NEC 110.22(A)
- 5.b. SERVICE EQUIPMENT SHALL BE LABELED WITH THE MAXIMUM AVAILABLE FAULT CURRENT AND DATE PER NEC 110.24(A).
- 5.c. WHERE ANY SERIES RATED COMBINATION SYSTEMS ARE UTILIZED, PROVIDE LABEL ON EQUIPMENT CLOSURE INDICATING THE SERIES RATED SYSTEM COMPONENTS INCLUDING FUSE AND BREAKER TYPES AND RATINGS IN ACCORDANCE WITH NEC 110.22(B) AND 110.22(C). CAUTION - SERIES COMBINATION SYSTEM RATED ____ AMPERES. IDENTIFIED REPLACEMENT COMPONENTS REQUIRED.

CODE COMPLIANCE STATEMENT:

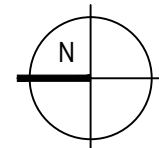
THIS PROJECT SHALL COMPLY WITH THE FOLLOWING CODES:

- 2020 National Electric Code (NEC)
- 2016 International Energy Conservation Code (IECC)





1 ELECTRICAL PLAN
SCALE: 1" = 30'-0"



ELECTRICAL PLAN GENERAL NOTES:

1. PROVIDE OUTLET WITHIN 25' OF EQUIPMENT IN ACCORDANCE WITH NEC 210.63. PROVIDE WEATHERPROOF GFI OUTLET ON ROOFTOPS WITHIN 25' OF ROOFTOP EQUIPMENT.
2. ALL EXTERIOR RECEPTACLES SHALL BE WEATHER RESISTANT AND ENCLOSED IN A WEATHERPROOF EXTRA DUTY ENCLOSURE WHILE IN USE IN ACCORDANCE WITH NEC 406.9(B).
3. FIELD VERIFY FINAL LOCATION OF ALL EQUIPMENT WITH PROVIDER PRIOR TO ROUGH-IN.
4. ALL RECEPTACLES IN BATHROOMS, KITCHENS, ROOFTOPS, EXTERIOR, AND WITHIN 6FT. OF A SINK, AND ALL OTHER REQUIRED LOCATIONS SHALL BE GFCI (OR SERVED BY A GFI CIRCUIT BREAKER) PER NEC 210.8(B) AND 422.5. THE E.C. SHALL PROVIDE GFCI OUTLETS (OR CIRCUIT BREAKERS) IN ALL LOCATIONS REQUIRED BY THE NEC. PROVIDE GFCI TEST SWITCH (OR GFCI BREAKER) IN READILY ACCESSIBLE LOCATION PER NEC.
5. NUMBERS NEXT TO DEVICES REFER TO CIRCUIT DESIGNATION IN PANEL A UNLESS NOTED.
6. PROVIDE ALL DEMOLITION WORK AS REQUIRED TO ACCOMMODATE THE NEW WORK AS INDICATED ON THE ELECTRICAL PLANS. FIELD VERIFY EXISTING CONDITIONS. PROVIDE ANY ADDITIONAL WORK NECESSARY AS REQUIRED TO PRESERVE EXISTING DEVICES AND BRANCH CIRCUIT COMPONENTS TO REMAIN. REFER TO THE ARCHITECTURAL PLANS FOR DEMOLITION SCOPE OF WORK AND VISIT THE SITE PRIOR TO BID TO DETERMINE THE ELECTRICAL SCOPE OF WORK REQUIRED.
7. PROVIDE NEUTRAL AND GROUND CONDUCTORS THROUGHOUT ALL LIGHTING BRANCH CIRCUITS INCLUDING ALL SWITCH OR LIGHTING CONTROL DEVICE LOCATIONS IN ACCORDANCE WITH NEC.
8. CIRCUIT EXTERIOR LIGHTING FIXTURES VIA MULTIPOLE CONTACTOR AND PROVIDE PHOTOCELL ON/TIMECLOCK OFF OPERATION (THE TIME CLOCK SHALL BE IECC COMPLIANT).
9. E.C. TO FIELD VERIFY BRANCH CIRCUIT LENGTHS AND ADJUST CONDUCTOR SIZES FOR VOLTAGE DROP AS REQUIRED. PROVIDE ALL SITE LIGHTING CONDUCTORS SIZE #10 Cu MINIMUM.
10. EXTERIOR LIGHTING CONTROLS
 - a. BUILDING FAÇADE AND LANDSCAPE LIGHTING SHALL AUTOMATICALLY SHUT OFF FROM NOT LATER THAN 1 HOUR AFTER BUSINESS CLOSING TO NOT EARLIER THAN 1 HOUR BEFORE BUSINESS OPENING.
 - b. LIGHTING THAT IS NOT CONTROLLED IN ACCORDANCE WITH 5(A) SHALL COMPLY WITH THE FOLLOWING:
 - i.a. BE CONTROLLED SO THAT THE TOTAL WATTAGE OF SUCH LIGHTING IS AUTOMATICALLY REDUCED BY NOT LESS THAN 50 PERCENT BY SELECTIVELY SWITCHING OFF OR DIMMING LUMINAIRES AT ONE OF THE FOLLOWING TIMES:
 - 1.1.1.1. FROM NOT LATER THAN MIDNIGHT TO NOT EARLIER THAN 6AM.
 - 1.1.1.2. FROM NOT LATER THAN ONE HOUR AFTER BUSINESS CLOSING TO NOT EARLIER THAN ONE HOUR BEFORE BUSINESS OPENING.
 - 1.1.1.3. DURING ANY TIME WHERE ACTIVITY HAS NOT BEEN DETECTED FOR 15 MINUTES OR MORE.
 - i.b. LUMINAIRES SERVING OUTDOOR PARKING AREAS AND HAVING A RATED INPUT WATTAGE OF GREATER THAN 78 WATTS AND A MOUNTING HEIGHT OF 24' OR LESS ABOVE THE GROUND SHALL BE CONTROLLED SO THAT THE WATTAGE OF SUCH LIGHTING IS AUTOMATICALLY REDUCED BY NOT LESS THAN 50 PERCENT DURING ANY TIME WHERE ACTIVITY HAS NOT BEEN DETECTED FOR 15 MINUTES OR MORE. NOT MORE THAN 1,500 WATTS OF LIGHTING POWER SHALL BE CONTROLLED TOGETHER.

ELECTRICAL PLAN KEYED NOTES:

1. EXTERIOR LIGHTING CONTROLS - PROVIDE PHOTOCELL ON/TIMECLOCK OFF CONTROLS AND MULTIPOLE LIGHTING CONTACTOR, PHOTOCELL ON ROOF AND PROGRAMMABLE TIME CLOCK AS REQUIRED. FIELD VERIFY REQUIREMENTS WITH TENANT AND LANDLORD.
2. IRRIGATION CONTROLLER - PROVIDE DEDICATED CIRCUIT WITH DEDICATED GROUND AND NEUTRAL CONDUCTOR. FIELD VERIFY FINAL LOCATION, MOUNTING HEIGHT, ELECTRICAL REQUIREMENTS, NUMBER OF WIRES, OUTLET TYPE AND CONFIGURATION WITH PROVIDER PRIOR TO ROUGH-IN.
3. E.C. SHALL FIELD VERIFY THE LOCATION OF THE TRANSFORMER WITH THE UTILITY CO. PROPOSED LOCATIONS ARE SHOWN FOR REFERENCE ONLY AND FINAL LOCATION SHALL BE DETERMINED ON SITE BY THE UTILITY CO. INFORM ENGINEER IMMEDIATELY OF ANY CHANGE OF TRANSFORMER LOCATION.



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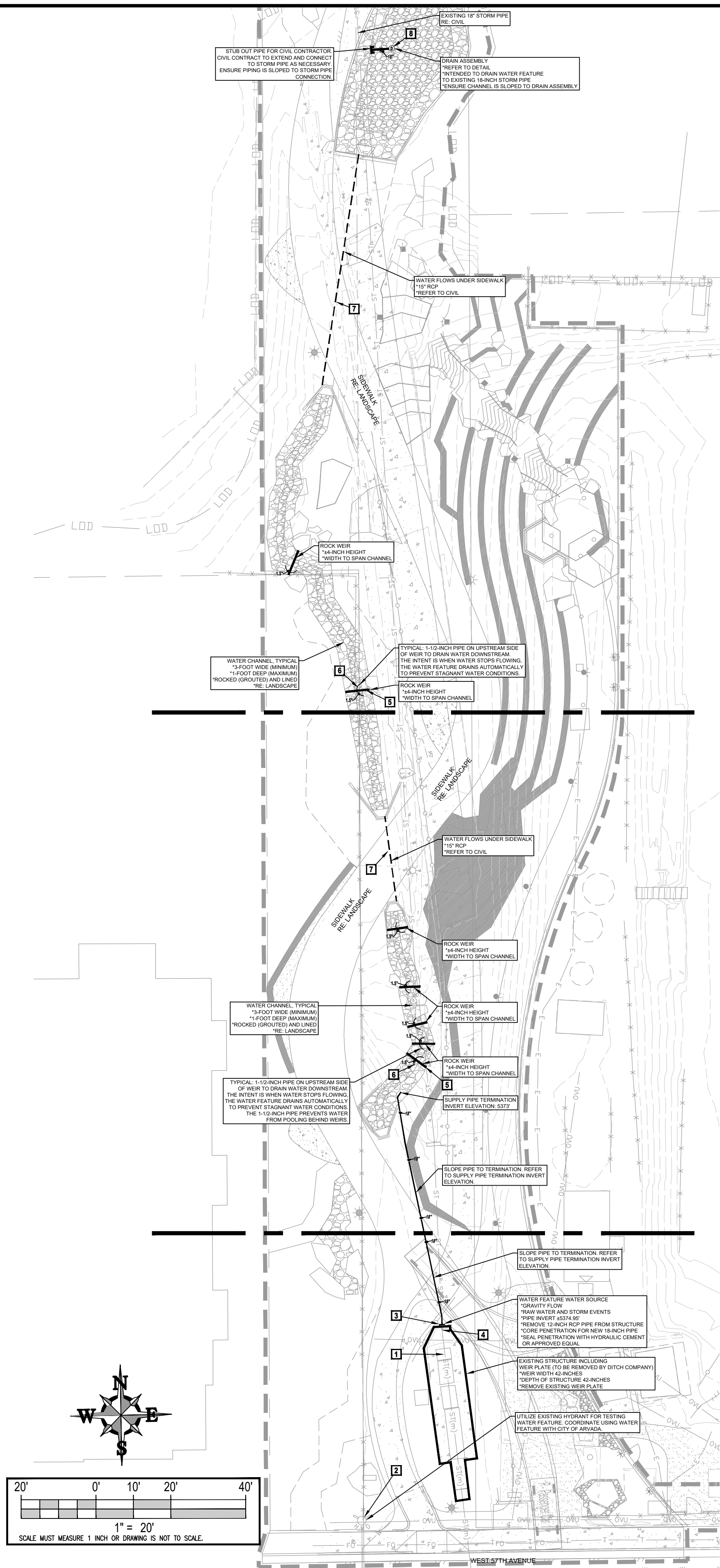
REVISION:		
NO.	DATE	BY

DATE:	07.20.2023
DRAWN BY:	FREE
CHECKED BY:	JB

ELECTRICAL PLAN

E1.00

SHEET OF



1 WATER FEATURE OVERVIEW

GENERAL DESCRIPTION

THE WATER FEATURE CONSISTS OF AN EXISTING STORM WATER SOURCE TO CONVEY WATER INTO A NEW SHALLOW CHANNEL.

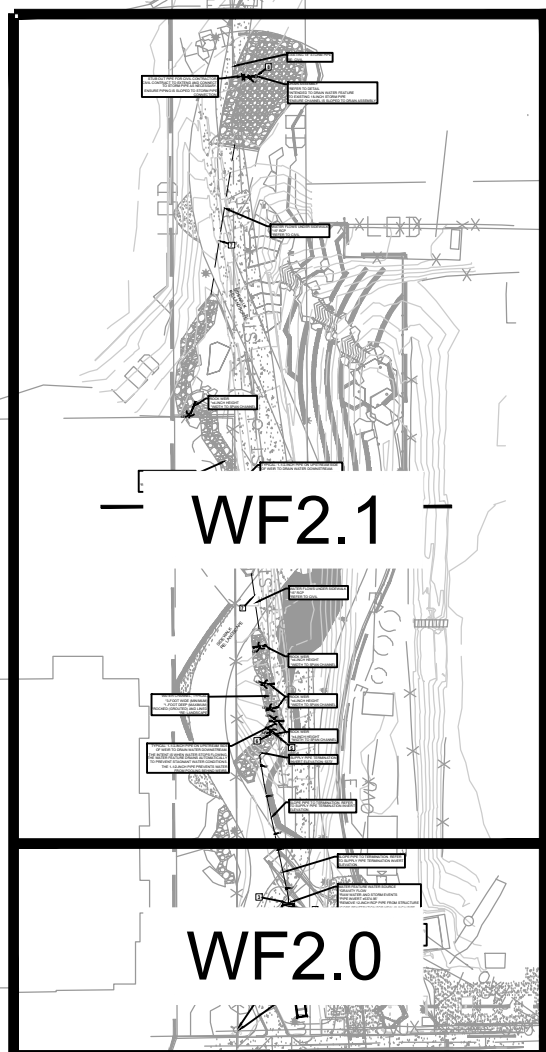
AN EXISTING STORM STRUCTURE WILL BE UTILIZED AND WILL REQUIRE MODIFICATION. THE EXISTING WEIR PLATE MUST BE REMOVED BY DITCH COMPANY.

