

DESIGN DATA

	Abutment 1	Abutment 3
◆ Joint opening "A"	2	2
★ Predicted Horizontal Movement	1/2"	1/2"

- ◆ Joint opening "A" for existing structure was determined from the existing plans and must be field verified before ordering or fabricating bridging plate.
- ★ The maximum predicted horizontal joint movement is based on a temperature drop of 60°F for concrete girders and 80°F for steel girders.

BRIDGING PLATE SIZES:

"A"	THICKNESS	WIDTH	MINIMUM LENGTH
0"-1"	1/4"	5"	4'-0"
1"-2"	3/8"	7"	4'-0"
2"-3"	3/8"	9"	4'-0"
3"-4"	1/2"	11"	4'-0"
4"-5"	1/2"	13"	4'-0"
5"-6"	5/8"	15"	4'-0"

NOTES:

The plug joint system shall include all labor and materials to install the expansion joint according to the Manufacturer's directions and according to these plans.

The blockout shall be formed or cut to full depth and ground to provide a uniform bearing surface for the bridging plate.

Bridging plates shall not rock on their supports prior to placing plug joint material.

The bridging plates shall be A36 steel as shown on the Table A or equivalent approved by the Engineer. It shall be installed in accordance with the Manufacturer directions. All bridging plates shall have locator pins or bars for centralizers.

The backer rod shall be secured and sealed according to the Manufacturer's directions.

The joint bonding agent shall be the type recommended by the Manufacturer for the joint system being installed. It shall be applied according to the Manufacturer's recommendations.

All surfaces in joint opening shall be cleaned according to the Manufacturer's directions.

The joints shall be installed and compacted according to the Manufacturer's procedures. The finished joint, after compacting and sealing, shall be flush with the top of the adjacent wearing surface.

A representative of the Manufacturer shall be on site prior to and during installation of the plug joints and shall approve the methods and materials before work commences.

The Asphaltic Binder shall not be overheated, either by absolute temperature limits of the material, or by extended time at a lower high temperature. Material that is overheated shall be discarded.

For construction requirements see section 518.08 of standard specifications.

Seal top of curb as directed by the Engineer.

Sealing the face of the curb or barrier will not be paid for separately, but will be included in the work.

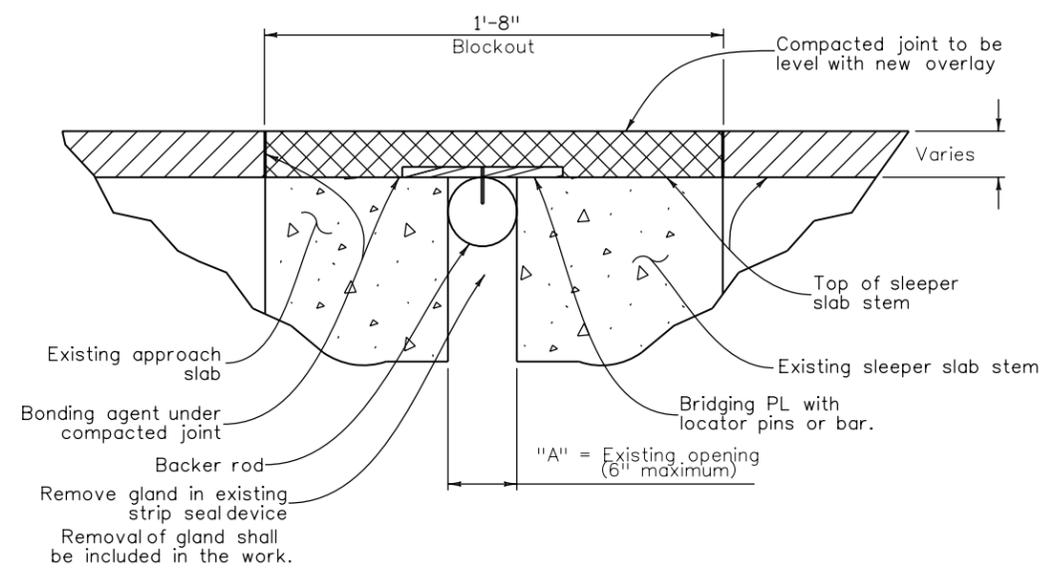
For information only: it is estimated that 153 cu. ft. of compacted joint material is required calculated based on an assumed average depth of 4.5".

The Contractor shall be prepare to provide temporary cover plates in case the work must be suspended prior to opening the structure to traffic.

ACCEPTABLE EXPANSION DEVICE ALTERNATES

All Asphaltic Plug Joint materials need a Certified Test Report (CTR) from an independent laboratory showing passing test results on all referenced tests within the most recent ASTM D 6297 for each lot of material to be included on the APL.

