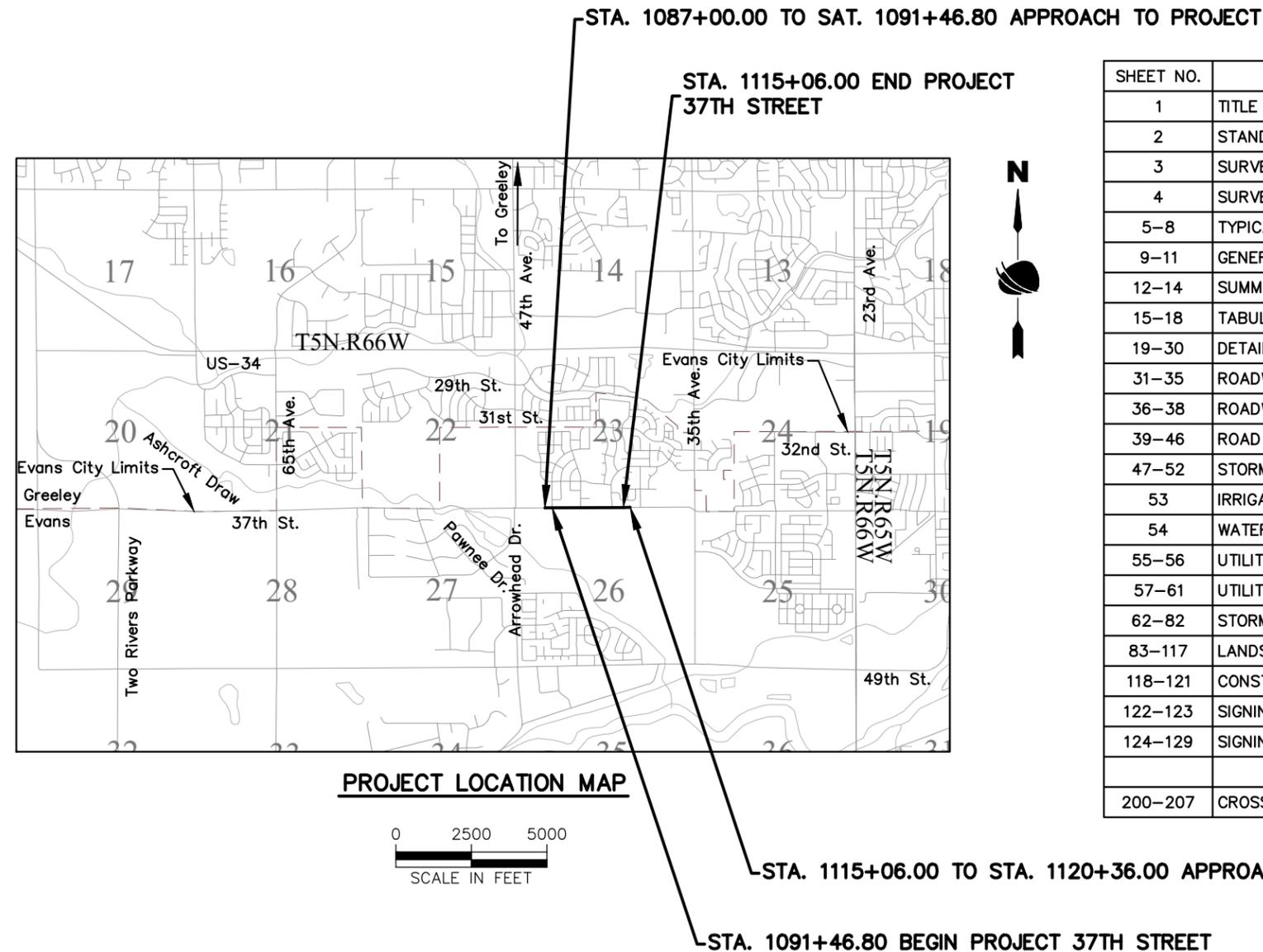


# CITY OF EVANS, COLORADO

## CONSTRUCTION BID PLANS OF PROPOSED 37TH STREET WIDENING PHASE 2A WELD COUNTY

TABULATION OF LENGTH & DESIGN DATA	
STATION	LINEAR FEET
APPROACH TO PROJECT =	
STA. 1087+00.00 TO STA. 1091+46.80	447
BEGIN PROJECT 37TH STREET =	
STA. 1091+46.80	2,359
END PROJECT 37TH STREET =	
STA. 1115+06.00	530
APPROACH TO PROJECT =	
STA. 1115+06.00 TO STA. 1120+36.00	530
<b>TOTAL</b>	<b>3,336</b>
<b>SUMMARY OF PROJECT LENGTH</b>	<b>FEET</b>
<b>PROJECT GROSS LENGTH</b>	<b>3,336</b>

DESIGN DATA	37TH STREET (40 MPH)
MAXIMUM RADIUS OF CURVE	6000
MAXIMUM GRADE	2.29%
MINIMUM S.S.D. HORIZONTAL	550 FT.
MINIMUM S.S.D. VERTICAL	305 FT.
MAXIMUM DESIGN SPEED	40 MPH
2040 DESIGN TRAFFIC	ADT 14,000
DHV TRUCK %	2%
CLEAR ZONE DISTANCE (TANGENT)	26-32 FT.



SHEET NO.	INDEX OF SHEETS
1	TITLE SHEET
2	STANDARD PLANS LIST
3	SURVEY CONTROL DIAGRAM
4	SURVEY CONTROL TABULATION
5-8	TYPICAL SECTIONS
9-11	GENERAL NOTES
12-14	SUMMARY OF APPROXIMATE QUANTITIES
15-18	TABULATION SHEETS
19-30	DETAIL SHEETS
31-35	ROADWAY PLANS
36-38	ROADWAY PROFILES
39-46	ROAD APPROACHES
47-52	STORM SEWER PLAN AND PROFILE
53	IRRIGATION PLAN AND PROFILE
54	WATERLINE TABULATION AND NOTES
55-56	UTILITY GENERAL NOTES
57-61	UTILITY PLANS
62-82	STORM WATER MANAGEMENT PLAN
83-117	LANDSCAPING PLANS
118-121	CONSTRUCTION PHASING
122-123	SIGNING AND PAVEMENT MARKING TABULATION
124-129	SIGNING AND PAVEMENT MARKING PLANS
200-207	CROSS SECTIONS

PROJECT LIST OF CONTACTS		
City of Evans	Mark Oberschmidt	970-475-1110
Utilities	See Utility Plans	



Print Date: 2/19/2024  
 File Name: GN P2A-001 TITLE SHEET.DWG  
 Horiz. Scale: As Noted    Vert. Scale: N/A

Sheet Revisions		
Date	Comments	Initials

<b>As Constructed</b>
No Revisions:
Revised:
Void:

37TH STREET WIDENING PHASE 2A TITLE SHEET			
Designer:	T. Tuttle	Structure Numbers:	
Detailer:	S. Hemler	Sheet Subset:	GENERAL
Subst Sheets: 1 of 2			

<b>Project No.</b>
37TH STREET 2A
Drawing Number GN-001
Sheet Number 1

Plot Date: 2/19/2024 4:25 PM Plotted By: Sarah Hemler  
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FOR CONSTRUCTION 2/24/2024

PLAN NUMBER	M STANDARD TITLE	PAGE NUMBER
■ M-100-1	STANDARD SYMBOLS (3 SHEETS)	1-3
■ M-100-2	ACRONYMS AND ABBREVIATIONS (4 SHEETS)	4-7
□ M-203-1	APPROACH ROADS	8
□ M-203-2	DITCH TYPES	9
□ M-203-11	SUPERELEVATION CROWNED AND DIVIDED HIGHWAYS (3 SHEETS)	10-12
□ M-203-12	SUPERELEVATION STREETS (2 SHEETS)	13-14
■ M-206-1	EXCAVATION AND BACKFILL FOR STRUCTURES (2 SHEETS)	15-16
□ M-206-2	EXCAVATION AND BACKFILL FOR BRIDGES (2 SHEETS)	17-18
■ M-208-1	TEMPORARY EROSION CONTROL (11 SHEETS)	19-29
■ M-210-1	MAILBOX SUPPORTS (2 SHEETS)	30-31
□ M-214-1	NURSERY STOCK DETAILS	32
□ M-216-1	SOIL RETENTION COVERING (2 SHEETS)	33-34
□ M-412-1	CONCRETE PAVEMENT JOINTS (9 SHEETS)	<del>35-39</del>
	<i>(REVISED ON JANUARY 31, 2022)</i>	
□ M-412-2	CONCRETE PAVEMENT CRACK REPAIR (6 SHEETS)	
	<i>(REVISED ON SEPTEMBER 6, 2022)</i>	
□ M-510-1	STRUCTURAL PLATE PIPE H-20 LOADING	40
□ M-601-1	SINGLE CONCRETE BOX CULVERT (CAST-IN-PLACE) (2 SHEETS)	41-42
□ M-601-2	DOUBLE CONCRETE BOX CULVERT (CAST-IN-PLACE) (2 SHEETS)	43-44
□ M-601-3	TRIPLE CONCRETE BOX CULVERT (CAST-IN-PLACE) (2 SHEETS)	45-46
□ M-601-10	HEADWALL FOR PIPES	47
□ M-601-11	TYPE "S" SADDLE HEADWALLS FOR PIPE	48
□ M-601-12	HEADWALLS AND PIPE OUTLET PAVING	49
□ M-601-20	WINGWALLS FOR PIPE OR BOX CULVERTS (2 SHEETS)	50-51
□ M-603-1	METAL PIPE (4 SHEETS)	52-55
■ M-603-2	REINFORCED CONCRETE PIPE	56
□ M-603-3	PRECAST CONCRETE BOX CULVERT	<del>57</del>
	<i>(REVISED ON SEPTEMBER 10, 2020)</i>	
□ M-603-4	CORRUGATED POLYETHYLENE PIPE (AASHTO M294) AND CORRUGATED POLYPROPYLENE PIPE (AASHTO M330) (2 sheets)	<del>58</del>
	<i>(REVISED ON MARCH 7, 2022)</i>	
■ M-603-5	POLYVINYL CHLORIDE (PVC) PIPE (AASHTO M304)	59
□ M-603-6	STEEL REINFORCED POLYETHYLENE RIBBED PIPE (AASHTO MP 20)	60
□ M-603-10	CONCRETE AND METAL END SECTIONS	61
□ M-603-12	TRAVERSABLE END SECTIONS AND SAFETY GRATES (3 SHEETS)	62-64
□ M-604-10	INLET, TYPE C	65
□ M-604-11	INLET, TYPE D	66
■ M-604-12	CURB INLET TYPE R (2 SHEETS)	67-68
□ M-604-13	CONCRETE INLET TYPE 13	69
■ M-604-20	MANHOLES (3 SHEETS)	70-72
□ M-604-25	VANE GRATE INLET (5 SHEETS)	73-77
	<i>(REVISED ON FEBRUARY 3, 2023)</i>	
□ M-605-1	SUBSURFACE DRAINS	78

PLAN NUMBER	M STANDARD TITLE	PAGE NUMBER
□ M-606-1	MIDWEST GUARDRAIL SYSTEM TYPE 3 W-BEAM 31 INCHES (19 SHEETS)	<del>79-97</del>
	<i>(REVISED ON MARCH 5, 2020)</i>	
□ M-606-13	GUARDRAIL TYPE 7 F-SHAPE BARRIER (4 SHEETS)	98-101
□ M-606-14	PRECAST TYPE 7 CONCRETE BARRIER (4 SHEETS)	<del>102-104</del>
	<i>(REVISED ON FEBRUARY 9, 2023)</i>	
□ M-606-15	GUARDRAIL TYPE 9 SINGLE SLOPE BARRIER (11 SHEETS)	<del>105-115</del>
	<i>(REVISED ON FEBRUARY 17, 2023)</i>	
□ M-607-1	WIRE FENCES AND GATES (3 SHEETS)	116-118
□ M-607-2	CHAIN LINK FENCE (3 SHEETS)	119-121
□ M-607-3	BARRIER FENCE	122
□ M-607-4	DEER FENCE, GATES, AND GAME RAMPS (7 SHEETS)	<del>123-127</del>
	<i>(REVISED ON JULY 13, 2020)</i>	
□ M-607-10	PICKET SNOW FENCE	128
□ M-607-15	ROAD CLOSURE GATE (9 SHEETS)	129-137
■ M-608-1	CURB RAMPS (10 SHEETS)	138-147
■ M-609-1	CURBS, GUTTERS, AND SIDEWALKS (4 SHEETS)	148-151
□ M-611-1	CATTLE GUARD (2 SHEETS)	152-153
□ M-611-2	DEER GUARD (2 SHEETS)	154-155
□ M-614-1	RUMBLE STRIPS (3 SHEETS)	156-158
□ M-614-2	SAND BARREL ARRAYS (2 SHEETS)	159-160
□ M-615-1	EMBANKMENT PROTECTOR TYPE 3	161
□ M-615-2	EMBANKMENT PROTECTOR TYPE 5	162
□ M-616-1	INVERTED SIPHON	163
□ M-620-1	FIELD LABORATORY CLASS 1	164
□ M-620-2	FIELD LABORATORY CLASS 2 (2 SHEETS)	165-166
□ M-620-11	FIELD OFFICE CLASS 1	167
□ M-620-12	FIELD OFFICE CLASS 2	168
■ M-629-1	SURVEY MONUMENTS (2 SHEETS)	169-170

PLAN NUMBER	S STANDARD TITLE	PAGE NUMBER
□ S-612-1	DELINEATOR INSTALLATIONS (8 SHEETS)	
	<i>(REVISED ON NOVEMBER 7, 2023)</i>	
□ S-613-1	ROADWAY LIGHTING (6 SHEETS)	
	<i>(REVISED ON SEPTEMBER 30, 2020)</i>	
□ S-613-2	ALTERNATIVE ROADWAY LIGHTING (4 SHEETS)	
	<i>(NEW, ISSUED ON SEPTEMBER 30, 2020)</i>	
□ S-613-4	TRAFFIC SIGNAL ONE-LINE DIAGRAMS (6 SHEETS)	
	<i>(NEW, ISSUED ON JUNE 15, 2023)</i>	
■ S-614-1	GROUND SIGN PLACEMENT (2 SHEETS)	188
■ S-614-2	CLASS I SIGNS	189
□ S-614-3	CLASS II SIGNS	190
□ S-614-4	CLASS III SIGNS (3 SHEETS)	191-193
□ S-614-5	BREAK-AWAY SIGN SUPPORT DETAILS FOR CLASS III SIGNS (2 SHEETS)	194-195
□ S-614-6	CONCRETE FOOTINGS AND SIGN ISLANDS FOR CLASS III SIGNS (2 SHEETS)	196-197
□ S-614-8	TUBULAR STEEL SIGN SUPPORT DETAILS (7 SHEETS)	198-204
	<i>(REVISED ON DECEMBER 29, 2020)</i>	
<del>□ S-614-9</del>	<del>PEDESTRIAN PUSH BUTTON POST ASSEMBLY (2 SHEETS)</del>	<del>205-206</del>
	<i>(SUPERSEDED ON JANUARY 23, 2020 BY S-614-45)</i>	
□ S-614-10	MARKER ASSEMBLY INSTALLATIONS	207
□ S-614-11	MILEPOST SIGN DETAIL FOR HIGH SNOW AREAS	208
□ S-614-12	STRUCTURE NUMBER INSTALLATION (2 SHEETS)	209-210
□ S-614-14	FLASHING BEACON AND SIGN INSTALLATIONS (4 SHEETS)	211-214
□ S-614-20	TYPICAL POLE MOUNT SIGN INSTALLATIONS	215
□ S-614-21	CONCRETE BARRIER SIGN POST INSTALLATIONS (2 SHEETS)	216-217
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□ S-614-22	TYPICAL MULTI-SIGN INSTALLATIONS	218
□ S-614-40	TYPICAL TRAFFIC SIGNAL 30'-75' DOUBLE MAST ARMS 65'-75' SINGLE MAST ARMS (5 SHEETS)	219-223
	<i>(REVISED ON JULY 22, 2022)</i>	
□ S-614-40A	ALTERNATIVE TRAFFIC SIGNAL 25'-55' SINGLE MAST ARMS (4 SHEETS)	224-227
	<i>(REVISED ON JULY 22, 2022)</i>	
□ S-614-41	TEMPORARY SPAN WIRE SIGNALS (13 SHEETS)	228-240
□ S-614-42	CABINET FOUNDATION DETAIL (4 SHEETS)	241-244
□ S-614-43	TRAFFIC LOOP AND MISCELLANEOUS SIGNAL DETAILS (8 SHEETS)	245-252
□ S-614-44	PEDESTAL POLE SIGNALS (2 SHEETS)	253-254
□ S-614-45	PEDESTRIAN PUSH BUTTON POST ASSEMBLY DETAILS (6 SHEETS)	
	<i>(REVISED ON DECEMBER 3, 2020)</i>	
□ S-614-50	STATIC SIGN MONOTUBE STRUCTURES (12 SHEETS)	255-266
□ S-614-60	DYNAMIC SIGN MONOTUBE STRUCTURES (14 SHEETS)	267-280
■ S-627-1	PAVEMENT MARKINGS (11 SHEETS)	<del>281-289</del>
	<i>(REVISED ON APRIL 14, 2023)</i>	
□ S-630-1	TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION (26 SHEETS)	<del>290-313</del>
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■ S-630-2	BARRICADES, DRUMS, CONCRETE BARRIERS (TEMP) AND VERTICAL PANELS	314
□ S-630-3	FLASHING BEACON (PORTABLE) DETAILS	315
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□ S-630-5	PORTABLE RUMBLE STRIPS (TEMPORARY) (2 SHEETS)	318-319
□ S-630-6	EMERGENCY PULL-OFF AREA (TEMPORARY)	320
□ S-630-7	ROLLING ROADBLOCKS FOR TRAFFIC CONTROL (3 SHEETS)	321-323



COLORADO  
 DEPARTMENT OF TRANSPORTATION  
**M&S STANDARDS PLANS LIST**  
 July 31, 2019  
 Revised on November 7, 2023

ALL OF THE M&S STANDARD PLANS, AS SUPPLEMENTED AND REVISED, APPLY TO THIS PROJECT WHEN USED BY DESIGNATED PAY ITEM OR SUBSIDIARY ITEM.

THE M&S STANDARD PLANS USED TO DESIGN THIS PROJECT ARE INDICATED BY A MARKED BOX ■, AND WILL BE ATTACHED TO THE PLANS. ALL OTHER M&S STANDARD PLANS ARE STILL ELIGIBLE FOR USE IN CONSTRUCTION IF APPROVED BY AN APPROPRIATE CDOT ENGINEER.

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FOR CONSTRUCTION 2/24/2024

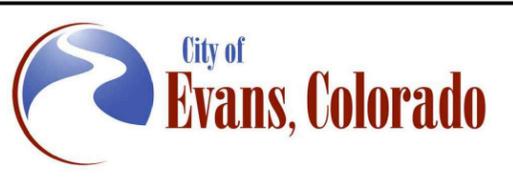
Print Date: 2/5/2024

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Horiz. Scale: N/A Vert. Scale: N/A

12076 Grant Street  
Thornton, CO 80241  
Ph: (303) 962-9300  
Fax: (303) 962-9350

Sheet Revisions		
Date	Comments	Initials

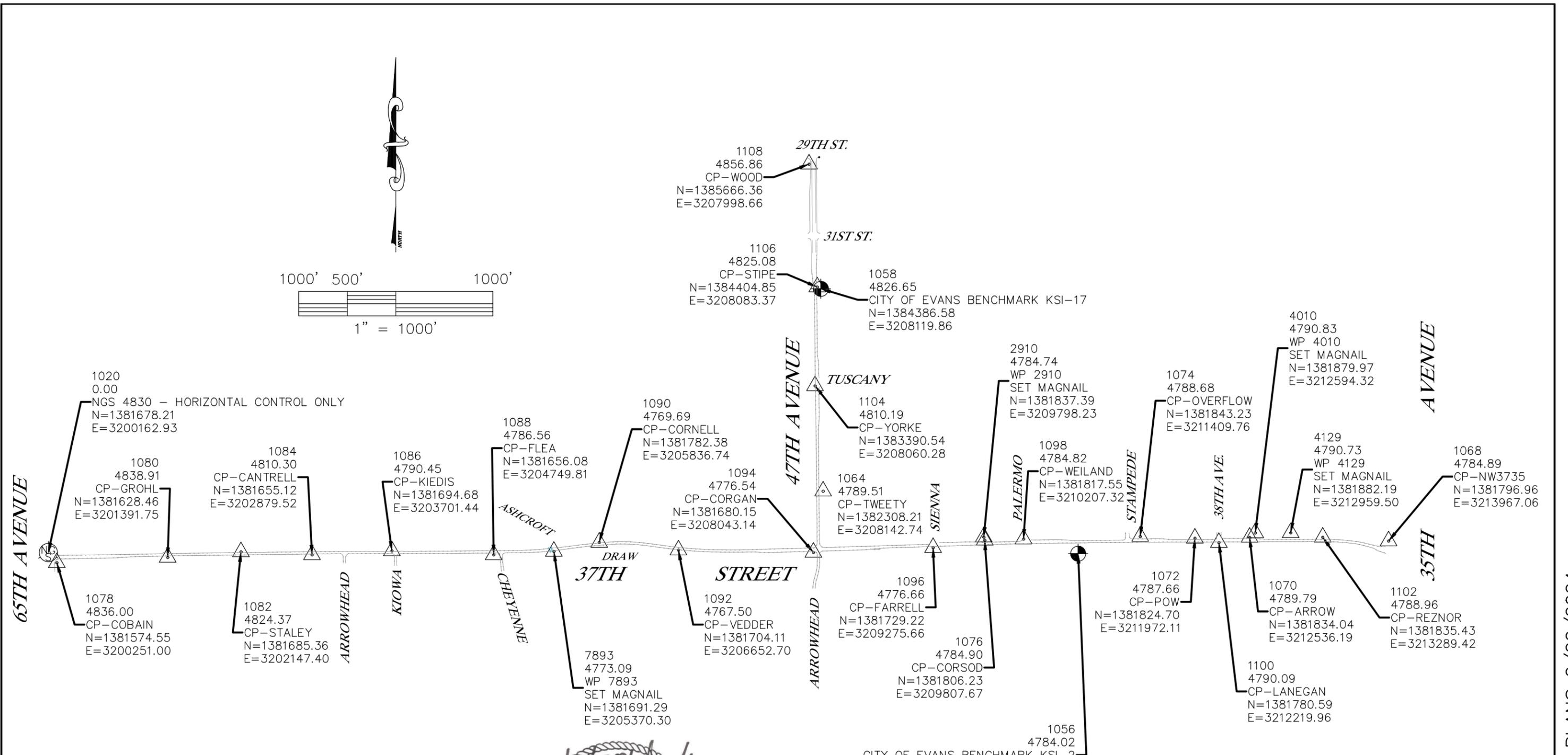


As Constructed
No Revisions:
Revised:
Void:

37TH STREET WIDENING PHASE 2A STANDARD PLANS LIST	
Designer: T. Tuttle	Structure Numbers
Detailer: S. Hemler	
Sheet Subset: GENERAL	Subset Sheets: 2 of 2

Project No.
37TH STREET 2A
Drawing Number GN-002
Sheet Number 2

Plot Date: 2/5/2024 8:19 AM Plotted By: Sarah Hemler  
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**HORIZONTAL DATUM**  
 Project coordinates are Colorado State Plane, North Zone, NAD 83/2011 coordinates that have been scaled to ground using a combined factor of 1.00026824 about an origin of 0,0.  
 Project Coordinates Northing US Survey Feet = (State Plane Coordinate Northing x 1.00026824).  
 Scale about an origin of 0,0.  
 Project Coordinates Easting US Survey Feet = (State Plane Coordinate Easting x 1.00026824).  
 Scale about an origin of 0,0.

**VERTICAL DATUM**  
 Project elevations are based on City of Evans Benchmarks (NAVD88).



Print Date: 2/5/2024		<b>Sheet Revisions</b>			<b>As Constructed</b> No Revisions:  Revised:  Void:	<b>37TH STREET WIDENING PHASE 2A SURVEY CONTROL DIAGRAM</b>		Project No.	
File Name: SC P2A-001 SURVEY CONTROL SHEET.DWG		Date	Comments					Initials	37TH STREET 2A
Horiz. Scale: As Noted Vert. Scale: N/A						Designer: AD	Structure	Drawing Number SC-001	
12076 Grant Street Thornton, CO 80241 Ph: (303) 962-9300 Fax: (303) 962-9350						Detailer: MCD	Numbers	Sheet Number 3	
						Sheet Subset: SURVCON	Subset Sheets: 1 of 1		

FOR CONSTRUCTION 2/24/2024

**TO ESTABLISH GEOMETRIC CONTROL FOR THE CONSTRUCTION OF THIS PROJECT, THE DEPARTMENT HAS PROVIDED THE FOLLOWING INFORMATION:**

- Format \*
- 3D Design Modeling Electronic Files
  - Horizontal Control
  - Vertical Control
  - Roadway Alignment
  - Original Terrain Data
  - Other: \_\_\_\_\_

\* Specify the information format, ie., plan sheet, computer disk, computer printout, or other. The information marked is either contained on the plans or is available from the Engineer.

**TYPE OF PROJECT**

- Landscaping
- Signalization
- Safety Improvement
- Asphalt Overlay
- Concrete Overlay
- Minor Widening
- Major Reconstruction
- New Roadway Construction
- Bridge Replacement
- Bridge Widening
- New Bridge
- Other: \_\_\_\_\_

**SURVEY WORK TO BE PERFORMED BY OTHERS:** \_\_\_\_\_

**WORK PERFORMED BY THE CONTRACTOR'S SURVEYOR UNDER SECTION 625:**

- A complete passing Base Line report (completed within 6 months prior to the start of the project)
- An instrument calibration Certification (completed within 6 months prior to the start of the project)
- Establish and Maintain Project Centerline or Engineer Approved Offset Line(s)
- Verification and Maintenance of Horizontal and Vertical Control
- Verify or Determine existing grades and alignments
- Verify or Determine existing topography
- Clearing and Grubbing Limits (Section 201)
- Removal Limits (Section 202)
- Reset Items (Section 210)
- Excavation and Embankment (Section 203)

	Slope Staking (Y/N)	Grid (Y/N)	Grade (Y/N)	Special Interval
Excavation	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-

	Slope Staking (Y/N)	Grid (Y/N)	Grade (Y/N)	Special Interval
Embankment	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-

- Excavation
  - Unclassified
  - Stripping
  - Muck
  - Rock
  - Borrow
  - Other: \_\_\_\_\_
  - Potholing

- Embankment
- Site Grading
- Erosion Control (Perm)
- Other: \_\_\_\_\_
- As Staked Earthwork Quantities (See General Notes)

- Landscaping
  - Top Soil (Section 207)
  - Seeding (Section 212)
  - Mulching (Section 213)
  - Planting (Section 214)
  - Herbicide (Section 217)
  - Other: \_\_\_\_\_

- Erosion Control (Section 208)
  - Seeding (Temp)
  - Silt Fence
  - Erosion Bales
  - Erosion Logs
  - Riprap (Temp)
  - Other: \_\_\_\_\_

- Roadway Bases
  - Untreated Subgrade
  - Treated Subgrade
  - Aggregate Base Course (Section 304)
  - Reconditioning
  - PMBB - Plant Mix Bituminous Base
  - Other: \_\_\_\_\_

	Grid (Y/N)	Grade (Y/N)	Special Interval	Special Offset
Roadway Bases	-	-	-	-
	-	-	-	-
	-	Y	-	-
	-	Y	-	-
	-	-	-	-

- Pavements
  - HMA - Hot Mix Asphalt (Section 403)
  - Concrete (Section 412)
  - Heating & Scarifying Treatment
  - Prime Coat, Tack Coat & Rejuvenating Agent (Section 407)
  - Seal Coat or Chip Seal (Section 409)
  - Other: \_\_\_\_\_

	Grid (Y/N)	Special Interval	Special Offset
Pavements	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

- Roadway Elements
  - Curb and Gutter (Section 609)
  - Drop inlets - alignment and grades (Section 604)
  - Retaining Walls
  - Guard Rail (Section 606)
  - Sidewalk (Section 608)
  - Overlay Stationing
  - Other: \_\_\_\_\_

	Tangent Interval	Curve Interval	Special Offset
Curb & Gutter	-	-	-
	-	-	-

- Riprap (Perm) (Section 506)
- Slope and Ditch Paving (Section 507)

- Minor Structures
  - Structure Excavation limits (Section 206)
  - Culverts (Section 603)
  - Culverts w/ Headwalls and Wingwalls (Section 601)
  - Concrete Box Culverts w/ Headwalls and Wingwalls
  - Pipes (Section 603)
    - Sanitary Sewer
    - Storm Sewer
    - Water
    - Irrigation
    - Miscellaneous
  - Manholes (Section 604)
  - Inlets (Section 604)
  - Permanent Water Quality BMP (Section 208)
  - Other: \_\_\_\_\_

	Left Interval	Center Interval	Right Interval
Stationing	-	-	-
	-	-	-

- Major Structures - Overhead Signs (Section 614), Concrete Box Culverts, Bridges - and all other structures assigned a structure number
  - Structure Excavation limits (Section 206)
  - Concrete Box Culverts (Section 603) w/ Headwalls and Wingwalls (Section 601)
  - Piling locations and cut off elevations (Section 502)
  - Caisson locations and elevations (Section 503)
  - Footing locations, alignment, and elevations
  - Abutment/Pier locations, alignment, and elevations
  - Wingwall skew angles/offsets
  - Structural concrete form locations
  - Substructure As-constructed survey required for Bridges (Subsection 601.12) and Overhead signs (S-614-50)
  - Bridge expansion joint(s) alignment and grade (longitudinal and transverse)
  - Deck grades at Girder 10th or "n" th point locations and elevations
  - Slope and Ditch Paving (Section 507)
  - Other: \_\_\_\_\_

- Fencing (Section 607)
  - Temporary
  - Permanent
  - Sound Barrier
  - Other: \_\_\_\_\_

- Delineators (Section 612)
  - Temporary
  - Permanent

- Lighting (Section 613) and Traffic Control Devices (Permanent) (Section 614)
  - Signal pole locations and elevations
  - Light pole locations and elevations
  - Sign locations
  - Field verify sign post locations, elevations, and lengths before fabrication.
  - Other: \_\_\_\_\_

- Pavement Marking (Section 627)
  - Striping (Temp)
  - Striping (Perm)
  - Symbols
  - Other: \_\_\_\_\_
- Temporary Lighting and Construction Traffic Control Devices (Section 630)
  - Signal pole locations and elevations (Temp)
  - Light pole locations and elevations (Temp)
  - Sign Locations (Temp)
  - Other: \_\_\_\_\_
- All Easements (Temp Staking by P.L.S. Only)
- Right of Way (Temp Staking by P.L.S. Only)

**WORK PERFORMED BY THE CONTRACTOR'S SURVEYOR UNDER SECTION 629:**

- Monumentation (Section 629)
  - Control
  - Right of Way
  - Land corners, Aliquot corners
  - Easements
  - Reference the specified existing monuments: \*\* \_\_\_\_\_
  - Replace the specified existing monuments: \*\* \_\_\_\_\_
  - Locate monuments. It is estimated \_\_\_\_\_ hours are required.

NOTE: All 629 items shall include adequate research, calculations, and evaluations of evidence for monuments to be set.

\*\* A Tabulation of Survey Monuments may be provided on the plans.

**GENERAL NOTES:**

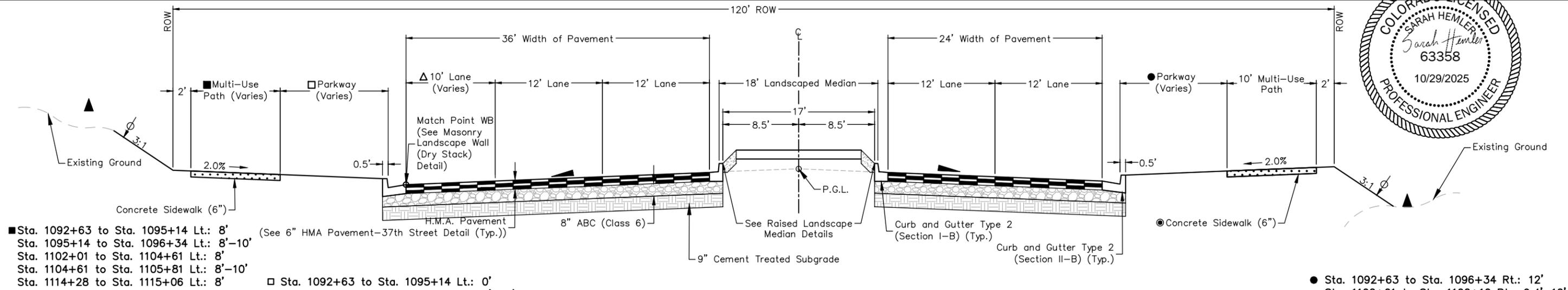
- Unless indicated otherwise on this Survey Tabulation Sheet, all survey work and staking intervals shall be done in accordance with the latest edition of the CDOT Survey Manual.
- Adequate information for establishing lines, grades, and locations for all work items have been specified on the plans. Any additional information required to stake the item or element shall be generated by the Contractor's surveyor.
- The Contractor's surveyor shall provide an estimate of the man-hours necessary to complete the work items indicated on this sheet. A copy of this sheet, with the estimated man-hours written on the blank line to the left of the specified items, shall be submitted with the Survey Schedule to the Engineer \_\_\_\_\_ days prior to the Presurvey Conference - Construction Survey.
- Stakes and Monuments which are damaged or destroyed by the progress of construction shall be replaced by the Contractor at no additional cost to the Department.
- The Contractor shall furnish an As Staked (or 3D Design Modeling Electronic Files) Earthwork Quantity report to the Engineer prior to completion of twenty percent (20%) of the planned earthwork in any phase as per the CDOT Survey Manual. A printed copy of the As Staked (or 3D Design Modeling Electronic Files) Earthwork data report and a computer disk with that information on it, in the specified format shall be submitted to the Engineer. The Contractor shall field verify original ground cross sections at a maximum 500 feet intervals.
- Prior to beginning work on any subsequent operation, such as placing base course or paving, the Contractor shall certify in writing to the Engineer that the final grade is within specified tolerance.
- The Contractor's surveyor shall perform all field surveying and calculations necessary to tie plan grades into field grades.
- The Contractor shall coordinate construction staking on the project with any utility work.
- Fieldbooks shall contain daily records of points set and or measurements observed. The information recorded shall contain: date, crew members' names, point no., description, staking information, and sketches. If the survey information is collected electronically, information recorded shall be provided to the Project Engineer in a hard copy format that is intuitive, clear and related to the supplemental information recorded in the field books. All linear surveys, such as slope stakes and blue tops, shall have the station and offset information related to the measured information. Non-linear surveys such as structures staking shall have sketches relating electronic information, such as point numbers, to the sketch.
- The Contractor's surveyor shall submit the following fieldbooks to the Engineer:
  - Horizontal Control (Primary & Secondary)
  - Vertical Control (i.e. Benchmarks)
  - Property Pin Ties
  - Horizontal Alignment
  - Grading
  - Slope Staking
  - Minor Structures
  - Major Structures
  - One fieldbook for each work category shown on this sheet
  - Other Fieldbook(s): \_\_\_\_\_
- The Contractor's surveyor shall submit the following (prior to surveying on the project) to the Engineer:
  - All required Instrument Calibrations



Plot Date: 2/5/2024 8:21 AM Plotted By: Sarah Hemler  
 P:\PROJECTS\YOUTH PROJECTS\37TH ST AND 47TH AVE PLAN\2024\COMPUTER DESIGN FILES\P2 - PHASE 2A\2024\SHEET FILES\SCT P2A-001 SURVEY CONTROL TABULATION.DWG

FOR CONSTRUCTION 2/24/2024

Print Date: 2/5/2024 File Name: SCT P2A-001 SURVEY CONTROL TABULATION.DWG Horiz. Scale: N/A      Vert. Scale: N/A	<b>Sheet Revisions</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Date</th> <th>Comments</th> <th>Initials</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Date	Comments	Initials										 	<b>As Constructed</b> No Revisions: Revised: Void:	<b>37TH STREET WIDENING PHASE 2A SURVEY CONTROL TABULATION</b> Designer: T. Tuttle Detailer: S. Hemler Sheet Subset: SURVCON TAB      Subset Sheets: 1 of 1	<b>Project No.</b> 37TH STREET 2A Drawing Number SCT-001 Sheet Number 4
Date	Comments	Initials															
12076 Grant Street Thornton, CO 80241 Ph: (303) 962-9300 Fax: (303) 962-9350																	



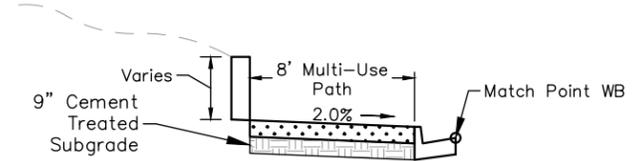
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- Sta. 1095+14 to Sta. 1096+34 Lt.: 8'-10'
- Sta. 1102+01 to Sta. 1104+61 Lt.: 8'
- Sta. 1104+61 to Sta. 1105+81 Lt.: 8'-10'
- Sta. 1114+28 to Sta. 1115+06 Lt.: 8'

- Sta. 1092+63 to Sta. 1095+14 Lt.: 0'
- Sta. 1095+14 to Sta. 1096+34 Lt.: 0'-12'
- Sta. 1102+01 to Sta. 1104+61 Lt.: 0'
- Sta. 1104+61 to Sta. 1105+81 Lt.: 0'-12'
- Sta. 1114+28 to Sta. 1115+06 Lt.: 0'

- Sta. 1092+63 to Sta. 1096+34 Rt.: 12'
- Sta. 1102+01 to Sta. 1102+10 Rt.: 9.4'-12'
- Sta. 1102+10 to Sta. 1105+81 Rt.: 12'
- Sta. 1114+28 to Sta. 1115+06 Rt.: 0'

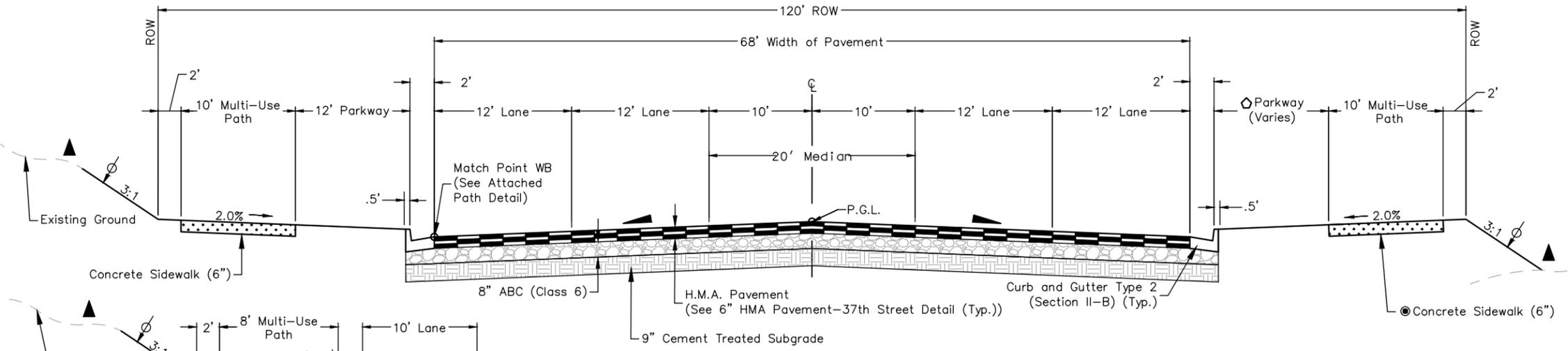
**TYPICAL SECTION ROADWAY 37TH STREET**

Sta. 1092+63.00 to 1096+34.00  
 Sta. 1102+01.00 to 1105+81.00  
 Sta. 1114+28.00 to 1115+06.00



**MASONRY LANDSCAPE WALL (DRY STACK)**

Sta. 1092+69.95 to Sta. 1093+00.00 Lt., wall height 1'  
 Sta. 1103+25.00 to Sta. 1104+75.00 Lt., wall height 2.5'  
 Sta. 1112+25.00 to Sta. 1112+50.00 Lt., wall height 2.5'

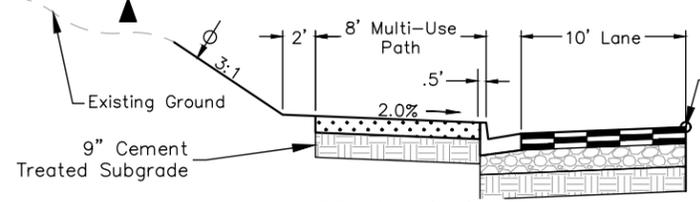


**TYPICAL SECTION ROADWAY 37TH STREET**

Sta. 1091+46.80 to 1092+63.00  
 Sta. 1100+71.00 to 1102+01.00  
 Sta. 1111+30.00 to 1112+31.00

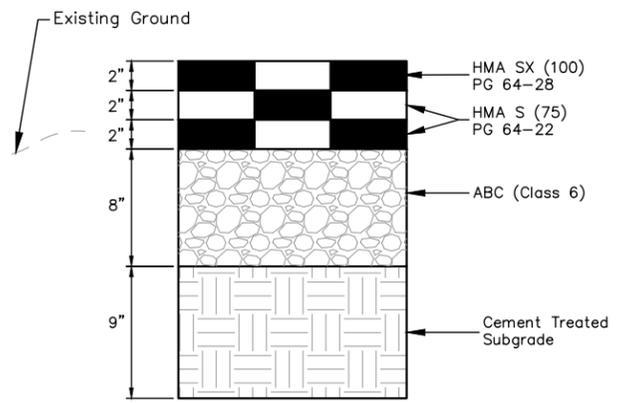
- ◇ Sta. 1091+46.80 to Sta. 1092+63 Rt.: 12'
- Sta. 1100+71 to Sta. 1101+60 Rt.: 0'
- Sta. 1101+60 to Sta. 1102+01 Rt.: 0'-9.4'
- Sta. 1111+30 to Sta. 1112+31 Rt.: 12'

- ~ 2%
- ~ Limits of topsoil placement
- ▲ ~ Breakpoints on slopes and in bottoms of ditches shall be rounded during construction for a pleasing appearance. The depth and width of the side ditch shall be varied where necessary in order to provide proper drainage
- The contractor shall apply a layer of Emulsified Asphalt (Slow-Setting) in between each lift of pavement.
- ~ Concrete sidewalk depth to be 8" for all driveways from edge of approach to edge of approach



**ATTACHED PATH**

Sta. 1092+21.00 to Sta. 1092+63.00  
 Sta. 1101+69.00 to Sta. 1102+01.00  
 Sta. 1112+16.00 to Sta. 1112+31.00



**6" HMA PAVEMENT SECTION- 37TH STREET**  
 Sta. 1091+46.80 to Sta. 1115+06.00

Plot Date: 2/27/2019 7:31 AM Plotted By: Sarah Hemler  
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Print Date: 2/27/2019  
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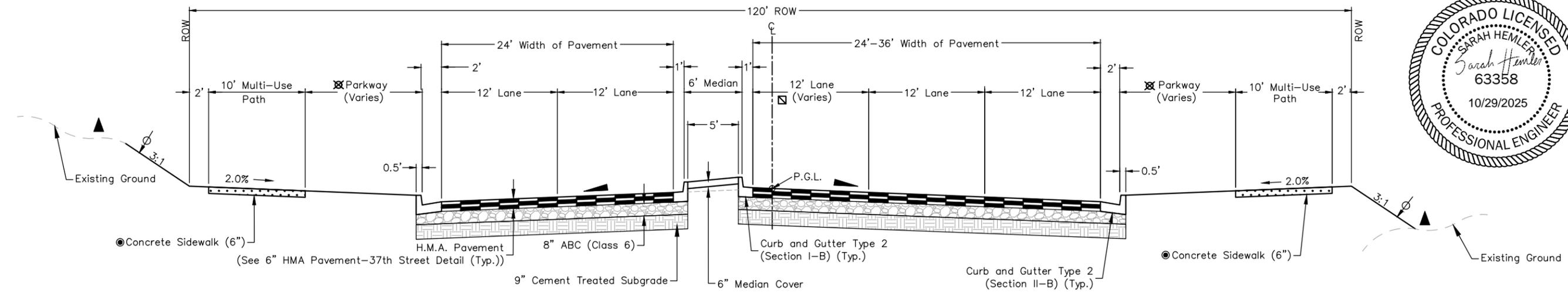
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 12076 Grant Street  
 Thornton, CO 80241  
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 Fax: (303) 962-9350

Sheet Revisions		
Date:	Comments	Init.



As Constructed	37TH STREET WIDENING PHASE 2A TYPICAL SECTIONS		Project No.
No Revisions:			37TH STREET 2A
Revised:	Designer: T. Tuttle	Structure Numbers	Drawing Number TYP-001
Void:	Detailer: S. Hemler		Sheet Number 5
	Sheet Subset: TYPICALS	Subset Sheets: 1 of 4	

FOR CONSTRUCTION 2/24/2024



**TYPICAL SECTION ROADWAY 37TH STREET**

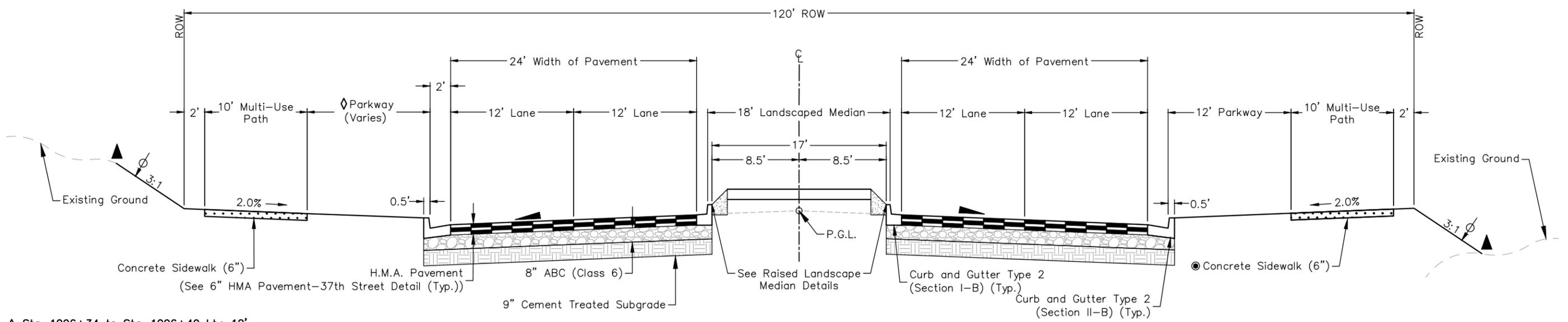
Sta. 1096+49.00 to 1100+71.00  
Sta. 1107+11.00 to 1111+30.00

▣ Sta. 1096+49 to Sta. 1097+93 Rt.: 0'-12'  
Sta. 1097+93 to Sta. 1100+71 Rt.: 12'  
Sta. 1107+11 to Sta. 1108+55 Rt.: 0'-12'  
Sta. 1108+55 to Sta. 1111+30 Rt.: 12'

⊠ Sta. 1096+49 to Sta. 1099+77 Rt.: 12'  
Sta. 1099+77 to Sta. 1100+27 Rt.: 12' - 0'  
Sta. 1100+27 to Sta. 1100+71 Rt.: 0'  
Sta. 1107+11 to Sta. 1111+30 Rt.: 12'

Sta. 1096+49 to Sta. 1099+84 Lt.: 12'  
Sta. 1099+84 to Sta. 1099+98 Lt.: 12' - 8.5'  
Sta. 1099+98 to Sta. 1100+05 Lt.: 8.5'  
Sta. 1105+05 to Sta. 1100+19 Lt.: 8.5' - 12'  
Sta. 1100+19 to Sta. 1100+71 Lt.: 12'

- ~ 2%
- ⊕ Limits of topsoil placement
- ▲ Breakpoints on slopes and in bottoms of ditches shall be rounded during construction for a pleasing appearance. The depth and width of the side ditch shall be varied where necessary in order to provide proper drainage
- The contractor shall apply a layer of Emulsified Asphalt (Slow-Setting) in between each lift of pavement.
- Concrete sidewalk depth to be 8" for all driveways from edge of approach to edge of approach



**TYPICAL SECTION ROADWAY 37TH STREET**

Sta. 1096+34.00 to 1096+49.00  
Sta. 1105+81.00 to 1107+11.00

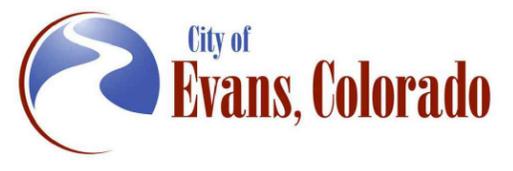
◇ Sta. 1096+34 to Sta. 1096+49 Lt.: 12'  
Sta. 1105+81 to Sta. 1105+99 Lt.: 12'  
Sta. 1105+99 to Sta. 1106+25 Lt.: 12' - 5'  
Sta. 1106+25 to Sta. 1106+40 Lt.: 5'  
Sta. 1106+40 to Sta. 1106+66 Lt.: 5' - 12'  
Sta. 1106+66 to Sta. 1107+11 Lt.: 12'

Plot Date: 2/12/2024 7:31 AM Plotted By: Sarah Hemler  
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Print Date: 2/12/2024  
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Sheet Revisions		
Date:	Comments	Init.



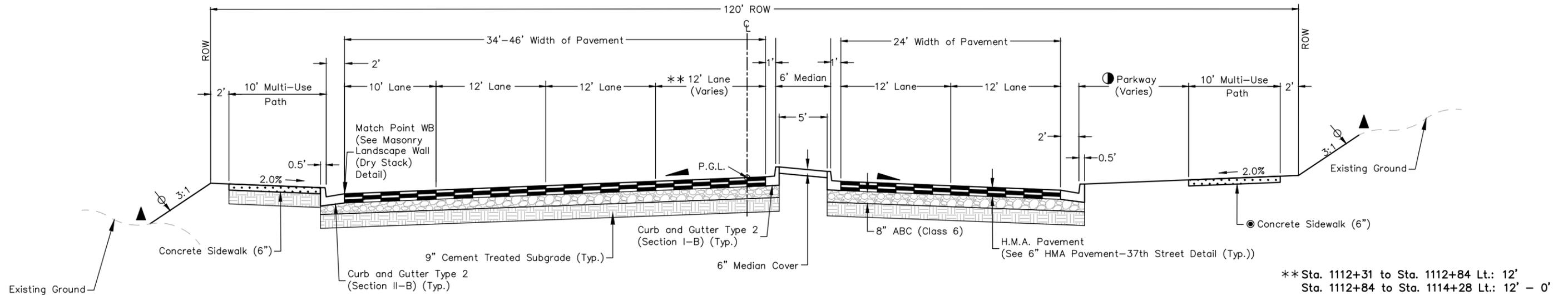
**As Constructed**  
 No Revisions:  
 Revised:  
 Void:

**37TH STREET WIDENING PHASE 2A TYPICAL SECTIONS**

Designer:	T. Tuttle	Structure Numbers	
Detailer:	S. Hemler		
Sheet Subset:	TYPICALS	Subset Sheets:	2 of 4

<b>Project No.</b>	37TH STREET 2A
Drawing Number	TYP-002
Sheet Number	6

FOR CONSTRUCTION 2/24/2024

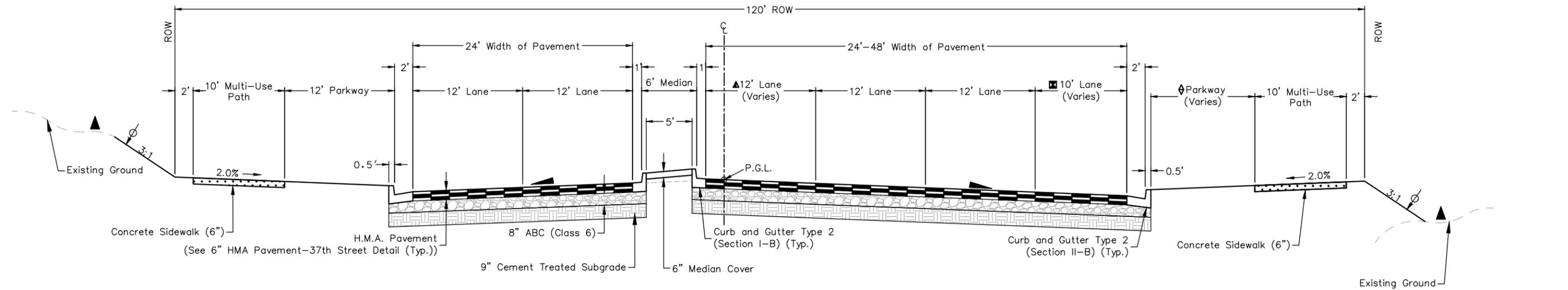


**TYPICAL SECTION ROADWAY 37TH STREET**  
Sta. 1112+31.00 to Sta. 1114+28.00

- \*\* Sta. 1112+31 to Sta. 1112+84 Lt.: 12' - 0'
- Sta. 1112+84 to Sta. 1114+28 Lt.: 12' - 0'
- Sta. 1112+31 to Sta. 1113+32 Rt.: 12' - 0'
- Sta. 1113+32 to Sta. 1113+82 Rt.: 12' - 0'
- Sta. 1113+82 to Sta. 1114+28 Rt.: 0'

- ~ 2%
- ~ Limits of topsoil placement
- ▲ ~ Breakpoints on slopes and in bottoms of ditches shall be rounded during construction for a pleasing appearance. The depth and width of the side ditch shall be varied where necessary in order to provide proper drainage

The contractor shall apply a layer of Emulsified Asphalt (Slow-Setting) in between each lift of pavement.



**TYPICAL SECTION ROADWAY 37TH STREET**  
Sta. 1107+11.00 to Sta. 1111+30.00

- ▲ Sta. 1107+11 to Sta. 1108+55 Rt.: 12'-0'
- Sta. 1108+55 to Sta. 1111+30 Rt.: 0'
- ◆ Sta. 1107+11 to Sta. 1107+30 Rt.: 12'
- Sta. 1107+30 to Sta. 1108+50 Rt.: 12'-0'
- Sta. 1108+50 to Sta. 1111+30 Rt.: 0'
- ☒ Sta. 1107+11 to Sta. 1107+30 Rt.: 0'
- Sta. 1107+30 to Sta. 1108+50 Rt.: 0'-10'
- Sta. 1108+50 to Sta. 1111+30 Rt.: 10'

Plot Date: 2/12/2024 7:31 AM Plotted By: Sarah Hemler  
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Print Date: 2/12/2024  
 File Name: TYP P2A-001-37TH.DWG  
 Horiz. Scale: NTS Vert. Scale: NTS

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 Thornton, CO 80241  
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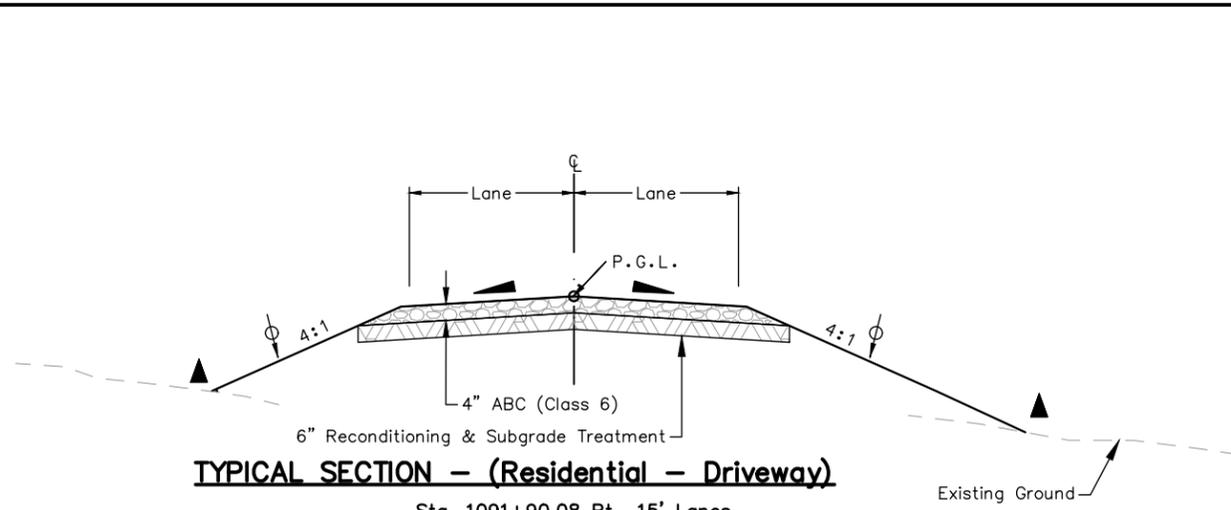
Sheet Revisions		
Date:	Comments	Init.



As Constructed	37TH STREET WIDENING PHASE 2A TYPICAL SECTIONS	
No Revisions:	Designer: T. Tuttle	Structure Numbers
Revised:	Detailer: S. Hemler	
Void:	Sheet Subset: TYPICALS	Subset Sheets: 3 of 4

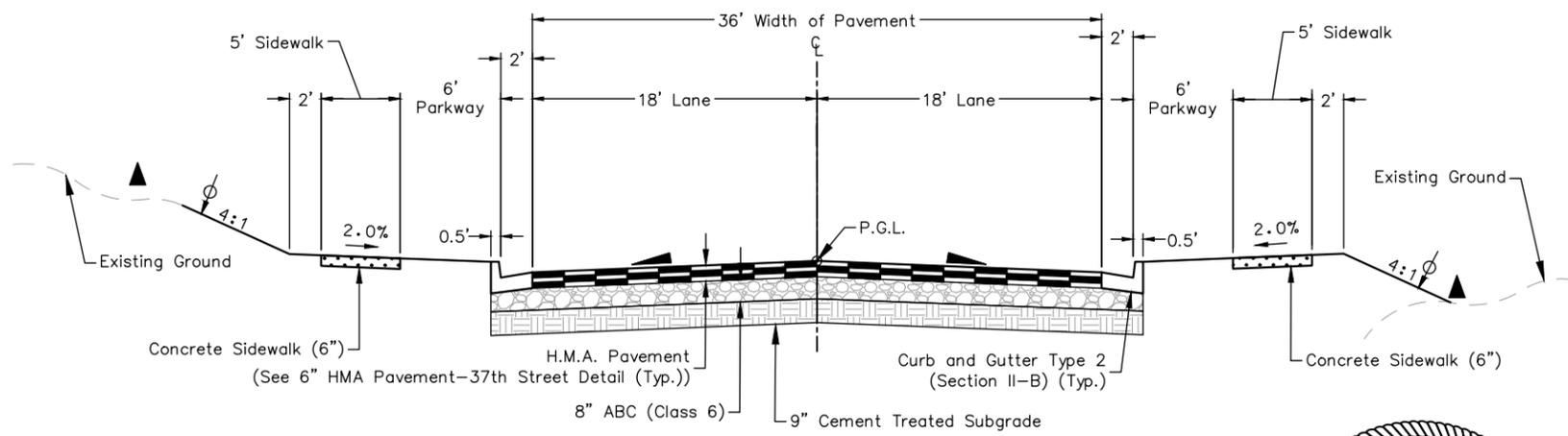
Project No.
37TH STREET 2A
Drawing Number TYP-003
Sheet Number 7

FOR CONSTRUCTION 2/24/2024



**TYPICAL SECTION - (Residential - Driveway)**

- Sta. 1091+90.08 Rt., 15' Lanes
- Sta. 1097+37.51 Lt., 10' Lanes
- Sta. 1098+53.19 Lt., 10' Lanes
- Sta. 1101+38.45 Rt., 10' Lanes
- Sta. 1101+43.20 Lt., 10' Lanes
- Sta. 1107+03.99 Rt., 15' Lanes
- Sta. 1114+32.36 Rt., 10' Lanes



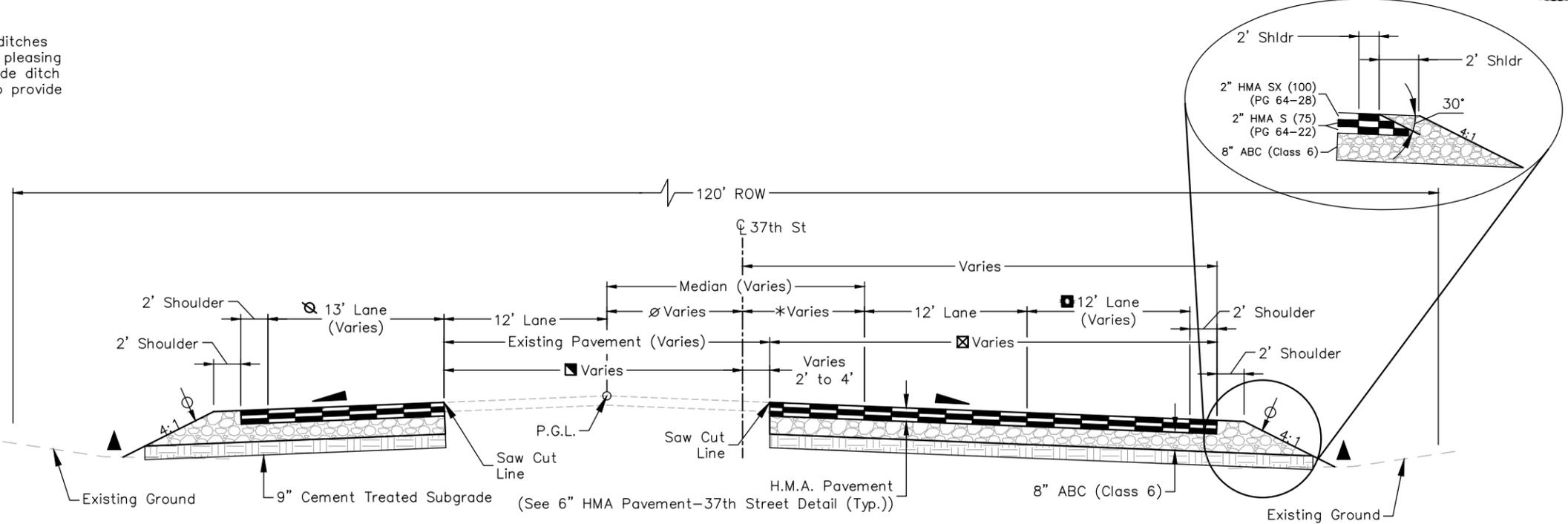
**TYPICAL SECTION ROAD APPROACH - STAMPEDE DRIVE**

Sta. 1111+77.01 Lt.



- ~ 2%
- ~ Limits of topsoil placement
- ~ Breakpoints on slopes and in bottoms of ditches shall be rounded during construction for a pleasing appearance. The depth and width of the side ditch shall be varied where necessary in order to provide proper drainage

- ⊗ Sta. 1115+05 to Sta. 1116+35 Lt.: 13'
- Sta. 1116+35 to Sta. 1117+85 Lt.: 13'-0'
- Sta. 1117+85 to Sta. 1120+35 Lt.: 0'
- Sta. 1115+05 to Sta. 1116+35 Lt.: 30'-18'
- Sta. 1116+35 to Sta. 1120+35 Lt.: 18'
- ⊗ Sta. 1115+05 to Sta. 1120+35 Rt.: 32'-2'
- Sta. 1115+05 to Sta. 1120+35 Rt.: 12'-0'
- ∅ Sta. 1115+05 to Sta. 1120+35 Lt.: 10'-0'
- \* Sta. 1115+05 to Sta. 1118+26 Rt.: 10'-0'
- Sta. 1118+26 to Sta. 1120+35 Rt.: 0'



**TYPICAL SECTION ROADWAY 37TH STREET - APPROACH TO PROJECT**

Sta. 1115+06.00 to Sta. 1120+36.00

Print Date: 2/12/2024	File Name: TYP P2A-001-37TH.DWG
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Date:	Comments	Init.



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<b>37TH STREET WIDENING PHASE 2A TYPICAL SECTIONS</b>	
Designer: T. Tuttle	Structure Numbers
Detailer: S. Hemler	
Sheet Subset: TYPICALS	Subset Sheets: 4 of 4

<b>Project No.</b>
37TH STREET 2A
Drawing Number TYP-004
Sheet Number 8

Plot Date: 2/12/2024 7:31 AM Plotted By: Sarah Hemler  
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FOR CONSTRUCTION 2/24/2024

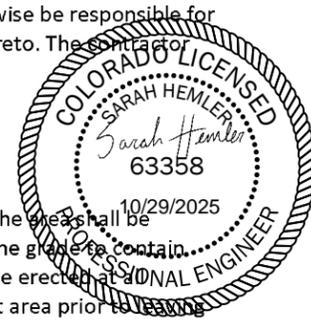
**GENERAL CONSTRUCTION NOTES**

- The general contractor shall give the City of Evans at least 48 hours advance notice before beginning construction. A pre-construction meeting with the City of Evans is the required method of notifying the City of construction activity.
- All contractors and subcontractors shall have a set of approved construction documents on site at all times.
- The general contractor shall call the utility notification center of Colorado (UNCC) at 1-(800)-922-1987, or the nationwide utility contact number (811), to request locates of all underground utilities at least 48 hours prior to commencement of any land disturbing activity.
- All vertical and horizontal datum information should be obtained using the Evans geodetic survey conducted by Albers, Drexel & Pohly, Inc. January 9, 1998. A copy of final coordinates, elevations, and monument descriptions can be obtained by contacting the City of Evans engineering division at (970) 475 1160.
- The general contractor shall be responsible for the locations and protection of all existing utilities shown, all existing utilities not shown, and all proposed utilities on these plans.
- The general contractor shall be responsible for protecting adjacent improvements from damage and erosion. Any adjacent improvements damaged during construction shall, at a minimum, be restored to a state equal to its preconstruction state.
- The general contractor shall obtain all necessary permits to complete work, and shall comply with all local, state, and federal regulations.
- Identifying the need for a permit, preparing the application, and paying the submittal and review fees necessary to secure permits will be the total responsibility of the general contractor. A copy of all permits must be on site at all times.
- All construction activities must comply with the State of Colorado permitting process for storm water discharge, associated with construction activity. For information, contact the Colorado Department of Public Health, and Environment, Water Quality Control Division, SQCD-PE-B2, 4300 Cherry Creek Drive South, Denver, Colorado 80246-1530, attention permits and enforcement section. (303) 692-3500. The water quality permitting page can be accessed at [www.cdphe.state.co.us/wq/permitsunit/wqcdpmt.html](http://www.cdphe.state.co.us/wq/permitsunit/wqcdpmt.html).
- If dewatering is to be used, then a state construction dewatering discharge permit is required if discharge is into a storm sewer, channel, irrigation ditch, or any waters of the United States.
- All work shall be performed in accordance with the recommendations of the geotechnical soils report and pavement design report, produced, or referenced for this project.
- The general contractor shall perform the work according to all city, county, state, and federal safety and health regulations. In particular, the "trenching" and "open excavation" operations shall comply with all current O.S.H.A. Regulatory requirements.
- All water line, sanitary sewer, and storm water construction shall conform to the City of Evans standards and specifications latest revision thereof. A current copy can be downloaded from the City of Evans website at [www.evanscolorado.gov](http://www.evanscolorado.gov).
- All materials and construction shall conform to the City of Evans standards and specifications latest revision thereof. A current copy can be downloaded from the City of Evans website at [www.evanscolorado.gov](http://www.evanscolorado.gov).
- The City of Evans follows all traffic control standards set forth in the current edition of the "Manual on Uniform Traffic Control Devices" (MUTCD).
- A traffic control plan must be submitted and approved for any and all utility work performed within the City of Evans right-of-way. Traffic control plans can be emailed to the engineering division attention Mark Oberschmidt at [moberschmidt@evanscolorado.gov](mailto:moberschmidt@evanscolorado.gov)
- All street lighting shall conform to the standards and specifications set forth in the City of Evans residential neighborhood design standards.
- All plantings shall utilize the City of Evans parks and recreation approved landscaping planting list.
- All seeding shall utilize the City of Evans irrigation design guidelines and the lawn and grass specifications section 02930.

- All work including warranty work, shall be inspected by a city representative who shall have authority to halt construction when proper construction practices are not being adhered to.
- There shall be no work performed on the weekends, or holidays except by approval of the City of Evans with a minimum of 24 hours notice.
- The general contractor shall notify all residents in writing prior to any disruption in service. The notices must have the general contractors phone number and the name of a contact person, and emergency phone number for after hour calls. Notices shall not be left in mailboxes unless properly sent through the U.S. Post office.
- The general contractor shall be responsible for obtaining their own disposal site for all disposed materials.
- The engineer who has prepared these plans, by execution and/ or seal hereof does hereby affirm responsibility to the City of Evans, as a beneficiary of said engineer's work, for any errors or omissions contained in these plans. Acceptance of these plans by the City of Evans shall not relieve the engineer who has prepared these plans of such responsibility.
- It is estimated that 1 sanitary facility will be required on this project.
- It is estimated that 80 hours will be required for potholing. The contractor shall be responsible for contacting and coordinating with the appropriate utility representatives to be onsite during potholing and shall likewise be responsible for determining the type and location of underground utilities as may be necessary to avoid damage thereto. The contractor shall refer to the utility specification for additional requirements.

**EROSION CONTROL NOTES**

- Erosion control measures must be in place prior to any land disturbing activity commences.
- A 20' x 20' concrete wash out area or approved equal shall be established near the exit to the site. The washout shall be fenced with orange safety fencing on three sides and have an earthen berm, or depression cut into the grade to contain water and concrete from leaving the area. A sign directing all concrete trucks to the washout must be erected at all entrances to the site. The general contractor is responsible for removing all debris from the washout area prior to leaving the site once initial site construction is complete. Burying of the debris is strictly prohibited.
- Silt fence or approved equal shall be placed along the downgradient perimeter of site.
- Once final grading is complete, all areas disturbed by construction activities shall be ripped by a grader in corn furrow fashion, or seeded. The furrows shall be perpendicular to the grade of the land. It is the responsibility of the developer/owner to maintain this erosion control measure for the duration of the 2 year warranty period.
- All areas disturbed by construction activities that will remain as outlots, open space, detention ponds, forebays, or trails shall receive 4 inches of top soil and shall be seeded. Soil preparation, fertilizer, compost, seeding, and mulching will be required. Seed tags will be collected by the City of Evans.
- All seeding required by either the City of Evans engineering division, or planning division shall utilize the City of Evans irrigation design guidelines, lawn and grass specifications section 02930.
- Grass seed shall be planted with a grass seed drill (not a grain drill) at a depth of 1/2" to 3/4". Broadcast seeding of grass seed is not acceptable. Straw mulch shall be spread and crimped into the soil at a rate of 4,000 lbs/acre. Hydroseeding and hydromulching is acceptable in lieu of drill seeding and crimping of mulch straw, only in areas that are inaccessible to landscaping equipment, and must be approved by the City of Evans prior to use.
- The developer/owner is responsible for hiring a contractor to remove all temporary erosion control measures once construction is complete and all open space areas, outlots, detention ponds, forebays, and trail corridors are stabilized with at least 80 percent growth of seeded ground cover.
- A vehicle tracking control strip 25' x 50' x 6" with 1 1/2" to 3" rock is to be placed and maintained by the general contractor at all access points into the construction site.
- The general contractor shall be responsible for maintaining all erosion control measures and shall be responsible for any and all fines associated with the discharge of sediments, erosion, or pollutants leaving the site as a result of construction activity.



Plot Date: 2/5/2024 9:14 AM Plotted By: Sarah Hemler  
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Print Date: 2/5/2024	
File Name: NT P2A-001 GENERAL NOTES.DWG	
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Sheet Revisions		
Date	Comments	Initials



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No Revisions:
Revised:
Void:

37TH STREET WIDENING PHASE 2A GENERAL NOTES			
Designer:	T. Tuttle	Structure	
Detailer:	J. Jensen	Numbers	
Sheet Subset:	NOTES	Subset Sheets:	1 of 3

<b>Project No.</b>
37TH STREET 2A
Drawing Number NT-001
Sheet Number 9

FOR CONSTRUCTION 2/24/2024

- No soil stockpile shall exceed 10 feet in height. All soil stockpiles shall be protected from sediment transport by surface roughening, watering, and perimeter silt fencing or earthen berm. Any soil stockpiles remaining after three months from the commencement of construction activities shall be seeded with a temporary cover crop, or removed from the site.

**GRADING NOTES**

- Grades shown on plans are finished grades. For subgrade elevations, refer to the paving sections and details.
- All work shall be performed in accordance with the recommendations of the geotechnical report produced, or referenced for this project.
- All work shall be performed in accordance with the storm water discharge permit issued for this project.
- Erosion control measures outlined on the erosion control/grading plan must be in place prior to commencement of any land disturbing activity. (stockpiling, stripping, grading, etc.).
- All work shall be performed in accordance with the standards and specifications of the City of Evans, and the approved project construction documents.
- The general contractor is responsible for verifying the plan alignment and grade in all roadways, parcels/lots, open spaces, ditches, swales, detention ponds, and forebays so that all drainage is directed in a positive flow to all drainage structures indicated on the construction plans at the completion of construction.
- All utilities (non-potable water lines, potable water lines, sanitary sewer lines, storm drainage, dry utility crossings (gas, electric, telephone, and cable t.v.), manholes, and inlets) within the road right-of-way shall be installed prior to roadway subgrade preparation.
- Subgrade shall be ripped, compacted, and shaped per City standards and specifications. The City of Evans engineering division shall be notified 24 hours in advance to schedule a proof roll of all subgrade where roadways, sidewalks, pans, aprons, curb and gutter, and other public improvements will be placed.
- All parkways, and properties adjacent to sidewalks, shall be backfilled and compacted in a timely manner to prevent weather related standing water from entering the roadway subgrade. The general contractor shall be held liable for any and all damage caused by failure to backfill these areas in a timely manner.
- Testing data by a third party testing company for compaction of all utility trenches, subgrade, and base material is to be submitted to the City of Evans in a timely manner. Email reports to the engineering division attention Mark Oberschmidt at moberschmidt@evanscolorado.gov
- Moisture Density control will be required for the full depth of those embankments on this project. The base of fill areas should be scarified to a depth of not less than 6 inches and compacted to not less than 95% of maximum density ±2% of optimum moisture content as determined by AASHTO T99 or as recommended by a geotechnical engineer, prior to placement of embankment material.
- The minimum thickness of topsoil shall be 4 inches.

**ROADWAY IMPROVEMENT NOTES**

- All work shall be performed in accordance with the standards and specifications of the City of Evans, and the approved project documents.
- Improvement projects which do not have a developer's agreement shall be required by the City of Evans to execute an application and permit for excavation / construction in public right of way.
- Concrete and asphaltic mix design shall be submitted by the supplier and approved by the City of Evans prior to roadway construction.
- All existing curb and gutter, sidewalk, and ADA ramps damaged during construction shall be repaired at the general contractor's expense, prior to acceptance of completed improvements.
- When an existing street is to be cut, the street must be restored to a condition equal to or better than its original condition. Saw cuts should be a clean straight vertical line parallel or perpendicular to the flow of traffic. Patches shall be 1 inch greater in depth than the existing asphalt material that was removed or as directed by the City.

- All large patches (greater than 10' wide and 20' long) shall be paved with by an asphalt lay-down machine. In streets where more than one cut is made, an overlay of the entire street width, including the patched area may be required.
- Street subgrades shall be scarified the top 12 inches and recompacted prior to sub-base installation. No base material shall be laid until the subgrade has been inspected by scheduling a proof roll with the City of Evans, and approved by the City of Evans engineering division.
- Prior to pavement installation base material shall be inspected by a proof roll scheduled with the City of Evans, and approved by the City of Evans engineering division.
- Prior to paving an herbicide treatment shall be applied for all new paved areas. It is estimated that 4.5 acres of herbicide treatment will be needed.
- Valve boxes, manholes, cleanouts, and survey monument boxes are required to be brought up to the subgrade level prior to pavement installation. All locations and distances of the valve boxes and manholes should be clearly labeled on the curb and gutter in white paint. Once the pavement is installed all valve boxes, manholes, cleanouts, and survey monument boxes shall be raised to ¼" below asphalt grade and have a one foot concrete collar installed around the outer diameter of the fittings.
- Nuclear gauge testing data by a third party testing company for compaction and moisture content of all utility trenches, subgrade, and base material is to be submitted to the City of Evans in a timely manner. Email reports to moberschmidt@evanscolorado.gov. Engineering division.
- Concrete curb and gutter, sidewalks, and street paving shall not begin until all testing data has been received by the City of Evans, and subgrade proof rolls accepted by the City of Evans engineering division has been completed.
- It is estimated that 100 hours of proof rolling will be required on this project.
- The general contractor shall maintain all necessary barricades, permanent signs, temporary signs, pavement markings, and other traffic control devices daily during construction and between phases of construction.
- The roadway and related work areas shall be left with a clean and finished appearance. In no case shall material removed from the right-of-way be stockpiled and left in such a manner as to pose a hazard to the public. The general contractor shall remove all debris from the sidewalks, curb and gutters, pans, and driveways at the construction site and dispose of the debris in an appropriate location.
- For preliminary plan quantities of pavement materials, the following rates of application were used:  
 Tack Coat Diluted Emulsified Asphalt.....@ 0.1 Gals./Sq. Yd.(Diluted)  
 Hot Mix Asphalt.....@ 110 Lbs./Sq. Yd./Inch  
 Aggregate Base Course.....@ 133 Lbs./Cu. Ft.
- Diluted emulsified asphalt for tack coat shall consist of 1 part emulsified asphalt and 1 part water.
- Water shall be used as a dust palliative where required. Locations shall be as directed by the Engineer.
- The Contractor shall not park any vehicles or equipment in, or disturb any areas not approved by the Engineer.
- Prior to placing bituminous pavement, the paved surface shall be swept and cleaned. This will not be paid for separately but shall be included in the cost of the Hot Mix Asphalt item.
- The Contractor shall coordinate the shouldering operation such that full compliance to existing grades (3:1 or flatter slopes) is obtained on a daily basis following the paving operation for the affected area prior to opening the pavement to normal traffic operations unless otherwise approved by the Engineer.
- Excavation required for compaction of bases of cuts and fills will be considered subsidiary to that operation and will not be paid for separately.
- Where new pavement is to abut existing pavement, the existing pavement shall be removed to a neat vertical line using a cutting saw or other methods as approved by the Engineer, Saw cutting asphalt will not be paid for separately but shall be included in the cost of Removal of Asphalt Mat.



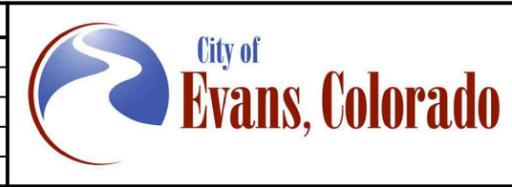
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FOR CONSTRUCTION 2/24/2024

Print Date: 2/5/2024  
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 Horiz. Scale: N/A Vert. Scale: N/A

12076 Grant Street  
 Thornton, CO 80241  
 Ph: (303) 962-9300  
 Fax: (303) 962-9350

Sheet Revisions		
Date	Comments	Initials



<b>As Constructed</b>
No Revisions:
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37TH STREET WIDENING PHASE 2A GENERAL NOTES			
Designer:	T. Tuttle	Structure Numbers	
Detailer:	J. Jensen		
Sheet Subset:	NOTES	Subset Sheets:	2 of 3

<b>Project No.</b>
37TH STREET 2A
Drawing Number NT-002
Sheet Number 10

24. The Contractor shall protect all existing survey monumentation designated to remain from damage during construction operations. Any monuments disturbed by the Contractor that are not designated for relocation shall be reset at the Contractor's expense. The Contractor and Engineer shall note those monuments in the field prior to construction.
25. The following shall be furnished with each bituminous paver:
  - a. A ski type device at least 30 feet in length
  - b. Short ski or shoe
  - c. 1500 feet of control line and stakes
26. Any layer of bituminous pavement that is to have a succeeding layer placed thereon shall be completed full width before succeeding layer is placed
27. Millings shall become the property of the City of Evans and be delivered to 1800 40<sup>th</sup> Street.

**TRAFFIC SIGNING & PAVEMENT MARKING NOTES**

1. The City of Evans follows all traffic signage standards set forth in the current edition of the "Manual on Uniform Traffic Control Devices" (MUTCD) and CDOT's M&S standards.
2. Roadway
3. Locations of existing signs are approximate. The general contractor shall coordinate with the City of Evans to determine if existing signs not shown on the construction plans shall be reset or removed.
4. All signs and pavement markings shall be furnished and installed in accordance with MUTCD standards.
5. The contractor installing the signs shall be responsible for locating and protecting all underground utilities.
6. Street and avenue signs shall be extruded aluminum 6" x 30" minimum, City of Evans standard reflective green background with white block lettering, city logo, and numbering.
7. All signs shall be mounted with vandal-proof bolts.
8. All signs shall be installed on Unistrut Telespar type perforated posts with anchors at the proper height as per current MUTCD standards.
9. Sign posts shall meet or exceed the following:
  - A. Posts – 1 3/4" x 1 3/4", 12 gauge, ASTM specification number A4446, grade A, drilled on 1" centers.
  - B. Anchors – 2" x 2", 12 gauge, ASTM specification number A4446, drilled on 1" centers.
  - C. All posts and anchors shall be galvanized to ASTM specification A52 coating designation G90.
10. The City of Evans follows all pavement marking standards set forth in the current edition of the "Manual on Uniform Traffic Control Devices" (MUTCD) and CDOT's M&S Standards.
11. All surfaces shall be thoroughly cleaned prior to installation of striping or markings to prepare the pavement surface for proper adhesion. All symbols, including arrows, onlays, crosswalks, stop bars, etc. shall be pre-formed thermoplastic per the City of Evans standards.
12. Markings that must be visible at night shall be retroreflective unless ambient illumination assures that the markings are adequately visible.
13. Removal of existing pavement markings shall be accomplished by a method that does not materially damage the surface or texture of the pavement. The pavement markings shall be removed to the extent that they will not be visible under day or night conditions. Under no circumstances shall black paint be used to cover existing markings, or mistakes in striping.

**ENVIRONMENTAL NOTES:**

1. CDPS Stormwater Construction Permit  
If project activities result in one acre or more of earth disturbance a CDPS permit will be required. The Contractor shall not commence permit-related work until the permit is received. Work performed must be consistent with that detailed in the stormwater management plan.
2. Wetlands, Threatened and Endangered Species, and Black-Tailed Prairie Dog Habitat  
Work activities including the movement and placement of vehicles and equipment shall not disturb wetlands, threatened and endangered species (or their habitat), or black-tailed prairie dog colonies. If any such sites are encountered, the engineer shall be notified so that all applicable clearances and permits may be obtained. CDOT Specification 240 shall be followed for any prairie dog management requirements.
3. Burrowing Owls  
Burrowing owls are a state threatened species and are protected under the migratory bird treaty act. No human encroachment or disturbance within 150 feet of the nest site from March 15 through October 31. If project activities are to take place between these times, a burrowing owl survey must be completed by the contractor's biologist before construction activities take place. If burrowing owls are identified on or adjacent to the project, avoidance measures shall be followed as outlined above.
4. MBTA  
The Migratory Bird Treaty Act (MBTA) protects migratory birds and their nests and eggs. Wildlife biologist hours have been provided for incidental work described in these notes. For projects that could potentially have an impact, the following conditions apply:
  - A. Tree trimming/removal  
Tree trimming and/or removal activities shall be completed before birds begin to nest or after the young have fledged. In Colorado, most nesting and rearing activities occur between April 1 and August 31. A nesting bird survey shall be conducted by the contractor's biologist before any tree trimming or removal activities begin between April 1 and August 31.
  - B. Bridge/box culvert work  
Bridge or box culvert work that may disturb nesting birds shall be completed before birds begin to nest or after the young have fledged. If work activities are planned between April 1 and August 31, nests shall be removed (before nesting begins) and appropriate measures taken to assure no new nests are constructed. Failure to remove and keep nests from becoming established may impact project construction.
  - C. Clearing/grubbing activities  
Clearing and grubbing of vegetation that may disturb ground nesting birds shall be completed before birds begin to nest or after the young have fledged. If work activities are planned between April 1 and August 31, vegetation shall be removed and/or trimmed to a height of six (6) inches or less prior to April 1. Once vegetation has been removed and/or trimmed, appropriate measures, i.e. repeated mowing/trimming, shall be implemented to assure vegetation does not grow more than six (6) inches. Failure to maintain vegetation height of six (6) inches or less may impact project construction.
  - D. Deterring nesting of migratory birds  
In order to deter migratory birds from returning to nesting sites, all nests should be removed within 50 feet of the limits of construction prior to nesting season and appropriate measures taken to assure no new nests are constructed. In Colorado, nesting and rearing activities occur between April 1 and August 31. If construction begins during this timeframe, a nesting bird survey shall be conducted by the contractor's biologist up to 7 days before any construction activities begin.
  - E. Birds of prey  
For birds of prey that could potentially nest near the project site, please contact and/or refer to Colorado Parks and Wildlife's "Recommended buffer zones and seasonal restrictions for Colorado raptors" guidelines available at Colorado Parks and Wildlife district offices and at <https://cpw.state.co.us/documents/wildlifespecies/livingwithwildlife/raptorbufferguidelines2008.pdf>.

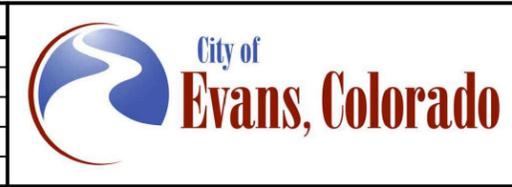


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 Thornton, CO 80241  
 Ph: (303) 962-9300  
 Fax: (303) 962-9350

Sheet Revisions		
Date	Comments	Initials



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No Revisions:
Revised:
Void:

37TH STREET WIDENING PHASE 2A GENERAL NOTES			
Designer:	T. Tuttle	Structure	
Detailer:	J. Jensen	Numbers	
Sheet Subset:	NOTES	Subset Sheets:	3 of 3

<b>Project No.</b>
37TH STREET 2A
Drawing Number NT-003
Sheet Number 11

FOR CONSTRUCTION 2/24/2024

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BOOK	PAGE	SHEET				PLAN	AS CONST.		PLAN	AS CONST.
			201-00000	Clearing and Grubbing	LS	1			1	
			202-00010	Removal of Tree	EACH	47			47	
			202-00012	Removal of Tree Stump	EACH	1			1	
			202-00015	Removal of Headwall	EACH	2			2	
			202-00035	Removal of Pipe	LF	110			110	
			202-00070	Removal of Barricade	EACH	1			1	
			202-00155	Removal of Wall	LF	62			62	
			202-00200	Removal of Sidewalk	SY	111			111	
			202-00201	Removal of Curb	LF	288			288	
			202-00220	Removal of Asphalt Mat	SY	11,128			11,128	
			202-00250	Removal of Pavement Marking	SF	412			412	
			202-00810	Removal of Ground Sign	EACH	8			8	
			202-01000	Removal of Fence	LF	412			412	
			202-01035	Removal of Gate	EACH	1			1	
			203-00060	Embankment Material (Complete In Place)	CY	16,119			16,119	
			203-01100	Proof Rolling	HOUR	100			100	
			203-01500	Blading	HOUR	20			20	
			203-01550	Dozing	HOUR	20			20	
			203-01597	Potholing	HOUR	80			80	
			206-00105	Cement Treated Base	CY	5,351			5,351	

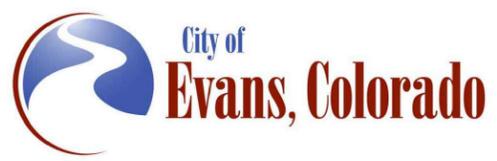
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			207-00205	Topsoil	CY	671			671	
			207-00405	Topsoil (Special)	CY	1,915			1,915	
			208-00002	Erosion Log Type 1 (12 Inch)	LF	3,412			3,412	
			208-00021	Silt Fence (Reinforced)	LF	1,600			1,600	
			208-00035	Aggregate Bag	LF	300			300	
			208-00046	Pre-Fabricated Concrete Washout Structure (Type I)	EACH	2			2	
			208-00053	Storm Drain Inlet Protection (Type I) (84 Inch)	EACH	8			8	
			208-00054	Storm Drain Inlet Protection (Type II)	EACH	3			3	
			208-00075	Pre-fabricated Vehicle Tracking Pad	EACH	4			4	
			208-00103	Removal and Disposal of Sediment (Labor)	HOUR	10			10	
			208-00105	Removal and Disposal of Sediment (Equipment)	HOUR	20			20	
			208-00106	Sweeping (Sediment Removal)	HOUR	20			20	
			208-00107	Removal of Trash	HOUR	10			10	
			208-00207	Erosion Control Management (ECM)	LS	1			1	
			210-00010	Reset Mailbox Structure	EACH	1			1	
			210-00050	Reset Fire Hydrant	EACH	2			2	
			210-01710	Reset Valve	EACH	11			11	
			210-04010	Adjust Manhole	EACH	7			7	
			212-00006	Seeding (Type I)	ACRE	1.3			1.3	
			212-00022	Seeding (Type II)	ACRE	0.8			0.8	



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 Fax: (303) 962-9350

Sheet Revisions		
Date:	Comments	Init.



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Revised:
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**37TH STREET WIDENING PHASE 2A**  
**SUMMARY OF APPROXIMATE QUANTITIES**

Designer: T. Tuttle	Structure Numbers
Detailer: S. Hemler	
Sheet Subset: SAQ	Subset Sheets: 1 of 3

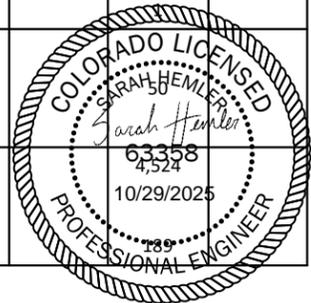
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Drawing Number SAQ-001
Sheet Number 12

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BOOK	PAGE	SHEET				PLAN	AS CONST.		PLAN	AS CONST.
			212-00032	Soil Conditioning	ACRE	2.1			2.1	
			213-00004	Mulching (Weed Free Straw)	ACRE	2.1			2.1	
			213-00005	Wood (Organic) Mulch (Brown Western Red Cedar)(4" Depth)	CY	209			209	
			213-00012	Spray-on Mulch Blanket	ACRE	1.0			1.0	
			213-00061	Mulch Tackifier	LB	420			420	
			213-00067	Inorganic Mulch (1.5" to 3" Tan River Rock)(3" Depth)(Special)	SF	4,409			4,409	
			213-00318	18 Inch Root Barrier	LF	2,520			2,520	
			213-00440	Metal Landscape Border (1/8" x 4")	LF	822			822	
			213-00705	Landscape Boulder A (Siloam)(4'l. x 2'w. x 2'h.)(Special)	EACH	33			33	
			213-00705	Landscape Boulder B (Siloam)(3'l. x 2'w. x 2'h.)(Special)	EACH	36			36	
			213-00705	Landscape Boulder C (Siloam)(2'l. x 2'w. x 2'h.)(Special)	EACH	52			52	
			214-00220	Deciduous Tree (2" Cal.)	EACH	36			36	
			214-00230	Deciduous Ornamental Tree (1.5" Cal.)	EACH	15			15	
			214-00350	Deciduous Shrub (5 Gal.)	EACH	116			116	
			214-00508	Exisitng Tree Protection	LS	1			1	
			214-00650	Evergreen Shrub (5 Gal.)	EACH	27			27	
			214-00908	Ornamental Grasses and Perennials (1 Gal.)	EACH	185			185	
			217-00000	Herbicide Treatment	ACRE	4.5			4.5	
			240-00000	Wildlife Biologist	HOUR	8			8	
			304-06007	Aggregate Base Course (Class 6)	CY	5,157			5,157	

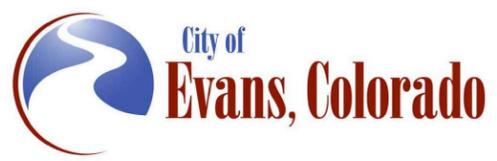
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			403-33741	Hot Mix Asphalt (Grading S)(75)(PG 64-22)	TON	4,611			4,611	
			403-34851	Hot Mix Asphalt (Grading SX)(100)(PG 64-28)	TON	2,306			2,306	
			411-10255	Emulsified Asphalt (Slow Setting)	GAL	1,823			1,823	
			412-00600	Concrete Pavement (6 Inch)	SY	204			204	
			412-00800	Concrete Pavement (8 Inch)	SY	21			21	
			504-08255	Masonry Landscape Wall (Dry Stack)	SF	468			468	
			603-01185	18 Inch Reinforced Concrete Pipe (Complete In Place)	LF	165			165	
			603-01245	24 Inch Reinforced Concrete Pipe (Complete In Place)	LF	831			831	
			603-01305	30 Inch Reinforced Concrete Pipe (Complete In Place)	LF	235			235	
			603-50008	8 Inch Plastic Pipe	LF	130			130	
			604-19115	Inlet Type R L 5 (15 Foot)	EACH	2			2	
			604-19205	Inlet Type R L 10 (5 Foot)	EACH	1			1	
			604-19210	Inlet Type R L 10 (10 Foot)	EACH	1			1	
			604-196XX	Inlet (Filter System)	EACH	2			2	
			604-30010	Manhole Slab Base (10 Foot)	EACH	3			3	
			604-30015	Manhole Slab Base (15 Foot)	EACH	3			3	
			604-30020	Manhole Slab Base (20 Foot)	EACH	1			1	
			607-11525	Fence (Plastic)	LF	50			50	
			608-00006	Concrete Sidewalk (6 Inch)	SY	4,524			4,524	
			608-00008	Concrete Sidewalk (8 Inch)	SY	189			189	



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 Ph: (303) 962-9300  
 Fax: (303) 962-9350

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**37TH STREET WIDENING PHASE 2A  
 SUMMARY OF APPROXIMATE  
 QUANTITIES**

Designer:	T. Tuttle	Structure Numbers	
Detailer:	S. Hemler	Structure Numbers	
Sheet Subset:	SAQ	Subset Sheets:	2 of 3

Project No.
37TH STREET 2A
Drawing Number SAQ-002
Sheet Number 13

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BOOK	PAGE	SHEET				PLAN	AS CONST.		PLAN	AS CONST.
			608-00010	Concrete Curb Ramp	SY	168			168	
			609-21010	Curb and Gutter Type 2 (Section I-B)	LF	4,056			4,056	
			609-21020	Curb and Gutter Type 2 (Section II-B)	LF	4,685			4,685	
			609-24008	Gutter Type 2 (8 Foot)	LF	36			36	
			610-00026	Median Cover Material (6 Inch Patterned Colored Concrete)	SF	9,738			9,738	
			614-00011	Sign Panel (Class 1)	SF	156			156	
			614-00214	Steel Sign Post (1.75x1.75 Inch Tubing)	LF	229			229	
			614-80321	Barricade (Type 3M-A)	EACH	2			2	
			619-50640	8 Inch PVC C900 DR18	LF	199			199	
			619-75064	8 Inch Gate Valve	EACH	3			3	
			620-00020	Sanitary Facility	EACH	1			1	
			623-07006	3/4 Inch Water Meter	EACH	4			4	
			623-09900	Irrigation System	LS	1			1	
			625-00000	Construction Surveying	LS	1			1	
			626-00000	Mobilization	LS	1			1	
			626-01104	Public Information Services (Tier IV)	LS	1			1	
			627-00008	Modified Epoxy Pavement Marking	GAL	28			28	
			627-30405	Preformed Thermoplastic Pavement Marking (Word-Symbol)	SF	438			438	
			627-30410	Preformed Thermoplastic Pavement Marking (Xwalk-Stop Line)	SF	400			400	
			629-01004	Survey Monument (Type 4)	EACH	4			4	

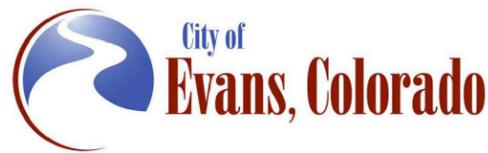
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			629-01031	Survey Monument (Type 3A)	EACH	2			2	
			630-00000	Flagging	HOUR	1,000			1,000	
			630-00007	Traffic Control Inspection	DAY	36			36	
			630-00012	Traffic Control Management	DAY	90			90	
			630-80337	Barricade (Type 3M-C) (Temporary)	EACH	6			6	
			630-80341	Construction Traffic Sign (Panel Size A)	EACH	40			40	
			630-80350	Vertical Panel	EACH	50			50	
			630-80360	Drum Channelizing Device	EACH	200			200	
			630-80380	Traffic Cone	EACH	100			100	
			700-	F/A Irrigation	F A	1			1	
			700-70491	F/A Traffic Control	F A	1			1	



Print Date: 2/19/2024  
 File Name: SAQ\_P2A-003.DWG  
 Horiz. Scale: N/A Vert. Scale: N/A

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Sheet Revisions		
Date:	Comments	Init.



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No Revisions:
Revised:
Void:

**37TH STREET WIDENING PHASE 2A  
 SUMMARY OF APPROXIMATE  
 QUANTITIES**

Designer: T. Tuttle	Structure Numbers
Detailer: S. Hemler	
Sheet Subset: SAQ	Subset Sheets: 3 of 3

Project No.
37TH STREET 2A
Drawing Number SAQ-003
Sheet Number 14

FOR CONSTRUCTION 2/24/2024

**SUMMARY OF EARTHWORK QUANTITIES**

<u>EMBANKMENT MATERIAL (COMPLETE IN PLACE) (NET)</u>	<u>CUBIC YARDS</u>
FOR ROADWAY	13,941
FOR MANHOLES/INLETS/PIPES	1,141
FOR ROAD APPROACHES	1,037
<b>TOTAL</b>	<b>16,119</b>
<b>FOR INFORMATION ONLY</b>	
<u>UNCLASSIFIED EXCAVATION</u>	<u>CUBIC YARDS</u>
FOR ROADWAY	9,444
FOR ROAD APPROACHES	257
FOR MANHOLES/INLETS/PIPES	662
<b>TOTAL</b>	<b>10,363</b>
<b>EARTHWORK QUANTITIES BALANCE</b>	
<u>UNCLASSIFIED EXCAVATION</u>	<u>CUBIC YARDS</u>
TOTAL UNCLASSIFIED EXCAVATION	10,363
<b>TOTAL</b>	<b>10,363</b>
<u>EMBANKMENT (NET)</u>	
<b>TOTAL</b>	<b>16,119</b>
<b>TOTAL FROM CONTRACTOR'S SOURCE</b>	<b>5,756</b>

A minimum R-value for all imported embankment will be 45.

**TABULATION OF PAVEMENT ITEMS**

STATION	HOT MIX ASPHALT PAVING		EMULSIFIED	AGGREGATE
	HOT MIX ASPHALT (GRADING SX) (100) (PG 64-28)	HOT MIX ASPHALT (GRADING S) (75) (PG 64-22)	ASPHALT (SLOW- SETTING)	BASE COURSE (CLASS 6)
	TONS	TONS	GAL	CY
Sienna Avenue to 35th Avenue				
1091+46.80 - 1115+05.78			1,616	4,065
1st Lift	1,777			
2nd Lift		1,777		
3rd Lift		1,777		
Approach to Project				
1115+05.78 - 1120+35.57			154	341
1st Lift	169			
2nd Lift		169		
3rd Lift		169		
Road Approaches				
1091+90.08 Rt.				42
1097+37.51 Lt.				11
1098+53.19 Lt.				10
1101+38.45 Rt.				16
1101+43.20 Lt.				13
1107+03.99 Rt.				26
1114+32.36 Rt.				23
Stampede Dr. - 1111+77.01 Lt.			53	140
1st Lift	59			
2nd Lift		59		
3rd Lift		59		
SUBTOTALS	2,005	4,010	1,823	4,688
Irregularities (15%)	301	601		
Irregularities (10%)				469
<b>TOTALS</b>	<b>2,306</b>	<b>4,611</b>	<b>1,823</b>	<b>5,157</b>

**TABULATION OF RETAINING WALL**

STATION	MASONRY LANDSCAPE	REMARKS
	WALL (DRY STACK) SF	
1092+69.95 - 1093+00.00	30	1' Tall
1103+25.00 - 1104+75.00	375	2.5' Tall
1112+25.00 - 1112+50.00	63	2.5' Tall
<b>TOTAL</b>	<b>468</b>	

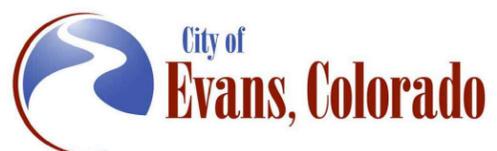


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Print Date: 2/19/2024  
 File Name: TAB P2A-001 TABULATION.DWG  
 Horiz. Scale: N/A Vert. Scale: N/A

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Sheet Revisions		
Date	Comments	Initials



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 Revised:  
 Void:

**37TH STREET WIDENING PHASE 2A  
 TABULATIONS**

Designer: T. Tuttle  
 Detailer: S. Hemler  
 Sheet Subset: TABS

Structure Numbers  
 Subset Sheets: 1 of 4

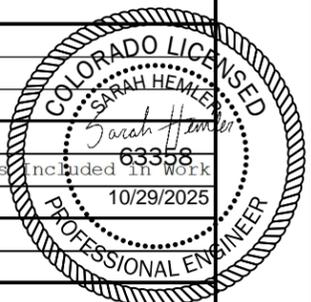
**Project No.**  
 37TH STREET 2A

Drawing Number TAB-001  
 Sheet Number 15

FOR CONSTRUCTION 2/24/2024

**TABULATION OF REMOVALS, RESETS, AND ADJUSTMENTS**

STATION	SIDE	REMOVAL OF TREE	REMOVAL OF BARRICADE	REMOVAL OF TREE STUMP	REMOVAL OF HEADWALL	REMOVAL OF PIPE	REMOVAL OF WALL	REMOVAL OF SIDEWALK	REMOVAL OF CURB	*REMOVAL OF ASPHALT MAT	REMOVAL OF PAVEMENT MARKING	REMOVAL OF FENCE	REMOVAL OF GATE	RESET MAILBOX STRUCTURE	RESET FIRE HYDRANT	RESET VALVE	ADJUST MANHOLE	REMARKS
		EA	EA	EA	EA	LF	LF	SY	LF	SY	SF	LF	EA	EA	EA	EA	EA	
1089+00.00	Rt.										58							
1091+46.80 - 1120+35.57	Rt. & Lt.									11128								
1091+46.80	Rt.		1															Removal of barricade with sign from previous construction 37th St. Phase 1
1091+94.77	Lt.															1		Water Valve
1092+00.08	Lt.															1		Water Valve
1092+21.53	Lt.							13	39									Tie in at Sienna Ave.
1096+59.42	Lt.															1		
1096+59.42	Rt.													1				
1098+36.73 - 1102+00.96	Rt.	20																
1100+34.50 - 1100+68.62	Rt.					34												
1100+91.90	Lt.							21	37									Tie in at Palermo Ave.
1101+33.24	Lt.															1		Water Valve
1101+48.38	Lt.															1		Water Valve
1101+63.57	Lt.							15	41									Tie in at Palermo Ave.
1102+45.23 - 1105+79.98	Rt.											412						
1103+62.32	Rt.	1																
1105+31.80	Rt.	1																
1105+79.98	Rt.												1					Fence Gate
1105+80.78	Rt.						62											Concrete and Steel Feeders
1105+99.80	Rt.														1			
1106+00.47	Lt.															1		Water Valve
1106+19.59	Lt.																1	
1106+45.22	Lt.																1	
1106+46.06	Lt.															1		Water Valve
1107+87.67	Lt. & Rt.					61												20'' CMP
1109+84.83	Lt.																1	
1111+32.06	Lt.							40	80									Tie in at Stampede Drive
1111+64.06	Lt.															1		Water Valve
1111+64.94	Lt.															1		
1111+82.56	Lt.							22	91									Tie in at Stampede Drive
1111+84.83	Lt.															1		Water Valve
1111+98.36	Lt.																1	
1112+99.44	Rt.													1				
1113+24.89 - 1115+74.96	Rt.	25																
1113+45.53	Rt.																	148' of Planks of Wood Aligning the Driveway
1113+44.37	Lt.																1	
1115+00.00 - 1120+35.57	Lt.										354							
1115+03.54	Rt.				1													Irrigation Structure
1115+07.65	Rt.				1													Concrete Irrigation Structure
1115+59.50	Rt.					12												12" PVC
1115+65.70	Rt.			1														
1115+70.68	Rt.					3												12" PVC and Connected Appurtences included in work
1117+07.62	Lt.																1	
1117+78.25	Lt.																1	
1118+28.09	Rt.															1		Water Valve
<b>TOTALS</b>		<b>47</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>110</b>	<b>62</b>	<b>111</b>	<b>288</b>	<b>11,128</b>	<b>412</b>	<b>412</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>11</b>	<b>7</b>	



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Sheet Revisions		
Date	Comments	Initials

As Constructed No Revisions: Revised: Void:	<b>37TH STREET WIDENING PHASE 2A TABULATIONS</b>		<b>Project No.</b> 37TH STREET 2A
	Designer: T. Tuttle	Structure Numbers	Drawing Number TAB-002
	Detailer: G. Garramone	Sheet Subset: TABS	Subset Sheets: 2 of 4 Sheet Number 16

FOR CONSTRUCTION 2/24/2024

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TABULATION OF CONCRETE ITEMS											
STATION	SIDE	CONCRETE SIDEWALK (6 INCH)	CONCRETE SIDEWALK (8 INCH)	CONCRETE CURB RAMP	CURB AND GUTTER TYPE 2 (SECTION I-B)	CURB AND GUTTER TYPE 2 (SECTION II-B)	GUTTER TYPE 2 (8 FOOT)	MEDIAN COVER MATERIAL (6 INCH PATTERNED CONCRETE)	CONCRETE PAVEMENT (6 INCH)	CONCRETE PAVEMENT (8 INCH)	REMARKS
		SY	SY	SY	LF	LF	LF	SF	SY	SY	
Sienna Ave. to Palermo Ave.											
1091+40.00 - 1101+40.00	Lt.	822		74		903					
	Rt.	1,049				993					
	Total				1,626			3,843			
Palermo Ave. to Stampede Dr.											
1101+40.00 - 1111+80.00	Lt.	981		26		995					
	Rt.	1,050				978					
	Total				1,868			4,199			
Stampede Dr. to Project End											
1111+80.00 - 1115+05.78	Lt.	242				291					
	Rt.	282				284					
	Total				562			1,697			
Road Approaches											
1091+90.08	Rt.		33					38			
1097+37.51	Lt.		22					26			
1098+53.19	Lt.		22					26			
1101+38.45	Rt.		34					27			
1101+43.20	Lt.		10					21		Driveway off Palermo Ave	
1107+03.99	Rt.		33					38			
1111+77.01	Lt.	98		69		240	36			21	Stampede Drive
1114+32.36	Rt.		34					27			
TOTAL		4,524	189	168	4,056	4,685	36	9,738	204	21	



Plot Date: 2/19/2024 4:41 PM Plotted By: Sarah Hemler  
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 File Name: TAB P2A-001 TABULATION.DWG  
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**37TH STREET WIDENING PHASE 2A TABULATIONS**

Designer: T. Tuttle  
 Detailer: S. Hemler  
 Sheet Subset: TABS

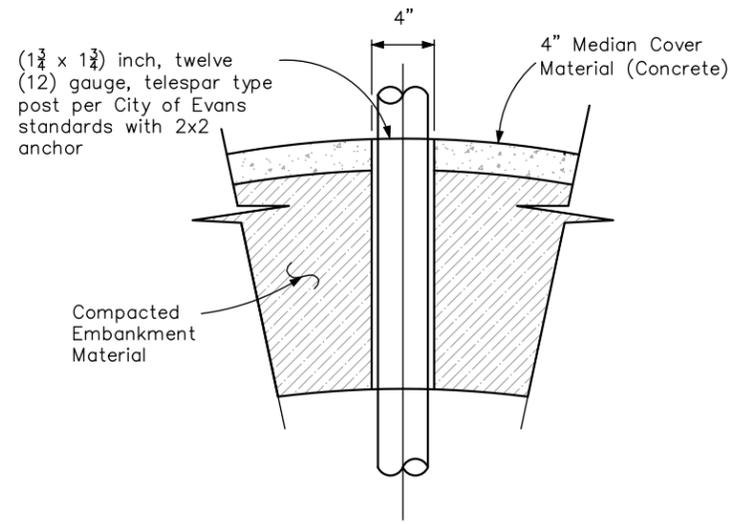
Structure Numbers  
 Subset Sheets: 3 of 4

**Project No.**  
 37TH STREET 2A

Drawing Number TAB-003  
 Sheet Number 17

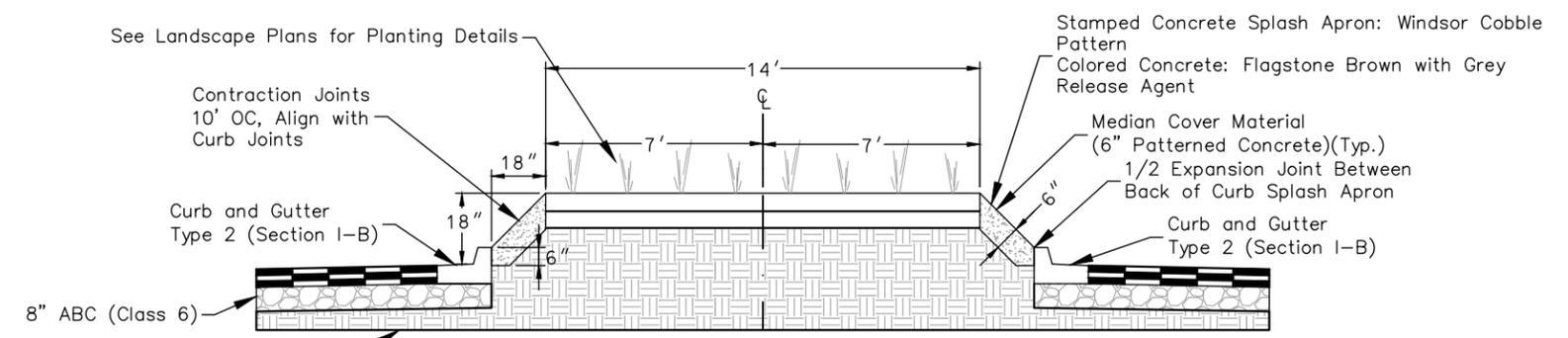
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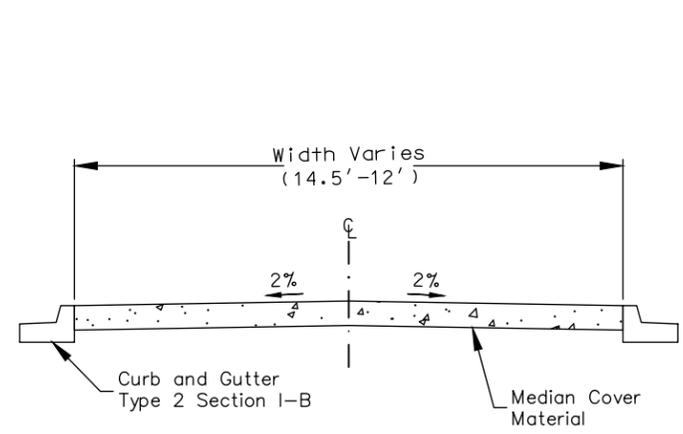
**SLEEVE FOR DESIGN POST OR DELINEATOR POST IN CONCRETE DETAIL**

Cost of sleeve will not be paid for separately, but will be included in the cost of Median Cover Material (Concrete). Location of posts are as shown on tabulation of signs and delineator tabulation.