A NEW PIPE WILL CONNECT TO THE EXISTING STORM DISCHARGE STRUCTURE TO THE HEAD CHANNEL. THEN WATER FLOWS DOWNHILL OVER A SERIES OF NEW WEIRS LOCATED WITHIN THE CHANNEL. WATER TERMINATES IN A DRAIN ASSEMBLY. A PIPE MUST BE STUBBED OUT FROM THE DRAIN ASSEMBLY FOR THE CIVIL CONTRACTOR TO EXTEND TO EXISTING STORM SEWER.

THE NEW CHANNEL MUST BE WATERPROOFED BY INSTALLING A LINER SYSTEM. THEN ROCKS/STONE IS SECURED IN CONCRETE THAT LINES THE CHANNEL. REFER TO LANDSCAPE PLANS FOR ROCK/STONE REQUIREMENTS.

GENERAL NOTES

1. LOCATE ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. VERIFY EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR UTILITY LOCATES AND POT HOLING AS NECESSARY TO VERIFY UTILITY LOCATIONS IMPACTED BY WATER FEATURE WORK.
2. READ THOROUGHLY AND BECOME FAMILIAR WITH THE SPECIFICATIONS AND INSTALLATION DETAILS FOR THIS AND RELATED WORK PRIOR TO CONSTRUCTION.
3. DO NOT PROCEED WITH THE INSTALLATION OF THE WATER FEATURE WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS OR GRADE DIFFERENCES EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING, OR IF DISCREPANCIES IN CONSTRUCTION DETAILS, LEGEND, NOTES, OR SPECIFICATIONS ARE DISCOVERED. BRING ALL SUCH OBSTRUCTIONS OR DISCREPANCIES TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE BEFORE CONTINUING WITH CONSTRUCTION.
4. THE WATER FEATURE DRAWINGS ARE DIAGRAMMATIC. COMPONENTS MAY BE SHOWN OUTSIDE OF THE INTENDED INSTALLATION AREAS FOR CLARITY. COORDINATE THIS INSTALLATION WITH THE INSTALLATION OF THE LANDSCAPE PLANS AND CIVIL PLANS TO AVOID CONFLICTS.
5. COORDINATE ALL ASPECTS OF THE WATER FEATURE INSTALLATIONS WITH NECESSARY TRADES AND THE OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.



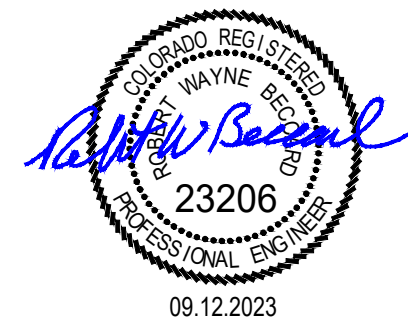
KEYMAP
N.T.S.

LEGEND

- SUPPLY PIPE
*TYPE: HDPE DR32.5 AWWA C906
*SIZE: REFER TO PLAN
- WEIR DRAIN PIPE
*TYPE: SCH. 40 PVC PIPE
*SIZE: REFER TO PLAN
- DRAIN ASSEMBLY
*REFER TO DETAIL
- WEIR
*REFER TO PLAN AND DETAIL
- 15" RCP CULVERT
*REFER TO CIVIL PLANS
- DRAIN PIPE
*TYPE: HDPE DR32.5 AWWA C906
*SIZE: REFER TO PLAN

FLAG NOTES

- 1 DITCH COMPANY TO REMOVE EXISTING WEIR PLATE FROM EXISTING STRUCTURE. COORDINATE WEIR PLATE REMOVAL WITH DITCH COMPANY.
- 2 OPERATIONAL TEST: UTILIZE EXISTING FIRE HYDRANT TO TEST WATER FEATURE. INSTALL NECESSARY FLEXIBLE HOSE FROM HYDRANT TO EXISTING STORM STRUCTURE. INSTALL NECESSARY METERING IF REQUIRED BY CITY OF AURORA TO MEASURE FLOW FROM HYDRANT. COORDINATE USE OF HYDRANT WITH CITY OF AURORA.
- 3 REMOVE EXISTING 12-INCH RCP PIPE FROM STRUCTURE AND CORE DRILL NEW HOLE FOR NEW 18-INCH HDPE PIPE. REFER TO PLAN AND DETAIL FOR INVERT ELEVATION. SLOPE NEW PIPE TO SUPPLY PIPE TERMINATION LOCATION INDICATED ON PLAN. TERMINATE PIPE END WITH BLIND FLANGE WITH SPACER (REFER TO DETAIL).
- 4 PLUG EXISTING 12-INCH OVERFLOW WITH CONCRETE. ABANDON DOWNSTREAM PIPING IN PLACE.
- 5 TYPICAL: INSTALL ROCK WEIR WITHIN CHANNEL. REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION.
- 6 TYPICAL: INSTALL 1-1/2-INCH PVC PIPE FOR ROCK WEIR SO THAT UPSTREAM WATER CAN DRAIN THROUGH PIPE WHEN WATER FEATURE HAS STOPPED OPERATING. REFER TO DETAIL.
- 7 INSTALL CONCRETE CULVERT UNDER SIDEWALK TO CONTINUE FLOW OF WATER FEATURE. REFER TO CIVIL PLANS FOR ADDITIONAL INFORMATION.
- 8 INSTALL DRAIN ASSEMBLY IN APPROXIMATE LOCATION. ENSURE CHANNEL IS SLOPED TO DRAIN TO DRAIN ASSEMBLY. INSTALL 18-INCH HDPE PIPE FROM DRAIN ASSEMBLY FOR CONNECTION TO EXISTING STORM PIPE. STUB OUT 18-INCH HDPE PIPE. CIVIL CONTRACTOR IS RESPONSIBLE FOR EXTENDING HDPE PIPE TO EXISTING STORM DRAIN AND MAKING FINAL CONNECTION TO EXISTING STORM DRAIN.



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REVISION:
NO. DATE BY

DATE: 09.12.2023
DRAWN BY: JHK
CHECKED BY: RWB

WATER FEATURE COVER
SHEET

GARRISON STREET PASEO
CONSTRUCTION DOCUMENTS
GARRISON STREET - ARVADA, CO 80002

20-131



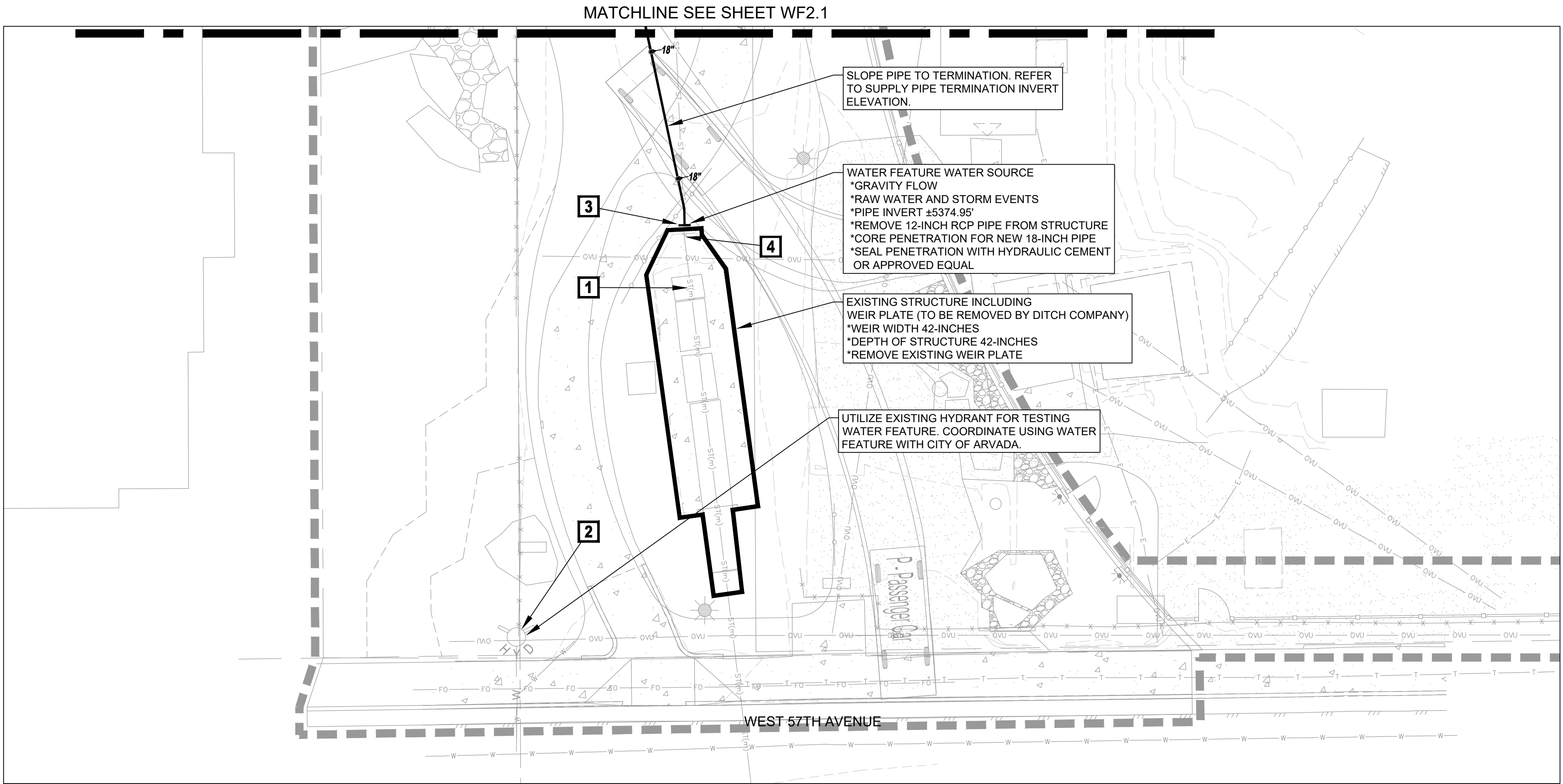
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REVISION:
NO. DATE BY

DATE: 09.12.2023
DRAWN BY: JHK
CHECKED BY: RWB

WATER FEATURE PLAN

WF2.0
SHEET 2 OF 5



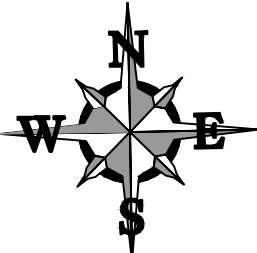
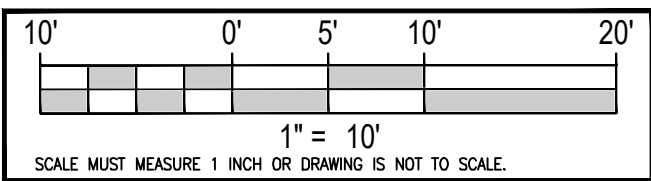
PLUG EXISTING OVERFLOW WITH CONCRETE