A list of current Pre-Approved Lot numbers, Suppliers, and the Procedure to register new suppliers can be found on CDDT Approved Products List Web site at:
http://www.dot.state.co.us/App_APL/



At these structures:

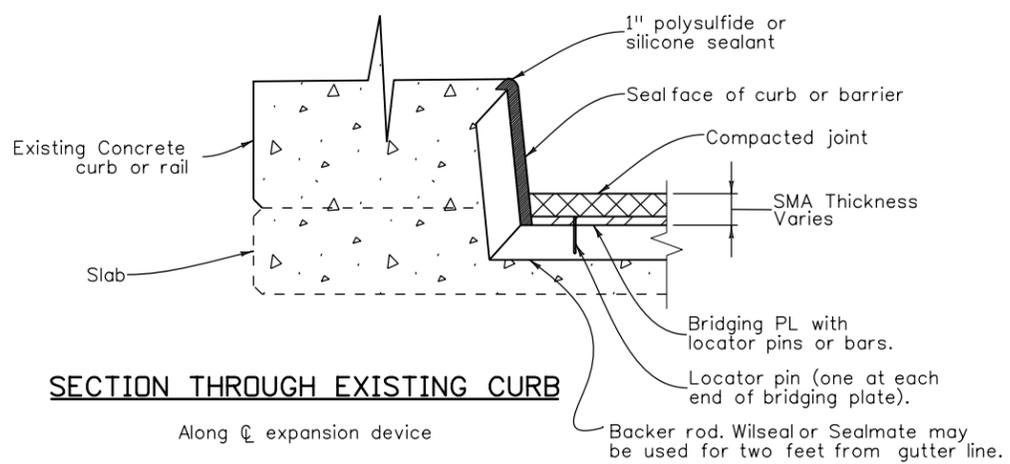
Temperature Extremes:
 Cold for mountains
 Hot for plains

Truck Traffic:
 ≥ 2500 ADTT For high truck traffic
 < 2500 ADTT For moderate truck traffic

Stop and Go Traffic:
 Common for controlled intersections
 Uncommon for everything else

JOINT REHABILITATION DETAIL WITHOUT EXISTING END DAMS

Typical detail shown.



SECTION THROUGH EXISTING CURB

Along centerline expansion device

Design	DATE		INITIAL	DATE		INITIAL
	Designed By	Checked By		MM/YY	MM/YY	
Detail	XXX	XXX	XXX	XXX	XXX	XXX
	Checked By	Checked By				
Quantities	DATE		INITIAL	DATE		INITIAL
	Quantities By	Checked By		MM/YY	MM/YY	
Revision Dates	DATE		INITIAL	DATE		INITIAL
	3/99	11/99		4/02	6/04	

Print Date: 6/18/2012	Sheet Revisions			<p>Colorado Department of Transportation 1480 Quail Lake Loop, Suite A Colorado Springs, CO 80906 Phone: 719-634-2323 FAX: 719-227-3298</p>	As Constructed No Revisions: Revised: Void:	BRIDGE EXPANSION DEVICE PLUG JOINT		Project No./Code
Drawing File Name: 18955DES_B-518-PR.dgn	Date:	Comments	Init.					BR 0252-422
Horiz. Scale: 1:1	Unit Information			<p>Region 2 MSA</p>	Designer: J. Deland Detailer: S. Ferguson	Structure Numbers: I-17-00	Subset Sheets: of	18955
Unit Leader Initials								Sheet Number