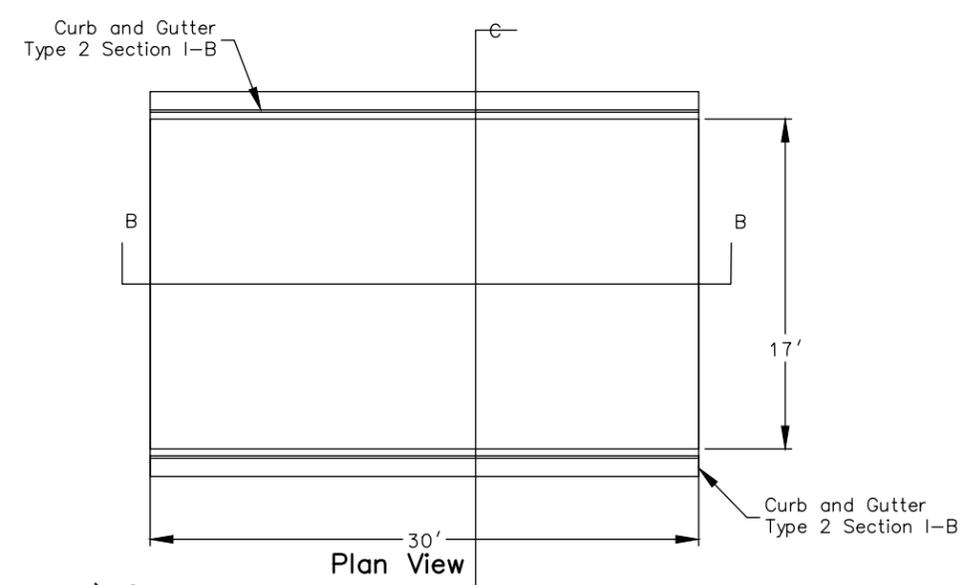


**RAISED LANDSCAPED MEDIAN DETAIL**

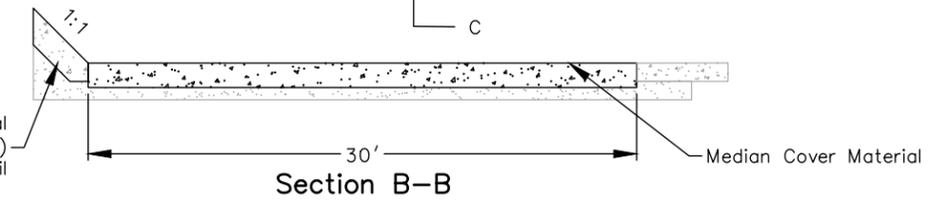
Sta. 1092+76.00 to Sta. 1096+78.00  
 Sta. 1102+14.00 to Sta. 1107+40.00  
 Sta. 1113+97.00 to Sta. 1115+04.50



**Section C-C**



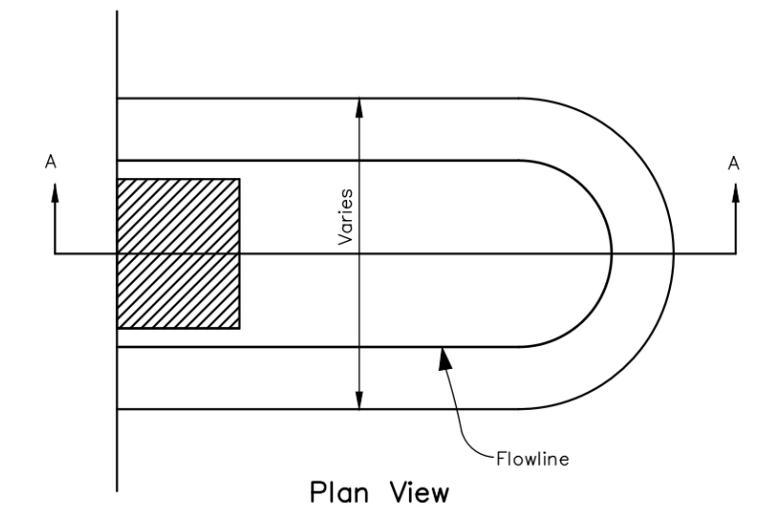
**Plan View**



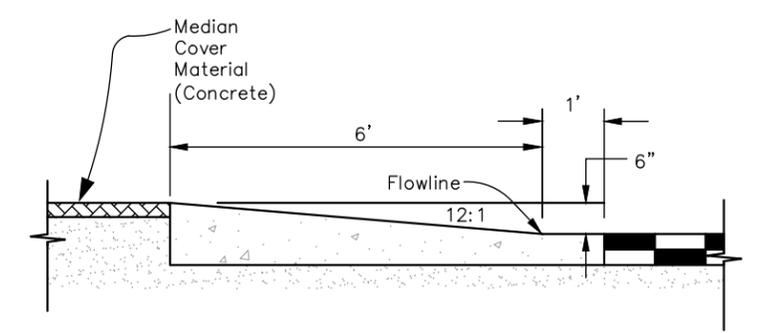
**Section B-B**

**PAVED MAINTENANCE PULLOUT SPACE DETAIL**

Sta. 1096+79.00 to Sta. 1097+09.00  
 Sta. 1107+42.00 to Sta. 1107+72.00



**Plan View**



**Section A-A**

**MEDIAN ISLAND NOSE DETAIL**

Sta. 1100+71  
 Sta. 1111+30  
 Sta. 1112+31

Median nose detail will be included in the cost of curb and gutter



Plot Date: 2/12/2024 7:41 AM Plotted By: Sarah Hemler R:\G-PROJECTS\ACTIVE PROJECTS\30001\_EVANS\_37TH\_ST AND 47TH AVE PLAN\B20\_COMPUTER DESIGN FILES\_P2 - PHASE 2A\B20\_SHEET FILES\DT\_P2A-001\_DETAILS.DWG

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Date	Comments	Initials



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<b>37TH STREET WIDENING PHASE 2A DETAILS</b>	
Designer: T. Tuttle	Structure Numbers
Detailer: S. Hemler	Numbers
Sheet Subset: DETAILS	Subset Sheets: 1 of 12

<b>Project No.</b>
37TH STREET 2A
Drawing Number DT-001
Sheet Number 19

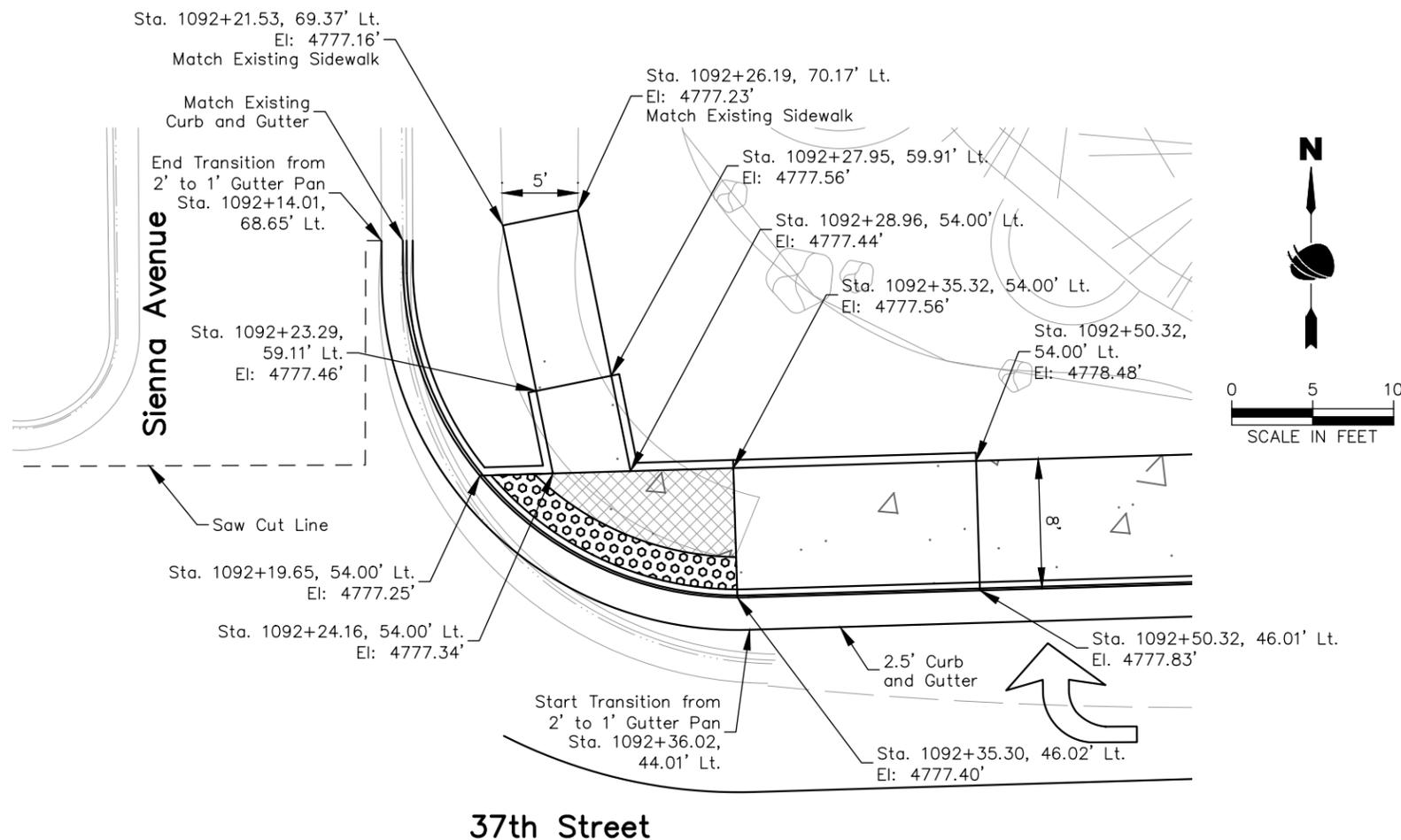
FOR CONSTRUCTION 2/24/2024

LEGEND

 Turning Space

NOTES:

1. If any field adjustments for ADA Ramps are required, ramp design must adhere to the latest CDOT M-608-1 standard.
2. Detectable warnings shall be cast iron.
3. It is estimated that 8 DWS panels (2' x 2') will be needed for this curb ramp.
4. All callouts are to the FL of the curb.
5. Refer to Road Approach Sheets for additional information



37th Street

**CURB RAMP SIENNA AVENUE EAST**



Plot Date: 2/12/2024 7:41 AM Plotted By: Sarah Hemler  
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File Name: DT P2A-001 DETAILS.DWG	
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Revised:
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37TH STREET WIDENING PHASE 2A DETAILS		
Designer:	T. Tuttle	Structure Numbers
Detailer:	J. Jensen	
Sheet Subset:	DETAILS	Subset Sheets: 2 of 12

<b>Project No.</b>
37TH STREET 2A
Drawing Number DT-002
Sheet Number 20

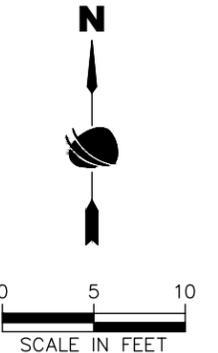
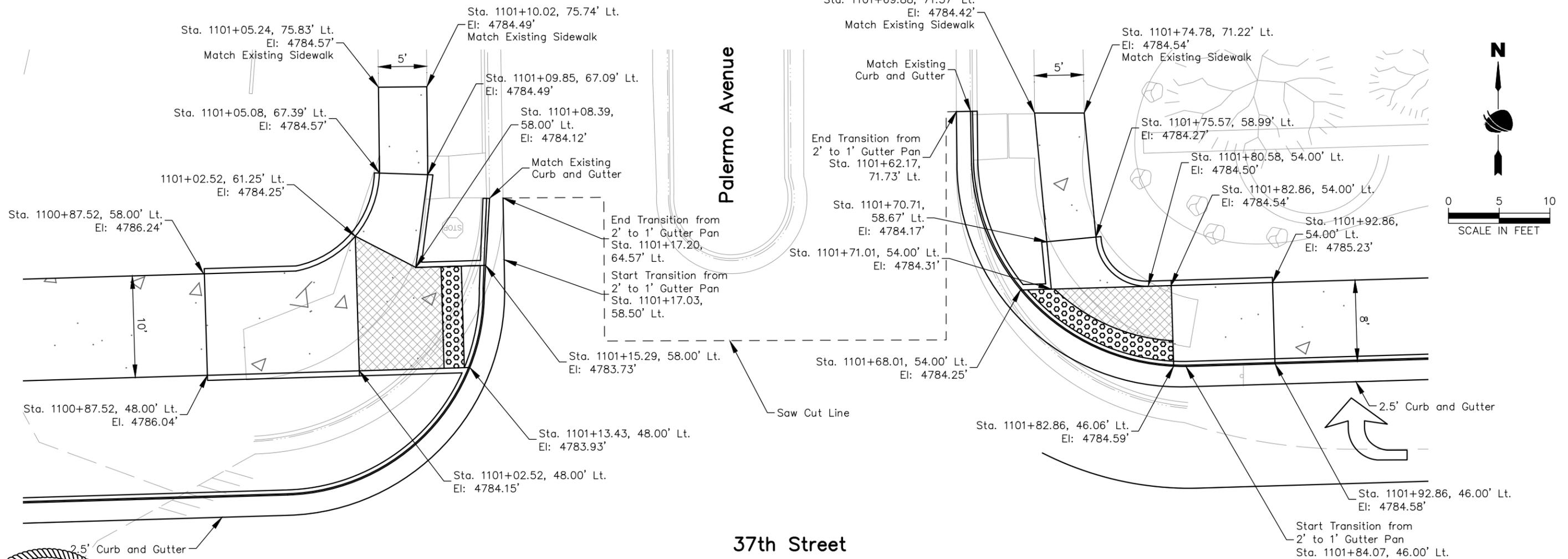
FOR CONSTRUCTION 2/24/2024

LEGEND



NOTES:

1. If any field adjustments for ADA Ramps are required, ramp design must adhere to the latest CDOT M-608-1 standard.
2. Detectable warnings shall be cast iron.
3. It is estimated that 5 DWS panels (2' x 2') will be needed for the west ramp.
4. It is estimated that 8 DWS panels (2' x 2') will be needed for the east ramp.
5. All callouts are to the FL of the curb.
6. Refer to Road Approach Sheets for additional information.



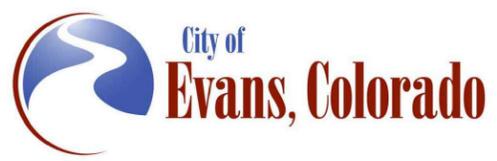
**CURB RAMP PALERMO AVENUE WEST**

**CURB RAMP PALERMO AVENUE EAST**



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File Name: DT P2A-001 DETAILS.DWG
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Sheet Revisions		
Date	Comments	Initials



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37TH STREET WIDENING PHASE 2A DETAILS			
Designer:	T. Tuttle	Structure Numbers:	
Detailer:	J. Jensen		
Sheet Subset:	DETAILS	Subset Sheets:	3 of 12

<b>Project No.</b>
37TH STREET 2A
Drawing Number DT-003
Sheet Number 21

FOR CONSTRUCTION 2/24/2024

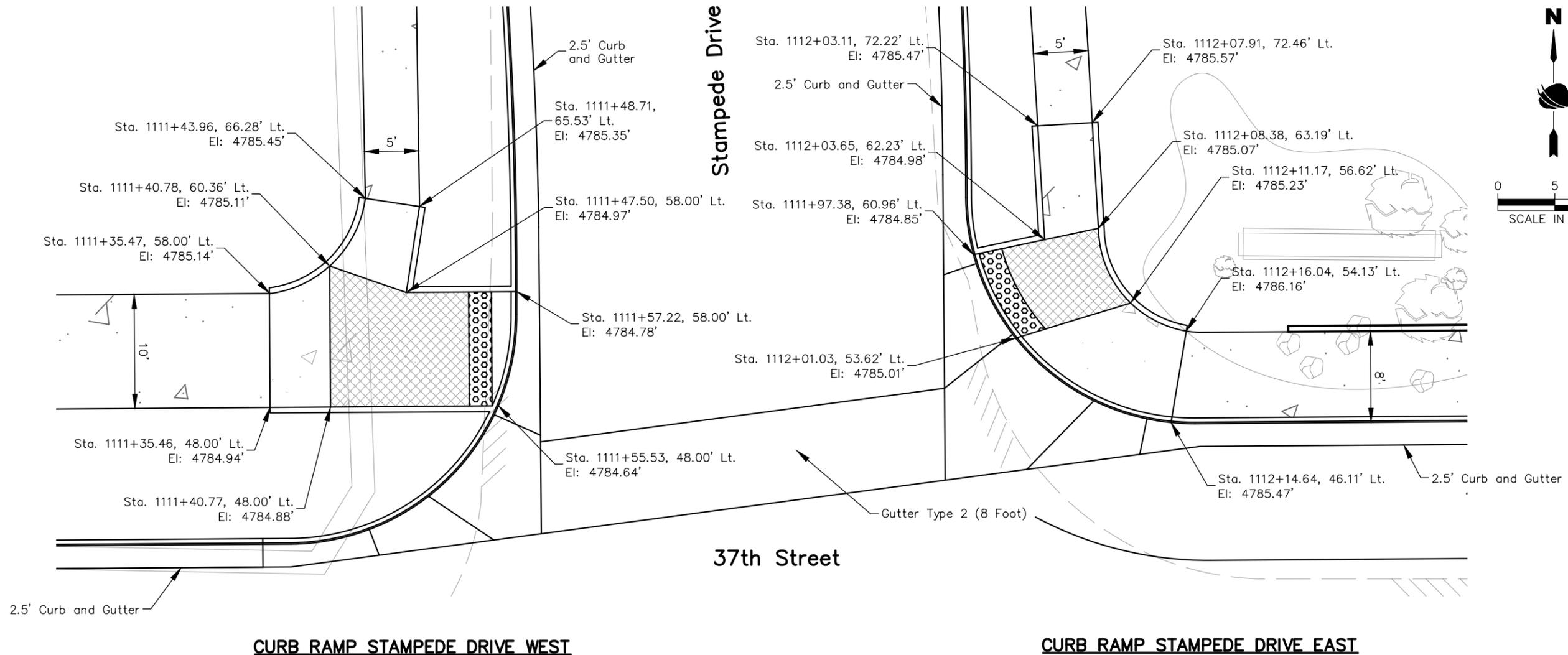
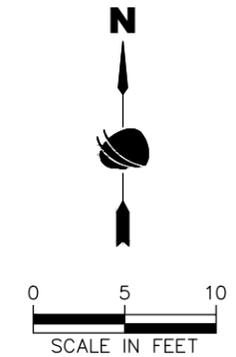
Plot Date: 2/12/2024 7:42 AM Plotted By: Sarah Hemler P:\PROJECTS\2024\PHASE 2A\COMPUTER DESIGN FILES\DT P2A-001 DETAILS.DWG

LEGEND

 Turning Space

NOTES:

1. If any field adjustments for ADA Ramps are required, ramp design must adhere to the latest CDOT M-608-1 standard.
2. Detectable warnings shall be cast iron.
3. It is estimated that 5 DWS panels (2' x 2') will be needed for the west ramp.
4. It is estimated that 4 DWS panels (2' x 2') will be needed for the east ramp.
5. All callouts are to the FL of the curb.
6. Refer to Road Approach Sheets for additional information.



Plot Date: 2/12/2024 7:42 AM Plotted By: Sarah Hemler  
 C:\PROJECTS\2024\PHASE 2A\COMPUTER DESIGN FILES\DT P2A-001 DETAILS.DWG

FOR CONSTRUCTION 2/24/2024

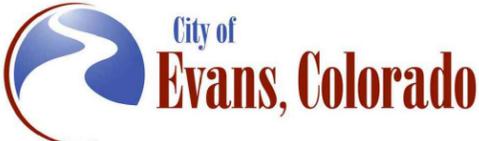


Print Date: 2/12/2024  
 File Name: DT P2A-001 DETAILS.DWG  
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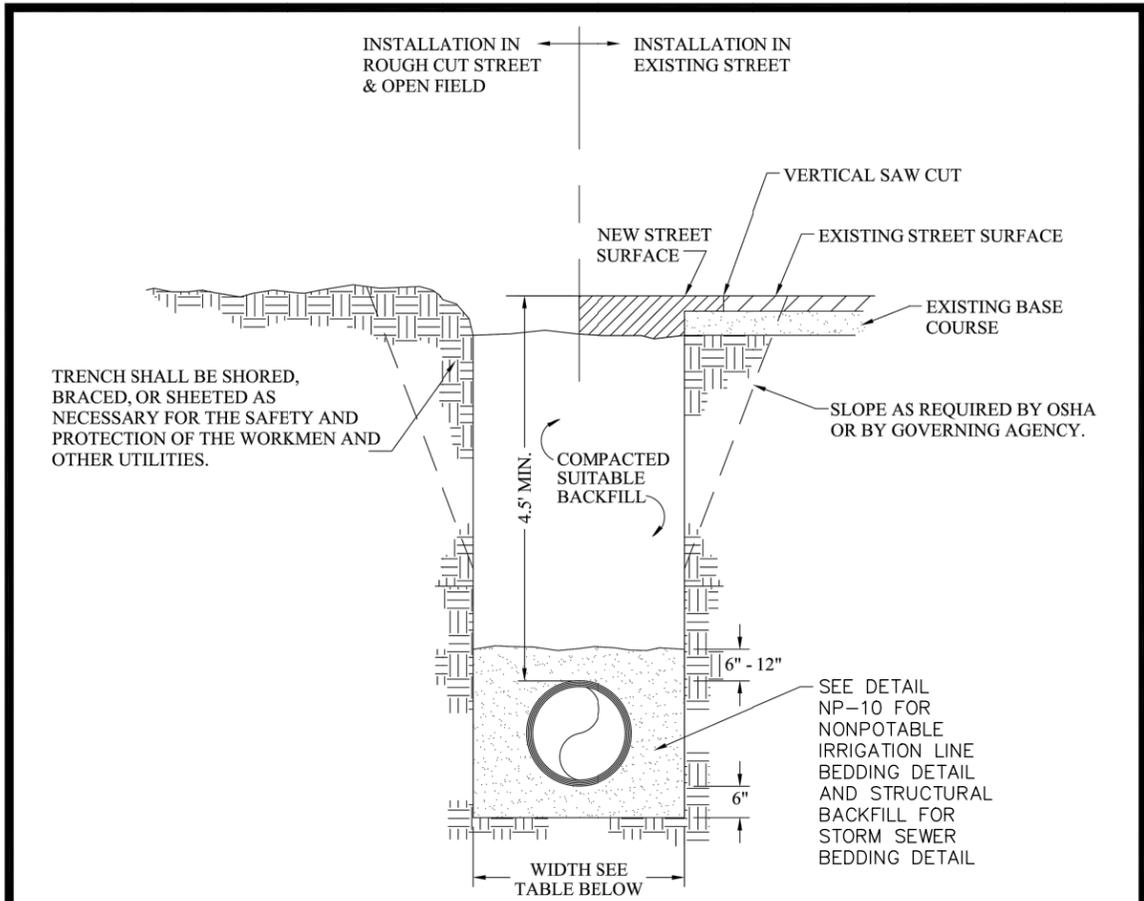
Sheet Revisions		
Date	Comments	Initials




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No Revisions:
Revised:
Void:

37TH STREET WIDENING PHASE 2A DETAILS			
Designer:	T. Tuttle	Structure Numbers	
Detailer:	J. Jensen		
Sheet Subset:	DETAILS	Subset Sheets:	4 of 12

<b>Project No.</b>
37TH STREET 2A
Drawing Number DT-004
Sheet Number 22



PIPE DIAMETER	MINIMUM WIDTH	MAXIMUM WIDTH
6"	1'-6"	2'-6"
8"	1'-8"	2'-8"
12"	2'-0"	3'-0"
16"	2'-4"	3'-4"
20"	2'-8"	3'-8"
24"	3'-0"	4'-0"
30"	3'-6"	4'-6"

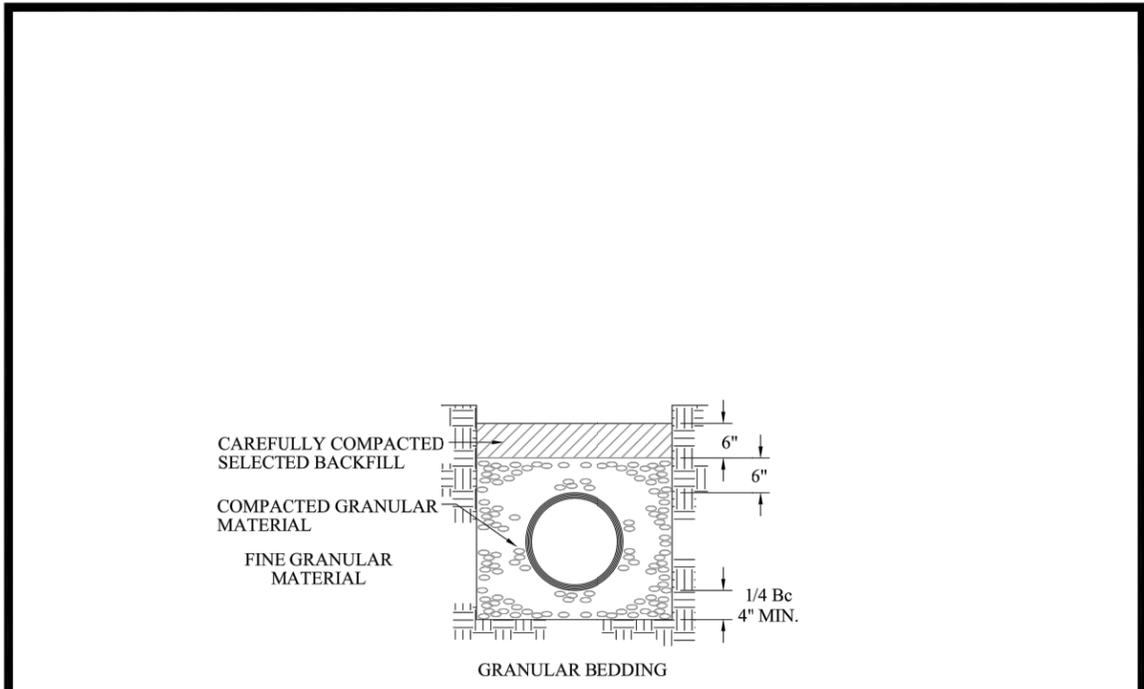
- NOTES:
1. SQUEEGEE SAND IS DEFINED AS MATERIAL IN WHICH 100% PASSES THROUGH A  $\frac{3}{8}$ " SIEVE AND ONLY 0% TO 5% PASSES THROUGH A #200 SIEVE
  2. AN OVER-EXCAVATED TRENCH SHALL BE REFILLED AND THOROUGHLY COMPACTED UNDER THE DIRECTION OF THE PUBLIC WORKS DEPARTMENT
  3. UNDER NO CIRCUMSTANCES WILL PIPE BE LAID IN A PROPOSED FILL AREA PRIOR TO IT BEING COMPLETELY FILLED. THE FILL WILL BE PLACED FIRST TO PROPOSED GRADE AND COMPACTED AS REQUIRED. A TRENCH THEN WILL BE EXCAVATED AND THE PIPE INSTALLED IN THE USUAL MANNER



Public Works  
Department

**TRENCH  
CROSS-SECTION DETAIL**

Scale: N.T.S.      NP-16      May 2019



- NOTES:
1. MINIMUM DENSITY FOR CAREFULLY COMPACTED SELECT BACKFILL SHALL BE 95% OF MAXIMUM OR AS SPECIFIED FOR THE TRENCH BACKFILL - WHICHEVER IS GREATER
  2. COMPACT GRANULAR MATERIAL BY SLICING WITH A SHOVEL AROUND PIPE. WHEN BEDDING IS 6" OVER PIPE, COMPACT WITH VIBRATING COMPACTOR



Public Works  
Department

**NONPOTABLE IRRIGATION LINE  
BEDDING DETAIL**

Scale: N.T.S.      NP-10      May 2019

Plot Date: 2/12/2024 7:42 AM Plotted By: Sarah Hemler  
 C:\PROJECTS\WASTE PROJECTS\33001\EVANS\37TH ST AND 47TH AVE PLAN\2024\COMPUTER DESIGN FILES\DT P2A-001 DETAILS.DWG

Print Date: 2/12/2024  
 File Name: DT P2A-001 DETAILS.DWG  
 Horiz. Scale: NTS      Vert. Scale: NTS



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Sheet Revisions		
Date	Comments	Initials

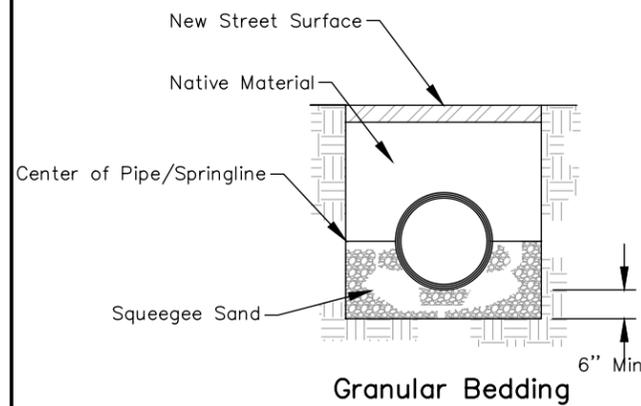


City of  
**Evans, Colorado**



As Constructed	37TH STREET WIDENING PHASE 2A DETAILS		Project No.
	No Revisions:	37TH STREET 2A	
Revised:	Designer: T. Tuttle	Structure Numbers	Drawing Number DT-005
Void:	Detailer: J. Jensen	Sheet Subset: DETAILS	Sheet Number 23
		Subset Sheets: 5 of 12	

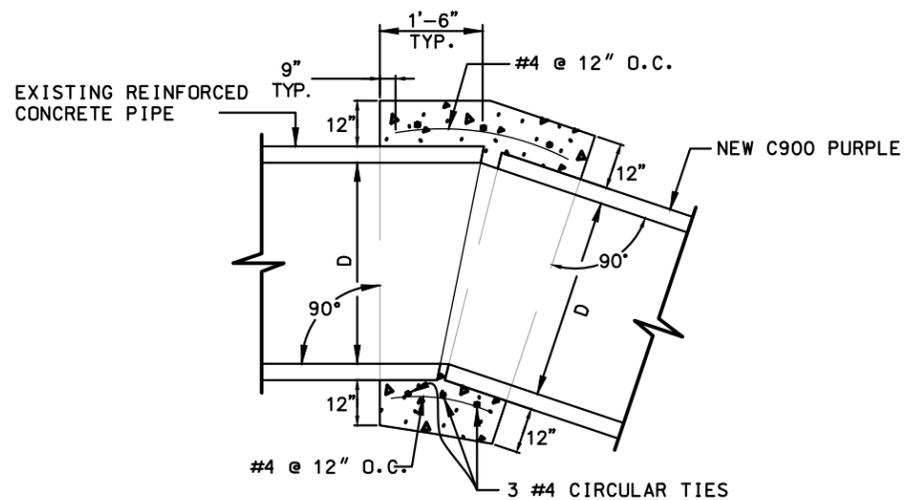
FOR CONSTRUCTION 2/24/2024



**Notes:**

1. Pipe must be RCP only.
2. Native material as backfill up to grade compacted to 95% ± 2%.
3. Squeegee from 6" below the pipe and up to the springline of the pipe.
4. Squeegee sand is defined as material in which 100% passes through a 3/8" sieve and only 0% to 5% passes through a #200 sieve.
5. All trenching shall meet OSHA requirements, including trench boxes and/or shoring when appropriate.
6. An over-excavated trench shall be refilled and thoroughly compacted under the direction of the public works department.
7. Under no circumstances will pipe be laid in a proposed fill area prior to it being completely filled. The fill will be placed first to proposed grade and compacted as required. A trench then will be excavated and the pipe installed per City of Evans Standards.

**STORM SEWER BACKFILL DETAIL  
NTS**



**CONCRETE COLLAR  
N.T.S.**

**Notes:**

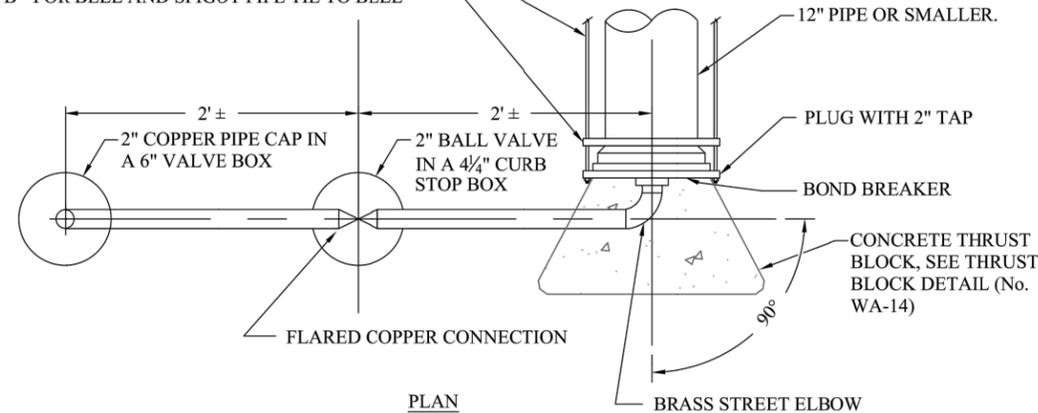
1. Collar shall be formed with plywood (Remove prior to backfill).
2. Contractor shall form to prevent concrete from entering the pipes.
3. Concrete shall be vibrated during placement.
4. Pipe shall be cleaned of loose dirt etc.
5. Rebar 3" clear of formed surface
6. A Concrete Collar is required where the maximum permissible pull at the joint, as specified by the Manufacturer, is exceeded.
7. Omit reinforcing on all pipes less than 24" in diameter with minimum 2' cover and substitute with wire mesh.
8. Concrete shall be CDOT Class B.
9. Concrete Pipe Collars will not be paid for separately but shall be included in the work.
10. The interior surface of the Concrete Collar shall be finished smooth to match the adjoining pipe surfaces. If the proposed pipe deflection creates a gap which prohibits a smooth interior finish, a mitered cut to each pipe shall be required.

**NOTE:**

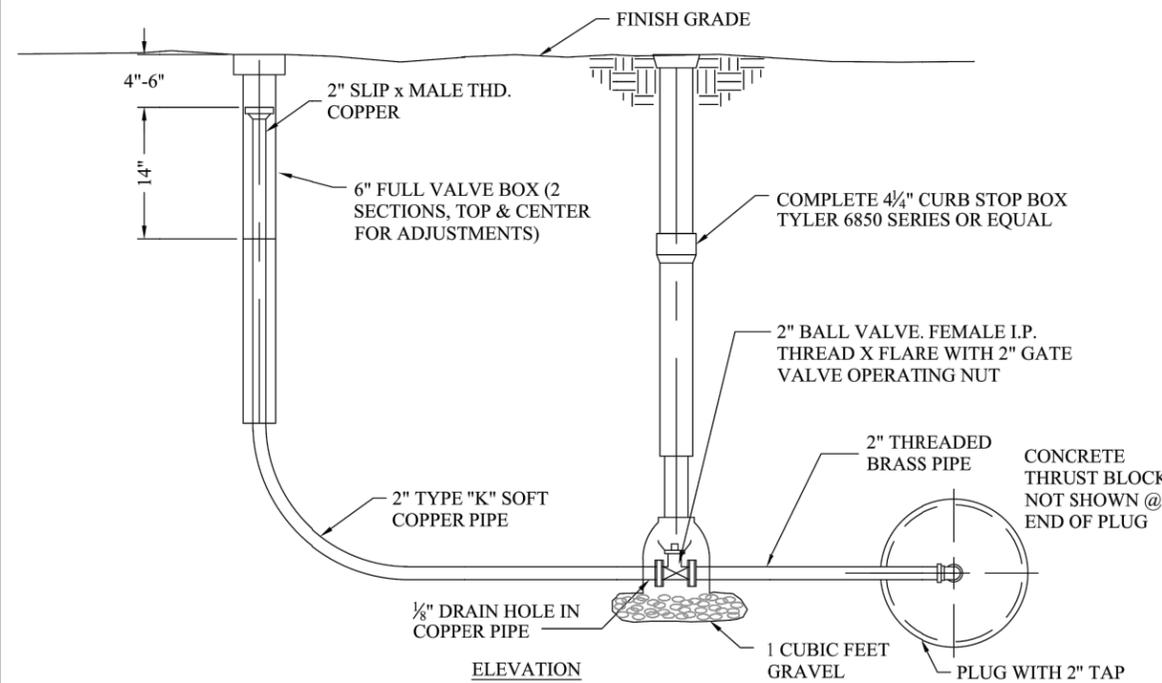
PLUG SHALL BE MECHANICALLY RESTRAINED:

A - FOR SLEEVE TYPE MACHINED COUPLING PIPE TIE BACK TO NEXT COUPLING

B - FOR BELL AND SPIGOT PIPE TIE TO BELL



**PLAN**



**ELEVATION**



Public Works  
Department

**BLOWOFF ASSEMBLY  
INSTALLATION DETAIL  
FOR 12" & SMALLER PIPE**

Scale: N.T.S.

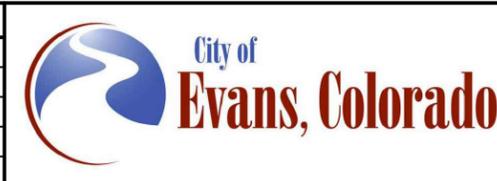
WA-2

May 2019

Print Date: 2/12/2024  
 File Name: DT P2A-001 DETAILS.DWG  
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Sheet Revisions		
Date	Comments	Initials

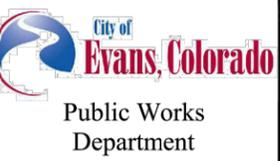
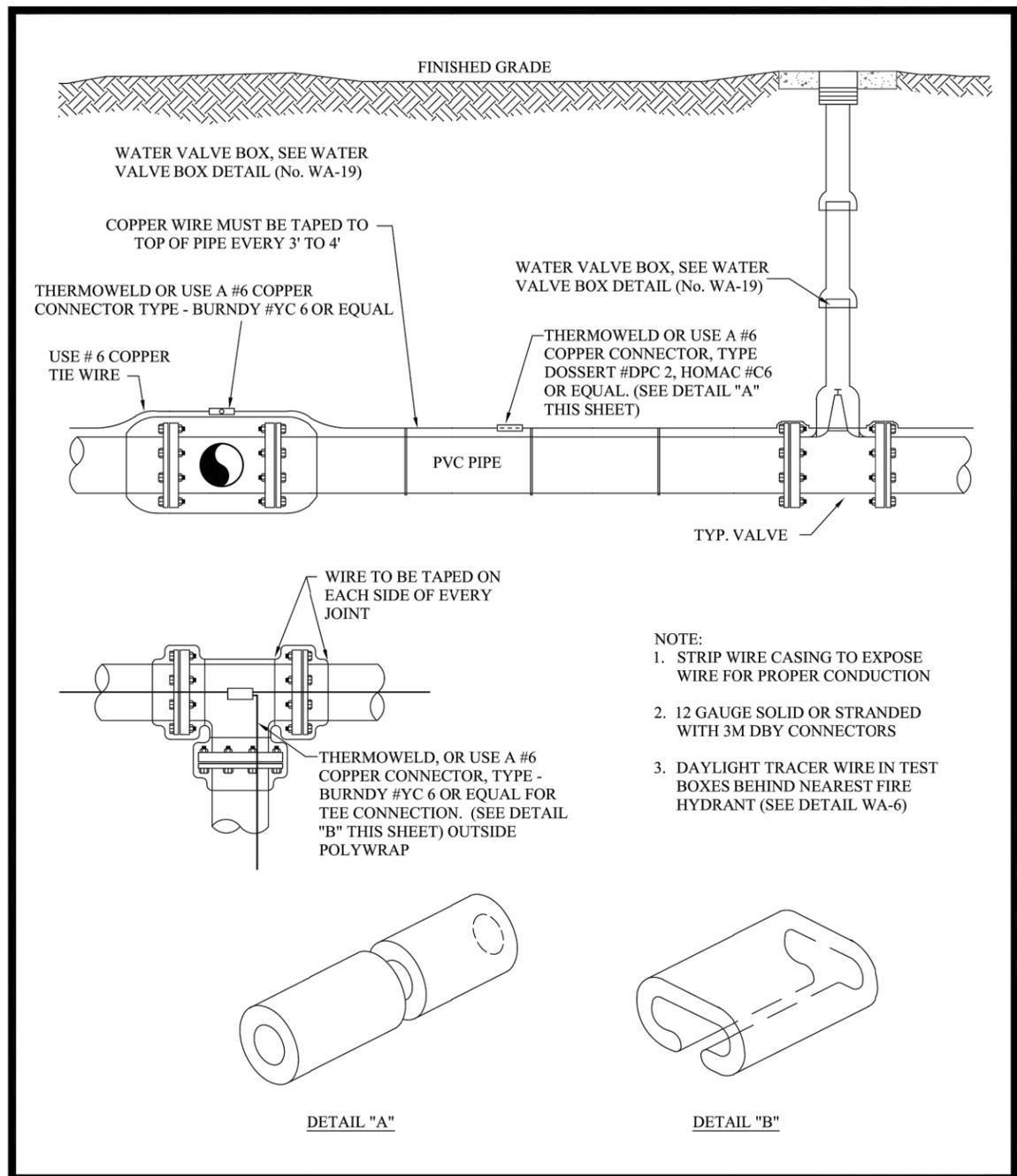


<b>As Constructed</b>
No Revisions:
Revised:
Void:

<b>37TH STREET WIDENING PHASE 2A DETAILS</b>			
Designer:	T. Tuttle	Structure Numbers	
Detailer:	J. Jensen		
Sheet Subset:	DETAILS	Subset Sheets:	6 of 12

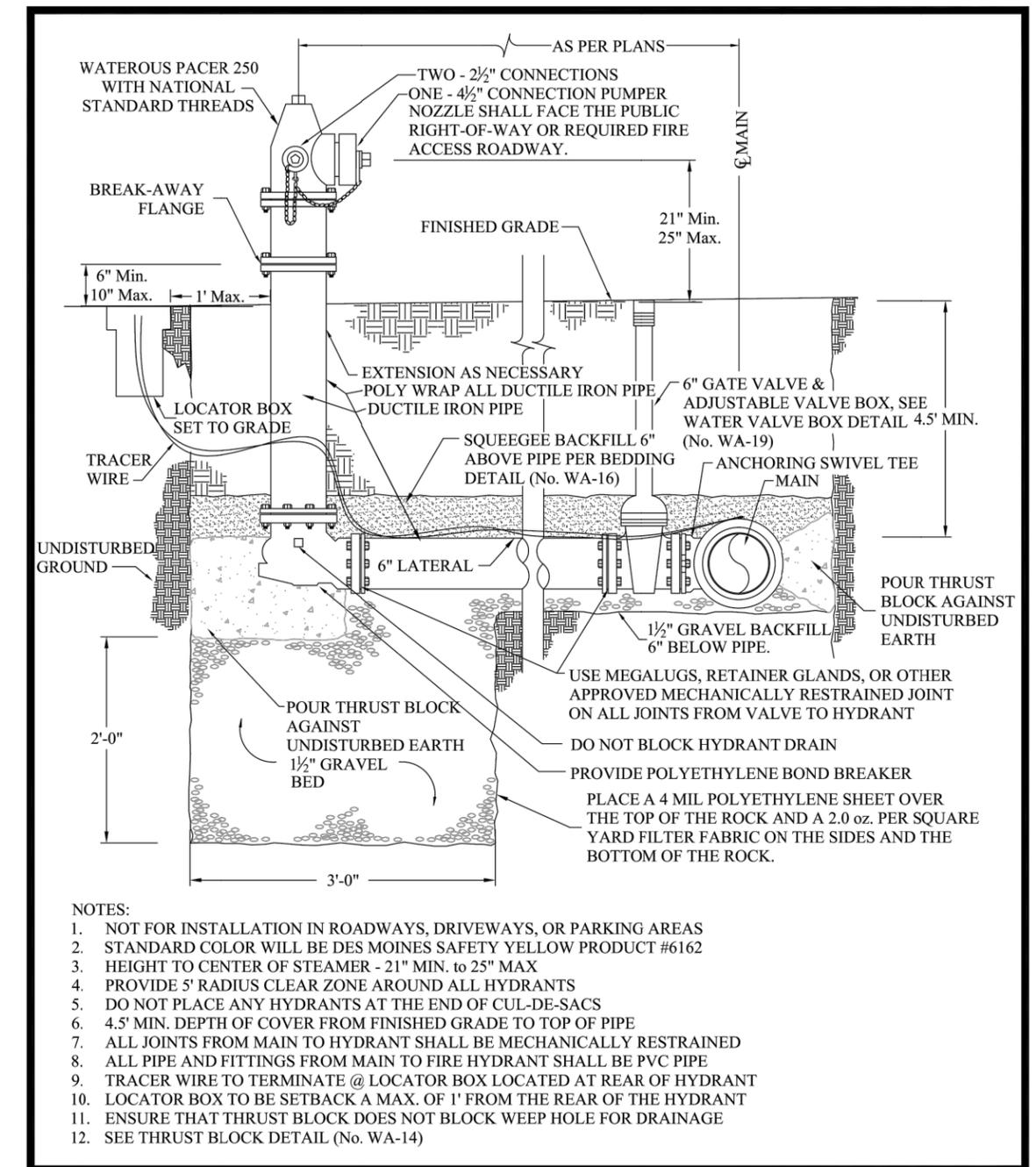
<b>Project No.</b>
37TH STREET 2A
Drawing Number DT-006
Sheet Number 24

FOR CONSTRUCTION 2/24/2024



**COPPER TRACER WIRE DETAIL ON PVC PIPE**

Scale: N.T.S. WA-5 May 2019



**FIRE HYDRANT DETAIL WATEROUS PACER 250 WITH NATIONAL STANDARD THREADS**

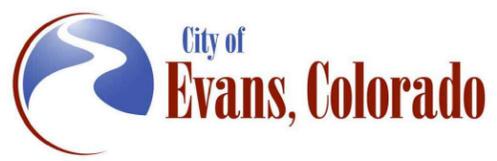
Scale: N.T.S. WA-6 May 2019

Plot Date: 2/12/2024 7:42 AM Plotted By: Sarah Hemler  
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Sheet Revisions		
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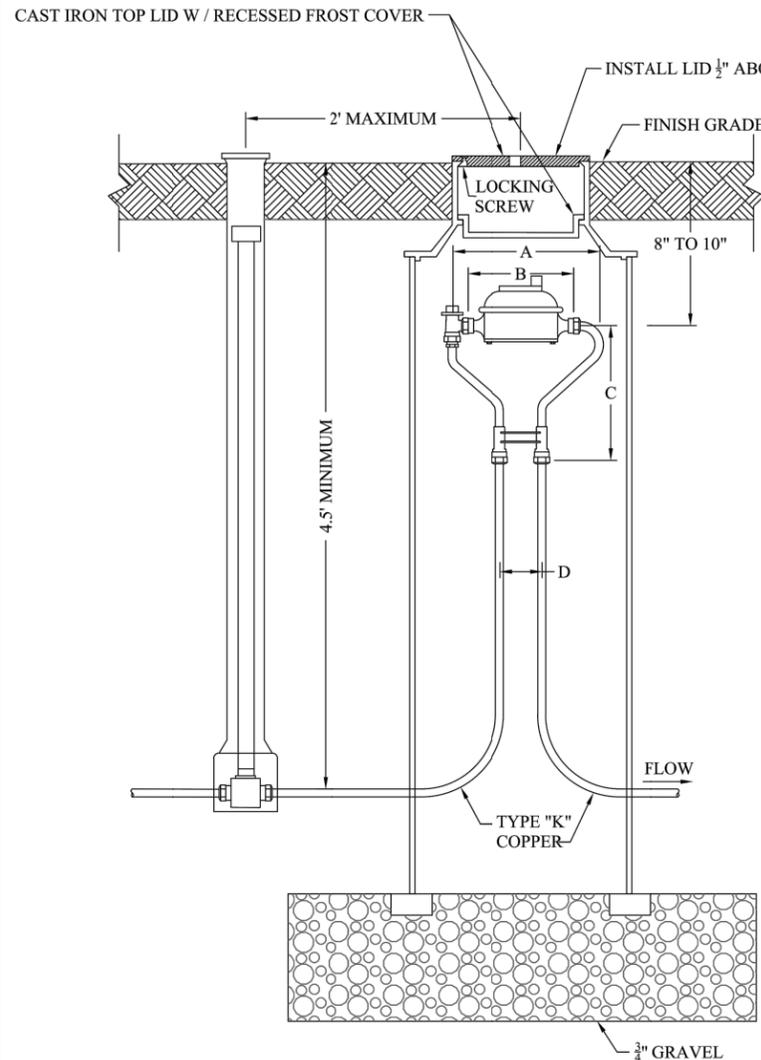


As Constructed	No Revisions:
Revised:	
Void:	

37TH STREET WIDENING PHASE 2A DETAILS			
Designer:	T. Tuttle	Structure Numbers	
Detailer:	J. Jensen		
Sheet Subset:	DETAILS	Subset Sheets:	7 of 12

Project No.	37TH STREET 2A
Drawing Number	DT-007
Sheet Number	25

FOR CONSTRUCTION 2/24/2024



METER SIZE	A	B	C	D
3/4-INCH	14 1/4-INCH	7 1/2-INCH	8 5/8-INCH	5-INCH
1-INCH	17 1/4-INCH	10 1/2-INCH	11 1/2-INCH	6-INCH

**NOTES:**

- NOT FOR INSTALLATION IN ROADWAYS, DRIVEWAYS, OR PARKING AREAS
- IF SURFACE IS NOT TO FINAL GRADE AT TIME OF INSTALLATION METER LID SHALL BE 2" ABOVE GRADE
- METER LID SHALL BE CAST IRON. IT SHALL HAVE A 1 7/8 INCH HOLE FOR ANTENNA ATTACHMENT AND LOCK WITH A PENTAGON BOLT WITH WORMLOCK. METER FROST PLATE SHALL BE RECESSED DISH TYPE
- METER YOKE SHALL BE LOCATED NOT LOWER THAN 12" BELOW THE TOP LID. IN THE EVENT THE METER PIT IS ADJUSTED TO FINAL GRADE, OWNER SHALL ENSURE THAT THE YOKE BE RAISED/LOWER AS REQUIRED
- METER TO BE LOCATED A MINIMUM OF 2' FROM THE CURB STOP AND WITHIN THE UTILITY EASEMENT ADJACENT TO FRONT SIDEWALK, UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF PUBLIC WORKS
- METER PIT SHALL BE PLACED ON FREE-DRAINING GRAVEL BASE. CONCRETE SHALL NOT BE PERMITTED
- METER PIT SHALL BE 20" INSIDE DIAMETER AND 48" DEEP DUROPIPE BITUMINIZED FIBER BY METRO-STATES PLASTICS OR APPROVED EQUAL
- SPRINKLER SYSTEM CONNECTIONS SHALL BE LOCATED A MINIMUM OF 5' DOWNSTREAM FROM THE METER PIT. UNDER NO CIRCUMSTANCES ARE SPRINKLER CONNECTIONS PERMITTED IN THE METER PIT
- NO STRUCTURES ARE TO BE LOCATED WITHIN 4' OF METER PIT. LANDSCAPING IS PERMITTED, HOWEVER ACCESS TO THE METER PIT MUST BE MAINTAINED
- IF PRESSURE REDUCING VALVE IS REQUIRED BY THE PLUMBING CODE, IT SHALL BE INSTALLED INSIDE THE BUILDING IMMEDIATELY FOLLOWING THE MAIN SHUT OFF VALVE
- SERVICE BOX FOR CURB STOP SHALL BE OF THE MUELLER TYPE WITH A COMBINATION LID AND PENTAGON PLUG (MODEL #H-10334) AND AN EXTENSION TYPE CURB BOX WITH ARCH PATTERN BASE AND SHUT-OFF ROD
- CURB STOPS SHALL BE STRAIGHT AND CLEAN OF ANY DEBRIS



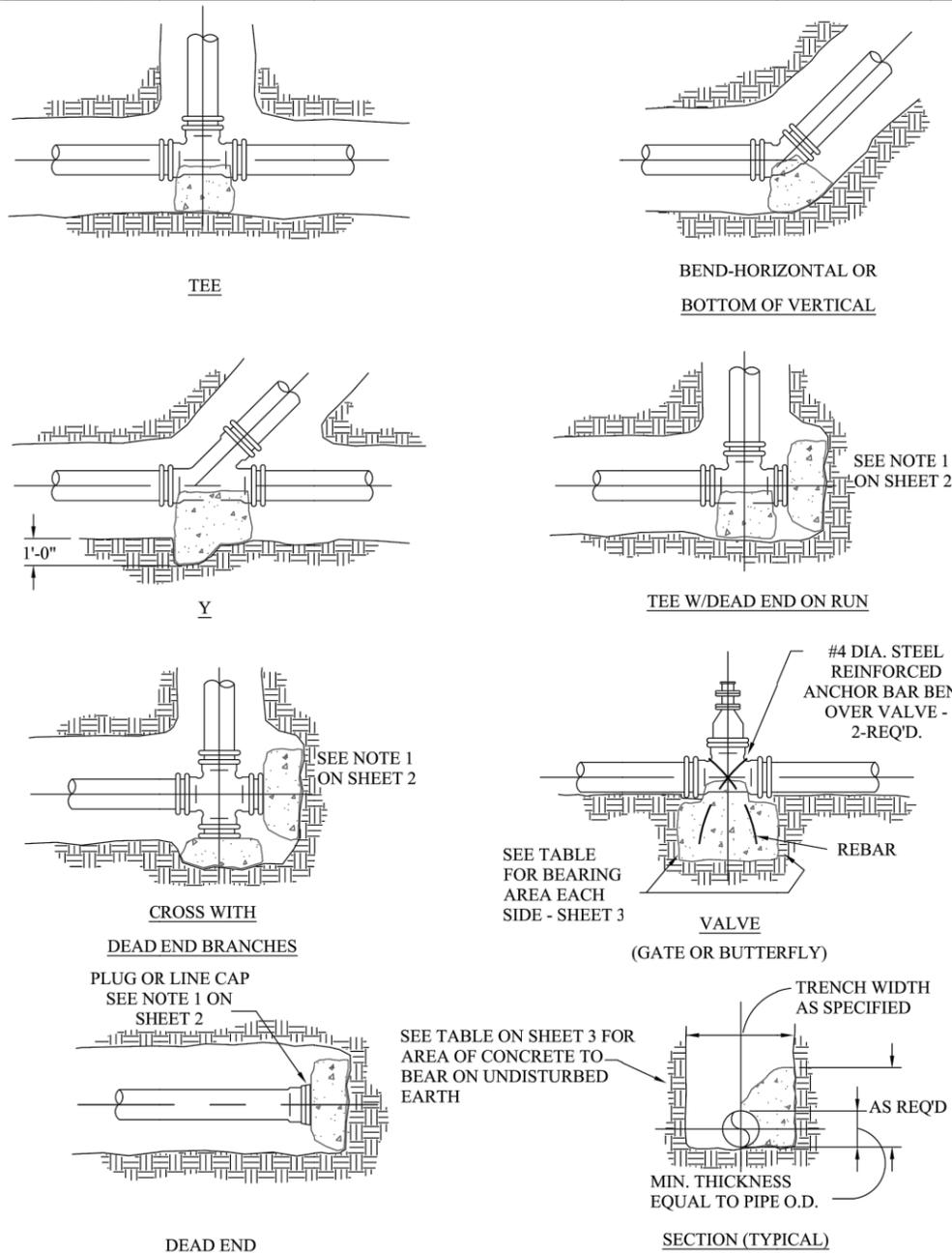
Public Works Department

**METER SETTING DETAIL FOR 3/4" AND 1" METERS**

Scale: N.T.S.

WA-7

May 2019



Public Works Department

**THRUST BLOCK DETAIL SHEET 1 OF 3**

Scale: N.T.S.

WA-14A

May 2019

Print Date: 2/12/2024

File Name: DT P2A-001 DETAILS.DWG

Horiz. Scale: NTS

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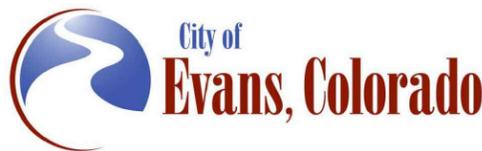


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**Sheet Revisions**

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**37TH STREET WIDENING PHASE 2A DETAILS**

Designer:	T. Tuttle	Structure Numbers	
Detailer:	J. Jensen		
Sheet Subset:	DETAILS	Subset Sheets:	8 of 12

**Project No.**

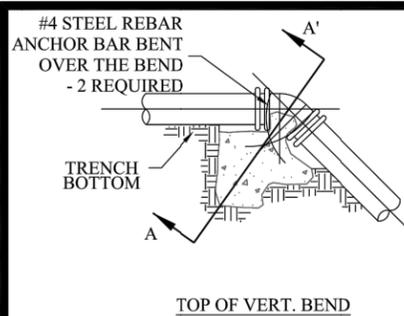
37TH STREET 2A

Drawing Number DT-008

Sheet Number 26

Plot Date: 2/12/2024 7:42 AM Plotted By: Sarah Hemler  
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FOR CONSTRUCTION 2/24/2024



BAR SIZES FOR 100 PSI		MIN. LENGTH OF EMBEDMENT
LESS THAN	NO. OF BARS & SIZE	
60 CUBIC FEET	TWO - #4	8"
90 CUBIC FEET	TWO - #5	12"
133 CUBIC FEET	TWO - #6	16"

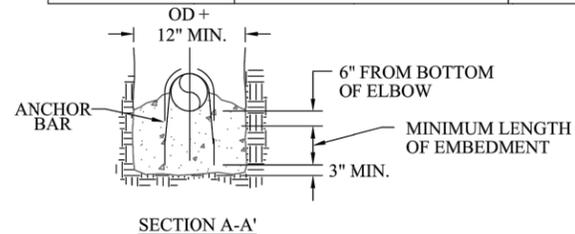


TABLE OF VOLUMES OF CONCRETE (IN CU. FT.)

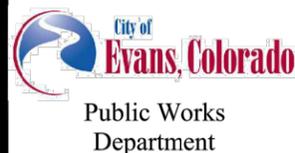
REQ'D FOR VERT. BEND ANCHOR BLOCKS FOR 100 P.S.I. PRESSURE  
ADJUST VOLUMES BY MULTIPLYING TABULATED VALUES BY A CORRECTION FACTOR "F".

$$F = \frac{\text{ACTUAL SPECIFIED TEST PRESSURE}}{100}$$

PIPE SIZE (INCHES)	BENDS		
	45°	22 1/2°	11 1/4°
3	3.7	1.9	1.4
4	6.5	3.3	1.7
6	14.6	7.5	3.7
8	26.0	13.2	6.6
10	40.5	20.7	10.3
12	58.5	30.0	14.8
14	79.5	40.7	20.2
15	91.0	46.6	23.2
16	104.0	53.0	26.5
18	SPECIAL DESIGN REQ'D.	67.3	33.4
20		83.0	41.0
21		45.5	
22		50.0	
24		59.5	
30			
36			

NOTES FOR DRAWINGS:

- AT DEAD ENDS, WRAP FITTINGS WITH TAR PAPER, FELT, OR HEAVY KRAFT PAPER TO PROVIDE BOND BREAK BETWEEN CONCRETE AND FITTINGS
- ALL THRUST BLOCKING SHALL BE CAST-IN-PLACE CONCRETE HAVING A MINIMUM YIELD STRENGTH OF 3000 P.S.I. NO HAND MIXING OF CONCRETE ALLOWED
- THRUST BLOCKING SHALL BE CAST AGAINST UNDISTURBED EARTH. FORMS SHALL BE USED AS REQUIRED TO OBTAIN ADEQUATE BEARING AREA AND TO CONFINE THE CONCRETE. THRUST BLOCKING SHALL BEAR ON THE FITTING OR END CAP ONLY AND SHOULD NOT BE ALLOWED TO SPILL OVER THE JOINT OR AGAINST THE PIPE
- MEGA-LUGS OR OTHER JOINT RESTRAINT MAY BE USED ALONG WITH OR IN PLACE OF CONCRETE THRUST BLOCKS WITH DESIGN SUBMITTED BY PROFESSIONAL ENGINEER AND APPROVED BY PUBLIC WORKS DEPARTMENT
- PIPE INSTALLED UNDER CONDITIONS DIFFERENT FROM THOSE NORMALLY ENCOUNTERED SHALL REQUIRE THRUST BLOCKS DESIGNED FOR THOSE PARTICULAR CONDITIONS



THRUST BLOCK DETAIL  
SHEET 2 OF 3

Scale: N.T.S.

WA-14B

May 2019

TABLE OF BEARING AREAS IN SQ. FT. FOR CONCRETE  
THRUST BLOCKING

FOR 100 P.S.I. INTERNAL STATIC PRESSURE AND 1000 LBS. PER SQ. FT. SOIL BEARING CAPACITY

PIPE SIZE (INCHES)	BENDS				TEES *	GATE VALVES	DEADENDS AND CROSSES WITH ONE OR TWO BRANCHES PLUGGED
	90°	45°	22 1/2°	11 1/4°			
3	1.0	0.6	0.3	0	0.7	0.5	0.7
4	1.8	1.0	0.5	0	1.3	0.5	1.3
6	4.0	2.2	1.1	0	2.8	0.7	2.8
8	7.1	3.8	2.0	1.0	5.0	2.4	5.0
10	11.1	6.0	3.0	1.5	7.8	4.5	7.8
12	16.0	8.6	4.4	2.2	11.3	7.3	11.3
14	21.7	11.8	6.0	3.0	15.4	11.0	15.4
15	25.0	13.5	7.0	3.5	17.6	SPECIAL DESIGN	17.6
16	28.4	15.3	8.0	4.0	20.0		20.0
18	SPECIAL DESIGN	SPECIAL DESIGN	10.0	5.0	25.4		25.4
20			12.2	6.1	31.4		31.4
21			6.8	34.6	34.6		
22			7.4	38.0	38.0		
24			8.8	45.0	45.0		
30					71.0		
36					102.0		

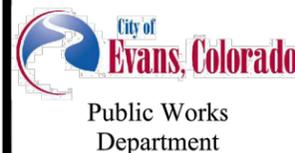
\* PIPE SIZES ARE THE SIZE OF THE BRANCH SIZE

BEARING AREAS FOR ANY PRESSURE AND SOIL BEARING CAPACITY MAY BE OBTAINED BY MULTIPLYING THE TABULATED VALUES BY A CORRECTION FACTOR "F"

$$F = \frac{\text{ACTUAL SPECIFIED TEST PRESSURE IN HUNDREDS OF LBS./SQ. IN.}}{\text{ACTUAL SOIL BEARING CAPACITY IN THOUSANDS OF LBS.}}$$

EXAMPLE:  
- TO FIND BEARING AREA FOR 8"-90° BEND WITH A STATIC INTERNAL PRESSURE OF 150 P.S.I. AND WITH A SOIL BEARING CAPACITY OF 3000 LBS. PER SQ. FT.  
-  $F = \frac{1.5}{3} = 0.5$   
- TABULATED VALUE = 7.1 SQ. FT.  
-  $0.5 * 7.1 = 3.56$  OR ~ 4 SQ. FT. OR 2 FT. LONG BY 2 FT. HIGH

IN THE ABSENCE OF SOIL BEARING CAPACITY INFORMATION, USE ABOVE TABLE



THRUST BLOCK DETAIL  
SHEET 3 OF 3

Scale: N.T.S.

WA-14C

May 2019

Print Date: 2/12/2024

File Name: DT P2A-001 DETAILS.DWG

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Sheet Revisions

Date	Comments	Initials



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No Revisions:

Revised:

Void:

37TH STREET WIDENING PHASE 2A  
DETAILS

Designer:	T. Tuttle	Structure Numbers	
Detailer:	J. Jensen	Subset Sheets:	9 of 12

Project No.

37TH STREET 2A

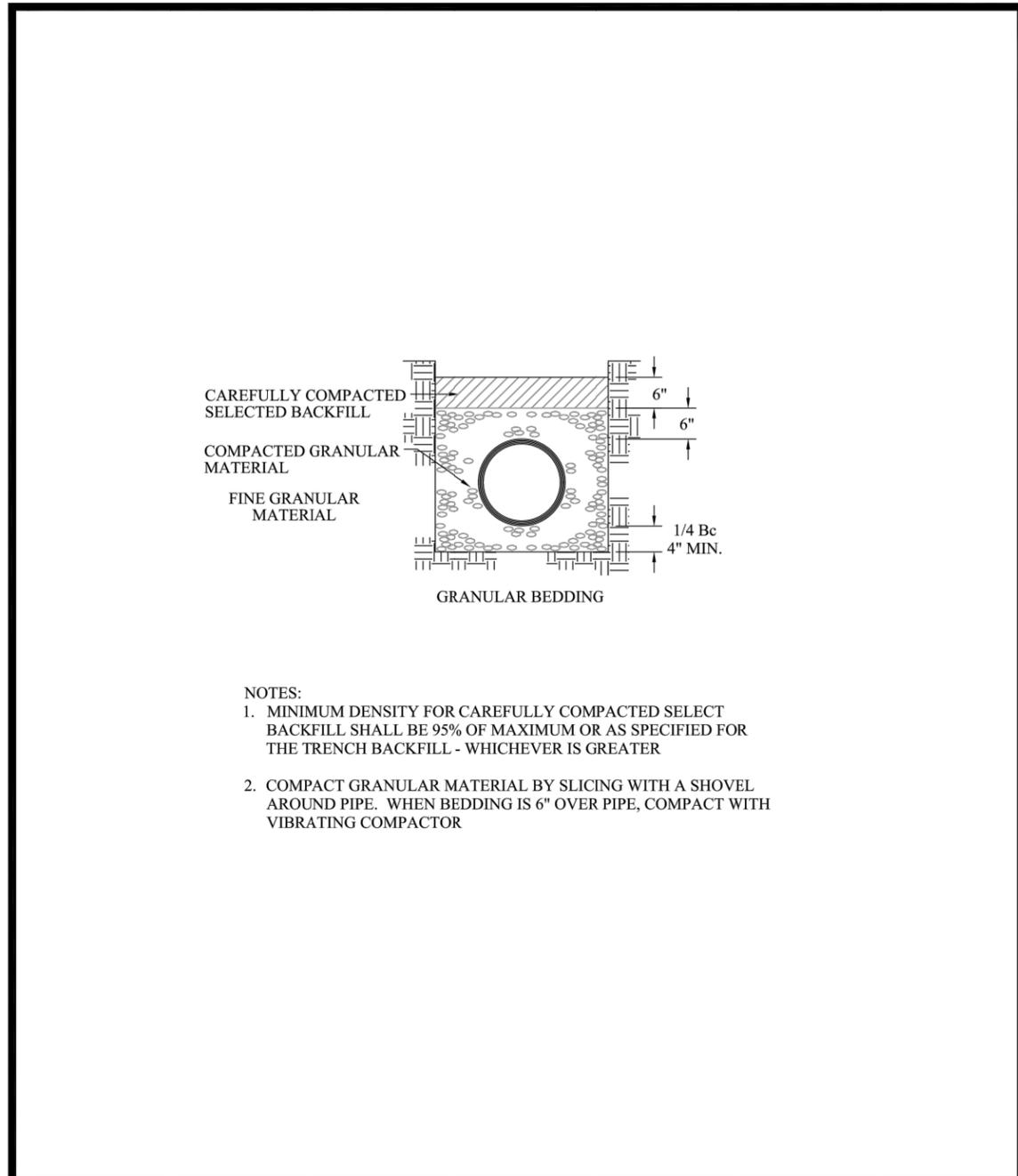
Drawing Number DT-009

Sheet Number 27

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Plot Date: 2/12/2024 7:42 AM Plotted By: Sarah Hemler C:\PROJECTS\37TH STREET WIDENING\37TH ST AND 47TH AVE PLAN\2024\COMPUTER DESIGN FILES\DT P2A-001 DETAILS.DWG

Plot Date: 7/12/2024 7:42 AM Plotted By: Sarah Hemler  
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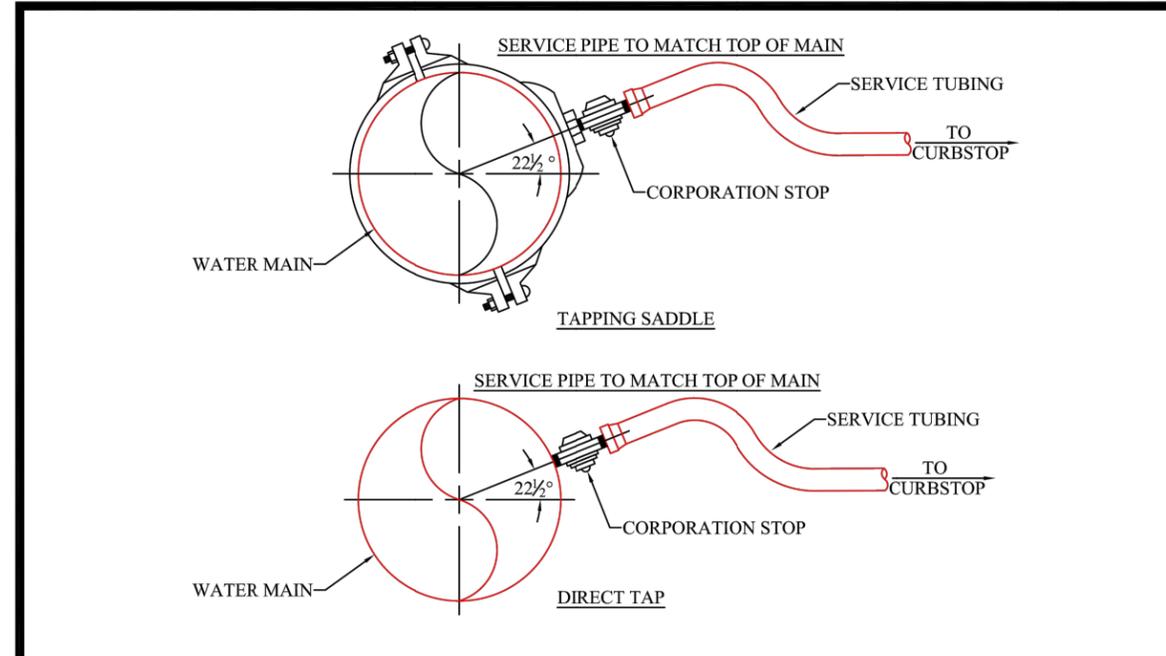


- NOTES:
1. MINIMUM DENSITY FOR CAREFULLY COMPACTED SELECT BACKFILL SHALL BE 95% OF MAXIMUM OR AS SPECIFIED FOR THE TRENCH BACKFILL - WHICHEVER IS GREATER
  2. COMPACT GRANULAR MATERIAL BY SLICING WITH A SHOVEL AROUND PIPE. WHEN BEDDING IS 6" OVER PIPE, COMPACT WITH VIBRATING COMPACTOR

  
 Public Works Department

**WATER LINE BEDDING DETAIL**

Scale: N.T.S.      WA-16      May 2019



**TYPE OF MAIN LINE PIPE AND SIZE OF TAP**

PIPE SIZE	CAST IRON					DUCTILE IRON					PVC C-900	
	3/4"	1"	1-1/2"	2"	3"& 4"	3/4"	1"	1-1/2"	2"	3"& 4"	< 2"	> 2"
3"	S	NO	NO	NO	TSV	NO	NO	NO	NO	TSV	S	TSV
4"	DT	S	NO	NO	TSV	S	S	NO	NO	TSV	S	TSV
6"	DT	DT	S	S	TSV	DT	S	S	S	TSV	S	TSV
8"	DT	DT	S	S	TSV	DT	DT	S	S	TSV	S	TSV
12"	DT	DT	S	S	TSV	DT	DT	S	S	TSV	S	TSV
16"	DT	DT	S	S	TSV	DT	DT	S	S	TSV		
20"	DT	DT	S	S	TSV	DT	DT	S	S	TSV		

- "S" - TAPPING SADDLE REQUIRED, ALL SADDLES SHALL HAVE THE AWWA TAPER ON IT'S THREADS.  
 "DT" - DIRECT TAP REQUIRED  
 "NO" - NO TAP PERMITTED WITH OR WITHOUT A SADDLE, A TEE CONNECTION MAY BE PERMITTED IF SPECIFICALLY AUTHORIZED BY THE WATER DEPARTMENT  
 "TSV" - TAPPING SLEEVE AND VALVE REQUIRED
- NOTE:
1. ALL TAPPING SADDLES 2" AND SMALLER, SHALL CONSIST OF A BRONZE BODY WITH TWO (2) BRONZE STRAPS
  2. EXISTING STEEL MAINS 12" IN DIAMETER OR LESS, SHALL BE TAPPED USING AN APPROVED TAPPING SADDLE
  3. ALL TAPS SHALL BE MADE WITH AN APPROVED TAPPING TOOL
  4. NO COUPLINGS ARE ALLOWED BETWEEN CURB STOP AND METER SETTER. SEE STANDARDS FOR ADDITIONAL REQUIREMENTS
  5. SERVICE SHALL BE TYPE K COPPER FROM MAIN TO METER

  
 Public Works Department

**WATER SERVICE CONNECTION DETAIL**

Scale: N.T.S.      WA-18      July 2019

Print Date: 2/12/2024  
 File Name: DT P2A-001 DETAILS.DWG  
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 Revised:  
 Void:

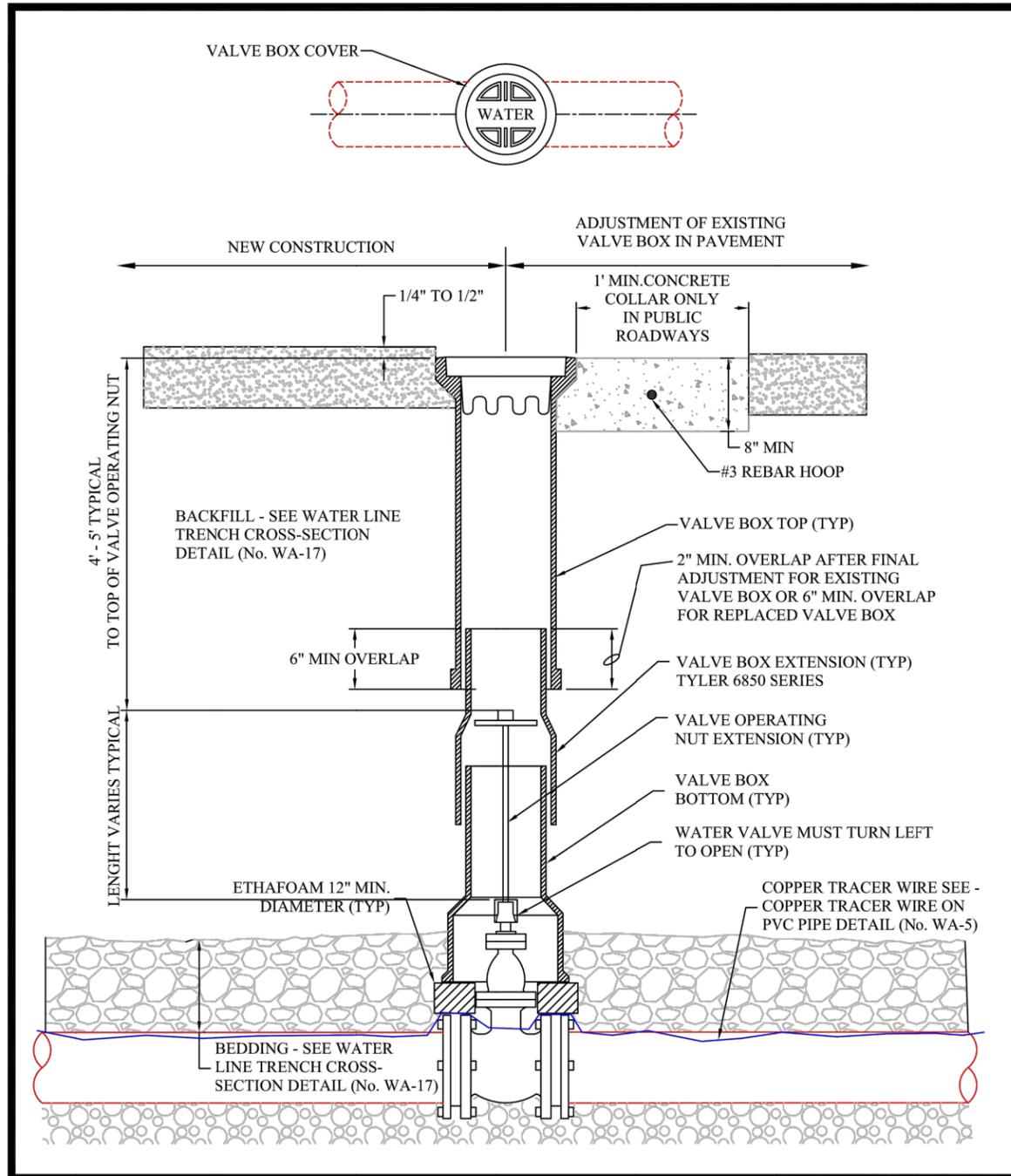
**37TH STREET WIDENING PHASE 2A DETAILS**

Designer: T. Tuttle	Structure Numbers
Detailer: J. Jensen	
Sheet Subset: DETAILS	Subset Sheets: 10 of 12

**Project No.**  
 37TH STREET 2A  
 Drawing Number DT-010  
 Sheet Number 28

FOR CONSTRUCTION 2/24/2024

Plot Date: 2/12/2024 7:43 AM Plotted By: Sarah Hemler  
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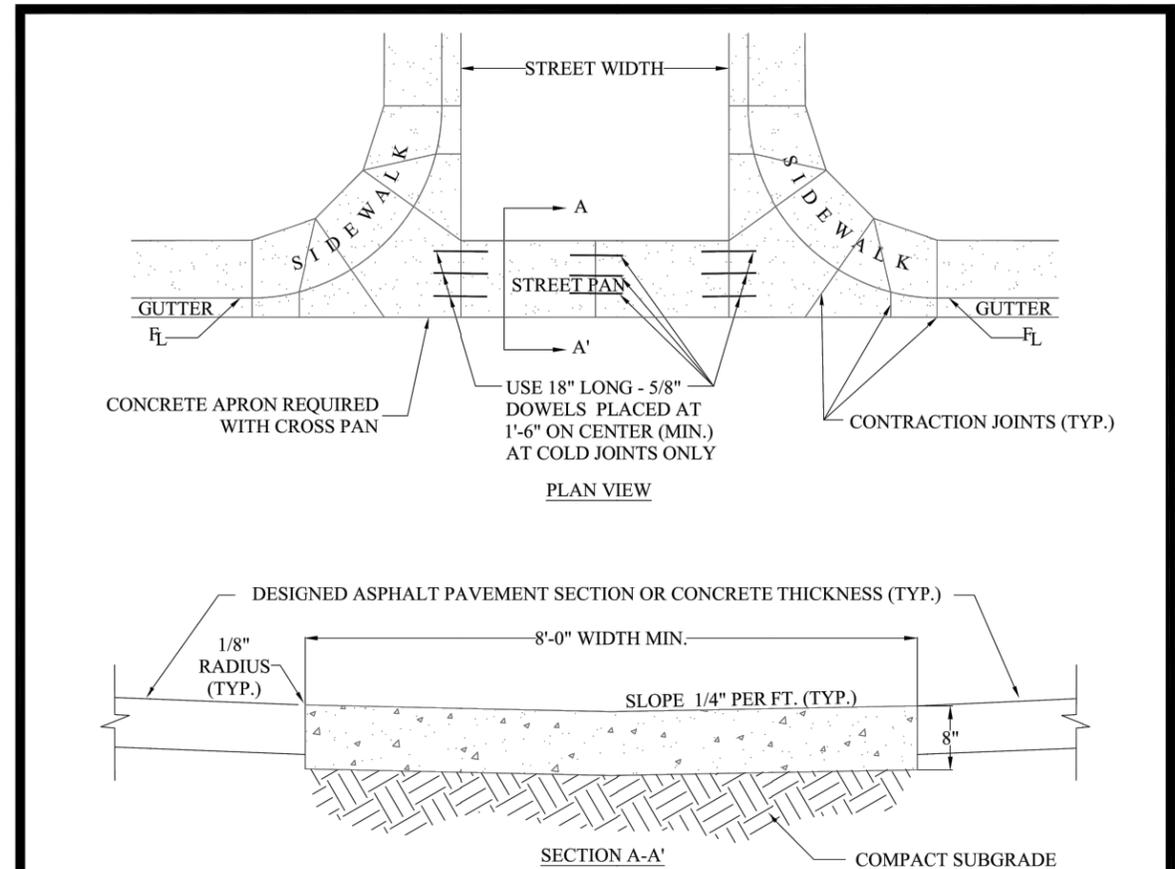
Public Works Department

**WATER VALVE BOX DETAIL**

Scale: N.T.S.

WA-19

August 2019



**NOTES:**

1. MINIMUM OF 0.6% LONGITUDINAL SLOPE FOR CROSS PANS.
2. MAXIMUM SPACING OF CONTRACTION JOINTS IS 10'.
3. CONCRETE APRON SHALL BE POURED MONOLITHICALLY WITH CURB/WALK AND SHALL BE 8" THICK (SEE DETAILS No. S-11 THROUGH S-14).
4. CROSS PAN AND APRON MAY BE POURED MONOLITHICALLY.
5. SEE THE SPECIFICATIONS FOR STREET DESIGN AND CONSTRUCTION FOR PERMISSIBLE LOCATIONS OF CROSS PANS.
6. MID-BLOCK CROSS PANS SHALL BE A MINIMUM OF 10' WIDE.
7. LARGER CROSS PAN WIDTH MAY BE REQUIRED BY THE CITY.
8. DOWELING MAY BE REQUIRED AT COLD JOINTS AT THE CITY'S DIRECTION.
9. CONCRETE SHALL BE 4500 PSI.



Public Works Department

**CROSS PAN DETAIL**

Scale: N.T.S

Detail No. S-5

May 2019

Print Date: 2/12/2024

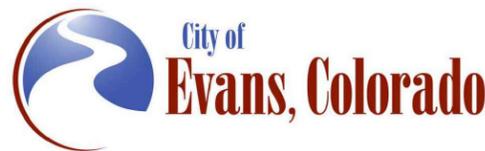
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**Sheet Revisions**

Date	Comments	Initials



**As Constructed**

No Revisions:

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**37TH STREET WIDENING PHASE 2A DETAILS**

Designer:	T. Tuttle	Structure Numbers	
Detailer:	J. Jensen		
Sheet Subset:	DETAILS	Subset Sheets:	11 of 12

**Project No.**

37TH STREET 2A

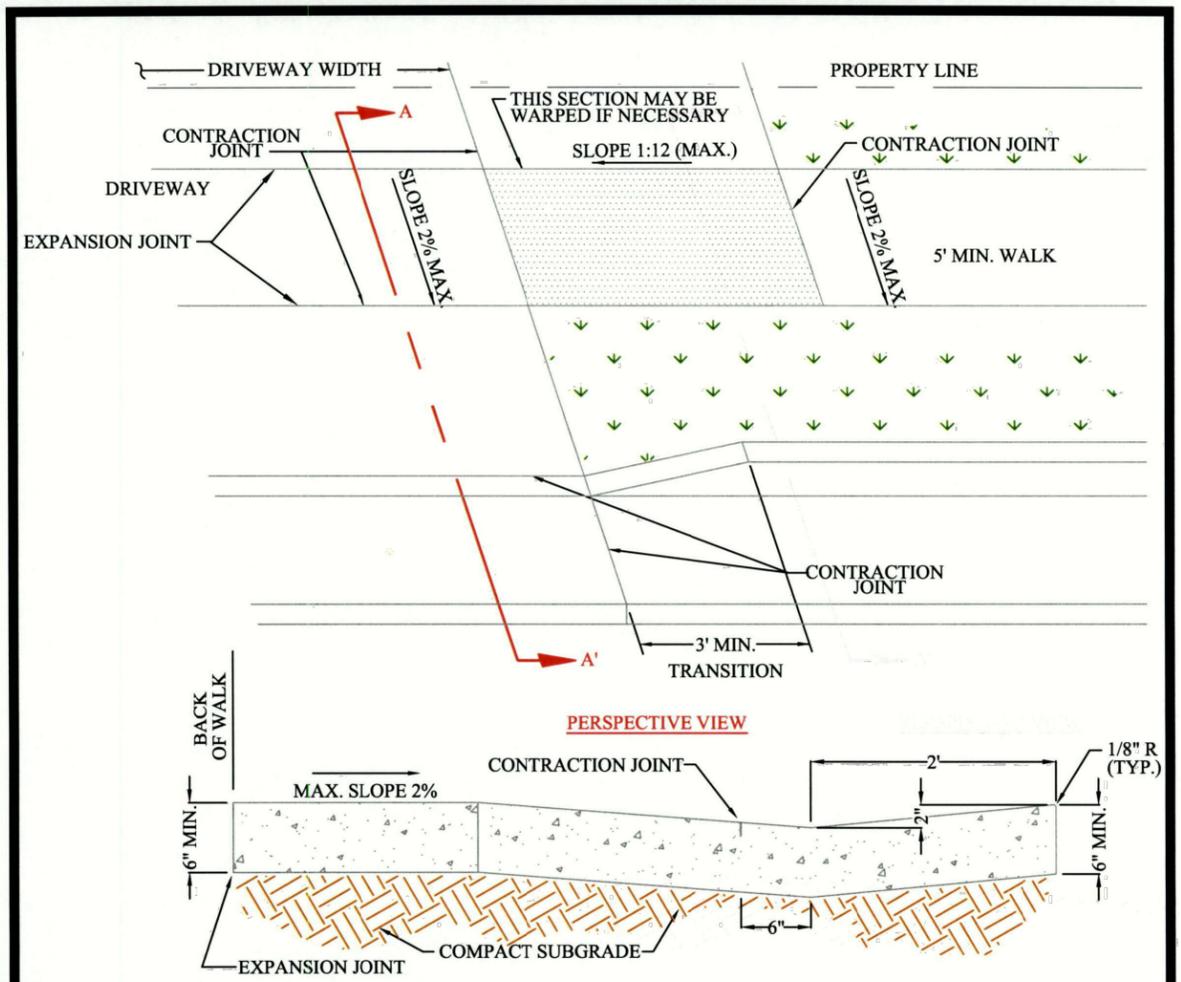
Drawing Number DT-011

Sheet Number 29



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FOR CONSTRUCTION 2/24/2024



- NOTES:**
- CONTRACTION JOINTS ARE REQUIRED AT EACH END OF WARPED SECTION & SHOULD BE EVENLY SPACED.
  - APPLY BROOM FINISH TO SURFACE.
  - DRIVEWAY SECTION SHALL BE 6" THICK ON ALL RESIDENTIAL, MULTIFAMILY RESIDENTIAL, & 8" THICK ON ALL COMMERCIAL, INDUSTRIAL & ALLEY DRIVEWAYS.
  - DRIVEWAY WIDTHS: 10' (MIN.) & 20'(MAX.)
  - DRIVEWAY WIDTHS FOR COMMERCIAL/ INDUSTRIAL AREAS AS APPROVED BY THE CITY.
  - SHOW DIMENSIONS OF DRIVEWAY ON DETAILED CONSTRUCTION PLANS.
  - RETROFIT DRIVE APPROACHES SHALL MATCH EXISTING CONDITIONS EXCEPT CONCRETE THICKNESSES SHALL CONFORM TO THIS DETAIL.



**DRIVEWAY APPROACH DETAIL  
DETACHED SIDEWALK  
FOR VERTICAL CURB & GUTTER**

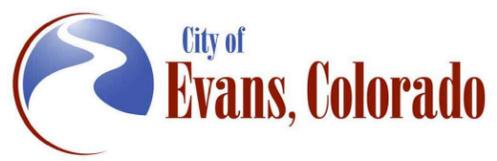
Scale: N.T.S      Detail No. S-18      April 2004

Plot Date: 2/12/2024 7:43 AM Plotted By: Sarah Hemler  
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Print Date: 2/12/2024  
 File Name: DT P2A-001 DETAILS.DWG  
 Horiz. Scale: NTS      Vert. Scale: NTS

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Sheet Revisions		
Date	Comments	Initials



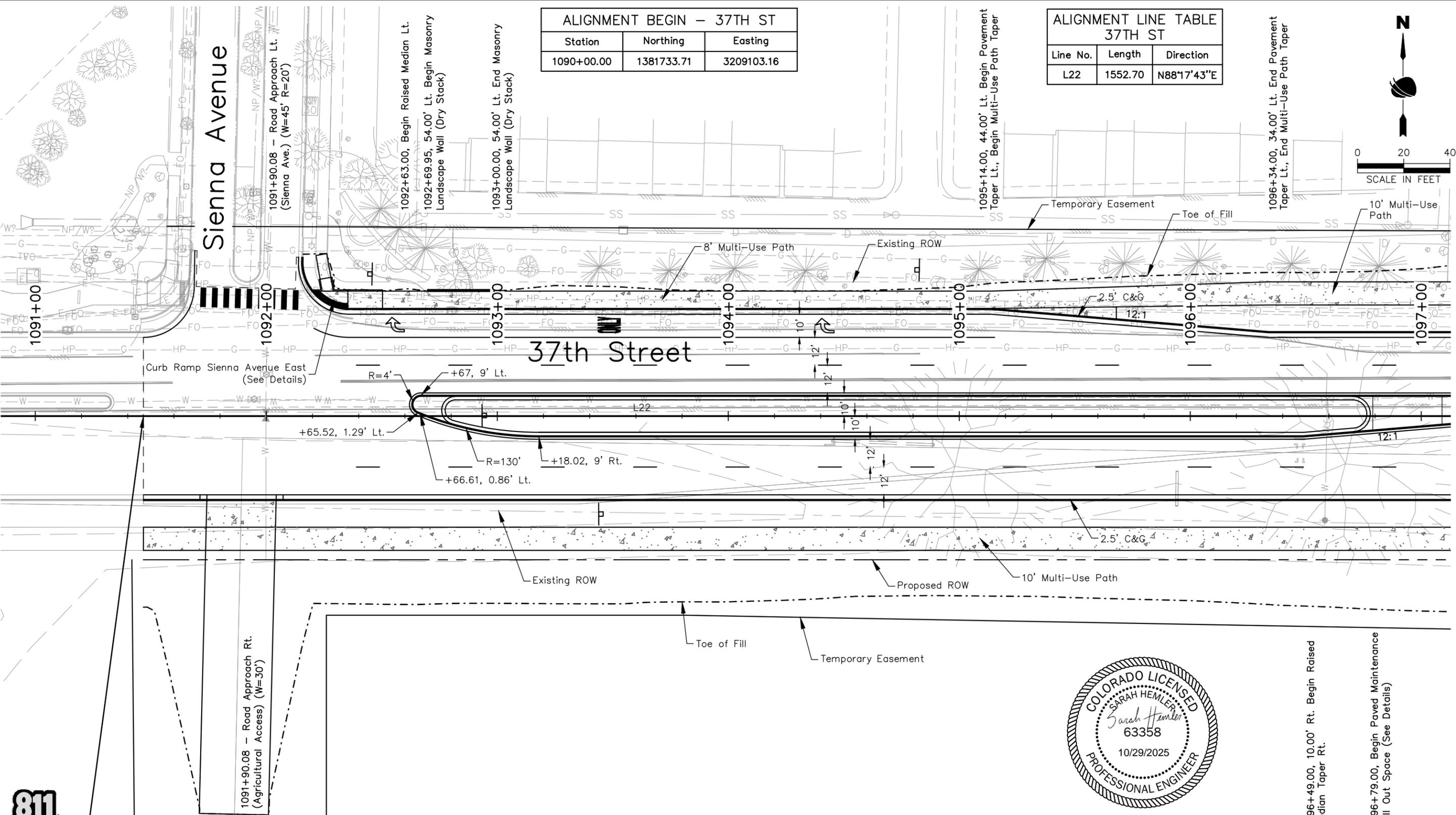
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No Revisions:
Revised:
Void:

37TH STREET WIDENING PHASE 2A DETAILS			
Designer:	T. Tuttle	Structure Numbers	
Detailer:	J. Jensen		
Sheet Subset:	DETAILS	Subset Sheets:	12 of 12

<b>Project No.</b>
37TH STREET 2A
Drawing Number DT-012
Sheet Number 30

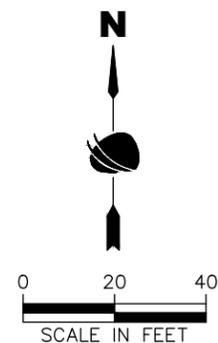
FOR CONSTRUCTION 2/24/2024

Plot Date: 2/12/2024 8:03 AM Plotted By: Sarah Hemler  
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ALIGNMENT BEGIN - 37TH ST		
Station	Northing	Easting
1090+00.00	1381733.71	3209103.16

ALIGNMENT LINE TABLE 37TH ST		
Line No.	Length	Direction
L22	1552.70	N88°17'43"E



Sta. 1091+46.80 Begin Project 37th St.,  
 Match Existing (Previous Construction 37th St. Phase 1) **37TH STREET PLAN**



1096+49.00, 10.00' Rt. Begin Raised Median Taper Rt.  
 1096+79.00, Begin Paved Maintenance Pull Out Space (See Details)

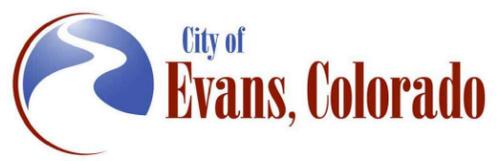
NOTE: All curb and gutter call out are to FL of the gutter



Print Date: 2/12/2024  
 File Name: PLAN P2A-001 ROADWAY PLAN.DWG  
 Horiz. Scale: As Noted Vert. Scale: N/A

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Sheet Revisions		
Date	Comments	Initials



**As Constructed**  
 No Revisions:  
 Revised:  
 Void:

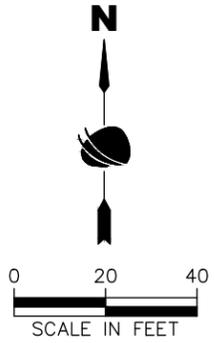
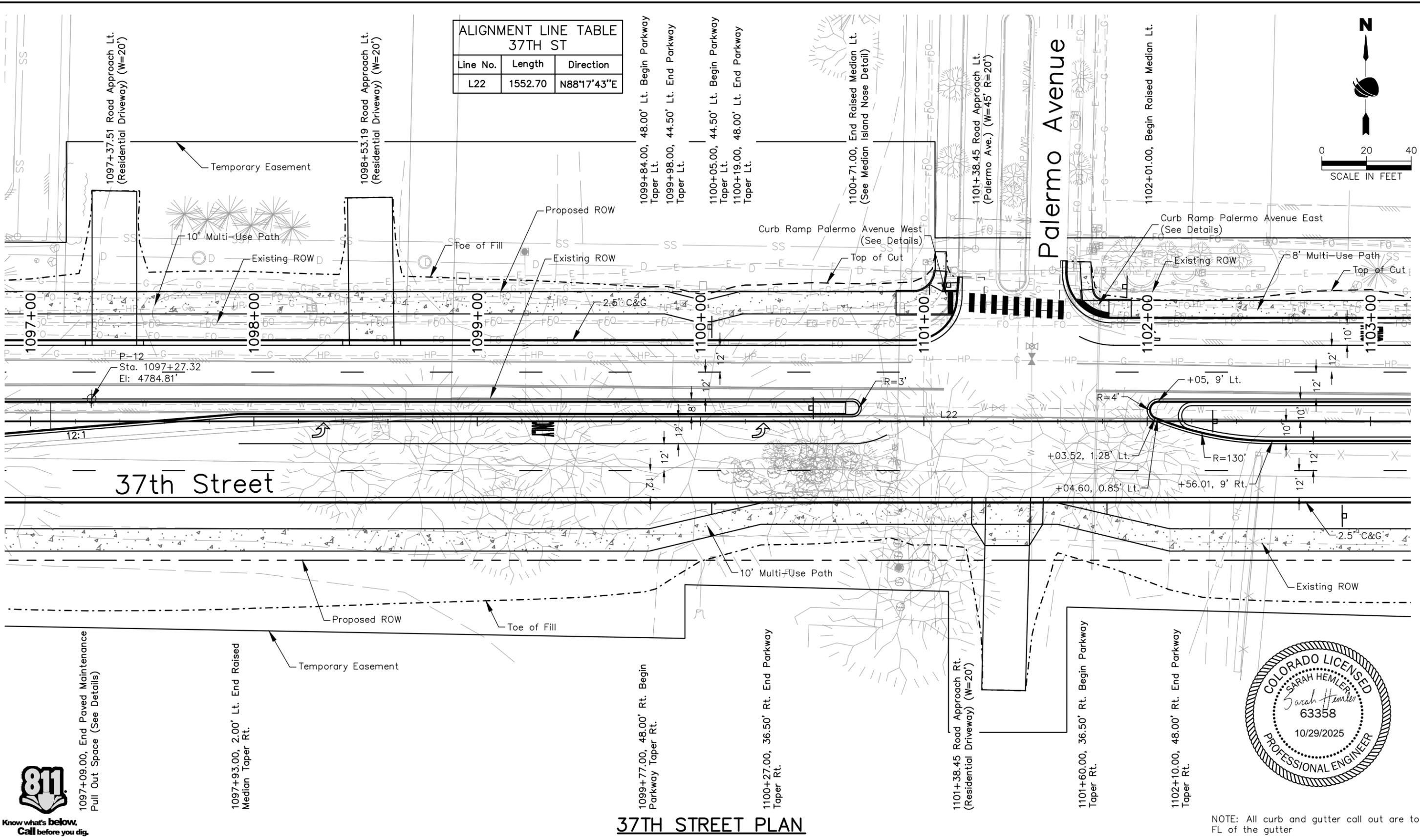
37TH STREET WIDENING PHASE 2A ROADWAY PLAN			
Designer:	T. Tuttle	Structure Numbers	
Detailer:	S. Hemler		
Sheet Subset:	PLAN	Subset Sheets:	1 of 5

Project No.	
37TH STREET 2A	
Drawing Number PLAN-001	
Sheet Number 31	

FOR CONSTRUCTION 2/24/2024

Plot Date: 2/12/2024 8:04 AM Plotted By: Sarah Hemler  
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ALIGNMENT LINE TABLE 37TH ST		
Line No.	Length	Direction
L22	1552.70	N88°17'43"E



Know what's below.  
Call before you dig.

1097+09.00, End Paved Maintenance Pull Out Space (See Details)

1097+93.00, 2.00' Lt. End Raised Median Taper Rt.

1099+77.00, 48.00' Rt. Begin Parkway Taper Rt.

1100+27.00, 36.50' Rt. End Parkway Taper Rt.

1101+38.45 Road Approach Rt. (Residential Driveway) (W=20')

1101+60.00, 36.50' Rt. Begin Parkway Taper Rt.

1102+10.00, 48.00' Rt. End Parkway Taper Rt.