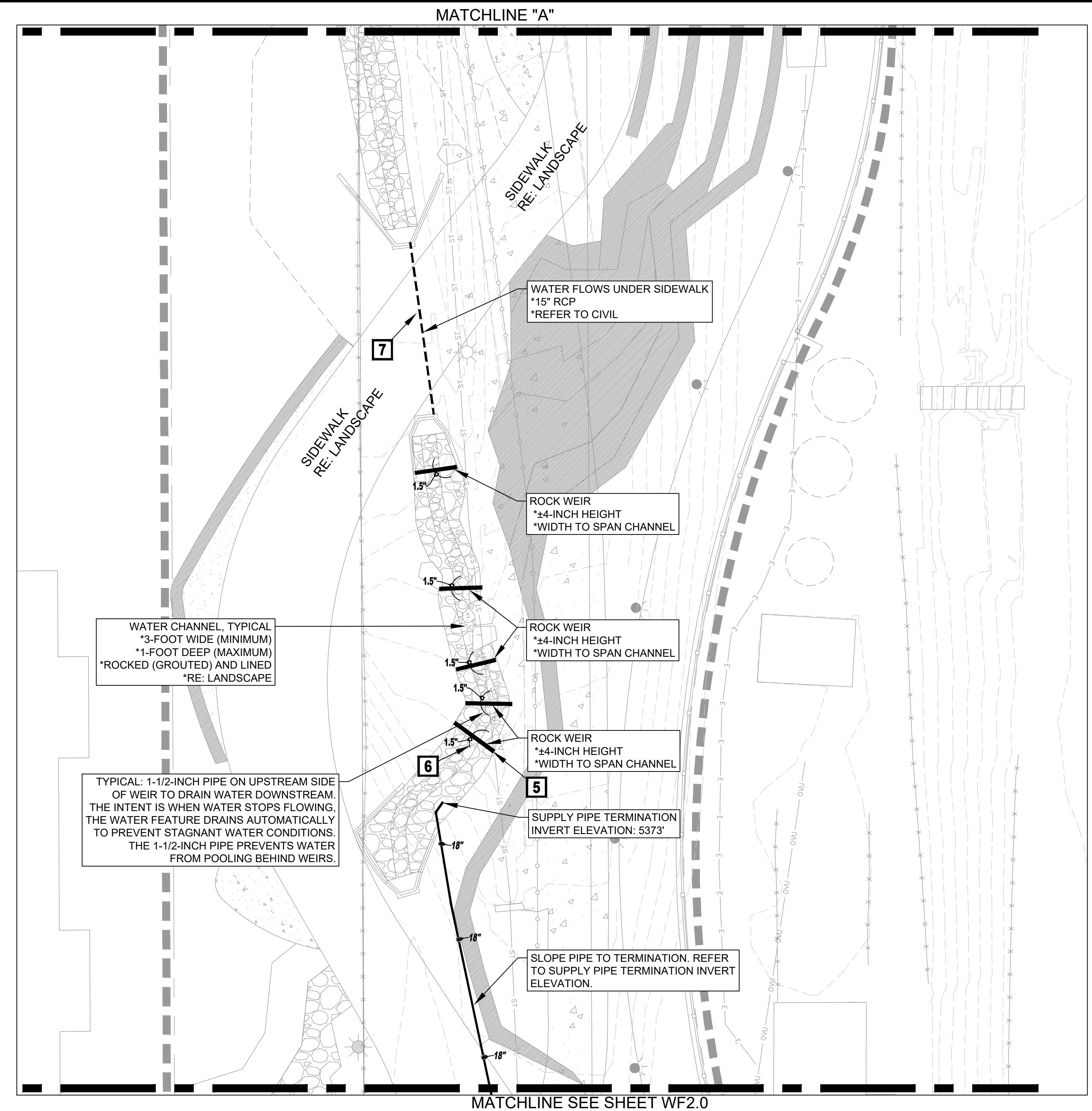
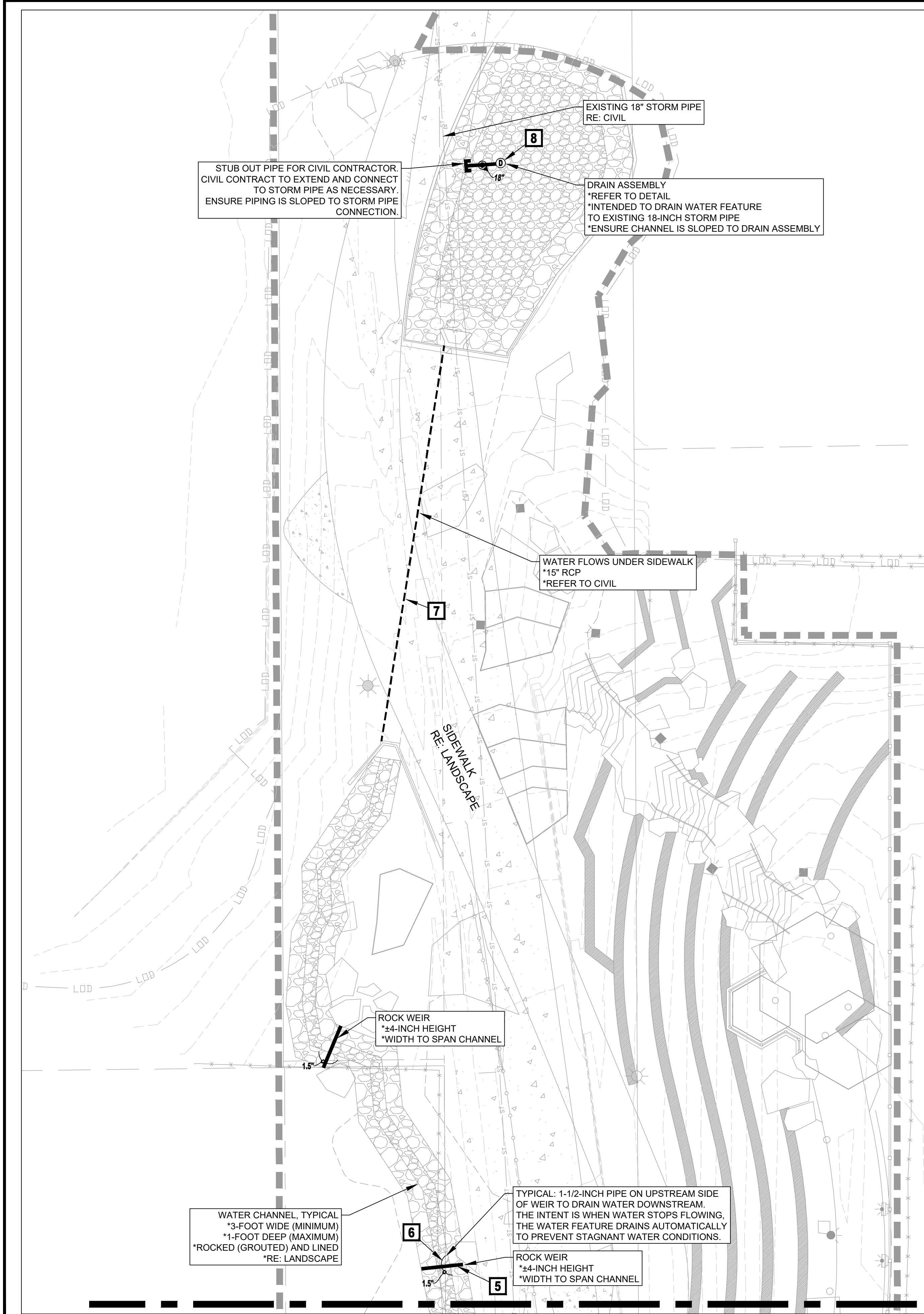
EXISTING WEIR TO BE REMOVED BY DITCH COMPANY