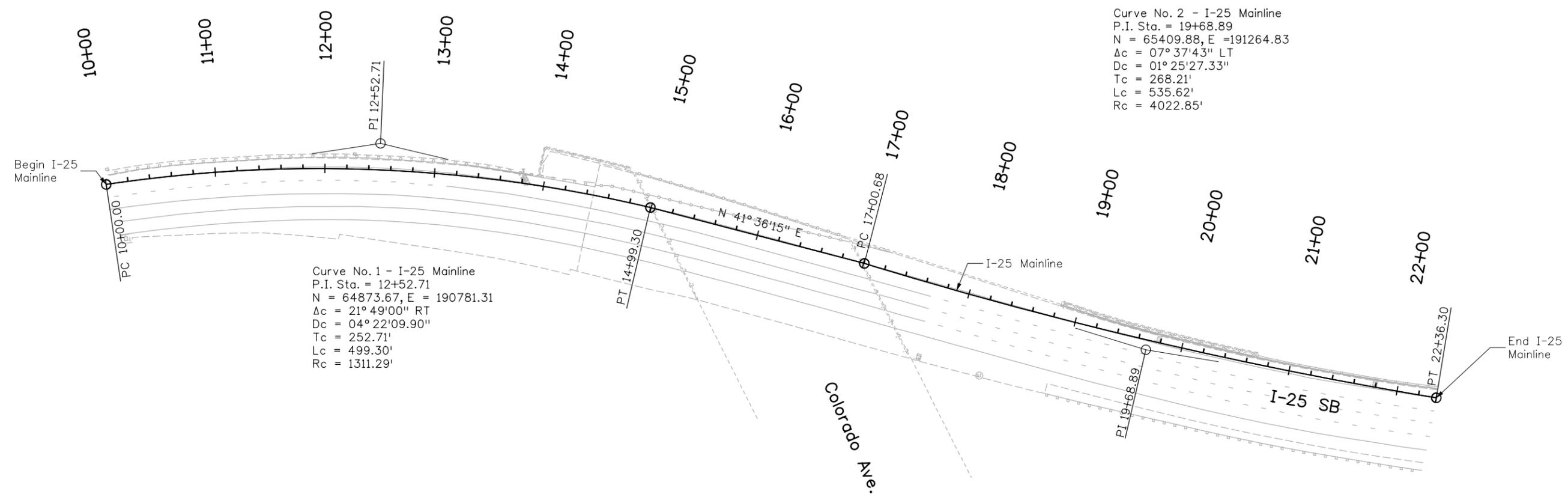
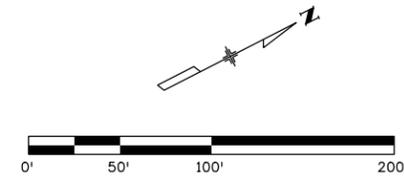
GENERAL NOTES

1. For preliminary plan quantities of pavement materials, the following rates of application were used:
 Tack Coat Diluted Emulsified Asphalt.....@ 0.1 Gals./Sq. Yd.(Diluted)
 Stone Matrix Asphalt PG (76-28).....@ 110 Lbs./Sq. Yd./Inch
2. Diluted emulsified asphalt for tack coat shall consist of 1 part emulsified asphalt and 1 part water.
3. Water shall be used as a dust palliative where required. Locations shall be as directed by the Engineer. This will not be paid separately, but shall be included in the work.
4. The following shall be furnished with each bituminous paver:
 1. A ski type device at least 30 Feet in length.
 2. Short ski or shoe.
 3. 500 Feet of control line and stakes.
5. Any layer of bituminous pavement that is to have a succeeding layer placed thereon shall be completed full width before succeeding layer is placed.
6. Asphalt joints shall fall on lines, shoulders lines or median lines, except where stated in the plans.
7. The Contractor shall not park any vehicles or equipment in, or disturb any areas not approved by the Engineer.
8. Millings shall become the property of the Contractor.
9. Prior to placing bituminous pavement, the paved surface shall be swept and cleaned. This will not be paid for separately, but shall be included in the cost of the Hot Mix Asphalt Pavement item.
10. The pavement shall be sawcut to a neat line as directed by the Engineer. This will not be paid for separately, but shall be included in the Stone Matrix Asphalt item.
11. Overlay of planed areas shall commence within 1 working day following the planning unless otherwise approved by the Engineer.
12. It is estimated that [75] gallons of pavement marking paint will be required on this project as follows:
 White.....[44] gallons
 Yellow.....[31] gallons
13. It is estimated that [150] days of Traffic Control Management will be required on this project.
14. It is estimated that [105] days of Traffic Control Inspection will be required on this project.
15. It is estimated that [3] Sanitary Facility will be required on this project.

16. It is estimated that 1 Field Office (Class 2) will be required for this project.
17. Public Information Services will be required on this project and paid for as lump sum.
18. No Right-Of-Way acquisition will be needed for this project. All work will be completed entirely within the existing Right-Of-Way.
19. Where new pavement is to abut existing pavement, the existing pavement shall be removed to a neat vertical line using a cutting saw or other method as approved by the Engineer. Saw cutting asphalt will not be paid for separately, but shall be included in the cost of Removal of Asphalt Mat.
20. The Contractor shall protect all existing survey monumentation designated to remain from damage during construction operations. Any monuments disturbed by the Contractor that are not designated for relocation, shall be reset at the Contractor's expense. The Contractor and Engineer shall note those monuments in the field prior to construction. See Tabulation of Survey.
21. Prior to milling operation the contractor will be responsible for locating and recording existing pavement marking prior to milling. All new pavement markings shall match previous markings unless otherwise directed by the Engineer.
22. On Structure I-17-00, SB I-25 over Colorado Avenue, prior to overlaying operations, the Contractor will be responsible for locating and recording the existing temporary concrete barrier location. The temporary concrete barrier will be reset to the previous location after overlaying operations are completed.
23. Roadway smoothness will be as follows:
 - a. I-25 - HRI Category I
24. Construction Staging is not allowed in the following areas:
 - a. Within 500' of Cottonwood Creek or Pine Creek
 - b. On the east side of I-25 over Colorado Avenue
25. The Contractor shall adjust the height of the guardrail on I-25 at Colorado Avenue in response to the increased pavement depth and shall be in accordance to Standard Plan M-606-1.
26. It is estimated that 10 hours of Removal of Nests and 10SY of Netting may be required per section 240 Protection of Migratory Birds.
27. The Contractor shall Adjust Inlet at I-25 & Colorado Ave. at approximate station 17+70 to accommodate a minimum of 3" asphalt increase.
28. The Contractor shall Adjust Manhole at I-25 & Colorado Ave. at approximate station 18+25 to accommodate a minimum of 3" asphalt increase.
29. The slope for the Temporary Asphalt Pavement shown on the Temporary Bridge Deck detail shall be 100:1 or flatter.