### 37TH STREET PLAN

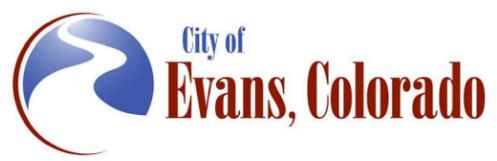
NOTE: All curb and gutter call out are to FL of the gutter



Print Date: 2/12/2024  
 File Name: PLAN P2A-001 ROADWAY PLAN.DWG  
 Horiz. Scale: As Noted Vert. Scale: N/A

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Sheet Revisions		
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As Constructed
No Revisions:
Revised:
Void:

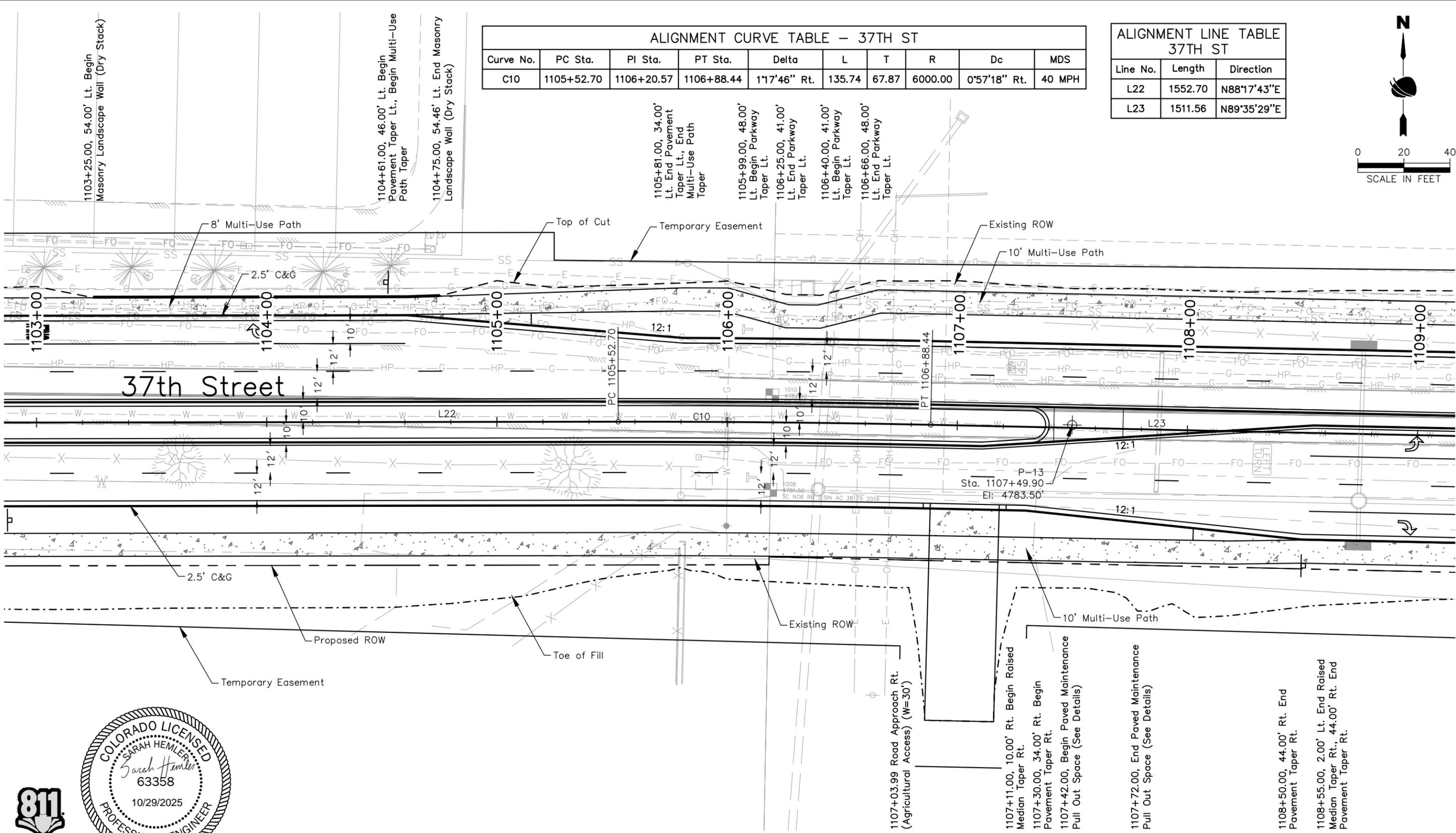
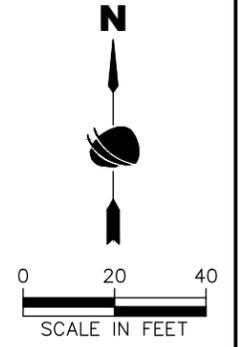
37TH STREET WIDENING PHASE 2A ROADWAY PLAN	
Designer:	T. Tuttle
Detailer:	S. Hemler
Sheet Subset:	PLAN
Structure Numbers:	
Subset Sheets:	2 of 5

Project No.
37TH STREET 2A
Drawing Number PLAN-002
Sheet Number 32

FOR CONSTRUCTION 2/24/2024

ALIGNMENT CURVE TABLE - 37TH ST									
Curve No.	PC Sta.	PI Sta.	PT Sta.	Delta	L	T	R	Dc	MDS
C10	1105+52.70	1106+20.57	1106+88.44	1°17'46" Rt.	135.74	67.87	6000.00	0°57'18" Rt.	40 MPH

ALIGNMENT LINE TABLE 37TH ST		
Line No.	Length	Direction
L22	1552.70	N88°17'43"E
L23	1511.56	N89°35'29"E



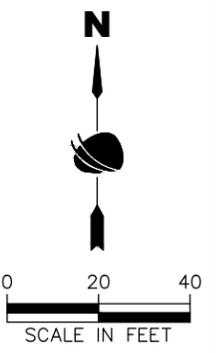
**37TH STREET PLAN**



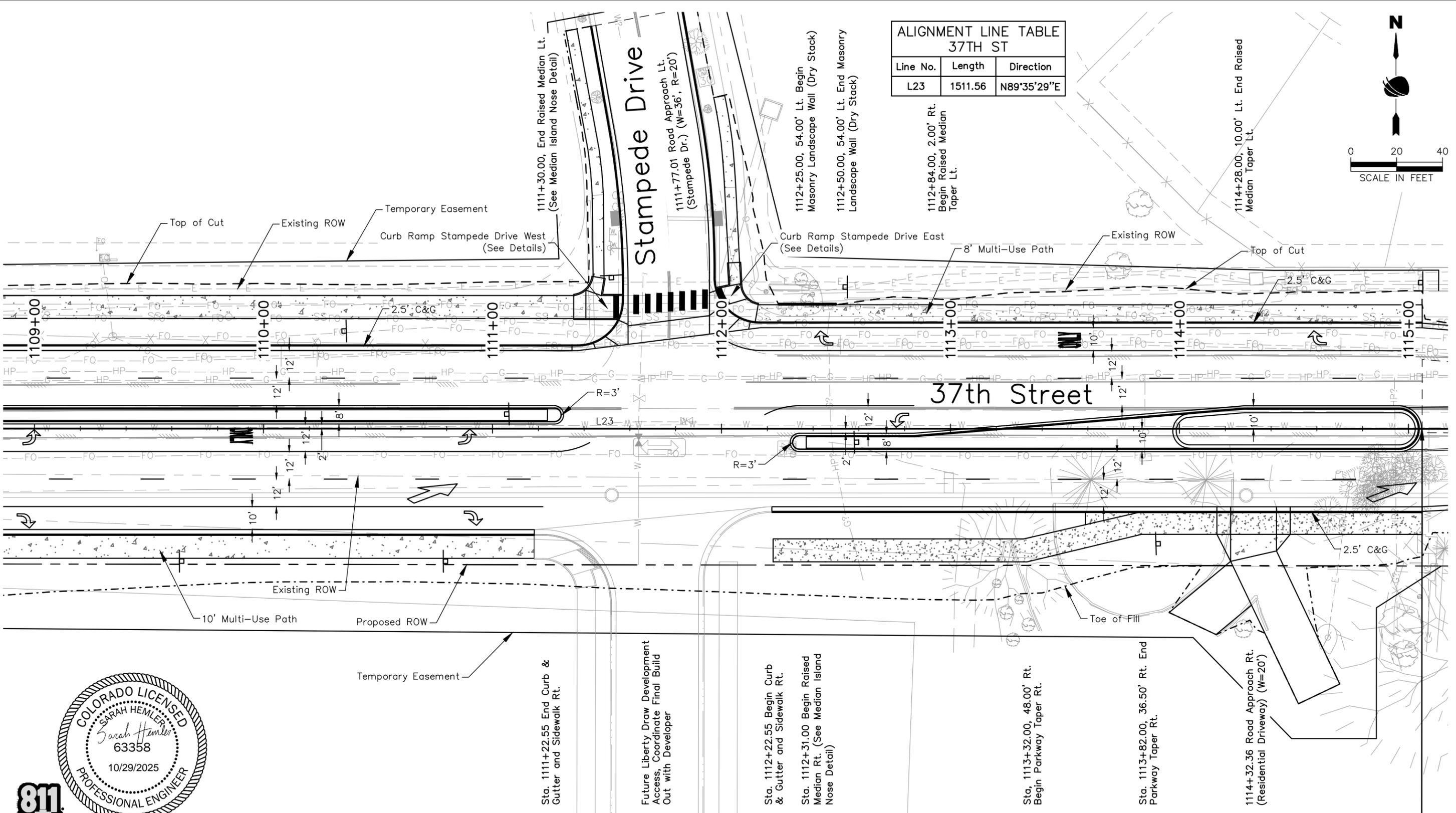
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FOR CONSTRUCTION 2/24/2024

Print Date: 2/12/2024		<b>Sheet Revisions</b>		<b>As Constructed</b>		<b>37TH STREET WIDENING PHASE 2A ROADWAY PLAN</b>		<b>Project No.</b>			
File Name: PLAN P2A-001 ROADWAY PLAN.DWG		Date	Comments	Initials	No Revisions:		Designer: T. Tuttle		37TH STREET 2A		
Horiz. Scale: As Noted      Vert. Scale: N/A					Revised:		Detailer: S. Hemler		Drawing Number PLAN-003		
					Void:		Sheet Subset: PLAN		Sheet Number 33		
12076 Grant Street Thornton, CO 80241 Ph: (303) 962-9300 Fax: (303) 962-9350							Structure Numbers		Subset Sheets: 3 of 5		



ALIGNMENT LINE TABLE 37TH ST		
Line No.	Length	Direction
L23	1511.56	N89°35'29"E



**37TH STREET PLAN**

Sta. 1115+06.00 End Project 37th St.  
Sta. 1115+06.00 Begin Approach to Project

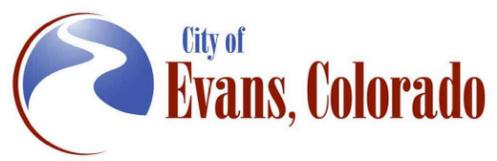


NOTE: All curb and gutter call out are to FL of the gutter

Print Date: 2/12/2024  
File Name: PLAN P2A-001 ROADWAY PLAN.DWG  
Horiz. Scale: As Noted Vert. Scale: N/A

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Void:

37TH STREET WIDENING PHASE 2A ROADWAY PLAN	
Designer:	T. Tuttle
Detailer:	S. Hemler
Sheet Subset:	PLAN
Structure Numbers	
Subset Sheets:	4 of 5

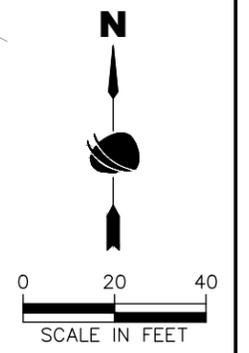
Project No.
37TH STREET 2A
Drawing Number PLAN-004
Sheet Number 34

FOR CONSTRUCTION 2/24/2024

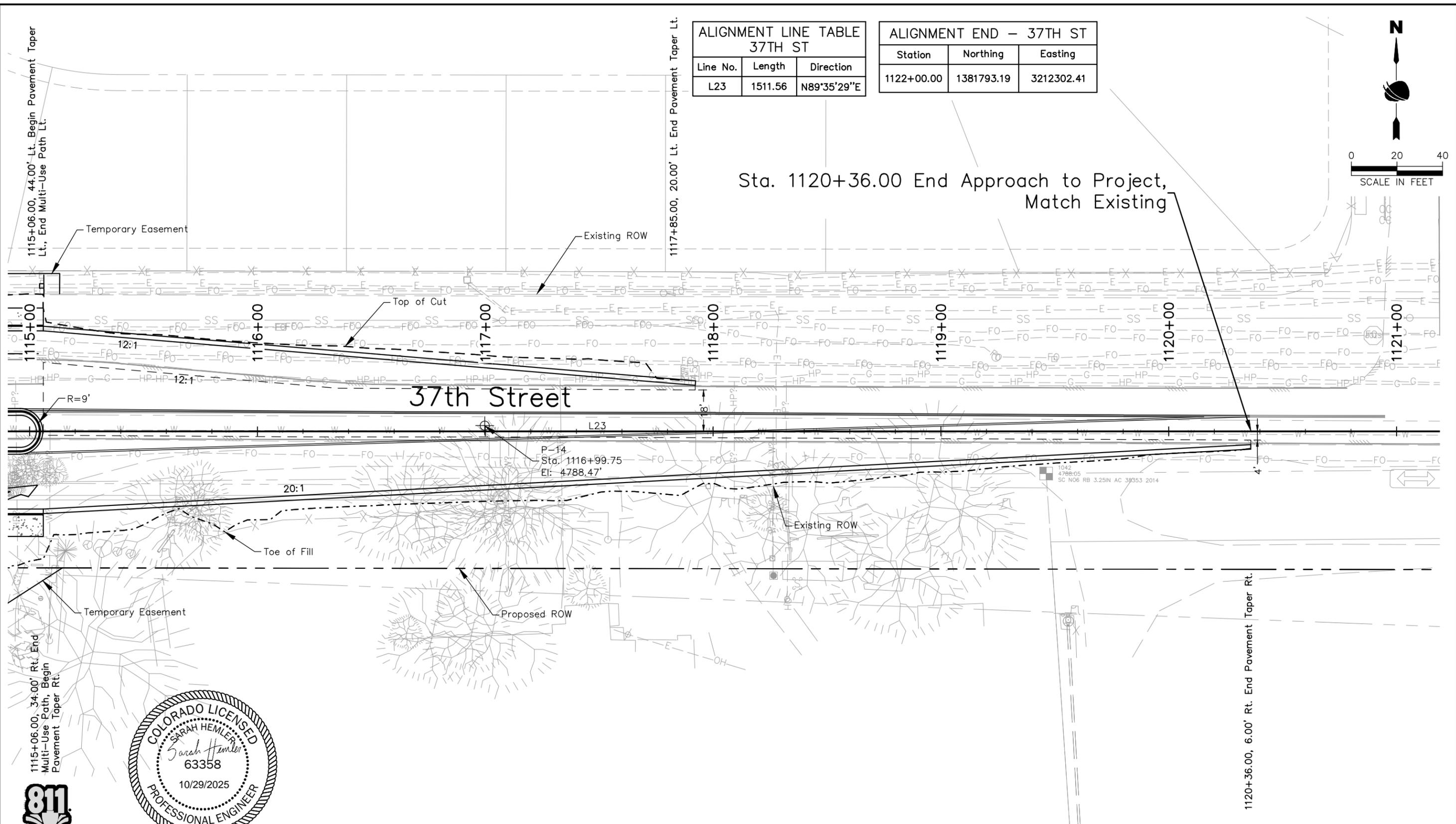
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C:\Q-PROJECTS\ACTIVE PROJECTS\37TH ST AND 47TH AVE PLAN\2024\COMPUTER DESIGN FILES\P2 - PHASE 2A\802\_SHEET FILES\PLAN P2A-001 ROADWAY PLAN.DWG

ALIGNMENT LINE TABLE 37TH ST		
Line No.	Length	Direction
L23	1511.56	N89°35'29"E

ALIGNMENT END - 37TH ST		
Station	Northing	Easting
1122+00.00	1381793.19	3212302.41



Sta. 1120+36.00 End Approach to Project,  
Match Existing



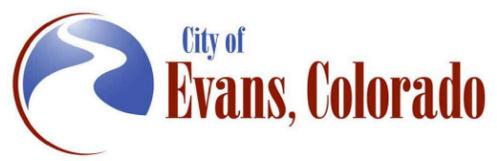
### 37TH STREET PLAN

NOTE: All curb and gutter call out are to FL of the gutter

Print Date: 2/12/2024  
 File Name: PLAN P2A-001 ROADWAY PLAN.DWG  
 Horiz. Scale: As Noted    Vert. Scale: N/A

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Sheet Revisions		
Date	Comments	Initials



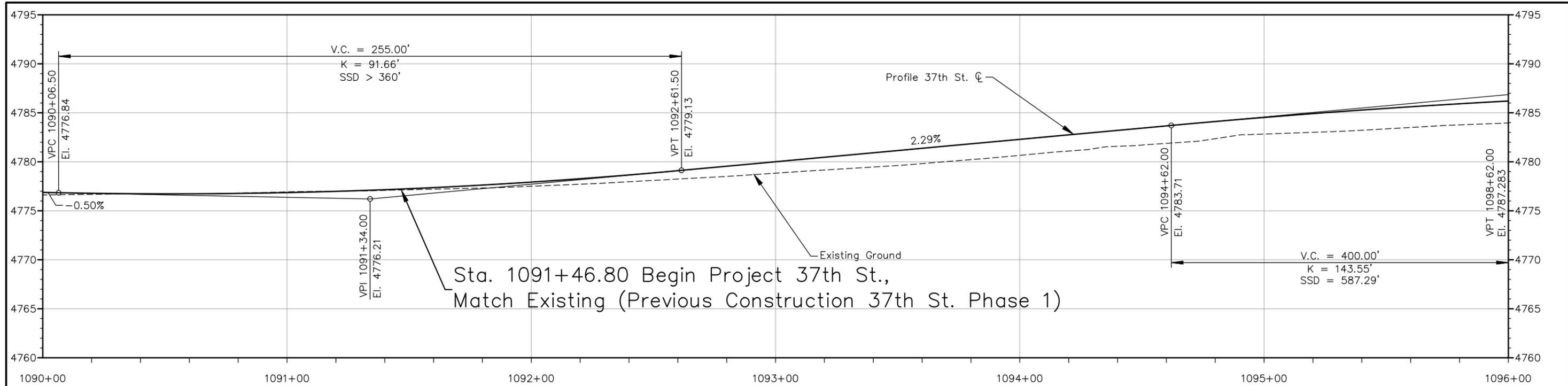
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No Revisions:
Revised:
Void:

37TH STREET WIDENING PHASE 2A ROADWAY PLAN	
Designer: T. Tuttle	Structure Numbers
Detailer: S. Hemler	
Sheet Subset: PLAN	Subset Sheets: 5 of 5

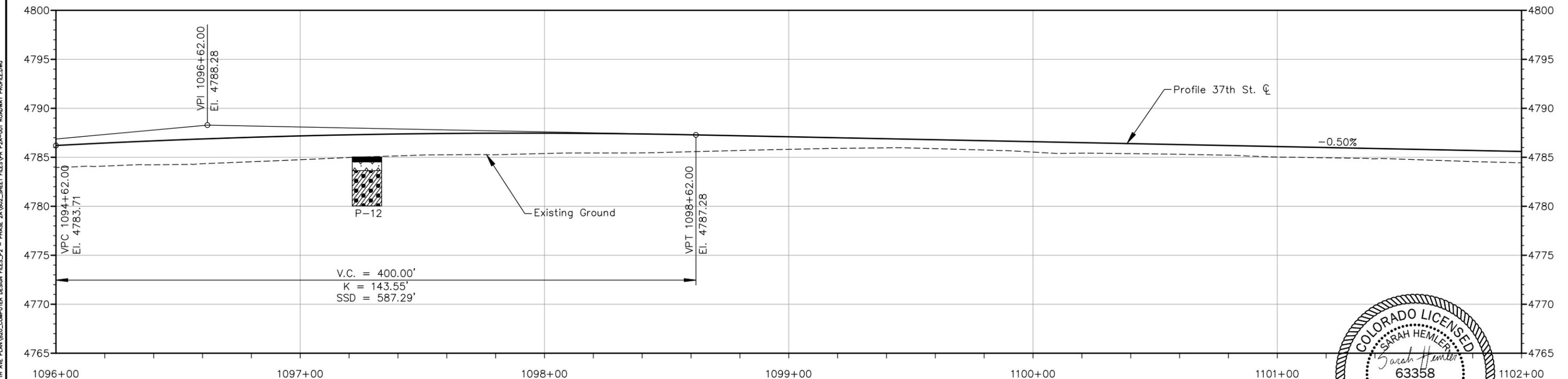
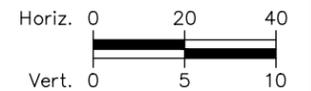
Project No.
37TH STREET 2A
Drawing Number PLAN-005
Sheet Number 35

Plot Date: 2/12/2024 8:04 AM Plotted By: Sarah Hemler  
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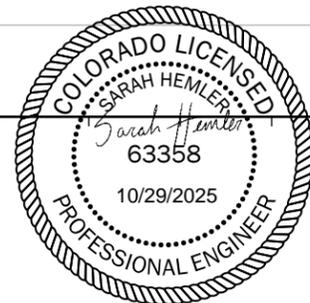
FOR CONSTRUCTION 2/24/2024



**37TH STREET PROFILE**



**37TH STREET PROFILE**



**LITHOLOGY**

- Asphalt Pavement
- Fill - SAND, clayey to silty
- Native - CLAY, sandy

Print Date: 2/12/2024

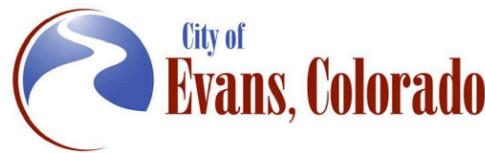
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 Horiz. Scale: As Noted    Vert. Scale: As Noted

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**Sheet Revisions**

Date	Comments	Initials



**As Constructed**

No Revisions:  
 Revised:  
 Void:

**37TH STREET WIDENING PHASE 2A ROADWAY PROFILE**

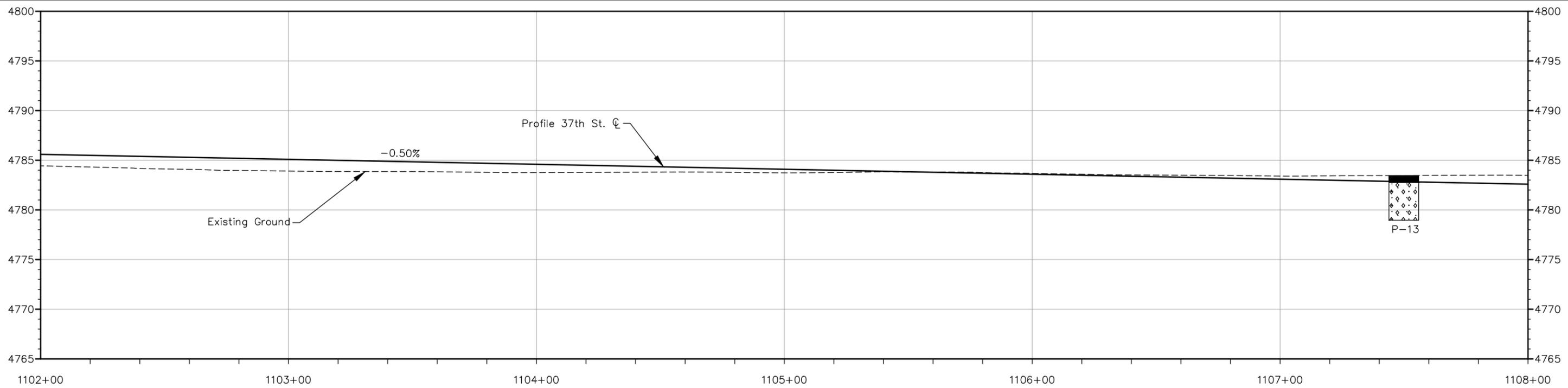
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 Detailer: S. Hemler  
 Sheet Subset: PROFILE    Subset Sheets: 1 of 3

**Project No.**

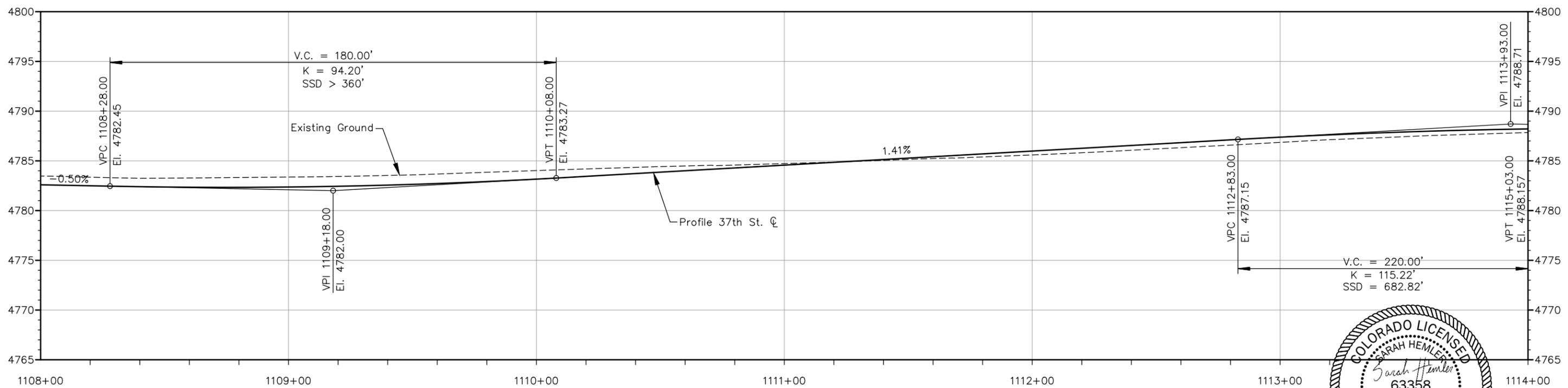
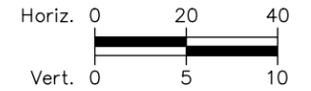
37TH STREET 2A  
 Drawing Number PR-001  
 Sheet Number 36

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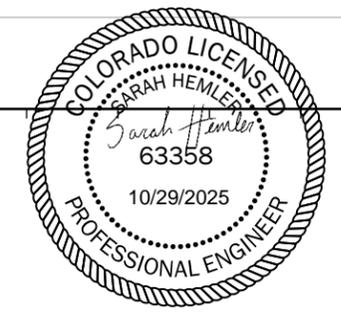
FOR CONSTRUCTION 2/24/2024



**37TH STREET PROFILE**



**37TH STREET PROFILE**

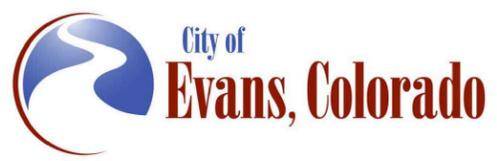


**811**  
Know what's below.  
Call before you dig.

**LITHOLOGY**

- Asphalt Pavement
- Fill - SAND, clayey to silty

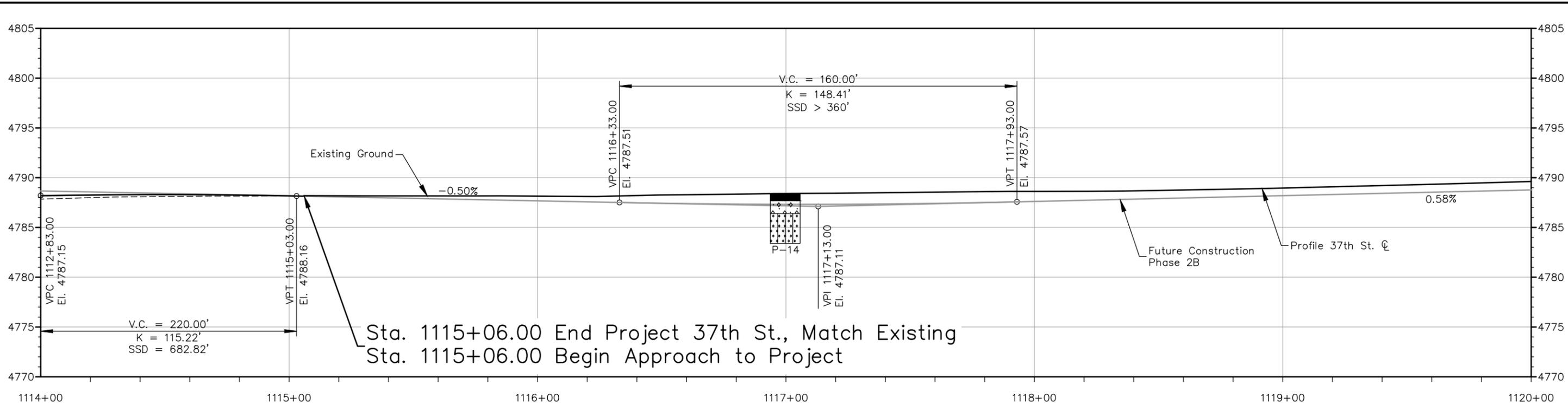
Sheet Revisions		
Date	Comments	Initials



As Constructed	37TH STREET WIDENING PHASE 2A ROADWAY PROFILE		Project No.
	No Revisions:		37TH STREET 2A
	Revised:	Designer: T. Tuttle Detailer: S. Hemler	Drawing Number PR-002
Void:	Sheet Subset: PROFILE	Structure Numbers: 2 of 3	Sheet Number 37

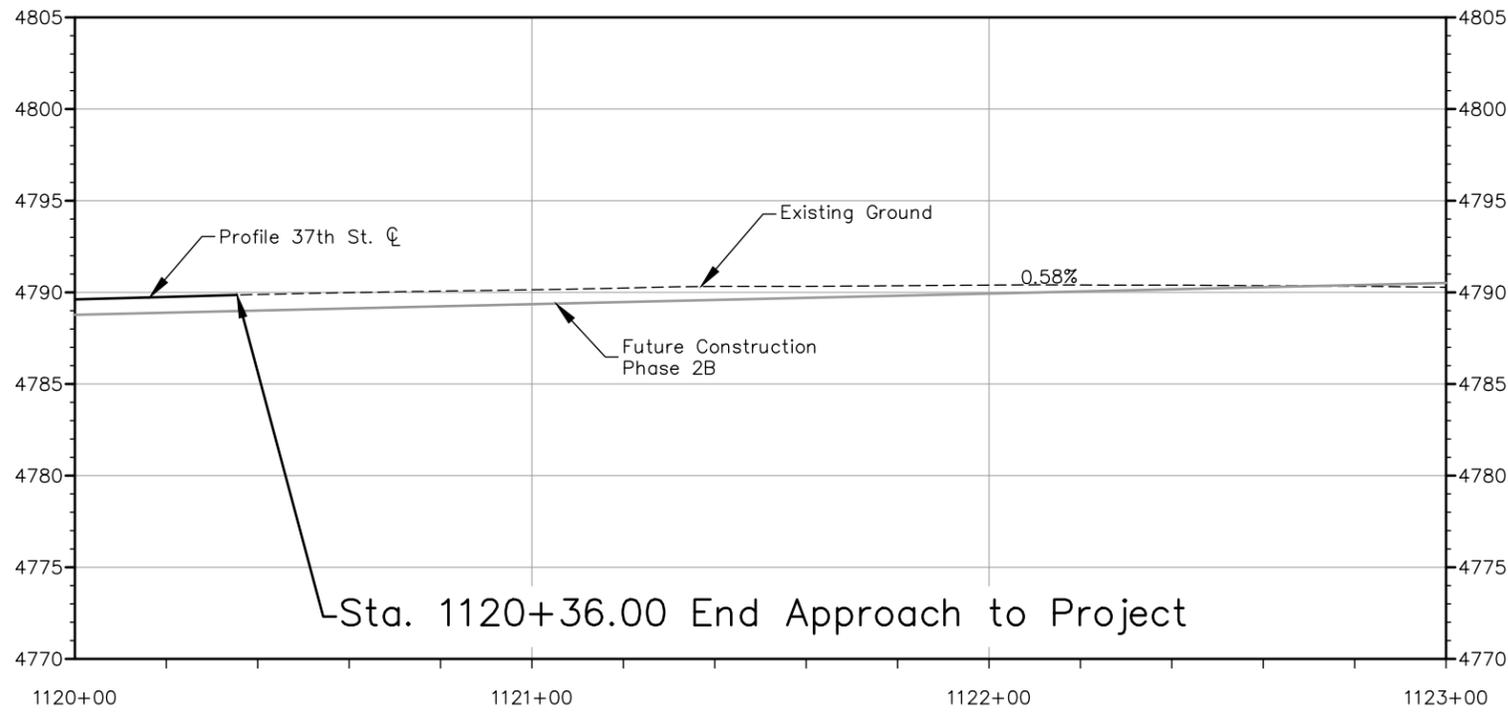
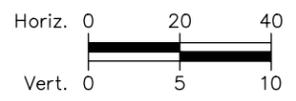
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FOR CONSTRUCTION 2/24/2024



Sta. 1115+06.00 End Project 37th St., Match Existing  
 Sta. 1115+06.00 Begin Approach to Project

**37TH STREET PROFILE**



**37TH STREET PROFILE**



- LITHOLOGY**
- Asphalt Pavement
  - Native - SAND, silty
  - Fill - SAND, clayey to silty

Plot Date: 2/12/2024 8:04 AM Plotted By: Sarah Hemler  
 C:\Q-PROJECTS\WYNTHE PROJECTS\33001\EVANS 37TH ST AND 47TH AVE PLAN\2024\COMPUTER DESIGN FILES\PR P2A-001 ROADWAY PROFILE.DWG

Print Date: 2/12/2024	
File Name: PR P2A-001 ROADWAY PROFILE.DWG	
Horiz. Scale: As Noted	Vert. Scale: As Noted
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Sheet Revisions		
Date	Comments	Initials



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No Revisions:
Revised:
Void:

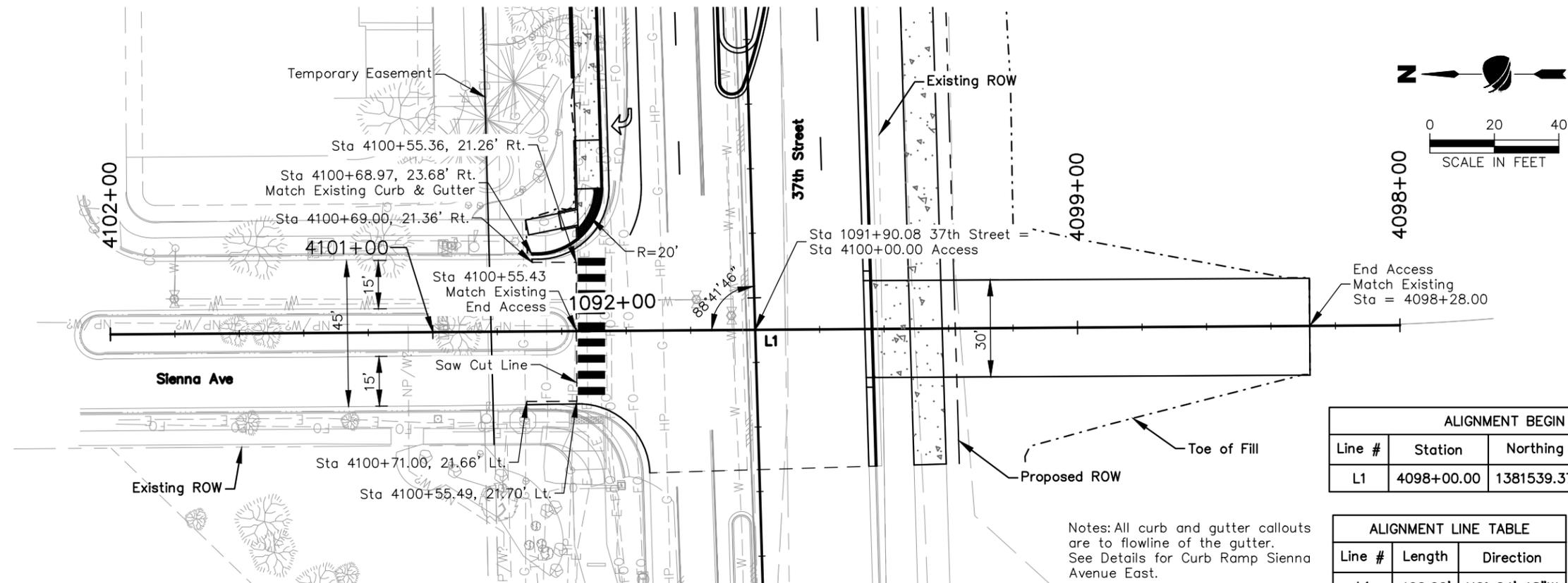
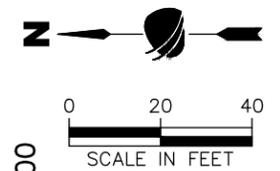
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Designer: T. Tuttle	Structure Numbers
Detailer: S. Hemler	
Sheet Subset: PROFILE	Subset Sheets: 3 of 3

<b>Project No.</b>
37TH STREET 2A
Drawing Number PR-003
Sheet Number 38

FOR CONSTRUCTION 2/24/2024

ROAD APPROACH (Sienna Avenue)  
1091+90.08 LT., SKEW 88°41'46" LT.  
(W = 45', R = 20')

ROAD APPROACH (Residential-Driveway)  
1091+90.08 RT.  
(W = 30')



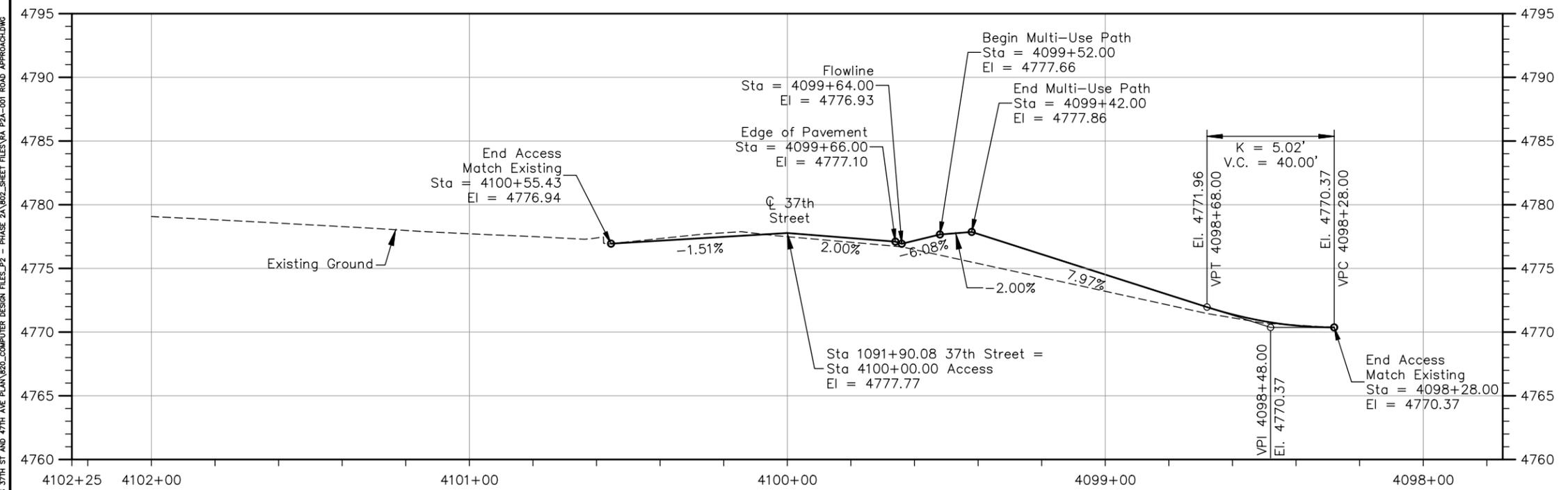
**PLAN VIEW ACCESS STA 1091+90.08 LT. & RT.**

ALIGNMENT BEGIN			
Line #	Station	Northing	Easting
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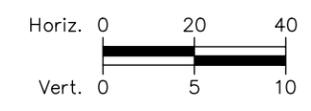
ALIGNMENT LINE TABLE		
Line #	Length	Direction
L1	400.00'	N0° 24' 18"W

ALIGNMENT END			
Line #	Station	Northing	Easting
L1	4102+00.00	1381939.36	3209291.75

Notes: All curb and gutter callouts are to flowline of the gutter. See Details for Curb Ramp Sienna Avenue East.



**PROFILE VIEW ACCESS STA 1091+90.08 LT. & RT.**

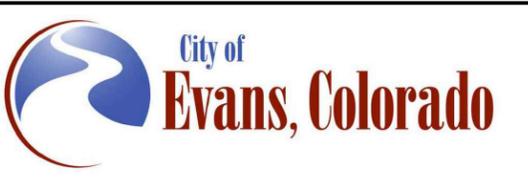


**Concrete Driveway Quantity Take Off**  
Aggregate Base Course (Class 6): 42 CY  
Concrete Sidewalk (8 Inch): 33 SY  
Concrete Pavement (8 Inch): 38 SY



Print Date: 2/6/2024  
File Name: RA P2A-001 ROAD APPROACH.DWG  
Horiz. Scale: As Noted Vert. Scale: As Noted

Sheet Revisions		
Date	Comments	Initials



As Constructed
No Revisions:
Revised:
Void:

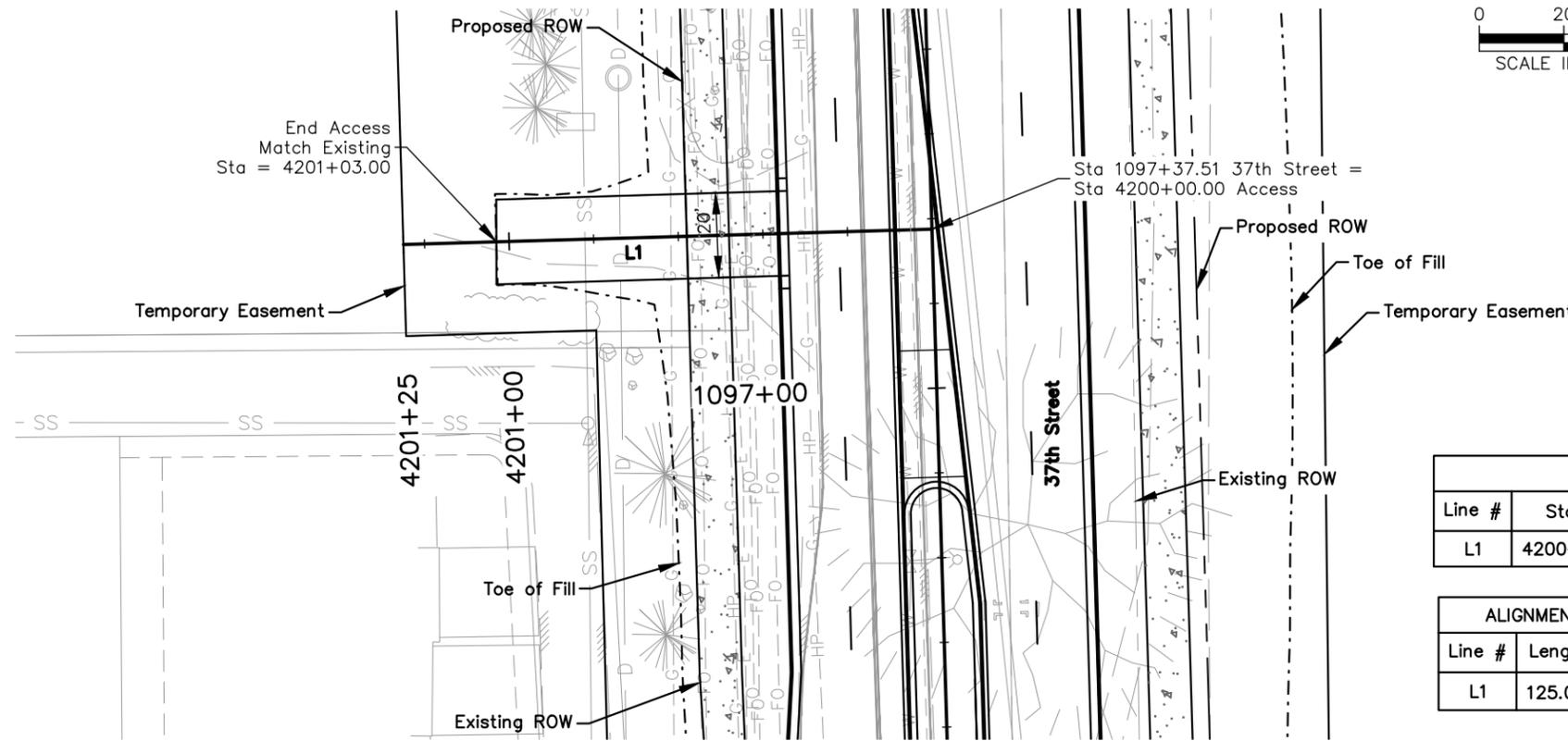
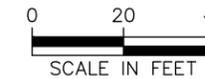
37TH STREET WIDENING PHASE 2A ROAD APPROACH 1091+90.08 LT. & RT.	
Designer: T. Tuttle	Structure Numbers
Detailer: J. Jensen	
Sheet Subset: APPROACH	Subset Sheets: 1 of 8

Project No.
37TH STREET 2A
Drawing Number RA-001
Sheet Number 39

Plot Date: 2/6/2024 7:45 AM Plotted By: Sarah Hemler  
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FOR CONSTRUCTION 2/24/2024

ROAD APPROACH (Residential-Driveway)  
1097+37.51 LT.  
(W = 20')

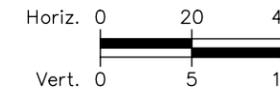
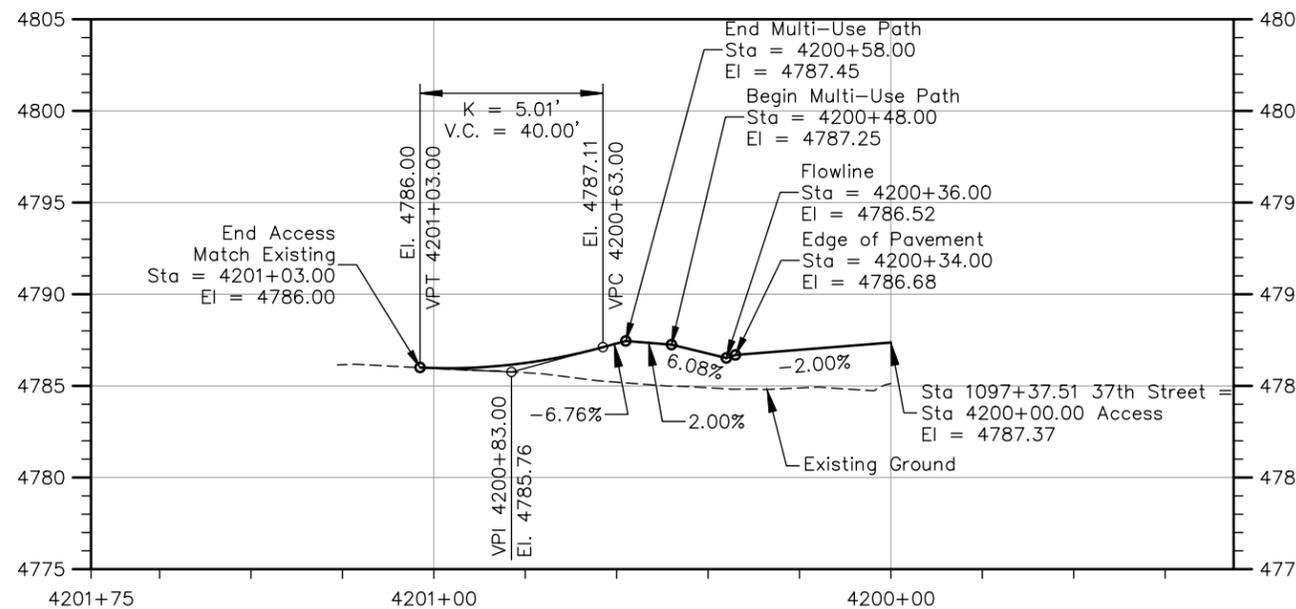


PLAN VIEW ACCESS STA 1097+37.51 LT.

ALIGNMENT BEGIN			
Line #	Station	Northing	Easting
L1	4200+00.00	1381755.65	3209840.35

ALIGNMENT LINE TABLE		
Line #	Length	Direction
L1	125.00'	N1° 39' 25"W

ALIGNMENT END			
Line #	Station	Northing	Easting
L1	4201+25.00	1381880.60	3209836.74



PROFILE VIEW ACCESS STA 1097+37.51 LT.

**Concrete Driveway Quantity Take Off**

- Aggregate Base Course (Class 6): 11 CY
- Concrete Sidewalk (8 Inch): 22 SY
- Concrete Pavement (8 Inch): 26 SY

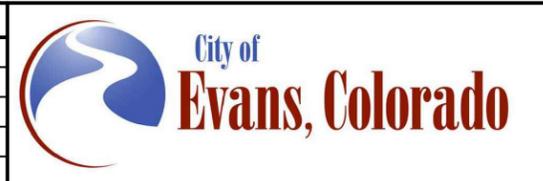


Know what's below.  
Call before you dig.

Plot Date: 2/6/2024 7:45 AM Plotted By: Sarah Hemler  
 C:\G-PROJECTS\2024\PHASE 2A\ROAD APPROACH\COMPUTER DESIGN FILES\RA\_P2A-001\ROAD\_APPROACH.DWG

Print Date: 2/6/2024	
File Name: RA P2A-001 ROAD APPROACH.DWG	
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Sheet Revisions		
Date	Comments	Initials



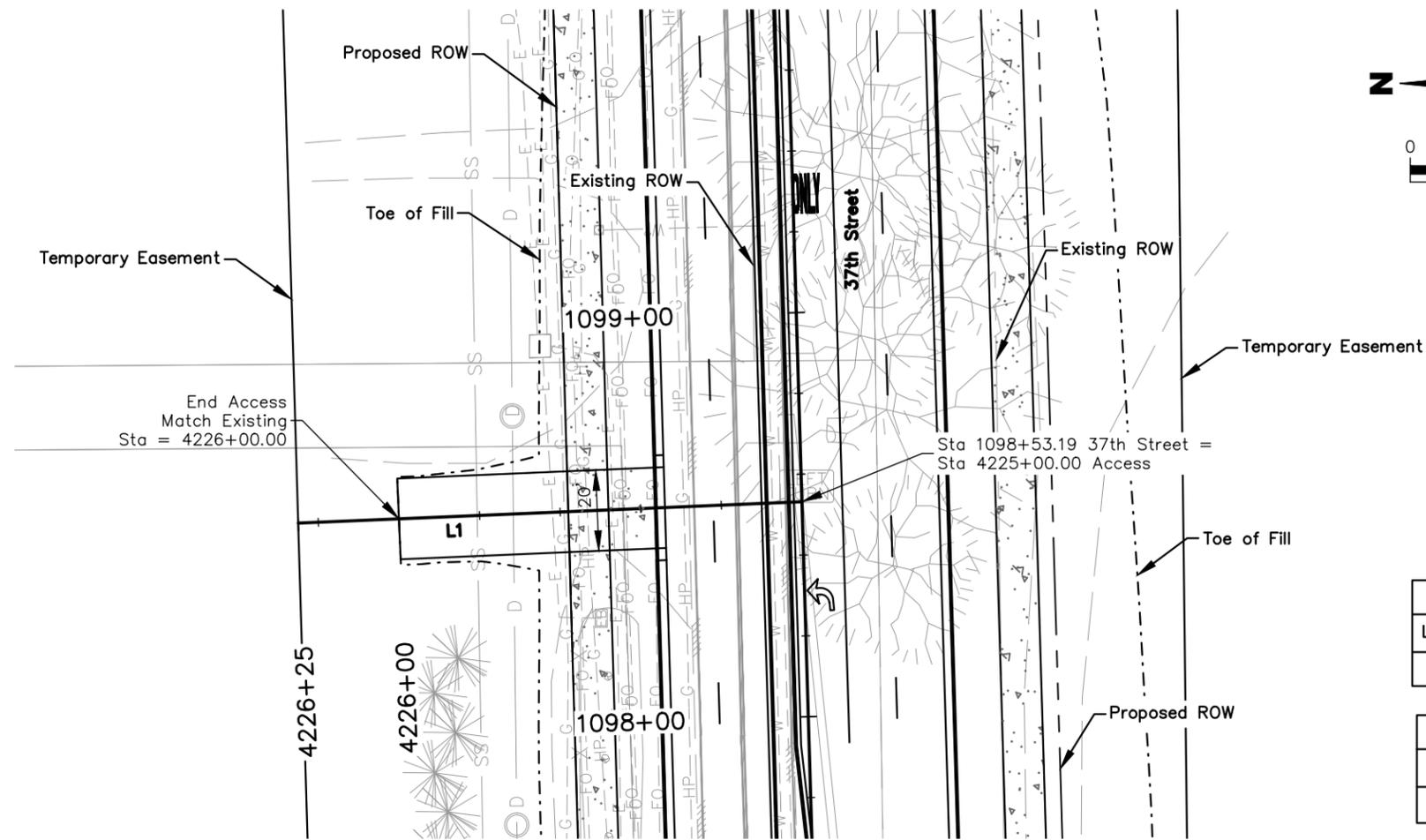
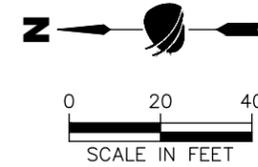
As Constructed	No Revisions:
Revised:	
Void:	

37TH STREET WIDENING PHASE 2A ROAD APPROACH 1097+37.51 LT.	
Designer:	T. Tuttle
Detailer:	J. Jensen
Sheet Subset:	APPROACH
Structure Numbers	
Subset Sheets:	2 of 8

Project No.	37TH STREET 2A
Drawing Number	RA-002
Sheet Number	40

FOR CONSTRUCTION 2/24/2024

ROAD APPROACH (Residential-Driveway)  
1098+53.19 LT.  
(W = 20')

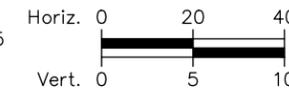
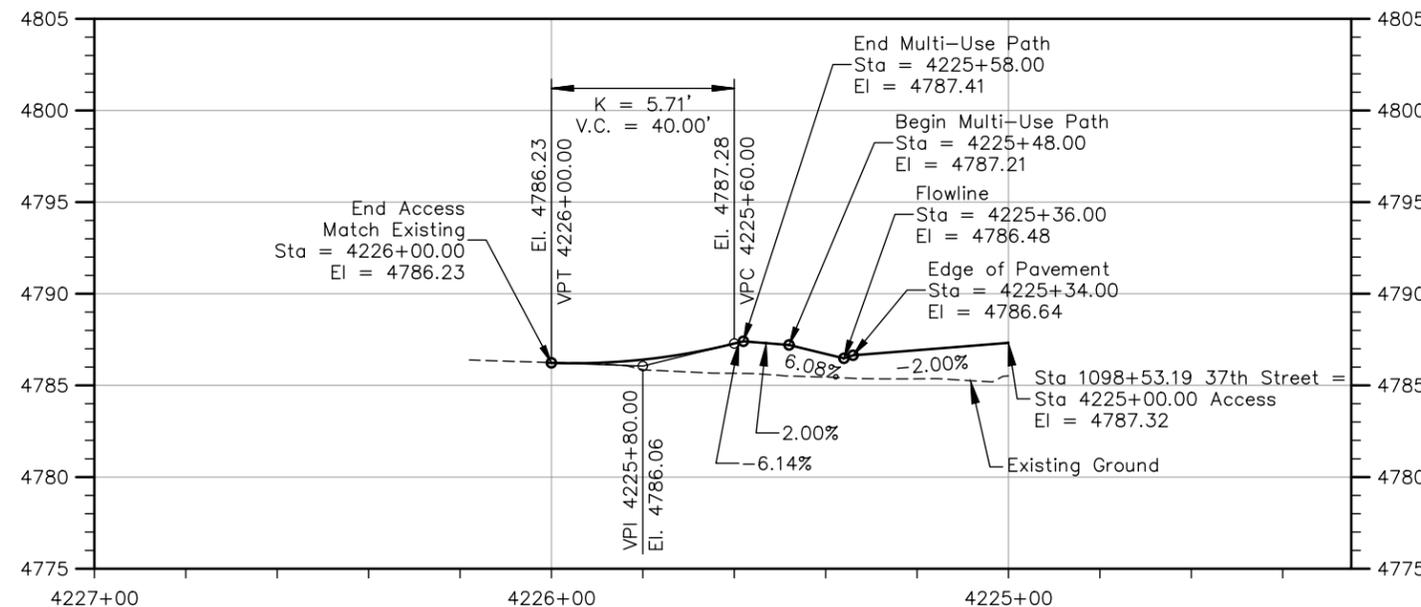


PLAN VIEW ACCESS STA 1098+53.19 LT.

ALIGNMENT BEGIN			
Line #	Station	Northing	Easting
L1	4225+00.00	1381759.09	3209955.98

ALIGNMENT LINE TABLE		
Line #	Length	Direction
L1	125.00'	N2° 25' 26"W

ALIGNMENT END			
Line #	Station	Northing	Easting
L1	4226+25.00	1381883.98	3209950.69



PROFILE VIEW ACCESS STA 1098+53.19 LT.

**Concrete Driveway Quantity Take Off**

- Aggregate Base Course (Class 6): 10 CY
- Concrete Sidewalk (8 Inch): 22 SY
- Concrete Pavement (8 Inch): 26 SY



Plot Date: 2/6/2024 7:46 AM Plotted By: Sarah Hemler  
 C:\G-PROJECTS\VAI\PROJECTS\3001\EVANS\37TH ST AND 47TH AVE PLAN\2024\COMPUTER DESIGN FILES\2A - PHASE 2A\RA001\_SHEET FILES\2A - PHASE 2A\RA001 ROAD APPROACH.DWG

Print Date: 2/6/2024	
File Name: RA P2A-001 ROAD APPROACH.DWG	
Horiz. Scale: As Noted	Vert. Scale: As Noted
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Sheet Revisions		
Date	Comments	Initials



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No Revisions:
Revised:
Void:

<b>37TH STREET WIDENING PHASE 2A ROAD APPROACH 1098+53.19 LT.</b>	
Designer: T. Tuttle	Structure Numbers
Detailer: J. Jensen	
Sheet Subset: APPROACH	Subset Sheets: 3 of 8

<b>Project No.</b>
37TH STREET 2A
Drawing Number RA-003
Sheet Number 41

FOR CONSTRUCTION 2/24/2024

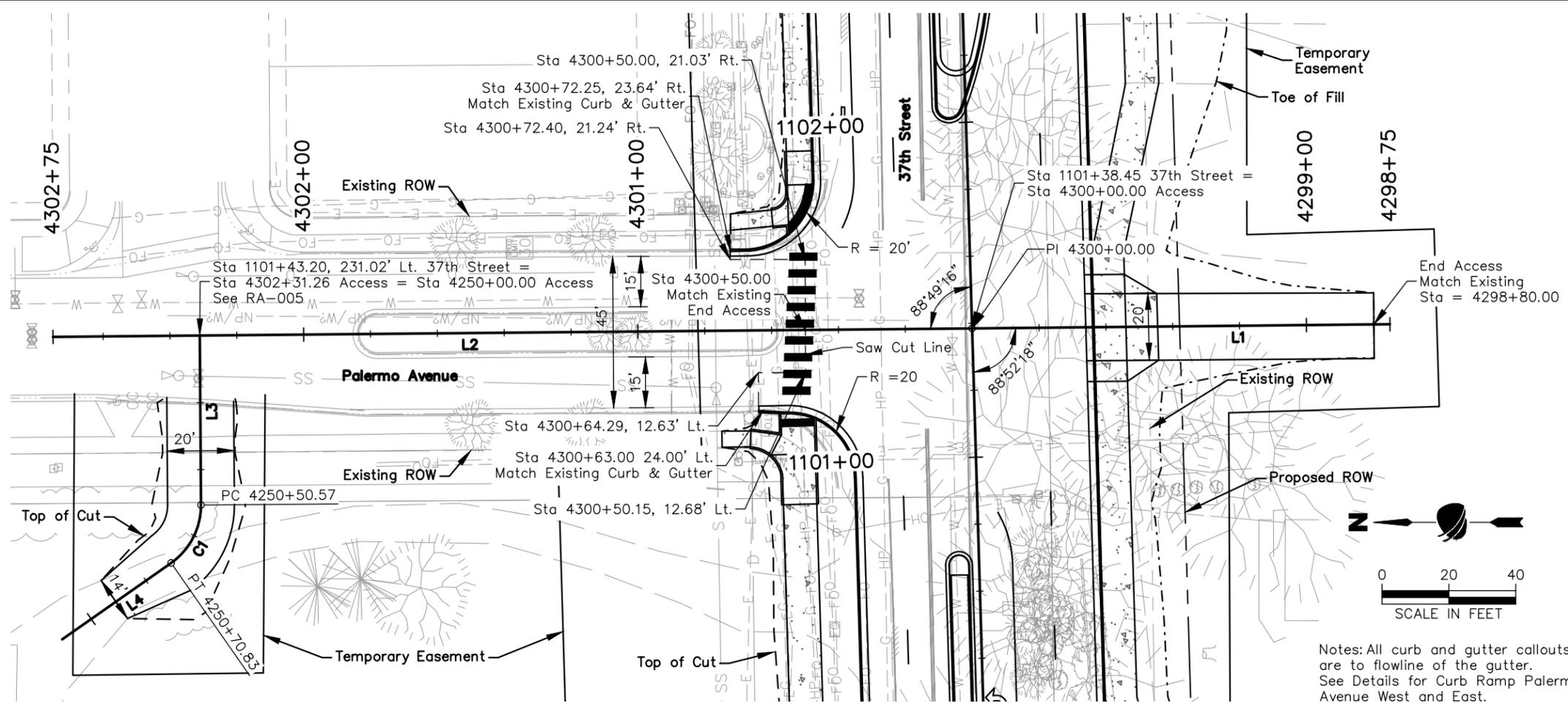
ROAD APPROACH (Palermo Avenue)  
1101+38.45 LT., SKEW 88°49'16" LT.  
(W = 45', R = 20')

ROAD APPROACH (Residential-Driveway)  
1101+38.45 RT., SKEW 88°52'18" RT.  
(W = 20')

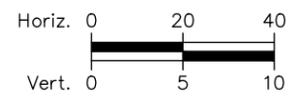
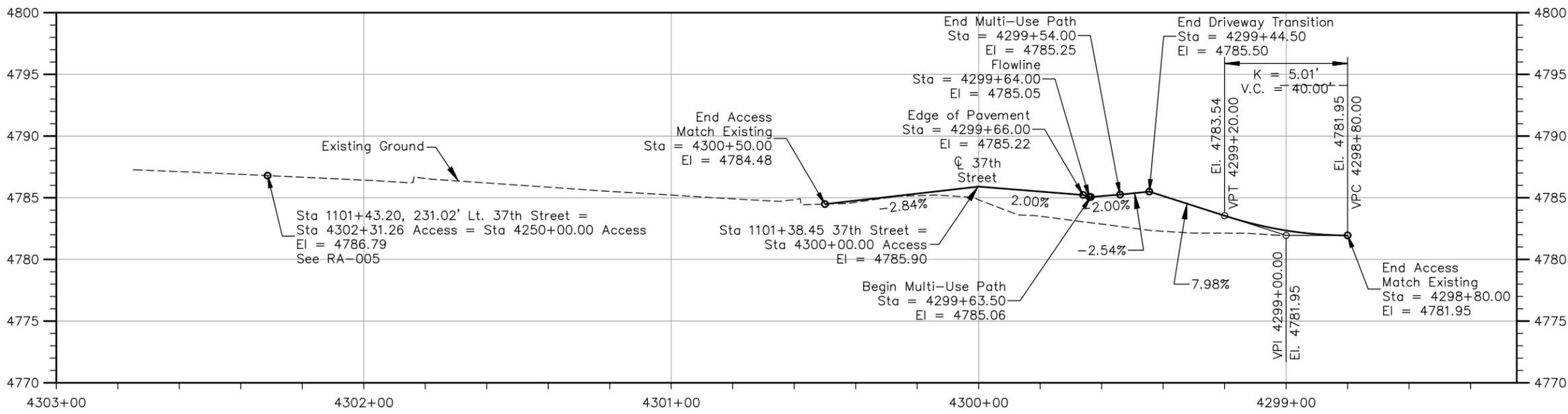
ALIGNMENT BEGIN			
Line #	Station	Northing	Easting
L1	4298+75.00	1381642.59	3210242.36

ALIGNMENT LINE TABLE		
Line #	Length	Direction
L1	125.00'	N0° 34' 35"W
L2	275.00'	N0° 31' 34"W

ALIGNMENT END			
Line #	Station	Northing	Easting
L2	4302+75.00	1382042.56	3210238.58



**PLAN VIEW ACCESS STA 1101+38.45 LT. & RT.**



**PROFILE VIEW ACCESS STA 1101+38.45 LT. & RT.**

**Concrete Driveway Quantity Take Off**

- Aggregate Base Course (Class 6): 16 CY
- Concrete Sidewalk (8 Inch): 34 SY
- Concrete Pavement (8 Inch): 27 SY



Print Date: 2/6/2024  
File Name: RA P2A-001 ROAD APPROACH.DWG  
Horiz. Scale: As Noted Vert. Scale: As Noted

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Sheet Revisions		
Date	Comments	Initials



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Revised:  
Void:

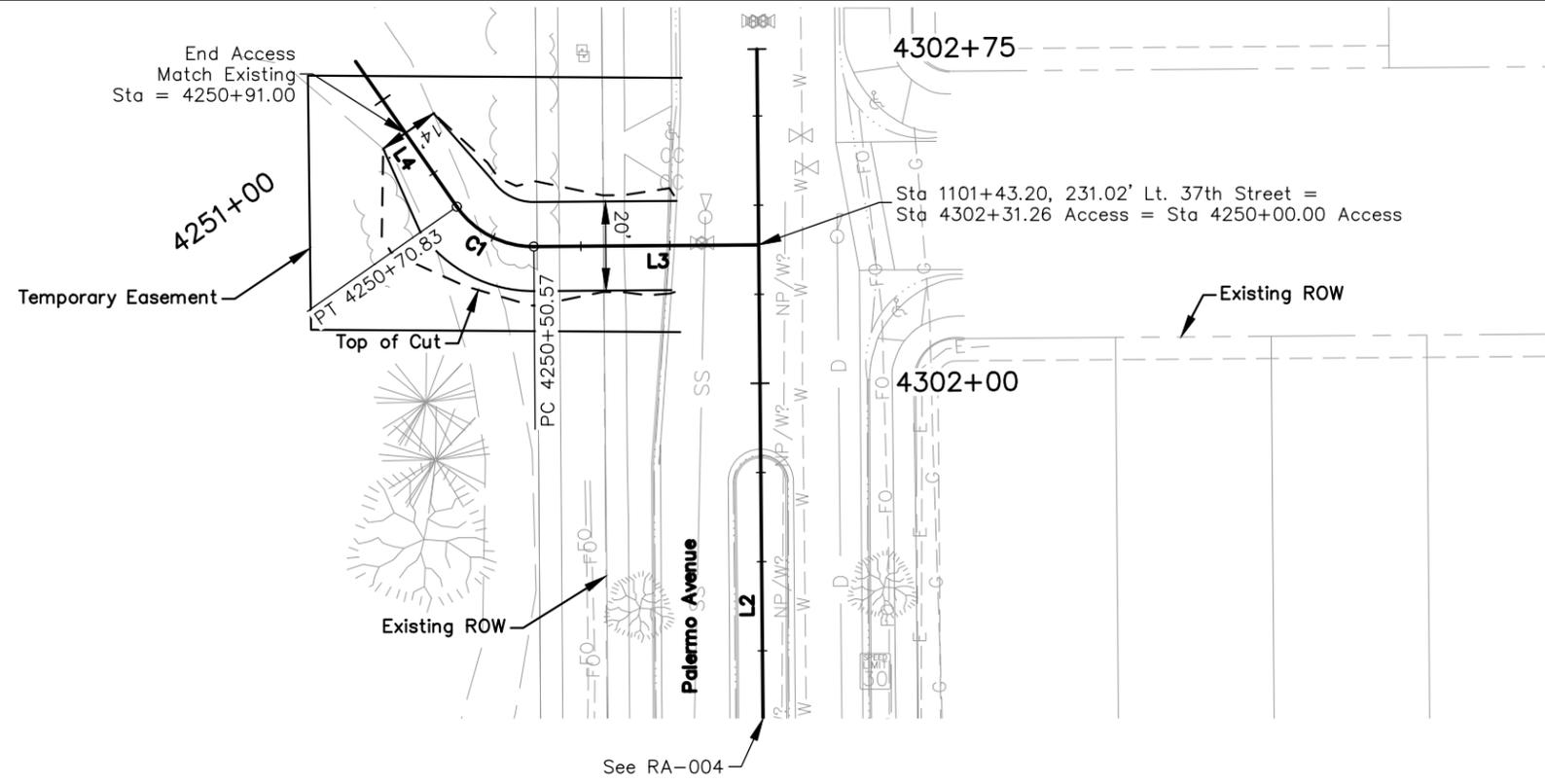
**37TH STREET WIDENING PHASE 2A ROAD APPROACH 1101+38.45 LT. & RT.**

Designer: T. Tuttle  
Detailer: J. Jensen  
Sheet Subset: APPROACH  
Subset Sheets: 4 of 8

**Project No.**  
37TH STREET 2A  
Drawing Number RA-004  
Sheet Number 42

Plot Date: 2/6/2024 7:46 AM Plotted By: Sarah Heimler  
 C:\Q-PROJECTS\ACTIVE PROJECTS\37TH ST AND 47TH AVE PLAN\2024\COMPUTER DESIGN FILES\PP - PHASE 2A\RA-001\_SHEET FILES\RA\_P2A-001\_ROAD\_APPROACH.DWG

FOR CONSTRUCTION 2/24/2024



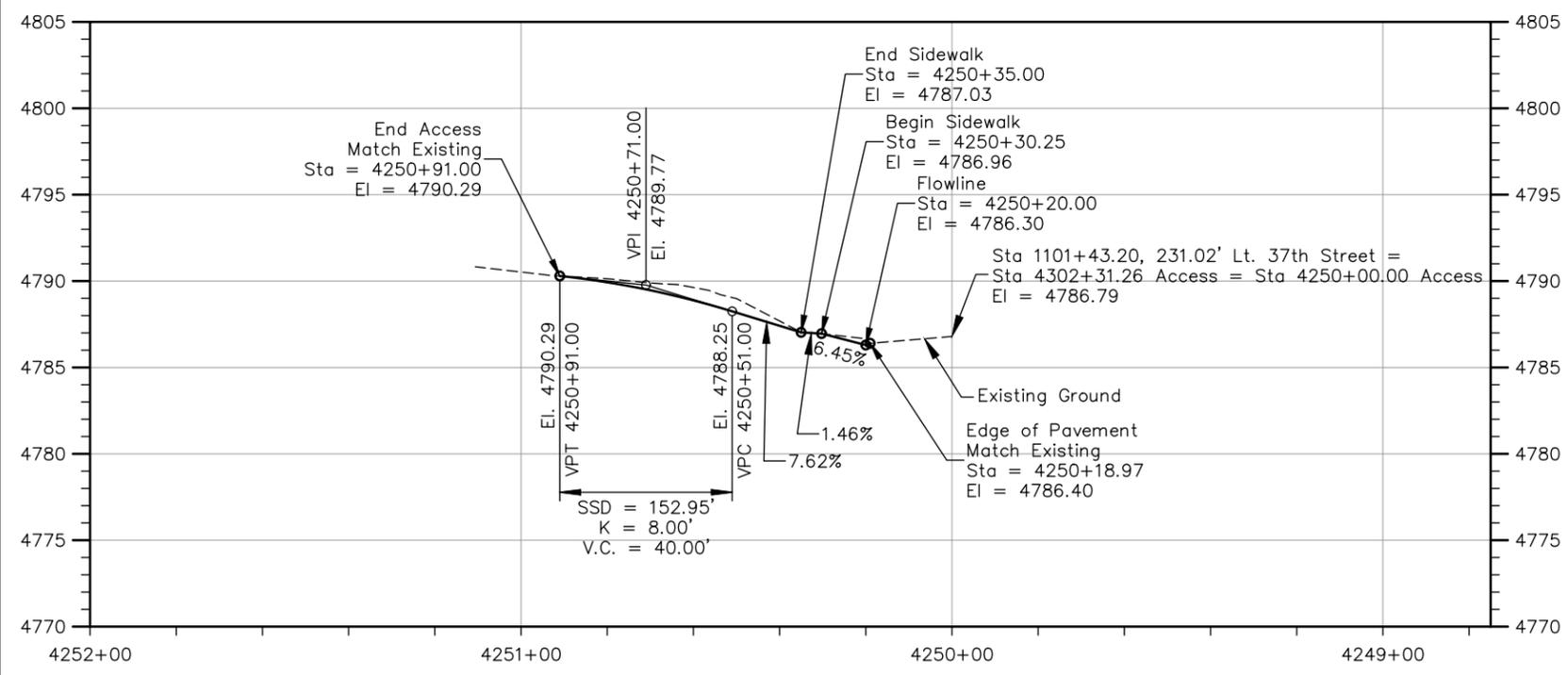
**PLAN VIEW ACCESS STA 1101+43.20, 231.02' LT.**

ALIGNMENT BEGIN			
Line #	Station	Northing	Easting
L3	4250+00.00	1381998.64	3210238.98

ALIGNMENT CURVE TABLE								
Curve #	PC Sta.	PI Sta.	PT Sta.	Delta	L	R	T	Dc
C1	4250+50.57	4250+61.57	4250+70.83	055°28'18"	20.26'	20.93'	11.00'	273.75

ALIGNMENT LINE TABLE		
Line #	Length	Direction
L3	50.57'	S89° 34' 42"W
L4	39.76'	N34° 57' 00"W

ALIGNMENT END			
Line #	Station	Northing	Easting
L4	4251+10.59	1382039.80	3210148.33



**PROFILE VIEW ACCESS STA 1101+43.20, 231.02' LT.**

**Concrete Driveway Quantity Take Off**

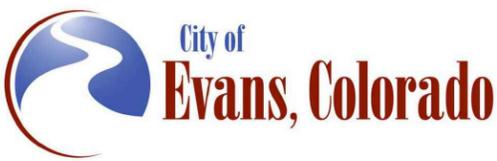
- Aggregate Base Course (Class 6): 13 CY
- Concrete Sidewalk (8 Inch): 10 SY
- Concrete Pavement (8 Inch): 21 SY



Print Date: 2/6/2024  
 File Name: RA P2A-001 ROAD APPROACH.DWG  
 Horiz. Scale: As Noted Vert. Scale: As Noted

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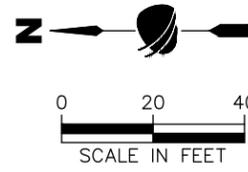
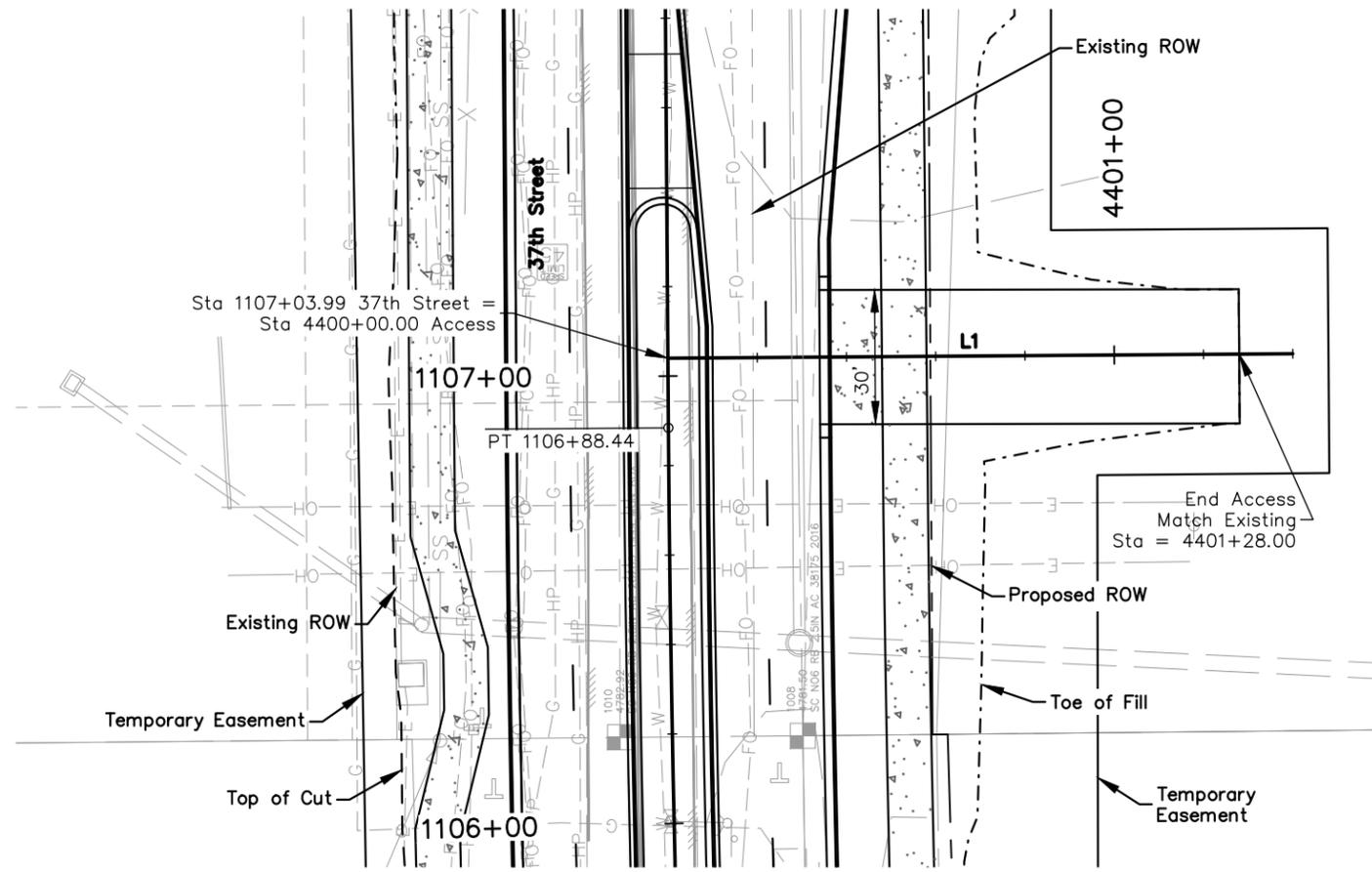
37TH STREET WIDENING PHASE 2A ROAD APPROACH 1101+43.20, 231.02' LT.	
Designer: T. Tuttle	Structure Numbers
Detailer: J. Jensen	
Sheet Subset: APPROACH	Subset Sheets: 5 of 8

Project No.
37TH STREET 2A
Drawing Number RA-005
Sheet Number 43

Plot Date: 2/6/2024 7:46 AM Plotted By: Sarah Hemler  
 C:\Q-PROJECS\37TH ST AND 47TH AVE PLAN\2024\COMPUTER DESIGN FILES\2A - PHASE 2A\RA-001\_SHEET FILES\RA\_P2A-001 ROAD APPROACH.DWG

FOR CONSTRUCTION 2/24/2024

ROAD APPROACH (Agricultural)  
1107+03.99 RT.  
(W = 30')

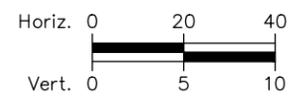
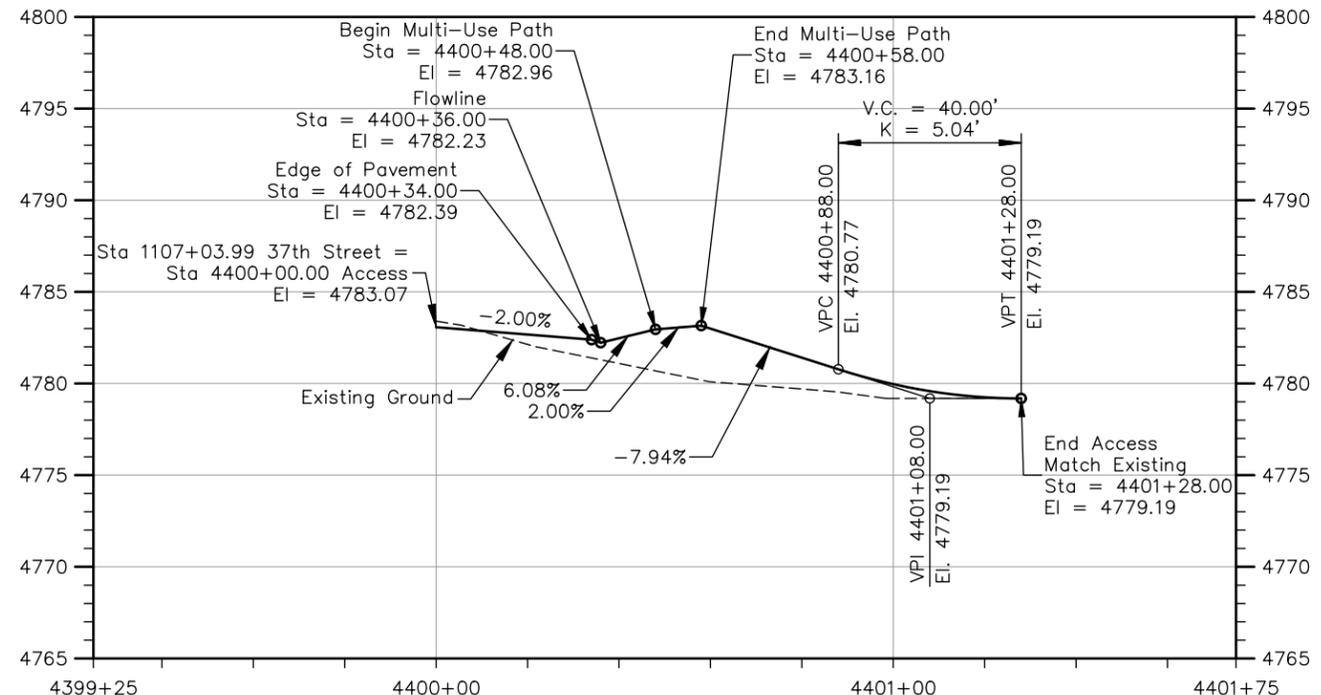


ALIGNMENT BEGIN			
Line #	Station	Northing	Easting
L1	4400+00.00	1381782.52	3210806.44

ALIGNMENT LINE TABLE		
Line #	Length	Direction
L1	140.00'	S0° 24' 31"E

ALIGNMENT END			
Line #	Station	Northing	Easting
L1	4401+40.00	1381642.52	3210807.44

PLAN VIEW ACCESS STA 1107+03.99 RT.



PROFILE VIEW ACCESS STA 1107+03.99 RT.

**Concrete Driveway Quantity Take Off**

- Aggregate Base Course (Class 6): 26 CY
- Concrete Sidewalk (8 Inch): 33 SY
- Concrete Pavement (8 Inch): 38 SY



Print Date: 2/6/2024  
File Name: RA P2A-001 ROAD APPROACH.DWG  
Horiz. Scale: As Noted Vert. Scale: As Noted

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Date	Comments	Initials

<b>As Constructed</b>	No Revisions:
	Revised:
	Void:

**37TH STREET WIDENING PHASE 2A ROAD APPROACH 1107+03.99 RT.**

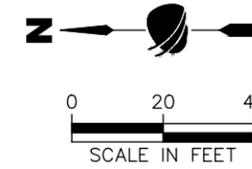
Designer:	T. Tuttle	Structure Numbers:	
Detailer:	J. Jensen		
Sheet Subset:	APPROACH	Subset Sheets:	6 of 8

<b>Project No.</b>	37TH STREET 2A
Drawing Number	RA-006
Sheet Number	44

Plot Date: 2/6/2024 7:47 AM Plotted By: Sarah Hemler  
 C:\Q-PROJECS\2024\PROJECTS\3001\EVANS\37TH ST AND 47TH AVE PLAN\2024\COMPUTER DESIGN FILES\P2 - PHASE 2A\RA-001 ROAD APPROACH.DWG

FOR CONSTRUCTION 2/24/2024

ROAD APPROACH (Stampede Drive)  
1111+77.01 LT.  
(W = 36', R = 20')



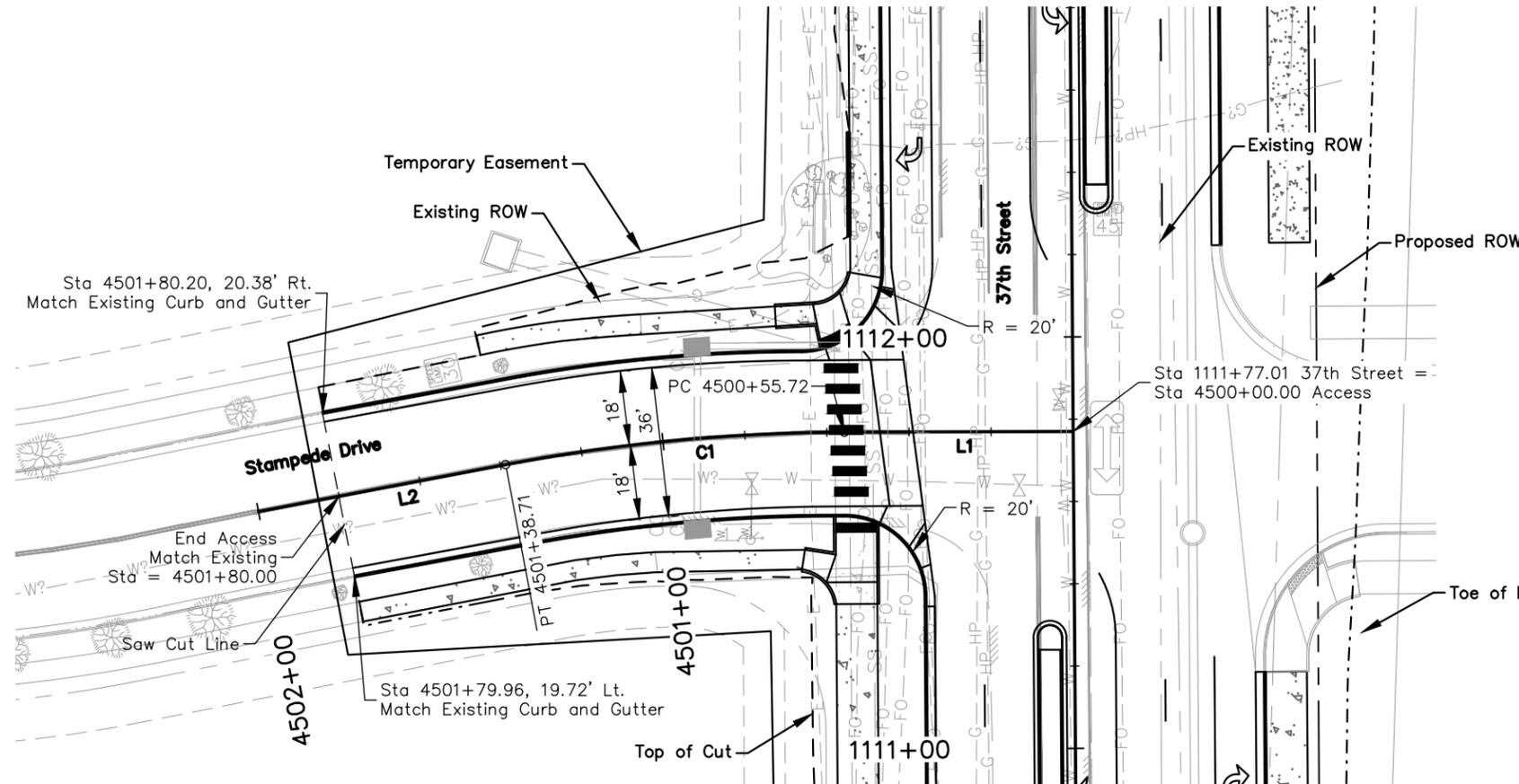
Notes: All curb and gutter callouts are to flowline of the gutter. See Details for Curb Ramp Stampede Drive West and East.

ALIGNMENT BEGIN			
Line #	Station	Northing	Easting
L1	4500+00.00	1381785.89	3211279.44

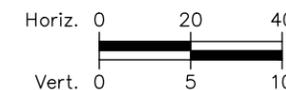
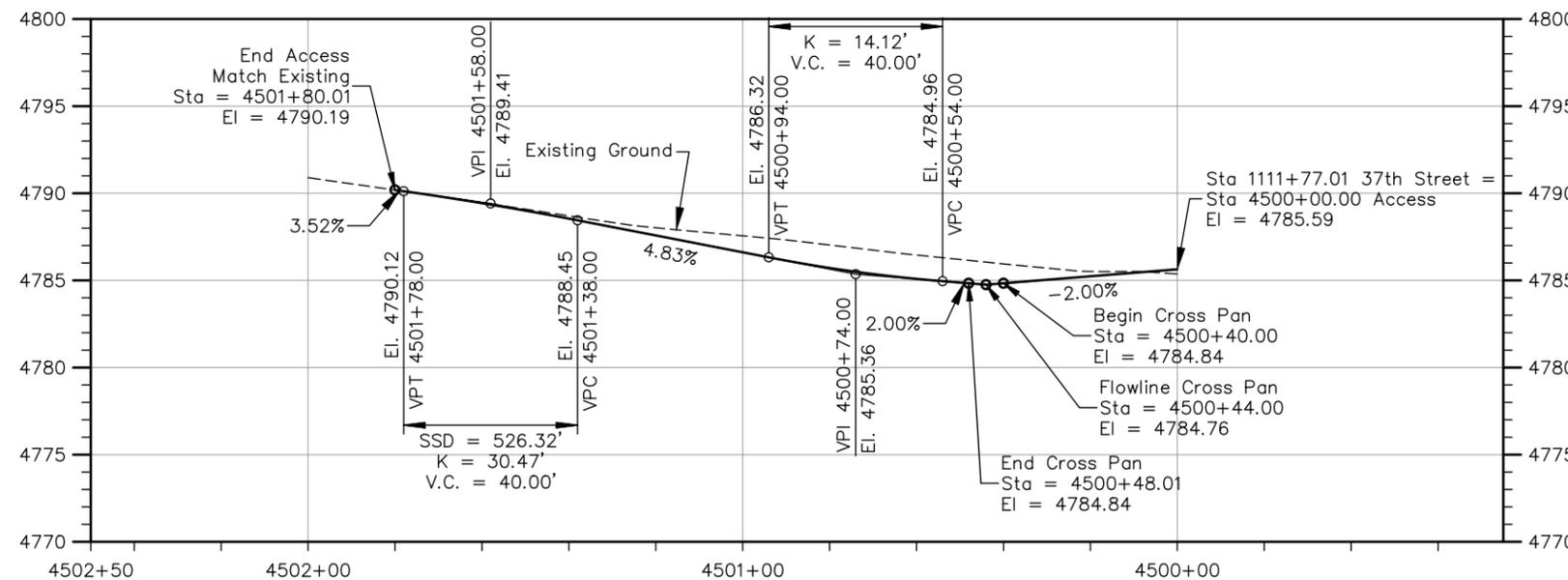
ALIGNMENT CURVE TABLE								
Curve #	PC Sta.	PI Sta.	PT Sta.	Delta	L	R	T	Dc
C1	4500+55.72	4500+97.34	4501+38.71	010°34'00"	82.99'	450.00'	41.61'	012.73

ALIGNMENT LINE TABLE		
Line #	Length	Direction
L1	55.72'	N0° 10' 23"W
L2	61.29'	N10° 44' 22"W

ALIGNMENT END			
Line #	Station	Northing	Easting
L2	4502+00.00	1381984.32	3211259.97



PLAN VIEW ACCESS STA 1111+77.01 LT.



PROFILE VIEW ACCESS STA 1111+77.01 LT.

**Street Approach Quantity Take Off**

- HMA (SX) (100) (PG 64-28): 59 TONS
- HMA (S) (75) (PG 64-22): 118 TONS
- Emulsified Asphalt (Slow-Setting): 53 GAL
- Aggregate Base Course (Class 6): 140 CY
- Concrete Sidewalk (6 Inch): 98 SY
- Concrete Curb Ramp: 69 SY
- Curb and Gutter Type 2 (Section II-B): 240 LF
- Gutter Type 2 (8 Foot): 36 LF
- Concrete Pavement (8 Inch): 21 SY



Plot Date: 2/6/2024 7:47 AM Plotted By: Sarah Hemler  
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Print Date: 2/6/2024  
 File Name: RA P2A-001 ROAD APPROACH.DWG  
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Date	Comments	Initials

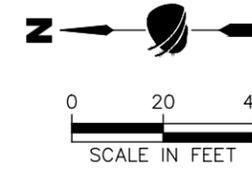
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No Revisions:
Revised:
Void:

37TH STREET WIDENING PHASE 2A ROAD APPROACH 1111+77.01 LT.	
Designer:	T. Tuttle
Detailer:	J. Jensen
Sheet Subset:	APPROACH
Structure Numbers	
Subset Sheets:	7 of 8

Project No.
37TH STREET 2A
Drawing Number RA-007
Sheet Number 45

FOR CONSTRUCTION 2/24/2024

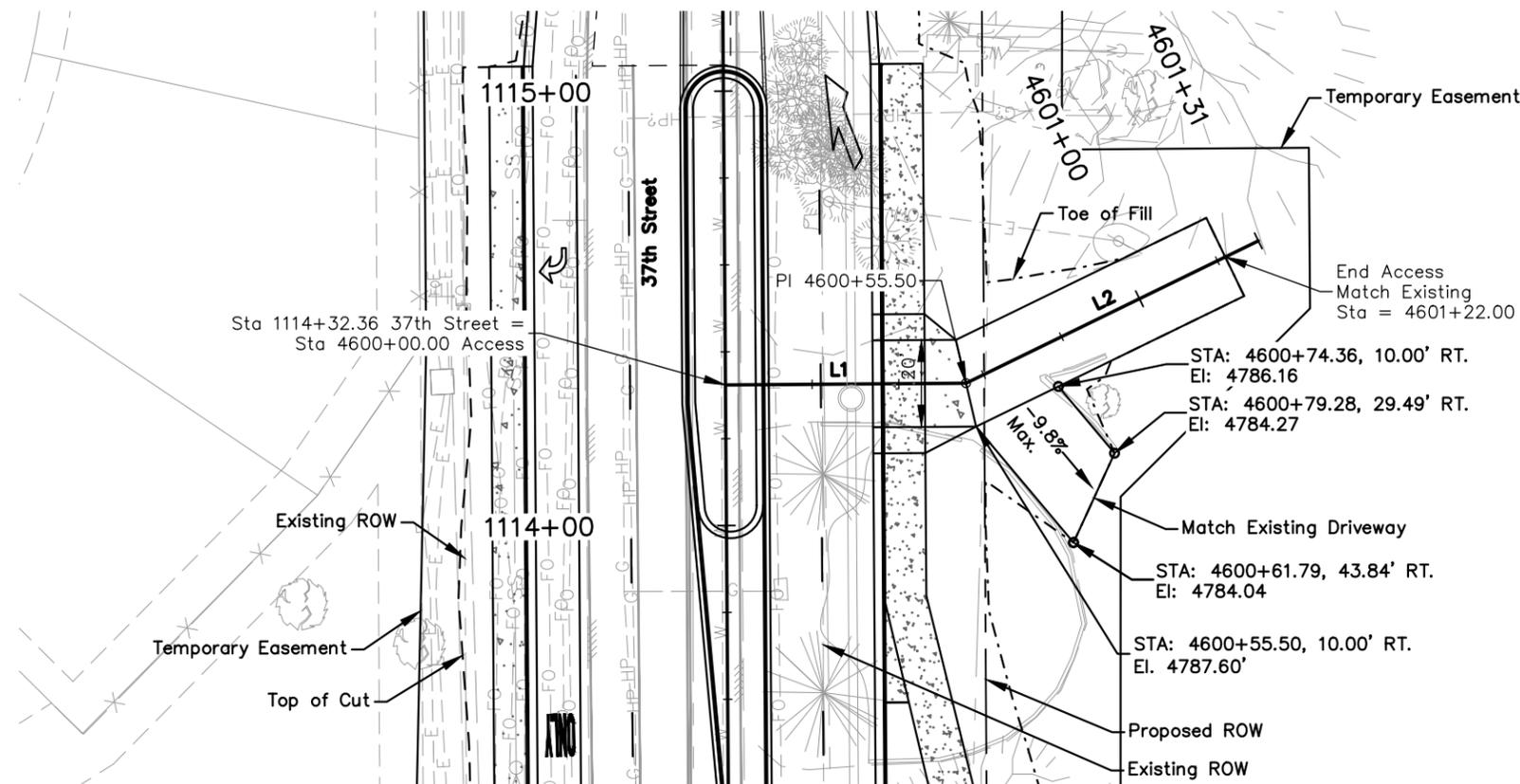
ROAD APPROACH (Residential-Driveway)  
 1114+32.36 RT.  
 (W = 20')



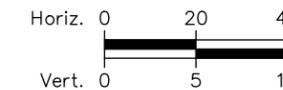
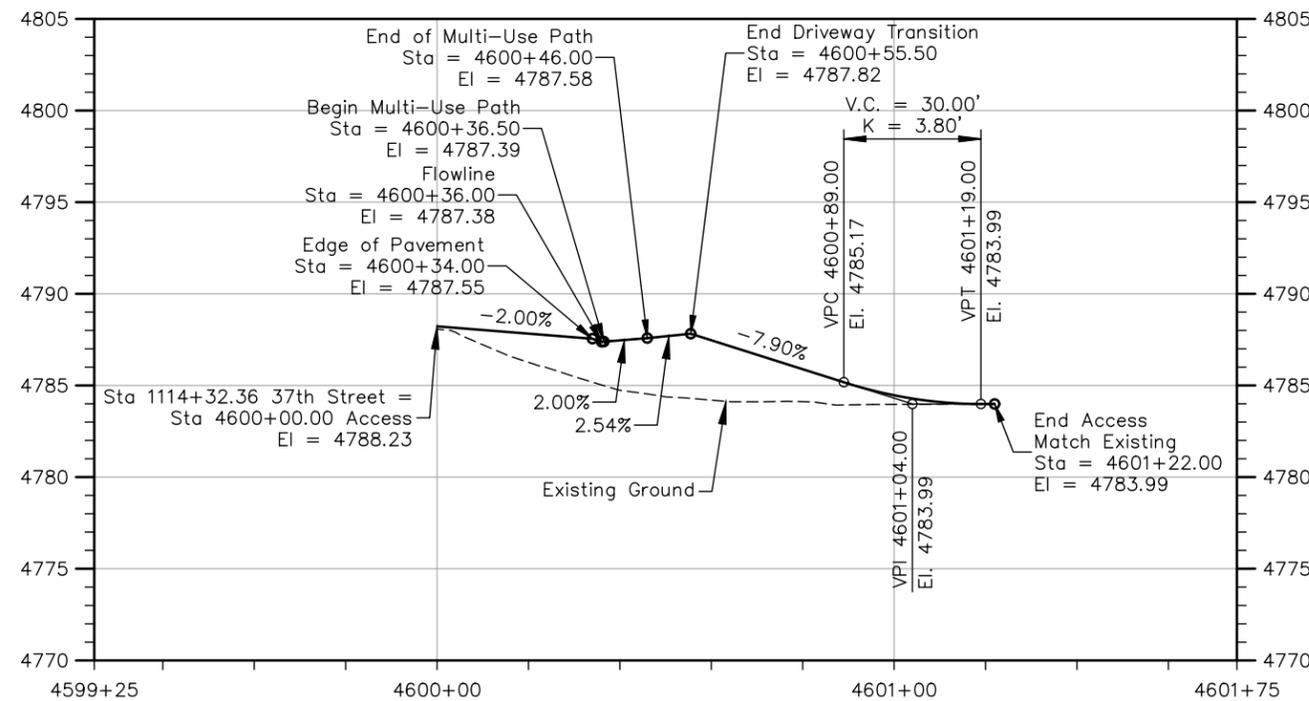
ALIGNMENT BEGIN			
Line #	Station	Northing	Easting
L1	4600+00.00	1381787.71	3211534.79

ALIGNMENT LINE TABLE		
Line #	Length	Direction
L1	55.50'	S0° 24' 31"E
L2	75.00'	S25° 55' 06"E

ALIGNMENT END			
Line #	Station	Northing	Easting
L2	4601+30.50	1381664.75	3211567.97



PLAN VIEW ACCESS STA 1114+32.36 RT.



PROFILE VIEW ACCESS STA 1114+32.36 RT.

**Concrete Driveway Quantity Take Off**

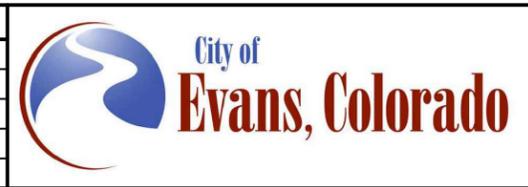
- Aggregate Base Course (Class 6): 22 CY
- Concrete Sidewalk (8 Inch): 34 SY
- Concrete Pavement (8 Inch): 27 SY



Plot Date: 2/6/2024 7:47 AM Plotted By: Sarah Hemler  
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Print Date: 2/6/2024  
 File Name: RA P2A-001 ROAD APPROACH.DWG  
 Horiz. Scale: As Noted Vert. Scale: As Noted

Sheet Revisions		
Date	Comments	Initials

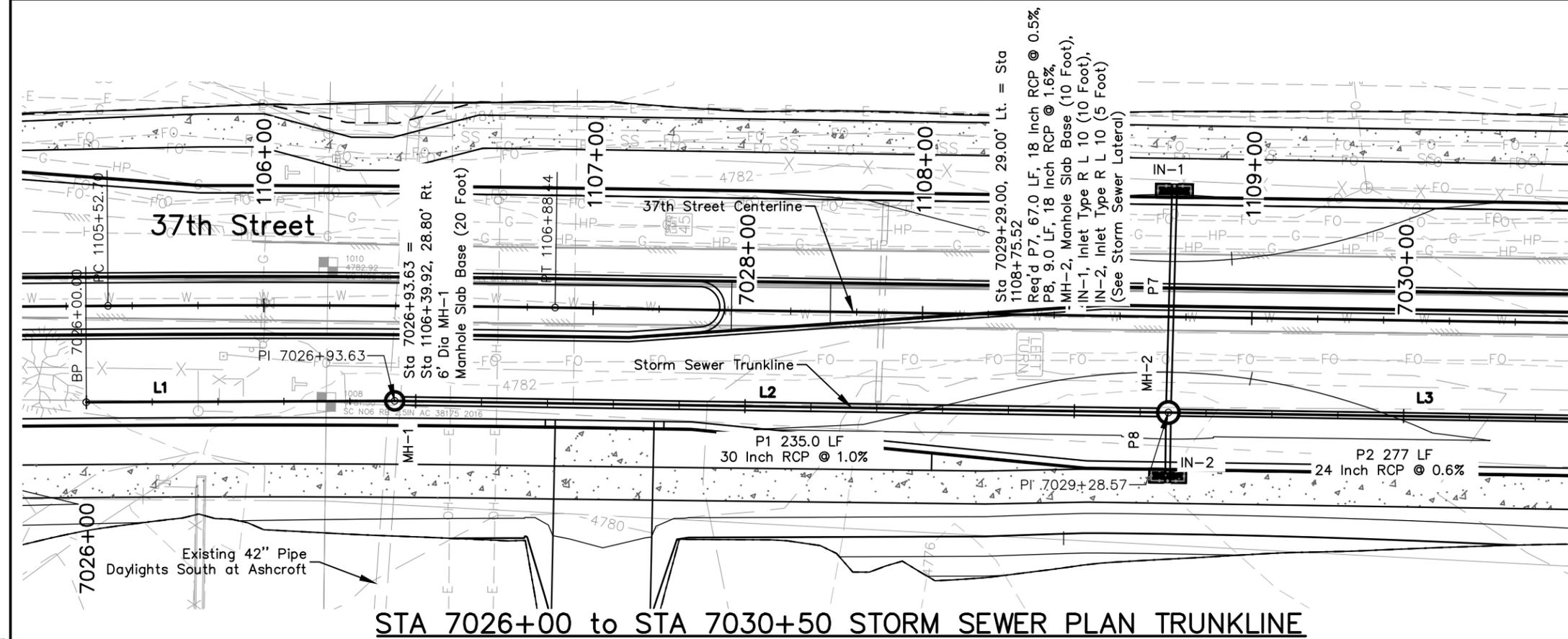


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Void:	

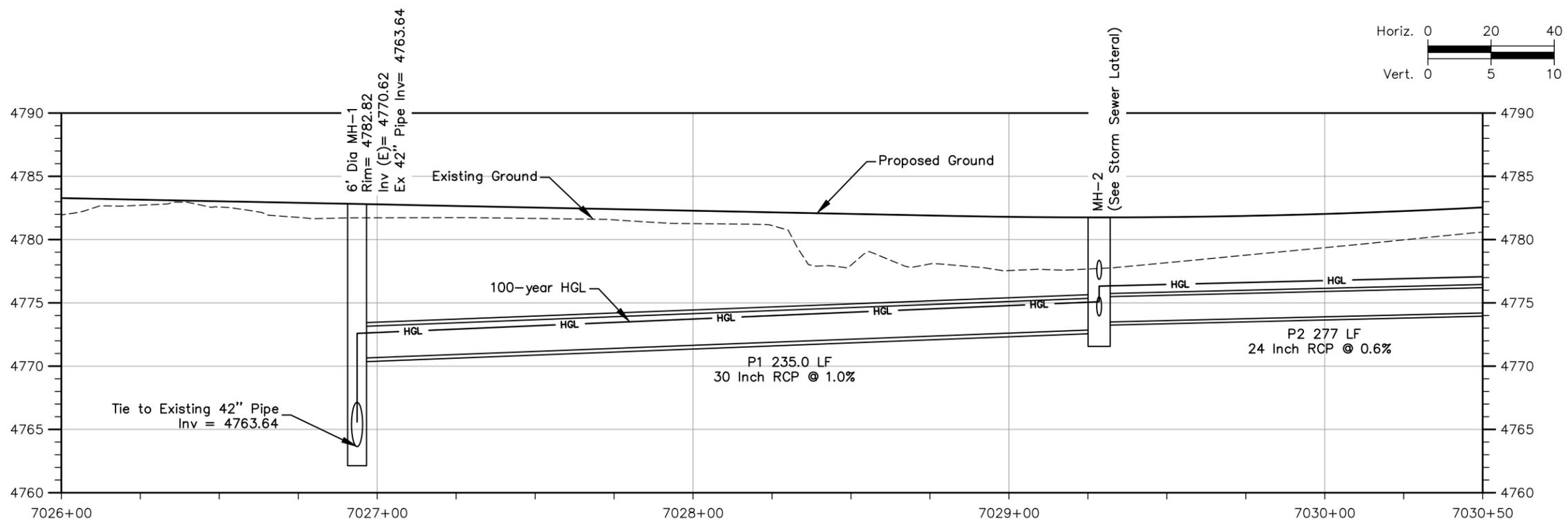
37TH STREET WIDENING PHASE 2A ROAD APPROACH 1114+32.36 RT.	
Designer:	T. Tuttle
Detailer:	J. Jensen
Sheet Subset:	APPROACH

Project No.	
37TH STREET 2A	
Drawing Number	RA-008
Sheet Number	46

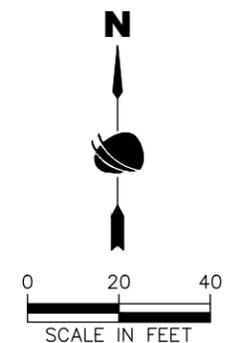
FOR CONSTRUCTION 2/24/2024



STA 7026+00 to STA 7030+50 STORM SEWER PLAN TRUNKLINE



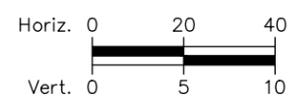
STA 7026+00 to STA 7030+50 STORM SEWER PROFILE TRUNKLINE



STORM SEWER TRUNKLINE

ALIGNMENT LINE TABLE		
Line No.	Start Northing	Start Easting
L1	1381750.58	3210649.21
L2	1381753.06	3210742.81
L3	1381754.74	3210977.74

ALIGNMENT LINE TABLE		
Line No.	Length	Direction
L1	93.63	N88° 28' 55"E
L2	234.94	N89° 35' 29"E
L3	277.00	N89° 34' 50"E



Plot Date: 2/12/2024 1:00 PM Plotted By: Sarah Heimle  
 C:\Q-PROJECTS\WASTE PROJECTS\33001\EVANS\37TH ST AND 47TH AVE PLAN\2024\COMPUTER DESIGN FILES\STRM P2A-001 STORM SEWER PLAN & PROFILE.DWG

Print Date: 2/12/2024  
 File Name: STRM P2A-001 STORM SEWER PLAN & PROFILE.DWG  
 Horiz. Scale: As Noted Vert. Scale: As Noted

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Sheet Revisions		
Date	Comments	Initials

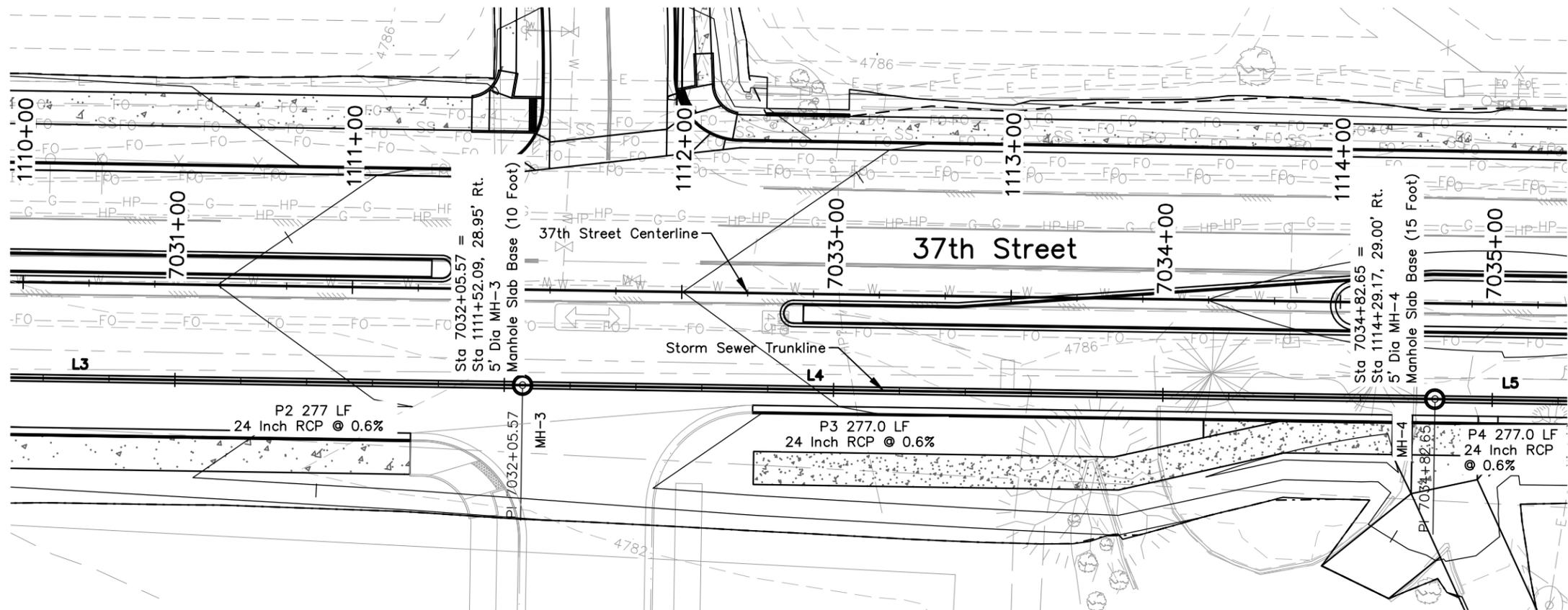
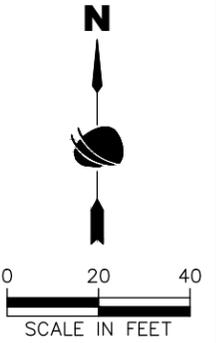
<b>As Constructed</b>
No Revisions:
Revised:
Void:

**37TH STREET WIDENING PHASE 2A  
 STORM SEWER PLAN & PROFILE  
 TRUNKLINE**

Designer: E. Schneider  
 Detailer: J. Jensen  
 Sheet Subset: STRM P&P

<b>Project No.</b>	37TH STREET 2A
Drawing Number	STRM-001
Sheet Number	

FOR CONSTRUCTION 2/24/2024

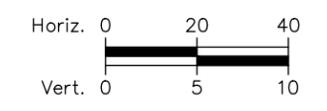
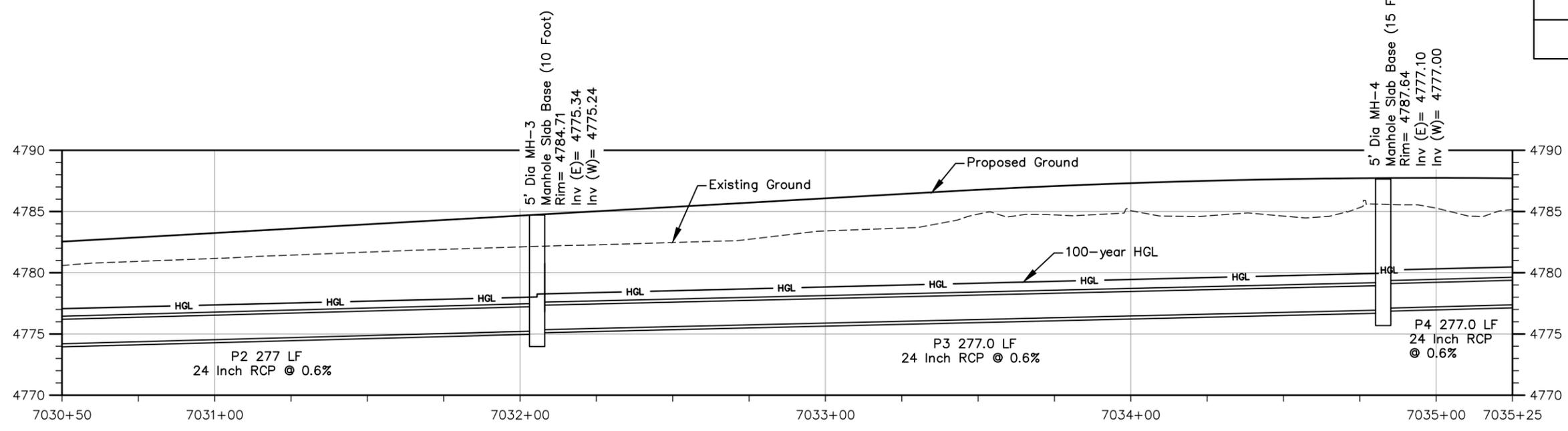


**STORM SEWER TRUNKLINE**

ALIGNMENT LINE TABLE		
Line No.	Start Northing	Start Easting
L3	1381754.74	3210977.74
L4	1381756.77	3211254.74
L5	1381758.69	3211531.80

ALIGNMENT LINE TABLE		
Line No.	Length	Direction
L3	277.00	N89° 34' 50"E
L4	277.07	N89° 36' 05"E
L5	277.07	N89° 36' 05"E

**STA 7030+50 to STA 7035+25 STORM SEWER PLAN TRUNKLINE**



**STA 7030+50 to STA 7035+25 STORM SEWER PROFILE TRUNKLINE**



Print Date: 2/12/2024  
 File Name: STRM P2A-001 STORM SEWER PLAN & PROFILE.DWG  
 Horiz. Scale: As Noted Vert. Scale: As Noted  
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Sheet Revisions		
Date	Comments	Initials



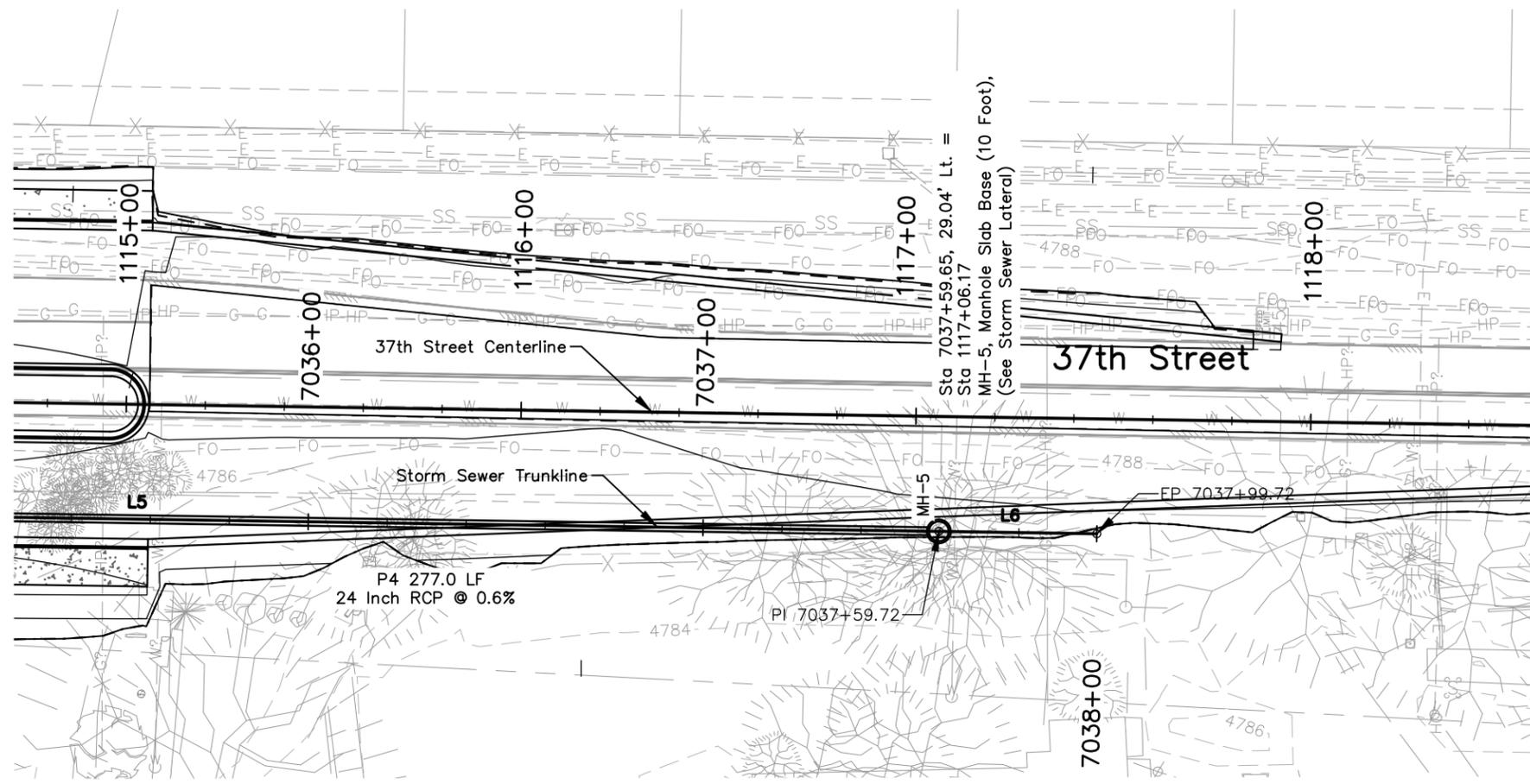
**As Constructed**  
 No Revisions:  
 Revised:  
 Void:

**37TH STREET WIDENING PHASE 2A STORM SEWER PLAN & PROFILE TRUNKLINE**  
 Designer: E. Schneider  
 Detailer: J. Jensen  
 Sheet Subset: STRM P&P  
 Structure Numbers  
 Subset Sheets: 2 of 6

**Project No.**  
 37TH STREET 2A  
 Drawing Number STRM-002  
 Sheet Number

Plot Date: 2/12/2024 1:00 PM Plotted By: Sarah Hemlin  
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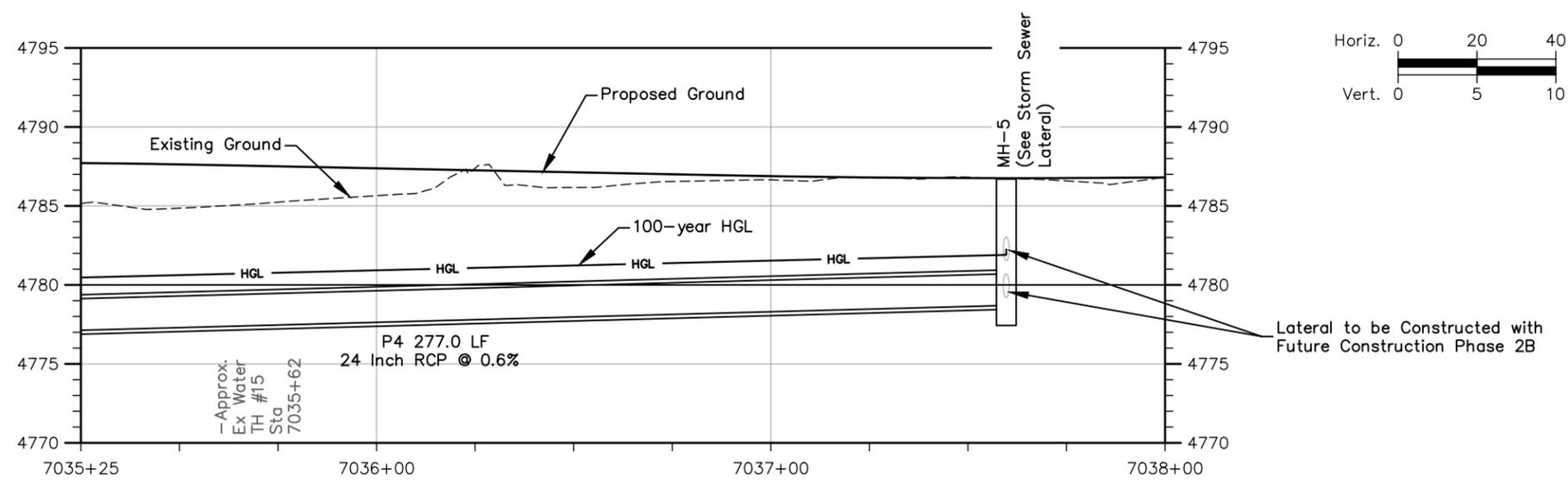


**STORM SEWER TRUNKLINE**

ALIGNMENT LINE TABLE		
Line No.	Start Northing	Start Easting
L5	1381758.69	3211531.80
L6	1381760.62	3211808.87

ALIGNMENT LINE TABLE		
Line No.	Length	Direction
L5	277.07	N89° 36' 05"E
L6	40.00	N89° 35' 40"E

**STA 7035+25 to STA 7038+00 STORM SEWER PLAN TRUNKLINE**



**STA 7035+25 to STA 7038+00 STORM SEWER PROFILE TRUNKLINE**



Plot Date: 2/12/2024 1:01 PM Plotted By: Sarah Hemler  
 C:\Q-PROJECTS\WASTE PROJECTS\33001\EVANS\37TH ST AND 47TH AVE PLAN\2024\COMPUTER DESIGN FILES\STRM P2A-001 STORM SEWER PLAN & PROFILE.DWG

Print Date: 2/12/2024  
 File Name: STRM P2A-001 STORM SEWER PLAN & PROFILE.DWG  
 Horiz. Scale: As Noted Vert. Scale: As Noted  

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Sheet Revisions		
Date	Comments	Initials

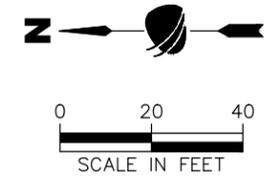
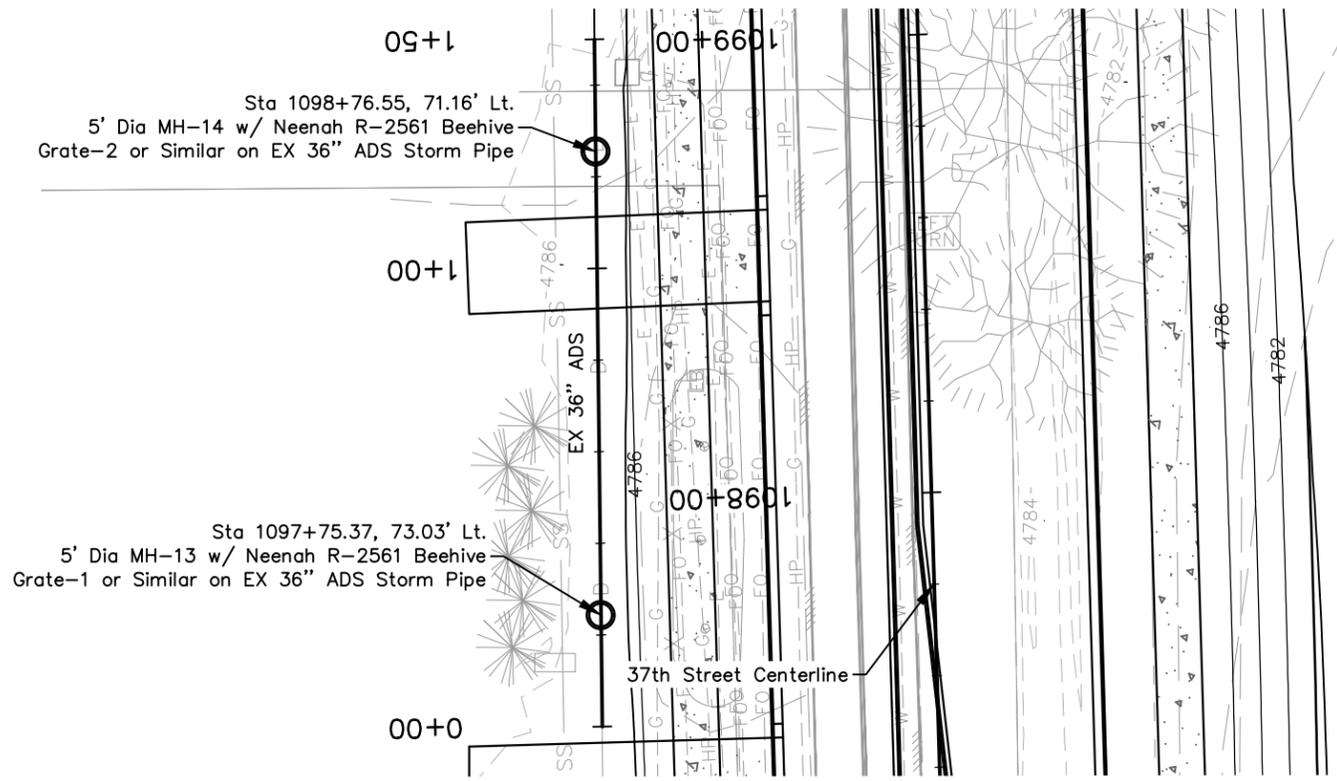


**As Constructed**  
 No Revisions:  
 Revised:  
 Void:

**37TH STREET WIDENING PHASE 2A  
 STORM SEWER PLAN & PROFILE  
 TRUNKLINE**  
 Designer: E. Schneider  
 Detailer: J. Jensen  
 Sheet Subset: STRM P&P  
 Structure Numbers  
 Subset Sheets: 3 of 6

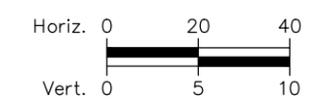
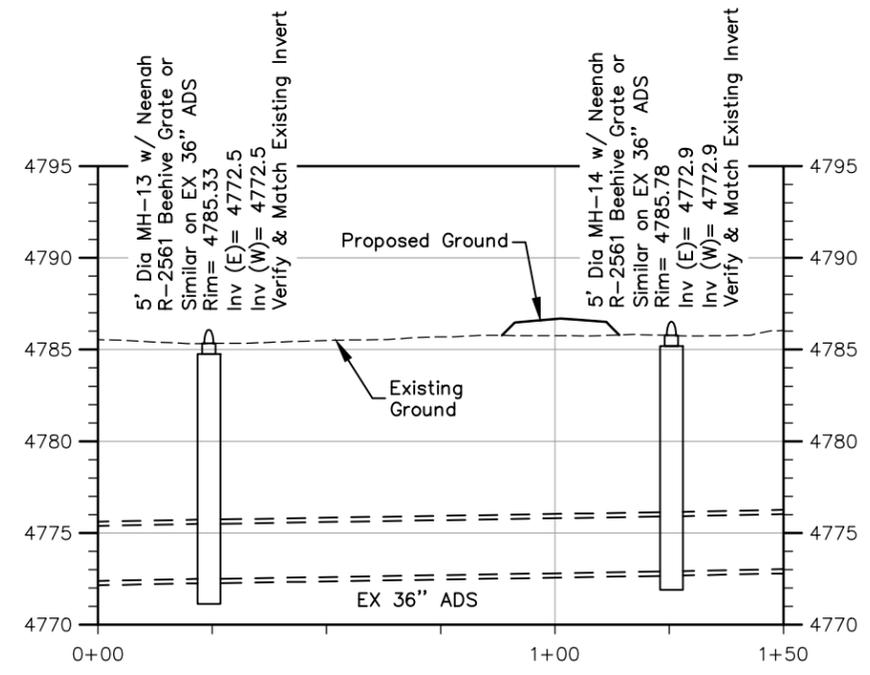
**Project No.**  
 37TH STREET 2A  
 Drawing Number STRM-003  
 Sheet Number

FOR CONSTRUCTION 2/24/2024



Notes:  
Re-grade area around the beehive grates so that the trapped water will drain to these inlets.  
Anchor beehive lids

**STA 1097+75.37 to 1098+76.55 LT STORM SEWER PLAN LATERAL**

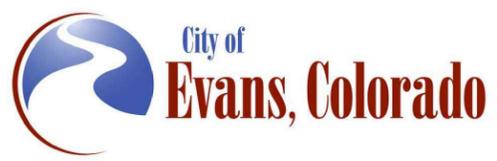


**STA 1097+75.37 to 1098+76.55 LT STORM SEWER PROFILE LATERAL**

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Print Date: 2/12/2024	
File Name: STRM P2A-004 STORM SEWER PLAN & PROFILE.LAT.DWG	
Horiz. Scale: As Noted	Vert. Scale: As Noted
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Sheet Revisions		
Date	Comments	Initials



<b>As Constructed</b>
No Revisions:
Revised:
Void:

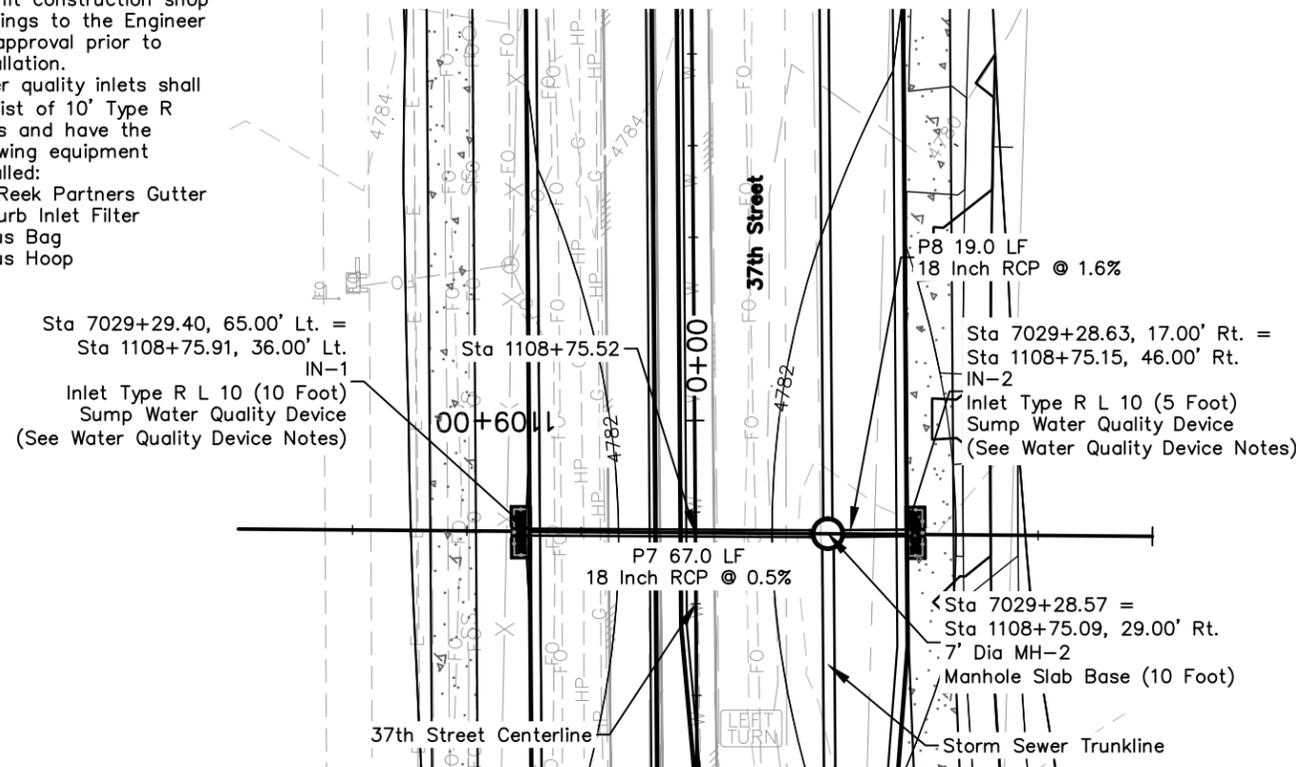
<b>37TH STREET WIDENING PHASE 2A STORM SEWER PLAN &amp; PROFILE LATERAL</b>	
Designer: E. Schneider	Structure Numbers
Detailer: J. Jensen	
Sheet Subset: STRM P&P	Subset Sheets: 4 of 6

<b>Project No.</b>
37TH STREET 2A
Drawing Number STRM-004
Sheet Number

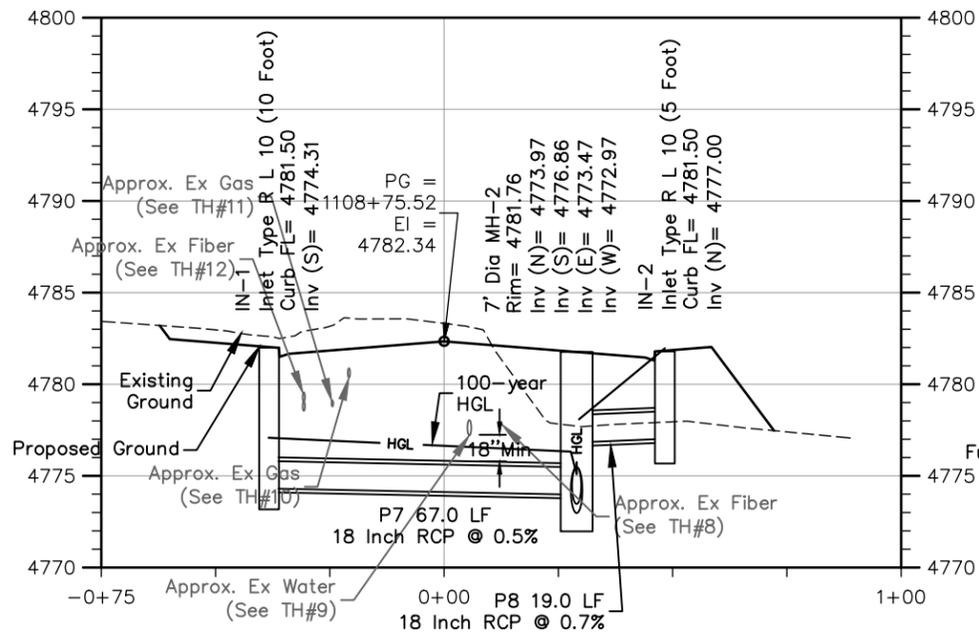
FOR CONSTRUCTION 2/24/2024

**WATER QUALITY DEVICE NOTES**

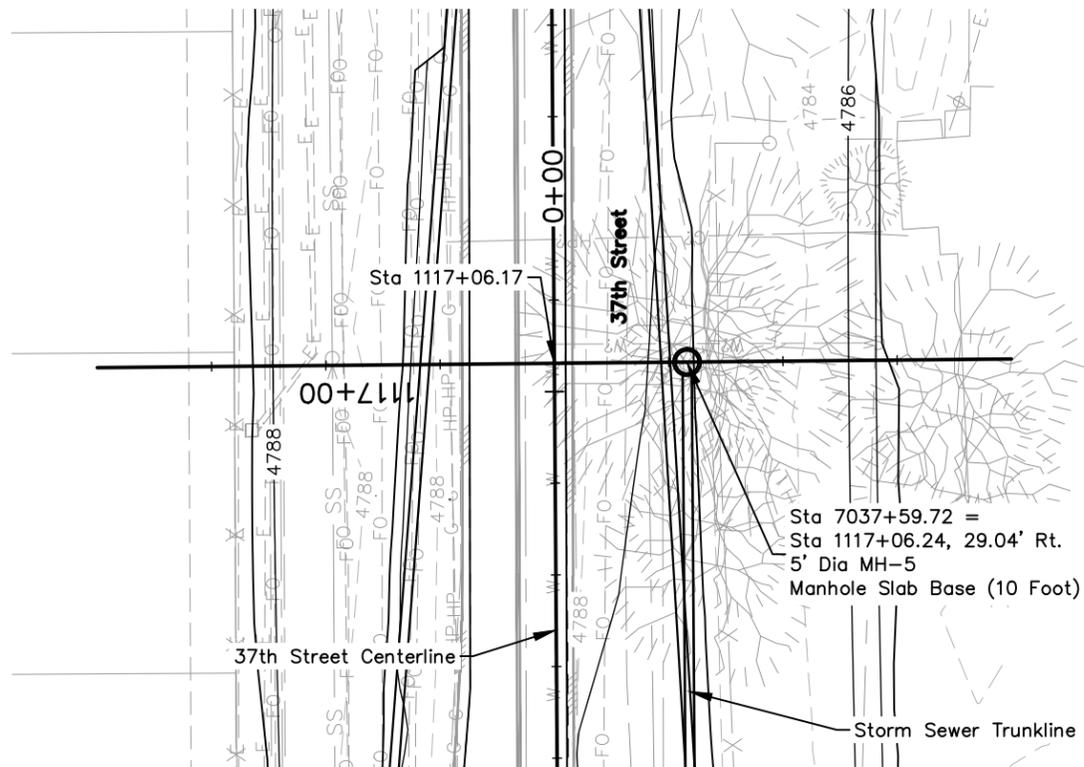
- The Contractor shall submit construction shop drawings to the Engineer for approval prior to installation.
- Water quality inlets shall consist of 10' Type R Inlets and have the following equipment installed:
  - Frog Reek Partners Gutter Bin Curb Inlet Filter
  - Mundus Bag
  - Mundus Hoop



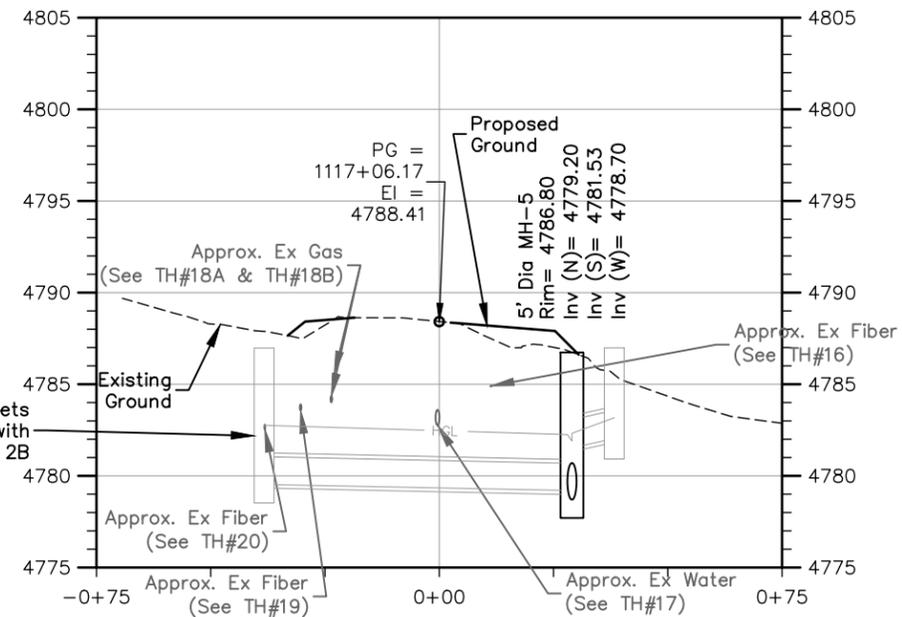
**STA 1108+75.52 STORM SEWER PLAN LATERAL**



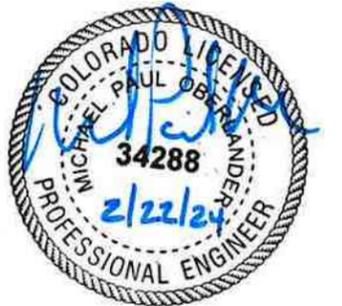
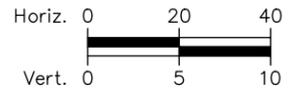
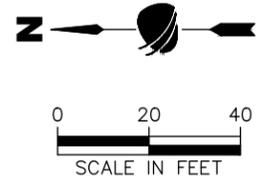
**STA 1108+75.52 STORM SEWER PROFILE LATERAL**



**STA 1117+06.17 STORM SEWER PLAN LATERAL**



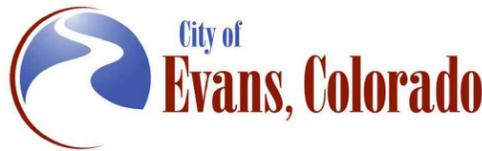
**STA 1117+06.17 STORM SEWER PROFILE LATERAL**



Print Date: 2/12/2024  
 File Name: STRM P2A-004 STORM SEWER PLAN & PROFILE\_LAT.DWG  
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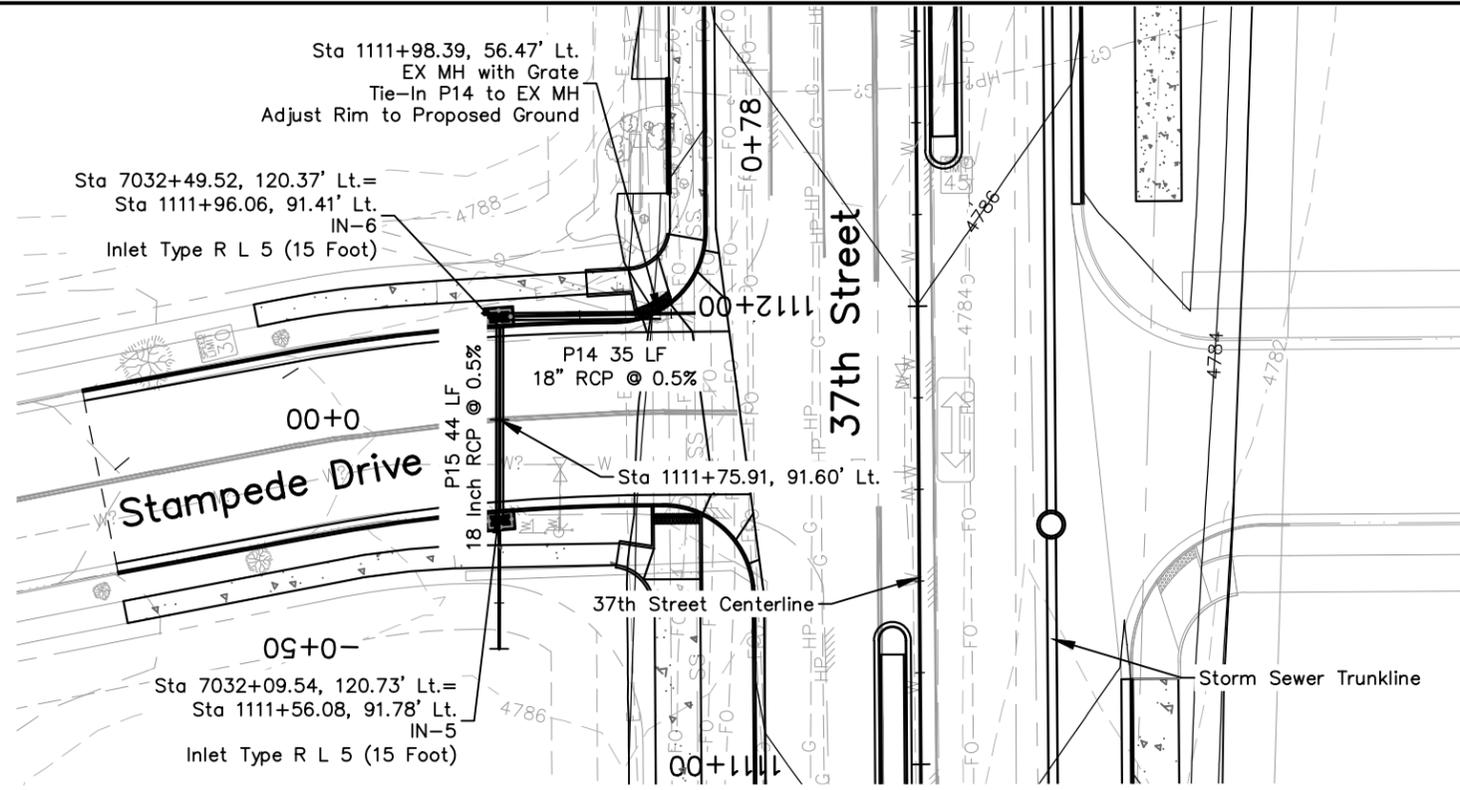
Sheet Revisions		
Date	Comments	Initials



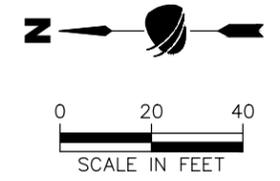
As Constructed No Revisions: Revised: Void:	<b>37TH STREET WIDENING PHASE 2A STORM SEWER PLAN &amp; PROFILE LATERAL</b>		Project No. 37TH STREET 2A
	Designer: E. Schneider	Structure Numbers	Drawing Number STRM-005
	Detailer: J. Jensen	Sheet Subset: STRM P&P	Subset Sheets: 5 of 6
Sheet Number			

FOR CONSTRUCTION 2/24/2024

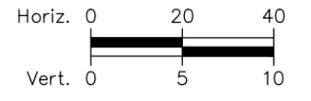
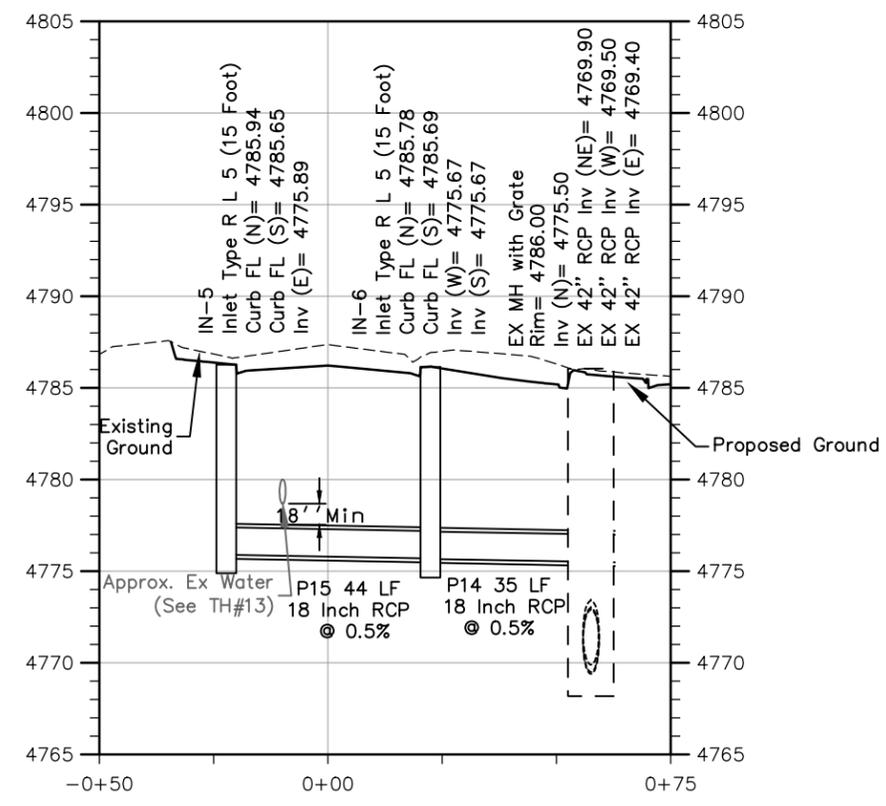
Plotted By: Sarah Heimle  
 Date: 2/12/2024 1:04 PM  
 File: C:\PROJECTS\WATER PROJECTS\37TH ST AND 47TH AVE PLAN\2024\COMPUTER DESIGN FILES\STRM P2A-004 STORM SEWER PLAN & PROFILE\_LAT.DWG



**STA 1111+76.03 LT STORM SEWER PLAN LATERAL**



Note:  
 Replace EX MH grate with solid lid. Swivel EX MH barrel top to avoid being in front of the ADA Ramp. All incidental to the adjust manhole work.



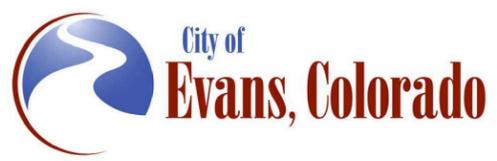
**STA 1111+76.03 LT STORM SEWER PROFILE LATERAL**



Plot Date: 2/12/2024 1:13 PM Plotted By: Sarah Hemler  
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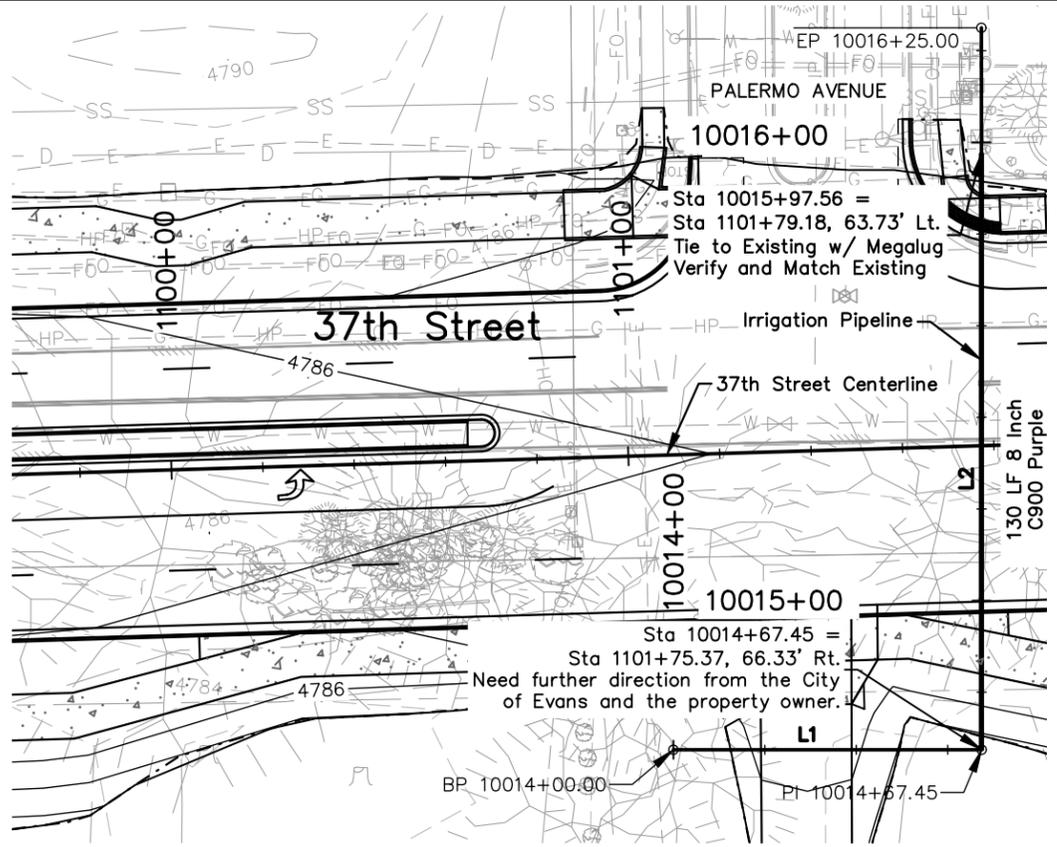
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Sheet Revisions		
Date	Comments	Initials



As Constructed	37TH STREET WIDENING PHASE 2A STORM SEWER PLAN & PROFILE LATERAL		Project No.
	No Revisions:		37TH STREET 2A
	Revised:	Designer: E. Schneider Detailer: J. Jensen	Drawing Number STRM-006
Void:	Sheet Subset: STRM P&P	Structure Numbers	Sheet Number
		Subset Sheets: 6 of 6	

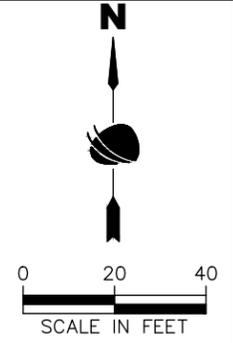
FOR CONSTRUCTION 2/24/2024



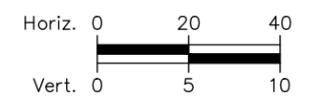
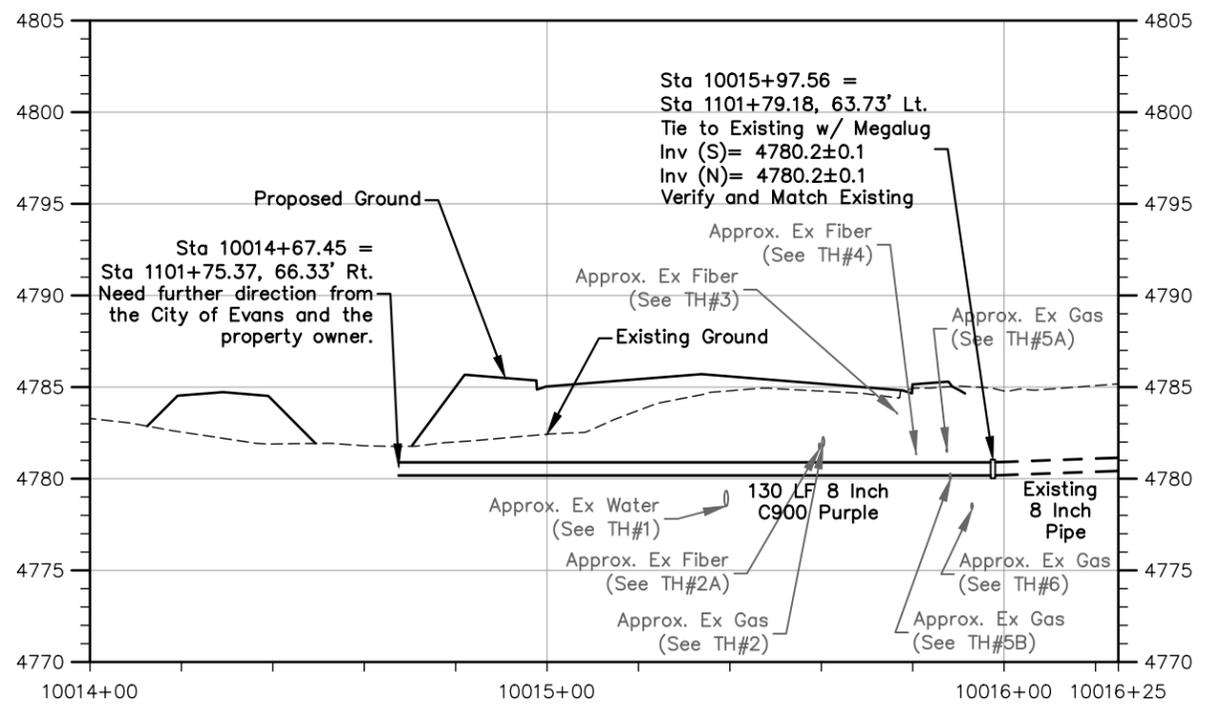
**IRRIGATION PIPELINE**

ALIGNMENT LINE TABLE				
Line No.	Length	Direction	Start Northing	Start Easting
L1	67.45	N90° 00' 00"E	1381702.38	3210212.54
L2	157.55	N0° 01' 43"W	1381702.38	3210279.99

ALIGNMENT END				
Line No.	Length	Direction	End Northing	End Easting
L2	157.55	N0° 01' 43"W	1381859.93	3210279.91



**STA 10014+00 to STA 10016+25 IRRIGATION PLAN**



**STA 10014+00 to STA 10016+25 IRRIGATION PROFILE**

**Notes**

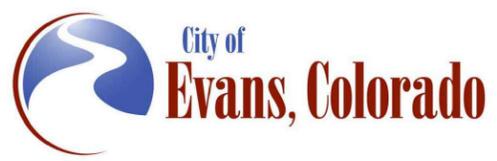
1. Future construction west of Sta 10014+67.45 = Sta 1101+75.37, 66.33' Rt. to be constructed by others and must verify irrigation layout with irrigation owner.
2. Irrigation design is conceptual and needs further discussions with the City of Evans and irrigation owner.



Know what's below.  
Call before you dig.

Print Date: 2/6/2024	
File Name: IRR P2A-001 IRRIGATION PLAN & PROFILE.DWG	
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Sheet Revisions		
Date	Comments	Initials



<b>As Constructed</b>
No Revisions:
Revised:
Void:

<b>37TH STREET WIDENING PHASE 2A IRRIGATION PLAN &amp; PROFILE TRUNKLINE</b>	
Designer: T. Tuttle	Structure Numbers
Detailer: J. Jensen	
Sheet Subset: IRR P&P	Subset Sheets: 1 of 1

<b>Project No.</b>
37TH STREET 2A
Drawing Number IRR-001
Sheet Number 53

Plot Date: 2/6/2024 7:50 AM Plotted By: Sarah Hemler  
 C:\Q-PROJECTS\2024\PROJECTS\30301\EVANS\37TH ST AND 47TH AVE PLAN\2024\COMPUTER DESIGN FILES\2 - PHASE 2A\IRRIGATION PLAN & PROFILE.DWG

FOR CONSTRUCTION 2/24/2024

**TABULATION OF WATER ITEMS**

STATION	SIDE	619-50640	619-75064	623-07006	REMARKS
		8 INCH PVC C900 DR18	8 INCH GATE VALVE	3/4 INCH WATER METER	
		LF	EACH	EACH	
1092+00.00	Lt. & Rt.	69	1		Includes work for installation and incidental items
1097+91.00	Lt.			1	Includes work for 3/4 Inch Copper Pipe and Removal of Existing Meter
1099+21.00	Lt.			1	Includes work for 3/4 Inch Copper Pipe and Removal of Existing Meter
1100+89.00	Rt.			1	Includes work for 3/4 Inch Copper Pipe and Removal of Existing Meter
1101+48.00	Lt. & Rt.	69	1		Includes work for installation and incidental items
1111+64.00	Lt. & Rt.	61	1		Includes work for installation and incidental items
1115+18.00	Rt.			1	Includes work for 3/4 Inch Copper Pipe and Connection to 1" Existing Service
<b>TOTAL</b>		199	3	4	

Note: For removal of valve, reset valve, reset of fire hydrant, and adjust manhole, see Tabulation of Removals, Resets, and Adjustments.

WATER LINE NOTES

1. WATER LINE DIMENSIONS ARE CALCULATED TO THE CENTER OF FITTINGS.
2. THE SIZE, TYPE AND LOCATION OF ALL KNOWN UNDERGROUND UTILITIES ARE APPROXIMATE WHEN SHOWN ON THESE DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE OF ALL UNDERGROUND UTILITIES BEFORE COMMENCING NEW CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL BE RESPONSIBLE FOR ALL UNKNOWN UNDERGROUND UTILITIES.
3. WATERLINE, FITTINGS, AND JOINT RESTRAINT TO BE CONSTRUCTED PER CITY OF EVANS STANDARD SPECIFICATIONS.
4. ALL WATERLINES SHALL BE CONSTRUCTED OF C900 PVC (DR-18).
5. ALL 6" WATERLINES SERVICING FIRE HYDRANTS SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE WITH MECHANICAL JOINTS OR C900 PVC (DR-18).
6. MECHANICAL JOINT RESTRAINT DEVICES FOR PVC PIPE SHALL BE EITHER MEGALUG 2000 PV SERIES OR APPROVED EQUAL AND SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
7. ALL PIPE SHALL BE INSTALLED WITH A MINIMUM OF FOUR (4) FEET SIX (6) INCHES OF COVER FROM FINISHED GRADE OF STREET TO THE TOP OF THE PIPE BARREL. 2" BLUEBOARD INSULATION SHALL BE PLACED DIRECTLY ABOVE THE PIPE IF LESS THAN FOUR (4) FEET SIX (6) INCHES OF COVER. BLUEBOARD INSULATION IS INCIDENTAL TO THE PROJECT.
8. FITTINGS, TEES, THRUST BLOCKS AND MEGALUGS ARE INCIDENTAL TO THE WATER MAIN.
9. TRACING WIRE, WATER MAIN CP TEST STATIONS, AND CATHODIC PROTECTION SHALL BE INCIDENTAL TO THE WATER MAIN. TRACER WIRE SHALL BE INSTALLED ON ALL PVC WATERLINES.



Plot Date: 2/19/2024 4:17 PM Plotted By: Sarah Henkle  
 P:\PROJECTS\WATER PROJECTS\37001\EVANS\37TH ST AND 47TH AVE PLAN\2024\COMPUTER DESIGN FILES\2 - PHASE 2A\WTR\_P2A-001\_TAB AND NOTES.DWG

Print Date: 2/19/2024  
 File Name: WTR P2A-001 TAB AND NOTES.DWG  
 Horiz. Scale: N/A Vert. Scale: N/A

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Sheet Revisions		
Date	Comments	Initials

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No Revisions:
Revised:
Void:

<b>37TH STREET WIDENING PHASE 2A WATERLINE TAB AND NOTES</b>		
Designer: R. Parks	Structure Numbers	
Detailer: R. Parks		
Sheet Subset: WATER LINE	Subset Sheets: 1 of 1	

<b>Project No.</b>
37TH STREET 2A
Drawing Number WTR-001
Sheet Number 54

FOR CONSTRUCTION 2/24/2024

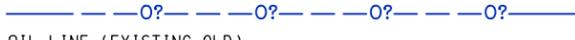
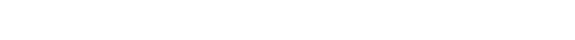
PROJECT LIST OF UTILITY CONTACTS

NO.	COMPANY	ABBREVIATION	UTILITY TYPE	CONTACT NAME	EMAIL	PHONE
1	Atmos Energy	ATMOS	Gas	Jerry Adams	jerry.adams@atmosenergy.com	970-304-2075
2	CenturyLink	CTL	Fiber Optic	Gary Crispe	gcrispe@terratechllc.net	303-995-1456
3	City of Evans	City of Evans	Water and Sewer	Leon Blasco	lblasco@evanscolorado.gov	970-371-9089
4	Comcast	COMCAST	Fiber Optic	John Hamburg	john_hamburg@comcast.com	970-567-4797
5	DCP Midstream	DCP	Gas	Ivan Ansel	iansel@dcpmidstream.cpm	970-539-1806
6	Level 3 Communications	Level 3	Fiber Optic	Thomas Longan	thomas.longan@centurylink.com	720-878-6311
7	XCEL Energy Distribution	XCEL	Overhead and Underground Electric	Shayla Montano	shayla.a.montano@xcelenergy.com	970-381-9734
8	XCEL Energy Transmission	XCEL	Overhead and Underground Electric	William Braasch	william.braasch@xcelenergy.com	303-571-7082
9	Zayo	ZAYO	Fiber Optic	Tony Belford	tony@sctrl.com	801-364-1063

UTILITY GENERAL NOTES

- UTILITIES ARE DEPICTED ON THESE PLANS IN ACCORDANCE WITH THEIR ACHIEVED "QUALITY LEVELS" AS DEFINED IN THE AMERICAN SOCIETY OF CIVIL ENGINEERS' DOCUMENT ASCE 38, "STANDARD GUIDELINE FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA." LOCATION OF EXISTING UTILITIES IS DEPICTED ACCORDING TO THE BEST AVAILABLE INFORMATION AND REPRESENT CONDITIONS AT THE TIME OF DATA COLLECTION. THESE PLANS DO NOT RELIEVE THE CONTRACTOR FROM FOLLOWING ALL APPLICABLE UTILITY DAMAGE PREVENTION STATUTES AND PROCEDURES DURING EXCAVATION. PRIOR TO CONSTRUCTION, CONTRACTOR VERIFICATION OF LOCATION AND DEPTHS OF UTILITIES FOR DAMAGE PREVENTION SHALL BE BORNE BY THE CONTRACTOR AND SHALL BE COMPLETED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT ALL UTILITIES TO COORDINATE SCHEDULING. SHOULD ANY CONFLICTS, RECONSTRUCTION, OR INTERRUPTIONS IN SERVICE BE REQUIRED, THE CONTRACTOR SHALL COORDINATE UTILITY SCHEDULING.
- THE CONTRACTOR SHALL CORRECTLY SHOW ON SUBMITTED DRAWINGS THE LOCATIONS OF ALL UTILITIES IN THE VICINITY WHERE THE CONTRACTOR MAY BORE, TRENCH, EXCAVATE, AND INSTALL CONDUIT, FIBER, FIBER ENCLOSURES, VAULTS, AND HANDHOLDS. IN THE EVENT THAT THE CONDUIT RUN, FIBER ENCLOSURES, VAULTS, OR HANDHOLDS ARE LOCATED WITHIN THE VICINITY OF ANY UTILITY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION THAT WILL PREVENT DAMAGE TO THE INSTALLATION UNDER NORMAL UTILITY OPERATING CONDITIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN INFORMATION ON EACH OF THE UTILITIES AS APPLICABLE SUCH AS GAS PRESSURE, STEAM, AND WATER PRESSURES, TEMPERATURES, ETC.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXAMINE THE SITE FOR EVIDENCE OF FAILURES OF OR DEFICIENCIES IN UTILITY COMPANY FACILITIES (I.E. XCEL, CENTURYLINK, ETC) AND TO IMMEDIATELY CALL ANY SUCH EVIDENCE OF PRE-EXISTING DAMAGE TO THE ATTENTION OF THE UTILITY COMPANY ALONG WITH PROPER DOCUMENTATION. THE CONTRACTOR HEREBY AGREES THAT THE REPAIR OF ANY AND ALL DAMAGES (DIRECT AND INDIRECT), THAT MAY BE SUBSEQUENTLY DISCOVERED AND PROVEN TO HAVE BEEN CAUSED BY THE CONSTRUCTION ACTIVITIES, IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR WITHOUT SUCH EVIDENCE OF PRE-EXISTING DAMAGE. THE CONTRACTOR HEREBY AGREES THAT ANY AND ALL DAMAGES (DIRECT OR INDIRECT) TO UTILITY COMPANY FACILITIES, WHICH ANY BE SUBSEQUENTLY DISCOVERED WITHIN THOSE AREAS WHERE CONSTRUCTION OCCURRED WITHIN SIX FEET OF UTILITY COMPANY FACILITIES (DIRECT OR INDIRECT), AND WITHIN A PERIOD OF THREE YEARS FROM THE DATE OF CONSTRUCTION, WERE CAUSED BY THE CONSTRUCTION ACTIVITIES. FURTHERMORE, THE REPAIR IS AGREED TO BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ALL UTILITY COMPANY FACILITIES WITHIN THE AREA OF CONSTRUCTION. THIS INCLUDES ALL STEPS NECESSARY TO PREVENT SUBSIDENCE OF THE SOIL ADJACENT TO OR NEAR UTILITY COMPANY FACILITIES.
- IT IS THE CONTRACTORS RESPONSIBILITY TO MAINTAIN ANY TEMPORARY ROADWAY PATCHES THAT MAY OCCUR IN ORDER TO REOPEN A ROADWAY WHILE CONSTRUCTION ACTIVITY PROGRESSES, UNTIL SUCH TIME A PERMANENT PATCH CAN BE INSTALLED.
- DURING CONSTRUCTION WHENEVER ANY PIPELINE IS LEFT UNATTENDED, TEMPORARY PLUGS SHALL BE INSTALLED AT ALL OPENINGS. TEMPORARY PLUGS SHALL BE WATERTIGHT, AND OF SUCH DESIGN AS TO PREVENT CHILDREN AND ANIMALS FROM ENTERING THE PIPE.
- THE CONTRACTOR SHALL NOTIFY ALL RESIDENTS IN WRITING PRIOR TO ANY DISTURBANCE IN SERVICE. THE NOTICES MUST HAVE THE CONTRACTORS PHONE NUMBER, THE NAME OF A CONTACT PERSON, AND AN EMERGENCY PHONE NUMBER FOR AFTER HOURS CALLS. NOTICES SHALL BE LEFT IN MAILBOXES UNLESS PROPERLY SENT THROUGH THE U.S. POST OFFICE.
- COMPACTION OF ALL UTILITY TRENCHES INCLUDING DRY UTILITIES SHALL BE PERFORMED TO 95% DENSITY OF THE STANDARD PROCTOR +/-2%.
- ALL POTABLE WATER, NON-POTABLE WATER, AND SANITARY SEWER SERVICES SHALL HAVE THEIR APPROXIMATE LOCATIONS STAMPED IN THE CONCRETE CURB AND GUTTER WITH THE INITIALS "W", "NP", AND "S" RESPECTIVELY. ADDITIONAL STAMPS FOR GAS "G" AND ELECTRIC "E" MAY ALSO BE NECESSARY AND ARE AT THE DISCRETION OF THE CONTRACTOR TO PERFORM.

UTILITY LEGEND

EXISTING	PROPOSED
 <p>OIL LINE (EXISTING QLB)</p>  <p>OIL LINE (EXISTING QLD)</p>  <p>GAS LINE LOW PRESSURE (EXISTING QLB)</p>  <p>GAS LINE LOW PRESSURE (EXISTING QLD)</p>  <p>GAS LINE HIGH PRESSURE (EXISTING QLB)</p>  <p>GAS LINE HIGH PRESSURE (EXISTING QLD)</p>  <p>NON-POTABLE WATER LINE (EXISTING QLD)</p>  <p>WATER LINE (EXISTING QLB)</p>  <p>WATER LINE (EXISTING QLD)</p>  <p>STORM SEWER PIPE (EXISTING QLD)</p>  <p>SANITARY SEWER PIPE (EXISTING QLB)</p>  <p>SANITARY SEWER (EXISTING QLD)</p>  <p>IRRIGATION LINE (EXISTING QLD)</p>  <p>FIBER OPTICS UNDERGROUND CABLE (EXISTING QLB)</p>  <p>FIBER OPTICS UNDERGROUND CABLE (EXISTING QLD)</p>	 <p>ELECTRICAL UNDERGROUND LINE (EXISTING QLB)</p>  <p>ELECTRICAL UNDERGROUND LINE (EXISTING QLD)</p>  <p>ELECTRICAL OVERHEAD LINE (EXISTING QLB)</p>  <p>ELECTRICAL OVERHEAD LINE (EXISTING QLD)</p>  <p>TEST HOLE LOCATION (QLA)</p>  <p>SANITARY SEWER MANHOLE</p>  <p>ELECTRICAL BOX</p>  <p>POWER POLE</p>  <p>GUY WIRE</p>  <p>ELECTRICAL MANHOLE</p>  <p>ELECTRICAL VAULT OR TRANSFORMER</p>  <p>FIRE HYDRANT</p>  <p>WATER METER</p>  <p>WATER VALVE</p>  <p>WATER MANHOLE</p>  <p>FIBER OPTIC PULLBOX</p>  <p>FIBER OPTIC MANHOLE</p>  <p>FIBER OPTIC PEDESTAL</p>  <p>FIBER OPTIC MARKER</p>  <p>GAS MARKER</p>  <p>OIL MARKER</p>  <p>IRRIGATION VALVE BOX</p>

QLA = QUALITY LEVEL A  
 QLB = QUALITY LEVEL B  
 QLD = QUALITY LEVEL D



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 File Name: UTGN P2A-001 UTILITY GENERAL NOTES.DWG  
 Horiz. Scale: N/A Vert. Scale: N/A



Sheet Revisions		
Date:	Comments	Init.



As Constructed	37TH STREET WIDENING PHASE 2A UTILITY GENERAL NOTES		Project No.
No Revisions:			37TH STREET
Revised:	Designer: R. Parks	Structure Numbers	Drawing Number UTGN-001
Void:	Detailer: R. Parks		Sheet Number 55
Sheet Subset: UTIL GEN		Subset Sheets: 1 of 2	

TEST HOLE TABLE (QUALITY LEVEL A)

POTHOLE NUMBER	UTILITY TYPE	UTILITY OWNER	UTILITY SIZE	UTILITY MATERIAL	SURFACE ELEVATION	DEPTH TO TOP OF UTILITY (IN.)	DEPTH TO TOP OF UTILITY (FT.)	UTILITY TOP OF PIPE (TOP) ELEV.	NOTES
101	HP GAS	ATMOS	6-INCH	BLACK STEEL	4780.9	36	3.00	4777.9	
102	FIBER OPTIC	LEVEL 3	2-INCH	ORANGE POLY	4780.6	53	4.42	4776.2	
103	FIBER OPTIC	CENTURYLINK	-	-	4780.7	61	5.08	4775.6	
104	ELECTRIC	XCEL	-	-	4780.7	50	4.17	4776.5	
105	HP GAS	ATMOS	6-INCH	BLACK STEEL	4785.0	35	2.92	4782.1	
106	FIBER OPTIC	LEVEL 3	2-INCH	ORANGE POLY	4784.9	60	5.00	4779.9	
1	WATER	CITY OF EVANS	10-INCH	STEEL	4784.7	65	5.42	4779.3	
2	GAS	ATMOS	6-INCH	STEEL	4784.8	30	2.50	4782.3	
2A	FIBER OPTIC	CENTURYLINK	4-INCH	PVC	4784.8	34	2.83	4782.0	
3	FIBER OPTIC	CENTURYLINK	1/4-INCH	PVC	4784.7	10	0.83	4783.9	
4	FIBER OPTIC	CENTURYLINK	1/4-INCH	PVC (BLACK)	4784.8	43	3.58	4781.2	
5A	FIBER OPTIC	CENTURYLINK	2-INCH	PVC	4785.0	40.5	3.38	4781.6	
5B	GAS	ATMOS	4-INCH	STEEL	4785.0	56.75	4.73	4780.3	
6	GAS	DCP	4-INCH	STEEL	4785.0	76	6.33	4778.7	
7	ELECTRIC	XCEL	6-INCH	PVC	4784.8	45	3.75	4781.1	
107	HP GAS	ATMOS	6-INCH	BLACK STEEL	4783.8	36	3.00	4780.8	
108	FIBER OPTIC	CENTURYLINK	-	-	4783.5	61	5.08	4778.4	
109	FIBER OPTIC	CENTURYLINK	-	-	4783.5	-	-	-	Did Not Find
8	FIBER OPTIC	CENTURYLINK	1/4-INCH	PVC	4781.0	42	3.50	4777.5	
9	WATER	CITY OF EVANS	10-INCH	STEEL	4783.0	61	5.08	4777.9	
10	GAS	ATMOS	6-INCH	STEEL	4783.3	33	2.75	4780.6	
11	GAS	ATMOS	4-INCH	STEEL	4783.0	49	4.08	4778.9	
12	FIBER OPTIC	CENTURYLINK	2 X 6-INCH	PVC	4782.3	40	3.33	4779.0	
13	WATER	CITY OF EVANS	16-INCH	STEEL	4786.7	84	7.00	4779.7	
110	HP GAS	ATMOS	6-INCH	BLACK STEEL	4786.0	36	3.00	4783.0	
111	HP GAS	ATMOS	4-INCH	RED STEEL	4785.9	48	4.00	4781.9	
112	FIBER OPTIC	CENTURYLINK	2 x 4-INCH	BLACK POLY	4785.4	49	4.08	4781.3	
113	FIBER OPTIC	LEVEL 3	2-INCH	ORANGE POLY	4786.3	93	7.75	4778.6	
114	FIBER OPTIC		2-INCH	ORANGE POLY	4786.5	58	4.83	4781.7	
115	HP GAS	ATMOS	6-INCH	BLACK STEEL	4788.2	40	3.33	4784.8	
116	HP GAS	ATMOS	4-INCH	RED STEEL	4788.2	52	4.33	4783.9	
117	FIBER OPTIC	CENTURYLINK	2 x 6-INCH	WHITE PVC	4787.8	39	3.25	4784.6	Stacked
118A	FIBER OPTIC	LEVEL 3	2-INCH	ORANGE POLY	4787.7	49	4.08	4783.6	
118B	FIBER OPTIC	CENTURYLINK	1-INCH	BLACK POLY	4787.7	59	4.92	4782.7	
119	FIBER OPTIC	ZAYO	2 x 2-INCH	ORANGE POLY & BLUE POLY	4788.2	67	5.58	4782.6	Side by Side
14	GAS	ATMOS	-	-	-	-	-	-	Did Not Locate - Abandoned
15	WATER	CITY OF EVANS	-	-	4784.7	-	-	-	Did Not Locate
16	FIBER OPTIC	CENTURYLINK	1/4-INCH	PVC	4787.2	31	2.58	4784.6	
17	WATER	CITY OF EVANS	10-INCH	STEEL	4788.1	58	4.83	4783.3	
18A	GAS	ATMOS	6-INCH	STEEL	4788.3	35.5	2.96	4785.3	
18B	GAS	ATMOS	4-INCH	STEEL	4788.3	50	4.17	4784.1	
19	FIBER OPTIC	LEVEL 3	2 X 4-INCH	PVC	4787.3	43.5	3.63	4783.7	
20	FIBER OPTIC	ZAYO	2-INCH & 1/2-INCH	PVC	4787.7	61	5.08	4782.6	

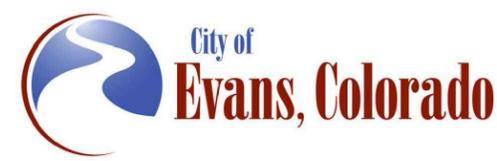


- Notes:  
 1. Testholes 1-20 performed on March 1, 2, 3, 4, 7, 2022.  
 2. Testholes 101-119 performed on September 19, 20, 21, 22, 2023.



Print Date: 2/19/2024  
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 Horiz. Scale: N/A Vert. Scale: N/A  
  
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 Thornton, CO 80241  
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 Fax: (303) 962-9350

Sheet Revisions		
Date:	Comments	Init.



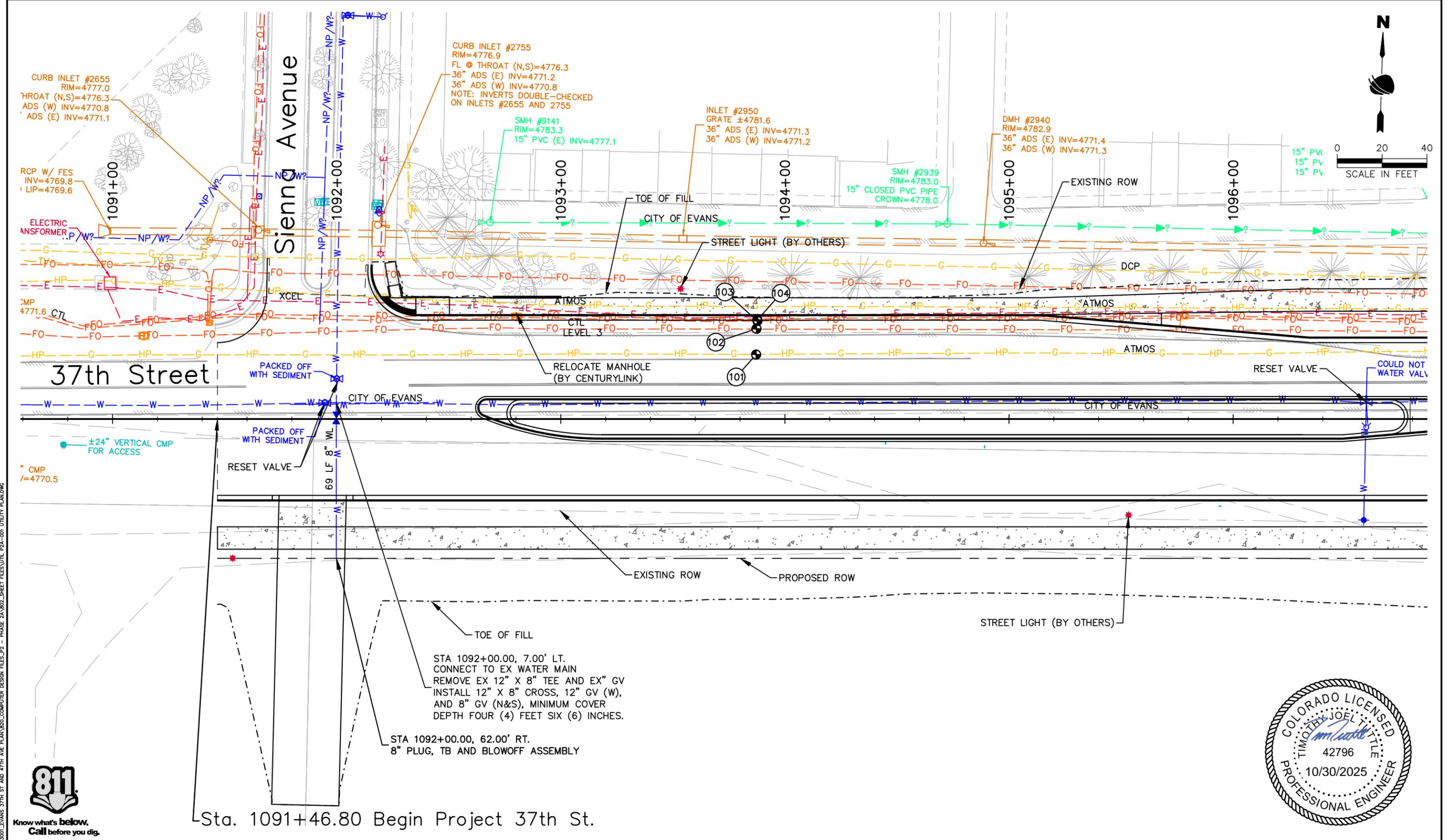
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Revised:
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37TH STREET WIDENING PHASE 2A TEST HOLE TABLE	
Designer: R. Parks	Structure Numbers
Detailer: R. Parks	
Sheet Subset: UTIL GEN	Subset Sheets: 2 of 2

Project No.
37TH STREET
Drawing Number UTGN-002
Sheet Number 56

Plot Date: 2/19/2024 2:58 PM Plotted By: Sarah Hemler  
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Sta. 1091+46.80 Begin Project 37th St.



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 File Name: UTIL P2A-001 UTILITY PLAN.DWG  
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 Revised:  
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**37TH STREET WIDENING PHASE 2A  
 UTILITY PLANS**

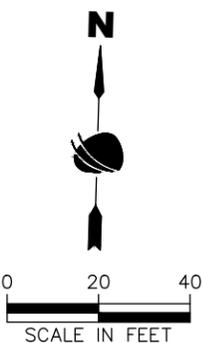
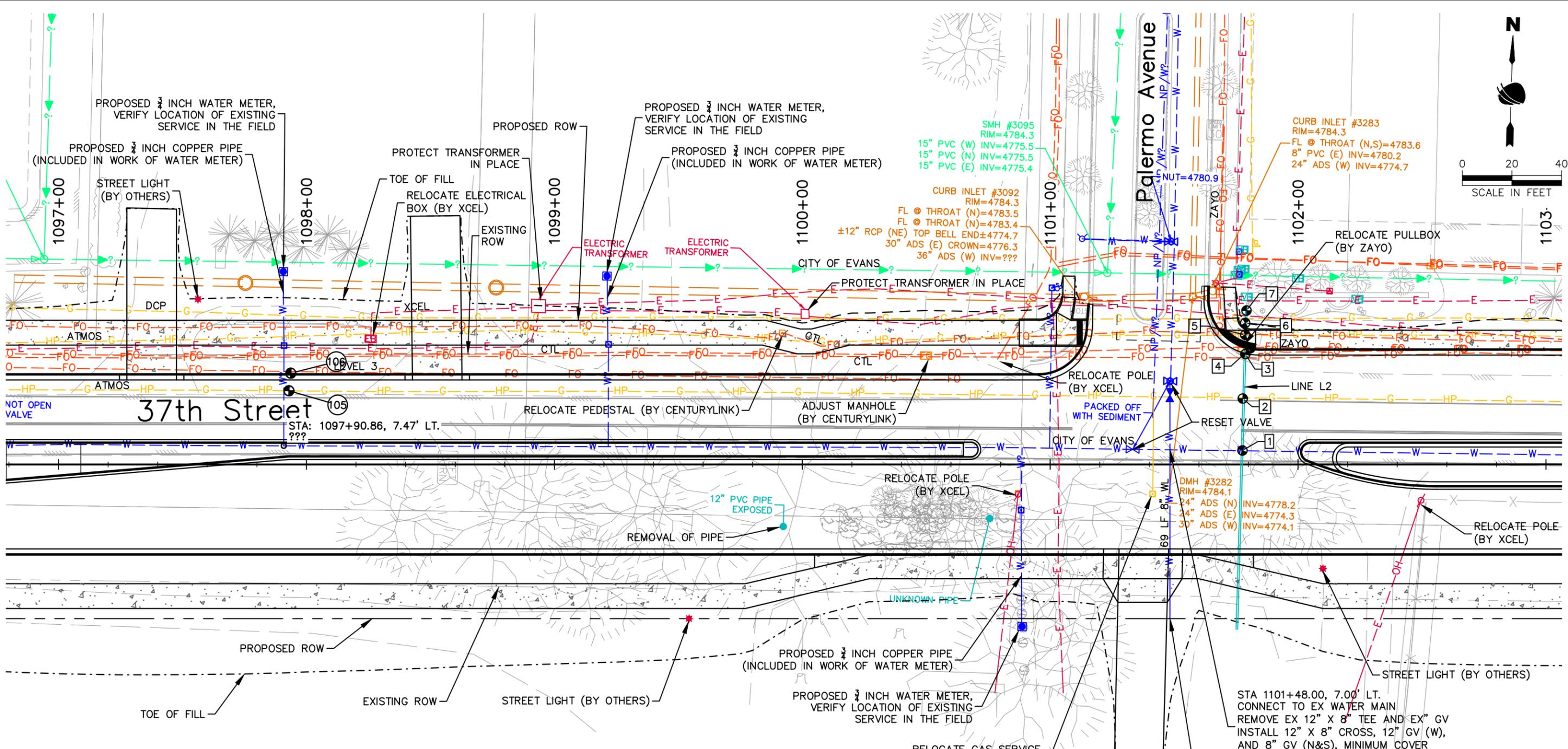
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Detailer:	R. Parks		
Sheet Subset:	UTILITIES	Subset Sheets:	1 of 5

**Project No.**  
 37TH STREET 2A

Drawing Number UTIL-001  
 Sheet Number 57

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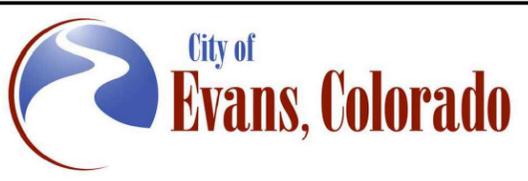
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No Revisions:
Revised:
Void:

37TH STREET WIDENING PHASE 2A UTILITY PLANS		
Designer:	R. Parks	Structure Numbers
Detailer:	R. Parks	
Sheet Subset:	UTILITIES	Subset Sheets: 2 of 5

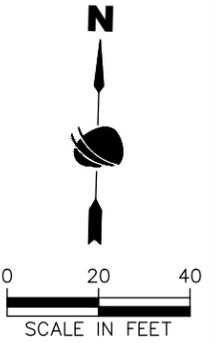
<b>Project No.</b>
37TH STREET 2A
Drawing Number UTIL-002
Sheet Number 58

FOR CONSTRUCTION 2/24/2024

STA 1101+48.00, 7.00' LT.  
 CONNECT TO EX WATER MAIN  
 REMOVE EX 12" X 8" TEE AND EX" GV  
 INSTALL 12" X 8" CROSS, 12" GV (W),  
 AND 8" GV (N&S), MINIMUM COVER  
 DEPTH FOUR (4) FEET SIX (6) INCHES.

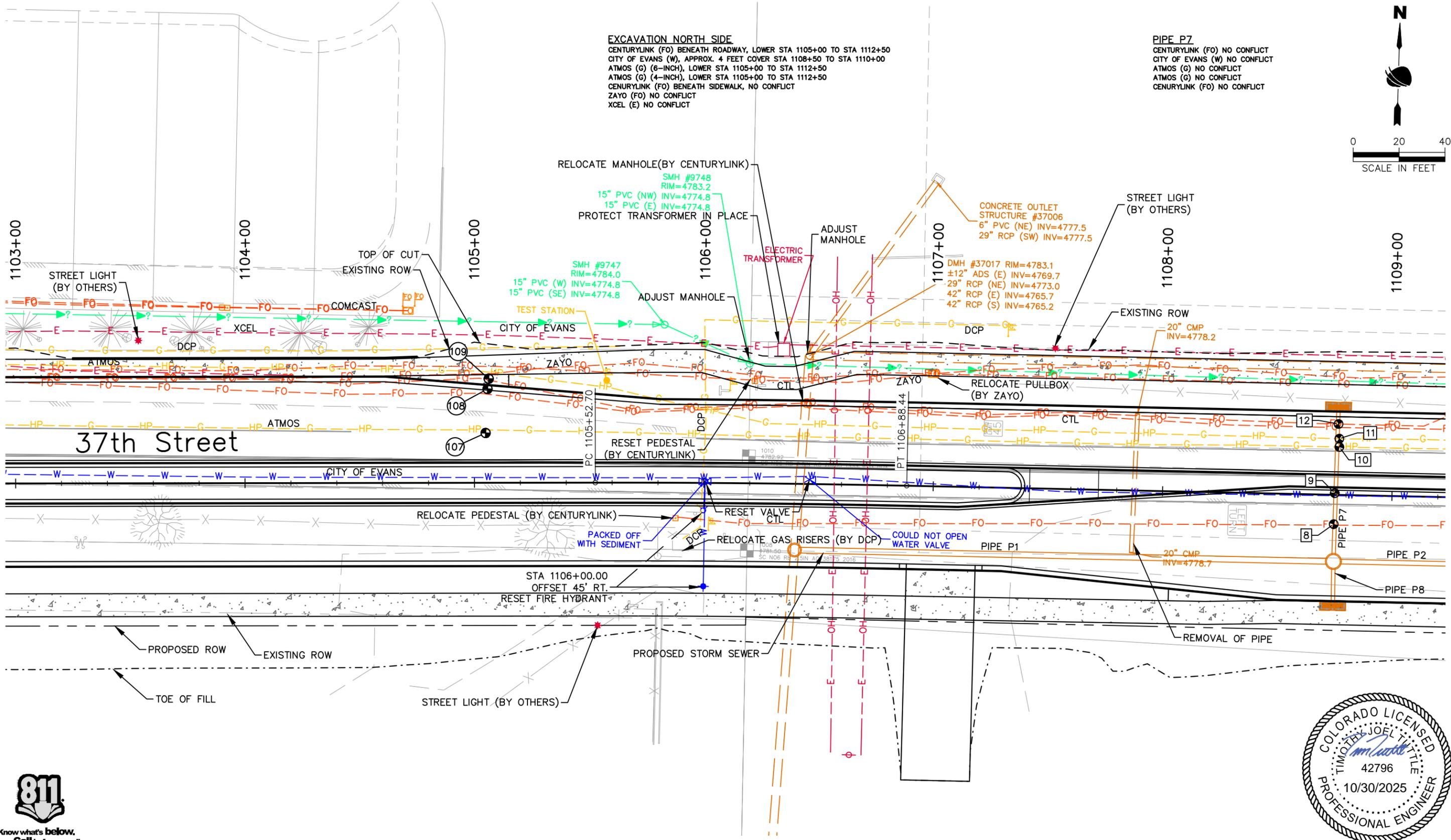
STA 1101+48.00, 62.00' RT.  
 8" PLUG, TB AND BLOWOFF ASSEMBLY

**IRRIGATION LINE L2**  
 CITY OF EVANS (W) NO CONFLICT  
 ATMOS (G) NO CONFLICT  
 CENTURYLINK (FO) NO CONFLICT  
 ZAYO (FO) NO CONFLICT  
 CENTURYLINK (FO) NO CONFLICT  
 ATMOS (GAS) RELOCATE  
 DCP (GAS) NO CONFLICT  
 XCEL (E) RELOCATE



**EXCAVATION NORTH SIDE**  
 CENTURYLINK (FO) BENEATH ROADWAY, LOWER STA 1105+00 TO STA 1112+50  
 CITY OF EVANS (W), APPROX. 4 FEET COVER STA 1108+50 TO STA 1110+00  
 ATMOS (G) (6-INCH), LOWER STA 1105+00 TO STA 1112+50  
 ATMOS (G) (4-INCH), LOWER STA 1105+00 TO STA 1112+50  
 CENTURYLINK (FO) BENEATH SIDEWALK, NO CONFLICT  
 ZAYO (FO) NO CONFLICT  
 XCEL (E) NO CONFLICT

**PIPE P7**  
 CENTURYLINK (FO) NO CONFLICT  
 CITY OF EVANS (W) NO CONFLICT  
 ATMOS (G) NO CONFLICT  
 ATMOS (G) NO CONFLICT  
 CENTURYLINK (FO) NO CONFLICT

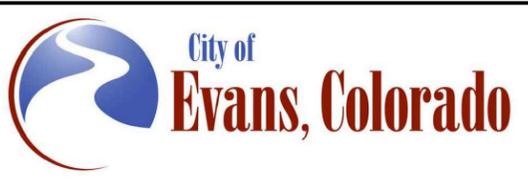


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Print Date: 2/19/2024  
 File Name: UTIL P2A-001 UTILITY PLAN.DWG  
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Date	Comments	Initials



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 No Revisions:  
 Revised:  
 Void:

**37TH STREET WIDENING PHASE 2A  
 UTILITY PLANS**  
 Designer: R. Parks  
 Detailer: R. Parks  
 Sheet Subset: UTILITIES  
 Structure Numbers:  
 Subset Sheets: 3 of 5

**Project No.**  
 37TH STREET 2A  
 Drawing Number UTIL-003  
 Sheet Number 59

FOR CONSTRUCTION 2/24/2024

**PIPE P4**  
 ATMOS (G) (CONTRACTOR VERIFY NO CONFLICT)  
 CITY OF EVANS (W) (CONTRACTOR VERIFY NO CONFLICT)

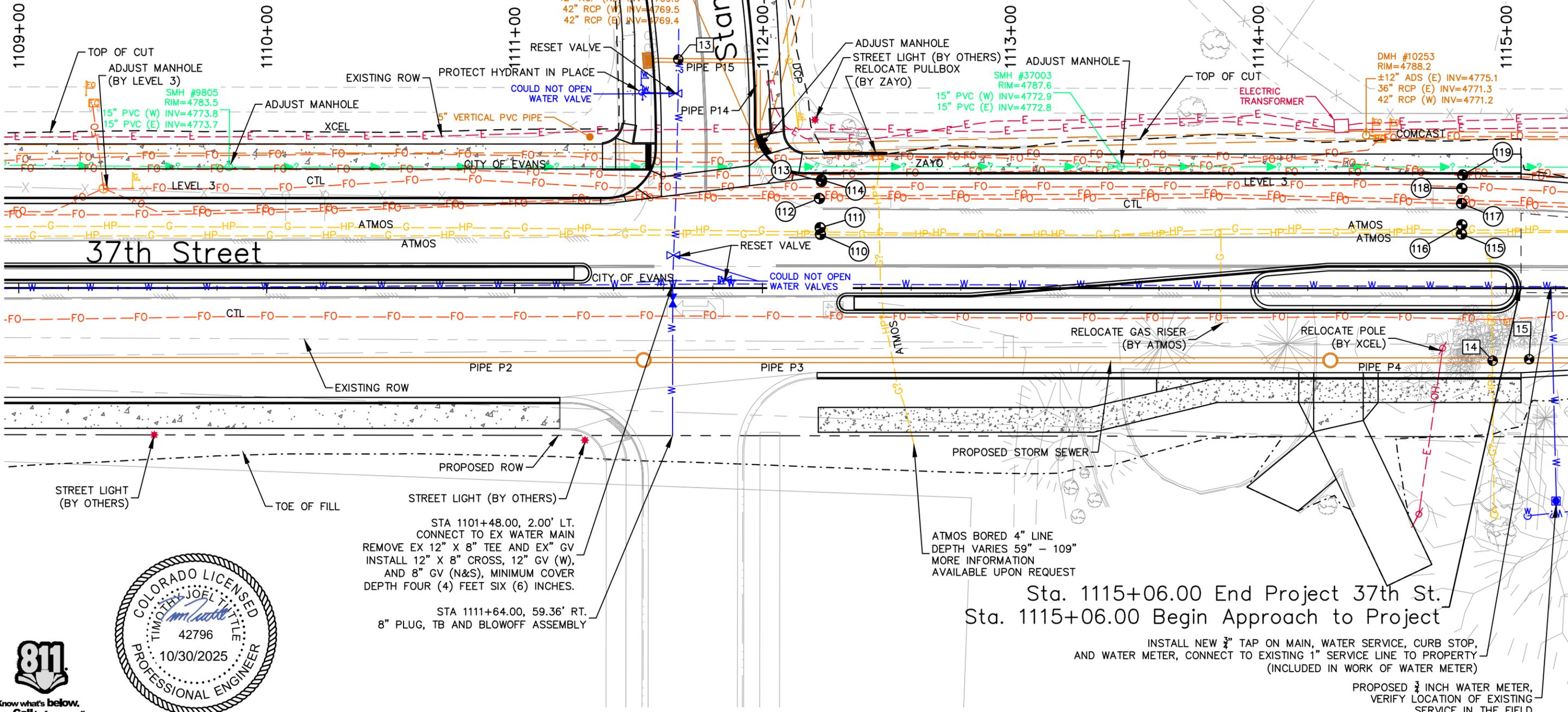
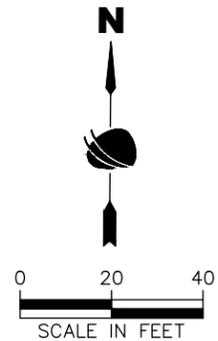
**PIPE P15**  
 CITY OF EVANS (W) NO CONFLICT

**PIPE P14**  
 XCEL (E) (CONTRACTOR VERIFY NO CONFLICT)

**EXCAVATION NORTH SIDE**  
 CENTURYLINK (FO) BENEATH ROADWAY, LOWER STA 1105+00 TO STA 1112+50  
 CITY OF EVANS (W), APPROX. 4 FEET COVER STA 1108+50 TO STA 1110+00  
 ATMOS (G) (6-INCH), LOWER STA 1105+00 TO STA 1112+50  
 ATMOS (G) (4-INCH), LOWER STA 1105+00 TO STA 1112+50  
 CENTURYLINK (FO) BENEATH SIDEWALK, NO CONFLICT  
 ZAYO (FO) NO CONFLICT  
 XCEL (E) NO CONFLICT  
 ZAYO (FO) NO CONFLICT

STORM STRUCTURE #3595  
 42" RCP (SW) INV=4783.1

DM# #3602  
 24" DIAMETER GRATE  
 RIM=4786.0  
 42" RCP (NE) INV=4769.9  
 42" RCP (W) INV=4769.5  
 42" RCP (E) INV=4769.4



STA 1101+48.00, 2.00' LT.  
 CONNECT TO EX WATER MAIN  
 REMOVE EX 12" X 8" TEE AND EX" GV  
 INSTALL 12" X 8" CROSS, 12" GV (W),  
 AND 8" GV (N&S), MINIMUM COVER  
 DEPTH FOUR (4) FEET SIX (6) INCHES.

STA 1111+64.00, 59.36' RT.  
 8" PLUG, TB AND BLOWOFF ASSEMBLY

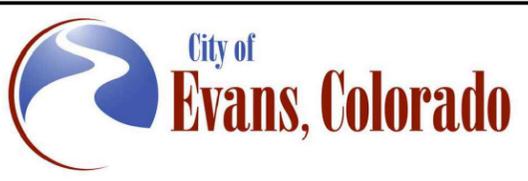
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 Sta. 1115+06.00 Begin Approach to Project



Plot Date: 2/19/2024 4:04 PM Plotted By: Sarah Hemler  
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Sheet Revisions		
Date	Comments	Initials

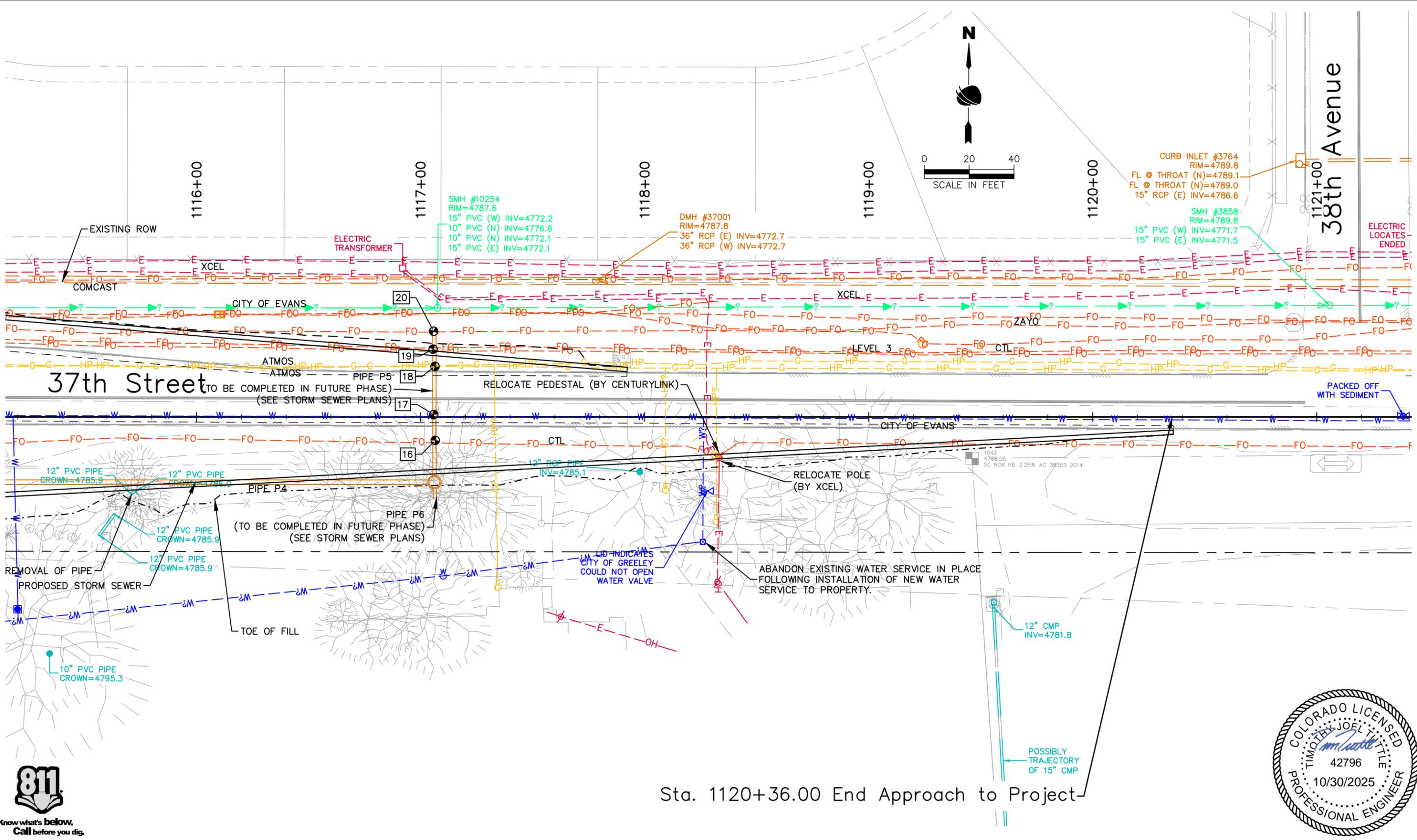


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No Revisions:
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37TH STREET WIDENING PHASE 2A UTILITY PLANS		
Designer:	R. Parks	Structure Numbers
Detailer:	R. Parks	
Sheet Subset:	UTILITIES	Subset Sheets: 4 of 5

<b>Project No.</b>
37TH STREET 2A
Drawing Number UTIL-004
Sheet Number 60

FOR CONSTRUCTION 2/24/2024



Sta. 1120+36.00 End Approach to Project



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**City of Evans, Colorado**

**FREEDOM Parkway**

<b>As Constructed</b>
No Revisions:
Revised:
Void:

<b>37TH STREET WIDENING PHASE 2A UTILITY PLANS</b>		
Designer:	R. Parks	Structure Numbers
Detailer:	R. Parks	
Sheet Subset:	UTILITIES	Subset Sheets: 5 of 5

<b>Project No.</b>
37TH STREET 2A
Drawing Number UTIL-005
Sheet Number 61

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FOR CONSTRUCTION 2/24/2024

## STORMWATER MANAGEMENT PLAN

### 1. SITE DESCRIPTION

The Contractor shall comply with all contractual requirements and all requirements associated with the CDPS-SCP on this project. The SWMP Administrator for Construction shall update to reflect current project site conditions.

- A. **PROJECT SITE LOCATION:** The project is located along 37<sup>th</sup> Street between Sienna Avenue to Stampede Drive and transition back to the existing roadway.
- B. **PROJECT SITE DESCRIPTION:** The project will include roadway widening from two lanes to four lanes, raised medians, curb and gutter, landscaping, extended sidewalks, and storm sewer system with offsite outfall to Ashcroft Draw.
- C. **PROPOSED SEQUENCING FOR MAJOR CONSTRUCTION ACTIVITIES:** Construction activities include, clearing and grubbing, grading, drainage improvements, and landscaping. Construction will begin with installation of initial control measures before clearing and grubbing. Followed by grading activities, paving, signing and striping, median landscaping, and permanent revegetation.
- D. **ACRES OF DISTURBANCE:**
  1. Total area of construction site (LOC (PERMITTED AREA)): 12.2 acres
  2. Total area of proposed disturbance (LDA): 9.6 acres
  3. Total area of seeding: 2.1 acres
- E. **EXISTING SOIL DATA:** Dominant site soils consist of Otero sandy loam and Aquolls and Aquents, gravelly substratum. Other small percentages include Otero sandy loam, Kim loam soil types, and Vona loamy sand. Otero soil type consists of Hydrologic Soil Group A, with a very low surface runoff potential. Aquolls and Aquents soil type consists of Hydrologic Soil Group D, with a high surface runoff potential when thoroughly wet.  
Data Source: <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>

F. **EXISTING VEGETATION, INCLUDING PERCENT COVER:**  
A survey including general description of existing vegetation shall be conducted by the SWMP Administrator for Construction prior to any ground disturbance on the project. The SWMP Administrator shall photo-document existing vegetation where all work will be occurring.

G. **POTENTIAL POLLUTANTS SOURCES:** See First Construction Activities under Potential Pollutant Sources. The SWMP Administrator for Construction shall prepare a list of all potential pollutants and their locations in accordance with subsection 107.25 of CDOT Standards and Specifications.

- H. **RECEIVING WATER:**
  1. Outfall locations: This project outfalls to the City of Evans MS4
  2. Names of immediate receiving water(s) on site: Unnamed roadside ditches
  3. Ultimate receiving water(s): Ashcroft Draw, South Platte River
  4. Horizontal distance to nearest ultimate receiving water from project: Approximately 0.2 miles to Ashcroft Draw and approximately 1.6 miles to South Platte River
  5. Description of all stream crossings located within the Construction Site Boundary: Not applicable

I. **NON-STORMWATER DISCHARGES:** SWMP Administrator for Construction shall provide a method statement of how discharge will be handled.

Discharge Description	Location (Site Map #)	Method Statement (Location)
Dewatering*		
Uncontaminated Spring		
Concrete Wash Water (in-ground washout structure)		
Landscape Irrigation Return Flows		
Emergency Fire Fighting		
Concrete Saw Water		

ALLOWABLE: Refer to CDPHE Low Risk Discharge Guidance Document of Uncontaminated Groundwater to Land.  
<https://www.colorado.gov/pacific/sites/default/files/WQ%20LOW%20RISK%20GW.pdf>

\*If ground water does not meet water quality standards for receiving water a separate CDPS Dewatering Permit shall be obtained by the Contractor from CDPHE in accordance with subsections 107.02 and 107.25 of CDOT Standards and Specifications.

### 2. SITE MAP COMPONENTS:

Pre-construction

- A. **PROJECT CONSTRUCTION POTENTIAL SITE BOUNDARIES** – See SWMP Site Maps
- B. **ALL AREAS OF GROUND SURFACE DISTURBANCE** – See SWMP Site Maps
- C. **AREAS OF CUT AND FILL** – See SWMP Site Maps
- D. **LOCATION OF ALL STRUCTURAL CONTROL MEASURES IDENTIFIED IN THE SWMP** – See SWMP Site Maps
- E. **LOCATION OF NON-STRUCTURAL CONTROL MEASURES AS APPLICABLE IN THE SWMP** – See SWMP Site Maps
- F. **STREAMS, SPRINGS, WETLANDS AND OTHER STATE WATERS, INCLUDING AREAS THAT REQUIRE PRE-EXISTING VEGETATION BE MAINTAINED WITHIN 50 FEET OF A RECEIVING WATER** – Not applicable
- G. **PROTECTION OF TREES, SHRUBS AND CULTURAL RESOURCES** – See Landscape Plans and Tree Protection Notes in Landscape Plans
- H. **FLOW ARROWS THAT DEPICT STORMWATER FLOW DIRECTIONS ON-SITE AND RUNOFF DIRECTION** – See SWMP Site Maps
- I. **AREAS USED FOR STORING AND STOCKPILING MATERIALS, STAGING AREAS (field trailer, fueling, etc.) WASTE ACCUMULATION AND BATCH PLANTS INCLUDING MASONRY MIXING STATIONS** – See SWMP Site Maps
- J. **LOCATIONS OF ALL STREAM CROSSINGS LOCATED WITHIN THE CONSTRUCTION SITE BOUNDARY** – See SWMP Site Maps

### 3. QUALIFIED STORMWATER MANAGERS:

A. **SWMP ADMINISTRATOR FOR DESIGN:**

Name/Title	Contact Information	CDOT SWMP Preparer Certification #
Jovonna Kirkling/Environmental Specialist	kirkling@rocksol.com/303-913-2193	2FE4F476

B. **SWMP Administrator for Construction:** (As defined in Section 208 of CDOT Standards and Specifications) The Contractor shall designate a SWMP Administrator for Construction upon co-permittee of the permit. The SWMP Administrator for Construction shall become the operator for the SWMP and assume responsibility for all design changes to the SWMP implementation and maintenance in accordance to subsection 208.03 of the CDOT Standards and Specifications. The SWMP Administrator for Construction shall be responsible for implementing, maintaining and revising SWMP, including the title and contact information. The activities and responsibilities of the SWMP Administrator for Construction shall address all aspects of the project's SWMP. (Update the information below for each new SWMP Administrator for Construction).

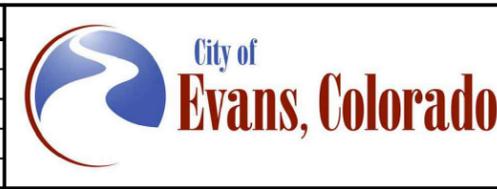
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37TH STREET WIDENING PHASE 2A STORMWATER MANAGEMENT PLAN SWMP NARRATIVE	
Designer: J. Kirkling	Structure Numbers
Detailer: J. Kirkling	
Sheet Subset: SWMP	Subset Sheets: 1 of 21

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37TH STREET 2A
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Name/Title	Contact Information (phone & email)	CDOT TECS Certification #	Start Date	Engineer Approval

C. **EROSION CONTROL INSPECTOR:** (As defined in Section 208 of CDOT Standards and Specifications) The Contractor may designate an Erosion Control Inspector. The Erosion Control Inspector shall complete duties in accordance with subsection 208.03(c) of CDOT Standards and Specifications.

Name/Title	Contact Information (phone & email)	CDOT TECS Certification #	Start Date	Engineer Approval

**4. STORMWATER MANAGEMENT CONTROLS FIRST CONSTRUCTION ACTIVITIES**

THE CONTRACTOR SHALL PERFORM THE FOLLOWING:

A. **POTENTIAL POLLUTANT SOURCES**

Evaluate, identify, locate and describe all potential sources of pollutants at the site in accordance with subsection 107.25 of CDOT Standards and Specifications, CDPS-SCP and place in the SWMP. All control measures related to potential pollutants shall be shown on the SWMP Site Map by the Contractor's SWMP Administrator for Construction.

B. **OFFSITE DRAINAGE (RUN ON WATER)**

1. Describe and record control measures on the SWMP Site Map that have been implemented to address off site run-on water in accordance with subsection 208.03 of CDOT Standards and Specifications.

C. **VEHICLE TRACKING CONTROL STRIP**

1. Control measures shall be implemented in accordance with Section 2.01.10 of City of Evans Standards and Specifications.

D. **PERIMETER CONTROL**

1. Perimeter control shall be established as the first item on the SWMP to prevent the potential for pollutants leaving the construction site boundaries, entering the stormwater drainage system, or discharging to state waters. Perimeter control shall be in accordance with subsection 208.04 of CDOT Standards and Specifications.  
 2. Perimeter control may consist of berms, silt fence, erosion logs, existing landforms, or other control measures as approved.

**5. DURING CONSTRUCTION**

**RESPONSIBILITIES OF THE SWMP Administrator for Construction**

The SWMP is a "living document" that is continuously reviewed and modified throughout the construction phasing. During construction, the following items shall be added, updated, or amended as needed by the SWMP Administrator for Construction in accordance with subsection 208.03 of CDOT Standards and Specifications. During construction, indicate how items that have not been addressed during design are being handled in construction.

A. **STOCKPILE MANAGEMENT:** Shall be done in accordance with Section 2.01.10 of City of Evans Standards and Specifications.

B. **CONCRETE WASHOUT:** Concrete wash out water or waste from field laboratories and paving equipment shall be contained in accordance with subsection 208.05 of CDOT Standards and Specifications.

C. **SAW CUTTING:** Shall be done in accordance with subsections 107.25, 208.04, and 208.05 of CDOT Standards and Specifications.

D. **STREET SWEEPING:** Shall be done in accordance with subsection 208.04 of CDOT Standards and Specifications.

**6. INSPECTIONS**

A. Inspections shall be in accordance with Section 2.01.06 of City of Evans Standards and Specifications and subsection 208.03(c) of CDOT Standards and Specifications.

**7. CONTROL MEASURE MAINTENANCE**

A. Maintenance shall be in accordance with Section 2.01.10 of City of Evans Standards and Specifications and subsection 208.04(f) of CDOT Standards and Specifications.

**8. RECORD KEEPING**

A. Records shall be kept in accordance with subsection 208.03(d) of CDOT Standards and Specifications.

**9. INTERIM, PERMANENT STABILIZATION, and LONG-TERM STORMWATER MANAGEMENT**

The Contractor shall comply with all interim stabilization and permanent stabilization requirements in accordance with Section 2.01.11 of City of Evans Standards and Specifications.

A. **SEEDING PLAN**

Seeding will be required for an estimated total of 2.4 acres of disturbed area within the right-of-way limits which are not surfaced. The following types and rates shall be used:

Type I Seed Mix: For use in ground surface disturbance between curb and sidewalk, areas shown on site maps.

COMMON NAME	BOTANICAL NAME	LBS. PLS PER ACRE
buffalograss	<i>Buchloe dactyloides</i>	13.2
blue grama grass	<i>Bouteloua gracilis</i>	8.8
TOTAL		22.0

Type II Seed Mix: Short grass for use in all other ground surface disturbances including, from sidewalk to edge of cut/fill areas. Areas shown on site maps. Refer to Landscaping Plans for ornamental tree/shrub plantings within these areas.

COMMON NAME	BOTANICAL NAME	% LBS. PLS PER ACRE (11 LBS. PER ACRE)
blue grama grass	<i>Bouteloua gracilis</i>	3.0
Sideoats grama	<i>Bouteloua curtipendula</i>	3.0
little bluestem (Pastura, Blaze)	<i>Schizachyrium scoparium</i>	2.8
sand dropseed	<i>Sporobolus cryptandrus</i>	1.1
sand lovegrass (Nebraska 27)	<i>Eragrostis trichoides</i>	1.1
TOTAL		11.0

B. **SEEDING APPLICATION:** Drill seed 0.25 inch to 0.75 inch into the soil at the specified PLS per acre rate with a mechanical grass drill with depth bands and an agitator in the seed box. Rows shall be spaced not more than seven inches apart in accordance with Section 2.01.11 of City of Evans Standards and Specifications. In small areas not accessible to a drill, hand broadcast or hydroseed at double the PLS rate per acre and rake 0.25 inch to 0.5 inch into the soil per Section 212 of CDOT Standards and Specifications.

C. **MULCHING APPLICATION:** Apply a minimum of 4,000 pounds of certified weed free straw per acre and in accordance with Chapter 2 of City of Evans Standards and Specifications, and mechanically crimp it into the soil in combination with an organic mulch tackifier.

1. Prior to winter shutdown or the summer seeding window closure: Uncompleted slopes shall be mulched with 2 tons of mulching (weed free straw) per acre, mechanically crimped into the topsoil in combination with an organic mulch tackifier in accordance with Sections 208 and 213 of CDOT Standards and Specifications.

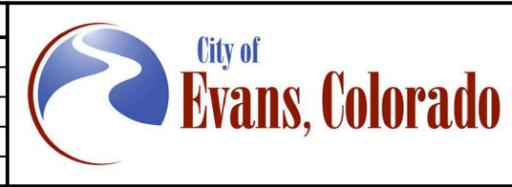
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**37TH STREET WIDENING PHASE 2A  
 STORMWATER MANAGEMENT PLAN  
 SWMP NARRATIVE**

Designer:	J. Kirkling	Structure Numbers	
Detailer:	J. Kirkling	Sheet Subset:	SWMP
		Subset Sheets:	2 of 21

Project No.
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Drawing Number ENVI-002
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**D. SPECIAL REQUIREMENTS:**

1. Due to high failure rates, hydroseeding will not be allowed for permanent stabilization.

**E. SOIL AMENDMENTS REQUIREMENTS:** Minimum amendment material requirements for all disturbances to receive seeding.

1. Compost shall be applied at 4 CY per 1000 SF over the designated areas in accordance with Section 2.01.11 of City of Evans Standards and Specifications.

**F. SOIL RETENTION COVERING:** On slopes and ditches requiring a blanket or turf reinforcement mat (trm), the blanket/trm shall be placed in lieu of mulch and mulch tackifier and placed after seeding (native). See SWMP Site Map for blanket/trm locations.

**G. RESEEDING OPERATIONS/CORRECTIVE STABILIZATION:**

Prior to partial acceptance.

1. Bare areas caused by surface or gully erosion, blown away mulch, etc. shall be re-graded, seeded, and have the designated mulching applied as necessary, at no additional cost to the project.

**10. PRIOR TO PROJECT FINAL ACCEPTANCE**

- A. Partial Acceptance shall be in accordance with Section 2.01.10 of City of Evans Standards and Specifications and subsections 107.25 (d), 208.10 and 214.04 of CDOT Standards and Specifications. At the Partial Acceptance of the project, it shall be determined by the SWMP Administrator for Construction and the Engineer which temporary control measures shall remain until 80% revegetation is established or which shall be removed.
- B. At the end of the project, all ditch checks shall either consist of temporary erosion logs (or equivalent) or permanent riprap.

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Designer: J. Kirkling	Structure Numbers
Detailer: J. Kirkling	
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**11. NARRATIVES:**

**Control Measure Matrixes During Construction:**

- Control measure narratives have been included for the CDOT Standard Specifications and Standard Plan M-208 and M-216 along with any non-standard control measures approved during the design process. If a Non-Standard Control Measure not included in the SWMP is proposed and approved by the Engineer the SWMP Administrator for Construction shall do the following: Place an "X" in the column for non-standard and complete a Non-Standard Control Measure Specification and Narrative covering the what, when, where and why the control measure is being used shall be added to the SWMP. The appropriate "X" shall also be added to the implementation phase(s).
- The SWMP Administrator for Construction shall place an "X" in the column In Use on-site when the control measure has been installed.
- A "P" in the Initial Activities Column indicates that the control measure shall be installed before construction activity starts. Locations and quantities will be discussed during the Environmental Pre-construction Conference with the Regional Water Pollution Control Manager.

**STRUCTURAL Control Measures** that may be potentially used on the project for erosion and sediment control; practices may include, but are not limited to the following:

APPLICATION, CONTROL MEASURE	NARRATIVE	M- 208 STANDARD or "X" for NON-STANDARD	IN USE ON SITE	CONTROL MEASURE IMPLEMENTATION PHASE		
				INITIAL ACTIVITIES	INTERIM ACTIVITIES	PERMANENT STABILIZATION
PROTECTION OF EXISTING WETLANDS <i>Fence (plastic) and erosion logs</i>	Fence (plastic) shall be placed in combination with erosion logs to prevent encroachment of construction traffic and sediment into state waters prior to start of construction disturbances. Fence (plastic) shall be placed adjacent to the wetlands; erosion logs shall be placed between the plastic fence and disturbance area. Logs shall be placed to direct flows away from or filter water running into wetlands from disturbance areas.			P	X	
PROTECTION OF EXISTING TREES/LANDSCAPING <i>Fence (plastic)</i>	Fence (plastic) shall be used in areas indicated in the plans to prevent encroachment of construction traffic and sediment for the protection of mature trees and/or existing landscaping prior to start of construction disturbances.			P or X	X	
CHECK DAM/DITCH CHECK <i>Erosion log, silt berm, silt dike, rock check dam</i>	Placed in ditches immediately upon completion of ditch grading to reduce velocity of runoff in ditch. For existing ditches, place prior to start of construction disturbances.	M-208		X	X	
STORM DRAIN INLET PROTECTION IN PAVED ROADWAYS <i>(Type 1, 2 and 3 as shown on M-208-1, sheet 5 of 11)</i>	Manufactured storm drain inlet protection placed prior to construction disturbances as detailed in M-208-1, to protect existing inlets or immediately upon completion of new inlets to prevent sediment from entering the inlet throughout construction.	M-208		P or X	X	X
STORM DRAIN INLET PROTECTION IN NATIVE SEED AREAS <i>(M-604 Standard Inlets Type C and D)</i>	Erosion logs or aggregate bags placed around inlet grate to prevent sediment from entering inlet. Place prior to construction disturbances to protect existing inlets or immediately upon completion of new inlets.	M-208		P or X		
CULVERT INLET/OUTLET PROTECTION <i>Erosion logs, aggregate bags</i>	Placed at mouth of culvert inlets and over top of culvert at inlet and outlet where disturbance may be occurring adjacent to pipe to prevent sediment laden water from entering pipe or drainage. Place prior to start of construction disturbances.	M-208		P	X	X
TYPE C, TYPE D, AND TYPE 13 PROTECTION <i>Erosion logs, aggregate bags, erosion bales</i>	Placed around inlet grate or slope and ditch paving to prevent sediment from entering inlet. Place prior to start of construction disturbances.	M-208		P	X	X
STOCKPILE PROTECTION <i>Temporary berm, erosion logs, aggregate bags*</i>	Placed within specified distance, in accordance with subsection 208.06, from toe to contain sediment around stockpile. *Aggregate bags are easily moved and replaced for access during the work day. Place prior to start of stockpile, increase control as stockpile increases size.	M-208			X	
TOE OF FILL PROTECTION <i>Erosion logs, temporary berm, silt fence, topsoil windrow*</i>	Place prior to slope/embankment work to capture sediment and protect and delineate undisturbed areas. *Can be used to stockpile topsoil for salvage.	M-208		X	X	
PERIMETER CONTROL <i>Erosion logs, silt fence, temporary berm, topsoil windrow*</i>	Placed prior to construction commencing to address potential run-on water from off site, and to divert around disturbed area. *Can be used to stockpile topsoil for salvage.	M-208		P or X	X	
SEDIMENT CONTROL/SLOPE CONTROL <i>Silt fence, erosion logs</i>	Placed on the contour of a slope to contain and slow down construction runoff. Place prior to start of construction disturbances.	M-208		X	X	
TEMPORARY SEDIMENT TRAP	Used to capture sediment laden runoff from disturbed areas < 5 acres during construction. Place prior to start of construction disturbances. Outlets that withdraw water from or near the surface may be installed when discharging from basins and impoundments.	M-208		X	X	
EMBANKMENT PROTECTION OR TEMPORARY SLOPE DRAIN <i>Outlet Protection</i>	Placed as a conduit or chute to drain runoff down slope and to prevent erosion of slope.	M-208			X	X
OUTLET PROTECTION <i>Riprap, or approved other</i>	Material placed as energy dissipator to prevent erosion at outlet structure.	M-601-12			X	X
CONCRETE WASHOUT <i>In-ground or fabricated</i>	Construction control, used for waste management of concrete and concrete equipment cleaning. Place prior to start of concrete activities.	M-208		X	X	
VEHICLE TRACKING PAD	Source control, placed to prevent tracking of sediment from disturbed area to offsite surface. Place prior to start of construction disturbances.	M-208		P	X	
ENGINEERED SEDIMENT BASIN	Constructed early in project, prior to storm sewer/ditches and in accordance with 208.05(p) to capture storm flow. Outlet structure and/or outfall shall be modified for temporary sediment control using an approved non-standard detail. Outlets that withdraw water from or near the surface shall be installed when discharging from basins and impoundments, unless infeasible			X	X	

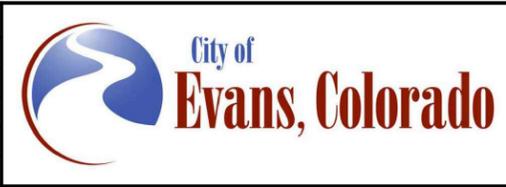
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**37TH STREET WIDENING PHASE 2A  
 STORMWATER MANAGEMENT PLAN  
 SWMP NARRATIVE**

Designer: J. Kirkling  
 Detailer: J. Kirkling  
 Sheet Subset: SWMP

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DEWATERING (Contractor is responsible for obtaining a permit from Colorado Department of Health and Environment.)	Shall be done in such a manner to prevent potential pollutants from entering state waters.			X	X	
TEMPORARY STREAM CROSSING	Constructed over stream or drainage to prevent discharge of pollutants from construction equipment into water.					
CLEAN WATER DIVERSION	Placed to divert clean surface or ground water around disturbance area to prevent it from mixing with construction runoff.					
OTHER						

**NON-STRUCTURAL Control Measures** that may be potentially used on the project for erosion and sediment control; practices may include, but are not limited to: Erosion control devices are used to limit the amount of soil loss on site. Sediment control devices are designed to capture sediment on the project site. Construction controls are control measures related to construction access and staging. Control Measure locations are indicated on the SWMP Site Map.