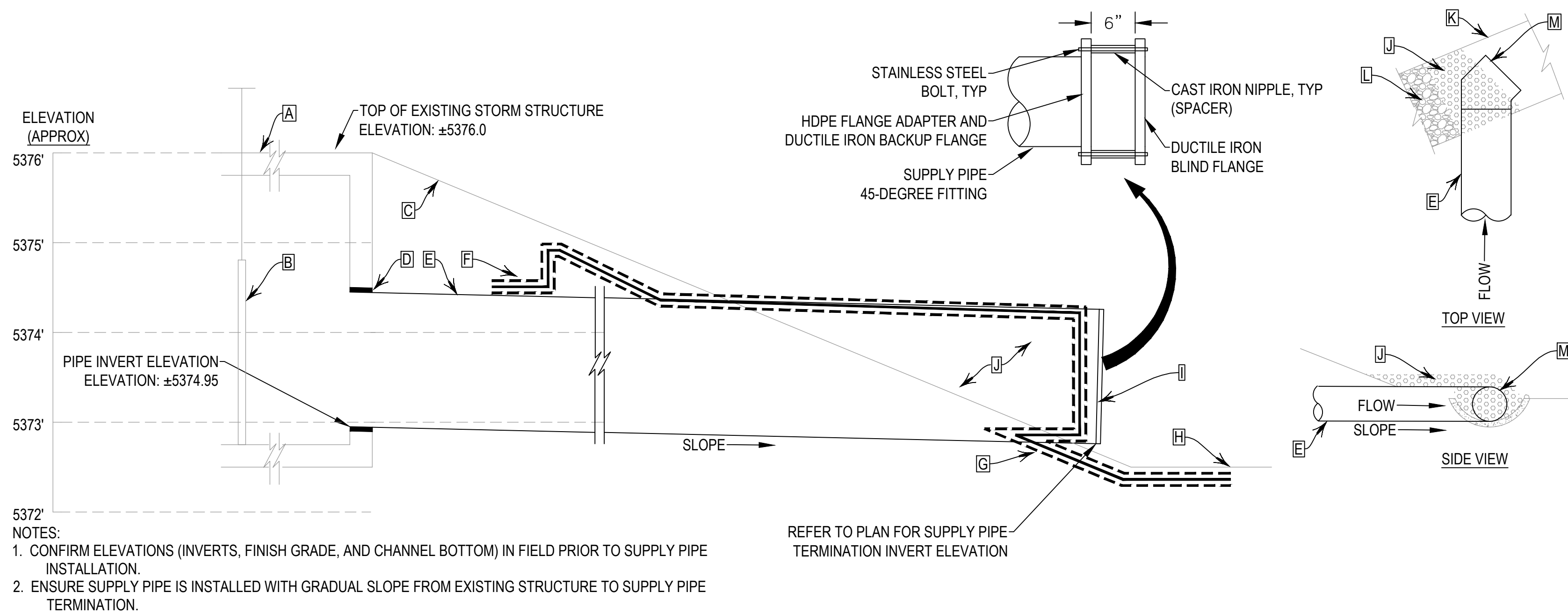
EXISTING STORM STRUCTURE



EXISTING WEIR TO BE REMOVED BY DITCH COMPANY





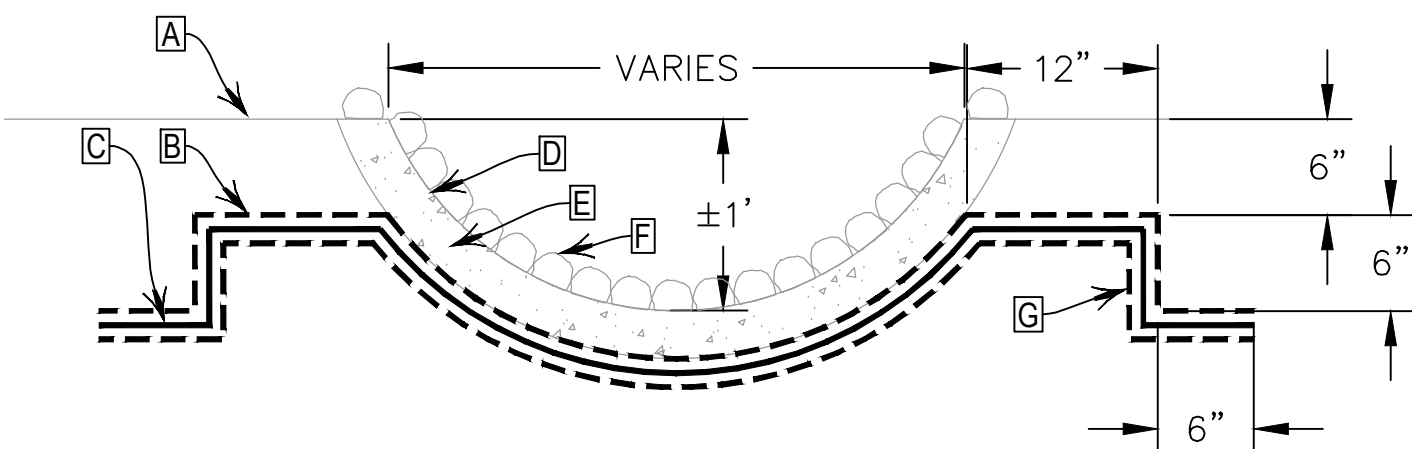


- A. EXISTING STORM STRUCTURE
B. EXISTING ADJUSTABLE WEIR WITH HANDWHEEL. DITCH COMPANY TO REMOVE AND PROPERLY DISPOSE OF WEIR AND HANDWHEEL.
C. FINISH GRADE
D. AFTER REMOVAL OF SUFFICIENT SECTION(S) OF EXISTING 12-INCH RCP, INSTALL NEW 18-INCH SUPPLY PIPE. CORE DRILL OR SAW CUT LARGER HOLE IN EXISTING STRUCTURE TO ACCOMMODATE THE LARGER SUPPLY PIPE. SEAL PENETRATION WITH HYDRAULIC CEMENT. INVERT OF NEW SUPPLY PIPE AT PENETRATION TO MATCH EXISTING PIPE'S INVERT ELEVATION. SLOPE NEW SUPPLY PIPE TO CHANNEL (SUPPLY PIPE TERMINATION).
E. NEW SUPPLY PIPE. REFER TO PLAN AND LEGEND FOR ADDITIONAL INFORMATION.
F. LINER SYSTEM AND KEY. REFER TO LINER SYSTEM DETAILS.
G. SEAL LINER SYSTEM PENETRATION WITH BOOT AND STAINLESS STEEL CLAMPS
H. BOTTOM OF CHANNEL. RE: ARCHITECTURAL PLANS
I. TERMINATE PIPE END WITH HDPE FLANGE ADAPTER, DUCTILE IRON BACKUP FLANGE, AND DUCTILE IRON BLIND FLANGE. PROVIDE 6-INCH GAP BETWEEN FLANGES. INSTALL 6-INCH LONG CAST IRON NIPPLES BETWEEN THE FLANGES. INSTALL BOLTS THROUGH THE CAST IRON NIPPLES. BOLTS TO BE CARBON STEEL OR EQUAL. INTENT OF TERMINATION IS TO PREVENT PERSON ENTRY INTO PIPE WHILE PROVIDE SUFFICIENT GAP TO ALLOW LARGE DEBRIS (IE. LEAVES, TRASH BAGS, AND STICKS) TO PASS THROUGH.
J. PLACE STONE AROUND EXPOSED SUPPLY PIPE TO HIDE PIPE AND TO PREVENT VANDALISM. GROUT STONE TO PIPE AS NECESSARY.
K. CHANNEL. RE: ARCHITECTURAL PLANS
L. FILL CHANNEL UPSTREAM OF SUPPLY PIPE WITH ROCK. RE: ARCHITECTURAL PLANS
M. HDPE DR32.5 45-DEGREE BUTT FUSED FITTING. ORIENT DISCHARGE DOWNSTREAM. INSTALL HDPE FLANGE ADAPTER, DUCTILE IRON BLIND FLANGE, CAST IRON NIPPLE SPACERS, STAINLESS STEEL BOLTS AS SHOWN ABOVE ON FITTING'S END.

1 EXISTING STORM STRUCTURE AND SUPPLY PIPE DETAIL

N.T.S.

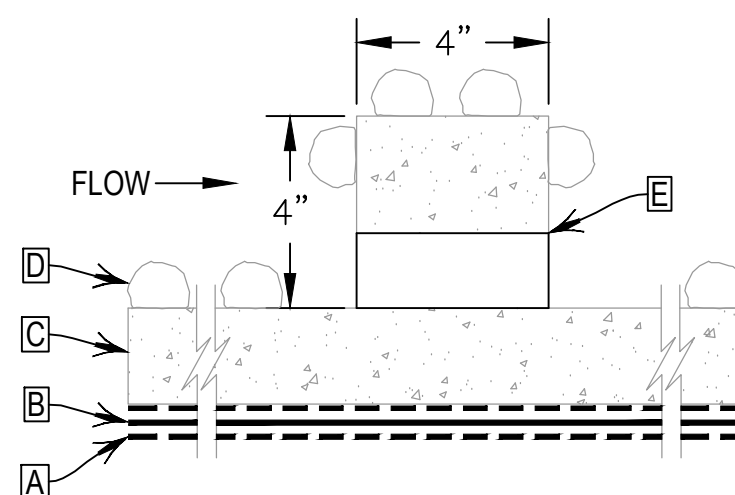
- A. FINISH GRADE
B. 8 OZ. GEOTEXTILE. ONE (1) LAYER OF GEOTEXTILE ON EACH SIDE OF LINER
C. LINER: 30 MIL REINFORCED POLYETHYLENE (RPE)
D. CHANNEL. RE: ARCHITECTURAL PLANS
E. CONCRETE: 6-INCH THICK MINIMUM THICKNESS, 3000 PSI MINIMUM COMPRESSIVE STRENGTH
F. STONE. RE: ARCHITECTURAL PLANS. EMBED STONES IN CONCRETE TO SECURE EACH STONE.
G. LINER SYSTEM KEY



2 CHANNEL AND LINING DETAIL

N.T.S.

- A. 8 OZ. GEOTEXTILE. ONE (1) LAYER OF GEOTEXTILE ON EACH SIDE OF LINER
B. LINER: 30 MIL REINFORCED POLYETHYLENE (RPE)
C. CONCRETE: 6-INCH THICK MINIMUM THICKNESS, 3000 PSI MINIMUM COMPRESSIVE STRENGTH
D. STONE. RE: ARCHITECTURAL PLANS. EMBED STONES IN CONCRETE TO SECURE EACH STONE.
E. 1-1/2-INCH SCH. 40 PVC PIPE CENTERED IN CHANNEL LOCATED AT BOTTOM OF WEIR INTENDED TO DRAIN UPSTREAM WATER WHEN WATER FEATURE IS NOT IN OPERATION



3 WEIR DETAIL

N.T.S.



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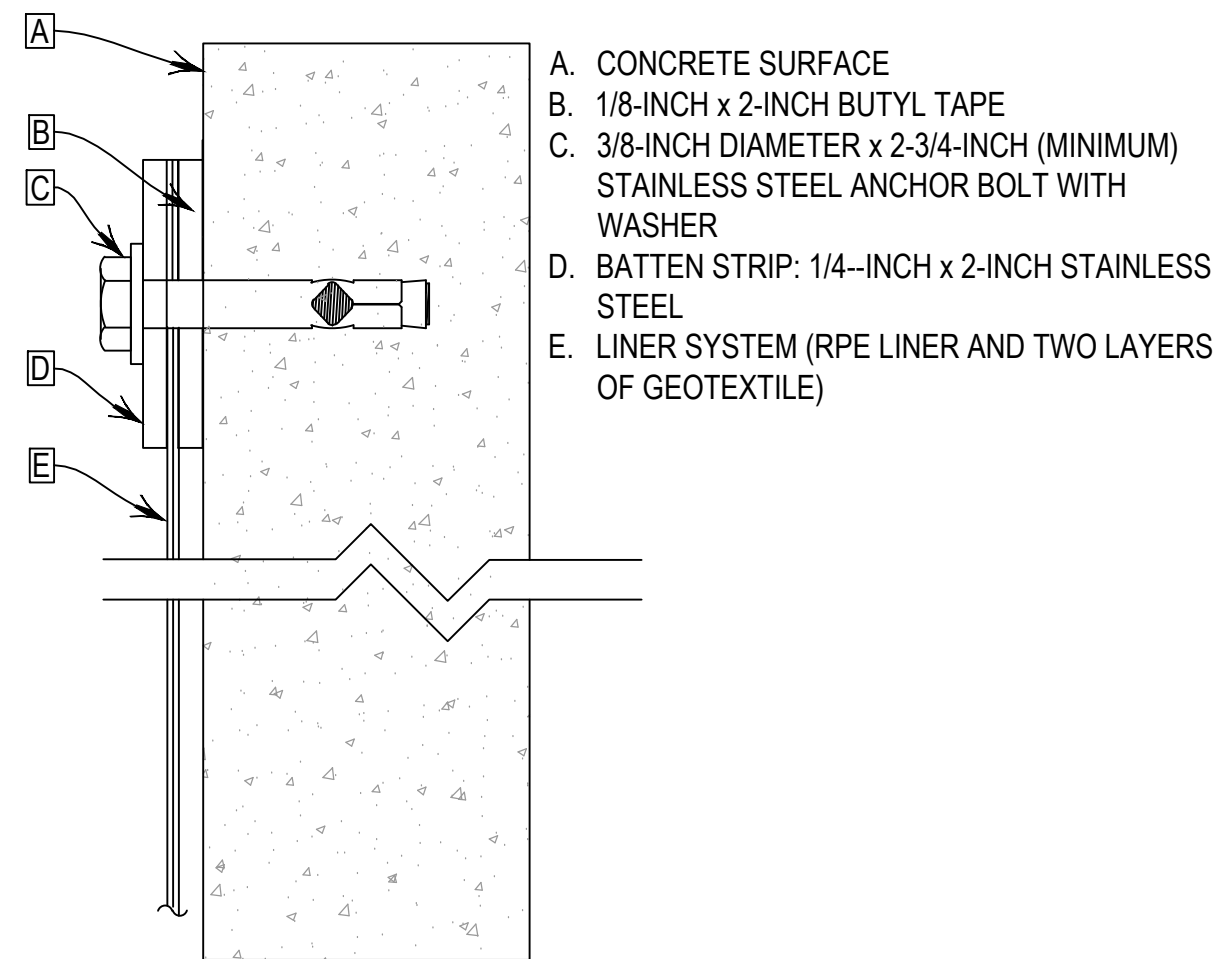
REVISION:
NO. DATE BY

DATE: 09.12.2023
DRAWN BY: JHK
CHECKED BY: RWB

WATER FEATURE DETAILS

WF3.0

SHEET 4 OF 5



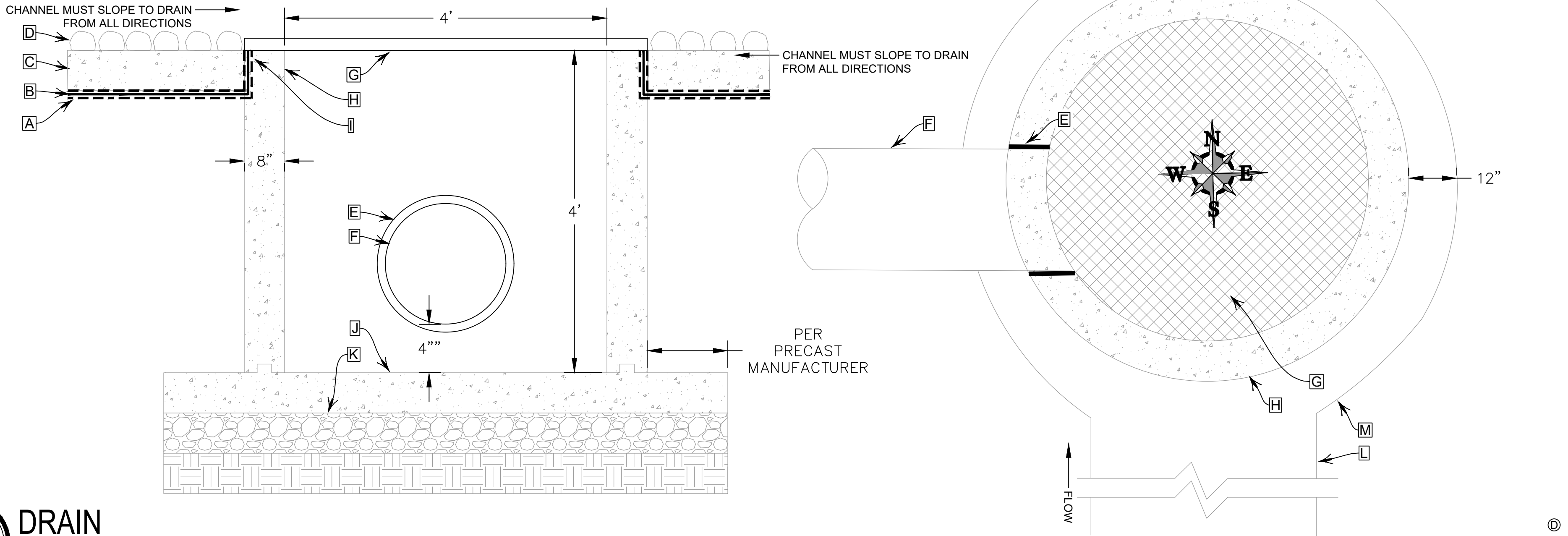
- NOTES:
- 1. ATTACH LINER SYSTEM TO CONCRETE SURFACE USING BATTEN WITH ANCHOR BOLTS 6-INCHES O.C.
 - 2. INSTALL LINER AND GEOTEXTILE FABRIC PER MANUFACTURER RECOMMENDATIONS.
 - 3. INSTALL BEAD OF SILKAFLEX 1A ALONG BUTYL TAPE PRIOR TO SECURING BATTEN STRIP TO CONCRETE SURFACE.

1

BATTEN STRIP
DETAIL

N.T.S.