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Print Date: 6/18/2012		Sheet Revisions			 Colorado Department of Transportation 1480 Quail Lake Loop, Suite A Colorado Springs, CO 80906 Phone: 719-634-2323 FAX: 719-227-3298 Region 2	As Constructed		GENERAL NOTES		Project No./Code
File Name: 18955DES_GenlNote_2010.dgn		Date:	Comments	Init.		No Revisions:			BR 0252-422	
Horiz. Scale: 1:1 Vert. Scale: As Noted						Revised:	Designer: S. Ferguson	Structure Numbers	18955	
Unit Information Unit Leader Initials						Void:	Detailer: S. Ferguson	Subset Sheets:	Sheet Number	
					Sheet Subset:					



Curve No. 1 - I-25 Mainline
 P.I. Sta. = 12+52.71
 N = 64873.67, E = 190781.31
 $\Delta c = 21^\circ 49'00''$ RT
 Dc = $04^\circ 22'09.90''$
 Tc = 252.71'
 Lc = 499.30'
 Rc = 1311.29'

Curve No. 2 - I-25 Mainline
 P.I. Sta. = 19+68.89
 N = 65409.88, E = 191264.83
 $\Delta c = 07^\circ 37'43''$ LT
 Dc = $01^\circ 25'27.33''$
 Tc = 268.21'
 Lc = 535.62'
 Rc = 4022.85'

Print Date: 6/18/2012
File Name: 18955DES_GeometryPlan_01.dgn
Horiz. Scale: 1:100 Vert. Scale: As Noted
Unit Information Unit Leader MAndrew

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation



1480 Quail Lake Loop, Suite A
 Colorado Springs, CO 80906
 Phone: 719-634-2323 FAX: 719-227-3298

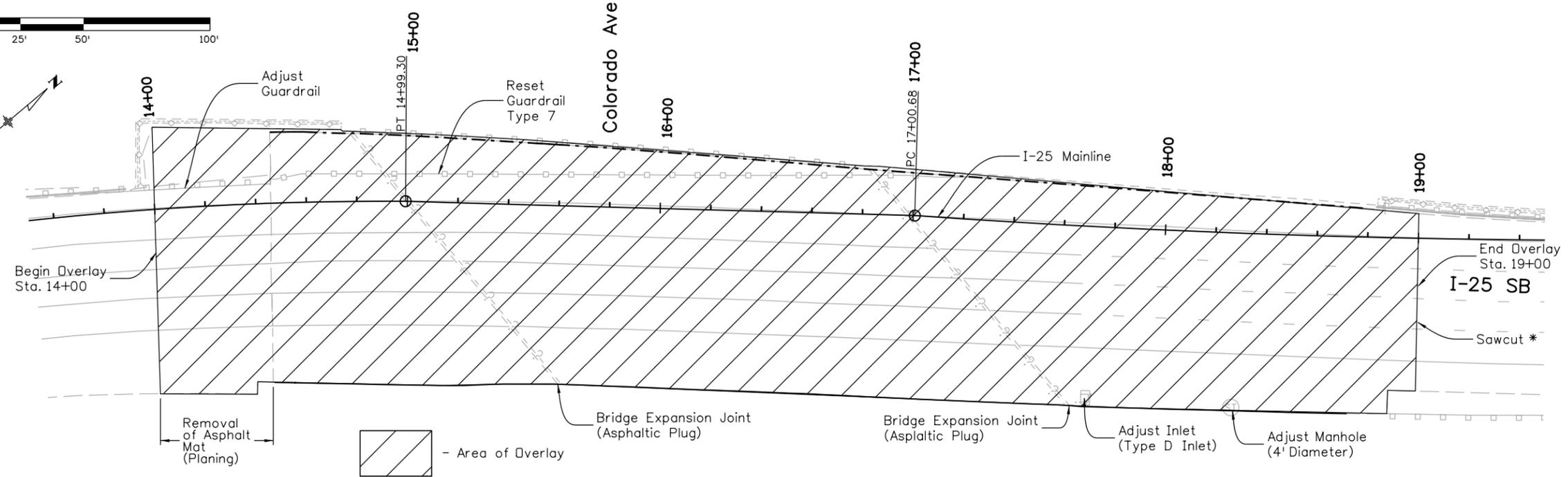
Region 2 MSA

As Constructed
No Revisions:
Revised:
Void:

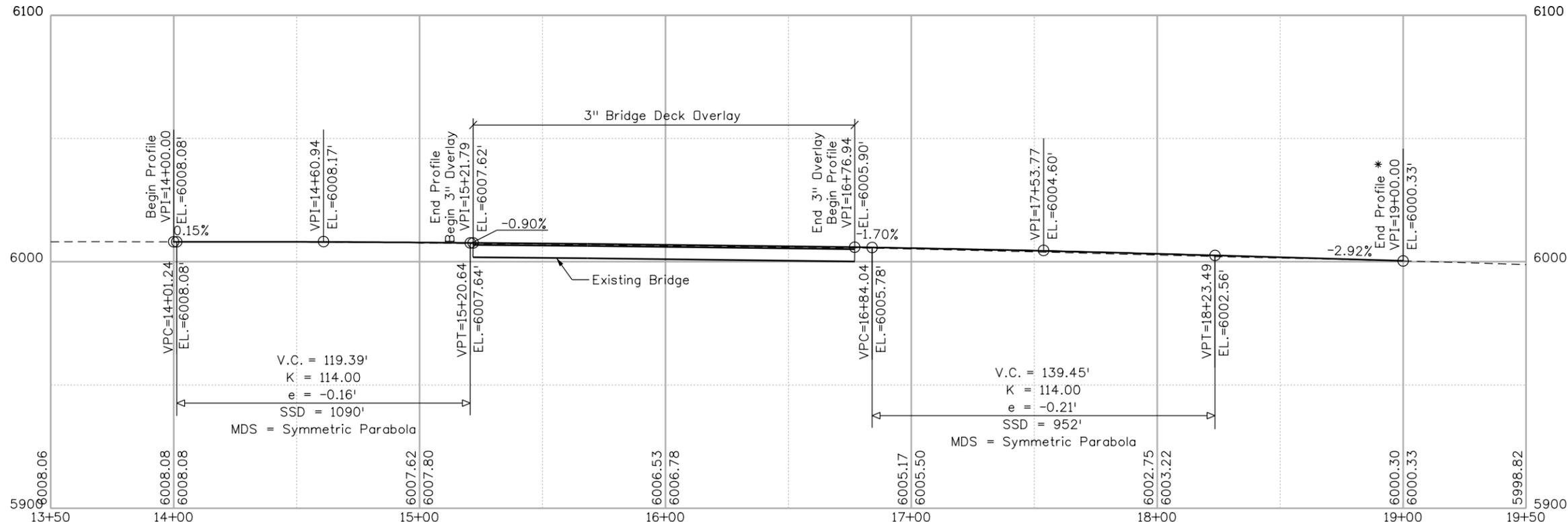
I-25 Geometry Plan Sheet			
Designer: S. Ferguson	Structure Numbers	I-17-00	Sheet Number
Detailer: C. Brown	Subset Sheets:	1 of 1	
Sheet Subset: Geometry			

Project No./Code
BR 0252-422
18955

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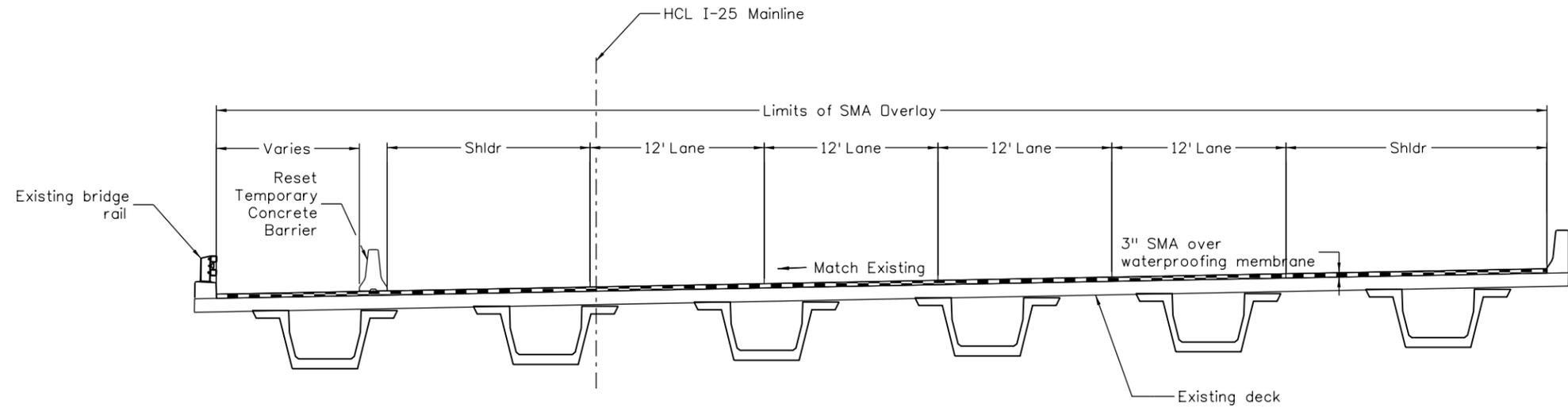


