

PoDI / NHS

FHWA PROJECT OF DIVISION INTEREST (PoDI)?  NO  YES

NATIONAL HIGHWAY SYSTEM?  NO  YES

# DEPARTMENT OF TRANSPORTATION STATE OF COLORADO

### Related Projects:

P. E. UNDER PROJECT:  
Project Number: 267 0252-499  
Project Code: 24278

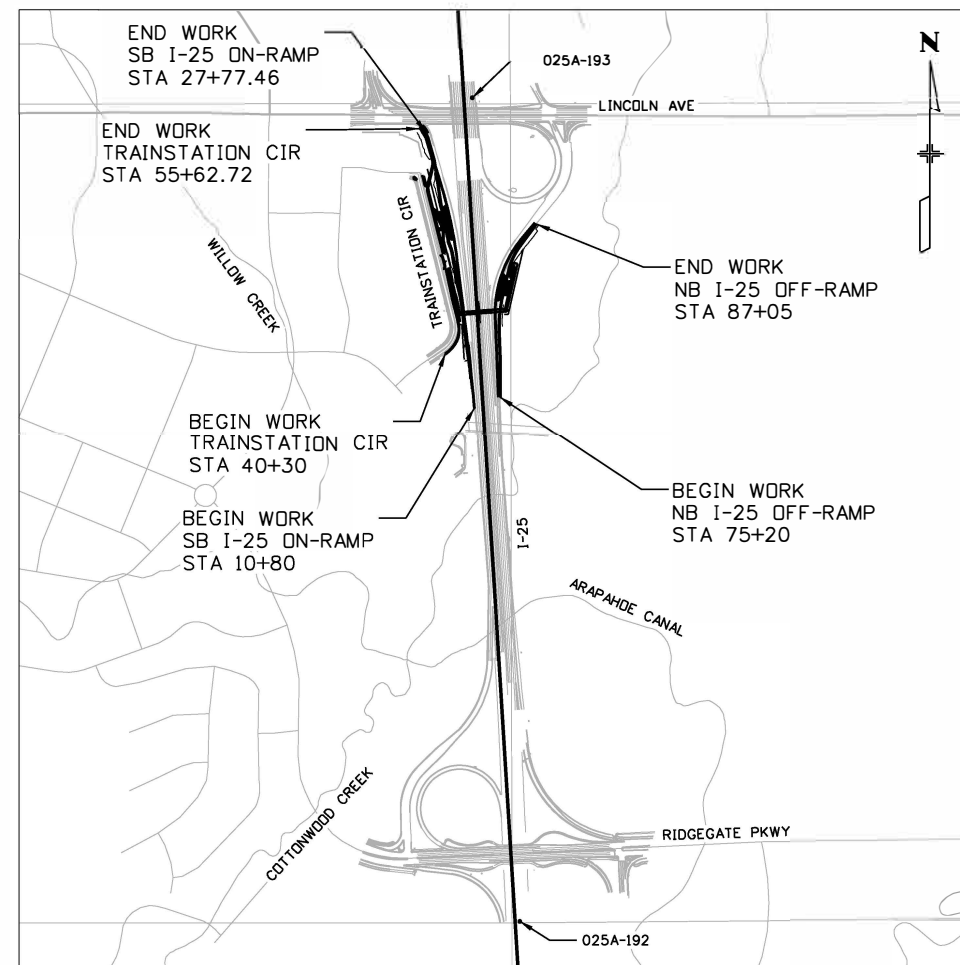
### R.O.W. Projects:

R.O.W. Project Description  
XXXXXXXXXXXXXXXXXX

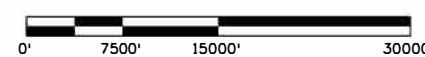
## HIGHWAY CONSTRUCTION BID PLANS OF PROPOSED FEDERAL AID PROJECT NO. 267 0252-499 I-25 MOBILITY HUB (LONE TREE) DOUGLAS COUNTY CONSTRUCTION PROJECT CODE NO. 24278

This plan set is being submitted as part of the City of Lone Tree Site Improvement Plan (SIP) process and is based off of 90% design plans. Some elements are yet to be determined and an updated final plan set and specification package will be provided to the City of Lone Tree when available. Notes in red have been added to highlight certain elements for the SIP Reviewers.

SHEET NO.	
1	TITLE SHEET
2-3	GENERAL NOTES
4-10	ROADWAY PLAN
11	AMENITY DETAILS
12-23	DRAINAGE PLAN
24-30	WEST RAMP PLAN
31-39	EAST RAMP PLAN
40-44	PEDESTRIAN BRIDGE PLAN
45	TEST HOLE INFORMATION
46-55	LIGHTING AND ELECTRICAL PLAN
56-66	ITS PLAN
67-73	SIGNING AND STRIPING PLAN
74-82	WAYFINDING AND SIGNAGE
83-104	STORMWATER MANAGEMENT PLAN
105-107	LANDSCAPE PLAN
108-116	MANUFACTURER'S SPECIFICATIONS



PROJECT LOCATION MAP



CONCEPTUAL RENDERING

- The property described herein is subject to all applicable requirements of the Lone Tree Zoning Code and Design Standards, including but not limited to, property maintenance, lighting, parking, signage, landscaping and outdoor storage, except as may otherwise be addressed in an approved planned development plan, subarea plan, or other applicable plan or agreement approved by the City.
- The applicant assumes responsibility to ensure the project is completed in accordance with the approved SIP and any associated materials sample boards and further assumes the risk associated with any changes or omissions made without prior City approval. Modifications to structures or sites may require an amendment to the SIP as determined by the City's Community Development Director, per Sec. 16-27-180. Unauthorized changes or omissions made without prior City approval corrective actions, delay of permits or citations for zoning violations with associated fines and legal measures. Building plans shall conform to the approved SIP.
- Within site triangles, as shown, limited landscaping shall be allowed with no solid structures permitted as stated in the City of Lone Tree's Landscape Design Guidelines and Standards for Landscaping. Landscaping within the sight triangle shall be maintained by the property owner or appropriate association or district, as may be identified in maintenance agreements recorded with the Douglas County Clerk and Recorder's Office.
- The owner is responsible for the installation of all roadway signage, including "no parking/fire lane" signage, as required by the City Public Works Department and/or the Fire District. Such signage shall be maintained by the property owner or appropriate association or district, as may be identified in maintenance agreements recorded with the Douglas County Clerk and Recorder's Office.
- Site landscaping, site amenities and furnishings, and all site improvements including, but not limited to, sidewalks and parking areas shall be maintained in a state of good repair consistent with the approved SIP and the Lone Tree Municipal Code and Design Guidelines and Standards. Such maintenance shall include the regular maintenance of pet waste stations (when present), to include waste collection and waste bag replacement. Landscape plantings must be alive and all irrigation must be functional. All maintenance obligations shall be completed by the property owner or appropriate association or district, as may be identified in maintenance agreements recorded with the Douglas County Clerk and Recorder's Office.
- The City of Lone Tree requires that maintenance access be provided to all storm drainage facilities to assure continuous operational capability of the system. The property owner shall be responsible for the maintenance of all drainage facilities, including inlets, pipes, culverts, channels, ditches, hydraulic structures and detention basins located on their land unless modified by the site improvement plan improvements agreement. Should the owner fail to adequately maintain said facilities, the City of Lone Tree shall have the right to enter said land for the purposes of operations and maintenance. All such maintenance costs will be assessed to the property owner or the responsible maintenance authority.
- According to the Federal Emergency Management Agency, National Flood Insurance Program, Flood Insurance Rate Map for the City of Lone Tree, Douglas County, Colorado Community Panel Number [insert applicable panel number], dated [insert effective date], the subject property lies within Zone [insert applicable zone], "areas determined to be inside/outside of the insert percentage)% annual chance flood."
- Developer is responsible for installing parking signs that: a. Restrict the surface parking lot to accessible, customer and prospective tenant parking, and loading/deliveries; and b. Prohibit residential visitor parking. All tenant, visitor and employee parking must be restricted to the parking structure.
- All present and future owners and occupants of land hereby subject to a Site Improvement Plan are hereby notified that the property is located within proximity to Centennial Airport and is subject to the terms of that certain Avigation and Hazard Easement recorded at reception number \_\_\_\_\_ on \_\_\_\_\_ in the records of the Douglas County Clerk and Recorder, as may be amended.
- Proximity to Centennial Airport may have any number of impacts on the property occupants, the property, and the development, improvement, use, enjoyment or occupancy of the property, including without limitation odors, aircraft noise, vibration, fumes, fuel particles, exhaust, and the operation and passage of aircraft above or near the property. Individual sensitivities to the potential Centennial Airport impacts can vary from person to person, and potential airport impacts can vary from location to location within the property and from time to time, records and information concerning Centennial Airport and potential airport impacts are publicly available through various federal, state, and local governmental agencies, including Centennial Airport. All present and future owners and occupants are solely responsible for evaluating and determining whether the airport impacts, if any, are acceptable to them.
- This property is within a wildfire risk area. Wildfire risk can vary from location to location within the property and from time to time, information concerning wildfire risk is publicly available through various federal, state, and local governmental agencies, including the Colorado State Forest Service. All present and future owners and occupants are solely responsible for evaluating and determining whether the wildfire risks, if any, are acceptable to them.
- It shall be the responsibility of the owner (or responsible association or district, as may be identified by maintenance agreements) to maintain all playground equipment and park infrastructure on the property in a state of good repair in conformance with all applicable building and safety regulations.
- Artwork must be maintained per the approved SIP. Any fading, chipping, or damage shall be repaired by the property owner or appropriate association or district, as may be identified in maintenance agreements recorded with the Douglas County Clerk and Recorder's Office. Any future removal or alteration of artwork, as approved by this SIP may warrant an SIP amendment and subsequent approval by the City of Lone Tree.

All seals for this set of drawings are applied to the cover page(s)

Print Date: 5/9/2024  
File Name: 24278-RSH-HW-025A-RD-DR-TITL.dgn  
Horiz. Scale: 1=1 Vert. Scale: As Noted  
Unit Information JT

### Sheet Revisions

Date:	Comments	Init.

Colorado Department of Transportation



18500 E. Colfax Ave.  
Aurora, CO 80011  
Phone: (303) 746-8639  
Fax: N/A

Region 1-South Program

NB

As Constructed

No Revisions:

Revised:

Void:

### Cover Page

Contractor:	XXXX X.XXXX
Resident Engineer:	Nyssa J. Beach
Project Engineer:	Jiovanna Toppi
PROJECT STARTED:	/ /
ACCEPTED:	/ /
Comments:	

Project No./Code

267 0252-499

24278







**GENERAL NOTES**

DRAINAGE

- 37. THE CONTRACTOR SHALL MAINTAIN SURFACE DRAINAGE DURING CONSTRUCTION AT ALL TIMES AND AS DIRECTED BY THE ENGINEER. MAINTAINING DRAINAGE WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE WORK.
- 38. CONTROL OF SURFACE RUNOFF AND THE REPAIR OF DAMAGES RESULTING FROM RUNOFF IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE INCLUDED IN THE WORK.
- 39. THE CONTRACTOR SHALL PROTECT WORK AREAS AND FACILITIES FROM RAIN OR RUNOFF EVENTS AT ALL TIMES. AREAS AND FACILITIES SUBJECTED TO FLOODING, REGARDLESS OF THE SOURCE OF WATER SHALL BE PROMPTLY DEWATERED AND RESTORED AT NO COST TO THE OWNER. THIS SHALL INCLUDE REMOVAL OF ANY DEBRIS CAUSED BY FLOODING.

MISCELLANEOUS

- 40. GUARDRAIL AND STEEL GUARDRAIL POSTS SHALL BE STAINED PER THE PROJECT SPECIAL: REVISION OF 509 – GALVANIZED METAL STAINING.
- 41. IT IS ESTIMATED THAT THE FOLLOWING ITEMS WILL BE REQUIRED AS DIRECTED BY THE ENGINEER:  
  
  - ITEM 203-01510 BACKHOE
  - ITEM 203-01594 COMBINATION LOADER
  - ITEM 203-01582 TRUCK (DUMP)
  - ITEM 203-02330 LABORER
  - ITEM 203-01590 FRONT END LOADER (RUBBER TIRE)
  - ITEM 203-01500 BLADING
- 42. THE CONTRACTOR SHALL PROTECT ALL EXISTING SURVEY MONUMENTS DESIGNATED TO REMAIN IN PLACE FROM DAMAGE DURING CONSTRUCTION OPERATIONS. ANY MONUMENTS DISTURBED BY THE CONTRACTOR SHALL BE RESET AT THE CONTRACTOR'S OWN EXPENSE. THE CONTRACTOR AND THE PROJECT ENGINEER SHALL NOTE THESE MONUMENTS IN THE FIELD PRIOR TO CONSTRUCTION.
- 43. CLEANING THE SANITARY FACILITY SHALL OCCUR A MINIMUM OF TWICE A WEEK, AND WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF ITEM 620, SANITARY FACILITY.
- 44. THE CONTRACTOR SHALL KEEP EQUIPMENT AND MATERIALS CLEAR OF THE TRAVEL WAY AS REQUIRED TO MAINTAIN TRAFFIC THROUGH THE SITE.
- 45. THE FOLLOWING ITEMS ARE REQUIRED:

Quantities TBD

- ?? (HR)
- ?? (HR)
- ?? (HR)
- ?? (HR)
- ?? (HR)
- ?? (HR)

- ITEM NO. 203 PROOF ROLLING
- ITEM NO. 203 POTHOLING
- ITEM NO. 211 DEWATERING
- ITEM NO. 250 ENVIRONMENTAL HEALTH AND SAFETY MANAGEMENT
- ITEM NO. 250 MATERIALS MANAGEMENT PLAN
- ITEM NO. 412 SAWING CONCRETE PAVEMENT
- ITEM NO. 620 FIELD OFFICE (SPECIAL)
- ITEM NO. 620 FIELD LABORATORY (CLASS 2)
- ITEM NO. 620 SANITARY FACILITY
- ITEM NO. 625 CONSTRUCTION SURVEYING (HOURLY)
- ITEM NO. 626 MOBILIZATION (WITHOUT AUTOPAY)
- ITEM NO. 626 PUBLIC INFORMATION SERVICES (TIER ??)
- ITEM NO. 630 TRAFFIC CONTROL MANAGEMENT
- ITEM NO. 630 TRAFFIC CONTROL INSPECTION
- ITEM NO. 630 FLAGGING

- ?? (HOUR)
- ?? (HOUR)
- 1 (L S)
- 1 (L S)
- 1 (L S)
- ?? (LF)
- 1 (EACH)
- 1 (EACH)
- 2 (EACH)
- ?? (HOUR)
- 1 (L S)
- ?? (DAY)
- ?? (DAY)
- ?? (DAY)
- ?? (HOUR)

Quantities TBD

- 46. IT IS ESTIMATED THAT 3 ACRES OF ITEM 201-00001, CLEARING AND GRUBBING WILL BE REQUIRED FOR THIS PROJECT AS DIRECTED BY THE PROJECT ENGINEER AND IN ACCORDANCE WITH THE SPECIFICATIONS. THE CONTRACTOR SHALL NOT DISTURB AREAS BEYOND THE LIMITS OF CLEARING AND GRUBBING AS SHOWN ON THE PLANS, TYPICAL SECTIONS, OR AS DIRECTED BY THE PROJECT ENGINEER.

- 47. REMOVAL OF DELINEATORS TO BE INCIDENTAL TO COST OF THE WORK.

OFF ROAD ACTIVITIES

- 48. TO PROTECT ENVIRONMENTAL RESOURCES WITHIN AND OUTSIDE CDOT ROW (E.G., WETLANDS, HISTORIC SITES, THREATENED AND ENDANGERED SPECIES), TEMPORARY USE AREAS FOR EQUIPMENT INCLUDING STAGING, SET-UP, STORAGE, REPAIR, OR OVERNIGHT PARKING AREAS SHALL BE PRE-APPROVED BY THE ENGINEER FOLLOWING COORDINATION WITH THE REGIONAL ENVIRONMENTAL MANAGER. COORDINATION FOR TEMPORARY USE AREAS WILL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF WORK.

LOCAL AGENCY PERMITS AND CERTIFICATIONS


- 49. A DOUGLAS COUNTY BUILDING PERMIT SHALL BE OBTAINED PRIOR TO ANY SURFACE DISTURBANCE.
- 50. A DOUGLAS COUNTY FLOODPLAIN DEVELOPMENT PERMIT WILL BE OBTAINED AND CONDITIONS THEREIN SATISFIED PRIOR TO ANY SURFACE DISTURBANCE IN ANY FEMA OR COUNTY REGULATED FLOODPLAIN OR FLOODWAY

ENVIRONMENTAL

- 51. IN THE EVENT THAT CONSTRUCTION ACTIVITIES OCCUR OUTSIDE THE LIMITS OF DISTURBANCE CLEARED IN THE CATEGORICAL EXCLUSION, CONTACT THE ENGINEER.
- 52. CONTRACTOR SHALL CONSOLIDATE HAULING AND TRUCKING OPERATIONS TO THE EXTENT PRACTICABLE.
- 53. THE CONTRACTOR SHALL PRE-CLEAN ANY EQUIPMENT USED IN-WATER OR WETLANDS IN ACCORDANCE WITH THE COLORADO PARKS AND WILDLIFE GUIDELINES LOCATED AT: <http://cpw.state.co.us/Documents/Research/Aquatic/pdf/Publications/Quaternary-Ammonia-Compound-Disinfection-Protocols.pdf>  
THE CONTRACTOR SHALL CERTIFY IN WRITING THAT CONSTRUCTION EQUIPMENT HAS BEEN CLEANED PRIOR TO INITIAL SITE ARRIVAL. VEHICLES LEAVING AND REENTERING THE PROJECT SITE SHALL BE RECERTIFIED.
- 54. THE CONTRACTORS SHALL MINIMIZE IDLING TIME TO 10 MINUTES.
- 55. THE CONTRACTOR SHALL USE ONE OR A COMBINATION OF THE FOLLOWING MEASURES TO REDUCE NOISE FROM CONSTRUCTION ACTIVITIES THAT INCLUDE, BUT ARE NOT LIMITED TO:
  - A. PLACE NOISE BLANKETS IN THE BED OF HAUL TRUCKS TO MUFFLE THE SOUND OF ROCK AND MATERIALS BEING PLACED
  - B. USE LIGHT POLE INSTEAD OF GENERATOR POWERED LIGHT PLANTS WHERE FEASIBLE
  - C. CONDUCT ALL EQUIPMENT MAINTENANCE IN DESIGNATED STAGING AREAS OUTSIDE OF THE DIRECT VICINITY OF NOISE SENSITIVE RECEPTORS AS SPECIFIED IN THE SWMP
  - D. MINIMIZE UNNECESSARY HONKING AND BACKING (BACK UP ALARMS) NEAR NOISE SENSITIVE RECEPTORS

- 56. IF PALEONTOLOGICAL OR ARCHAEOLOGICAL/CULTURAL RESOURCES ARE UNCOVERED DURING PROJECT CONSTRUCTION, WORK IN THE IMMEDIATE AREA OF THE FIND SHALL CEASE, AND EITHER THE CDOT HQ PALEONTOLOGIST (NICOLE PEAVEY: 303.757.9632, NICOLE.PEAVEY@STATE.CO.US) SHALL BE NOTIFIED AS SOON AS POSSIBLE PER SECTION 107.23 OF THE STANDARD SPECIFICATIONS.

ChouE 2:56:59 PM pw:\\cdot-pw-bentley.com\cdot-pw-Dip-Documents\02\_Minor\_Projects\CDDT\_Collaboration\Projects\24278 - i-25 -mobility hub (lone tree)\01\_Pre-Construction\Drawings\General\24278-RSH-HW-025A-RD-DR-GNNT

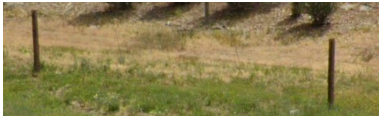
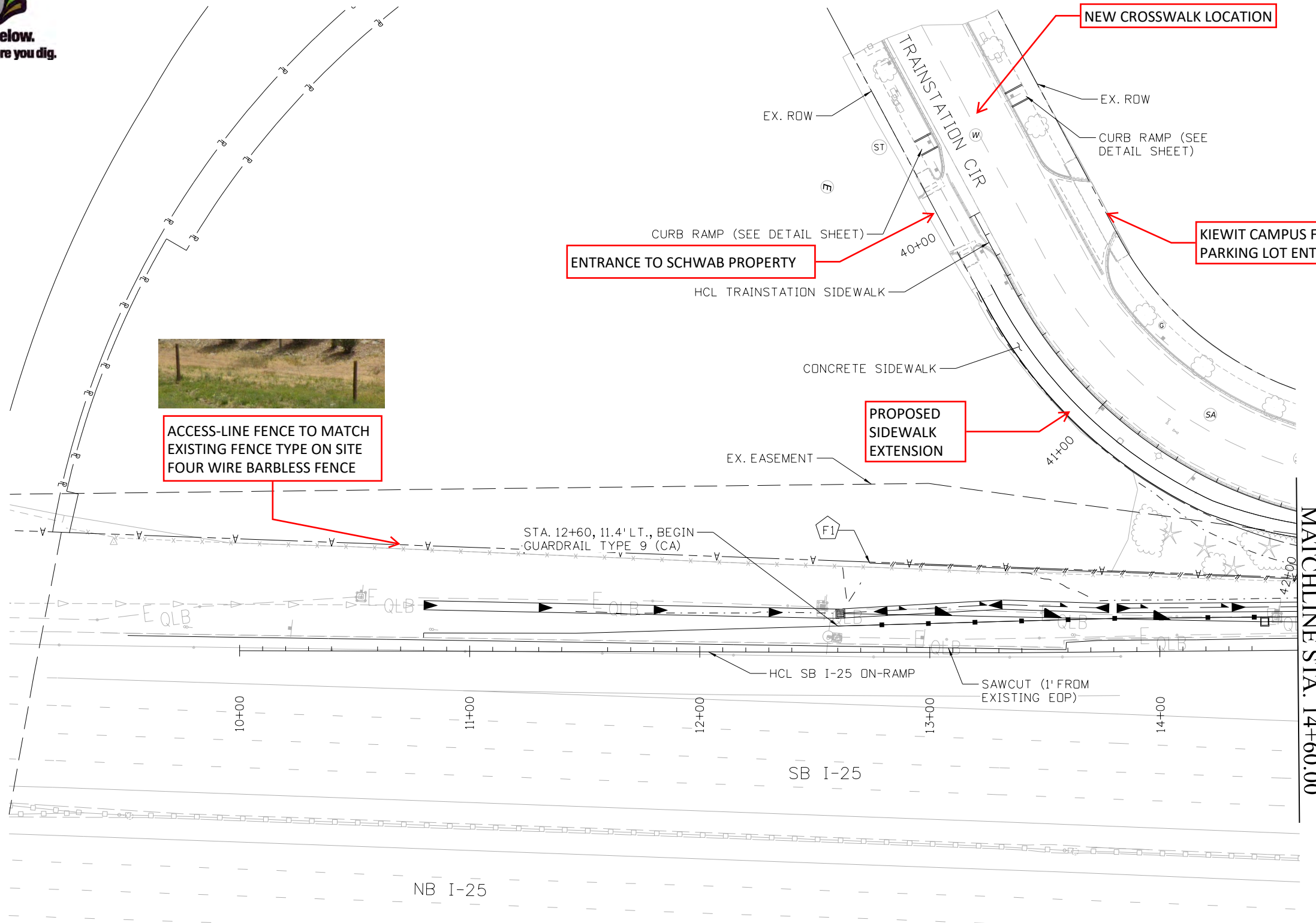
All seals for this set of drawings are applied to the cover page(s)	Print Date: 5/9/2024	Sheet Revisions			Colorado Department of Transportation		As Constructed		I-25 MOBILITY HUB (LONE TREE) GENERAL NOTES			Project No./Code
	File Name: 24278-RSH-HW-025A-RD-DR-GNNT.dgn	Date:	Comments	Init.	 18500 E. Colfax Ave. Aurora, CO 80011 Phone: (303) 746-8639 Fax: N/A Region 1-South Program	No Revisions:					267 0252-499	
	Unit Information JT	Horiz. Scale: 1"=XX'	Vert. Scale: As Noted			Revised:	Designer:	EC	Structure Numbers	X-XX-XX	24278	
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						Sheet Subset:	GEN	2 of 2				



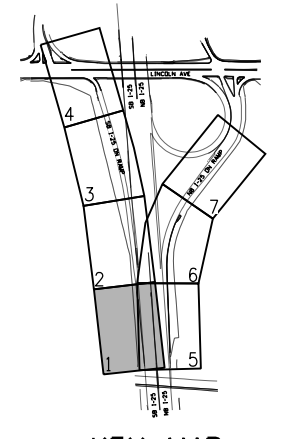


Know what's below.  
Call before you dig.

ChouE 9:39:35 AM pw:\cdot\pw.bentley.com\cdot-pw-Dip\Documents\02 Minor Projects\CDOT Collaboration Projects\24278 - i-25 -mobility hub (lone tree)\01 Pre-Construction\Drawings\Roadway\24278-RSH-HW-025A-RD-DR-PLAN



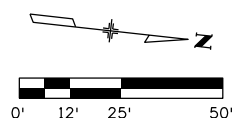
ACCESS-LINE FENCE TO MATCH EXISTING FENCE TYPE ON SITE FOUR WIRE BARBLESS FENCE



KEY MAP

**LEGEND:**

- - - - - TOE OF FILL
- - - - - TOP OF CUT
- - - - - DITCH
- - - - - EXISTING PROPERTY LINE
- - - - - EXISTING ACCESS CONTROL
- - - - - FOUR WIRE BARBLESS FENCE
- - - - - STEEL PICKET FENCE
- - - - - CHAIN LINK FENCE



All seals for this set of drawings are applied to the cover page(s)	Print Date: 6/11/2024	Sheet Revisions			Colorado Department of Transportation			As Constructed		I-25 MOBILITY HUB (LONE TREE) ROADWAY PLAN BEGIN TO STA 14+60			Project No./Code		
	File Name: 24278-RSH-HW-025A-RD-DR-PLAN.dgn	Date:	Comments	Init.	18500 E. Colfax Ave. Aurora, CO 80011 Phone: (303) 746-8639 Fax: N/A Region 1-South Program			No Revisions:		Designer: PB		Structure: X-XX-XX		267 0252-499	
	Horiz. Scale: 1"=50' Vert. Scale: As Noted							Revised:		Detailer: EC		Numbers: X-XX-XX		24278	
	Unit Information JT							Void:		Sheet Subset: ROAD		Subset Sheets: 1 of 009			

24278 - I-25 MOBILITY HUB (SKY RIDGE @ LONE TREE) - FOR - 06/11/2024







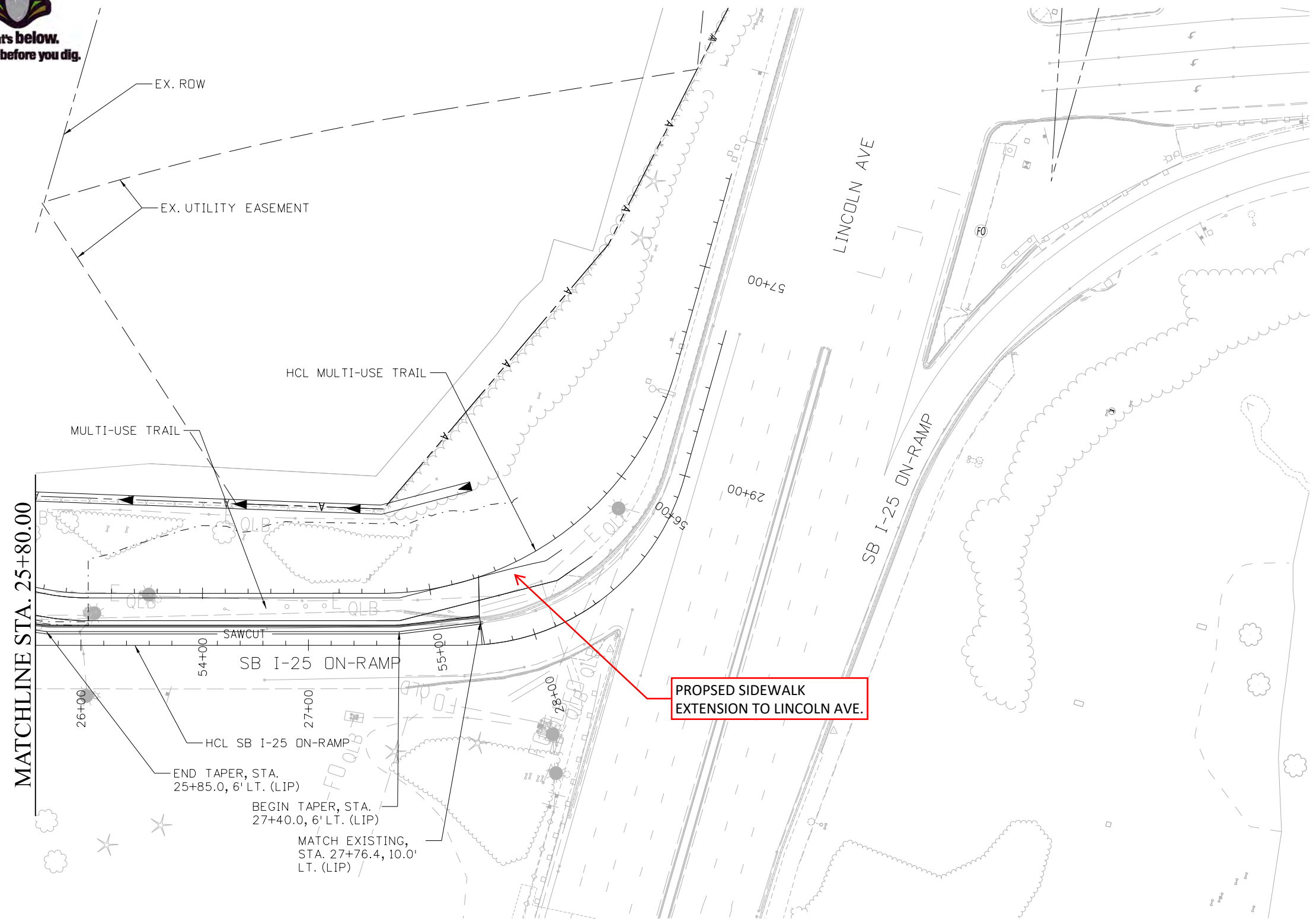




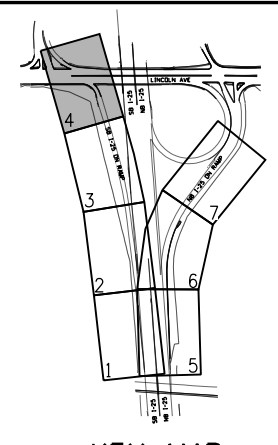
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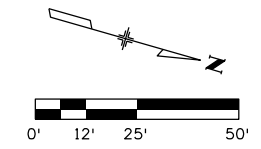
**PROPOSED SIDEWALK  
EXTENSION TO LINCOLN AVE.**



KEY MAP

**LEGEND:**

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Unit Information JT

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation

18500 E. Colfax Ave.  
Aurora, CO 80011  
Phone: (303) 746-8639  
Fax: N/A

Region 1-South Program **NB**

As Constructed
No Revisions:
Revised:
Void:

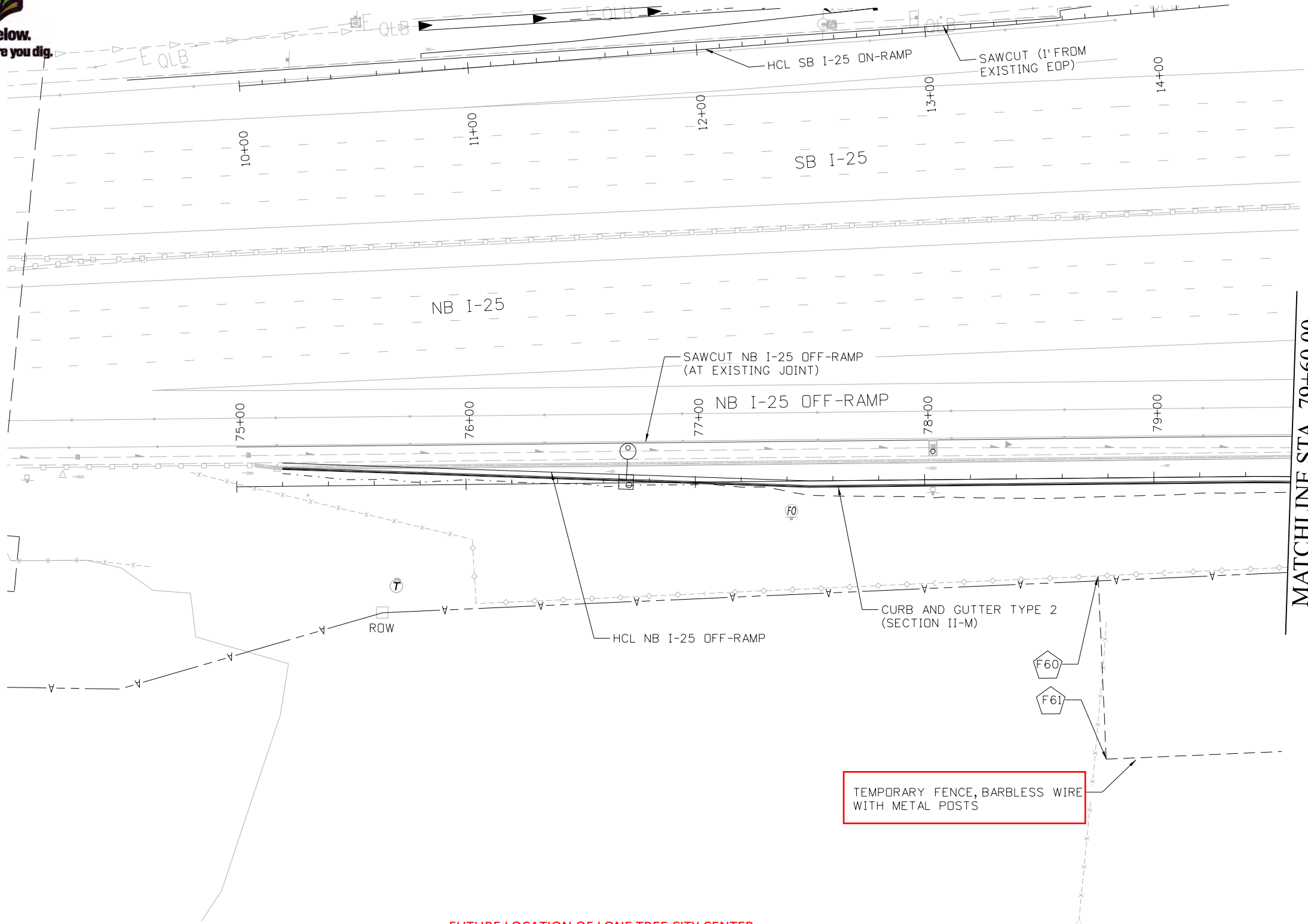
I-25 MOBILITY HUB (LONE TREE) ROADWAY PLAN STA 25+80 TO LINCOLN AVE			
Designer:	PB	Structure	X-XX-XX
Detailer:	EC	Numbers	X-XX-XX
Sheet Subset:	ROAD	Subset Sheets:	4 of 009

Project No./Code
267 0252-499
24278

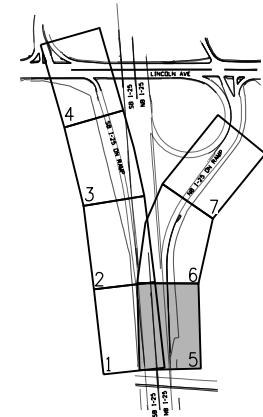
**24278 - I-25 MOBILITY HUB (SKY RIDGE @ LONE TREE) - FOR - 06/11/2024**



Know what's below.  
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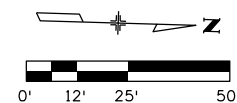
FUTURE LOCATION OF LONE TREE CITY CENTER



KEY MAP

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- - - - - TOE OF FILL
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Colorado Department of Transportation

18500 E. Colfax Ave.  
Aurora, CO 80011  
Phone: (303) 746-8639  
Fax: N/A

Region 1-South Program NB

As Constructed
No Revisions:
Revised:
Void:

I-25 MOBILITY HUB (LONE TREE) ROADWAY PLAN			
STA 75+00 TO STA 79+60			
Designer:	CM	Structure	X-XX-XX
Detailer:	EC	Numbers	X-XX-XX
Sheet Subset:	ROAD	Subset Sheets:	5 of 009

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24278 - I-25 MOBILITY HUB (SKY RIDGE @ LONE TREE) - FOR - 06/11/2024

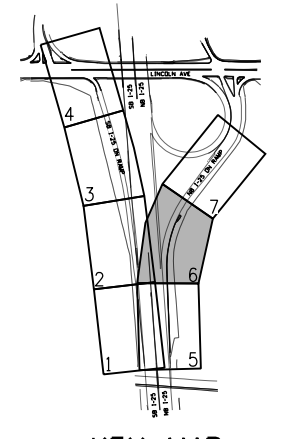
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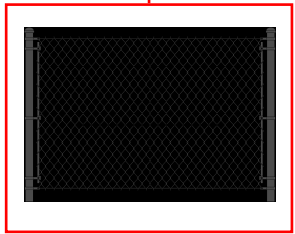
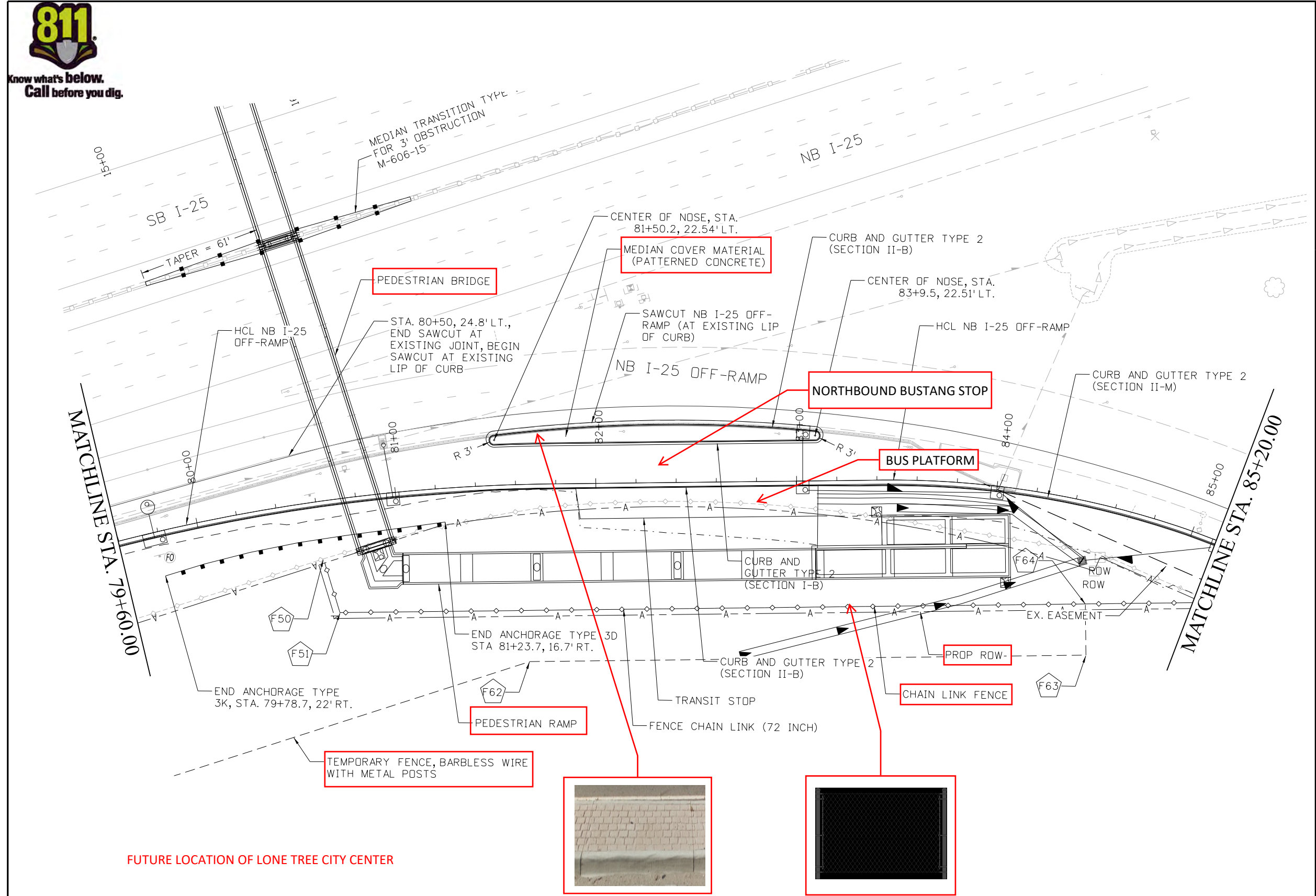
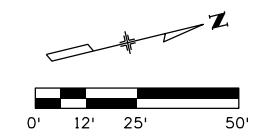
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KEY MAP

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Phone: (303) 746-8639  
Fax: N/A

Region 1-South Program NB

As Constructed
No Revisions:
Revised:
Void:

I-25 MOBILITY HUB (LONE TREE) ROADWAY PLAN STA 79+60 TO STA 85+20			
Designer:	CM	Structure	X-XX-XX
Detailer:	EC	Numbers	X-XX-XX
Sheet Subset:	ROAD	Subset Sheets:	6 of 009

Project No./Code	
267 0252-499	24278

24278 - I-25 MOBILITY HUB (SKY RIDGE @ LONE TREE) - FOR - 06/11/2024



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MATCHLINE STA. 85+20.00

SAWCUT NB I-25 OFF-RAMP

HCL NB I-25 OFF-RAMP

86+00

87+00

NB I-25 ON-RAMP

NB I-25 OFF-RAMP

ROW

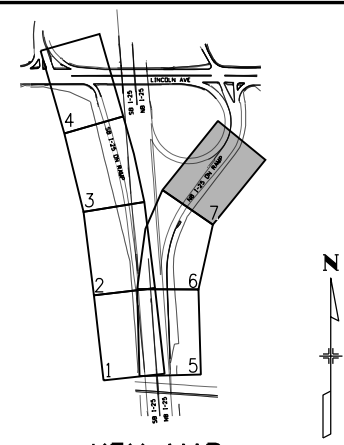
F52

CURB AND GUTTER TYPE 2  
(SECTION II-M)

EX. ROW

EX. EASEMENT

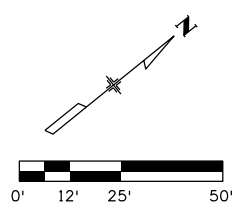
EX. EASEMENT



KEY MAP

LEGEND:

- TOE OF FILL
- - - TOP OF CUT
- > DITCH
- > EXISTING PROPERTY LINE
- A— EXISTING ACCESS CONTROL
- //// FOUR WIRE BARBLESS FENCE
- STEEL PICKET FENCE
- ◇-◇- CHAIN LINK FENCE




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Unit Information JT

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Colorado Department of Transportation



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Phone: (303) 746-8639  
Fax: N/A

Region 1-South Program NB

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No Revisions:
Revised:
Void:

I-25 MOBILITY HUB (LONE TREE) ROADWAY PLAN STA 85+20 TO END			
Designer:	CM	Structure	X-XX-XX
Detailer:	EC	Numbers	X-XX-XX
Sheet Subset:	ROAD	Subset Sheets:	7 of 009

Project No./Code
267 0252-499
24278

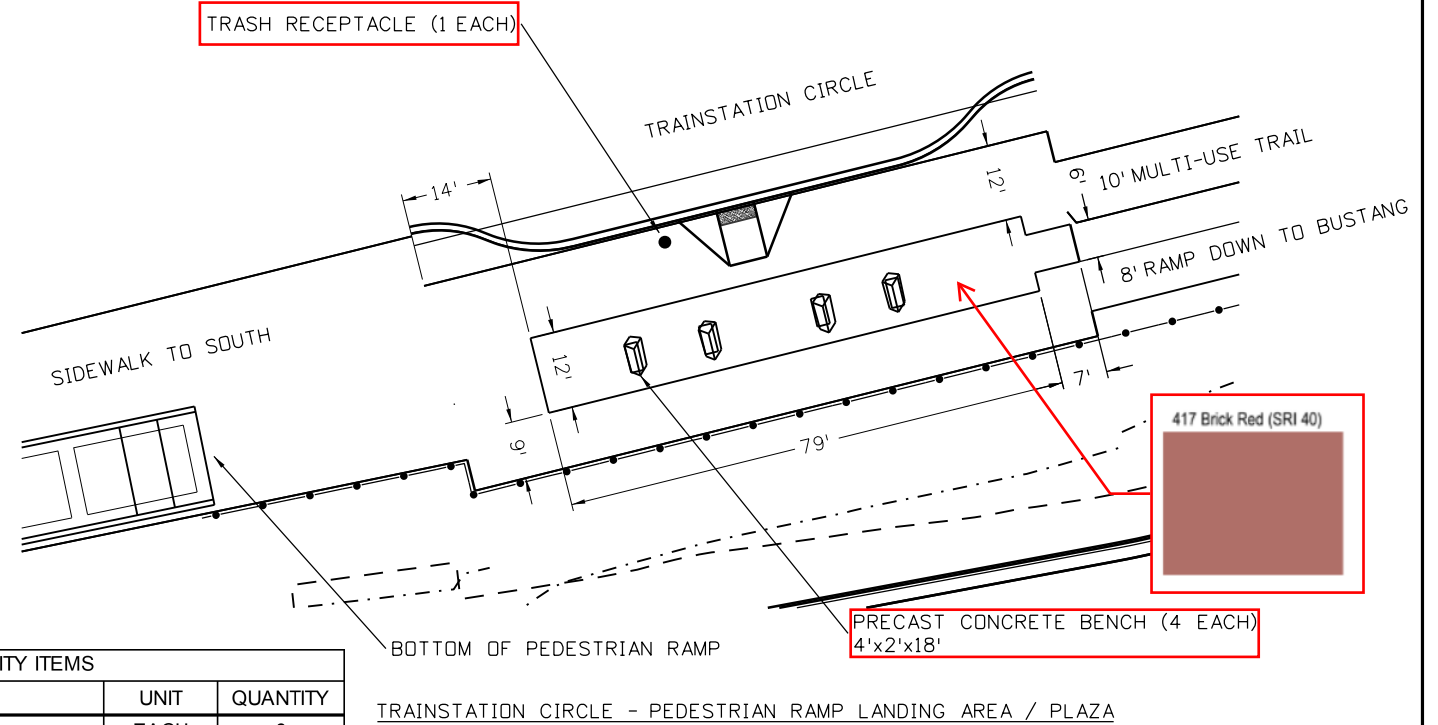
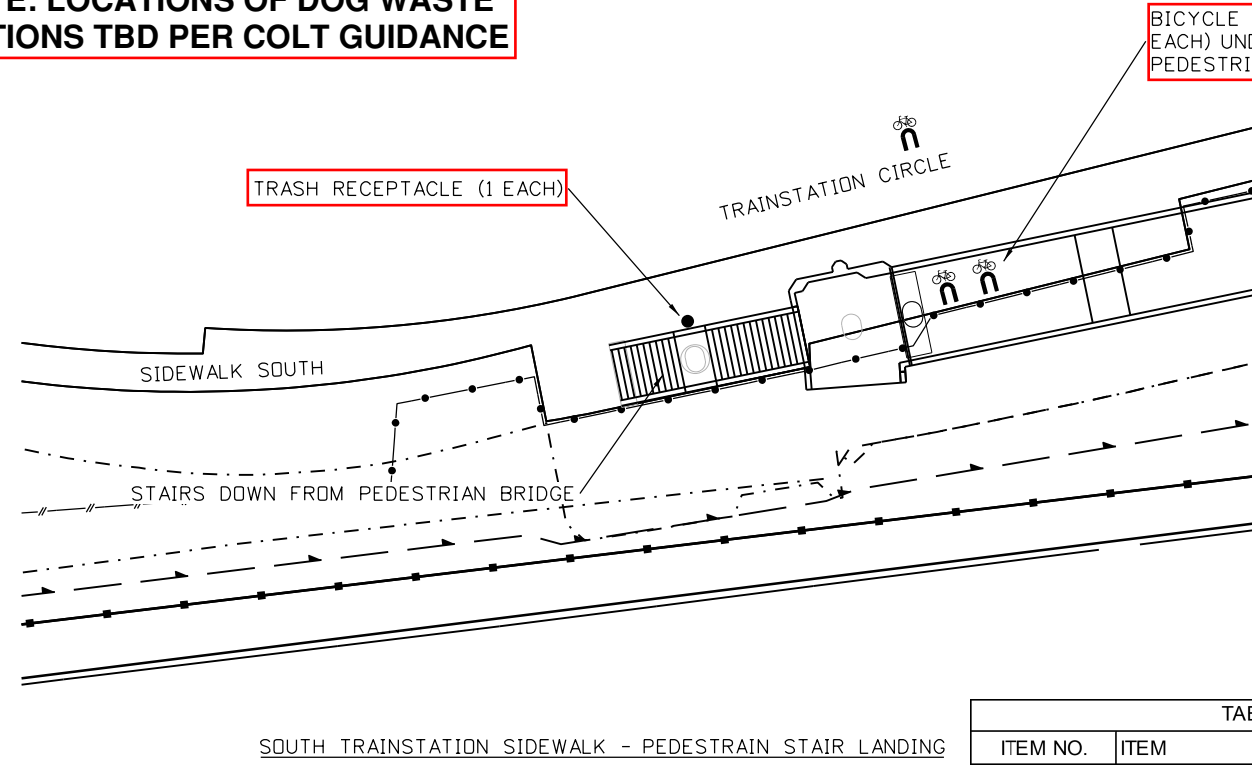
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24278 - I-25 MOBILITY HUB (SKY RIDGE @ LONE TREE) - FOR - 06/11/2024

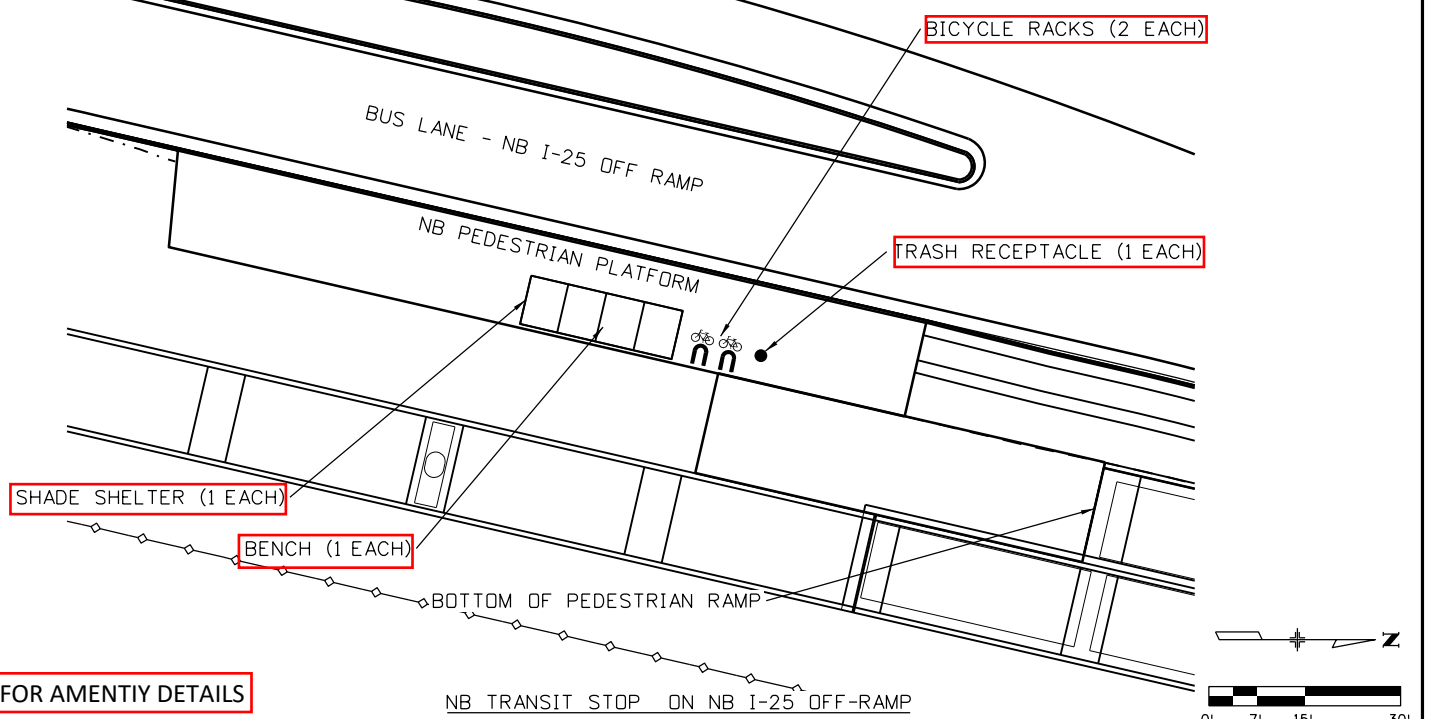
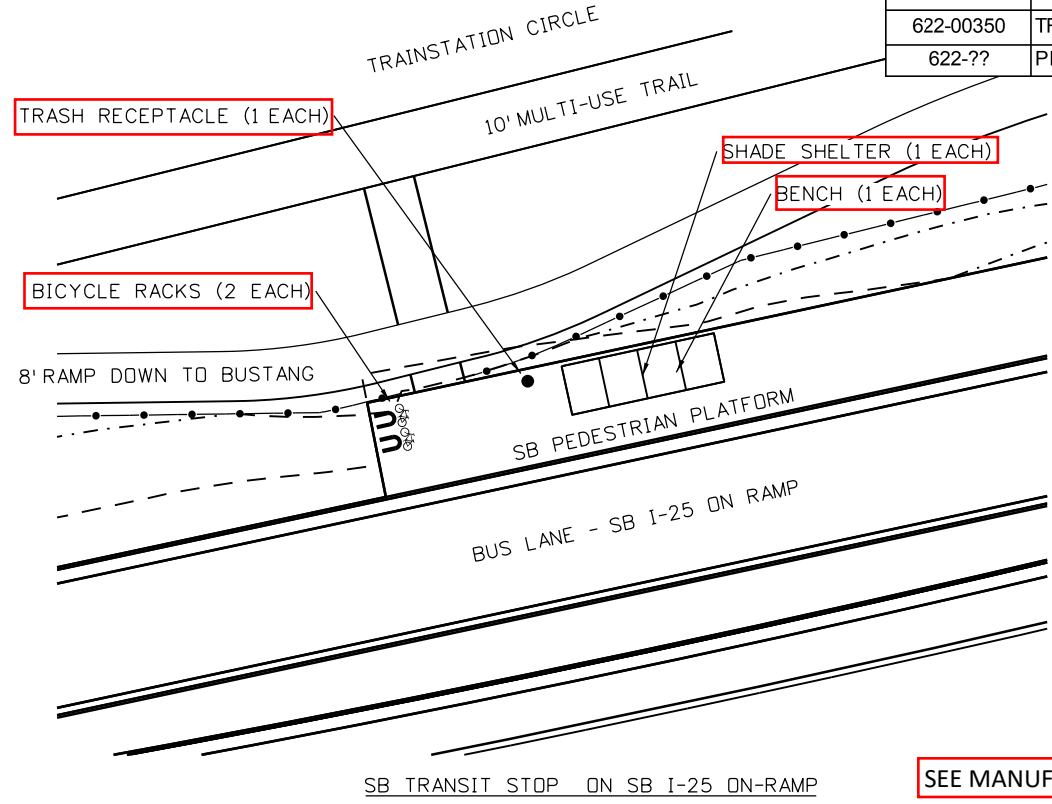


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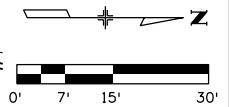
**NOTE: LOCATIONS OF DOG WASTE STATIONS TBD PER COLT GUIDANCE**



TABULATION OF AMENITY ITEMS			
ITEM NO.	ITEM	UNIT	QUANTITY
622-00010	BICYCLE RACK	EACH	6
622-00100	SHADE SHELTER	EACH	2
622-00250	BENCH	EACH	2
622-00350	TRASH RECEPTACLE	EACH	4
622-??	PRECAST CONCRETE BENCH	EACH	4



SEE MANUFACTURER'S SPECIFICATIONS FOR AMENITY DETAILS



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**RS&H**

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Date:	Comments	Init.

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**I-25 MOBILITY HUB (LONE TREE) AMENITIES LOCATIONS**

Designer:	DW	Structure Numbers:	X-XX-XX
Detailer:	EC		X-XX-XX
Sheet Subset:	AMEN	Subset Sheets:	1 of 001

Project No./Code	267 0252-499
	24278
Sheet Number	

**GENERAL NOTES**

1. DRAINAGE FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CDOT STANDARD SPECIFICATIONS DATED 2019, CDOT STANDARD PLANS - M&S STANDARDS DATED 2019, UNLESS OTHERWISE NOTED.
2. UNLESS OTHERWISE NOTED, EXISTING DRAINAGE FACILITIES SHALL REMAIN AND BE PROTECTED. ANY DAMAGE TO EXISTING UTILITIES OR STRUCTURES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
3. THE CONTRACTOR SHALL VERIFY EXISTING INVERT ELEVATIONS AND EXISTING UTILITY LOCATIONS PRIOR TO CONSTRUCTION AND IMMEDIATELY NOTIFY THE ENGINEER IF ANY CONFLICTS OCCUR.
4. THE DECISION TO BRACE, SHORE OR SHEET PILE FOR STRUCTURE EXCAVATION SHALL BE ENTIRELY THE CONTRACTOR'S RESPONSIBILITY. ALL WORK SHALL BE IN ACCORDANCE WITH ALL STATE AND FEDERAL O.S.H.A. REGULATIONS. THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES AND STRUCTURES NEAR THE PROPOSED EXCAVATION DURING CONSTRUCTION.
5. UTILITIES SHOWN ON THE PLAN SHEETS ARE PLOTTED FROM THE BEST AVAILABLE INFORMATION AT THE TIME OF DESIGN. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING THE TYPE AND LOCATION OF THE UTILITIES ARE NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR SHALL TAKE THE APPROPRIATE MEASURES TO FIELD VERIFY UTILITY LOCATIONS INCLUDING COMMUNICATION WITH THE UTILITY NOTIFICATION CENTER OF COLORADO AT 811.
6. THE CONTRACTOR IS REQUIRED TO KEEP EXISTING STORM DRAIN SYSTEMS FUNCTIONAL AND MAINTAIN PROPER STORMWATER CONVEYANCE OR PROVIDE TEMPORARY FACILITIES UNTIL PROPOSED DRAINAGE FACILITIES ARE CONSTRUCTED AND FUNCTIONING PROPERLY. REMOVAL OR ABANDONMENT OF THE EXISTING STORM DRAIN SYSTEMS SHALL BE AT THE DISCRETION OF THE CONTRACTOR AS ALLOWED IN SECTION 202 OF THE CDOT STANDARD SPECIFICATIONS AND IN ACCORDANCE WITH CONSTRUCTION PHASING.
7. INFORMATION SHOWN IN THE PLANS REPRESENTS THE FINAL STORM DRAINAGE SYSTEM. PHASING OF INSTALLATION AND INSTALLATION METHODS IS AT THE DISCRETION OF THE CONTRACTOR.
8. THE CONTRACTOR SHALL PROTECT ALL WORK AREAS AND FACILITIES FROM STORMWATER AT ALL TIMES. AREA AND FACILITIES SUBJECTED TO FLOODING, REGARDLESS OF THE SOURCE OF WATER, SHALL BE PROMPTLY DEWATERED AND RESTORED AT NO COST TO THE OWNER.
9. THE APPLICABLE BEST MANAGEMENT PRACTICES (BMPs) FOR CONSTRUCTION EROSION CONTROL SHALL BE APPLIED DURING EACH CONSTRUCTION PHASE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO THE SIZE, TYPE AND LOCATION OF BMPs. THE CONTRACTOR'S EROSION CONTROL SUPERVISOR (ECS) SHALL COORDINATE WITH THE SUPERINTENDENT AND ENGINEER AS TO AMENDMENTS TO THE SWMP/EROSION CONTROL PLANS IN ACCORDANCE WITH CDOT STANDARD SPECIFICATION 208.

10. EACH DRAINAGE STRUCTURE HAS AN IDENTIFIER, K-A-XXXX, WHERE: "XXXX" REFERS TO THE TRUNCATED STATION OF THE STRUCTURE; "K" IS THE STRUCTURE TYPE; AND "A" IS THE SYSTEM NAME.  
STRUCTURE TYPES INCLUDE:  
 CH - DITCH  
 FES - CONCRETE FLARED END SECTION  
 HW - HEADWALL  
 IN - INLET  
 MH - MANHOLE  
 P - PIPE
11. STRUCTURE TYPES AND ASSOCIATED REFERENCE POINTS ARE AS FOLLOWS:  
 ADJUST/MODIFY STRUCTURE SAME AS CORRESPONDING PROPOSED STRUCTURES  
 CCD INLET TYPE 16 VALLEY MIDPOINT OF VAULT AT FLOWLINE  
 CDOT INLET TYPE C & D CENTER OF VAULT / GRATE ELEVATION  
 CDOT INLET TYPE R MIDPOINT OF VAULT AT PROJECTED FLOW LINE  
 CDOT VANE GRATE INLET MIDPOINT OF VAULT AT BARRIER/PROJECTED FLOW LINE  
 CONCRETE FLARED END SECTION CENTER LINE FRONT FACE INVERT  
 CONCRETE COLLAR CENTER LINE/INVERT  
 DECK DRAIN MIDPOINT OF GRATE AT BARRIER  
 EXISTING STRUCTURE SAME AS CORRESPONDING PROPOSED STRUCTURE  
 HEADWALL CENTER LINE AT OUTSIDE FACE INVERT  
 MANHOLE CENTER OF VAULT/LID ELEVATION  
 OUTLET STRUCTURE CENTER OF STRUCTURE  
 REMOVE STRUCTURE CENTER OF STRUCTURE

SEE REFERENCE POINT DETAILS IN THESE GENERAL NOTES FOR ADDITIONAL INFORMATION

12. THE DEFINITION OF PIPE LENGTH CALLED OUT ON THE PLANS IS DETAILED IN THE GENERAL NOTES.
13. STANDARD PIPE JOINTS SHALL BE BELL AND SPIGOT OR TONGUE AND GROOVE. JOINTS FOR ALL CIRCULAR OR ELLIPTICAL REINFORCED CONCRETE PIPES SHALL HAVE CONFINED RUBBER GASKETS PER CDOT STANDARD SPECIFICATION 705.03.
14. NON-STANDARD JOINTS TO EXISTING PIPES SHALL USE CONCRETE COLLARS AS DETAILED IN THESE PLANS.
15. PIPE CONNECTIONS THAT DO NOT OCCUR AT A MANHOLE OR INLET SHALL BE WITH A PREFABRICATED PIPE WYE OR TEE CONNECTION.
16. FLOW CHANNELS ARE REQUIRED THROUGH MANHOLES AND INLETS PER CDOT STANDARD PLAN M-604-20.

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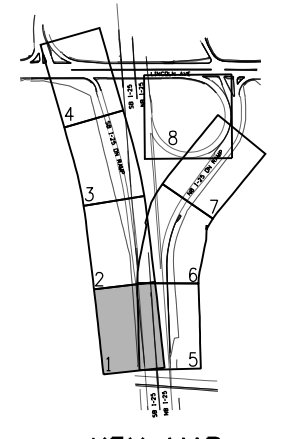
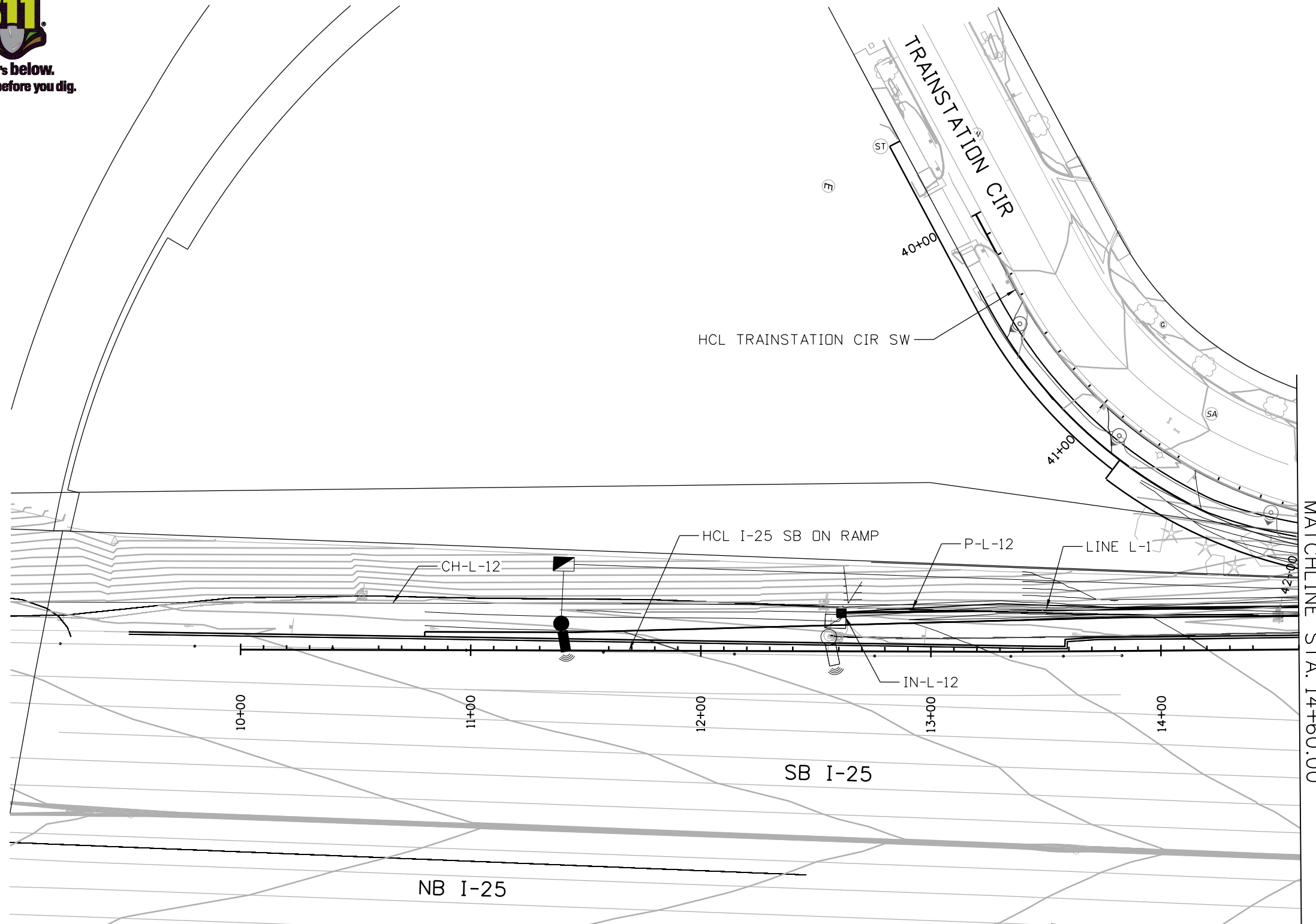
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	File Name: 24278-RSH-HW-025A-DR-GN.dgn	Date:	Comments	Init.		No Revisions:	DRAINAGE			267 0252-499
	Horiz. Scale: 1"=XX' Vert. Scale: As Noted					Revised:	Designer: MED	Structure	X-XX-XX	24278
	Unit Information JT					Void:	Detailer: MTH	Numbers	X-XX-XX	
						Sheet Subset: DR DET	Subset Sheets:	1 of 008		



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KEY MAP

**NOTES:**

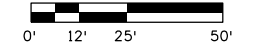
1. ALL EXISTING DRAINAGE SYSTEM TO BE PROTECTED IN PLACE UNLESS OTHERWISE NOTED.

**KEY NOTE:**

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- 2 CONNECT TO EXISTING PIPE
- 3 CONNECT TO EXISTING STRUCTURE

**LEGEND:**

- TOE OF FILL
- TOP OF CUT
- ROADSIDE DITCH
- RIPRAP

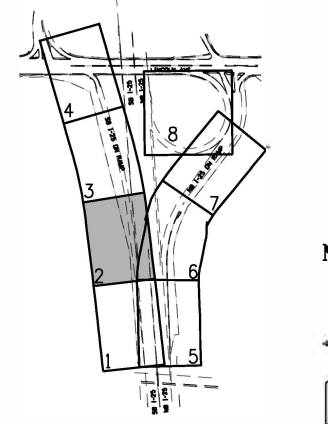


PROFILE SHEET	LINE	ID	STATION/OFFSET	HCL	ITEM	LENGTH	PAY DEPTH	MISC NOTES
	L-1	IN-L-12 P-L-12	STA 12+61.06, 18.23'LT.	SB I-25 ON RAMP	INLET TYPE C 18" RCP	261'	5'	

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	Date:	Comments	Init.															



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KEY MAP

**NOTES:**

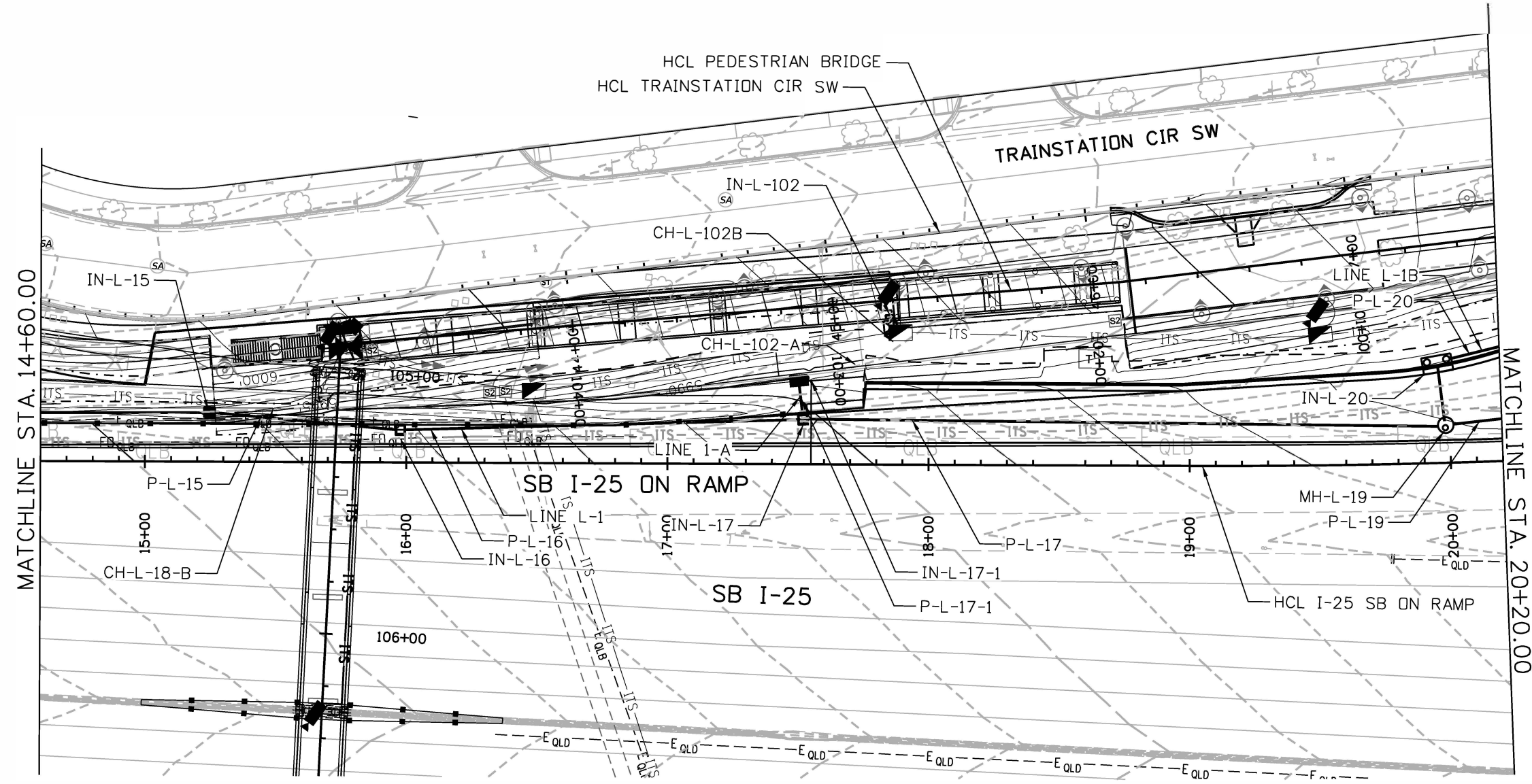
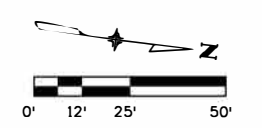
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**LEGEND:**

- TOE OF FILL
- - - TOP OF CUT
- ▬ ROADSIDE DITCH
- ▨ RIPRAP



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Revised:
Void:

I-25 MOBILITY HUB (LONE TREE) DRAINAGE PLAN			
STA 14+60 TO STA 20+20			
Designer:	MED	Structure	X-XX-XX
Detailer:	MTH	Numbers	X-XX-XX
Sheet Subset:	PLAN	Subset Sheets:	2 of 007

Project No./Code
267 0252-499
24278



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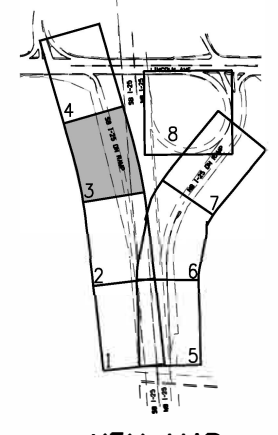
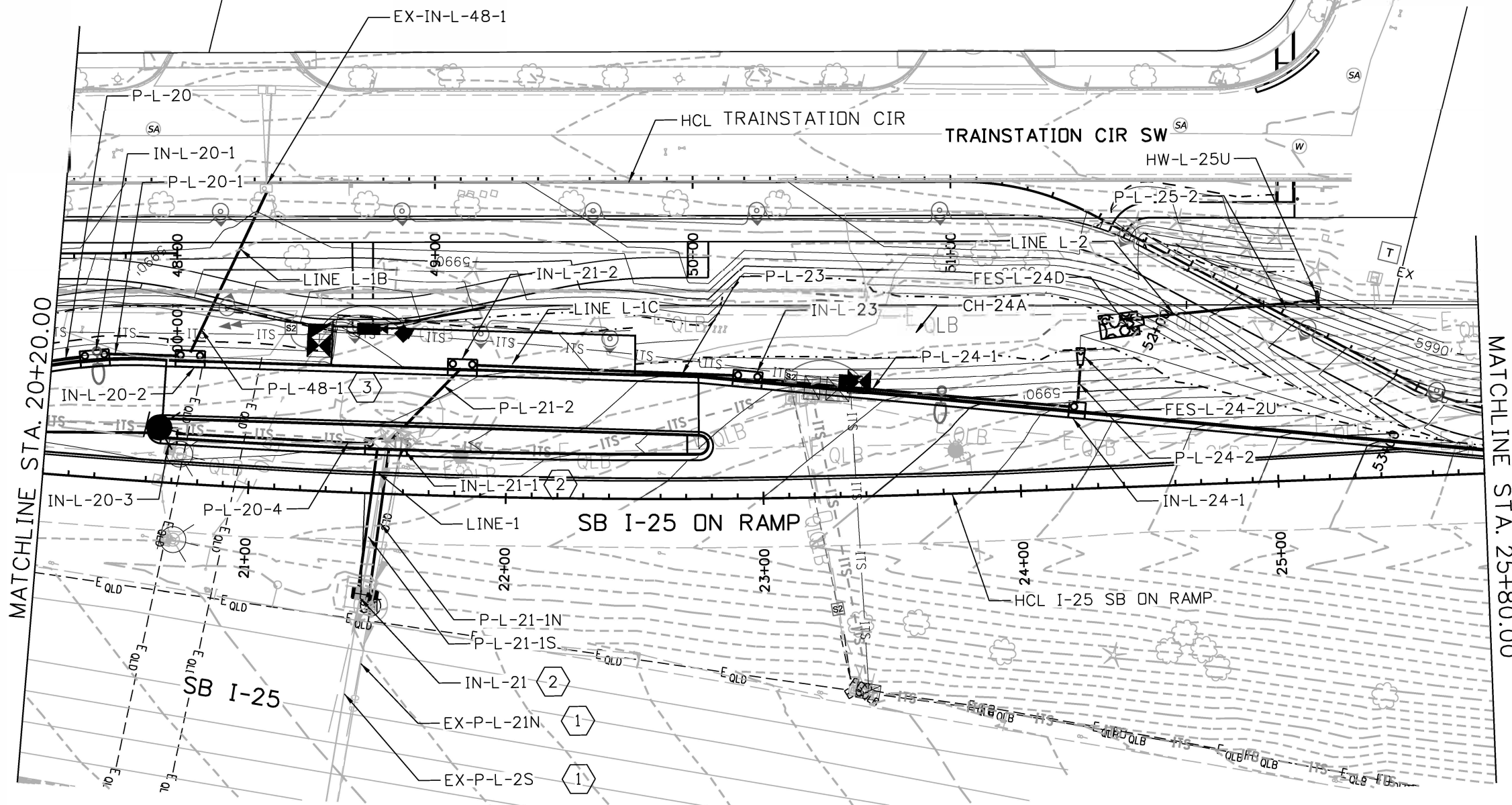
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	L-7	IN-L-15	STA 15+24.66, 18.80'LT.	SB I-25 ON RAMP	INLET TYPE C		5'	
	NA	IN-L-102	STA 102+79.09, 7.07'LT.	PED BRIDGE	DECK DRAIN			
	L-8	P-L-16			18" RCP	71'		
		IN-L-16	STA 15+97.98, 11.07'LT.	SB I-25 ON RAMP	INLET TYPE C		5'	
		P-L-16			18" RCP	158'		
		IN-L-17	STA 17+55.96, 15.32'LT.	SB I-25 ON RAMP	VANE GRATE (SINGLE)		10'	
		P-L-17-1			18" RCP	14'		
		IN-L-17-2	STA 17+54.98, 32.10'LT.	SB I-25 ON RAMP	INLET TYPE D		5'	
		P-L-17-1			24" RCP	49'		
		MH-L-18	STA 18+07.49, 18.89'LT.	SB I-25 ON RAMP	MH SLAB BASE		5'	
	L-9	P-L-18			24" RCP	254'		
		IN-L-20	19+95.97, 36.71'LT.	SB I-25 ON RAMP	INLET TYPE R (10')		5'	
		P-L-20			18" RCP	36'		

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	Horiz. Scale: 1"=50'    Vert. Scale: As Noted						Revised:		STA 14+60 TO STA 20+20		
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KEY MAP

**NOTES:**

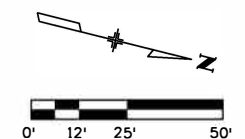
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- ③ CONNECT TO EXISTING STRUCTURE

**LEGEND:**

- TOE OF FILL
- - - TOP OF CUT
- ▬ ROADSIDE DITCH
- ⊗ RIPRAP



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Revised:
Void:

I-25 MOBILITY HUB (LONE TREE) DRAINAGE PLAN STA 20+20 TO STA 25+80			
Designer:	MED	Structure Numbers:	X-XX-XX
Detailer:	MTH	Structure Numbers:	X-XX-XX
Sheet Subset:	DR PLAN	Subset Sheets:	2 of 007

Project No./Code
267 0252-499
24278

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PROFILE SHEET	LINE	ID	STATION/OFFSET	HCL	ITEM	LENGTH	PAY DEPTH	MISC NOTES
	L-9	IN-L-20-1	STA 20+37.00, 44.96'LT.	SB I-25 ON RAMP	INLET TYPE R (10')		10'	
		P-L-20-1			18" RCP	27'		
		IN-L-20-2	STA 20+74.36, 47.36'LT.	SB I-25 ON RAMP	INLET TYPE R (10')		5'	
		P-L-20-2			18" RCP	28'		
		IN-L-20-3	STA 20+68.02, 17.00'LT.	SB I-25 ON RAMP	INLET TYPE R (5')		10'	
	L-10	P-L-20-4			24" RCP	74'		
		P-L-48-1			18 RCP	69'		
	L-11	IN-L-21-2	STA 21+81.82, 48.81'LT.	SB I-25 ON RAMP	INLET TYPE R (10')		5'	
		P-L-21-2			18" RCP	43'		
		IN-L-21-1	STA 21+52.86, 17.00'LT.	SB I-25 ON RAMP	INLET TYPE R (15')		10'	
		P-L-21-4S			24" RCP	56'		
		IN-L-21-5	STA 21+45.25, 39.40'RT.	SB I-25 ON RAMP	INLET TYPE D		10'	
	L-12	P-L-23			18" RCP	101'		
		IN-L-23	STA 24+94.18, 45.00'LT.	SB I-25 ON RAMP	INLET TYPE R (10')		10'	
		P-L-24-1			18" RCP	126'		
		IN-L-24-1	STA 24+22.76, 29.37'LT.	SB I-25 ON RAMP	INLET TYPE R (5')		10'	
		P-L-24-2			18" RCP	15'		
		FES-L-24-2U	STA 24+25.29, 54.48'LT.	SB I-25 ON RAMP	18" FLARED END SECTION			
	L-12	FES-L-24D	STA 24+43.62, 63.07' LT.	SB I-25 ON RAMP	18" FLARED END SECTION			
		P-L-25-2			18" RCP	85'		
		HW-L-25U	STA 25+34.56, 68.66'LT.	SB I-25 ON RAMP	HEADWALL			

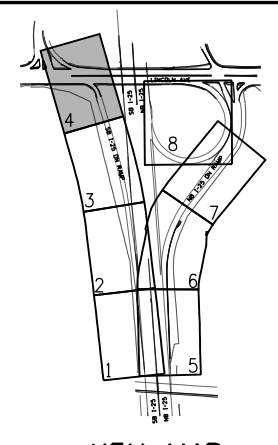
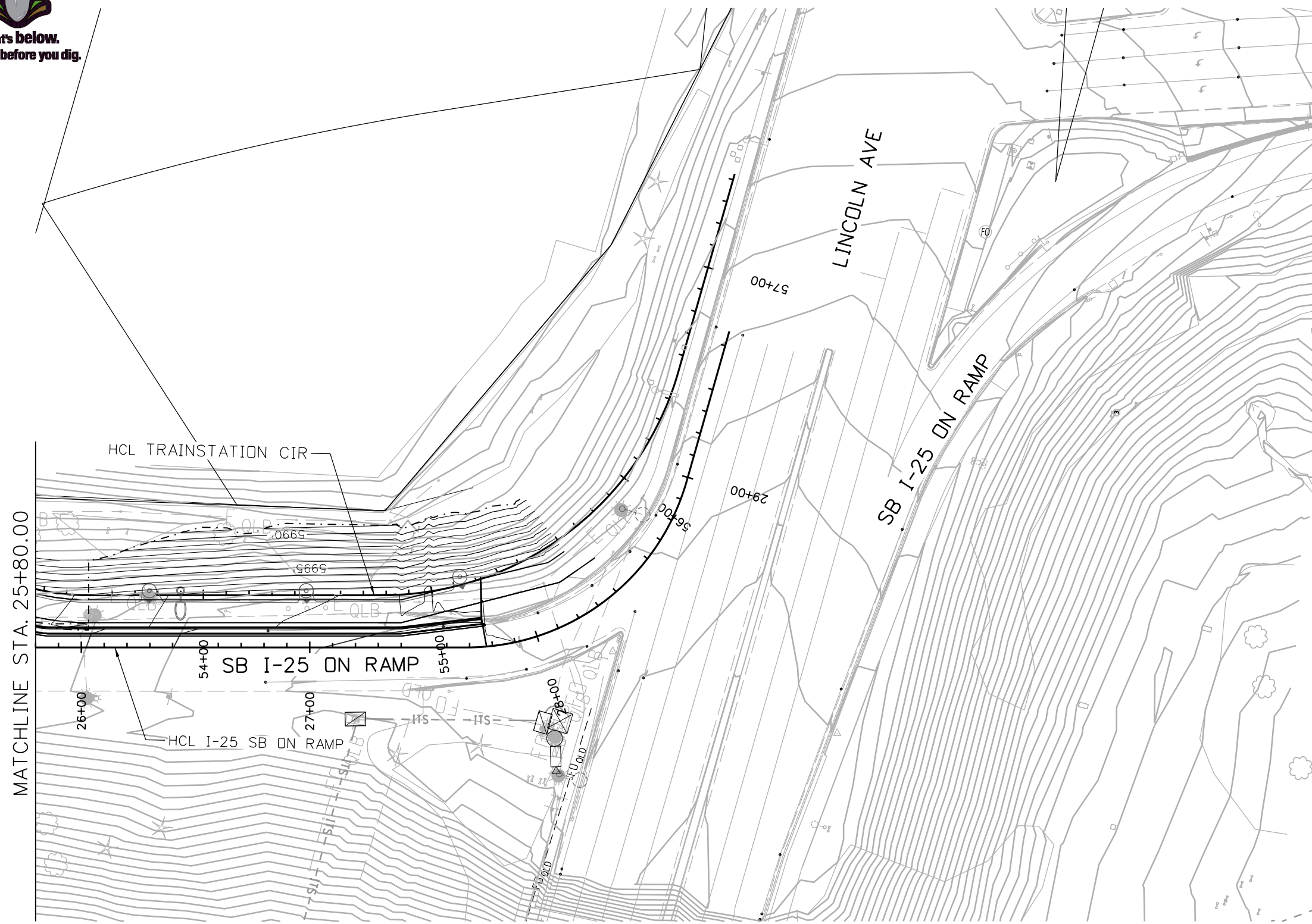
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	File Name: 24278-RSH-HW-025A-DR-DR-PLAN-23.dgn	Date:	Comments	Init.	 Phone: Fax:		No Revisions:		DRAINAGE PLAN		
	Horiz. Scale: 1"=50'    Vert. Scale: As Noted						Revised:		STA 20+20 TO STA 25+80		
	Unit Information						Void:		Designer:	Structure Numbers	
					Region		Sheet Subset:	Subset Sheets: 3t of 008			



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KEY MAP

**NOTES:**

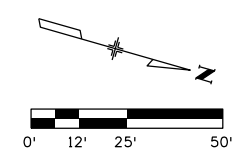
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**LEGEND:**

- TOE OF FILL
- - - TOP OF CUT
- ▬ ROADSIDE DITCH
- ▬ RIPRAP



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Fax: N/A

Region 1-South Program **NB**

As Constructed
No Revisions:
Revised:
Void:

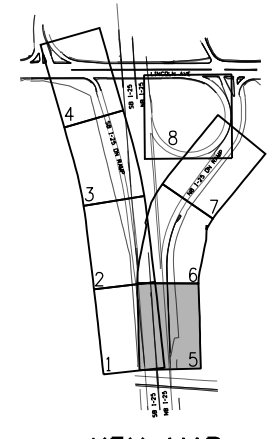
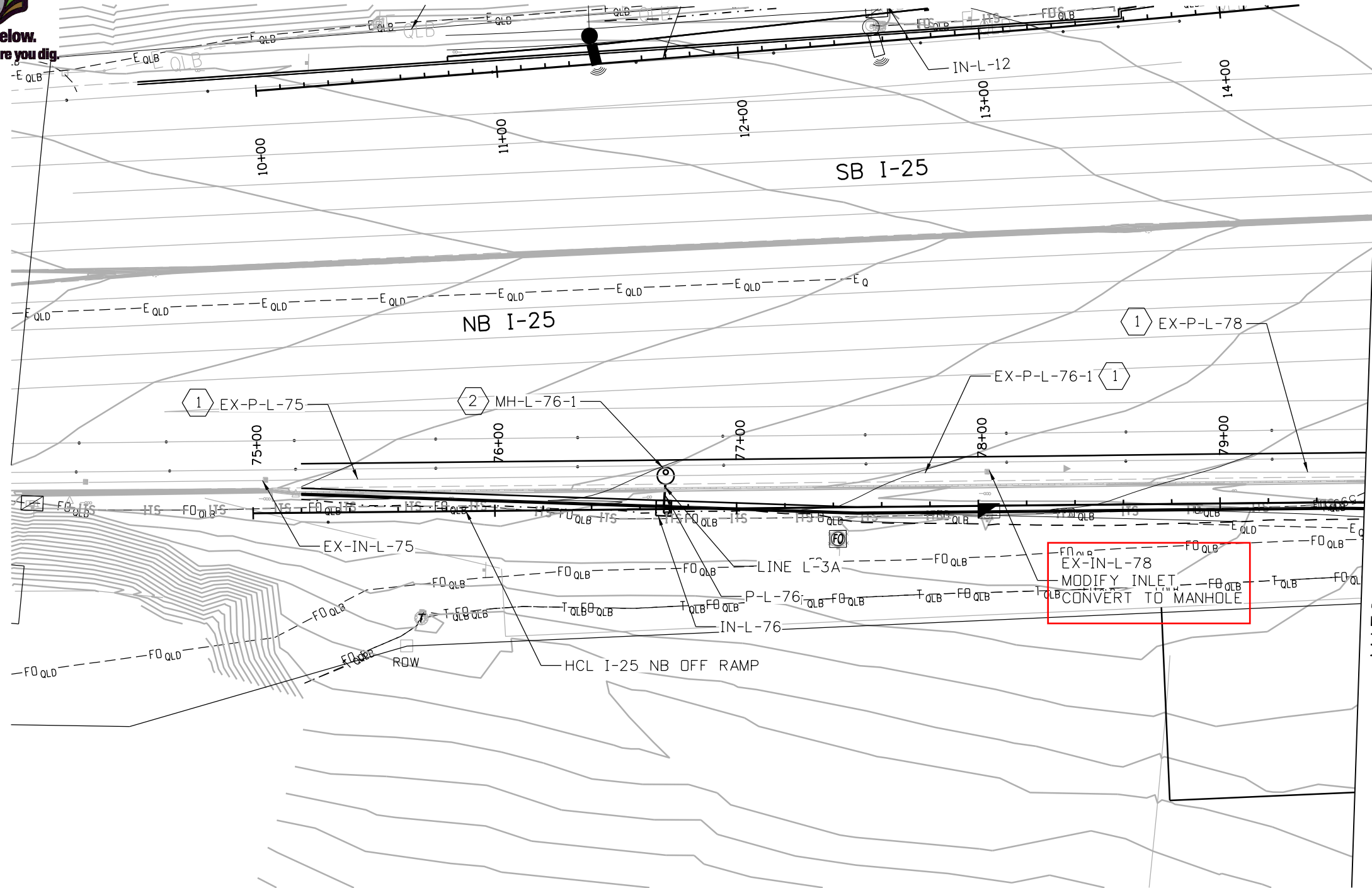
I-25 MOBILITY HUB (LONE TREE) DRAINAGE PLAN STA 25+80 TO LINCOLN AVE			
Designer:	MED	Structure	X-XX-XX
Detailer:	MTH	Numbers	X-XX-XX
Sheet Subset:	DR PLAN	Subset Sheets:	3 of 007

Project No./Code	267 0252-499
	24278

WhitB 10:42:28 AM pw:\vcdot-pw\entley.com\cdot-pw-01p\Documents\02 Minor Projects\CDOT Collaboration Projects\24278 - I-25 - mobility hub (lone tree)\01 Pre-Construction\Drawings\Hydraulics\24278-RSH-HW-025A-DR-DR-PLAN-23



Know what's below.  
Call before you dig.