**\* Use of vegetative buffer strip requirements.** The CDPHE Water Quality Control Division Technical Memorandum dated August 27, 2015 clarifies the requirements for utilization of existing vegetation as a buffer type of sediment control measure, while maintaining compliance with the CDPS permit for Stormwater Discharges Associated with Construction Activity – CDPS Permit No. COR4000000. In general, the division does not recommend that vegetated buffers be implemented as a sediment removal control measure for runoff from disturbed areas at construction sites, unless implemented as a "finishing" component of a treatment train comprised of additional, adequate up-gradient Control Measures. The entire memorandum can be found at: <https://www.colorado.gov/pacific/sites/default/files/Vegetative%20Buffer%20Memo.pdf>

APPLICATION, CONTROL MEASURE	NARRATIVE	M-STANDARD or "For NON-STANDARD	IN USE ON SITE	CONTROL MEASURE IMPLEMENTATION PHASE		
				INITIAL ACTIVITY	INTERIM ACTIVITIES	PERMANENT STABILIZATION
* VEGETATIVE BUFFER STRIP Fence (plastic)	Finishing component for filtering sediment-laden runoff from disturbance area. Area within CDOT ROW or temporary easement to be identified on SWMP prior to construction starting.					
GRADING APPLICATIONS (LANDFORM)	Existing or created landforms may be used as a control measure if they prevent sediment from entering or leaving the disturbance area. If a landform directs flow of water to a concentrated outfall point, the outfall point shall be protected to prevent erosion. Area to be identified on SWMP prior to construction starting.	M-208		X	X	
TOPSOIL MANAGEMENT STOCKPILE/SALVAGE Windrow or stockpile	Prior to any site disturbance work commencing, existing topsoil shall be scraped to a depth four inches, or as specified, and placed in stockpiles or windrows. Upon completion of final grading, topsoil shall be evenly distributed over embankment to a depth of four inches or as specified.	M-208		X	X	X
SURFACE ROUGHENING / GRADING TECHNIQUES	Temporary stabilization of disturbance and to minimize wind and erosion.				X	
SEEDING (TEMPORARY)	Temporary stabilization used for over wintering of disturbance or used to control erosion for areas scheduled for future construction.					
BONDED FIBER MATRIX or MULCHING (HYDRAULIC)	Not to be used in areas of concentrated flows, i.e. ditch lines. To be for either Interim or Permanent Stabilization placed as a surface cover for erosion control. May be used as surface cover when work is temporarily halted and as approved by the Engineer for stockpiles.					
STRAW or HAY MULCH/MULCH TACKIFIER	Interim or Permanent Stabilization placed as a surface cover for erosion control and or seeding establishment. To be installed as Interim Stabilization as a surface cover when work is temporarily halted and as approved by the Engineer				X	X
SPRAY-ON MULCH BLANKET (Not to be used in areas of concentrated flows, i.e. ditch lines.)	Interim or Final Stabilization placed as a surface cover for erosion control and or seeding establishment. To be installed as temporary surface cover when work is temporarily halted and as approved by the Engineer				X	X
SEEDING PERMANENT (NATIVE)	Final Stabilization of disturbance and to reduce runoff and control erosion on disturbed areas.					X
SOIL RETENTION BLANKET (SRB)	Final Stabilization of disturbance and to reduce runoff and control erosion on disturbed areas.	M-216				
TURF REINFORCEMENT MAT (TRM)	Final Stabilization of disturbance and to reduce runoff and control erosion on disturbed areas. Placed in channels or on slopes for erosion control, channel liner and seeding establishment.	M-216				
SWEEPING	Source control, used to remove sediment tracked onto paved surfaces and to prevent sediment from entering drainage system. Sweep daily and at the end of the construction shift as needed. Kick brooms shall not be permitted.			X	X	X

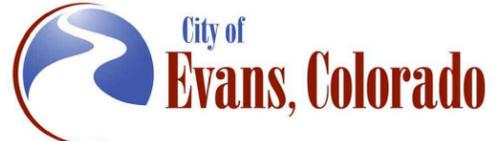
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**37TH STREET WIDENING PHASE 2A  
 STORMWATER MANAGEMENT PLAN  
 SWMP NARRATIVE**

Designer: J. Kirkling  
 Detailer: J. Kirkling  
 Sheet Subset: SWMP

Structure Numbers  
 Subset Sheets: 5 of 21

<b>Project No.</b>
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Drawing Number ENVI-005
Sheet Number 66

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**12. TABULATION OF STORMWATER QUANTITIES**

- A. Control Measure sediment removal and disposal shall be paid for as: 208 Removal and Disposal of Sediment (Equipment) and 208 Removal and Disposal of Sediment (Labor). All other control measure maintenance shall be included in the cost of the control measure.
- B. Establishment of seeded areas from Substantial Landscape Completion shall be included in the price of the work. This shall include mowing, weed control, reseeding/mulch/tackifier.

Pay Item	Description	Pay Unit	Initial Const.	Interim Const.	Permanent Stabilization	*Total Quantity
203-01500	Blading	Hour		20		20
203-01550	Dozing	Hour		20		20
207-00205	Topsoil	CY		671		671
208-00002	*Erosion Log (Type I)(12 inch)	LF	3412	500		3412
208-00021	**Silt Fence (Reinforced)	LF	800	800		1600
208-00035	*Aggregate Bag	LF		300		300
208-00046	Pre-fabricated Concrete Washout Structure (Type I)	Each	2			2
208-00053	Storm Drain Inlet Protection (Type I) (84 Inch)	Each		8		8
208-00054	Storm Drain Inlet Protection (Type II)	Each		3		3
208-00075	Pre-fabricated Vehicle Tracking Pad	Each	4	2		4
208-00103	Removal and Disposal of Sediment (Labor)	Hour		10		10

208-00105	Removal and Disposal of Sediment (Equipment)	Hour		10	10	20
208-00106	Sweeping (Sediment Removal)	Hour		20		20
208-00107	Removal of Trash	Hour		10		10
208-00207	Erosion Control Management (ECM)	LS	1			1
212-00006	**Seeding (Type I)	Acre			1.3	1.3
212-00022	**Seeding (Type II)	Acre			0.8	0.8
212-00032	**Soil Conditioning	Acre			2.1	2.1
213-00004	**Mulching (Weed Free Straw)	Acre			2.1	2.1
213-00012	Spray-on Mulch Blanket	Acre			1	1 (b)
213-00061	**Mulch Tackifier	LB			420	420
607-11525	Fence (Plastic)	LF			50	50

\*It is anticipated that additional control measures and control measure quantities not shown on the SWMP Site Maps shall be required on the project for unforeseen conditions and replacement of items that are beyond their useful service life, see subsections 208.03 and 208.04 of CDOT Standards and Specifications. **Quantities for all control measures shown above are estimated and have been increased for unforeseen conditions and normal control measure life expectancy.** Quantities shall be adjusted according to the conditions encountered in the field as directed and approved by the Engineer. Payment shall be for the actual work completed and material used. \*\*An additional 10% was added to account for use of broadcast seeding in confined areas where drill seeding cannot be achieved.

**13. BIOLOGIC IMPACTS and DEWATERING**

A. ENVIRONMENTAL IMPACTS:

- 1. Wetland Impacts: NO
- 2. Stream Impacts: NO
- 3. Threatened and Endangered Species: No species are anticipated to be impacted by the project.

B. DEWATERING (Not Covered Under the CDPHE Low Risk Discharge Guidance Document of Uncontaminated Groundwater to Land):

- 1. Dewatering: Refer to other environmental permits in accordance with subsection 107.02 of CDOT Standards and Specifications.

**14. NOTES**

- (a). An additional 10% was added to account for replacement and maintenance of silt fence.
- (b). Spray-on Mulch Blanket was added for an as-needed basis.

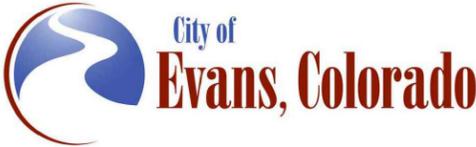
Plot Date: 2/7/2024 11:00 AM Plotted By: Sarah Hemler  
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Print Date: 2/7/2024  
 File Name: ENVI P2A-001 SWMP NARRATIVE.DWG  
 Horiz. Scale: N/A Vert. Scale: N/A



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Sheet Revisions		
Date	Comments	Initials




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Revised:
Void:

**37TH STREET WIDENING PHASE 2A  
 STORMWATER MANAGEMENT PLAN  
 SWMP NARRATIVE**

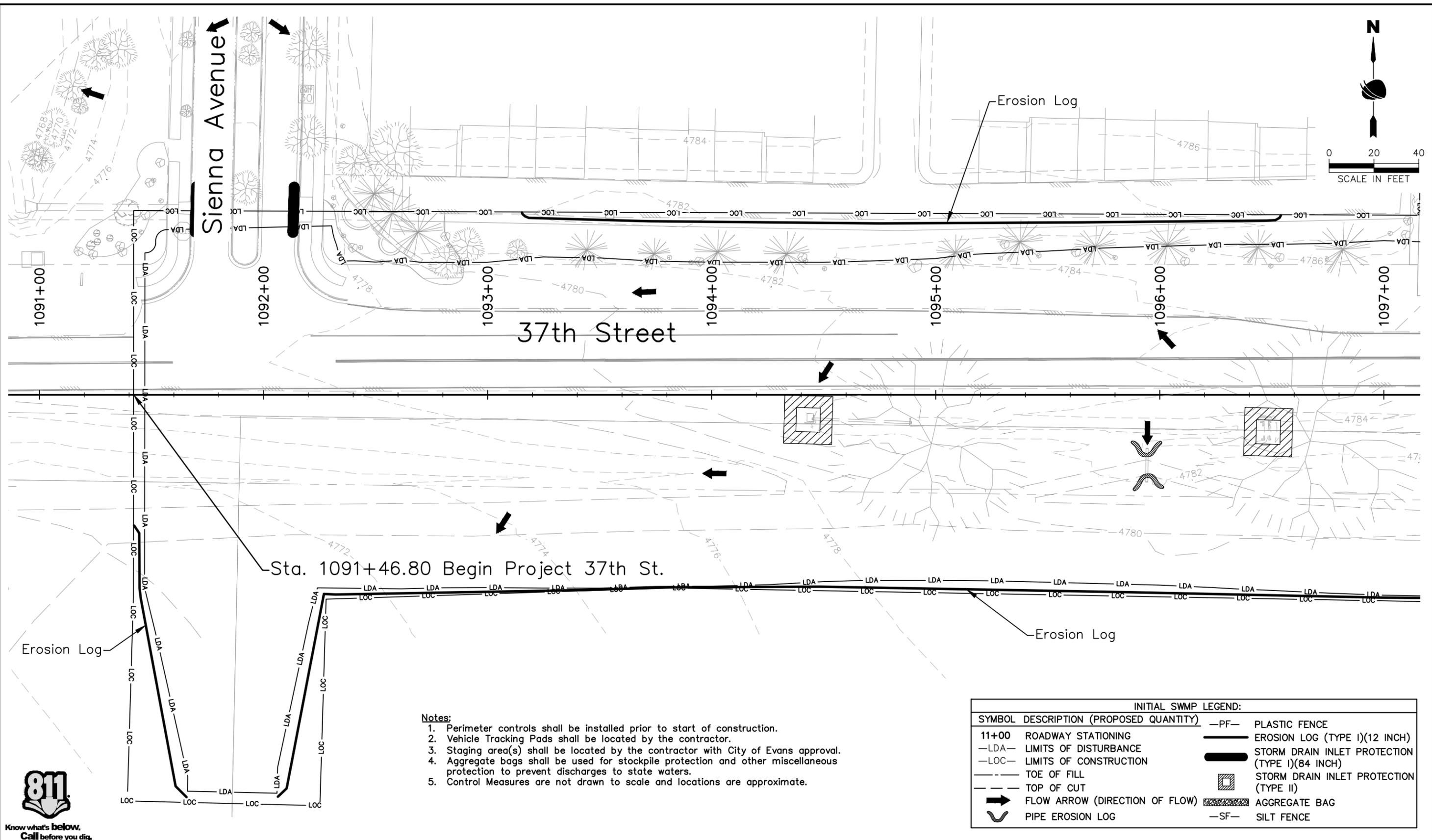
Designer: J. Kirkling  
 Detailer: J. Kirkling  
 Sheet Subset: SWMP

Structure Numbers  
 Subset Sheets: 6 of 21

Project No.
37TH STREET 2A
Drawing Number ENVI-006
Sheet Number 67

FOR CONSTRUCTION 2/24/2024

Plot Date: 2/7/2024 1:01 AM Plotted By: Sarah Henner  
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- Notes:**
1. Perimeter controls shall be installed prior to start of construction.
  2. Vehicle Tracking Pads shall be located by the contractor.
  3. Staging area(s) shall be located by the contractor with City of Evans approval.
  4. Aggregate bags shall be used for stockpile protection and other miscellaneous protection to prevent discharges to state waters.
  5. Control Measures are not drawn to scale and locations are approximate.

INITIAL SWMP LEGEND:	
SYMBOL	DESCRIPTION (PROPOSED QUANTITY)
11+00	ROADWAY STATIONING
—LDA—	LIMITS OF DISTURBANCE
—LOC—	LIMITS OF CONSTRUCTION
---	TOE OF FILL
- - -	TOP OF CUT
➔	FLOW ARROW (DIRECTION OF FLOW)
⤵	PIPE EROSION LOG
—PF—	PLASTIC FENCE
—	EROSION LOG (TYPE I)(12 INCH)
—	STORM DRAIN INLET PROTECTION (TYPE I)(84 INCH)
▣	STORM DRAIN INLET PROTECTION (TYPE II)
▨	AGGREGATE BAG
—SF—	SILT FENCE



Print Date: 2/7/2024  
 File Name: ENVI P2A-007 INITIAL SWMP PLAN.DWG  
 Horiz. Scale: As Noted      Vert. Scale: N/A

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Date	Comments	Initials



**As Constructed**

No Revisions:  
 Revised:  
 Void:

**37TH STREET WIDENING PHASE 2A  
 STORMWATER MANAGEMENT PLAN  
 INITIAL SWMP SITE MAP**

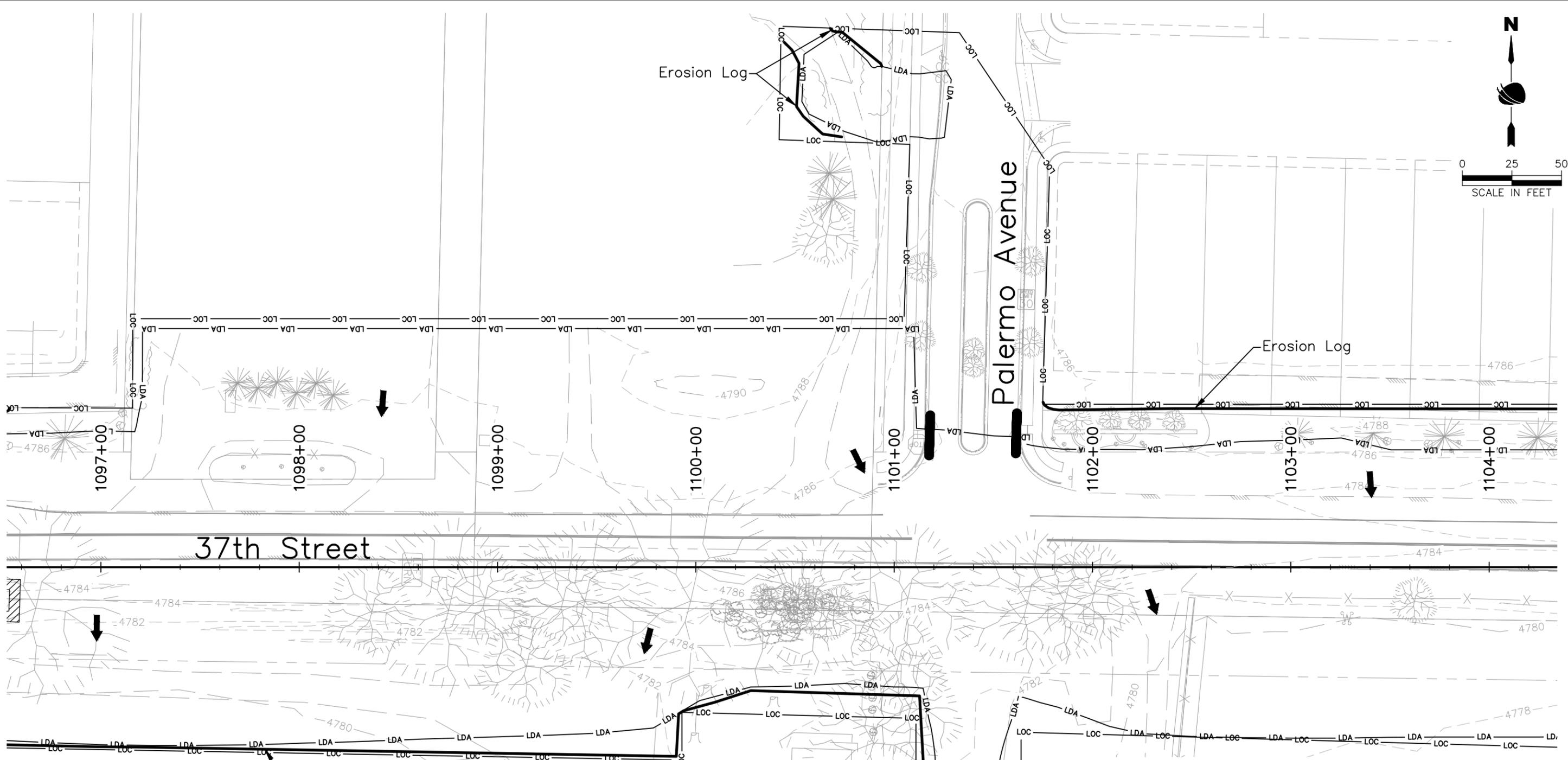
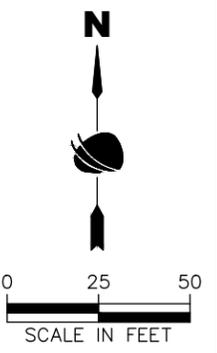
Designer: J. Kirkling  
 Detailer: J. Jensen  
 Sheet Subset: SWMP

Structure Numbers  
 Subset Sheets: 7 of 21

**Project No.**  
 37TH STREET 2A

Drawing Number ENVI-007  
 Sheet Number 68

FOR CONSTRUCTION 2/24/2024



- Notes:**
1. Perimeter controls shall be installed prior to start of construction.
  2. Vehicle Tracking Pads shall be located by the contractor.
  3. Staging area(s) shall be located by the contractor with City of Evans approval.
  4. Aggregate bags shall be used for stockpile protection and other miscellaneous protection to prevent discharges to state waters.
  5. Control Measures are not drawn to scale and locations are approximate.

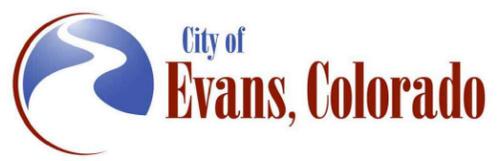
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SYMBOL	DESCRIPTION (PROPOSED QUANTITY)	
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—LDA—	LIMITS OF DISTURBANCE	—E— EROSION LOG (TYPE I)(12 INCH)
—LOC—	LIMITS OF CONSTRUCTION	—SIP— STORM DRAIN INLET PROTECTION (TYPE I)(84 INCH)
---	TOE OF FILL	—SII— STORM DRAIN INLET PROTECTION (TYPE II)
---	TOP OF CUT	—SB— AGGREGATE BAG
→	FLOW ARROW (DIRECTION OF FLOW)	—SF— SILT FENCE
U	PIPE EROSION LOG	



Plot Date: 2/7/2024 11:01 AM Plotted By: Sarah Hemler  
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Print Date: 2/7/2024	
File Name: ENVI P2A-007 INITIAL SWMP PLAN.DWG	
Horiz. Scale: As Noted	Vert. Scale: N/A
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Sheet Revisions		
Date	Comments	Initials

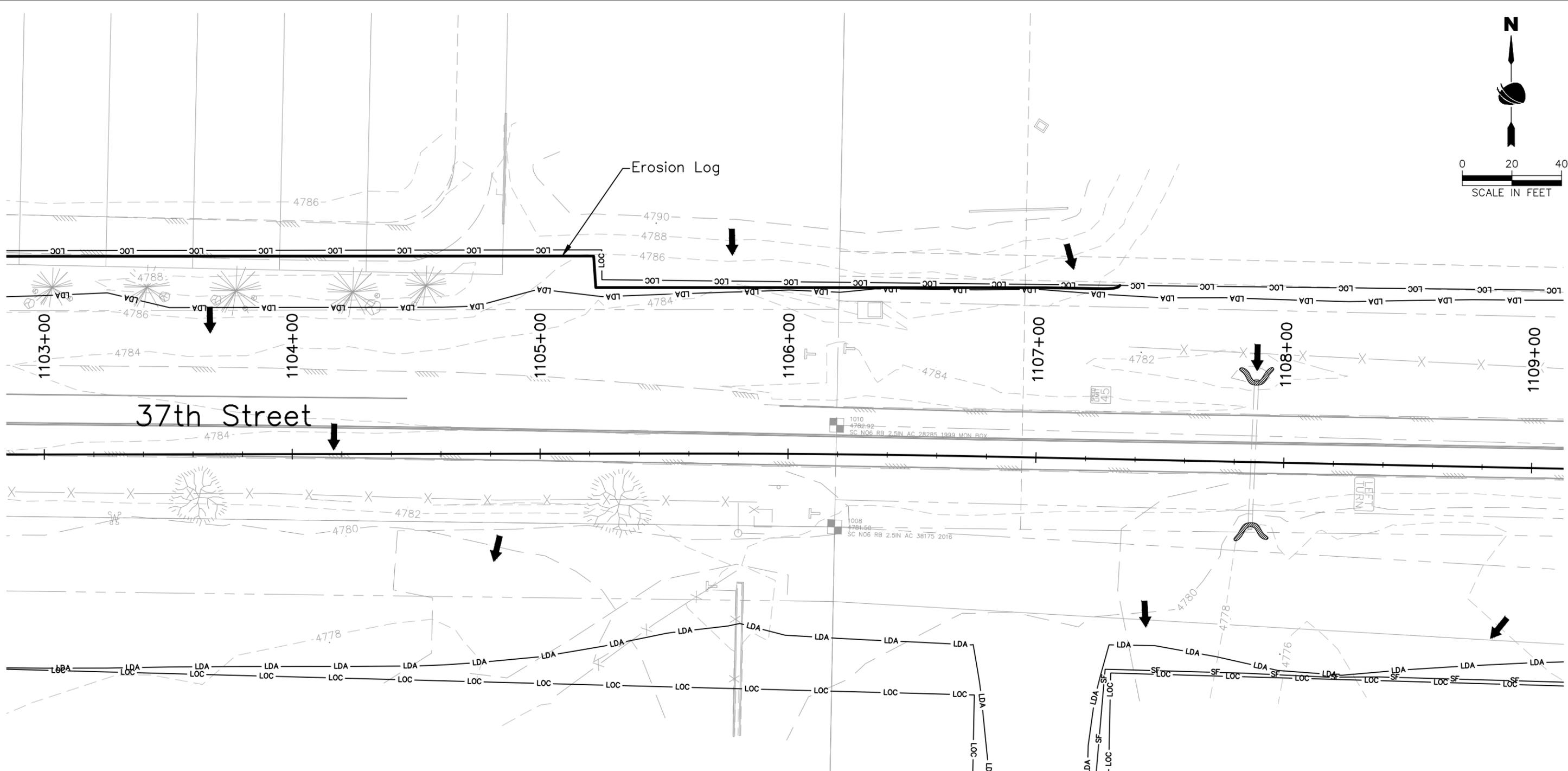
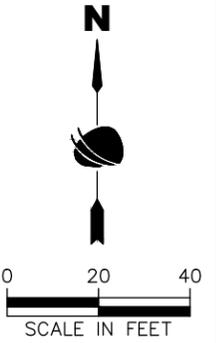


<b>As Constructed</b>
No Revisions:
Revised:
Void:

<b>37TH STREET WIDENING PHASE 2A STORMWATER MANAGEMENT PLAN INITIAL SWMP SITE MAP</b>	
Designer: J. Kirkling	Structure Numbers
Detailer: J. Jensen	
Sheet Subset: SWMP	Subset Sheets: 8 of 21

<b>Project No.</b>
37TH STREET 2A
Drawing Number ENVI-008
Sheet Number 69

FOR CONSTRUCTION 2/24/2024



INITIAL SWMP LEGEND:	
SYMBOL	DESCRIPTION (PROPOSED QUANTITY)
11+00	ROADWAY STATIONING
-LDA-	LIMITS OF DISTURBANCE
-LOC-	LIMITS OF CONSTRUCTION
- - -	TOE OF FILL
- - -	TOP OF CUT
→	FLOW ARROW (DIRECTION OF FLOW)
U	PIPE EROSION LOG
-PF-	PLASTIC FENCE
—	EROSION LOG (TYPE I)(12 INCH)
—	STORM DRAIN INLET PROTECTION (TYPE I)(84 INCH)
□	STORM DRAIN INLET PROTECTION (TYPE II)
▨	AGGREGATE BAG
-SF-	SILT FENCE

- Notes:**
1. Perimeter controls shall be installed prior to start of construction.
  2. Vehicle Tracking Pads shall be located by the contractor.
  3. Staging area(s) shall be located by the contractor with City of Evans approval.
  4. Aggregate bags shall be used for stockpile protection and other miscellaneous protection to prevent discharges to state waters.
  5. Control Measures are not drawn to scale and locations are approximate.

Plot Date: 2/7/2024 1:01 AM Plotted By: Sarah Henkle  
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Print Date: 2/7/2024  
 File Name: ENVI P2A-007 INITIAL SWMP PLAN.DWG  
 Horiz. Scale: As Noted      Vert. Scale: N/A

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Sheet Revisions		
Date	Comments	Initials

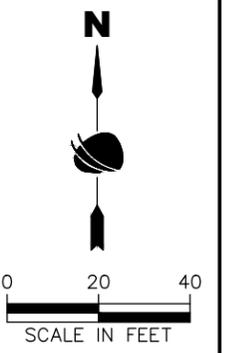


<b>As Constructed</b>
No Revisions:
Revised:
Void:

<b>37TH STREET WIDENING PHASE 2A STORMWATER MANAGEMENT PLAN INITIAL SWMP SITE MAP</b>	
Designer: J. Kirkling	Structure Numbers
Detailer: J. Jensen	
Sheet Subset: SWMP	Subset Sheets: 9 of 21

<b>Project No.</b>
37TH STREET 2A
Drawing Number ENVI-009
Sheet Number 70

FOR CONSTRUCTION 2/24/2024



**INITIAL SWMP LEGEND:**

SYMBOL	DESCRIPTION (PROPOSED QUANTITY)	SYMBOL	DESCRIPTION
11+00	ROADWAY STATIONING	—PF—	PLASTIC FENCE
—LDA—	LIMITS OF DISTURBANCE	—	EROSION LOG (TYPE I)(12 INCH)
—LOC—	LIMITS OF CONSTRUCTION	—	STORM DRAIN INLET PROTECTION (TYPE I)(84 INCH)
---	TOE OF FILL	—	STORM DRAIN INLET PROTECTION (TYPE II)
---	TOP OF CUT	▨	AGGREGATE BAG
→	FLOW ARROW (DIRECTION OF FLOW)	—SF—	SILT FENCE
⤵	PIPE EROSION LOG		

- Notes:**
1. Perimeter controls shall be installed prior to start of construction.
  2. Vehicle Tracking Pads shall be located by the contractor.
  3. Staging area(s) shall be located by the contractor with City of Evans approval.
  4. Aggregate bags shall be used for stockpile protection and other miscellaneous protection to prevent discharges to state waters.
  5. Control Measures are not drawn to scale and locations are approximate.



Print Date: 2/7/2024  
 File Name: ENVI P2A-007 INITIAL SWMP PLAN.DWG  
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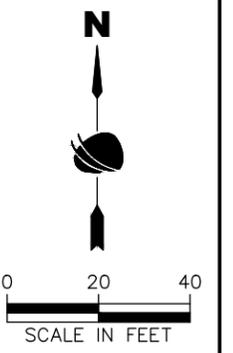
Sheet Revisions		
Date	Comments	Initials



As Constructed	37TH STREET WIDENING PHASE 2A STORMWATER MANAGEMENT PLAN INITIAL SWMP SITE MAP		Project No.
No Revisions:			37TH STREET 2A
Revised:	Designer: J. Kirkling	Structure Numbers	Drawing Number ENVI-010
Void:	Detailer: J. Jensen		Sheet Number 71
Sheet Subset: SWMP		Subset Sheets: 10 of 21	

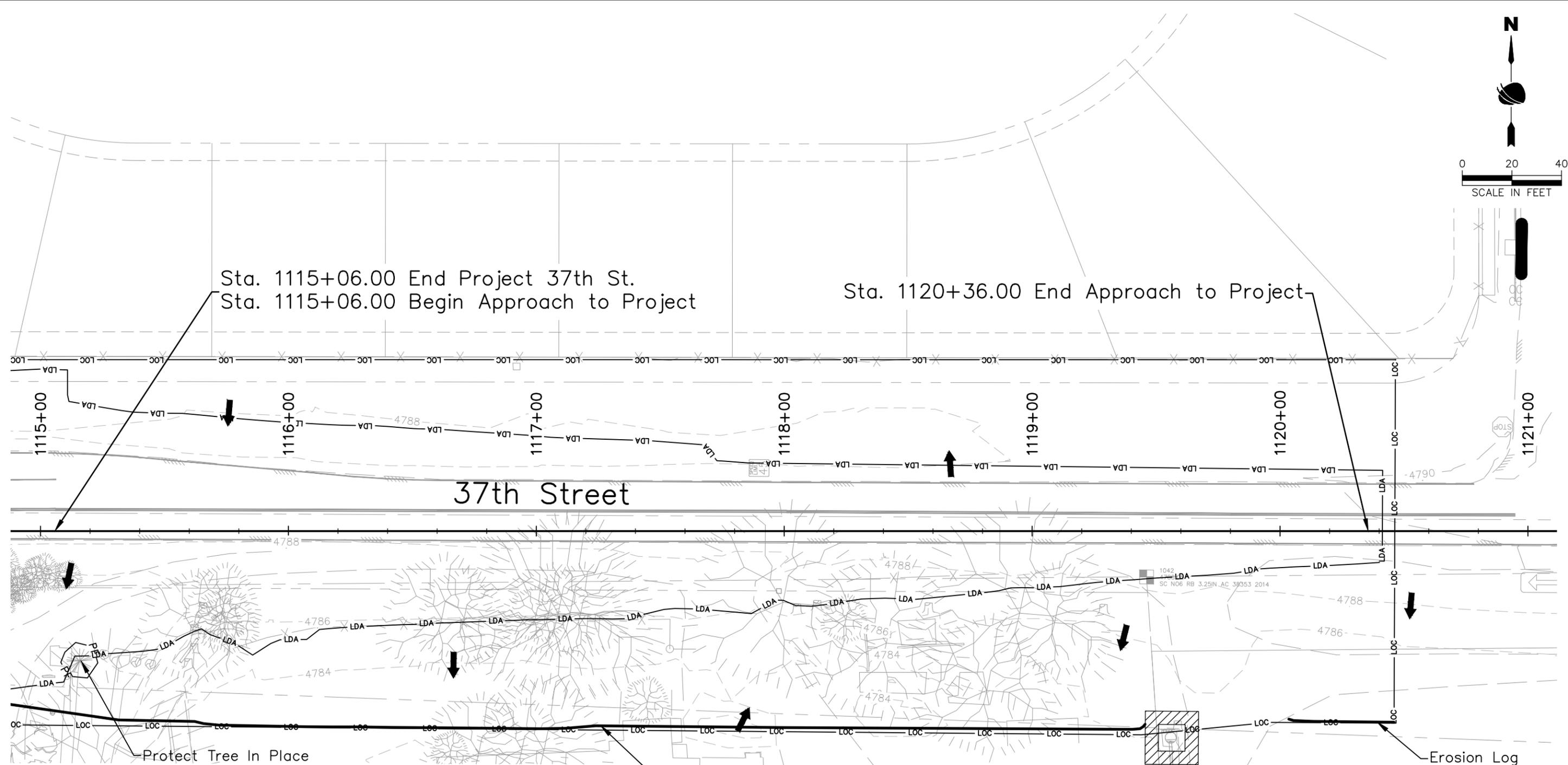
Plot Date: 2/7/2024 11:01 AM    Plotted By: Sarah Henkle  
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FOR CONSTRUCTION 2/24/2024



Sta. 1115+06.00 End Project 37th St.  
Sta. 1115+06.00 Begin Approach to Project

Sta. 1120+36.00 End Approach to Project



**INITIAL SWMP LEGEND:**

SYMBOL	DESCRIPTION (PROPOSED QUANTITY)	SYMBOL	DESCRIPTION
11+00	ROADWAY STATIONING	-PF-	PLASTIC FENCE
-LDA-	LIMITS OF DISTURBANCE	—	EROSION LOG (TYPE I)(12 INCH)
-LOC-	LIMITS OF CONSTRUCTION	—	STORM DRAIN INLET PROTECTION (TYPE I)(84 INCH)
---	TOE OF FILL	▨	STORM DRAIN INLET PROTECTION (TYPE II)
---	TOP OF CUT	▨	AGGREGATE BAG
→	FLOW ARROW (DIRECTION OF FLOW)	-SF-	SILT FENCE
U	PIPE EROSION LOG		

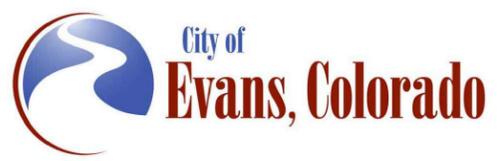
- Notes:**
1. Perimeter controls shall be installed prior to start of construction.
  2. Vehicle Tracking Pads shall be located by the contractor.
  3. Staging area(s) shall be located by the contractor with City of Evans approval.
  4. Aggregate bags shall be used for stockpile protection and other miscellaneous protection to prevent discharges to state waters.
  5. Control Measures are not drawn to scale and locations are approximate.



Print Date: 2/7/2024  
 File Name: ENVI P2A-007 INITIAL SWMP PLAN.DWG  
 Horiz. Scale: As Noted    Vert. Scale: N/A

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Sheet Revisions		
Date	Comments	Initials



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Revised:
Void:

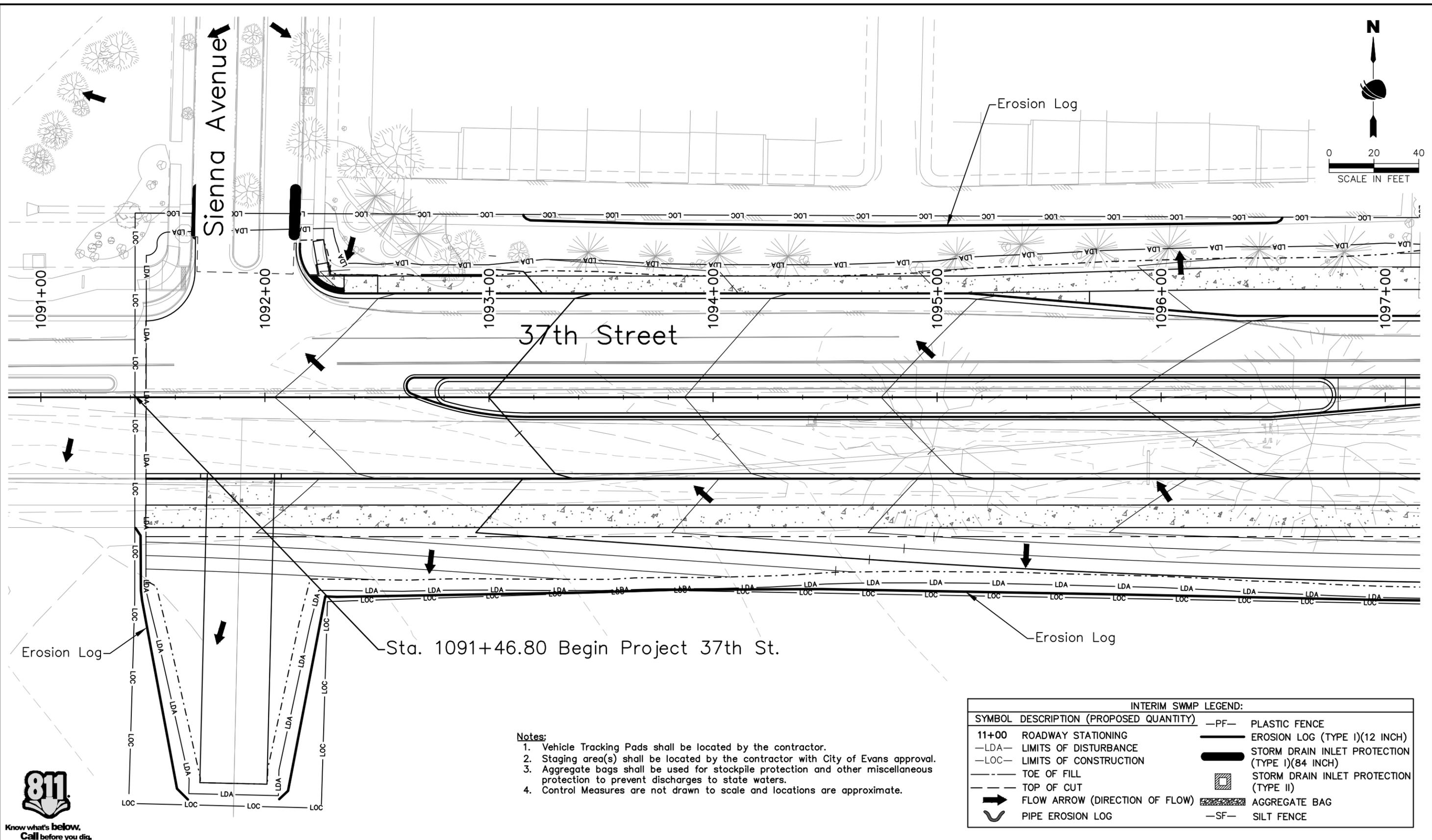
37TH STREET WIDENING PHASE 2A STORMWATER MANAGEMENT PLAN INITIAL SWMP SITE MAP	
Designer: J. Kirkling	Structure Numbers
Detailer: J. Jensen	
Sheet Subset: SWMP	Subset Sheets: 11 of 21

Project No.
37TH STREET 2A
Drawing Number ENVI-011
Sheet Number 72

FOR CONSTRUCTION 2/24/2024

Plot Date: 2/7/2024 11:01 AM Plotted By: Sarah Henkle  
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Plot Date: 2/7/2024 11:02 AM Plotted By: Sarah Heimler  
 C:\PROJECTS\WASTE PROJECTS\37TH ST AND 47TH AVE PLAN\2024\COMPUTER DESIGN FILES\ENV P2A-012 INTERIM SWMP PLAN.DWG



- Notes:**
1. Vehicle Tracking Pads shall be located by the contractor.
  2. Staging area(s) shall be located by the contractor with City of Evans approval.
  3. Aggregate bags shall be used for stockpile protection and other miscellaneous protection to prevent discharges to state waters.
  4. Control Measures are not drawn to scale and locations are approximate.

INTERIM SWMP LEGEND:	
SYMBOL	DESCRIPTION (PROPOSED QUANTITY)
11+00	ROADWAY STATIONING
—LDA—	LIMITS OF DISTURBANCE
—LOC—	LIMITS OF CONSTRUCTION
---	TOE OF FILL
- - -	TOP OF CUT
➔	FLOW ARROW (DIRECTION OF FLOW)
⤵	PIPE EROSION LOG
—PF—	PLASTIC FENCE
—	EROSION LOG (TYPE I)(12 INCH)
▬	STORM DRAIN INLET PROTECTION (TYPE I)(84 INCH)
▣	STORM DRAIN INLET PROTECTION (TYPE II)
▨	AGGREGATE BAG
—SF—	SILT FENCE



Print Date: 2/7/2024  
 File Name: ENVI P2A-012 INTERIM SWMP PLAN.DWG  
 Horiz. Scale: As Noted      Vert. Scale: N/A

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Date	Comments	Initials



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No Revisions:  
 Revised:  
 Void:

**37TH STREET WIDENING PHASE 2A  
 STORMWATER MANAGEMENT PLAN  
 INTERIM SWMP SITE MAP**

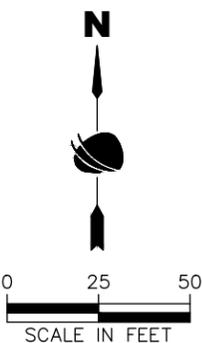
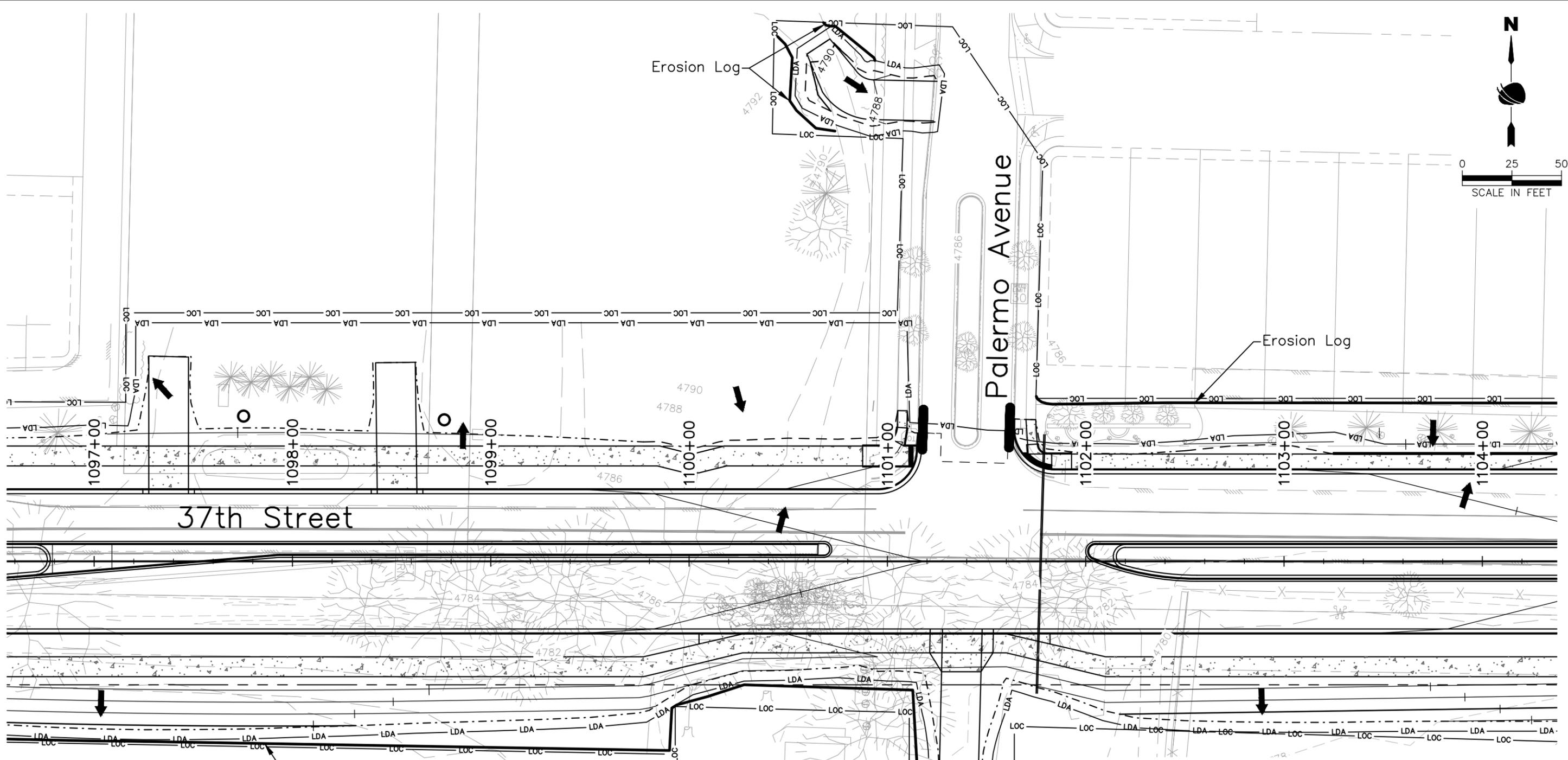
Designer: J. Kirkling  
 Detailer: J. Jensen  
 Sheet Subset: SWMP

Structure Numbers:  
 Subset Sheets: 12 of 21

**Project No.**  
 37TH STREET 2A

Drawing Number ENVI-012  
 Sheet Number 73

FOR CONSTRUCTION 2/24/2024



- Notes:**
1. Vehicle Tracking Pads shall be located by the contractor.
  2. Staging area(s) shall be located by the contractor with City of Evans approval.
  3. Aggregate bags shall be used for stockpile protection and other miscellaneous protection to prevent discharges to state waters.
  4. Control Measures are not drawn to scale and locations are approximate.

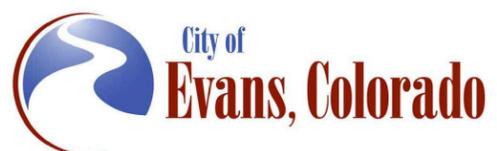
INTERIM SWMP LEGEND:	
SYMBOL	DESCRIPTION (PROPOSED QUANTITY)
11+00	ROADWAY STATIONING
—LDA—	LIMITS OF DISTURBANCE
—LOC—	LIMITS OF CONSTRUCTION
---	TOE OF FILL
---	TOP OF CUT
➔	FLOW ARROW (DIRECTION OF FLOW)
⤿	PIPE EROSION LOG
—PF—	PLASTIC FENCE
—	EROSION LOG (TYPE I)(12 INCH)
▬	STORM DRAIN INLET PROTECTION (TYPE I)(84 INCH)
▩	STORM DRAIN INLET PROTECTION (TYPE II)
▨	AGGREGATE BAG
—SF—	SILT FENCE



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Print Date: 2/7/2024	
File Name: ENVI P2A-012 INTERIM SWMP PLAN.DWG	
Horiz. Scale: As Noted	Vert. Scale: N/A
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Sheet Revisions		
Date	Comments	Initials



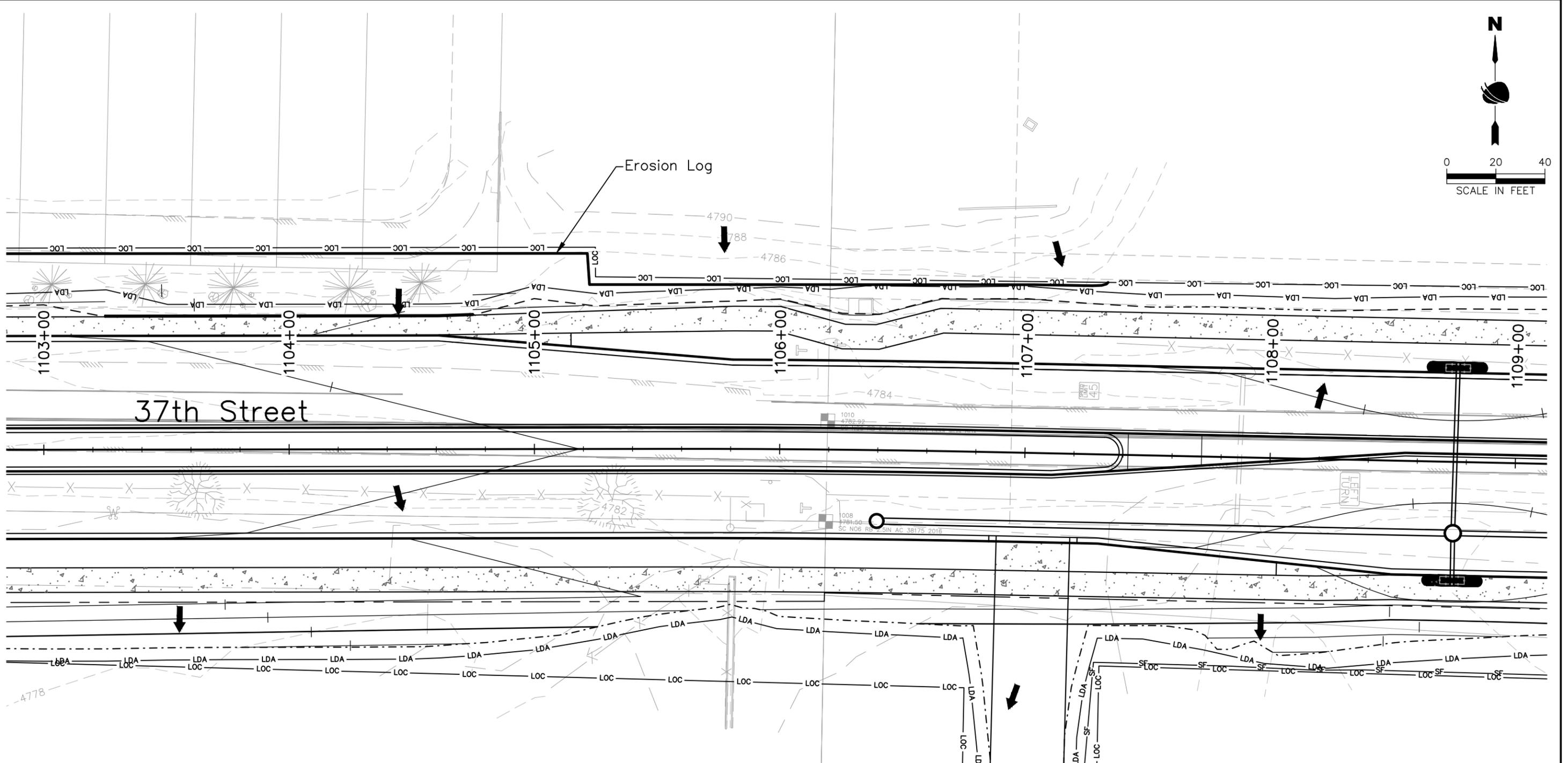
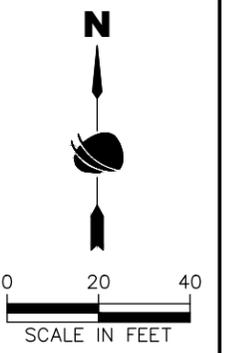
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No Revisions:
Revised:
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<b>37TH STREET WIDENING PHASE 2A STORMWATER MANAGEMENT PLAN INTERIM SWMP SITE MAP</b>	
Designer: J. Kirkling	Structure Numbers
Detailer: J. Jensen	
Sheet Subset: SWMP	Subset Sheets: 13 of 21

<b>Project No.</b>
37TH STREET 2A
Drawing Number ENVI-013
Sheet Number 74

Plot Date: 2/7/2024 11:02 AM Plotted By: Sarah Hemler  
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FOR CONSTRUCTION 2/24/2024



INTERIM SWMP LEGEND:	
SYMBOL	DESCRIPTION (PROPOSED QUANTITY)
11+00	ROADWAY STATIONING
—LDA—	LIMITS OF DISTURBANCE
—LOC—	LIMITS OF CONSTRUCTION
---	TOE OF FILL
- - -	TOP OF CUT
→	FLOW ARROW (DIRECTION OF FLOW)
↘	PIPE EROSION LOG
—PF—	PLASTIC FENCE
—	EROSION LOG (TYPE I)(12 INCH)
—	STORM DRAIN INLET PROTECTION (TYPE I)(84 INCH)
▣	STORM DRAIN INLET PROTECTION (TYPE II)
▨	AGGREGATE BAG
—SF—	SILT FENCE

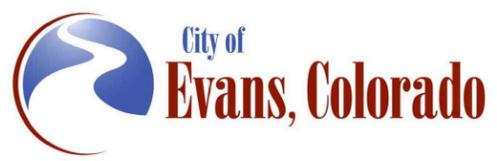
- Notes:**
1. Vehicle Tracking Pads shall be located by the contractor.
  2. Staging area(s) shall be located by the contractor with City of Evans approval.
  3. Aggregate bags shall be used for stockpile protection and other miscellaneous protection to prevent discharges to state waters.
  4. Control Measures are not drawn to scale and locations are approximate.



Print Date: 2/7/2024  
 File Name: ENVI P2A-012 INTERIM SWMP PLAN.DWG  
 Horiz. Scale: As Noted    Vert. Scale: N/A

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Sheet Revisions		
Date	Comments	Initials



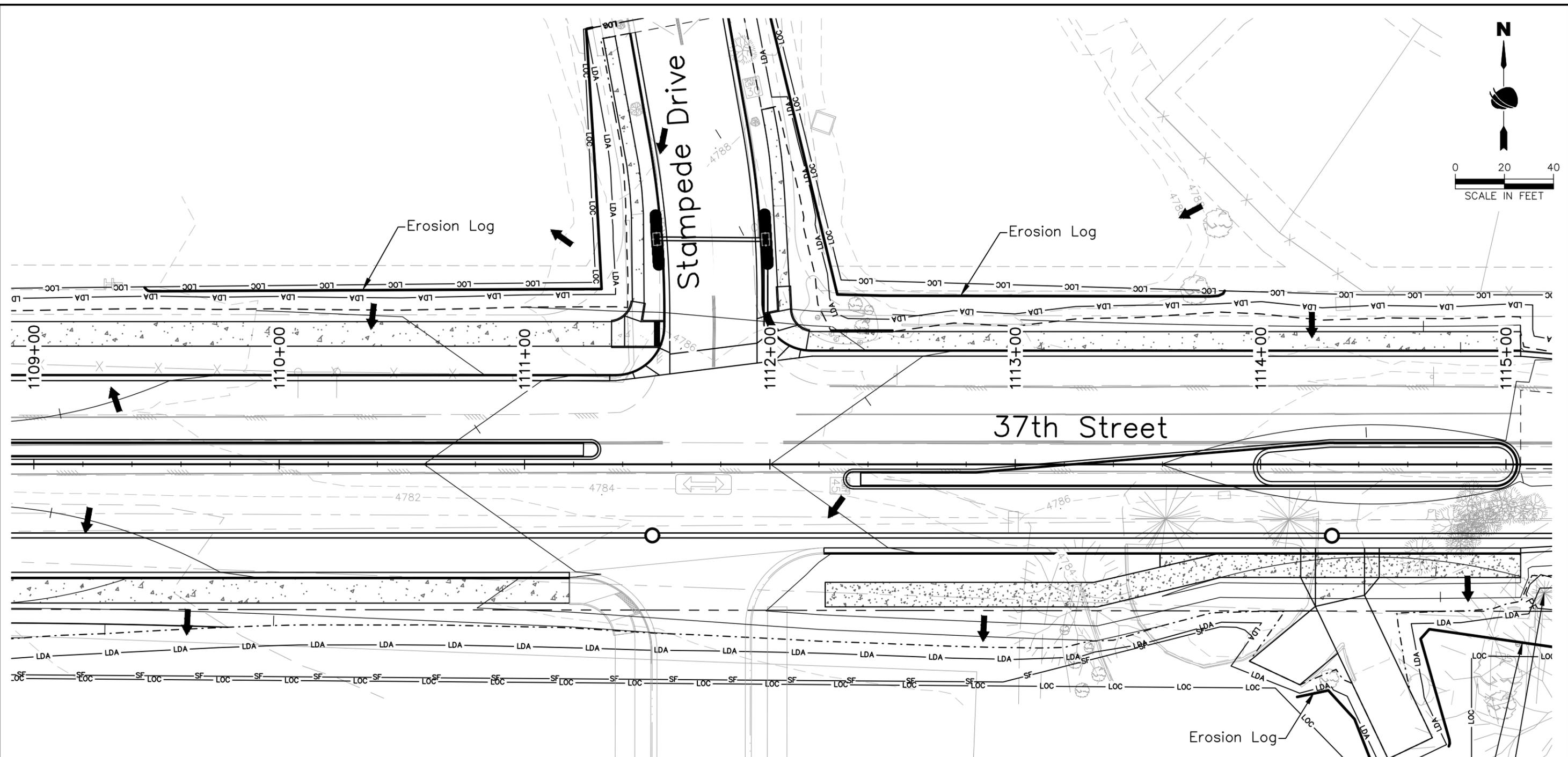
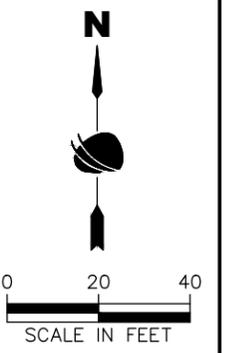
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No Revisions:
Revised:
Void:

<b>37TH STREET WIDENING PHASE 2A STORMWATER MANAGEMENT PLAN INTERIM SWMP SITE MAP</b>	
Designer: J. Kirkling	Structure Numbers
Detailer: J. Jensen	
Sheet Subset: SWMP	Subset Sheets: 14 of 21

<b>Project No.</b>
37TH STREET 2A
Drawing Number ENVI-014
Sheet Number 75

Plot Date: 2/7/2024 11:02 AM    Plotted By: Sarah Hemler  
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FOR CONSTRUCTION 2/24/2024



INTERIM SWMP LEGEND:	
SYMBOL	DESCRIPTION (PROPOSED QUANTITY)
11+00	ROADWAY STATIONING
-LDA-	LIMITS OF DISTURBANCE
-LOC-	LIMITS OF CONSTRUCTION
---	TOE OF FILL
- - -	TOP OF CUT
→	FLOW ARROW (DIRECTION OF FLOW)
⤵	PIPE EROSION LOG
-PF-	PLASTIC FENCE
—	EROSION LOG (TYPE I)(12 INCH)
—	STORM DRAIN INLET PROTECTION (TYPE I)(84 INCH)
▨	STORM DRAIN INLET PROTECTION (TYPE II)
▨	AGGREGATE BAG
-SF-	SILT FENCE

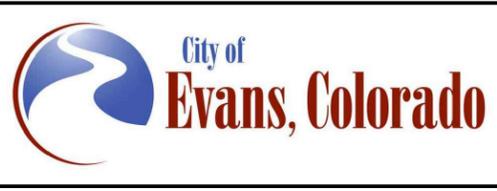
- Notes:**
1. Vehicle Tracking Pads shall be located by the contractor.
  2. Staging area(s) shall be located by the contractor with City of Evans approval.
  3. Aggregate bags shall be used for stockpile protection and other miscellaneous protection to prevent discharges to state waters.
  4. Control Measures are not drawn to scale and locations are approximate.



Plot Date: 2/7/2024 11:02 AM Plotted By: Sarah Hemler  
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Print Date: 2/7/2024  
 File Name: ENVI P2A-012 INTERIM SWMP PLAN.DWG  
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Sheet Revisions		
Date	Comments	Initials



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 No Revisions:  
 Revised:  
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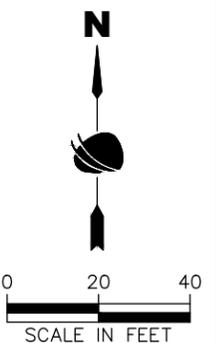
**37TH STREET WIDENING PHASE 2A  
 STORMWATER MANAGEMENT PLAN  
 INTERIM SWMP SITE MAP**

Designer: J. Kirkling  
 Detailer: J. Jensen  
 Sheet Subset: SWMP

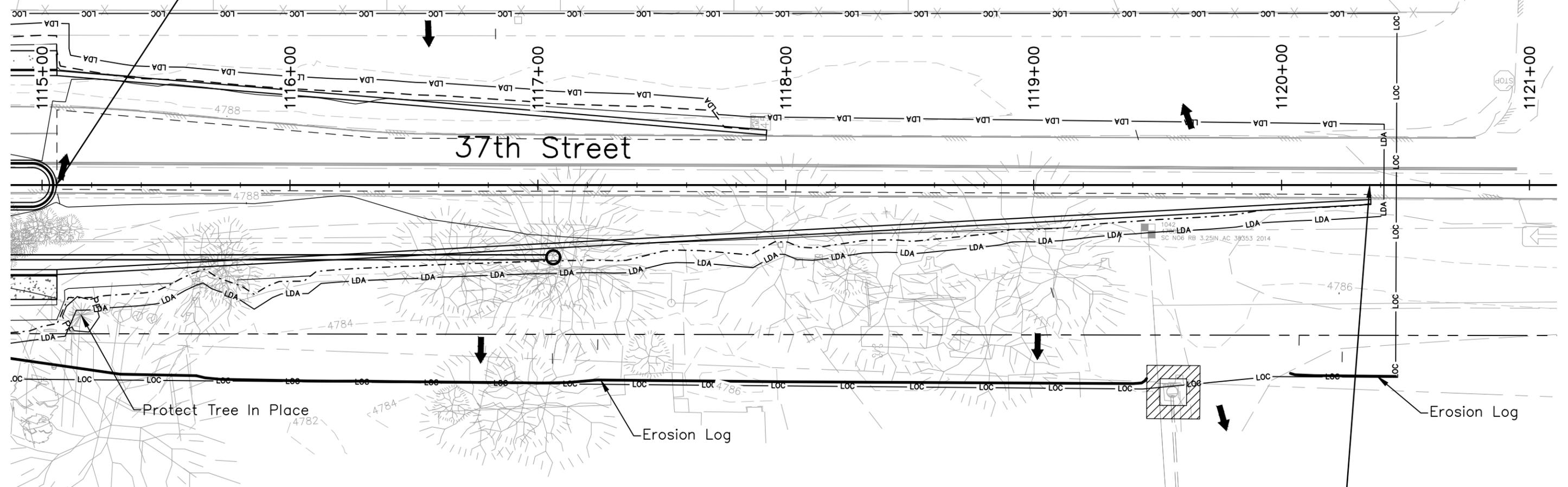
Structure Numbers  
 Subset Sheets: 15 of 21

**Project No.**  
 37TH STREET 2A  
 Drawing Number ENVI-015  
 Sheet Number 76

FOR CONSTRUCTION 2/24/2024



Sta. 1115+06.00 End Project 37th St.  
 Sta. 1115+06.00 Begin Approach to Project



Sta. 1120+36.00 End Approach to Project

INTERIM SWMP LEGEND:			
SYMBOL	DESCRIPTION (PROPOSED QUANTITY)	SYMBOL	DESCRIPTION
11+00	ROADWAY STATIONING	—PF—	PLASTIC FENCE
—LDA—	LIMITS OF DISTURBANCE	—	EROSION LOG (TYPE I)(12 INCH)
—LOC—	LIMITS OF CONSTRUCTION	—	STORM DRAIN INLET PROTECTION (TYPE I)(84 INCH)
---	TOE OF FILL	□	STORM DRAIN INLET PROTECTION (TYPE II)
---	TOP OF CUT	▨	AGGREGATE BAG
→	FLOW ARROW (DIRECTION OF FLOW)	—SF—	SILT FENCE
U	PIPE EROSION LOG		

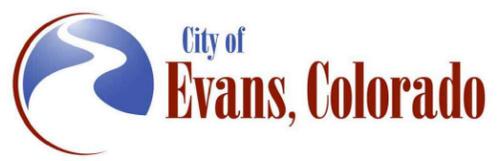
- Notes:**
1. Vehicle Tracking Pads shall be located by the contractor.
  2. Staging area(s) shall be located by the contractor with City of Evans approval.
  3. Aggregate bags shall be used for stockpile protection and other miscellaneous protection to prevent discharges to state waters.
  4. Control Measures are not drawn to scale and locations are approximate.



Print Date: 2/7/2024  
 File Name: ENVI P2A-012 INTERIM SWMP PLAN.DWG  
 Horiz. Scale: As Noted    Vert. Scale: N/A

**RockSol** Consulting Group, Inc.  
 12076 Grant Street  
 Thornton, CO 80241  
 Ph: (303) 962-9300  
 Fax: (303) 962-9350

Sheet Revisions		
Date	Comments	Initials



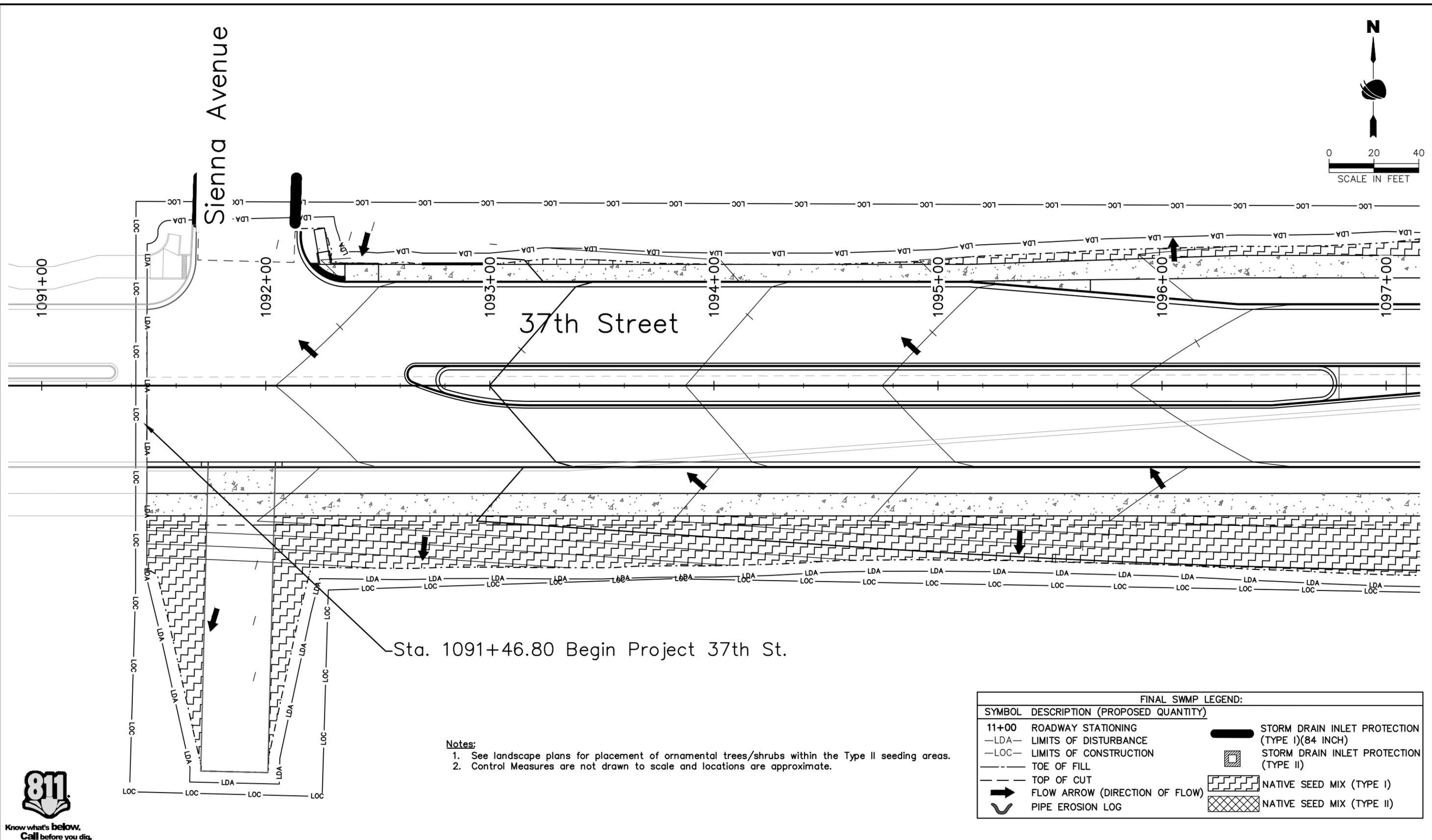
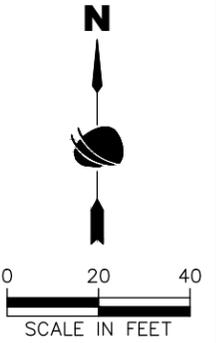
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No Revisions:
Revised:
Void:

<b>37TH STREET WIDENING PHASE 2A STORMWATER MANAGEMENT PLAN INTERIM SWMP SITE MAP</b>	
Designer: J. Kirkling	Structure Numbers
Detailer: J. Jensen	
Sheet Subset: SWMP	Subset Sheets: 16 of 21

<b>Project No.</b>
37TH STREET 2A
Drawing Number ENVI-016
Sheet Number 77

FOR CONSTRUCTION 2/24/2024

Plot Date: 2/7/2024 11:02 AM Plotted By: Sarah Hemler  
 C:\Q-PROJECTS\WATER PROJECTS\37001\EVANS\37TH ST AND 47TH AVE PLAN\2024\COMPUTER DESIGN FILES\PP - PHASE 2A\800\_SHEET FILES\ENV P2A-012 INTERIM SWMP PLAN.DWG



Sta. 1091+46.80 Begin Project 37th St.

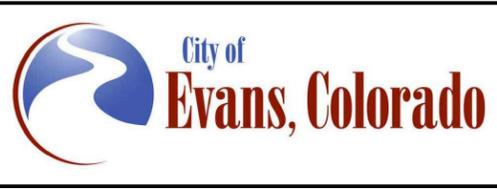
- Notes:**
1. See landscape plans for placement of ornamental trees/shrubs within the Type II seeding areas.
  2. Control Measures are not drawn to scale and locations are approximate.

FINAL SWMP LEGEND:	
SYMBOL	DESCRIPTION (PROPOSED QUANTITY)
11+00	ROADWAY STATIONING
—LDA—	LIMITS OF DISTURBANCE
—LOC—	LIMITS OF CONSTRUCTION
---	TOE OF FILL
---	TOP OF CUT
➔	FLOW ARROW (DIRECTION OF FLOW)
U	PIPE EROSION LOG
	STORM DRAIN INLET PROTECTION (TYPE I)(84 INCH)
	STORM DRAIN INLET PROTECTION (TYPE II)
	NATIVE SEED MIX (TYPE I)
	NATIVE SEED MIX (TYPE II)



Print Date: 2/7/2024	
File Name: ENVI P2A-017 FINAL SWMP PLAN.DWG	
Horiz. Scale: As Noted	Vert. Scale: N/A
	12076 Grant Street Thornton, CO 80241 Ph: (303) 962-9300 Fax: (303) 962-9350

Sheet Revisions		
Date	Comments	Initials



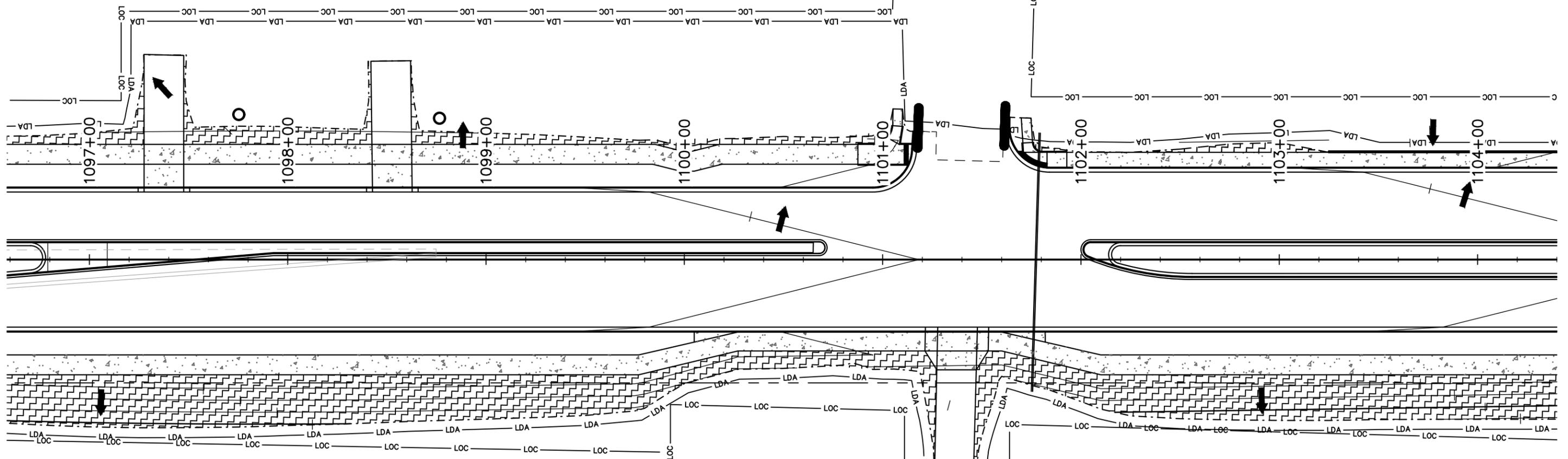
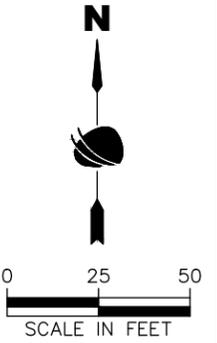
<b>As Constructed</b>
No Revisions:
Revised:
Void:

<b>37TH STREET WIDENING PHASE 2A STORMWATER MANAGEMENT PLAN FINAL SWMP SITE MAP</b>	
Designer: J. Kirkling	Structure Numbers
Detailer: J. Jensen	
Sheet Subset: SWMP	Subset Sheets: 17 of 21

<b>Project No.</b>
37TH STREET 2A
Drawing Number ENVI-017
Sheet Number 78

FOR CONSTRUCTION 2/24/2024

Plot Date: 2/7/2024 11:02 AM Plotted By: Sarah Hemler  
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**Notes:**

1. See landscape plans for placement of ornamental trees/shrubs within the Type II seeding areas.
2. Control Measures are not drawn to scale and locations are approximate.

FINAL SWMP LEGEND:	
SYMBOL	DESCRIPTION (PROPOSED QUANTITY)
11+00	ROADWAY STATIONING
-LDA-	LIMITS OF DISTURBANCE
-LOC-	LIMITS OF CONSTRUCTION
---	TOE OF FILL
---	TOP OF CUT
→	FLOW ARROW (DIRECTION OF FLOW)
⤿	PIPE EROSION LOG
	STORM DRAIN INLET PROTECTION (TYPE I)(84 INCH)
	STORM DRAIN INLET PROTECTION (TYPE II)
	NATIVE SEED MIX (TYPE I)
	NATIVE SEED MIX (TYPE II)

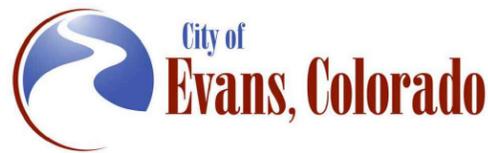


Know what's below.  
Call before you dig.

Plot Date: 2/7/2024 11:02 AM Plotted By: Sarah Hemler  
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Print Date: 2/7/2024	
File Name: ENVI P2A-017 FINAL SWMP PLAN.DWG	
Horiz. Scale: As Noted	Vert. Scale: N/A
	12076 Grant Street Thornton, CO 80241 Ph: (303) 962-9300 Fax: (303) 962-9350

Sheet Revisions		
Date	Comments	Initials

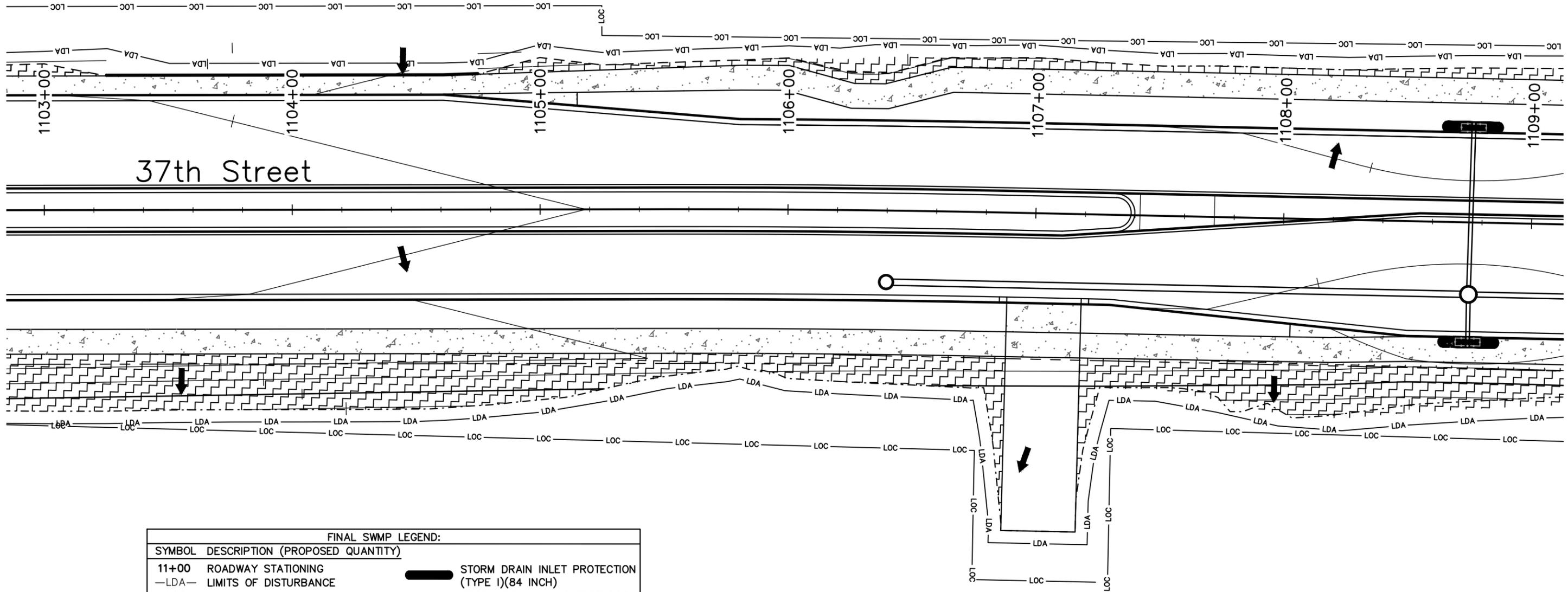
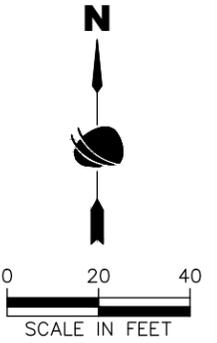


<b>As Constructed</b>
No Revisions:
Revised:
Void:

<b>37TH STREET WIDENING PHASE 2A STORMWATER MANAGEMENT PLAN FINAL SWMP SITE MAP</b>	
Designer: J. Kirkling	Structure Numbers
Detailer: J. Jensen	
Sheet Subset: SWMP	Subset Sheets: 18 of 21

<b>Project No.</b>
37TH STREET 2A
Drawing Number ENVI-018
Sheet Number 79

FOR CONSTRUCTION 2/24/2024



FINAL SWMP LEGEND:	
SYMBOL	DESCRIPTION (PROPOSED QUANTITY)
11+00	ROADWAY STATIONING
—LDA—	LIMITS OF DISTURBANCE
—LOC—	LIMITS OF CONSTRUCTION
---	TOE OF FILL
- - -	TOP OF CUT
→	FLOW ARROW (DIRECTION OF FLOW)
⤵	PIPE EROSION LOG
	STORM DRAIN INLET PROTECTION (TYPE I)(84 INCH)
	STORM DRAIN INLET PROTECTION (TYPE II)
	NATIVE SEED MIX (TYPE I)
	NATIVE SEED MIX (TYPE II)

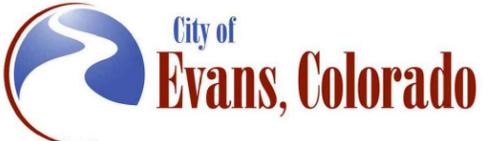
- Notes:**
- See landscape plans for placement of ornamental trees/shrubs within the Type II seeding areas.
  - Control Measures are not drawn to scale and locations are approximate.



Know what's below.  
Call before you dig.

Print Date: 2/7/2024
File Name: ENVI P2A-017 FINAL SWMP PLAN.DWG
Horiz. Scale: As Noted      Vert. Scale: N/A
12076 Grant Street Thornton, CO 80241 Ph: (303) 962-9300 Fax: (303) 962-9350

Sheet Revisions		
Date	Comments	Initials



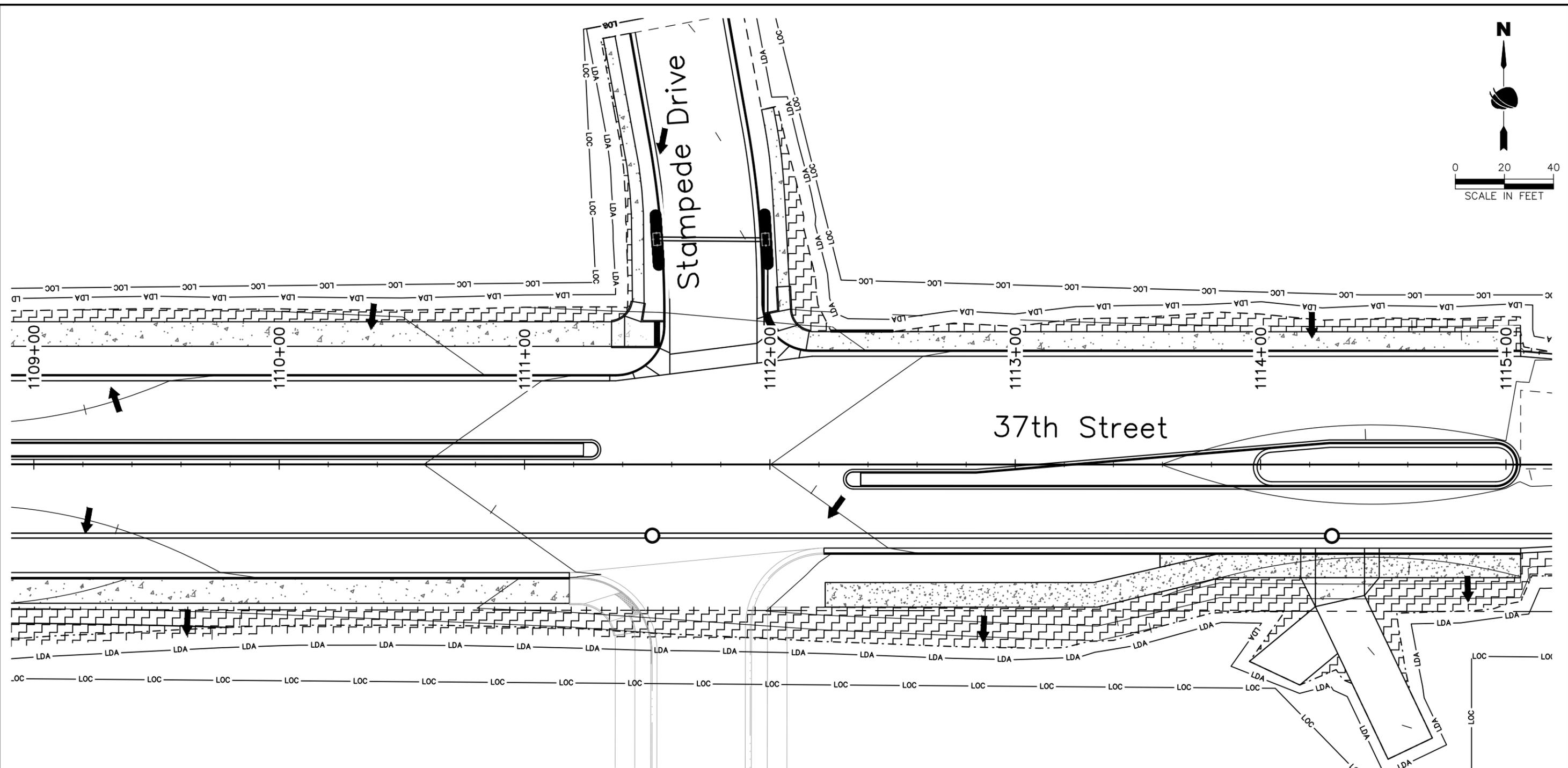
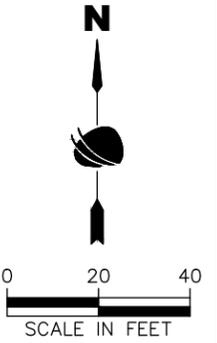
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No Revisions:
Revised:
Void:

<b>37TH STREET WIDENING PHASE 2A STORMWATER MANAGEMENT PLAN FINAL SWMP SITE MAP</b>	
Designer: J. Kirkling	Structure Numbers
Detailer: J. Jensen	
Sheet Subset: SWMP	Subset Sheets: 19 of 21

<b>Project No.</b>
37TH STREET 2A
Drawing Number ENVI-019
Sheet Number 80

Plot Date: 2/7/2024 11:02 AM    Plotted By: Sarah Hemler  
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FOR CONSTRUCTION 2/24/2024



FINAL SWMP LEGEND:	
SYMBOL	DESCRIPTION (PROPOSED QUANTITY)
11+00	ROADWAY STATIONING
—LDA—	LIMITS OF DISTURBANCE
—LOC—	LIMITS OF CONSTRUCTION
---	TOE OF FILL
- - -	TOP OF CUT
→	FLOW ARROW (DIRECTION OF FLOW)
⤵	PIPE EROSION LOG
▬	STORM DRAIN INLET PROTECTION (TYPE I)(84 INCH)
▣	STORM DRAIN INLET PROTECTION (TYPE II)
▨	NATIVE SEED MIX (TYPE I)
▩	NATIVE SEED MIX (TYPE II)

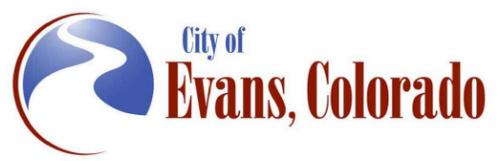
- Notes:**
1. See landscape plans for placement of ornamental trees/shrubs within the Type II seeding areas.
  2. Control Measures are not drawn to scale and locations are approximate.



Plot Date: 2/7/2024 11:02 AM Plotted By: Sarah Henner  
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	12076 Grant Street Thornton, CO 80241 Ph: (303) 962-9300 Fax: (303) 962-9350

Sheet Revisions		
Date	Comments	Initials

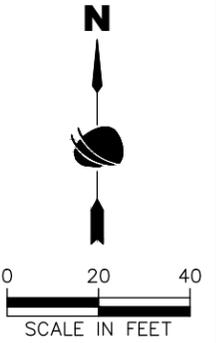


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Revised:
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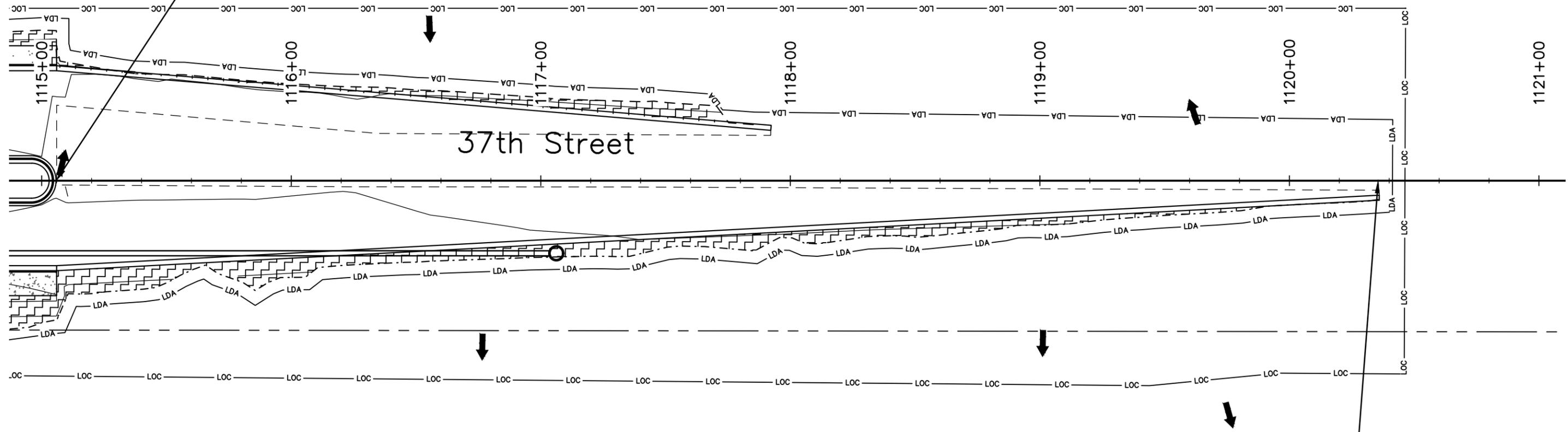
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Designer: J. Kirkling	Structure Numbers
Detailer: J. Jensen	
Sheet Subset: SWMP	Subset Sheets: 20 of 21

<b>Project No.</b>
37TH STREET 2A
Drawing Number ENVI-020
Sheet Number 81

FOR CONSTRUCTION 2/24/2024



Sta. 1115+06.00 End Project 37th St.  
 Sta. 1115+06.00 Begin Approach to Project



Sta. 1120+36.00 End Approach to Project

FINAL SWMP LEGEND:		
SYMBOL	DESCRIPTION (PROPOSED QUANTITY)	
11+00	ROADWAY STATIONING	
—LDA—	LIMITS OF DISTURBANCE	STORM DRAIN INLET PROTECTION (TYPE I)(84 INCH)
—LOC—	LIMITS OF CONSTRUCTION	STORM DRAIN INLET PROTECTION (TYPE II)
---	TOE OF FILL	NATIVE SEED MIX (TYPE I)
- - -	TOP OF CUT	NATIVE SEED MIX (TYPE II)
	FLOW ARROW (DIRECTION OF FLOW)	
	PIPE EROSION LOG	

**Notes:**

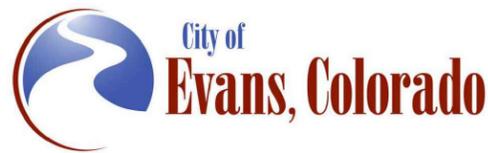
1. See landscape plans for placement of ornamental trees/shrubs within the Type II seeding areas.
2. Control Measures are not drawn to scale and locations are approximate.



Know what's below.  
 Call before you dig.

Print Date: 2/7/2024	
File Name: ENVI P2A-017 FINAL SWMP PLAN.DWG	
Horiz. Scale: As Noted	Vert. Scale: N/A
	12076 Grant Street Thornton, CO 80241 Ph: (303) 962-9300 Fax: (303) 962-9350

Sheet Revisions		
Date	Comments	Initials



<b>As Constructed</b>
No Revisions:
Revised:
Void:

<b>37TH STREET WIDENING PHASE 2A STORMWATER MANAGEMENT PLAN FINAL SWMP SITE MAP</b>	
Designer: J. Kirkling	Structure Numbers
Detailer: J. Jensen	
Sheet Subset: SWMP	Subset Sheets: 21 of 21

<b>Project No.</b>
37TH STREET 2A
Drawing Number ENVI-021
Sheet Number 82

FOR CONSTRUCTION 2/24/2024

Plot Date: 2/7/2024 11:05 AM Plotted By: Sarah Hemler  
 C:\Q-PROJETS\2024\ENVI\PROJECTS\37TH ST AND 47TH AVE PLAN\2024\COMPUTER DESIGN FILES\2A-017 FINAL SWMP PLAN.DWG

**LANDSCAPE SHEET INDEX**

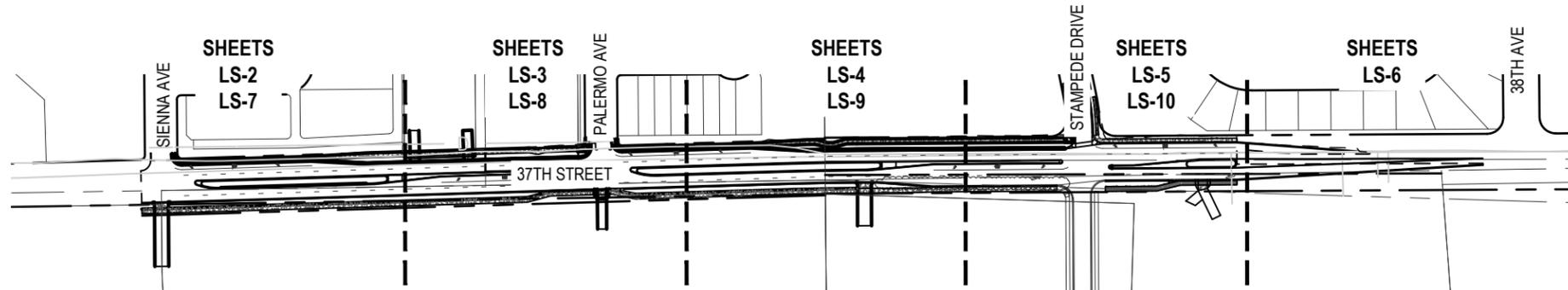
LS-1	LANDSCAPE COVER SHEET
LS-2	LANDSCAPE PLAN
LS-3	LANDSCAPE PLAN
LS-4	LANDSCAPE PLAN
LS-5	LANDSCAPE PLAN
LS-6	LANDSCAPE PLAN
LS-7	MULCH & BOULDER PLAN
LS-8	MULCH & BOULDER PLAN
LS-9	MULCH & BOULDER PLAN
LS-10	MULCH & BOULDER PLAN
LS-11	PLANT LIST
LS-12	LANDSCAPE NOTES
LS-13	LANDSCAPE DETAILS
LS-14	LANDSCAPE DETAILS
LS-15	LANDSCAPE DETAILS
LS-16	LANDSCAPE DETAILS

**SUMMARY OF QUANTITIES**

ITEM #	ITEM DESC.	UNIT	QTY
207-00405	Topsoil (Special) - 4" at Sod and 6" Beds outside of Median, 18" In Median	CY	1915
213-00005	Wood (Organic) Mulch (Brown Western Cedar)(4" Depth)	CY	209
213-00067	Inorganic Mulch (1.5" to 3" Tan River Rock)(3" Depth)(Special)	SF	4409
213-00440	Metal Landscape Border (1/8" x 4")	LF	822
213-00318	18 Inch Root Barrier	LF	2520
213-00705	Landscape Boulder A (Siloam)(4'l. x 2'w. x 2'h.)(Special)	EACH	33
213-00705	Landscape Boulder B (Siloam) (3'l. x 2'w. x 2'h.)(Special)	EACH	36
213-00705	Landscape Boulder C (Siloam) (2'l. x 2'w. x 2'h.)(Special)	EACH	52
214-00220	Deciduous Tree (2" Cal.)	EACH	36
214-00230	Deciduous Ornamental Tree (1.5" Cal.)	EACH	15
214-00350	Deciduous Shrub (5 Gal.)	EACH	116
214-00650	Evergreen Shrub (5 Gal.)	EACH	27
214-00908	Ornamental Grasses and Perennials (1 Gal.)	EACH	185
623-09900	Irrigation System	LS	1



**SHEET KEY MAP**



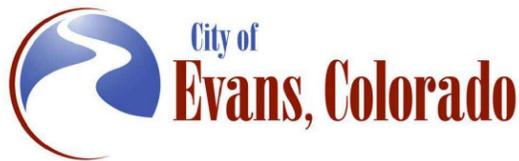
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Print Date: 12-5-2023  
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Sheet Revisions		
Date:	Comments	Init.



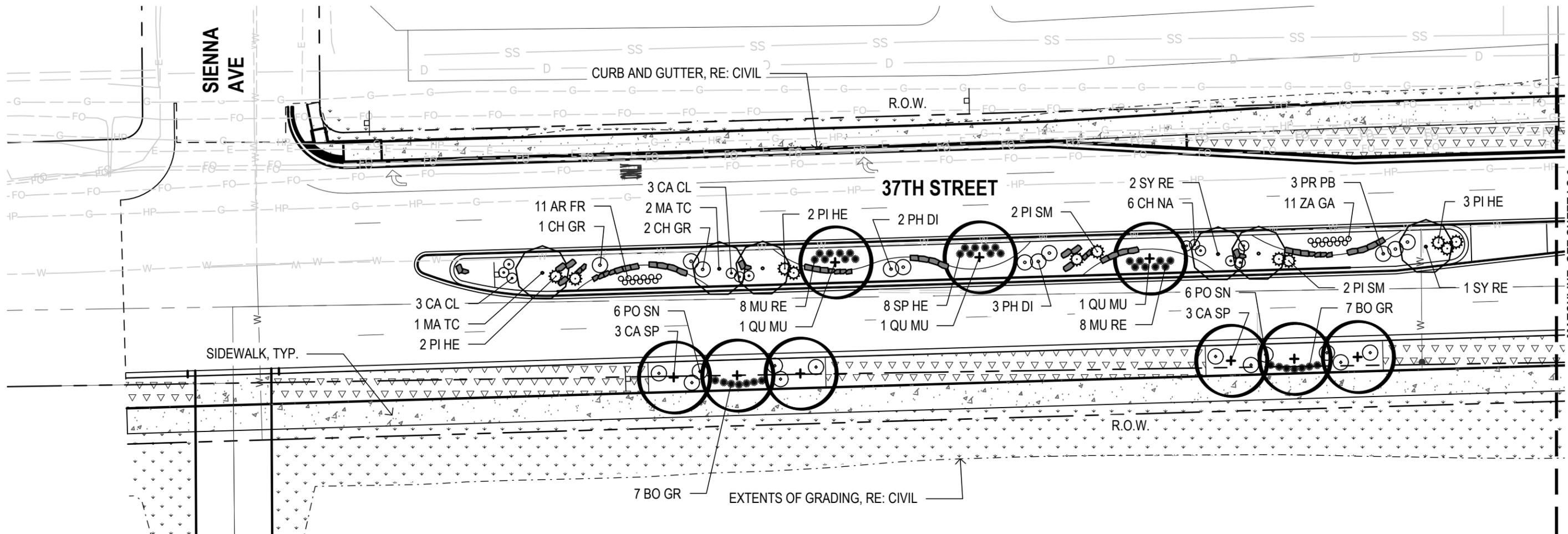
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No Revisions:
Revised:
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37TH STREET WIDENING PHASE 2A LANDSCAPE PLAN	
Designer:	DE
Detailer:	DE
Structure Numbers	
Sheet Subset: LANDSCAPE	Subset Sheets: 1 of 35

Project No.	AQC M415-021
Drawing Number	LS-1
Sheet Number	83

FOR CONSTRUCTION 2/24/2024

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NOTES:  
 CONTRACTOR RESPONSIBLE FOR  
 RESTORING AREAS AFFECTED BY  
 GRADING OR CONSTRUCTION BEYOND  
 THOSE AREAS INDICATED ON THIS PLAN

LEGEND

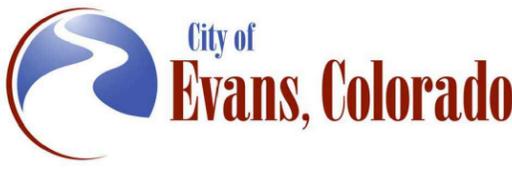
-  DECIDUOUS SHADE TREE
-  ORNAMENTAL TREE
-  DECIDUOUS SHRUB
-  EVERGREEN SHRUBS
-  ORNAMENTAL GRASS
-  PERENNIAL
-  SEED - TYPE 1, RE: SWMP
-  SEED - TYPE 2, RE: SWMP



Print Date: 1/26/2024  
 File Name: 1914\_37TH\_LANDSCAPE\_PLANP2A.DWG  
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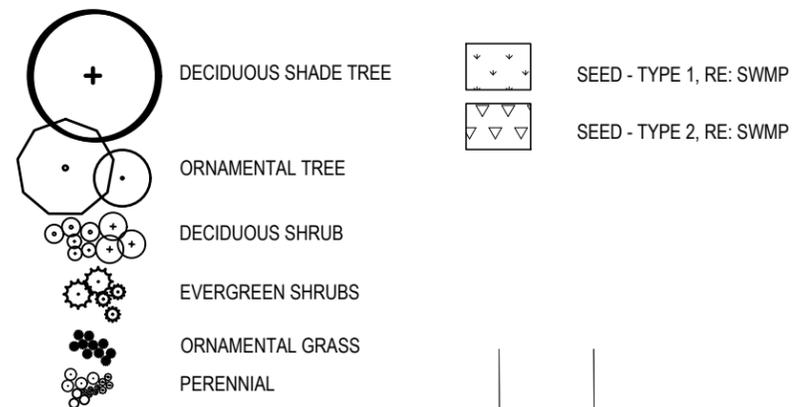

Sheet Revisions		
Date:	Comments	Init.



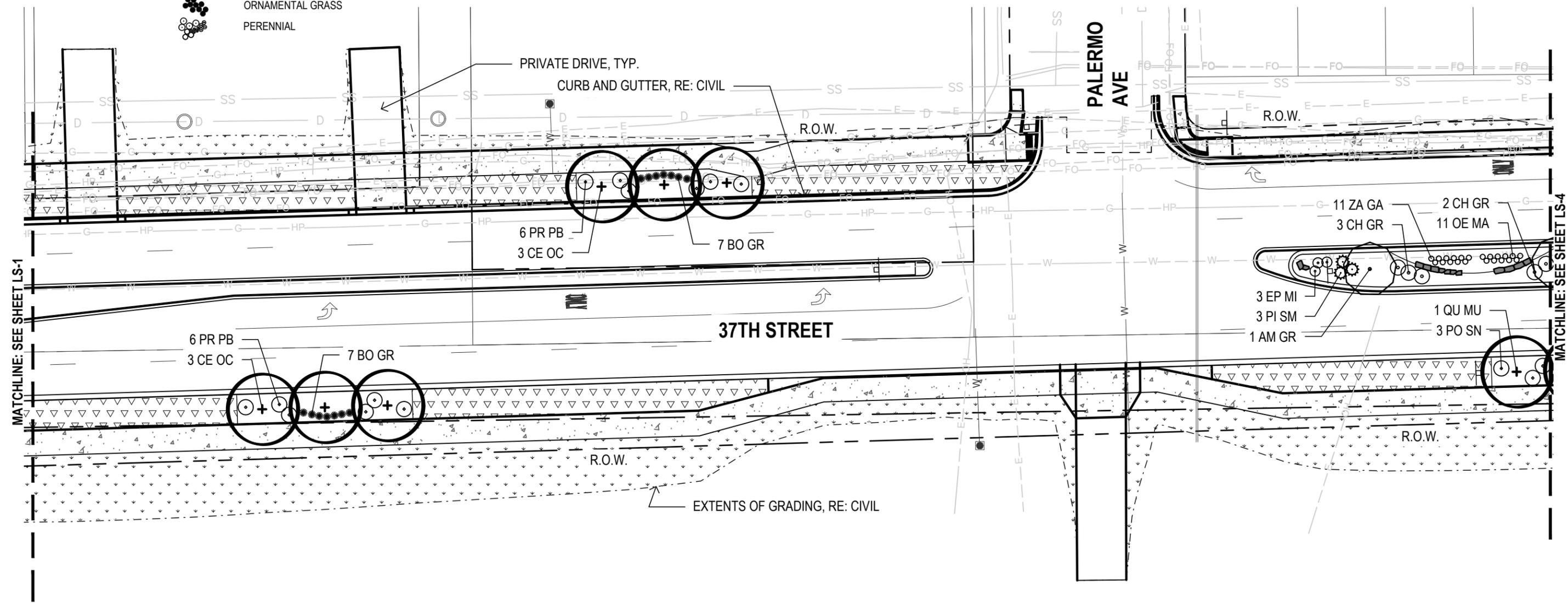
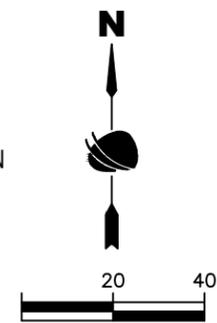

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No Revisions:	Designer: DE	Structure Numbers	Drawing Number LS-2
Revised:	Detailer: DE	Sheet Subset: LANDSCAPE	Subset Sheets: 2 of 35
Void:			Sheet Number 84

FOR CONSTRUCTION 2/24/2024

**LEGEND**



NOTES:  
 CONTRACTOR RESPONSIBLE FOR  
 RESTORING AREAS AFFECTED BY  
 GRADING OR CONSTRUCTION BEYOND  
 THOSE AREAS INDICATED ON THIS PLAN



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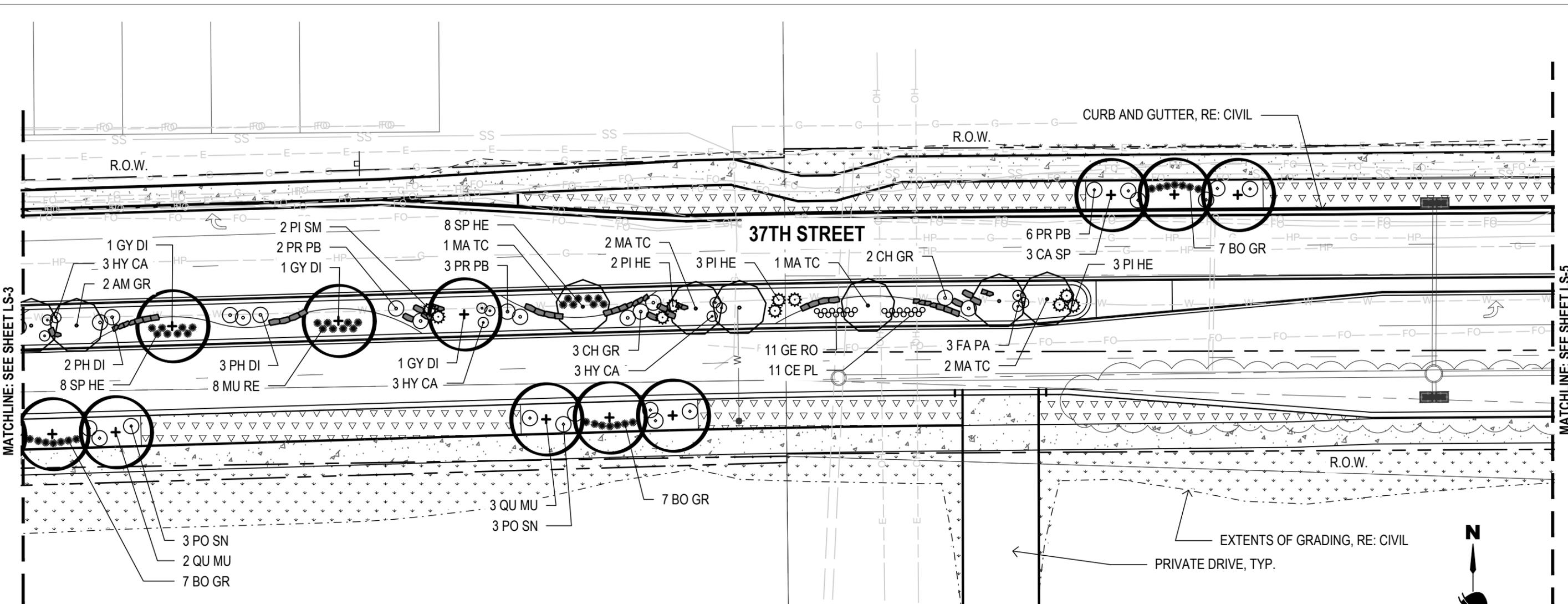
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Sheet Revisions		
Date:	Comments	Init.

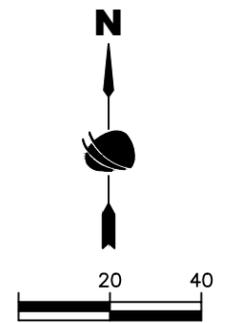
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	Designer: DE	Structure Numbers	Drawing Number LS-3
	Detailer: DE		Sheet Number 85
	Sheet Subset: LANDSCAPE	Subset Sheets: 3 of 35	

FOR CONSTRUCTION 2/24/2024

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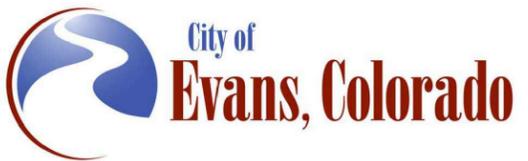


**NOTES:**  
 CONTRACTOR RESPONSIBLE FOR RESTORING AREAS AFFECTED BY GRADING OR CONSTRUCTION BEYOND THOSE AREAS INDICATED ON THIS PLAN



Print Date: 1/26/2024  
 File Name: 1914\_37TH\_LANDSCAPE\_PLANP2A.DWG  
 Horiz. Scale: As Noted    Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.