* Adjust sawcut location north to the next transverse joint. Maintain existing profile elevation and cross slope.

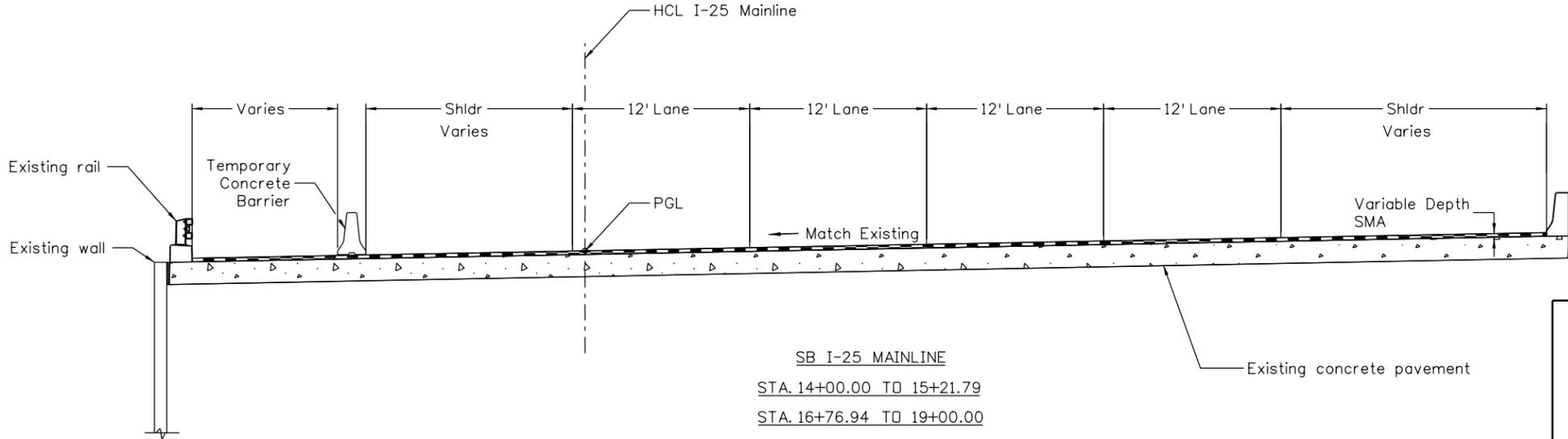


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Print Date: 6/18/2012		Sheet Revisions			Colorado Department of Transportation		As Constructed		I-25 - Str. No. I-17-00			Project No./Code		
File Name: 18955DES_PnP#\1.dgn		Date:	Comments	Init.	 1480 Quail Lake Loop, Suite A Colorado Springs, CO 80906 Phone: 719-634-2323 FAX: 719-227-3298		No Revisions:		Plan & Profile Sheet			Project Number		
Horiz. Scale: 1:50 Vert. Scale: As Noted							Revised:		Designer: S. Ferguson	Structure	I-17-00		18955	
Unit Information Unit Leader MAndrew							Void:		Detailer: C. Brown	Numbers			Sheet Number	
					Region 2				Sheet Subset: P and P	Subset Sheets:	1 of 1			