KEY MAP

**NOTES:**

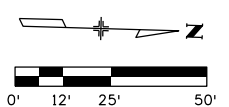
1. ALL EXISTING DRAINAGE SYSTEM TO BE PROTECTED IN PLACE UNLESS OTHERWISE NOTED.

**KEY NOTE:**

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- ② CONNECT TO EXISTING PIPE
- ③ CONNECT TO EXISTING STRUCTURE

**LEGEND:**

- TOE OF FILL
- TOP OF CUT
- ▬ ROADSIDE DITCH
- ▬ RIPRAP



PROFILE SHEET	LINE	ID	STATION/OFFSET	HCL	ITEM	LENGTH	PAY DEPTH	MISC NOTES
	L-3A	MH-L-76-1	STA 76+70.78, 13.76' LT.	NB I-25 OFF RAMP	MH SLAB BASE		10'	
		P-L-76			24" RCP	10'		
	N/A	IN-L-76	STA 76+69.88, 1.50' LT.	NB I-25 OFF RAMP	INLET TYPE R (5')			
		EX-IN-L-78	STA 78+03.77, 14.43' LT.	NB I-25 OFF RAMP	MODIFY INLET			

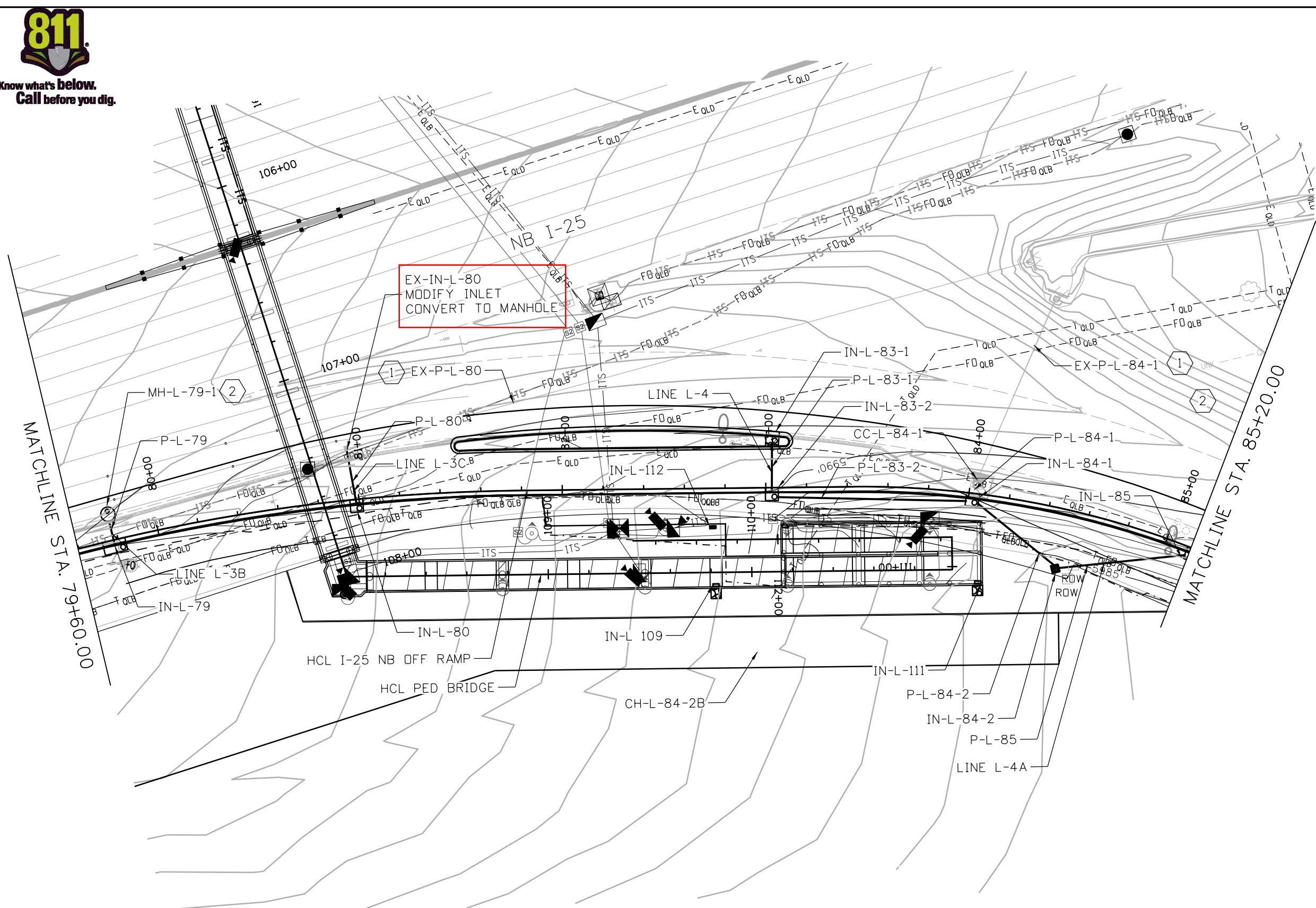
All seals for this set of drawings are applied to the cover page(s)	Print Date: 5/13/2024	Sheet Revisions			Colorado Department of Transportation 18500 E. Colfax Ave. Aurora, CO 80011 Phone: (303) 746-8639 Fax: N/A Region 1-South Program	As Constructed	I-25 MOBILITY HUB (LONE TREE)				Project No./Code		
	File Name: 24278-RSH-HW-025A-DR-DR-PLAN-23.dgn	Date:	Comments	Init.			No Revisions:	DRAINAGE PLAN				267 0252-499	
	Horiz. Scale: 1"=50' Vert. Scale: As Noted						Revised:	Designer: MED	Structure Numbers: X-XX-XX	24278			
	Unit Information: JT						Void:	Detailer: MTH	Structure Numbers: X-XX-XX				
						Sheet Subset: DR PLAN	Subset Sheets: 4 of 007						



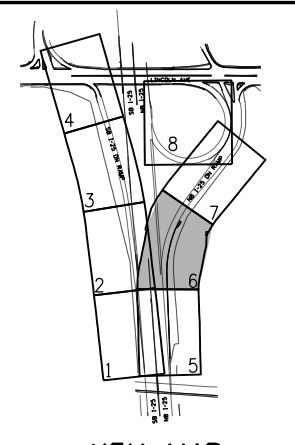


Know what's below.  
Call before you dig.

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EX-IN-L-80  
MODIFY INLET  
CONVERT TO MANHOLE



KEY MAP

**NOTES:**

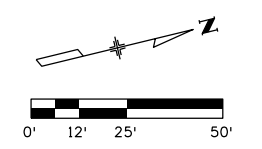
- 1. ALL EXISTING DRAINAGE SYSTEM TO BE PROTECTED IN PLACE UNLESS OTHERWISE NOTED.

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- 2 CONNECT TO EXISTING PIPE
- 3 CONNECT TO EXISTING STRUCTURE

**LEGEND:**

- TOE OF FILL
- - - TOP OF CUT
- ▶ ROADSIDE DITCH
- ▨ RIPRAP



All seals for this set of drawings are applied to the cover page(s)

Print Date: 5/13/2024
File Name: 24278-RSH-HW-025A-DR-DR-PLAN-23.dgn
Horiz. Scale: 1"=50' Vert. Scale: As Noted
Unit Information JT

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation

18500 E. Colfax Ave.  
Aurora, CO 80011  
Phone: (303) 746-8639  
Fax: N/A

Region 1-South Program NB

As Constructed
No Revisions:
Revised:
Void:

I-25 MOBILITY HUB (LONE TREE) DRAINAGE PLAN STA 79+60 TO STA 85+20			
Designer:	MED	Structure	X-XX-XX
Detailer:	MTH	Numbers	X-XX-XX
Sheet Subset:	DR PLAN	Subset Sheets:	5 of 007

Project No./Code	
267 0252-499	24278



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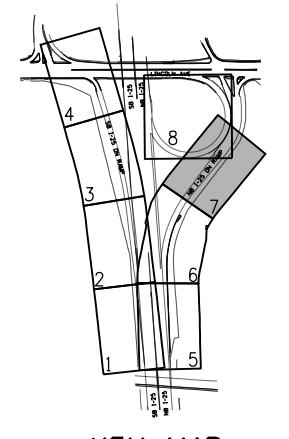
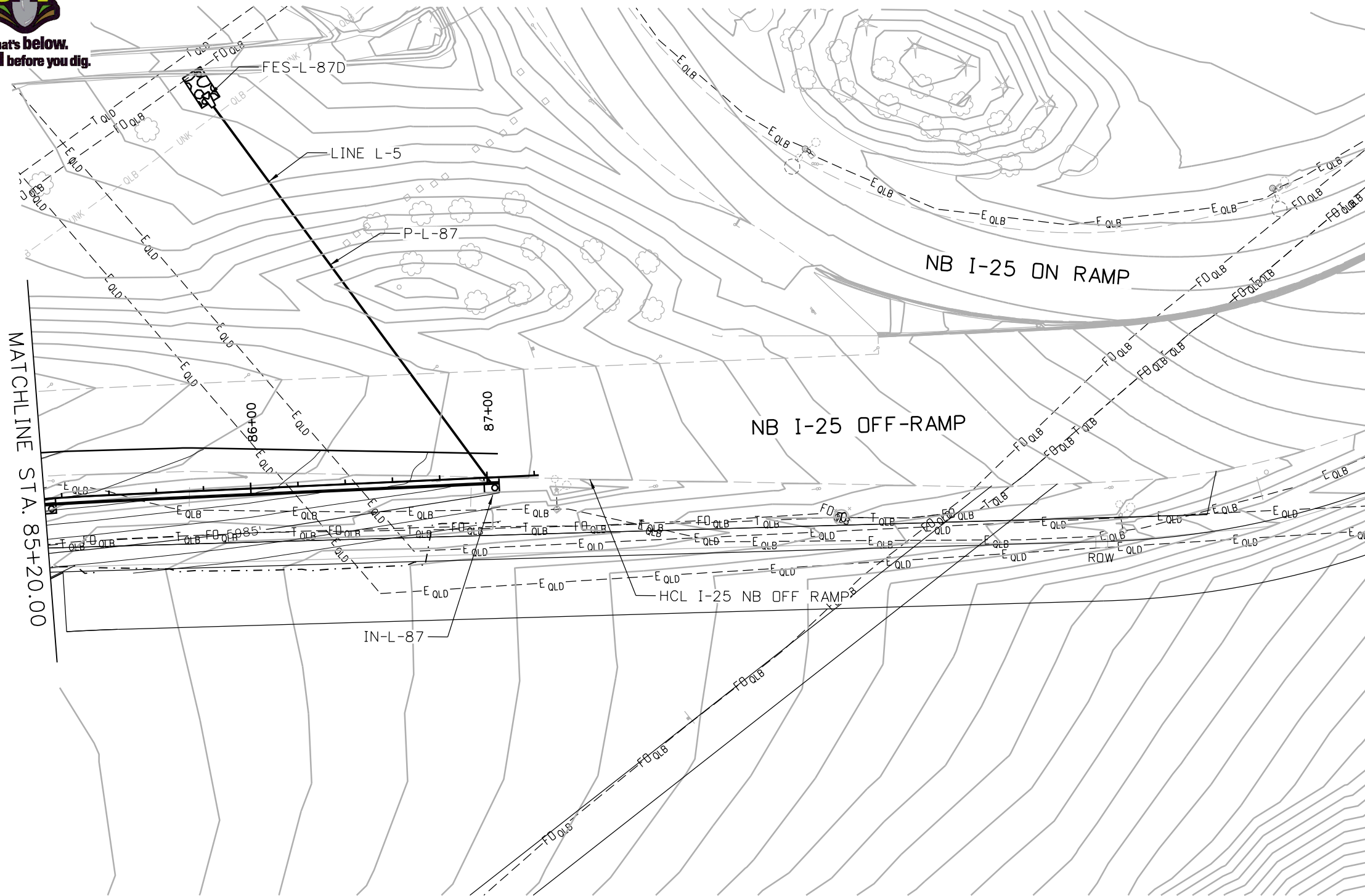
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		P-L-79			24" RCP	13'			
		IN-L-79	STA 79+77.62, 0.00' RT.	NB I-25 OFF RAMP	INLET TYPE R (10')				
	L-3	EX-IN-L-80	STA 80+96.18, 25.65' LT.	NB I-25 OFF RAMP	MODIFY INLET				
		P-L-80			24" RCP	25'			
		IN-L-80	STA 80+98.60, 2.07' RT.	NB I-25 OFF RAMP	INLET TYPE R (5')		5'		
		N/A	IN-L-109	STA 109+83.14, 6.81' RT.	PED BRIDGE	DECK DRAIN			
	N/A	IN-L-112	STA 112+31.90, 6.81' RT.	PED BRIDGE	DECK DRAIN				
	N/A	CHASE-L-112D	STA 112+28.51, 22.59' RT.	PED BRIDGE	CHASE DRAIN				
	N/A	IN-L-111	STA 110+98.49, 14.17' RT.	PED BRIDGE	DECK DRAIN				
2	L-4	IN-L-83-1	83+03.97, 25.60' LT.	NB I-25 OFF RAMP			10'		
		P-L-83-1			18" RCP	25'			
		IN-L-83-2	83+02.95, 2.00' RT.	NB I-25 OFF RAMP	INLET TYPE R (5')		10'		
		P-L-83-2			18" RCP	93'			
		IN-L-84-1	84+01.92, 2.00' RT.	NB I-25 OFF RAMP	INLET TYPE R (5')		10'		
		P-L-84-1			24" RCP	9'			
		CC-L-84-1	STA 84+03.18, 6.50' LT.	NB I-25 OFF RAMP	24" CONC COLLAR				
2	L-5	P-L-84-2			18" RCP	49'			
		IN-L-84-2	STA 84+49.72, 29.60' RT.	NB I-25 OFF RAMP	INLET TYPE C		5'		
		P-L-85			18" RCP	63'			
		IN-L-85	STA 85+14.06, 2.00' RT.	NB I-25 OFF RAMP	INLET TYPE R (5')		10'		

All seals for this set of drawings are applied to the cover page(s)	Print Date: 5/13/2024	Sheet Revisions			Colorado Department of Transportation		As Constructed		I-25 MOBILITY HUB (LONE TREE) DRAINAGE PLAN		Project No./Code	
	File Name: 24278-RSH-HW-025A-DR-DR-PLAN-23.dgn	Date:	Comments	Init.	 Phone: Fax:		No Revisions:		STA 79+60 TO STA 85+20		Structure Numbers Subset Sheets: 6t of 008	
	Horiz. Scale: 1"=50'    Vert. Scale: As Noted						Revised:		Designer:			
	Unit Information						Void:		Detailer:			
					Region		Sheet Subset:					

WhitB 10:42:32 AM pw:\vdot-pw\entire\com\cdot-pw-01p\Documents\02 Minor Projects\CDOT Collaboration Projects\24278 - I-25 - mobility hub (lone tree)\01 Pre-Construction\Drawings\Hydraulics\24278-RSH-HW-025A-DR-DR-PLAN-23



Know what's below.  
Call before you dig.



KEY MAP

**NOTES:**

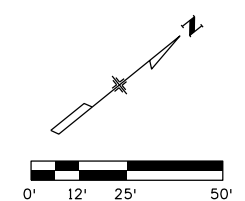
1. ALL EXISTING DRAINAGE SYSTEM TO BE PROTECTED IN PLACE UNLESS OTHERWISE NOTED.

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**LEGEND:**

- TOE OF FILL
- - - TOP OF CUT
- ▬ ROADSIDE DITCH
- ▬ RIPRAP



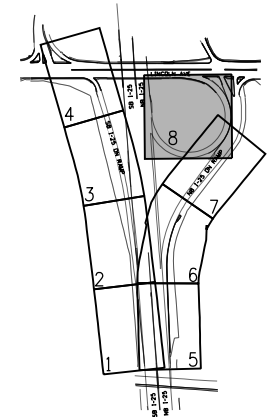
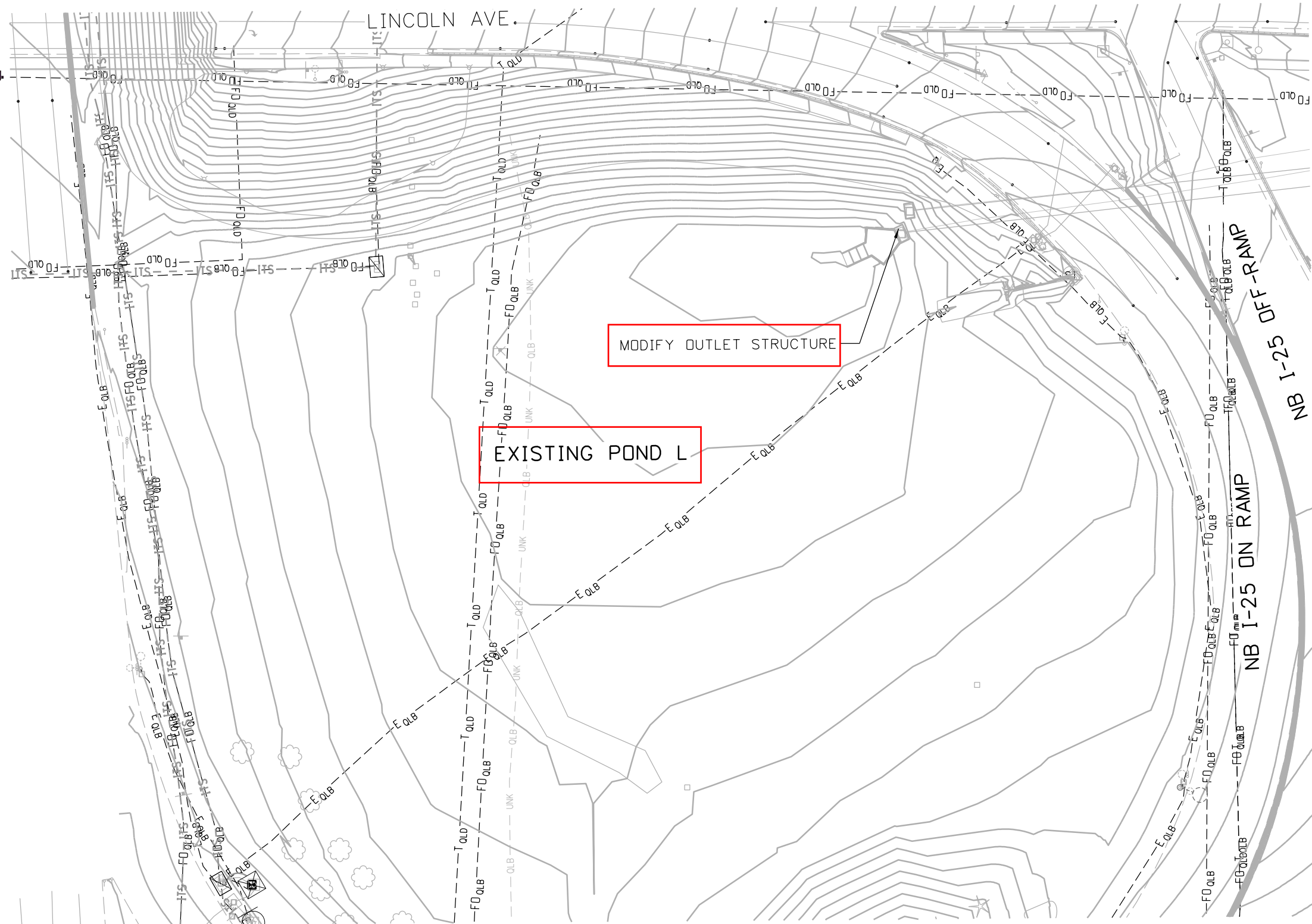
PROFILE SHEET	LINE	ID	STATION/OFFSET	HCL	ITEM	LENGTH	PAY DEPTH	MISC NOTES
2	L-5	FES-L-87D	NB I-25 OFF RAMP	STA 85+88.48, 167.69'LT.	18" FLARED END SECTION			
		P-L-87	NB I-25 OFF RAMP		18" RCP	197'		
		IN-L-87	NB I-25 OFF RAMP	STA 87+01.83, 2.00'RT.	INLET TYPE R (5')			

All seals for this set of drawings are applied to the cover page(s)	Print Date: 5/13/2024 File Name: 24278-RSH-HW-025A-DR-DR-PLAN-23.dgn Horiz. Scale: 1"=50'    Vert. Scale: As Noted Unit Information: JT	<b>Sheet Revisions</b> <table border="1"> <thead> <tr> <th>Date:</th> <th>Comments</th> <th>Init.</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	Init.										Colorado Department of Transportation  18500 E. Colfax Ave. Aurora, CO 80011 Phone: (303) 746-8639 Fax: N/A Region 1-South Program	As Constructed No Revisions: Revised: Void:	<b>I-25 MOBILITY HUB (LONE TREE) DRAINAGE PLAN</b> STA 85+20 TO END Designer: MED Detailer: MTH Sheet Subset: DR PLAN Structure Numbers: X-XX-XX Subst Sheets: 6 of 007	Project No./Code 267 0252-499 24278
	Date:	Comments	Init.															

WhitB 10:42:33 AM pw:\vdot-pw-bentley.com\cdot-pw-01p\Documents\02 Minor Projects\CDOT Collaboration Projects\24278 - I-25 -mobility hub (lone tree)\01 Pre-Construction\Drawings\Hydraulics\24278-RSH-HW-025A-DR-DR-PLAN-23



Know what's below.  
Call before you dig.



KEY MAP

**NOTES:**

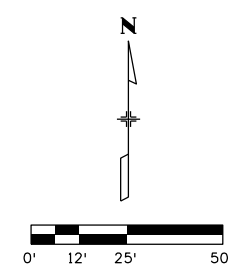
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**LEGEND:**

- TOE OF FILL
- - - TOP OF CUT
- ▬ ROADSIDE DITCH
- ▬ RIPRAP



All seals for this set of drawings are applied to the cover page(s)

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File Name: 24278-RSH-HW-025A-DR-DR-PLAN-23.dgn
Horiz. Scale: 1"=XX' Vert. Scale: As Noted
Unit Information JT

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation

18500 E. Colfax Ave.  
Aurora, CO 80011  
Phone: (303) 746-8639  
Fax: N/A

Region 1-South Program **NB**

As Constructed
No Revisions:
Revised:
Void:

I-25 MOBILITY HUB (LONE TREE) DRAINAGE PLAN POND			
Designer:	MED	Structure Numbers	X-XX-XX
Detailer:	MTH	Structure Numbers	X-XX-XX
Sheet Subset:	DR PLAN	Subset Sheets:	7 of 007

Project No./Code	267 0252-499
	24278



**GENERAL NOTES:**

All work shall be done in accordance with the Colorado Department of Transportation 2023 Standard Specifications for Road and Bridge Construction and the Contract Documents.

Structure excavation and backfill shall be as shown on the plans.

Expansion joint material shall meet AASHTO Specification M213.

All exposed concrete surfaces shall receive a Class 1 final finish to one foot below the ground line. See Sealer and Stain Coating Limits sheet.

A colored Structural Concrete Stain finish will be required on exposed concrete surfaces to one foot below finished ground. For color requirements, see Sealer and Stain Coating Limits sheets.

Grade 60 reinforcing steel is required.

All reinforcing steel shall be epoxy coated unless otherwise noted.

Ⓝ denotes non-epoxy coated reinforcing steel.

The contractor shall be responsible for the stability of the structure during construction.

Stations, elevations, and dimensions contained in these plans are calculated from a recent field survey. The Contractor shall verify all dependent dimensions in the field before ordering or fabricating any material.

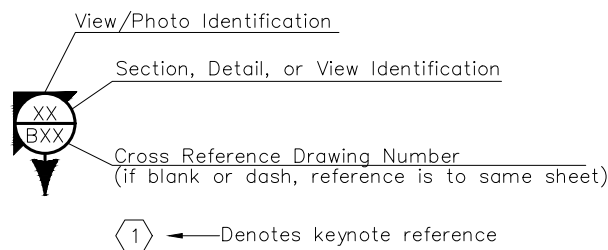
All longitudinal and transverse dimensions are measured horizontally and include no correction for grade.

The information shown on these plans concerning the type and location of underground utilities is not guaranteed to be accurate or all inclusive. The Contractor is responsible for making its own determination as to the type and location of underground utilities as may be necessary to avoid damage thereto. The Contractor shall contact the Utility Notification Center of Colorado at 811 (1-800-922-1987) at least 3 days (2 days not including the day of notification) prior to any excavation or other earthwork.

All provisions for bridge deck concrete shall also apply to approach slab concrete.

For structure number installation, see Standard S-614-12.

**LEGEND**



**ABBREVIATIONS**

(Per M-100-2 or as shown below)

Abut. = abutment	Exp. = expansion	ROW = right of way
B.F. = back face	ft. = foot/feet	Shld. = shoulder
Brg. = bearing	HCL = horizontal control line	Spa. = spaced
Ⓞ = center line	Jt. = joint	Sta. = station
Clr = clear	kip = thousand pounds	sq. mi. = square mile
Const. = construction	Max. = maximum	Str. = structure
Cont. = continuous	Min. = minimum	Typ. = typical
EF = each face	MSE = mechanically stabilized earth	UNO = unless noted otherwise
Elev. = elevation	No. = number	VC = vertical curve
Eq. = equally	PGL = profile grade line	VPI = vertical point of intersection
Est. = estimated	Proj. = projection	WSEL = water surface elevation

**DESIGN DATA**

AASHTO, 9th Edition LRFD, 2020  
AASHTO LRFD Guide Specifications for Design of Pedestrian Bridges, 2nd Edition with current interims

Design Method: Load and Resistance Factor Design

Dead Load: Assumes 10 lb/ft for drainage and future utilities

Live Loads: Pedestrian load: 90 psf  
Vehicle load: H-5 vehicle

Reinforced Concrete:  
Class DF Concrete: f'c = 4,500 psi  
Class BZ Concrete: f'c = 4,500 psi  
Reinforcing Steel: fy = 60,000 psi  
Sulfate Exposure: Class O

Caisson Concrete:  
Class BZ Concrete: f'c = 4,000 psi  
Reinforcing Steel: fy = 60,000 psi

Structural Steel:  
AASHTO M270 (ASTM A709) Grade 36 fy= 36,000 psi  
AASHTO M270 (ASTM A709) Grade 50 fy= 50,000 psi

Precast Prestressed Concrete:  
Class PS Concrete: f'c = (see details)  
f's = 270,000 psi

**SEISMIC DESIGN CRITERIA**

Earthquake Design method:  
Latitude = XXXXX  
Longitude = XXXXX

AASHTO Spectrum for 7% PE in 75 years (1000yr Return Period):  
Period (sec) Sa (g)  
0.0 0.XXX PGA - Site Class C  
0.2 0.XXX Ss - Site Class C  
1.0 0.XXX S1 - Site Class C

Spectral Response Accelerations:  
As = Fpga\*PGA, SDs = Fa\*Ss, and SD1 = Fv\*S1  
Fpga = X.X, Fa = X.X, Fv = X.X  
Period (sec) Sa (g)  
0.0 0.XXX As - Site Class C  
0.2 0.XXX SDs - Site Class C  
1.0 0.XXX SD1 - Site Class C

Seismic Zone: Zone = 1

**BRIDGE DESCRIPTION**

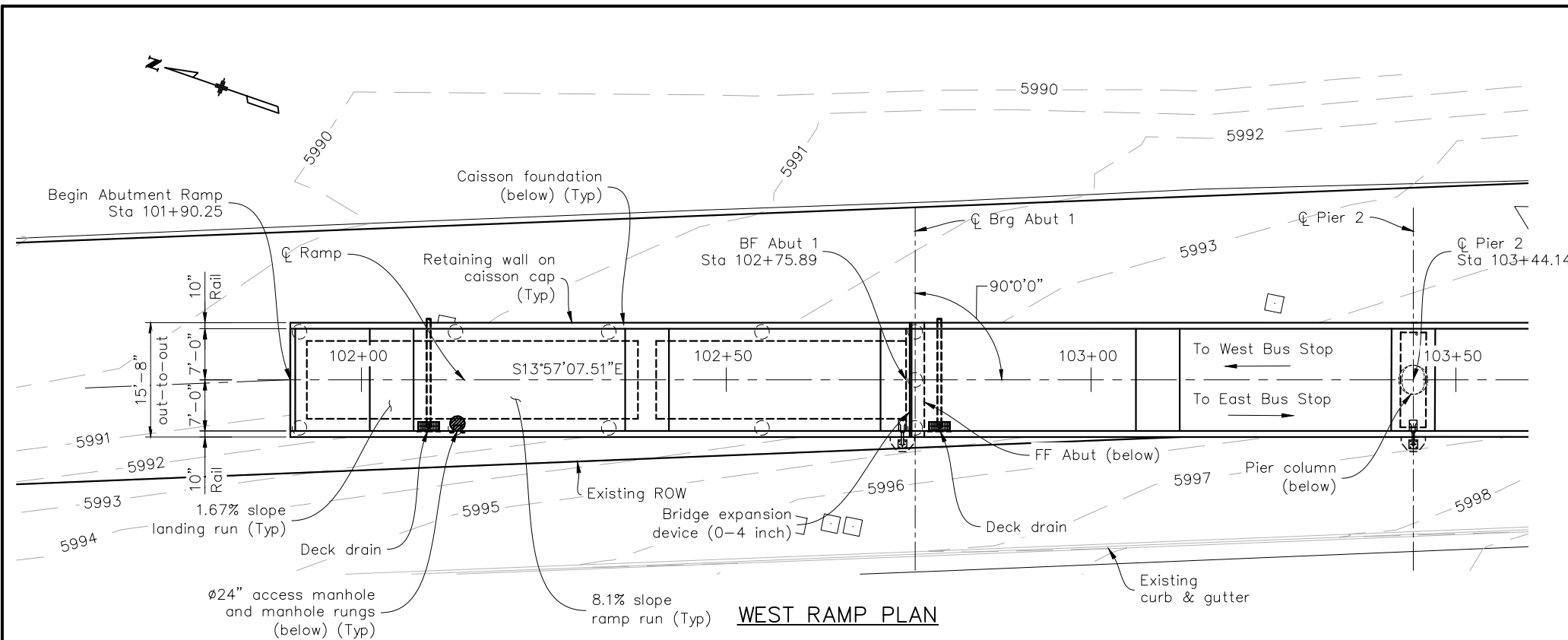
4-span (11'-1 1/2", 65'-35/8", 69'-11 7/8", 68'-27/8") pedestrian bridge approach ramp  
Prestressed concrete box girders and cast-in-place concrete upper landing  
14'-0" clear width  
54" Pedestrian Rail (Typ); 66" Pedestrian Rail at switchback

CONCEPTUAL RENDERING

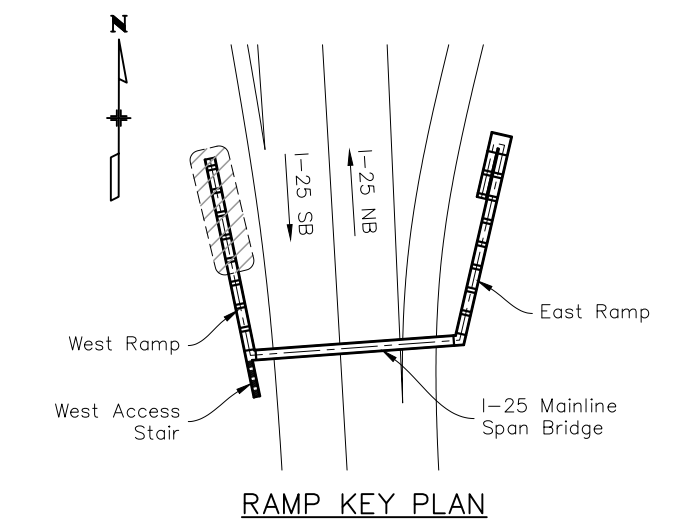


INITIALS	DESIGN DATE	DETAIL DATE	QUANTITY DATE
By			
Checked By			

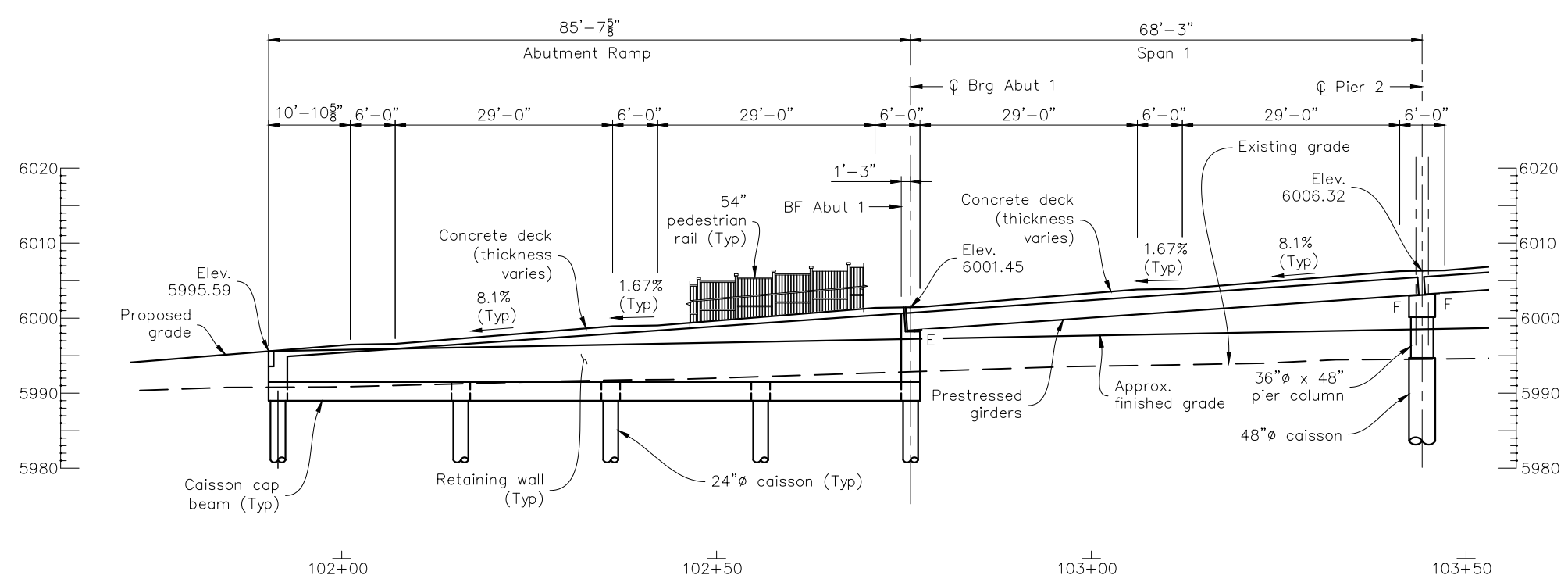
All seals for this set of drawings are applied to the cover page(s)	Print Date: 6/4/2024	<b>Sheet Revisions</b>		Colorado Department of Transportation 18500 E. Colfax Ave. Aurora, CO 80111 Phone: (303) 746-8639 <b>Region 1 - South Program</b>	<b>As Constructed</b> No Revisions: Revised: Void:	<b>Lone Tree Mobility Hub West Ramp to I-25 Overcrossing General Information</b>			Project No./Code 267 0252-499 24278	
	File Name: LTMH West Ramp.dgn	Date:	Comments			Init.	Designer: J. Migliaccio	Structure Numbers		F-17-QX
	Horiz. Scale: As Noted Vert. Scale: As Noted						Detailer: J. Migliaccio			
	Unit Information JT						Sheet Subset: West Ramp	Subset Sheets: RW01 of 50		
	San Engineering LLC Civil and Structural Engineering			Region 1 - South Program	NJB					



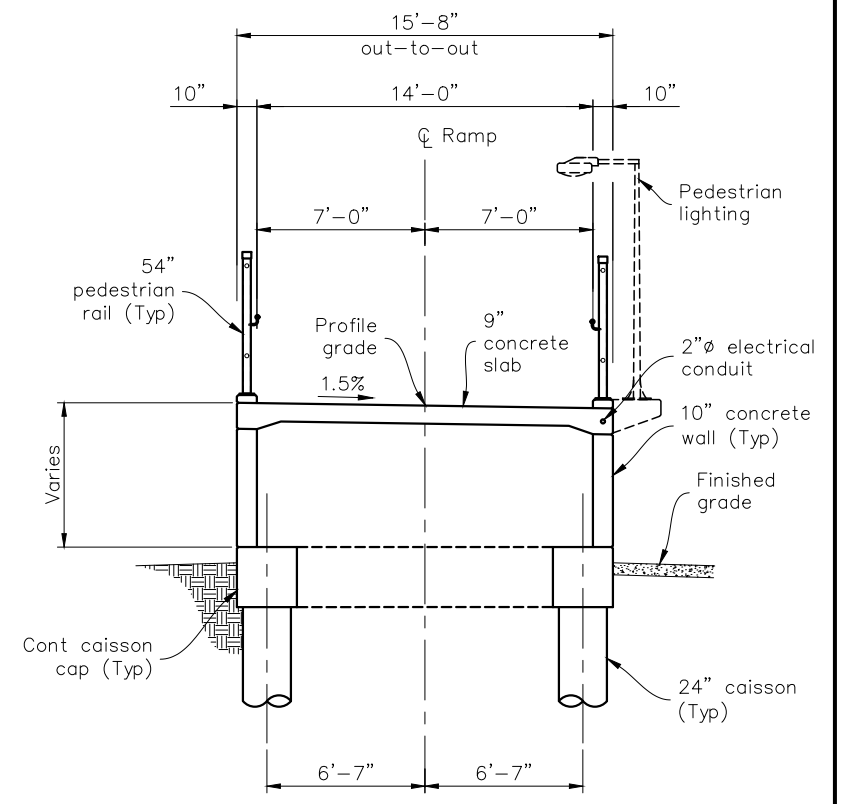
**WEST RAMP PLAN**



**RAMP KEY PLAN**




**WEST RAMP SECTION**




**TYPICAL SECTION - ABUTMENT RAMP**

INITIALS	DESIGN DATE	DETAIL DATE	QUANTITY DATE
By			
Checked By			

All seals for this set of drawings are applied to the cover page(s)

Print Date: 5/10/2024  
 File Name: LTMH West Ramp.dgn  
 Horiz. Scale: As Noted Vert. Scale: As Noted  
 Unit Information JT  


Sheet Revisions		
Date:	Comments	Init.

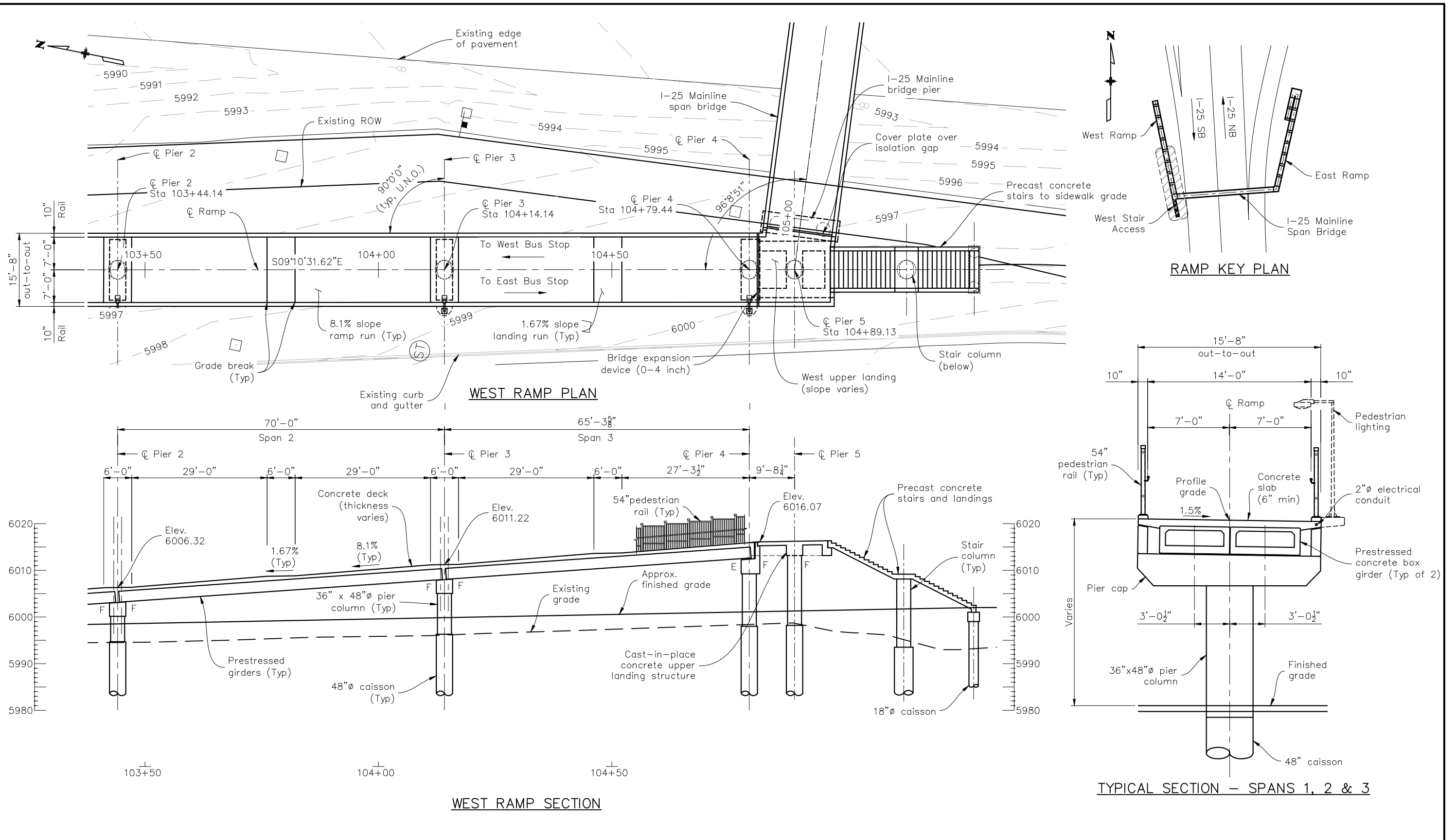
**Colorado Department of Transportation**  
 18500 E. Colfax Ave.  
 Aurora, CO 80111  
 Phone: (303) 746-8639  
  
**Region 1 - South Program**      **NJB**

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

<b>Lone Tree Mobility Hub West Ramp to I-25 Overcrossing General Layout (1 of 2)</b>			
Designer:	J. Migliaccio	Structure Numbers	F-17-QX
Detailer:	J. Migliaccio	Subset Sheets:	R03 of XX
Sheet Subset: West Ramp			

<b>Project No./Code</b>
267 0252-499
24278

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INITIALS	DESIGN DATE	DETAIL DATE	QUANTITY DATE
By			
Checked By			

All seals for this set of drawings are applied to the cover page(s)

Print Date: 5/10/2024  
 File Name: LTMH West Ramp.dgn  
 Horiz. Scale: As Noted Vert. Scale: As Noted  
 Unit Information JT  
**San Engineering LLC**  
 Civil and Structural Engineering

Sheet Revisions		
Date:	Comments	Init.

**Colorado Department of Transportation**  
 18500 E. Colfax Ave.  
 Aurora, CO 80111  
 Phone: (303) 746-8639

**Region 1 - South Program**      **NJB**

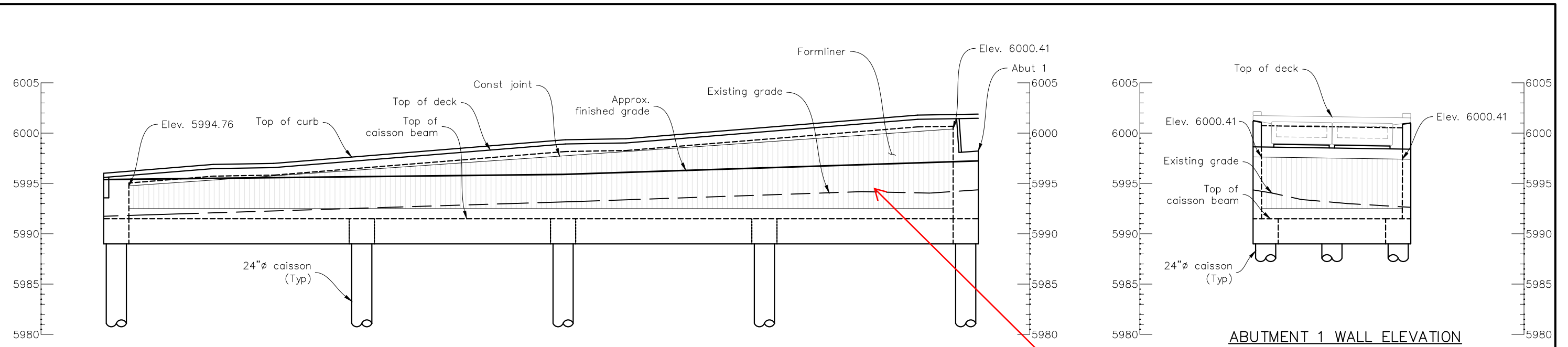
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 Revised:  
 Void:

**Lone Tree Mobility Hub  
 West Ramp to I-25 Overcrossing  
 General Layout (2 of 2)**

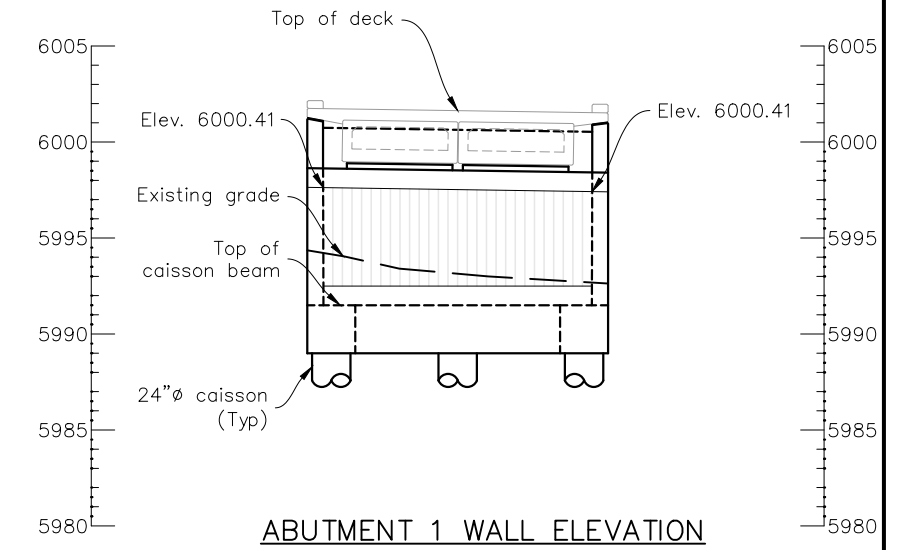
Designer: J. Migliaccio  
 Detailer: J. Migliaccio  
 Sheet Subset: West Ramp

**Project No./Code**  
 267 0252-499  
 24278  
 Subset Sheets: R04 of XX

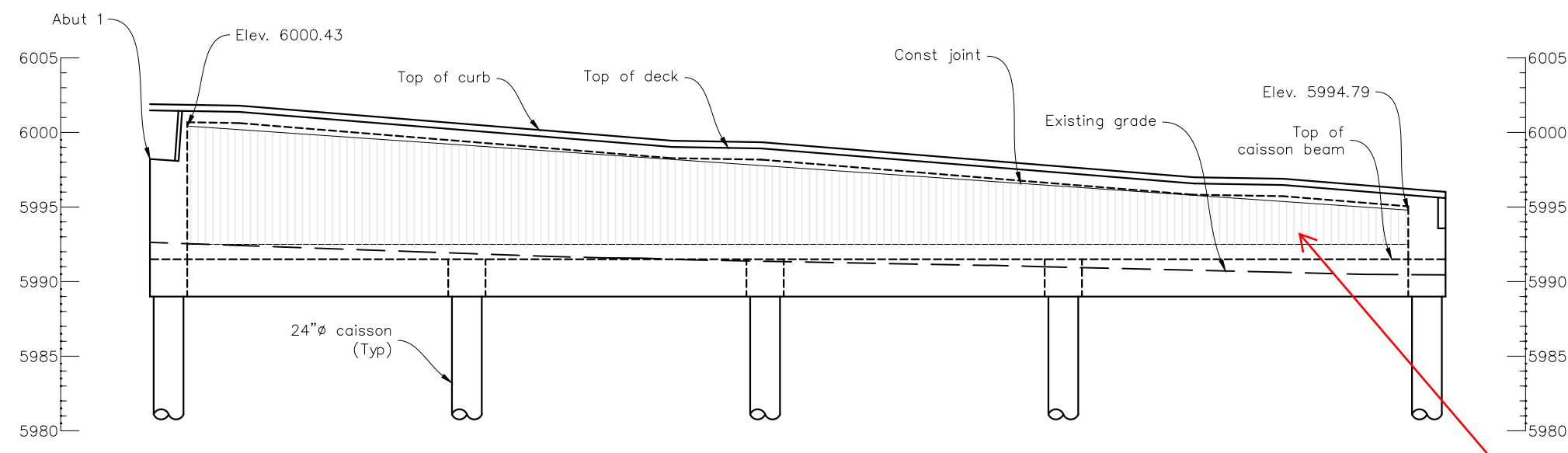




ABUTMENT 1 RAMP WEST WALL ELEVATION



ABUTMENT 1 WALL ELEVATION



ABUTMENT 1 RAMP EAST WALL ELEVATION



**WALL PATTERN: SMOOTH  
FINISH FOR FUTURE ART  
OR MURAL INSTALLATION**

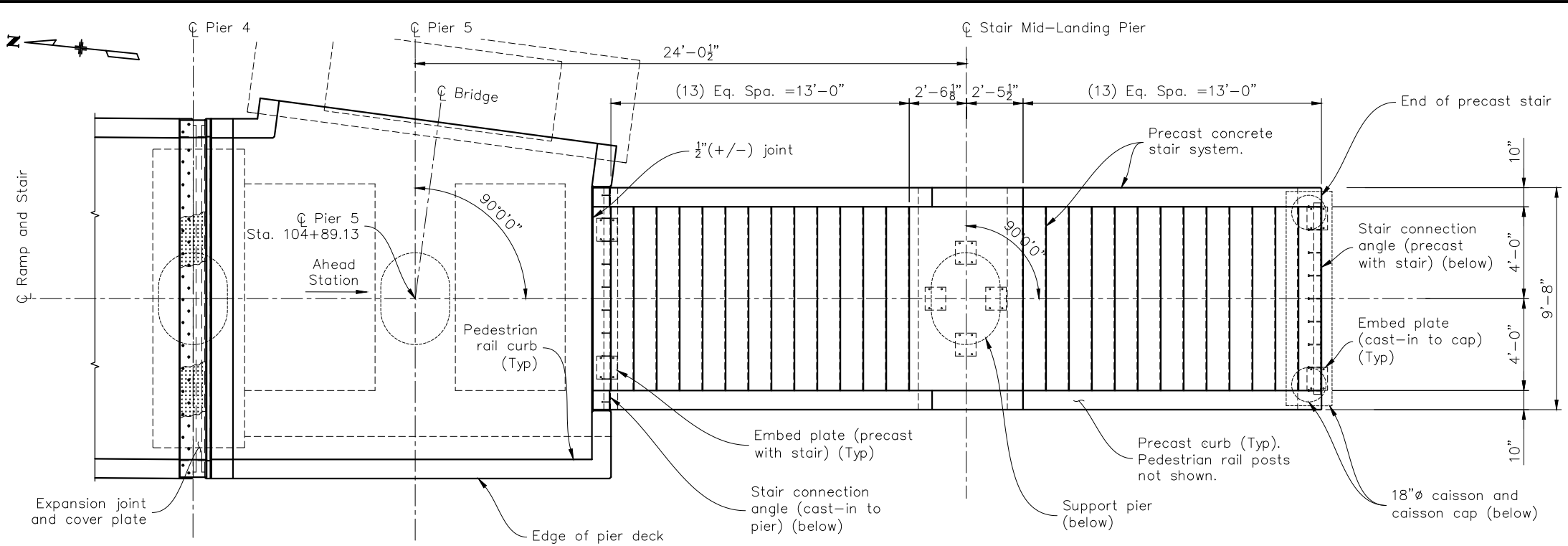


**WALL PATTERN COLORADO  
RANDOM REVEAL PER CDOT I-25  
SOUTH AESTHETIC GUIDELINES**

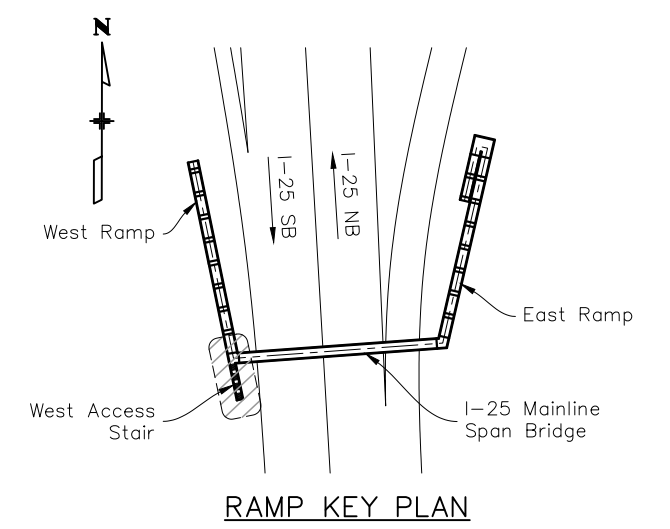
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By						
Checked By						

All seals for this set of drawings are applied to the cover page(s)	Print Date: 5/10/2024 File Name: LTMH West Ramp.dgn Horiz. Scale: As Noted    Vert. Scale: As Noted Unit Information: JT	<b>Sheet Revisions</b> <table border="1"> <thead> <tr> <th>Date:</th> <th>Comments</th> <th>Init.</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	Init.										<b>Colorado Department of Transportation</b> 18500 E. Colfax Ave. Aurora, CO 80111 Phone: (303) 746-8639 <b>Region 1 – South Program</b> <b>NJB</b>	<b>As Constructed</b> No Revisions: Revised: Void:	<b>Lone Tree Mobility Hub West Ramp to I-25 Overcrossing Abut 1 Ramp Wall Elev</b> Designer: J. Migliaccio Detailer: J. Migliaccio Sheet Subset: West Ramp	<table border="1"> <tr> <td>Structure Numbers</td> <td>F-17-QX</td> </tr> <tr> <td>Subset Sheets:</td> <td>R10 of XX</td> </tr> </table>	Structure Numbers	F-17-QX	Subset Sheets:	R10 of XX	<b>Project No./Code</b> 267 0252-499 24278
	Date:	Comments	Init.																				
Structure Numbers	F-17-QX																						
Subset Sheets:	R10 of XX																						
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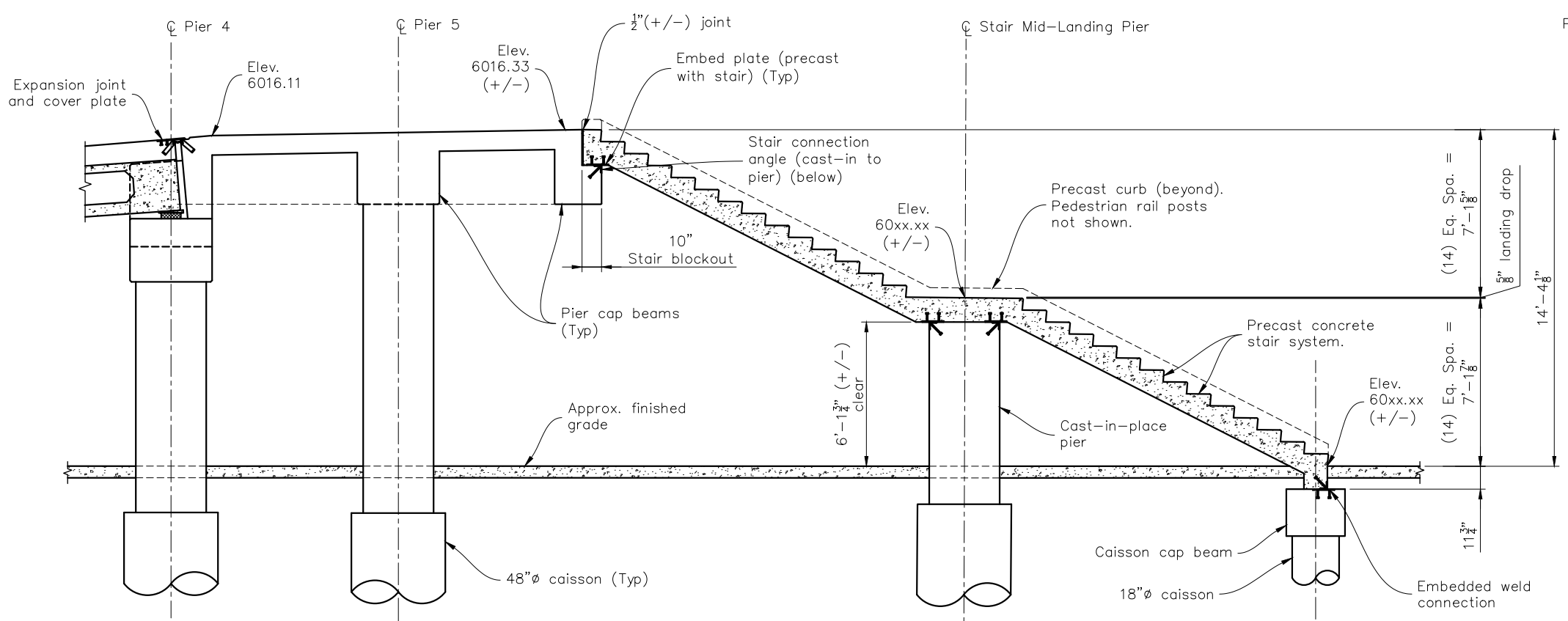
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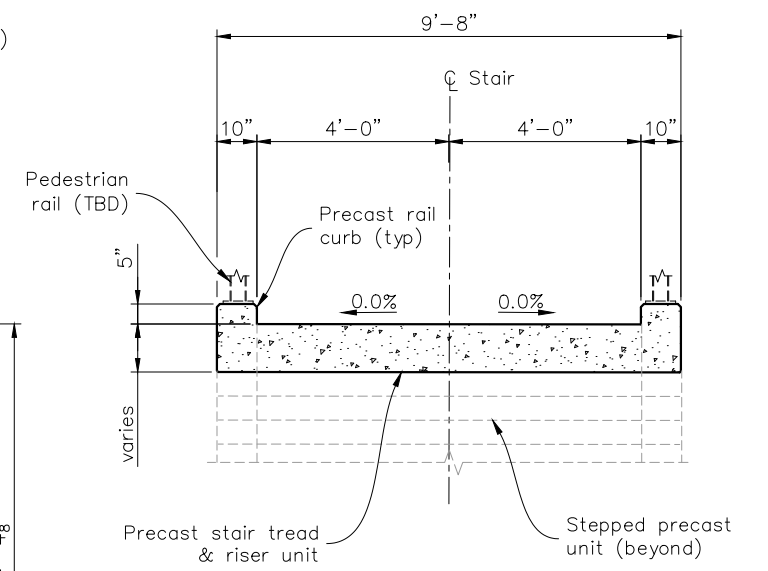
**STAIR PLAN**



**RAMP KEY PLAN**



**STAIR SECTION**

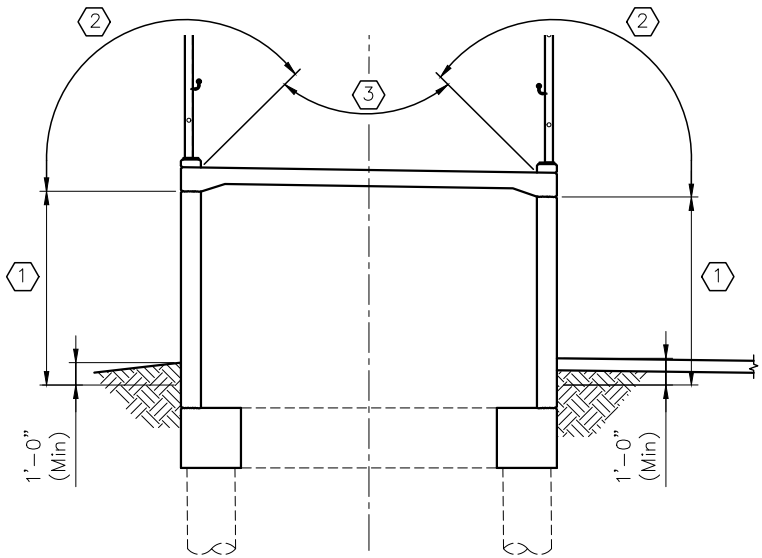


**STAIR TYPICAL SECTION**

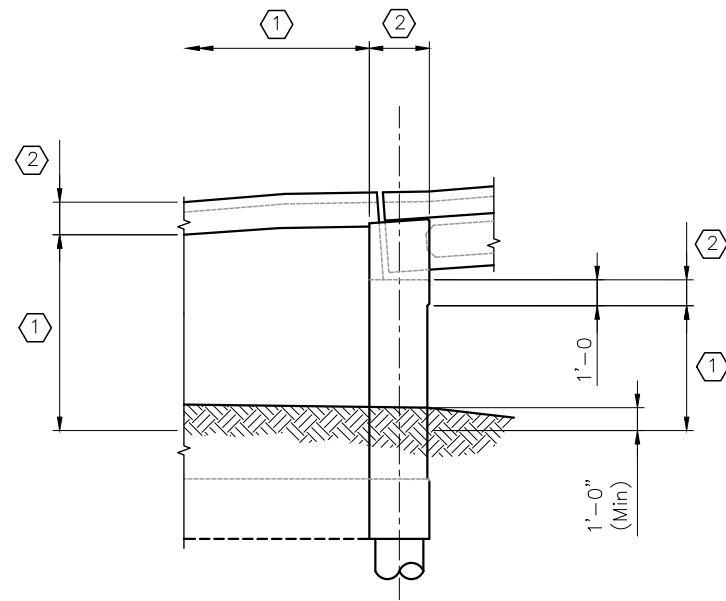
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Checked By						

All seals for this set of drawings are applied to the cover page(s)	Print Date: 5/10/2024 File Name: LTMH West Ramp.dgn Horiz. Scale: As Noted    Vert. Scale: As Noted Unit Information: JT	<b>Sheet Revisions</b> <table border="1"> <thead> <tr> <th>Date:</th> <th>Comments</th> <th>Init.</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	Init.										<b>Colorado Department of Transportation</b> 18500 E. Colfax Ave. Aurora, CO 80111 Phone: (303) 746-8639 <b>Region 1 - South Program</b>	<b>As Constructed</b> No Revisions: Revised: Void:	<b>Lone Tree Mobility Hub</b> <b>West Ramp to I-25 Overcrossing</b> <b>West Stair General Layout</b> Designer: J. Migliaccio Detailer: J. Migliaccio Sheet Subset: West Ramp	<b>Project No./Code</b> 267 0252-499 24278 Subst Sheets: R37 of XX
	Date:	Comments	Init.															
		<b>NJB</b>	Structure Numbers: F-17-QX															

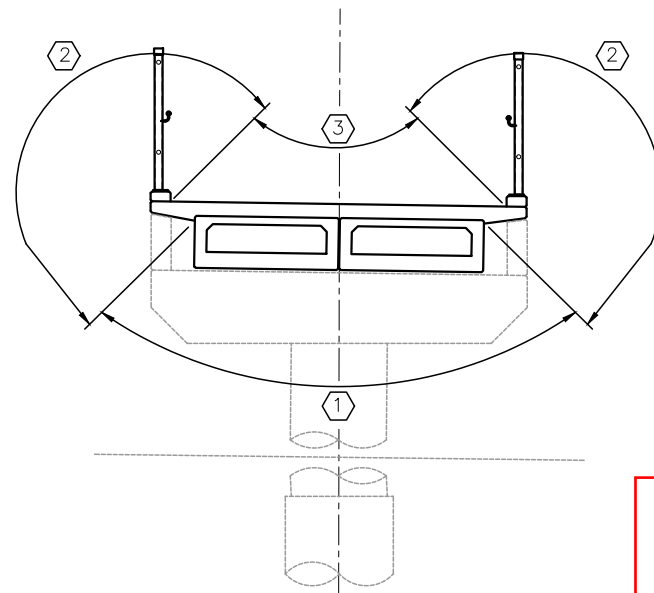
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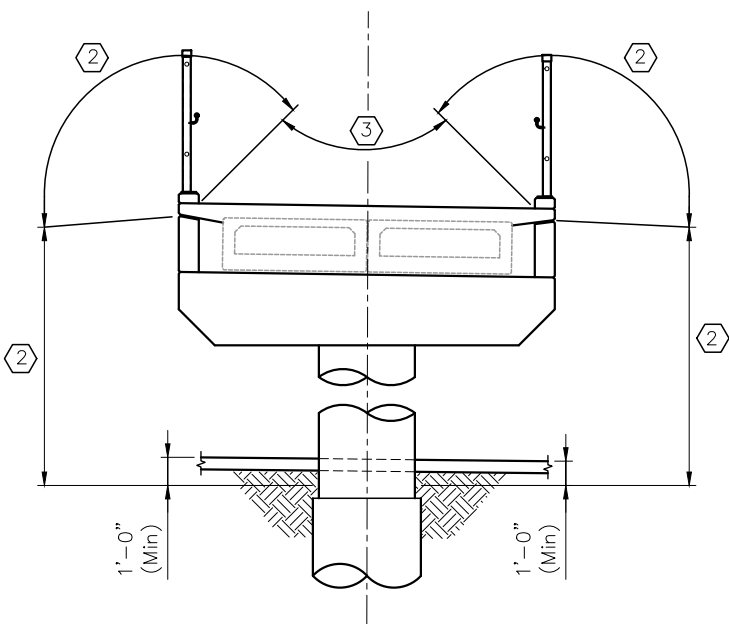
**COATING LIMITS AT ABUTMENT RAMP**



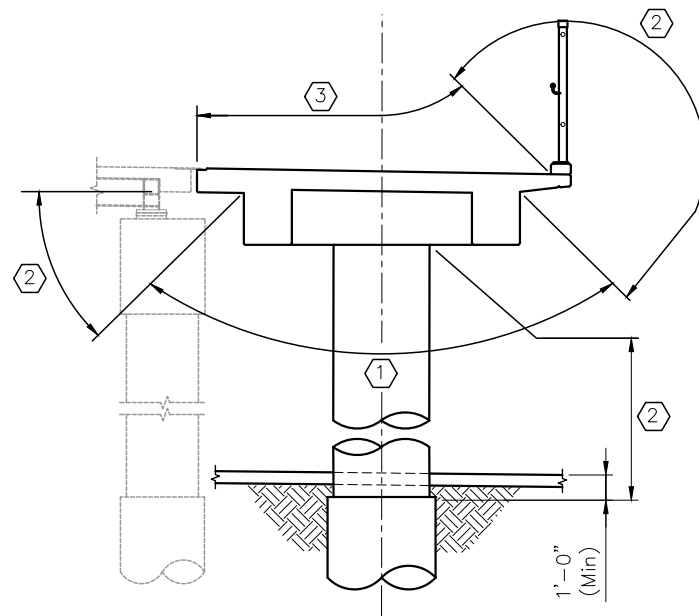
**COATING LIMITS AT ABUTMENT**



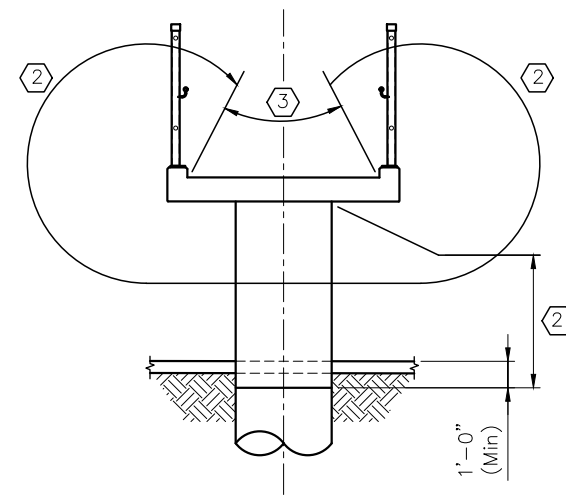
**COATING LIMITS AT BRIDGE SPANS**



**COATING LIMITS AT TYPICAL PIERS**



**COATING LIMITS AT PIER 5**




**COATING LIMITS AT STAIRS**

**KEY NOTES**


- ① Limits of dark colored Structural Concrete Stain include all exposed portions (to 1'-0" below finished grade) of the ramp walls, grade beams and girders as shown. The color shall be Federal Standard 20140.
- ② Limits of light colored Structural Concrete Stain include all exposed portions of the abutments, decks, curbs, piers, cheek walls, and precast stair exterior as shown. The color shall be Federal Standard 20219.
- ③ A concrete sealer shall be applied to the exposed portions of abutment ramp deck, bridge deck, pier decks, and stair tread and risers as shown.

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Checked By						

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Print Date: 6/4/2024  
 File Name: LTMH West Ramp.dgn  
 Horiz. Scale: As Noted Vert. Scale: As Noted  
 Unit Information JT  
  
 San Engineering LLC  
 Civil and Structural Engineering

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation  
 18500 E. Colfax Ave.  
 Aurora, CO 80111  
 Phone: (303) 746-8639  
  
 Region 1 - South Program NJB

As Constructed
No Revisions:
Revised:
Void:

Lone Tree Mobility Hub  
 West Ramp to I-25 Overcrossing  
 Sealer and Stain Coating Limits  
 Designer: J. Migliaccio  
 Detailer: J. Migliaccio  
 Sheet Subset: West Ramp  
 Structure Numbers F-17-QX  
 Subset Sheets: RW48 of 50

Project No./Code
267 0252-499
24278





CONCEPTUAL RENDERING



Existing light rail and roadway bridge with representative aesthetic details

Proposed project location

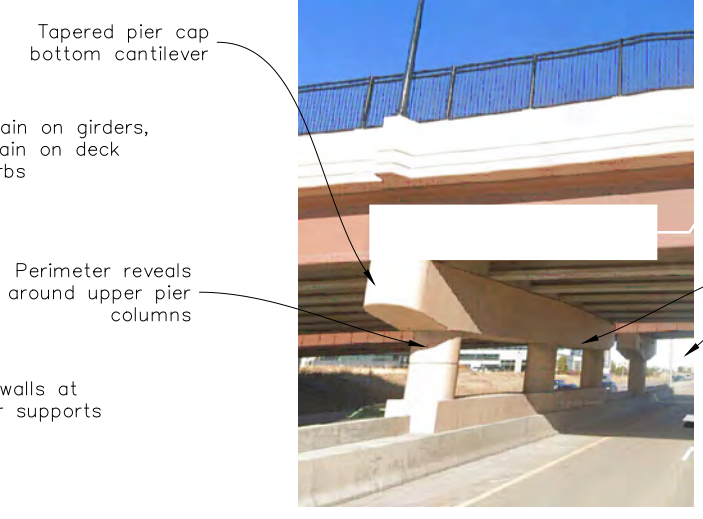
AESTHETIC DETAILS OF THE NEW MOBILITY HUB STRUCTURE WILL MATCH SKY RIDGE AVE AS SHOWN BELOW

PROJECT SITE AND REFERENCE AESTHETICS VICINITY

Pedestrian Rail (see detail sheets and image beside)  
 Pedestrian lights and corbels outside of rail  
 Cont. chamfer reveals at construction joints



SKY RIDGE AVE OVER I-25 AESTHETIC DETAILS



SKY RIDGE AVE OVER I-25 AESTHETIC DETAILS



RAMP Pedestrian Rail STYLE

Dark stain at wall formliner, light stain at coping and curbs

Dark stain on girders, light stain on deck and curbs

Perimeter reveals around upper pier columns

Cheek walls at exterior supports

Tapered pier cap bottom cantilever

Galvanized steel rub rail

Oblong pier column shape

6" concrete curb

Post caps at each post

Round pipe posts and rails, black coating

Vertical picket members @ 5" (+/-)

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Revised:
Void:

Lone Tree Mobility Hub West Ramp to I-25 Overcrossing Ramp Aesthetics Images			
Designer:	J. Migliaccio	Structure Numbers	F-17-QX
Detailer:	J. Migliaccio	Sheet Subset:	West Ramp
Sheet Subset: West Ramp		Subset Sheets:	RW50 of 50

Project No./Code
267 0252-499
24278

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24278 - I-25 MOBILITY HUB (SKY RIDGE @ LONE TREE) - FOR - 06/11/2024  
 90% DESIGN - NOT FOR CONSTRUCTION



**GENERAL NOTES:**

All work shall be done in accordance with the Colorado Department of Transportation 2023 Standard Specifications for Road and Bridge Construction and the Contract Documents.

Structure excavation and backfill shall be as shown on the plans.

Expansion joint material shall meet AASHTO Specification M213.

All exposed concrete surfaces shall receive a Class 1 final finish to one foot below the ground line. See Sealer and Stain Coating Limits sheet.

A colored Structural Concrete Stain finish will be required on exposed concrete surfaces to one foot below finished ground. For color requirements, see Sealer and Stain Coating Limits sheets.

Grade 60 reinforcing steel is required.

All reinforcing steel shall be epoxy coated unless otherwise noted.

Ⓝ denotes non-epoxy coated reinforcing steel.

The contractor shall be responsible for the stability of the structure during construction.

Stations, elevations, and dimensions contained in these plans are calculated from a recent field survey. The Contractor shall verify all dependent dimensions in the field before ordering or fabricating any material.

All longitudinal and transverse dimensions are measured horizontally and include no correction for grade.