- A. 8 OZ. GEOTEXTILE, ONE (1) LAYER OF GEOTEXTILE ON EACH SIDE OF LINER
- B. LINER: 30 MIL REINFORCED POLYETHYLENE (RPE)
- C. CONCRETE: 6-INCH THICK MINIMUM THICKNESS, 3000 PSI MINIMUM COMPRESSIVE STRENGTH
- D. STONE, RE: ARCHITECTURAL PLANS. EMBED STONES IN CONCRETE TO SECURE EACH STONE.
- E. SEAL PENETRATION WITH LINK SEAL
- F. 18-INCH DRAIN PIPE, REFER TO PLAN. MUST SLOPE TO STORM (REFER TO CIVIL PLANS).
- G. REMOVABLE GRATE FABRICATED FROM 1/2-INCH EXPANDED STEEL GRATING. WELD GRATING TO 2-INCH ANGLE IRON FRAME. SECURE FRAME TO CONCRETE SUMP WITH STAINLESS STEEL VESTIL CONCRETE WEDGE ANCHOR BOLTS (OR EQUAL).
- H. CONCRETE SUMP: PRECAST CONCRETE MANHOLE SECTION, 4-FOOT DIAMETER, 4-FOOT LONG
- I. SECURE LINER TO CONCRETE SUMP PERIMETER WITH BATTEN STRIP AND SEAL WITH SILKAFLEX 1A. REFER TO BATTEN STRIP DETAIL.
- J. PRECAST BOTTOM WITH ANTI-FLOATATION SKIRT (SIZED PER PRECAST MANUFACTURER)
- K. 1-FOOT DEPTH OF 3/4-INCH CRUSHED GRAVEL OVER 95% STANDARD PROCTOR DENSITY COMPACTED SUBGRADE
- L. CHANNEL
- M. FORM CHANNEL TERMINATION AROUND CONCRETE SUMP. SLOPE CHANNEL SIDES TO THAT WATER DRAINS INTO SUMP.



2

DRAIN
ASSEMBLY

N.T.S.

EXHIBIT B
AN AGREEMENT BY AND BETWEEN THE CITY OF ARVADA ANDR. G.
BRINKMANN COMPANY (D/B/A BRINKMANN CONSTRUCTORS) FOR
CONSTRUCTION OF THE GARRISON GARDEN PASEO IN AN AMOUNT
NOT TO EXCEED \$3,608,191.87

BID PROPOSAL

TO: City of Arvada, Colorado (hereinafter called "CITY").

FROM: Brinkmann Constructors (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. 23-VCN-072 entitled Garrison Garden Paseo 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. 1-5 Initials: UW UW LKK UW LKK

Bidder states that their (add additional sheet if space below doesn't suffice):

Major Material Suppliers are:

To Be Determined

Material They Will Supply

To Be Determined

Major Subcontractors are:

To Be Determined

Work They Will Perform

To Be Determined

CONTRACT TIME AND LIQUIDATED DAMAGES: All work shall be completed, including clean-up, within **270 calendar** days after the date to be specified in the Notice to Proceed. A Notice to Proceed is anticipated to be issued on or about ~~September 11, 2023~~. The bidder shall agree to pay the owner the sum as identified in Section 1121.07 on the Engineering Code of Standards & Specifications dated July 26, 2022, for each calendar day that the work exceeds the executed contract time. Contract time may be adjusted by Change Order as approved by the Project Manager.

Total from included Bid Schedule:

TOTAL BID \$ \$3,608,191.87

SUBMITTED BY:

Company Name: Brinkmann Constructors

Contact Names: Jeremy Hamm, Baptiste Debuire, Patrick Loecker

Address: 3800 Lewiston Street, Suite 400, Aurora, CO 80011

Phone: (303) 657-9700 Email(s): jhamm@brinkmannconstructors.com; bdebuire@brinkmannconstructors.com
ploecker@brinkmannconstructors.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

Lucas Rottler

Typed/Printed Name of Agent

9/28/23

Date

V.P. of Precon

Title of Agent

43-1321222

FEIN

lrattler@brinkmann

Agent email

Constructors.com

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. 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 CSB 23-VCN-072 Garrsion Garden Paseo

Contractor: Brinkmann Constructors

Address, City, Zip: _____

1. Contractor to submit bids for all items, failure to do so will render bid non-responsive. On lump sum items, provide total price on item; on unit price bid items, provide the unit price and the extended amount of the bid.
2. If no bid item existing for a portion of the work, include the costs in a related bid item. Contractor to provide a bid for a fully completed project.
3. In case of error in the extension of unit prices, unit price governs. In case of error in summation, the total of the corrected bid amount governs.

BASE BID ITEMS

Item					
No.	Description	Est. Qty.	Unit	Unit Price	Extension
1	Mobilization	1	LS	\$ -	\$0.00
2	Erosion Control	1	LS	\$ 21,100.99	\$21,100.99
3	Construction Surveying & Staking	1	LS	\$ 49,200.67	\$49,200.67
4	Storm Water Management	1	LS	\$ 59,032.94	\$59,032.94
5	Demo, Removal and Site Protection	1	LS	\$ 108,990.54	\$108,990.54
6	Site Grading, Earthwork, and Drainage Improvements	1	LS	\$ 364,620.21	\$364,620.21
7	Traffic Control	1	LS	\$ 26,236.86	\$26,236.86
8	Traffic - Patching	132	SY	\$ 131.18	\$17,316.33
9	Traffic - Striping	101	LF	\$ 12.34	\$1,246.25
10	Traffic - Pavement Markings	4	EA	\$ 1,139.66	\$4,558.65
11	Traffic - Signage	4	EA	\$ 549.33	\$2,197.34
12	Utilities - Fire Line	12	LF	\$ 2,717.59	\$32,611.11
13	Utilities - Fire Hydrant	1	EA	\$ 3,935.53	\$3,935.53
14	Utilities - Inlets	1	EA	\$ 11,150.67	\$11,150.67
15	Utilities - Manholes	3	EA	\$ 3,935.53	\$11,806.59
16	Utilities - Street Subgrade/Fill	185	SY	\$ 26.24	\$4,853.82
17	Utilities - Street Subbase	185	SY	\$ 45.91	\$8,494.18
18	Utilities - Storm Sewer	265	LF	\$ 620.62	\$164,463.14
19	6" Concrete Paving	8,600	SF	\$ 24.65	\$211,978.09
20	ADA Curb Ramp	1	EA	\$ 9,707.64	\$9,707.64
21	Concrete Curb and Gutter	408	LF	\$ 63.82	\$26,038.77
22	Concrete Edger - Flush	350	LF	\$ 20.16	\$7,056.40
23	Decomposed Granite	3,700	SF	\$ 14.21	\$52,578.67
24	Stone Slab Stairs with Railing	45	LF	\$ 1,490.45	\$67,070.24
25	Stone Slab Retaining Walls	800	LF	\$ 470.55	\$376,438.04
26	Concrete Seat Wall	210	LF	\$ 980.93	\$205,996.09
27	Dry Stack Sandstone Slab Seat Walls	120	LF	\$ 1,315.30	\$157,835.89
28	Custom Cut Stone Boulder with Sawn Top	5	EA	\$ 6,738.46	\$33,692.32
29	Buff Sandstone Boulder	60	EA	\$ 2,224.28	\$133,456.78
30	Complete Lighting System	1	LS	\$ 218,379.31	\$218,379.31
31	Custom Fabricated Gates	2	EA	\$ 6,690.40	\$13,380.80
32	Wire Mesh Fence	650	LF	\$ 196.78	\$127,904.69
33	Interpretive Fence Panels	9	EA	\$ 1,996.92	\$17,972.25
34	Interpretive Trellis Panels	2	EA	\$ 5,154.23	\$10,308.46
35	Custom Hexagon Trellis	1	LS	\$ 144,150.56	\$144,150.56
36	Trellis Guardrailing	25	LF	\$ 1,422.14	\$35,553.57
37	Play Structures	3	EA	\$ 21,283.78	\$63,851.34
38	Welcome Signage	1	LS	\$ 10,308.46	\$10,308.46
39	Drinking Fountain	1	LS	\$ 20,333.57	\$20,333.57
40	Raised Plate Steel Planters	1	LS	\$ 163,980.38	\$163,980.38
41	Mortar Set Stream Bed / Water Feature	1	LS	\$ 192,945.70	\$192,945.70
42	Kentucky Bluegrass Sod	1,760	SF	\$ 3.53	\$6,205.02
43	Native Seeding w/ Hydromulch	4,275	SF	\$ 0.75	\$3,200.90
44	Top Soil	14	CY	\$ 530.08	\$7,421.10
45	Deciduous Shade Trees	13	EA	\$ 734.63	\$9,550.22
46	Deciduous Ornamental Trees	20	EA	\$ 295.16	\$5,903.29
47	Evergreen Trees	9	EA	\$ 177.10	\$1,593.89
48	Deciduous Shrubs	219	EA	\$ 288.61	\$63,204.60
49	Ornamental Grasses	423	EA	\$ 39.36	\$16,647.29
50	Perennials	231	EA	\$ 26.24	\$6,060.71
51	Groundcover	112	EA	\$ 96.47	\$10,804.34

52	4"-6" Cobble	10	CY	\$	1,615.01	\$16,150.10
53	Shredded Cedar Wood Mulch	105	CY	\$	206.40	\$21,671.65
54	Complete Irrigation System	1	LS	\$	189,091.68	\$189,091.68
55	Structural Engineering	1	LS	\$	57,953.29	\$57,953.29

TOTAL BASE BID						\$3,608,191.87
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REQUIRED CONTRACTOR SUBMITTAL FORM

SUBMITTAL CHECKLIST:

Proposals shall be submitted in the order listed below with each section clearly identified. **Missing information or required documents may result in submission being deemed non-responsive.**

- ☒ Submit completed City Submittal Forms including this sheet, Bid Bond, Bid Proposal, Bid Schedule, Performance Measures Form, and any other attachments requested.
- ☒ Submit proposed Construction Schedule
- ☒ 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 X #2 X #3 X #4 X #5 X

REFERENCES:

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

Name: Point Metro District Phase 1&2 Infrastructure Contact Person: Randall Phelps

Address: 4582 South Ulster Street Suite 1500, Denver CO 80237

Telephone No: 303-228-2336 Email: Randall.Phelps@kimley-Horn.com

Describe type of work/service performed or items supplied: Installed utilities, roads, landscaping, irrigation, monument signs, retaining walls for the Point Metro District in Aurora, CO.

Name: Mile High Development Contact Person: George Thorn

Address: 90 Madison Street, Suite 101 Denver, CO 80206

Telephone No: 303-339-9200 Email: gthorn@milehighdevelopment.com

Describe type of work/service performed or items supplied: Built multiple affordable housing projects for MHD including active construction on adjacent Ralston Garden's project.

Name: _____ Contact Person: _____

Address: _____

Telephone No: _____ Email: _____

Describe type of work/service performed or items supplied: _____

VENDOR NAME: Brinkmann Constructors

SOLICITATION #: 23-VCN-072

REQUIRED 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. Brinkmann has competitively bid out the scopes of work associated with the project to
2. ensure that the contractors performing each work represent a cost affective and equally qualified professional

(b) Punctuality/Responsiveness

Example Measure: Reporting of project status will occur monthly with the City and consultant's Project Manager.

1. Brinkmann S.O.P provides our clients with a weekly report which outlines scopes
2. complete, outstanding items (RFIs, submittals, change requests) and photo documentation of specific tasks performed throughout the work week

(c) Quality/Reliability

Example Measure: Revisions are drafted within two weeks, and no more than 3 revisions prior to final draft.

1. Brinkmann on-sight dedicated personal are responsible for daily QC checks, ensuring
2. third party testing and AHJ representation is scheduled ahead of the task. Procore is utilized for information sharing, field reporting and document management

(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. Procore is Brinkmann's primary document control program, this eliminates excessive
2. paper, consolidates information into a single location rather than relying on emails for direction.

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.

BID BOND

We, the undersigned R.G. Brinkmann Company d/b/a Brinkmann Constructors as Principal, and Liberty Mutual 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 Attached Bid (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. 23-VCN-072.

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 6th day of September, 2023, 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: R.G. Brinkmann Company d/b/a Brinkmann Constructors

Address: _____

By: Brian M. Sittgen

Title: CGO

SURETY

Liberty Mutual Insurance Company

175 Berkeley St., Boston, MA 02116

By: Katherine M. Schwartz

Title: Katherine M. Schwartz

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.

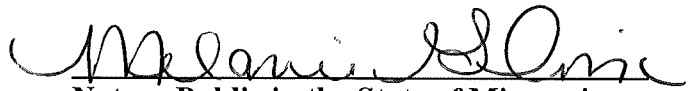
ACKNOWLEDGMENT BY SURETY

STATE OF MISSOURI

County of St. Louis

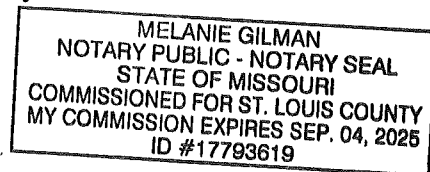
On this 6th day of September, 2023 before me personally appeared
Katherine M. Schwartz known to me to be the Attorney - In - Fact of
Liberty Mutual Insurance Company, the corporation that executed the within
instrument, and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal,
at my office in the aforesaid County, and the day and year in this certificate first
above written.