As Constructed
No Revisions:
Revised:
Void:

37TH STREET WIDENING PHASE 2A LANDSCAPE PLAN		
Designer:	DE	Structure
Detailer:	DE	Numbers
Sheet Subset: LANDSCAPE	Subset Sheets: 4 of 35	

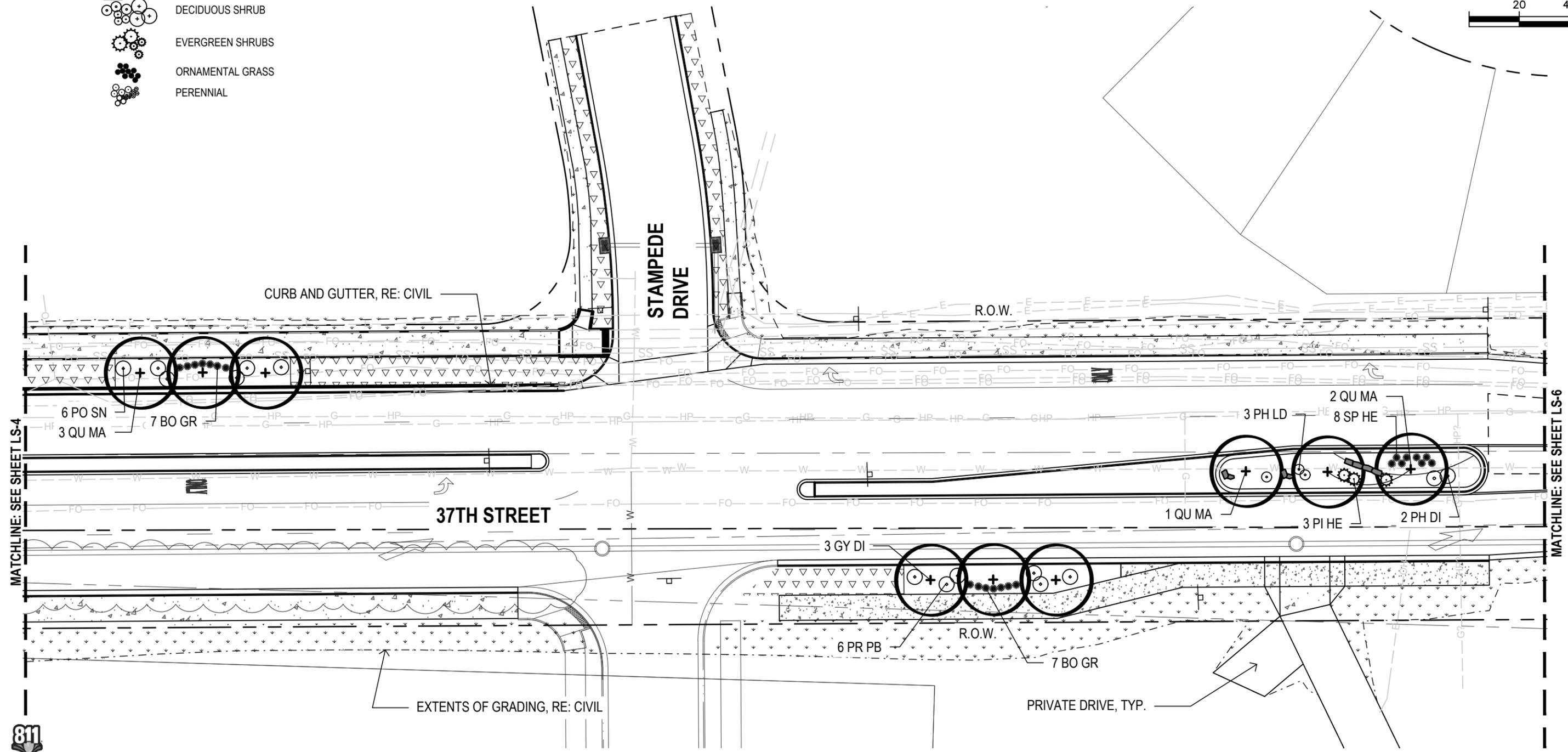
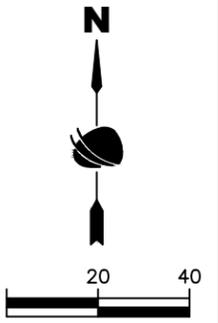
Project No.	AQC M415-021
Drawing Number	LS-4
Sheet Number	86

FOR CONSTRUCTION 2/24/2024

**LEGEND**

-  DECIDUOUS SHADE TREE
-  ORNAMENTAL TREE
-  DECIDUOUS SHRUB
-  EVERGREEN SHRUBS
-  ORNAMENTAL GRASS
-  PERENNIAL
-  SEED - TYPE 1, RE: SWMP
-  SEED - TYPE 2, RE: SWMP

NOTES:  
 CONTRACTOR RESPONSIBLE FOR  
 RESTORING AREAS AFFECTED BY  
 GRADING OR CONSTRUCTION BEYOND  
 THOSE AREAS INDICATED ON THIS PLAN



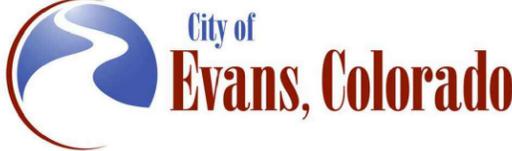
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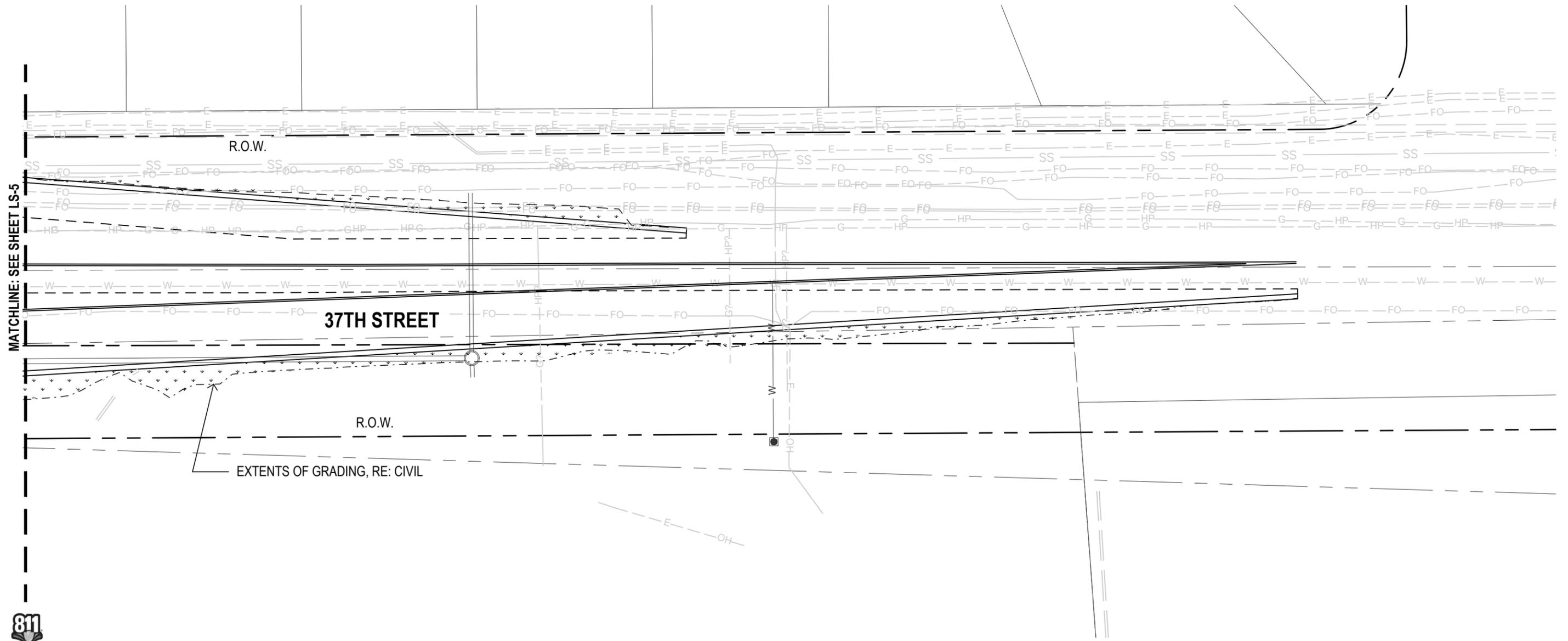
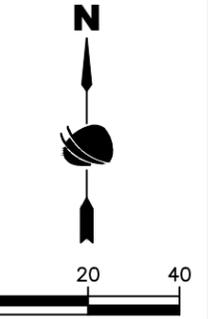

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	Designer:	DE	Structure	Drawing Number LS-5
	Detailer:	DE	Numbers	
	Sheet Subset: LANDSCAPE	Subset Sheets: 5 of 35		Sheet Number 87

FOR CONSTRUCTION 2/24/2024

**LEGEND**

-  DECIDUOUS SHADE TREE
-  ORNAMENTAL TREE
-  DECIDUOUS SHRUB
-  EVERGREEN SHRUBS
-  ORNAMENTAL GRASS
-  PERENNIAL
-  SEED - TYPE 1, RE: SWMP
-  SEED - TYPE 2, RE: SWMP

NOTES:  
 CONTRACTOR RESPONSIBLE FOR  
 RESTORING AREAS AFFECTED BY  
 GRADING OR CONSTRUCTION BEYOND  
 THOSE AREAS INDICATED ON THIS PLAN



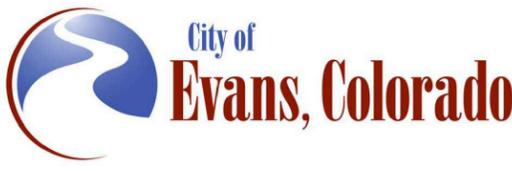
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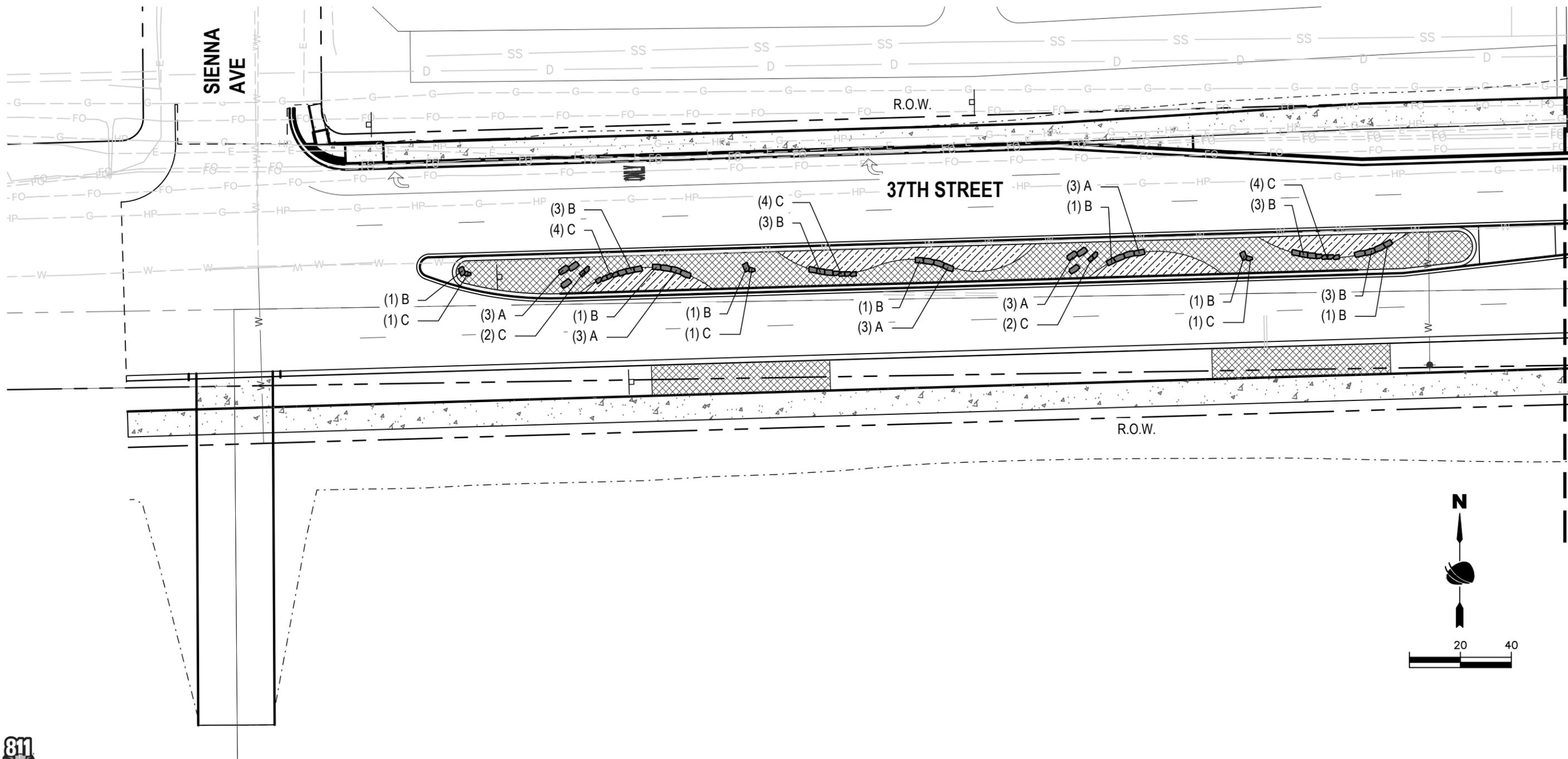

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	No Revisions:		AQC M415-021
	Revised:	Designer: DE	Structure Numbers
Void:	Detailer: DE	Sheet Subset: LANDSCAPE	Drawing Number LS-6
		Subset Sheets: 6 of 35	Sheet Number 88

FOR CONSTRUCTION 2/24/2024

LEGEND

-  ORGANIC MULCH
-  INORGANIC MULCH
-  A LANDSCAPE BOULDER A
-  B LANDSCAPE BOULDER B
-  C LANDSCAPE BOULDER C

NOTES:  
 CONTRACTOR RESPONSIBLE FOR  
 RESTORING AREAS AFFECTED BY  
 GRADING OR CONSTRUCTION BEYOND  
 THOSE AREAS INDICATED ON THIS PLAN



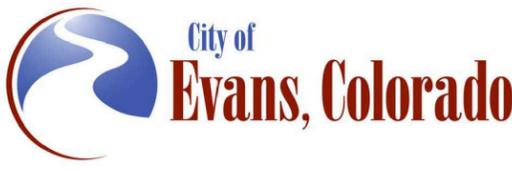
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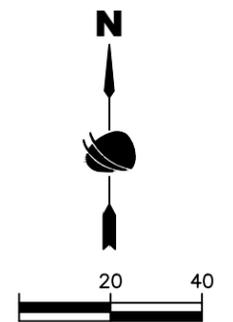
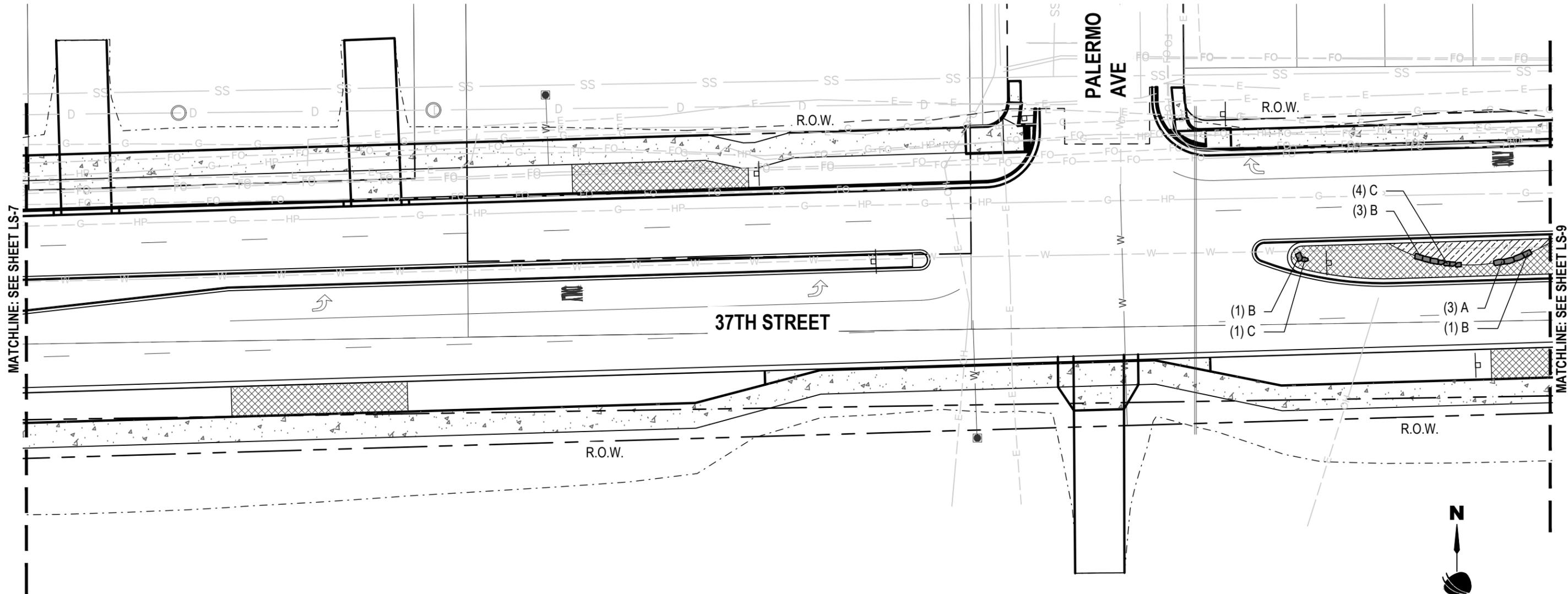

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Revised:	Detailer: DE	Sheet Subset: LANDSCAPE	Sheet Number 89
Void:	Subset Sheets: 7 of 35		

FOR CONSTRUCTION 2/24/2024

**LEGEND**

- |   |                 |   |   |                     |
|---|-----------------|---|---|---------------------|
|  | ORGANIC MULCH   |  | A | LANDSCAPE BOULDER A |
|  | INORGANIC MULCH |  | B | LANDSCAPE BOULDER B |
|   |                 |  | C | LANDSCAPE BOULDER C |

NOTES:  
 CONTRACTOR RESPONSIBLE FOR  
 RESTORING AREAS AFFECTED BY  
 GRADING OR CONSTRUCTION BEYOND  
 THOSE AREAS INDICATED ON THIS PLAN



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Date:	Comments	Init.



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Revised:
Void:

37TH STREET WIDENING PHASE 2A MULCH AND BOULDER PLAN	
Designer: DE	Structure Numbers
Detailer: DE	
Sheet Subset: LANDSCAPE	Subset Sheets: 8 of 35

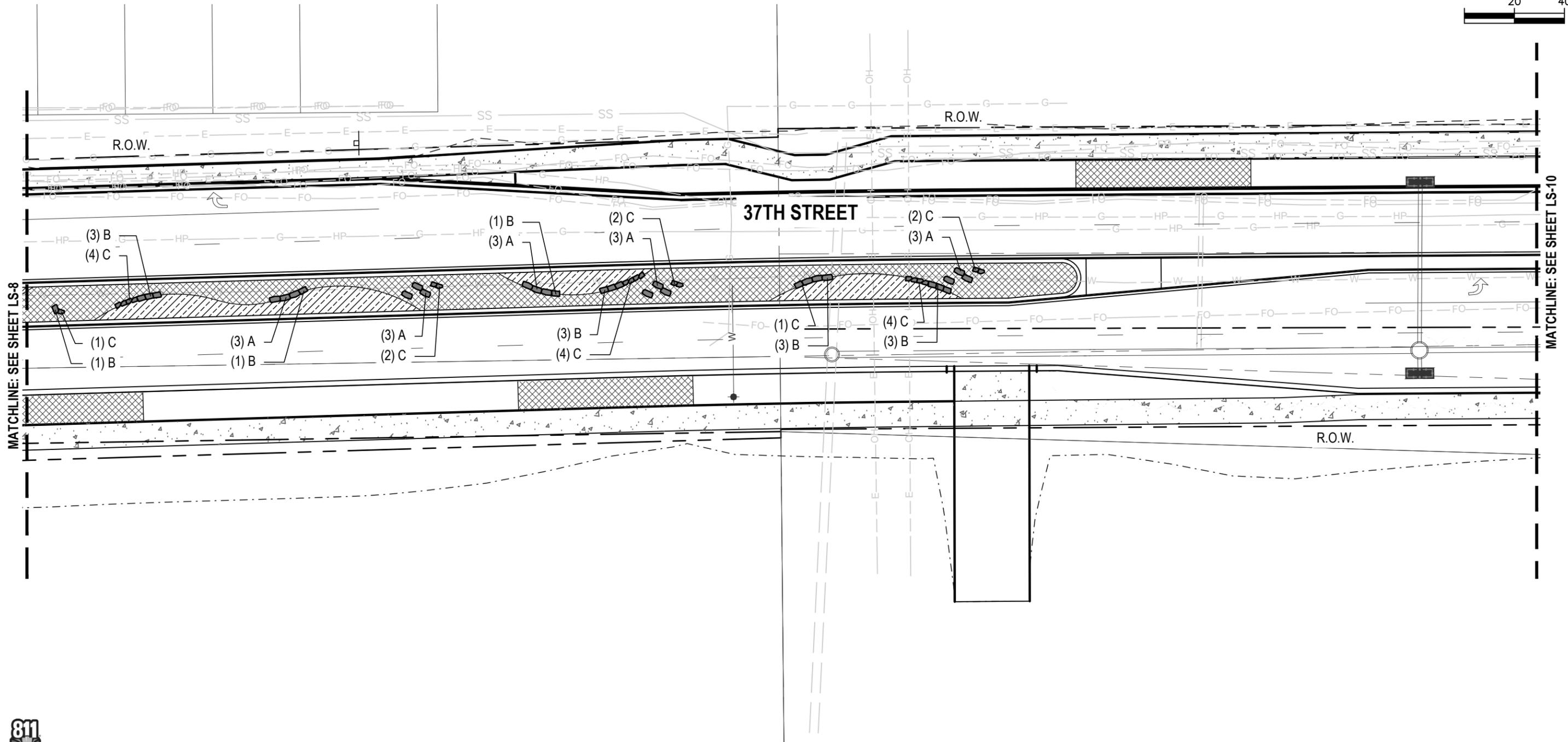
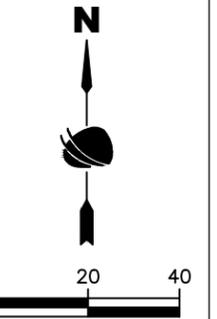
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Drawing Number LS-8
Sheet Number 90

FOR CONSTRUCTION 2/24/2024

**LEGEND**

- |   |                 |   |   |                     |
|---|-----------------|---|---|---------------------|
|  | ORGANIC MULCH   |  | A | LANDSCAPE BOULDER A |
|  | INORGANIC MULCH |  | B | LANDSCAPE BOULDER B |
|   |                 |  | C | LANDSCAPE BOULDER C |

NOTES:  
 CONTRACTOR RESPONSIBLE FOR  
 RESTORING AREAS AFFECTED BY  
 GRADING OR CONSTRUCTION BEYOND  
 THOSE AREAS INDICATED ON THIS PLAN



MATCHLINE: SEE SHEET LS-8

MATCHLINE: SEE SHEET LS-10

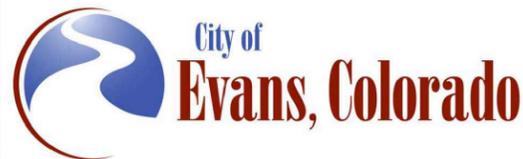
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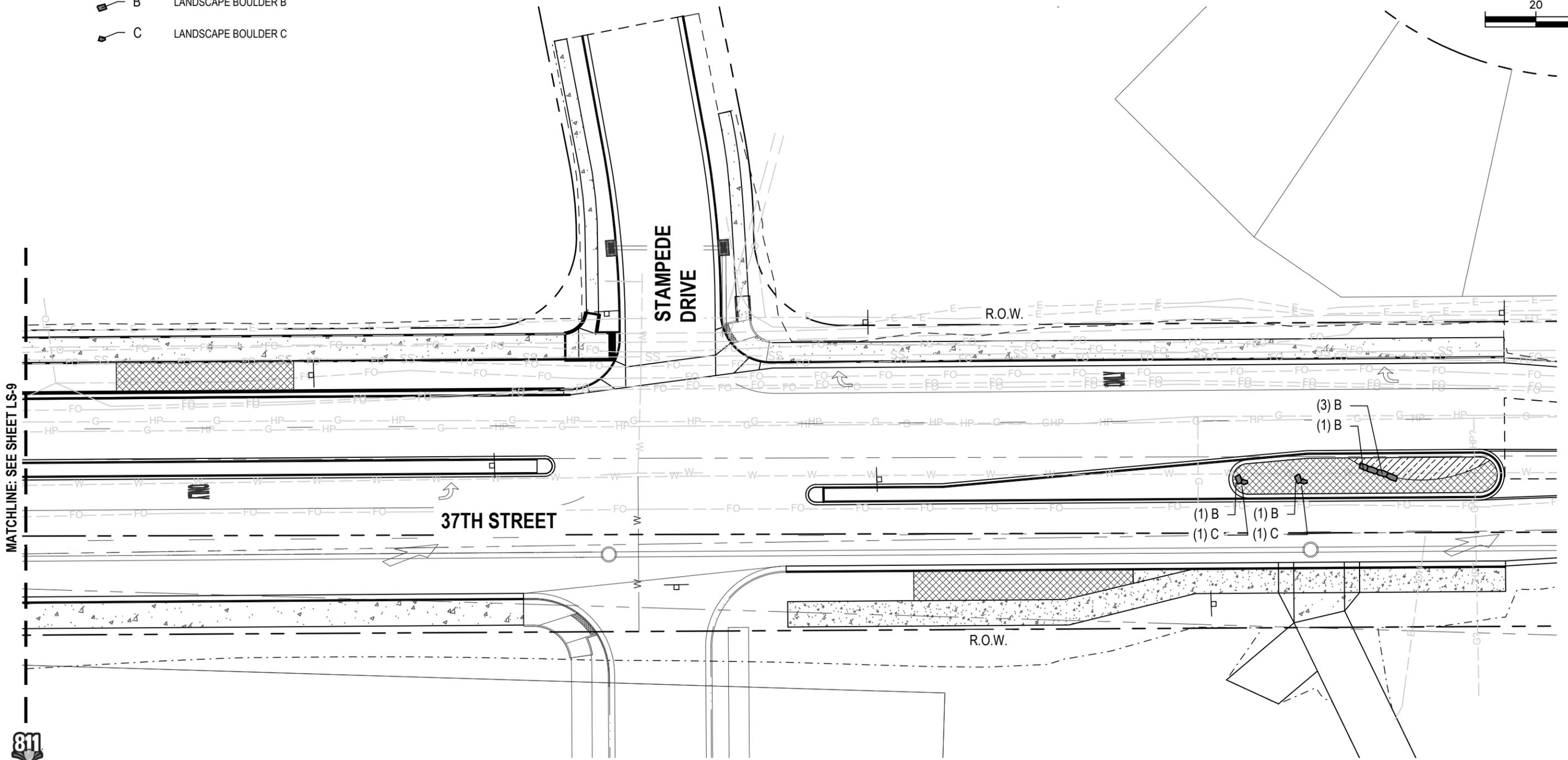
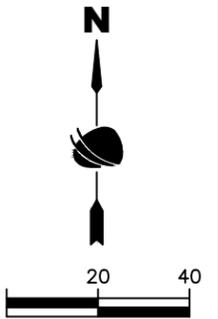
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	Detailer: DE		Sheet Number 91
	Sheet Subset: LANDSCAPE	Subset Sheets: 9 of 35	

FOR CONSTRUCTION 2/24/2024

**LEGEND**

-  ORGANIC MULCH
-  INORGANIC MULCH
-  LANDSCAPE BOULDER A
-  LANDSCAPE BOULDER B
-  LANDSCAPE BOULDER C

NOTES:  
 CONTRACTOR RESPONSIBLE FOR  
 RESTORING AREAS AFFECTED BY  
 GRADING OR CONSTRUCTION BEYOND  
 THOSE AREAS INDICATED ON THIS PLAN



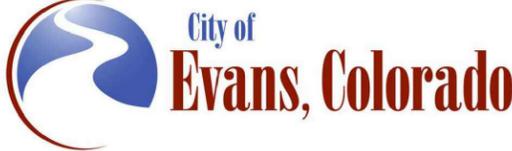
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	Designer: DE	Structure	Drawing Number LS-10
	Detailer: DE	Numbers	Sheet Number 92
	Sheet Subset: LANDSCAPE	Subset Sheets: 10 of 35	

FOR CONSTRUCTION 2/24/2024

# PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	SIZE AT PLANTING	ROOT	QTY	FLOWER COLOR	FLOWER SEASON	SIZE AT MATURITY
<b>SHADE TREES</b>								
CA SP	Catalpa speciosa	Western Catalpa	2" Cal.	B&B	9	White	Summer	50-60't., 30-40' w.
CE OC	Celtis occidentalis	Hackberry	2" Cal.	B&B	6	N/A	N/A	50-60't., 30-40' w.
GY DI	Gymnocladus dioicus 'Espresso'	Espresso Kentucky Coffeetree	2" Cal.	B&B	6	N/A	N/A	50-60't., 35-45' w.
QU MU	Quercus muehlenbergia	Chinkapin Oak	2" Cal.	B&B	9	NA	NA	50-60't., 35-45' w.
QU MA	Quercus macrocarpa	Bur Oak	2" Cal.	B&B	6	NA	NA	50-60't., 35-45' w.
<b>ORNAMENTAL TREES</b>								
AM GR	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	1.5" Cal.	B&B	3	White	Spring	15-20't., 15-20' w.
MA TC	Malus 'Thunderchild'	Thunderchild Crabapple	1.5" Cal.	B&B	9	Pink	Spring	15-20't., 15-20' w.
SY RE	Syringa reticulata 'Ivory Silk'	Ivory Silk Japanese Tree Lilac	1.5" Cal.	B&B	3	White	Spring	15-20't., 15-20' w.
<b>DECIDUOUS SHRUBS</b>								
CA CL	Caryopteris x clandonensis 'Dark Knight'	Dark Knight Spirea	5 Gal.	Cont.	6	Purple	Summer	2-3' t., 2-3' w.
CH NA	Chrysothamnus nauseosus nauseosus	Dwarf Baby Blue Rabbitbrush	5 Gal.	Cont.	6	Yellow	Late Summer	1-2' t., 2-4' w.
CH GR	Chrysothamnus nauseosus graveolens	Tall Green Rabbitbrush	5 Gal.	Cont.	13	Yellow	Late Summer	4-6' t., 4-6' w.
EP MI	Ephedra minima	Dwarf Joint Fir	5 Gal.	Cont.	3	Red Berries	Summer	2-4" t., 2-3' w.
HY CA	Hypericum calycinum	Creeping St. John's Wort	5 Gal.	Cont.	9	Yellow	Spring/Simmer	1-2' t., 2-4' w.
FA PA	Fallugia paradoxa	Apache Plume	5 Gal.	Cont.	3	White/Pink	Summer	3-5' t., 3-5' w.
PH DI	Physocarpus opulifolius Diabolo	Diabolo Ninebark	5 Gal.	Cont.	15	White	Summer	8' t., 8' w.
PH LD	Physocarpus opulifolius Little Devil	Little Devil Ninebark	5 Gal.	Cont.	3	White/pink	Summer	4' t., 4' w.
PO SN	Potentilla fruticosa 'Davurica'	Prairie Snow Potentilla	5 Gal.	Cont.	27	White	Summer	1-2' t., 3-6' w.
PR PB	Prunus besseyi 'Pawnee Buttes'	Creeping Western Sandcherry	5 Gal.	Cont.	32	White	Spring	1-2' t., 6' w.
<b>EVERGREEN SHRUBS</b>								
PI SM	Picea pungens 'St. Mary's Broom'	St. Mary's Blue Spruce	5 Gal.	Cont.	9	-	-	18-24" t., 3-4' w.
PI HE	Pinus nigra 'Helga'	Dwarf Austrian Pine	5 Gal.	Cont.	18	-	-	4-6' t., 4-6' w.
<b>ORNAMENTAL GRASSES</b>								
BO GR	Bouteloua gracilis 'Blonde Ambition'	Blonde Ambition Grama Grass	1 Gal.	Cont.	63	Blonde	Summer-Fall	3' t., 2' w.
MU RE	Muhlenbergia reverchonii 'Ruby Muhly'	Undaunted Ruby Muhly Grass	1 Gal.	Cont.	26	Ruby	Late Summer	15-30" t., 18-24" w.
SP HE	Sporobolus heterolepis	Prairie Dropseed	1 Gal.	Cont.	32	Golden Orange Fall		18-24" t. 15-20" w.
<b>PERENNIALS, GROUNDCOVERS</b>								
AR FR	Artemisia frigida	Fringed Sage	1 Gal.	Cont.	11	Yellow	Late Summer	12" t., 24" w.
CE PL	Ceratostigma plumbaginoides	Plumbago	4" Pot	Cont.	11	Blue	Mid-Late Summer	12" t., 24" w.
GE RO	Geranium 'Gerwat' rozanne	Blue Cranesbill	1 Gal.	Cont.	11	Blue/Purple	Spring-Fall	18-20" t., 36" w.
OE MA	Oenothera macrocarpa	Missouri Evening Primrose	1 Gal.	Cont.	11	Lemon Yellow	Mid-Summer	12" t., 24" w.
ZA GA	Zauschneria garrettii 'PWVG01S'	Org. Carpet Hummingbird Mint	1 Gal.	Cont.	22	Orange	Summer-Fall	8" t., 18" w.

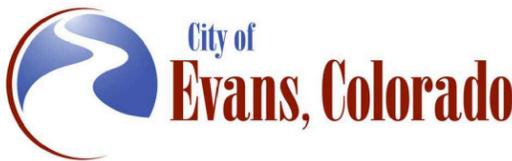
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Print Date: 1/26/2024  
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 Horiz. Scale: As Noted    Vert. Scale: As Noted




Sheet Revisions		
Date:	Comments	Init.




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No Revisions:	PLANT LIST		AQC M415-021
Revised:	Designer: DE	Structure	Drawing Number LS-11
Void:	Detailer: DE	Numbers	Sheet Number 93
	Sheet Subset: LANDSCAPE	Subset Sheets: 11 of 35	

FOR CONSTRUCTION 2/24/2024

# LANDSCAPE NOTES

- REFERENCE THE SWMP DRAWINGS FOR ADDITIONAL INFORMATION ON SOIL PREPARATION, FERTILIZER, COMPOST, SEEDING, AND MULCHING, AS WELL AS CITY OF EVANS STANDARDS.
- AREAS DISTURBED BY CONSTRUCTION OUTSIDE LIMIT OF WORK LINE SHALL BE REGRADED AND SEEDED WITH TYPE 2 SEED. AREAS CALLED OUT AS TYPE 2 SEED SHALL BE SEEDED WITH TYPE 2 SEED (BELOW).

TYPE 2 SEED SHORT GRASS MIX: (SEED MUST BE APPLIED WITH DRILL SEEDER @ RATE OF 11+ LBS. PLS. PER ACRE. IF BROADCAST, APPROVED BY THE CITY OF EVANS ONLY, APPLY @ A RATE OF 22+ LBS. PLS. PER ACRE.)

- (10%) SAND DROPSEED
- (27%) BLUE GRAMMA
- (26%) LITTLE BLUESTEM
- (27%) SIDEOATS GRAMA
- (10%) SAND LOVEGRASS

- DECIDUOUS TREES SHALL BE SINGLE-STEM TREES WITH STRAIGHT TRUNK, WELL BALANCED CROWN, AND INTACT LEADER, OF HEIGHT AND CALIPER INDICATED IN PLANT LIST, COMPLYING WITH ANSI Z60.1 FOR TYPE OF TREES REQUIRED. TREES SHALL BE BALLED AND BURLAPPED WITH BRANCHING HEIGHT ONE-THIRD TO ONE-HALF OF TREE HEIGHT.
- ORNAMENTAL DECIDUOUS TREES SHALL BE BRANCHED OR PRUNED NATURALLY ACCORDING TO SPECIES AND TYPE, OF CALIPER AND HEIGHT INDICATED IN PLANT LIST, AND BRANCHING ACCORDING TO ANSI Z60.1. STEM FORM SHALL BE SINGLE TRUNK AND ALL TREES SHALL BE BALLED AND BURLAPPED.
- GRADE PLANTING BEDS TO A SMOOTH, UNIFORM SURFACE PLANE WITH LOOSE, UNIFORMLY FINE TEXTURE. ROLL AND RAKE, REMOVE RIDGES, AND FILL DEPRESSIONS TO MEET FINISHED GRADES.

## 6. MEDIAN AREAS

- PLANTING AREAS (SHRUBS, PERENNIALS, ORNAMENTAL GRASSES) SHALL BE AMENDED WITH CITY OF EVANS APPROVED COMPOST AT A RATE OF 4 CUBIC YARDS PER 1,000 S.F. SOIL AMENDMENT SHALL BE INCORPORATED EVENLY INTO THE TOP 6 INCHES OF SOIL.
- MEDIAN AREAS SHALL BE MULCHED WITH 4 INCH DEEP SHREDDED CEDAR MULCH AND ROCK MULCH REFERENCE MULCH AND BOULDER PLANS FOR LOCATIONS.

## 7. INSPECTIONS

### 7.A. SITE INSPECTION

- CONTRACTOR WILL INSPECT EXISTING SITE CONDITIONS AND NOTE IRREGULARITIES AFFECTING THE WORK OF THIS SECTION. VERIFY THAT GRADING OPERATIONS HAVE BEEN SATISFACTORILY COMPLETED AND THAT TOPSOIL OF ADEQUATE QUANTITY AND QUALITY HAS BEEN PLACED IN AREAS AS SPECIFIED. VERIFY THAT THE AREAS TO BE REVEGETATED ARE PROTECTED FROM CONCENTRATED RUNOFF AND SEDIMENT FROM ADJACENT AREAS. NOTE PREVIOUS TREATMENTS TO THE AREAS SUCH AS TEMPORARY TYPE 2 SEED OR MULCHING AND DISCUSS WITH THE CITY OF EVANS OR ENGINEER HOW THESE TREATMENTS WILL AFFECT PERMANENT REVEGETATION. REPORT IRREGULARITIES AFFECTING WORK OF THIS SECTION TO THE CITY OF EVANS OR ENGINEER BEFORE INITIATING WORK. WHEN THE CONTRACTOR BEGINS WORK UNDER THIS SECTION, IT IMPLIES ACCEPTANCE OF EXISTING CONDITIONS.
- CONTRACTOR SHALL NOTIFY THE CITY OF EVANS OR ENGINEER PRIOR TO START OF WORK. THE CITY OF EVANS OR ENGINEER WILL BE RESPONSIBLE TO MONITOR THE WORK.

### 7.B. PRE-PLANTING INSPECTIONS:

- PLANT MATERIAL SHALL BE INSPECTED BY THE CITY OF EVANS OR ENGINEER, BEFORE PLANTING. INSPECTION OF MATERIALS MAY BE SEQUENCED BY MAJOR PLANTING AREAS TO ACCOMMODATE EFFICIENT PLANTING OPERATIONS. PLANTS FOR INSPECTION MUST BE IN A SINGLE LOCATION PREFERABLY ON THE PROJECT SITE. REJECTED MATERIALS MUST BE REMOVED FROM THE SITE, REPLACED AND REINSPECTED BEFORE PLANTING. IF THE SUPPLIER IS A LOCAL NURSERY, TAGGED PLANTS MAY BE INSPECTED AT THE NURSERY. PHOTOGRAPHS OF THE PLANT MATERIALS TO BE OBTAINED FROM NON-LOCAL SOURCES MAY BE SUBMITTED TO THE CITY OF EVANS OR ENGINEER FOR PRELIMINARY INSPECTION. THIS PRELIMINARY INSPECTION IS SUBJECT TO FINAL APPROVAL OF PLANTS AT THE JOB SITE. THE OWNER RESERVES THE RIGHT TO REJECT PLANT MATERIAL AT ANY STAGE OF CONSTRUCTION OR WARRANTY PERIOD.

### 7.C. TYPE 1 SEED SHALL CONSIST OF THE FOLLOWING:

- 60% BUFFALO GRASS
- 40% BLUE GRAMMA GRASS

- SOIL AMENDMENTS, BACKFILL MIXES AND MULCHES WILL BE INSPECTED AT THE SITE BY THE THE CITY OF EVANS OR ENGINEER BEFORE THEY ARE USED IN PLANTING OPERATIONS. OBTAIN THE CITY OF EVANS OR ENGINEER'S REVIEW OF STAKED LOCATIONS OF TREES BEFORE DIGGING FOR THOSE PLANTS OCCURS. OBTAIN THE CITY OF EVANS OR ENGINEER'S REVIEW OF THE LOCATION OF SHRUBS IN THEIR CONTAINERS AT THE PROPOSED LOCATIONS BEFORE DIGGING COMMENCES. CONTACT THE CITY OF EVANS OR ENGINEER AT LEAST TWO DAYS IN ADVANCE.

## 10. SUBSTANTIAL COMPLETION INSPECTION:

- AS SOON AS PLANTING IS COMPLETED, A REVIEW AND PRELIMINARY INSPECTION TO DETERMINE THE CONDITION OF THE VEGETATION WILL BE HELD BY THE CITY OF EVANS OR ENGINEER UPON REQUEST BY THE CONTRACTOR.
- THE INSPECTION WILL OCCUR ONLY AFTER THE FOLLOWING CONDITIONS HAVE BEEN MET:
  - LANDSCAPE AREAS WILL BE FREE OF WEEDS AND NEATLY CULTIVATED;
  - PLANT BASINS SHALL BE IN GOOD REPAIR;
  - IRRIGATION SYSTEMS SHALL BE FULLY OPERATIONAL WITH HEADS PROPERLY ADJUSTED;
  - DEBRIS AND LITTER SHALL BE CLEANED UP AND WALKWAYS AND CURBS SHALL BE CLEANED OF SOIL AND DEBRIS LEFT FROM PLANTING OPERATIONS.
- IF, AFTER THE INSPECTION, THE CITY OF EVANS OR ENGINEER IS OF THE OPINION THAT THE WORK HAS BEEN PERFORMED AS PER THE CONTRACT DOCUMENTS, AND THAT THE VEGETATION IS IN SATISFACTORY GROWING CONDITION, HE WILL GIVE THE CONTRACTOR WRITTEN NOTICE OF ACCEPTANCE AND THE WARRANTY PERIOD SHALL BEGIN.
- WORK REQUIRING CORRECTIVE ACTION IN THE JUDGMENT OF THE CITY OF EVANS OR ENGINEER SHALL BE PERFORMED WITHIN THE FIRST TEN (10) DAYS OF THE WARRANTY PERIOD. WORK NOT PERFORMED WITHIN THIS TIME WILL REQUIRE AN EQUIVALENT EXTENSION OF THE WARRANTY PERIOD. CORRECTIVE WORK AND MATERIALS REPLACEMENT SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, AND SHALL BE MADE BY THE CONTRACTOR AT NO COST TO THE OWNER.
- ON OCCASION COLD WEATHER MAY PRECLUDE THE OPPORTUNITY TO REPLACE DEAD PLANTS, OR THE CONTRACTOR MAY REQUEST REPLACEMENT TO BE DELAYED TO THE FOLLOWING SPRING. THE CITY OF EVANS OR ENGINEER MAY GRANT THIS EXTENSION. IN THE EVENT AN EXTENSION IS GRANTED, THE REPLACEMENT PLANTS SHALL BE INSTALLED NO LATER THAN MAY 15TH, AND THE WARRANTY SHALL BE EXTENDED TO NOVEMBER 15TH OF THE SAME YEAR (ONE GROWING SEASON).
- FINAL APPROVAL AND SUBSTANTIAL COMPLETION NOTICE WILL BE GIVEN WHEN ALL DEFICIENCIES ARE CORRECTED.

## 15. WARRANTY:

- SPECIAL WARRANTY: INSTALLER'S STANDARD FORM IN WHICH INSTALLER AGREES TO REPAIR OR REPLACE PLANTINGS AND ACCESSORIES THAT FAIL IN MATERIALS, WORKMANSHIP, OR GROWTH WITHIN SPECIFIED WARRANTY PERIOD.
  - FAILURES INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
    - DEATH AND UNSATISFACTORY GROWTH, EXCEPT FOR DEFECTS RESULTING FROM LACK OF ADEQUATE MAINTENANCE, NEGLIGENCE, ABUSE BY OWNER, OR INCIDENTS THAT ARE BEYOND CONTRACTOR'S CONTROL.
    - STRUCTURAL FAILURES INCLUDING PLANTINGS FALLING OR BLOWING OVER.
    - FAULTY OPERATION OF TREE STABILIZATION.
    - DETERIORATION OF METALS, METAL FINISHES, AND OTHER MATERIALS BEYOND NORMAL WEATHERING.
  - WARRANTY PERIODS FROM DATE OF SUBSTANTIAL COMPLETION:
    - TREES, SHRUBS, ORNAMENTAL GRASSES, AND PERENNIALS: ONE YEAR.
  - INCLUDE THE FOLLOWING REMEDIAL ACTIONS AS A MINIMUM:
    - REMOVE DEAD EXTERIOR PLANTS IMMEDIATELY. REPLACE IMMEDIATELY UNLESS REQUIRED TO PLANT IN THE SUCCEEDING PLANTING SEASON.
    - REPLACE EXTERIOR PLANTS THAT ARE MORE THAN 25 PERCENT DEAD OR IN AN UNHEALTHY CONDITION AT END OF WARRANTY PERIOD.
    - PROVIDE EXTENDED WARRANTY FOR REPLACED PLANT MATERIALS; WARRANTY PERIOD EQUAL TO ORIGINAL WARRANTY PERIOD.

## 16. MAINTENANCE SERVICE

- INITIAL MAINTENANCE SERVICE FOR EXTERIOR PLANTS: PROVIDE FULL MAINTENANCE BY SKILLED EMPLOYEES OF LANDSCAPE INSTALLER. BEGIN MAINTENANCE IMMEDIATELY AFTER EACH AREA IS PLANTED AND CONTINUE UNTIL FINAL ACCEPTANCE BY OWNER.

## 17. TREE AND SHRUB MAINTENANCE:

- MAINTAIN PLANTINGS BY PRUNING, CULTIVATING, WATERING, WEEDING, FERTILIZING, RESTORING PLANTING SAUCERS, ADJUSTING AND REPAIRING STAKES AND GUY SUPPORTS, AND RESETTING TO PROPER GRADES OR VERTICAL POSITION, AS REQUIRED TO ESTABLISH HEALTHY, VIABLE PLANTINGS. SPRAY OR TREAT AS REQUIRED TO KEEP TREES AND SHRUBS FREE OF INSECTS AND DISEASE. RESTORE OR REPLACE DAMAGED TREE WRAPPINGS.

## 18. LAWN MAINTENANCE:

- MAINTAIN AND ESTABLISH LAWN BY WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING, REPLANTING, AND OTHER OPERATIONS. ROLL, REGRADE, AND REPLANT BARE OR ERODED AREAS AND REMULCH TO PRODUCE A UNIFORMLY SMOOTH LAWN. PROVIDE MATERIALS AND INSTALLATION THE SAME AS THOSE USED IN THE ORIGINAL INSTALLATION. IN AREAS WHERE MULCH HAS BEEN DISTURBED BY WIND OR MAINTENANCE OPERATIONS, ADD NEW MULCH AND ANCHOR AS REQUIRED TO PREVENT DISPLACEMENT.
- WATERING:
  - PROVIDE AND MAINTAIN TEMPORARY PIPING, HOSES, AND LAWN-WATERING EQUIPMENT TO CONVEY WATER FROM SOURCES AND TO KEEP LAWN UNIFORMLY MOIST TO A DEPTH OF 4 INCHES.
  - SCHEDULE WATERING TO PREVENT WILTING, PUDDLING, EROSION, AND DISPLACEMENT OF TYPE 1 SEED OR MULCH. LAY OUT TEMPORARY WATERING SYSTEM TO AVOID WALKING OVER MUDDY OR NEWLY PLANTED AREAS.
  - WATER LAWN WITH FINE SPRAY AT A MINIMUM RATE OF 1 INCH PER WEEK UNLESS RAINFALL PRECIPITATION IS ADEQUATE.
- MOW LAWN AS SOON AS TOP GROWTH IS TALL ENOUGH TO CUT. REPEAT MOWING TO MAINTAIN SPECIFIED HEIGHT WITHOUT CUTTING MORE THAN 1/3 OF GRASS HEIGHT. REMOVE NO MORE THAN 1/3 OF GRASS-LEAF GROWTH IN INITIAL OR SUBSEQUENT MOWINGS. DO NOT DELAY MOWING UNTIL GRASS BLADES BEND OVER AND BECOME MATTED. DO NOT MOW WHEN GRASS IS WET. SCHEDULE INITIAL AND SUBSEQUENT MOWINGS TO MAINTAIN A 2-3 INCH GRASS HEIGHT.
- LAWN POSTFERTILIZATION:
  - APPLY FERTILIZER AFTER INITIAL MOWING AND WHEN GRASS IS DRY.

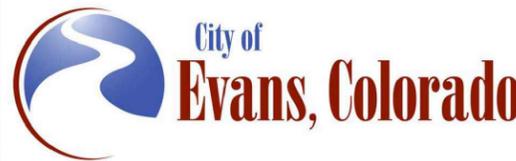
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No Revisions:				AQC M415-021
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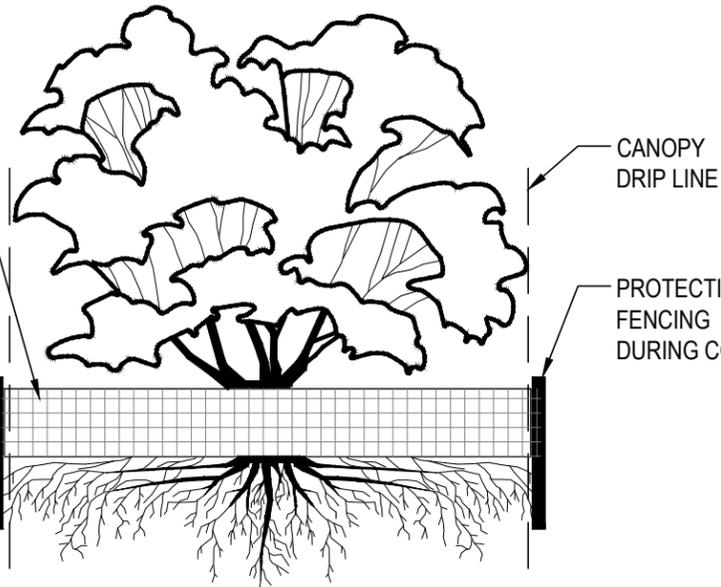
# TREE PROTECTION NOTES

- EXISTING TREES WITHIN THE LIMITS OF THE DEVELOPMENT SHALL REMAIN AND BE PROTECTED UNLESS NOTED ON THESE PLANS FOR REMOVAL.
  - WITHIN THE DRIP LINE OF PROTECTED EXISTING TREE, THERE SHALL BE NO CUT OR FILL OVER A FOUR-INCH DEPTH UNLESS A QUALIFIED ARBORIST OR FORESTER HAS EVALUATED AND APPROVED THE DISTURBANCE.
  - TREE PRUNING AND REMOVAL SHALL BE PERFORMED BY A CERTIFIED ARBORIST.
  - PRIOR TO AND DURING CONSTRUCTION, BARRIERS SHALL BE ERECTED AROUND PROTECTED EXISTING TREES WITH SUCH BARRIERS TO BE OF ORANGE FENCING A MINIMUM OF FOUR (4) FEET IN HEIGHT, SECURED WITH METAL T-POSTS, NO CLOSER THAN SIX (6) FEET FROM THE TRUNK OR ONE-HALF (1/2) OF THE DRIP LINE, WHICHEVER IS GREATER. THERE SHALL BE NO STORAGE OR MOVEMENT OF EQUIPMENT, MATERIAL, DEBRIS OR FILL WITHIN THE FENCED TREE PROTECTION ZONE.
  - DURING THE CONSTRUCTION STAGE OF DEVELOPMENT, THE APPLICANT SHALL PREVENT THE CLEANING OF EQUIPMENT OR MATERIAL OR THE STORAGE AND DISPOSAL OF WASTE MATERIAL SUCH AS PAINTS, OILS, SOLVENTS, ASPHALT, CONCRETE, MOTOR OIL OR ANY OTHER MATERIAL HARMFUL TO THE LIFE OF A TREE WITHIN THE DRIP LINE OF ANY PROTECTED TREE OR GROUP OF TREES.
  - NO DAMAGING ATTACHMENT, WIRES, SIGNS OR PERMITS MAY BE FASTENED TO PROTECTED TREE.
  - LARGE AREAS CONTAINING PROTECTED TREES AND SEPARATED FROM CONSTRUCTION OR LAND CLEARING AREAS, ROAD RIGHTS-OF-WAY AND UTILITY EASEMENTS MAY BE "RIBBONED OFF," RATHER THAN ERECTING PROTECTIVE FENCING AROUND EACH TREE AS REQUIRED ABOVE. THIS MAY BE ACCOMPLISHED BY PLACING METAL T-POST STAKES A MAXIMUM OF FIFTY (50) FEET APART AND TYING RIBBON OR ROPE FROM STAKE-TO-STAKE ALONG THE OUTSIDE PERIMETERS OF SUCH AREAS BEING CLEARED.
  - THE INSTALLATION OF UTILITIES, IRRIGATION LINES OR UNDERGROUND FIXTURE REQUIRING EXCAVATION DEEPER THAN SIX (6) INCHES SHALL BE ACCOMPLISHED BY BORING UNDER THE ROOT SYSTEM OF PROTECTED EXISTING TREES AT A MINIMUM DEPTH OF TWENTY-FOUR (24) INCHES. THE AUGER DISTANCE IS ESTABLISHED FROM THE FACE OF THE TREE (OUTER BARK) AND IS SCALED FROM TREE DIAMETER AT BREST HEIGHT AS DESCRIBED IN THE CHART BELOW:
- | TREE DIAMETER AT BREST HEIGHT (INCHES) | AUGER DISTANCE FROM FACE OF TREE (FEET) |
|--|---|
| 0-2                                    | 1                                       |
| 3-4                                    | 2                                       |
| 5-9                                    | 5                                       |
| 10-14                                  | 10                                      |
| 15-19                                  | 12                                      |
| OVER 19                                | 15                                      |
- TREE REMOVAL SHOWN SHALL BE COMPLETED OUTSIDE OF THE SONGBIRD NESTING SEASON (FEB 1 - JULY 31) OR CONDUCT A SURVEY OF TREES ENSURING NO ACTIVE NESTS IN THE AREA.

FENCING MATERIAL SHALL BE BRIGHT CONTRASTING COLOR, DURABLE AND 48" MINIMUM

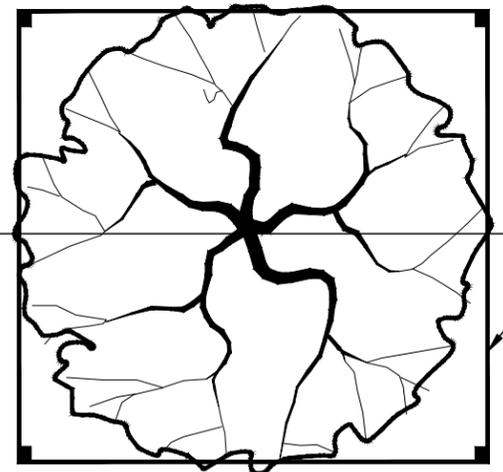
FENCE POSTS SHALL BE COMPARABLE TO METAL T-POSTS OR HEAVIER, AND PLACED AT LEAST 12" IN SOLID GROUND

SECTION



SEE SECTION

PLAN



## TREE PROTECTION NOTES:

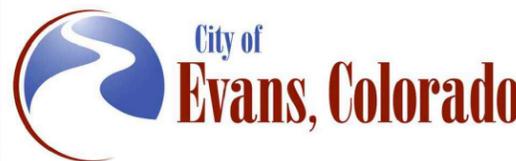
- TO PREVENT SOIL COMPACTION WITH IN PROTECTED ROOT ZONES, DESIGNATED ROUTES FOR EQUIPMENT AND FOOT TRAFFIC BY WORK CREWS SHALL BE DETERMINED PRIOR TO COMMENCING ACTIVITIES AND INDICATED IN THESE CONST. DOCUMENTS.
- PLANNED ROUTES SHALL BE MARKED AT THE SITE BEFORE CONST. COMMENCES.
- THE CONTRACTOR SHALL INFORM CONSTRUCTION CREW MEMBERS AND SUBCONTRACTORS OF THE ROUTES AND ENSURE THAT ONLY THESE ROUTES ARE USED.
- TO PREVENT SOIL COMPACTION AND REDUCE TREE ROOT RESPIRATION, NO SOIL STOCKPILES, SUPPLIES, EQUIPMENT OR ANY OTHER MATERIAL SHALL BE PLACED OR STORED WITHIN A TREE DRIP ZONE OR WITHIN 10' OF THE TREE TRUNK, WHICHEVER DISTANCE IS GREATER. HEAVY OBJECTS SUCH AS WOOD PALLETS OR METAL RAILINGS SHALL NOT LEAN AGAINST OR COME IN CONTACT WITH THE TREE.
- WHEN FOOT TRAFFIC OR EQUIPMENT USE IS UNAVOIDABLE WITHIN THE DRIP LINE, THIS AREA SHALL BE MULCHED WITH WOOD CHIPS TO A PRE-DETERMINED DEPTH BEFORE CONSTRUCTION ACTIVITY BEGINS. MULCH DEPTH AND POSSIBLE PLANKING SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT AND REMOVED WHEN CONSTRUCTION ACTIVITIES ARE COMPLETED. SITUATIONS SUCH AS THIS NEED TO BE DISCUSSED AND APPROVED BY FORESTRY SERVICES.
- FENCING MATERIAL SHALL ENCIRCLE ANY TREE WHOSE DRIP LINE EDGE IS WITHIN 20' OF ANY CONSTRUCTION ACTIVITY.



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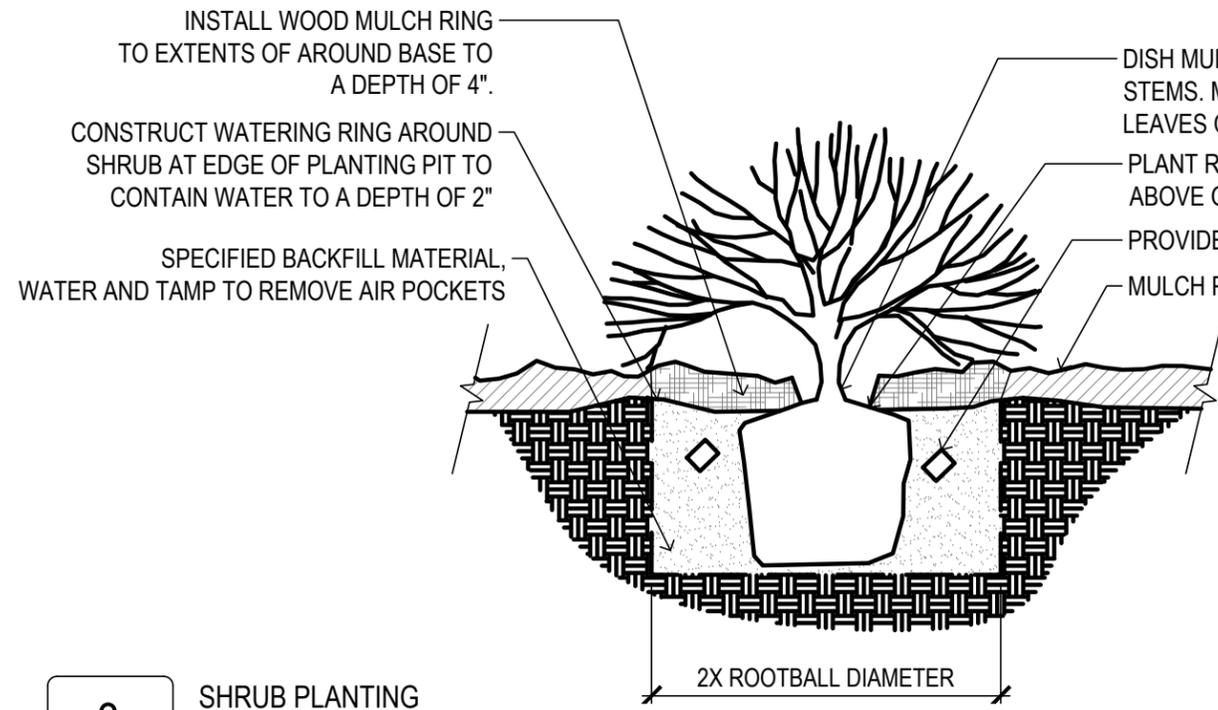
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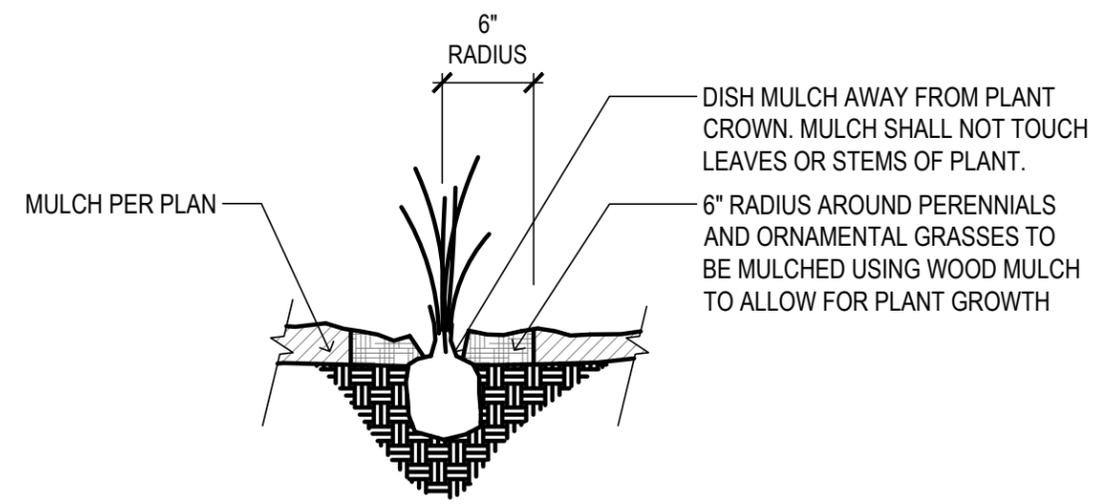
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No Revisions:	Designer: DE	Structure Numbers	Drawing Number LS-13
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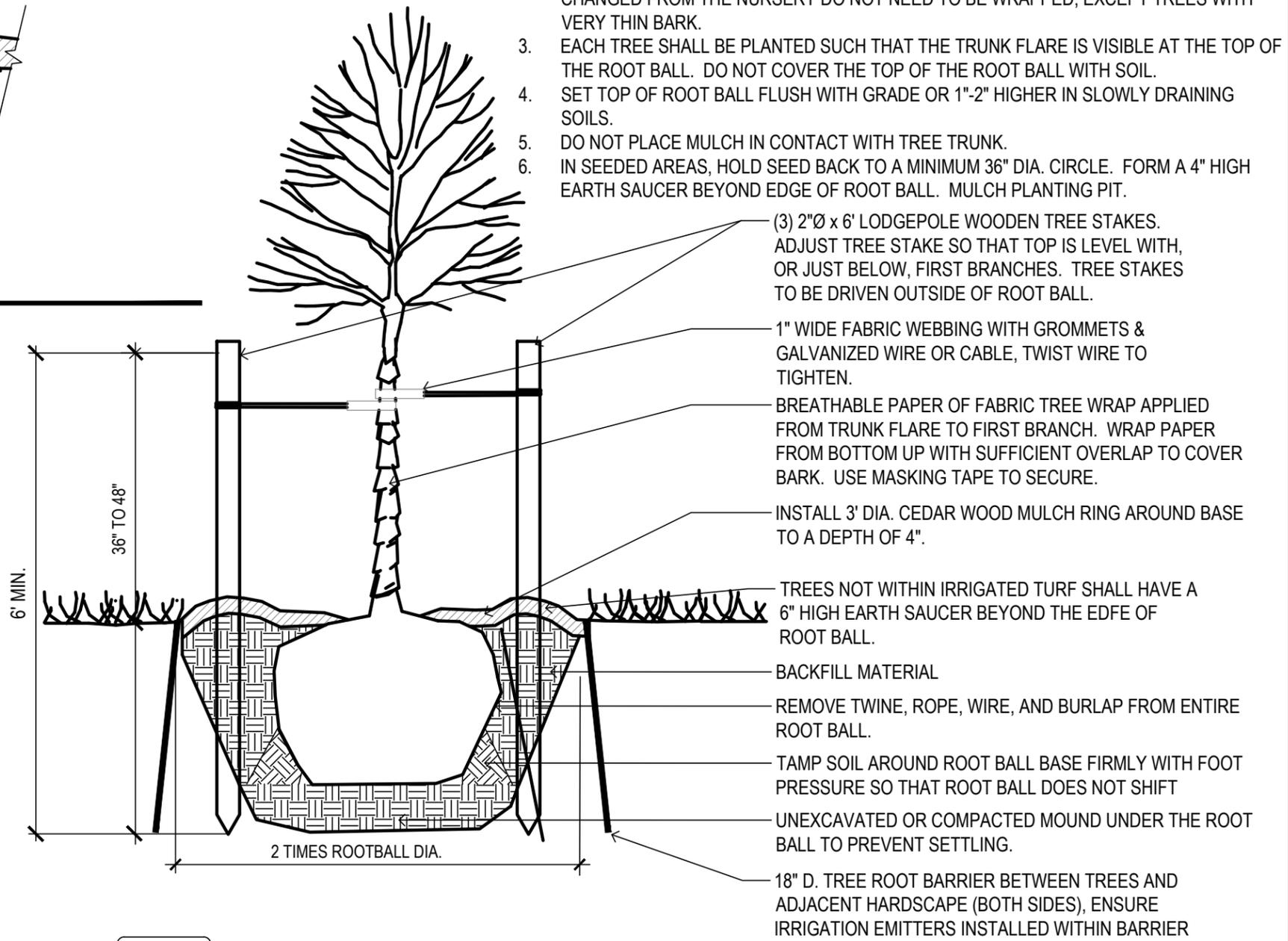
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**3** SHRUB PLANTING  
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**2** PERENNIAL AND GRASSES PLANTING  
SCALE: NTS



**1** DECIDUOUS TREE PLANTING  
SCALE: NTS

- GENERAL TREE PLANTING NOTES
1. PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS, AND BROKEN OR DEAD BRANCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED; HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.
  2. MARK NORTH SIDE OF THE TREE IN THE NURSERY AND ROTATE TREE TO FACE NORTH AT THE SITE WHENEVER POSSIBLE. TREES WHOSE NORTH ORIENTATION IS NOT CHANGED FROM THE NURSERY DO NOT NEED TO BE WRAPPED, EXCEPT TREES WITH VERY THIN BARK.
  3. EACH TREE SHALL BE PLANTED SUCH THAT THE TRUNK FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL.
  4. SET TOP OF ROOT BALL FLUSH WITH GRADE OR 1"-2" HIGHER IN SLOWLY DRAINING SOILS.
  5. DO NOT PLACE MULCH IN CONTACT WITH TREE TRUNK.
  6. IN SEEDED AREAS, HOLD SEED BACK TO A MINIMUM 36" DIA. CIRCLE. FORM A 4" HIGH EARTH SAUCER BEYOND EDGE OF ROOT BALL. MULCH PLANTING PIT.

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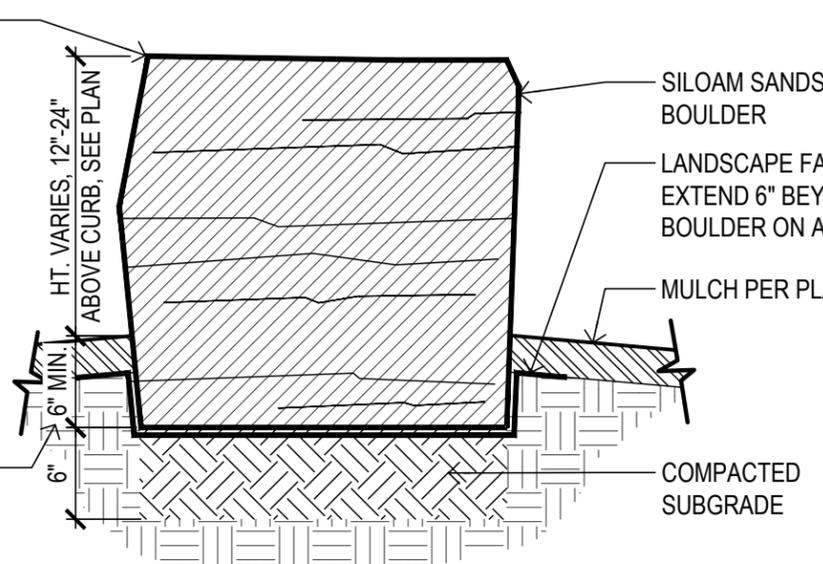
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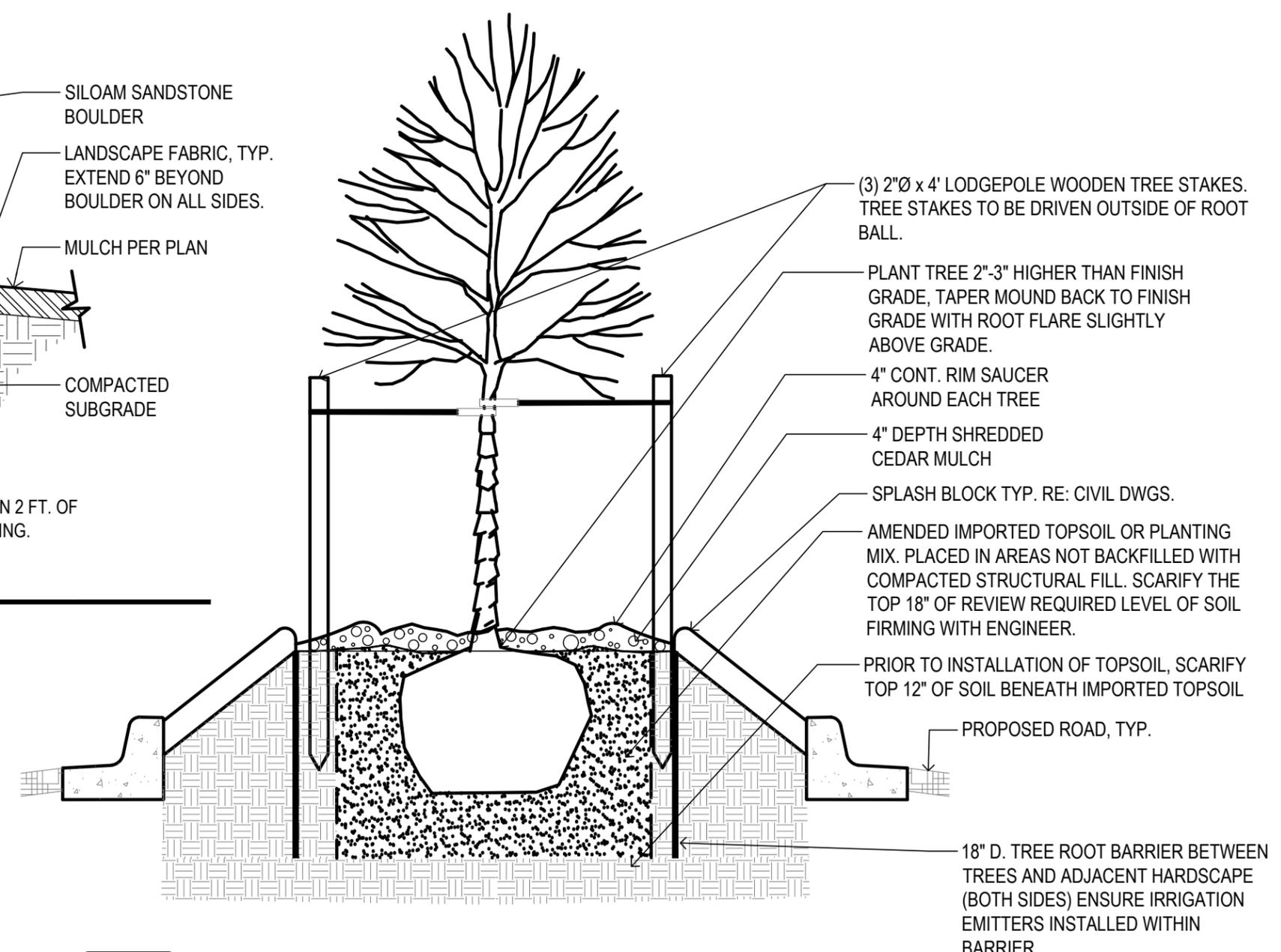
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TOP SURFACE OF BOULDERS WITHIN SIGHT TRIANGLES SHALL BE 35" MAX ABOVE STREET LEVEL



BURY BOTTOM OF BOULDER 6" MIN. BELOW ADJACENT FINISHED GRADE  
 IF BOULDER IS LOCATED WITHIN DRIP LINE OF EXISTING TREE, BURY BOULDER 3" BELOW ADJACENT FINISHED GRADE, TYP.

**2** LANDSCAPE BOULDER  
 SCALE: NTS



**1** MEDIAN TREE PLANTING  
 SCALE: NTS



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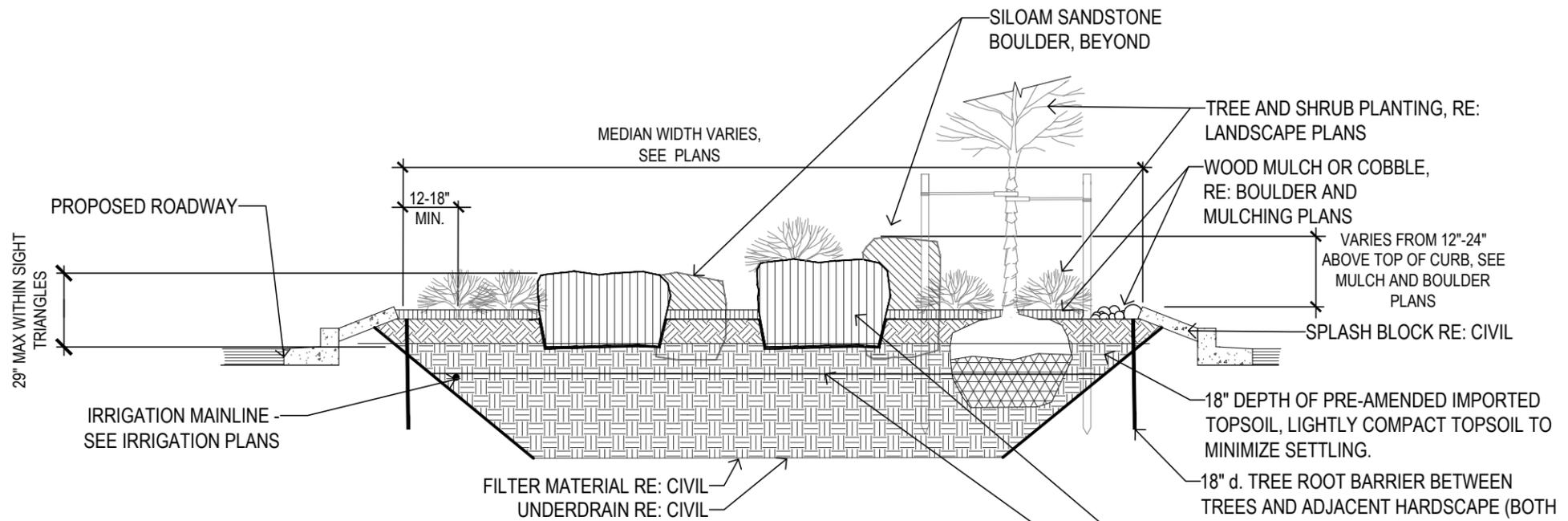
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City of **Evans, Colorado**

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**NOTES:**

1. **SIGHT DISTANCE TRIANGLES:** BOULDER AND PLANTS (MATURE SIZE) LOCATED WITHIN SIGHT DISTANCE TRIANGLES SHALL NOT EXTEND MORE THAN 29" ABOVE STREET LEVEL. REFER TO LANDSCAPE AND THE MULCH AND BOULDER PLAN FOR SIGHT TRIANGLE LOCATIONS. SEE PLANS FOR SIGHT DISTANCE TRIANGLE AREA.
2. CONTRACTOR SHALL SUBMIT PHOTOS OF BOULDERS AT QUARRY FOR THE CITY OF EVANS OR ENGINEER TO REVIEW AND APPROVE PRIOR TO DELIVERY TO PROJECT SITE. INCLUDE AN EXTENDED TAPE MEASURE PLACED NEXT TO BOULDER IN PHOTO FOR SCALE.
3. THE CITY OF EVANS OR ENGINEER SHALL REVIEW AND APPROVE BOULDER LOCATIONS PRIOR TO PLACEMENT. LOCATIONS SHOULD BE STAKED FOR REVIEW.
4. VERTICAL JOINTS BETWEEN BOULDERS SHALL NOT EXCEED 1". STONE CHINKING IS NOT ACCEPTABLE.
5. DAMAGED/SCARRED BOULDERS MAY BE REJECTED BY THE CITY OF EVANS OR ENGINEER.
6. COMPACT SOIL BENEATH BOULDERS TO REDUCE SETTLING.
7. PLACE BOULDERS WITH FLATTEST SIDE UP AND MOST ATTRACTIVE FACE (AS DETERMINED BY OWNER'S REPRESENTATIVE) FACING ROADWAY. TOP SURFACE OF BOULDER SHALL BE FLAT AND SLIGHTLY SLOPED FOR DRAINAGE.

1

**MEDIAN CROSS SECTION**

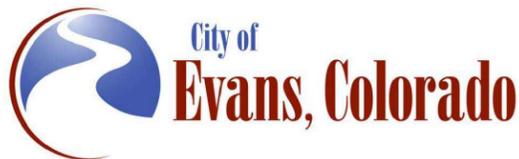
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**GENERAL DESCRIPTION**

A FULLY AUTOMATED SPRINKLER AND DRIP IRRIGATION SYSTEM WILL IRRIGATE TURF AREAS AND TREES. POP-UP SPRAY SPRINKLERS WILL IRRIGATE TURF. INLINE DRIP TUBING WILL IRRIGATE TREES IN MEDIANS (REFER TO IRRIGATION PLANS AND DETAILS).

RAW WATER FROM THE EXISTING TUSCANY IRRIGATION PUMP STATION WILL BE USED FOR IRRIGATION. THE POINT-OF-CONNECTION (P.O.C.) WILL BE AS SHOWN ON THE IRRIGATION PLANS.

SINCE THE IRRIGATION SYSTEM UTILIZES NON-POTABLE WATER, THE FOLLOWING ITEMS ARE REQUIRED:

- IRRIGATION PIPING (SLEEVES, MAINLINE, LATERAL) IS PURPLE
- IRRIGATION EQUIPMENT DESIGNED FOR NON-POTABLE USE (IE. DIRTY WATER VALVES)
- SPRINKLERS TO HAVE PURPLE TOPS
- VALVE BOXES TO HAVE PURPLE LIDS

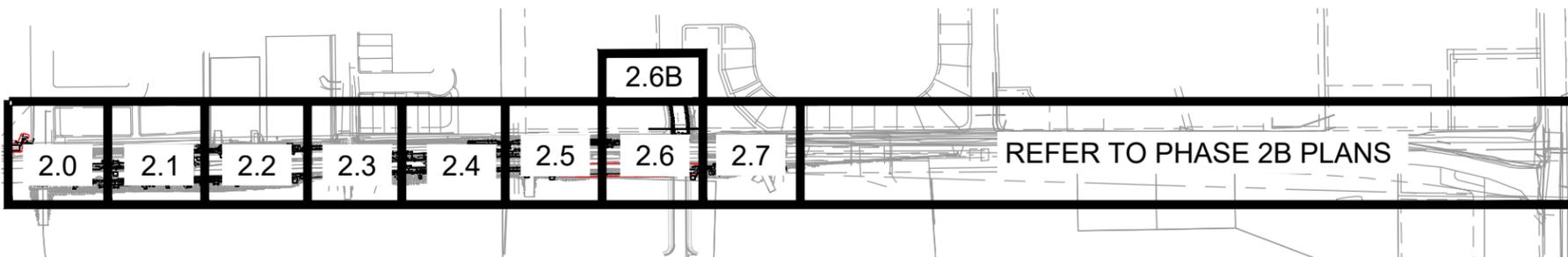
A PEDESTAL MOUNT IRRIGATION CONTROLLER COMPATIBLE WITH THE CITY OF EVANS EXISTING CENTRAL CONTROL SYSTEM MUST BE INSTALLED UNDER THIS CONTRACT. A FLOW SENSOR AND MASTER VALVE WILL BE UTILIZED TO FACILITATE AUTOMATIC SHUT DOWN OF THE IRRIGATION SYSTEM IN THE EVENT OF A MAINLINE PIPE BREAK.

ISOLATION GATE VALVES PERMIT THE ISOLATION OF SECTIONS OF THE SYSTEM FOR REPAIRS OR MAINTENANCE. QUICK COUPLING VALVES HAVE BEEN PROVIDED THROUGHOUT THE SITE FOR INCIDENTAL WATERING.

MAINLINE AND TWO WIRE CABLE MUST BE STUBBED OUT FOR FUTURE USE (PHASE 2B). REFER TO IRRIGATION PLANS FOR ADDITIONAL INFORMATION.

**GENERAL NOTES**

1. THE SYSTEM DESIGN ASSUMES A MINIMUM STATIC PRESSURE AND MINIMUM DISCHARGE AS INDICATED ON THE PLANS FOR THE POINT-OF-CONNECTION. VERIFY PRESSURE AND FLOW ON SITE PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES WITH THE ASSUMPTIONS.
2. COORDINATE UTILITY LOCATES ("CALL BEFORE YOU DIG") OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
3. DO NOT PROCEED WITH THE INSTALLATION OF THE IRRIGATION SYSTEM 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.
4. THE DRAWINGS ARE DIAGRAMMATIC. THEREFORE, THE FOLLOWING SHOULD BE NOTED:
  - A. IRRIGATION COMPONENTS MAY BE SHOWN OUTSIDE PLANTING AREAS FOR CLARITY. AVOID CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING MATERIALS, AND ARCHITECTURAL FEATURES. INSTALL IRRIGATION PIPE AND WIRING IN LANDSCAPED AREAS WHENEVER POSSIBLE.
  - B. USE ONLY STANDARD TEES AND ELBOW FITTINGS. USE OF CROSS TYPE FITTINGS IS NOT PERMITTED.
5. PROVIDE THE FOLLOWING COMPONENTS TO THE OWNER PRIOR TO THE COMPLETION OF THE PROJECT:
  - A. TWO OPERATING KEYS FOR EACH TYPE OF MANUALLY OPERATED VALVE.
  - B. TWO OF EACH SERVICING WRENCH OR TOOL NEEDED FOR COMPLETE ACCESS, ADJUSTMENT, AND REPAIR OF ALL SPRAY SPRINKLERS.
  - C. TWO QUICK COUPLING KEYS, EACH WITH ATTACHED SWIVEL HOSE EL FOR OPERATION OF THE QUICK COUPLING VALVES.
6. SELECT NOZZLES FOR SPRAY SPRINKLERS WITH ARCS WHICH PROVIDE COMPLETE AND ADEQUATE COVERAGE WITH MINIMUM OVERSPRAY FOR THE SITE CONDITIONS.
7. THE IRRIGATION CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF IRRIGATION SLEEVING. SLEEVES ARE TO BE INSTALLED FOR BOTH PIPING AND ELECTRICAL WIRING AT EACH HARDSCAPE CROSSING. COORDINATE INSTALLATION OF SLEEVING WITH OTHER TRADES. ANY PIPE OR WIRE WHICH PASSES BENEATH EXISTING HARDSCAPE REQUIRES HORIZONTAL BORING BY THE IRRIGATION CONTRACTOR.
8. CONNECT ELECTRICAL POWER TO THE IRRIGATION CONTROL SYSTEM IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND ALL APPLICABLE LOCAL ELECTRIC UTILITY CODES.
9. WITH REGARD TO PIPE SIZING, THE FOLLOWING SHOULD BE NOTED: IF A SECTION OF UNSIZED PIPE IS LOCATED BETWEEN TWO IDENTICALLY SIZED SECTIONS, THE UNSIZED PIPE IS THE SAME NOMINAL SIZE AS THE TWO SIZED SECTIONS. THE UNSIZED PIPE SHOULD NOT BE CONFUSED WITH THE DEFAULT PIPE SIZE NOTED IN THE LEGEND.
10. INSTALL VAN NOZZLES WHERE SPRAY ANGLES ARE LESS OR GREATER THAN WHAT A FIXED SPRAY NOZZLE CAN IRRIGATE WITHOUT EXCESSIVE OVERSPRAY.
11. CONTRACTOR TO INSTALL SPRINKLERS PERPENDICULAR TO GRADE AND FINE GRADING TECHNIQUES EMPLOYED TO REDUCE SEDIMENT, HEAD DAMAGE, AND RUNOFF TO HARD SURFACES.
12. CONTRACTOR MUST USE CYCLE/SOAK PROGRAMMING TECHNIQUES TO MINIMIZE RUN OFF.



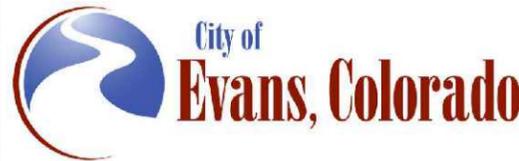
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**LEGEND**

<p>--- EXISTING MAINLINE PIPE</p> <p>===== SLEEVING *TYPE: CLASS 200 PVC, COLOR PURPLE</p> <p>----- MAINLINE PIPE *TYPE: CLASS 200 PVC, SIZE PER PLAN, COLOR PURPLE</p> <p>----- LATERAL PIPE TO SPRINKLERS AND INLINE DRIP RINGS *TYPE: CLASS 200 PVC, COLOR PURPLE *1-INCH UNLESS OTHERWISE NOTED</p> <p>--- MANIFOLD PIPE TO ZONE CONTROL VALVES *TYPE: CLASS 200 PVC, COLOR PURPLE *SIZE: 1-INCH</p> <p>~ DRIP LATERAL PIPE TO EMITTERS *TYPE: RAIN BIRD XT-700 OR EQUAL *3/4-INCH SIZE UNLESS OTHERWISE NOTED *EMITTER TYPE: RAIN BIRD XERI-BUG OR EQUAL</p> <p>----- INLINE DRIP TO TREES *TYPE: RAIN BIRD XFCV, 0.9 GPH/EMITTER, 12-INCH EMITTER SPACING *INSTALL CHRIS CROSS PATTERN THROUGH TREE AREAS (REFER TO DETAIL)</p> <p>----- INLINE DRIP HEADER PIPE *TYPE: CLASS 200 PVC, COLOR PURPLE *SIZE: 1-INCH</p> <p>--- UNCONNECTED PIPE CROSSING</p> <p>--- POINT-OF-CONNECTION (P.O.C.)</p> <p>--- STUB OUT FOR FUTURE USE</p> <p>☐ MASTER VALVE ASSEMBLY: *MODEL: GRISWOLD 2000, NORMALLY CLOSED *SIZE: REFER TO PLAN *DECODER: BASELINE BL-5201</p> <p>☐ FLOW SENSOR ASSEMBLY: *MODEL: FLOMEC QS200 *SIZE: 1.5-INCH *DECODER: BASELINE BL-5309 FLOW SENSOR BICODER</p> <p>☐ ISOLATION GATE VALVE ASSEMBLY *MODEL (2.5-INCH AND SMALLER): NIBCO T113K OR EQUAL *MODEL (3-INCH AND LARGER): MATCO 10RT *NOMINAL SIZE OF GATE VALVE TO MATCH NOMINAL MAINLINE SIZE</p> <p>☐ BLOW OUT ASSEMBLY (REFER TO DETAIL)</p> <p>☐ QUICK COUPLING VALVE ASSEMBLY *MODEL: RAIN BIRD 44NP OR EQUAL</p> <p>☐ AIR VACUUM RELIEF VALVE ASSEMBLY *MODEL: WATERMAN AV-150 *SIZE: 1-1/2-INCH</p> <p>☐ REMOTE CONTROL VALVE ASSEMBLY *MODEL: RAIN BIRD PESB-R OR EQUAL *SIZE AS SHOWN ON PLANS *BALL VALVE: SPEARS PVC COMPACT OR EQUAL *DECODER: SEE DECODER NOTES TO RIGHT</p> <p>☐ DRIP REMOTE CONTROL VALVE ASSEMBLY *MODEL: RAIN BIRD XCZ-100-PRB-COM OR EQUAL *BALL VALVE INCLUDED WITH DRIP ZONE KIT *DECODER: SEE DECODER NOTES TO RIGHT</p> <p>☐ ZONE CONTROL VALVE ASSEMBLY *BALL VALVE: SPEARS PVC COMPACT OR EQUAL *SIZE: 1-INCH</p> <p>~ FLUSH CAP ASSEMBLY *MODEL: RAIN BIRD OR EQUAL</p>	<p>POP-UP SPRINKLER: RAIN BIRD MPR SERIES ON 1806-SAM-PRS-NP OR EQUAL @ 30 PSI</p> <p>●●● RADIUS: 5' FLOW (GPM): Q - 0.10 H - 0.20 F - 0.41</p> <p>▲▲▲ RADIUS: 8' FLOW (GPM): Q - 0.26 H - 0.52 F - 1.05</p> <p>●●● RADIUS: 10' FLOW (GPM): Q - 0.39 H - 0.79 F - 1.58</p> <p>◆◆◆ RADIUS: 12' FLOW (GPM): Q - 0.65 H - 1.30 F - 2.60</p> <p>●●● RADIUS: 15' FLOW (GPM): Q - 0.92 H - 1.85 F - 3.70</p> <p>SS RADIUS: 4'X'30 FLOW (GPM): SST-1.21</p> <p>SS RADIUT: 4'X'15 FLOW (GPM): EST-0.61</p> <p>☐ INLINE DRIP RING ASSEMBLY (TREE IRRIGATION) *RAIN BIRD XFCV, 9 GPH/EMITTER, 12-INCH EMITTER SPACING OR EQUAL</p> <p>☐ INLINE DRIP FLUSH VALVE ASSEMBLY *REFER TO DETAIL</p> <p>☐ IRRIGATION CONTROLLER ASSEMBLY: *MODEL: BASELINE BL-3200P (PEDESTAL MOUNT) *INSTALL BL-LA01 LIGHTING ARRESTORS PER BASELINE GUIDELINES *INSTALL BL-CM4G-P-VZ BASELINE CELLULAR MODEM VERIZON *14 GAUGE P7072D TWO WIRE CABLE (MAXI WIRE) *PROVIDE DBC SITE VERIFICATION SERVICE, DBC CERTIFIED START UP SERVICE, AND DBC EXTENDED WARRANTY SERVICE *CONTACT DBC IRRIGATION, BRIAN YOUNG (PHONE: 970-744-7598) FOR ORDERING AND TESTING</p> <p>--- 2 --- TWO WIRE CABLE</p> <p>☐ INDICATES CONTROLLER AND CONTROLLER STATION NUMBER INDICATES LATERAL DISCHARGE IN GPM INDICATES REMOTE CONTROL VALVE SIZE IN INCHES</p> <p>☐ VALVE BOXES *MODEL: RAIN BIRD VB SERIES OR EQUAL. LID COLORS PURPLE.</p> <p>☐ VALVE DECODER NOTES: *INSTALL ONE BL-5201 DECODER WITH AN INDIVIDUAL VALVE *INSTALL BL-5202 TWO STATION DECODER WHERE THERE ARE A PAIR OF CLUSTERED VALVES *INSTALL BL-5204 FOUR STATION DECODER WHERE THERE ARE FOUR CLUSTERED VALVES</p>
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**FLAG NOTES**

- ① EXCAVATE AND EXPOSE EXISTING IRRIGATION DISTRIBUTION MAINLINE IN APPROXIMATE LOCATION SHOWN. INSTALL DOUBLE BAND BRASS SERVICE SADDLE (FORD 202BS OR EQUAL) AND INSTALL 2-INCH PVC MAINLINE TO GATE VALVE, MASTER VALVE, AND FLOW SENSOR. COORDINATE CONNECTION WITH OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.
- ② INSTALL PEDESTAL MOUNT CONTROLLER IN APPROXIMATE LOCATION SHOWN. ELECTRICAL POWER WILL BE PROVIDED WITHIN 5-FEET OF THE CONTROLLER (REFER TO ELECTRICAL PLANS). COORDINATE EXACT LOCATION OF ELECTRICAL POWER WITH NECESSARY TRADES ON SITE. PROVIDE ALL NECESSARY CPNDUIT AND CONDUCTORS BETWEEN ELECTRICAL POWER SOURCE AND IRRIGATION CONTROLLER. MAKE ALL NECESSARY CONNECTIONS. COORDINATE EXACT PLACEMENT OF THE CONTROLLER WITH THE OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.
- ③ PROGRAM MASTER VALVE AND FLOW SENSOR SO THAT THE MASTER VALVE SHUTS DOWN IF A HIGH FLOW OF 120 GPM IS EXCEEDED (MAINLINE PIPE BREAK). INSTALL TWO WIRE CABLE FROM MASTER VALVE AND FLOW SENSOR AS WELL AS NECESSARY DECODER FOR THE MASTER VALVE AND FLOW SENSOR.
- ④ INSTALL IRRIGATION DECODER GROUNDING EQUIPMENT THAT MEETS CONTROLLER MANUFACTURER'S GUIDELINES AT LOCATION ADJACENT TO INDICATED REMOTE CONTROL VALVE ASSEMBLY. COORDINATE EXACT LOCATION OF GROUNDING EQUIPMENT WITH THE OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION. THE IRRIGATION CONTRACTOR IS RESPONSIBLE FOR GROUNDING THE ENTIRE TWO WIRE PATH PER MANUFACTURER'S GUIDELINES.
- ⑤ INSTALL BASELINE SOIL MOISTURE SENSOR (BL-5315B) FOR INDICATED REMOTE CONTROL VALVE. UTILIZE SENSOR FOR PROGRAMMING OF ZONES OF SAME IRRIGATION TYPE AND SIMILAR PLANTING MATERIALS TO BE APPLIED TO REMAINING ZONES (OF SAME TYPE) FOR THIS PROJECT. COORDINATE PROGRAMMING WITH OWNER'S REPRESENTATIVE. COORDINATE EXACT LOCATION OF SENSOR WITH OWNER'S REPRESENTATIVE.
- ⑥ INSTALL SLEEVING FOR EITHER OF THE FOLLOWING:  
1. ONE (1) 6-INCH SLEEVE FOR IRRIGATION MAINLINE AND ONE (1) 2-INCH SLEEVE FOR TWO WIRE CABLE.  
2. ONE (1) SLEEVE FOR LATERAL PIPING. REFER TO SIZE REQUIRED ON PLAN.  
COORDINATE SLEEVING INSTALLATION WITH OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.
- ⑦ IRRIGATION PIPE AND VALVES MAY BE SHOWN OUTSIDE PLANTING AREA IN HARDSCAPE FOR CLARITY ONLY. INSTALL ALL IRRIGATION COMPONENTS IN LANDSCAPED AREA.
- ⑧ STUB OUT MAINLINE PIPE AND TWO WIRE CABLE FOR FUTURE USE (PHASE 2B). TERMINATE MAINLINE PIPE END WITH SOLVENT WELD SCH. 40 PVC CAP. INSTALL STANDARD RECTANGULAR VALVE BOX OVER CAPPED END AND BRAND "STUB OUT" ON VALVE BOX LID. COIL 30-INCH LENGTH OF TWO WIRE CABLE AND PLACE COIL WITHIN THE SAME VALVE BOX. COORDINATE MAINLINE AND TWO WIRE CABLE STUB OUT INSTALLATION WITH THE OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.
- ⑨ INSTALL TWO WIRE CABLE WITHIN 1-1/2-INCH CONDUIT FROM CONTROLLER TO MAINLINE PIPE. CONDUIT TO BE INSTALLED 24-INCHES BELOW GRADE. INSTALL DETECTABLE WARNING TABLE 6-INCHES BELOW GRADE OVER TOP OF CONDUIT.

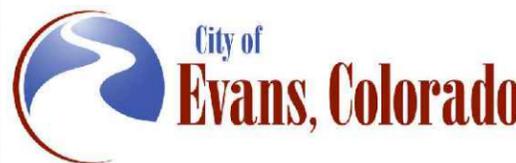
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 00 37TH STREET WIDENING EAST OF ROUNDABOUT PHASE 2A P-PHASE 2A.DWG



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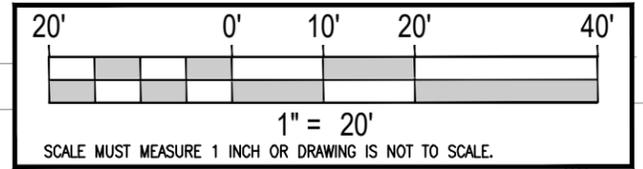
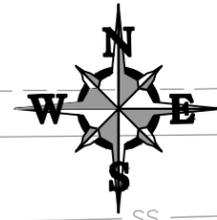
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PRIME CONSULTANT:	SUB CONSULTANT:

Sheet Revisions		
Date:	Comments	Init.



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	IRRIGATION FLAG NOTES AND LEGEND			37TH STREET 2A
	No Revisions:	Designer: JHK	Structure	Drawing Number IR1.1
	Revised:	Detailer: JHK	Numbers	
Void:	Sheet Subset: IRRIGATION	Subset Sheets: 18 of 35	Sheet Number 100	

FOR CONSTRUCTION 2/24/2024



14" C905 PVC DR18

14" C905 PVC DR18

IRRIGATION CONTROLLER  
REQUIRES 120 VAC POWER  
PEDESTAL MOUNTED

IRRIGATION CONNECTION  
SIZE: 2-INCH  
DESIGN FLOW: 80 GPM  
MINIMUM PRESSURE: 70 PSI  
AVAILABLE PRESSURE: 85 PSI  
SOURCE: EXISTING TUSCANY PUMP  
STATION'S MAINLINE PIPE

SLEEVES:  
1, 6-INCH  
1, 2-INCH

SLEEVES:  
1, 6-INCH  
1, 2-INCH

SLEEVE:  
1, 2-INCH

37TH STREET

SIENNA AVE



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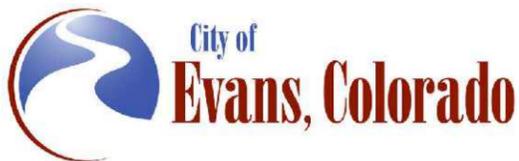
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Sheet Revisions

Date:	Comments	Init.



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Revised:
Void:

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IRRIGATION PLAN

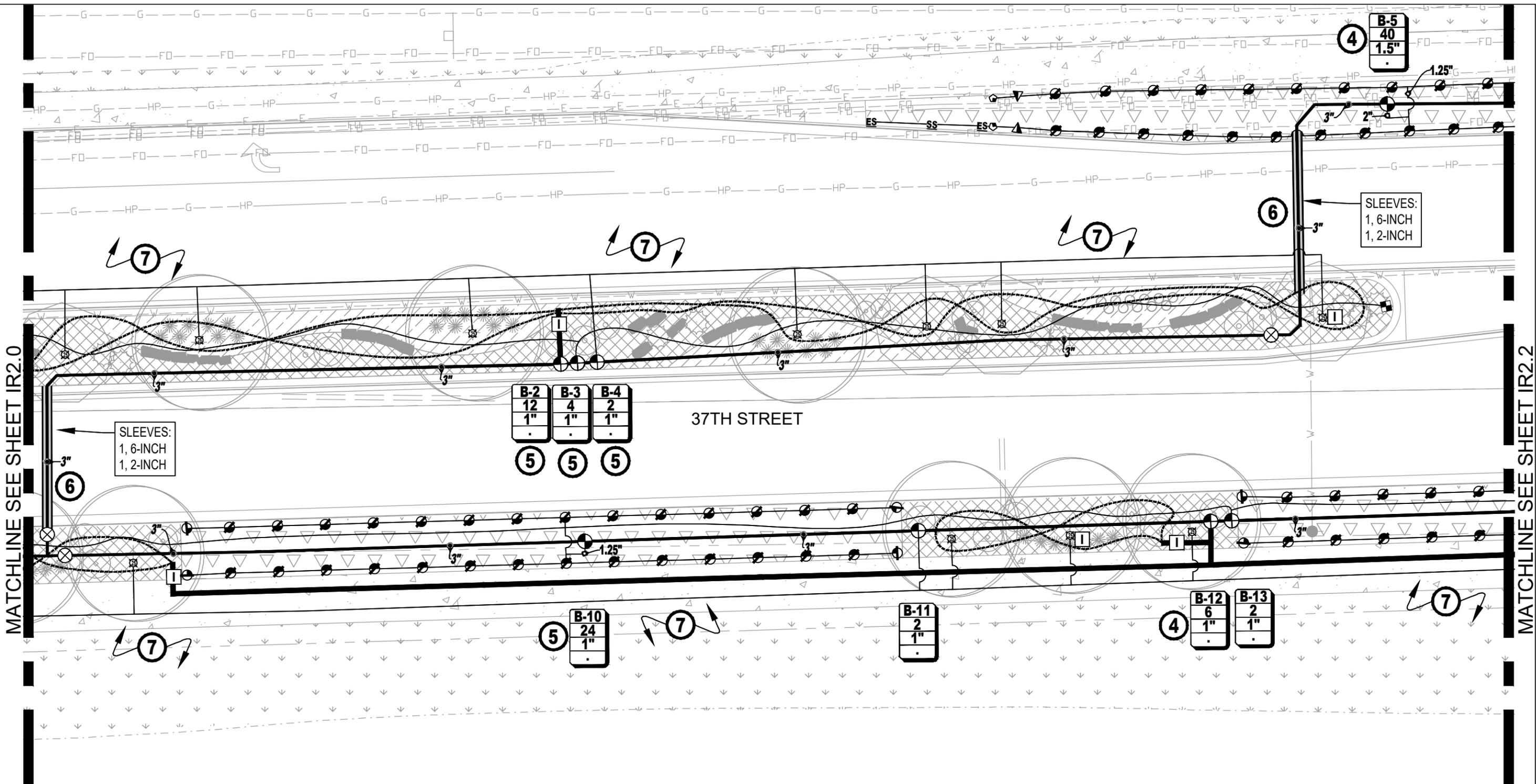
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Detailer:	JHK	Numbers	
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Project No.	37TH STREET 2A
Drawing Number	IR2.0
Sheet Number	101

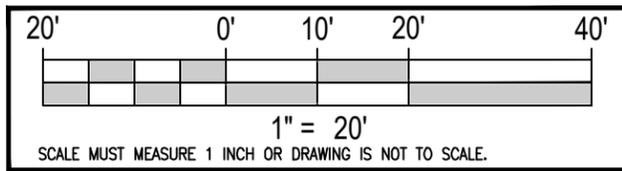
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FOR CONSTRUCTION 2/24/2024

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970.228.9888  
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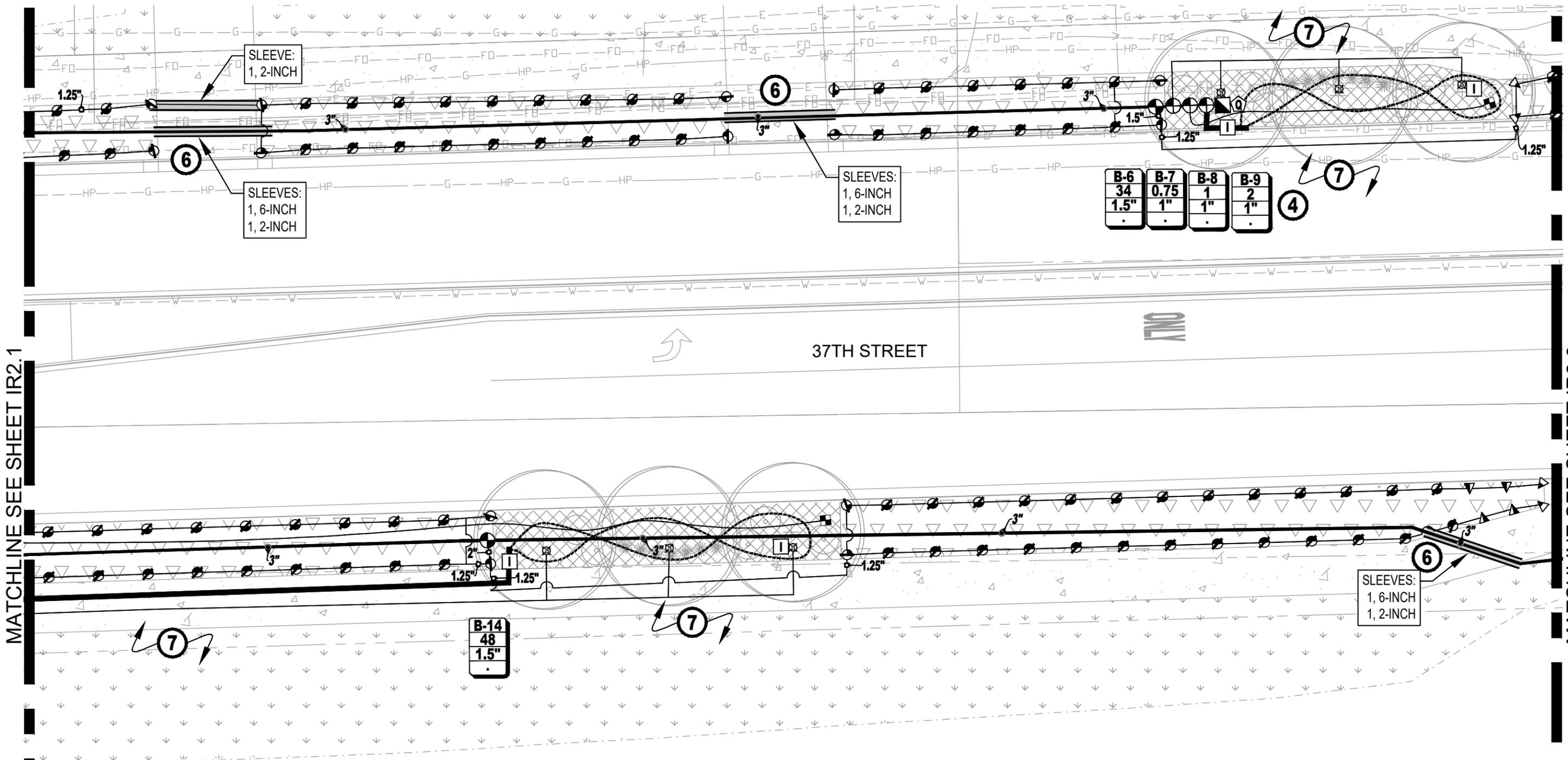
Sheet Revisions		
Date:	Comments	Init.

**City of Evans, Colorado**  
**FREEDOM Parkway**

As Constructed No Revisions: Revised: Void:	37TH STREET WIDENING PHASE 2A IRRIGATION PLAN		Project No. 37TH STREET 2A
	Designer: JHK	Structure Numbers	Drawing Number IR2.1
	Detailer: JHK		
	Sheet Subset: IRRIGATION	Subset Sheets: 20 of 35	Sheet Number 102

Plot Date: 2/26/2024 3:43 PM. Plotted By: Jason H. Kowarski  
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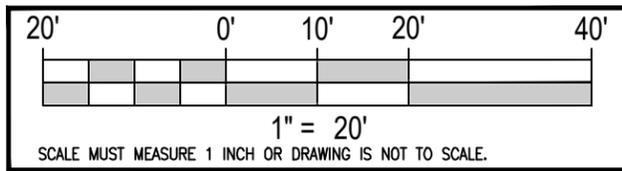
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MATCHLINE SEE SHEET IR2.1

MATCHLINE SEE SHEET IR2.3

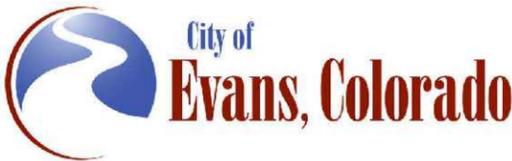
37TH STREET ONLY



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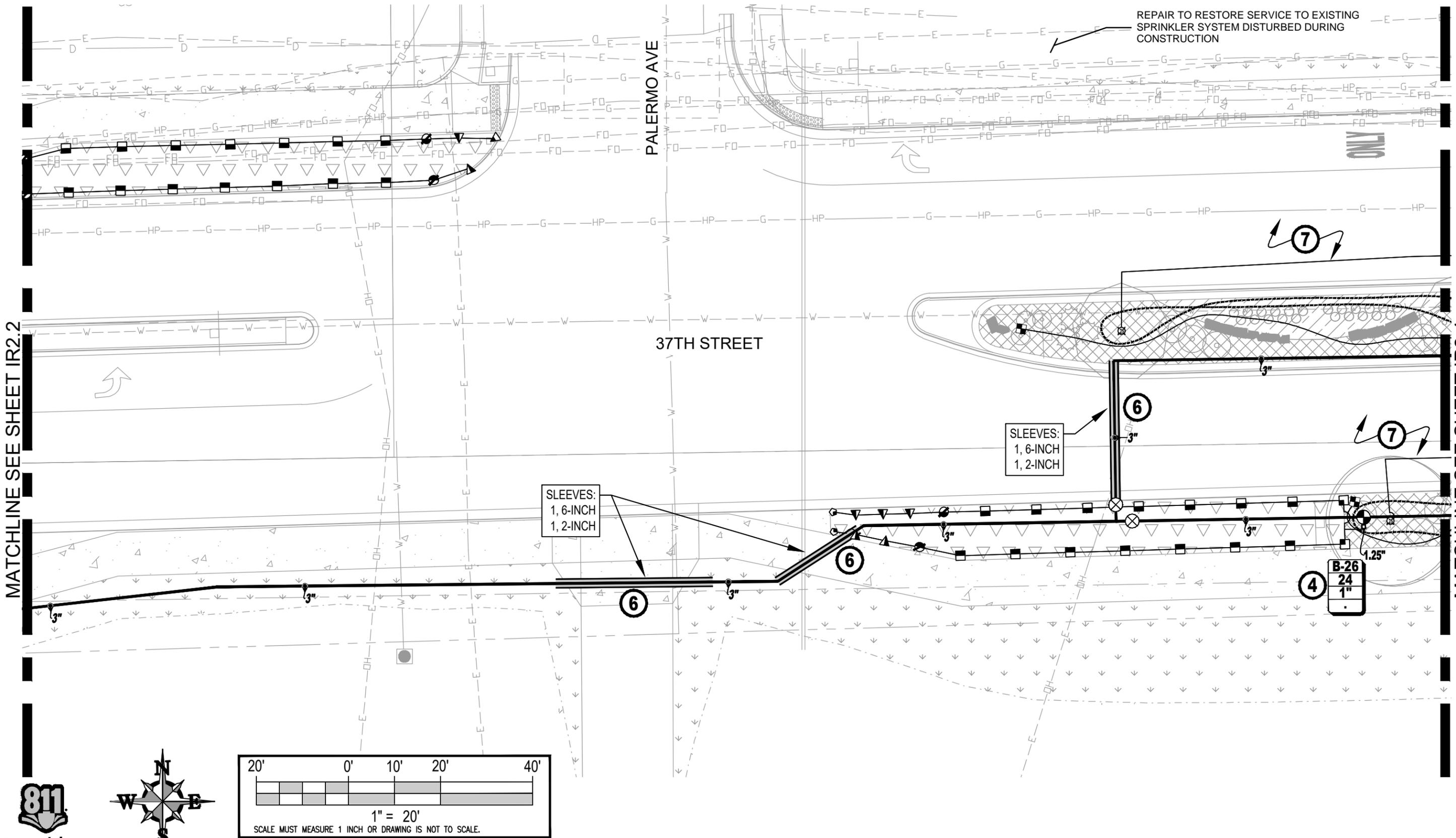
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Revised:
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Designer: JHK	Structure Numbers
Detailer: JHK	
Sheet Subset: IRRIGATION	Subset Sheets: 21 of 35

Project No. 37TH STREET 2A
Drawing Number IR2.2
Sheet Number 103

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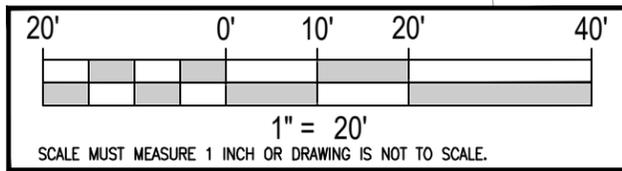


MATCHLINE SEE SHEET IR2.2

MATCHLINE SEE SHEET IR2.4

FOR CONSTRUCTION 2/24/2024

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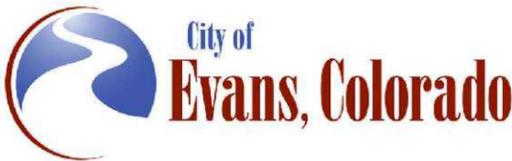


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37TH STREET WIDENING PHASE 2A  
IRRIGATION PLAN

Designer:	JHK	Structure Numbers	
Detailer:	JHK		
Sheet Subset:	IRRIGATION	Subset Sheets:	22 of 35

Project No.  
37TH STREET 2A  
Drawing Number IR2.3  
Sheet Number 104

REPAIR TO RESTORE SERVICE TO EXISTING  
SPRINKLER SYSTEM DISTURBED DURING  
CONSTRUCTION

SLEEVES:  
1, 6-INCH  
1, 2-INCH

MATCHLINE SEE SHEET IR2.3

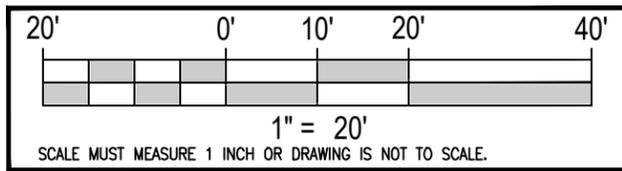
MATCHLINE SEE SHEET IR2.5

37TH STREET

<b>B-15</b>	<b>B-16</b>	<b>B-17</b>
15	5	3
1"	1"	1"
.	.	.