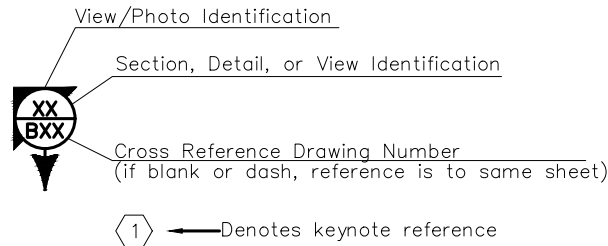
The information shown on these plans concerning the type and location of underground utilities is not guaranteed to be accurate or all inclusive. The Contractor is responsible for making its own determination as to the type and location of underground utilities as may be necessary to avoid damage thereto. The Contractor shall contact the Utility Notification Center of Colorado at 811 (1-800-922-1987) at least 3 days (2 days not including the day of notification) prior to any excavation or other earthwork.

All provisions for bridge deck concrete shall also apply to approach slab concrete.

For structure number installation, see Standard S-614-12.

Prior to conducting any excavation, the Contractor and CDOT Project Engineer shall coordinate with the CDOT Paleontologist for any requirements pertaining to archaeological issues at the site.

**LEGEND**



**ABBREVIATIONS**

(Per M-100-2 or as shown below)

Abut. = abutment	Exp. = expansion	ROW = right of way
B.F. = back face	ft. = foot/feet	Shld. = shoulder
Brg. = bearing	HCL = horizontal control line	Spa. = spaced
@ = center line	Jt = joint	Sta. = station
Clr = clear	kip = thousand pounds	sq. mi. = square mile
Const. = construction	Max = maximum	Str. = structure
Cont = continuous	Min = minimum	Typ = typical
EF = each face	MSE = mechanically stabilized earth	VC = vertical curve
Elev. = elevation	No. = number	VPI = vertical point of intersection
Eq. = equally	PGL = profile grade line	WSEL = water surface elevation
Est. = estimated	Proj. = projection	

**DESIGN DATA**

AASHTO, 9th Edition LRFD, 2020  
AASHTO LRFD Guide Specifications for Design of Pedestrian Bridges, 2nd Edition with current interims

Design Method: Load and Resistance Factor Design

Dead Load: Assumes 5 lb/ft for drainage and future utilities  
Deck overlay: xx psf

Live Loads: Pedestrian load: 90 psf  
Vehicular load: H-5 vehicle

Reinforced Concrete:  
Class DF Concrete: f'c = 4,500 psi  
Class BZ Concrete: f'c = 4,500 psi  
Reinforcing Steel: fy = 60,000 psi  
Sulfate Exposure: Class O

Caisson Concrete:  
Class BZ Concrete: f'c = 4,000 psi  
Reinforcing Steel: fy = 60,000 psi

Structural Steel:  
AASHTO M270 (ASTM A709) Grade 36 fy= 36,000 psi  
AASHTO M270 (ASTM A709) Grade 50 fy= 50,000 psi

Precast Prestressed Concrete:  
Class PS Concrete: f'c = (see details)  
f's = 270,000 psi

**SEISMIC DESIGN CRITERIA**

Earthquake Design method:  
Latitude = XXXX  
Longitude = XXXX

AASHTO Spectrum for 7% PE in 75 years (1000yr Return Period):  
Period (sec) Sa (g)  
0.0 0.XXX PGA - Site Class C  
0.2 0.XXX Ss - Site Class C  
1.0 0.XXX S1 - Site Class C

Spectral Response Accelerations:  
As = Fpga\*PGA, SDs = Fa\*Ss, and SD1 = Fv\*S1  
Fpga = X.X, Fa = X.X, Fv = X.X  
Period (sec) Sa (g)  
0.0 0.XXX As - Site Class C  
0.2 0.XXX SDs - Site Class C  
1.0 0.XXX SD1 - Site Class C

Seismic Zone: Zone = 1

**BRIDGE DESCRIPTION**

4-span (11'-1 1/2", 65'-3 5/8", 70'-0", 68'-3") pedestrian bridge approach ramp  
Prestressed concrete box girders and cast-in-place concrete upper landing  
14'-0" clear width  
54" Pedestrian Rail (Typ); 66" Pedestrian Rail at switchback

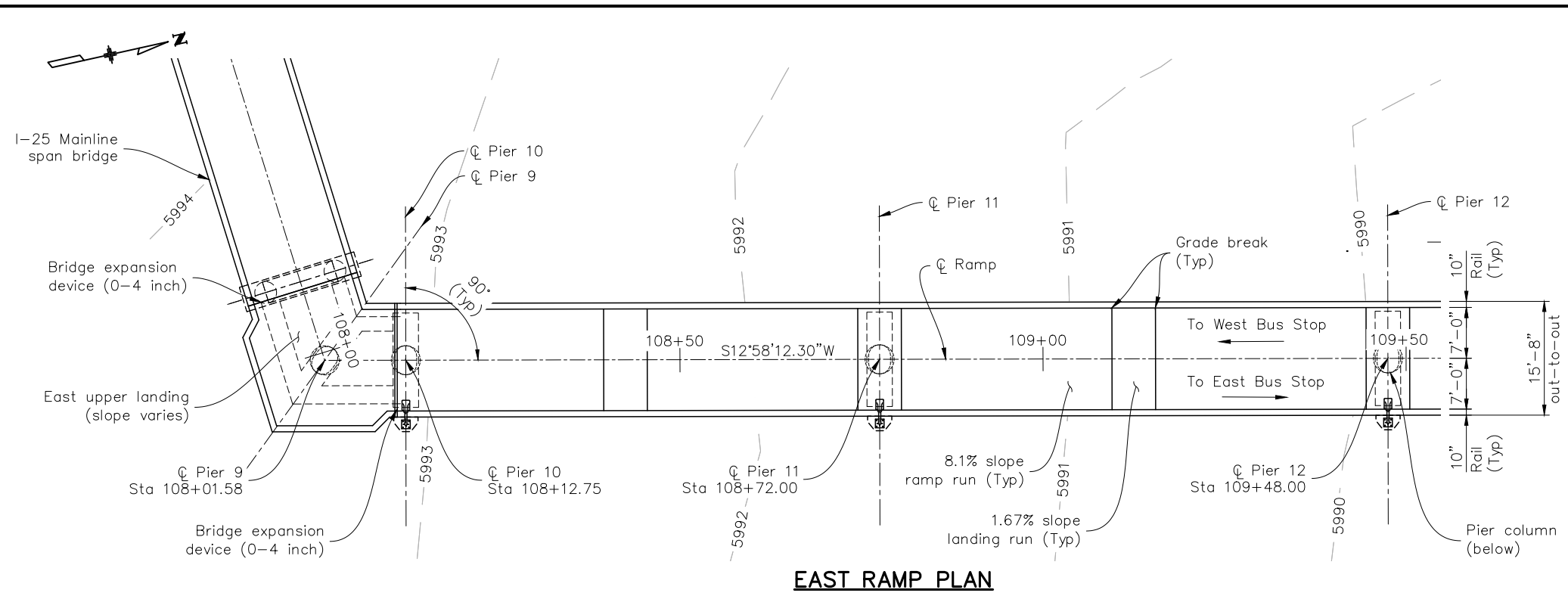
CONCEPTUAL RENDERING



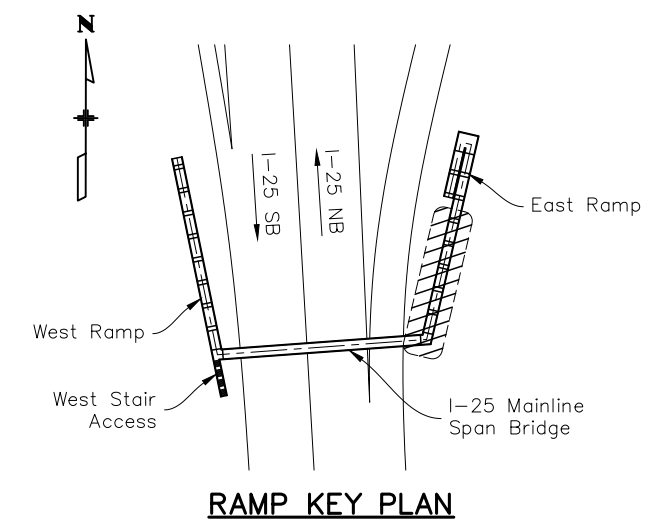
INITIALS	DESIGN DATE	DETAIL DATE	QUANTITY DATE
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Checked By			

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	File Name: LTMH East Ramp.dgn	Date:	Comments						Init.	267 0252-499
	Horiz. Scale: As Noted    Vert. Scale: As Noted						Designer: J. Migliaccio	Structure Numbers	F-17-QX	24278
	Unit Information: JT						Detailer: J. Migliaccio	Sheet Subset: East Ramp	Subset Sheets: RE01 of 44	

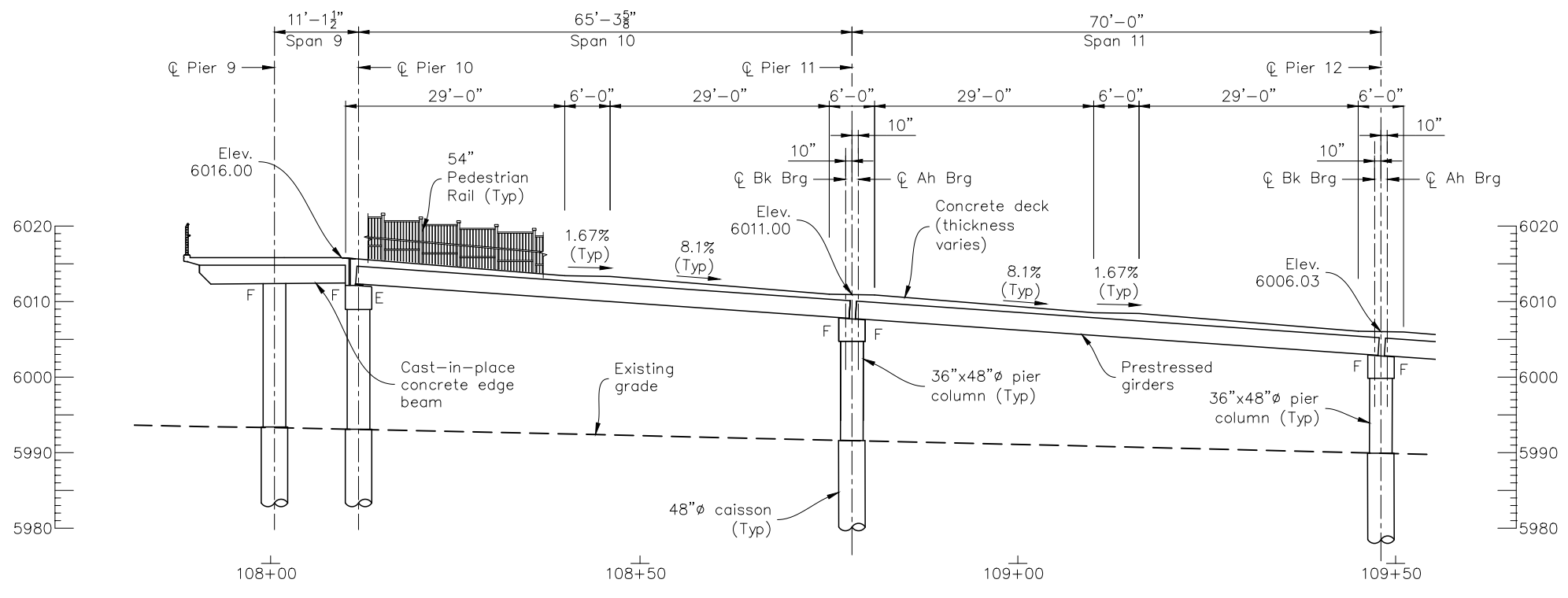




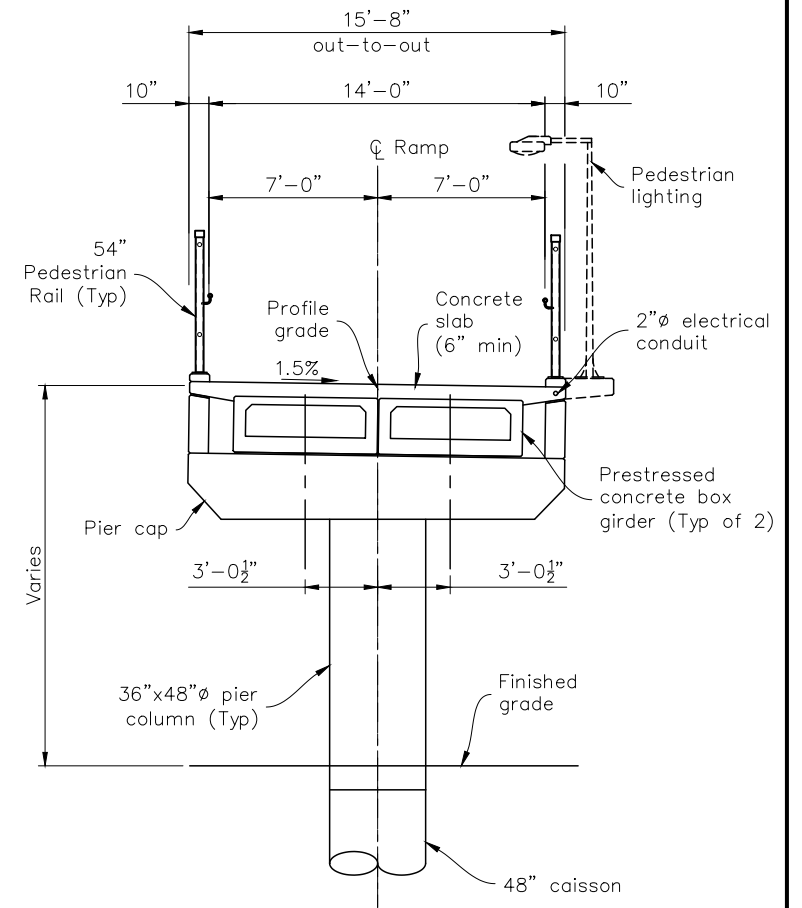
**EAST RAMP PLAN**



**RAMP KEY PLAN**



**EAST RAMP SECTION**



**TYPICAL SECTION - SPANS 8, 9, & 10**

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 Unit Information JT  
**San Engineering LLC**  
 Civil and Structural Engineering

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Date:	Comments	Init.

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 Phone: (303) 746-8639

**Region 1 - South Program**      **NJB**

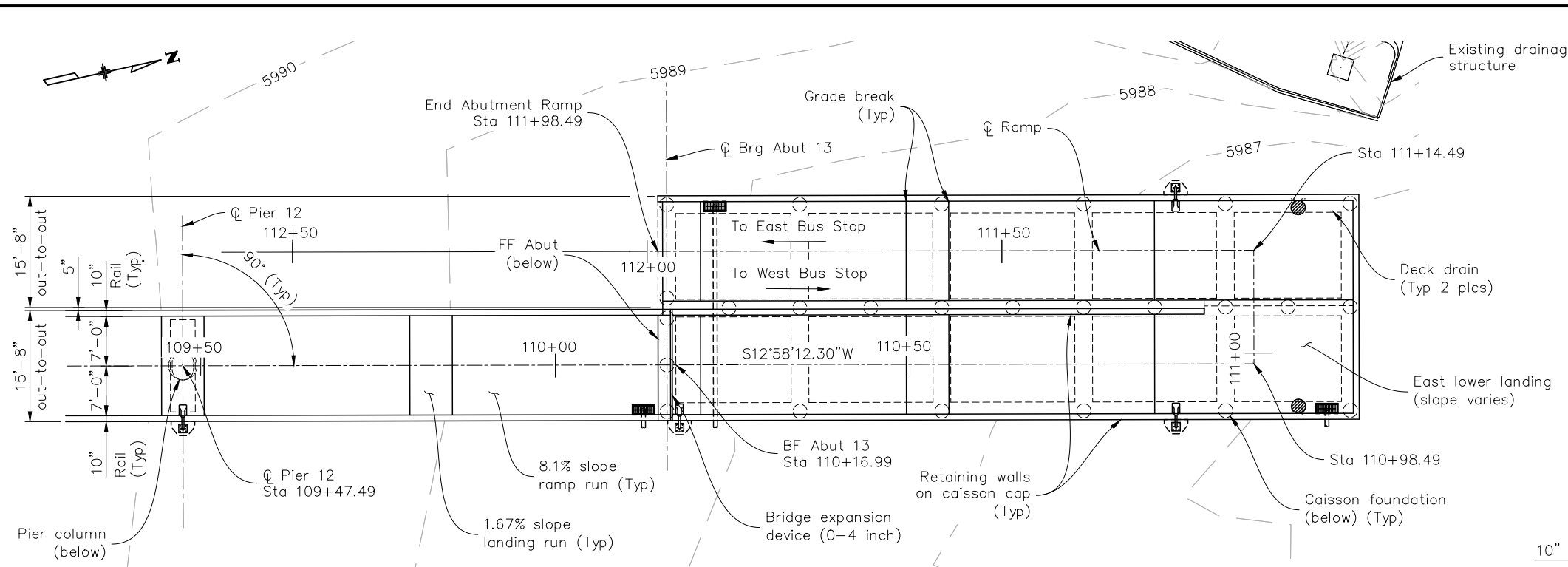
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Void:

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Designer:	J. Migliaccio	Structure Numbers	F-17-QX
Detailer:	J. Migliaccio	Sheet Subset:	East Ramp
Sheet Subset: East Ramp		Subset Sheets:	R48 of XX

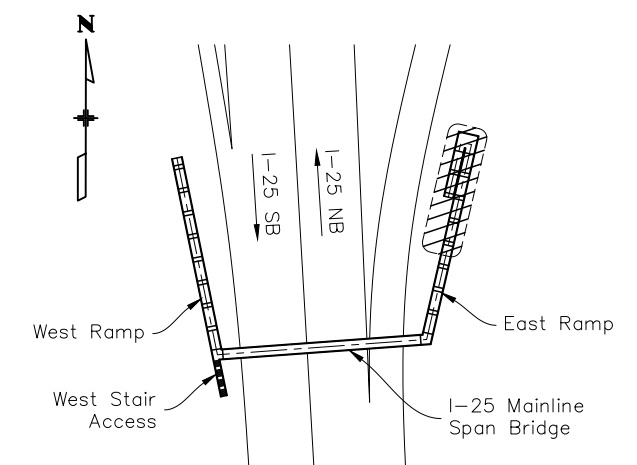
<b>Project No./Code</b>
267 0252-499
24278

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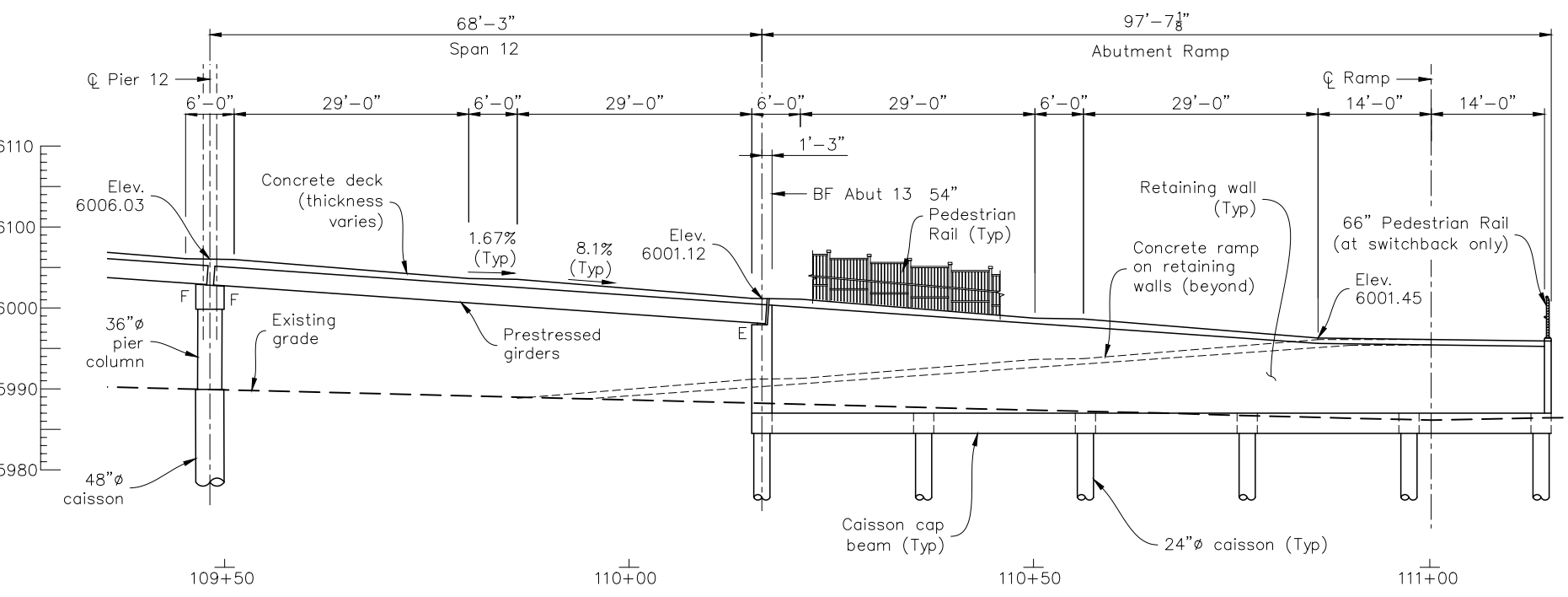




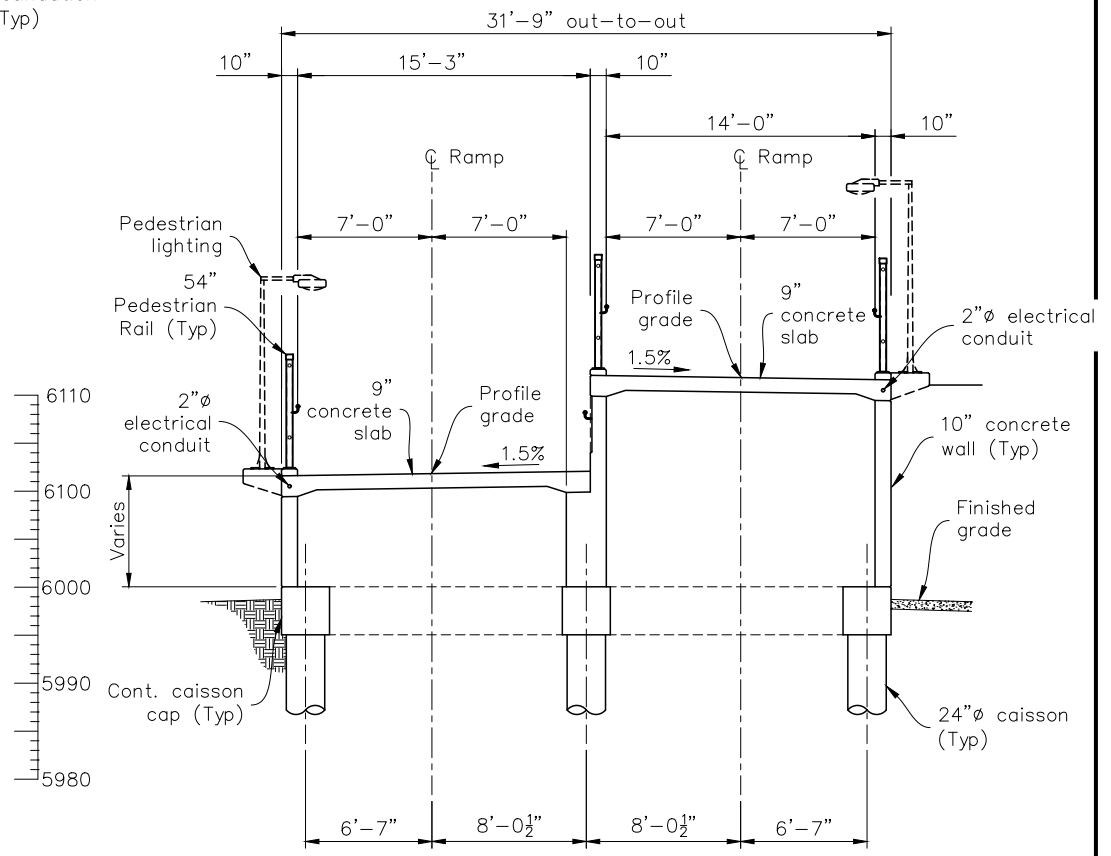
**EAST RAMP PLAN**



**RAMP KEY PLAN**




**EAST RAMP SECTION**




**TYPICAL SECTION - EAST ABUTMENT RAMP**

INITIALS	DESIGN	DATE	DETAIL	DATE	QUANTITY	DATE
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 Unit Information JT  


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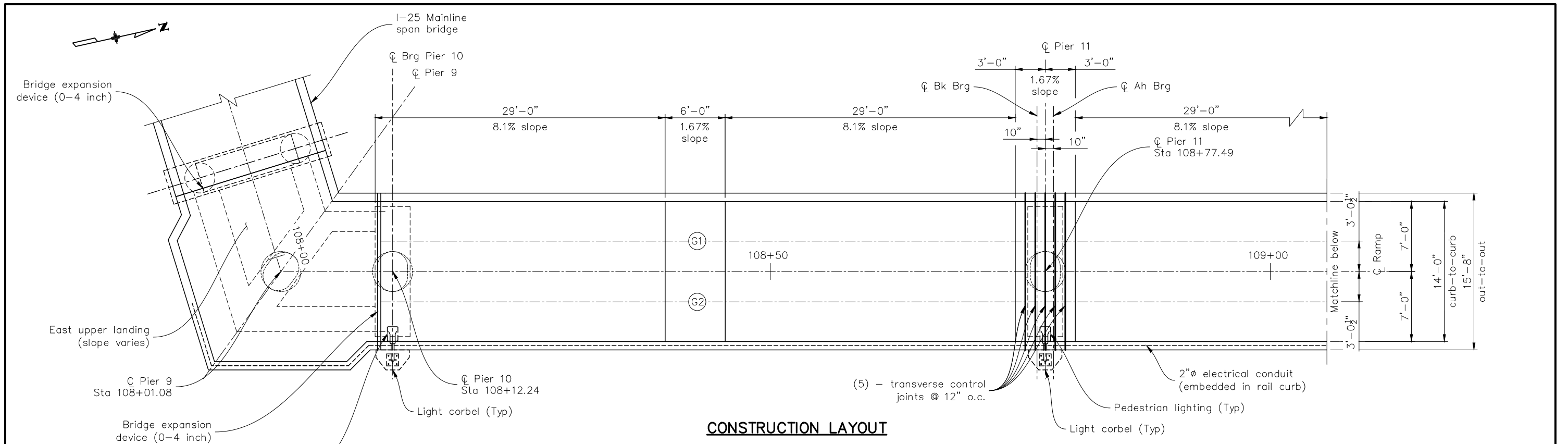
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 Region 1 - South Program NJB

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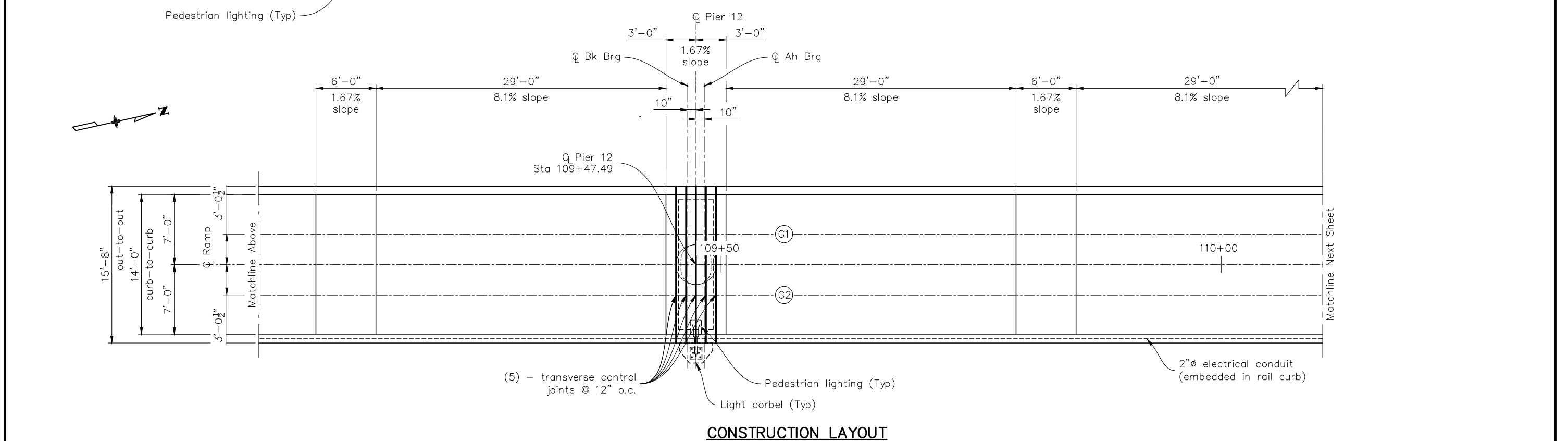
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 East Ramp to I-25 Overcrossing  
 General Layout (2 of 2)  
 Designer: J. Migliaccio  
 Detailer: J. Migliaccio  
 Sheet Subset: East Ramp  
 Structure Numbers F-17-QX  
 Subset Sheets: R49 of XX

Project No./Code
267 0252-499
24278

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**CONSTRUCTION LAYOUT**




**CONSTRUCTION LAYOUT**

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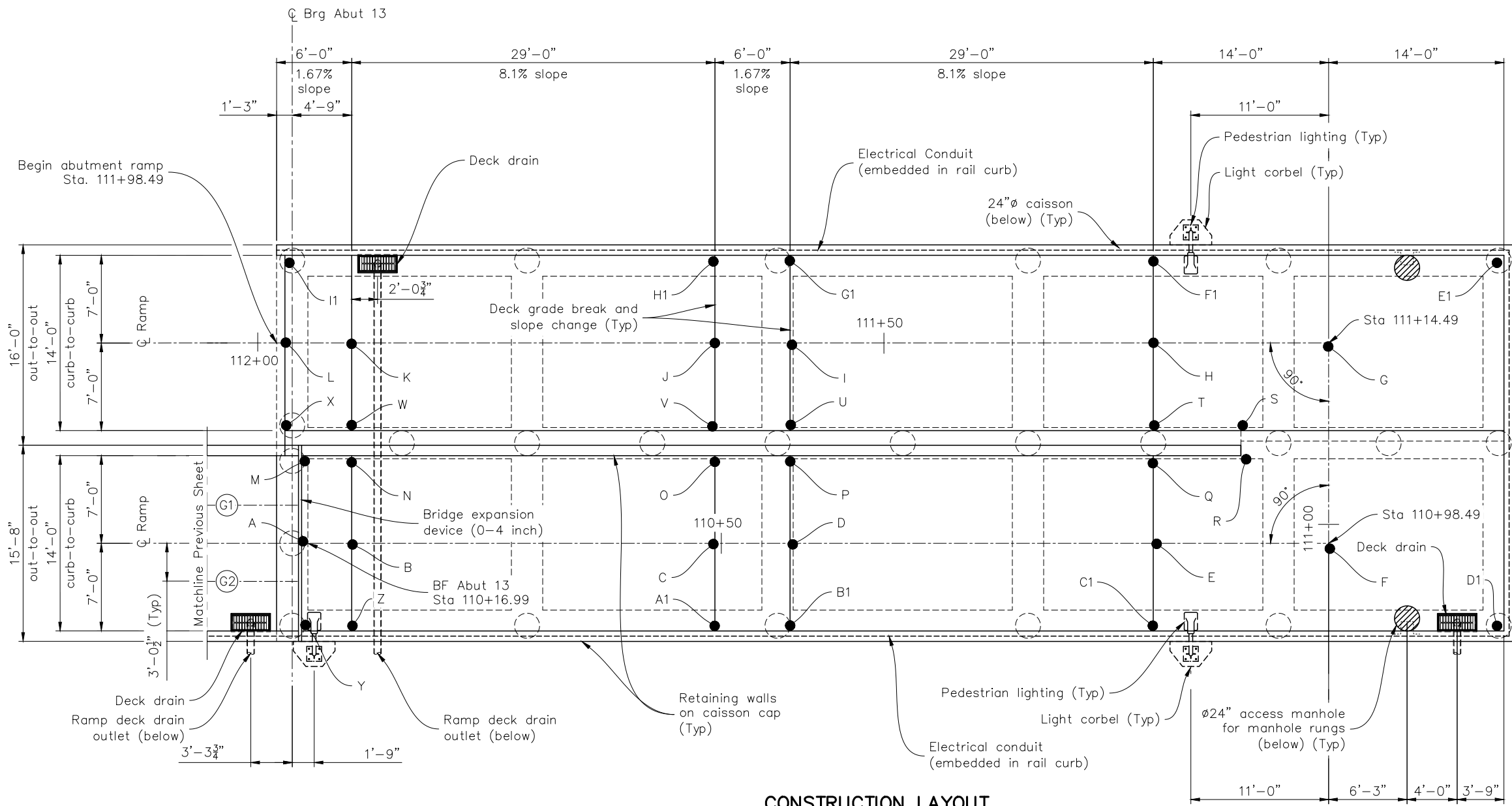
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 Region 1 - South Program NJB

As Constructed
No Revisions:
Revised:
Void:

Lone Tree Mobility Hub East Ramp to I-25 Overcrossing Construction Layout (1 of 2)			
Designer:	J. Migliaccio	Structure Numbers	F-17-QX
Detailer:	J. Migliaccio	Subset Sheets:	R50 of XX
Sheet Subset: East Ramp			

Project No./Code
267 0252-499
24278

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**CONSTRUCTION LAYOUT**

**ABUTMENT RAMP DECK SPOT ELEVATIONS**

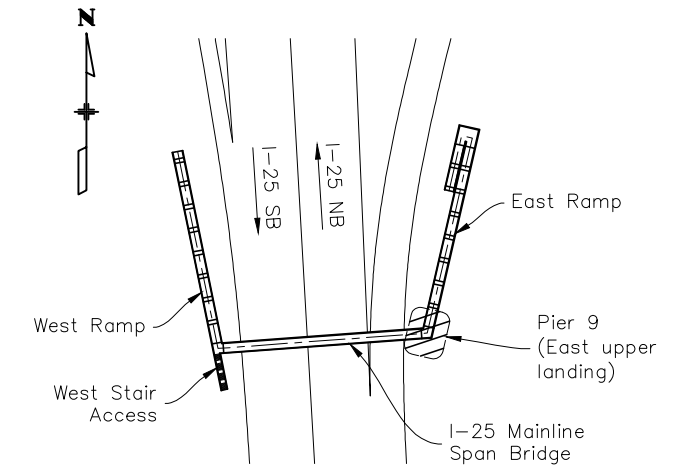
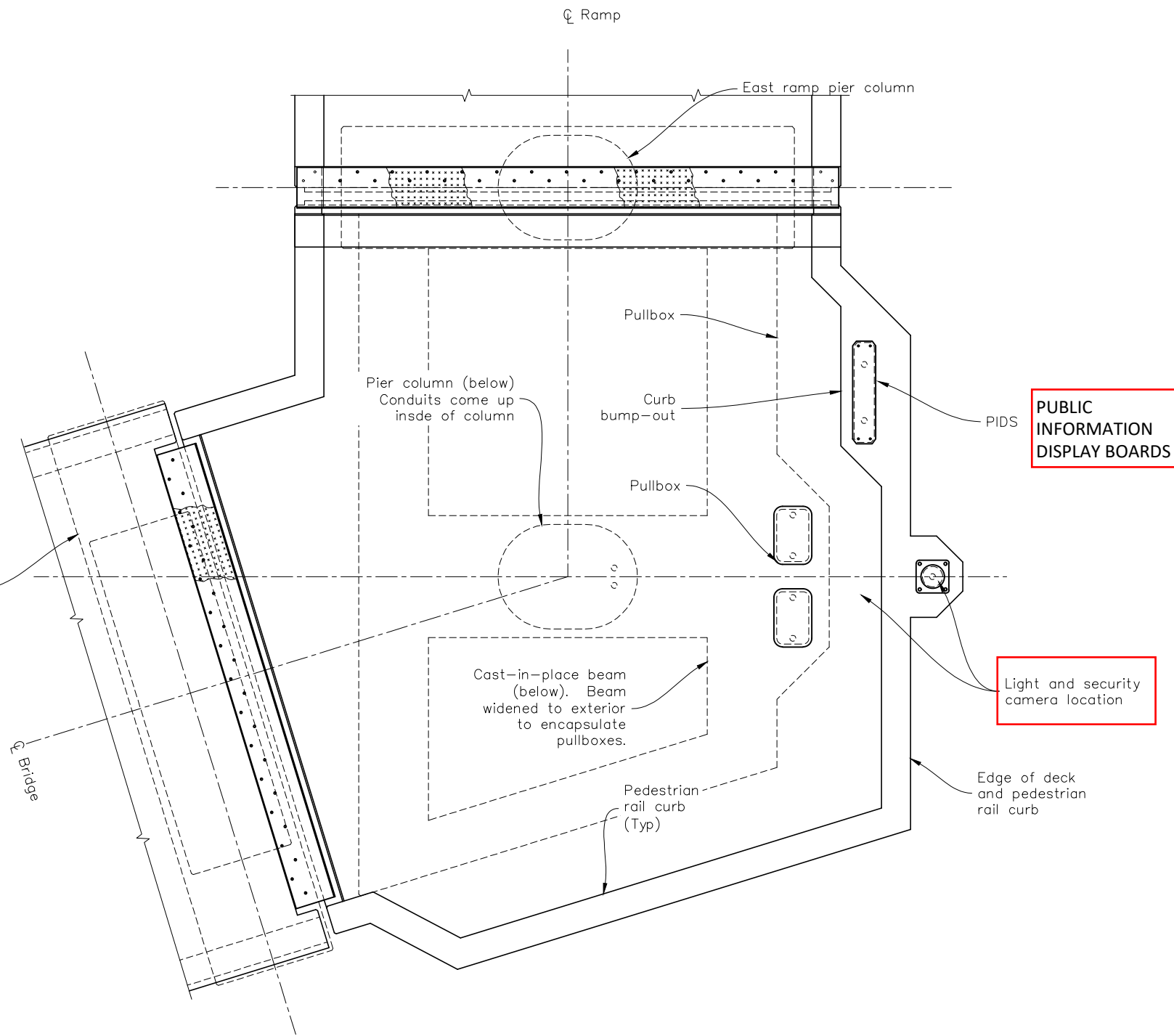
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	Date:	Comments	Init.																
 <b>San Engineering LLC</b> Civil and Structural Engineering	<b>Region 1 - South Program</b> <b>NJB</b>	Sheet Subset: East Ramp	Subset Sheets: R51 of XX																

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**RAMP KEY PLAN**


**Pier 9 – CONCEPT STRUCTURAL SKETCH FOR ITS INFRASTRUCTURE**

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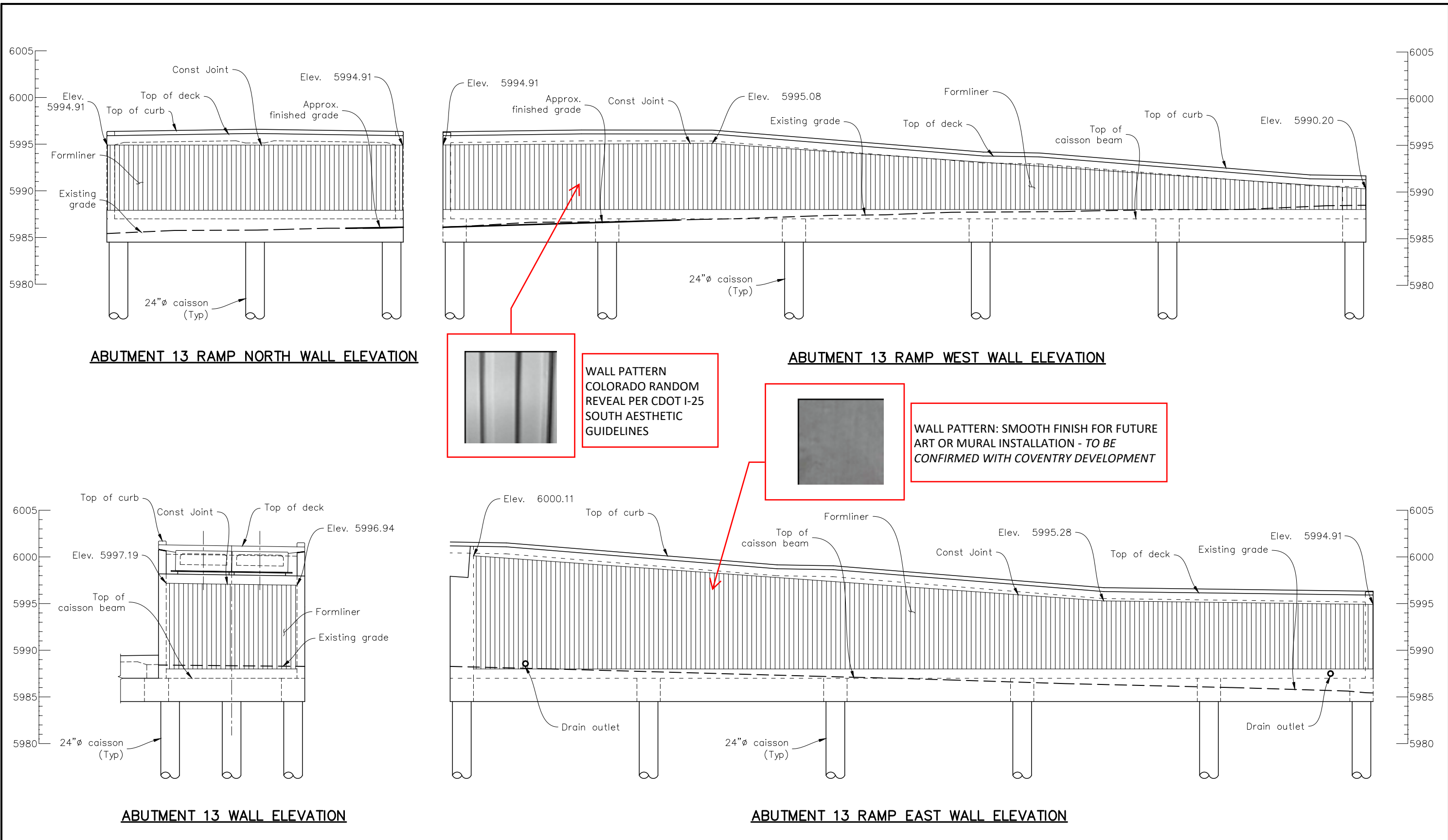
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No Revisions:
Revised:
Void:

Lone Tree Mobility Hub  
 East Ramp to I-25 Overcrossing  
 Designer: J. Migliaccio  
 Detailer: J. Migliaccio  
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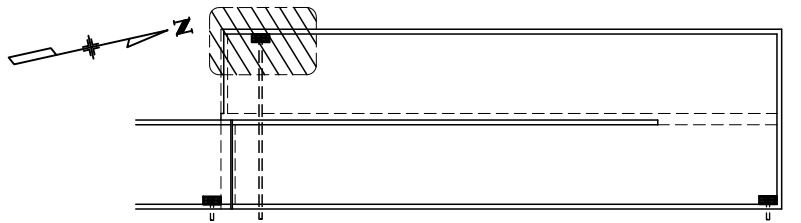
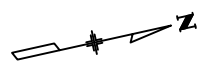
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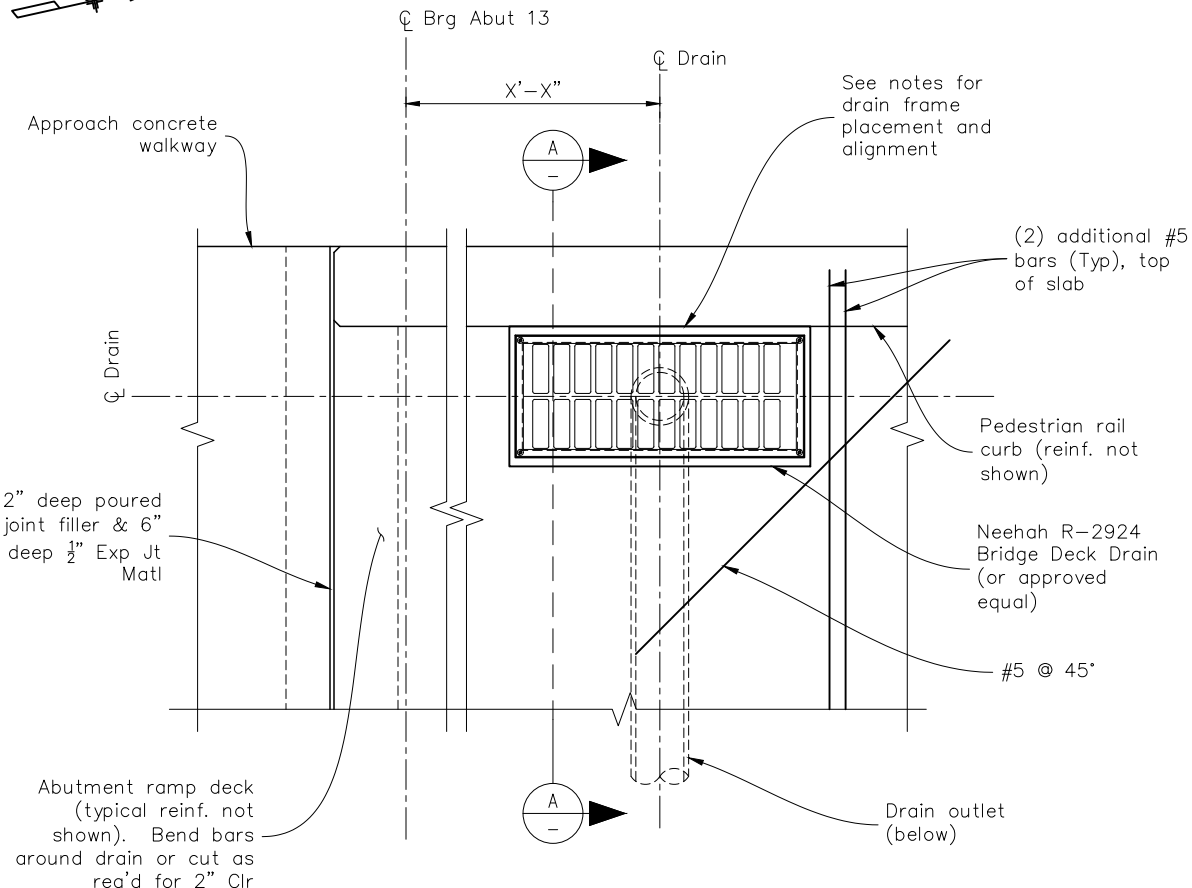
INITIALS	DESIGN	DATE	DETAIL	DATE	QUANTITY	DATE
By						
Checked By						

All seals for this set of drawings are applied to the cover page(s)	Print Date: 5/10/2024 File Name: LTMH East Ramp.dgn Horiz. Scale: As Noted    Vert. Scale: As Noted Unit Information: JT	<b>Sheet Revisions</b> <table border="1"> <thead> <tr> <th>Date:</th> <th>Comments</th> <th>Init.</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	Init.										<b>Colorado Department of Transportation</b> 18500 E. Colfax Ave. Aurora, CO 80111 Phone: (303) 746-8639 <b>Region 1 - South Program</b>	<b>As Constructed</b> No Revisions: Revised: Void:	<b>Lone Tree Mobility Hub</b> <b>East Ramp to I-25 Overcrossing</b> <b>Abut 13 Ramp Wall Elev</b> Designer: J. Migliaccio Detailer: J. Migliaccio Sheet Subset: East Ramp	<table border="1"> <tr> <td>Structure Numbers</td> <td>F-17-QX</td> </tr> <tr> <td>Subset Sheets:</td> <td>R68 of XX</td> </tr> </table>	Structure Numbers	F-17-QX	Subset Sheets:	R68 of XX	<b>Project No./Code</b> 267 0252-499 24278
	Date:	Comments	Init.																				
Structure Numbers	F-17-QX																						
Subset Sheets:	R68 of XX																						
<b>San Engineering LLC</b> Civil and Structural Engineering	<b>Region 1 - South Program</b>	<b>NJB</b>	Designer: J. Migliaccio Detailer: J. Migliaccio Sheet Subset: East Ramp	Structure Numbers: F-17-QX Subset Sheets: R68 of XX	Project No./Code: 267 0252-499 24278																		

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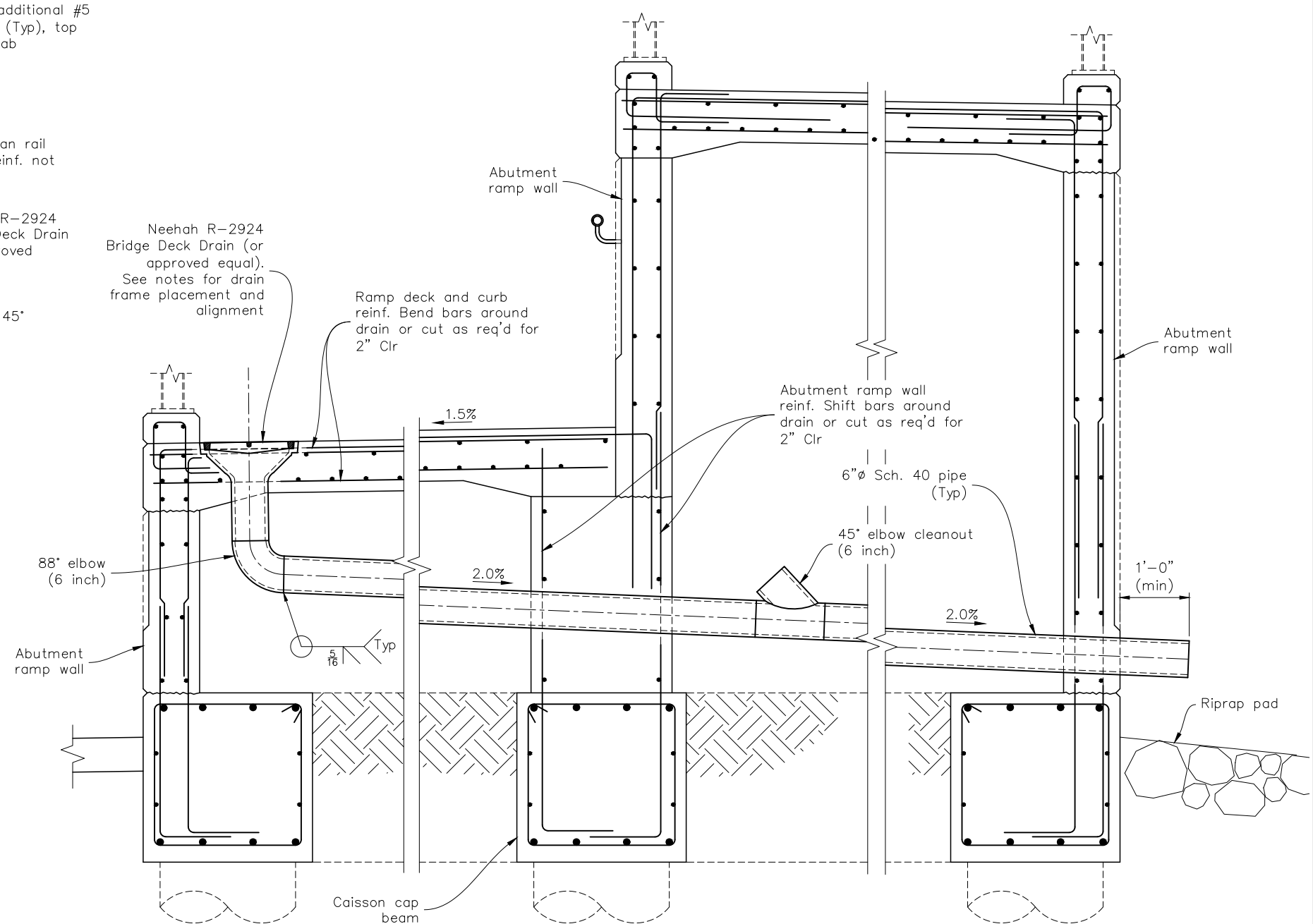
**RAMP DRAIN KEY PLAN**



**ABUTMENT RAMP DRAIN PLAN**

**ABUTMENT RAMP DRAIN NOTES:**


1. The drain assembly shall be installed on grade, parallel to the cross-slope and grade of the abutment ramp where located.
2. If topping materials are to be placed above concrete deck, set drain grate above deck accordingly to result in a flush condition adjacent to the topping material.
3. The deck drain frame shall be set flush with the faces of rail curb. Grate shall be removable in final condition.
4. All materials shall be hot-dipped galvanized.
5. Contractor may submit alternative configurations for closed bridge deck drain system to be reviewed by the engineer prior to installation.
6. Bridge deck drain and closed deck drain system shall be paid for as 513-00690 Bridge Drain (Special) and shall include grate, pipe, elbows, cleanouts, pipe supports and all other appurtenances.




**ABUTMENT RAMP DRAIN SECTION**

INITIALS	DESIGN DATE	DETAIL DATE	QUANTITY DATE
By			
Checked By			

All seals for this set of drawings are applied to the cover page(s)

Print Date: 5/10/2024  
 File Name: LTMH East Ramp.dgn  
 Horiz. Scale: As Noted Vert. Scale: As Noted  
 Unit Information JT  


Sheet Revisions		
Date:	Comments	Init.

**Colorado Department of Transportation**  
 18500 E. Colfax Ave.  
 Aurora, CO 80111  
 Phone: (303) 746-8639  
  
**Region 1 - South Program** NJB

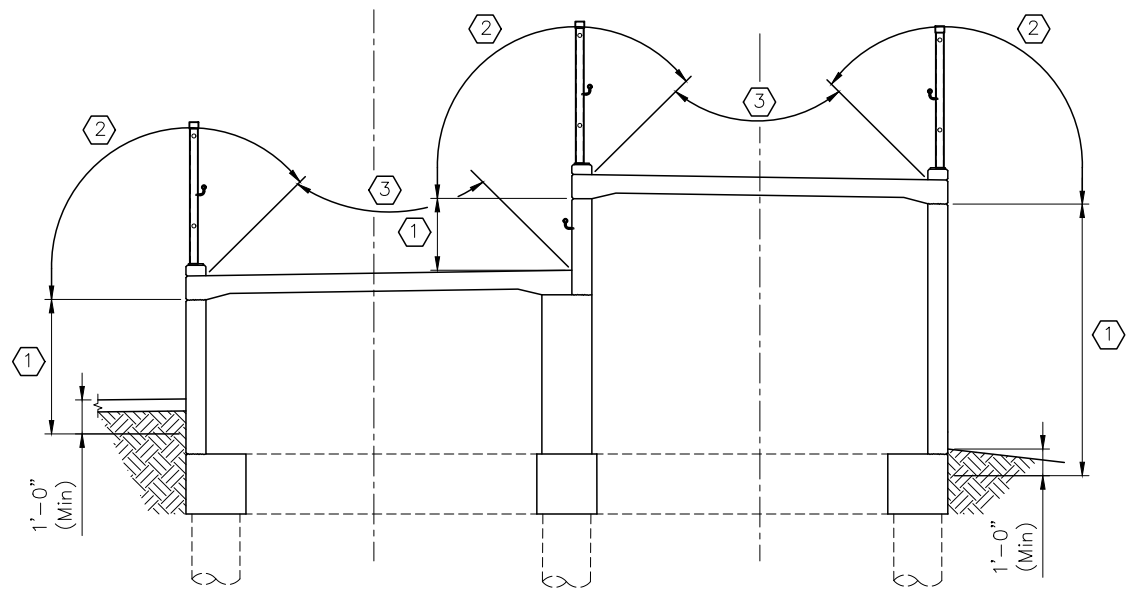
<b>As Constructed</b>
No Revisions:
Revised:
Void:

<b>Lone Tree Mobility Hub</b>			
<b>East Ramp to I-25 Overcrossing</b>			
<b>Abut Ramp Drain Details (2 of 2)</b>			
Designer:	J. Migliaccio	Structure Numbers	F-17-QX
Detailer:	J. Migliaccio	Subset Sheets:	R82 of XX

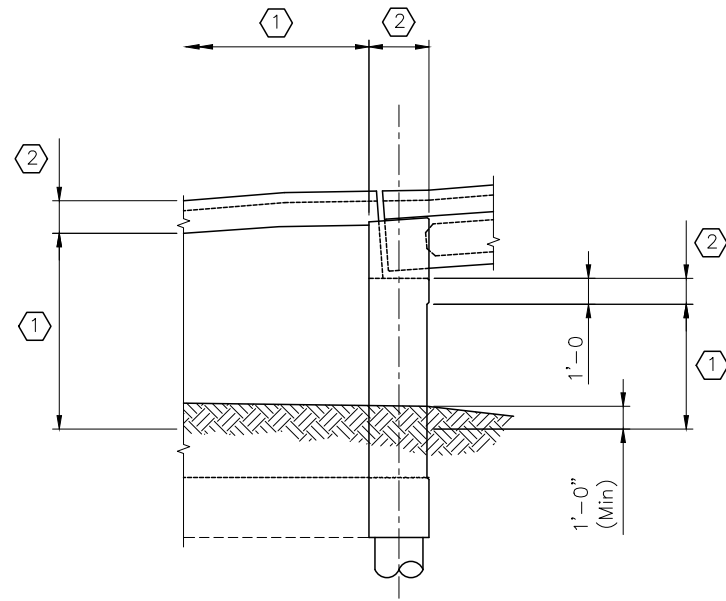
<b>Project No./Code</b>
267 0252-499
24278

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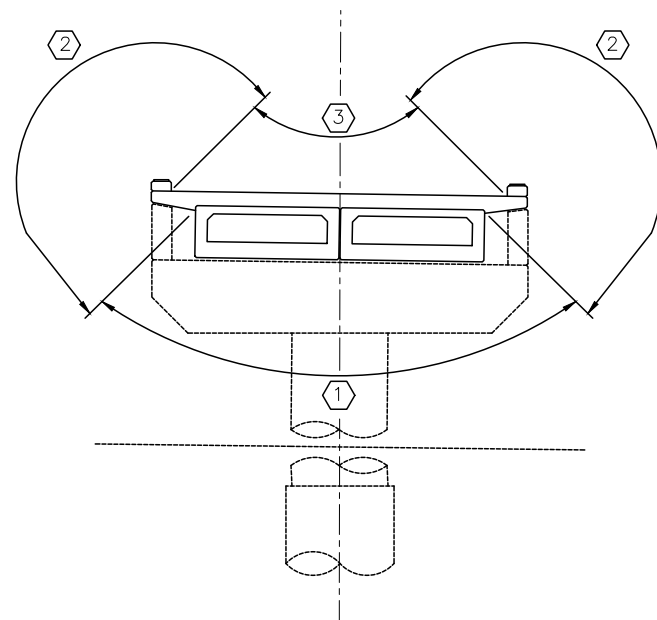




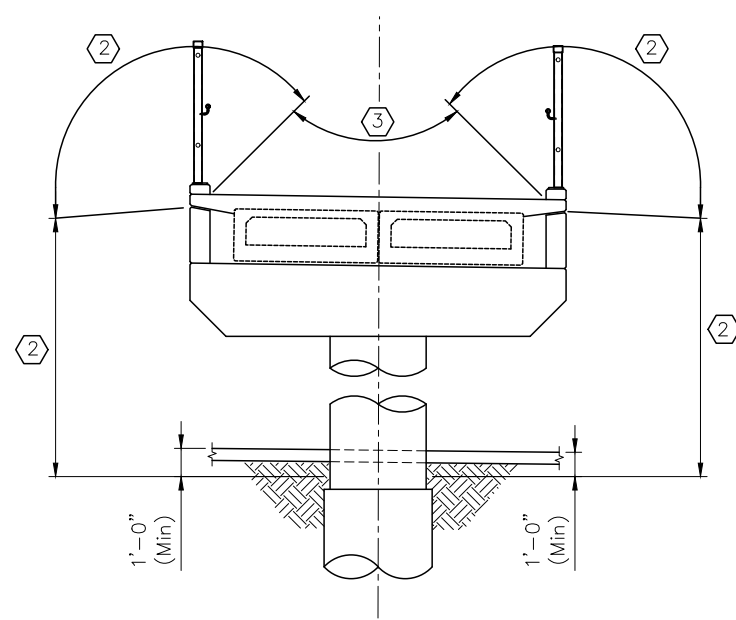
**COATING LIMITS AT ABUTMENT RAMP**



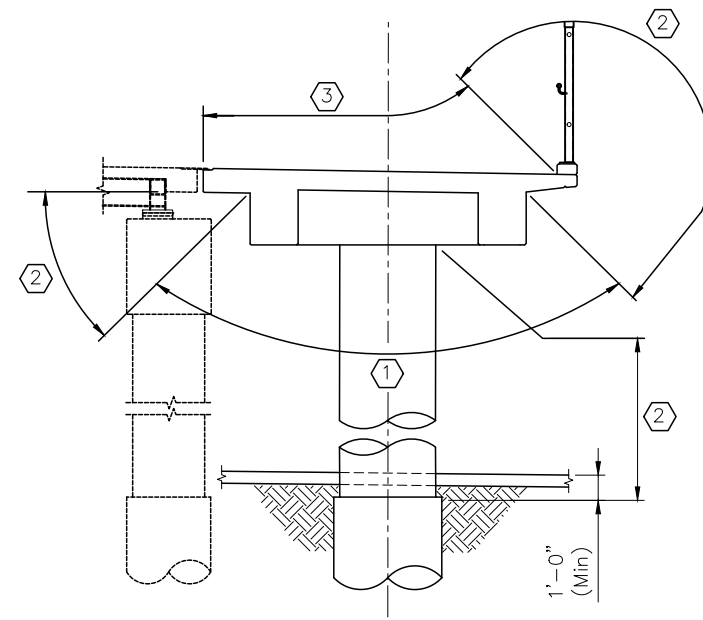
**COATING LIMITS AT ABUTMENT**



**COATING LIMITS AT BRIDGE SPANS**



**COATING LIMITS AT TYPICAL PIERS**



**COATING LIMITS AT Pier 8**

**KEY NOTES**

- ① Limits of dark colored Structural Concrete Stain include all exposed portions (to 1'-0" below finished grade) of the ramp walls, grade beams and girders as shown. The color shall be Federal Standard 20140
- ② Limits of light colored Structural Concrete Stain include all exposed portions of the abutments, decks, curbs, piers, cheek walls, and precast stair exterior as shown. The color shall be Federal Standard 20219
- ③ A concrete sealer shall be applied to the exposed portions of abutment ramp deck, bridge deck, pier decks, and stair tread and risers as shown.

INITIALS	DESIGN	DATE	DETAIL	DATE	QUANTITY	DATE
By						
Checked By						

All seals for this set of drawings are applied to the cover page(s)

Print Date: 6/4/2024  
 File Name: LTMH East Ramp.dgn  
 Horiz. Scale: As Noted Vert. Scale: As Noted  
 Unit Information JT



**Sheet Revisions**

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Colorado Department of Transportation



18500 E. Colfax Ave.  
 Aurora, CO 80111  
 Phone: (303) 746-8639

Region 1 - South Program

NJB

As Constructed

No Revisions:

Revised:

Void:

Lone Tree Mobility Hub  
 East Ramp to I-25 Overcrossing  
 Sealer and Stain Coating Limits

Designer: J. Migliaccio

Detailer: J. Migliaccio

Sheet Subset: East Ramp

Structure Numbers

F-17-QX

Subset Sheets: RE43 of 44

Project No./Code

267 0252-499

24278

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### GENERAL NOTES

All work shall be done in accordance with the Colorado Department of Transportation 2023 Standard Specifications for Road and Bridge Construction.

Structure excavation and backfill shall be as shown on the plans.

Expansion joint material shall meet AASHTO Specification M213.

All exposed concrete surfaces shall receive a Class 2 final finish to one foot below the ground line.

Deck concrete shall receive a final transverse broom finish.

A colored Structural Concrete Coating finish will be required as shown on the plans and on all exposed concrete surfaces to 2 feet below finished ground. The color shall be Brown, equivalent to AMS-STD-595 Color No. 20119, and shall be selected from test panels provided by the Contractor.

All structural steel not otherwise noted shall be painted in accordance with Section 509 of the Specifications. The color shall be Black, equivalent to AMS-STD-595 Color No. xxxx.

All plate steel and angle members shall be ASTM A572, Gr. 50 unless otherwise noted.

All rectangular HSS shall be ASTM A500, Gr B.

All bolts shall ASTM F3125, Gr. A325 (Type 1). Provide heavy hex nut, structural washer (Type 1), and DTI washer for each bolt. All pins shall be ASTM A668, Class F. All clevises shall be ASTM A668, Class A.

Field welding of any kind shall not be permitted on the steel superstructure.

Grade 60 reinforcing steel is required.

All reinforcing steel shall be epoxy coated unless otherwise noted.

Ⓝ denotes non-coated reinforcing steel.

The Contractor shall be responsible for the stability of the structure during construction.

Permanent Steel Deck Forms are required.

For structure number installation, see Standard S-614-12.

Stations, Elevations, and Dimensions contained in these plans are calculated from a recent field survey. The Contractor shall verify all dependent dimensions in the field before ordering or fabricating any material.

All longitudinal and transverse dimensions are measured horizontally and include no correction for grade.

The information shown on these plans concerning the type and location of underground utilities is not guaranteed to be accurate or all inclusive. The Contractor is responsible for making their own determination as to the type and location of underground utilities as may be necessary to avoid damage thereto. The Contractor shall contact the Utility Notification Center of Colorado at 811 (1-800-922-1987) at least 3 days (2 days not including the day of notification) prior to any excavation or other earthwork.

### DESIGN DATA

AASHTO LRFD Bridge Design Specifications, 9th Edition, 2020  
 AASHTO LRFD Guide Specifications for the Design of Pedestrian Bridges, 2nd Edition, 2009  
 AASHTO LRFD Specification for Structural Supports for Highway Signs, Luminaires, and Traffic Signals  
 AISC Steel Construction Manual, 16th Edition, 2023.  
 AISC Hollow Structural Section Connections, 2nd Edition, 2024.

Design Method: Load and Resistance Factor Design

Pedestrian Live Load: 90 psf  
 Vehicular Live Load: H-5 Truck (No Impact)  
 Dead Load: Assumes 5 psf for permanent deck forms

**Reinforced Concrete:**  
 Class D Concrete:  $f'c = 4,500$  psi  
 Reinforcing Steel:  $f_y = 60,000$  psi

**Drilled Shaft Concrete:**  
 Class BZ Concrete:  $f'c = 4,000$  psi  
 Reinforcing Steel:  $f_y = 60,000$  psi

**Structural Steel:**  
 ASTM A572 Grade 50  $f_y = 50,000$  psi  
 ASTM A500 Grade C  $f_y = 50,000$  psi  
 ASTM A36  $f_y = 36,000$  psi

### BRIDGE DESCRIPTION

Two-simple span (130'-0", 160'-0") bridge  
 Enclosed steel through-truss and steel tied-arch  
 Pedestrian path over I-25  
 14'-0" walkway rail-to-rail  
 90° 00'00" skew  
 36" tall handrail

### ERECTION SEQUENCE

1. Construct trusses.
2. Install roof system.
3. Apply tension to arch tie rods.
4. Erect trusses.
5. Install hold-downs.
6. Erect arches.
7. Install hangers (do not tighten).
8. Place concrete deck.
9. Tighten hangers (snug fit).
10. Install glazing panels.

### LEGEND

- ⊙ XX ⊙ Section or Detail Identification
- ⊙ BXX ⊙ Cross reference drawing number  
(if blank, reference is to same sheet)
- Ⓝ Denotes keynote reference
- ⊙ DX ⊙ Denotes truss diagonal tension rod designation
- ⊙ HX ⊙ Denotes arch hanger tension rod designation
- ⊙ AX ⊙ Denotes arch tension rod designation



CONCEPTUAL RENDERING

INITIALS	DESIGN	DATE	DETAIL	QUANTITY	DATE

All seals for this set of drawings are applied to the cover page(s)	Print Date: 5/10/2024	Sheet Revisions			Colorado Department of Transportation  18500 E. Colfax Ave. Aurora, CO 80011 Phone: (303) 746-8639 Fax: N/A Region 1-South Program	As Constructed No Revisions: Revised: Void:	<b>I-25 MOBILITY HUB (LONE TREE) PEDESTRIAN BRIDGE</b>		Project No./Code
	File Name: 24278-RSH-HW-025A-ST-DR-GNNT.dgn	Date:	Comments:	Init.			267 0252-499		
	Horiz. Scale: 1"=XX' Vert. Scale: As Noted						24278		
	Unit Information: JT								
						NB	<b>GENERAL INFORMATION</b>		
Near: Lone Tree      Sec. 10    Township 6S    Range 67W							Station 105+00.26 to Station 107+90.26		

**SUMMARY OF QUANTITIES**

ITEM NO.	DESCRIPTION	UNIT	SUPER-STRUCTURE	PIER 6	PIER 7	PIER 8	TOTAL
206-00000	Structure Excavation	CY		40	40	40	120
206-00200	Structure Backfill (Class 2)	CY		29	29	29	87
503-00036	Drilled Shaft (36 Inch)	LF		80	80	80	240
509-00000	Structural Steel	LB	263500				263500
512-00101	Bearing Device (Type I)	EACH		2	4	2	8
514-00100	Hand Rail	LF	585				585
513-00600	Bridge Drain	EACH		2		2	4
601-03040	Concrete Class D (Bridge)	CY	68	35	38	35	176
601-40300	Structural Concrete Coating	SY		72	76	72	220
602-00020	Reinforcing Steel (Epoxy Coated)	LB	9634	6350	6783	6350	29117
613-00200	2 Inch Electrical Conduit	LF	308	32	32		372
618-00005	Prestressing Steel Bar	MKFT	27				27
① 622-XXXX	Glazing Panels	SF	4824				4824
② 622-XXXX	Standing Seam Metal Roofing	SF	4532				4532

ITEM NUMBERS TBD

**KEY NOTES**

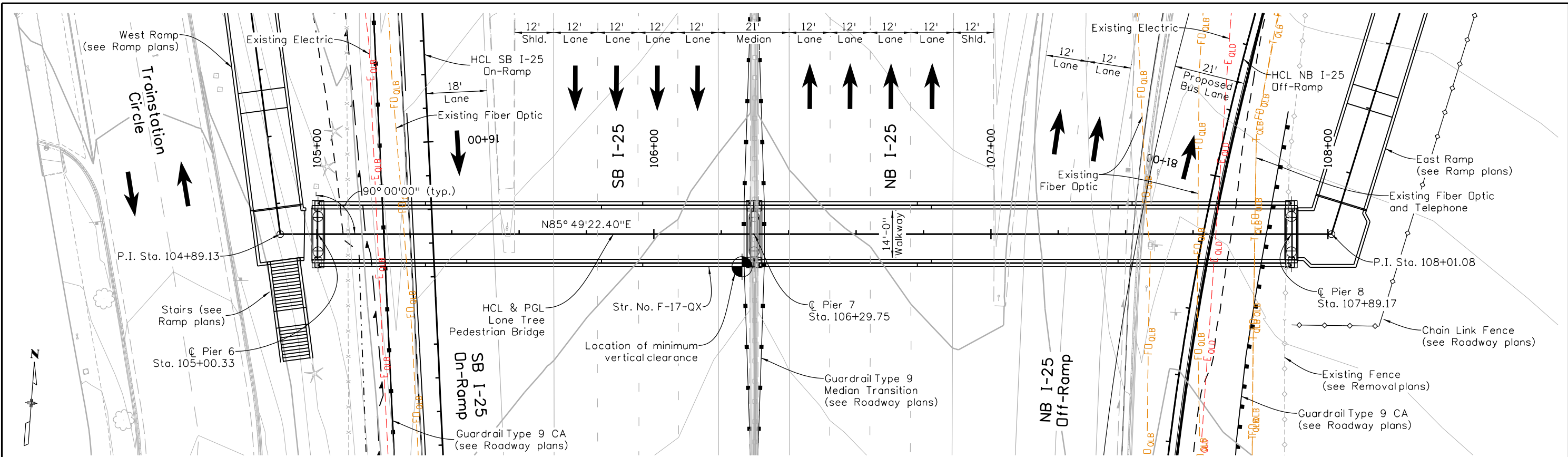
- ① Cost of Glazing Panels includes fabrication and installation of glazing frames, glazing panels, bolts, nuts, washers, and any other miscellaneous items required for installation.
- ② Cost of Standing Seam Metal Roofing includes design, fabrication, and installation of standing seam metal roofing.

INITIALS	DESIGN	DATE	DETAIL	DATE	QUANTITY	DATE
Designed By						
Checked By						

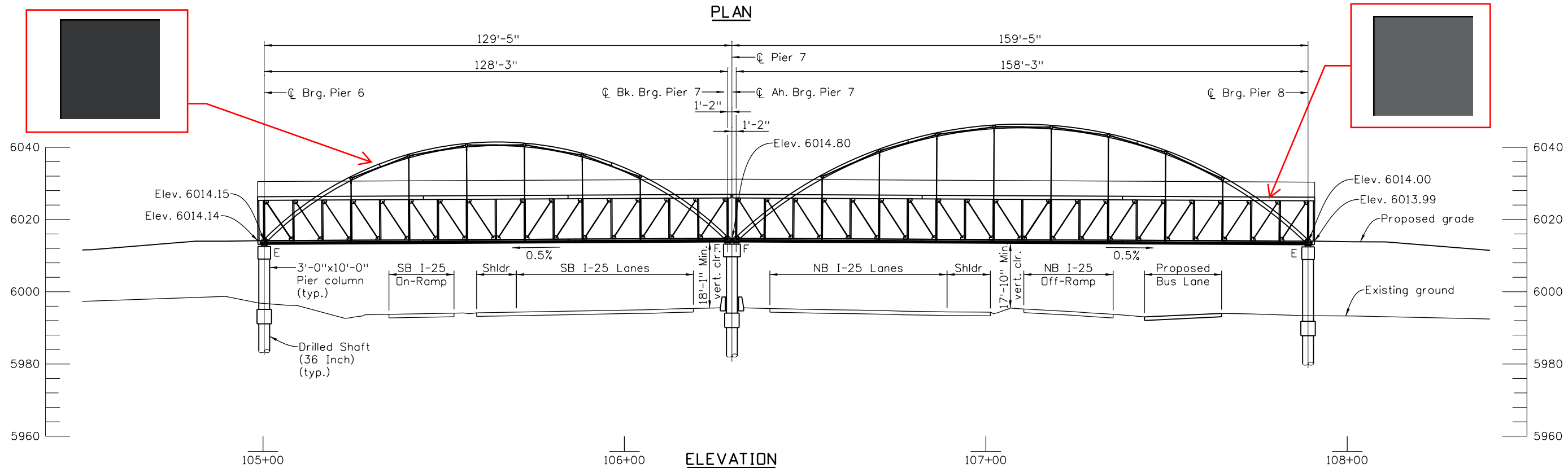
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	Date:	Comments	Init.																			
Designer: M. PATTON    Structure Numbers: F-17-QX		Detailer: M. WELCH		Sheet Subset: BRIDGE    Subset Sheets: B02 of 036																		
NB		Region 1-South Program		NB																		
All seals for this set of drawings are applied to the cover page(s)		RS&H		NB																		



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PLAN



ELEVATION

(Elev. numbers shown taken at HCL Lone Tree Pedestrian Bridge)

INITIALS	DESIGN	DATE	DETAIL	DATE	QUANTITY	DATE
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	Checked By					

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Print Date: 6/11/2024
File Name: 24278-RSH-HW-025A-ST-DR-GNLY.dgn
Horiz. Scale: 1"=XX' Vert. Scale: As Noted
Unit Information JT
<b>RS&amp;H</b>

Sheet Revisions		
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Colorado Department of Transportation

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Aurora, CO 80011  
Phone: (303) 746-8639  
Fax: N/A

Region 1-South Program

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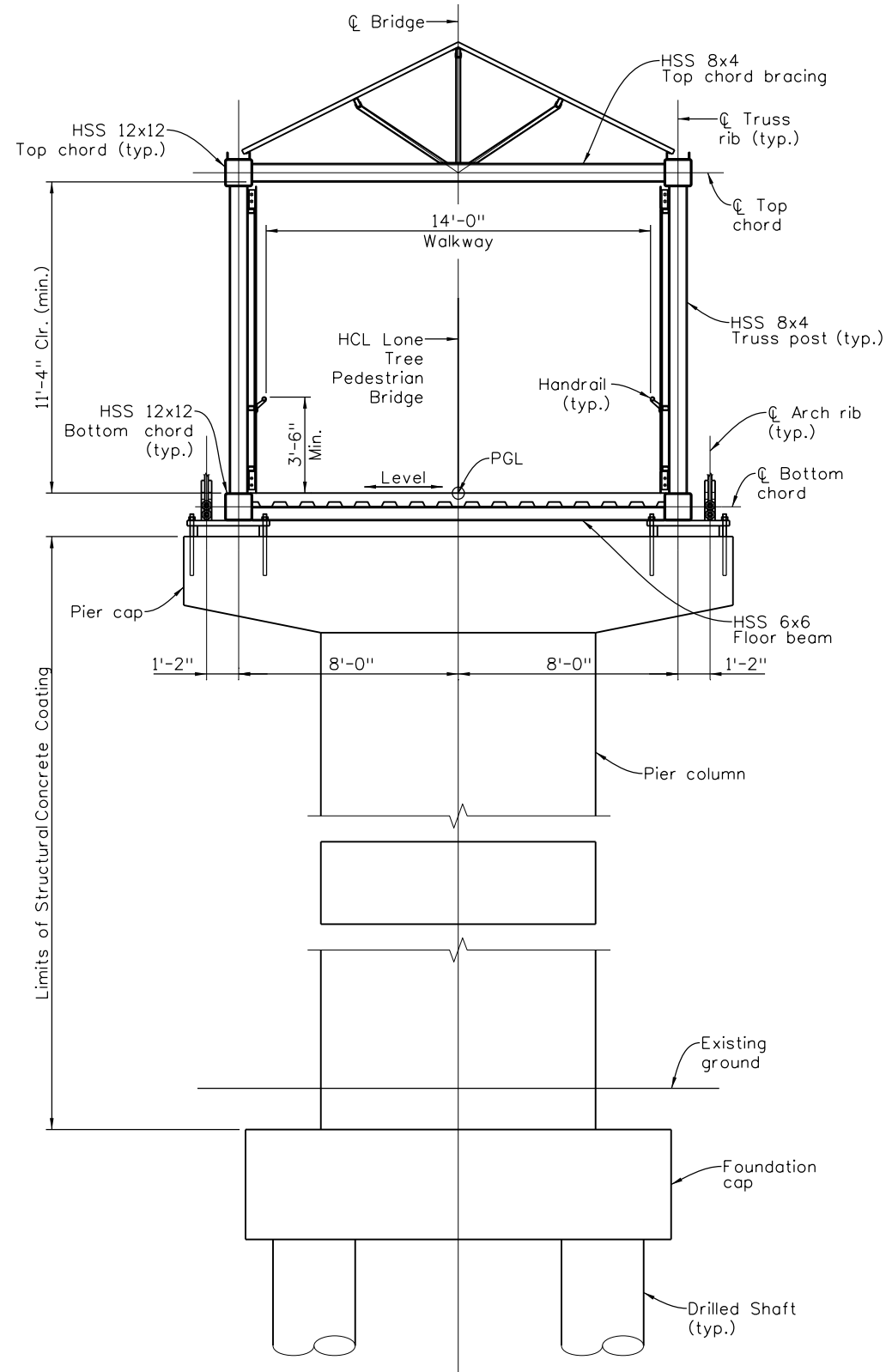
I-25 MOBILITY HUB (LONE TREE) PEDESTRIAN BRIDGE GENERAL LAYOUT			
Designer:	M. PATTON	Structure Numbers	F-17-QX
Detailer:	M. WELCH	Subset Sheets:	B03 of 036
Sheet Subset:	BRIDGE		

Project No./Code	267 0252-499
	24278

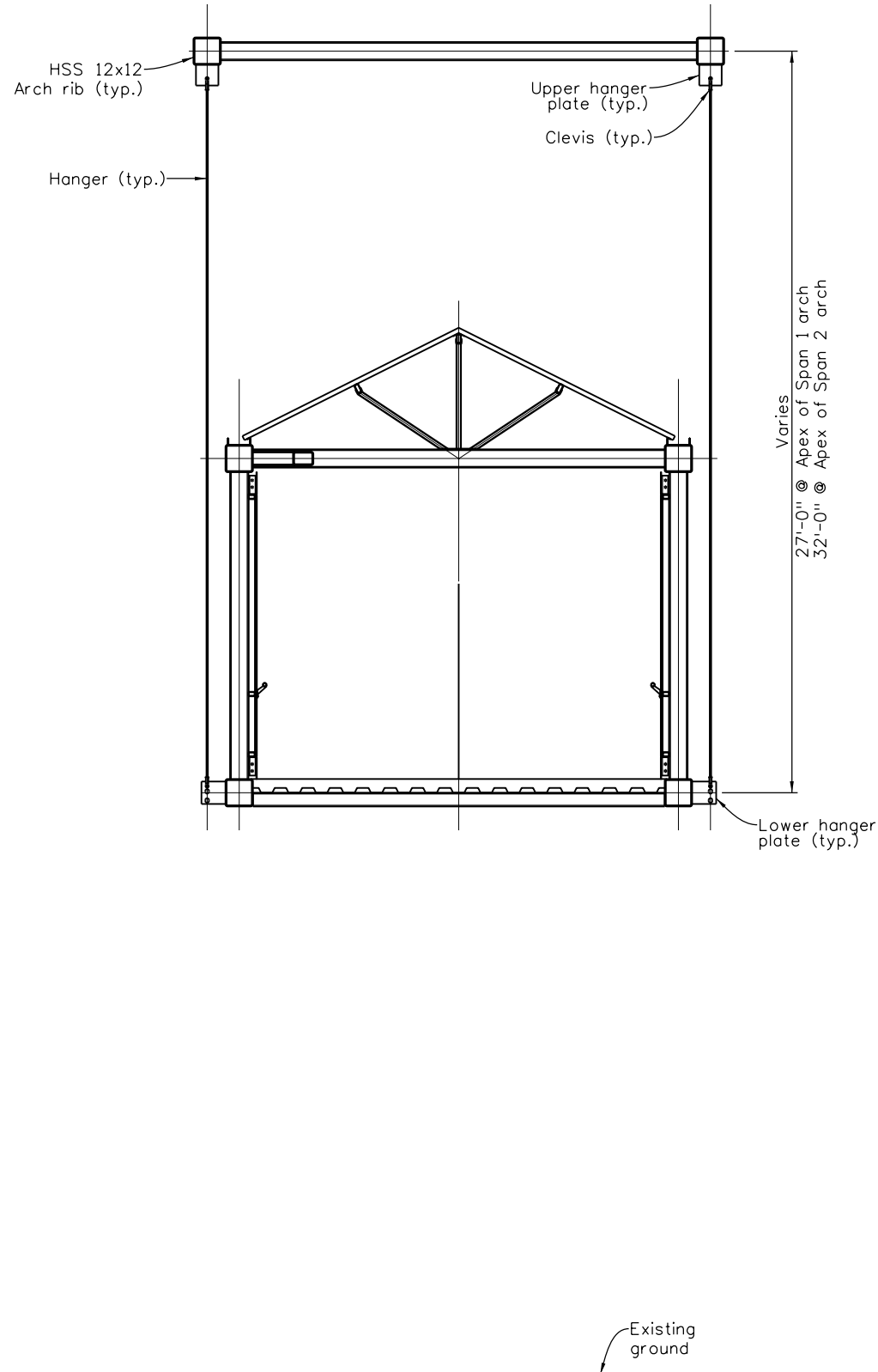
24278 - I-25 MOBILITY HUB (SKY RIDGE @ LONE TREE) - FOR - 06/11/2024

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INITIALS	DESIGN	DATE	DETAIL	DATE	QUANTITY	DATE



**TYPICAL SECTION AT PIER**



**TYPICAL SECTION AT MID-SPAN**  
(Similar to Typical Section at Pier except as shown)

All seals for this set of drawings are applied to the cover page(s)

Print Date: 5/10/2024  
 File Name: 24278-RSH-HW-025A-ST-DR-TPSC.dgn  
 Horiz. Scale: 1"=XX' Vert. Scale: As Noted  
 Unit Information JT



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 18500 E. Colfax Ave.  
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 Phone: (303) 746-8639  
 Fax: N/A  
 Region 1-South Program **NB**

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No Revisions:
Revised:
Void:

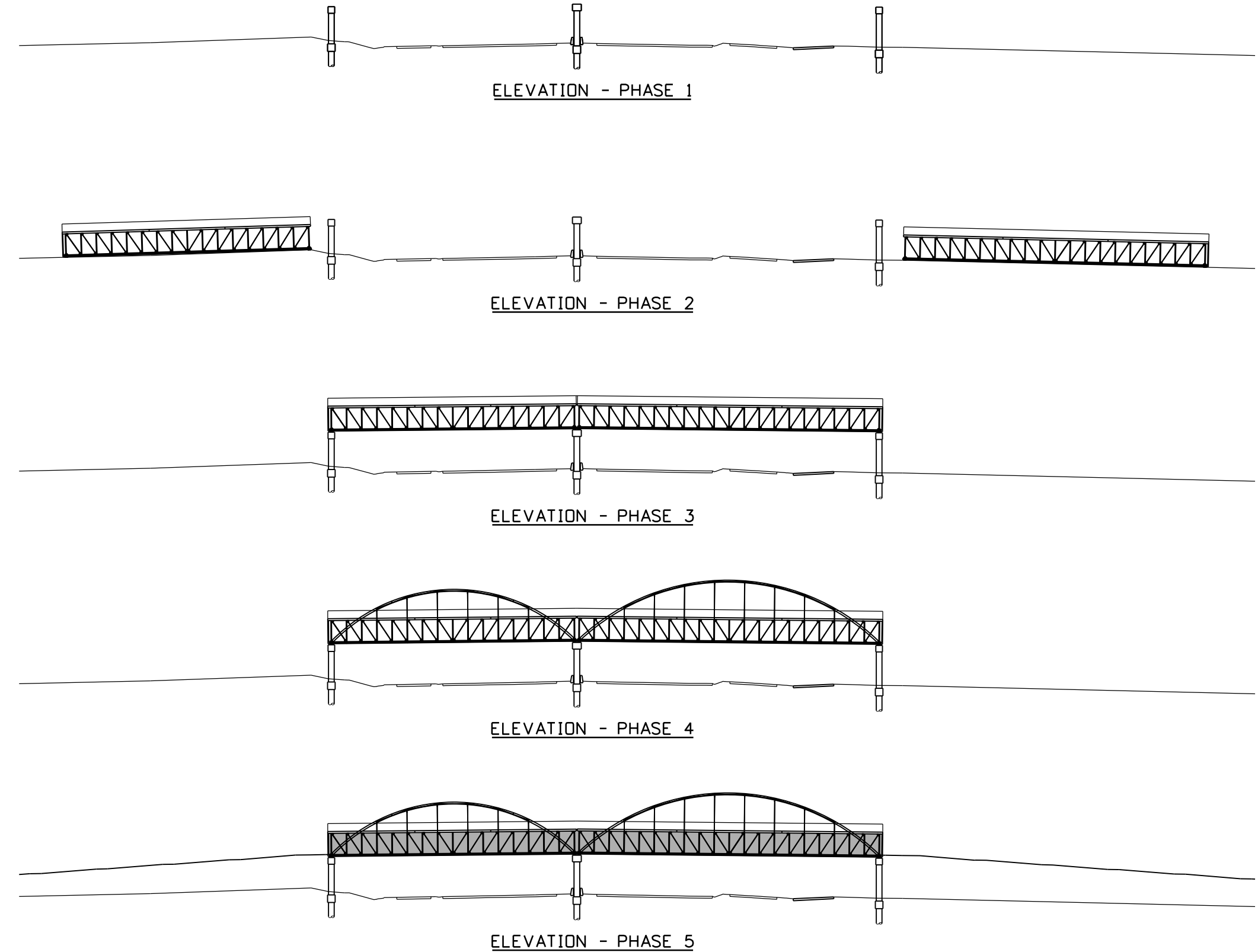
**I-25 MOBILITY HUB (LONE TREE) PEDESTRIAN BRIDGE TYPICAL SECTION**

Designer:	M. PATTON	Structure Numbers	F-17-QX
Detailer:	M. WELCH	Sheet Subset:	BRIDGE
Subst Sheets:		B04 of 024	

Project No./Code  
 267 0252-499  
 24278

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INITIALS	DESIGN	DATE	DETAIL	DATE	QUANTITY	DATE
	Designed By					
	Checked By					



**Phase 1**

Construct drilled shafts, grade beams, pier columns, and pier caps.