Notary Public in the State of Missouri
County of St. Louis

09-04-2025
My Commission Expires:





This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

Certificate No: **8207339-969422**

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Allyson Schulz, Chase H. Butler, Jeffery A. Mentel, Jessica Gryder, Katherine M. Schwartz

all of the city of Saint Louis state of MO each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 14th day of February, 2022.



Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

By:

David M. Carey
David M. Carey, Assistant Secretary

State of PENNSYLVANIA ss
County of MONTGOMERY

On this 14th day of February, 2022 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.



Commonwealth of Pennsylvania - Notary Seal
Teresa Pastella, Notary Public
Montgomery County
My commission expires March 28, 2025
Commission number 1126044
Member, Pennsylvania Association of Notaries

By:

Teresa Pastella
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS: Section 12. Power of Attorney.

Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts: Section 5. Surety Bonds and Undertakings.

Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 6th day of September, 2023.



By:

Renee C. Llewellyn
Renee C. Llewellyn, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

For bond and/or Power of Attorney (POA) verification inquiries, please call 610-832-8240 or email HOSUR@libertymutual.com.

Garrison Garden Paseo - 25-Sep-23																Page 1 of 1											
Activity ID	Activity Name	Org Dur	Rem Dur	Current Start Date	Current Finish Date	2024												2025									
						A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M		
Garrison Garden Paseo		210	210	09-Aug-23 A	19-Jul-24																						
A1010	Contractors Bidding	30	4	09-Aug-23 A	27-Sep-23																						
A1000	Bid Date	0	0	28-Sep-23																							
A1020	City Review of Bids	5	5	28-Sep-23	04-Oct-23																						
A1030	Notice of Award	0	0	05-Oct-23																							
A1040	Contrtact Negotiations	12	12	05-Oct-23	20-Oct-23																						
A1050	City Council Approval	0	0	23-Oct-23																							
A1060	Notice to Proceed	0	0	24-Oct-23																							
A1080	Mobilization	10	10	25-Oct-23	07-Nov-23																						
A1090	SWPP Installation	5	5	08-Nov-23	14-Nov-23																						
A1100	Demoltion	10	10	15-Nov-23	30-Nov-23																						
A1110	Clear/Grub	7	7	15-Nov-23	27-Nov-23																						
A1120	Earthwork	15	15	28-Nov-23	18-Dec-23																						
A1130	Utilities	20	20	12-Dec-23	10-Jan-24																						
A1230	Utility Tie-Ins	15	15	19-Dec-23	10-Jan-24																						
A1250	Underground Electrical Rough-In	15	15	19-Dec-23	10-Jan-24																						
A1140	Retaning Walls	30	30	11-Jan-24	21-Feb-24																						
A1150	Concrete	30	30	08-Feb-24	20-Mar-24																						
A1160	Steel	15	15	21-Mar-24	10-Apr-24																						
A1170	Landscaping	40	40	21-Mar-24	15-May-24																						
A1070	Light Fixture Installation/Trim	10	10	21-Mar-24	03-Apr-24																						
A1240	Play Structures	10	10	04-Apr-24	17-Apr-24																						
A1180	Punch Process	15	15	16-May-24	06-Jun-24																						
A1190	Final Inspections	10	10	07-Jun-24	20-Jun-24																						
A1200	Weather Days	10	10	21-Jun-24	05-Jul-24																						
A1210	Schedule Contingency	10	10	08-Jul-24	19-Jul-24																						
A1220	Substantial Completion	0	0		19-Jul-24																						

- Remaining Level of Effort
- Actual Level of Effort
- Actual Work
- Remaining Work
- Critical Remaining Work
- ◆

◆ Milestone

Garrison Garden Paseo

Full Schedule Report

Brinkmann Constructors



AEC8441

CONTRACTOR'S LICENSE

CONTRACTOR - BUILDING

Contractor Information:

BRINKMANN CONSTRUCTORS INC
16650 CHESTFIELD GROVE RD SUITE 100
CHESTERFIELD MO 63005

License Information:

Expiration: 4/4/2024

Authorized Signer's: DANIEL J. FEAGANS, ICC HOLDER, JASON SOMERS, DAVE RAHM, ERICK HARTZELL,

License Grades: UNLIMITED



Justin Clark
Chief Building Official

Contractor's Responsibilities:

Arvada City Code Sec. 18-72. Responsibilities. All licensees shall be responsible for any work requiring a permit under the provisions of this chapter, without limitation to the items as herein listed to:

- (a) Provide generally recognized safety measures and equipment to protect laborers and the public in general;
- (b) Present the required city license card when required by the building official or the building official's authorized representative;
- (c) Inform the building inspection division promptly of any change in licensee's address or telephone number;
- (d) Obtain a permit when the same is required;
- (e) Provide correct and honest factual information on all applications for permits;
- (f) Pay all fees assessed under authority of this chapter and other city regulations and to accurately inform the customer of the exact permit fee and other costs associated with obtaining a permit;
- (g) Construct without substantial departure from or disregard of drawings and specifications when such drawings and specifications have been filed and approved by the building inspection division and permit issued for same unless changes are approved by the building inspection division;
- (h) Perform the activity authorized by a permit in a proficient, workmanlike manner consistent with acceptable building practices;
- (i) Complete all work authorized by the permit issued under the authority of this chapter unless good cause is proved;
- (j) Notify the building official when work is ready for inspection, and provide access to and means for the inspection, or if access to the work has been denied by the property owner, to comply with the requirements of section 18-33(c);
- (k) Obtain all required inspections and special inspections when the same are required by this chapter;
- (l) Take all reasonable actions to assist the building inspection division in ensuring that all inspections, including a final inspection, are completed before the expiration of the building permit. This includes, but is not limited to, ensuring that work subject to inspection is not concealed by subsequent work, assisting in making timely arrangements for inspections so that approvals may be completed before a permit expires, and engaging in timely and continuing communications with the division concerning the inspection process until a final inspection is completed and the permit is closed;
- (m) Obtain a final inspection and approval, a certificate of completion, a temporary certificate of occupancy, or a certificate of occupancy, when required, upon completion of the work authorized by the licensee's permit;
- (n) Keep streets and sidewalks that are adjacent to construction sites and open to the public traffic free of obstructions, construction materials, equipment, debris, mud, dirt or any other material that may be a hindrance or hazard to vehicular or pedestrian traffic;
- (o) Observe and conform to all of the rules and regulations governing construction and land use in the city; and
- (p) Comply with all orders, conditions, and restrictions issued by written order of the building official or the Board.

MUNICIPAL CONTRACTOR'S LICENSE

CONTRACTOR RIGHT OF WAY

AEC10303

CONTRACTOR INFORMATION

R.G. BRINKMANN - ROW
16650 CHESTERFIELD GROVE ROAD
CHESTERFIELD MO 63005

LICENSE INFORMATION

Expiration: 4/19/2024

License Grades:

Authorized Signers: JEREMY HAMM JENNA SCHNELKER BRIAN SATTATHWALTE

Fee	Paid Amount	Paid Date
\$210.00	\$210.00	4/18/2023



Jenny Wolfschlag, P.E.
City Engineering

Contractor's Responsibilities:

***Notes Regarding Permits:

License and Permit: Municipal General Contractor License holder is the sole responsible party accountable for the work performed by subcontractors and is responsible for compliance with all city codes, specifications, and approved construction drawings.

Permitee: The municipal General Contractor is responsible for applying for and managing the permit. Subcontractors will perform their portion of the larger project under the supervision of the Municipal General Contractor and will no longer be required to obtain a separate city license or permit.

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 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.

Failure to Comply: Failure to comply may result in a Stop Work Order, suspension/revocation of permit, or of license.

Garrison Garden Paseo – Arvada, CO

Contract Clarifications

September 28, 2023

PROJECT SCOPE CLARIFICATIONS

GENERAL & SPECIAL CONDITIONS:

1. This proposal is based on the Addendum Documents dated September 14, 2023. and the geotechnical report prepared by Kumar & Associates, dated February 17th, 2023.
2. We have assumed that the project is fully tax exempt. It has been conveyed to Brinkmann that City, County and State of Colorado sales tax exemptions will be provided by the Owner.
3. Ownership is to confirm/perform tax exempt application/approval is in place.
4. Construction schedule shall be Two Hundred Seventy (270) calendar days from the date of notice to Proceed.
5. Within the project schedule of (270) days, (10) of them have been designated as weather days. In the event that weather affects the critical path activities, Brinkmann will notify the owner and provide a log of days impacted to-date with the current total days remaining.
6. The Contractor will provide a one (1) year workmanship warranty and obtain same of all subcontractors on all installed work unless as otherwise specifically required by the prime contract, or by the contract documents including Architect specifications.
7. We exclude all building permit & plan review fees, use taxes, inspection fees (less re-inspections caused by contractor), or other permit related fees as these are anticipated to be paid directly by the Owner. We exclude all tap fees, impact fees, use fees, connection fees, or other development fees which may be assessed by authorities having jurisdiction (AHJs).
8. For site security we have included 6' tall temporary chain link fencing with driven posts at the North and South ends of the site with lockable manual access gates.
9. We have assumed the Owner will assist Contractor in obtaining construction access agreements to the adjacent properties where the scope of work requires access to their property.
10. The following Owner Allowances have been included in Line Item #6 Side Grading, any costs exceeding these allowances will be the responsibility of the Owner:
 - a. Dewatering - \$10,000
 - b. Winter/Weather Conditions - \$10,000
11. Contractor to carry all trade permits. Ownership to review budget and make sure all water/sewer taps related fees have been captured per city requirements.
12. Force Majeure Delays: A Force Majeure Delay shall be caused by a Force Majeure event. In order to claim that a Force Majeure Delay has occurred, the contractor shall be required to notify the Owner,

Developer, and Architect of the Force Majeure Delay promptly, and in any event (3) business days after the claimed Force Majeure Delay becomes known to the Contractor. Any such notice shall specify the occurrence of the claimed Force Majeure Delay, nature of cause of the claimed delay and the work that is affected by the delay. A Force Majeure Delay shall be deemed to have commenced on the day that it begins if such notice is timely given or, if such notice is not given, shall be deemed to have commenced on the day after such notice is given. Any claimed Force Majeure Delay of which Contractor has given notice to the Owner and the Developer shall be deemed to be a Force Majeure Delay unless the Owner notifies Contractor objecting to the Contractor's claim for a Force Majeure Delay within (5) business days after receipt of the Contractor's notice.

13. Force Majeure events are, weather, labor strikes, work stoppages, slowdowns, or conditions beyond the control of Brinkmann. 10 critical path weather days are included in the construction schedule. In the event weather activities prevent critical path work from being executed by more than 10 days, the project schedule will be adjusted accordingly. A weather day is defined as a day when critical path activities cannot achieve 50% of reasonably expected production due to adverse weather events.
14. Unit Priced provided in the Bid Schedule can not be used as a basis for future changes in the scope of work.
15. We will be subcontracting more that 50% of the work for this project.
16. The Testing and Inspection costs were included in the Structural Engineering Bid Item.

All clarifications below are deviations/clarifications from the September 15, 2023, Construction Documents and Specifications. The GMP provided has been based upon the following scopes:

DEMOLITION:

1. We have not included any provisions for environmental studies; handling, removal, and/or disposal of hazardous materials or other environmental concerns, including but not limited to the resulting schedule delays should such be encountered once we have commenced with onsite work.
2. It is assumed there are no underground tanks, structures, utilities, etc. that will require demolition other than what are shown on the contract documents.

EARTHWORK:

1. Based on the geotechnical report provided for the site, the following has been included to address the potential for any ground movement. The Owner acknowledges that these recommendations reduce the potential for any movement but will not completely eliminate the potential for any movement as explained in the geotechnical report:
2. Rock excavation has been excluded.

ASPHALT PAVING:

1. The following asphalt paving sections have been included a 4" asphalt section over flowable fill.
2. No cost has been included for improvements to surrounding public roadways outside the demo extents shown on the civil drawings.

CONCRETE PAVING:

1. All curb, gutter, & sidewalk is assumed to reinforced as required pre the city of Arvada Specifications

RIGHT-OF-WAY WORK:

1. It is assumed that this entire project is performed under a right of way permit and this permit will be provided at no cost to Brinkmann constructors and its subcontractors.
2. It is assumed that the existing curb and gutter in the ROW remain in-place per plan during construction, other than locations to be removed for the proposed entry drives and parking. No cost for replacement of this curb and gutter has been included.
3. Unless specifically listed, no other public improvements have been included.