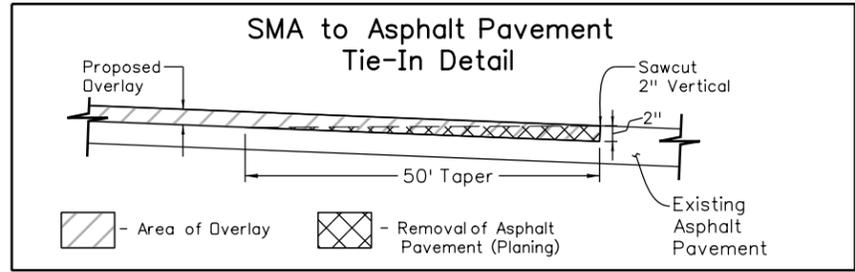
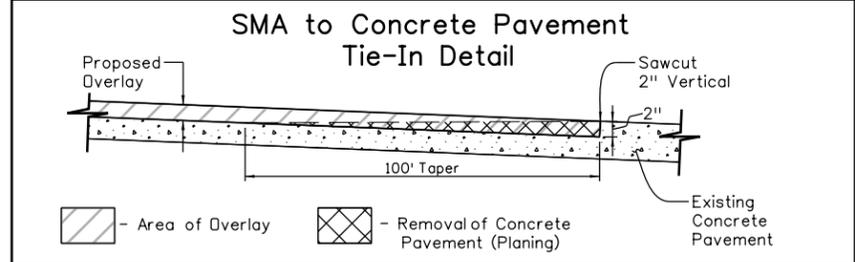
SB I-25 OVER COLORADO AVE.
STR. I-17-00 STA 15+21.79 TO 16+76.94



SB I-25 MAINLINE
STA. 14+00.00 TO 15+21.79
STA. 16+76.94 TO 19+00.00

NOTES:

1. Lane Width Dimensions shown for example purpose only.
2. Girders shown are for example purpose only.
3. Maximum overlay on the bridge is 3".
4. For the I-25 at Colorado Ave overlay, the maximum lift depth will be limited to 1.5" unless otherwise directed by the Engineer.



Print Date: 6/18/2012
File Name: 18955DES_Typ1Sect2.dgn
Horiz. Scale: 1:10 Vert. Scale: As Noted
Unit Information Unit Leader Initials

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation



1480 Quail Lake Loop, Suite A
Colorado Springs, CO 80906
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Region 2 MSA

As Constructed
No Revisions:
Revised:
Void:

TYPICAL SECTION I-25 AT COLORADO AVE.			
Designer:	S. Ferguson	Structure Numbers	I-17-00
Detailer:	S. Ferguson	Sheet Subset:	TYPICAL
Subset Sheets:	2 of 2		

Project No./Code
BR 0252-422
18955
Sheet Number

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Region 2
 Address: 905 Erie Avenue - P.O. Box 536
 Pueblo, CO 81002
 Phone: (719) 546-5442 FAX: (719) 546-5414

Right of Way Plans Unit: 2152

Sheet Revisions		
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Sheet Revisions		
mm/yy	XXXXX	XXX