<b>B-28</b>	<b>B-29</b>	<b>B-30</b>
2	4	2
1"	1"	1"
.	.	.

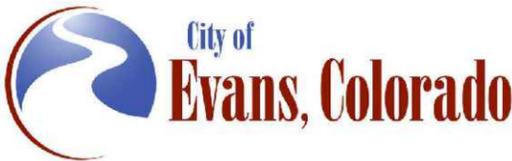
<b>B-27</b>
34
1.5"
.



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Date:	Comments	Init.

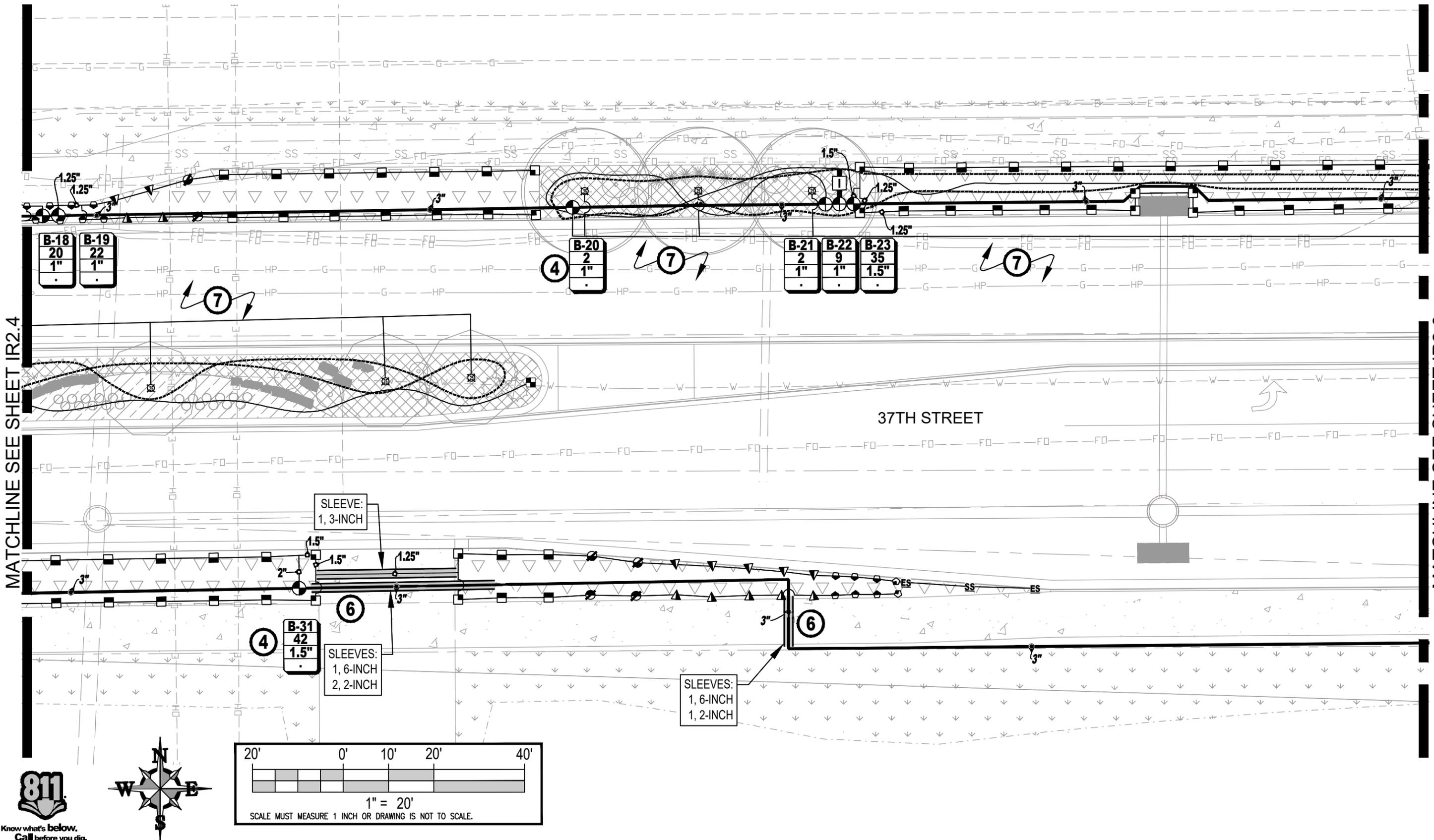


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No Revisions:
Revised:
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37TH STREET WIDENING PHASE 2A IRRIGATION PLAN	
Designer:	JHK
Detailer:	JHK
Structure Numbers	
Sheet Subset: IRRIGATION	Subset Sheets: 23 of 35

Project No.	37TH STREET 2A
Drawing Number	IR2.4
Sheet Number	105

FOR CONSTRUCTION 2/24/2024



MATCHLINE SEE SHEET IR2.4

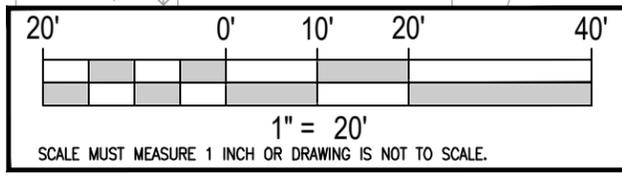
MATCHLINE SEE SHEET IR2.6

37TH STREET

SLEEVE:  
1, 3-INCH

SLEEVES:  
1, 6-INCH  
2, 2-INCH

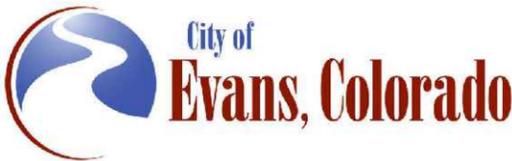
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1, 2-INCH



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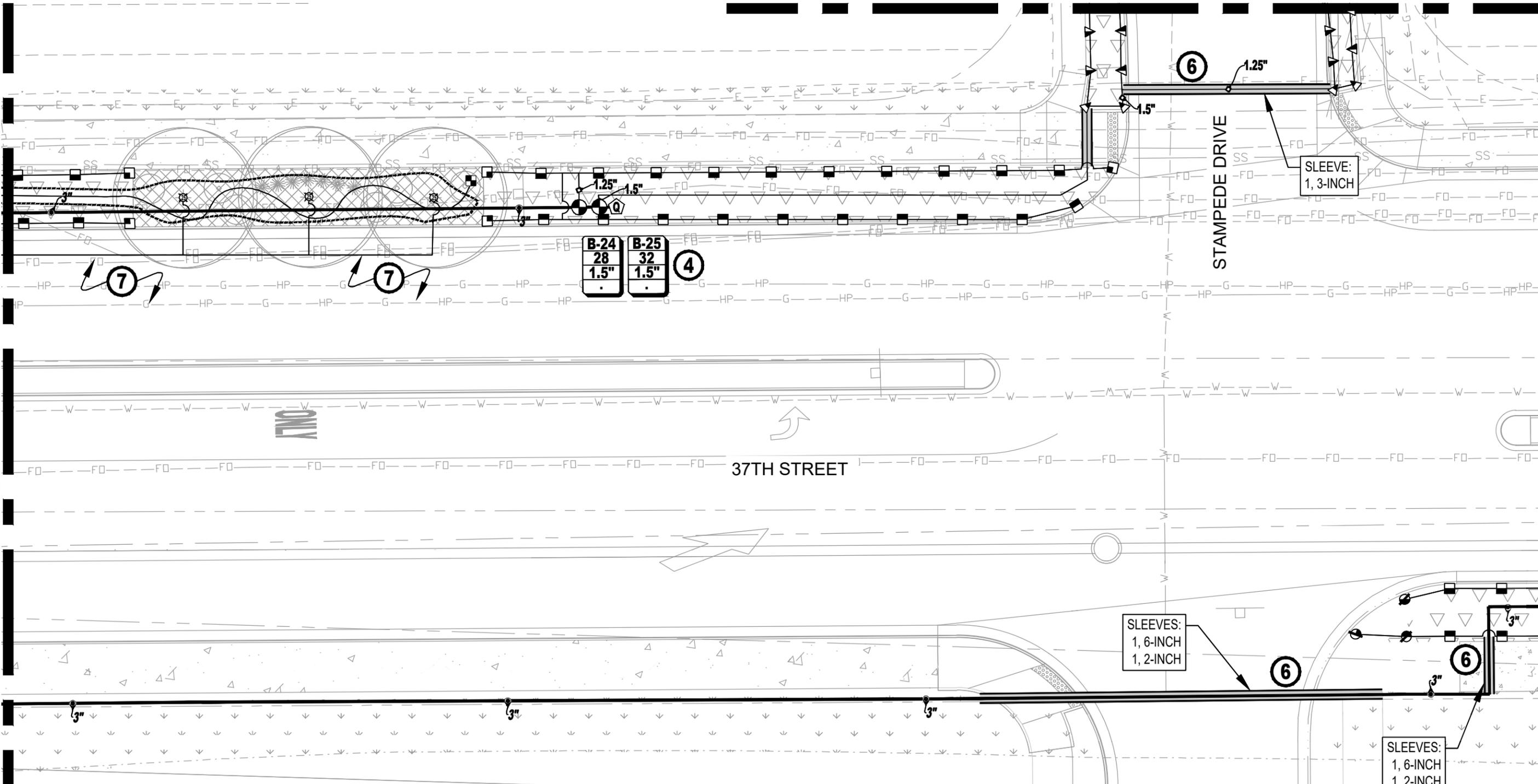
37TH STREET WIDENING PHASE 2A  
IRRIGATION PLAN  
Designer: JHK  
Detailer: JHK  
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Project No.  
37TH STREET 2A  
Drawing Number IR2.5  
Sheet Number 106

Plot Date: 1/26/2024 3:44 PM. Plotted By: Jason H. Kowarski  
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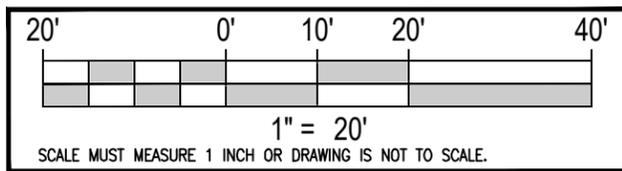
FOR CONSTRUCTION 2/24/2024

MATCHLINE SEE SHEET IR2.6B



MATCHLINE SEE SHEET IR2.5

MATCHLINE SEE SHEET IR2.7

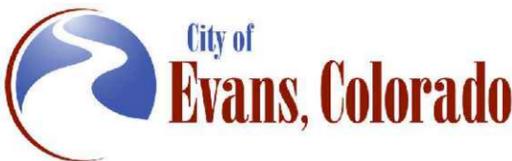


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37TH STREET WIDENING PHASE 2A  
 IRRIGATION PLAN

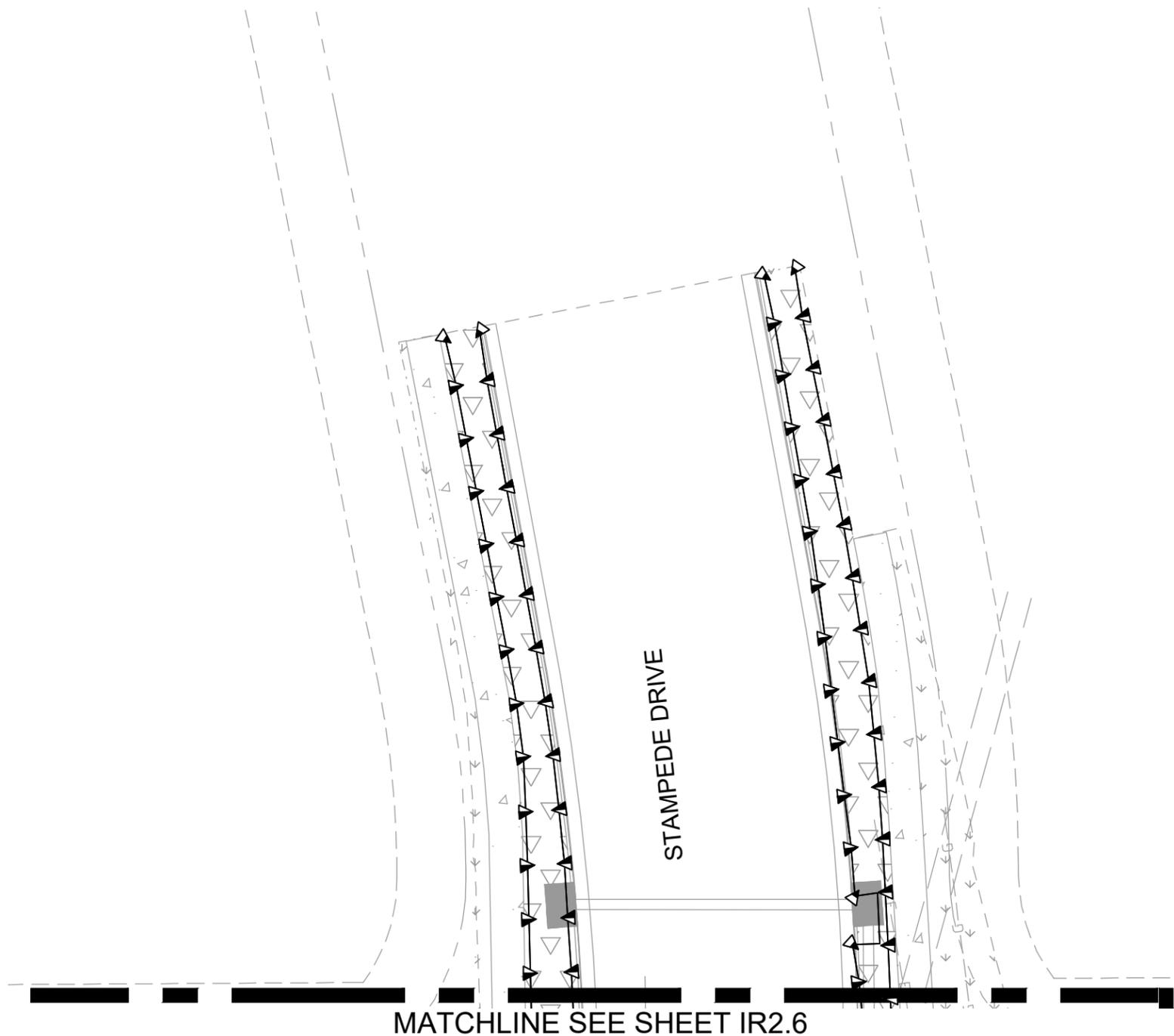
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Structure Numbers  
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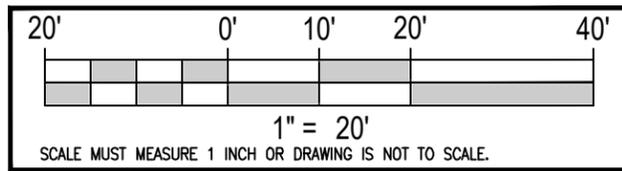
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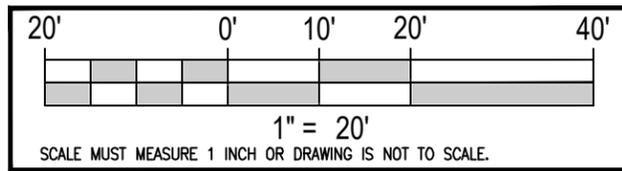
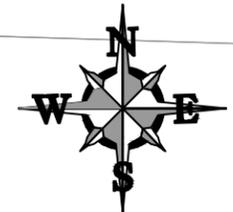
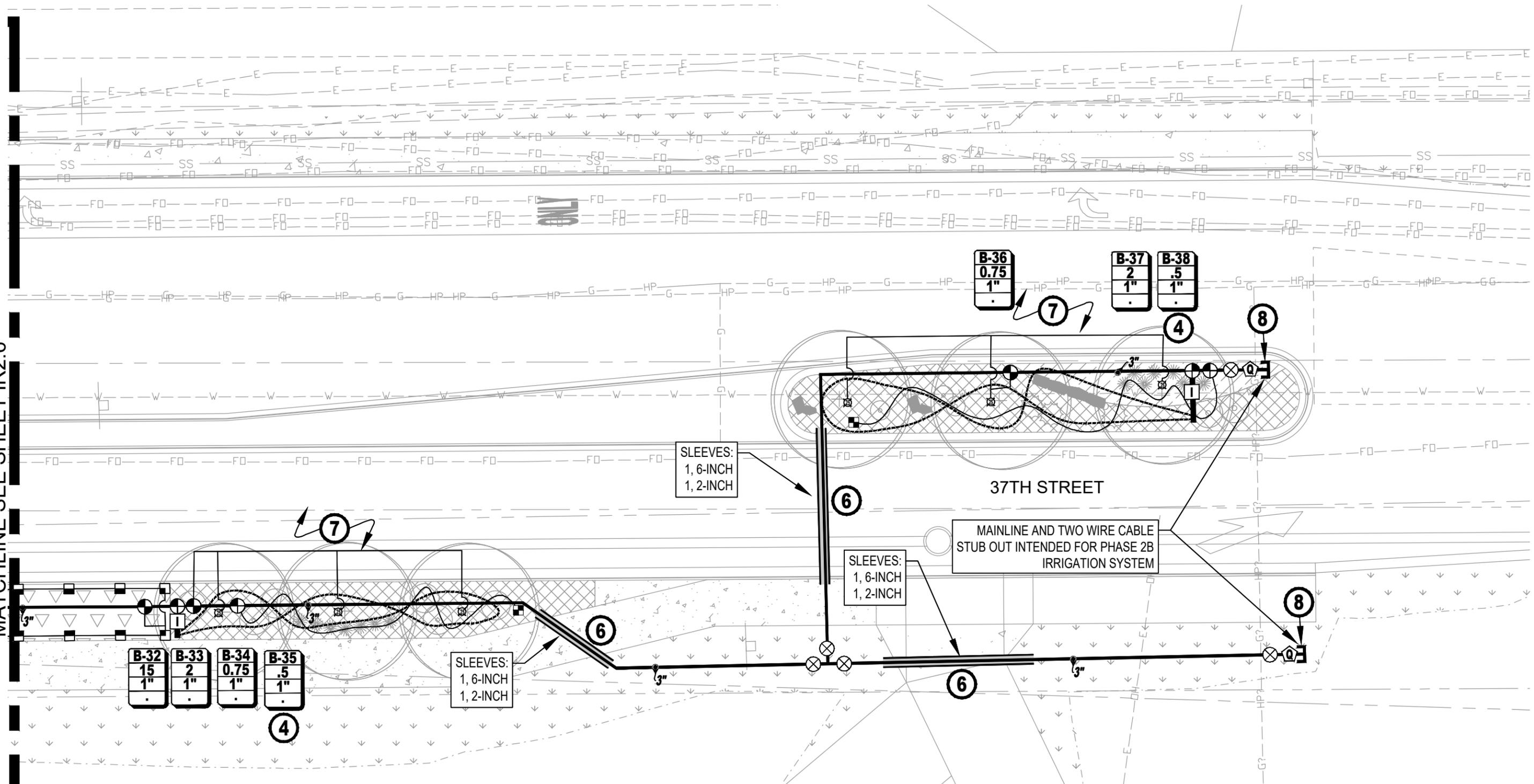
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Detailer:	JHK	
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Project No.
37TH STREET 2A
Drawing Number
IR2.6B
Sheet Number
108

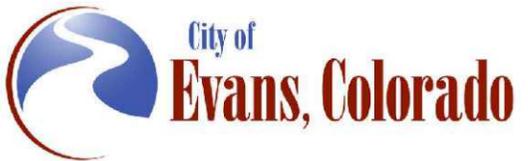
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MATCHLINE SEE SHEET IR2.6



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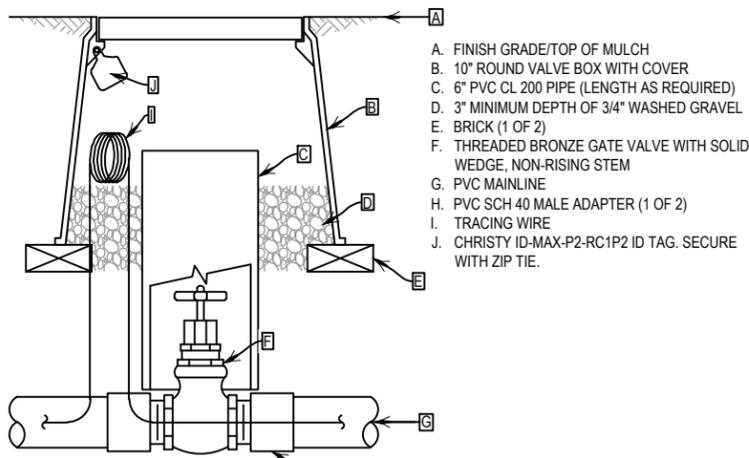


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Revised:	
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37TH STREET WIDENING PHASE 2A IRRIGATION PLAN	
Designer:	JHK
Detailer:	JHK
Sheet Subset:	IRRIGATION
Structure Numbers	
Subset Sheets:	27 of 35

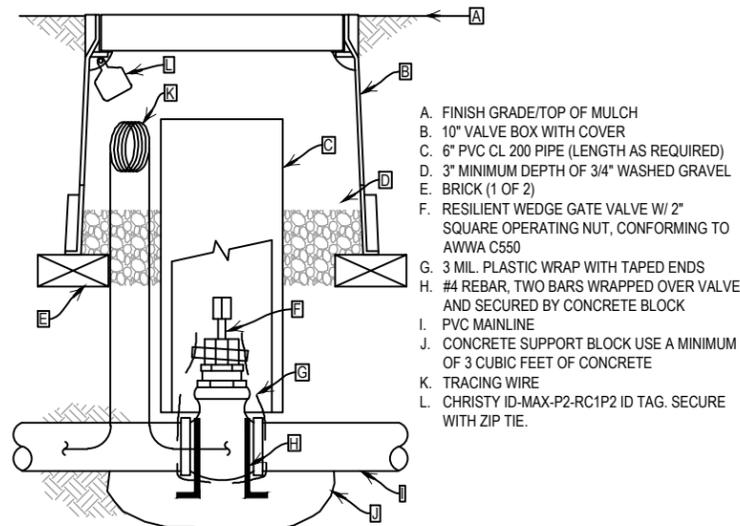
Project No.	37TH STREET 2A
Drawing Number	IR2.7
Sheet Number	109

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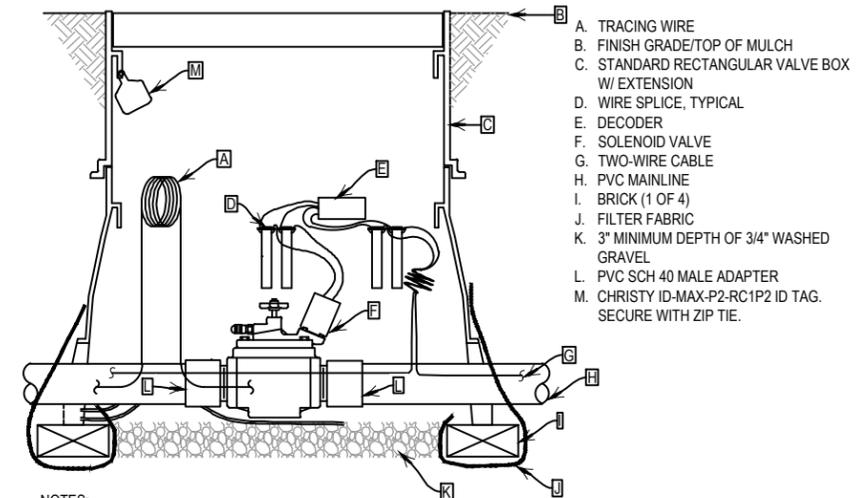
- A. FINISH GRADE/TOP OF MULCH
- B. 10" ROUND VALVE BOX WITH COVER
- C. 6" PVC CL 200 PIPE (LENGTH AS REQUIRED)
- D. 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL
- E. BRICK (1 OF 2)
- F. THREADED BRONZE GATE VALVE WITH SOLID WEDGE, NON-RISING STEM
- G. PVC MAINLINE
- H. PVC SCH 40 MALE ADAPTER (1 OF 2)
- I. TRACING WIRE
- J. CHRISTY ID-MAX-P2-RC1P2 ID TAG. SECURE WITH ZIP TIE.

NOTE:  
1. NOMINAL SIZE OF GATE VALVE TO MATCH NOMINAL MAINLINE SIZE.



- A. FINISH GRADE/TOP OF MULCH
- B. 10" VALVE BOX WITH COVER
- C. 6" PVC CL 200 PIPE (LENGTH AS REQUIRED)
- D. 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL
- E. BRICK (1 OF 2)
- F. RESILIENT WEDGE GATE VALVE W/ 2" SQUARE OPERATING NUT, CONFORMING TO AWWA C550
- G. 3 MIL. PLASTIC WRAP WITH TAPED ENDS
- H. #4 REBAR, TWO BARS WRAPPED OVER VALVE AND SECURED BY CONCRETE BLOCK
- I. PVC MAINLINE
- J. CONCRETE SUPPORT BLOCK USE A MINIMUM OF 3 CUBIC FEET OF CONCRETE
- K. TRACING WIRE
- L. CHRISTY ID-MAX-P2-RC1P2 ID TAG. SECURE WITH ZIP TIE.

NOTES:  
1. NOMINAL SIZE OF GATE VALVE TO MATCH NOMINAL MAINLINE SIZE.  
2. INSTALL A 4" THICK CONCRETE PAD BELOW VALVE WITH NO. 4 REBAR WHEN USING PUSH ON TYPE VALVES.  
3. RESILIENT WEDGE GATE VALVE MAY HAVE EITHER MECHANICAL JOINT OR PUSH-ON GASKETED ENDS. THE OPERATOR IS A 2" SQUARE-WRENCH NUT.  
4. ANCHOR ISOLATION VALVE TO CONCRETE BY BENDING REBAR OVER EACH END OF VALVE AND EXTENDING A MINIMUM OF 6" INTO CONCRETE SUPPORT BLOCK.  
5. WRAP VALVE ENDS AND BODY IN 3 MIL. PLASTIC PRIOR TO POURING CONCRETE.  
6. CONCRETE SUPPORT BLOCK IS TO BE POURED UNDER ISOLATION GATE VALVE. THE ISOLATION GATE VALVE IS NOT TO BE SET IN THE CONCRETE.



- A. TRACING WIRE
- B. FINISH GRADE/TOP OF MULCH
- C. STANDARD RECTANGULAR VALVE BOX W/ EXTENSION
- D. WIRE SPLICE, TYPICAL
- E. DECODER
- F. SOLENOID VALVE
- G. TWO-WIRE CABLE
- H. PVC MAINLINE
- I. BRICK (1 OF 4)
- J. FILTER FABRIC
- K. 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL
- L. PVC SCH 40 MALE ADAPTER
- M. CHRISTY ID-MAX-P2-RC1P2 ID TAG. SECURE WITH ZIP TIE.

NOTES:  
1. USE VALVE BOX EXTENSION AS NECESSARY TO ACHIEVE MINIMUM DIMENSIONS ABOVE ASSEMBLY.  
2. NOMINAL SIZE OF ALL COMPONENTS ARE TO BE THE SAME NOMINAL SIZE AS THE SOLENOID VALVE (SIZED AS SHOWN).  
3. INSTALL FILTER FABRIC AROUND EXTERIOR OF VALVE BOX. USE DUCT TAPE TO SECURE FABRIC TO PIPE AND VALVE BOX.  
4. DO NOT CUT OUT ENDS OF VALVE BOX UNNECESSARILY.  
5. POSITION VALVE BOX OVER VALVE TO ALLOW ACCESS TO SOLENOID.  
6. INSTALL SO THAT NO GRAVEL IS IN CONTACT WITH VALVE ASSEMBLY.

**1** ISOLATION GATE VALVE ASSEMBLY (2.5" AND SMALLER) N.T.S.

**2** ISOLATION GATE VALVE ASSEMBLY (3" AND LARGER) N.T.S.

**3** MASTER VALVE ASSEMBLY N.T.S.

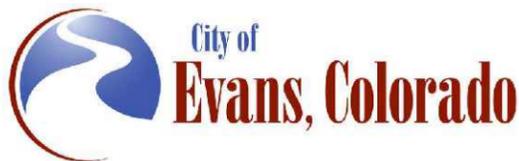


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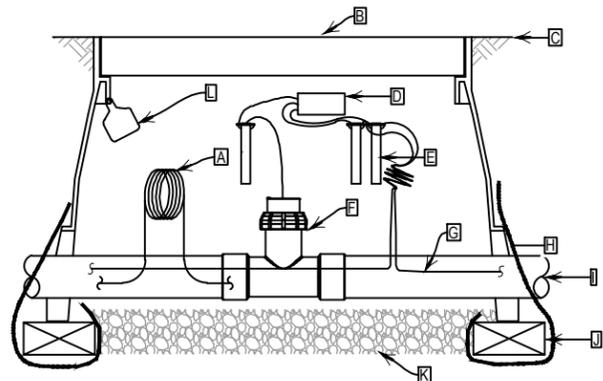
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Revised:	Designer: JHK	Structure Numbers	Drawing Number IR3.0
Void:	Detailer: JHK		Sheet Number 110
	Sheet Subset: IRRIGATION	Subset Sheets: 28 of 35	

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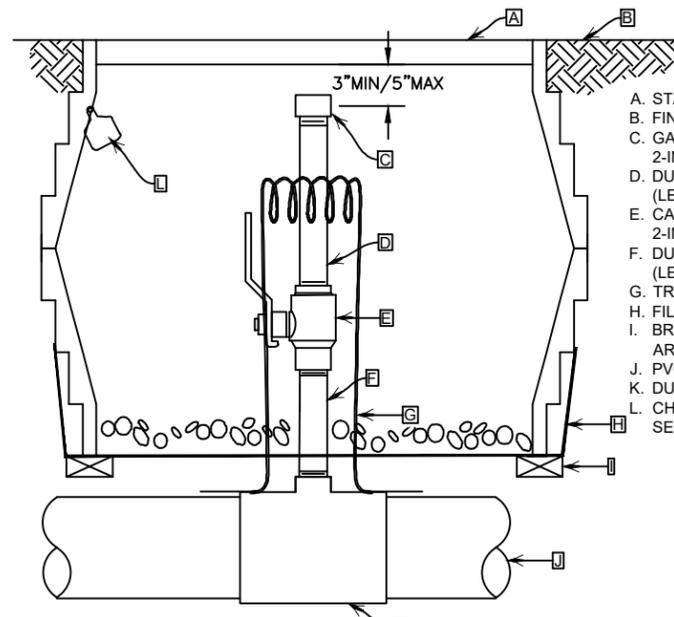
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- A. TRACING WIRE
- B. 12" VALVE BOX WITH COVER
- C. FINISH GRADE/TOP OF MULCH
- D. SENSOR DECODER
- E. WIRE SLICE, TYPICAL
- F. FLOW SENSOR
- G. TWO WIRE CABLE
- H. FILTER FABRIC
- I. PVC PIPE
- J. BRICK (1 OF 4)
- K. 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL
- L. CHRISTY ID-MAX-P2-RC1P2 ID TAG. SECURE WITH ZIP TIE.

- NOTES:
1. ALLOW 10 PIPE DIAMETERS UPSTREAM AND 5 PIPE DIAMETERS DOWNSTREAM OF STRAIGHT RUN OF PIPE TO ACHIEVE PROPER FLOW REGIME.
  2. INSTALL FILTER FABRIC AROUND EXTERIOR OF VALVE BOX. USE DUCT TAPE TO SECURE FABRIC TO PIPE AND VALVE BOX.
  3. DO NOT CUT OUT ENDS OF VALVE BOX UNNECESSARILY.
  4. INSTALL SO THAT GRAVEL IS ONLY IN CONTACT WITH BOTTOM OF SENSOR ASSEMBLY.

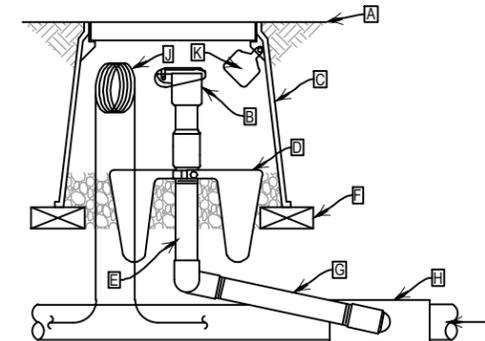
**1** FLOW SENSOR ASSEMBLY F N.T.S.



- A. STANDARD VALVE BOX WITH LID
- B. FINISH GRADE
- C. GALVANIZED THREADED CAP (SIZE 2-INCH)
- D. DUCTILE IRON NIPPLE (SIZE 2-INCH) (LENGTH AS REQUIRED)
- E. CARBON STEEL BALL VALVE (SIZE 2-INCH)
- F. DUCTILE IRON NIPPLE (SIZE 2-INCH) (LENGTH AS REQUIRED)
- G. TRACING WIRE
- H. FILTER FABRIC
- I. BRICKS (CONTINUOUS END TO END AROUND BOTTOM OF VALVE BOX)
- J. PVC MAINLINE PIPE
- K. DUCTILE IRON SERVICE TEE
- L. CHRISTY ID-MAX-P2-RC1P2 ID TAG. SECURE WITH ZIP TIE.

- NOTES:
1. INSTALL FILTER FABRIC AROUND EXTERIOR OF VALVE BOX. USE DUCT TAPE TO SECURE FABRIC TO PIPE AND VALVE BOX.
  2. BRAND VALVE BOX LID PER SPECIFICATIONS.

**2** BLOW OUT ASSEMBLY B N.T.S.



- A. FINISH GRADE/TOP OF MULCH
- B. QUICK-COUPLING VALVE
- C. 10" ROUND VALVE BOX WITH COVER
- D. HARCO QUICK COUPLER ANCHOR
- E. PVC SCH 80 TOE NIPPLE (LENGTH AS REQUIRED)
- F. BRICK (1 OF 2)
- G. PRE-FABRICATED UNITIZED SWING JOINT 1" MIPT INLET X SOC OUTLET
- H. TEE OR EL: SEE SPECIFICATIONS FOR MATERIALS
- I. PVC MAINLINE PIPE
- J. TRACING WIRE
- K. CHRISTY ID-MAX-P2-RC1P2 ID TAG. SECURE WITH ZIP TIE.

- NOTES:
1. FURNISH FITTINGS AND PIPING NOMINALLY SIZED IDENTICAL TO NOMINAL QUICK COUPLER VALVE INLET SIZE.
  2. INSTALLATION HEIGHT OF QUICK COUPLER VALVE IN VALVE BOX MUST ALLOW PROPER OPERATION OF QUICK COUPLER KEY.
  3. INSTALL SWING JOINT LAY ARM BETWEEN 30° AND 45° OF LATERAL PIPE IN ORDER TO ABSORB DOWNWARD IMPACT.

**3** QUICK COUPLING VALVE ASSEMBLY N.T.S.



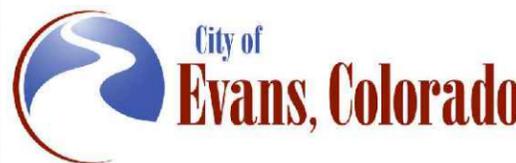
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 970.229.9868  
 www.aquaengineering.com

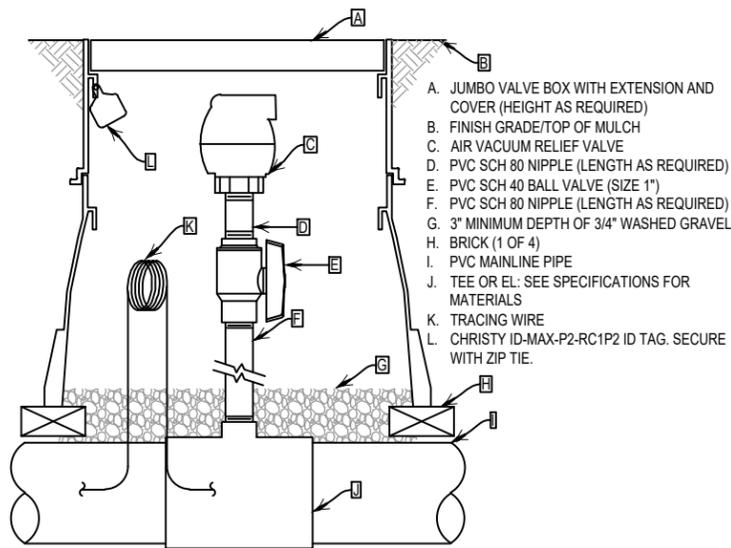
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No Revisions:			37TH STREET 2A
Revised:	Designer: JHK	Structure Numbers	Drawing Number IR3.1
Void:	Detailer: JHK		Sheet Number 111
	Sheet Subset: IRRIGATION	Subset Sheets: 29 of 35	

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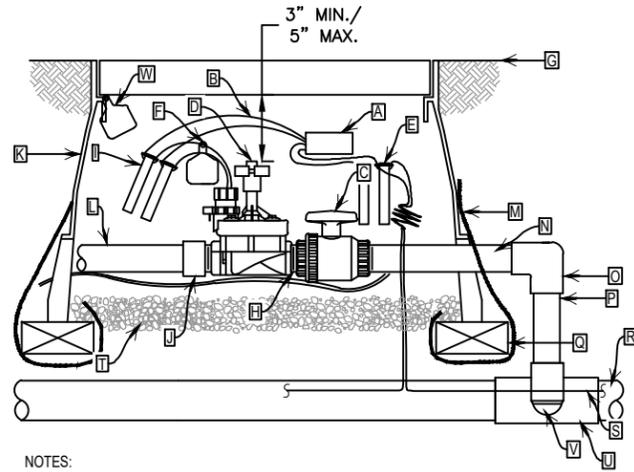
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- A. JUMBO VALVE BOX WITH EXTENSION AND COVER (HEIGHT AS REQUIRED)
- B. FINISH GRADE/TOP OF MULCH
- C. AIR VACUUM RELIEF VALVE
- D. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
- E. PVC SCH 40 BALL VALVE (SIZE 1")
- F. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
- G. 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL
- H. BRICK (1 OF 4)
- I. PVC MAINLINE PIPE
- J. TEE OR EL: SEE SPECIFICATIONS FOR MATERIALS
- K. TRACING WIRE
- L. CHRISTY ID-MAX-P2-RC1P2 ID TAG. SECURE WITH ZIP TIE.

- NOTES:
1. OPEN BALL VALVE IN ASSEMBLY 1/4 TURN UNTIL IRRIGATION SYSTEM IS FULLY CHARGED WITH WATER.
  2. CLOSE VALVE DURING WINTERIZATION AND OPEN 1/2 TURN AFTER WINTERIZATION OF SYSTEM TO PROTECT VALVE DURING FREEZING WEATHER.
  3. REPLACE PVC BALL VALVE WITH BRASS BALL VALVE IN THE EVENT AN AIR VACUUM RELIEF VALVE WITH MALE INLET IS USED.

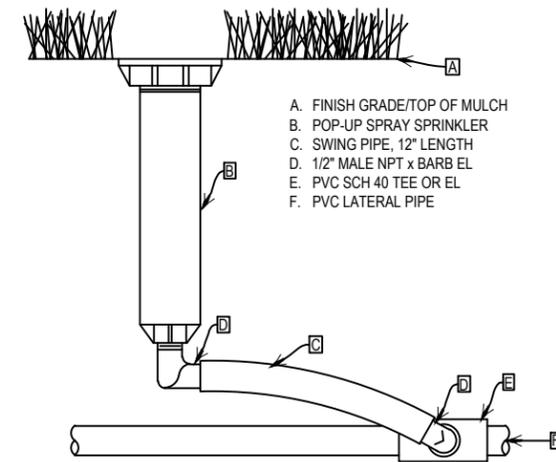
**1** AIR VACUUM RELIEF VALVE ASSEMBLY N.T.S.



- A. DECODER
- B. WIRE FROM DECODER TO VALVE SEE SPECIFICATIONS
- C. PVC BALL VALVE
- D. REMOTE CONTROL VALVE
- E. WIRE CONNECTOR FROM TWO-WIRE CABLE TO DECODER (1 OF 2)
- F. CHRISTY ID TAG
- G. FINISH GRADE
- H. PVC SCH 80 CLOSE NIPPLE
- I. WIRE CONNECTOR FROM DECODER TO SOLENOID VALVE (1 OF 2)
- J. PVC SCH 40 MALE ADAPTER
- K. 12" STANDARD VALVE BOX WITH COVER
- L. PVC LATERAL PIPE
- M. FILTER FABRIC
- N. PVC SCH 80 TOE NIPPLE (LENGTH AS REQUIRED)
- O. PVC SCH 40 EL
- P. PVC SCH 40 PIPE (LENGTH AS REQUIRED)
- Q. BRICK (1 OF 4)
- R. PVC MAINLINE
- S. TWO-WIRE CABLE
- T. 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL
- U. TEE OR EL: SEE SPECIFICATIONS FOR MATERIALS
- V. PVC SCH 80 TOE NIPPLE (LENGTH AS REQUIRED, HIDDEN) AND PVC SCH 40 EL
- W. CHRISTY ID-MAX-P2-RC1P2 ID TAG. SECURE WITH ZIP TIE.

- NOTES:
1. USE VALVE BOX EXTENSION AS NECESSARY TO ACHIEVE MINIMUM DIMENSIONS ABOVE ASSEMBLY.
  2. NOMINAL SIZE OF ALL COMPONENTS ARE TO BE THE SAME NOMINAL SIZE AS THE SOLENOID VALVE (SIZED AS SHOWN).
  3. INSTALL FILTER FABRIC AROUND EXTERIOR OF VALVE BOX. USE DUCT TAPE TO SECURE FABRIC TO PIPE AND VALVE BOX.
  4. TRANSITION TO PROPER LATERAL PIPE BURIAL DEPTH USING 45° ELBOW FITTINGS DOWNSTREAM OF REMOTE CONTROL VALVE ASSEMBLY.
  5. DO NOT CUT OUT ENDS OF VALVE BOX UNNECESSARILY.
  6. POSITION VALVE BOX OVER VALVE TO ALLOW ACCESS TO SOLENOID AND PROPER OPERATION OF BALL VALVE.
  7. COIL 3-FEET OF WIRE FOR EACH DECODER FOR SERVICE PURPOSES.

**2** REMOTE CONTROL VALVE ASSEMBLY N.T.S.



- A. FINISH GRADE/TOP OF MULCH
- B. POP-UP SPRAY SPRINKLER
- C. SWING PIPE, 12" LENGTH
- D. 1/2" MALE NPT x BARB EL
- E. PVC SCH 40 TEE OR EL
- F. PVC LATERAL PIPE

**3** POP-UP SPRAY SPRINKLER ASSEMBLY N.T.S.

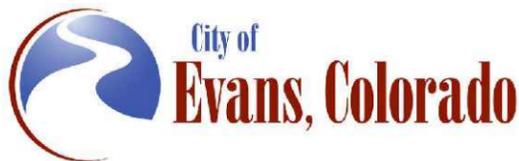


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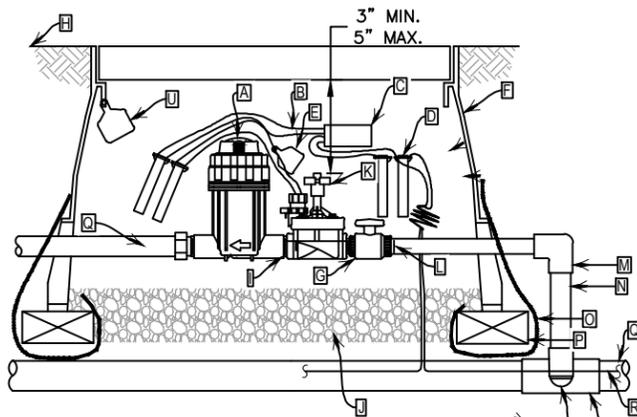
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Sheet Subset: IRRIGATION		Subset Sheets: 30 of 35	

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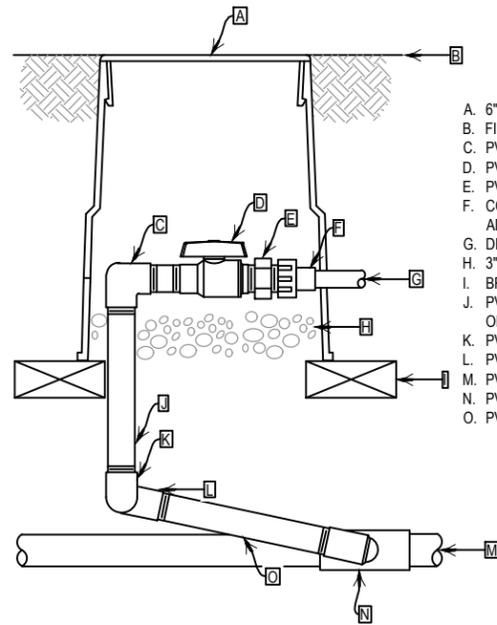
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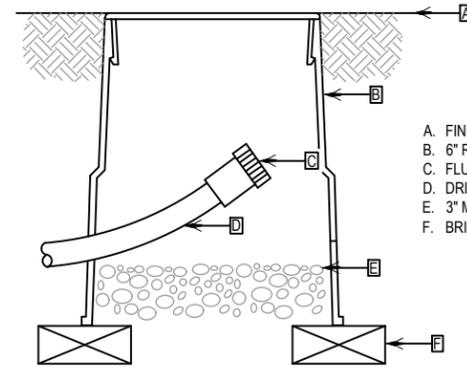
- A. PRESSURE REGULATING FILTER
- B. WIRE FROM DECODER TO VALVE SEE SPECIFICATIONS
- C. DECODER
- D. WIRE CONNECTOR FROM TWO-WIRE CABLE TO DECODER (1 OF 2)
- E. CHRISTY I.D. TAG
- F. JUMBO VALVE BOX WITH COVER
- G. PVC BALL VALVE
- H. FINISH GRADE/TOP OF MULCH
- I. PVC SCH 80 NIPPLE
- J. 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL
- K. REMOTE CONTROL VALVE
- L. PVC SCH 80 TOE NIPPLE
- M. PVC SCH 40 EL
- N. PVC SCH 40 PIPE (TYPICAL) (LENGTH AS REQUIRED)
- O. FILTER FABRIC
- P. BRICK (1 OF 4)
- Q. MANIFOLD/DRIP LATERAL. SEE NOTE 8.
- R. TWO-WIRE CABLE
- S. TEE OR EL: SEE SPECIFICATIONS FOR MATERIALS
- T. PVC SCH 80 TOE NIPPLE (LENGTH AS REQUIRED, HIDDEN) AND PVC SCH 40 EL
- U. CHRISTY ID-MAX-P2-RC1P2 ID TAG. SECURE WITH ZIP TIE.

NOTES:

1. USE VALVE BOX EXTENSION AS NECESSARY TO ACHIEVE MINIMUM DIMENSIONS ABOVE ASSEMBLY.
2. NOMINAL SIZE OF ALL COMPONENTS ARE TO BE THE SAME NOMINAL SIZE AS THE SOLENOID VALVE (SIZED AS SHOWN).
3. INSTALL FILTER FABRIC AROUND EXTERIOR OF VALVE BOX. USE DUCT TAPE TO SECURE FABRIC TO PIPE AND VALVE BOX.
4. TRANSITION TO PROPER LATERAL PIPE BURIAL DEPTH USING 45° ELBOW FITTINGS DOWNSTREAM OF REMOTE CONTROL VALVE ASSEMBLY.
5. DO NOT CUT OUT ENDS OF VALVE BOX UNNECESSARILY.
6. POSITION VALVE BOX OVER VALVE TO ALLOW ACCESS TO SOLENOID, AND PROPER OPERATION OF BALL VALVE.
7. COIL 3-FEET OF WIRE FOR EACH DECODER FOR SERVICE PURPOSES.
8. IN CASES OF DIRECT DRIP LATERAL PIPE CONNECTION INSTALL SCH. 40 PVC BARB FITTING TO PRESSURE REGULATING BASKET. SECURE CONNECTION WITH STAINLESS STEEL PINCH CLAMPS.
9. SEE DECODER GROUNDING SCHEMATIC FOR ADDITIONAL DECODER GROUNDING INFORMATION.



- A. 6" ROUND VALVE BOX WITH COVER
- B. FINISH GRADE/TOP OF MULCH
- C. PVC SCH. 40 EL
- D. PVC BALL VALVE
- E. PVC SCH. 40 TRANSITION NIPPLE (MIPTxMHT)
- F. COMPRESSIONx FEMALE HOSE SWIVEL ADAPTER
- G. DRIP LATERAL PIPING
- H. 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL
- I. BRICK (1 OF 2)
- J. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED, 1 OF 2)
- K. PVC SCH 40 EL
- L. PVC SCH 40 STREET EL (1 OF 2)
- M. PVC DRIP MANIFOLD PIPE
- N. PVC SCH 40 TEE OR EL
- O. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)



- A. FINISH GRADE/TOP OF MULCH
- B. 6" ROUND VALVE BOX WITH COVER
- C. FLUSH CAP WITH HOSE THREAD CAP
- D. DRIP IRRIGATION LATERAL
- E. 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL
- F. BRICK (1 OF 2)

NOTE:

1. INSTALL FLUSH CAP ASSEMBLY AT THE END OF EACH DRIP LATERAL SEGMENT.

**1** DRIP REMOTE CONTROL VALVE ASSEMBLY N.T.S.

**2** ZONE CONTROL VALVE ASSEMBLY N.T.S.

**3** FLUSH CAP ASSEMBLY N.T.S.



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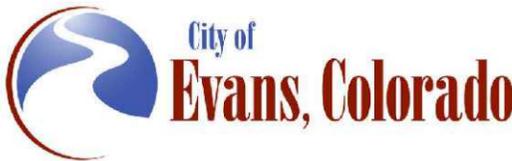
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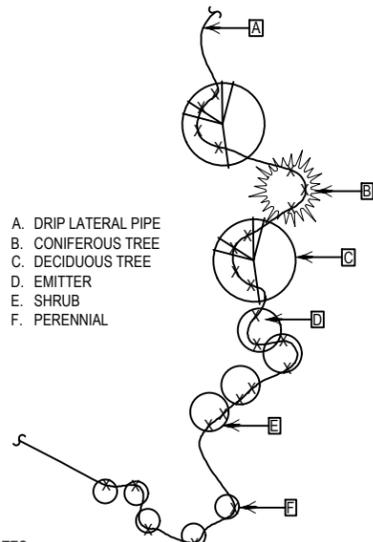
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37TH STREET WIDENING PHASE 2A IRRIGATION DETAILS			
Designer:	JHK	Structure Numbers	
Detailer:	JHK		
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Project No.	37TH STREET 2A
Drawing Number	IR3.3
Sheet Number	113

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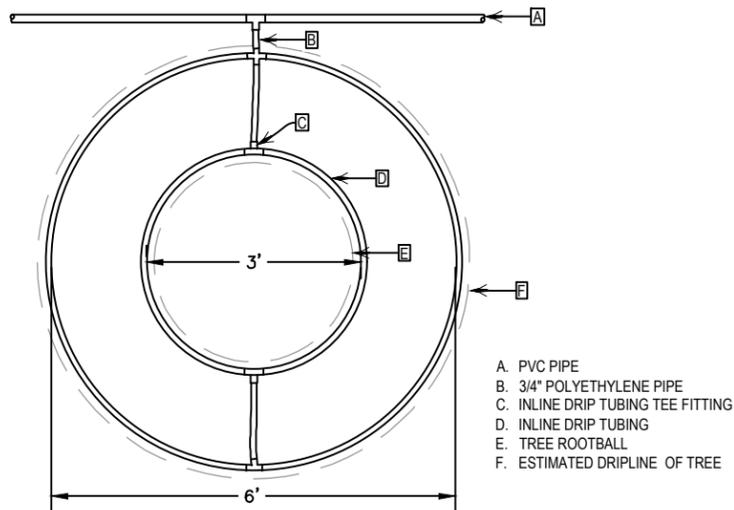
FOR CONSTRUCTION 2/24/2024



- A. DRIP LATERAL PIPE
- B. CONIFEROUS TREE
- C. DECIDUOUS TREE
- D. EMITTER
- E. SHRUB
- F. PERENNIAL

- NOTES:
1. EMITTERS SHALL BE LOCATED IMMEDIATELY ADJACENT TO PERENNIALS AND AT THE OUTSIDE PERIMETER OF THE PLANTING PIT OF ALL SHRUBS AND TREES.
  2. INSTALL FOUR 1 GPH EMITTERS PER DECIDUOUS TREE.
  3. INSTALL THREE 1 GPH EMITTER PER CONIFEROUS TREE.
  4. INSTALL TWO 1 GPH EMITTER PER SHRUB.
  5. INSTALL ONE 1 GPH EMITTER PER PERENNIAL.

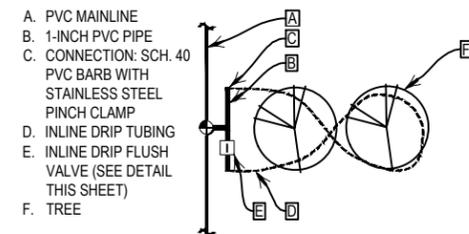
**1** POINT SOURCE DRIP EMITTER PLACEMENT N.T.S.



- A. PVC PIPE
- B. 3/4" POLYETHYLENE PIPE
- C. INLINE DRIP TUBING TEE FITTING
- D. INLINE DRIP TUBING
- E. TREE ROOTBALL
- F. ESTIMATED DRIPLINE OF TREE

- NOTE:
1. PROVIDE A 3-FT AND 6-FT DIAMETER RING OF INLINE DRIP TUBING AROUND EACH TREE ROOTBALL. TOTAL ESTIMATED FLOW PER TREE IS 0.4 GPM.
  2. INSTALL INLINE DRIP TUBING 4" BELOW GRADE AROUND EACH TREE.

**2** INLINE DRIP RING ASSEMBLY N.T.S.



- A. PVC MAINLINE
- B. 1-INCH PVC PIPE
- C. CONNECTION: SCH. 40 PVC BARB WITH STAINLESS STEEL PINCH CLAMP
- D. INLINE DRIP TUBING
- E. INLINE DRIP FLUSH VALVE (SEE DETAIL THIS SHEET)
- F. TREE

- NOTES:
1. 1-INCH PVC PIPE TO BE 12-INCHES BELOW GRADE.
  2. INLINE DRIP TUBING TO BE 4-INCHES BELOW GRADE.

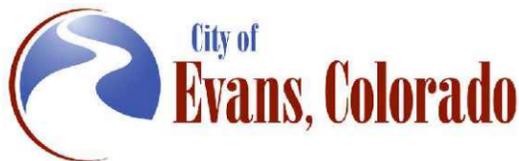
**3** INLINE DRIP TO TREES LAYOUT N.T.S.



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Sheet Revisions		
Date:	Comments	Init.

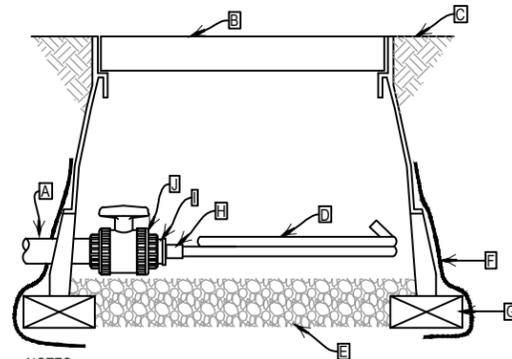


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Revised:	Designer: JHK	Structure Numbers	Drawing Number IR3.4
Void:	Detailer: JHK	Sheet Subset: IRRIGATION	Sheet Number 114
		Subset Sheets: 32 of 35	

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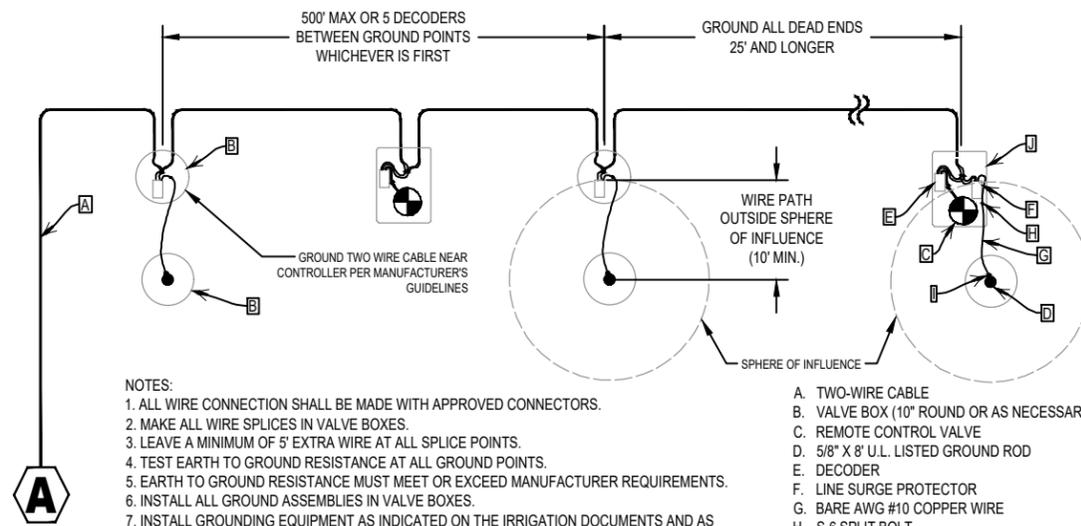
FOR CONSTRUCTION 2/24/2024

- A. PVC PIPE
- B. 12" STANDARD VALVE BOX WITH COVER
- C. FINISH GRADE/TOP OF MULCH
- D. FLEXIBLE VINYL IRRIGATION HOSE: AQUARIUS BRANDS
- E. 5/8" FLEX VINYL IRRIGATION HOSE
- F. 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL
- G. FILTER FABRIC
- H. BRICK (1 OF 4)
- I. SCH 40 PVC HOSE FITTING: MIPT X HOSE FITTING
- J. SCH 40 PVC REDUCER BUSHING FITTING (SPIG X FIPT)
- K. TRUE UNION PVC BALL VALVE



- NOTES:
1. NOMINAL SIZE OF BALL VALVE TO MATCH NOMINAL LATERAL SIZE.
  2. USE FOR FLUSHING AND WINTERIZATION OF DRIP LATERAL.
  3. INSTALL FILTER FABRIC AROUND EXTERIOR OF VALVE BOX. USE DUCT TAPE TO SECURE FABRIC TO PIPE AND VALVE BOX.

**1** INLINE DRIP FLUSH VALVE ASSEMBLY N.T.S.



- NOTES:
1. ALL WIRE CONNECTION SHALL BE MADE WITH APPROVED CONNECTORS.
  2. MAKE ALL WIRE SPLICES IN VALVE BOXES.
  3. LEAVE A MINIMUM OF 5' EXTRA WIRE AT ALL SPLICE POINTS.
  4. TEST EARTH TO GROUND RESISTANCE AT ALL GROUND POINTS.
  5. EARTH TO GROUND RESISTANCE MUST MEET OR EXCEED MANUFACTURER REQUIREMENTS.
  6. INSTALL ALL GROUND ASSEMBLIES IN VALVE BOXES.
  7. INSTALL GROUNDING EQUIPMENT AS INDICATED ON THE IRRIGATION DOCUMENTS AND AS RECOMMENDED BY THE MANUFACTURER.
- A. TWO-WIRE CABLE
  - B. VALVE BOX (10" ROUND OR AS NECESSARY)
  - C. REMOTE CONTROL VALVE
  - D. 5/8" X 8" U.L. LISTED GROUND ROD
  - E. DECODER
  - F. LINE SURGE PROTECTOR
  - G. BARE AWG #10 COPPER WIRE
  - H. S-6 SPLIT BOLT
  - I. BARE COPPER CONNECTION ("CADWELD")
  - J. REMOTE CONTROL VALVE ASSEMBLY

**2** TWO WIRE GROUNDING DETAIL N.T.S.



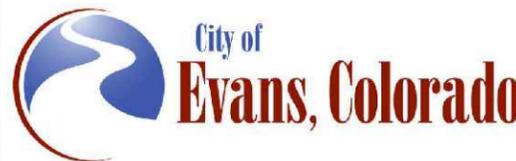
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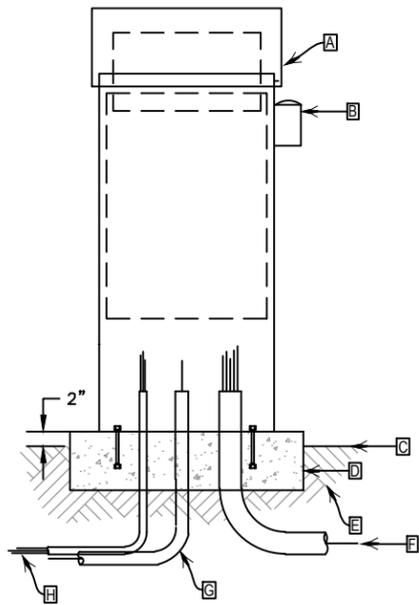


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	Designer: JHK	Structure Numbers	Drawing Number IR3.5
	Sheet Subset: IRRIGATION		Sheet Number 115
	Subset Sheets: 33 of 35		

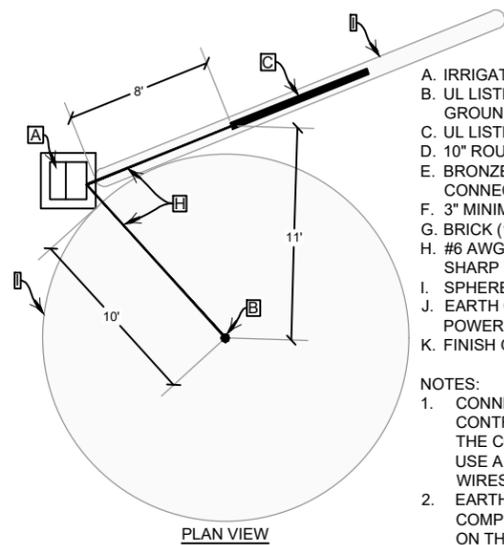
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FOR CONSTRUCTION 2/24/2024

- A. IRRIGATION CONTROLLER ASSEMBLY
- B. RAIN SENSOR WITH VANDAL GUARD
- C. FINISH GRADE
- D. STRONG BOX QUICK PAD
- E. COMPACTED SUBGRADE
- F. 3" SCH 40 ELECTRICAL CONDUIT AND SWEEP EL FOR TWO WIRE CABLE
- G. 1" SCH 40 ELECTRICAL CONDUIT AND SWEEP EL FOR ELECTRICAL GROUNDING
- H. 1" SCH 40 ELECTRICAL CONDUIT AND SWEEP EL FOR ELECTRICAL SERVICE

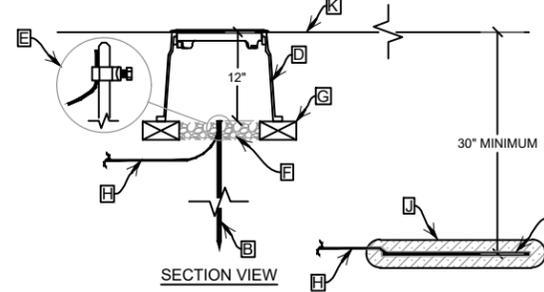


**1** IRRIGATION CONTROLLER ASSEMBLY (B) N.T.S.



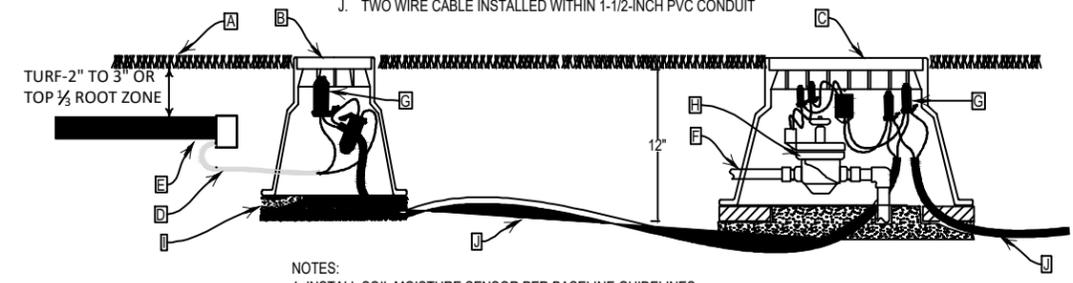
- A. IRRIGATION CONTROLLER ASSEMBLY
- B. UL LISTED 5/8" X 10' COPPER-CLAD GROUNDING ROD
- C. UL LISTED 4" X 8' COPPER GROUNDING PLATE
- D. 10" ROUND VALVE BOX WITH COVER
- E. BRONZE GROUND ROD CLAMP OR CADWELD CONNECTION: PAIGE ELECTRIC
- F. 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL
- G. BRICK (1 OF 4)
- H. #6 AWG INSULATED SOLID COPPER WIRE. NO SHARP BENDS.
- I. SPHERE OF INFLUENCE
- J. EARTH CONTACT MATERIAL, POWERSSET® OR POWERFILL® DEPENDING ON SOIL CONDITIONS
- K. FINISH GRADE

- NOTES:
- CONNECT ALL #6 AWG WIRES INSIDE THE CONTROLLER. CONNECT ONE WIRE TO THE CONTROLLER GROUND LUG AND USE A #4 SPLIT BOLT TO CONNECT ALL WIRES TOGETHER.
  - EARTH CONTACT MATERIAL MUST COMPLETELY COVER THE WELD JOINT ON THE GROUND PLATE.



**2** CONTROLLER GROUNDING DETAIL N.T.S.

- A. LAWN OR SURFACE TREATMENT
- B. 10-INCH ROUND VALVE BOX
- C. JUMBO VALVE BOX
- D. SLEEVED WIRE
- E. BISENSOR - SET LENGTH HORIZONTALLY AND BLADE IN VERTICAL POSITION WITH WIRES OUT OF BOTTOM
- F. LATERAL PIPE
- G. RED TO RED AND BLACK TO BLACK IN 3M DBRY-6 WIRE SPLICE
- H. REMOTE CONTROL VALVE - REFER TO DETAIL
- I. 6-INCH DEPTH OF 3/4-INCH CRUSHED GRAVEL
- J. TWO WIRE CABLE INSTALLED WITHIN 1-1/2-INCH PVC CONDUIT



- NOTES:
- INSTALL SOIL MOISTURE SENSOR PER BASELINE GUIDELINES.
  - COORDINATE EXACT LOCATION OF SOIL MOISTURE SENSOR WITH OWNER'S REPRESENTATIVE.

**3** SOIL MOISTURE SENSOR DETAIL N.T.S.

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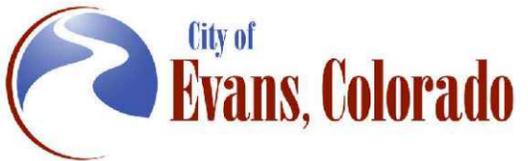
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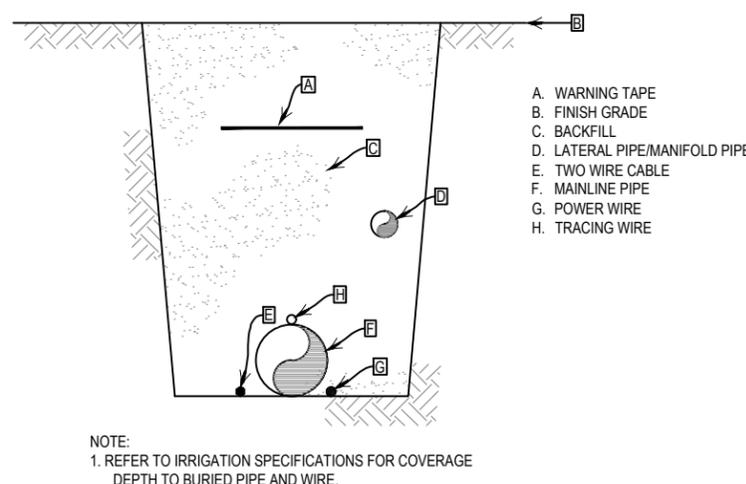


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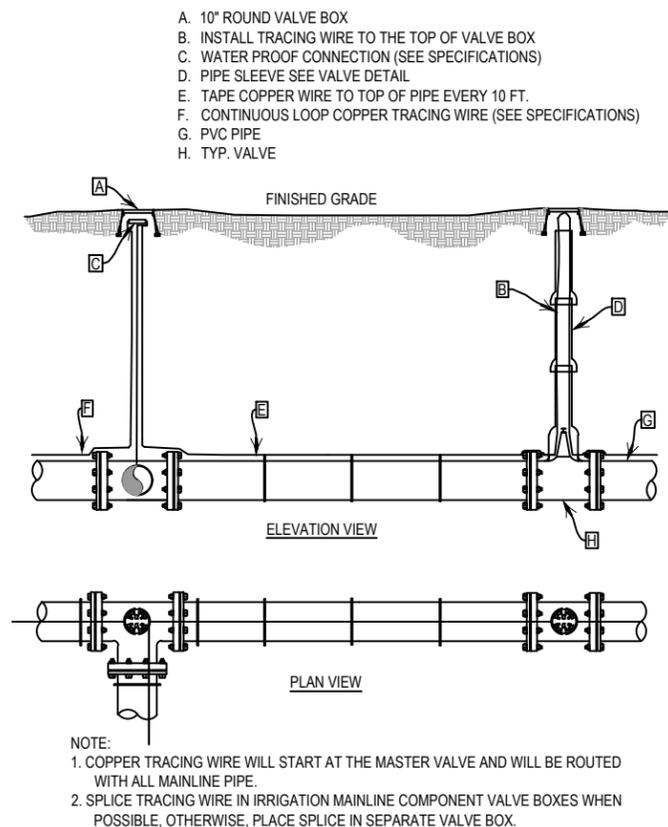
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Detailer:	JHK		
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Project No.	37TH STREET 2A
Drawing Number	IR3.6
Sheet Number	116

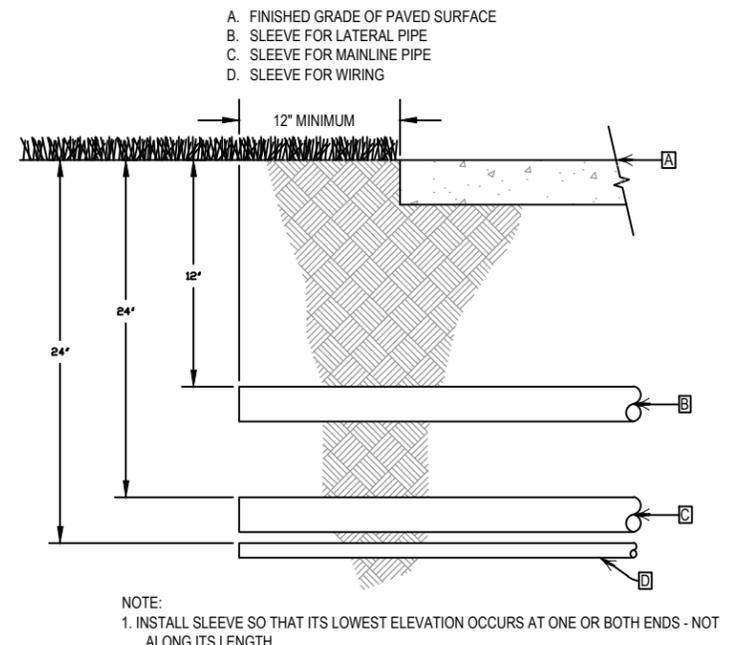
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**1** TRENCH DETAIL N.T.S.



**2** TRACING WIRE DETAIL N.T.S.



**3** SLEEVE DETAIL N.T.S.

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37TH STREET WIDENING PHASE 2A IRRIGATION DETAILS	
Designer:	JHK
Detailer:	JHK
Structure Numbers	
Sheet Subset: IRRIGATION	Subset Sheets: 35 of 35

Project No.	37TH STREET 2A
Drawing Number	IR3.7
Sheet Number	117

# 37TH STREET CONSTRUCTION PHASING

**TABULATION OF TEMPORARY TRAFFIC CONTROL SIGNING**

SIGN	DESCRIPTION	DIMENSION	PANEL SIZE
			A
W20-1	ROAD WORK AHEAD	36" X 36"	6
G20-2	END ROAD WORK	36" X 18"	2
R2-1	SPEED LIMIT (30 MPH)	24" X 30"	6
R2-6aP	FINES DOUBLE (PLAQUE)	24" X 18"	6
R2-10	BEGIN FINES DOUBLE IN WORK ZONE	24" X 30"	2
R2-11	END FINES DOUBLE IN WORK ZONE	24" X 30"	2
W20-5L	LEFT LANE CLOSED	36" X 36"	1
W20-5R	RIGHT LANE CLOSED	36" X 36"	1
W20-7	FLAGGER (SYMBOLE)	36" X 36"	4
W4-2R	RIGHT LANE MERGE	36" X 36"	2
W4-2L	LEFT LANE MERGE	36" X 36"	2
G20-10	XYZ CONSTRUCTION THANKS YOU	24" X 30"	2
R9-9	SIDEWALK CLOSED	24" X 12"	4
<b>TOTALS</b>			40

**TABULATION OF TRAFFIC CONTROL DEVICES**

ITEM	DESCRIPTION	UNIT	QUANTITY
630-00000	FLAGGING	HOUR	1000
630-00007	TRAFFIC CONTROL INSPECTION	DAY	36
630-00012	TRAFFIC CONTROL MANAGEMENT	DAY	90
630-80337	BARRICADE (TYPE 3M-C) (TEMPORARY)	EACH	6
630-80341	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE A)	EACH	40
630-80350	VERTICAL PANEL	EACH	50
630-80360	DRUM CHANNELIZING DEVICE	EACH	200
630-80380	TRAFFIC CONE	EACH	100

CONSTRUCTION PHASING GENERAL NOTES:

The Contractor shall prepare and submit a Traffic Control Plan (TCP) prior to starting. The TCP shall be submitted to the City of Evans' Project Engineer for review and approval no less than five business days prior to starting construction.

The TCP shall conform to the requirements of Part 6 of the Manual on Uniform Traffic Control Devices (MUTCD), 2009 Edition, and the Colorado Department of Transportation M & S Standard Plans, 2019 (S-630-1 and S-630-2).

Project requirements include:

1. All construction work that will be in traffic lanes or affect the flow of traffic shall be completed between the hours of 9:00 AM and 4:00 PM Monday through Friday. Construction work that will not affect traffic shall be completed between the hours of 7:00 AM and 7:00 PM.
2. There shall be no work performed on weekends or holidays except by approval of the City of Evans with a minimum of 24 hours notice.
3. It is the Contractor's responsibility to provide a safe traveled way for vehicular traffic traveling through the construction zone and within the clear zone of the excavated area.
4. Unless otherwise approved by the Engineer, the Contractor's equipment shall follow normal and legal traffic movements. The Contractor's ingress and egress of the work area shall be accomplished with as little disruption to traffic as possible. Traffic control devices shall be removed by picking up the devices in a reverse sequence to that used for installation. This may require moving backwards through the work zone, but is limited to within the lane or shoulder closures. When located behind or at other locations shown on approved traffic control plans, equipment may operate in a direction opposite to adjacent traffic.
5. The Contractor shall not have construction equipment or materials in the lanes open to traffic at any time, unless approved by the Engineer.
6. All travel lanes shall be a minimum of 11' wide.
7. The Contractor shall maintain traffic flow and allow access to homes, businesses, and side streets at all times. The Contractor shall provide temporary ramping and use flaggers when necessary.
8. The Contractor should coordinate any temporary closures to homes or businesses with the owners.
9. Signal construction will need to be coordinated in each phase.

The construction sequence described below and shown on the plans is a potential sequence available for the Contractor's use. It is a general concept and is provided for information only. Not all construction details have been addressed. The Contractor is in no way obliged to employ the methods or sequences of construction outlined in the phasing plans. Any variation in phasing must be approved before construction begins.

PHASE 1

1. Use existing pavement, and pavement markings for Phase 1 traffic.
2. All temporary construction signs and traffic control devices shall be placed according to an approved MHT before beginning construction.
3. Construct proposed Phase 1 utility improvements. See utility plans.
4. Construct proposed hydraulic improvements.
5. Construct proposed eastbound lanes, and apply temporary pavement markings for Phase 2 construction.
6. Construct curb and gutter on south side of roadway.
7. Construct parkway and sidewalks, including ADA ramps on south side of roadway.

PHASE 2

1. Shift traffic to new pavement as shown in Phase 2 drawings.
2. All temporary construction signs and traffic control devices shall be placed according to an approved MHT before beginning construction.
3. Construct proposed Phase 2 utility improvements under Phase 2 roadway. See utility plans.
4. Construct proposed westbound lanes, and apply permanent pavement markings for final traffic configuration.
5. Construct median island and turn lanes, see median detail.
6. Construct curb and gutter on north side of roadway.
7. Construct parkway and sidewalks, including ADA ramps on north side of roadway.

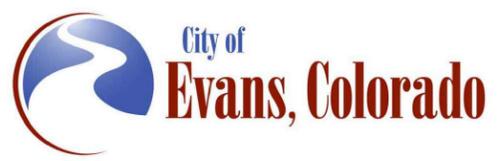


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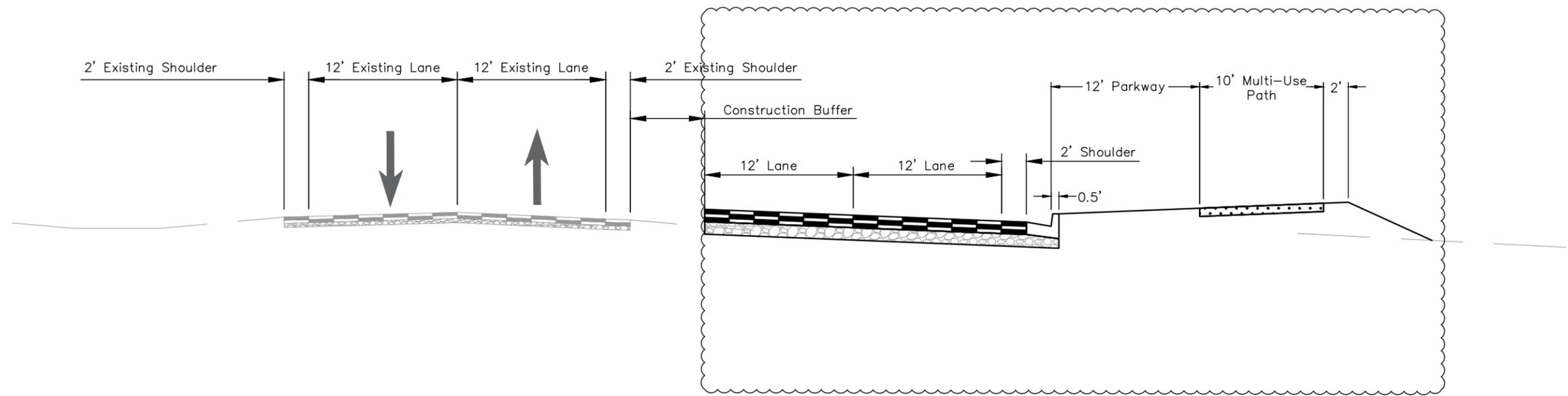


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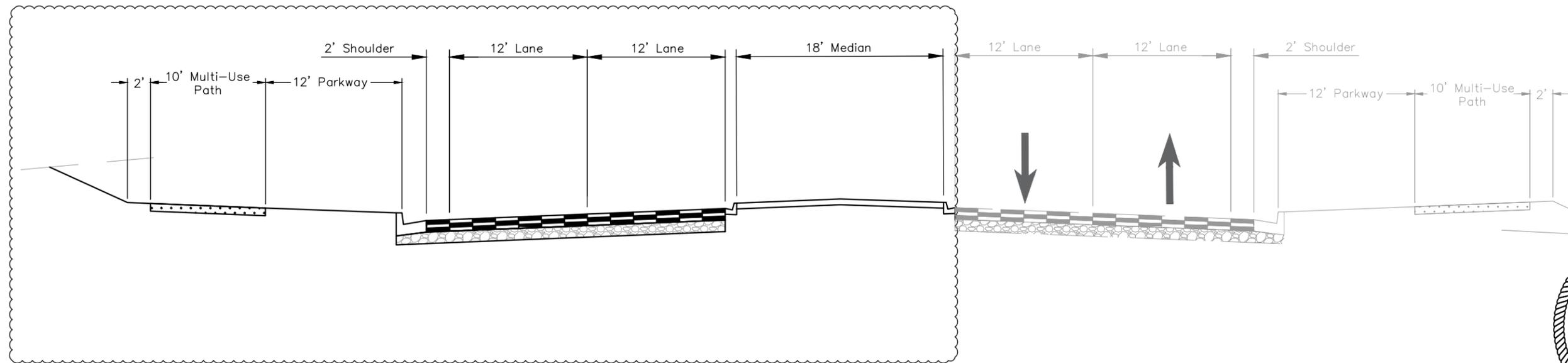
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Designer:	B. DANE	Structure Numbers
Detailer:	B. DANE	
Sheet Subset:	PHASING	Subset Sheets: 1 of 4

<b>Project No.</b>
37TH STREET 2A
Drawing Number PH-001
Sheet Number 118

FOR CONSTRUCTION 2/24/2024



**37th - Phase 1 Construction**



**37th - Phase 2 Construction**



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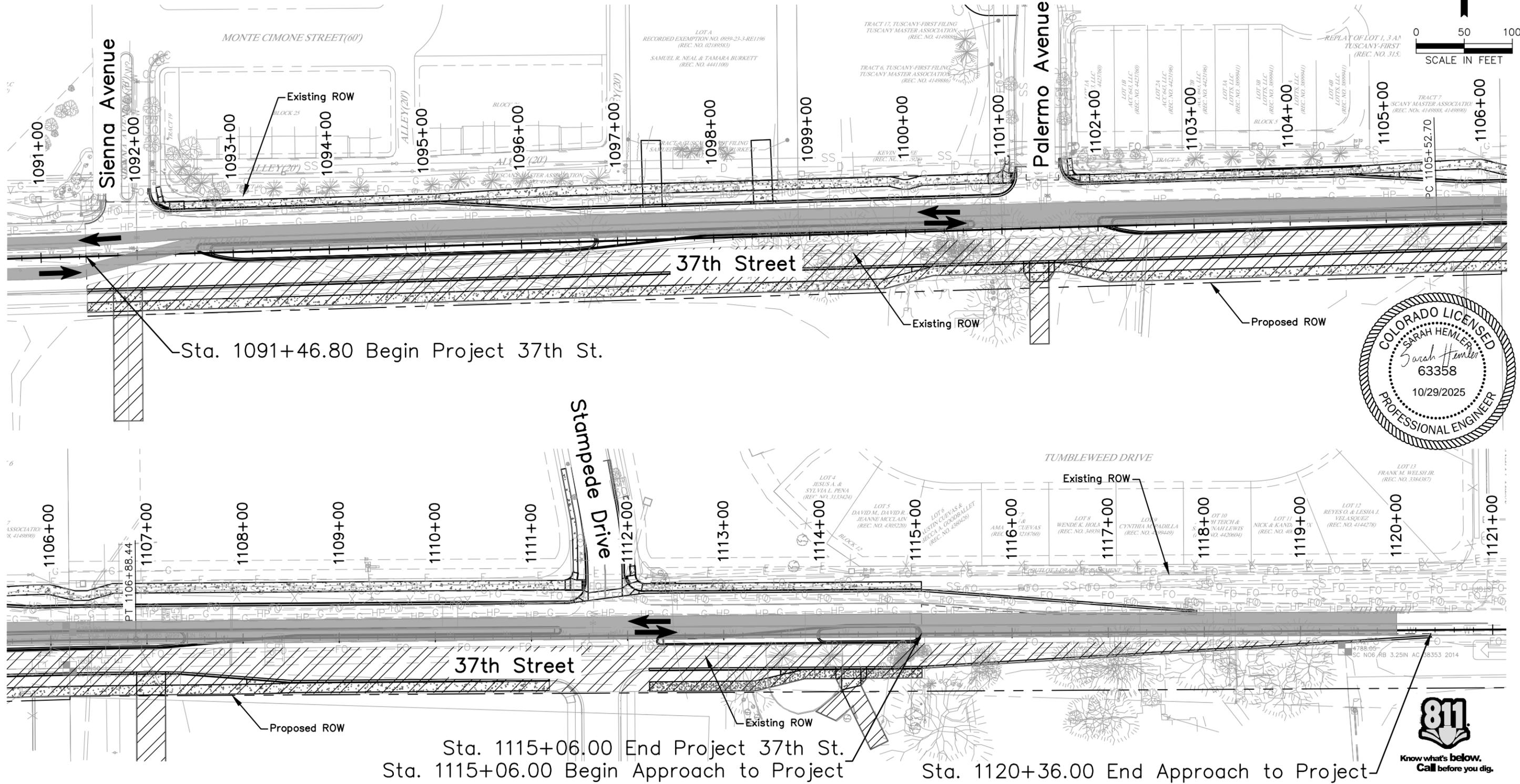
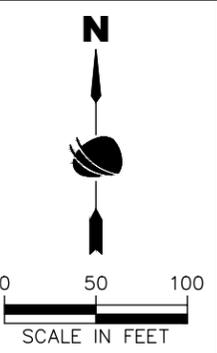
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Designer: T. Tuttle	Structure Numbers
Detailer: C. Peterson	
Sheet Subset: PHASING	Subset Sheets: 2 of 4

<b>Project No.</b>
37TH STREET 2A
Drawing Number PH-002
Sheet Number 119

FOR CONSTRUCTION 2/24/2024

Legend:

- Construction Phase 1 - 
- Phase 1 Traffic - 
- Traffic Direction - 



Sta. 1091+46.80 Begin Project 37th St.

Sta. 1115+06.00 End Project 37th St.  
Sta. 1115+06.00 Begin Approach to Project

Sta. 1120+36.00 End Approach to Project



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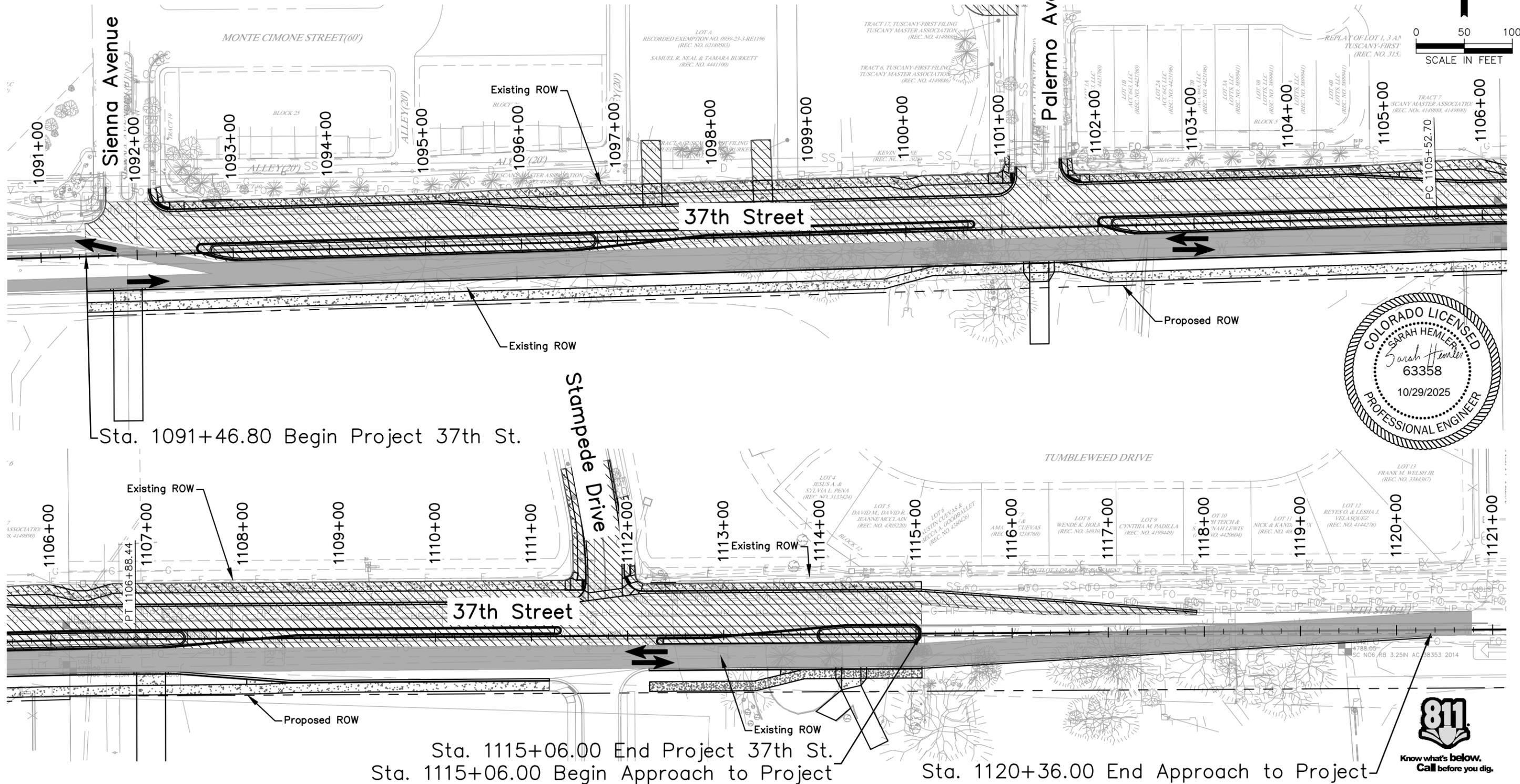
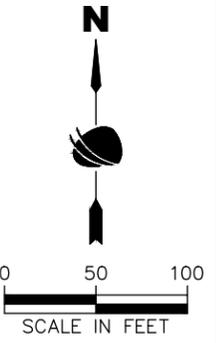
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Designer: T. Tuttle	Structure Numbers
Detailer: C. Petersen	
Sheet Subset: PHASING	Subset Sheets: 3 of 4

<b>Project No.</b>
37TH STREET 2A
Drawing Number PH-003
Sheet Number 120

FOR CONSTRUCTION 2/24/2024

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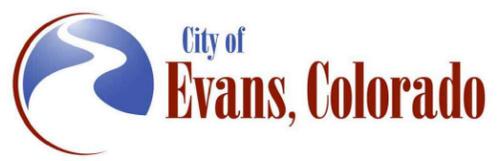
- Construction Phase 2 - 
- Phase 2 Traffic - 
- Traffic Direction - 



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**37TH STREET WIDENING PHASE 2A  
 CONSTRUCTION PHASING  
 PHASE 2**

Designer: T. Tuttle  
 Detailer: C. Petersen  
 Sheet Subset: PHASING

Structure Numbers:  
 Subset Sheets: 4 of 4

**Project No.**  
 37TH STREET 2A

Drawing Number PH-004  
 Sheet Number 121

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FOR CONSTRUCTION 2/24/2024

**TABULATION OF SIGNS**

SIGN NO.	SIGN CODE	LEGEND	COLOR	EXISTING LOCATION	EXISTING POSITION	TRAVEL DIRECTION	PANEL SIZE	PROPOSED LOCATION	PROPOSED POSITION	BARRICADE	STEEL SIGN POST	SIGN PANEL	REMOVALS	REMARKS
										TYPE 3M-A	(1.75x1.75 INCH TUBING)	CLASS I	GROUND SIGN	
							EACH			LF	SF	EACH		
1	W4-2	Lane Ends	Yellow	1087+75	42' Right	East	36" x 36"						1	Remove from transition of 37th St. Ph 1 Project
2	R3-7R	Right Lane Must Turn Right	White			West	30" x 30"	1092+45	61' Left		10.5	6.25		
3	R4-7	Keep Right	White			East	24" x 30"	1092+95	0'		10.5	5.00		
4	R2-1	Speed Limit 35mph	White	1093+75	40' Right	East	30" x 36"	1093+45	42' Right		11.0	7.50		
5	R3-7R	Right Lane Must Turn Right	White			West	30" x 30"	1094+82	63' Left		10.5	6.25		
6	R3-7R	Right Lane Must Turn Right	White	1096+07	49' Left	West	30" x 30"						1	
7a	W2-2	3 Way Intersection Ahead	Yellow	1098+57	1' Right	East	30" x 30"						1	
7b	D3-1	Palermo Ave	Yellow	1098+57	1' Right	East	36" x 12"							Included in removal of 6a
8	R2-1	Speed Limit 35mph	White			West	30" x 36"	1100+05	42' Left		11.0	7.50		
9	R4-7	Keep Right	White			West	24" x 30"	1100+50	6' Left		10.5	5.00		
10a	R1-1	Stop	Red	1101+13	62' Left	South	36" x 36"	1101+11	61' Left		13.0	9.00		
10b	D3-1	Palermo Ave	Green	1101+13	62' Left	South	36" x 12"	1101+11	61' Left			3.00		
10c	D3-1	37th St	Green	1101+13	62' Left	South	36" x 12"	1101+11	61' Left			3.00		
11	R3-7R	Right Lane Must Turn Right	White	1101+88	45' Left	West	30" x 30"	1101+90	60' Left		10.5	6.25		
12	R4-7	Keep Right	White			East	24" x 30"	1102+30	0'		10.5	5.00		
13	R2-1	Speed Limit 35mph	White			East	30" x 36"	1102+89	42' Right		11.0	7.50		
14	R3-7R	Right Lane Must Turn Right	White	1105+37	34' Left	West	30" x 30"	1104+52	60' Left		10.5	6.25		
15	R2-1	Speed Limit 45mph	White	1107+25	26' Left	West	30" x 36"						1	
16a	W2-2	3 Way Intersection Ahead	Yellow	1108+32	12' Right	East	30" x 30"						1	
16b	D3-1	Stampede Dr	Yellow	1108+32	12' Right	East	36" x 12"							Included in removal of 15a
17	R3-7R	Right Lane Must Turn Right	White			East	30" x 30"	1108+52	58' Right		10.5	6.25		
18	W4-2	Lane Ends	Yellow			East	36" x 36"	1109+63	58' Right		11.0	9.00		
19	R2-1	Speed Limit 35mph	White			West	30" x 36"	1110+35	42' Left		11.0	7.50		
20	R3-7R	Right Lane Must Turn Right	White			East	30" x 30"	1110+80	58' Right		10.5	6.25		
21	R4-7	Keep Right	White			West	24" x 30"	1111+06	6' Left		10.5	5.00		
22a	R1-1	Stop	Red	1111+44	30' Left	South	36" x 36"	1111+52	66' Left		13.0	9.00		
22b	D3-1	Stampede Dr	Green	1111+44	30' Left	South	36" x 12"	1111+52	66' Left			3.00		
22c	D3-1	37th St	Green	1111+44	30' Left	South	36" x 12"	1111+52	66' Left			3.00		
23	W1-7	Two-Direction Large Arrow	Yellow	1111+73	8' Right	South	48" x 24"						1	
24	R2-1	Speed Limit 45mph	White	1112+28	9' Right	East	30" x 36"						1	
25	R3-7R	Right Lane Must Turn Right	White	1112+51	36' Left	West	30" x 30"	1112+54	62' Left		10.5	6.25		
26	R4-7	Keep Right	White			East	24" x 30"	1112+59	6' Right		10.5	5.00		
27	R2-1	Speed Limit 35mph	White			West	30" x 36"	1113+91	50' Right		11.0	7.50		
28	R9-9	Sidewalk Closed	Yellow			West	24" x 12"	1115+04	50' Left	1		2.00		Mount on Barricade
29	R9-9	Sidewalk Closed	Yellow			East	24" x 12"	115+04	40' Right	1		2.00		Mount on Barricade
30	R3-7R	Right Lane Must Turn Right	White	1114+70	36' Left	West	30" x 30"	1115+05	64' Left		10.5	6.25		
31a	W2-2	3 Way Intersection Ahead	Yellow	1118+41	11' Right	East	30" x 30"						1	
31b	D3-1	38th Avenue	Yellow	1118+41	11' Right	East	36" x 12"							Included in removal of 30a
TOTAL										2	228.5	155.5	8	



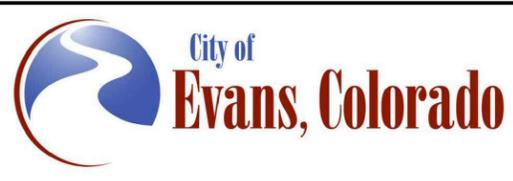
Plot Date: 2/19/2024 3:23 PM Plotted By: Sarah Hemler  
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FOR CONSTRUCTION 2/24/2024

Print Date: 2/19/2024  
 File Name: TRAFFIC TAB P2A-001 TRAFFIC TABULATION.DWG  
 Horiz. Scale: N/A      Vert. Scale: N/A

12076 Grant Street  
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Sheet Revisions		
Date	Comments	Initials



**As Constructed**  
 No Revisions:  
 Revised:  
 Void:

**37TH STREET WIDENING PHASE 2A SIGNING AND STRIPING TABULATION**

Designer: T. Tuttle  
 Detailer: S. Hemler

Structure Numbers  
 Sheet Subset: TRAFFIC TAB      Subset Sheets: 1 of 2

**Project No.**  
 37TH STREET 2A

Drawing Number TTAB-001  
 Sheet Number 122

**TABULATION OF PAVEMENT MARKINGS**

STATION	SIDE	CENTER	LANE	CHANNELIZING	PVMT MARKING		REMARKS	
		YELLOW DOUBLE 4 INCH	WHITE BROKEN 4 INCH	WHITE LANE DROP 8 INCH	WORD SYMBOL	X WALK - STOP LINE		
		LF	LF	LF	SF	SF		
1091+72 - 1092+14	LT						144	
1092+20 - 1095+15	LT			295				
1092+39 - 1100+89	RT		213					
1092+39 - 1100+89	LT		213					
1092+58	LT				16.1			
1093+48	LT				22.5			
1094+44	LT				16.1			
1097+93 - 1100+83	RT			291				
1098+29	RT				16.1			
1099+29	RT				22.5			
1100+25	RT				16.1			
1101+21 - 1101+63	LT					144		
1101+70 - 1104+60	LT			291				
1101+86 - 1111+26	RT		235					
1101+86 - 1111+26	LT		235					
1102+04	LT				16.1			
1103+00	LT				22.5			
1103+98	LT				16.1			
1108+54 - 1111+22	RT			268				
1108+54 - 1111+42	RT			289				
1108+97	RT				32.2			Includes left and right turn arrows
1109+90	RT				22.5			
1110+75	RT				58.0			
1110+88	RT				32.2			Includes left and right turn arrows
1111+62 - 1111+94	LT					112		
1112+03 - 1115+04	LT			302				
1112+19 - 1112+84	LT			66				
1112+27 - 1120+77	RT		213					
1112+27 - 1120+77	LT		213					
1112+46	LT				16.1			
1112+78	LT				16.1			
1113+53	LT				22.5			
1114+61	LT				16.1			
1114+96	RT				58.0			
1114+95	LT & RT	1120+35	1080					
<b>TOTAL</b>			1,080	1,320	1,802	438	400	

COLOR	MODIFIED EPOXY PAVEMENT MARKING		PREFORMED THERMO PAVEMENT MARKING	
	MIN GAL	MAX GAL	X-WALK	WORD SYMBOL
			SF	SF
WHITE	18	19	400	438
YELLOW	8	8		
<b>TOTALS</b>	<b>26</b>	<b>28</b>	<b>400</b>	<b>438</b>



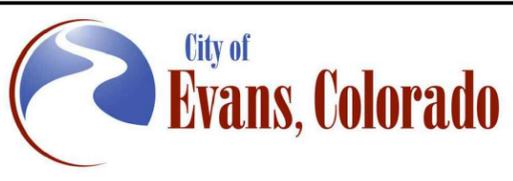
**Note:**  
 All cross walks, stop bars, and arrows shall be pre-formed thermoplastic.  
 Stationing is approximate, locations are to be field verified by contractor prior to final placement.

Plot Date: 2/19/2024 2:25 PM Plotted By: Sarah Hemler  
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Print Date: 2/19/2024  
 File Name: TRAF TAB P2A-001 TRAFFIC TABULATION.DWG  
 Horiz. Scale: N/A Vert. Scale: N/A

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Sheet Revisions		
Date	Comments	Initials



**As Constructed**  
 No Revisions:  
 Revised:  
 Void:

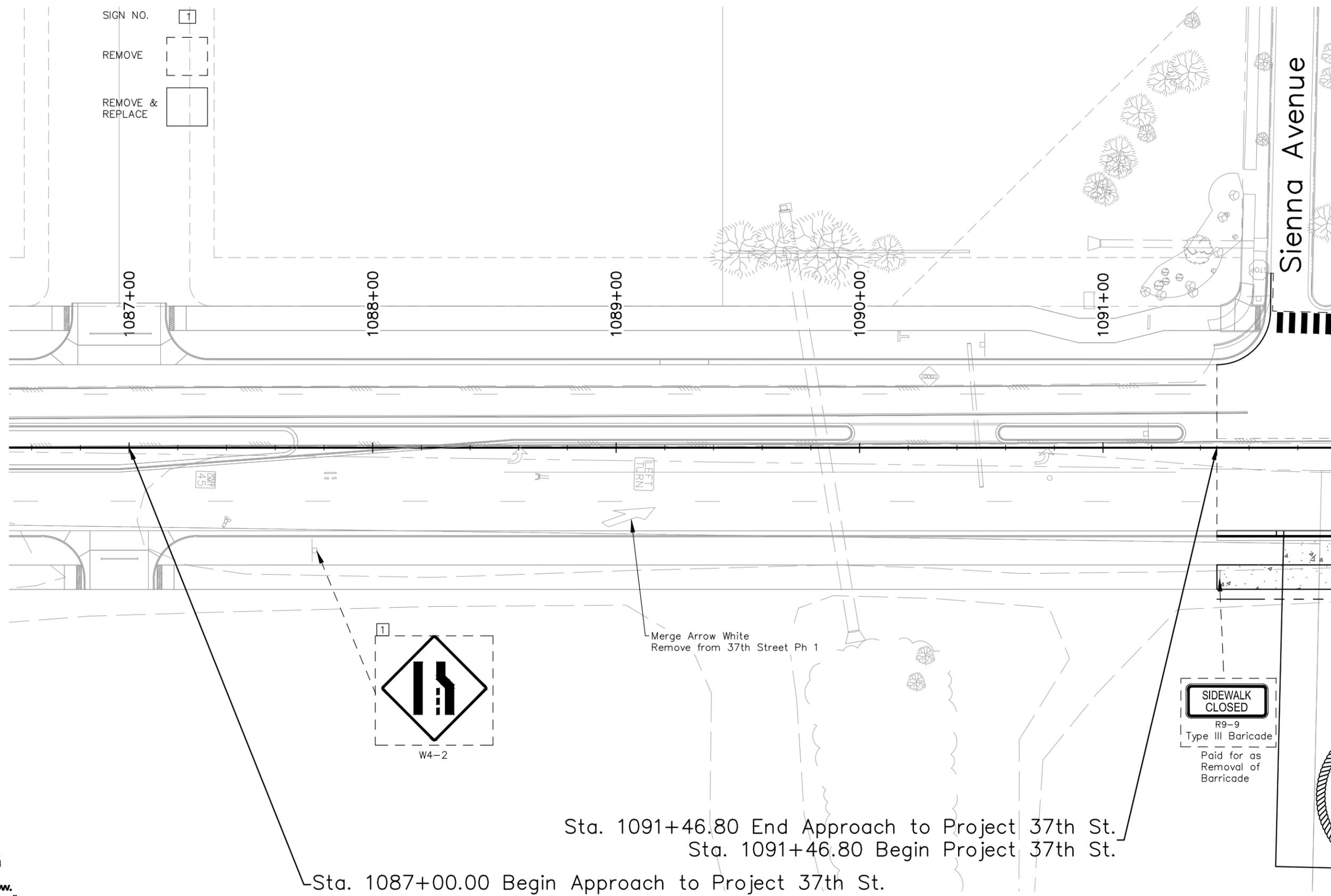
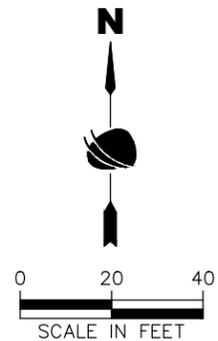
**37TH STREET WIDENING PHASE 2A SIGNING AND STRIPING TABULATION**

Designer: T. Tuttle  
 Detailer: S. Hemler  
 Sheet Subset: TRAF TAB

**Project No.**  
 37TH STREET 2A  
 Drawing Number TTAB-002  
 Sheet Number 123

FOR CONSTRUCTION 2/24/2024

SIGN NO. 1  
 REMOVE    
 REMOVE & REPLACE  



Sta. 1087+00.00 Begin Approach to Project 37th St.

Sta. 1091+46.80 End Approach to Project 37th St.  
 Sta. 1091+46.80 Begin Project 37th St.