UTILITIES:

1. We have not included costs for Xcel utilities to the project, Power or any communication company conduits, transformers, pipes, or wire to the project site. We have included transformer secondary cables as indicated on the electrical one-line. We have not included the Xcel power transformer, the pad or vaults.
2. We have not included the submission, design, approval, and installation of Xcel equipment in our schedule. This is all assumed to be the responsibility of the City of Arvada. Any Delay by Xcel in the completion of the project will not be the responsibility of Brinkmann Constructors.
3. We have not included any offsite improvements including but not limited to utility extensions, storm water quality or conveyance to existing improvements offsite, borrow/export sites, or adjacent roadway improvements/extensions outside of what is shown on the contract documents.
4. We exclude cathodic protection of site water lines.
5. We have included the domestic and irrigation water line in the fire line costs.

SITE AMENITIES / LANDSCAPING:

1. We have not included any concrete pads under the 5.7 Play Structures.
2. Landscaping 1 year warranty is contingent upon Owner providing proof of adequate maintenance and care including but not limited to appropriate watering and maintenance schedules for the specified plant materials. Maintenance and upkeep of the landscape areas has been excluded from the GMP and shall be the responsibility of the Owner from the date of acceptance (mutually agreed upon) or substantial completion, whichever is sooner.

STEEL AND METALS:

1. We have included safety railings at headwalls for drainage structure as shown on CD5.0/CD5.1 to be 2" tube railing with a standard black painted finish.

WATERPROOFING & SEALANTS:

1. We have included a self-leveling silicone sealant at all new curb to sidewalk expansion joints.

PAINTING:

1. Painting of handrails has been included as standard black. Brinkmann has excluded any high-performance coating.

PLUMBING/HVAC:

1. PEX/CPVC piping has been included for domestic water piping, copper pipe is excluded.
2. Contractor is aware that the fire, irrigation, and domestic lines are inter-connected, and this does not meet city code. Contractor has priced what is shown in the drawings. Providing a code compliant system with a separate domestic tap will be an add to this bid.

ELECTRICAL/LOW VOLTAGE:

1. Excludes any provisions for EV charging.
2. Specified lighting vendor is no longer in business for Fixtures SB1 and SB2. Contractor reserves the right to provide alternate fixtures.

GENERAL AND SPECIFIC EXCLUSIONS

1. Our General Conditions include all personnel that are chargeable to the job. These personnel will be billed at an hourly rate not to exceed 40 hours per week.
2. The GMP amount does not include additional work which may result from subsequent plan reviews and the ensuring code interpretation of the AHJs over the project.
3. Construction costs and fees associated with the installation, modification, or removal of dry utilities on or off site including primary electric, public street lighting, or other special services are anticipated to be coordinated by Brinkmann and paid for by the Owner.
4. Builder's Risk is excluded and assumed to be provided by the Owner. Brinkmann reserves the right to review and capture any costs associated with compliance of the Owner's policy.
5. Builder's Risk deductibles are assumed to be paid by the Owner. Flood plain, hazardous material, and similar premiums are excluded.
6. CAD and/or BIM modeling and coordination is not included.
7. Testing services (i.e., construction materials testing), including code required special inspections, shall be contracted and paid for by Brinkmann, We have only included testing and inspections for soil compaction,

structural concrete, and structural Welding.

8. We have not included overtime, premium time or shift work.
9. We exclude costs associated with wildlife habitat concerns such as remediation or relocation, as well as pest control measures such as termite treatment, prairie dog removal, etc.
10. We have not included extended maintenance periods or monitoring agreements for scopes of work not specifically identified in the contract documents, including but not limited to landscaping, conveying systems, auto-doors, fire alarm monitoring, etc.
11. We have not included any provisions for LEED.
12. Obtaining temporary or permanent easements such as air rights for crane swings or easements for retaining wall excavations are the responsibility of the Owner, and not included.
13. Pricing does not include cost associated with any future pricing increases caused by government and/or unforeseen changes including but not limited to taxing, tariffs, etc.

Bidding RFIs - 8/21/23

GeoTechnical Report

- Groundwater Conditions: Geotech report states that groundwater was not encountered nor did any of the borings accumulate with groundwater. Special Conditions section SC-7 Protection Water Protection states that the GC shall provide all pumps. Please confirm acceptable to exclude all dewatering costs at this time. If not acceptable please confirm what allowance GCs shall carry for potential cost as a separate line item in the bid form.

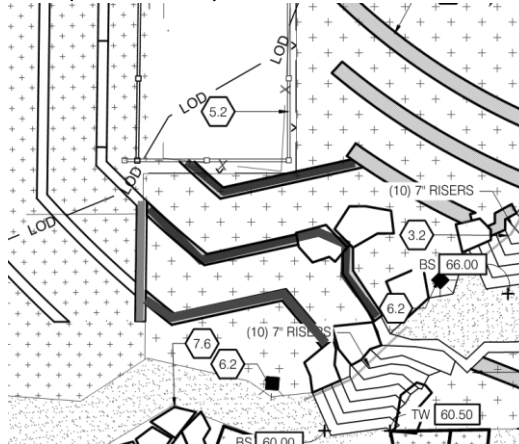
General

- Please confirm that all applicable City departments have reviewed and signed off on the provided plan set, including but not limited to Civil, Landscape, Irrigation, Stormwater, ROW, etc.
- We assume engineering for the steel trellis and retaining walls will be the responsibility of the Contractor, please confirm that the concrete foundations design for the trellis and monument sign have already been designed by the EOR as depicted in the plans provided.
- Please clarify what specification and finish expectations for 'weathered steel' (sheets S-101/S-301, 6/L401. Etc.)
- Please confirm special inspections and material testing is by the Contractor.
- Typical of all plans: Can all work that is not included in this project be greyed/dimmed so clear scope of work can be identified.
- Special Provisions - Section 20 Contractor License: Please confirm the City shall waive costs for all for all subdivision permits, including but not limited to, electrical, site disturbance, retaining wall, ROW, lane closure, traffic control permits, development permit, etc.
- Limits of disturbance do not appear to be consistent between civil and landscaping pages and coordinated with the adjacent construction projects. Please confirm which document shall govern under this proposal.
- Special Conditions - SC-18 Concrete Finishes: Please provide what finish the exposed concrete and any seat walls should be.
- Special Conditions - SC-18 Concrete Winter Protection: Due to timing of project, schedule appears that concrete will be poured during the winter. Not knowing the extent of winter weather, will the client accept a winter protection allowance that will include blankets, admixtures, hot water to be able to continue with schedule?

Landscape

- L201

- Horizontal wall (Red below) on the Ralston Garden Project MSE Wall is not part of that project's scope. This needs to be part of the Garrison Paseo Scope per Carrie Brisco.
- There appears to be three new sections of retaining wall that are not labeled with a keynote but graphically appear similar to the Ralston Garden's retaining wall (blue below). Please confirm these are MSE block retaining walls.



- L202
 - Drinking fountain (5.8) does not appear to have domestic water ran to that location on the civil documents. Please confirm how water will be ran to the drinking fountain.
- L203
 - Please provide a detail on what the connection in the South corner where the new fence will tie into an existing galvanized chain-link fence?
- L300/L301
 - Please provide an updated drawing that shows the extent of work for this project. All surrounding areas to be dimmed or greyed out.
- L400
 - Detail 5: Please confirm the desired finish of the 2" tube steel railing?
 - Detail 7: Please clarify the basis of design for the Monolithic stone slab retaining wall including stone type, color, and expected width (when facing wall) per piece.
- L401
 - Detail 1: Please confirm if Cedar Planks shall be stained or left unfinished?
 - Fence and Gate (Details 1,2,3): Finishes are hard to follow, please confirm all components of the fence (posts, hardware and mesh) shall be galvanized with just the panels to be corten steel.
 - Detail 7: Please confirm the thickness of these panels.

- Detail 6: Please confirm welcome sign is a design-build contract inclusive of a foundation design.
- L402
 - Please confirm that where there hexagon is not shaded in on the trellis the 'white' is open void space.
- L403
 - Detail 2: please confirm required footing size and reinforcement for the planter boxes.

Civil

- Typical of all headwalls – please provide detail showing required railing locations, design and attachment details in all locations for entire project.
- CD2.0
 - General Notes:
 - Item J – Is the client responsible for the site disturbance permit?
 - Erosion Control Note "M" - Has the City determined a location for an off-site concrete washout area or shall Contractor assume Eco Pans (or similar) shall be required for this project.
 - Street Notes Item E – Is this entire project considered ROW work?
 - Utility Note Item A – Current Arvada ROW standard is 72hrs prior to any shutdowns or interruptions, please advise on which protocol the general contractor will follow.
 - Utility Note Item C – Please confirm it is Contractor's choice which PVC fire hydrant pipe can be provided from two choices listed.
- CD3.0
 - 'Garden Structures to be Removed' - Please confirm if Contractor is to perform this demolition and if the adjacent Gardner's are aware of this?
 - Please confirm that the City has coordinated the temp fence and limits of disturbance with the adjacent Gardeners.
 - Please confirm that Overhead utilities to be relocated to underground shall be by Xcel and shall not be the responsibility of the General Contractor.
- CD3.1
 - Notes about the existing 18" RCP demo are confusing. Please show graphically where the removal starts by a distinct line and/or grey out section to remain.
 - Demolition scope and extents of work shown on L200 need to be coordinated to show project specific items that need to be removed. (also needs to be fixed on CD4.1)
- CD5.0
 - 'Contractor shall tie to existing sidewalk' (West side apartments). Currently there is no gate in the fence. Please confirm if Contractor is required to include modification of existing fence in this proposal or just install sidewalk up to the property line.

- Sidewalk chase detail (directs to CD5.1) appears to be missing from the drawings. Please provide detail required for this sidewalk chase.
- CD5.1
 - Proposed CDOT Manhole at Garrison tie-in (Station 1+19.09 on sheet CD7.1) appears to lack detail and size. Please confirm design.
- CD6.0
 - New fence gates do not appear to align with the adjacent property's existing sidewalks (Gardens). Please confirm no sidewalk work is required under this contract for the Gardens.
- CD6.1/CD6.4
 - Grading along the Ralston Garden's property near the retaining walls appear to lack clarity on the interaction/connections of exiting walls and new construction. Existing walls do not appear to match wall design on L201.
 - Elevations indicated on the retaining wall profiles and TW/BW appear to indicate upwards of a 3' tall, exposed wall face. Have these elevations been coordinated with landscape? Detail 7/L400 states this will need to be monolithic. This would require a single 36-48" tall single piece of stone to be placed as the retaining wall per location the entire length of the wall.
 - Please provide detail on thickened edge of curb wall along sidewalk (noted on plan CD5.0, elevations on CD6.3). There appears to be a tall, exposed face of concrete on Cross section C-C on CD6.3 that would potentially require reinforcement and/or a footing.
- CD6.6, 6.7 & 6.8
 - Please confirm that the "construct wall" shall be made out of monolithic stone (Detail 7 on L400). Please confirm if these walls need to be engineered. See question above about coordination of landscape detail and civil.
 - Please provide detail and finish desired for 36" tall railing to be mounted on top of the stone retaining wall (detail 7/L400).
- CD7.0
 - Plans show RCP Stormwater Pipe connecting the sections of Drainage Channel that shall be below grade. The Water feature drawings show a box culvert. These documents do not appear to be coordinated. Please confirm what shall be included in the base proposal.
 - Typical of all manholes - contractor is unable to locate Manhole size designation on plans/drainage profiles.
- CD7.3
 - The pipe connecting the CDOT Type C Inlet to the adjacent Ralston Garden's outlet structure is not shown on these plans. This scope should be part of the Garrison Paseo scope.
- CD7.4

- Generic headwall and exit structure detail is not adequate to price the specific locations on the actual utility plans. Example CD7.3 the headwall wraps 3 of the 4 sides of the pool structure with walls varying 1-4' tall. How thick is wall, what reinforcement is necessary, is a footer required. Etc.
- CD 8.0
 - No domestic water lines appear to be shown providing water to the drinking fountain. Please confirm what scope should be included.
- CD9.0
 - Please provide detail for required footing for signs.
 - Please confirm reuse of existing signs that are noted to be relocated and that new signs in these locations are not required.

Irrigation

City of Arvada – Irrigation Construction Notes (IR100)

- #3 – Please confirm contractor shall provide and install controller noted on the Irrigation Details (IR300) and upon City acceptance include the removal of controller and installation of City supplied 'Motorola' controller.
- #4.3 – How long after project acceptance and turnover will the contractor need to notify the city of Arvada parks department for annual maintenance and inspections for?