Sheet Revisions		
mm/yy	XXXXX	XXX

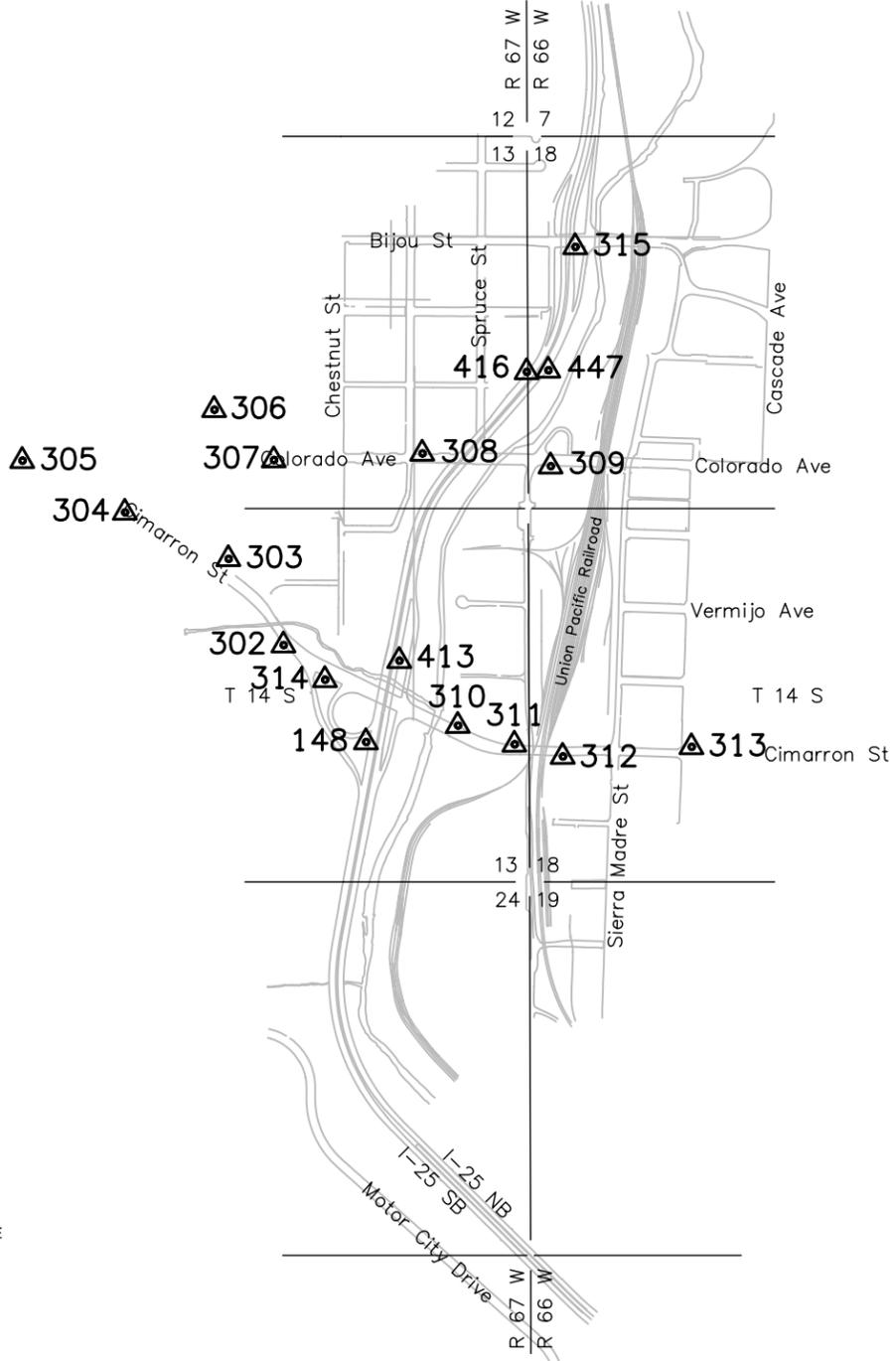
WILSON & COMPANY
 Engineers & Architects
 455 E. Pikes Peak Avenue, Suite 200
 Colorado Springs, CO 80903-3675
 Phone: 719-520-5800
 FAX: 719-520-0108

Right of Way Plans				
Project Control Diagram				
Project Number: IM 0252-370 UNIT 1				
Project Location: I-25 IN CS, DESIGN BUILD				
Project Location:				
Project Code	Last Mod. Date	Subset Sheets	Sheet No.	Total No. of Sheets
14740	6/11/04	1 of 2	3	11

PROJECT CONTROL DIAGRAM

SECTIONS 13 AND 24, TOWNSHIP 14 SOUTH, RANGE 67 WEST SECTIONS 18, TOWNSHIP 14 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN EL PASO COUNTY, COLORADO

△ CONTROL MONUMENT



NOT TO SCALE

△403

GENERAL NOTES

1. The Coordinates of the GPS points were adjusted from NAD 83 (1992) Colorado Central Zone State Plane Coordinate System to the Modified Grid System using the following parameters:

Mean Elevation = 5983.9 U.S. feet
 Mean Geoid Height = 55.177 U.S. feet
 Mean Sea Level Factor = 0.999716483
 Mean Grid Factor = 0.999946840

Combined Scale Factor = 0.999663338

2. All coordinates listed are U.S. feet.

3. GPS Network adjustment was constrained using the following published coordinates:

Points published by the National Geodetic Survey:

PID	Designation	Latitude	Longitude
JK1384	GPS 3	38°48'50.67573"	104°49'35.28805"
AE4290	GPS 7	38°54'42.73581"	104°49'15.88400"
AE4291	JONES	38°49'40.68889"	104°47'33.70523"

4. Primary Benchmarks for the project were the following Benchmarks as published by the National Geodetic Survey:

PID	Designation	NAVD 88 Elevation (U.S. feet)
JK0843	A 396	5959.95

Note: Elevations reported are established by GPS observations or spirit levels as indicated.

Note: Closed successfully into CDOT JF46 & JF47.

5. NOTICE: According to Colorado Law, you must commence any legal action based upon any defect in this survey within three years after you discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years from the date of the certificate shown hereon.

6. Basis of Bearings: The line between the found 3 ¼ inch aluminum cap LS 25361, being the Northeast corner of section 13, Township 14 South, Range 67 West (#30) and the Found 3 ¼ inch witness corner aluminum cap LS 25361 being a witness to the East quarter of section 13, Township 14 South, Range 67 West (#31) is determined to be N00°12'31"W grid bearing by using calculated coordinates from Global Positioning System (GPS) survey performed September of 2002.

7. This control survey is not a complete boundary survey and is prepared for the use of the Colorado Department of Transportation only.

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