**Phase 2**

Connect truss segments.  
Install roof supports and standing seam roof.  
Apply tension load to tension ties. See Tension Tie Data Table.

**Phase 3**

Erect trusses. See Lifting Location Table for lifting locations.  
Install hold-downs at bearing plates.

**LIFTING LOCATION TABLE**

Span	Element	Panels
1	Truss	3, 16
2	Arch	7, 13
1	Truss	21, 37
2	Arch	26, 32

**Phase 4**

Connect arch segments.  
Erect arches. See Lifting Location Table for lifting locations.  
Install clevises and hanger rods at bottom of arches. Do not install clevises at bottom chord.

**Phase 5**

Install steel cover plates at deck joints.  
Place deck concrete.  
Install clevises at bottom chord and turnbuckles and hanger rods at bottom of hanger. Tighten turnbuckles to snug tight.  
Install steel glazing panel frames and glazing panels.  
Grout anchor bolts.  
After grout reaches 0.8\*f'c, remove hold-downs.

All seals for this set of drawings are applied to the cover page(s)

Print Date: 6/11/2024  
 File Name: 24278-RSH-HW-025A-ST-DR-ERSQ.dgn  
 Horiz. Scale: 1"=XX' Vert. Scale: As Noted  
 Unit Information: JT  
**RS&H**

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation  
 18500 E. Colfax Ave.  
 Aurora, CO 80011  
 Phone: (303) 746-8639  
 Fax: N/A  
**CDOT**  
 Region 1-South Program NB

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No Revisions:
Revised:
Void:

**I-25 MOBILITY HUB (LONE TREE) PEDESTRIAN BRIDGE SUGGESTED ERECTION SEQUENCE**

Designer:	M. PATTON	Structure Numbers	F-17-QX
Detailer:	M. WELCH	Subset Sheets:	B05 of 036

Project No./Code	267 0252-499
	24278

24278 - I-25 MOBILITY HUB (SKY RIDGE @ LONE TREE) - FOR - 06/11/2024





**Lamb-Star Engineering**  
 1440 Brickyard Rd  
 Unit 3  
 Golden, CO 80403  
 (720) 547-5222

## Summary of Test Hole Information and Coordinates

<b>Project Name:</b> CDOT R1 Lone Tree Mobility Hub	<b>General Location:</b> I-25 & Sy Ridge Avenue	<b>Field Manager:</b> T. Harris
<b>Client Name:</b> RS&H		<b>Technicians:</b> RW EC ZP
<b>Client Proj. No.:</b> 10244875000		<b>Vacuum Excavation Truck/Trailer:</b> 1528
<b>LSE Proj. No.:</b> B201662.01	<b>City/Town:</b> Lone Tree <b>County:</b> Douglas <b>State:</b> Colorado	<b>Designating Truck:</b> 5558, 6536

Test Hole #	Owner	Utility Size, O.D. (Inches)	Utility Material (Refer to Legend)	Utility Type (Refer to Legend)	Depth to Top of Utility (Feet)	Cross Sectional View	General Utility Direction	Surface Type and Thickness (Inches) C - Concrete AC - Asphalt NG - Nat. Grd	ID'd By: 1: 5/8" Iron Rod/Cap 2: Nail/Disk 3: X'in Conc.	Date Test Hole Excavated	Utility Observed (Yes or No)	Survey Point #	Northing (Y)	Easting (X)	Surface Elevation (Z)	Top of Utility Elevation	Test Hole Notes
01	XCEL	6"	PE	E	5.47	○	↔	NG N/A	5/8"IR W/ CAP	4/17/2024	YES	141024	1620614.89	3179110.56	5984.08	5978.61	
02	CDOT	2.5"	PE	E	3.10	○	↔	NG N/A	5/8"IR W/ CAP	4/17/2024	YES	141034	1620164.62	3179177.08	5991.62	5988.52	
03	Unknown	2-2.5"	PE	UNK	7.54	○○	↕	NG N/A	5/8"IR W/ CAP	4/15/2024	YES	141001	1620675.84	3179469.30	5978.36	5970.82	
04	Lumen	1-4" 1-1.5"	PVC DBC	FOC/BT	3.78	○○	↗	NG N/A	5/8"IR W/ CAP	4/15/2024	YES	140992	1620440.10	3179526.45	5984.73	5980.95	TH Marker placed at center of utilities. Depth measured at highest point of utilities.
05	Lumen	1-4" 1-1.5"	PVC DBC	FOC/BT	3.72	○○	↕	NG N/A	5/8"IR W/ CAP	4/15/2024	YES	140985	1620314.31	3179475.55	5987.98	5984.26	TH Marker placed at center of utilities. Depth measured at highest point of utilities.
06	Lumen	1-4" 1-1.5"	PVC DBC	FOC/BT	3.87	○○	↕	NG N/A	5/8"IR W/ CAP	4/15/2024	YES	140978	1620153.00	3179442.29	5991.96	5988.09	TH Marker placed at center of utilities. Depth measured at highest point of utilities.
07	CDOT/Douglas County	6.5"	PE	FOC	3.87	○	↕	C 15	"X" in CONC.	4/16/2024	YES	141013	1620126.59	3179409.15	5991.97	5988.10	
08	AT&T	20" W X UNK H	CONC	FOC	3.90	┌┐	↕	NG N/A	5/8"IR W/ CAP	4/16/2024	YES	141017	1620125.43	3179424.53	5993.05	5989.15	West edge of concrete duct bank
08A	AT&T	20" W X UNK H	CONC	FOC	3.93	┌┐	↕	NG N/A	5/8"IR W/ CAP	4/16/2024	YES	141018	1620125.44	3179426.08	5992.93	5989.00	East edge of concrete duct bank
09	CDOT/Douglas County	6.5"	PE	FOC	6.10	○	↕	NG N/A	5/8"IR W/ CAP	4/16/2024	YES	141010	1620004.95	3179418.48	5994.96	5988.86	
10	CDOT/Douglas County	6.5"	PE	FOC	5.00	○	↕	NG N/A	5/8"IR W/ CAP	4/15/2024	YES	140970	1619697.26	3179437.12	5997.01	5992.01	

**Notes:** COORDINATES SHOWN ARE SURFACE VALUES (COMBINED SCALE FACTOR OF 1.000337772) AND BASED ON THE COLORADO STATE PLANE COORDINATE SYSTEM, NAD-83 (2011) CENTRAL ZONE (502)  
 ELEVATIONS SHOWN ARE BASED ON THE NAVD-88 VERTICAL DATUM.

Utility Materials:		
STL - Steel	PVC - Polyvinyl Chloride	CSC - Concrete/Steel Cylinder
PE - Polyethylene	DBC - Direct Buried Cable	CMP - Corrugated Metal Pipe
AC - Transite	RCP - Reinforced Concrete Pipe	COP - Copper
CI - Cast Iron	VC - Vitrified Clay	CONC - Concrete Encased
DI - Ductile Iron	FG - Fiberglass	I - Iron

Utility Types:		
E - Electric	BT - Buried Telephone	TS - Traffic Signal
G - Gas	FOC - Fiber Optic Cable	FM - Force Main
W - Water	SAN - Sanitary Sewer	ITS - Intelligent Traffic Systems
PL - Pipe Line	STM - Storm Sewer	-
FL - Fuel Line	CTV - Cable Television	-

Prepared By:           KAN           Date:           4/16/2024           Checked by:           TAH           Date:           4/25/2024           Page:           1           of           1

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### LIGHTING AND ELECTRICAL LEGEND

- LP1-X TYPE 'LP1' NEW CITY OF LONE TREE OWNED LED PEDESTRIAN LUMINAIRE AT TRAILS.
- LP2-X TYPE 'LP2' NEW CDOT OWNED LED PEDESTRIAN LUMINAIRE AT BUS STOP.
- LP3-X TYPE 'LP3' NEW CDOT OWNED LED PEDESTRIAN LUMINAIRE AT PEDESTRIAN RAMP UP TO BRIDGE.
- LT-X TYPE 'LT' NEW CDOT OWNED PENDANT MOUNTED LED LUMINAIRE AT PEDESTRIAN BRIDGE.
- EXISTING LUMINAIRE
- LR-X LIGHT STANDARD TO BE REMOVED OR RESET ON NEW FOUNDATION.
- NEW SURFACE MOUNTED STAINLESS STEEL JUNCTION BOX
- HEAVY DUTY, TYPE TWO FLUSH IN GRADE POLYMER CONCRETE SPLICE BOX WITH ANSI TIER 22 RATED FOR INCIDENTAL DRIVE OVER
- NEW METER POWER PEDESTAL
- NEW LIGHTING CONTROL CENTER
- ITS CABINET LOCATION. REFER TO ITS PLANS
- NEW PAD MOUNTED TRANSFORMER
- EXISTING UNDERGROUND ELECTRICAL
- SURFACE MOUNTED CONDUIT TO UNDERDECK LIGHTS, SEE PLANS AND DETAILS FOR TYPE AND SIZE
- 2" PVC CONDUIT
- 3" PVC OR HDPE BORE
- EXPANSION FITTING FOR PVC CONDUIT TRANSITION ON BRIDGE STRUCTURE
- FLEXIBLE CONNECTION FOR PVC CONDUIT TRANSITION FROM BARRIER WALL TO 48" DEEP TRENCH AND COMPRESSION BACKFILL
- ELECTRICAL FEEDER TAG, REFER TO FEEDER SCHEDULE

### TABULATION OF APPROXIMATE QUANTITIES

CDOT PAY ITEM	DESCRIPTION	UNIT	QTY	NOTES
<del>202-00700</del>	<del>REMOVAL OF LIGHT STANDARD</del>	<del>EA</del>		
210-00750	RESET LIGHT STANDARD	EA		
613-01200	2 INCH ELECTRICAL CONDUIT (PLASTIC)			
613-01300	3 INCH ELECTRICAL CONDUIT (PLASTIC)		1400	
613-07002	TYPE TWO PULL BOX	EACH	4	
613-10000	WIRING	LS	1	
613-13006	LUMINAIRE (LED) (6,000 LUMENS)	EACH	8	4
613-30005	LIGHT STANDARD AND LUMINAIRE	EACH	26	1
613-30005	LIGHT STANDARD AND LUMINAIRE	EACH	5	2
613-30005	LIGHT STANDARD AND LUMINAIRE	EACH	12	3
613-40000	CONCRETE FOUNDATION	EACH	4	
613-40010	LIGHT STANDARD	EACH	31	
613-50106	LIGHT STANDARD (SPECIAL)	EACH	2	
613-50106	METER POWER PEDESTAL	EACH	1	
700	REMOVE AND INSTALL ELECTRICAL SERVICE	FA	1	

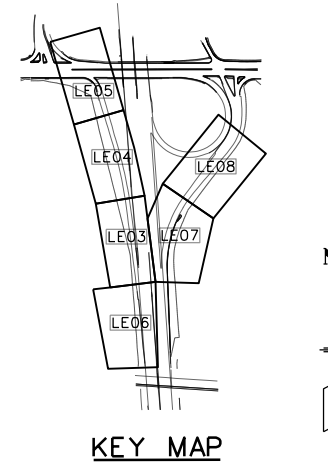
FINAL LIGHTING ITEMS AND QUANTITIES TBD

**NOTE**

- THIS PAY ITEM IS FOR THE TYPE 'LP1' LUMINAIRE. CITY OF LONE TREE OWNED.
- THIS PAY ITEM IS FOR THE TYPE 'LP2' LUMINAIRE. CDOT OWNED.
- THIS PAY ITEM IS FOR THE TYPE 'LP3' LUMINAIRE. CDOT OWNED.
- THIS PAY ITEM IS FOR THE TYPE 'LT' LUMINAIRE. CDOT OWNED.

### GENERAL NOTES

- ALL LIGHTING AND ELECTRICAL EQUIPMENT SHALL BE LOCATED WITHIN THE RIGHT OF WAY
- ALL CONDUCTORS SHALL BE RATED 600 VOLTS AND SHALL BE OF SIZES AND TYPES AS INDICATED IN THE PLANS, OR AS REQUIRED BY THE NATIONAL ELECTRIC CODE (NEC). ALL CONDUCTORS SHALL BE COPPER, THWN OR XHHW INSULATION, MINIMUM #12 AWG WIRE SIZE. CONDUCTORS SHALL BE CONTINUOUS BETWEEN OUTLETS OR JUNCTION BOXES. SPLICES SHALL BE IN READILY ACCESSIBLE PULL BOXES, JUNCTION BOXES, OR OUTLET BOXES AND MADE IN AN ACCEPTABLE MANNER.
- CONTRACTOR TO INSTALL #12 AWG LOCATE WIRE AND 1250 LB NYLON PULL STRING WITH FOOTAGE TAPE IN ALL SPARE AND EMPTY CONDUIT.
- CONTRACTOR SHALL FIELD LOCATE AND STAKE ALL ELECTRICAL LOCATIONS PRIOR TO INSTALLATION. ENGINEER SHALL CONFIRM ALL LOCATIONS PRIOR TO INSTALLATION.
- UNLESS OTHERWISE NOTED, THE WORK DESCRIBED ON THE PLANS SHALL INCLUDE ALL LABOR AND MATERIAL NECESSARY FOR COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM. FURNISH ALL REQUIRED ITEMS WHETHER SUCH ARE SPECIFICALLY SHOWN OR NOT.
- INFORMATION SHOWN ON THE DRAWINGS IS DIAGRAMMATIC ONLY AND SHALL NOT BE SCALED. OBTAIN AND VERIFY EXACT LOCATIONS, MEASUREMENTS, ELEVATIONS, SPACE REQUIREMENTS, POTENTIAL CONFLICTS AMONG TRADE, ETC. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND FOR ADJUSTING THE WORK AS REQUIRED BY THE ACTUAL CONDITIONS OF THE PROJECT.
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING INTEGRITY OF ELECTRICAL SYSTEMS THAT MAY BE AFFECTED BY CONSTRUCTION WORK INCLUDING, BUT NOT LIMITED TO, EXISTING TRAFFIC AND LIGHTING WIRING AND CONDUIT, IRRIGATION WIRING, AND COMMUNICATIONS WIRING.
- COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES, REGULATIONS, AND ORDINANCES; AND THE LATEST APPLICABLE REQUIREMENTS OF THE NEC AS INTERPRETED BY THE AGENCY HAVING JURISDICTION.
- MAINTAIN A COMPLETE SET OF DRAWINGS AT THE JOB SITE WITH ALL CHANGES OR VARIATIONS IN THE WORK MARKED IN AN OBVIOUS MANNER. A COMPLETE AS-BUILT SET OF DRAWINGS INCORPORATING ALL MARK-UPS OF THE WORK SHALL BE DELIVERED TO THE ENGINEER UPON COMPLETION OF THE PROJECT.
- CONTRACTOR SHALL SCHEDULE THE WORK TO CONFORM WITH THE PROGRESS OF OTHER TRADES. COORDINATE ALL INSTALLATION AND ROUGH-IN AS REQUIRED.
- INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH THE INFORMATION INDICATED ON THE DRAWINGS AND IN FULL ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ALL MATERIALS SHALL BE NEW, SHALL BE SUITABLE FOR THE PURPOSE, AND SHALL BEAR THE UL LABEL. DAMAGED OR DEFECTIVE MATERIAL SHALL BE REPLACED AT NO COST TO THE PROJECT.
- COORDINATE NEW ELECTRICAL WORK AND POWER SOURCE LOCATIONS WITH THE ELECTRIC UTILITY.
- POWER OUTAGES, WHEN NECESSARY, SHALL BE SCHEDULED SUFFICIENTLY IN ADVANCE WITH THE OWNER. POWER SHALL BE INTERRUPTED ONLY AT OWNER APPROVED TIMES.
- CONTRACTOR TO SECURE AND PAY FOR ALL PERMITS, FEES, TAXES, LICENSES, AND INSPECTIONS IN CONNECTION WITH THE ELECTRICAL WORK INCLUDING ANY CONNECTION FEES OR SERVICE MODIFICATION COSTS BY THE ELECTRIC UTILITY COMPANY.
- CONDUIT CROSSING OTHER UTILITIES SHALL BE ROUTED ABOVE THE UTILITY WHEN POSSIBLE. MAINTAIN A MINIMUM OF 48-INCHES OF COVER BETWEEN THE TOP OF CONDUIT AND FINISHED GRADE, OR CONCRETE ENCASE CONDUIT WHEN 48-INCHES OF COVER CANNOT BE MAINTAINED.




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	File Name: 24278-CLA-HW-025A-LT-DR-PLAN.dgn	Date:	Comments	Init.		No Revisions:	Designer: BRIAN NELSON Detailer: JON EHNERT	Structure		Subset Sheets: LE01 of 18
	Horiz. Scale:      Vert. Scale: As Noted					Revised:		Numbers		
	Unit Information					Void:		Sheet Subset: LIGHTING		
LIGHTING DESIGN AND ENGINEERING 488 N. WHEELER COURT SOUTH STE. 102 BOULDER, CO 80501 303.440.9729		Region 1-South Program			NB					

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### SCHEDULE OF LIGHTING DEVICES

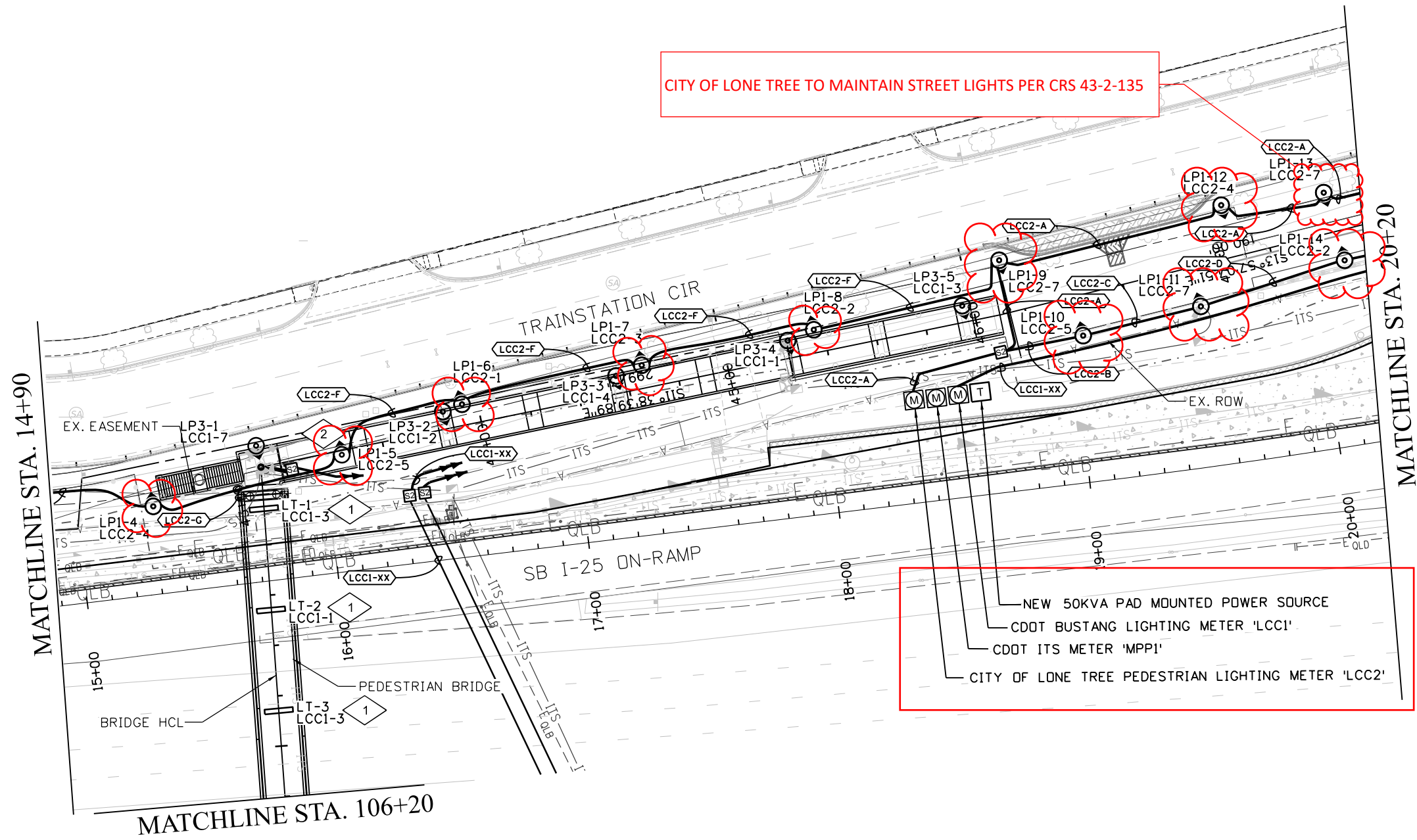
LONG DESCRIPTION					REMOVAL OF LIGHT STANDARD	RESET OF LIGHT STANDARD	LUMINAIRE (LED) (6,000 LUMENS) TYPE 'LT'	LUMINAIRE (LED) (10,000 LUMENS) TYPE 'LP1'	LUMINAIRE (LED) (10,000 LUMENS) TYPE 'LP2'	LUMINAIRE (LED) (10,000 LUMENS) TYPE 'LP3'	LIGHT STANDARD FOUNDATION	METER POWER PEDESTAL	LIGHTING CONTROL CENTER (SPECIAL)	CONCRETE FOUNDATION PAD	NOTES
UNITS					EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	
SHEET No.	I.D. No.	BASELINE	STATION	OFFSET											
LE06	LP1-01						1				1				2
LE06	LP1-02						1				1				2
LE06	LP1-03						1				1				2
LE03	LP1-04						1				1				2
LE03	LP1-05						1				1				2
LE03	LP1-06						1				1				2
LE03	LP1-07						1				1				2
LE03	LP1-08						1				1				2
LE03	LP1-09						1				1				2
LE03	LP1-10						1				1				2
LE03	LP1-11						1				1				2
LE04	LP1-12						1				1				2
LE04	LP1-13						1				1				2
LE04	LP1-14						1				1				2
LE04	LP1-15						1				1				2
LE04	LP1-16						1				1				2
LE04	LP1-17						1				1				2
LE04	LP1-18						1				1				2
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LE05	LP1-21						1				1				2
LE05	LP1-22						1				1				2
LE05	LP1-23						1				1				2
LE05	LP1-24						1				1				2
LE05	LP1-25						1				1				2
LE05	LP1-26						1				1				2
LE04	LP2-01							1			1				1
LE04	LP2-02							1			1				1
LE04	LP2-03							1			1				1
LE07	LP2-04							1			1				1
LE07	LP2-05							1			1				1
LE03	LP3-01								1						1.3
LE03	LP3-02								1						1.3
LE03	LP3-03								1						1.3
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LE03	LP3-05								1						1.3
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LE07	LP3-09								1						1.3
LE07	LP3-10								1						1.3
LE07	LP3-11								1						1.3
LE07	LP3-12								1						1.3
LE03	LT-01		BRIDGE			1									1.4
LE03	LT-02		BRIDGE			1									1.4
LE03	LT-03		BRIDGE			1									1.4
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LE07	LT-05		BRIDGE			1									1.4
LE07	LT-06		BRIDGE			1									1.4
LE07	LT-07		BRIDGE			1									1.4
LE07	LT-08		BRIDGE			1									1.4
LE04	LR-01						1								
LE04	LR-02						1								
LE05	LR-03						1								
LE07	LR-04						1								
LE08	LR-05						1								
LE08	LR-06					1									
LE03	MPP1										1			1	
LE03	LCC1											1		1	
LE03	LCC2											1		1	
LE03	XFMR													1	
<b>TOTALS</b>					1	5	8	26	5	12	31	1	2	4	

**NOTES:**  
 1) TYPE 'LP2', 'LP3' AND 'LT' PEDESTRIAN LIGHT STANDARDS OWNED AND MAINTAINED BY CDOT.  
 2) TYPE 'LP1' PEDESTRIAN LIGHT STANDARDS OWNED AND MAINTAINED BY THE CITY OF LONETREE.  
 3) TYPE 'LP3' PEDESTRIAN LIGHT STANDARDS INSTALLED ON BRIDGE RAMP.  
 4) TYPE 'LT' LINEAR LUMINAIRES INSTALLED ON BRIDGE CANOPY STRUCTURE.

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	File Name: 24278-CLA-HW-025A-LT-DR-PLAN.dgn	Date:	Comments	Init.						
	Horiz. Scale:      Vert. Scale: As Noted									
	Unit Information									
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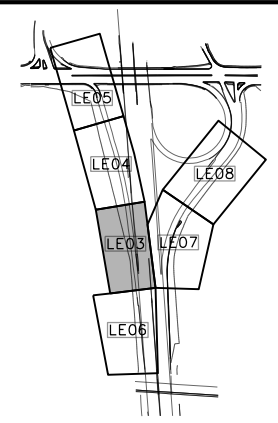


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CITY OF LONE TREE TO MAINTAIN STREET LIGHTS PER CRS 43-2-135

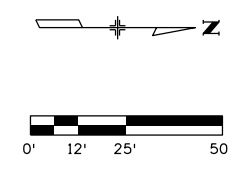
NEW 50KVA PAD MOUNTED POWER SOURCE  
 CDOT BUSTANG LIGHTING METER 'LCCI'  
 CDOT ITS METER 'MPP1'  
 CITY OF LONE TREE PEDESTRIAN LIGHTING METER 'LCC2'



KEY MAP

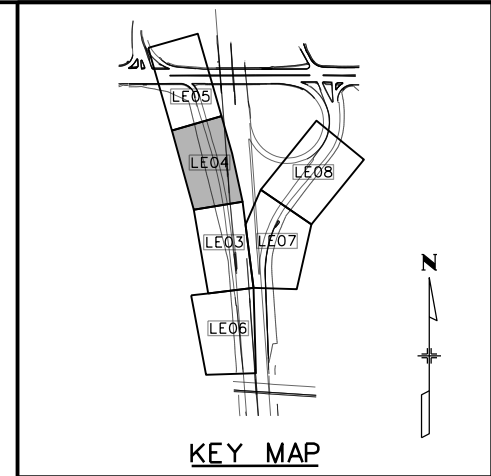
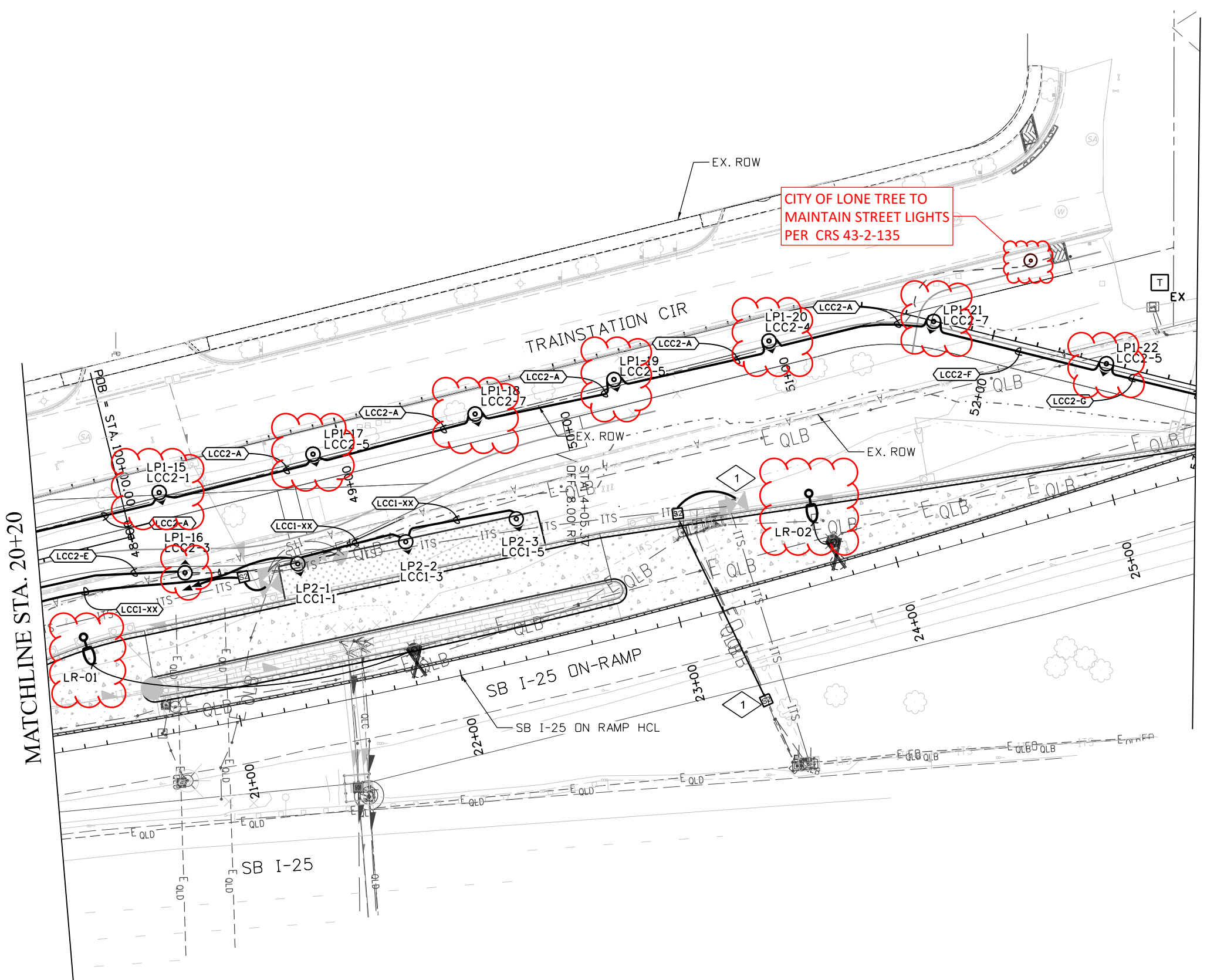
PLAN NOTES:

- 1 TYPE 'LT' LINEAR LED LUMINAIRE INSTALLED ON BRIDGE CANOPY. REFER LIGHTING DETAIL ON SHEET LE10 FOR MORE INFORMATION.
- 2 LINEAR LED LUMINAIRE INSTALLED UNDER BRIDGE.

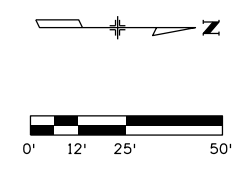


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	Date:	Comments	Init.															
 LIGHTING DESIGN AND ENGINEERING <small>4880 N. WILLOW CREEK ROAD, SUITE 100          BOULDER, CO 80504          303.440.9729</small>	Region 1-South Program      NB	Designer: BRIAN NELSON Detailer: JON EHNERT Sheet Subset: LIGHTING	Structure Numbers Subset Sheets: LE03 of 18															
DLANTON & ASSOCIATES	Region 1-South Program      NB	Designer: BRIAN NELSON Detailer: JON EHNERT Sheet Subset: LIGHTING	Structure Numbers Subset Sheets: LE03 of 18															
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PLAN NOTES:  
 1 INTERCEPT EXISTING RAMP METER POWER, EXTEND AND RECONNECT CONDUIT AND CIRCUITING TO RESET RAMP METER LOCATION.



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Horiz. Scale: Vert. Scale: As Noted
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<b>GLANTON &amp; ASSOCIATES</b> LIGHTING DESIGN AND ENGINEERING 4550 N. W. 10TH AVE. SUITE 100 BOULDER, CO 80504 303.440.1234

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Date:	Comments	Init.

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 18500 E. Colfax Ave.  
 Aurora, CO 80011  
 Phone: (303) 746-8639  
 Fax: N/A

**Region 1-South Program** NB

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Revised:
Void:

I-25 MOBILITY HUB (LONE TREE) LIGHTING AND ELECTRICAL PLAN	
Designer: BRIAN NELSON	Structure Numbers
Detailer: JON EHNERT	
Sheet Subset: LIGHTING	Subset Sheets: LE04 of 18

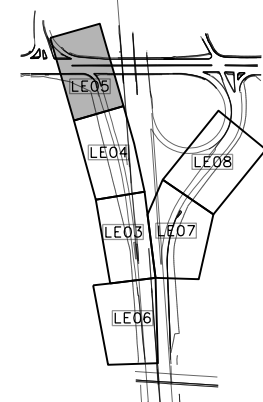
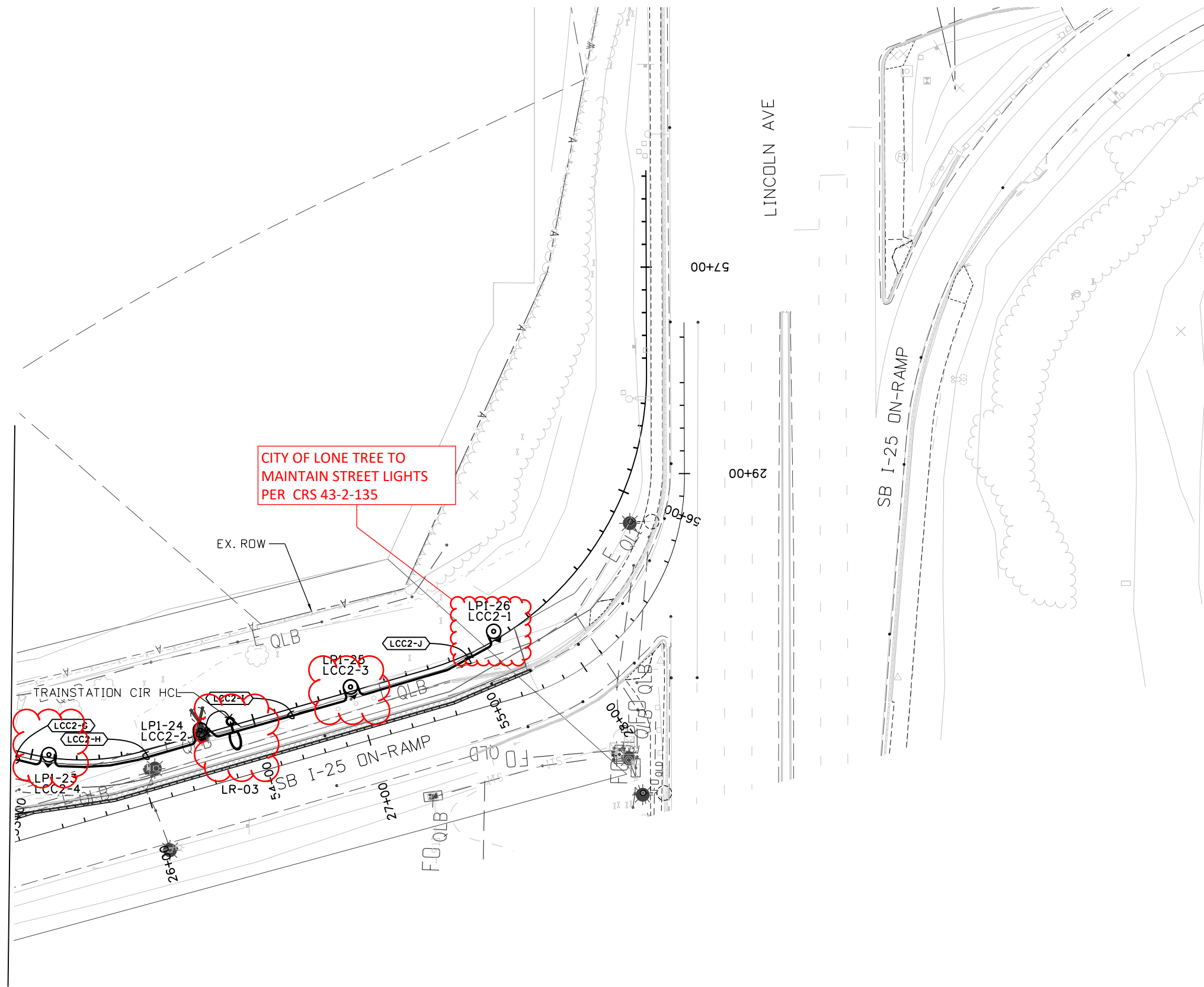
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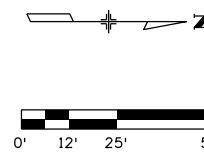


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KEY MAP



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<b>CLANTON &amp; ASSOCIATES</b> LIGHTING DESIGN AND ENGINEERING 444 NORTH COLORED STREET SUITE 102 AURORA, CO 80011 303.746.8639

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation

18500 E. Colfax Ave.  
Aurora, CO 80011  
Phone: (303) 746-8639  
Fax: N/A

**Region 1-South Program** NB

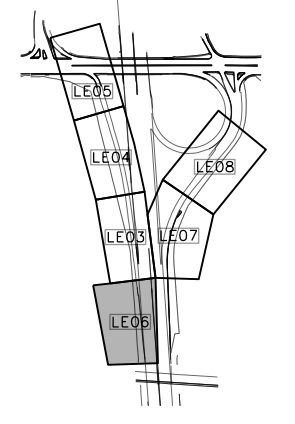
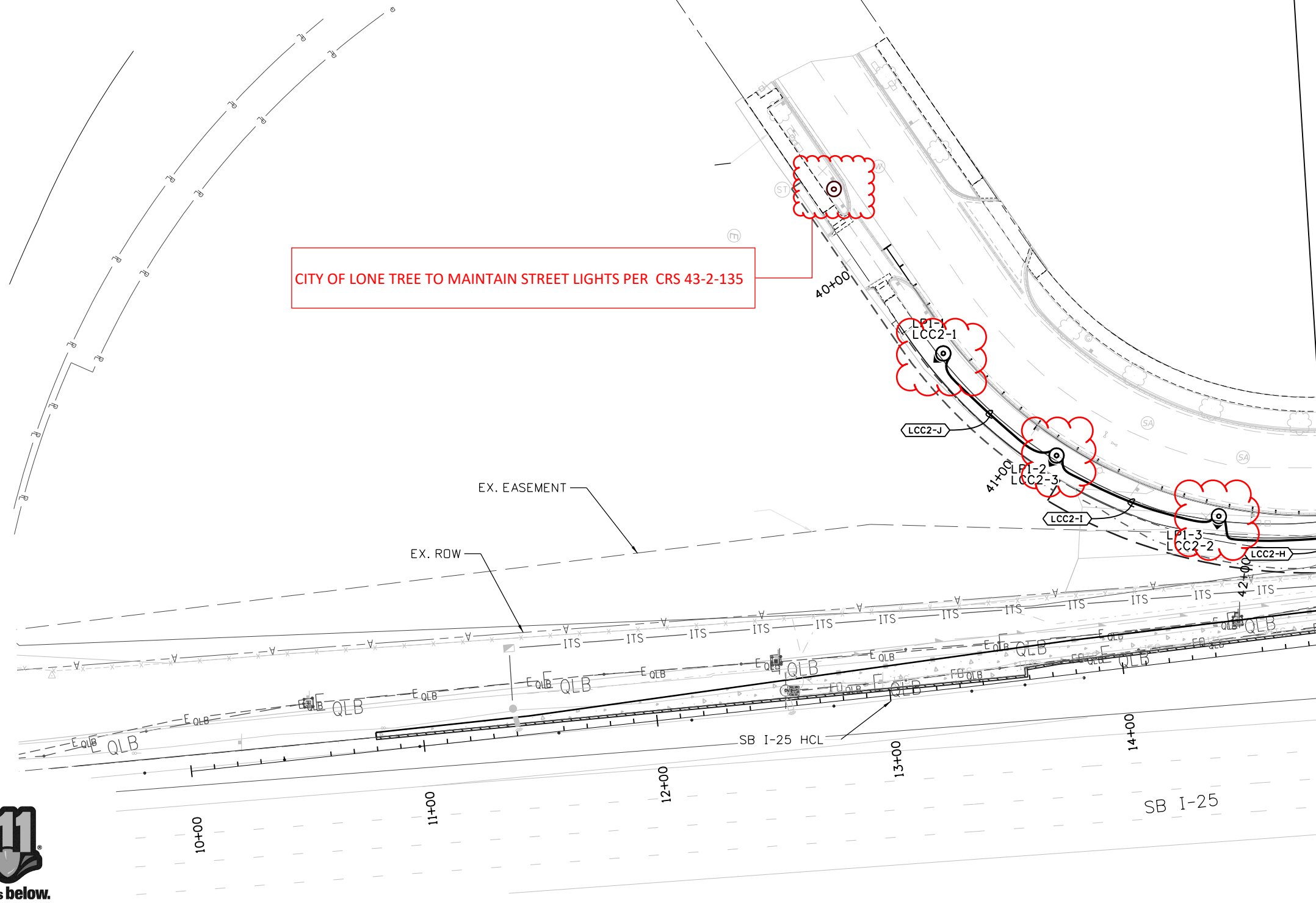
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Revised:
Void:

I-25 MOBILITY HUB (LONE TREE) LIGHTING AND ELECTRICAL PLAN	
Designer: BRIAN NELSON	Structure Numbers
Detailer: JON EHNERT	
Sheet Subset: LIGHTING	Subset Sheets: LE05 of 18

Project No./Code



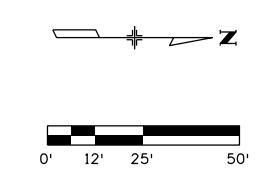
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KEY MAP

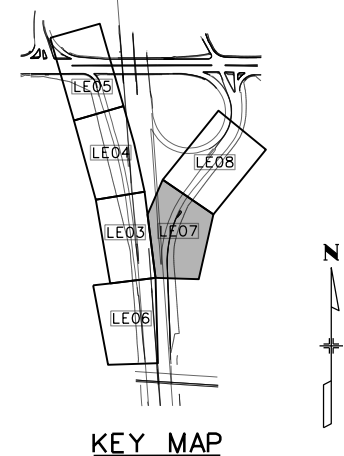
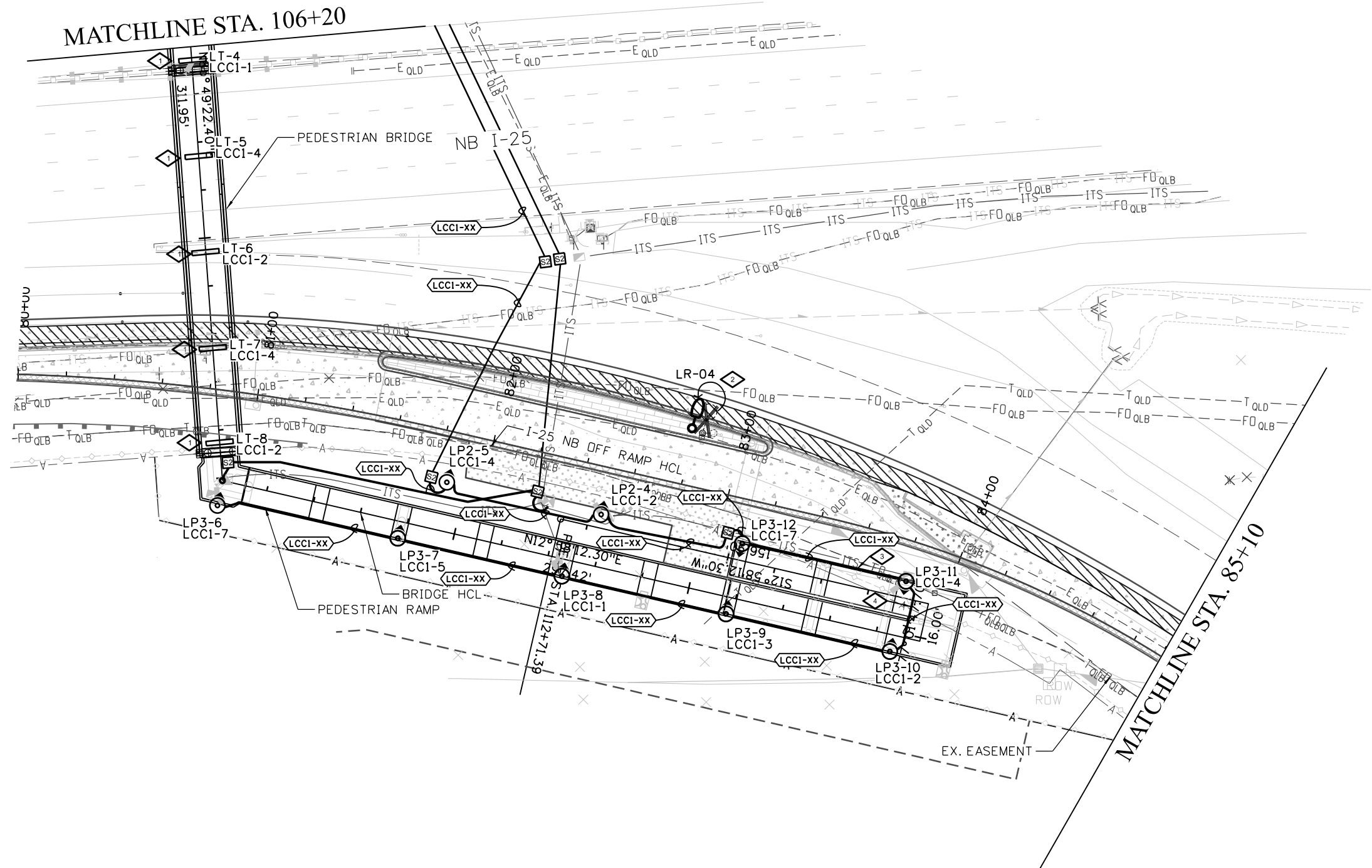


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	File Name: 24278-CLA-HW-025A-LT-DR-PLAN.dgn	Date:	Comments	Init.			No Revisions:	LIGHTING AND ELECTRICAL PLAN	
	Horiz. Scale: Vert. Scale: As Noted				Region 1-South Program	Revised:	Designer: BRIAN NELSON	Structure Numbers	
	Unit Information					Void:	Detailer: JON EHNERT	Sheet Subset: LIGHTING	Subset Sheets: LE06 of 18
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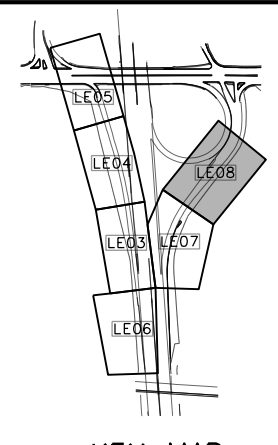
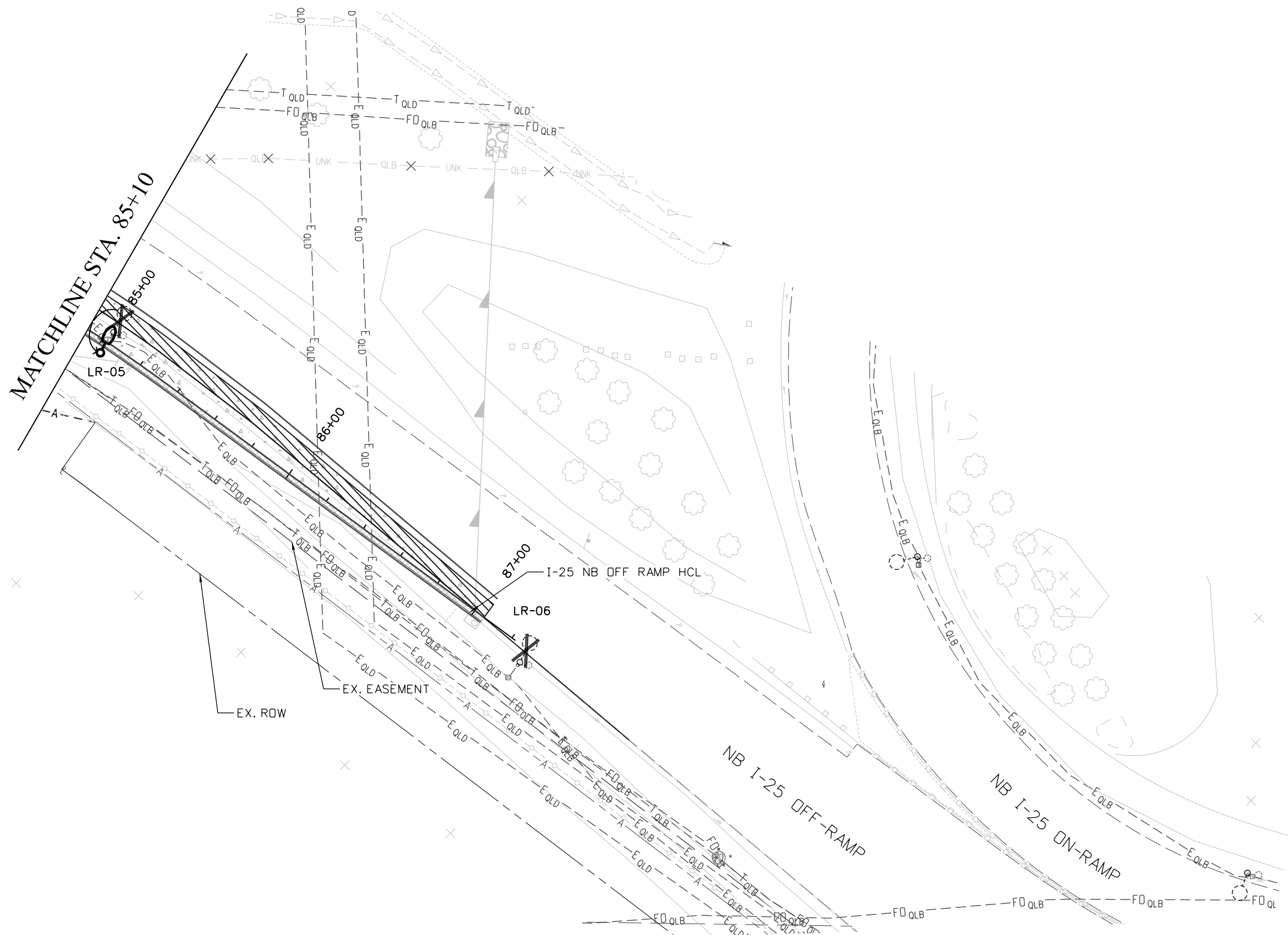


- PLAN NOTES:**
- 1 TYPE 'LT' LINEAR LED LUMINAIRE INSTALLED ON BRIDGE CANOPY. REFER TO LIGHTING DETAIL ON SHEET LE10 FOR MORE INFORMATION.
  - 2 RESET LIGHT STANDARD IN SAME LOCATION. ALL NECESSARY PULL BOXES, CONDUIT, AND CIRCUITING TO REMAIN.
  - 3 ROUTE CONDUIT INSIDE RAMP CURB, SEE LIGHTING DETAILS. REFER TO STRUCTURAL DETAILS FOR ADDITIONAL INFORMATION.
  - 4 ROUTE CONDUIT UNDER DECK BETWEEN LIGHTS LP3-10 AND LP3-11, SEE LIGHTING DETAILS. REFER TO STRUCTURAL DETAILS FOR ADDITIONAL INFORMATION.

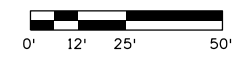


All seals for this set of drawings are applied to the cover page(s)	Print Date: 5/10/2024 File Name: 24278-CLA-HW-025A-LT-DR-PLAN.dgn Horiz. Scale:            Vert. Scale: As Noted Unit Information	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">Sheet Revisions</th> </tr> <tr> <th>Date:</th> <th>Comments</th> <th>Init.</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>	Sheet Revisions			Date:	Comments	Init.										Colorado Department of Transportation 18500 E. Colfax Ave. Aurora, CO 80011 Phone: (303) 746-8639 Fax: N/A Region 1-South Program	As Constructed No Revisions: Revised: Void:	<b>I-25 MOBILITY HUB (LONE TREE)                  LIGHTING AND ELECTRICAL PLAN</b> Designer: BRIAN NELSON Detailer: JON EHNERT Sheet Subset: LIGHTING	Project No./Code Structure Numbers Subset Sheets: LE07 of 18
	Sheet Revisions																				
Date:	Comments	Init.																			
LIGHTING DESIGN AND ENGINEERING <small>4889 N. WILSON ROAD, SUITE 102                  BOULDER, CO 80501                  303.440.2229</small>																					

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KEY MAP




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Unit Information
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Fax: N/A

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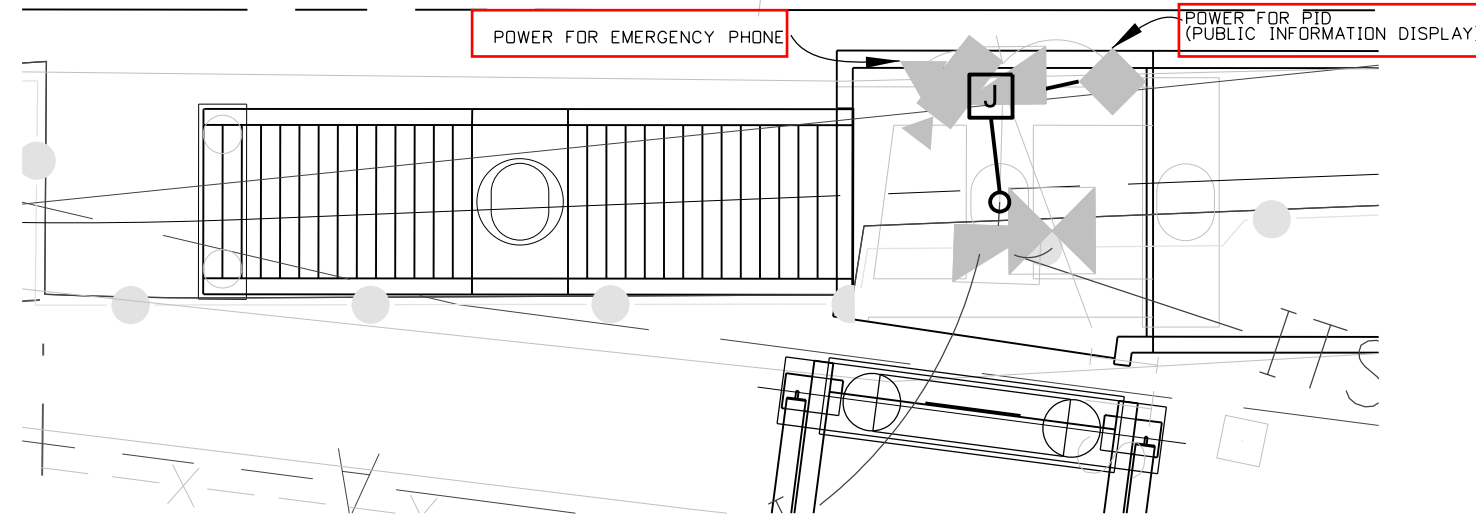
I-25 MOBILITY HUB (LONE TREE) LIGHTING AND ELECTRICAL PLAN	
Designer: BRIAN NELSON	Structure Numbers
Detailer: JON EHNERT	
Sheet Subset: LIGHTING	Subset Sheets: LE08 of 18

Project No./Code

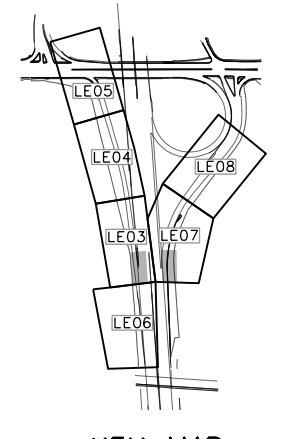
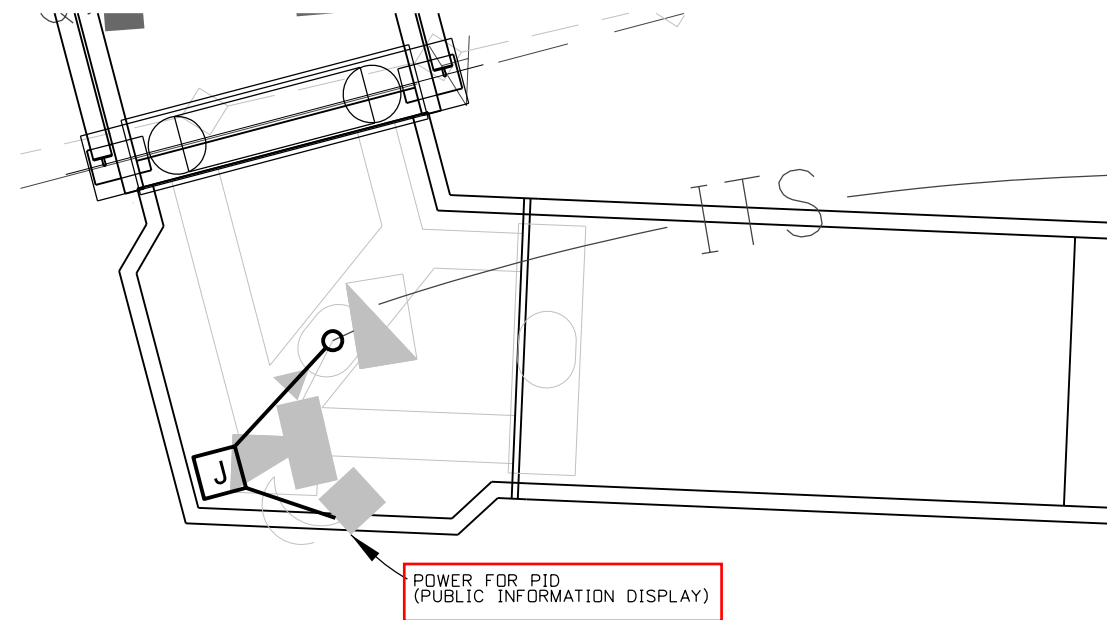


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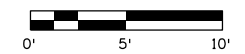
ENLARGED LIGHTING AND ELECTRICAL PLAN - WEST LANDING



ENLARGED LIGHTING AND ELECTRICAL PLAN - EAST LANDING



KEY MAP




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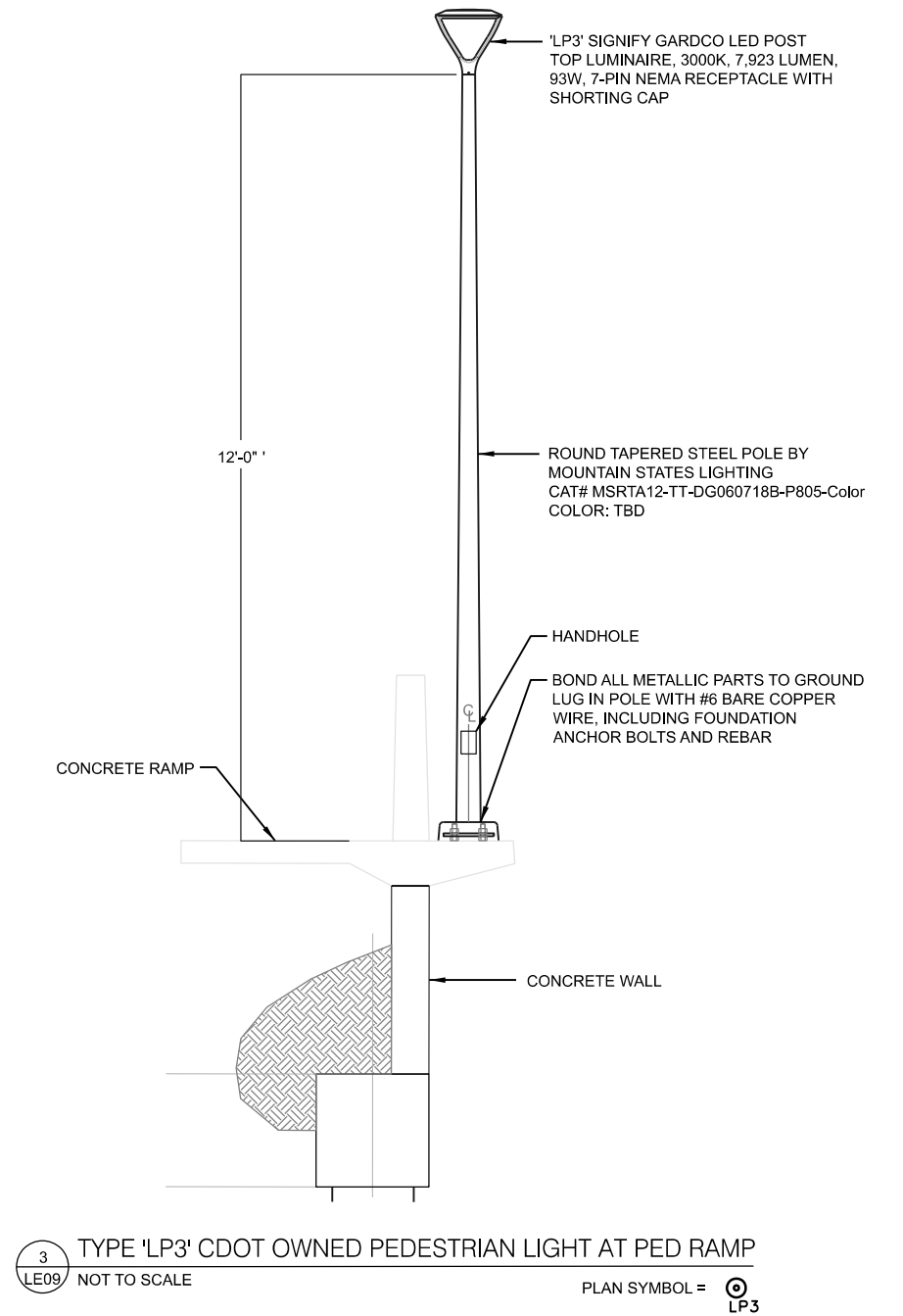
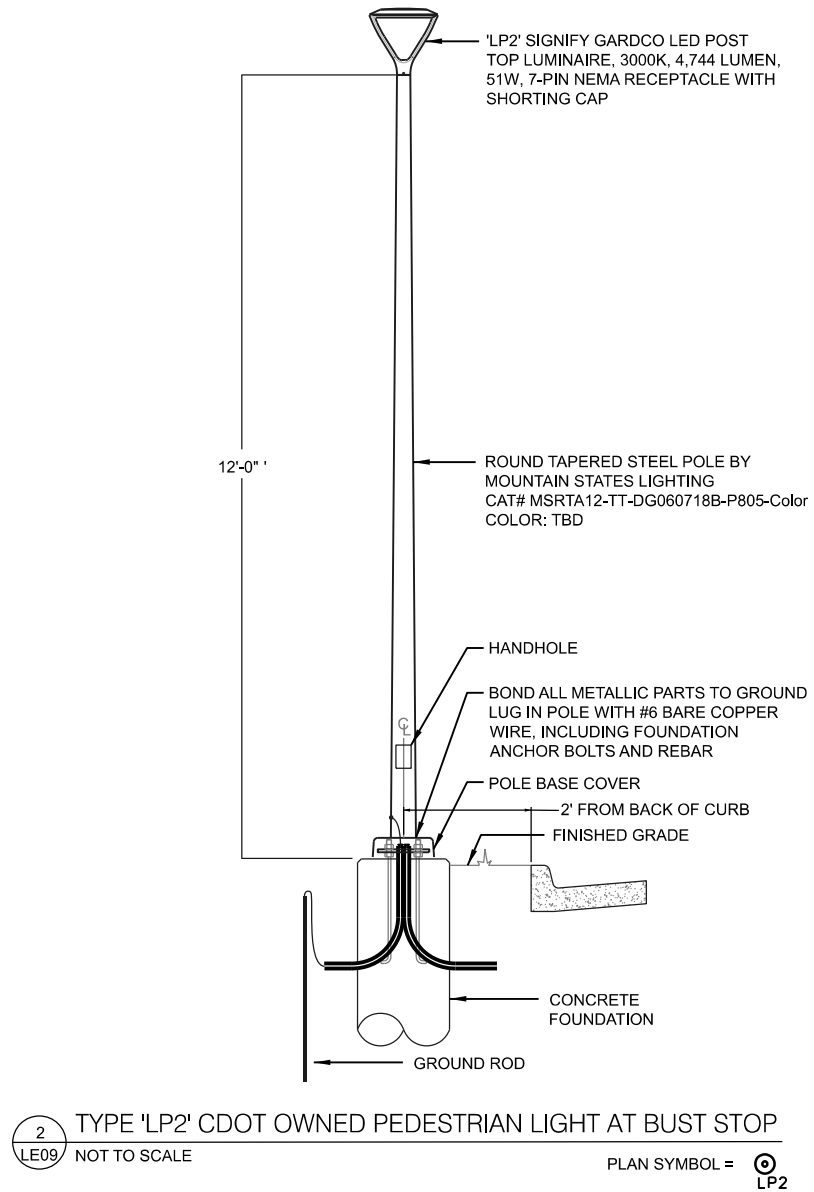
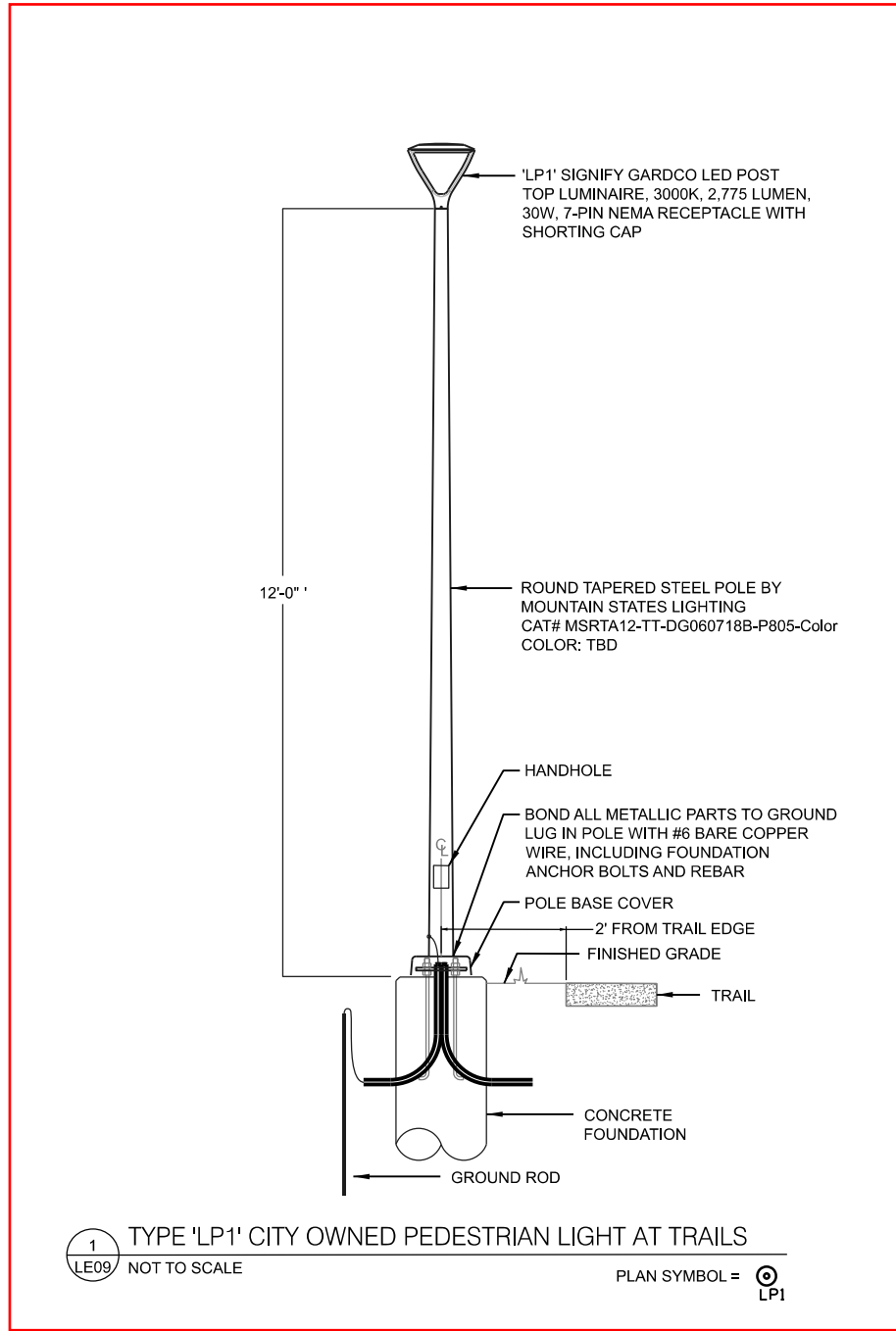
Region 1-South Program      NB

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No Revisions:
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I-25 MOBILITY HUB (LONE TREE) LIGHTING AND ELECTRICAL PLAN	
Designer: BRIAN NELSON	Structure Numbers
Detailer: JON EHNERT	
Sheet Subset: LIGHTING	Subset Sheets: LE09 of 18

Project No./Code

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I-25 MOBILITY HUB (LONE TREE) LIGHTING AND ELECTRICAL PLAN DETAILS	
Designer: BRIAN NELSON	Structure Numbers
Detailer: JON EHNERT	
Sheet Subset: LIGHTING	Subset Sheets: LE10 of 18

Project No./Code

Chris Dyk 3:42:34 PM pw:\cdot-pw\benley.com\cdot-pw-01p\Documents\02 Minor Projects\CDOT Collaboration Projects\24278 - I-25 -mobility hub (lone tree)\01 Pre-Construction\Drawings\Roadway\24278-ITS-Gen Notes

**ITS GENERAL NOTES**

1. ALL WORK SHALL BE ACCORDANCE WITH THE COLORADO DEPARTMENT OF TRANSPORTATION'S (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2023 EDITION, CDOT'S STANDARD PLANS, M&S STANDARD PLANS, 2019 EDITION, THE NATIONAL ELECTRIC CODE AND THE CONTRACT DOCUMENTS.
2. THE CONTRACTOR IS REQUIRED TO SUBMIT A MINIMUM OF THREE (3) HARD COPIES OR ONE (1) ELECTRONIC COPY OF THE MATERIAL PRODUCT SHEETS TO CDOT FOR REVIEW. CDOT SHALL REVIEW THE REQUIRED SUBMITTALS AND RETURN COMMENTS WITHIN 14 DAYS.
3. CONTRACTOR SHALL REFER TO SIGNING, STRUCTURAL, ELECTRICAL, AND PLANS BY OTHERS AS NOTED IN THE ITS PLANS.
4. ALL CABINET AND ITS DEVICE LOCATIONS ARE APPROXIMATE AND ARE TO BE FIELD LOCATED BASED UPON PREVAILING CONDITIONS. THE CONTRACTOR SHALL RECEIVE APPROVAL FROM THE PROJECT ENGINEER REGARDING EXACT PLACEMENT AND ORIENTATION OF ALL CABINETS. THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER FOR THE FOLLOWING: 48 HOURS PRIOR TO INSTALLATION OF ANY ITS DEVICE, INFRASTRUCTURE, MANHOLE, OR RELOCATION OF ANY EXISTING ITS DEVICE FOR COORDINATION AND FINAL PLACEMENT; 48 HOURS PRIOR TO NODE BUILDING ENTRY; AND TWO WEEKS PRIOR TO SPLICING.
5. MAINTAIN AND KEEP OPERATION OF ALL EXISTING ITS DEVICES, UNLESS TEMPORARY OR PERMANENT DEVICES HAVE BEEN SUBSTITUTED.
6. PRE-PAVEMENT TRENCHING OR BORING IS ALLOWED ACROSS ALL RAMPS, CROSS STREETS, AND MAINLINE.
7. THE LOCATION OF EXISTING AND PROPOSED CONDUITS AND PULL BOXES FOR COMMUNICATIONS AND POWER SHOWN ON THE PLANS ARE APPROXIMATE AND NOT TO SCALE.
8. USE INSTALLATION METHODS THAT WILL ENSURE THE SAFETY AND PROTECTION OF EQUIPMENT, PERSONNEL, EXISTING FEATURES, AND THE TRAVELING PUBLIC.
9. FIBER OPTIC BACKBONE CONDUIT SHALL NOT BE LOCATED IN THE TRAVELED WAY (WITH THE EXCEPTION OF CROSSING), UNLESS OTHERWISE INDICATED ON PLANS.
10. LOCATE AND INSTALL PULL BOXES AS REQUIRED TO PREVENT DAMAGE TO CABLE DURING INSTALLATION. SEAL CONDUITS AND CONDUITS AT ENCLOSURES TO PREVENT RODENT ENTRY.
11. DO NOT PLACE PULL BOXES IN PONDS, DITCHES, RIPRAP, AND DRAINAGE CHANNELS.
12. INSTALL PULL BOXES IN A PROPOSED FILL ZONE USING GRADE STAKES. DO NOT INSTALL CONDUIT OR PULL BOXES IN A PROPOSED CUT ZONE WITHOUT GRADE STAKES. WHERE NECESSARY STUB OUT AND PROTECT CONDUITS UNTIL BOX CAN BE PLACED.
13. FURNISH AND INSTALL WATERTIGHT, REMOVABLE CONDUIT PLUGS AT ALL CONDUIT ENDS IMMEDIATELY FOLLOWING CONDUIT INSTALLATION.
14. GRADE A RELATIVELY FLAT 4' X 4' AREA IN FRONT OF ALL ITS CABINET OPENINGS FOR MAINTENANCE ACCESS.
15. INSTALL ITS DEVICES AND ELEMENTS OUTSIDE OF ULTIMATE WETLAND AREAS UNLESS OTHERWISE DIRECTED BY CDOT.
16. EXERCISE ALL APPROPRIATE SAFETY MEASURES WHEN WORKING IN OR AROUND AREAS OF OVERHEAD ELECTRICAL/TRANSMISSION LINES OR UNDERGROUND UTILITIES.
17. THE CONTRACTOR'S ATTENTION IS DIRECTED TO SUBSECTION 105.11 OF THE STANDARD SPECIFICATIONS CONCERNING UTILITIES. THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL FEATURES, INCLUDING ALL UNDERGROUND AND ABOVE GROUND UTILITIES, PRIOR TO BEGINNING ANY WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD LOCATING AND VERIFYING ALL UTILITY INFORMATION. FOR UTILITY CONSTRUCTION COORDINATION, THE CONTRACTOR SHALL NOTIFY ALL AFFECTED UTILITIES AT LEAST TWO (2) BUSINESS DAYS, NOT INCLUDING THE ACTUAL DAY OF NOTICE, PRIOR TO COMMENCING SUCH OPERATIONS. THE CONTRACTOR SHALL CONTACT COLORADO 811 AT CO811 OR CO811.ORG TO HAVE LOCATIONS OF UNDERGROUND UTILITIES MARKED BY ALL UNDERGROUND COMPANIES.
18. COORDINATE ALL CONSTRUCTION TO AVOID UTILITY CONFLICTS AND CONFLICTS THAT MAY AFFECT THE PERFORMANCE OF THE EXISTING ITS DEVICES WITH THE CORRESPONDING AGENCY BEFORE PERFORMING WORK.
19. POTHOLING WILL BE REQUIRED FOR CONSTRUCTION ACTIVITIES ON THE PROJECT. THE CONTRACTOR SHALL LOCATE AND POT HOLE ALL POTENTIAL CONFLICTS WITH EXISTING BURIED UTILITY FACILITIES WITHIN THE PROPOSED CONSTRUCTION LIMITS. NOTIFY THE ENGINEER IF A POTENTIAL CONFLICT EXISTS.
20. AT CABINETS CONTAINING FIBER OPTIC TERMINATION PANELS, INSTALL FIBER OPTIC PATCH CABLES WITH NO MORE THAN 4 FEET OF SLACK CABLE. USE APPROPRIATE CABLE MANAGEMENT.
21. ALL WIRE SIZES SHALL CONFORM TO THE NATIONAL ELECTRIC CODE. CONTRACTOR SHALL REFER TO THE LIGHTING AND ELECTRICAL PLANS FOR ELECTRICAL WIRING AND ITS PLANS FOR ELECTRICAL INFRASTRUCTURE.
22. DO NOT FEED POWER CONDUCTORS THROUGH MANHOLES OR COMMUNICATIONS PULL BOXES. IF A CONDUIT DUCT BANK PATH CONTAINING POWER CONDUCTORS PASSES THROUGH A MANHOLE, ROUTE POWER CONDUIT AROUND OR THROUGH A NEW ELECTRICAL PULL BOX ADJACENT TO THE MANHOLE.
23. ALL STRUCTURE AND POLE PENETRATIONS SHALL BE WATERTIGHT.
24. ALL ITS INFRASTRUCTURE, INCLUDING CONDUIT, PULL BOXES, AND MANHOLES, TO BE INSTALLED TO PROPOSED GRADE. CONTRACTOR SHALL COORDINATE WITH GRADING PLANS.
25. CONDUIT ROUTING SHOWN ON THE PLANS IS DIAGRAMMATIC IN INTENT. CONTRACTOR SHALL MODIFY ROUTING AS NECESSARY TO AVOID EXISTING AND PROPOSED OBSTRUCTIONS.
26. THE CONTRACTOR SHALL REMOVE AND SALVAGE TO CDOT ALL EXISTING COMMUNICATION EQUIPMENT AND ELECTRICAL EQUIPMENT THAT IS REPLACED ON THIS PROJECT AND NO LONGER IN USE AT FIELD LOCATIONS. CABLING NOTED TO BE REMOVED ON THE PLANS SHALL BE DISPOSED OF BY THE CONTRACTOR.
27. A PULL TAPE WITH EMBEDDED TRACER WIRE SHALL BE PLACED IN EACH CONDUIT AFTER THE CABLES HAVE BEEN INSTALLED. IN CONDUITS CONTAINING FIBER OPTIC CABLE, A SEPARATE #12 AWG TRACER WIRE SHALL ALSO BE INSTALLED IN THE CONDUIT AND CAN BE INSTALLED WITH THE FIBER OPTIC CABLE. THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE FOR CONDUIT AND WILL NOT BE PAID SEPARATELY PER THE REVISION OF SECTION 613 ELECTRICAL CONDUIT.
28. ALL CONDUIT SHALL BE SCHEDULE 80 HDPE OR PVC, UNLESS OTHERWISE NOTED, AND BE INSTALLED AT A MINIMUM DEPTH OF 48 INCHES BELOW FINAL GRADE, UNLESS APPROVED BY THE ENGINEER. CONDUIT SHALL BE INSTALLED A MINIMUM OF 48 INCHES FROM CAISSONS.
29. ALL CONDUIT SHALL BE PLUGGED PER THE REVISION OF SECTION 613 ELECTRICAL CONDUIT AT TERMINATION POINTS SUCH AS STUB OUTS, PULL BOXES, MANHOLES, CONTROLLER CABINETS, AND NODE BUILDINGS ON THE DAY OF INSTALLATION. CONDUIT WILL NOT BE PAID FOR IF THE CONDUIT PLUGS ARE NOT INSTALLED. THE CONTRACTOR SHALL CLEAN ALL DEBRIS AND WATER OUT OF NEW CONDUIT AT THEIR OWN EXPENSE.
30. STREET CUTS FOR CONDUITS IN EXISTING PAVEMENT SHALL NOT BE ALLOWED, UNLESS OTHERWISE SHOWN ON THE PLANS OR APPROVED BY THE PROJECT ENGINEER.
31. WHEN CUTS TO THE EXISTING PAVEMENT ARE APPROVED, THE CUTTING SHALL BE DONE TO A NEAT WORK LINE TO THE DESIRED DEPTH WITH A PAVEMENT CUTTING SAW OR OTHER METHOD AS APPROVED BY THE CDOT PROJECT ENGINEER. PAVEMENT CUTS AND PATCHING WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE WORK.
32. CONTRACTOR SHALL REFER TO THE REVISION OF SECTION 108 DISINCENTIVE FOR ITS OFFLINE DEVICES FOR ALLOWABLE DOWN-TIME FOR ITS DEVICES. ALL POWER, COMMUNICATION AND INFRASTRUCTURE SHALL BE IN PLACE FOR THE PROPOSED LOCATION OF A RELOCATED DEVICE BEFORE THE EXISTING DEVICE IS REMOVED.
33. THE CONTRACTOR SHALL REMOVE ALL CABLING FROM CONDUIT TO BE ABANDONED IN PLACE, INCLUDING TRACER WIRE. THE CONTRACTOR SHALL ALSO CUT, CAP OR REMOVE ABANDONED CONDUIT ENTERING EXISTING PULL BOXES THAT WILL REMAIN IN PLACE. THE CONTRACTOR SHALL LABEL ANY CONDUIT REMAINING IN THE PULL BOX THAT IS ABANDONED IN PLACE DUE TO THEIR WORK. THIS WORK SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.
34. EXISTING UNDERGROUND CONDUIT TO BE INCORPORATED INTO A NEW SYSTEM SHALL BE CLEANED WITH A MANDREL OR CYLINDRICAL WIRE BRUSH AND BLOWN OUT WITH COMPRESSED AIR. THIS WORK SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF PAY ITEM FIBER OPTIC CABLE (SINGLE MODE). CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DAMAGED OR UNUSABLE SEGMENTS OF EXISTING CONDUIT.
35. COPPER COMMUNICATIONS CABLES SHALL NOT BE LOCATED IN THE SAME CONDUIT AS 120V OR HIGHER ELECTRICAL WIRING.