Irrigation Construction Notes

- Sheet L000 Note #17 Under Planting Notes States irrigation shall be design build. IR drawings provided appear to be already designed by Hydro systems. Please confirm bid shall be per the plans provided and no design shall be included.
- IR202 – Point of Connection – 1"
 - Notes states the installation of tap, service line, meter pit and stub to this location is by others. This does not appear on Civil Sheet CD8.0. Please clarify if contractor is to include this utility work in the bid. If required please provide irrigation tap design and callouts for scope to be included on utility plans.

Electrical

- Has this design and project been submitted to Xcel? If so, when is Xcel planning to perform its portion of the installation?
- Please confirm desired base for sight electrical bollards and light poles.

Water Feature

- When will the ditch water be turned off? Is there a specific schedule this work must occur within? When must water flow be restored?
- Notes on the plans indicated that the Weir Plate and Existing Structure is to be removed, notes on the provided photographs suggest Ditch Company shall remove Weir. Please clarify demolition scope contractor shall include in bid.
- Box culvert is shown on Sheet WF2.1 while the utility plans (CD7.0) show RCP. Please confirm which is required.

- Flag Note 2 on WF1.0 makes reference to the City of Aurora. Please confirm this should be the City of Arvada.
-



REPORT TO CITY COUNCIL RESOLUTION

AGENDA ITEM
8.B.1.

TO: THE HONORABLE CITY COUNCIL

DATE: November 27, 2023

SUBJECT: R23-110, A Resolution Authorizing an Intergovernmental Agreement for Provision of Juror List by and between the City of Arvada and the State of Colorado Judicial Department

Report in Brief

PRESENTER: Presiding Judge Kathryn Kurtz

From time to time the Arvada Municipal Court (AMC) holds jury trials to hear criminal cases. The Office of the State Court Administrator is required by law to maintain master juror lists for all Colorado State Courts. The State Court Administrator makes its master juror list available to municipal courts, at no cost, subject to the terms of a standard intergovernmental agreement (IGA). Under this IGA the State will provide the AMC with portions of its 2024 master juror list for residents in the City of Arvada. This will allow the AMC to more efficiently issue municipal jury summonses and administer related processes.

The Arvada team recommends that the City Council approve R23-110, A Resolution Authorizing an Intergovernmental Agreement for Provision of Juror List by and between the City of Arvada and the State of Colorado Judicial Department.

Financial Impact

This IGA has no fiscal impact. The State provides the 2024 master juror list at no charge.

Background

Municipal court defendants may, depending on the alleged offense, be entitled to a jury trial. Each jury trial requires the AMC to summon a pool of potential jurors from eligible Arvada residents. Under this IGA the State will provide the AMC with the portion of its 2024 master juror list listing current jury-eligible residents within the City of Arvada.

Discussion

Utilizing the State's master juror list is more efficient than randomly summoning jurors based on City records, which may be outdated or may list persons who are ineligible for jury service. The State's master juror list is maintained and kept substantially accurate in accordance with applicable statutes, therefore helping to ensure that AMC jury summonses are in fact sent to persons who are eligible to serve as jurors in an Arvada municipal case.

Public Contact

Posting of the City Council agenda.

Commission Recommendation

na

Strategic Alignment

This IGA supports the City's Safe Community strategies by ensuring efficient administration of municipal jury selection processes.

Alternative Courses of Action

na

Recommendation for Action

The Arvada team recommends that the City Council approve R23-110, A Resolution Authorizing an Intergovernmental Agreement for Provision of Juror List by and between the City of Arvada and the State of Colorado Judicial Department.

Suggested Motion:

I move that R23-110, A Resolution Authorizing an Intergovernmental Agreement for Provision of Juror List by and between the City of Arvada and the State of Colorado Judicial Department, be (approved) (rejected).

Prepared by:
Aaron Jacks, Assistant City Attorney

Reviewed by:

Approved by:

Alyssa Gleinn, Legal Specialist-Prosecution	10/25/2023
Kathryn Kurtz, Municipal Judge	10/26/2023
Linda Haley, Deputy City Manager	10/26/2023
Rachel Morris, City Attorney	11/14/2023
Lorie Gillis, City Manager	11/15/2023

Enclosure, exhibits & attachments required to support the report

RESOLUTION NO. R23-110

A RESOLUTION AUTHORIZING AN INTERGOVERNMENTAL AGREEMENT FOR
PROVISION OF JUROR LIST BY AND BETWEEN THE CITY OF ARVADA AND THE
STATE OF COLORADO JUDICIAL DEPARTMENT

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 Intergovernmental Agreement for Provision of Juror List by and between the City of Arvada and the State of Colorado Judicial Department, which is in substantially the same form as that attached hereto.

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

APPROVED AND ADOPTED this 27th day of November, 2023.

Lauren Simpson, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:

Rachel A. Morris, City Attorney

By: _____

INTERGOVERNMENTAL AGREEMENT FOR PROVISION OF JUROR LIST

1. PARTIES. The Parties to this Intergovernmental Agreement for Provision of Juror List (“Agreement”) are the COLORADO JUDICIAL DEPARTMENT (“Department”), by and through the Office of the State Court Administrator located at 1300 Broadway, Suite 1200, Denver, Colorado 80203, and the CITY OF ARVADA (“City”). Department and City may be referred to collectively as “Parties.” In consideration of their mutual promises and for their mutual benefit, the Parties agree as follows:
2. RECITALS & PURPOSE. The Department is required by C.R.S. § 13-71-108 to compile and maintain, in electronic form, a master juror wheel identifying potential jurors for the state courts of Colorado and is charged with certain responsibilities concerning public disclosure of information contained on the list of potential jurors. The City is required by C.R.S. § 13-10-114(2) to establish a procedure for summoning and selecting prospective jurors. The Parties desire to make pertinent portions of Department’s current master juror wheel available to the City for purposes of identifying prospective jurors within the City’s jurisdiction. The Parties are authorized by C.R.S. § 29-1-203 to enter into agreements with one another to provide any function or service lawfully authorized to each.
3. EFFECTIVE DATE. This Agreement shall be effective upon the date it is fully executed by both Parties and shall terminate upon the City’s performance of responsibilities as identified in subsection 5.d. below.
4. THE DEPARTMENT’S RESPONSIBILITIES. The Department shall prepare and deliver a list of potential jurors (“Juror List”) derived from its 2024 master juror wheel to the City, and at no cost to the City, as follows:

Boundaries: Zip codes below.

Zip codes: 80002, 80003, 80004, 80005, 80007, 80030, 80033, 80403

Other Features: (If any)

Format: Excel Spreadsheet

Delivered by means of Email:

Emailed to:

Abby Cook, Court Administrator, Arvada Municipal Court

acook@arvada.org

Delivery date: December 4, 2023

5. THE CITY’S RESPONSIBILITIES.
 - a. The City shall treat the Juror List as a confidential record and shall not permit the inspection of the Juror List by the public or release the record by any means to the public or to any person other than City employees who, by virtue of their job duties for the City, need access to the Juror List. The City will instruct its employees, agents, or any individual with access to the Juror List, that they are bound by this duty of confidentiality. The City agrees to immediately notify the Office of the State Court

Administrator by telephone at (720) 625-5000 upon discovery of any unauthorized use or disclosure of the Juror List.

- b. In the event that the City receives a request to inspect or copy the Juror List or any part thereof, the City shall promptly refer the requesting party to the Office of State Court Administrator at 1300 Broadway, Suite 1200, Denver, CO 80203 or by telephone at (720) 625-5000.
- c. The City shall only use the data furnished in the Juror List for the purpose of selecting jurors for trials in the City's courts and the City shall not use the data for any other purpose.
- d. Upon discontinuing the use of the Juror List for any reason whatsoever, the City shall return to the Department all copies of the Juror List, in form and manner as requested by the Department. Any copy or copies that cannot be returned must be destroyed.

The terms and conditions in the above Agreement are accepted by the Parties by authorized signatures below.

COLORADO JUDICIAL DEPARTMENT

By: _____
Typed: Steven Vasconcellos
Title: State Court Administrator
Date: _____

CITY OF ARVADA
MUNICIPAL COURT

By: _____
Printed: Lauren Simpson
Title: Mayor
Date: November 27, 2023

ATTEST:

APPROVED AS TO FORM:

Rachel A. Morris, City Attorney

By: _____
City Clerk

By: _____
Aaron P. Jacks, Sr. Asst. City Attorney



REPORT TO CITY COUNCIL

AGENDA ITEM
13.A.

TO: THE HONORABLE CITY COUNCIL

DATE: November 27, 2023

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, Lorie Gillis, will review with City Council the tentative schedule and make any adjustments necessary.

Prepared by:
Chris Koch, CCO Admin

Reviewed by:

Approved by:

Rachel Morris, City Attorney 11/14/2023

Lorie Gillis, City Manager 11/15/2023

Enclosure, exhibits & attachments required to support the report

2023/2024 CITY COUNCIL WORKSHOPS, STUDY SESSIONS, PRESENTATIONS AND RETREATS (TENTATIVE)

WORKSHOPS	Date	Lead
Bond Project Update Public Works will provide the City Council with an update on the bond projects for streets and utilities. There are two street projects. The first project is Ralston Road Phase 2 (Yukon Street to Garrison Street). The second project is W. 72nd Avenue (Swadley Court to Kipling Street). The utility bonds were issued in December 2022 and an update on the spending plan for each fund will be presented.	Dec 11	PW
Infrastructure Annual Report	Dec 11	Utilities/PW
Community Survey @Business meeting	Dec 18	CMO
2024		
City Budget and Financial Resilience @Business meeting	Jan 8	Fin
Financial Resiliency Recommendations Provide City Council an update on the OSE's SR9: By 12/2024 based on long-term financial projections and updated master plans, develop financial resiliency recommendations to ensure adequate and ongoing investment in city infrastructure and core services. This workshop will present the summary of long range unfunded needs by work systems. Next Steps will be [M9B] By 12/2023 develop a city-wide consolidated level of service summary. [M9C] By 12/2023 prepare an exhaustive list of funding source opportunities for closing identified infrastructure and core service funding gaps.	Jan 8	Fin
Fiscal Policy @Business meeting	Jan 22	Fin
Comp Plan and Land Use/Development Review	Jan 29	CED
Affordable Housing @Business meeting	Feb 5	
Traffic Engineering @Business meeting	Feb 12	PW
Police Staffing @Business meeting	Mar 4	CMO
Traffic Calming @Business meeting	Mar 4	PW
Quarterly Bond Projects Update	Mar 11	PW
DEI @Business Meeting	Mar 18	CMO
Strategic Plan	Mar 25	CMO
Pavement Management @Business Meeting	Apr 1	PW
Utility Financial Strategy/Utility Master Planning	Apr 8	Utilities
Utilities Master Plan Implementation on Projects	Apr 8	Utilities
Park Maintenance Standards	Apr 22	VCN
Sustainability @Business meeting The Arvada Sustainability Division will provide the City Council with an overview of division projects since the inception of the program in January 2023. The workshop will highlight achievements from 2023 and provide a vision for the future of Arvada Sustainability, with a focus on upcoming city-wide sustainability and climate action planning efforts.	May 6	VCN
Waste Hauling Fees	May 13	Utilities
Quarterly Bond Projects Update	Jun 10	PW
	July 8	
Water, Wastewater & Stormwater 2025 Rates/Fees	July 22	Utilities
	Aug 12	
Water, Wastewater & Stormwater 2025 Rates/Fees	Aug 26	Utilities
Quarterly Bond Projects Updates	Sept 23	PW
Final Water, Wastewater & Stormwater 2025 Rates/Fees	Sept 23	Utilities
Transportation System Plan	Oct 14	PW

Updated ADA Transition Plan	Oct 28	PW
	Nov 11	
	Dec 9	
PRESENTATIONS		
STUDY SESSIONS		
BID and Chamber funding	TBD	
WORKSHOP TBD's		
Right of Way Acquisition @Business meeting	TBD	CED
Flood Plain Management	TBD	
Water Infrastructure for Fire Protection	TBD	Utilities
Smart Meters Update	TBD	Utilities
Capital Campaign Update and strategy discussion	TBD	CMO/Fin
Community Engagement	TBD	CMO
Fleet Electrification	TBD	Utilities
Pre-Sentencing/One Small Step	TBD	Courts
Meyers Pool Provide City Council an update on the VCN's SR3: By 12/2025 develop a maintenance and reinvestment plan to ensure a sustainable, resilient and beautiful community of parks, trails, open space and medians in alignment with our diverse, changing and growing community and VCN's SR3 Milestone [M3H] By 7/2024 replace Meyer's Pool with a new 50 meter natatorium.	TBD	CMO
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 co-locate opportunities, IGA member updates, and connections to current assets (city buildings, traffic, signals, utilities, radio, etc.).	TBD	PW
Problem Properties	TBD	P.D.
Activation of Historical Assets	TBD	VCN
Customer Service Philosophy	TBD	CMO
Ask Arvada Update	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		