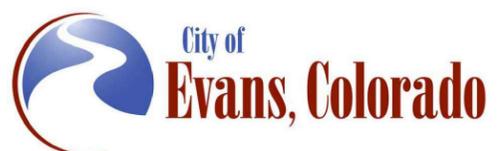
**SIDEWALK CLOSED**  
 R9-9  
 Type III Barricade  
 Paid for as  
 Removal of  
 Barricade



Plot Date: 2/19/2024 5:26 PM Plotted By: Sarah Hemler  
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Print Date: 2/19/2024	
File Name: TRAF P2A-001 TRAFFIC SIGNING AND STRIPING.DWG	
Horiz. Scale: As Noted	Vert. Scale: N/A
	12076 Grant Street Thornton, CO 80241 Ph: (303) 962-9300 Fax: (303) 962-9350

Sheet Revisions		
Date	Comments	Initials



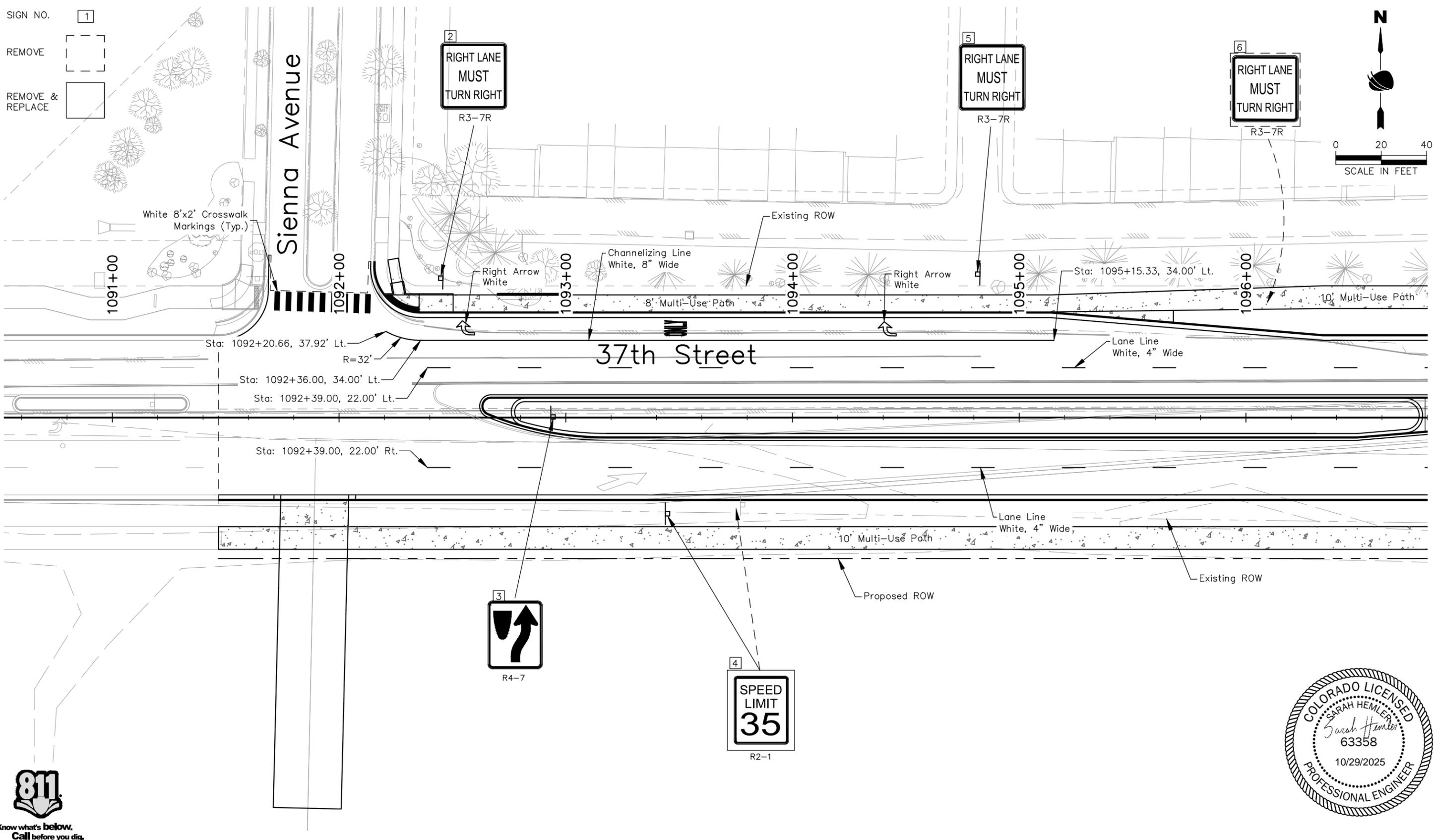
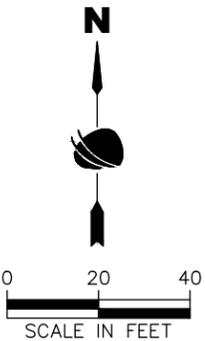
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No Revisions:
Revised:
Void:

<b>37TH STREET WIDENING PHASE 2A SIGNING AND STRIPING PLAN</b>	
Designer: T. Tuttle	Structure Numbers
Detailer: C. Petersen	
Sheet Subset: TRAFFIC	Subset Sheets: 1 of 6

<b>Project No.</b>
37TH STREET 2A
Drawing Number TRAF-001
Sheet Number 124

FOR CONSTRUCTION 2/24/2024

SIGN NO. 1  
 REMOVE   
 REMOVE & REPLACE



Plot Date: 2/19/2024 3:27 PM Plotted By: Sarah Hemler  
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Print Date: 2/19/2024	Horiz. Scale: As Noted	Vert. Scale: N/A
File Name: TRAF P2A-001 TRAFFIC SIGNING AND STRIPING.DWG		
12076 Grant Street Thornton, CO 80241 Ph: (303) 962-9300 Fax: (303) 962-9350		

Sheet Revisions		
Date	Comments	Initials

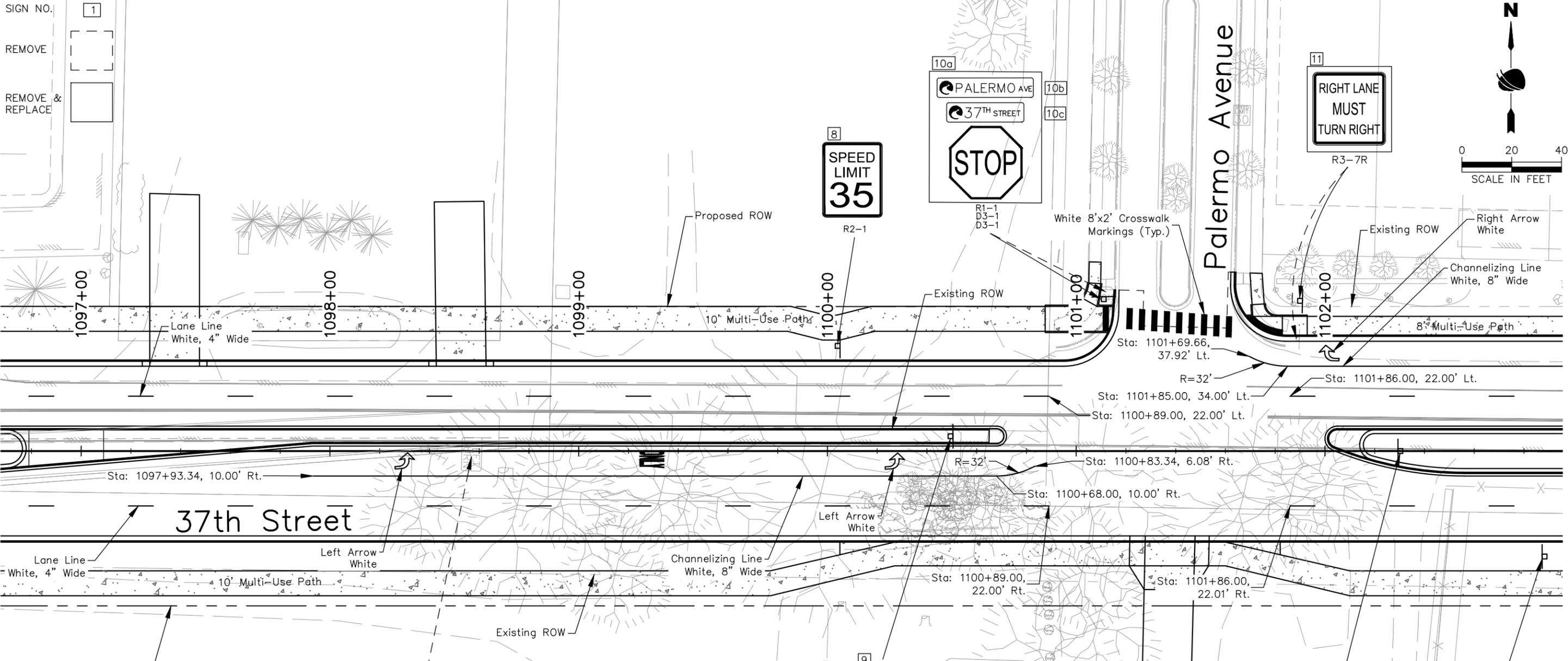


<b>As Constructed</b>
No Revisions:
Revised:
Void:

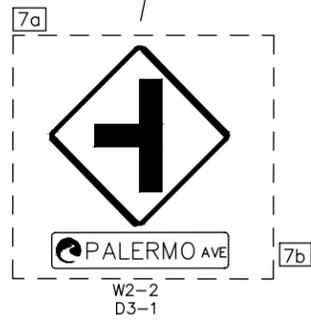
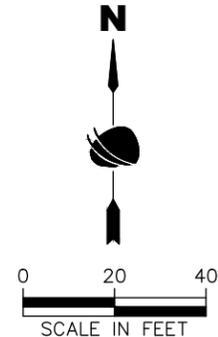
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Designer: T. Tuttle	Structure Numbers:	
Detailer: C. Petersen		
Sheet Subset: TRAFFIC	Subset Sheets: 2 of 6	

<b>Project No.</b>
37TH STREET 2A
Drawing Number TRAF-002
Sheet Number 125

FOR CONSTRUCTION 2/24/2024



SIGN NO.	1
REMOVE	
REMOVE & REPLACE	

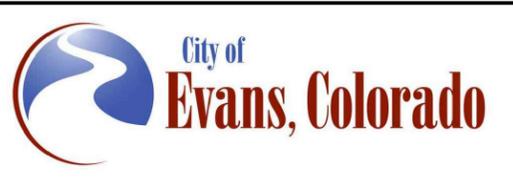


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Print Date: 2/19/2024	
File Name: TRAF P2A-001 TRAFFIC SIGNING AND STRIPING.DWG	
Horiz. Scale: As Noted Vert. Scale: N/A	
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Sheet Revisions		
Date	Comments	Initials

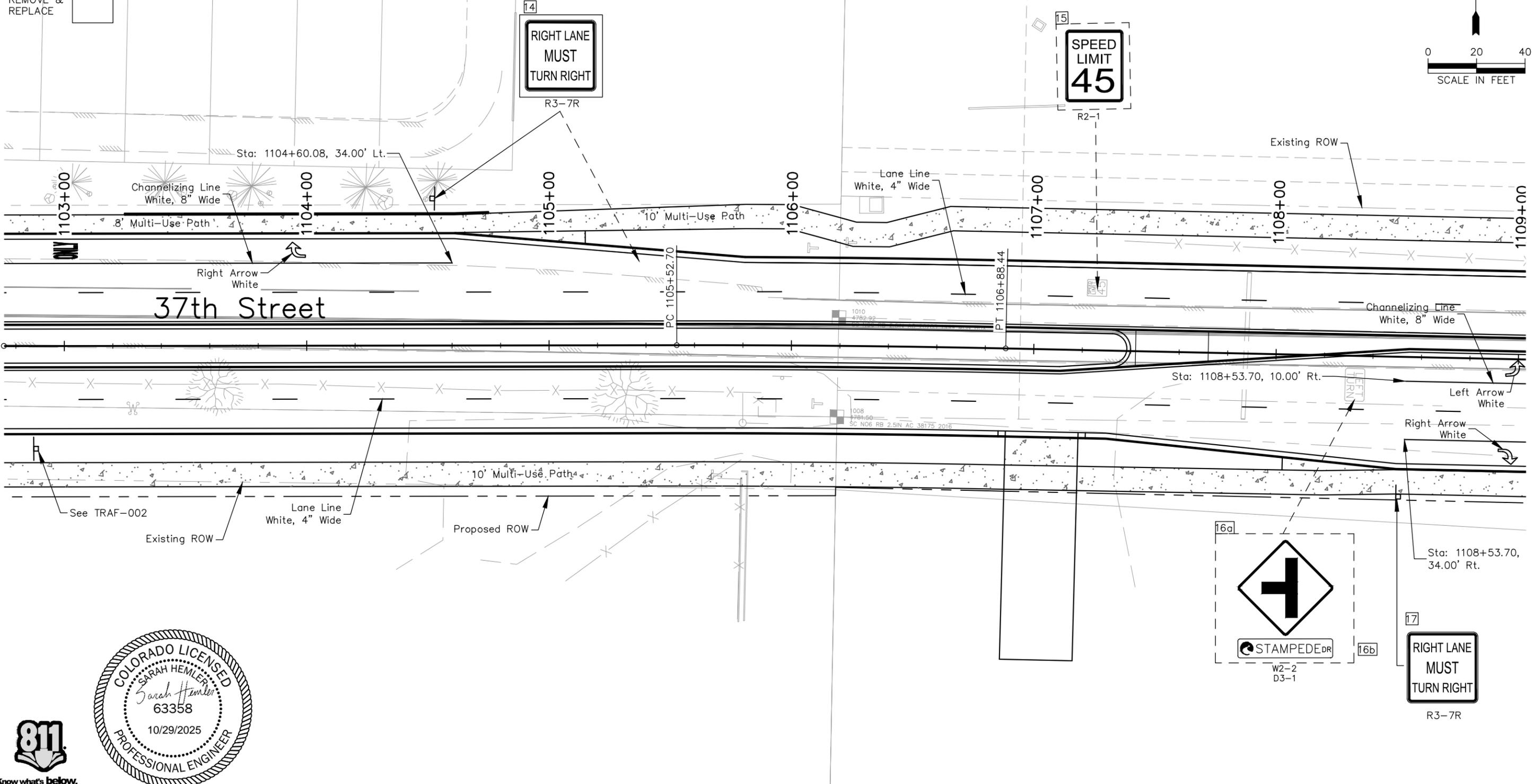
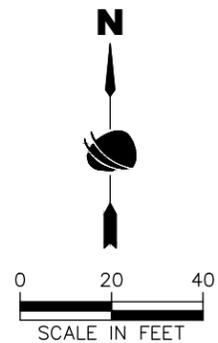


<b>As Constructed</b>
No Revisions:
Revised:
Void:

<b>37TH STREET WIDENING PHASE 2A SIGNING AND STRIPING PLAN</b>	
Designer: T. Tuttle	Structure Numbers
Detailer: C. Petersen	
Sheet Subset: TRAFFIC	Subset Sheets: 3 of 6

<b>Project No.</b>
37TH STREET 2A
Drawing Number TRAF-003
Sheet Number 126

SIGN NO. 1  
 REMOVE   
 REMOVE & REPLACE

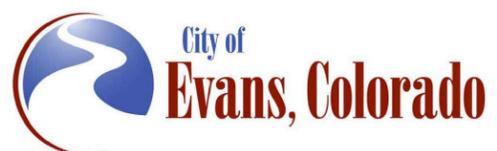


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Print Date: 2/19/2024  
 File Name: TRAF P2A-001 TRAFFIC SIGNING AND STRIPING.DWG  
 Horiz. Scale: As Noted Vert. Scale: N/A

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 Thornton, CO 80241  
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 Fax: (303) 962-9350

Sheet Revisions		
Date	Comments	Initials



**As Constructed**  
 No Revisions:  
 Revised:  
 Void:

**37TH STREET WIDENING PHASE 2A  
 SIGNING AND STRIPING PLAN**

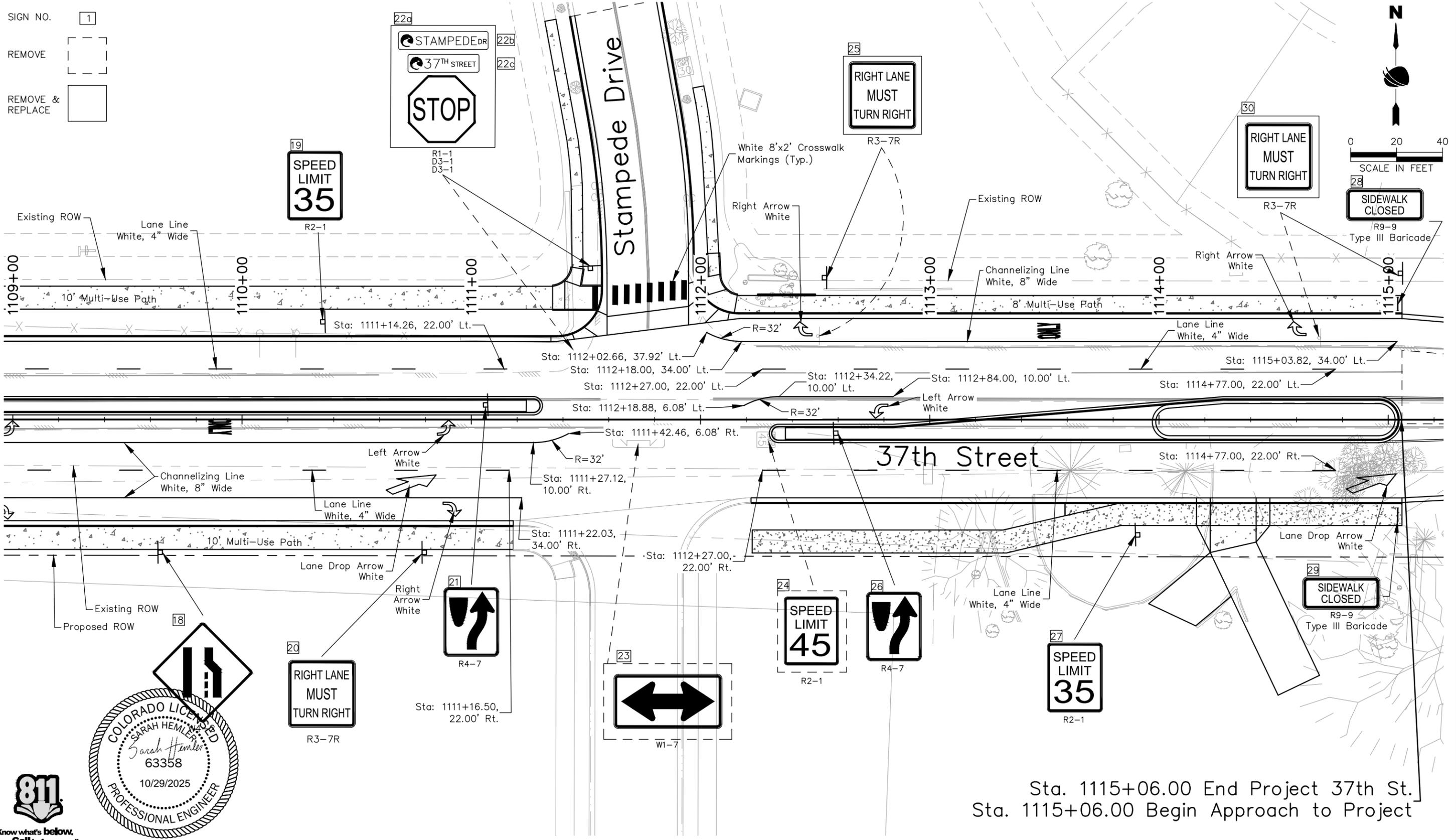
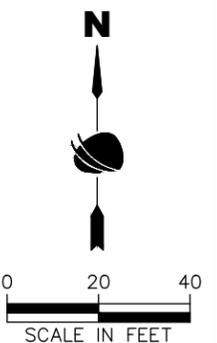
Designer: T. Tuttle  
 Detailer: C. Petersen  
 Sheet Subset: TRAFFIC

**Project No.**  
 37TH STREET 2A

Drawing Number TRAF-004  
 Sheet Number 127

FOR CONSTRUCTION 2/24/2024

SIGN NO. 1  
 REMOVE [dashed box]  
 REMOVE & REPLACE [solid box]



Sta. 1115+06.00 End Project 37th St.  
 Sta. 1115+06.00 Begin Approach to Project

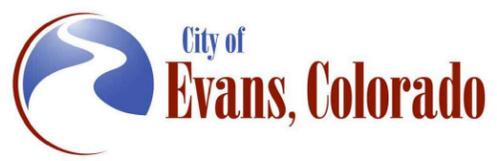


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FOR CONSTRUCTION 2/24/2024

Print Date: 2/19/2024  
 File Name: TRAF P2A-001 TRAFFIC SIGNING AND STRIPING.DWG  
 Horiz. Scale: As Noted Vert. Scale: N/A

Sheet Revisions		
Date	Comments	Initials



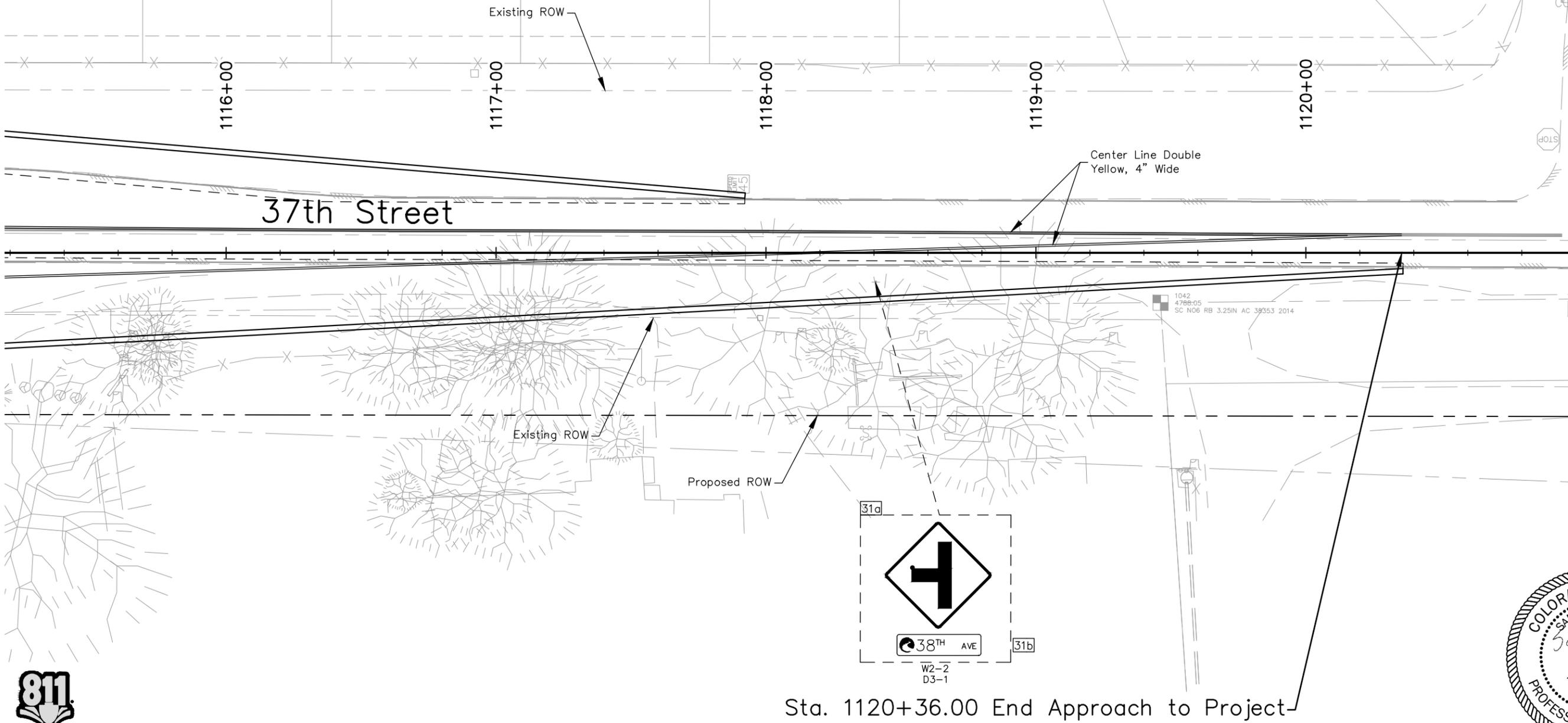
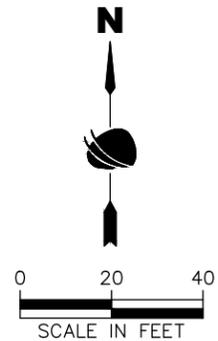
**As Constructed**  
 No Revisions:  
 Revised:  
 Void:

**37TH STREET WIDENING PHASE 2A SIGNING AND STRIPING PLAN**

Designer:	T. Tuttle	Structure Numbers:	
Detailer:	C. Petersen		
Sheet Subset:	TRAFFIC	Subset Sheets:	5 of 6

**Project No.**  
 37TH STREET 2A  
 Drawing Number TRAF-005  
 Sheet Number 128

SIGN NO. 1  
 REMOVE   
 REMOVE & REPLACE



Sta. 1120+36.00 End Approach to Project



Plot Date: 2/19/2024 3:27 PM Plotted By: Sarah Hemler  
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Print Date: 2/19/2024	
File Name: TRAF P2A-001 TRAFFIC SIGNING AND STRIPING.DWG	
Horiz. Scale: As Noted	Vert. Scale: N/A
	12076 Grant Street Thornton, CO 80241 Ph: (303) 962-9300 Fax: (303) 962-9350

Sheet Revisions		
Date	Comments	Initials

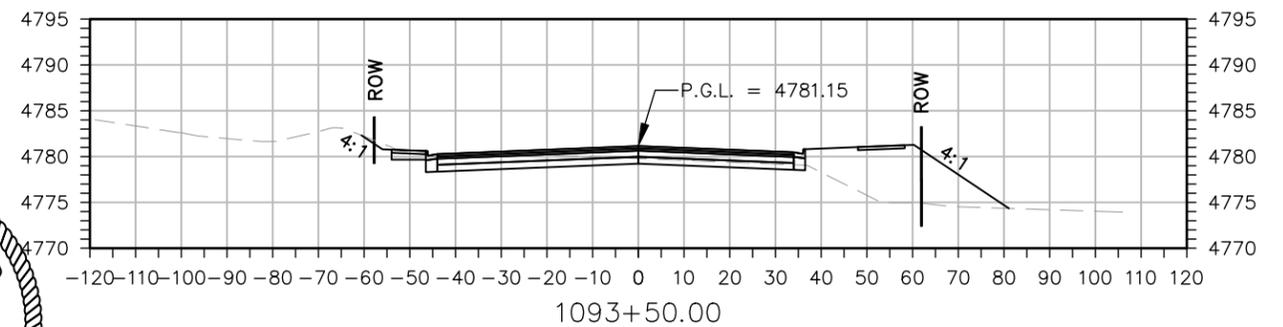
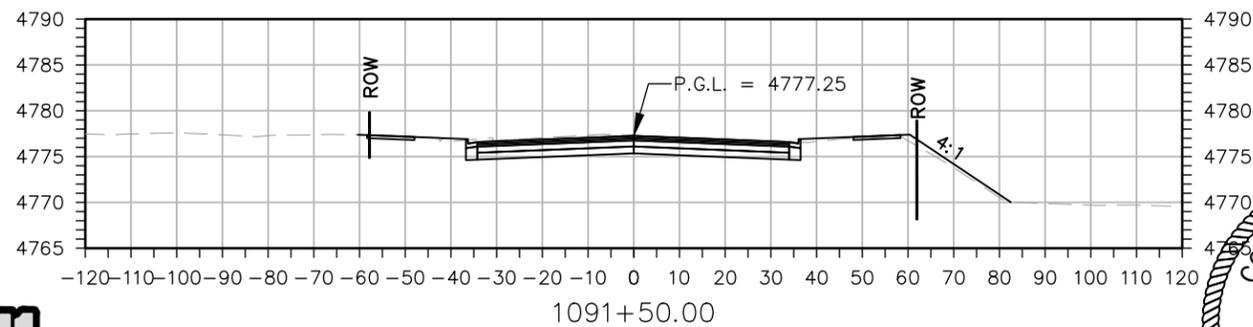
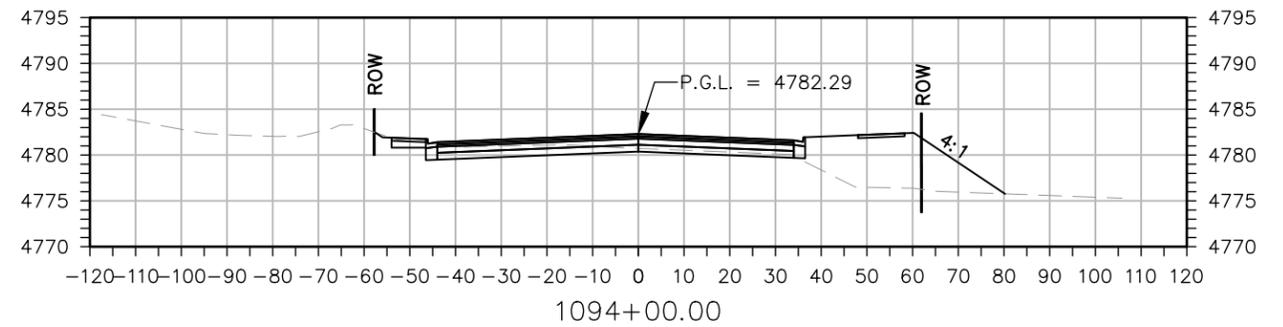
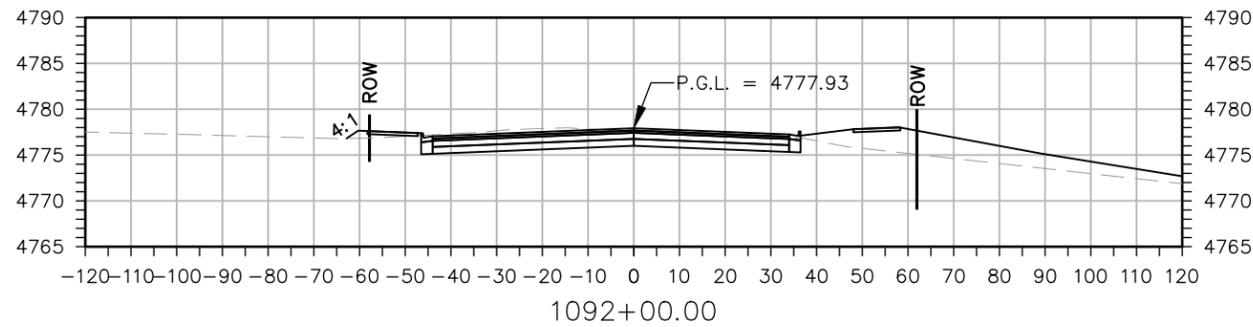
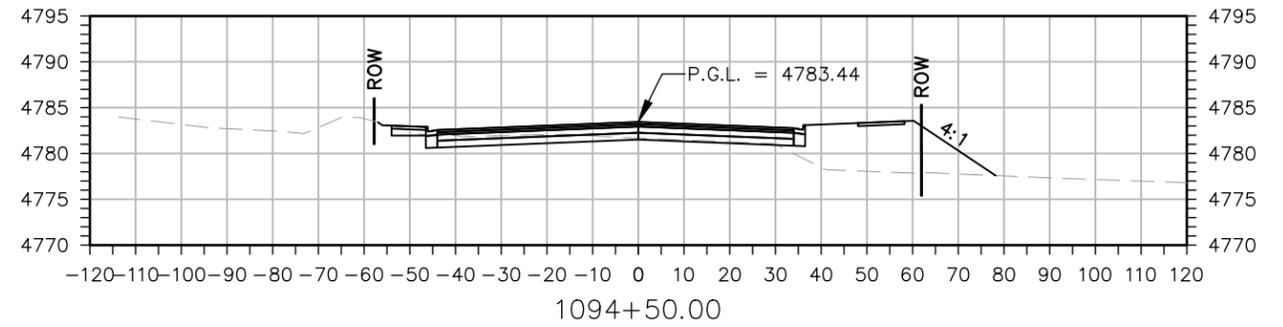
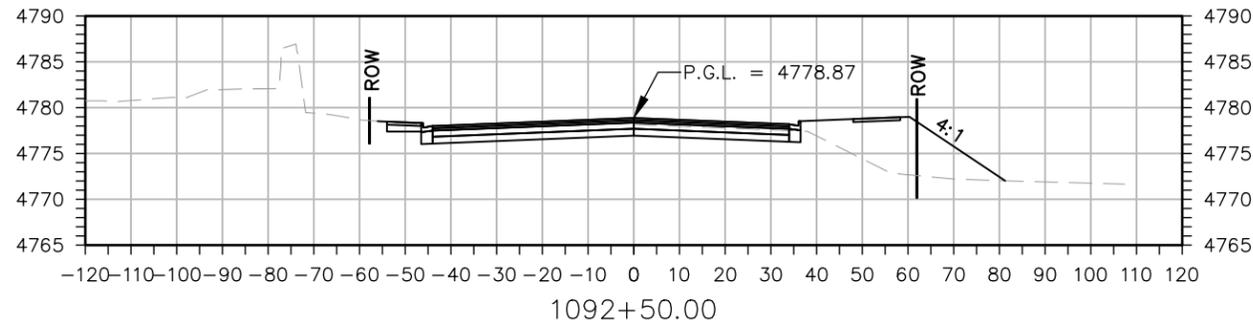
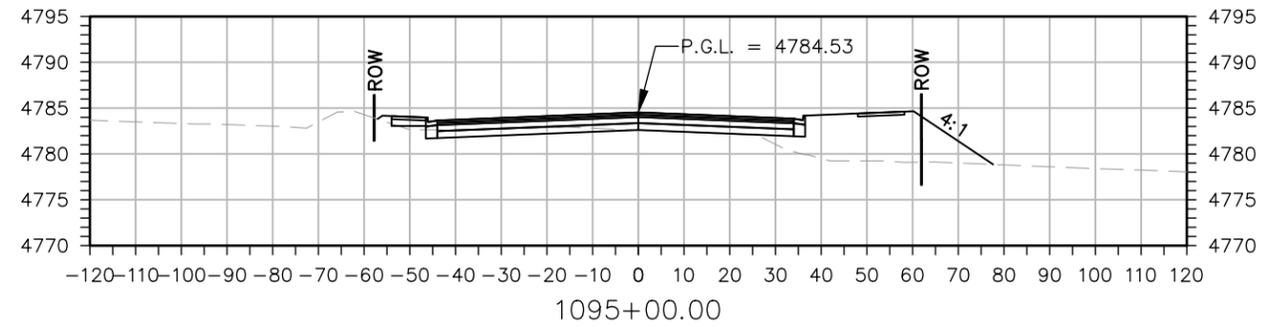
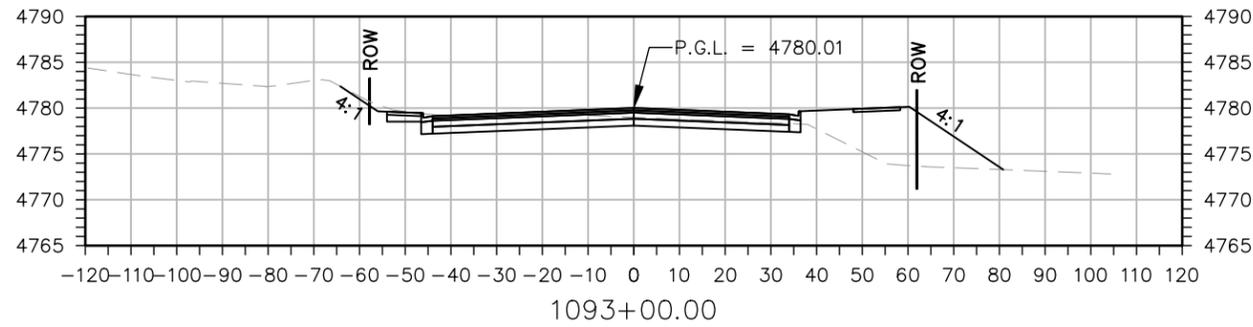


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No Revisions:
Revised:
Void:

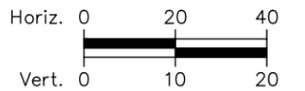
<b>37TH STREET WIDENING PHASE 2A SIGNING AND STRIPING PLAN</b>		
Designer: T. Tuttle	Structure Numbers	Sheet Subset: TRAFFIC Subset Sheets: 6 of 6
Detailer: C. Petersen		
Sheet Subset: TRAFFIC		

<b>Project No.</b>
37TH STREET 2A
Drawing Number TRAF-006
Sheet Number 129

FOR CONSTRUCTION 2/24/2024

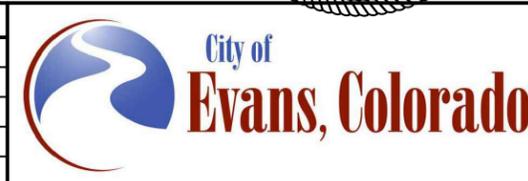


STA. 1091+46.80 BEGIN PROJECT 37TH ST.



Print Date: 2/19/2024	
File Name: XS P2A-001 CROSS SECTIONS.DWG	
Horiz. Scale: As Noted	Vert. Scale: As Noted
<b>RockSol</b> Consulting Group, Inc.	12076 Grant Street Thornton, CO 80241 Ph: (303) 962-9300 Fax: (303) 962-9350

Sheet Revisions		
Date:	Comments	Init.



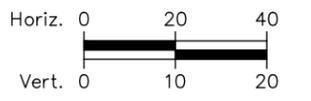
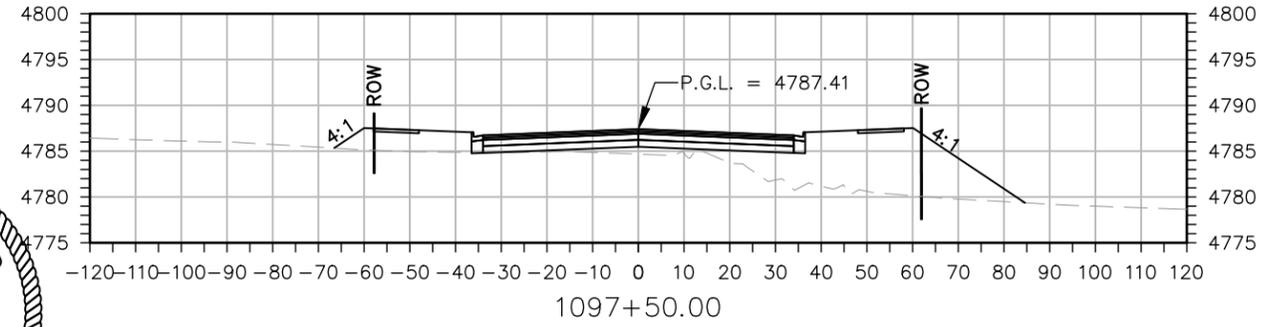
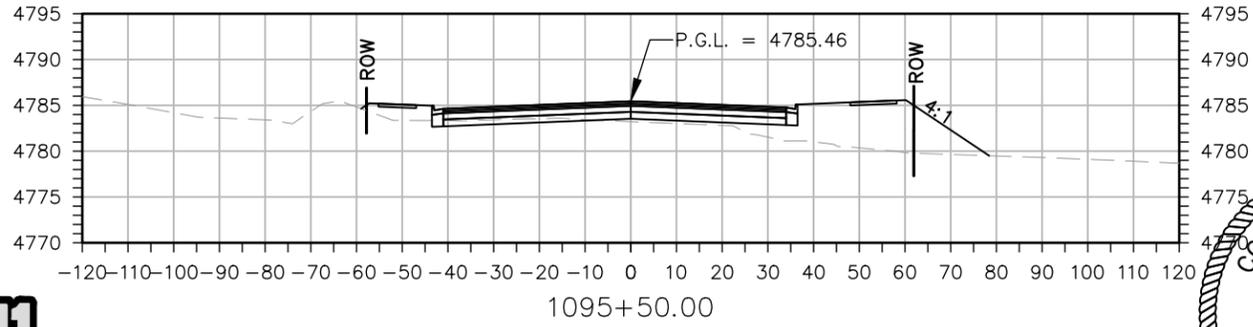
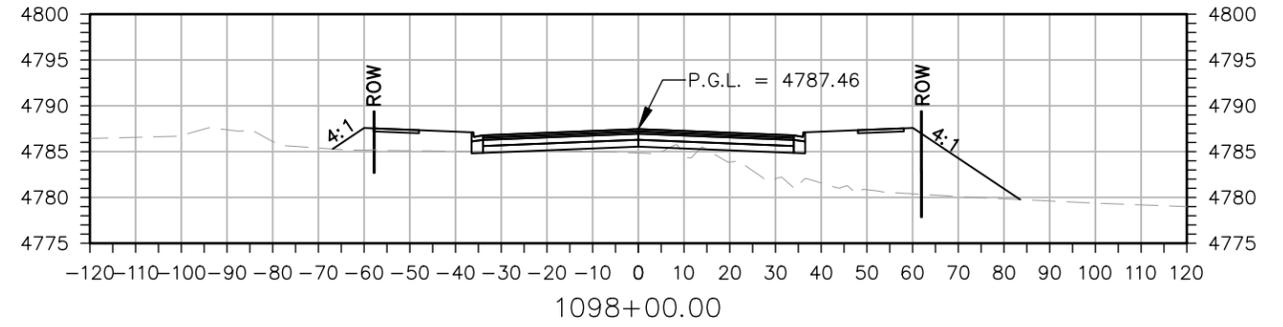
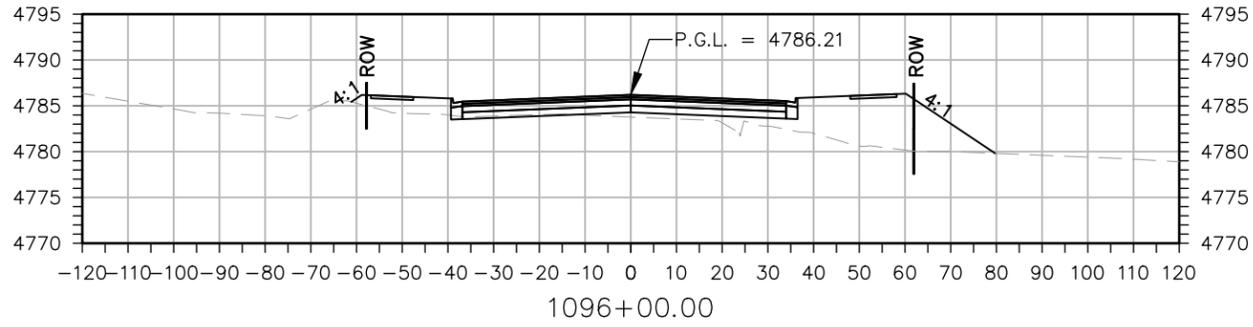
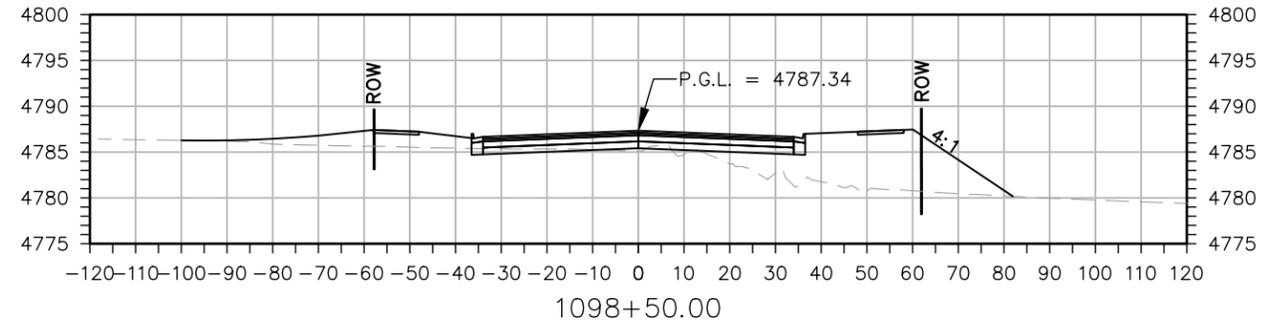
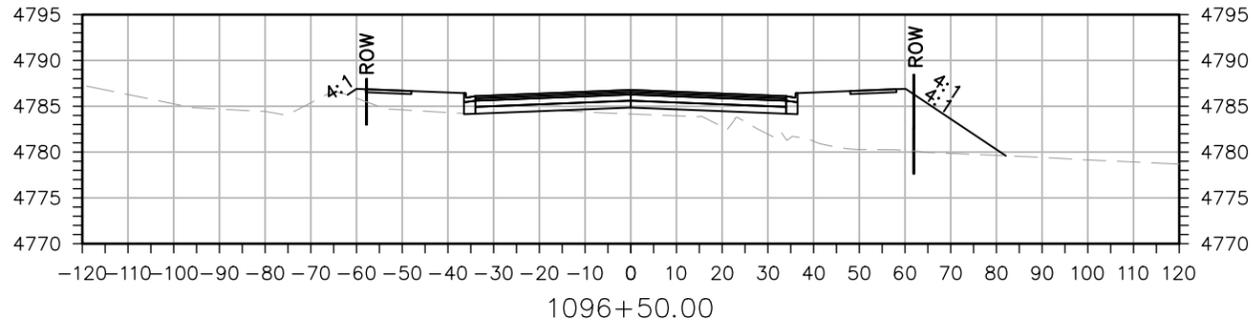
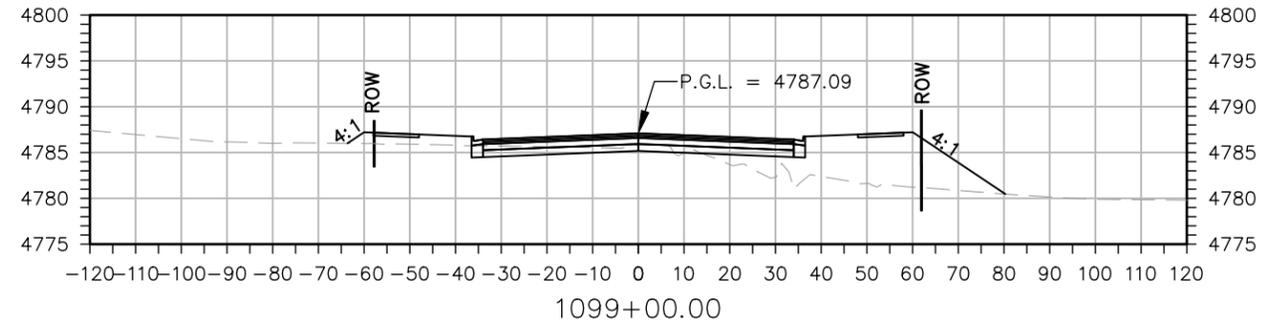
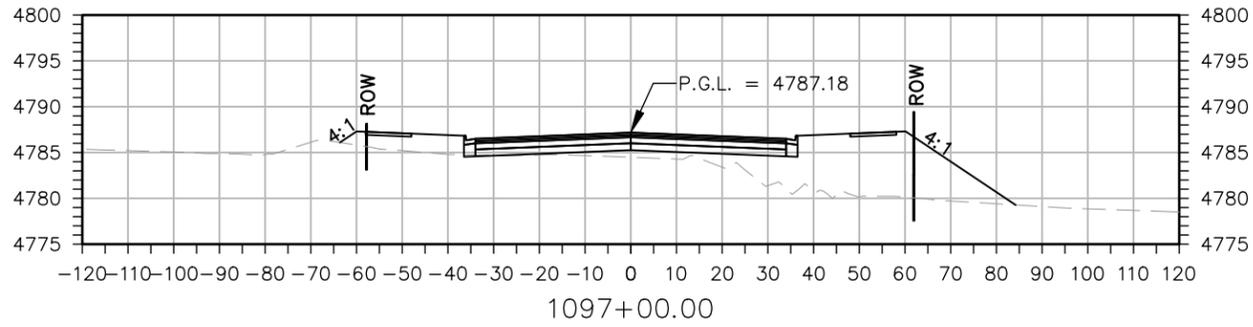
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No Revisions:
Revised:
Void:

<b>37TH STREET WIDENING PHASE 2A CROSS SECTIONS</b>	
Designer: T. Tuttle	Structure Numbers
Detailer: S. Hemler	
Sheet Subset: X SECTIONS	Subset Sheets: 1 of 8

<b>Project No.</b>
37TH STREET 2A
Drawing Number XS-001
Sheet Number 200

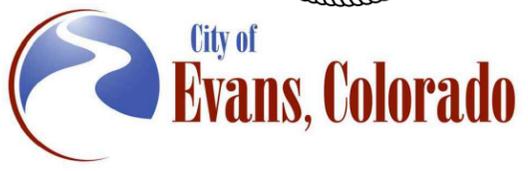
Plot Date: 2/19/2024 10:27 AM Plotted By: Sarah Hemler  
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FOR CONSTRUCTION 2/24/2024



Print Date: 2/19/2024	
File Name: XS P2A-001 CROSS SECTIONS.DWG	
Horiz. Scale: As Noted	Vert. Scale: As Noted
	12076 Grant Street Thornton, CO 80241 Ph: (303) 962-9300 Fax: (303) 962-9350

Sheet Revisions		
Date:	Comments	Init.



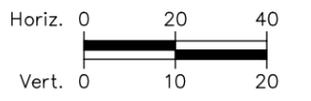
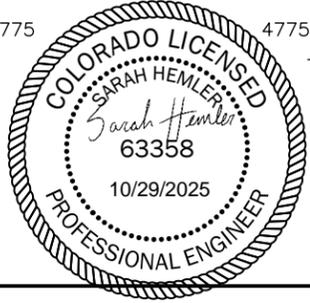
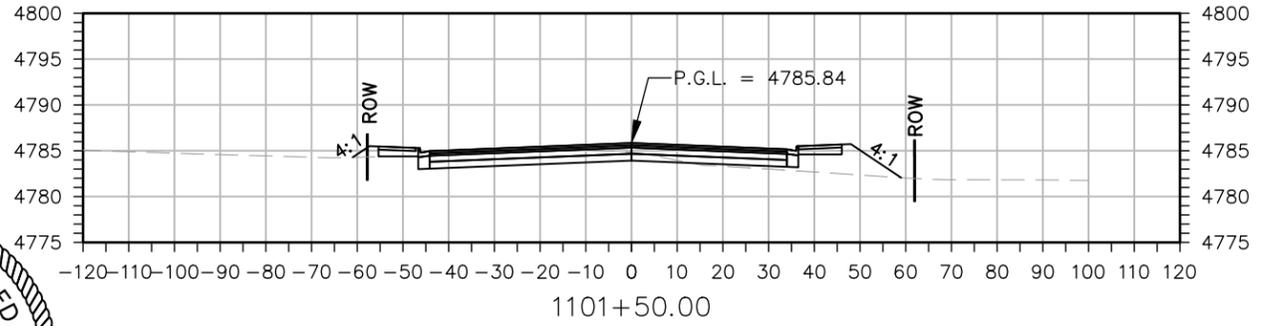
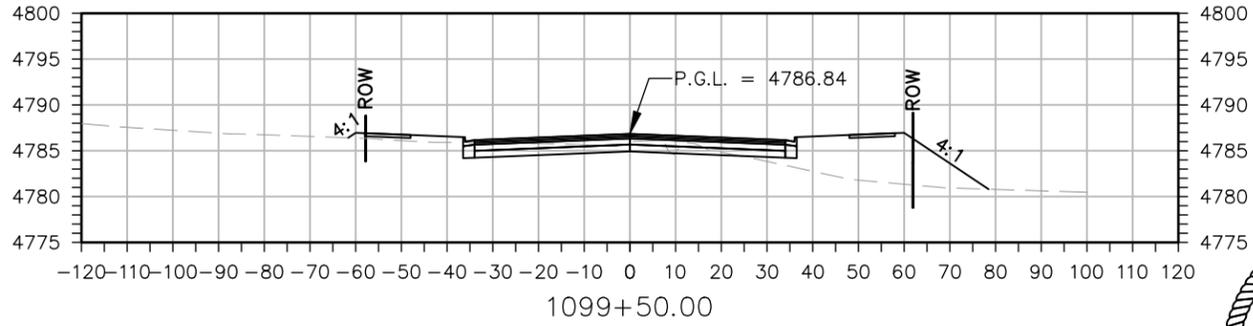
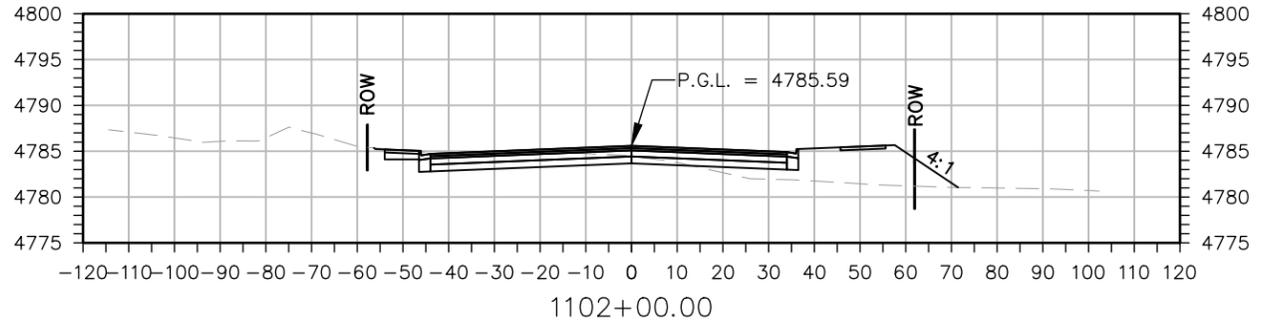
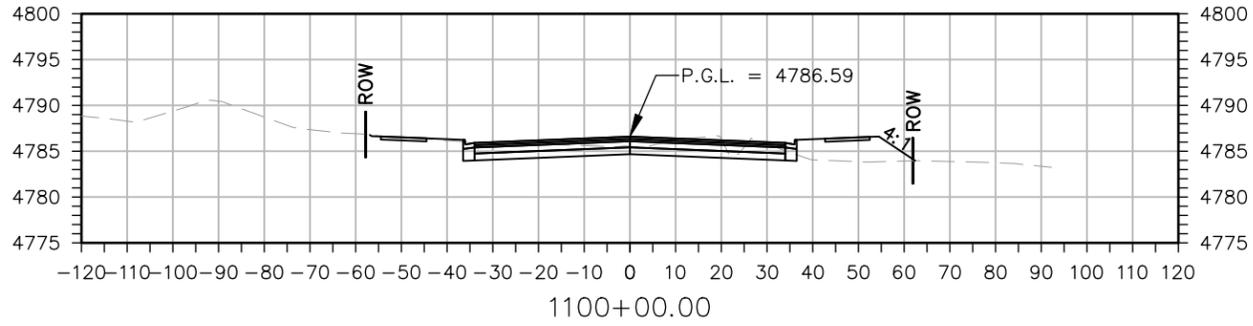
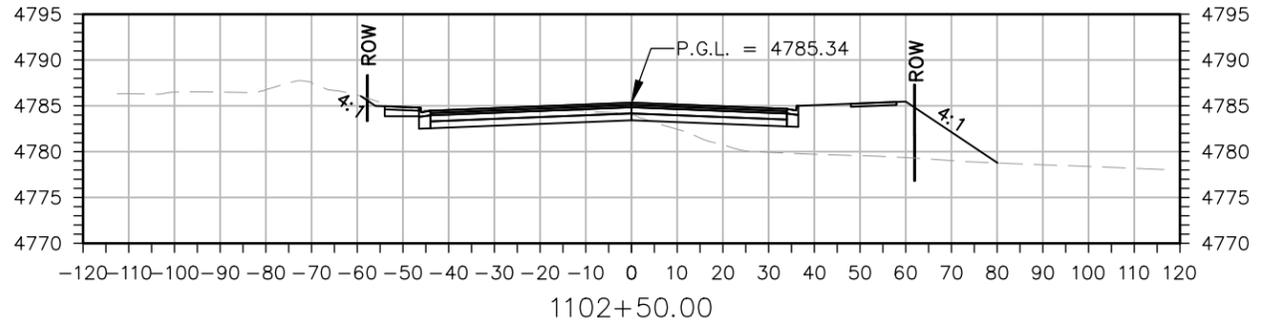
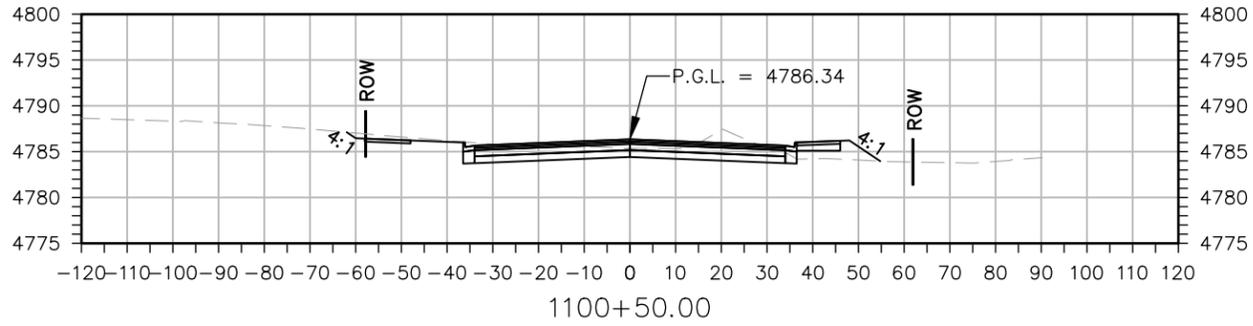
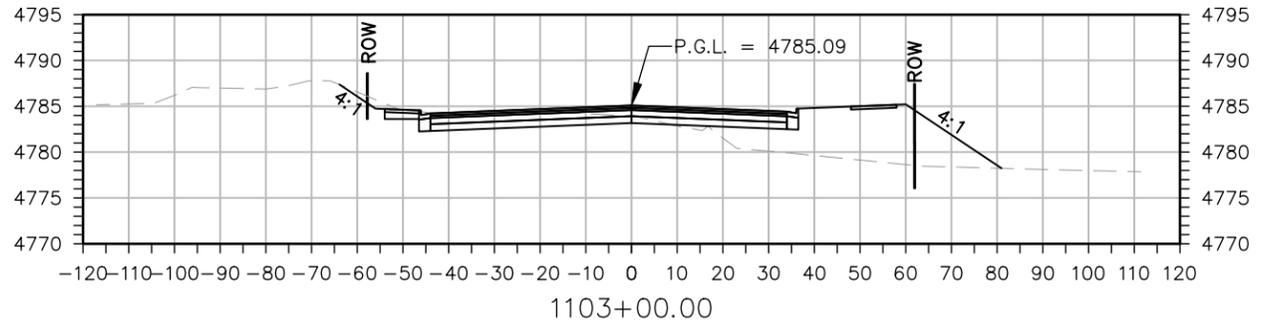
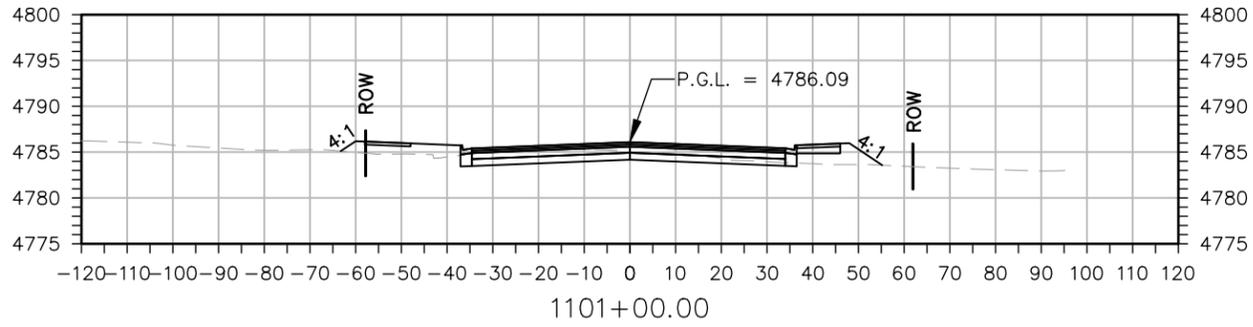
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No Revisions:
Revised:
Void:

<b>37TH STREET WIDENING PHASE 2A CROSS SECTIONS</b>	
Designer: T. Tuttle	Structure Numbers
Detailer: S. Hemler	
Sheet Subset: X SECTIONS	Subset Sheets: 2 of 8

<b>Project No.</b>
37TH STREET 2A
Drawing Number XS-002
Sheet Number 201

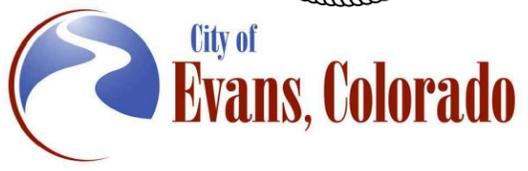
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Sheet Revisions		
Date:	Comments	Init.



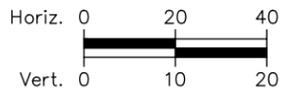
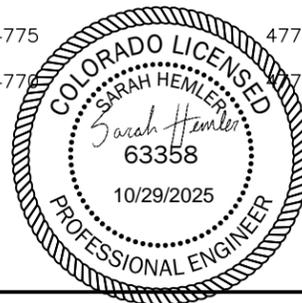
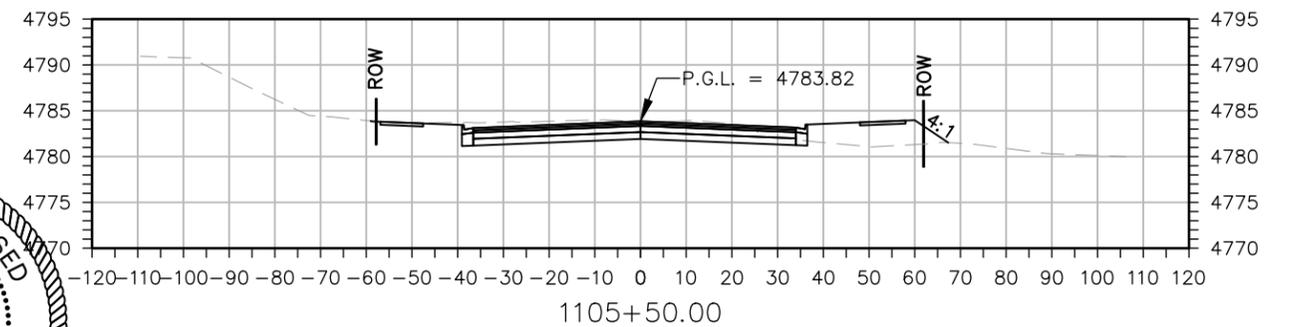
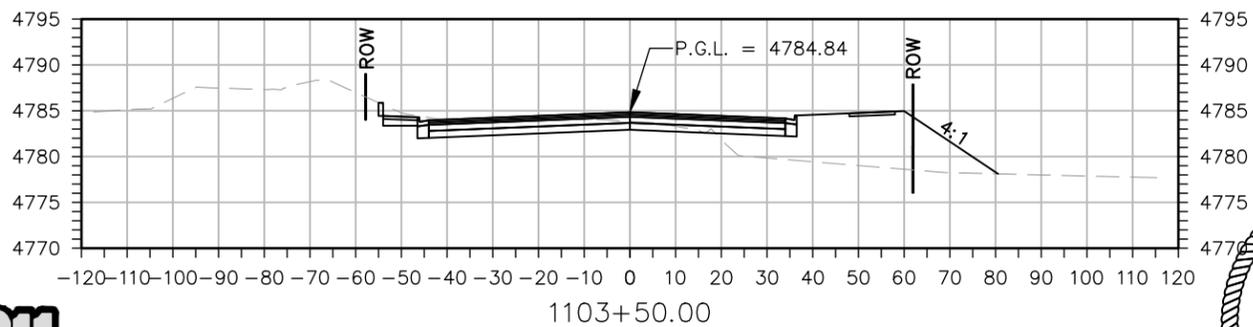
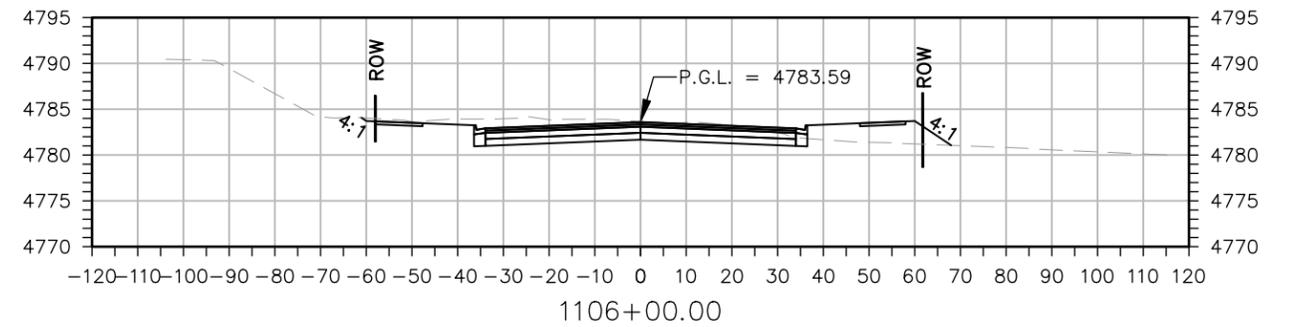
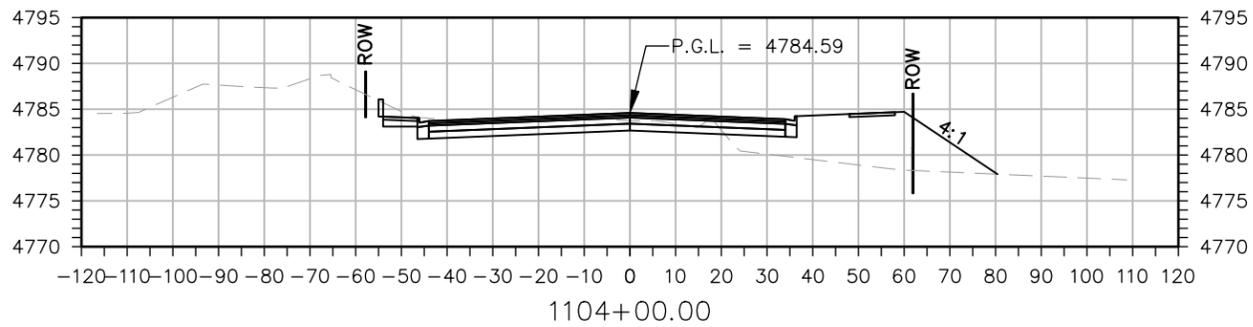
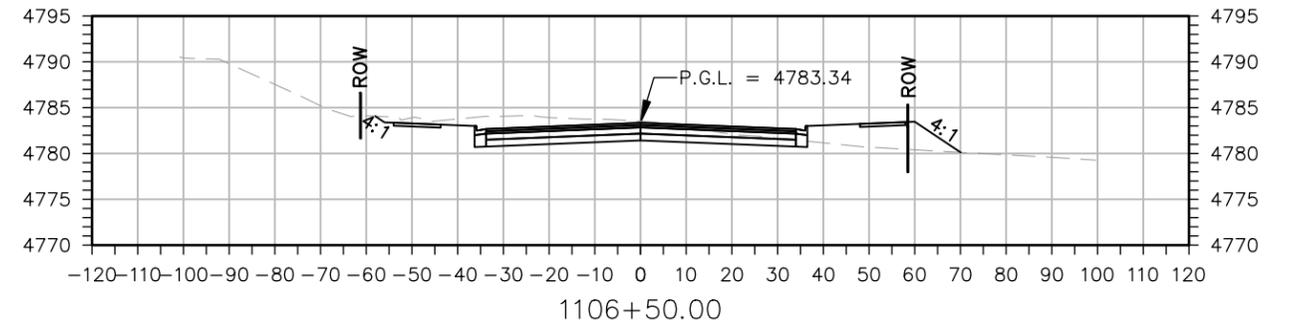
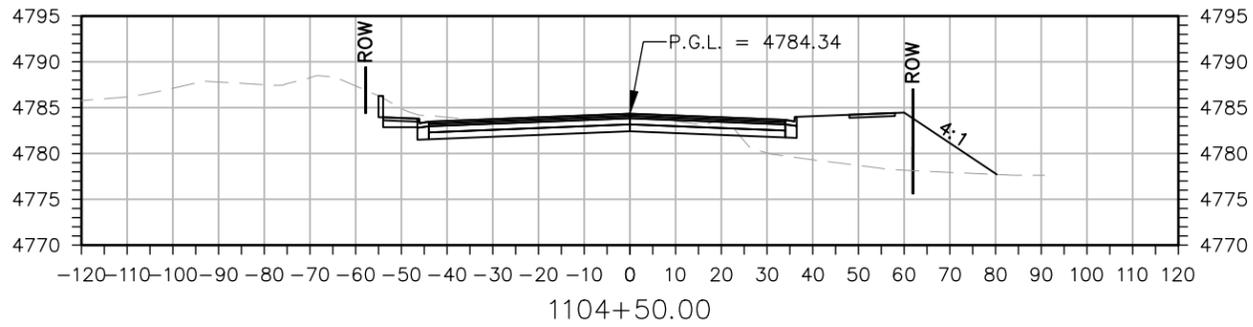
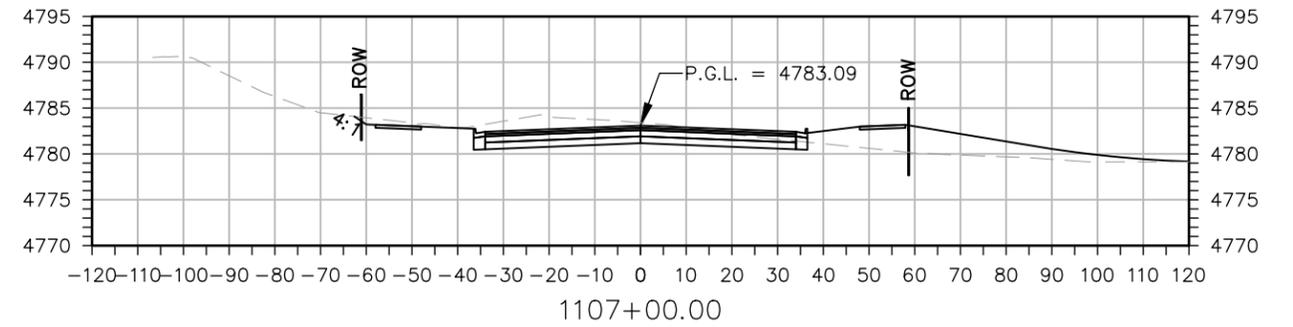
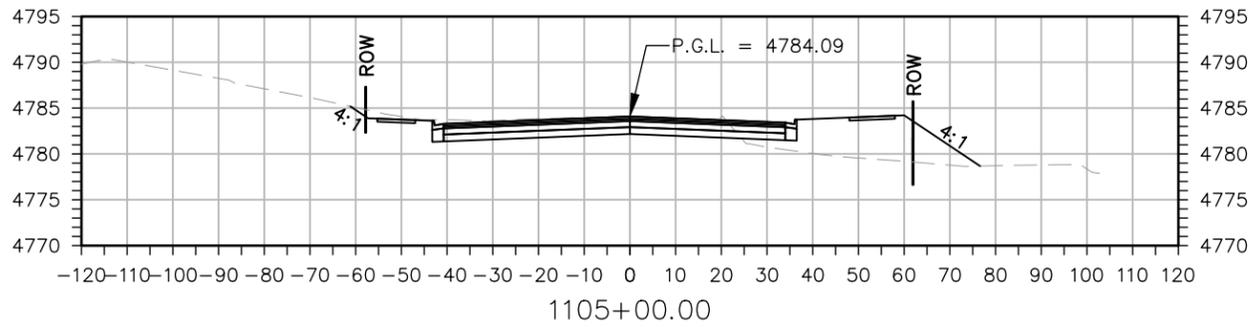
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No Revisions:
Revised:
Void:

<b>37TH STREET WIDENING PHASE 2A CROSS SECTIONS</b>	
Designer: T. Tuttle	Structure Numbers
Detailer: S. Hemler	
Sheet Subset: X SECTIONS	Subset Sheets: 3 of 8

<b>Project No.</b>
37TH STREET 2A
Drawing Number XS-003
Sheet Number 202

Plot Date: 2/19/2024 10:28 AM Plotted By: Sarah Hemler  
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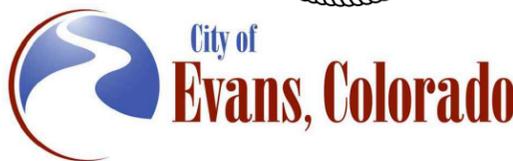
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Sheet Revisions		
Date:	Comments	Init.



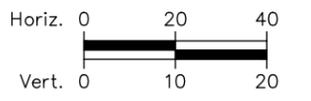
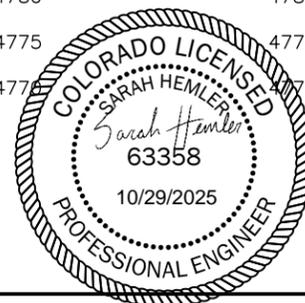
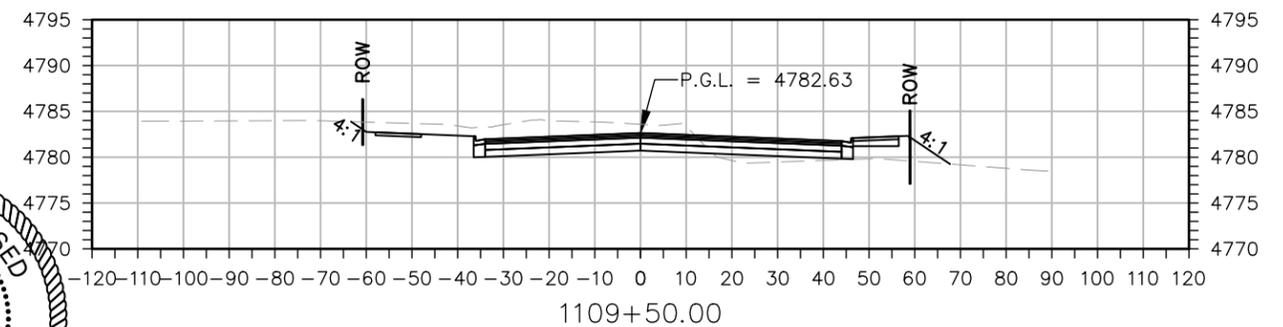
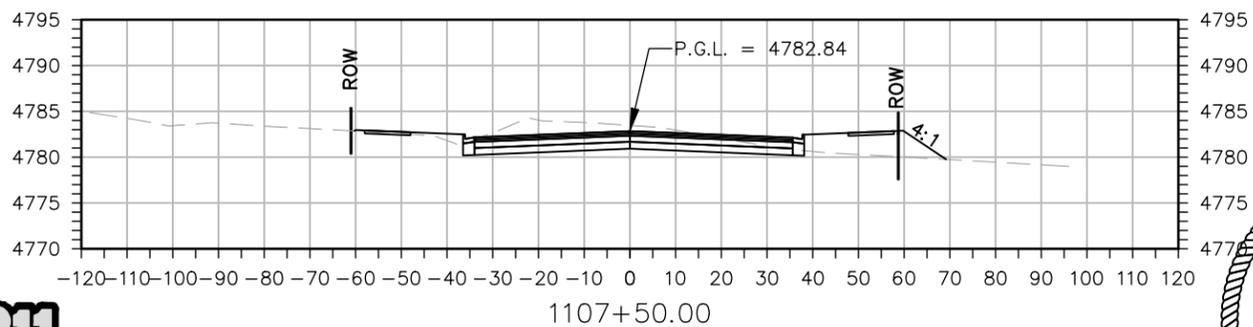
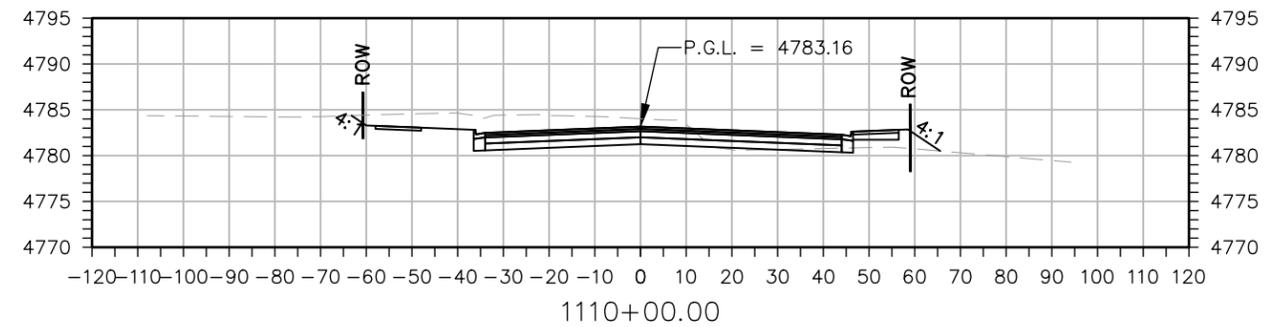
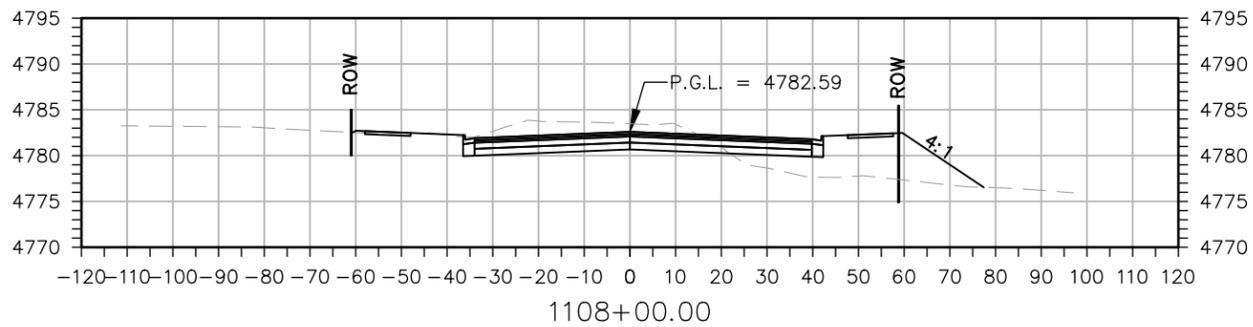
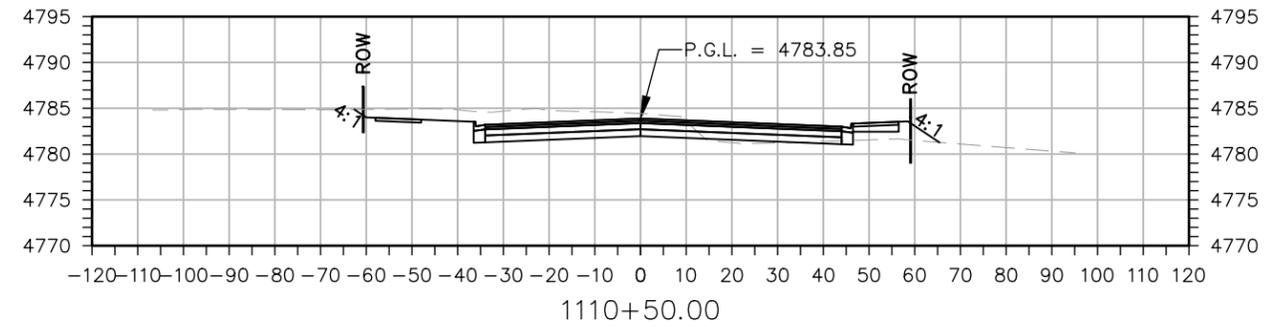
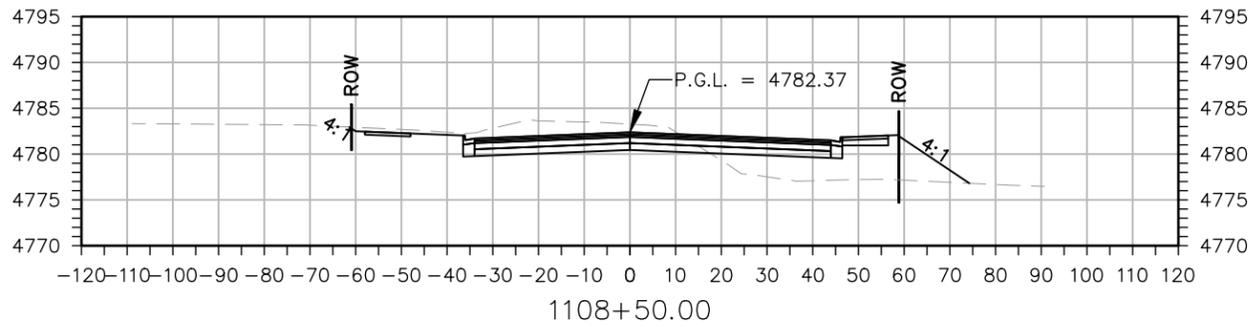
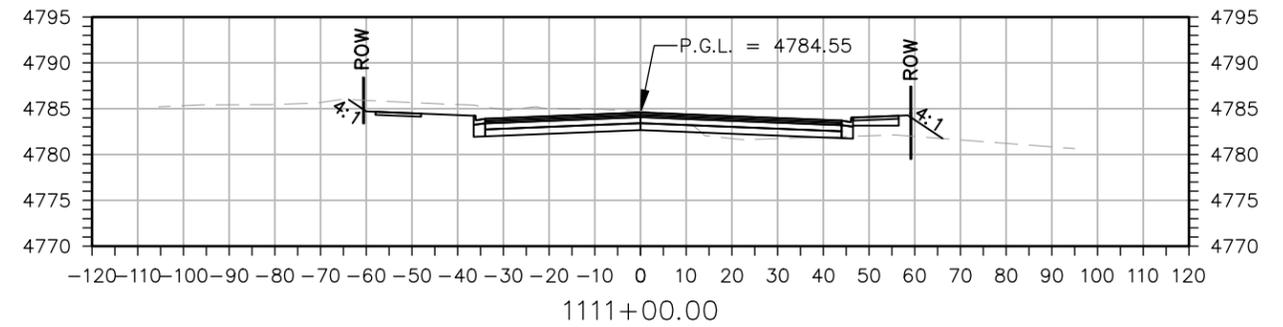
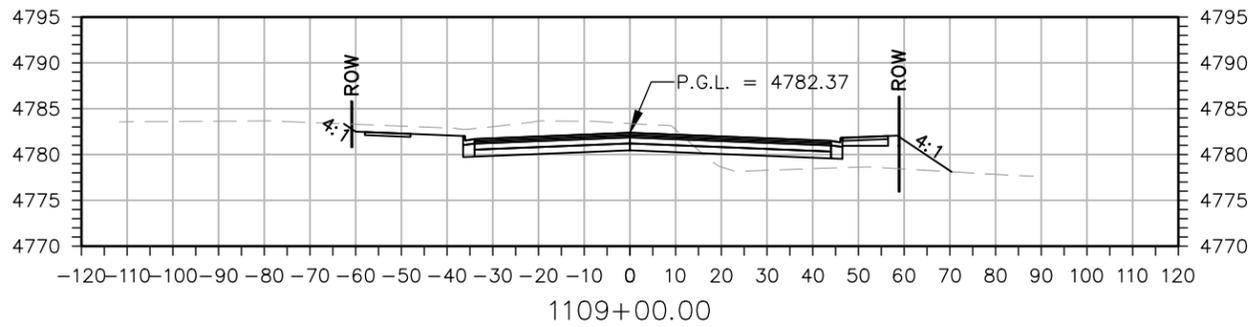
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<b>37TH STREET WIDENING PHASE 2A CROSS SECTIONS</b>	
Designer: T. Tuttle	Structure Numbers
Detailer: S. Hemler	
Sheet Subset: X SECTIONS	Subset Sheets: 4 of 8

<b>Project No.</b>
37TH STREET 2A
Drawing Number XS-004
Sheet Number 203

Plot Date: 2/19/2024 10:28 AM Plotted By: Sarah Hemler  
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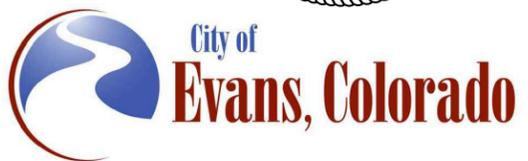
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Sheet Revisions		
Date:	Comments	Init.



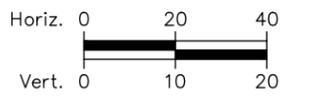
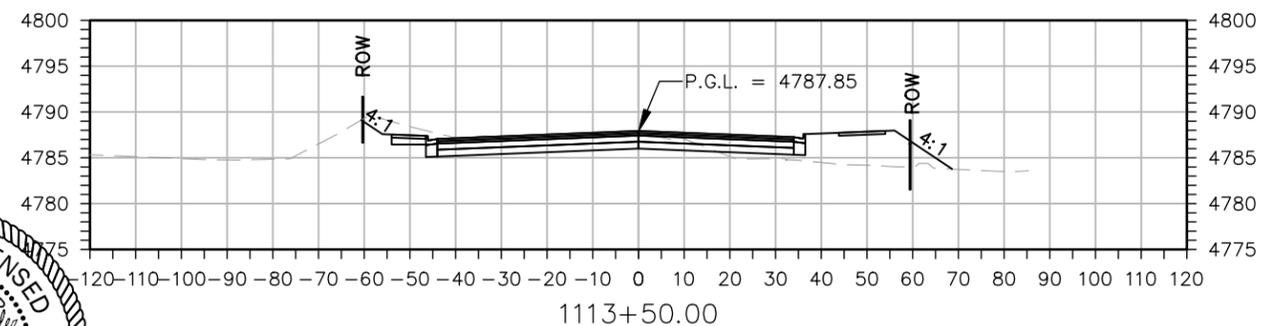
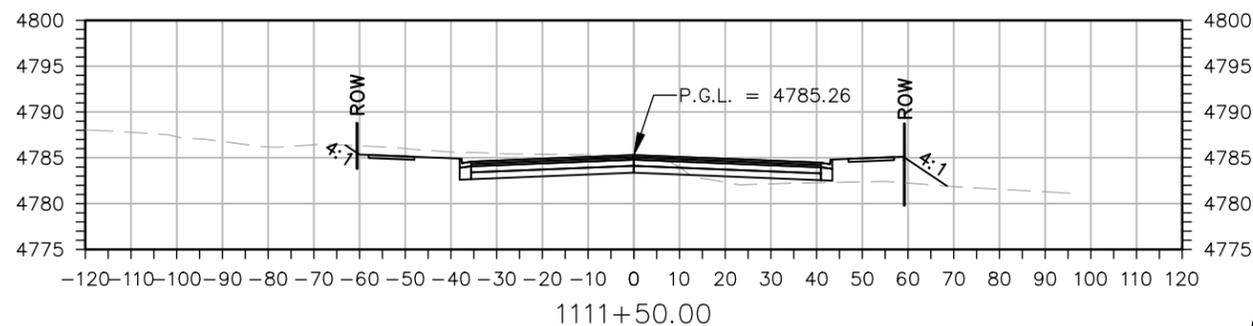
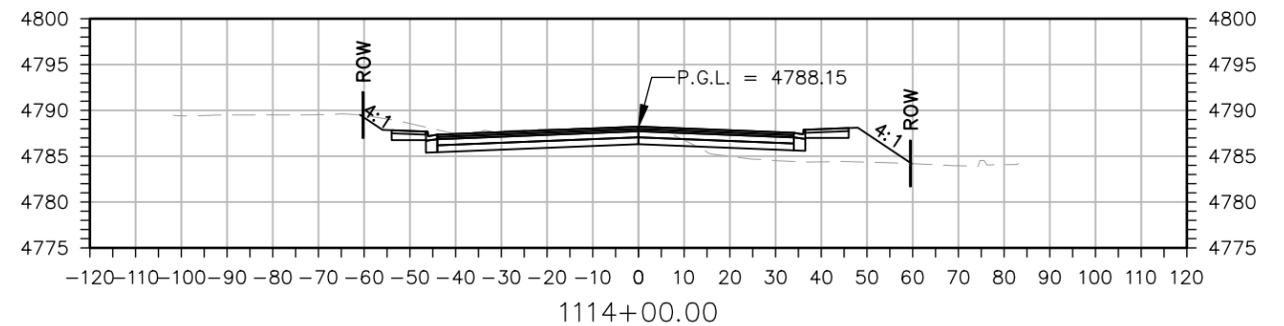
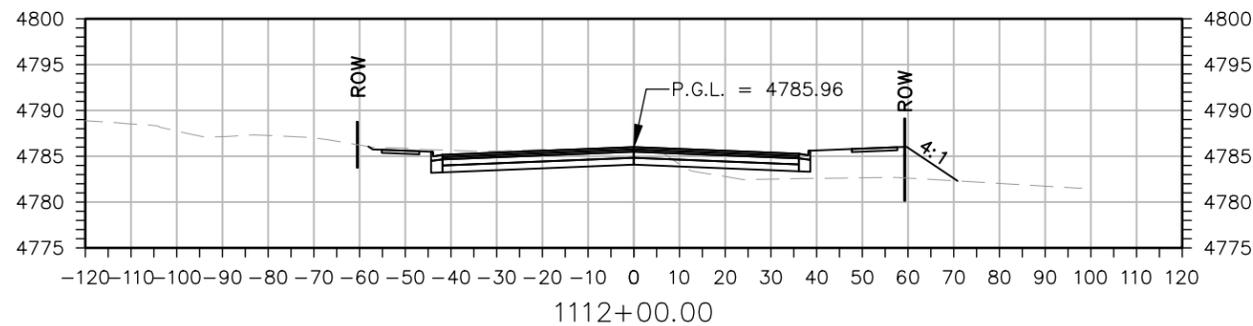
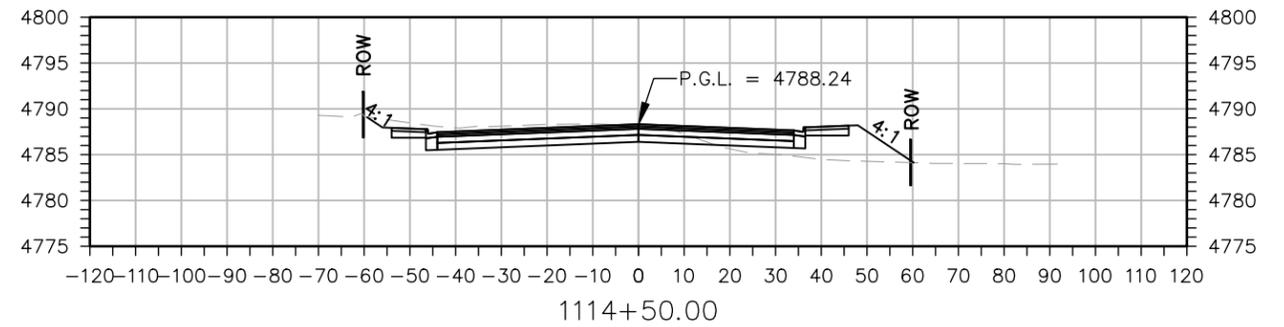
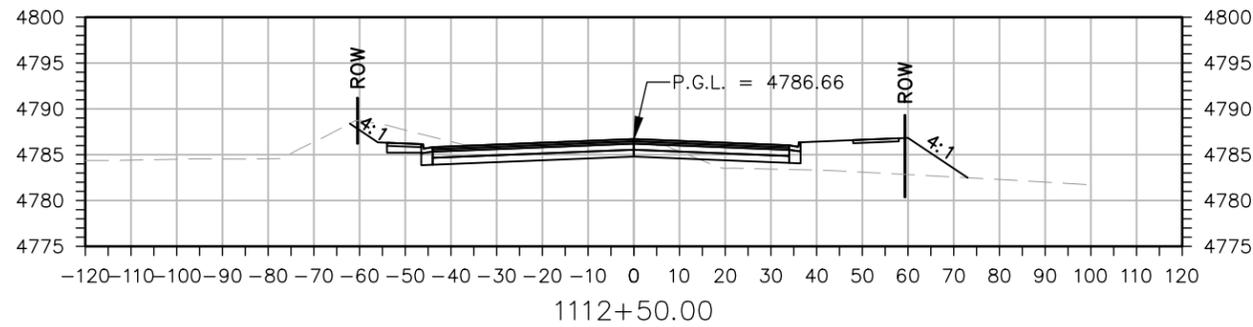
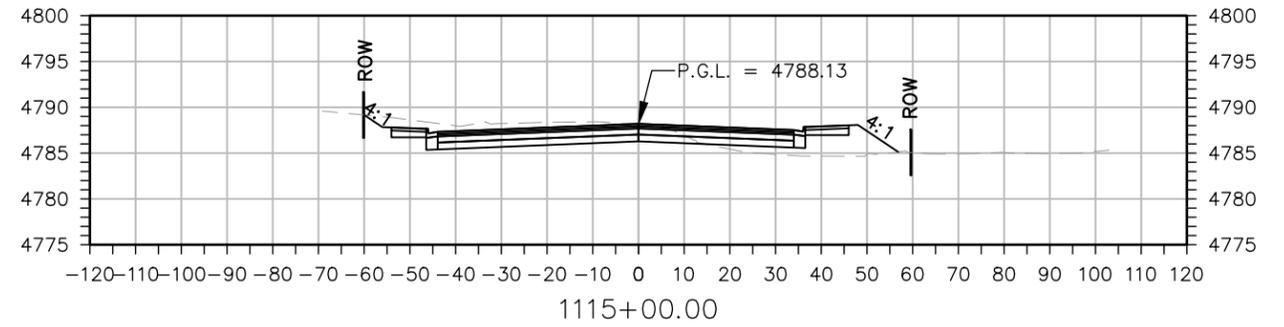
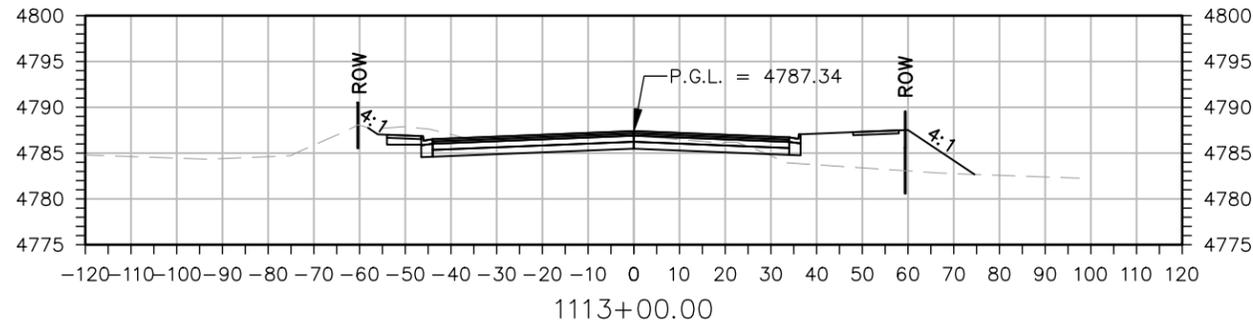
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No Revisions:
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Designer: T. Tuttle	Structure Numbers	Project No. 37TH STREET 2A Drawing Number XS-005 Sheet Number 204
Detailer: S. Hemler		
Sheet Subset: X SECTIONS	Subset Sheets: 5 of 8	

FOR CONSTRUCTION 2/24/2024

Plot Date: 2/19/2024 10:28 AM Plotted By: Sarah Hemler  
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 STA. 1115+06.00 BEGIN APPROACH TO PROJECT

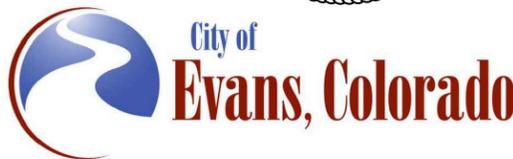


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 File Name: XS P2A-001 CROSS SECTIONS.DWG  
 Horiz. Scale: As Noted Vert. Scale: As Noted

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 Thornton, CO 80241  
 Ph: (303) 962-9300  
 Fax: (303) 962-9350

Sheet Revisions		
Date:	Comments	Init.

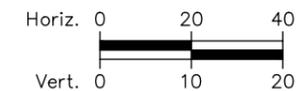
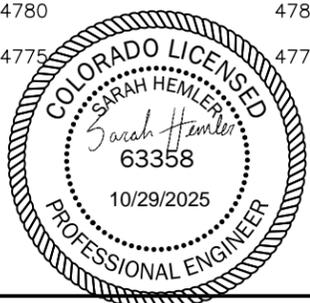
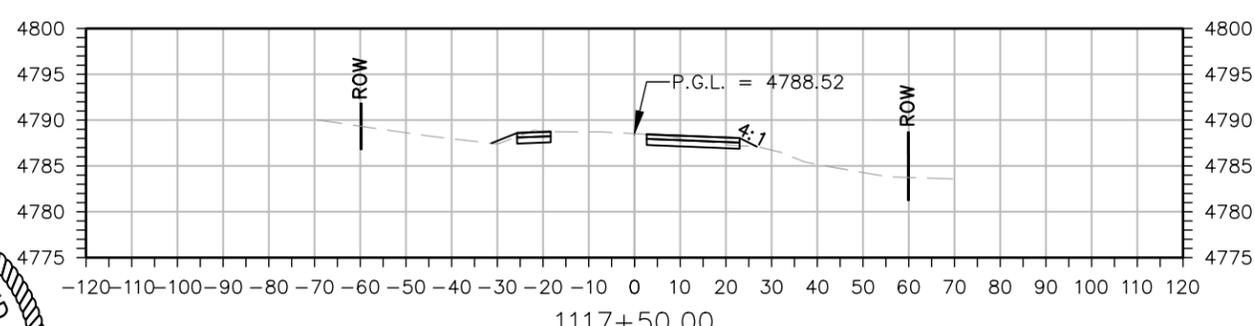
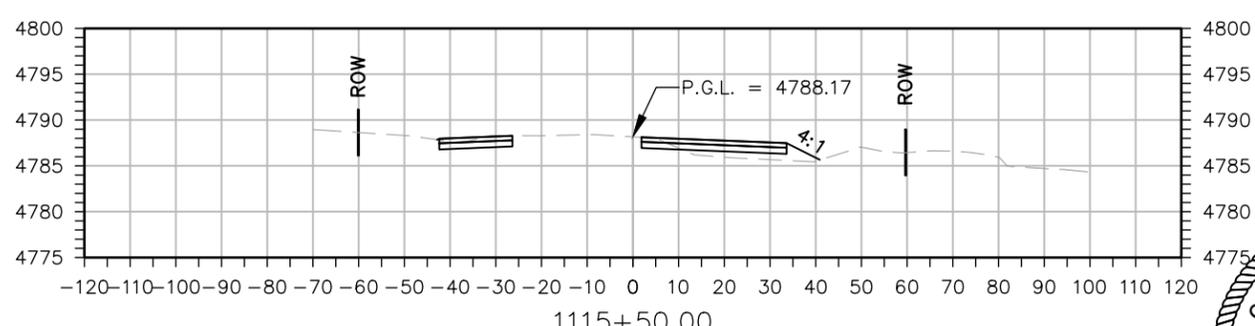
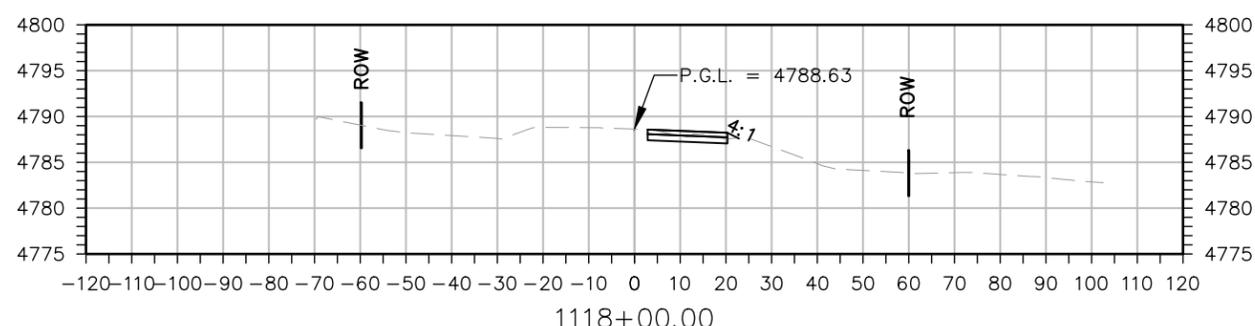
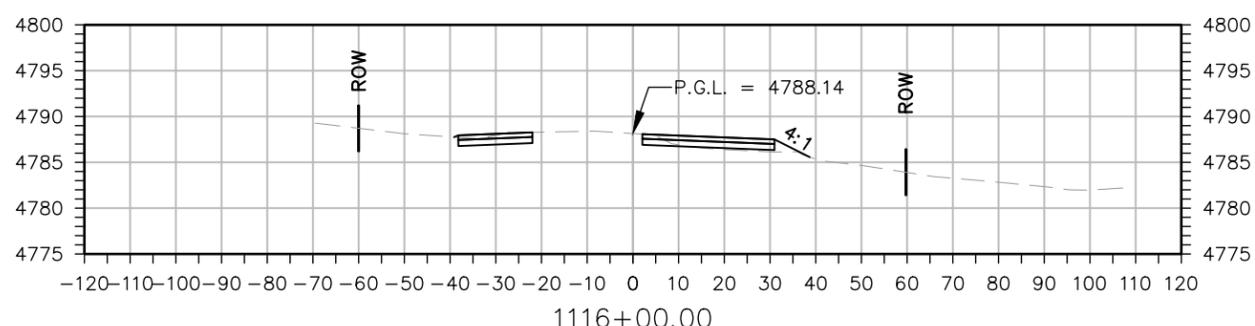
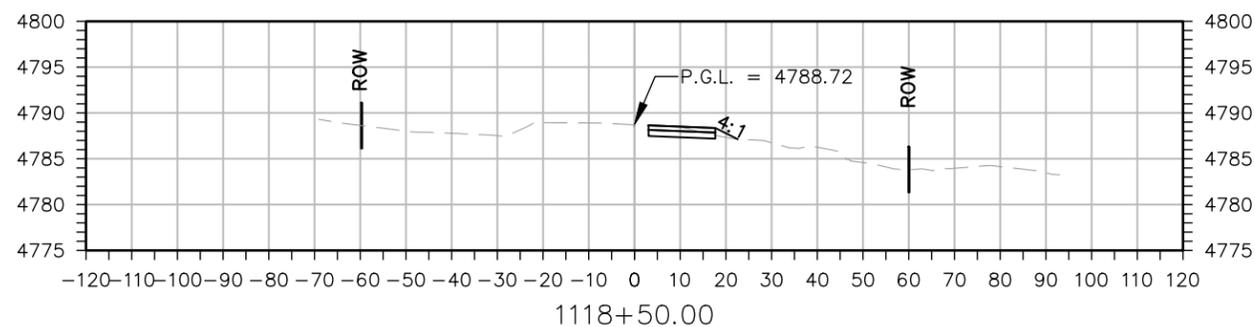
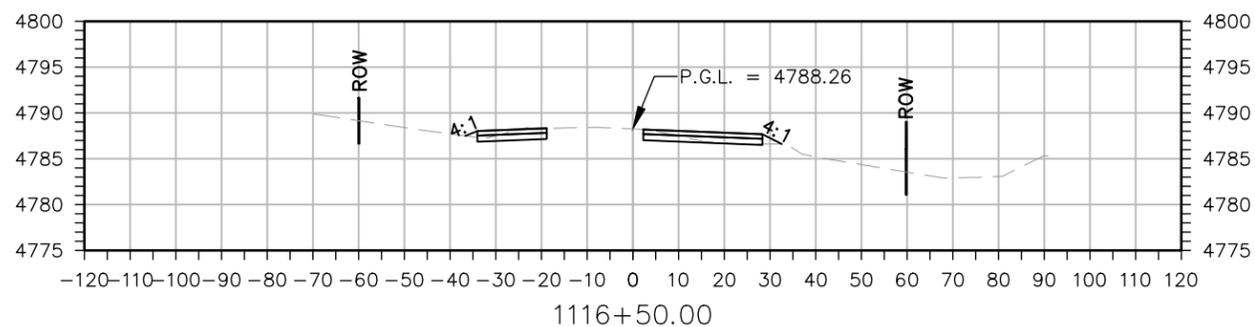
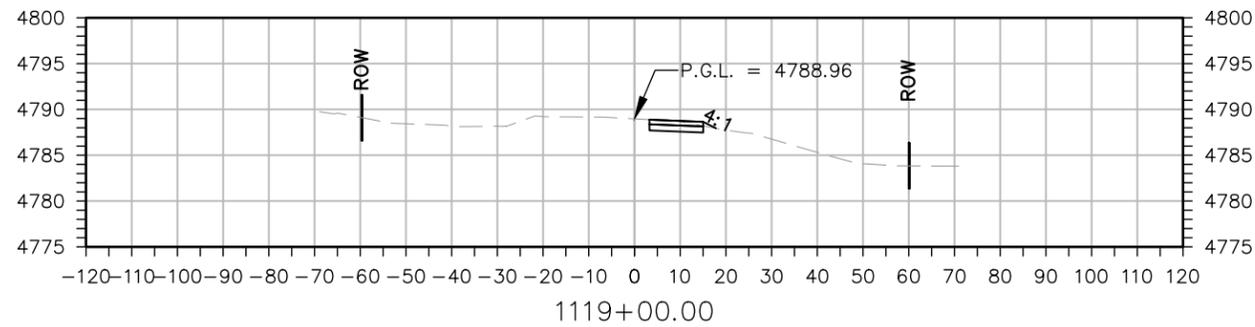
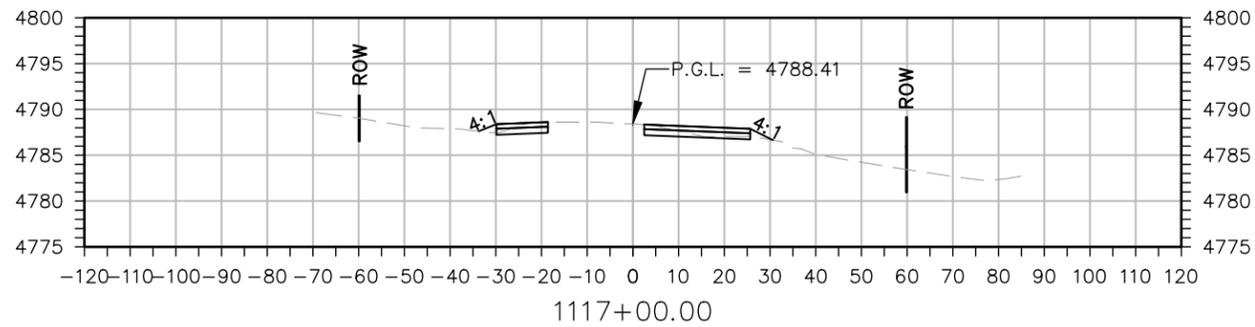


As Constructed No Revisions: Revised: Void:	<b>37TH STREET WIDENING PHASE 2A CROSS SECTIONS</b>		<b>Project No.</b> 37TH STREET 2A
	Designer: T. Tuttle	Structure Numbers	Drawing Number XS-006
	Detailer: S. Hemler	Sheet Subset: X SECTIONS	Subset Sheets: 6 of 8
			Sheet Number 205

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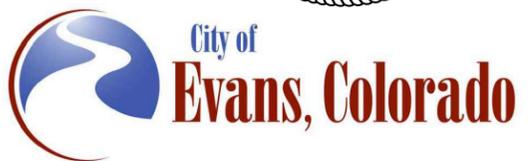
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Plot Date: 2/19/2024 10:28 AM Plotted By: Sarah Hemler  
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Sheet Revisions		
Date:	Comments	Init.



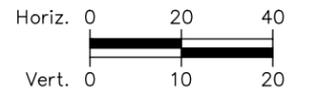
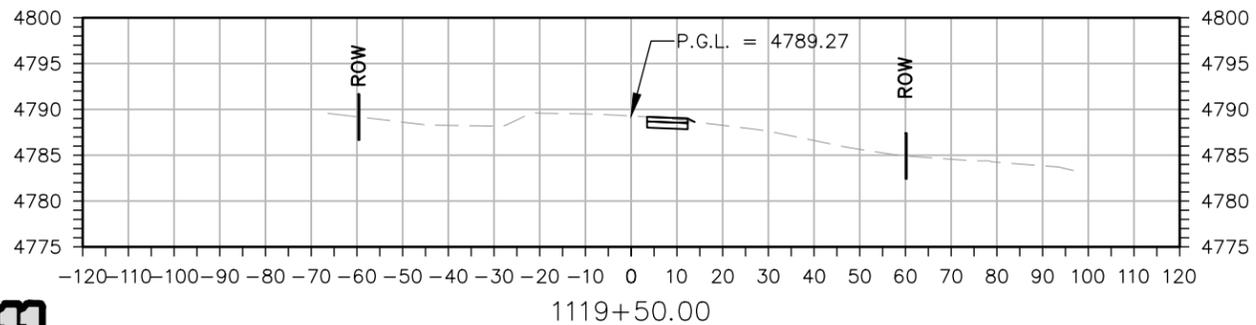
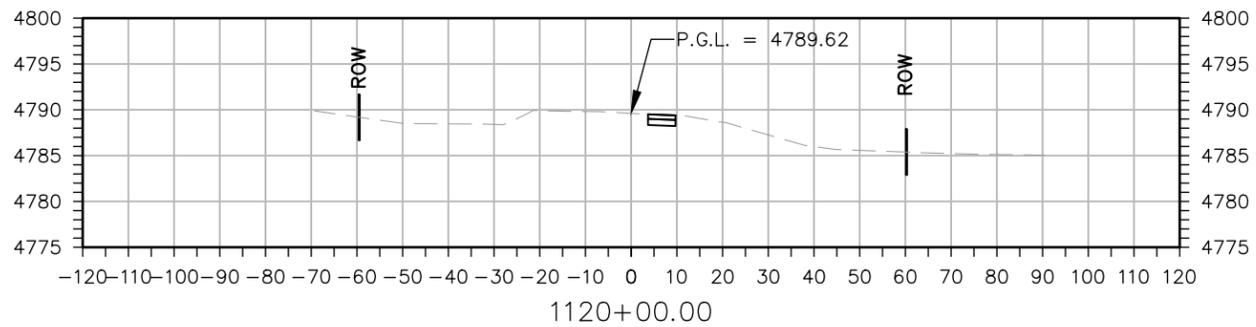
<b>As Constructed</b>
No Revisions:
Revised:
Void:

37TH STREET WIDENING PHASE 2A CROSS SECTIONS	
Designer: T. Tuttle	Structure Numbers
Detailer: S. Hemler	
Sheet Subset: X SECTIONS	Subset Sheets: 7 of 8

<b>Project No.</b>
37TH STREET 2A
Drawing Number XS-007
Sheet Number 206

FOR CONSTRUCTION 2/24/2024

STA. 1120+36.00 END APPROACH TO PROJECT

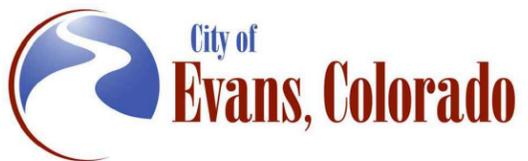


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File Name: XS P2A-001 CROSS SECTIONS.DWG	
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37TH STREET WIDENING PHASE 2A CROSS SECTIONS	
Designer: T. Tuttle	Structure Numbers
Detailer: S. Hemler	
Sheet Subset: X SECTIONS	Subset Sheets: 8 of 8

<b>Project No.</b>
37TH STREET 2A
Drawing Number XS-008
Sheet Number 207

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