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	File Name: 24278-ITS-Gen Notes.dgn	Date:	Comments	Init.		No Revisions:	<b>ITS GEN NOTES</b>			267 0252-499
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	Unit Information					Void:	Detailer:	CTD	Subset Sheets:	1 of 2
DENVER, COLORADO 80222 PH: 720-807-4766					Sheet Subset: ITS					



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**FIBER OPTIC / NETWORK NOTES**



1. FOR BACKBONE FIBER OPTIC CABLES THE CONTRACTOR SHALL COIL 50 FEET OF EACH FIBER OPTIC CABLE IN PULL BOXES AND 150 FEET IN MANHOLES. AT LOCATIONS OF FIBER OPTIC CABLE END SPLICES, INSTALL 150 FEET OF BACKBONE CABLE SLACK COIL ON BOTH ENDS OF SPlice ENCLOSURE. FOR LATERAL FIBER OPTIC CABLES THE CONTRACTOR SHALL COIL 50 FEET OF EACH FIBER OPTIC CABLE IN PULL BOXES AND 100 FEET IN MANHOLES. AT LOCATIONS OF COARSE WAVELENGTH DIVISION MULTIPLEXING (CWDM) NETWORK EQUIPMENT, THE CONTRACTOR SHALL INSTALL AND COIL TWO SEPARATE 100-FOOT LATERAL FIBER OPTIC CABLES IN THE SPlice MANHOLES. REFER TO THE FIBER OPTIC SPLICING DETAILS FOR MORE INFORMATION.
2. THE CONTRACTOR SHALL SPlice THE FIBER OPTIC CABLE ONLY AT APPROVED SPlice LOCATIONS AS SHOWN ON THE PLANS. THE COST OF THE SPlice ENCLOSURE AND SPLICING WORK SHALL BE INCLUDED IN BID ITEM 614 – FIBER OPTIC CABLE. SPLICES SHALL BE PERFORMED AT LATERAL LOCATIONS AND ONLY FIBERS BEING SPLICED SHALL BE CUT. IT IS ESTIMATED THAT 16 FIBER OPTIC FUSION SPLICES WILL BE REQUIRED FOR THIS PROJECT.
3. IT IS ESTIMATED THAT 2 SPlice ENCLOSURES WILL BE REQUIRED FOR THIS PROJECT.
4. ALL TESTING AND INTEGRATION OF THE ETHERNET SWITCHES SHALL BE PER THE PLAN SHEETS AND PROJECT SPECIFICATIONS. A NETWORK TESTING AND INTEGRATION AND FIBER SPlice MEETING SHALL BE SCHEDULED BY THE CONTRACTOR PRIOR TO ANY FIBER OPTIC OR NETWORK INSTALLATION. THE CONTRACTOR SHALL SUBMIT A METHOD STATEMENT FOR BOTH THEIR FIBER OPTIC SPLICING AND NETWORK TESTING AND INSTALLATION METHODOLOGY PRIOR TO THE MEETING.
5. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TESTING HARDWARE EQUIPMENT FOR THIS PROJECT. THIS SHALL INCLUDE BUT NOT BE LIMITED TO AN OPTICAL POWER METHOD AND OPTICAL TIME DOMAIN REFLECTOMETER (OTDR) ALONG WITH ANY OTHER FIBER OPTIC EQUIPMENT THAT MAY BE REQUIRED.
6. THE CONTRACTOR MUST SUBMIT TO THE PROJECT ENGINEER, CUT SHEETS AND/OR MATERIAL DESCRIPTIONS FOR ALL FIBER OPTIC MATERIALS PRIOR TO PURCHASE FOR APPROVAL BY CDOT. IN ADDITION, COPIES OF ALL MANUFACTURER'S RECOMMENDED INSTALLATION INSTRUCTIONS AND PROCEDURES FOR MATERIALS SHALL BE PROVIDED TO CDOT PRIOR TO THE START OF ANY FIBER INSTALLATION WORK. THESE SUBMITTALS SHALL INCLUDE ALL INFORMATION FOR THE PROPOSED MATERIALS INCLUDING ALL MODEL OR ITEM INFORMATION NUMBERS HIGHLIGHTED. IF THE MODEL OR IDENTIFICATION NUMBER IS NOT HIGHLIGHTED ON THE SUBMITTAL, IT SHALL BE REJECTED AND A RESUBMITTAL SHALL BE REQUIRED.
7. ALL FIBER OPTIC WORK SHALL BE PER THE MANUFACTURER'S INSTRUCTION AND RECOMMENDATIONS. THIS SHALL INCLUDE ALL SPLICING, TERMINATION FIBER OPTIC CLOSURE MANAGEMENT AND ALL OTHER MATERIALS PROVIDED.
8. THE CONTRACTOR MUST SUBMIT TO THE PROJECT ENGINEER CUT SHEETS AND/OR MATERIAL DESCRIPTIONS OF ALL OPTICAL NETWORKING MATERIALS PRIOR TO PURCHASES FOR APPROVAL BY CDOT
9. FOR NETWORK RELATED EQUIPMENT INSTALLATIONS WITHIN THE INTERIOR OF COMMUNICATION CABINETS AND VARIABLE MESSAGE SIGNS (VMS), THE CONTRACTOR SHALL:
  - A. SECURE TERMINATION PANELS, ETHERNET SWITCHES AND ASSOCIATED ELECTRICAL WIRING AND EQUIPMENT CABLING IN A WORKMANLIKE MANNER THAT DOES NOT INTERFERE WITH EQUIPMENT AND FUTURE MAINTENANCE ON CABINET.
  - B. INSTALL LATERAL FIBER OPTIC IN A LOCATION WHICH WILL NOT DAMAGE CABLE OR PATCH CABLES AND NOT BE DISTURBED BY FUTURE ROUTINE MAINTENANCE. STRAIN RELIEF AND CABLE LABEL SHALL BE INSTALLED.
  - C. PRE-CONNECTORIZED FIBER PATCH CABLE SHALL BE LABELLED WITH CORRESPONDING TRANSMIT (TX), RECEIVE (RX), WAVELENGTHS, TERMINATION PANEL PORT ASSIGNMENT AND DATA DIRECTION FROM DEVICE LOCATION AS PART OF REQUIRED CABLE LABELING.
10. PRIOR TO INSTALLING THE SPlice ENCLOSURE AND FIBER OPTIC CABLE, THE CONTRACTOR SHALL CLEAN THE INTERIOR OF THE MANHOLE OR PULL BOX WHICH INCLUDES THE RIM WHERE THE RESPECTIVE LID RESTS TO REMOVE ANY DIRT, SAND, OR DEBRIS. THIS SHALL BE INCLUDED IN THE COST OF THE FIBER OPTIC CABLE AND WILL NOT BE PAID FOR SEPARATELY.
11. THE CONTRACTOR SHALL SUBMIT A FIBER OPTIC PLAN TO CDOT ITS FOR REVIEW AND APPROVAL ACCORDING TO SPECIFICATION REVISION OF SECTION 108.
12. THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER TEN (10) WORKING DAYS PRIOR TO WORK AT EACH SPlice LOCATION TO HAVE A CDOT REPRESENTATIVE ON SITE WHILE SPLICING IS PERFORMED. IN THE EVENT THAT THE REPRESENTATIVE CANNOT BE ON SITE, DIGITAL PICTURES (TAKEN AT VARYING ANGLES) SHOWING ALL COMPLETED WORK SHALL BE TAKEN. THESE PICTURES SHALL INCLUDE THE FOLLOWING:
  - A. THE COMPLETED SPlice TRAYS PRIOR TO INSTALLATION IN SPlice ENCLOSURE SHOWING BOTH FIBER MANAGEMENT AND LABELING.
  - B. THE SPlice TRAYS AND EXPOSED BUFFER TUBES INSTALLED INSIDE THE SPlice ENCLOSURE, PRIOR TO CLOSING, SHOWING PROPER CABLE MANAGEMENT. FAILURE TO PROVIDE PICTURES WILL RESULT IN RE-ACCESSING THE SPlice ENCLOSURE.
13. THE CONTRACTOR SHALL SCHEDULE A PRE-FIBER INSTALLATION AND PRE-SPLICING MEETING TO ENSURE THAT ALL WORK WILL BE CONDUCTED ACCORDING TO THE PROJECT PLANS AND MANUFACTURER'S RECOMMENDATIONS.
14. TESTING OF FIBER OPTIC CABLE SHALL BE BI-DIRECTIONAL PER THE FIBER OPTIC TESTING SPECIFICATION INCLUDING OTDR AND POWER METER TESTING AND SHALL BE CONDUCTED FROM DEVICE TO DEVICE AND FROM DEVICE TO THE NETWORK REGENERATION NODE BUILDINGS.
15. INFORMATION LABELS SHALL BE INSTALLED ON ALL FIBER OPTIC PATCH CABLES AND TERMINATION PANELS AS DESCRIBED IN THE PROJECT SPECIFICATIONS AND DETAIL SHEETS.
16. THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT ENGINEER FOR NETWORK FINAL ACCEPTANCE AND INTEGRATION OF THE ETHERNET SWITCHES. CDOT ITS SHALL BE INVOLVED IN THE SCHEDULING PROCEDURES OF THE NETWORK.
17. THE CONTRACTOR SHALL ASSEMBLE ALL ETHERNET SWITCHES PRIOR TO DELIVERING TO THE CTMC FOR CONFIGURATION. INFORMATION LOCATION LABELS, BLACK LETTERING ON WHITE BACKGROUND WITH 3/8" MINIMUM LETTERING, SHALL BE ATTACHED TO THE TOP OF THE ETHERNET SWITCH AT THE LOWER RIGHT BOTTOM. THE LABEL SHALL INCLUDE THE FOLLOWING:
  - A. HIGHWAY AND HIGHWAY MILE POINT OF THE ETHERNET SWITCH INSTALLATION LOCATION
  - B. DEVICES TO BE ATTACHED TO THE SWITCH
  - C. TYPE OF SFP OPTICS TO BE INSTALLED.

AFTER THE ASSEMBLED ETHERNET SWITCHES IS RE-BOXED FOR DELIVERY TO THE CTMC FOR CONFIGURATION, THE CONTRACTOR SHALL PRINT THE HIGHWAY AND HIGHWAY MILE POINT ON THE TOP OF THE BOX.

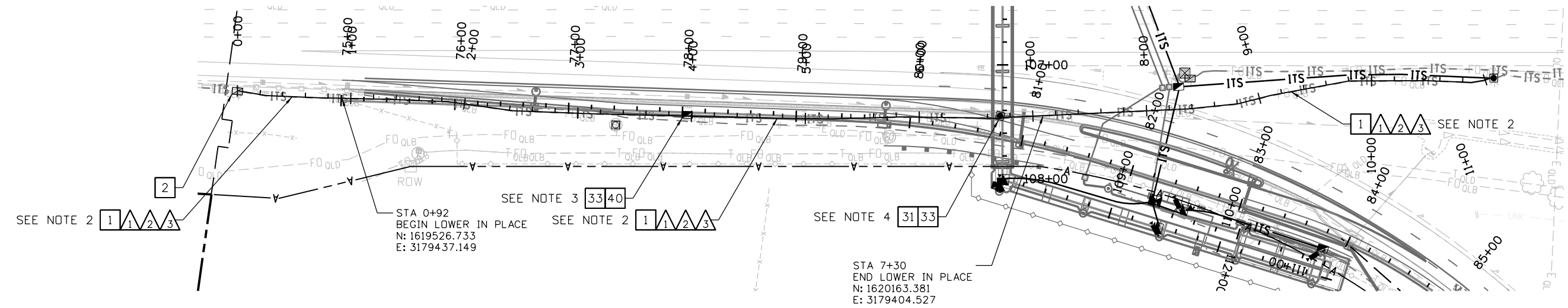
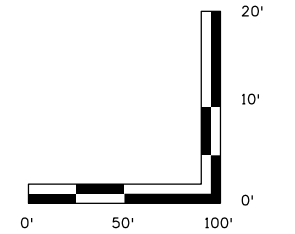
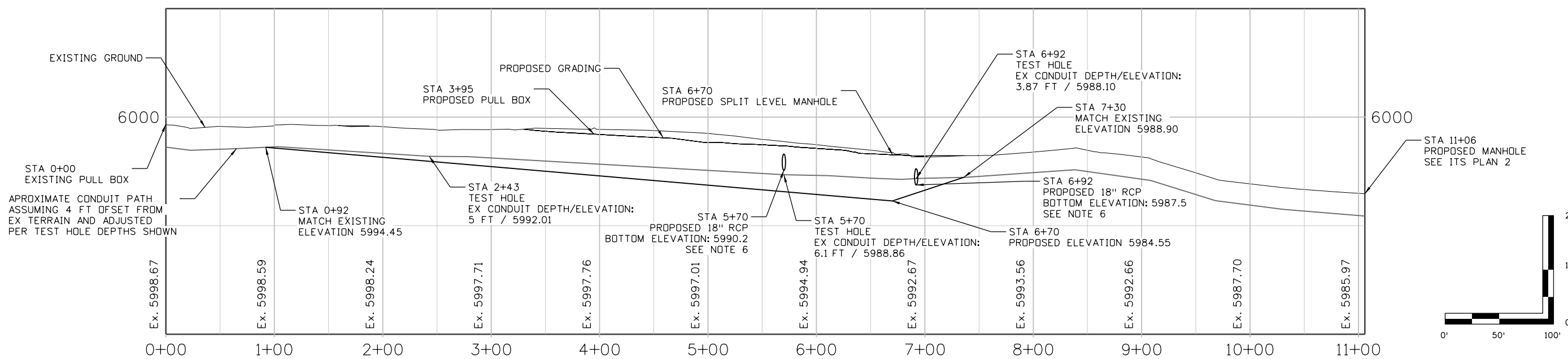
All seals for this set of drawings are applied to the cover page(s)	Print Date: 5/8/2024	Sheet Revisions			Colorado Department of Transportation			As Constructed		I-25 MOBILITY HUB (LONE TREE)			Project No./Code		
	File Name: 24278-ITS-Gen Notes.dgn	Date:	Comments	Init.	18500 E. Colfax Ave. Aurora, CO 80011 Phone: (303)-746-8639 Fax: N/A			No Revisions:		ITS GEN NOTES			267 0252-499		
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	Unit Information							Void:		Detailer:	CTD	Numbers			
	DENVER, COLORADO 80222 PH: 720-807-4766							Region 1-South Program		NB		Sheet Subset:	ITS	Subset Sheets:	2 of 2

Chris Dyk 9:33:20 AM pw:\cdot-pw\benley.com\cdot-pw-01p\Documents\02 Minor Projects\CDOT Collaboration Projects\24278 - i-25 -mobility hub (lone tree)\01 Pre-Construction\Drawings\Roadway\24278-ITS-Tabulation.dgn

TABULATION OF ITS												
ITEM NO.	ITEM DESCRIPTION	UNIT	ITS PLAN SUBSET SHEET								MISC	PROJECT TOTAL
			1	2	3	4	5	6	7	8		
202-00827	REMOVAL OF PULL BOX	EACH	2		1							3
210-00476	RESET MICROWAVE VEHICLE RADAR DETECTOR (MVRD)	EACH		1								1
210-00750	RESET LIGHT STANDARD	EACH	1									1
210-00848	RESET TRAFFIC SIGNAL CONTROLLER CABINET	EACH									1	1
210-00858	RESET PEDESTAL POLE	EACH									1	1
604-39000	MANHOLE SPECIAL	EACH	1		1							2
612-00260	LOCATION MARKER (FIBER OPTIC) (DOME)	EACH	1	3	1	1	1			1	2	10
613-00206	2 INCH ELECTRICAL CONDUIT (BORED)	LF		470							250	720
613-01200	2 INCH ELECTRICAL CONDUIT (PLASTIC)	LF		1,525	210	465	560			15	320	3,095
613-03500	ELECTRICAL CONDUIT (PLASTIC)(MULTIDUCT)(SPECIAL)	LF	638									638
613-07001	TYPE ONE PULL BOX	EACH		1			2					3
613-07004	TYPE FOUR PULL BOX	EACH		3		1	1	1			1	7
613-07005	TYPE FIVE PULL BOX	EACH	1				1			1	1	4
613-60700	TROUBLESHOOTING	HOUR									20	20
614-10142	PUBLIC INFORMATION DISPLAY	EACH					1	1		1	1	4
614-70024	1310NM SFP OPTIC MODULE	EACH									4	4
614-70028	CWDM SFP OPTIC MODULE	EACH									4	4
614-70032	OPTICAL FILTER	EACH									4	4
614-72830	COMMUNICATIONS CABINET	EACH					1			1	1	3
614-72894	EMERGENCY TELEPHONE	EACH					1			1	1	3
614-86800	UNINTERRUPTED POWER SUPPLY	EACH					1			1	1	3
614-87010	FIBER OPTIC CABLE (SINGLE MODE) (12 STRAND)	LF		1,350	510	275	65			65	65	2,330
614-87015	BUFFER TUBE FAN OUT KIT	EACH					1			1	1	3
614-87024	FIBER OPTIC TERMINATION PANEL (24 FIBER)	EACH					1			1	1	3
614-87333	CLOSED CIRCUIT TELEVISION CAMERA (TRAFFIC SURVEILLANCE)	EACH		2		1	3	1		1	1	9
614-87692	ETHERNET SWITCH TYPE II	EACH					1			1	1	3
625-00000	CONSTRUCTION SURVEYING	LS									1	1
700-70230	F/A COMMUNICATION LINES	FA									1	1

All seals for this set of drawings are applied to the cover page(s)	Print Date: 5/10/2024	Sheet Revisions			Colorado Department of Transportation			As Constructed		I-25 MOBILITY HUB (LONE TREE)			Project No./Code	
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	Unit Information							Void:		Detailer:	CTD			
 DENVER, COLORADO 80222 PH: 720-807-4766				Region 1-South Program    NB				Sheet Subset:	ITS	Subset Sheets:	1 of 1			

Chris Dyk 1:32:12 PM pwr:\cadd\pw-bentley.com\cdot\Documents\02\_Minor\_Projects\CDOT\_Collaboration\Projects\24278 - i-25 -mobility hub (lone tree)\01 Pre-Construction\Drawings\Roadway\24278-ITS-PLAN



**CONSTRUCTION NOTES**

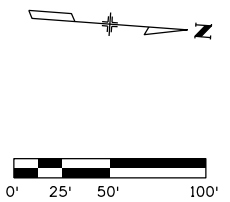
- 2 EXISTING PULL BOX
- 31 MANHOLE (SPECIAL) (SPLIT LEVEL)
- 33 REMOVE EXISTING PULL BOX
- 40 TYPE FIVE PULL BOX (30" X 48" X 24")

**WIRING NOTES**

- 1 EXISTING CDOT FIBER OPTIC CABLE (SINGLE MODE) (168 STRANDS)
- 2 EXISTING DC/LONE TREE FIBER OPTIC CABLE (SINGLE MODE) (180 STRANDS)
- 3 EXISTING ZAYO MICRO FIBER OPTIC CABLE (SINGLE MODE) (288 STRANDS)

**NOTES**

1. THIS SHEET IS FOR THE BACKBONE DUCT BANK LOWER IN PLACE ONLY. SEE ITS PLAN SUBSET SHEETS 2-8 FOR ADDITIONAL ITS PLANS. HCL SHOWN FOR THE EXISTING BACKBONE DUCT BANK IS FOR REFERENCE ONLY. SEE NORTHINGS AND EASTINGS FOR EXACT LOCATION REFERENCES.
2. BACKBONE DUCT BANK CONTAINS A 6 INCH SLEEVE WITH FIVE 1-1/4" CONDUITS.
3. REMOVE EXISTING PULL BOX AND REPLACE WITH A TYPE FIVE PULL BOX. ADJUST FINAL PULL BOX LOCATION TO BE OUTSIDE OF THE PROPOSED CURB AND GUTTER.
4. REMOVE EXISTING PULL BOX AND REPLACE WITH A SPLIT LEVEL MANHOLE. ADJUST FINAL MANHOLE LOCATION TO BE WITHIN THE STRIPED GORE AREA.
5. TOP OF PROPOSED LOWER IN PLACE BACKBONE DUCT BANK SHALL MAINTAIN A MINIMUM OF 1 FT CLEAR BELOW THE PROPOSED RCP.

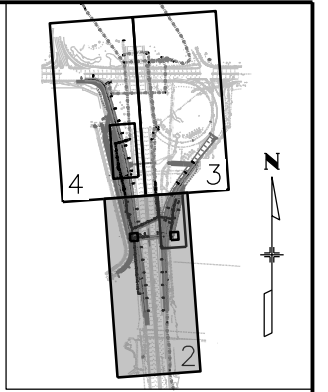
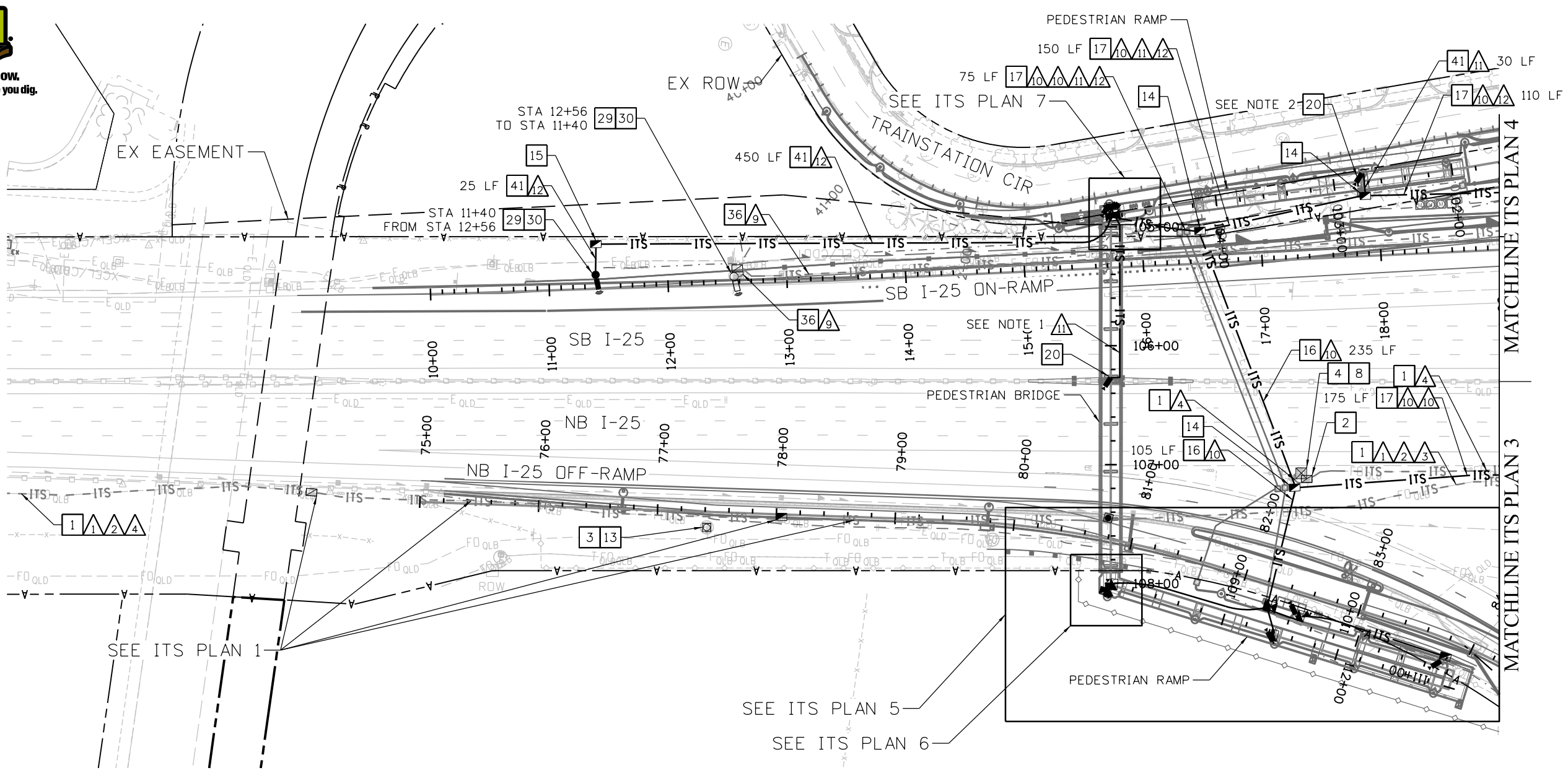


All seals for this set of drawings are applied to the cover page(s)	Print Date: 5/9/2024 File Name: 24278-ITS-PLAN.dgn Horiz. Scale: 1"=100'    Vert. Scale: As Noted Unit Information	<b>Sheet Revisions</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Date:</th> <th>Comments</th> <th>Init.</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	Init.										Colorado Department of Transportation 18500 E. Colfax Ave. Aurora, CO 80011 Phone: (303)-746-8639 Fax: N/A Region 1-South Program	As Constructed No Revisions: Revised: Void:	<b>I-25 MOBILITY HUB (LONE TREE) ITS PLAN</b> <b>LOWER IN PLACE PLAN/PROFILE</b> Designer: RMK Detailer: CTD Sheet Subset: ITS    Subset Sheets: 1 of 8	Project No./Code 267 0252-499 24278
	Date:	Comments	Init.															
DENVER, COLORADO 80222 PH: 720-807-4766		<b>NB</b>	Structure Numbers:	24278														
IRONSTRIDE SOLUTIONS		Region 1-South Program	NB	Sheet Subset: ITS    Subset Sheets: 1 of 8	24278													





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KEY MAP

**CONSTRUCTION NOTES**

- 1 EXISTING CONDUIT(S)
- 3 EXISTING MANHOLE
- 4 EXISTING COMMUNICATIONS CABINET
- 8 EXISTING ETHERNET SWITCH (3930)
- 13 PROTECT IN PLACE
- 14 TYPE FOUR PULL BDX (24" X 36" X 24")
- 15 TYPE ONE PULL BDX (11" X 18" X 12")
- 16 2 - 2 INCH ELECTRICAL CONDUIT (BORED)

**WIRING NOTES**

- 17 2 - 2 INCH ELECTRICAL CONDUIT (PLASTIC)
- 20 CCTV CAMERA (TRAFFIC SURVEILLANCE)
- 29 RESET ITS POLE
- 30 RESET MVRD
- 36 ABANDON EXISTING CONDUIT(S)
- 41 1 - 2 INCH ELECTRICAL CONDUIT (PLASTIC)

- 1 EXISTING CDOT FIBER OPTIC CABLE (SINGLE MODE) (168 STRANDS)
- 2 EXISTING DC/LONE TREE FIBER OPTIC CABLE (SINGLE MODE) (180 STRANDS)
- 3 EXISTING ZAYO MICRO FIBER OPTIC CABLE (SINGLE MODE) (288 STRANDS)
- 4 EXISTING FIBER OPTIC CABLE (SINGLE MODE) (12 STRANDS)
- 9 REMOVE EXISTING MVRD CABLE
- 10 FIBER OPTIC CABLE (SINGLE MODE) (12 STRANDS)
- 11 CAT 5E STP CABLE
- 12 MVRD CABLE

**NOTES**

1. SEE BRIDGE PLANS FOR CONDUIT QUANTITIES AND DETAILS.
2. SEE "RTD BUS INFRASTRUCTURE STANDARD DRAWINGS", SHEET 24 OF 68 FOR MOUNTING CCTV ON LIGHT POLE DETAIL. CCTV SHALL BE MOUNTED 11 FEET ABOVE FINISHED GRADE.

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File Name: 24278-ITS-PLAN.dgn
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Unit Information
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Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation

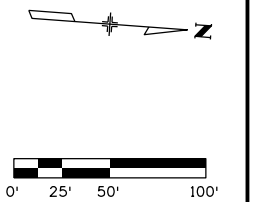
18500 E. Colfax Ave.  
Aurora, CO 80011  
Phone: (303)-746-8639  
Fax: N/A

Region 1-South Program **NB**

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No Revisions:
Revised:
Void:

I-25 MOBILITY HUB (LONE TREE) ITS PLAN			
Designer:	RMK	Structure Numbers	
Detailer:	CTD		
Sheet Subset:	ITS	Subset Sheets:	2 of 8

Project No./Code
267 0252-499
24278

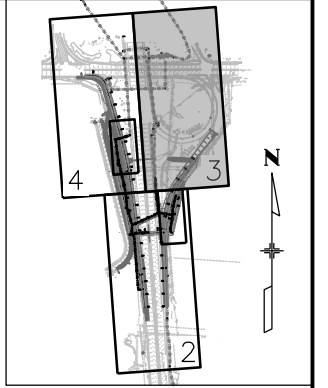


Chris Dyk 1:32:13 PM pwr:\cadd\pw-bentley.com\cdot\Documents\02\_Minor Projects\CDOT\_Collaboration Projects\24278 - i-25 -mobility hub (lone tree)\01 Pre-Construction\Drawings\Roadway\24278-ITS-PLAN



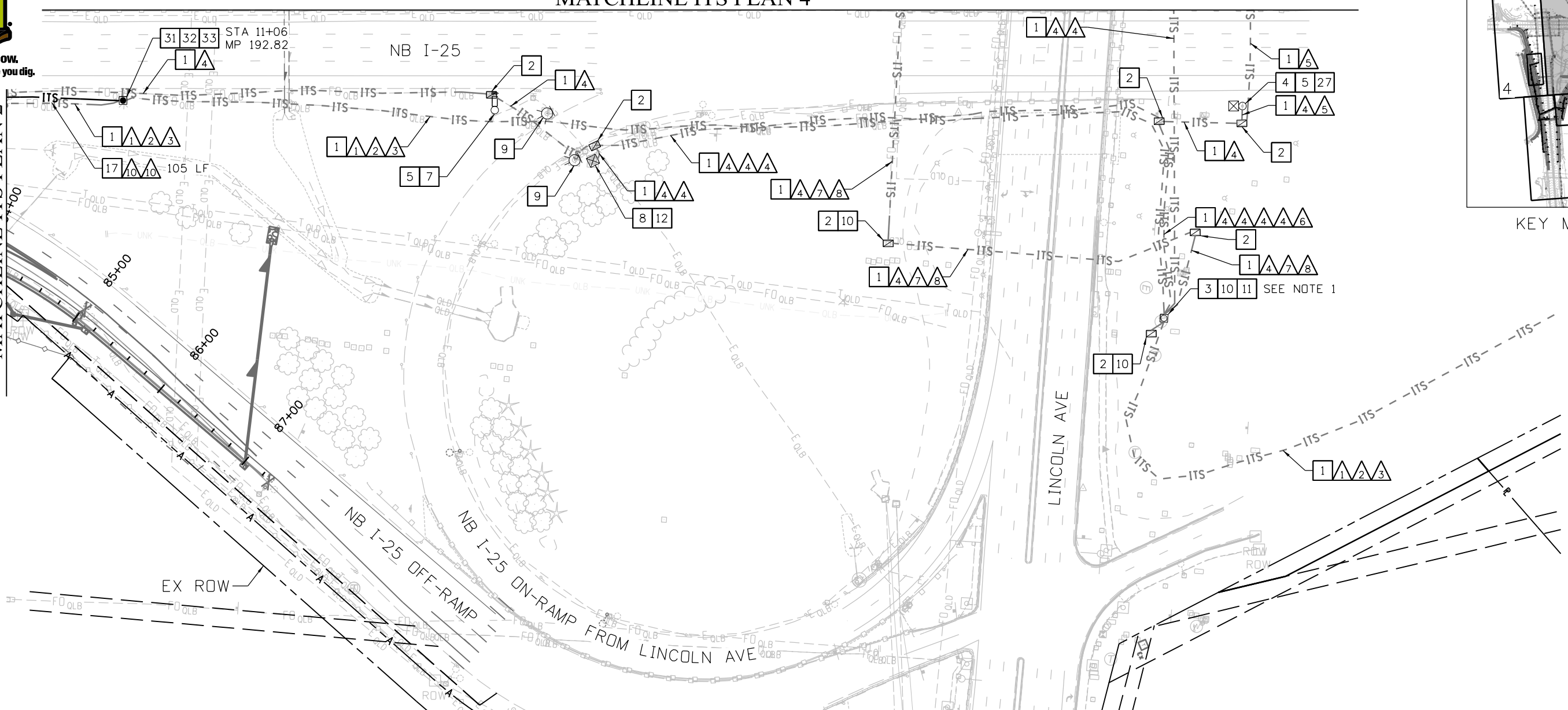
Know what's below.  
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### MATCHLINE ITS PLAN 4



KEY MAP

MATCHLINE ITS PLAN 2



#### CONSTRUCTION NOTES

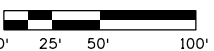
- 1 EXISTING CONDUIT(S)
- 2 EXISTING PULL BDX
- 3 EXISTING MANHOLE
- 4 EXISTING COMMUNICATIONS CABINET
- 5 EXISTING ITS POLE
- 7 EXISTING MVRD
- 8 EXISTING ETHERNET SWITCH (3930)
- 9 EXISTING RAMP METER PEDESTAL POLE
- 10 EXISTING SPLICE POINT
- 11 EXISTING CABLE END SPLICE
- 12 EXISTING RMS CABINET
- 17 2 - 2 INCH ELECTRICAL CONDUIT (PLASTIC)
- 27 EXISTING ETHERNET SWITCH (3931)
- 31 MANHOLE (SPECIAL) (SPLIT LEVEL)
- 32 PROPOSED SPLICE POINT (CWDM)
- 33 REMOVE EXISTING PULL BOX

#### WIRING NOTES

- 1 EXISTING CDOT FIBER OPTIC CABLE (SINGLE MODE) (168 STRANDS)
- 2 EXISTING DC/LONE TREE FIBER OPTIC CABLE (SINGLE MODE) (180 STRANDS)
- 3 EXISTING ZAYO MICRO FIBER OPTIC CABLE (SINGLE MODE) (288 STRANDS)
- 4 EXISTING FIBER OPTIC CABLE (SINGLE MODE) (12 STRANDS)
- 5 EXISTING CAT6 CABLE
- 6 EXISTING FIBER OPTIC CABLE (SINGLE MODE) (6 STRANDS)
- 7 EXISTING FIBER OPTIC CABLE (T-REX BACKBONE)
- 8 EXISTING FIBER OPTIC CABLE (COMMSCOPE 2002)
- 10 FIBER OPTIC CABLE (SINGLE MODE) (12 STRANDS)

#### NOTES

- 1. EXISTING CDOT 168 STRAND FIBER OPTIC CABLE END SPLICE.



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Phone: (303)-746-8639  
Fax: N/A

Region 1-South Program **NB**

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Revised:
Void:

I-25 MOBILITY HUB (LONE TREE) ITS PLAN			
Designer:	RMK	Structure Numbers	
Detailer:	CTD		
Sheet Subset:	ITS	Subset Sheets:	3 of 8

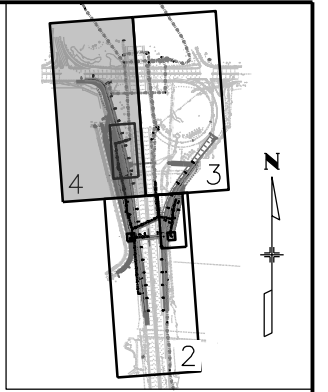
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267 0252-499
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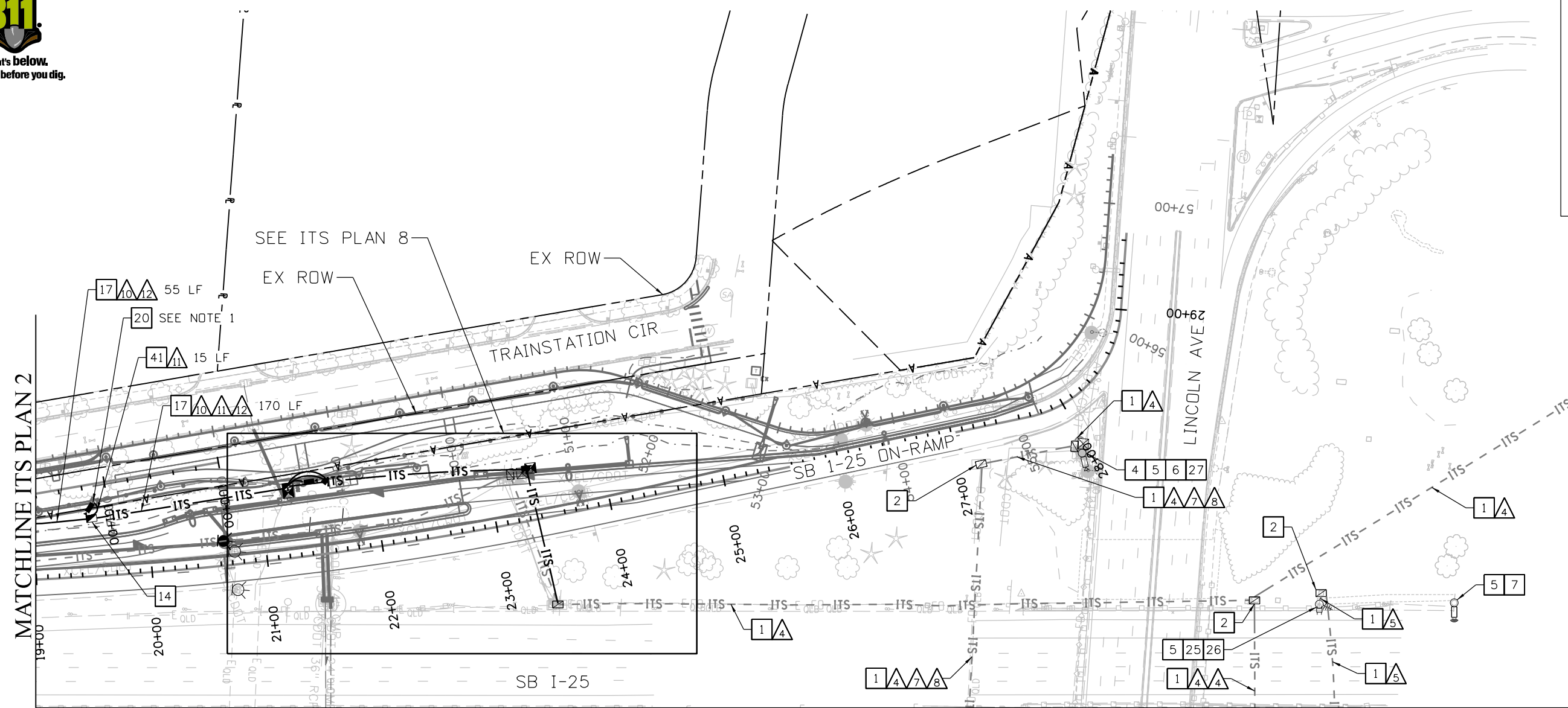


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KEY MAP



MATCHLINE ITS PLAN 2

MATCHLINE ITS PLAN 3

CONSTRUCTION NOTES

- 1 EXISTING CONDUIT(S)
- 2 EXISTING PULL BDX
- 4 EXISTING COMMUNICATIONS CABINET
- 5 EXISTING ITS POLE
- 6 EXISTING CCTV
- 7 EXISTING MVRD
- 14 TYPE FOUR PULL BDX (24" X 36" X 24")
- 17 2 - 2 INCH ELECTRICAL CONDUIT (PLASTIC)

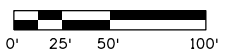
- 20 CCTV CAMERA (TRAFFIC SURVEILLANCE)
- 25 EXISTING DSRC
- 26 REMOVE EXISTING TTI
- 27 EXISTING ETHERNET SWITCH (3931)
- 41 1 - 2 INCH ELECTRICAL CONDUIT (PLASTIC)

WIRING NOTES

- 4 EXISTING FIBER OPTIC CABLE (SINGLE MODE) (12 STRANDS)
- 5 EXISTING CAT6 CABLE
- 7 EXISTING FIBER OPTIC CABLE (T-REX BACKBONE)
- 8 EXISTING FIBER OPTIC CABLE (COMMSCOPE 2002)
- 10 FIBER OPTIC CABLE (SINGLE MODE) (12 STRANDS)
- 11 CAT 5E STP CABLE
- 12 MVRD CABLE

NOTES

- 1. SEE "RTD BUS INFRASTRUCTURE STANDARD DRAWINGS", SHEET 24 OF 68 FOR MOUNTING CCTV ON LIGHT POLE DETAIL. CCTV SHALL BE MOUNTED 11 FEET ABOVE FINISHED GRADE.

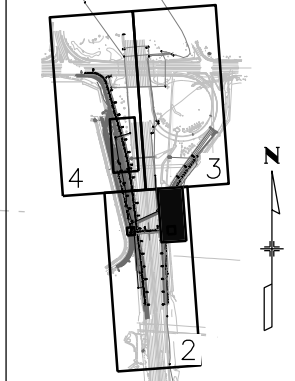
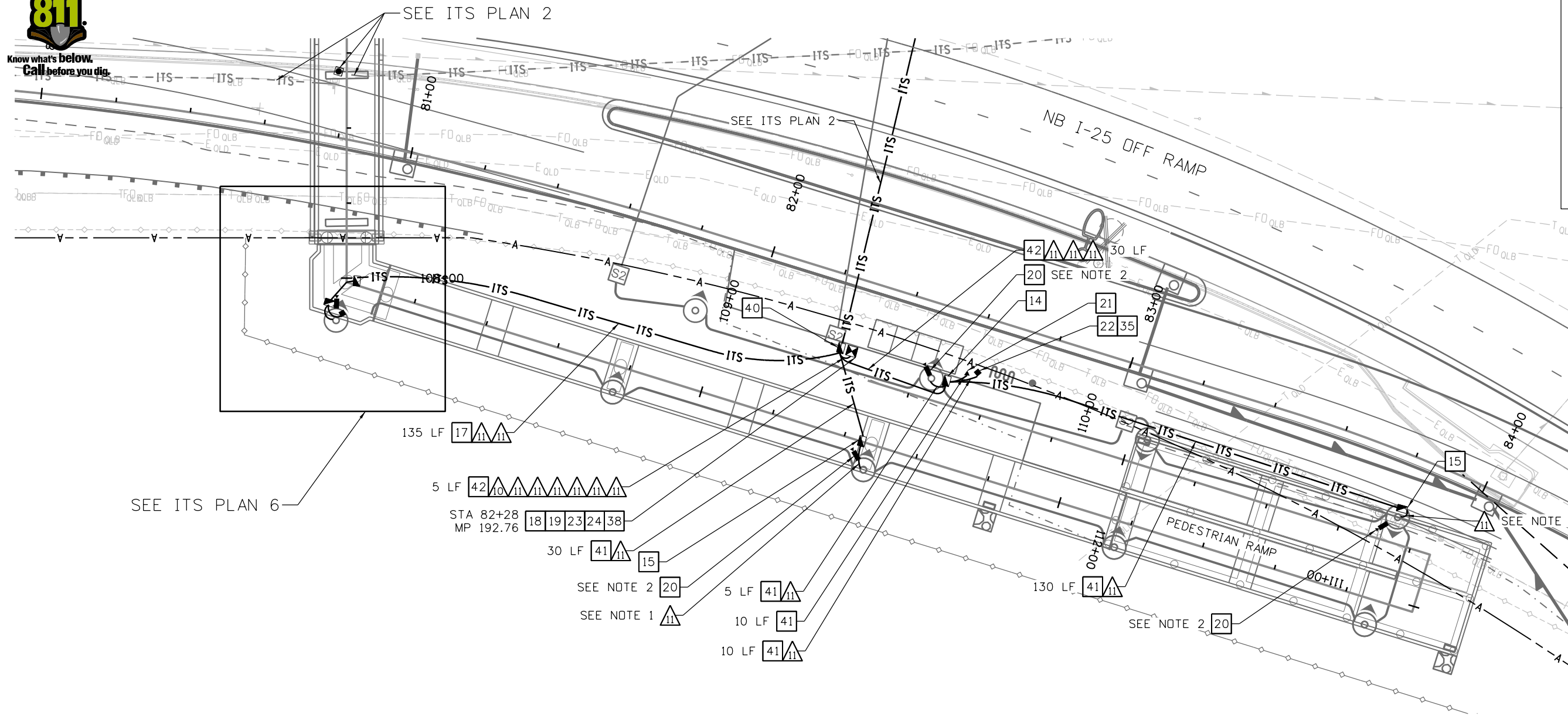


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	File Name: 24278-ITS-PLAN.dgn	Date:	Comments	Init.		No Revisions:	ITS PLAN		267 0252-499
	Horiz. Scale: 1"=100' Vert. Scale: As Noted					Revised:	Designer: RMK	Structure Numbers	24278
Unit Information	IRONSTRIDE SOLUTIONS DENVER, COLORADO 80222 PH: 720-807-4766				Void:	Detailer: CTD	Subset Sheets: 4 of 8		





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KEY MAP

**CONSTRUCTION NOTES**

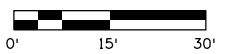
- 14 TYPE FOUR PULL BOX (24" X 36" X 24")
- 15 TYPE ONE PULL BOX (11" X 18" X 12")
- 17 2 - 2 INCH ELECTRICAL CONDUIT (PLASTIC)
- 18 FIBER OPTIC TERMINATION PANEL (24 FIBER)
- 19 BUFFER TUBE FAN OUT KIT
- 20 CCTV CAMERA (TRAFFIC SURVEILLANCE)
- 21 EMERGENCY TELEPHONE
- 22 PUBLIC INFORMATION DISPLAY
- 23 COMMUNICATIONS CABINET (332D)
- 24 UNINTERRUPTED POWER SUPPLY
- 35 PID PC
- 38 ETHERNET SWITCH TYPE II (3926)
- 40 TYPE FIVE PULL BOX (30" X 48" X 24")
- 41 1 - 2 INCH ELECTRICAL CONDUIT (PLASTIC)
- 42 3 - 2 INCH ELECTRICAL CONDUIT (PLASTIC)

**WIRING NOTES**

- △ FIBER OPTIC CABLE (SINGLE MODE) (12 STRANDS)
- △ CAT 5E STP CABLE

**NOTES**

1. SEE BRIDGE PLANS FOR CONDUIT QUANTITIES AND DETAILS.
2. SEE "RTD BUS INFRASTRUCTURE STANDARD DRAWINGS", SHEET 24 OF 68 FOR MOUNTING CCTV ON LIGHT POLE DETAIL. CCTV SHALL BE MOUNTED 11 FEET ABOVE FINISHED GRADE.



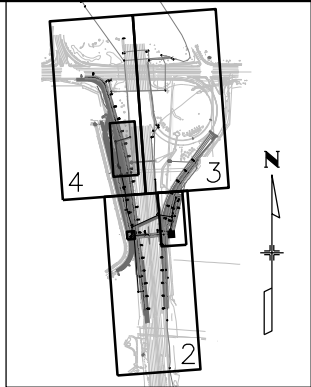
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	Date:	Comments	Init.															
DENVER, COLORADO 80222 PH: 720-807-4766	<b>Region 1-South Program</b> <b>NB</b>	No Revisions: Revised: Void:	Designer: RMK Detailer: CTD Sheet Subset: ITS    Subset Sheets: 5 of 8	Project No./Code 267 0252-499 24278														

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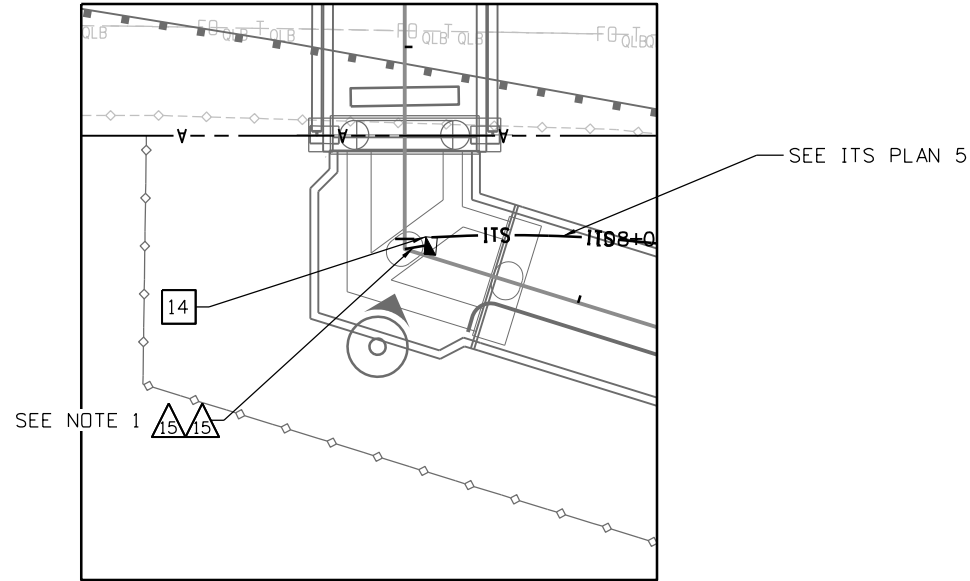


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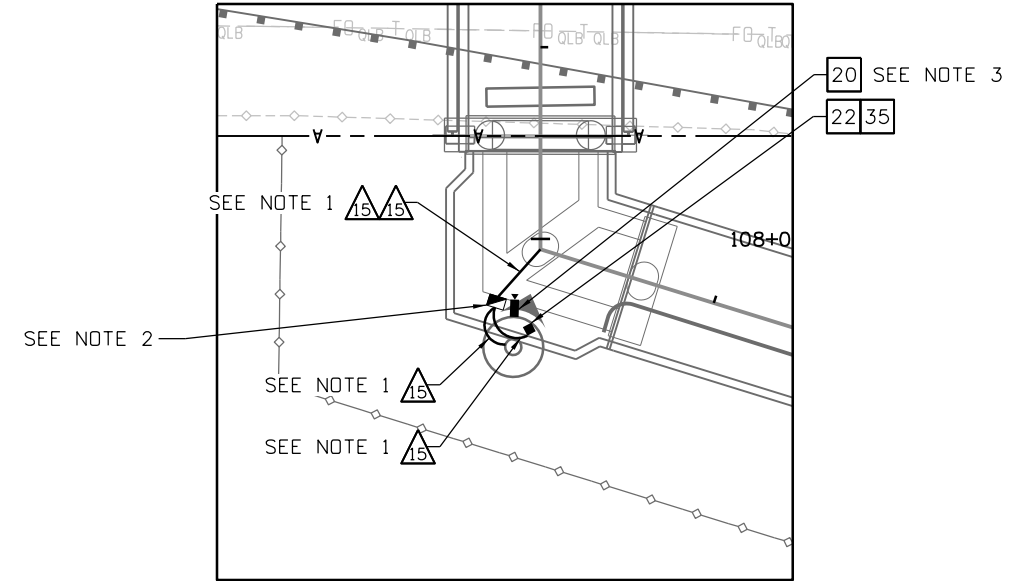
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KEY MAP



AT GRADE UNDER PEDESTRIAN BRIDGE



ON PEDESTRIAN BRIDGE DECK

**CONSTRUCTION NOTES**

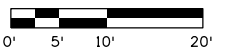
- 14 TYPE FOUR PULL BOX (24" X 36" X 24")
- 20 CCTV CAMERA (TRAFFIC SURVEILLANCE)
- 22 PUBLIC INFORMATION DISPLAY
- 35 PID PC

**WIRING NOTES**

- 11 CAT 5E STP CABLE

**NOTES**

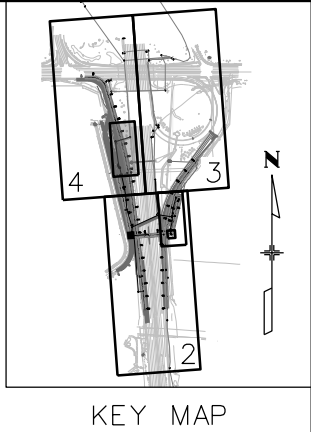
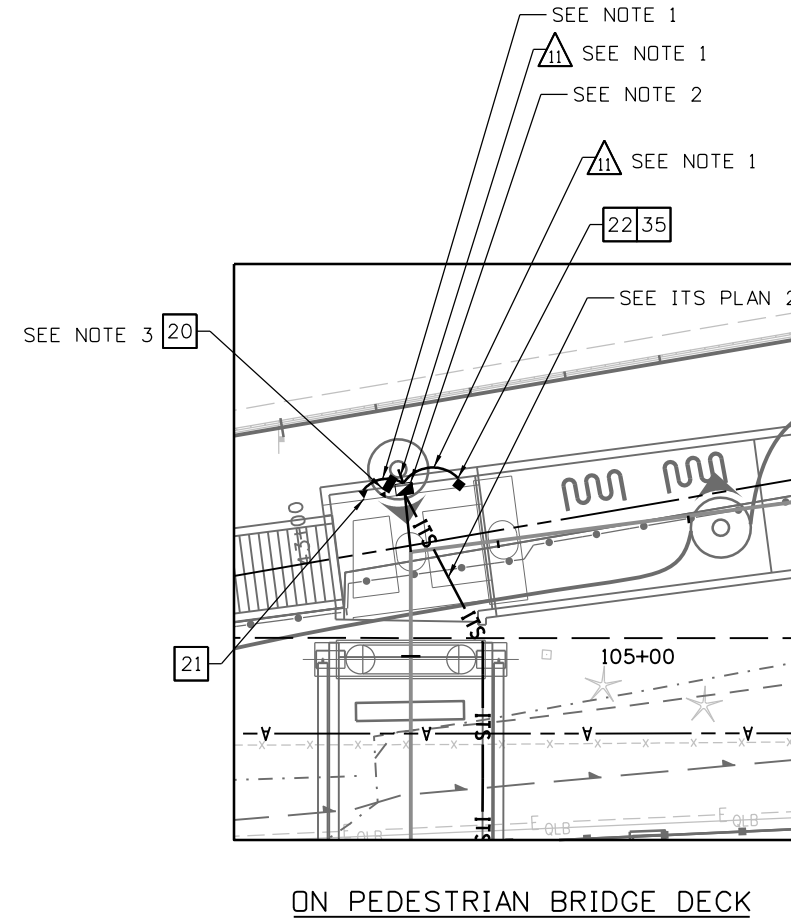
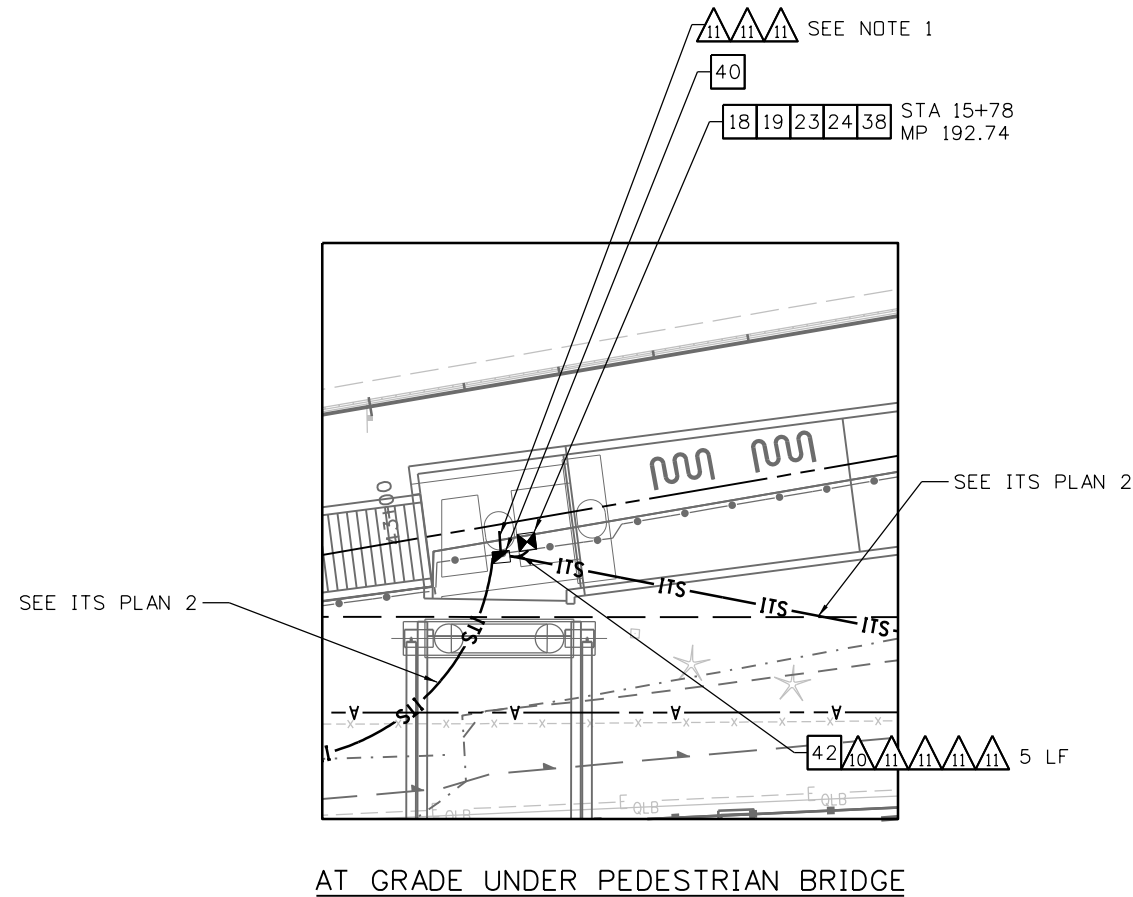
1. SEE BRIDGE PLANS FOR CONDUIT QUANTITIES AND DETAILS.
2. SEE BRIDGE PLANS FOR PULL BOX QUANTITIES AND DETAILS.
3. SEE "RTD BUS INFRASTRUCTURE STANDARD DRAWINGS", SHEET 24 OF 68 FOR MOUNTING CCTV ON LIGHT POLE DETAIL. CCTV SHALL BE MOUNTED AS HIGH AS POSSIBLE WHILE MAINTAINING A VIEW THROUGH THE PEDESTRIAN BRIDGE.



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	Unit Information							Void:		Detailer:	CTD	Numbers		
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### CONSTRUCTION NOTES

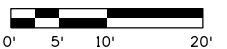
- 18 FIBER OPTIC TERMINATION PANEL (24 FIBER)
- 19 BUFFER TUBE FAN OUT KIT
- 20 CCTV CAMERA (TRAFFIC SURVEILLANCE)
- 21 EMERGENCY TELEPHONE
- 22 PUBLIC INFORMATION DISPLAY
- 23 COMMUNICATIONS CABINET (332D)
- 24 UNINTERRUPTED POWER SUPPLY
- 35 PID PC
- 38 ETHERNET SWITCH TYPE II (3926)
- 40 TYPE FIVE PULL BOX (30" X 48" X 24")
- 42 3 - 2 INCH ELECTRICAL CONDUIT (PLASTIC)

### WIRING NOTES

- 10 FIBER OPTIC CABLE (SINGLE MODE) (12 STRANDS)
- 11 CAT 5E STP CABLE

### NOTES

1. SEE BRIDGE PLANS FOR CONDUIT QUANTITIES AND DETAILS.
2. SEE BRIDGE PLANS FOR PULL BOX QUANTITIES AND DETAILS.
3. SEE "RTD BUS INFRASTRUCTURE STANDARD DRAWINGS", SHEET 24 OF 68 FOR MOUNTING CCTV ON LIGHT POLE DETAIL. CCTV SHALL BE MOUNTED AS HIGH AS POSSIBLE WHILE MAINTAINING A VIEW THROUGH THE PEDESTRIAN BRIDGE.



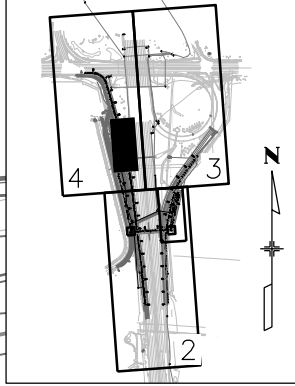
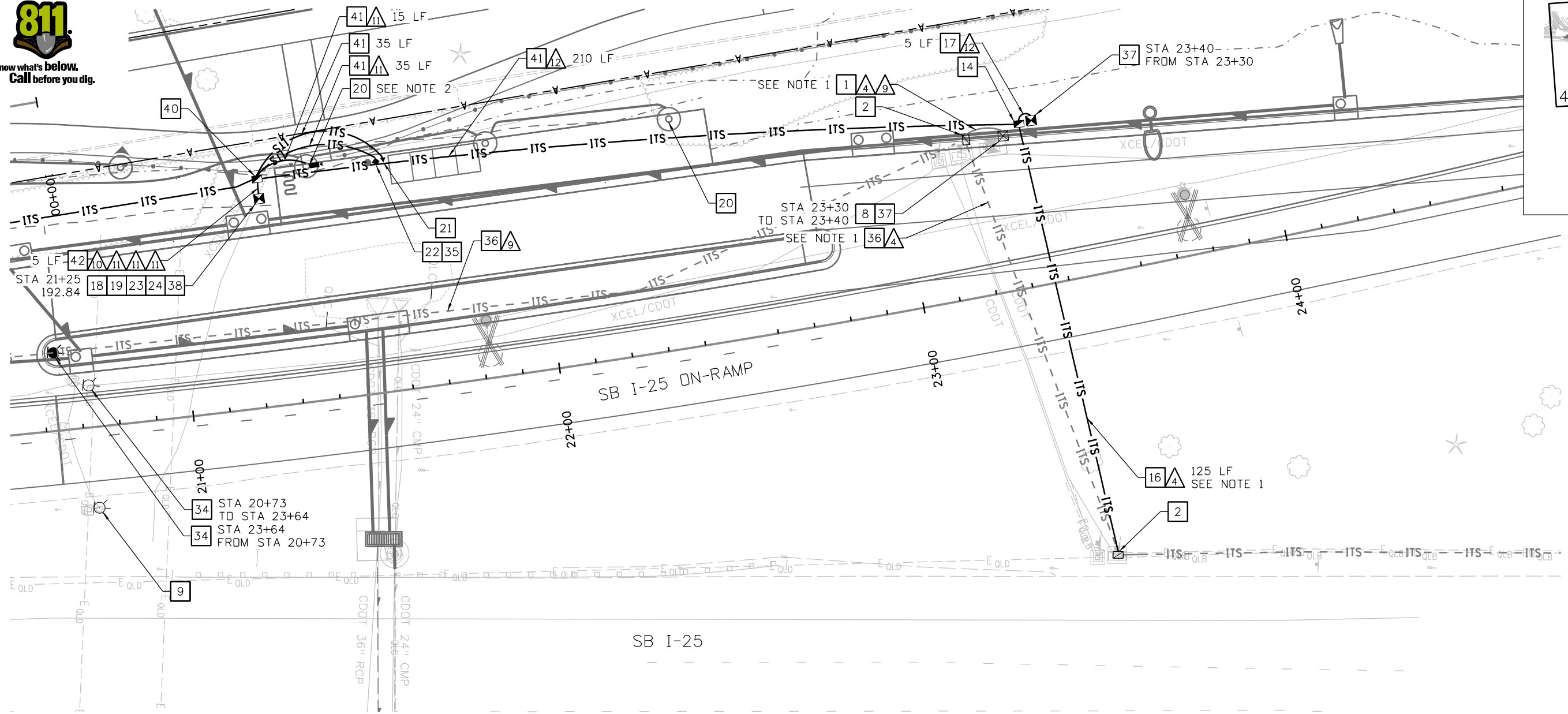
All seals for this set of drawings are applied to the cover page(s)	Print Date: 5/9/2024	Sheet Revisions			Colorado Department of Transportation			As Constructed		I-25 MOBILITY HUB (LONE TREE)			Project No./Code		
	File Name: 24278-ITS-PLAN.dgn				18500 E. Colfax Ave. Aurora, CO 80011 Phone: (303)-746-8639 Fax: N/A			No Revisions:		ITS PLAN			267 0252-499		
	Horiz. Scale: 1"=20'    Vert. Scale: As Noted							Revised:		Designer: RMK		Structure Numbers		24278	
	Unit Information							Void:		Detailer: CTD		Sheet Subset: ITS		Subset Sheets: 7 of 8	
DENVER, COLORADO 80222 PH: 720-807-4766					Region 1-South Program			NB							

Chris Dyk 1:32:26 PM pwr:\caddot-pw-bentley.com\cdot-pw-01p\Documents\02\_Minor\_Projects\CDDT\_Collaboration\_Projects\24278 - i-25 -mobility hub (lone tree)\01 Pre-Construction\Drawings\Roadway\24278-ITS-PLAN





Know what's below.  
Call before you dig.



KEY MAP

**CONSTRUCTION NOTES**

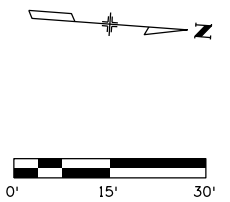
- [2] EXISTING PULL BOX
- [8] EXISTING ETHERNET SWITCH (3930)
- [9] EXISTING RAMP METER PEDESTAL POLE
- [14] TYPE FOUR PULL BOX (24" X 36" X 24")
- [16] 2 - 2 INCH ELECTRICAL CONDUIT (BORED)
- [17] 2 - 2 INCH ELECTRICAL CONDUIT (PLASTIC)
- [18] FIBER OPTIC TERMINATION PANEL (24 FIBER)
- [19] BUFFER TUBE FAN OUT KIT
- [20] CCTV CAMERA (TRAFFIC SURVEILLANCE)
- [21] EMERGENCY TELEPHONE
- [22] PUBLIC INFORMATION DISPLAY
- [23] COMMUNICATIONS CABINET (332D)
- [24] UNINTERRUPTED POWER SUPPLY
- [34] RESET RAMP METER PEDESTAL POLE
- [35] PID PC
- [36] ABANDON EXISTING CONDUIT(S)
- [37] RESET RMS CABINET
- [38] ETHERNET SWITCH TYPE II (3926)
- [40] TYPE FIVE PULL BOX (30" X 48" X 24")
- [41] 1 - 2 INCH ELECTRICAL CONDUIT (PLASTIC)
- [42] 3 - 2 INCH ELECTRICAL CONDUIT (PLASTIC)

**WIRING NOTES**

- [4] EXISTING FIBER OPTIC CABLE (SINGLE MODE) (12 STRANDS)
- [9] REMOVE EXISTING MVRD CABLE
- [10] FIBER OPTIC CABLE (SINGLE MODE) (12 STRANDS)
- [11] CAT 5E STP CABLE
- [12] MVRD CABLE

**NOTES**

1. PULL EXISTING 12 STRAND LATERAL FROM EXISTING RAMP METER CABINET AT STA 23+30 BACK TO EXISTING PULL BOX. THEN PULL EXISTING 12 STRAND LATERAL THROUGH PROPOSED CONDUIT TO THE RESET CABINET LOCATION AT 23+40.
2. SEE "RTD BUS INFRASTRUCTURE STANDARD DRAWINGS", SHEET 24 OF 68 FOR MOUNTING CCTV ON LIGHT POLE DETAIL. CCTV SHALL BE MOUNTED 11 FEET ABOVE FINISHED GRADE.



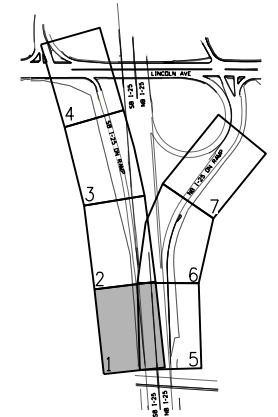
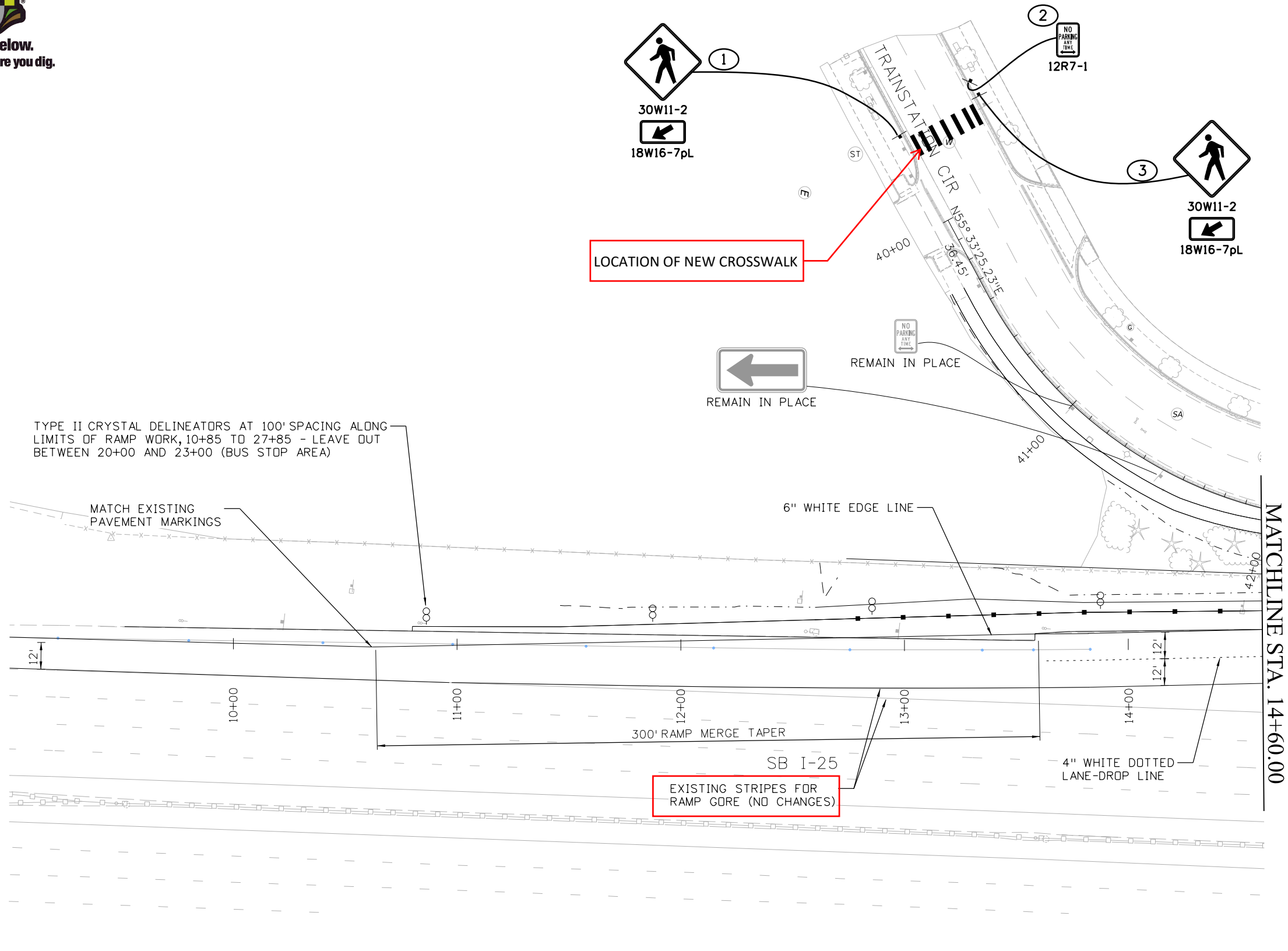
All seals for this set of drawings are applied to the cover page(s)	Print Date: 5/9/2024 File Name: 24278-ITS-PLAN.dgn Horiz. Scale: 1"=30'    Vert. Scale: As Noted Unit Information DENVER, COLORADO 80222 PH: 720-807-4766	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">Sheet Revisions</th> </tr> <tr> <th>Date:</th> <th>Comments</th> <th>Init.</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>	Sheet Revisions			Date:	Comments	Init.										 Colorado Department of Transportation 18500 E. Colfax Ave. Aurora, CO 80011 Phone: (303)-746-8639 Fax: N/A Region 1-South Program    NB	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>As Constructed</td> <td rowspan="4" style="text-align: center;"> <b>I-25 MOBILITY HUB (LONE TREE) ITS PLAN</b> </td> <td colspan="2">Project No./Code</td> </tr> <tr> <td>No Revisions:</td> <td colspan="2" style="text-align: center;">267 0252-499</td> </tr> <tr> <td>Revised:</td> <td>Designer: RMK</td> <td>Structure Numbers:</td> <td style="text-align: center;">24278</td> </tr> <tr> <td>Void:</td> <td>Detailer: CTD</td> <td>Subset Sheets:</td> <td style="text-align: center;">8 of 8</td> </tr> </table>	As Constructed	<b>I-25 MOBILITY HUB (LONE TREE) ITS PLAN</b>	Project No./Code		No Revisions:	267 0252-499		Revised:	Designer: RMK	Structure Numbers:	24278	Void:	Detailer: CTD	Subset Sheets:	8 of 8	
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As Constructed	<b>I-25 MOBILITY HUB (LONE TREE) ITS PLAN</b>	Project No./Code																																	
No Revisions:		267 0252-499																																	
Revised:		Designer: RMK	Structure Numbers:	24278																															
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Chris Dyk 3:17:10 PM pwr:\cadd\pw-bentley.com\cdot\Documents\02\_Minor Projects\CDOT\_Collaboration Projects\24278 - i-25 -mobility hub (lone tree)\01 Pre-Construction\Drawings\Roadway\24278-ITS-PLAN

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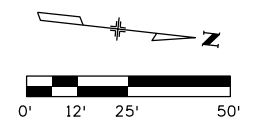


KEY MAP

**NOTES:**

1. SIGNS THAT REMAIN IN PLACE ARE NOT NUMBERED
  - 2.
  3. SIGNS ON TRAINSTATION CIRCLE USE LONE TREE STANDARD SIGN POSTS (2" X 2" SQUARE)
- SEE WAYFINDING SIGN PLANS FOR BUSTANG WAYFINDING

**LEGEND:**

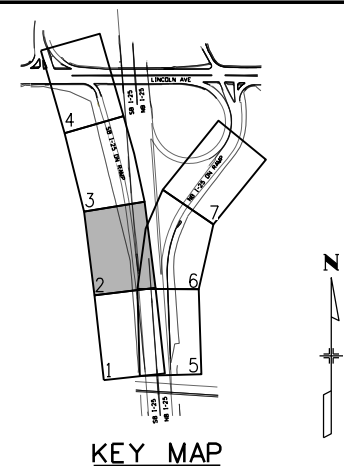
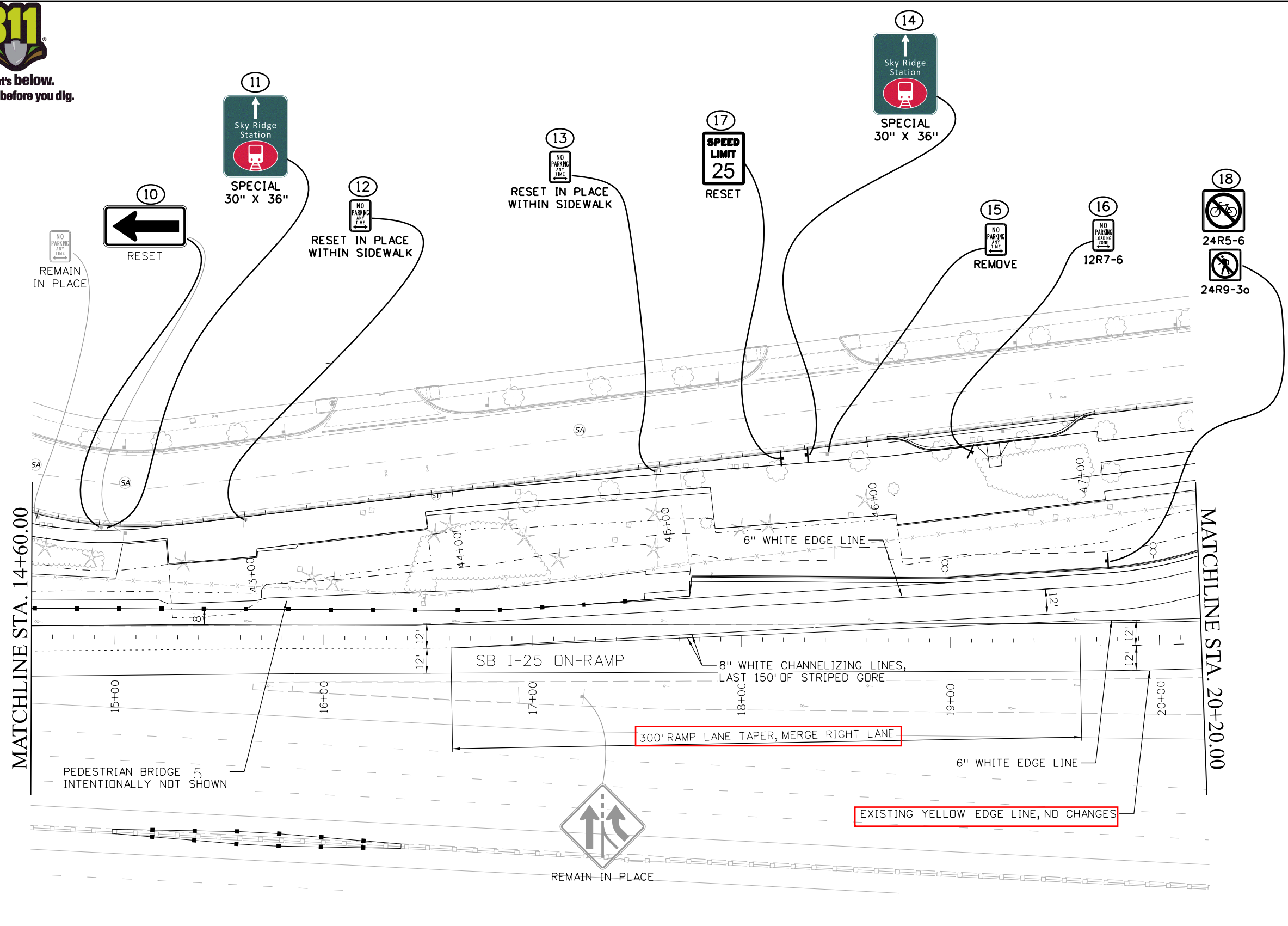


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	File Name: 24278-RSH-HW-025A-RD-DR-SNST.dgn	Date:	Comments	Init.			No Revisions:	Designer: DW	Structure Numbers: X-XX-XX	Subset Sheets: 1 of 007	
	Horiz. Scale: 1"=50' Vert. Scale: As Noted						Revised:	Detailer: DW	X-XX-XX		
	Unit Information JT						Void:	Sheet Subset: SNST			

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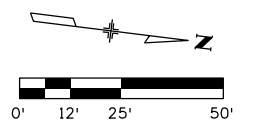


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- NOTES:**
- 1.
  - 2.
  - 3.

**LEGEND:**



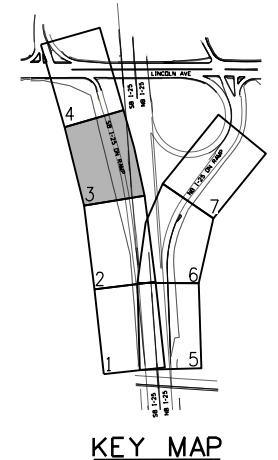
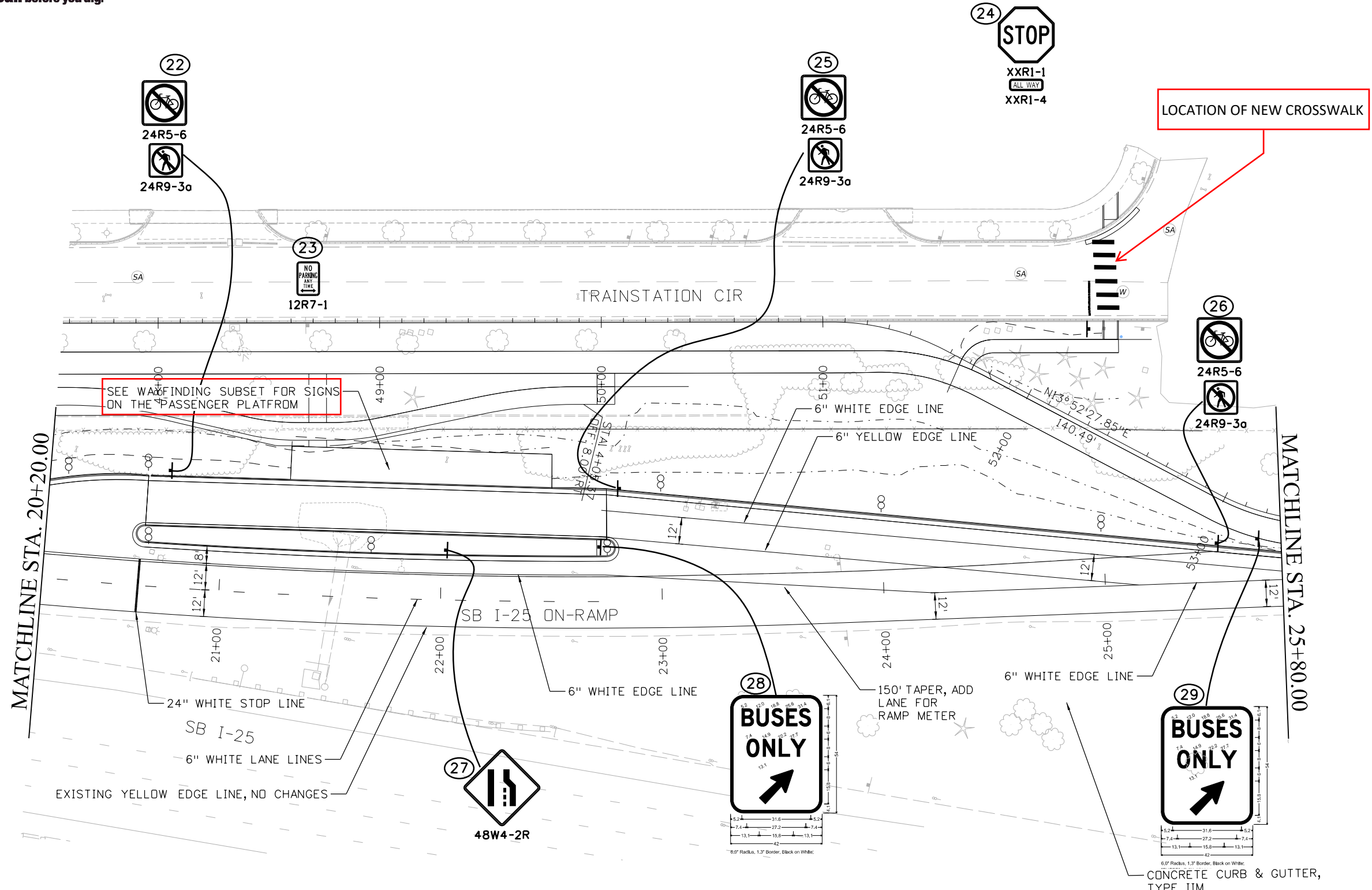
All seals for this set of drawings are applied to the cover page(s)	Print Date: 5/9/2024	Sheet Revisions		Colorado Department of Transportation		As Constructed		I-25 MOBILITY HUB (LONE TREE) SIGNING AND STRIPING PLAN STA 14+60 TO STA 20+20		Project No./Code
	File Name: 24278-RSH-HW-025A-RD-DR-SNST.dgn	Date:	Comments	Init.	18500 E. Colfax Ave. Aurora, CO 80011 Phone: (303) 746-8639 Fax: N/A	No Revisions:		267 0252-499		
	Horiz. Scale: 1"=50' Vert. Scale: As Noted					Revised:	Designer: DW	Structure Numbers	X-XX-XX	24278
	Unit Information JT					Void:	Detailer: DW	Subset Sheets:	X-XX-XX	
						Sheet Subset: SNST	2 of 007			
				Region 1-South Program		NB				



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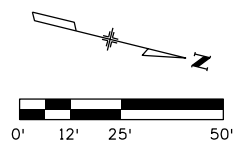


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- NOTES:**
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**LEGEND:**



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Horiz. Scale: 1"=50' Vert. Scale: As Noted
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Fax: N/A

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Revised:
Void:

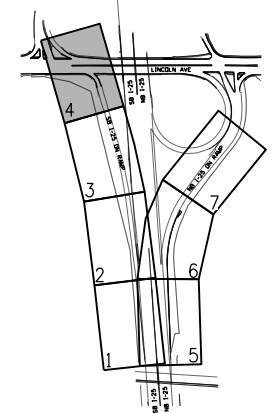
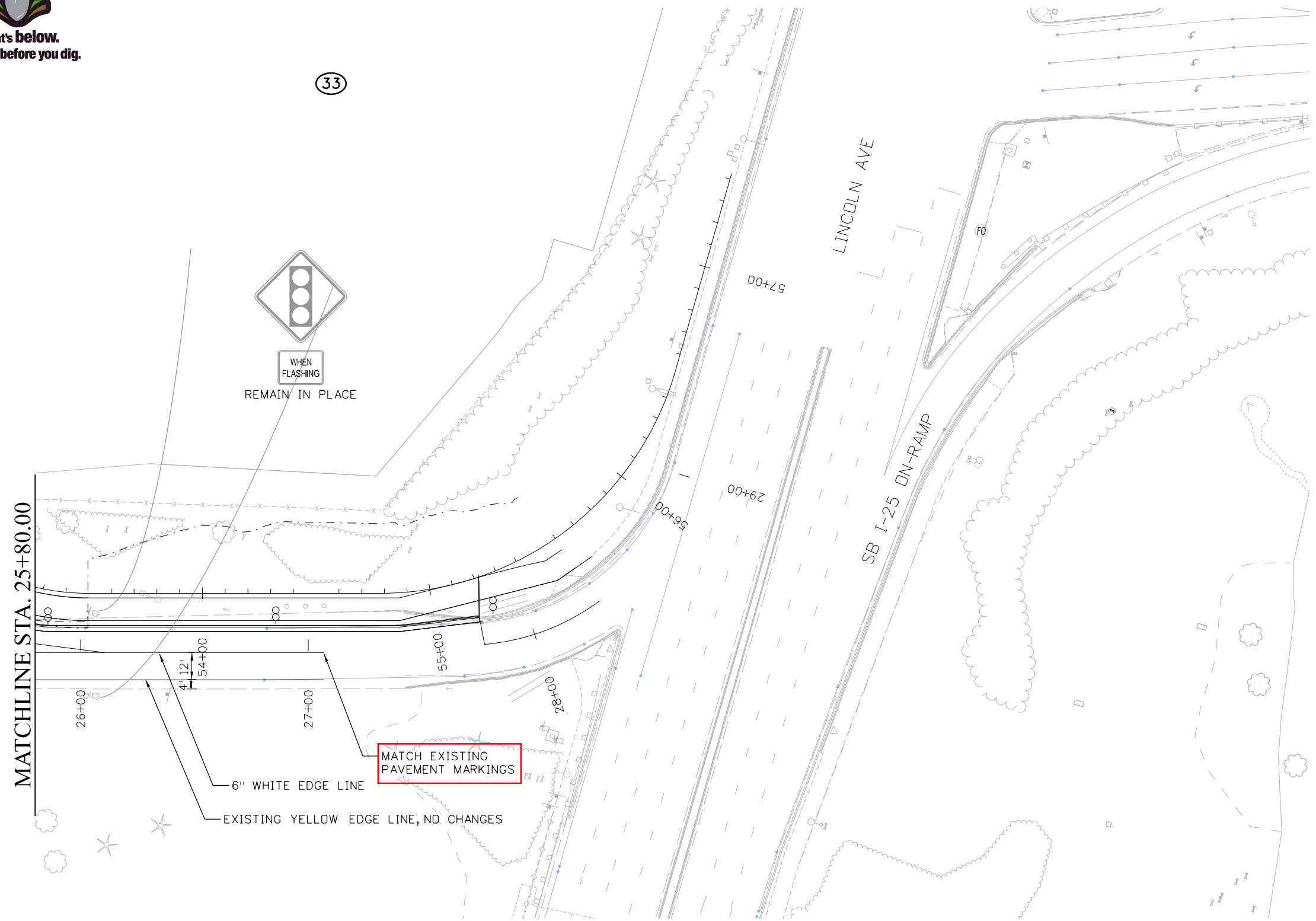
I-25 MOBILITY HUB (LONE TREE) SIGNING AND STRIPING PLAN STA 20+20 TO STA 25+80			
Designer:	DW	Structure Numbers	X-XX-XX
Detailer:	DW	Subset Sheets:	X-XX-XX
Sheet Subset:	SNST	Subset Sheets:	3 of 007

Project No./Code	267 0252-499
	24278

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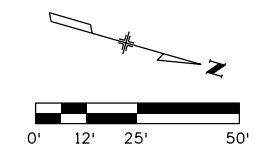
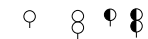


KEY MAP

**NOTES:**

- 1.
- 2.
- 3.

**LEGEND:**



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 Fax: N/A  
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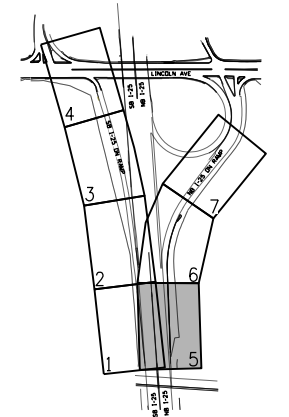
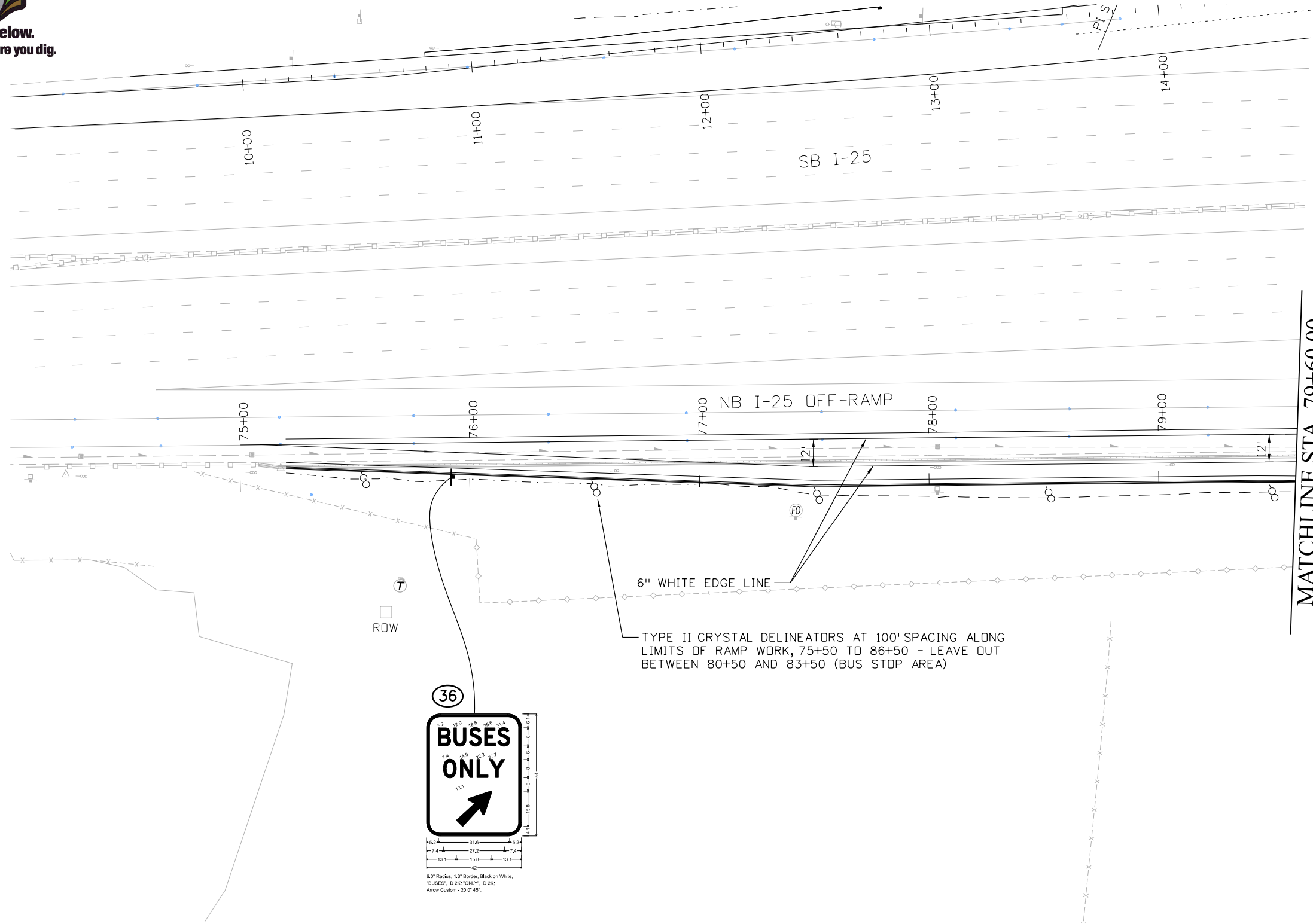
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Designer:	DW	Structure Numbers	X-XX-XX
Detailer:	DW	Structure Numbers	X-XX-XX
Sheet Subset:	SNST	Subset Sheets:	4 of 007

Project No./Code	267 0252-499
	24278

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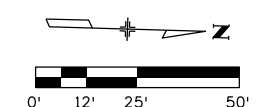


KEY MAP

**NOTES:**

- 1.
- 2.
- 3.

**LEGEND:**



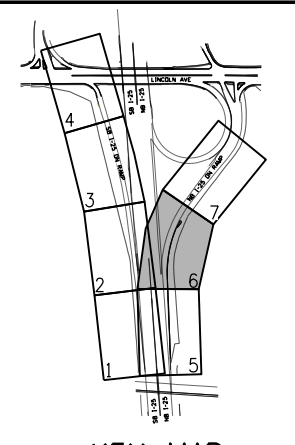
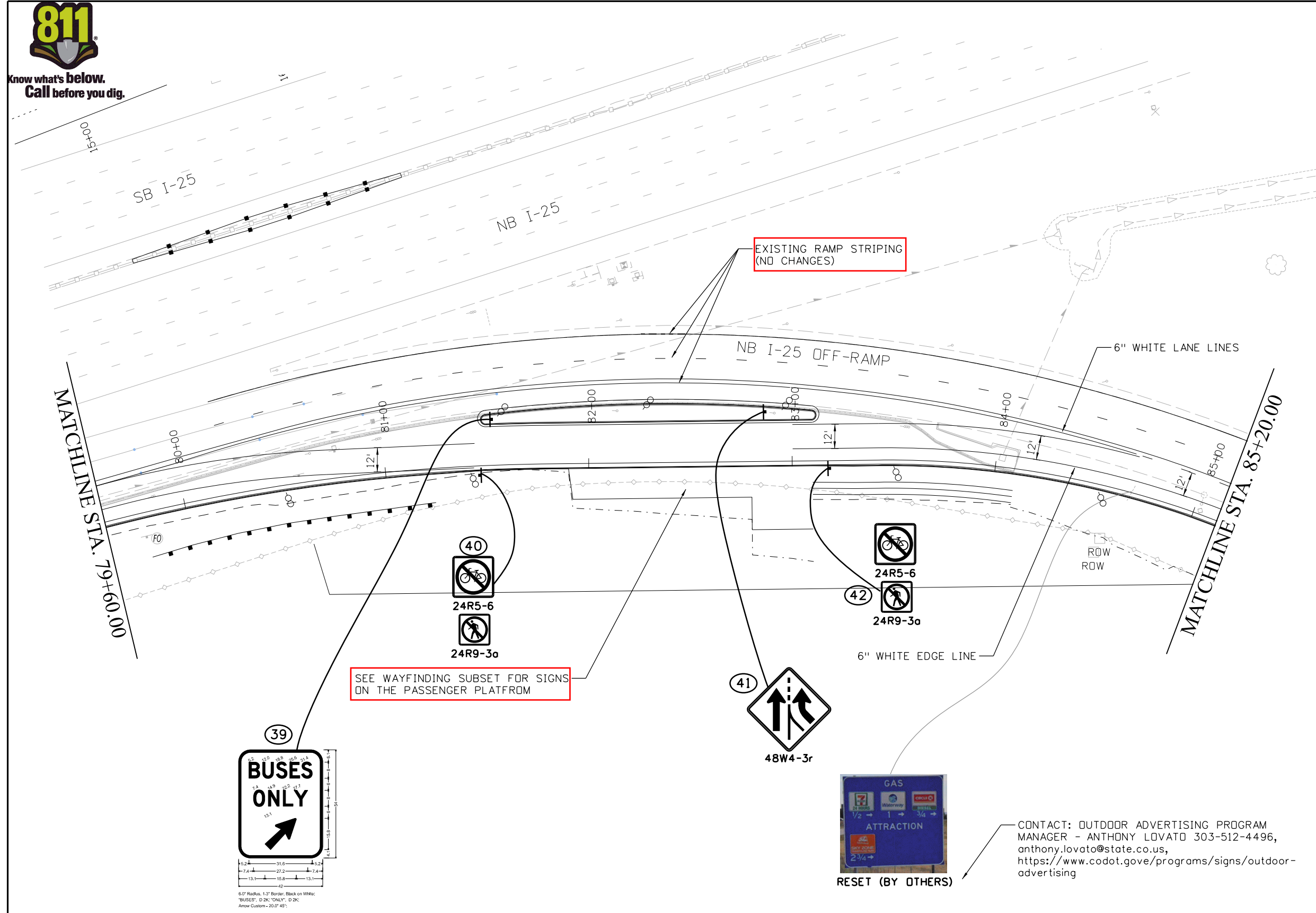
All seals for this set of drawings are applied to the cover page(s)	Print Date: 5/9/2024	Sheet Revisions			Colorado Department of Transportation				As Constructed		I-25 MOBILITY HUB (LONE TREE) SIGNING AND STRIPING PLAN STA 75+00 TO STA 79+60			Project No./Code		
	File Name: 24278-RSH-HW-025A-RD-DR-SNST.dgn	Date:	Comments	Init.	18500 E. Colfax Ave. Aurora, CO 80011 Phone: (303) 746-8639 Fax: N/A Region 1-South Program				No Revisions:		Designer: DW		Structure		267 0252-499	
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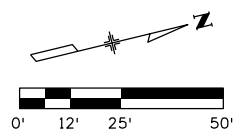


KEY MAP

**NOTES:**

- 1.
- 2.
- 3.

**LEGEND:**



CONTACT: OUTDOOR ADVERTISING PROGRAM  
MANAGER - ANTHONY LOVATO 303-512-4496,  
anthony.lovato@state.co.us,  
<https://www.codot.gov/programs/signs/outdoor-advertising>



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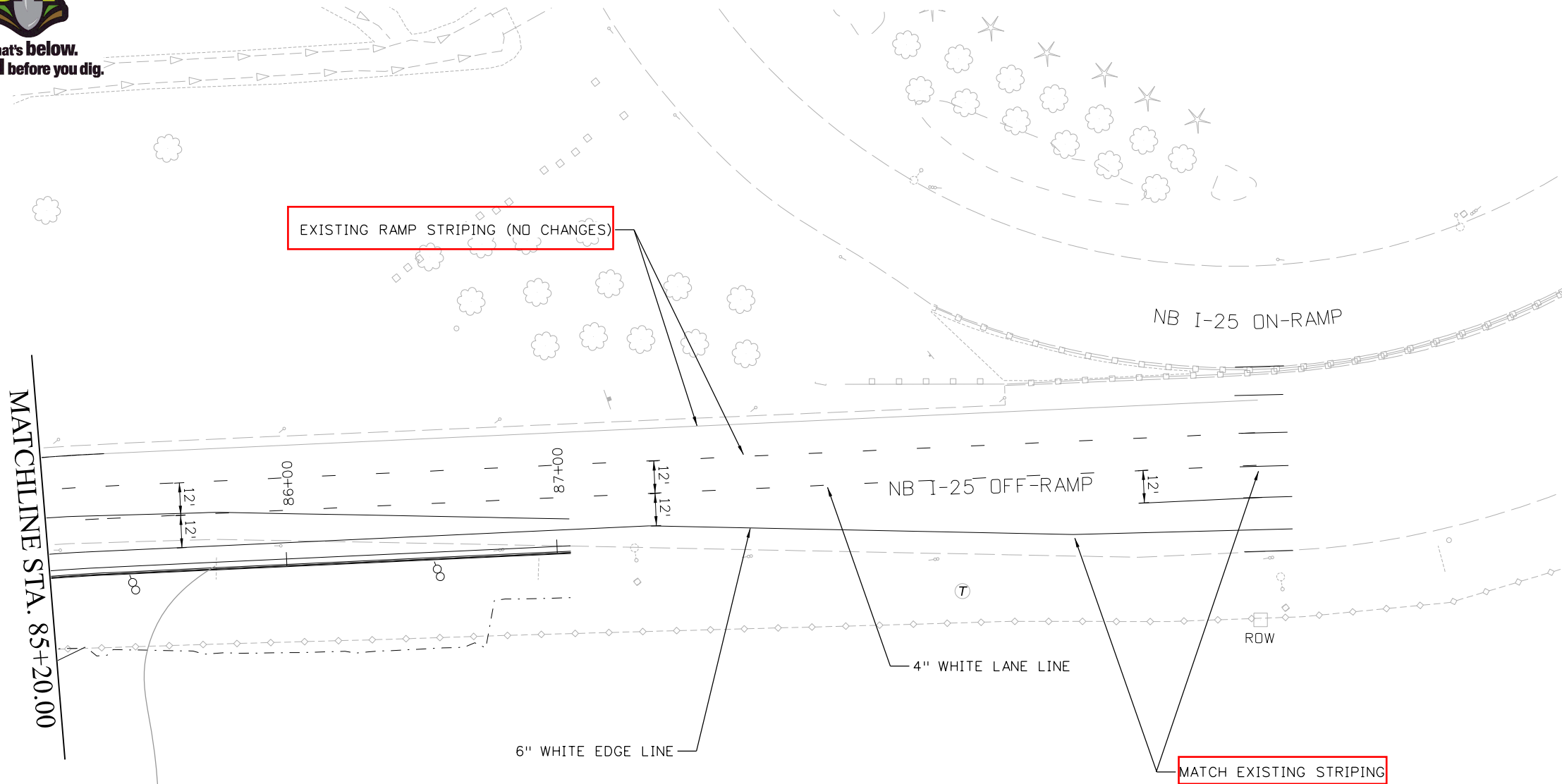
I-25 MOBILITY HUB (LONE TREE) SIGNING AND STRIPING PLAN STA 79+60 TO STA 85+20			
Designer:	DW	Structure	X-XX-XX
Detailer:	DW	Numbers	X-XX-XX
Sheet Subset:	SNST	Subset Sheets:	6 of 007

Project No./Code
267 0252-499
24278

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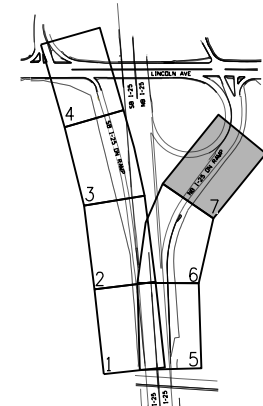
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MATCHLINE STA. 85+20.00



RESET (BY OTHERS)

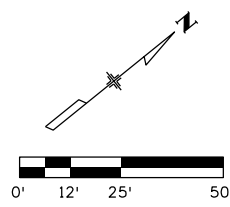


KEY MAP

**NOTES:**

- 1.
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**LEGEND:**



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Horiz. Scale: 1"=50' Vert. Scale: As Noted
Unit Information JT

Sheet Revisions		
Date:	Comments	Init.

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Fax: N/A

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No Revisions:
Revised:
Void:

I-25 MOBILITY HUB (LONE TREE) SIGNING AND STRIPING PLAN STA 85+20 TO END			
Designer:	DW	Structure Numbers:	X-XX-XX
Detailer:	DW	Structure Numbers:	X-XX-XX
Sheet Subset:	SNST	Subset Sheets:	7 of 007

Project No./Code
267 0252-499
24278

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**GENERAL NOTES**

- CONTRACTOR MUST VISIT THE SITE TO ACQUAINT THEMSELVES WITH THE EXISTING CONDITIONS AND FIELD VERIFY ALL DIMENSIONS, EVALUATIONS, UTILITIES, AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
- CONTRACTOR MUST REVIEW THE CONTRACT DOCUMENTS, VERIFY DIMENSIONS, ELEVATIONS, FIELD CONDITIONS, AND CONFIRM THAT THE WORK IS BUILDABLE AS SHOWN. REPORT ANY CONFLICTS, DISCREPANCIES, OR OMISSIONS TO THE DESIGNER IN WRITING FOR CLARIFICATION PRIOR TO PERFORMING THE WORK IN QUESTION.
- ALL WORK MUST CONFORM TO THE CONTRACT DOCUMENTS, WHICH INCLUDES THE DRAWINGS AND SIGN SPECIFICATIONS.
- IT IS UNDERSTOOD THAT THE DESIGNER OF RECORD MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, AS TO FINDINGS, DESIGNS, RECOMMENDATIONS, SPECIFICATIONS, OPINIONS, OR PROFESSIONAL ADVICES, EXCEPT THAT THESE INSTRUMENTS OR SERVICE HAVE BEEN PREPARED IN ACCORDANCE WITH THE CURRENT GENERALLY ACCEPTED PROFESSIONAL ENGINEER PRACTICES.
- ALL WORK IS TO BE PERFORMED IN A SAFE, ORDERLY MANNER WITHOUT DAMAGE TO THE BUILDINGS, SIDEWALKS, ROADS, OR ADJACENT PROPERTIES. ANY RESULTING DAMAGE OR LOSS MUST BE CORRECTED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK ON THE PROJECT. TAKE ALL NECESSARY PRECAUTIONS FOR THE SAFETY OF ALL PERSONS AND PROTECT THEM AGAINST INJURY. PROTECT ALL PROPERTY AGAINST DAMAGE OR LOSS.
- COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS AND ORDERS OF ANY PUBLIC BODY HAVING JURISDICTION FOR THE SAFETY OF PERSONS OR PROPERTY.
- "TYPICAL" OR "TYP" MEANS THAT THE CONDITIONS ARE REPRESENTATIVE OF CONDITIONS THROUGHOUT UNLESS OTHERWISE NOTED.
- "SIMILAR" OR "SIM" MEANS COMPARABLE IN CHARACTERISTICS FOR THE CONDITIONS NOTES. VERIFY DIMENSIONS AND ORIENTATION ON THE PLANS AND ELEVATIONS.
- "OPP" MEANS REVERSED OR OPPOSITE HAND FOR THE CONDITION(S) NOTED.
- "NIC" OR "BY OTHERS" MEANS NOT IN CONTRACT OR ITEMS OR WORK UNDER SEPARATE CONTRACT.
- ALL SIGN MOUNTING TO COMPLY WITH CURRENT WIND LOAD REQUIREMENTS FOR THIS JURISDICTION.

**SHOP DRAWINGS**

- REVIEW OF SHOP DRAWINGS BY THE OWNER OR OWNER REPRESENTATIVE IS LIMITED TO COMPLIANCE OF THE COMPLETED STRUCTURE WITH THE DESIGN CONCEPT AND INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DIMENSIONS, QUANTITIES, PERFORMANCE, SAFETY, COORDINATION WITH OTHER WORK, AND ALL OTHER REQUIREMENTS OF THE CONTRACT DOCUMENTS. REVIEW DOES NOT AUTHORIZE CHANGES TO CONTRACT.
- SHOP DRAWINGS MUST HAVE BEEN CHECKED BY, AND STAMPED WITH THE APPROVAL OF THE OWNER OR OWNER REPRESENTATIVE PRIOR TO BEGINNING ANY WORK. THE DATA SHOWN ON THE SHOP DRAWINGS MUST BE COMPLETE WITH RESPECT TO DIMENSIONS, DESIGN CRITERIA, AND CONTENT.
- LAYOUTS ARE PROVIDED FOR EXAMPLE ONLY. MESSAGES AND LETTERING MAY CHANGE AND MUST BE CONFIRMED BY THE OWNER BEFORE FABRICATION.

**SIGN LOCATION NOTES**

- EACH SIGN HAS BEEN ASSIGNED A UNIQUE SIGN NUMBER.
- ALL SIGN LOCATIONS MUST BE VERIFIED IN THE FIELD AND APPROVED BY OWNER OR OWNER REPRESENTATIVE PRIOR TO INSTALLATION. CONTRACTOR TO CALL OUT ANY CONFLICTS IN WRITING PRIOR TO FABRICATION.

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 abcdefghijklmnopqrstuvwxyz  
 0123456789

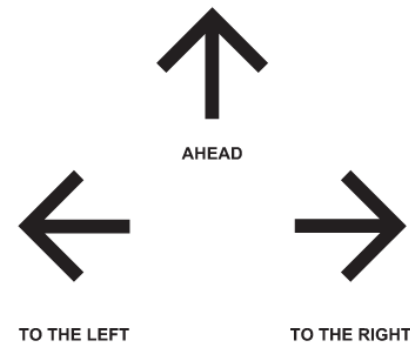
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**Gotham Book**  
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 abcdefghijklmnopqrstuvwxyz  
 0123456789

1 TYPESTYLE  
 NTS



2 LOGO  
 NTS



4 ARROW  
 NTS

Pantone Colors	Matthews Paint Colors	Vinyl Colors
C-1 PANTONE WHITEC	P-1 MP 32071	V-1 3M REFLECTIVE WHITE 3290
C-2 PANTONE 447C	P-2 MP 74387	V-2 3M BLACK 7125-22
C-3 PANTONE 526C	P-3 MP 705	V-3 3M PURPLE 3630-128
		V-4 3M WHITE 7125-10

All paint to include UV inhibitor and satin finish anti-graffiti clear coat unless noted.

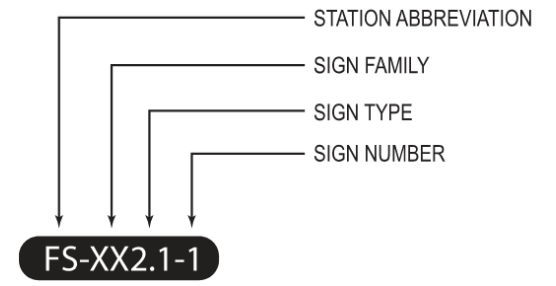
3 COLORS  
 NTS

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	File Name: 24278-RSH-HW-025A-WF-DR-DETAILS.dgn	Date:	Comments	Init.	18500 E. Colfax Ave. Aurora, CO 80011 Phone: (303) 746-8639 Fax: N/A Region 1-South Program		No Revisions:		<table border="1"> <tr> <td>Designer:</td> <td>DW</td> <td>Structure Numbers</td> <td>X-XX-XX</td> </tr> <tr> <td>Detailer:</td> <td>ADH</td> <td>Subset Sheets:</td> <td>X-XX-XX</td> </tr> <tr> <td>Sheet Subset:</td> <td>TRAF</td> <td>Subset Sheets:</td> <td>3 of 16</td> </tr> </table>		Designer:	DW	Structure Numbers	X-XX-XX	Detailer:	ADH	Subset Sheets:	X-XX-XX	Sheet Subset:	TRAF	Subset Sheets:	3 of 16	267 0252-499	
	Designer:	DW	Structure Numbers	X-XX-XX																				
	Detailer:	ADH	Subset Sheets:	X-XX-XX																				
	Sheet Subset:	TRAF	Subset Sheets:	3 of 16																				
Horiz. Scale: As Noted Vert. Scale: As Noted				Revised:							24278													
Unit Information JT				Void:																				
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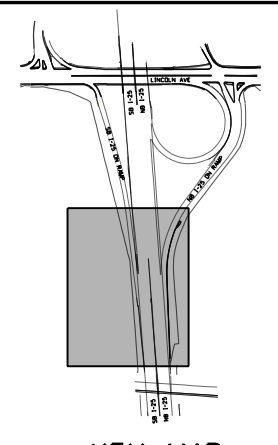
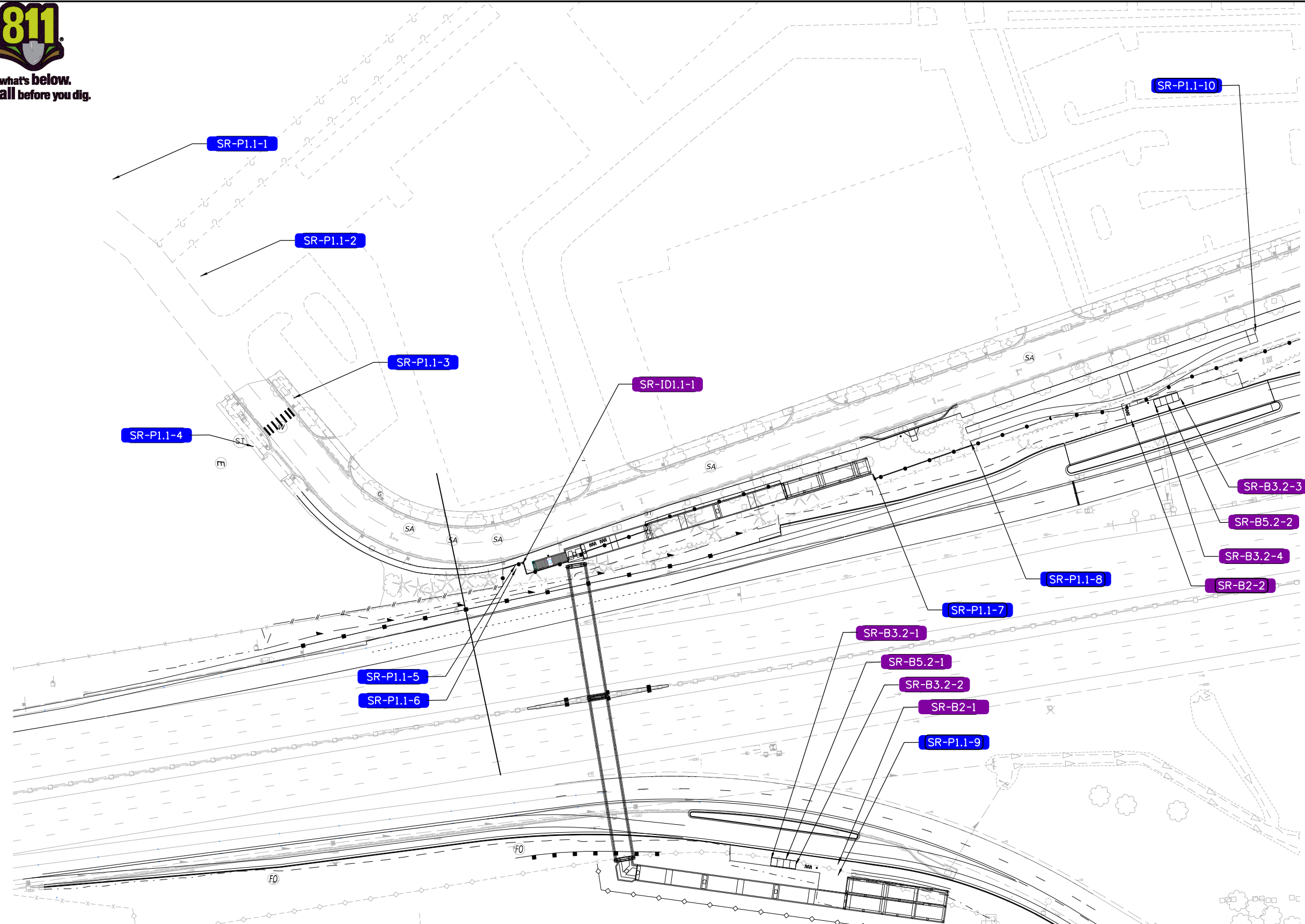
SIGN TYPE	DESCRIPTION	LIGHTING	HEIGHT	WIDTH	ARROW DIR.	STATION
<b>ID</b>	<b>IDENTITY SIGNS</b>					
SR-ID1.1.1	SITE MONUMENT IDENTIFY SIGN - VERTICAL	NON-ILLUMINATED	15'-0"	3'-0"		SKY RIDGE
		NON-ILLUMINATED				SKY RIDGE
<b>B</b>	<b>PLATFORM SIGNAGE</b>					
SR-B2-1	BUS BAY IDENTITY-SMALL	NON-ILLUMINATED	8'-0"	8"		SKY RIDGE
SR-B2-2	BUS BAY IDENTITY-SMALL	NON-ILLUMINATED	8'-0"	8"		SKY RIDGE
SR-B3.2-1	BUS SHELTER IDENTITY SIGN (SIDE) FOR KRAMER SHELTER - RIGHT SIDE	NON-ILLUMINATED	2' - 1 3/4"	6'-0"		SKY RIDGE
SR-B3.2-2	BUS SHELTER IDENTITY SIGN (SIDE) FOR KRAMER SHELTER - LEFT SIDE	NON-ILLUMINATED	2' - 1 3/4"	6'-0"		SKY RIDGE
SR-B3.2-3	BUS SHELTER IDENTITY SIGN (SIDE) FOR KRAMER SHELTER - RIGHT SIDE	NON-ILLUMINATED	2' - 1 3/4"	6'-0"		SKY RIDGE
SR-B3.2-4	BUS SHELTER IDENTITY SIGN (SIDE) FOR KRAMER SHELTER - LEFT SIDE	NON-ILLUMINATED	2' - 1 3/4"	6'-0"		SKY RIDGE
SR-B5.2-1	BUS SHELTER BRAND SIGN FOR KRAMER SHELTER	NON-ILLUMINATED	1'-7"	11' - 7 3/4"		SKY RIDGE
SR-B5.2-2	BUS SHELTER BRAND SIGN FOR KRAMER SHELTER	NON-ILLUMINATED	1'-7"	11' - 7 3/4"		SKY RIDGE
<b>P</b>	<b>PEDESTRIAN DIRECTIONAL SIGNAGE</b>					
SR-P1.1-1	PEDESTRIAN POST & PANEL DIRECTIONAL SIGN - PANEL CENTERED ON POST	NON-ILLUMINATED	2'-0"	2'-0"	UP	SKY RIDGE
SR-P1.1-2	PEDESTRIAN POST & PANEL DIRECTIONAL SIGN - PANEL CENTERED ON POST	NON-ILLUMINATED	2'-0"	2'-0"	UP	SKY RIDGE
SR-P1.1-3	PEDESTRIAN POST & PANEL DIRECTIONAL SIGN - PANEL CENTERED ON POST	NON-ILLUMINATED	2'-0"	2'-0"	RIGHT	SKY RIDGE
SR-P1.1-4	PEDESTRIAN POST & PANEL DIRECTIONAL SIGN - PANEL CENTERED ON POST	NON-ILLUMINATED	2'-0"	2'-0"	LEFT	SKY RIDGE
SR-P1.1-5	PEDESTRIAN POST & PANEL DIRECTIONAL SIGN - PANEL CENTERED ON POST	NON-ILLUMINATED	3'-0"	2'-0"	UP	SKY RIDGE
SR-P1.1-6	PEDESTRIAN POST & PANEL DIRECTIONAL SIGN - PANEL CENTERED ON POST	NON-ILLUMINATED	3'-0"	2'-0"	UP-RIGHT	SKY RIDGE
SR-P1.1-7	PEDESTRIAN POST & PANEL DIRECTIONAL SIGN - PANEL CENTERED ON POST	NON-ILLUMINATED	3'-0"	2'-0"	UP	SKY RIDGE
SR-P1.1-8	PEDESTRIAN POST & PANEL DIRECTIONAL SIGN - PANEL CENTERED ON POST	NON-ILLUMINATED	3'-0"	2'-0"	UP-RIGHT	SKY RIDGE
SR-P1.1-9	PEDESTRIAN POST & PANEL DIRECTIONAL SIGN - PANEL CENTERED ON POST	NON-ILLUMINATED	2'-0"	2'-0"	UP	SKY RIDGE
SR-P1.1-10	PEDESTRIAN POST & PANEL DIRECTIONAL SIGN - PANEL CENTERED ON POST	NON-ILLUMINATED	2'-0"	2'-0"	LEFT	SKY RIDGE



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	Unit Information: JT						Void:	Detailer: ADH	Subset Sheets: X-XX-XX		
					Sheet Subset: TRAF	Subset Sheets: 3 of 16					



Know what's below.  
Call before you dig.

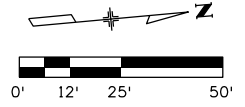


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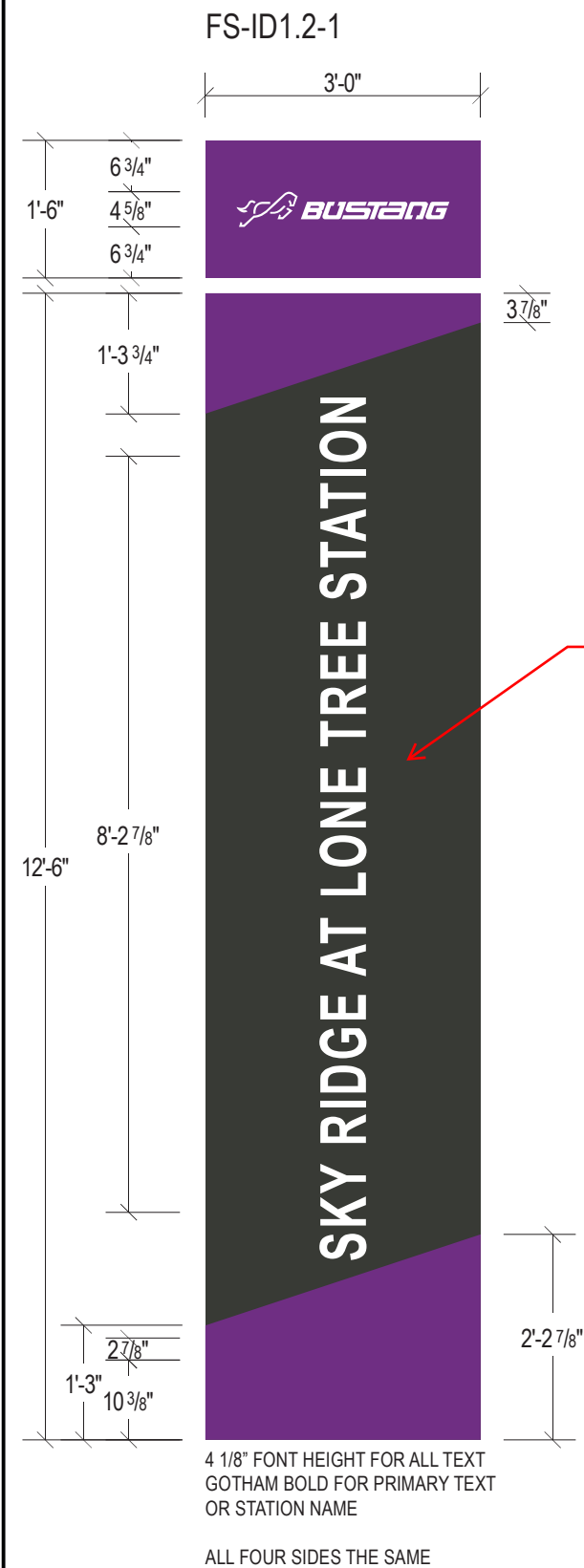
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- 2.
- 3.

LEGEND:

- [Purple box] IDENTIFICATION SIGNAGE
- [Blue box] PEDESTRIAN DIRECTIONAL SIGNAGE



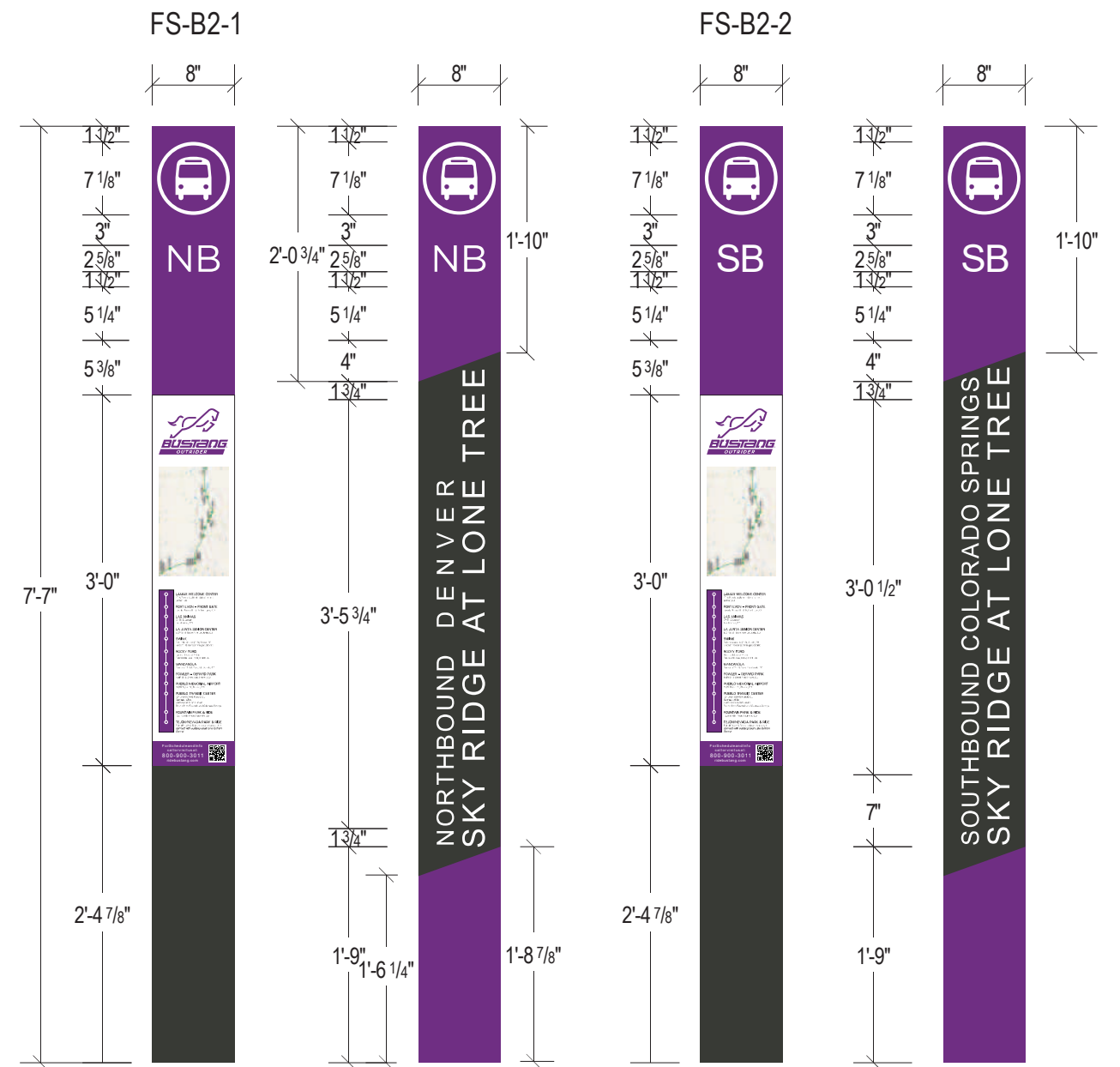
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	Unit Information						Void:		Detailer: AH	Subset Sheets:	1 of 1	
									Sheet Subset: TRAF			



NOTE STATION NAME:  
SKYRIDGE AT LONE TREE

4 1/8" FONT HEIGHT FOR ALL TEXT  
GOTHAM BOLD FOR PRIMARY TEXT  
OR STATION NAME

ALL FOUR SIDES THE SAME



SIDE B & D  
2 1/8" FONT HEIGHT  
GOTHAM BOLD FOR PRIMARY TEXT OR STATION NAME  
  
1 5/8" FONT HEIGHT  
GOTHAM BOOK FOR SECONDARY TEXT  
  
FINAL MAP ARTWORK  
TO BE PROVIDED  
BY OWNER

SIDE B & D  
2 1/8" FONT HEIGHT  
GOTHAM BOLD FOR PRIMARY TEXT OR STATION NAME  
  
1 5/8" FONT HEIGHT  
GOTHAM BOOK FOR SECONDARY TEXT  
  
FINAL MAP ARTWORK  
TO BE PROVIDED  
BY OWNER

Print Date: 08/19/2022
File Name: Firestone_SignageSystem.indd
<b>RS&amp;H</b> 4582 S. ULSTER ST. SUITE 1100 DENVER, COLORADO 80237 PHONE: 303-409-9700

Sheet Revisions		
Date:	Comments	Init.

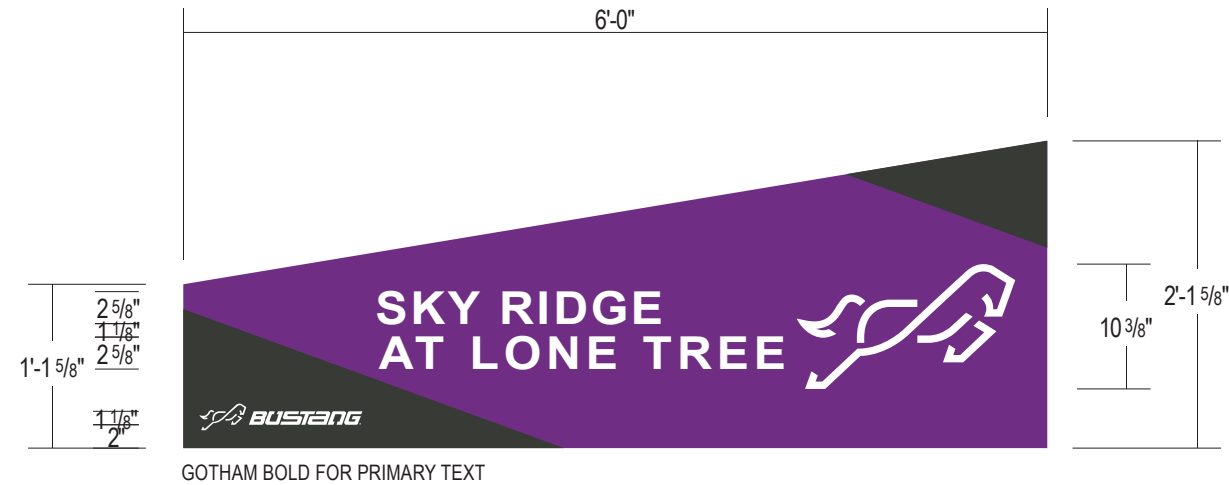
Colorado Department of Transportation  
 1050 Lee Hill Drive  
 Boulder, CO 80302  
 Phone: 303-546-5658  
 FAX: 303-444-0751  
 Region 4 RDM

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

<b>I-25 MOBILITY HUB (LONE TREE) WAYFINDING &amp; SIGNAGE</b>	
Designer: D. WOOLFALL	Structure Numbers
Detailer: A. HARR	I.D.#:
Subset: SIGNAGE	of

<b>Project No./Code</b>
TRG 0253-264
22547
Sh





GOTHAM BOLD FOR PRIMARY TEXT

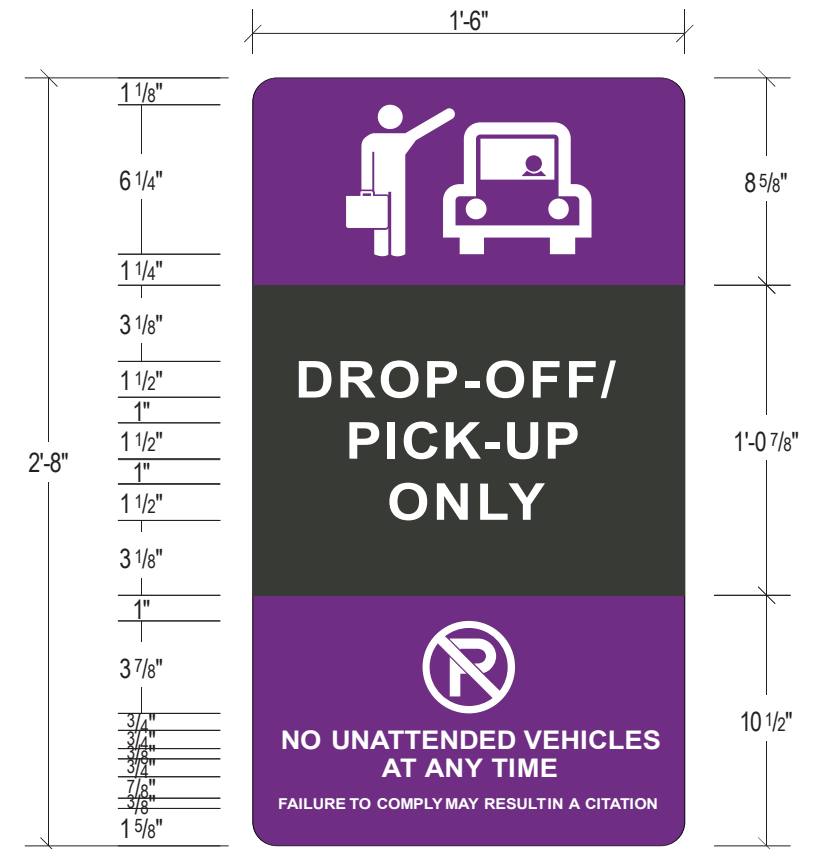
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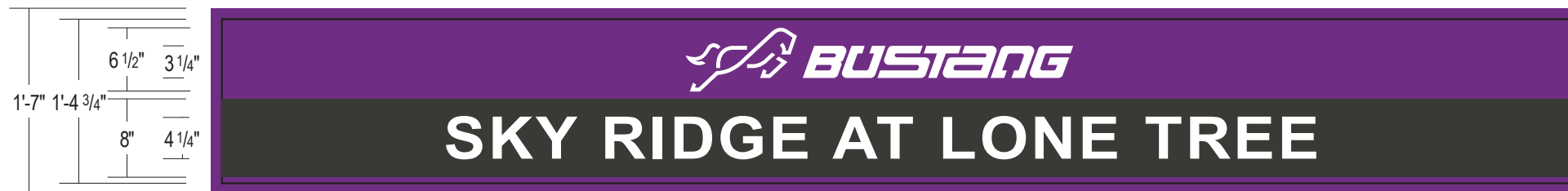
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FS-B3.2-4

FS-P1.1-1 FS-P1.1-3  
FS-P1.1-2 FS-P1.1-4



GOTHAM BOLD FOR ALL TEXT

FS-B5.2-1  
FS-B5.2-2



GOTHAM BOLD FOR PRIMARY TEXT

Print Date: 08/19/2022  
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PHONE: 303-409-9700

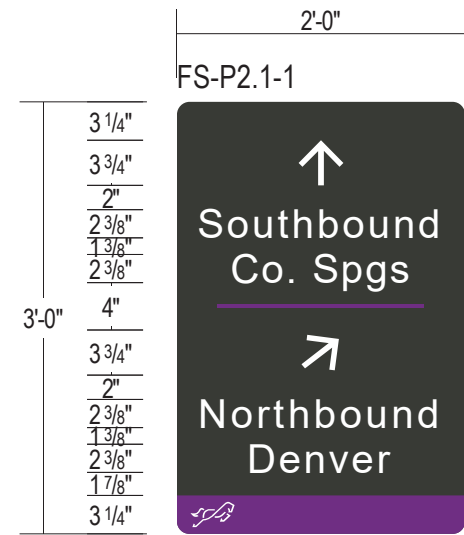
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**CDOT** 1050 Lee Hill Drive  
Boulder, CO 80302  
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Region 4 RDM

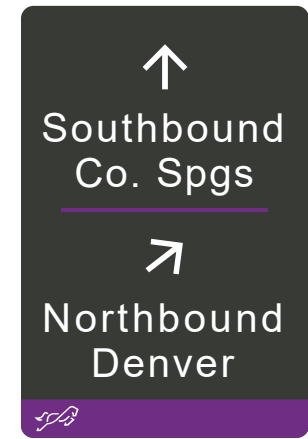
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WAYFINDING & SIGNAGE  
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Detailer: A. HARR  
Subset: SIGNAGE  
Structure Numbers  
I.D.#: of

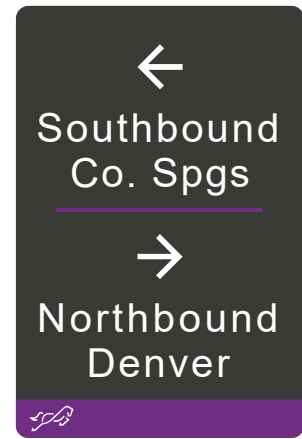
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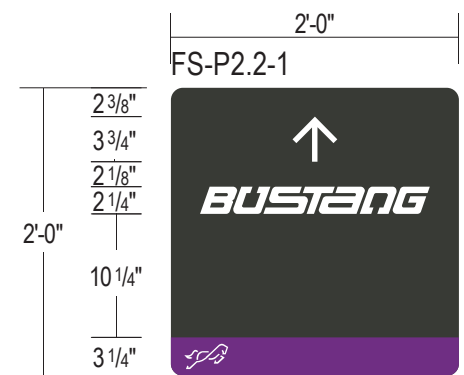
SIGN A



SIGN A



GOTHAM MEDIUM FOR PRIMARY TEXT  
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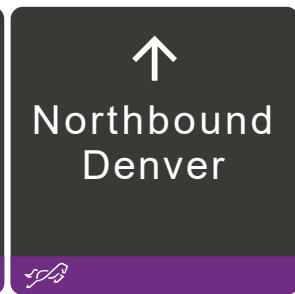


SIGN A

FS-P2.2-2



SIGN A



SIGN B

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Region 4 RDM

As Constructed	No Revisions:
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**I-25 MOBILITY HUB (LONE TREE)  
WAYFINDING & SIGNAGE**  
Designer: D. WOOLFALL  
Detailer: A. HARR  
Subset: SIGNAGE

Project No./Code	TRG 0253-264
Structure Numbers	22547
I.D.#:	of
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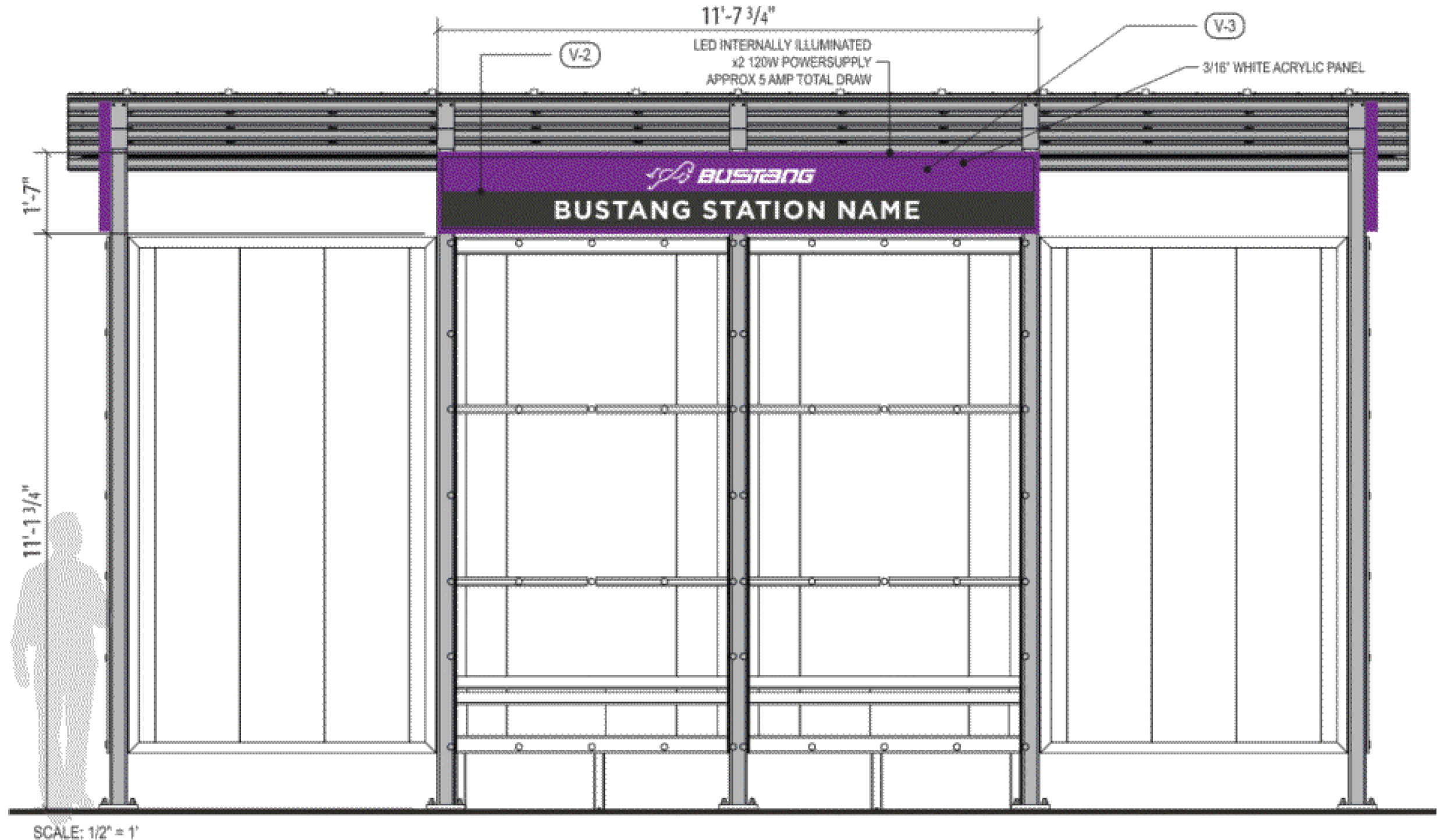


SCALE: 1/2" = 1'


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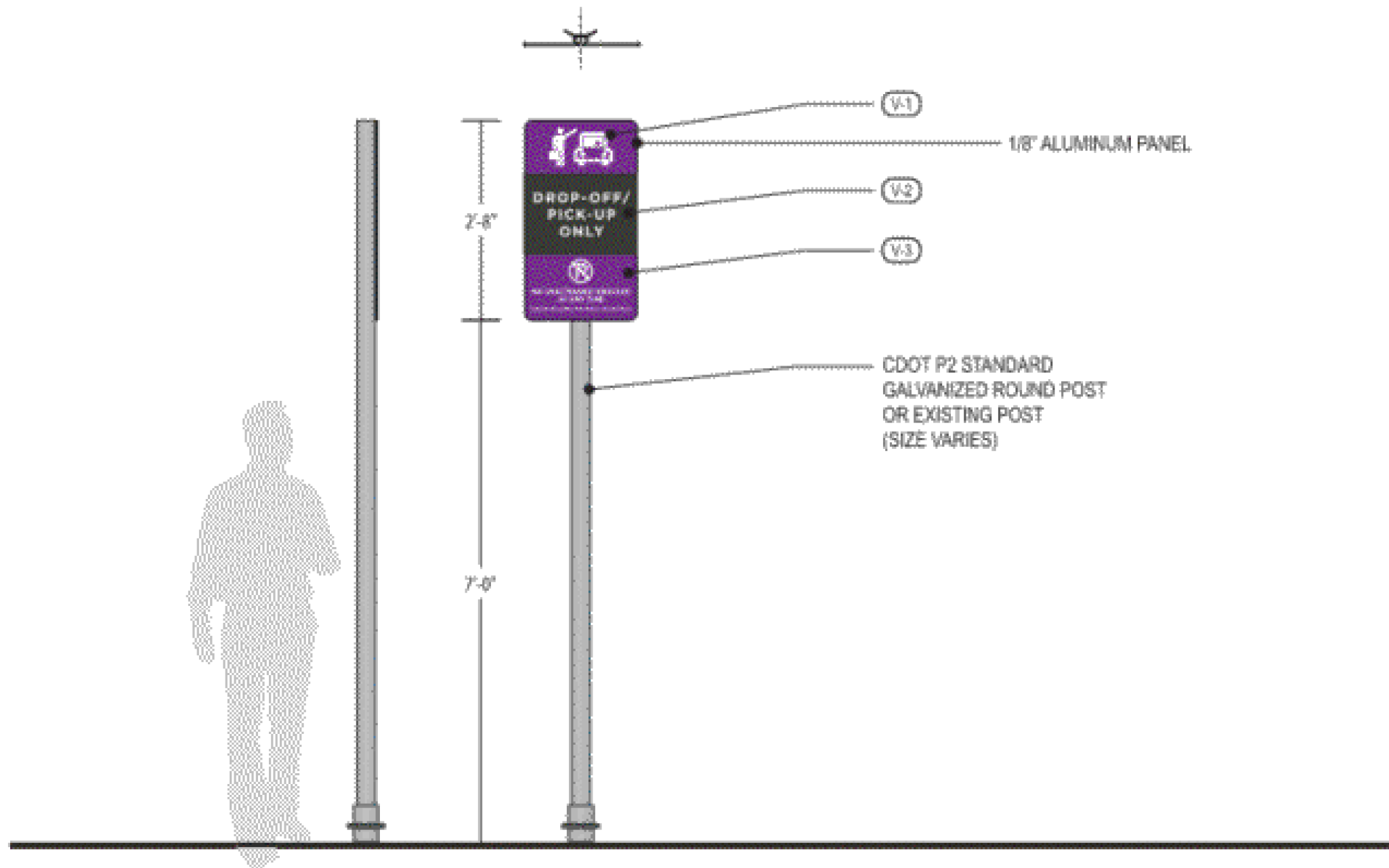


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SCALE: 1/2" = 1'

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	Unit Information: JT					Void:	Detailer: ADH	Structure Numbers: X-XX-XX	
					Sheet Subset: TRAF	Subset Sheets: 10 of 16			



**SWMP TEMPLATE (PLAN SHEETS) FOR PROJECTS WITH 1 ACRE OR MORE OF DISTURBANCE 2/25/2022 UPDATE**

**1. SITE DESCRIPTION**

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

**A. PROJECT SITE LOCATION:**

This project is located on I-25 in the City of Lone Tree, between milepost 191.00 and milepost 193.5 in Douglas County.  
Location or address of construction office:

**B. PROJECT SITE DESCRIPTION:**

This project is intended to provide northbound and southbound mobility hubs along I-25 in the City of Lone Tree for CDOT's Bustang service, allowing the transit service minimal delay to depart and re-enter I-25. This transit improvement project will consist of constructing slip ramps along the I-25 northbound off-ramp and southbound on-ramp for use by Bustang transit services, a pedestrian bridge connecting the two transit stops, and sidewalks.

**C. PROPOSED SCHEDULE FOR SEQUENCE FOR MAJOR CONSTRUCTION ACTIVITIES:**

1. Clearing and Grubbing for Slip Ramps and Pedestrian Bridge Foundations: inlet protection, erosion control logs
2. Excavation for Slip Ramps and Bridge Foundations: inlet protection, erosion control logs
3. Construction of Slip Ramps: inlet protection, erosion control logs, temporary seeding, stockpile stabilization
4. Pedestrian Bridge Construction: inlet protection, erosion control logs, temporary seeding, stockpile stabilization
5. Sidewalk Installation: inlet protection, erosion control logs, temporary seeding, stockpile stabilization
6. Stabilize all areas that are not paved or landscaped through establishment of vegetation cover

**D. ACRES OF DISTURBANCE:**

1. Total area of construction site (LOC (PERMITTED AREA)): 11.3 acres
2. Total area of proposed disturbance (LDA): 4.5 acres
3. Total area of seeding: 4.5 acres
4. Total area of pre-project impervious surface: 0 sq. ft.
5. Total area of final impervious surface: 47,529 sq. ft.

**E. EXISTING SOIL DATA:**

The primary soil type is Fondis clay loam. This soil type is composed of clay loams, clays, and sandy clay loams. It is well drained with a high runoff class and a hydrologic soil group of C.

Data Source(s): <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>

**F. EXISTING VEGETATION, INCLUDING PERCENT OF VEGETATIVE COVER:**

During design, the SWMP Administrator for Design in consultation with the Engineer will determine if the SWMP Administrator for Design or the SWMP Administrator for Construction will conduct the Vegetation Transects. If the site is disturbed, an Adequate Reference Site(s) may be utilized, refer to the permit. The SWMP Administrator for Construction is to conduct a survey including general description of existing vegetation prior to any ground disturbance on the project. The SWMP Administrator shall photo-document existing vegetation where all work will be occurring. The SWMP Administrator shall perform the vegetation survey transect(s) and include photo documentation.

Pre-Construction Date of survey: [XXX] Percent Existing Vegetative Cover: [XXX]

Description of existing vegetation: [XXX]

Method for determining percent vegetative cover:

<https://www.codot.gov/programs/environmental/landscape-architecture/swmp/vegetative-transect-procedure.pdf>

Post-Construction Date of survey: \_\_\_\_\_ Percent Vegetative Cover: \_\_\_\_\_

**TBD PRIOR TO CONSTRUCTION**

Description of vegetation:

Method for determining percent vegetative cover:

<https://www.codot.gov/programs/environmental/landscape-architecture/swmp/vegetative-transect-procedure.pdf>

**G. POTENTIAL POLLUTANTS SOURCES:**

Refer to Potential Pollutant Sources in SWMP Section 4A. The SWMP Administrator for Construction shall prepare a list of all potential pollutants and their locations in accordance with subsection 107.25.

**H. DRAINAGE PATTERNS AND RECEIVING WATER(S):**

1. Description of drainage patterns from the Site:

Drainage across the site generally goes from south to north and to the northeast towards Cottonwood Creek. On the west side of I-25 stormwater is collected in drainage ditches that exit to stormwater drains that carry the water under I-25 and to the east eventually making their way to Cottonwood Creek.

2. Names of immediate and ultimate receiving water(s) on site:

The ultimate receiving water for drainage within the project area is Cottonwood Creek. There are no active surface water bodies on the site. Stormwater is collected in ditches and through inlets along I-25 and funnelled underground to an extended detention basin on the southeast corner of I-25 and Lincoln Avenue which ultimately drains to the east making it's way to Cottonwood creek.

3. Description of all stream crossings located within the Construction Site Boundary:

Location	Stream Name	Description Of Any Disturbed Upland Areas
Not Applicable (N/A) – there are no stream crossings within the Construction Site Boundaries	N/A	N/A

**I. ALLOWABLE NON-STORMWATER DISCHARGES:**

Discharge Description	Site Map #	Method Statement (Location)
Uncontaminated Springs	N/A	N/A
Concrete Washout Water (in-ground washout structure) #	See Site Maps	See Site Maps
Landscape Irrigation Return Flows	N/A	N/A
Discharges from Diversions of State Waters	N/A	N/A
Emergency Fire Fighting	N/A	N/A

#Concrete washout water associated with the washing of concrete tools and concrete mixer chutes can be discharged to the ground if site is managed accordingly to prevent the water from leaving the site as surface runoff or reaching receiving waters.

**J. DIVERSION CRITERIA:**

1. Is a diversion planned for the Site? Yes \_\_\_\_\_ No X\_\_\_\_\_

2. If yes, complete information below:

- a. What is the 2-year peak flow for the waterway being diverted (cubic feet per second)?
- b. What are the monthly averages if available? (provide averages for Jan- Dec if available)
- c. What is the upstream contributing drainage area and imperviousness?
- d. A method statement must be prepared by the Contractor and approved by CDOT for each diversion. Diversion structures must minimize soil transport and erosion within the entire diversion, minimize erosion during discharge, and minimize run-on into the diversion and meet the conditions in the SCP.
- e. If the conditions in the SCP cannot be met and an alternative is required, CDOT must approve the alternative and then it must be submitted and approved by CDPHE's Water Quality Control Division prior to implementation.

**K. ALTERNATIVE TEMPORARY STABILIZATION SCHEDULE:**

[If applicable, provide a description of the alternative temporary stabilization schedule. If temporary stabilization exceeds the 14-day schedule, then the SWMP must document the constraints necessitating the alternative schedule, provide the alternative schedule, and identify all the locations where the alternative schedule is applicable on the site map. Alternative temporary stabilization schedules must be approved by CDOT prior to implementation]

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Unit Information			
Unit Leader Initials			
<b>Pinyon</b> Environmental, Inc.			
3222 SOUTH WANCE STREET LAKWOOD, CO 80227 TEL: 303-980-6200 WWW.PINYONENVIRONMENTAL.COM			

Colorado Department of Transportation

18500 E. Colfax Ave.  
Aurora, CO 80011  
Phone: (303) 746-8639  
Fax: N/A

**Region 1-South Program** **NB**

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No Revisions:
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<b>I-25 MOBILITY HUB (LONE TREE) SWMP NARRATIVE</b>			
Designer:	S. FANELLO	Structure Numbers	
Detailer:	S. ADAMITIS		
Sheet Subset:	SWMP	Subset Sheets:	1 of 8

<b>Project No./Code</b>
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**2. SITE MAP COMPONENTS:**

Pre-construction

- A. PROJECT CONSTRUCTION POTENTIAL SITE BOUNDARIES:  
See SWMP Site Maps
- B. FLOW ARROWS THAT DEPICT STORMWATER FLOW DIRECTIONS ON-SITE, RUN-ON AND RUNOFF DIRECTION:  
See SWMP Site Maps
- C. ALL AREAS OF GROUND SURFACE DISTURBANCE:  
See SWMP Site Maps
- D. AREAS OF CUT AND FILL:  
See SWMP Site Maps
- E. AREAS USED FOR STORING AND STOCKPILING OF MATERIALS, STAGING AREAS (field trailer, fueling, etc.) and LOCATIONS OF ALL WASTE ACCUMULATION and BATCH PLANTS INCLUDING MASONRY MIXING STATIONS:  
See SWMP Site Maps
- F. LOCATION OF ALL STRUCTURAL CONTROL MEASURES IDENTIFIED IN THE SWMP:  
See SWMP Site Maps
- G. LOCATION OF NON-STRUCTURAL CONTROL MEASURES AS APPLICABLE IN THE SWMP:  
See SWMP Site Maps
- H. SPRINGS, STREAMS, WETLANDS, DIVERSIONS, AND OTHER STATE WATERS, INCLUDING AREAS THAT REQUIRE PRE-EXISTING VEGETATION BE MAINTAINED WITHIN 50 FEET OF A RECEIVING WATER:  
See SWMP Site Maps
- I. LOCATIONS OF ALL STREAM CROSSING LOCATED WITHIN THE CONSTRUCTION SITE BOUNDARY:  
See SWMP Site Maps
- J. PROTECTION OF TREES, SHRUBS, SENSITIVE HABITAT, AND CULTURAL RESOURCES:  
See SWMP Site Maps
- K. LOCATIONS WHERE ALTERNATIVE TEMPORARY STABILIZATION SCHEDULES APPLY:  
See SWMP Site Maps

**3. QUALIFIED STORMWATER MANAGERS:**

- A. SWMP ADMINISTRATOR FOR DESIGN:  
CDOT Certified individual responsible for developing SWMP Plan Sheets and SWMP Site Maps during the design phase.

Name/Title	Contact Information	Certification #
Scott Fanello, Env. Engineer	303.980.5200, fanello@pinyon-env.com	53DE94DF

- B. SWMP ADMINISTRATOR FOR CONSTRUCTION: (As defined in Section 208) The Contractor shall designate a SWMP Administrator for Construction upon accepting 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 208.03, the SWMP shall remain the property of CDOT. 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) (A copy of TECS Certification must be included in the SWMP.)

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

- C. EROSION CONTROL INSPECTOR: (As defined in Section 208) The Contractor may designate an Erosion Control Inspector. The Erosion Control Inspector shall complete duties in accordance with subsection 208.03 (c) (Copy of TECS Certification must also be included in the SWMP.)

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

- D. PERMANENT STABILIZATION SUBJECT MATTER EXPERT: This qualified individual will be either a Regional Environmental Staff member, or an Independent Contractor Controller (Independent Assurance Program). This expert is a project team leader responsible for ensuring project adherence to requirements of the 207 and 212 Project Special Provisions as follows and will be available for questions regarding permanent stabilization requirements.
  1. Review the Topsoil Management Plan and the Permanent Stabilization Site Maps.
  2. Attend the Environmental Pre-Construction Conference.
  3. Coordinate the Site Pre-Vegetation Conference.
  4. Review and recommend approval of products.
  5. Review and recommend approval of the Quantities Verification Prerequisite.
  6. Attend the Partial Landscape Completion Walkthrough.
  7. Attend the Final Landscape Completion Walkthrough.

Name/Title	Contact Information

**4. STORMWATER MANAGEMENT CONTROLS FOR 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, 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):  
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.
- C. VEHICLE TRACKING CONTROL:  
Control measures shall be implemented in accordance with subsection 208.04.
- 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
  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: Considered a "living document", the SWMP is continuously reviewed and modified throughout the construction phases.

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 18500 E. Colfax Ave.  
 Aurora, CO 80011  
 Phone: (303) 746-8639  
 Fax: N/A

**Region 1-South Program**      **NB**

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<b>I-25 MOBILITY HUB (LONE TREE) SWMP NARRATIVE</b>			
Designer:	S. FANELLO	Structure Numbers	
Detailer:	S. ADAMITIS		
Sheet Subset:	SWMP	Subset Sheets:	2 of 8

<b>Project No./Code</b>
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During construction, SWMP Administrator for Construction shall add, update, or amend the items A-G below as needed in accordance with subsection 208.03.

During construction, indicate how items that were not addressed during design are being handled in construction. If items are covered in other sections of the SWMP, indicate below what section the discussion takes place.

- A. **MATERIALS HANDLING AND SPILL PREVENTION AND RESPONSE PLAN:** Prior to construction commencing the Contractor shall submit a Spill Response Plan. Materials handling and Spill Response Plan shall be in accordance with subsection 208.06.
- B. **OTHER CDPS PERMITS:** List applicable CDPS permits associated with the permitted site and activities.
- C. **STOCKPILE MANAGEMENT:** Shall be done in accordance with subsections 107.25 and 208.07.
- D. **CONCRETE WASHOUT:** Concrete washout water or waste from field laboratories and paving equipment shall be contained in accordance with subsection 208.05.
- E. **SAW CUTTING:** Shall be done in accordance with subsections 107.25, 208.04, 208.05
- F. **STREET SWEEPING:** Shall be done in accordance with subsection 208.04.

**6. INSPECTIONS**

- A. Water Quality Inspections shall be in accordance with subsection 208.03(c).
- B. Permanent Stabilization Inspections shall be in accordance with subsections 208.04(e)4 and 208.10.

**7. CONTROL MEASURE MAINTENANCE**

Maintenance shall be in accordance with subsection 208.04(f).

**8. RECORD KEEPING**

Records shall be kept in accordance with subsection 208.03(d).

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

The Contractor shall comply with all interim stabilization and permanent stabilization requirements in accordance with subsection 208.04(e).

A. **SEEDING PLAN:**

The following seed mix(es) and rates are for drill seeding method as shown on the Permanent Stabilization Site Maps shall be used:

COMMON NAME	BOTANICAL NAME	LBS. PLS PER ACRE
Western wheatgrass	<i>Pascopyrum smithii</i> Arriba	4.75
Slender wheatgrass	<i>Elymus trachycaulus</i> San Luis	4.5
Blue bunch wheatgrass	<i>Pseudoroegneria spicata ssp spicata</i> Goldar	5.5
Green needlegrass	<i>Nassella viridula</i> VNS	1.0
Prairie junegrass	<i>Koeleria macrantha</i> VNS	0.1
Rocky Mountain fescue	<i>Festuca saximontana</i> VNS	0.3
Muttongrass	<i>Poa fendleriana</i>	0.5
Sandberg bluegrass	<i>Poa sandbergii</i> VNS	0.4
Rocky Mountain penstemon	<i>Penstemon strictus</i>	0.1
Wheat x wheatgrass sterile hybrid	<i>Triticum aestivum x Elytrigia elongata</i>	3.0
Annual sunflower	<i>Helianthus annuus</i>	0.6
<b>TOTAL</b>		<b>20.75</b>

B. **SEEDING APPLICATION METHOD:**

The following seeding methods shall be used for all areas shown on the Permanent Stabilization Site Maps. Soil compaction shall be minimized for areas where permanent stabilization will be achieved through vegetative cover.

Pay Item	Seeding Method (subsection 212.05)	Acre
212-00706	Seeding (Native) Drill	4.6
212-00707	Seeding (Native) Hydraulic	
212-00708	Seeding (Native) Broadcast	
<b>Total</b>		<b>4.6</b>

C. **SOIL STABILIZATION METHODS:**

Minimum soil stabilization methods (attached mulch) for all disturbances to receive seeding.

1. Apply a minimum of 2 tons/ac certified weed free hay or 2 ½ tons/ac of certified weed free straw and mechanically crimp into the soil in combination with natural mulch tackifier in accordance with Section 213. Prior to winter shutdown or the summer seeding window closure: Uncompleted slopes shall be mulched with 2 tons of mulching (weed free) per acre, mechanically crimped into the topsoil in combination with an organic mulch tackifier in accordance with Sections 208 and 213.
2. Apply Spray-on Mulch Blanket hydraulically in accordance with Section 213.

D. **SPECIAL REQUIREMENTS:**

1. Soil amendments, seedbed preparation, and permanent stabilization mulching shall be accomplished within four working days of placing the topsoil on the de-compacted civil subgrades. If placed topsoil is not mulched with permanent stabilization mulch within four working days, the Contractor shall complete interim stabilization methods in accordance with subsection 208.04(e) at no additional cost to the Department.
2. Complete permanent stabilization mulching within 24 hours of hydraulic application of native seed.
3. The Contractor shall submit a proposed Permanent Stabilization Phasing Plan to the Engineer for approval showing how implementation of SWMP Permanent Stabilization Plans will minimize damage to seeded areas.

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

**4.6 Total Acres of Seeding (Native) Drill With Topsoil Generated From**

Seeding (Native) Drill Pay Item 212-00706	Pay Item	Description	Amount/Acre	Units	Total For This Method
	212-00700	Organic Fertilizer High or Low N	800	Pounds	3,680
	212-00701	Compost (Mechanically Applied)	65	CY	300
	212-00703	Humate	75	Pounds	345
	212-00704	Mycorrhizae	20	Pounds	92
	212-00705	Elemental Sulfur	100	Pounds	460

F. **Permanent Stabilization Application Under Structures:**

Under structures shade patterns should be considered and the use of Medicin Cover Material (Stone) or other stabilized options with an approved Project Special Provision should be used. See SWMP Site Map for locations.


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

Prior to stormwater construction work partial acceptance.


1. All seeded areas shall be reviewed by the SWMP Administrator for Construction and or Erosion Control Inspector for bare soils caused by surface or wind erosion. 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.
2. The Contractor shall maintain seeding/mulch/tackifier/blanket/TRM, mow to control weeds or apply herbicide to control weeds in the seeded areas, at no additional cost to the project.

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 3222 SOUTH WANCE STREET  
 LAKEWOOD, CO 80227  
 TEL: 303-980-6200  
 WWW.PINYONENVIRONMENTAL.COM

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 18500 E. Colfax Ave.  
 Aurora, CO 80011  
 Phone: (303) 746-8639  
 Fax: N/A  
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I-25 MOBILITY HUB (LONE TREE)  
 SWMP NARRATIVE  
 Designer: S. FANELLO  
 Detailer: S. ADAMITIS  
 Sheet Subset: SWMP  
 Structure Numbers  
 Subset Sheets: 3 of 8

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

**(continued)**

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

Pay Item	Description	Amount/Acre	Units	Total For This Method
212-00700	Organic Fertilizer High or Low N	800	Pounds	3,680
212-00701	Compost (Mechanically Applied)	65	CY	300
212-00703	Humate	75	Pounds	345
212-00704	Mycorrhizae	20	Pounds	92
212-00705	Elemental Sulfur	100	Pounds	460

Pay Item	Description	Amount/Acre	Units	Total For This Method
212-00700	Organic Fertilizer High or Low N	0	Pounds	
212-00702	Biotic Soil Amendments (Hydraulically Applied)	3,500	Pounds	
212-00703	Humate	200	Pounds	
212-00704	Mycorrhizae	20	Pounds	

Pay Item	Description	Amount/Acre	Units	Total For This Method
212-00700	Organic Fertilizer High or Low N	800	Pounds	
212-00701	Compost (Mechanically Applied)	65	CY	
212-00703	Humate	200	Pounds	
212-00704	Mycorrhizae	20	Pounds	
212-00705	Elemental Sulfur	60	Pounds	

F. Permanent Stabilization Application Under Structures:

Under structures shade patterns should be considered and the use of Median Cover Material (Stone) or other stabilized options with an approved Project Special Provision should be used. See SWMP Site Map for locations.

G. RESEEDING OPERATIONS/CORRECTIVE STABILIZATION:

Prior to stormwater construction work partial acceptance.

1. All seeded areas shall be reviewed by the SWMP Administrator for Construction and or Erosion Control Inspector for bare soils caused by surface or wind erosion. 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.

2. The Contractor shall maintain seeding/mulch/tackifier/blanket/TRM, mow to control weeds in the seeded areas, at no additional cost to the project.

H. LOCATION AND DESCRIPTION OF PLANNED PERMANENT CONTROL MEASURES: Is Permanent Water

Quality Required. Yes  No . A Permanent Water Quality (PWQ) pond is proposed just south of EB I-70 at approximate STA 2178.

**10. PRIOR TO PROJECT FINAL ACCEPTANCE**

- A. When directed by the Engineer, removal and disposal of temporary control measures shall be included in the cost of work.
- B. At the end of the project, all ditch checks shall consist of either temporary erosion logs (or equivalent) or permanent riprap.
- C. Storm drains, as identified by the Project Engineer, shall be cleaned prior to commencement of construction. Any additional cleaning of these culverts shall be the responsibility of the contractor. All culverts, existing and installed, shall be inspected and cleaned if necessary at completion of construction, as directed by Project Engineer, this work is the responsibility of the contractor and incidental to the work.
- D. Refer to subsection 208.10 for Items to be completed prior to requesting partial acceptance of water quality work.

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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 "B" 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 Fence (plastic) and erosion logs	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.			B	X	
PROTECTION OF EXISTING TREES/LANDSCAPING Fence (plastic)	Fence (plastic) shall be used in areas indicated in the plans to prevent encroachment of construction traffic and sediment for the protection of sensitive habitat, mature trees and/or existing landscaping prior to start of construction disturbances.			B	X	
CHECK DAM/DITCH CHECK Erosion log, silt berm, silt dike, rock check dam	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 (Type 1, 2 and 3 as shown on M-208-1, sheet 5 of 11)	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		B	X	X
Storm Drain Inlet Protection In Native Seed Areas (M-604 Standard Inlets Type C and D)	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		B	X	
CULVERT INLET/OUTLET PROTECTION Erosion logs, aggregate bags	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 the start of construction disturbances.	M-208		B	X	X
TYPE C, TYPE D AND TYPE 13 PROTECTION Erosion logs, aggregate bags, erosion bales	Placed around inlet grate or slope and ditch paving to prevent sediment from entering inlet. Place prior to the start of construction disturbances.	M-208		B	X	
STOCKPILE PROTECTION Temporary berm, erosion logs, aggregate bags*	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 stockpiling, increase control as the stockpile increases size.	M-208			X	
TOE OF FILL PROTECTION Erosion logs, temporary berm, silt fence, topsoil windrow*	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 Erosion logs, silt fence, temporary berm, topsoil windrow*	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		X	X	
SLOPE CONTROL Silt fence, erosion logs	Placed on the contour of a slope to contain and slow down construction runoff. Place prior to the 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 the start of construction disturbances. Outlets that withdraw water from or near the surface may be installed when discharging from basins and impoundments.	M-208				
TEMPORARY SLOPE DRAIN	Placed as a conduit or chute to drain runoff down slope and to prevent erosion of slope.	M-208				
OUTLET PROTECTION Riprap, or approved other	Material placed as an energy dissipater to prevent erosion at outlet structure.	M-601-12			X	X
CONCRETE WASHOUT In-ground or fabricated	Construction control, used for waste management of concrete and concrete equipment cleaning. Place prior to the start of concrete activities.	M-208		X	X	

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 Unit Information Unit Leader Initials  

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 LAKEWOOD, CO 80227  
 TEL: 303-980-6200  
 WWW.PINYONENVIRONMENTAL.COM

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 18500 E. Colfax Ave.  
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I-25 MOBILITY HUB (LONE TREE)  
 SWMP NARRATIVE  
 Designer: S. FANELLO  
 Detailer: S. ADAMITIS  
 Sheet Subset: SWMP  
 Structure Numbers  
 Subset Sheets: 5 of 8

Project No./Code	267 0252-499
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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
VEHICLE TRACKING PAD	Source control, placed to prevent tracking of sediment from disturbed area to offsite surface. Place prior to the start of construction disturbances.	M-208		X	X	
Engineered SEDIMENT BASIN	Constructed early in the 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					
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.					
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 groundwater around the disturbance area to prevent it from mixing with construction runoff.					
OTHER						

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	File Name: 24278_HW-025A-SWMP_0.dgn	Date:	Comments	Init.						
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	Unit Information      Unit Leader Initials									
 3222 SOUTH WANCE STREET LAKEWOOD, CO 80227 TEL: 303-980-6200 WWW.PINYONENVIRONMENTAL.COM				<b>NB</b>			Sheet Subset: SWMP      Subset Sheets: 6 of 8			

**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	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.			X	X	X
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 Stockpile	Prior to any site disturbance work commencing, existing topsoil shall be scraped to a depth six 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 six 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.				X	
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.				X	
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 Permanent 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
SEEDING PERMANENT (NATIVE PERENNIAL)	Permanent Stabilization of disturbance and to reduce runoff and control erosion on disturbed areas.					X
SOIL RETENTION BLANKET (SRB)	Permanent Stabilization of disturbance and to reduce runoff and control erosion on disturbed areas.	M-216			X	X
TURF REINFORCEMENT MAT (TRM)	Permanent 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
OTHER						

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I-25 MOBILITY HUB (LONE TREE)  
 SWMP NARRATIVE  
 Designer: S. FANELLO  
 Detailer: S. ADAMITIS  
 Sheet Subset: SWMP  
 Structure Numbers  
 Subset Sheets: 7 of 8  
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Project No./Code
267 0252-499
24278



**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. It is estimated that 10 hours of blading (140-250 horsepower) and dozing (130-250 horsepower) may be required for miscellaneous erosion control work as directed by the Engineer. Work shall be paid for as: 203 Blading and 203 Dozing.

Pay Item	Description	Pay Unit	Initial Const.	Interim Const.	Permanent Stabilization	*Total Quantity
208-00002	Erosion Log Type 1 (12 inch)	LF		2,500		2,500
208-00020	Silt Fence	LF		130		130
208-00033	Sediment Trap	Each		1		1
208-00035	Aggregate Bag	LF		570		570
208-00051	Storm Drain Inlet Protection (Type I)	LF	100	300		400
208-00103	Removal and Disposal of Sediment (Labor)	Hour		80	20	100
208-00105	Removal and Disposal of Sediment (Equipment)	Hour		20	5	25
208-00106	Sweeping (Sediment Removal)	Hour		80	20	100
208-00107	Removal of Trash	Hour		40	10	50
208-00207	Erosion Control Management (ECM)	Day	5	40	7	52
212-00700	Organic Fertilizer	Pounds			3,680	3,680
212-00701	Compost (Mechanically Applied)-	CY			300	300
212-00703	Humate	Pounds			345	345
212-00704	Mycorrhizae	Pounds			92	92
212-00705	Elemental Sulfur	Pounds			460	460
212-00706	Seeding (Native) Drill	Acre			4.6	4.6
213-00002	Mulching (Weed Free Hay)	Acre			4.6	4.6
213-00150	Bonded Fiber Matrix <sup>4</sup>	Acre		1		1
216-00201	Soil Retention Blanket (Straw/Coconut) (Biodegradable Class 1)	SY			5,900	5,900
216-00301	Turf Reinforcement Mat (Class 1)	SY			146	146
607-11525	Fence (Plastic) <sup>4</sup>	LF		2,510		2,510

\*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. **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.  
 \*\*Pay Item 208-00071 is included for anticipated maintenance of vehicle tracking pads based on the service life of the control measure in the field. The use of the material shall be directed and approved by the Engineer.  
 \*\*\* F/A refers to CDOT's Force Account Pay Items.


**13. BIOLOGICAL 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 guidance document Low Risk Discharge Guidance Discharges of Uncontaminated Groundwater to Land):  
<https://www.colorado.gov/pacific/sites/default/files/WQ%20LOW%20RISK%20GW.pdf>
  1. Dewatering: Refer to other environmental permits in accordance with subsection 107.02 and the permits contained in Tab 16 of the SWMP.
  2. If groundwater 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.


**14. NOTES**

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I-25 MOBILITY HUB (LONE TREE)  
 SWMP NARRATIVE

Designer:	S. FANELLO	Structure Numbers	
Detailer:	S. ADAMITIS		
Sheet Subset:	SWMP	Subset Sheets:	8 of 8

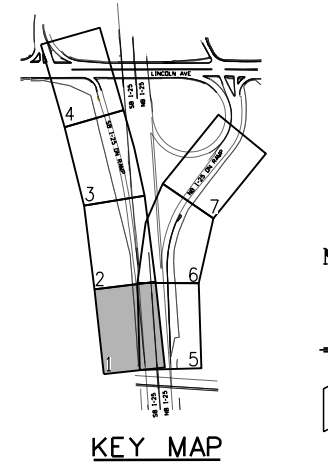
Project No./Code	267 0252-499
	24278
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**NOTES:**

1. CONTROL MEASURES SHOWN ARE NOT DRAWN TO SCALE.
2. CONTROL MEASURE LOCATIONS ARE APPROXIMATE.
3. CONTRACTOR WILL PLACE VEHICLE TRACKING PAD AND STABILIZED STAGING AREA.
4. AGGREGATE BAGS ARE TO BE PLACED ON SHOULDER NOT IN TRAFFIC LANES.
5. PEDESTRAIN OVERPASS INLETS DRAIN TO RIPRAP OUTFALL.



PER NEPA REQUIREMENTS, EXISTING TREES GREATER THAN 4" DIAMETER BREAST HEIGHT (DBH) SHALL BE MITIGATED BY THE PROJECT. ALL TREES WERE MEASURED AND 26 MEET THE MITIGATION REQUIREMENT. REPLANTING ZONES, SHOWN IN GREEN, REPRESENT WHERE THE PROJECT PLANS TO REPLANT THE MITIGATION TREES.

TREE REPLANTING ZONE  
3 EVERGREEN TREES PROPOSED

112 AB  
AGGREGATE BAG  
APPROX. 50' D.C.  
(TYPICAL)

**PHASING LEGEND:**

- 1 INITIAL BMP TO BE INSTALLED PRIOR TO CONSTRUCTION
  - 2 INTERIM BMP TO BE INSTALLED DURING CONSTRUCTION
  - 3 FINAL BMP TO BE INSTALLED AFTER CONSTRUCTION
- NOTE: ALL EROSION CONTROL MEASURES ARE PER CDOT M-208-1 UNLESS NOTED OTHERWISE.

**LEGEND:**

- AB AGGREGATE BAG
- ECL EROSION CONTROL LOG
- IP INLET PROTECTION
- PF PLASTIC FENCE
- SF SILT FENCE
- LDA LIMITS OF DISTURBED AREA
- LDC LIMITS OF CONSTRUCTION
- OP EROSION LOG OUTLET PROTECTION
- VTP VEHICLE TRACKING PAD
- RCS ROUGH CUT STREET CONTROL
- RC ROCK CHECK DAM
- PROPOSED FLOW ARROW
- EXISTING FLOW ARROW
- EXISTING CONTOUR
- PROPOSED CONTOUR
- TREE PROTECTION AREA



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Unit Information	Unit Leader Initials
<b>Pinyon</b> Environmental, Inc.	

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**I-25 MOBILITY HUB (LONE TREE)  
 STORMWATER MANAGEMENT PH 1&2  
 BEGIN TO STA 14+60**

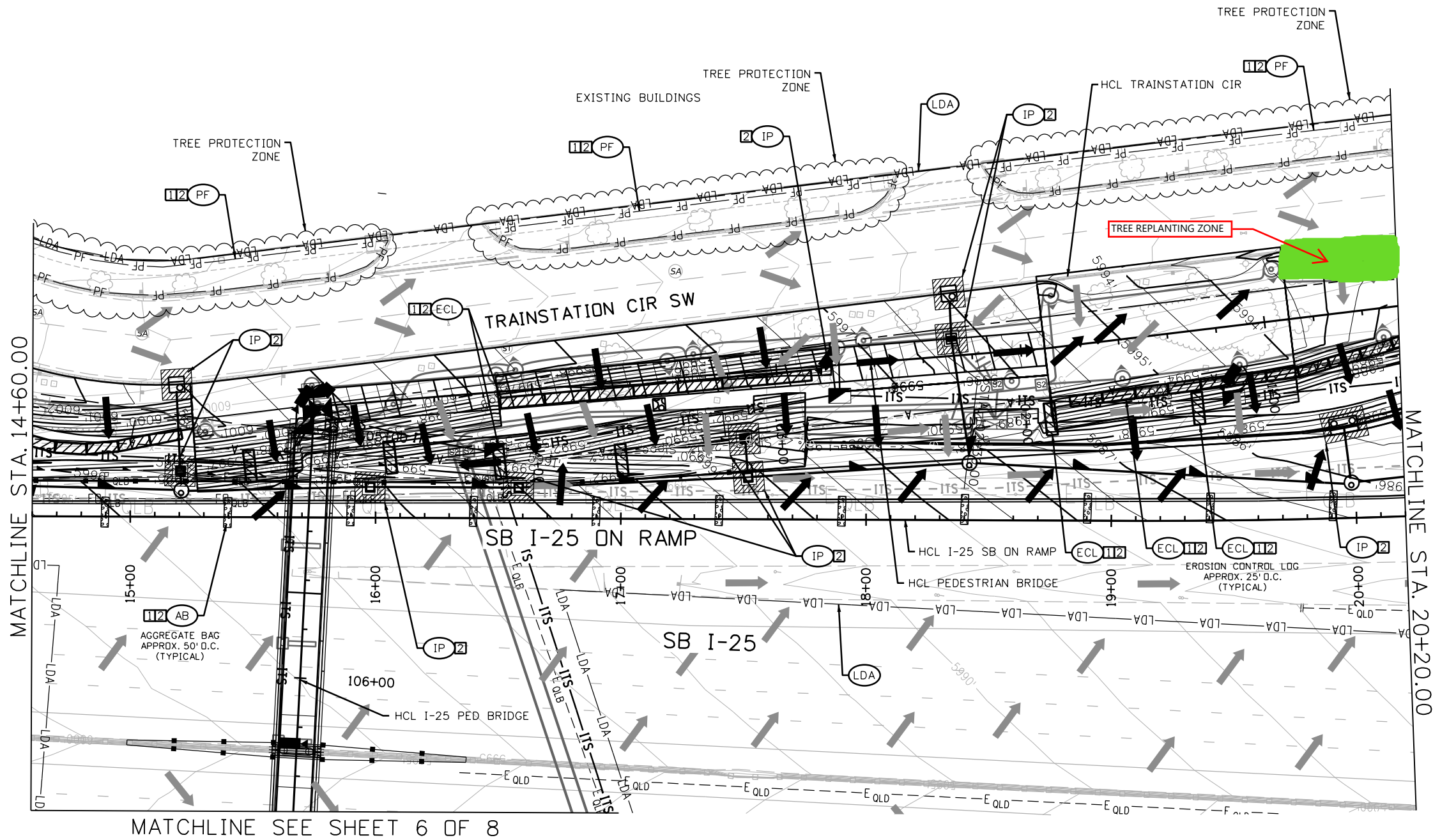
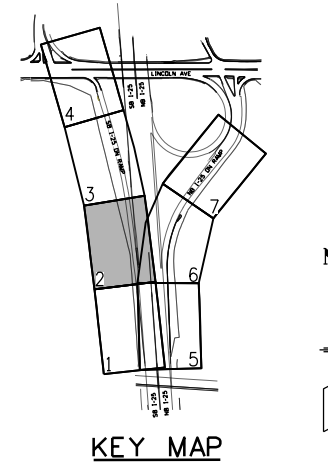
Designer: S. FANELLO  
 Detailer: S. ADAMITIS  
 Sheet Subset: SWMP

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  - LOC LIMITS OF CONSTRUCTION
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  - VTP VEHICLE TRACKING PAD
  - RCS ROUGH CUT STREET CONTROL
  - RC ROCK CHECK DAM
  - ➔ PROPOSED FLOW ARROW
  - ➔ EXISTING FLOW ARROW
  - 6350 --- EXISTING CONTOUR
  - 6300 --- PROPOSED CONTOUR
  - ☁ TREE PROTECTION AREA

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**Region 1-South Program** NB

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**I-25 MOBILITY HUB (LONE TREE) STORMWATER MANAGEMENT PH 1&2 STA 14+60 TO STA 20+20**

Designer: S. FANELLO  
 Detailer: S. ADAMITIS  
 Sheet Subset: SWMP

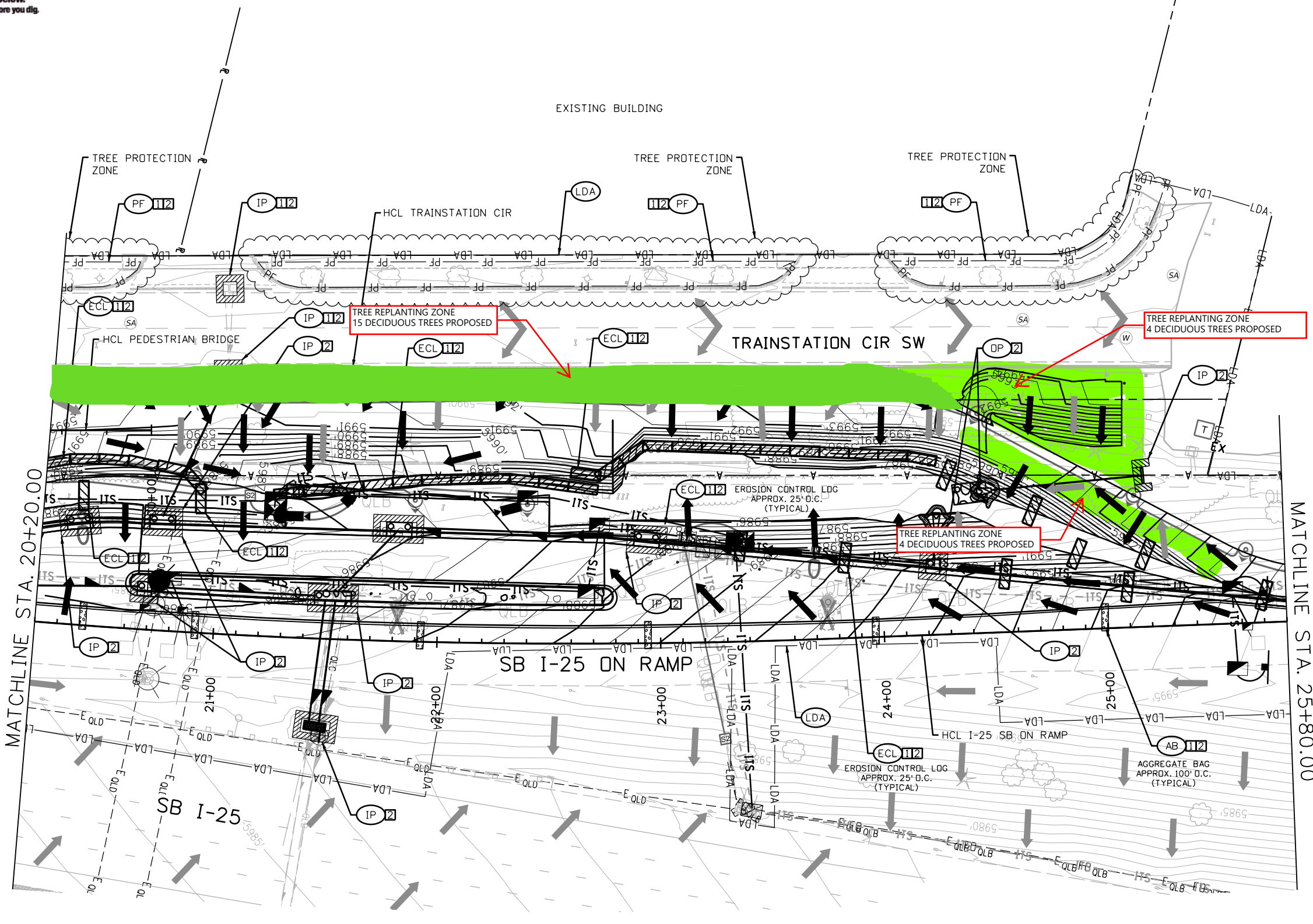
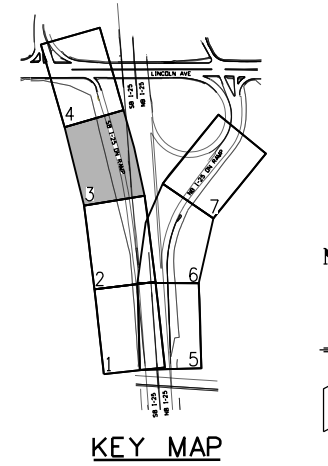
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- (ECL) EROSION CONTROL LOG
- (IP) INLET PROTECTION
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- (SF) SILT FENCE
- (LDA) LIMITS OF DISTURBED AREA
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<b>I-25 MOBILITY HUB (LONE TREE) STORMWATER MANAGEMENT PH 1&amp;2 STA 20+20 TO STA 25+80</b>			
Designer:	S. FANELLO	Structure Numbers	
Detailer:	S. ADAMITIS		
Sheet Subset:	SWMP	Subset Sheets:	3 of 7

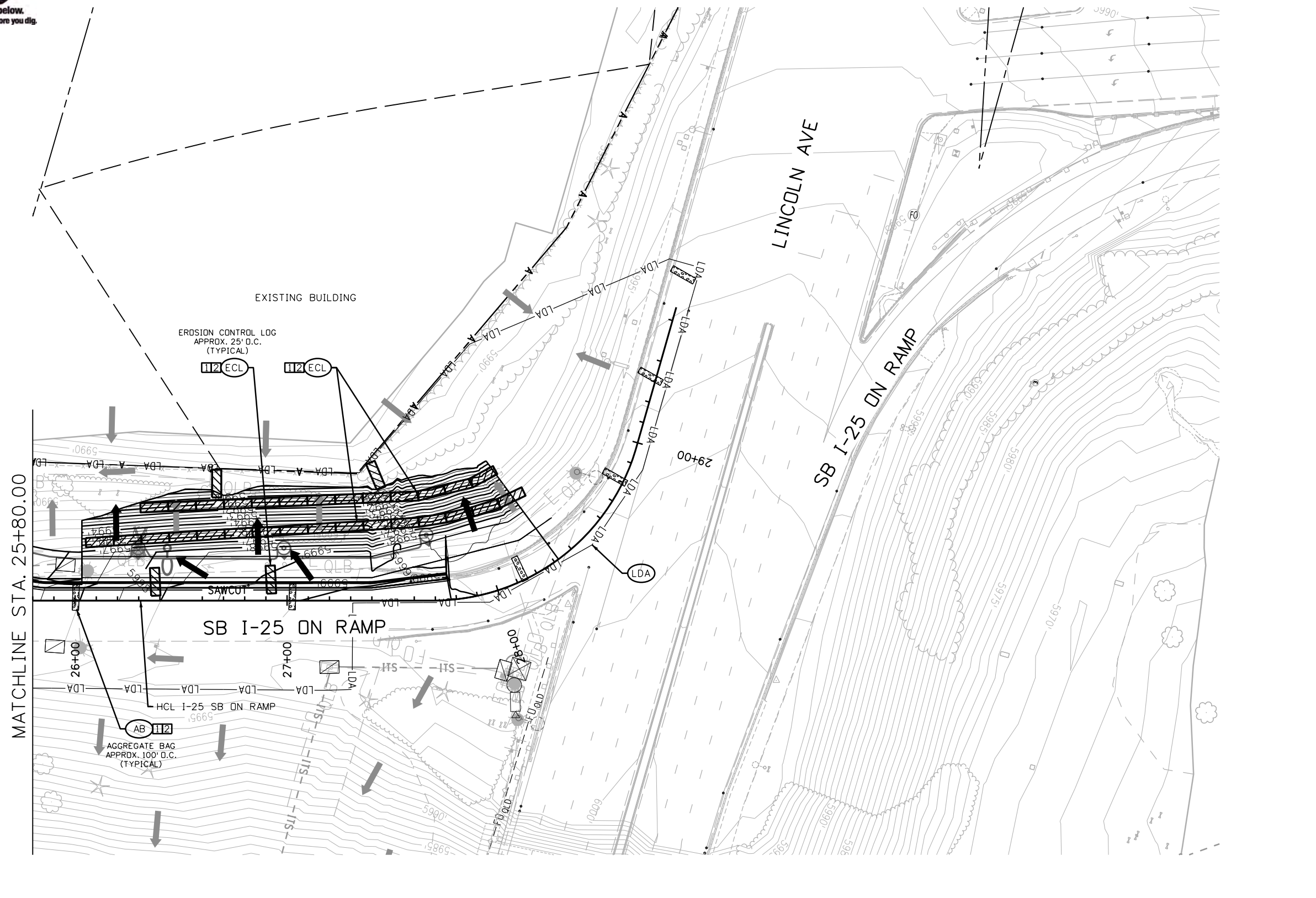
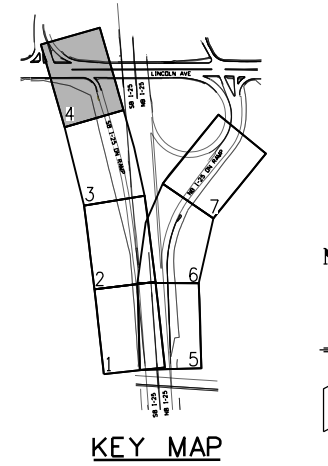
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  - RCS ROUGH CUT STREET CONTROL
  - RC ROCK CHECK DAM
  - PROPOSED FLOW ARROW
  - EXISTING FLOW ARROW
  - EXISTING CONTOUR
  - PROPOSED CONTOUR
  - TREE PROTECTION AREA

6/11/2024 11:11:58 AM  
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All seals for this set of drawings are applied to the cover page(s)

Print Date: 6/11/2024	File Name: 24278-HW-025A-SWMP_1.dgn
Horiz. Scale: 1" = 50'	Vert. Scale: As Noted
Unit Information	Unit Leader Initials

Sheet Revisions			
Date:	Comments	Init.	

**Colorado Department of Transportation**  
 18500 E. Colfax Ave.  
 Aurora, CO 80011  
 Phone: (303) 746-8639  
 Fax: N/A  
**Region 1-South Program**

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

**I-25 MOBILITY HUB (LONE TREE)  
 STORMWATER MANAGEMENT PH 1&2  
 STA 25+80 TO LINCOLN AVE**

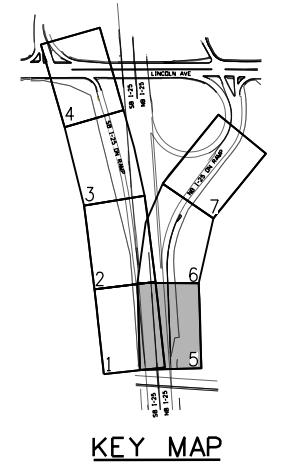
Designer: S. FANELLO	Structure Numbers
Detailer: S. ADAMITIS	
Sheet Subset: SWMP	Subset Sheets: 4 of 7

<b>Project No./Code</b>
267 0252-499
24278
Sh



**NOTES:**

- CONTROL MEASURES SHOWN ARE NOT DRAWN TO SCALE.
- CONTROL MEASURE LOCATIONS ARE APPROXIMATE.
- CONTRACTOR WILL PLACE VEHICLE TRACKING PAD AND STABILIZED STAGING AREA.
- AGGREGATE BAGS ARE TO BE PLACED ON SHOULDER NOT IN TRAFFIC LANES.
- PEDESTRAIN OVERPASS INLETS DRAIN TO RIPRAP OUTFALL.



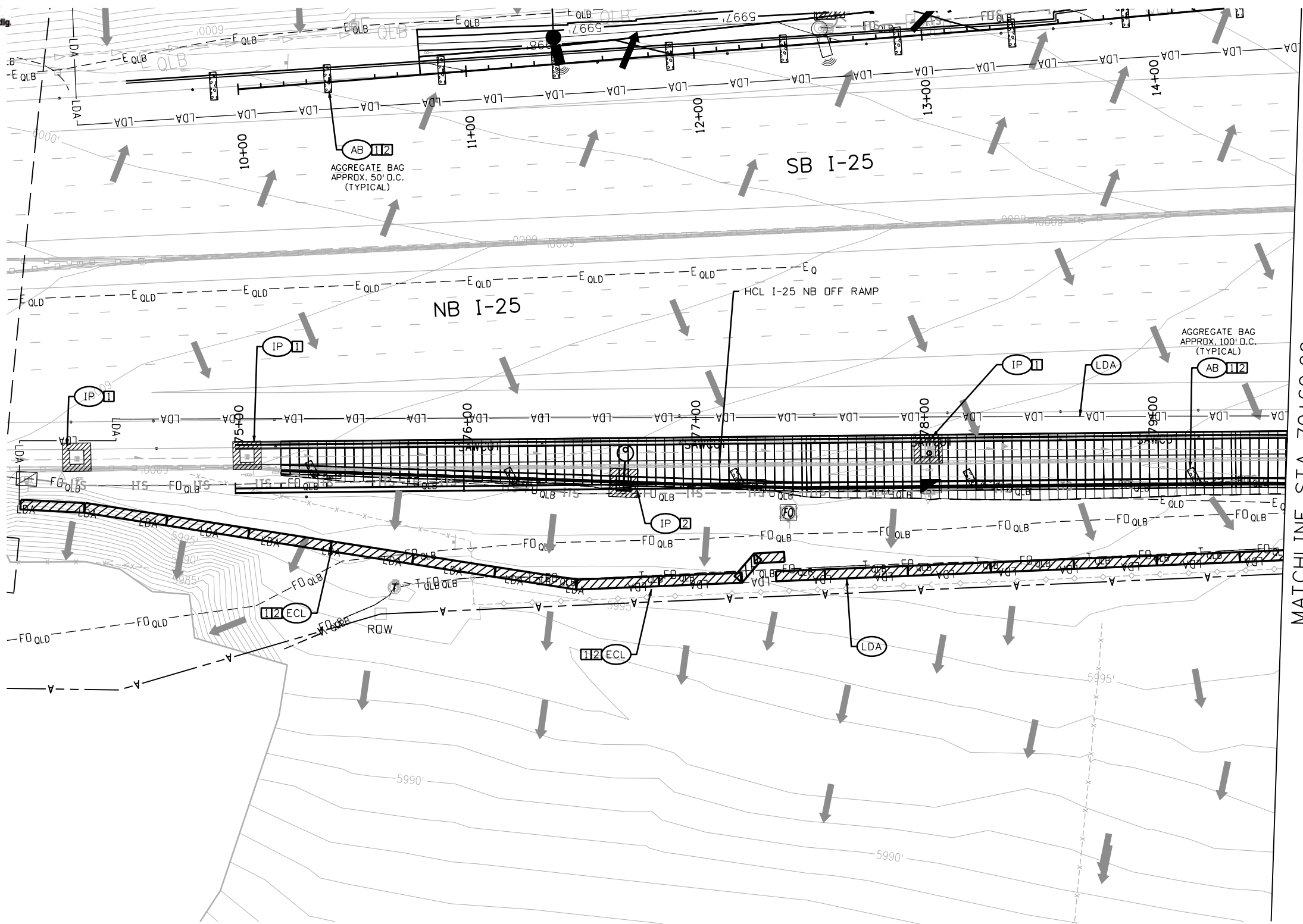
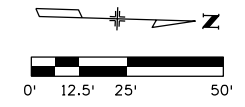
**KEY MAP**

**PHASING LEGEND:**

- 1 INITIAL BMP TO BE INSTALLED PRIOR TO CONSTRUCTION
  - 2 INTERIM BMP TO BE INSTALLED DURING CONSTRUCTION
  - 3 FINAL BMP TO BE INSTALLED AFTER CONSTRUCTION
- NOTE: ALL EROSION CONTROL MEASURES ARE PER CDOT M-208-1 UNLESS NOTED OTHERWISE.

**LEGEND:**

- (AB) AGGREGATE BAG
- (ECL) EROSION CONTROL LOG
- (IP) INLET PROTECTION
- (PF) PLASTIC FENCE
- (SF) SILT FENCE
- (LDA) LIMITS OF DISTURBED AREA
- (LOC) LIMITS OF CONSTRUCTION
- (OP) EROSION LOG OUTLET PROTECTION
- (VTP) VEHICLE TRACKING PAD
- (RCS) ROUGH CUT STREET CONTROL
- (RC) ROCK CHECK DAM
- PROPOSED FLOW ARROW
- EXISTING FLOW ARROW
- EXISTING CONTOUR / PROPOSED CONTOUR
- TREE PROTECTION AREA



MATCHLINE STA. 79+60.00

6/11/2024 11:12:30 AM DGN MODEL:DR Plan 5 [Sheet] pw://cadd-pw.bentley.com/cadd-pw-01p/Documents/02\_Minor\_Projects/CDOT\_Collaboration/Projects/24278-i-25-mobility-hub (lone-tree)/01\_Pre-Construction/Drawings/SWMP/24278-HW-025A-SWMP\_1.dgn

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Horiz. Scale: 1" = 50'	Vert. Scale: As Noted
Unit Information	Unit Leader Initials

Sheet Revisions			
Date:	Comments	Init.	

Colorado Department of Transportation  
 18500 E. Colfax Ave.  
 Aurora, CO 80011  
 Phone: (303) 746-8639  
 Fax: N/A

**Region 1-South Program**      **NB**

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

<b>I-25 MOBILITY HUB (LONE TREE) STORMWATER MANAGEMENT PH 1&amp;2 STA 75+00 TO STA 79+60</b>			
Designer:	S. FANELLO	Structure Numbers	
Detailer:	S. ADAMITIS	Subset Sheets:	5 of 7
Sheet Subset:	SWMP		

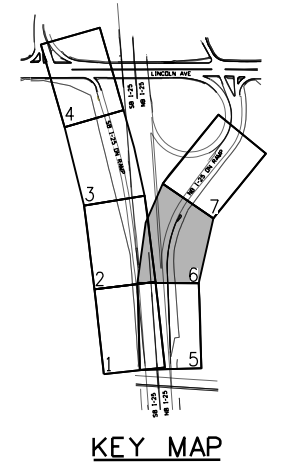
<b>Project No./Code</b>
267 0252-499
24278
Sh





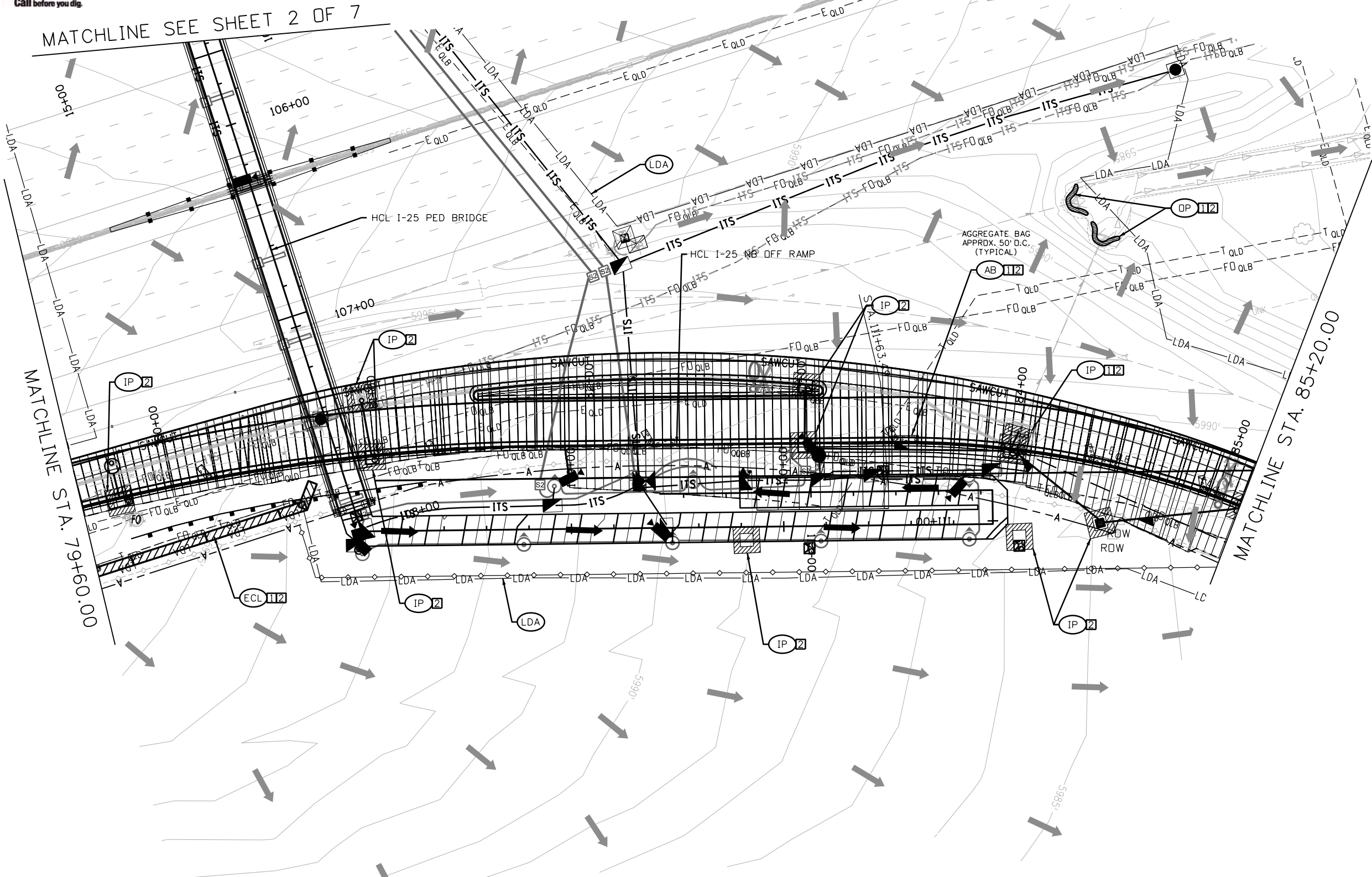
**NOTES:**

- CONTROL MEASURES SHOWN ARE NOT DRAWN TO SCALE.
- CONTROL MEASURE LOCATIONS ARE APPROXIMATE.
- CONTRACTOR WILL PLACE VEHICLE TRACKING PAD AND STABILIZED STAGING AREA.
- AGGREGATE BAGS ARE TO BE PLACED ON SHOULDER NOT IN TRAFFIC LANES.
- PEDESTRAIN OVERPASS INLETS DRAIN TO RIPRAP OUTFALL.



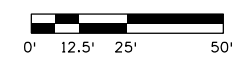
MATCHLINE SEE SHEET 2 OF 7

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- PHASING LEGEND:**
- 1 INITIAL BMP TO BE INSTALLED PRIOR TO CONSTRUCTION
  - 2 INTERIM BMP TO BE INSTALLED DURING CONSTRUCTION
  - 3 FINAL BMP TO BE INSTALLED AFTER CONSTRUCTION
- NOTE: ALL EROSION CONTROL MEASURES ARE PER CDOT M-208-1 UNLESS NOTED OTHERWISE.

- LEGEND:**
- (AB) AGGREGATE BAG
  - (ECL) EROSION CONTROL LOG
  - (IP) INLET PROTECTION
  - (PF) PLASTIC FENCE
  - (SF) SILT FENCE
  - (LDA) LIMITS OF DISTURBED AREA
  - (LOC) LIMITS OF CONSTRUCTION
  - (OP) EROSION LOG OUTLET PROTECTION
  - (VTP) VEHICLE TRACKING PAD
  - (RCS) ROUGH CUT STREET CONTROL
  - (RC) ROCK CHECK DAM
  - PROPOSED FLOW ARROW
  - EXISTING FLOW ARROW
  - 6350 EXISTING CONTOUR
  - 6350 PROPOSED CONTOUR
  - TREE PROTECTION AREA



Print Date: 6/11/2024	
File Name: 24278-HW-025A-SWMP_1.dgn	
Horiz. Scale: 1" = 50'	Vert. Scale: As Noted
Unit Information	Unit Leader Initials
<b>Pinyon</b> Environmental, Inc.	3222 SOUTH WANCE STREET LAKEWOOD, CO 80227 TEL: 303-980-6200 WWW.PINYON-ENV.COM

Sheet Revisions			
Date:	Comments	Init.	

Colorado Department of Transportation

18500 E. Colfax Ave.  
Aurora, CO 80011  
Phone: (303) 746-8639  
Fax: N/A

**Region 1-South Program**      **NB**

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No Revisions:
Revised:
Void:

<b>I-25 MOBILITY HUB (LONE TREE) STORMWATER MANAGEMENT PH 1&amp;2 STA 79+60 TO STA 85+20</b>	
Designer: S. FANELLO	Structure Numbers
Detailer: S. ADAMITIS	
Sheet Subset: SWMP	Subset Sheets: 6 of 7

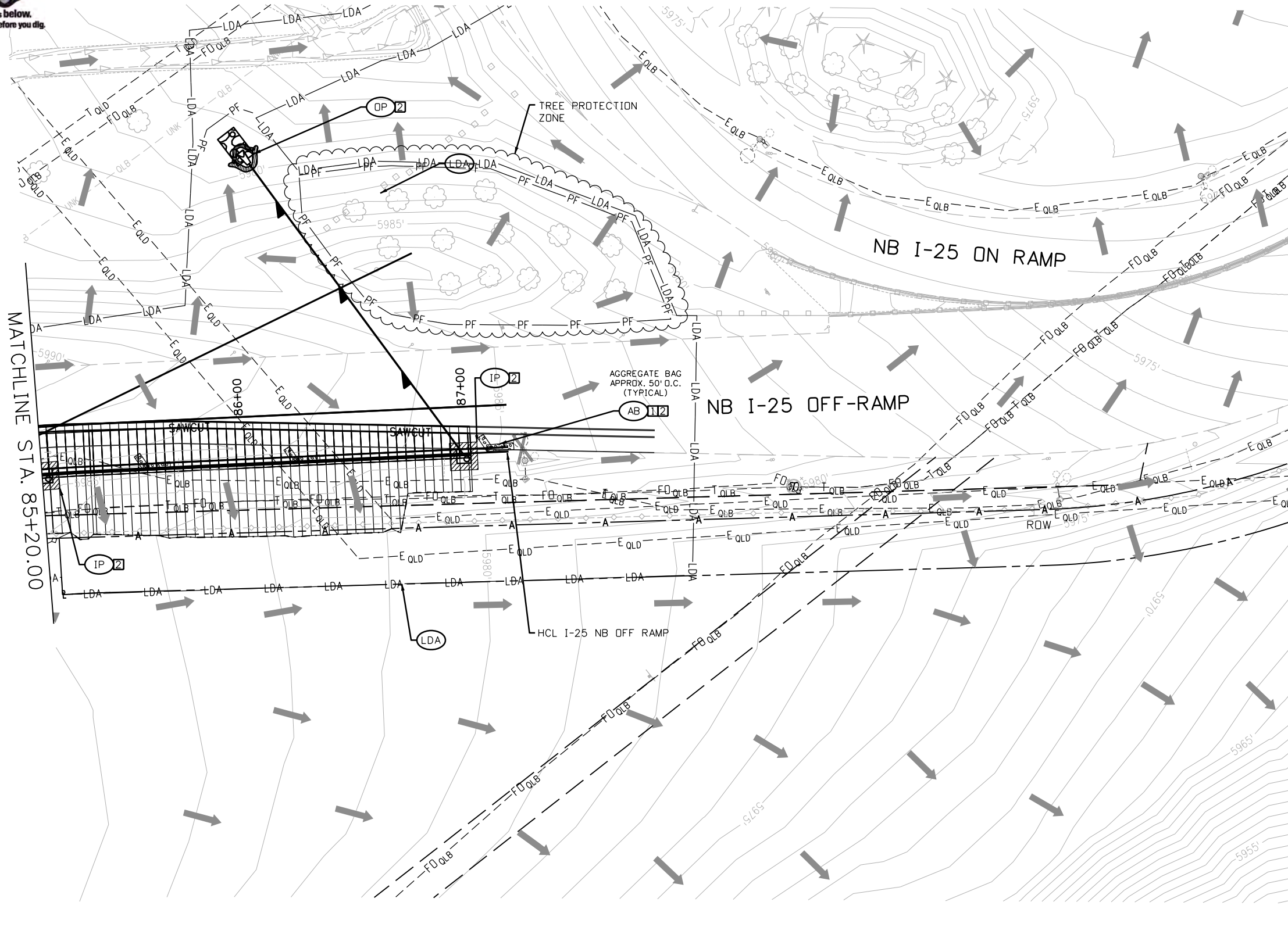
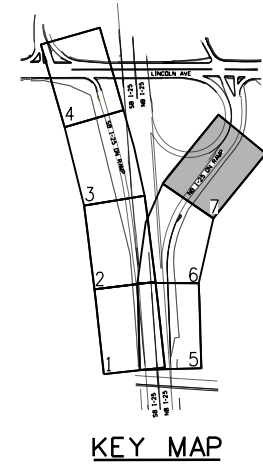
<b>Project No./Code</b>
267 0252-499
24278
Sh





**NOTES:**

- CONTROL MEASURES SHOWN ARE NOT DRAWN TO SCALE.
- CONTROL MEASURE LOCATIONS ARE APPROXIMATE.
- CONTRACTOR WILL PLACE VEHICLE TRACKING PAD AND STABILIZED STAGING AREA.
- AGGREGATE BAGS ARE TO BE PLACED ON SHOULDER NOT IN TRAFFIC LANES.
- PEDESTRAIN OVERPASS INLETS DRAIN TO RIPRAP OUTFALL.



- PHASING LEGEND:**
- [1] INDICATES PHASE OF CONSTRUCTION TO INSTALL ASSOCIATED BMP (INITIAL, INTERIM, OR FINAL)
  - [1] INITIAL BMP TO BE INSTALLED PRIOR TO CONSTRUCTION
  - [2] INTERIM BMP TO BE INSTALLED DURING CONSTRUCTION
  - [3] FINAL BMP TO BE INSTALLED AFTER CONSTRUCTION
- NOTE: ALL EROSION CONTROL MEASURES ARE PER CDOT M-208-1 UNLESS NOTED OTHERWISE.

- LEGEND:**
- (AB) AGGREGATE BAG
  - (ECL) EROSION CONTROL LOG
  - (IP) INLET PROTECTION
  - (PF) PLASTIC FENCE
  - (SF) SILT FENCE
  - (LDA) LIMITS OF DISTURBED AREA
  - (LOC) LIMITS OF CONSTRUCTION
  - (OP) EROSION LOG OUTLET PROTECTION
  - (VTP) VEHICLE TRACKING PAD
  - (RCS) ROUGH CUT STREET CONTROL
  - (RC) ROCK CHECK DAM
  - PROPOSED FLOW ARROW
  - EXISTING FLOW ARROW
  - EXISTING CONTOUR (6350)
  - PROPOSED CONTOUR (6380)
  - TREE PROTECTION AREA

6/11/2024 11:17:53 AM  
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All seals for this set of drawings are applied to the cover page(s)

Print Date: 6/11/2024	File Name: 24278-HW-025A-SWMP_1.dgn
Horiz. Scale: 1" = 50'	Vert. Scale: As Noted
Unit Information	Unit Leader Initials

Sheet Revisions		
Date:	Comments	Init.

**Colorado Department of Transportation**  
 18500 E. Colfax Ave.  
 Aurora, CO 80011  
 Phone: (303) 746-8639  
 Fax: N/A  
**Region 1-South Program**

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

**I-25 MOBILITY HUB (LONE TREE) STORMWATER MANAGEMENT PH 1&2**  
**STA 85+20 TO END**  
 Designer: S. FANELLO  
 Detailer: S. ADAMITIS  
 Sheet Subset: SWMP

<b>Project No./Code</b>
267 0252-499
24278
Sh

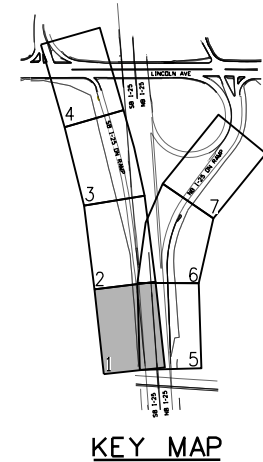


**NOTES:**

1. AREAS OF EXPOSED ROCK DO NOT REQUIRE FURTHER STABILIZATION MEASURES.

2. EXISTING SHOULDERS ARE NON-VEGETATED. FINAL STABILIZATION WILL MIMIC EXISTING CONDITIONS WITHIN 20' OF PAVEMENT.

3. EROSION CONTROL LOGS AND AGGREGATE BAGS MUST BE REMOVED PRIOR TO SEEDING.



**KEY MAP**

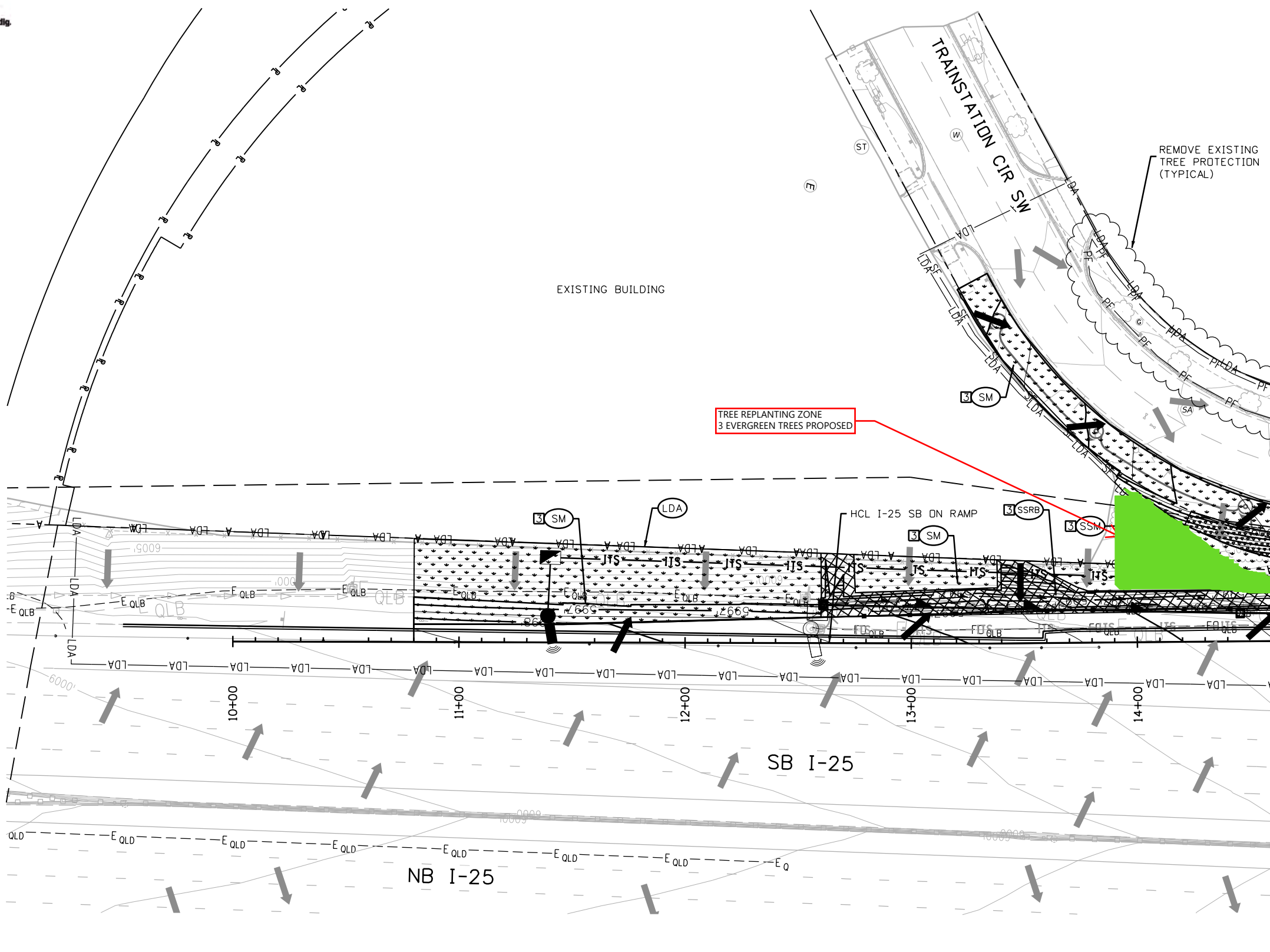
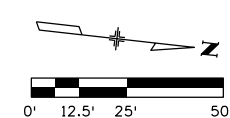
**PHASING LEGEND:**

- ⑦ INDICATES PHASE OF CONSTRUCTION TO INSTALL ASSOCIATED BMP (INITIAL, INTERIM, OR FINAL)
- ① INITIAL BMP TO BE INSTALLED PRIOR TO CONSTRUCTION
- ② INTERIM BMP TO BE INSTALLED DURING CONSTRUCTION
- ③ FINAL BMP TO BE INSTALLED AFTER CONSTRUCTION

NOTE: ALL EROSION CONTROL MEASURES ARE PER CDOT M-208-1 UNLESS NOTED OTHERWISE.

**LEGEND:**

- SEEDING (NATIVE) DRILL/STRAW MULCH
- SEEDING (NATIVE) HYDRAULIC/HYDROMULCH
- SEEDING (NATIVE) DRILL/SOIL RETENTION BLANKET
- LDA LIMITS OF DISTURBED AREA
- LOC LIMITS OF CONSTRUCTION
- RIP RAP OUTLET PROTECTION
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED FLOW ARROW
- EXISTING FLOW ARROW



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All seals for this set of drawings are applied to the cover page(s)

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Horiz. Scale: 1" = 50'	Vert. Scale: As Noted
Unit Information	Unit Leader Initials
<b>Pinyon</b> Environmental, Inc.	3222 SOUTH WANCE STREET LAKEWOOD, CO 80227 TEL: 303-980-6200 WWW.PYNYONENVIRONMENTAL.COM

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation  
 18500 E. Colfax Ave.  
 Aurora, CO 80011  
 Phone: (303) 746-8639  
 Fax: N/A

**Region 1-South Program**      **NB**

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

**I-25 MOBILITY HUB (LONE TREE)  
 STORMWATER MANAGEMENT PH 3  
 BEGIN TO STA 14+60**

Designer: S. FANELLO  
 Detailer: S. ADAMITIS  
 Sheet Subset: SWMP

Structure Numbers  
 Subset Sheets: 1 of 7

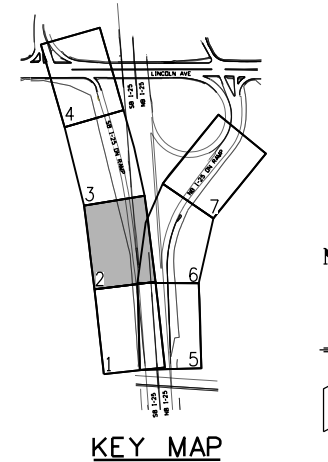
<b>Project No./Code</b>
267 0252-499
24278
Sh





**NOTES:**

1. AREAS OF EXPOSED ROCK DO NOT REQUIRE FURTHER STABILIZATION MEASURES.
2. EXISTING SHOULDERS ARE NON-VEGETATED. FINAL STABILIZATION WILL MIMIC EXISTING CONDITIONS WITHIN 20' OF PAVEMENT.
3. EROSION CONTROL LOGS AND AGGREGATE BAGS MUST BE REMOVED PRIOR TO SEEDING.



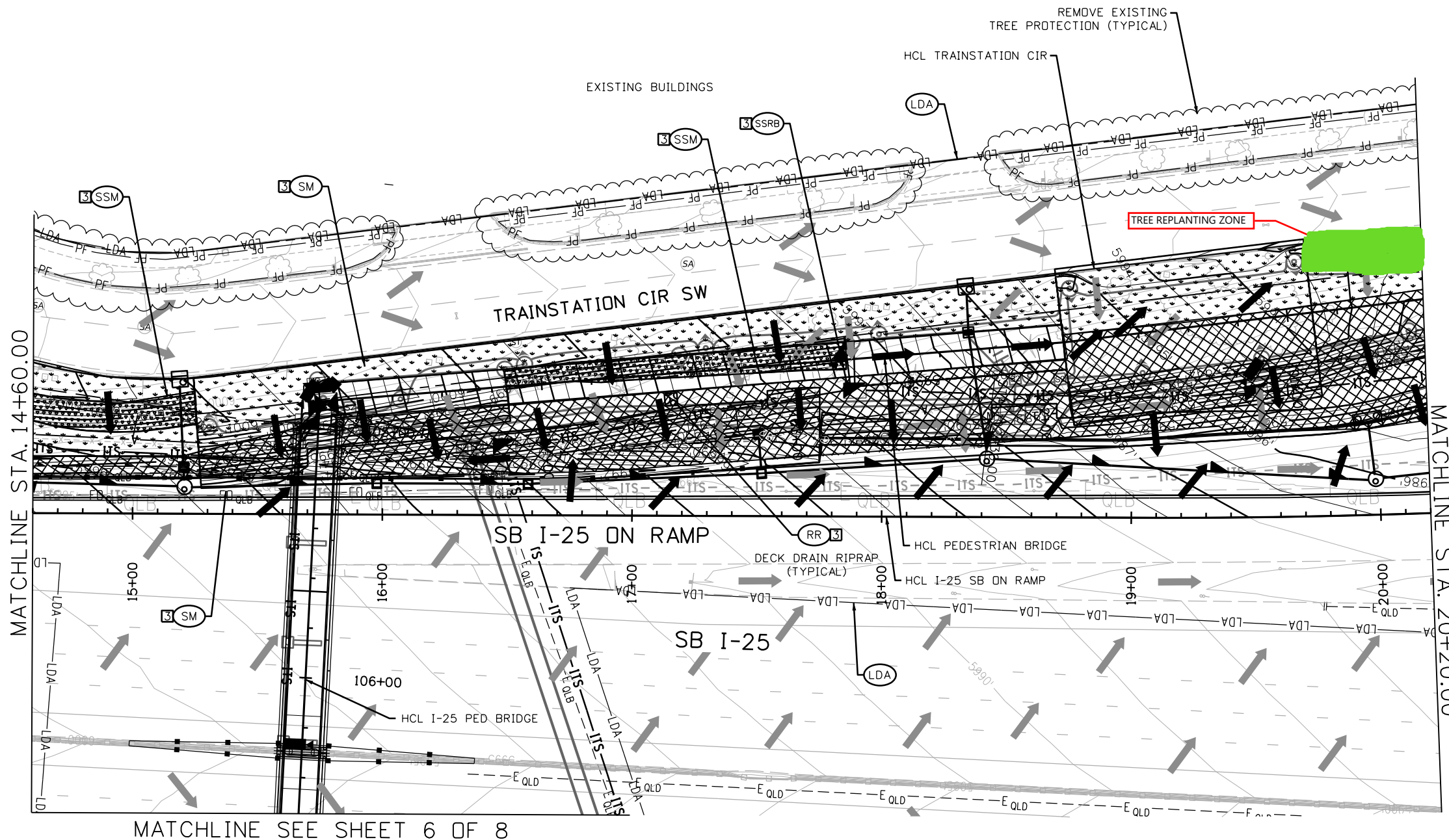
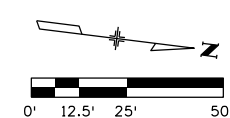
**KEY MAP**

**PHASING LEGEND:**

- ① INDICATES PHASE OF CONSTRUCTION TO INSTALL ASSOCIATED BMP (INITIAL, INTERIM, OR FINAL)
  - ① INITIAL BMP TO BE INSTALLED PRIOR TO CONSTRUCTION
  - ② INTERIM BMP TO BE INSTALLED DURING CONSTRUCTION
  - ③ FINAL BMP TO BE INSTALLED AFTER CONSTRUCTION
- NOTE: ALL EROSION CONTROL MEASURES ARE PER CDOT M-208-1 UNLESS NOTED OTHERWISE.

**LEGEND:**

- (SM) SEEDING (NATIVE) DRILL/STRAW MULCH
- (SSM) SEEDING (NATIVE) HYDRAULIC/HYDROMULCH
- (SSRB) SEEDING (NATIVE) DRILL/SOIL RETENTION BLANKET
- (LDA) LIMITS OF DISTURBED AREA
- (LOC) LIMITS OF CONSTRUCTION
- (RR) RIP RAP OUTLET PROTECTION
- (6350) EXISTING CONTOUR
- (6350) PROPOSED CONTOUR
- PROPOSED FLOW ARROW
- EXISTING FLOW ARROW



MATCHLINE STA. 14+60.00

MATCHLINE STA. 20+20.00

MATCHLINE SEE SHEET 6 OF 8

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All seals for this set of drawings are applied to the cover page(s)

Print Date: 6/11/2024	
File Name: 24278-HW-025A-SWMP_3.dgn	
Horiz. Scale: 1" = 50'	Vert. Scale: As Noted
Unit Information	Unit Leader Initials
<b>Pinyon</b> Environmental, Inc.	3222 SOUTH WANCE STREET LAKEWOOD, CO 80227 TEL: 303-980-6200 WWW.PINYON-ENV.COM

Sheet Revisions			
Date:	Comments	Init.	

Colorado Department of Transportation  
 18500 E. Colfax Ave.  
 Aurora, CO 80011  
 Phone: (303) 746-8639  
 Fax: N/A

**Region 1-South Program** **NB**

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No Revisions:
Revised:
Void:

<b>I-25 MOBILITY HUB (LONE TREE) STORMWATER MANAGEMENT PH 3 STA 14+60 TO STA 20+20</b>		
Designer:	S. FANELLO	Structure Numbers
Detailer:	S. ADAMITIS	
Sheet Subset:	SWMP	Subset Sheets: 2 of 7

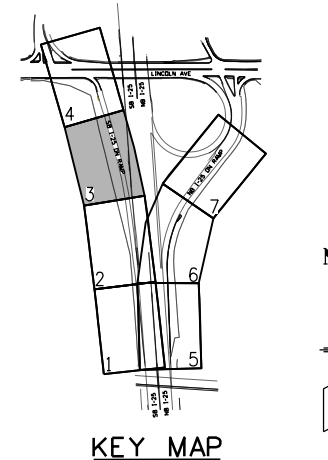
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267 0252-499
24278
Sh



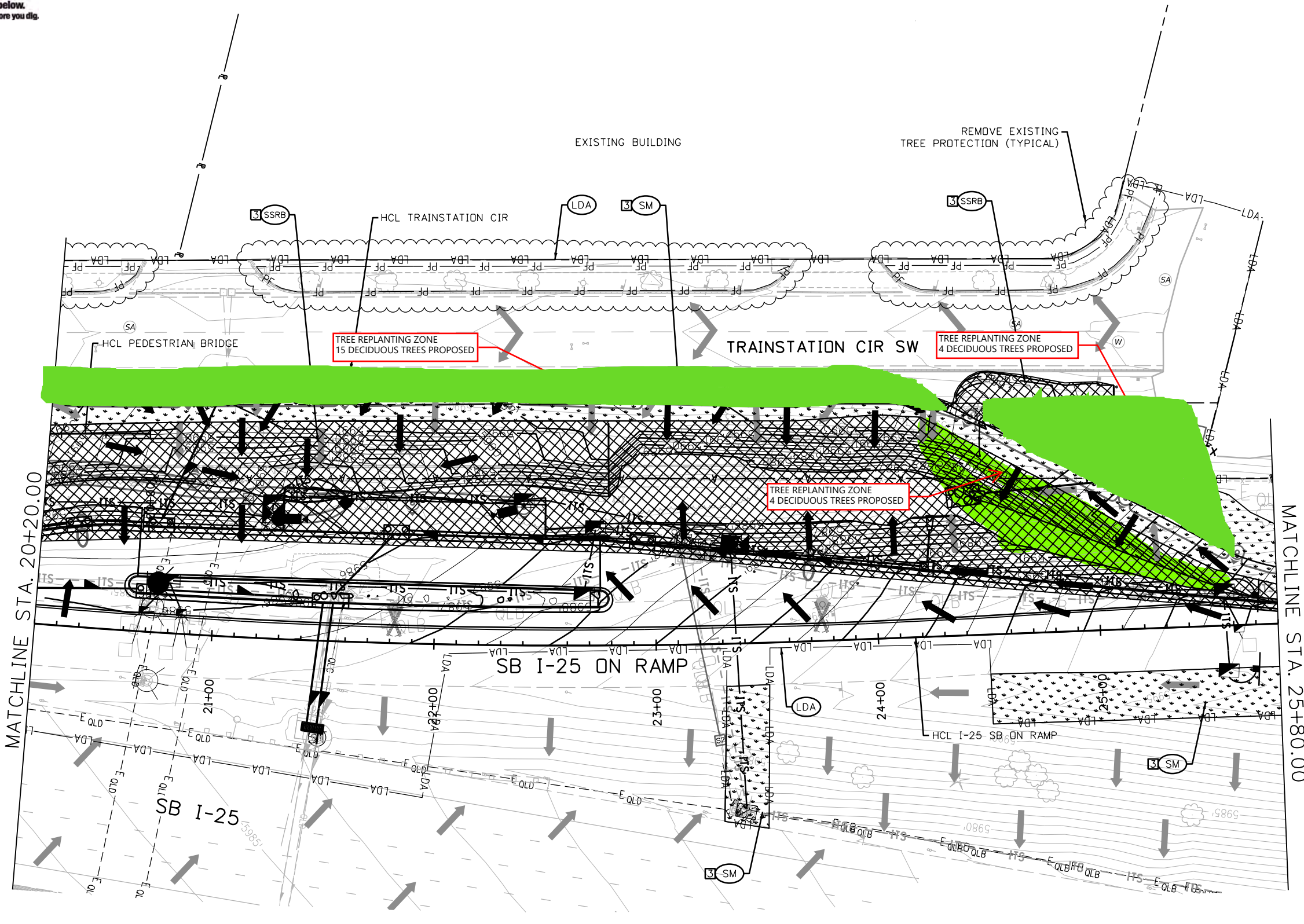


**NOTES:**

1. AREAS OF EXPOSED ROCK DO NOT REQUIRE FURTHER STABILIZATION MEASURES.
2. EXISTING SHOULDERS ARE NON-VEGETATED. FINAL STABILIZATION WILL MIMIC EXISTING CONDITIONS WITHIN 20' OF PAVEMENT.
3. EROSION CONTROL LOGS AND AGGREGATE BAGS MUST BE REMOVED PRIOR TO SEEDING.



**KEY MAP**

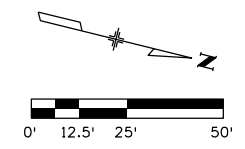


**PHASING LEGEND:**

- 1 INITIAL BMP TO BE INSTALLED PRIOR TO CONSTRUCTION
  - 2 INTERIM BMP TO BE INSTALLED DURING CONSTRUCTION
  - 3 FINAL BMP TO BE INSTALLED AFTER CONSTRUCTION
- NOTE: ALL EROSION CONTROL MEASURES ARE PER CDOT M-208-1 UNLESS NOTED OTHERWISE.

**LEGEND:**

- SM SEEDING (NATIVE) DRILL/STRAW MULCH
- SSM SEEDING (NATIVE) HYDRAULIC/HYDROMULCH
- SSRB SEEDING (NATIVE) DRILL/SOIL RETENTION BLANKET
- LDA LIMITS OF DISTURBED AREA
- LOC LIMITS OF CONSTRUCTION
- RR RIP RAP OUTLET PROTECTION
- 6350 EXISTING CONTOUR
- 6350 PROPOSED CONTOUR
- PROPOSED FLOW ARROW
- EXISTING FLOW ARROW



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All seals for this set of drawings are applied to the cover page(s)

Print Date: 6/11/2024	Unit Leader Initials
File Name: 24278-HW-025A-SWMP_3.dgn	
Horiz. Scale: 1" = 50'	Vert. Scale: As Noted
Unit Information	
<b>Pinyon</b> Environmental, Inc.	3222 SOUTH WANCE STREET LAKEWOOD, CO 80227 TEL: 303-489-6200 WWW.PINYON-ENV.COM

Sheet Revisions			
Date:	Comments	Init.	

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 Aurora, CO 80011  
 Phone: (303) 746-8639  
 Fax: N/A

**Region 1-South Program**      **NB**

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

<b>I-25 MOBILITY HUB (LONE TREE) STORMWATER MANAGEMENT PH 3 STA 20+20 TO STA 25+80</b>		
Designer:	S. FANELLO	Structure Numbers
Detailer:	S. ADAMITIS	
Sheet Subset:	SWMP	Subset Sheets: 3 of 7

<b>Project No./Code</b>
267 0252-499
24278
Sh

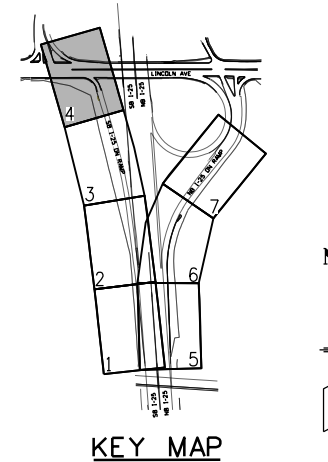


**NOTES:**

1. AREAS OF EXPOSED ROCK DO NOT REQUIRE FURTHER STABILIZATION MEASURES.

2. EXISTING SHOULDERS ARE NON-VEGETATED. FINAL STABILIZATION WILL MIMIC EXISTING CONDITIONS WITHIN 20' OF PAVEMENT.

3. EROSION CONTROL LOGS AND AGGREGATE BAGS MUST BE REMOVED PRIOR TO SEEDING.



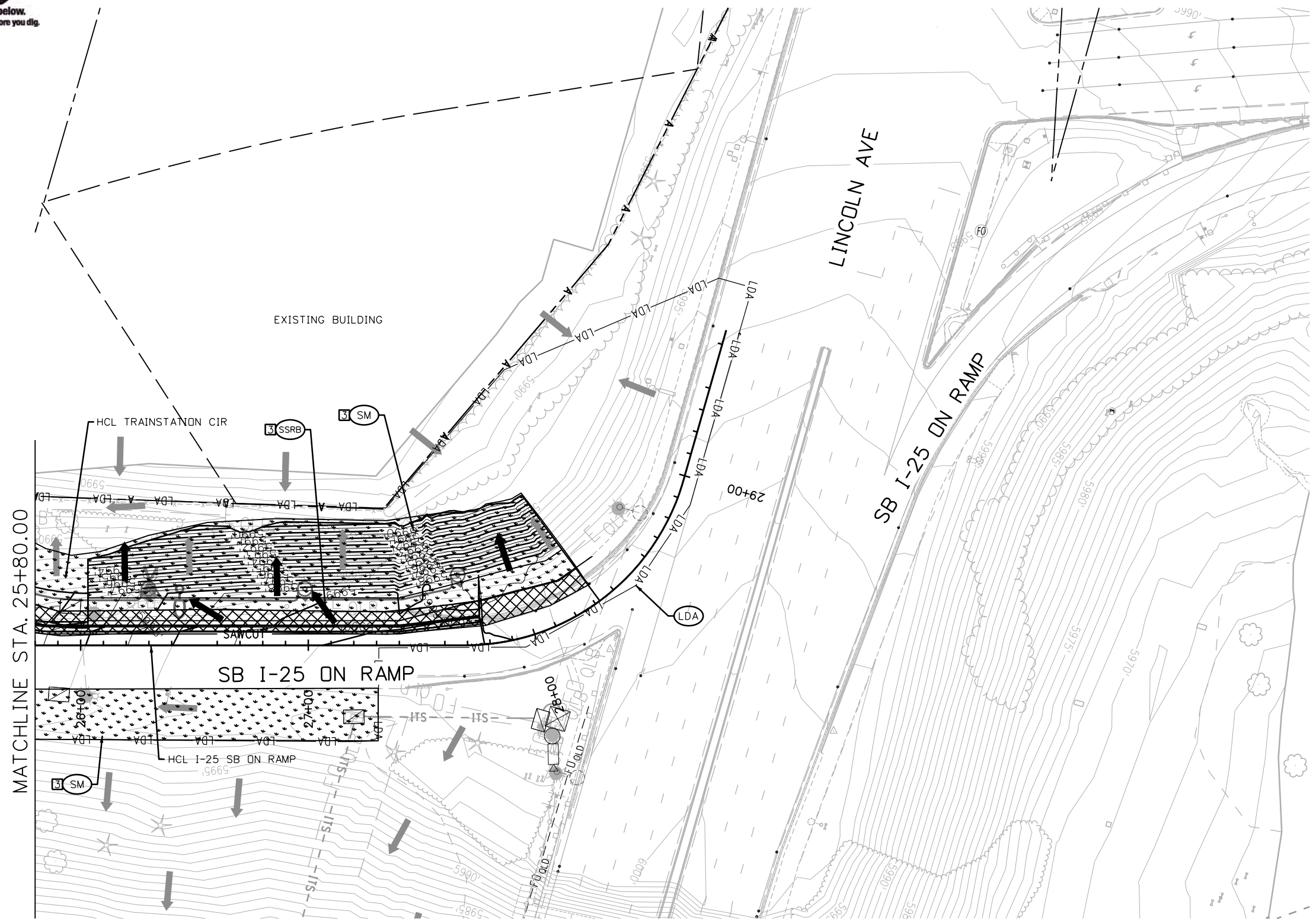
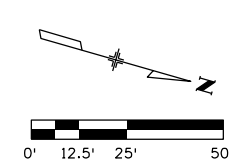
**KEY MAP**

**PHASING LEGEND:**

- ① INDICATES PHASE OF CONSTRUCTION TO INSTALL ASSOCIATED BMP (INITIAL, INTERIM, OR FINAL)
  - ① INITIAL BMP TO BE INSTALLED PRIOR TO CONSTRUCTION
  - ② INTERIM BMP TO BE INSTALLED DURING CONSTRUCTION
  - ③ FINAL BMP TO BE INSTALLED AFTER CONSTRUCTION
- NOTE: ALL EROSION CONTROL MEASURES ARE PER CDOT M-208-1 UNLESS NOTED OTHERWISE.

**LEGEND:**

- SEEDING (NATIVE) DRILL/STRAW MULCH
- SEEDING (NATIVE) HYDRAULIC/HYDROMULCH
- SEEDING (NATIVE) DRILL/SOIL RETENTION BLANKET
- LIMITS OF DISTURBED AREA
- LIMITS OF CONSTRUCTION
- RIP RAP OUTLET PROTECTION
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED FLOW ARROW
- EXISTING FLOW ARROW



MATCHLINE STA. 25+80.00

6/11/2024 11:43:13 AM DGN MODEL:DR Plan 4 [Sheet] pw://cadd-pw.bentley.com/cadd-pw-01p/Documents/02\_Minor\_Projects/CDOT\_Collaboration/Projects/24278 - i-25 - mobility hub (lone tree)/01\_Pre-Construction/Drawings/SWMP/24278-HW-025A-SWMP\_3.dgn

All seals for this set of drawings are applied to the cover page(s)

Print Date: 6/11/2024	
File Name: 24278-HW-025A-SWMP_3.dgn	
Horiz. Scale: 1" = 50'	Vert. Scale: As Noted
Unit Information	Unit Leader Initials
<b>Pinyon</b> Environmental, Inc.	3222 SOUTH WANCE STREET LAKEWOOD, CO 80227 TEL: 303-989-6200 WWW.PINYON-ENV.COM

Sheet Revisions			
Date:	Comments	Init.	

**Colorado Department of Transportation**

18500 E. Colfax Ave.  
Aurora, CO 80011  
Phone: (303) 746-8639  
Fax: N/A

**Region 1-South Program** **NB**

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

**I-25 MOBILITY HUB (LONE TREE) STORMWATER MANAGEMENT PH 3 STA 25+80 TO LINCOLN AVE**

Designer: S. FANELLO  
Detailer: S. ADAMITIS  
Sheet Subset: SWMP

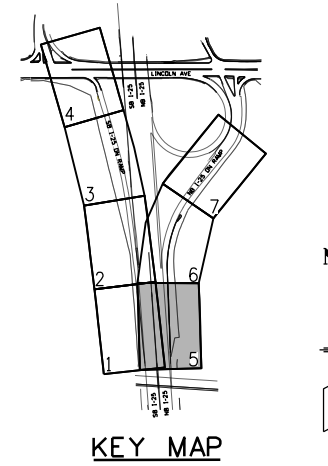
<b>Project No./Code</b>
267 0252-499
24278
Sh





**NOTES:**

1. AREAS OF EXPOSED ROCK DO NOT REQUIRE FURTHER STABILIZATION MEASURES.
2. EXISTING SHOULDERS ARE NON-VEGETATED. FINAL STABILIZATION WILL MIMIC EXISTING CONDITIONS WITHIN 20' OF PAVEMENT.
3. EROSION CONTROL LOGS AND AGGREGATE BAGS MUST BE REMOVED PRIOR TO SEEDING.



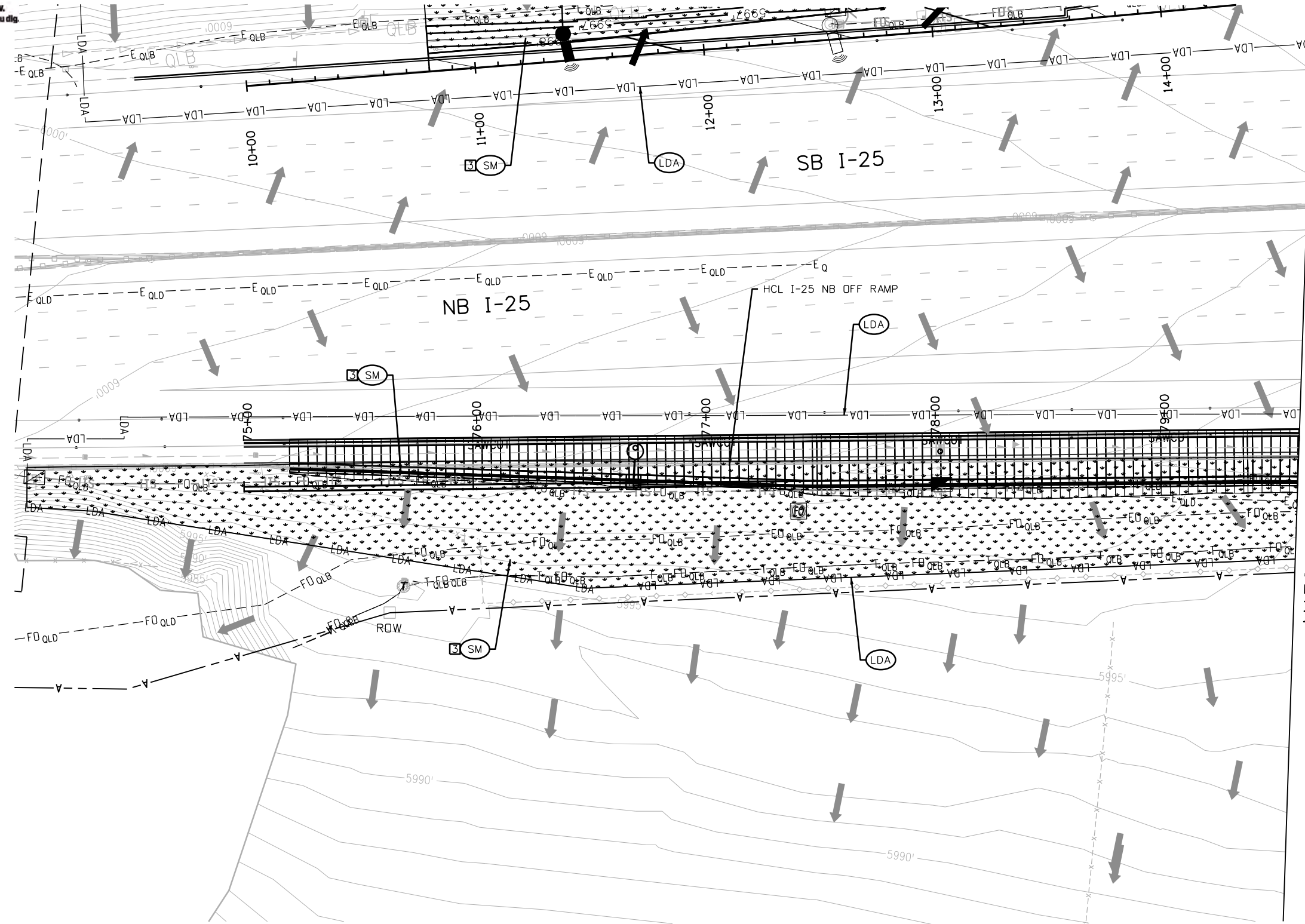
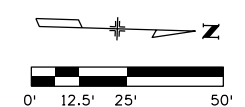
**KEY MAP**

**PHASING LEGEND:**

- [1] INDICATES PHASE OF CONSTRUCTION TO INSTALL ASSOCIATED BMP (INITIAL, INTERIM, OR FINAL)
  - [1] INITIAL BMP TO BE INSTALLED PRIOR TO CONSTRUCTION
  - [2] INTERIM BMP TO BE INSTALLED DURING CONSTRUCTION
  - [3] FINAL BMP TO BE INSTALLED AFTER CONSTRUCTION
- NOTE: ALL EROSION CONTROL MEASURES ARE PER CDOT M-208-1 UNLESS NOTED OTHERWISE.

**LEGEND:**

- [SM] SEEDING (NATIVE) DRILL/STRAW MULCH
- [SSM] SEEDING (NATIVE) HYDRAULIC/HYDROMULCH
- [SSRB] SEEDING (NATIVE) DRILL/SOIL RETENTION BLANKET
- [LDA] LIMITS OF DISTURBED AREA
- [LOC] LIMITS OF CONSTRUCTION
- [RR] RIP RAP OUTLET PROTECTION
- [---] EXISTING CONTOUR
- [—] PROPOSED CONTOUR
- [→] PROPOSED FLOW ARROW
- [←] EXISTING FLOW ARROW



MATCHLINE STA. 79+60.00

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All seals for this set of drawings are applied to the cover page(s)

Print Date: 6/11/2024	File Name: 24278-HW-025A-SWMP_3.dgn
Horiz. Scale: 1" = 50'	Vert. Scale: As Noted
Unit Information	Unit Leader Initials

Sheet Revisions		
Date:	Comments	Init.

**Colorado Department of Transportation**  
 18500 E. Colfax Ave.  
 Aurora, CO 80011  
 Phone: (303) 746-8639  
 Fax: N/A

**Region 1-South Program**      **NB**

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

<b>I-25 MOBILITY HUB (LONE TREE) STORMWATER MANAGEMENT PH 3 STA 75+00 TO STA 79+60</b>	
Designer: S. FANELLO	Structure Numbers
Detailer: S. ADAMITIS	
Sheet Subset: SWMP	Subset Sheets: 5 of 7

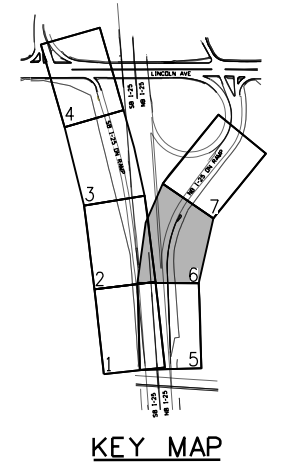
<b>Project No./Code</b>
267 0252-499
24278
Sh





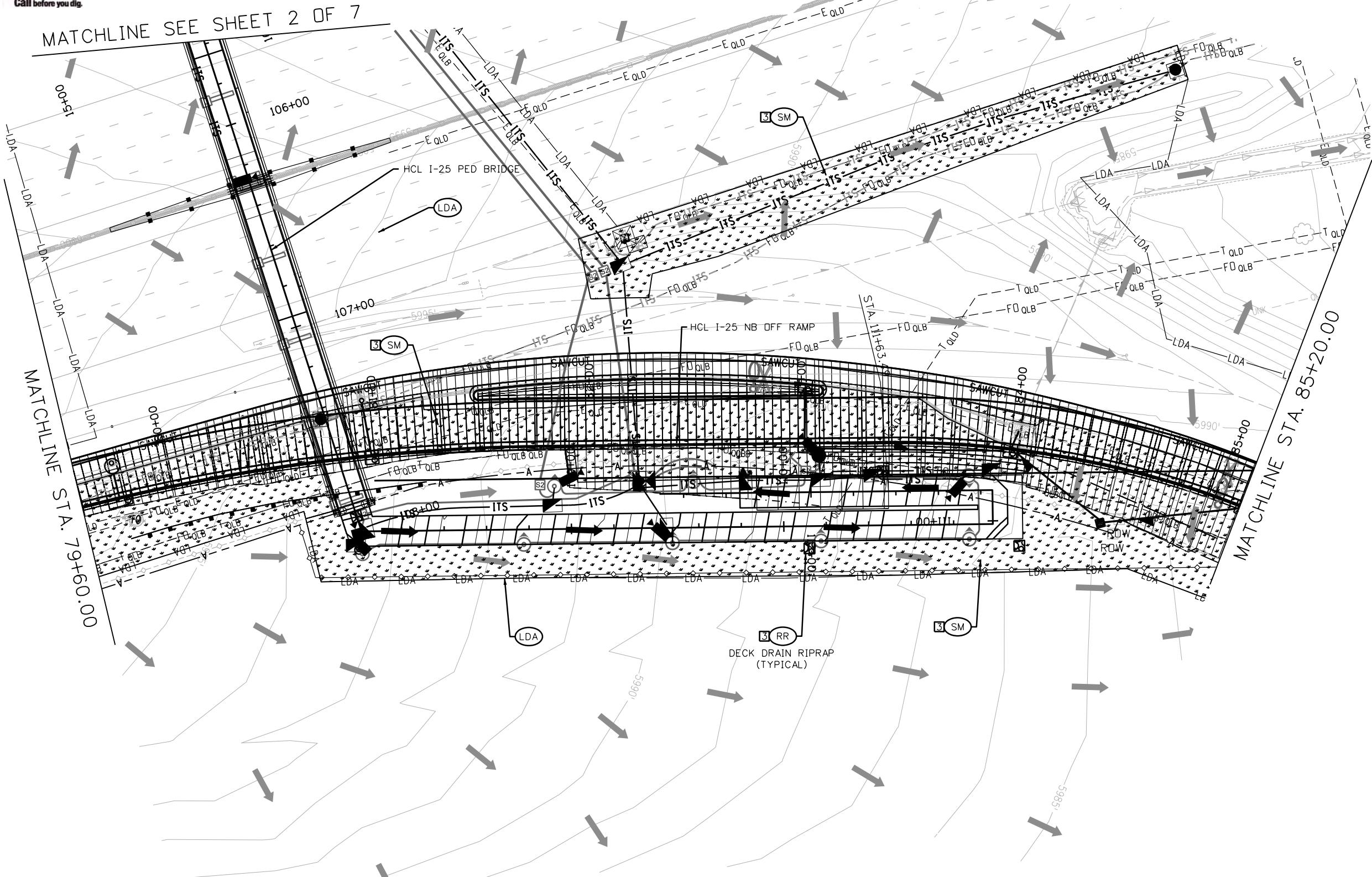
**NOTES:**

1. AREAS OF EXPOSED ROCK DO NOT REQUIRE FURTHER STABILIZATION MEASURES.
2. EXISTING SHOULDERS ARE NON-VEGETATED. FINAL STABILIZATION WILL MIMIC EXISTING CONDITIONS WITHIN 20' OF PAVEMENT.
3. EROSION CONTROL LOGS AND AGGREGATE BAGS MUST BE REMOVED PRIOR TO SEEDING.



MATCHLINE SEE SHEET 2 OF 7

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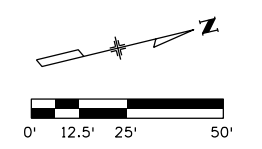


**PHASING LEGEND:**

- 1 INDICATES PHASE OF CONSTRUCTION TO INSTALL ASSOCIATED BMP (INITIAL, INTERIM, OR FINAL)
  - 1 INITIAL BMP TO BE INSTALLED PRIOR TO CONSTRUCTION
  - 2 INTERIM BMP TO BE INSTALLED DURING CONSTRUCTION
  - 3 FINAL BMP TO BE INSTALLED AFTER CONSTRUCTION
- NOTE: ALL EROSION CONTROL MEASURES ARE PER CDOT M-208-1 UNLESS NOTED OTHERWISE.

**LEGEND:**

- SM SEEDING (NATIVE) DRILL/STRAW MULCH
- SSM SEEDING (NATIVE) HYDRAULIC/HYDROMULCH
- SSRB SEEDING (NATIVE) DRILL/SOIL RETENTION BLANKET
- LDA LIMITS OF DISTURBED AREA
- LOC LIMITS OF CONSTRUCTION
- RR RIP RAP OUTLET PROTECTION
- 6350 EXISTING CONTOUR
- 6350 PROPOSED CONTOUR
- PROPOSED FLOW ARROW
- EXISTING FLOW ARROW



All seals for this set of drawings are applied to the cover page(s)

Print Date: 6/11/2024	
File Name: 24278-HW-025A-SWMP_3.dgn	
Horiz. Scale: 1" = 50'	Vert. Scale: As Noted
Unit Information	Unit Leader Initials
<b>Pinyon</b> Environmental, Inc.	3222 SOUTH WANCE STREET LAKEWOOD, CO 80227 TEL: 303-980-6200 WWW.PINYON-ENV.COM

Sheet Revisions			
Date:	Comments	Init.	

Colorado Department of Transportation  
 18500 E. Colfax Ave.  
 Aurora, CO 80011  
 Phone: (303) 746-8639  
 Fax: N/A

**Region 1-South Program**      **NB**

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

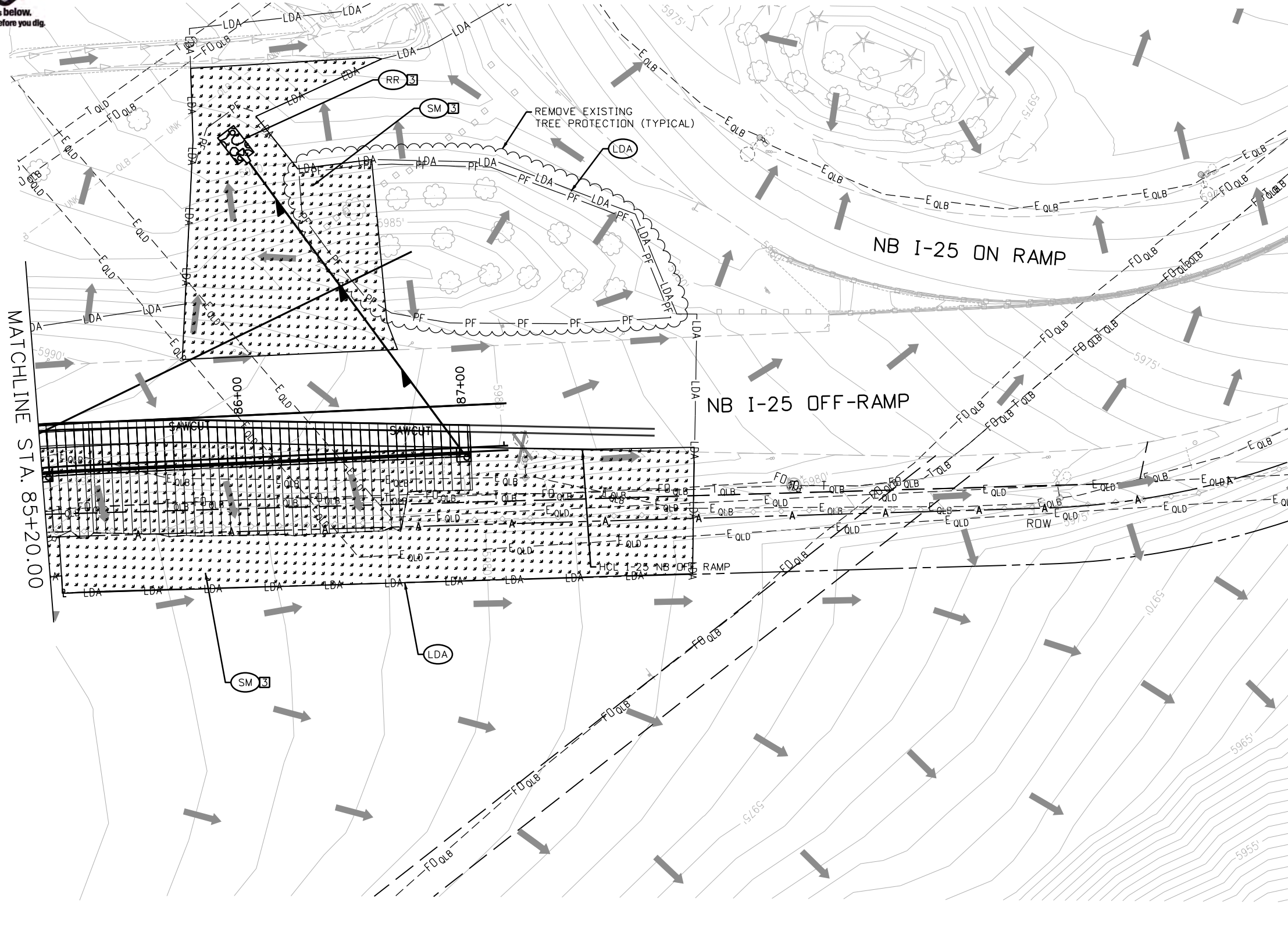
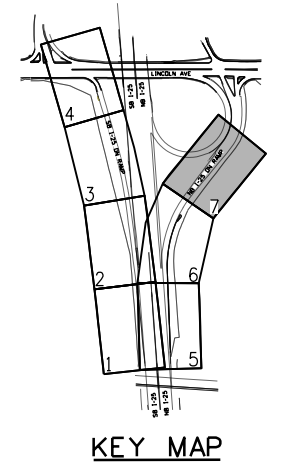
<b>I-25 MOBILITY HUB (LONE TREE) STORMWATER MANAGEMENT PH 3 STA 79+60 TO STA 85+20</b>		
Designer:	S. FANELLO	Structure Numbers
Detailer:	S. ADAMITIS	
Sheet Subset:	SWMP	Subset Sheets: 6 of 7

<b>Project No./Code</b>
267 0252-499
24278
Sh



**NOTES:**

1. AREAS OF EXPOSED ROCK DO NOT REQUIRE FURTHER STABILIZATION MEASURES.
2. EXISTING SHOULDERS ARE NON-VEGETATED. FINAL STABILIZATION WILL MIMIC EXISTING CONDITIONS WITHIN 20' OF PAVEMENT.
3. EROSION CONTROL LOGS AND AGGREGATE BAGS MUST BE REMOVED PRIOR TO SEEDING.

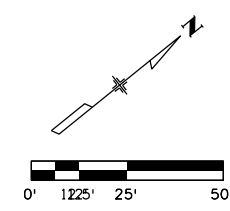


**PHASING LEGEND:**

- [#] INDICATES PHASE OF CONSTRUCTION TO INSTALL ASSOCIATED BMP (INITIAL, INTERIM, OR FINAL)
  - [1] INITIAL BMP TO BE INSTALLED PRIOR TO CONSTRUCTION
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  - [3] FINAL BMP TO BE INSTALLED AFTER CONSTRUCTION
- NOTE: ALL EROSION CONTROL MEASURES ARE PER CDOT M-208-1 UNLESS NOTED OTHERWISE.

**LEGEND:**

- [SM] SEEDING (NATIVE) DRILL/STRAW MULCH
- [SSM] SEEDING (NATIVE) HYDRAULIC/HYDROMULCH
- [SSRB] SEEDING (NATIVE) DRILL/SOIL RETENTION BLANKET
- [LDA] LIMITS OF DISTURBED AREA
- [LOC] LIMITS OF CONSTRUCTION
- [RR] RIP RAP OUTLET PROTECTION
- [---] EXISTING CONTOUR
- [—] PROPOSED CONTOUR
- [→] PROPOSED FLOW ARROW
- [←] EXISTING FLOW ARROW



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Print Date: 6/11/2024	
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Horiz. Scale: 1" = 50'	Vert. Scale: As Noted
Unit Information	Unit Leader Initials
<b>Pinyon</b> Environmental, Inc.	3222 SOUTH WANCE STREET LAKEWOOD, CO 80227 TEL: 303-989-6200 WWW.PYTHON-ENV.COM

Sheet Revisions			
Date:	Comments	Init.	

Colorado Department of Transportation  
 18500 E. Colfax Ave.  
 Aurora, CO 80011  
 Phone: (303) 746-8639  
 Fax: N/A

**Region 1-South Program**      **NB**

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

**I-25 MOBILITY HUB (LONE TREE)  
 STORMWATER MANAGEMENT PH 3  
 STA 85+20 TO END**

Designer: S. FANELLO  
 Detailer: S. ADAMITIS  
 Sheet Subset: SWMP

Structure Numbers  
 Subset Sheets: 7 of 7

<b>Project No./Code</b>
267 0252-499
24278
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**LANDSCAPE NOTES:**

1. ANY PROPOSED SUBSTITUTIONS OF PLANT SPECIES SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO DELIVERY TO THE SITE.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR BECOMING AWARE OF ALL UNDERGROUND UTILITIES, PIPES AND STRUCTURES. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES FOR FIELD LOCATION OF UNDERGROUND UTILITY LINES PRIOR TO ANY EXCAVATION. LANDSCAPE CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR ANY COST OF UTILITY REPAIR DUE TO DAMAGE CAUSED BY THEIR OPERATIONS.
3. DO NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTIONS AND/OR GRADE DIFFERENCES EXIST THAT MAY OR MAY NOT HAVE BEEN KNOWN DURING DESIGN.
4. SEE SPECIFICATIONS FOR PLANTING REQUIREMENTS, SOIL PREPARATION TESTING, MATERIALS AND EXECUTIONS. ARRANGE FOR VISIT OF LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL A MINIMUM OF 48 HOURS PRIOR TO INSTALLATION.
5. MAINTENANCE STATEMENT: ALL LANDSCAPING SHOWN ON THIS PLAN SHALL BE MAINTAINED IN A NEAT AND ADEQUATE MANNER. REQUIRED MAINTENANCE ACTIVITIES SHALL INCLUDE, BUT NOT LIMITED TO, ADEQUATE IRRIGATION, REPLACEMENT OF DEAD OR DISEASED OR UNSIGHTLY LANDSCAPING, REMOVAL OF WEEDS FROM PLANTED AREAS, AND APPROPRIATE PRUNING PLANT MATERIALS.

THE PROJECT WILL UTILIZE EXISTING RRMD IRRIGATION FOR LONG TERM MAINTENANCE OF TREES

**IRRIGATION NOTES:**

1. IRRIGATION LINE LOCATIONS SHOWN IN THESE PLANS ARE APPROXIMATE. REFER TO SUPPLEMENTAL RAMPART RANGE METRO DISTRICT (RRMD) PLANS FOR EXACT LOCATIONS.
2. A FIELD VISIT SHALL TAKE PLACE PRIOR TO THE START OF CONSTRUCTION TO LOCATE IRRIGATION LINES AND IDENTIFY AREAS TO CUT AND RECONNECT TO.

**MULCHING NOTES:**

1. LANDSCAPE WEED BARRIER FABRIC: INSTALL FABRIC IN ROCK MULCH AREAS ONLY. SPUNBOND TYPE LANDSCAPE FABRIC/WEED BARRIER SIMILAR AND EQUAL TO MIRAFI 140N, TYPAR, OR STABILENKA T-80.
2. MULCHING (WOOD CHIP): WOOD MULCH SHALL BE DOUBLE-SHREDDED CEDAR MULCH HAVING MULCH RINGS AROUND ALL TREES SET IN NATIVE AREAS.

**PLANT LIST:**

ID#	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY	HEIGHT	SPREAD

TREE SPECIES WILL MATCH EXISTING

**LANDSCAPE SUMMARY OF QUANTITIES:**

ITEM #	DESCRIPTION	UNIT	QTY.
213-00008	MULCHING (WOOD CHIP)	CF	243
213-00070	LANDSCAPE WEED BARRIER FABRIC	SY	323
213-00462	METAL LANDSCAPE BORDER (3/16x5-1/2-INCH)	LF	600
214-00008	EXTENDED LANDSCAPE PRESERVATION	LS	1
214-00220	DECIDUOUS TREE (2-INCH CALIPER)	EACH	26
214-00506	EVERGREEN TREE (6 FOOT)(B&B)	EACH	3
700-70380	F/A EROSION CONTROL	F/A	1
700-70310	F/A LANDSCAPING	F/A	1

NOTE: REFERENCE SWMP FOR SEEDING (NATIVE) QUANTITIES AND PAVING PLAN FOR ROCK MULCH QUANTITIES.

**SIP REQUIRED LANDSCAPING NOTES:**

1. ALL PLANTS INSTALLED SHALL FOLLOW THE PLANT SCHEDULE, INSTALLATION INSTRUCTIONS AND THE LANDSCAPE DRAWINGS ON THE APPROVED LANDSCAPE PLAN INCLUDED IN THIS SITE IMPROVEMENT PLAN. ANY CHANGES TO THE APPROVED LANDSCAPE PLAN, TO INCLUDE PLANT SUBSTITUTIONS, MUST BE APPROVED BY THE CITY IN ADVANCE OF INSTALLATION.
2. ALL MULCH AND/OR ROCK COBBLE SHALL BE INSTALLED AND MAINTAINED TO THE DEPTH(S) PROVIDED ON THE APPROVED LANDSCAPE PLAN INCLUDED IN THIS SITE IMPROVEMENT PLAN.
3. ORGANIC MULCH SHALL NOT BE PLACED WITHIN SIX (6) FEET OF STORM INLETS.
4. THE USE OF IMPERMEABLE SHEET PLASTIC AS A WEED BARRIER IS PROHIBITED.

**SIP REQUIRED IRRIGATION NOTES:**

1. IRRIGATION SHALL OCCUR BETWEEN THE HOURS OF 8:00 P.M. AND 6:00 A.M.
2. ANY IRRIGATION EQUIPMENT MOUNTED TO THE BUILDING SHALL BE PAINTED TO MATCH THE BUILDING.

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All seals for this set of drawings are applied to the cover page(s)	Print Date: 8/23/2024	Sheet Revisions			Colorado Department of Transportation		As Constructed		LANDSCAPE NOTES		Project No./Code
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	Horiz. Scale: 1"=XX' Vert. Scale: As Noted						Revised:		Designer: JET	Structure Numbers	24278
	Unit Information						Void:		Detailer: JET	Subset Sheets:	Sheet Number
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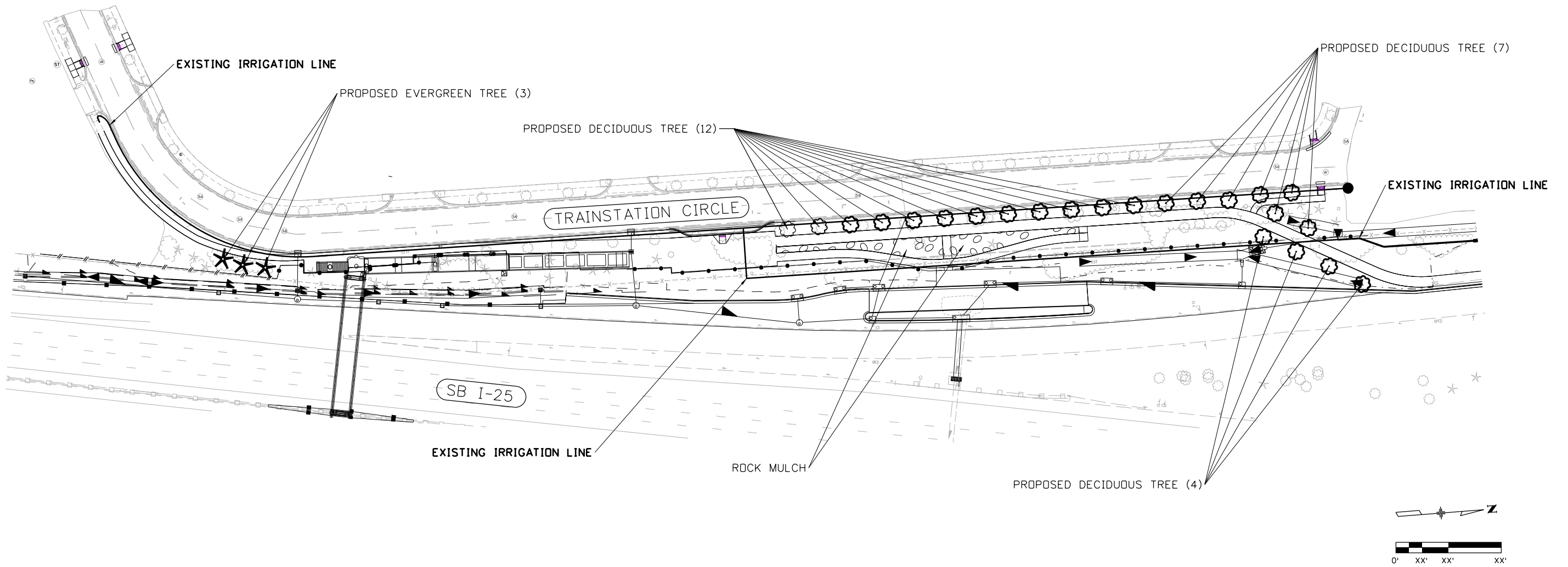


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LEGEND

- ▶— FLOWLINE
- - - CUT
- · - · - FILL
- ⊙ ROCK MULCH
- ⊙ PROPOSED DECIDUOUS TREE
- ★ PROPOSED EVERGREEN TREE
- EXISTING IRRIGATION LINE




All seals for this set of drawings are applied to the cover page(s)

Print Date: 8/23/2024
File Name: 24278_CDDT_HW_EN_DR_LANDSCAPE PLAN.dwg
Horiz. Scale: 1"=XX' Vert. Scale: As Noted
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Date:	Comments	Init.

Colorado Department of Transportation



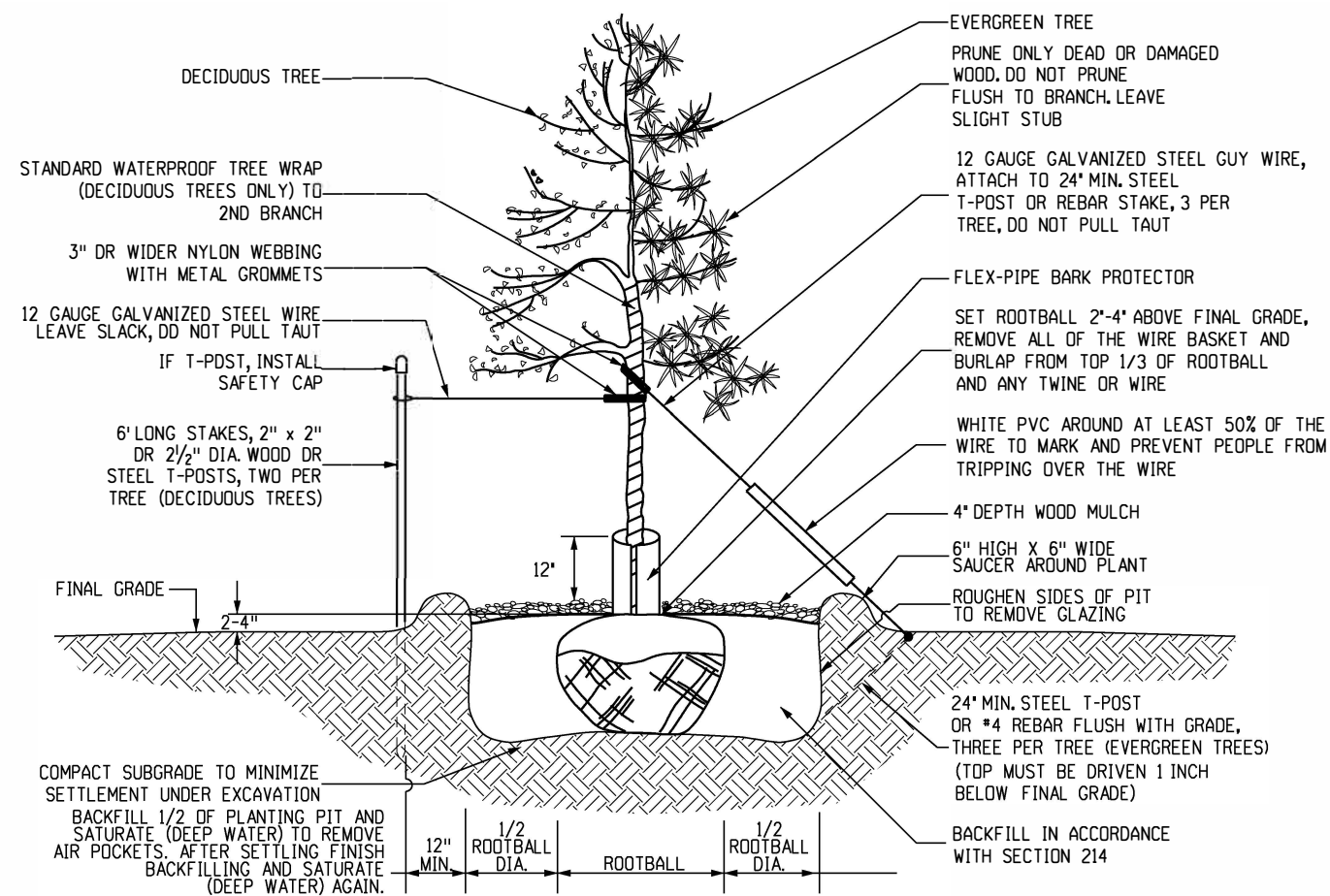
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Aurora, CO 80011  
Phone: (303)-746-8639  
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Region 1-South Program NJB

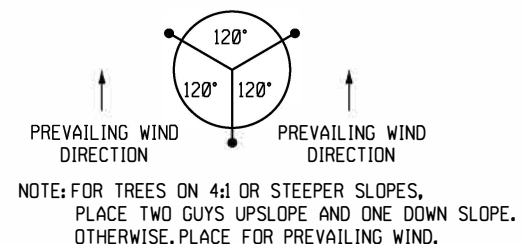
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Revised:
Void:

LANDSCAPE PLAN			
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Detailer:	JET	Subset Sheets:	
Sheet Subset:			

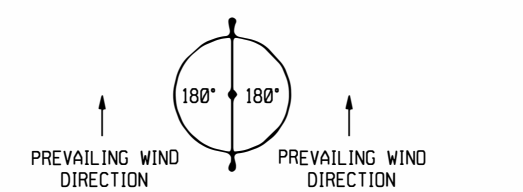
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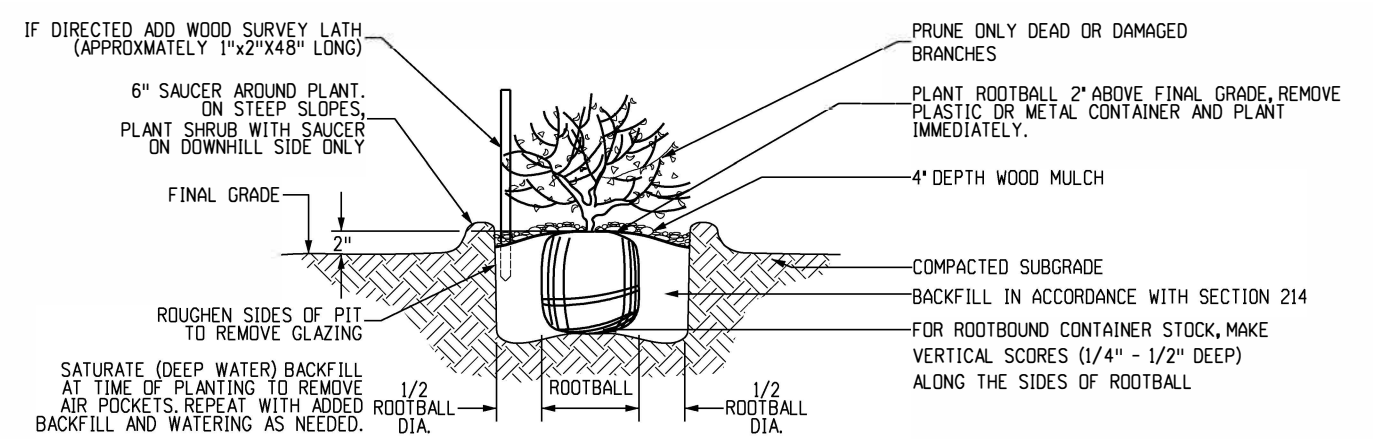
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 (GUY AND STAKE DECIDUOUS TREES 2" AND LARGER CALIPER AND EVERGREEN TREES OVER 4' HEIGHT.)  
 NOT TO SCALE



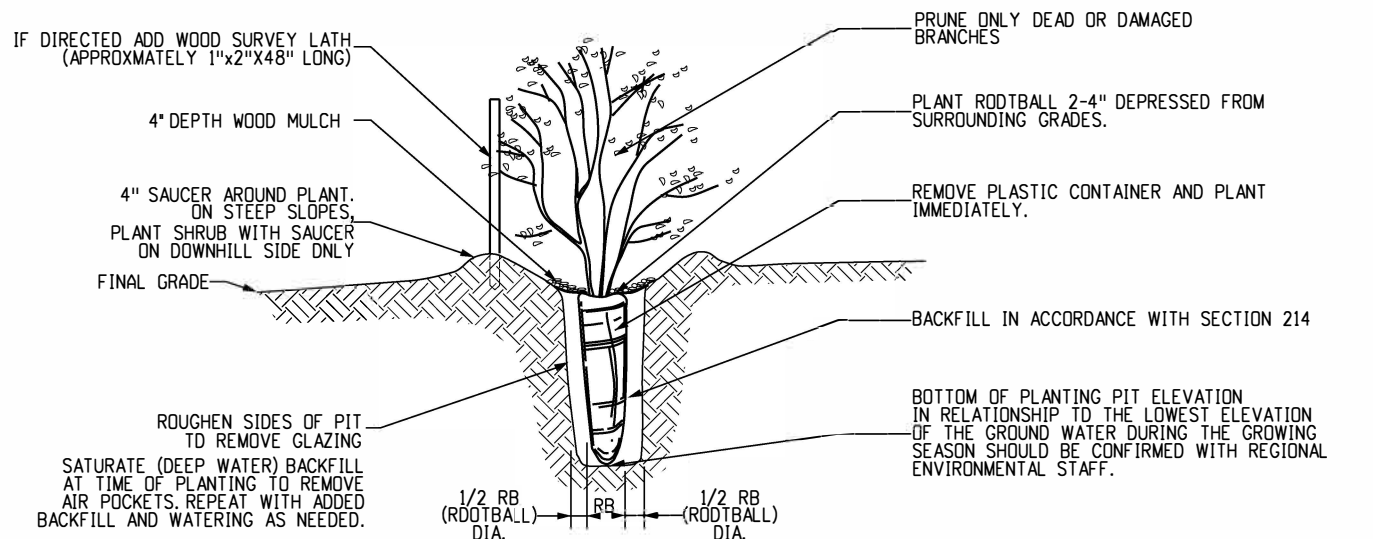
**GUYING PATTERN FOR EVERGREEN TREE BALLED AND BURLAPPED TREE PLANTINGS**



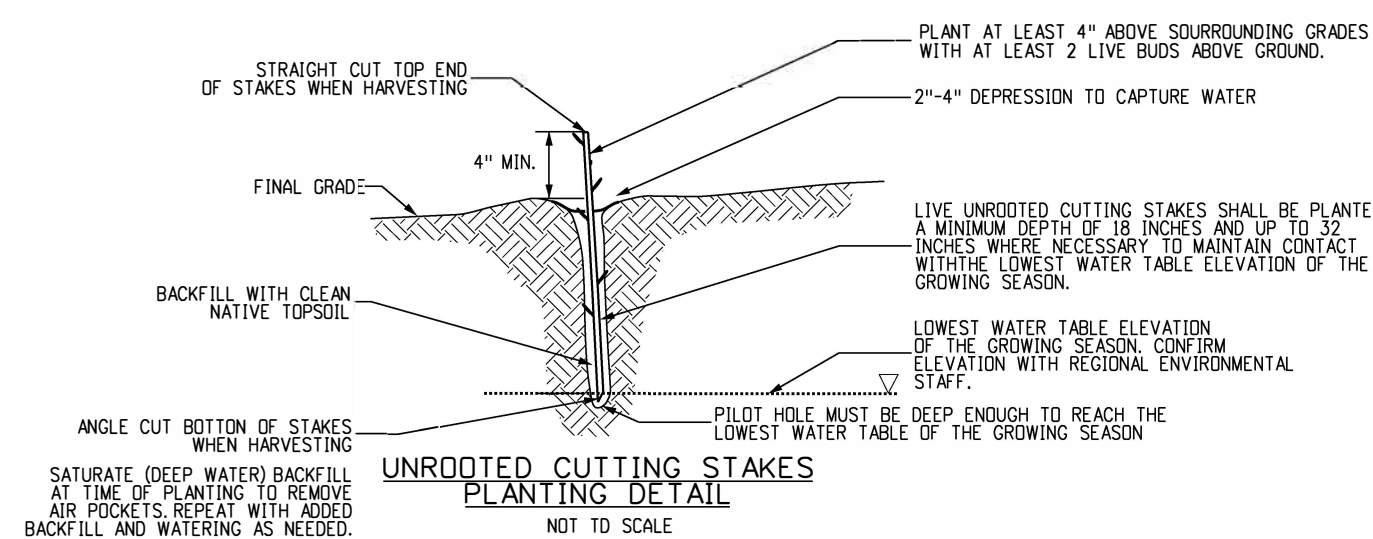
**GUYING PATTERN FOR DECIDUOUS TREE BALLED AND BURLAPPED TREE PLANTINGS**



**STANDARD NURSERY STOCK CONTAINERS (#5, #10 AND #20) PLANTING DETAIL**  
 NOT TO SCALE



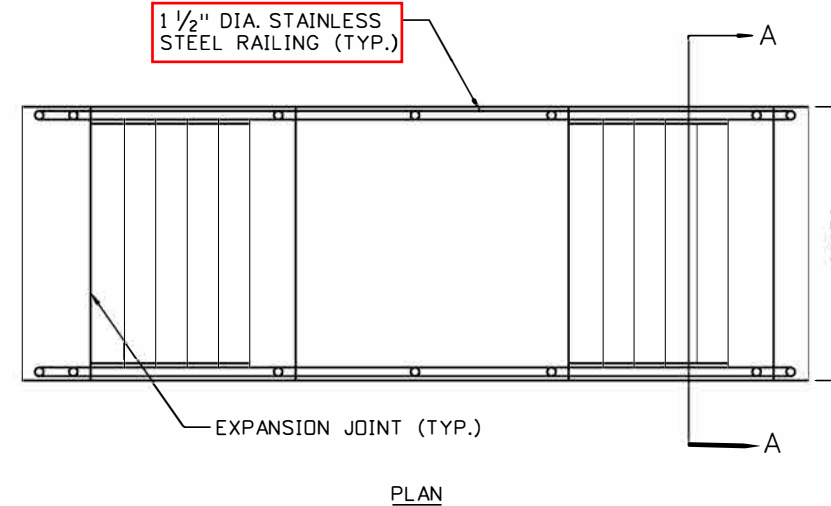
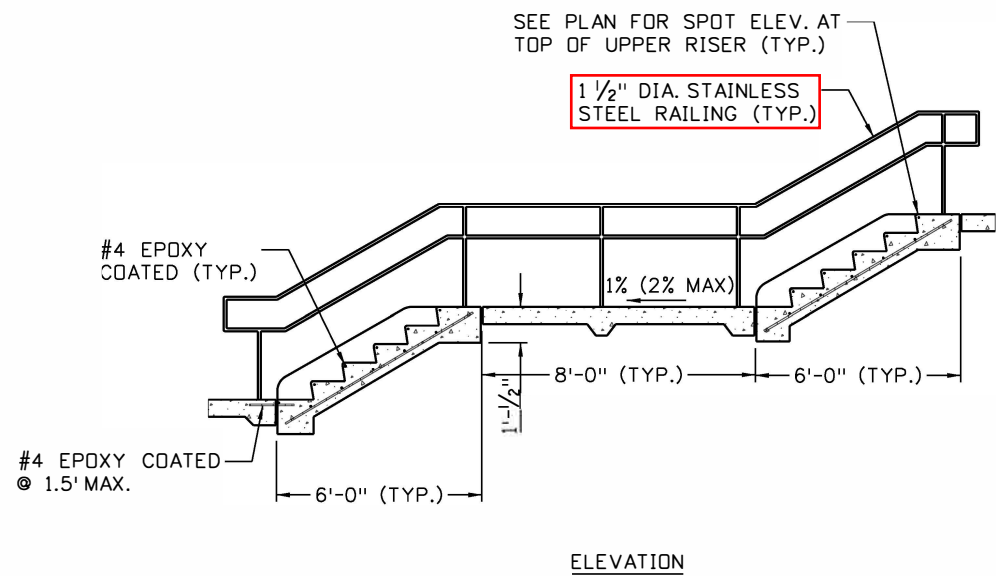
**DEEP ROOTED UPLAND NURSERY CONTAINERS (DRC #10, #40, #60 AND #180) PLANTING DETAIL**  
 NOT TO SCALE



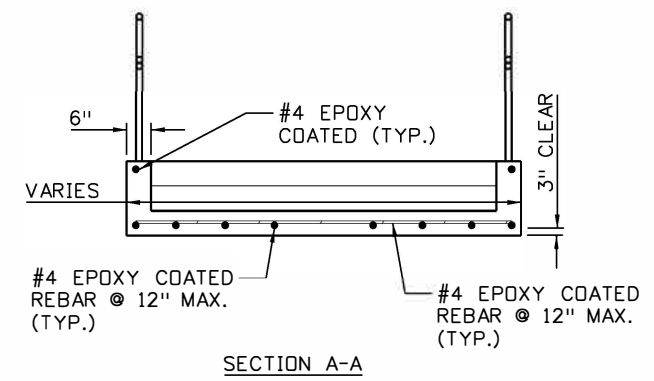
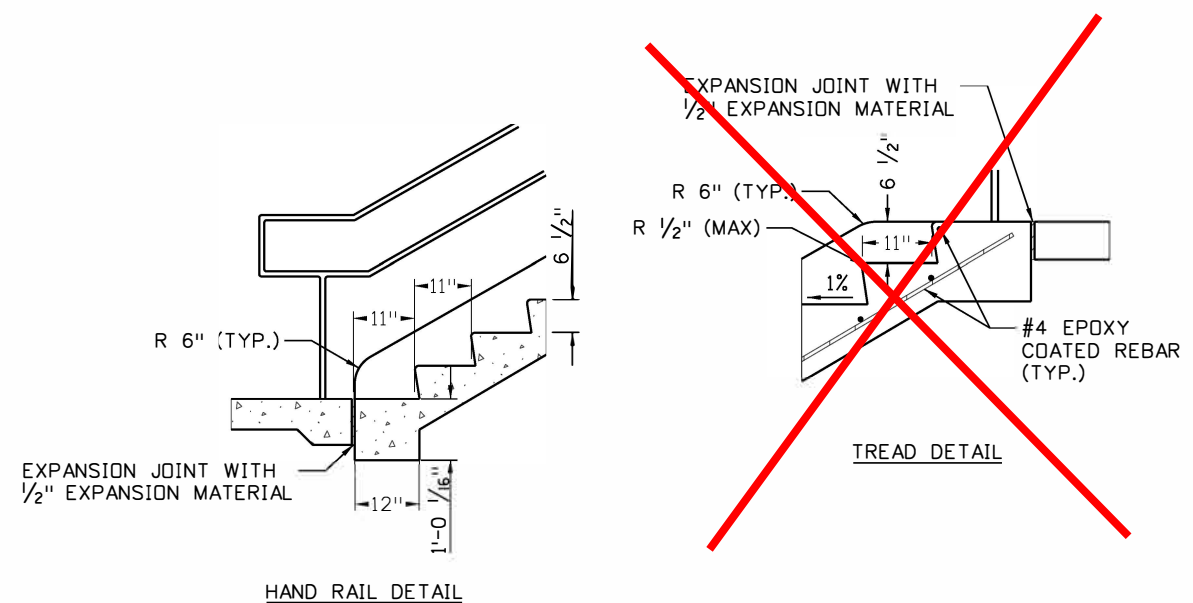
**UNROOTED CUTTING STAKES PLANTING DETAIL**  
 NOT TO SCALE


<b>Computer File Information</b>		<b>Sheet Revisions</b>		Colorado Department of Transportation 2829 West Howard Place CDDT HQ, Denver, CO 80204 Phone: 303-757-9542 <b>Project Development Branch</b>	<h1>NURSERY STOCK DETAILS</h1>	<b>STANDARD PLAN NO.</b>	
Creation Date: 07/31/19	(R-X)	Date:	Comments:			M-214-1	
Designer Initials: MP	(R-X)					Standard Sheet No. 1 of 1	
Last Modification Date: 07/31/19	(R-X)						
Detailer Initials: LTA	(R-X)						
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	(R-X)			JBK	Issued by the Project Development Branch: July 31, 2019		

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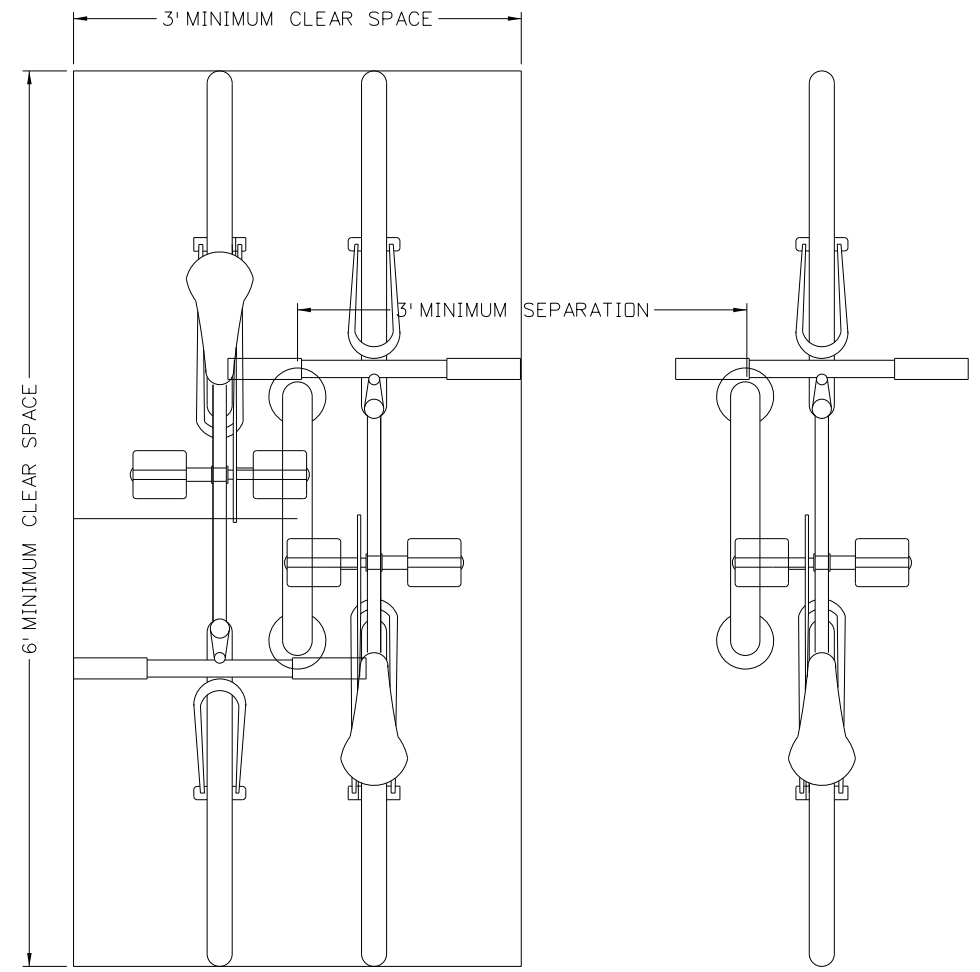
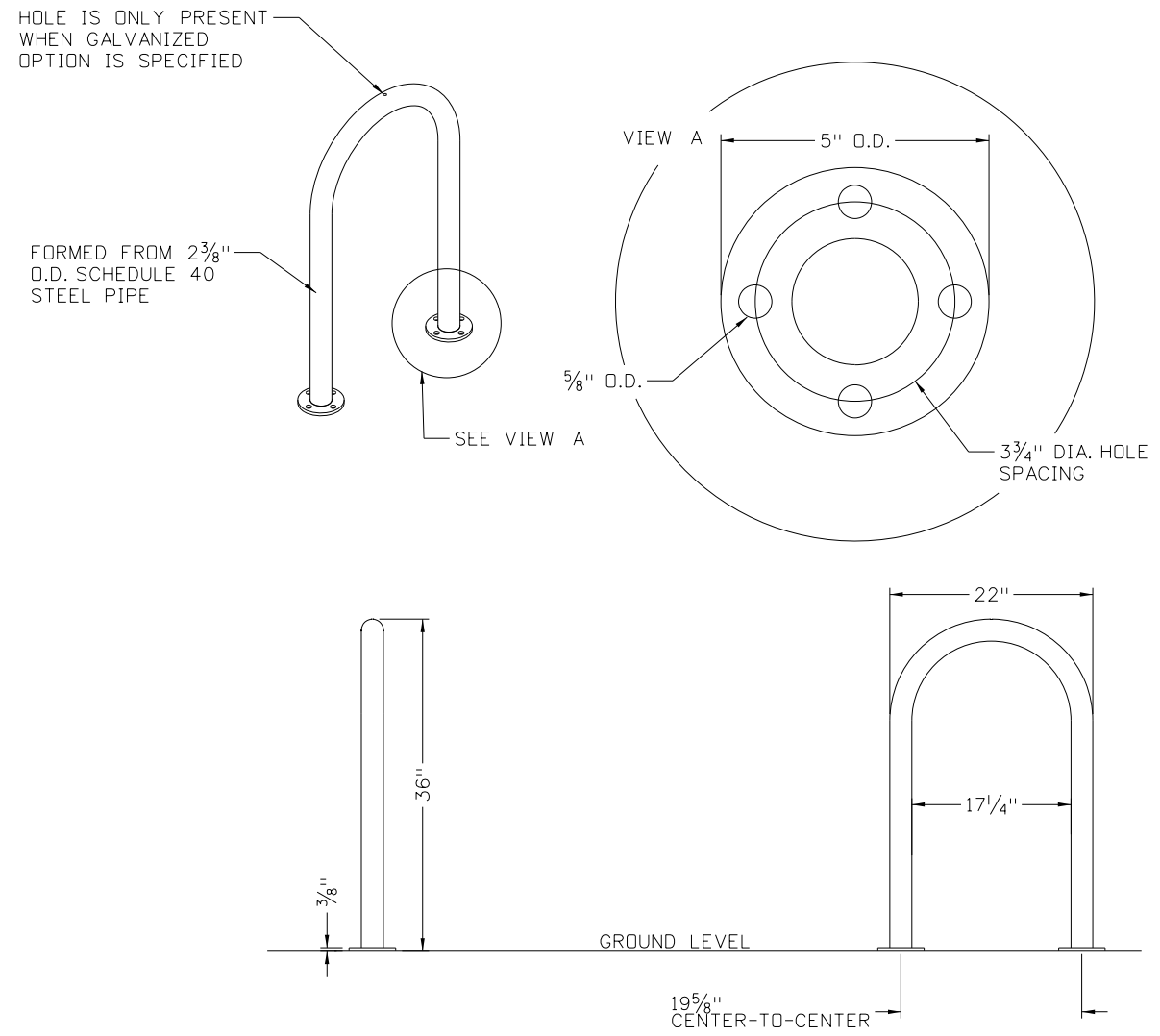
- NOTES:**
1. STAINLESS STEEL OR GALVANIZED AND POWDER COATED RAILING IS REQUIRED UNLESS OTHERWISE SPECIFIED BY CDDT.
  2. STAINLESS STEEL FOR RAILINGS SHALL CONFORM TO TYPE 316. MILD STEEL FOR RAILING SHALL CONFORM TO ASTM A500 GR B.
  3. WHEN RAILING IS USED AT RAMPS, THE TREAD LENGTH IS ALWAYS 11".
  4. VERTICAL RISE FOR A FLIGHT OF STAIRS SHALL BE 12 FEET.
  5. DESIGNER TO CHECK COMPLIANCE WITH LOCAL CODES AND GRADING PLAN.
  6. CONCRETE SHALL BE CLASS D CONCRETE.
  7. ALL HANDRAILS SHALL COMPLY WITH LATEST ADA STANDARDS FOR ACCESSIBLE DESIGN, SECTION 505, AND THE LATEST INTERNATIONAL BUILDING CODE (IBC) REQUIREMENTS.
  8. ALL HANDRAILS SHALL BE SURFACE MOUNTED.
  9. THE WIDTH OF STAIRS AND NUMBER OF RAILINGS SHALL COMPLY WITH IBC.
  10. USE HEAVY BROOM FINISH FOR CAST-IN-PLACE STAIRS AND ANTI-SLIP COATING FOR TREADS ON PRECAST STAIRS.
  11. HANDRAIL DESIGN IS FOR ILLUSTRATION PURPOSES ONLY.
  12. STANDARD SHOWN IS BASED ON RTD BUS INFRASTRUCTURE STANDARD DRAWINGS 2016, SD-C108.



<b>Computer File Information</b> Print Date: 6/6/2024 File Name: 60699717-03_MH_DTR_PED_stairs.dgn		<b>Sheet Revisions</b> Date:                      Comments		Colorado Department of Transportation  2829 West Howard Place CDDT HQ, 3rd Floor Denver, CO 80204 Phone: 303-757-9021 FAX: 303-757-9868		<b>STAIRWAY WITH BICYCLE CHANNEL</b>		<b>STANDARD PLAN NO. MOBILITY HUBS DRAFT</b> PLAN 3-2	
Detailer Initials:		(R-X) (R-X) (R-X) (R-X)		DIVISION OF TRANSIT & RAIL		DRAFT - MOBILITY HUB STANDARDS DEVELOPED 2024			
CAD Ver.: OPENROADS    Scale: Not to Scale    Units: English									



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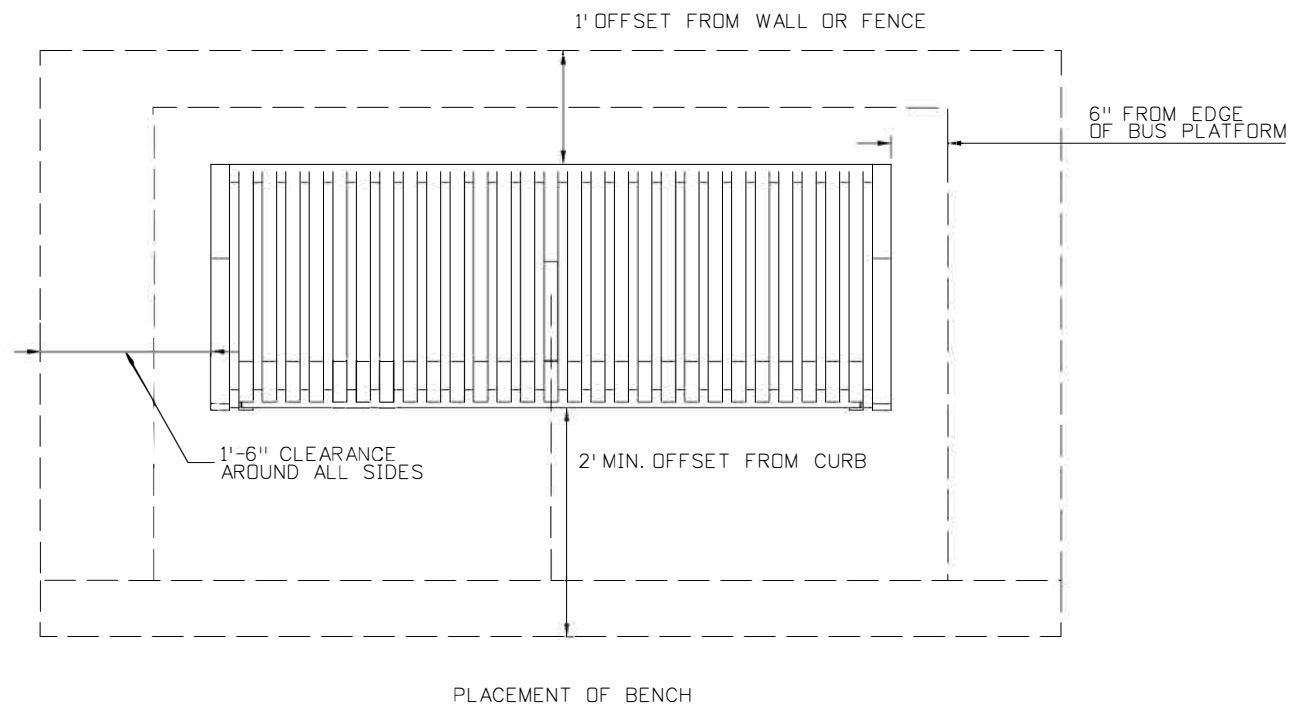
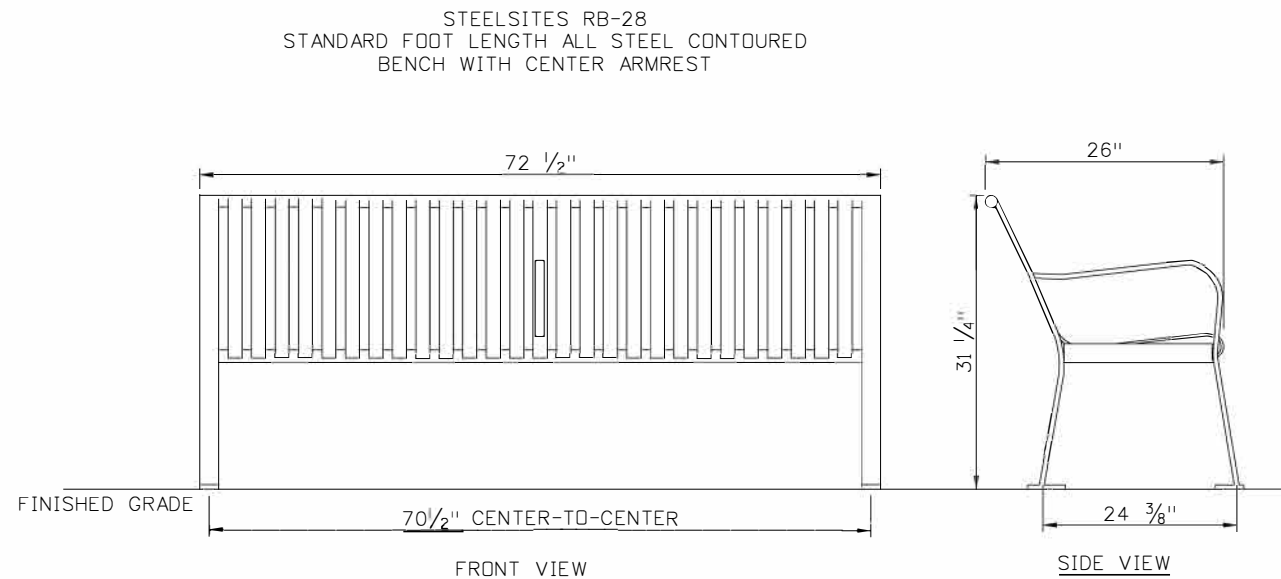


BIKE RACK INSTALLATION DETAIL

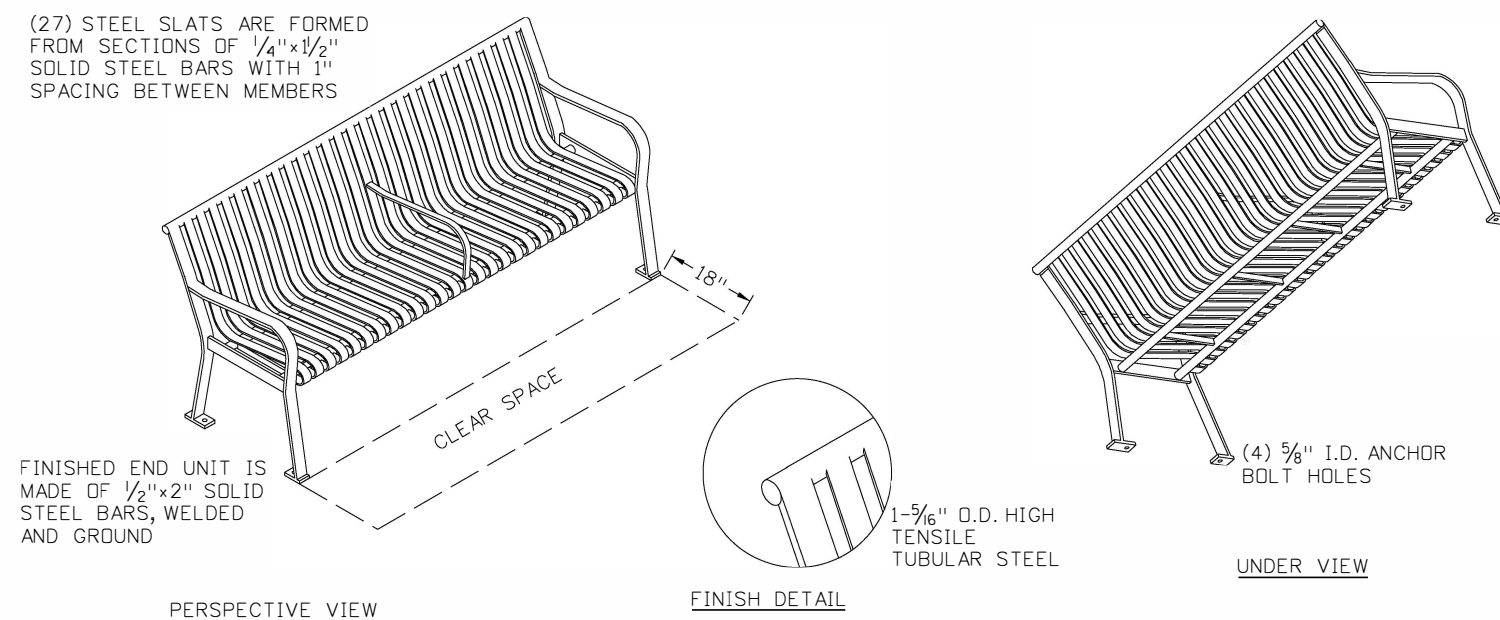
- NOTES:**
1. BASIS OF DESIGN SHOWN IS VICTOR STANLEY SECURE SITE DESIGN COLLECTION. THIS DESIGN OR APPROVED EQUAL IS PERMITTED.
  2. MINIMUM PAD THICKNESS FOR SURFACE MOUNTING IS 6".
  3. MOUNTING: STANDARD SURFACE MOUNTING (AS SHOWN) AND IN-GROUND OPTIONS ARE AVAILABLE.
  4. ANCHOR BOLTS SHALL NOT BE INSTALLED WITHIN 6" OF THE EDGE OF THE CONCRETE PAD. ANCHOR BOLTS ARE NOT INCLUDED WITH THE VICTOR STANLEY DESIGN SHOWN HERE.
  5. BIKE RACKS SHALL BE INSTALLED A MINIMUM OF 2' FROM THE FACE OF CURB.
  6. POWDER COATING IS TO BE RAL COLOR 6012 BLACK GREEN, GALVANIZED OR STAINLESS STEEL.
  7. THIS PRODUCT MUST BE PERMANENTLY AFFIXED TO THE GROUND. CHECK LOCAL CODES FOR REGULATIONS.
  8. ALL FABRICATED METAL COMPONENTS ARE STEEL SHOTBLASTED, ETCHED, PHOSPHATIZED, PREHEATED, AND ELECTROSTATICALLY POWDER-COATED WITH T.G.I.C. POLYESTER POWDER COATINGS. PRODUCTS ARE FULLY CLEANED AND PREHEATED, PREHEATED AND COATED WHILE HOT TO FILL CREVICES AND BUILD COATING FILM. COATED PARTS ARE THEN FULLY CURED TO COATING MANUFACTURER'S SPECIFICATIONS. THE THICKNESS OF THE RESULTING FINISH AVERAGES 8-10 MILS (200-250 MICRONS).
  9. DRAWINGS NOT TO SCALE. DO NOT SCALE DRAWINGS.
  10. DESIGN AND MANUFACTURER SHALL BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).
  11. INVERTED-U SHAPE SHALL BE FORMED FROM ONE SEGMENT OF STEEL PIPE USING METHODOLOGY THAT MAINTAINS THE STRUCTURAL INTERGRITY OF THE STEEL PIPE.

Computer File Information		Sheet Revisions		Colorado Department of Transportation		BIKE RACK DETAILS	STANDARD PLAN NO.
Print Date: 6/6/2024		Date:	Comments	2829 West Howard Place CDOT HQ, 3rd Floor Denver, CO 80204 Phone: 303-757-9021 FAX: 303-757-9868			MOBILITY HUBS DRAFT
File Name: 60699717-06_MH DTR_BIKE_rack_U_rack-SHT 1.DGN	(R-X)			CDOT			PLAN 4-1
Detailer Initials:	(R-X)			DIVISION OF TRANSIT & RAIL			
CAD Ver.: OPENROADS Scale: Not to Scale Units: English	(R-X)					DRAFT - MOBILITY HUB STANDARDS DEVELOPED 2024	

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(27) STEEL SLATS ARE FORMED FROM SECTIONS OF 1/4"x1/2" SOLID STEEL BARS WITH 1" SPACING BETWEEN MEMBERS



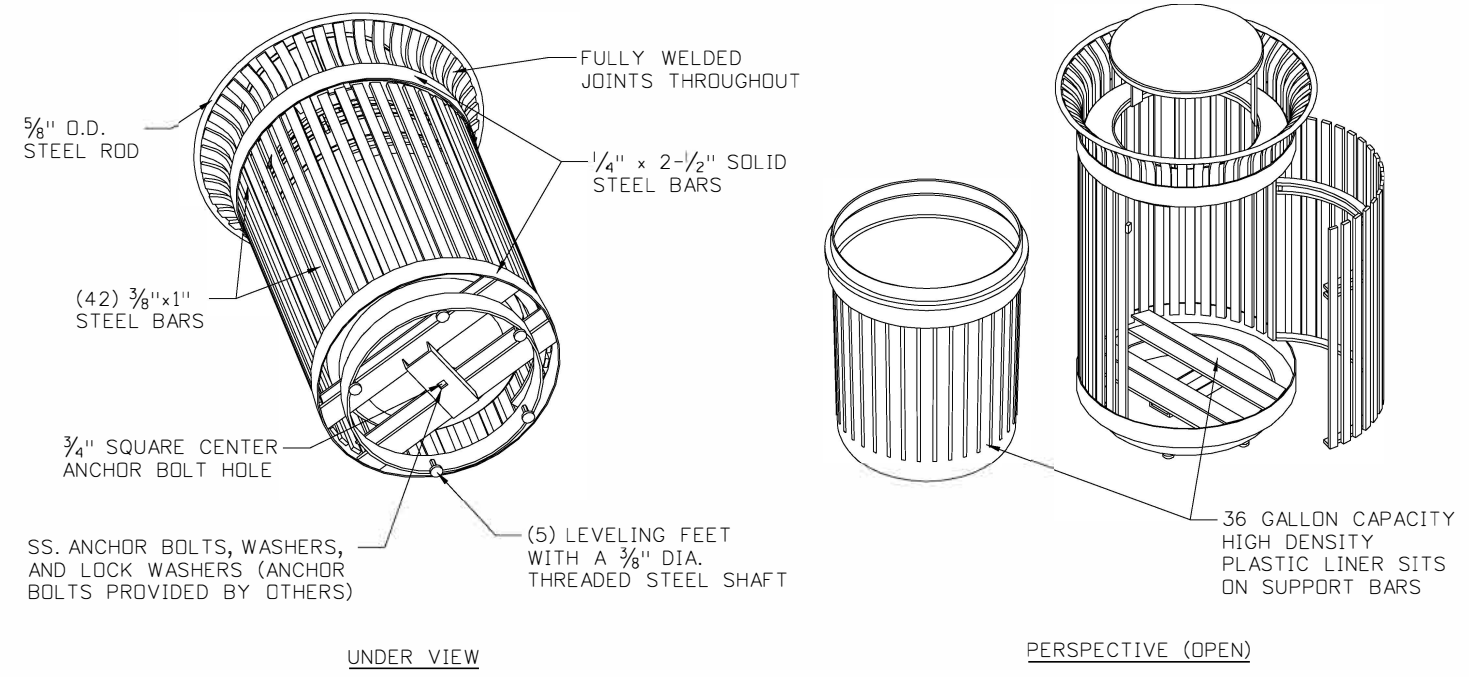
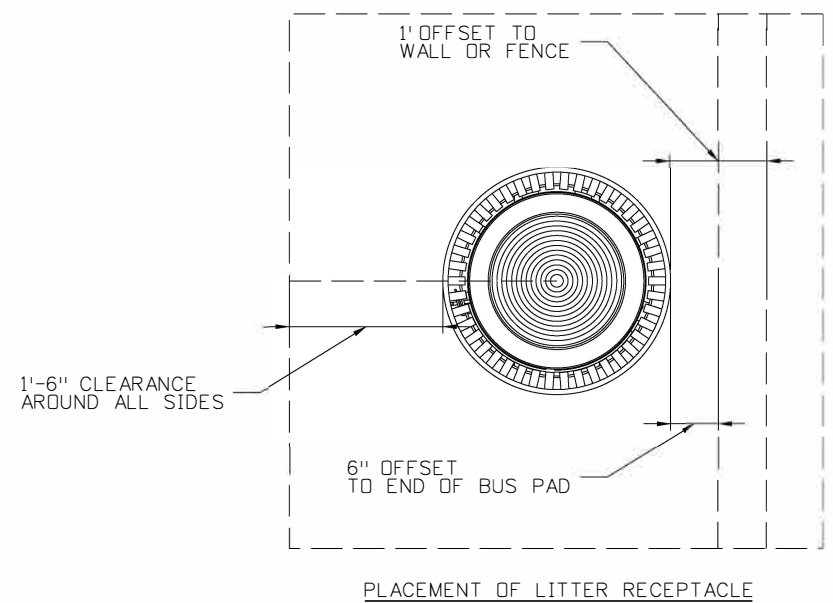
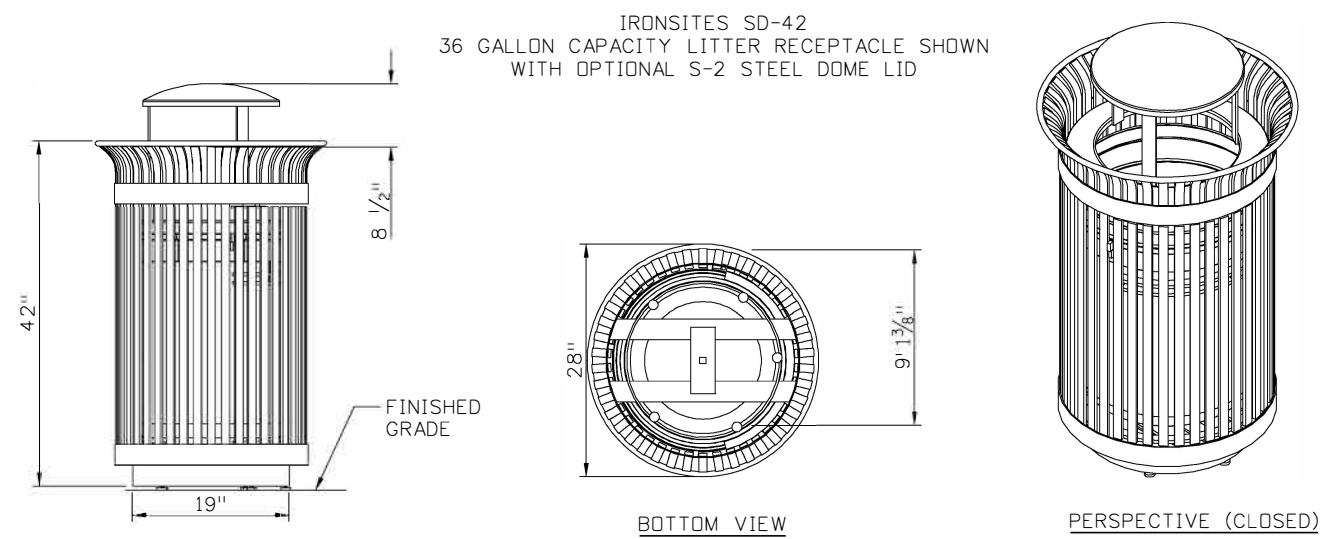
MULTIPLE VIEWS - BENCH

**NOTES:**

1. BASIS OF DESIGN SHOWN IS VICTOR STANLEY STEELSITES RB COLLECTION. THIS DESIGN OR APPROVED EQUAL IS PERMITTED.
2. MINIMUM PAD THICKNESS FOR SURFACE MOUNTING IS 6".
3. ANCHOR BOLTS SHALL NOT BE INSTALLED WITHIN 6" OF THE EDGE OF THE CONCRETE PAD.
4. CLEAR ZONE OF 1.5' IN FRONT OF THE BENCH MUST BE CLEAR OF ALL OBSTRUCTIONS.
5. CLEARANCE OF 3' SHALL BE MAINTAINED BETWEEN FURNITURE/FIXTURES.
6. BENCH SHALL HAVE A MINIMUM OFFSET OF 2' FROM FACE OF CURB.
7. BENCHES SHALL BE OFFSET A MINIMUM OF 12" WHEN DIRECTLY ADJACENT TO A BUILDING, WALL, BARRIER, OR SOLID FENCE TO PERMIT TRASH AND SNOW REMOVAL.
8. 6' BENCH LENGTH SHOWN. OTHER STANDARD LENGTHS (4' OR 8') AVAILABLE AND MAY BE PERMITTED IF APPROVED.
9. POWDER COATING IS TO BE RAL COLOR XXX.
10. ALL FABRICATED METAL COMPONENTS ARE STEEL SHOTBLASTED, ETCHED, PHOSPHATIZED, PREHEATED, AND ELECTROSTATICALLY POWDER-COATED WITH T.G.I.C. POLYESTER POWDER COATINGS. PRODUCTS ARE FULLY CLEANED AND PRETREATED, PREHEATED AND COATED WHILE HOT TO FILL CREVICES AND BUILD COATING FILM. COATED PARTS ARE THEN FULLY CURED TO COATING MANUFACTURER'S SPECIFICATIONS. THE THICKNESS OF THE RESULTING FINISH AVERAGES 8-10 MILS (200-250 MICRONS).
11. THIS PRODUCT MUST BE PERMANENTLY AFFIXED TO THE GROUND. CONSULT LOCAL CODES FOR REGULATIONS.
12. DRAWINGS NOT TO SCALE. DO NOT SCALE DRAWINGS.

Computer File Information		Sheet Revisions		Colorado Department of Transportation 2829 West Howard Place CDDT HQ, 3rd Floor Denver, CO 80204 Phone: 303-757-9021 FAX: 303-757-9868	BENCH	STANDARD PLAN NO.
Print Date: 6/6/2024	File Name: 60699717-19_MH_DTR_PED_bench.dgn	Date:	Comments:			MOBILITY HUBS DRAFT
Detailer Initials:				DIVISION OF TRANSIT & RAIL	DRAFT - MOBILITY HUB STANDARDS DEVELOPED 2024	PLAN 7-6
CAD Ver.: OPENROADS	Scale: Not to Scale Units: English					

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MULTIPLE VIEWS - LITTER RECEPTACLE

**NOTES:**

1. BASIS OF DESIGN SHOWN IS VICTOR STANLEY IRONSITES COLLECTION. THIS DESIGN OR APPROVED EQUAL IS PERMITTED.
2. MINIMUM PAD THICKNESS FOR SURFACE MOUNTING IS 6".
3. ANCHOR BOLTS SHALL NOT BE INSTALLED WITHIN 6" OF THE EDGE OF THE CONCRETE PAD.
4. TRASH RECEPTACLES SHALL HAVE A MINIMUM OFFSET OF 2' FROM FACE OF CURB.
5. TRASH RECEPTACLES SHALL BE OFFSET A MINIMUM OF 12" WHEN DIRECTLY ADJACENT TO A BUILDING, WALL, BARRIER, OR SOLID FENCE.
6. LID SHALL BE STANDARD TAPERED FORMED LID. AVAILABLE WITH OPTIONAL DOME LID.
7. OIL IMPREGNATED BRONZE BUSHINGS AND STAINLESS STEEL PIVOT PINS FOR DOOR MOVEMENT, STANDARD 3/16" SOLID STEEL LATCH ASSEMBLY OR OPTIONAL PATENTED STAINLESS STEEL KEYED LOCK ASSEMBLY.
8. POWDER COATING IS TO BE RAL COLOR XXX.
9. ALL FABRICATED METAL COMPONENTS ARE STEEL SHOTBLASTED, ETCHED, PHOSPHATIZED, PREHEATED, AND ELECTROSTATICALLY POWDER-COATED WITH T.G.I.C. POLYESTER POWDER COATINGS. PRODUCTS ARE FULLY CLEANED AND PRETREATED, PREHEATED AND COATED WHILE HOT TO FILL CREVICES AND BUILD COATING FILM. COATED PARTS ARE THEN FULLY CURED TO COATING MANUFACTURER'S SPECIFICATIONS. THE THICKNESS OF THE RESULTING FINISH AVERAGES 8-10 MILS (200-250 MICRONS).
10. PLASTIC INNER LINERS ARE MOLDED ON TOOLING DESIGNED FOR AND OWNED BY VICTOR STANLEY, INC. THEY OFFER MAXIMUM CAPACITY AND STRENGTH WITH LIGHTWEIGHT CONSTRUCTION USING CRITICAL MOLDED RIBS, INTEGRAL HANDHOLDS, AND HIGH-STRENGTH MATERIALS. THIS MINIMIZES HANDLING DIFFICULTY AND FACILITATES EASY EMPTYING AND STORAGE WHILE AFFORDING LONG SERVICE LIFE.
11. FOR HIGH SALT ABUSIVE CLIMATES, HOT-DIP GALVANIZING INCLUDES AN AGGRESSIVE PRE-TREATMENT AND IMMERSION IN A TANK OF CHARGED LIQUID ZINC AT OR AROUND 860°F (460°C). THE RESULTING SURFACE IS RESISTANT TO RUST BUT HAS SOME UNEVENNESS RESULTING FROM THE BONDING OF THE ZINC TO THE STEEL SURFACE. AS A RESULT, THE POWDER-COATING SURFACE FINISH OVER THAT GALVANIZED SURFACE MAY EXHIBIT BUMPS, UNEVENNESS, AND MAY NOT BE AS SMOOTH AS THE STANDARD FINISH; THIS UNEVEN AND INCONSISTENT FINISH IS NORMAL FOR GALVANIZING. CONTACT MANUFACTURER FOR DETAILS.
12. THIS PRODUCT MUST BE PERMANENTLY AFFIXED TO THE GROUND. CONSULT LOCAL CODES FOR REGULATIONS.
13. DRAWINGS NOT TO SCALE. DO NOT SCALE DRAWINGS.

Computer File Information		Sheet Revisions		Colorado Department of Transportation		STANDARD PLAN NO.	
Print Date: 6/6/2024		Date:	Comments	2829 West Howard Place CDDT HQ, 3rd Floor Denver, CO 80204 Phone: 303-757-9021 FAX: 303-757-9868		MOBILITY HUBS DRAFT	
File Name: 60699717-20_MH DTR_PED_trash.dgn		(R-X)				TRASH RECEPTACLE	
Detailer Initials:		(R-X)		DIVISION OF TRANSIT & RAIL		PLAN 7-7	
CAD Ver.: OPENROADS Scale: Not to Scale Units: English		(R-X)				DRAFT - MOBILITY HUB STANDARDS DEVELOPED 2024	



**REVISION OF SECTION 622  
PRECAST CONCRETE BENCH**

Section 622 of the Standard Specifications is hereby revised for this project as follows:

**DESCRIPTION**

**622.01** This work includes the installation of a precast concrete bench with minimum dimensions of 48” length, 24” width, and 18” height. The bench shall be a solid rectangular shape or may have tapered / angled support shapes.

**MATERIALS**

**622.02** All materials used in the construction shall meet the requirements set in this specification.

**622.03** The Contractor shall furnish drawings and descriptions from the manufacturer / vendor. The material designations shall be shown in the manufacturer information. Below are three acceptable example benches with associated web addresses for the manufacturer, the contractor may submit an alternate bench for consideration of approved equal.

<https://www.belson.com/Gallery.aspx?M=TF5117>



<https://www.streetscapes.biz/5117-p-17096.html?osCsid=sica8sm29eafd8hi1fnv4939o2>



**5117**

Model: TF-5117

5117 Bench

Construction - Precast Concrete

Standard Finishes

- Acid Wash

- Weatherstone

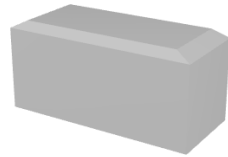
Premium Finish - Ground and Polished

Dimensions - 48"W x 18"D x 18"H

Weight - 630 Lbs.



## Pikes Peak Bench



**622.04** The concrete bench shall be a hollow-core design with steel reinforcement. All other associated materials shall meet the manufacturer's recommendations.

### CONSTRUCTION REQUIREMENTS

**622.05** The precast concrete bench shall be transported and installed per manufacturer's recommendations. The bench shall not be attached to the ground/concrete. The concrete bench shall be installed on a concrete surface with a slope of no more than 2% in any direction. The concrete surface is already included in the plan quantity as 6" sidewalk (item 608-00006).

The concrete bench shall not be painted but may have a concrete finish applied. Concrete finish shall be included in the cost of the precast concrete bench and not paid separately.

### METHOD OF MEASUREMENT

**622.27** Precast concrete bench shall be measured for each bench installed.

### BASIS OF PAYMENT

**622.28** The accepted quantity of precast concrete bench will be paid for at the contract unit price per each.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Precast Concrete Bench	Each

-1-  
REVISION OF SECTION 622  
DOG WASTE STATION

Section 622 of the Standard Specifications is hereby revised for this project as follows:

**DESCRIPTION**

This work consists of furnishing and installing a dog waste station signpost with mounted sign, bag dispenser and trash can.

**MATERIALS**

**622.04 Construction Materials**

Post shall be a minimum of 6-foot-tall mounted above ground and made of steel. Sign shall be 12" x 18" aluminum. Sign shall have text says "DOG WASTE STATION" or "PET WASTE" or other equivalent terminology. Sign shall have text to encourage users to clean up after pet. Text on the sign shall be black. Sign design shall be approved by the project engineer prior to purchasing. Example of an acceptable sign is shown below.



Dispenser box shall be provided for refillable pet waste bags. Dispenser box shall be black. Trash can shall be a minimum of 10-gallon capacity and mountable to the signpost. Trash can color shall be black.

Concrete footing shall be made of Class BZ Concrete. The Contractor may use an alternate material that meets the requirements for Class BZ concrete in Section 601, as approved by the Engineer. Structure backfill around concrete footings shall be Class 2, per Section 206.

**CONSTRUCTION REQUIREMENTS**

**622.20**

This work shall include furnishing of all labor, materials, equipment and services necessary for the proper installation of dog waste station. The post shall be



-2-

## REVISION OF SECTION 622 DOG WASTE STATION

embedded into the ground minimum 14 inches. The bottom of the trash receptacles shall be mounted on the post 5 inches above ground. There shall be a minimum 12 inch gap between the trash can and the bag dispenser. There shall be a minimum 1 inch gap between the sign and the bag dispenser. An example of the assembled finished product is shown below.



### METHOD OF MEASUREMENT

**622.27 shall include the following:**

Dog Waste Station shall include the post, sign, bag dispenser, trash can, and all required hardware for assembly and materials for installation.

**-3-**  
**REVISION OF SECTION 622**  
**DOG WASTE STATION**

**BASIS OF PAYMENT**

**622.28 shall include the following:**

<b>Pay Item</b>	<b>Pay Unit</b>
Dog Waste Station	Each

**END OF SECTION**