

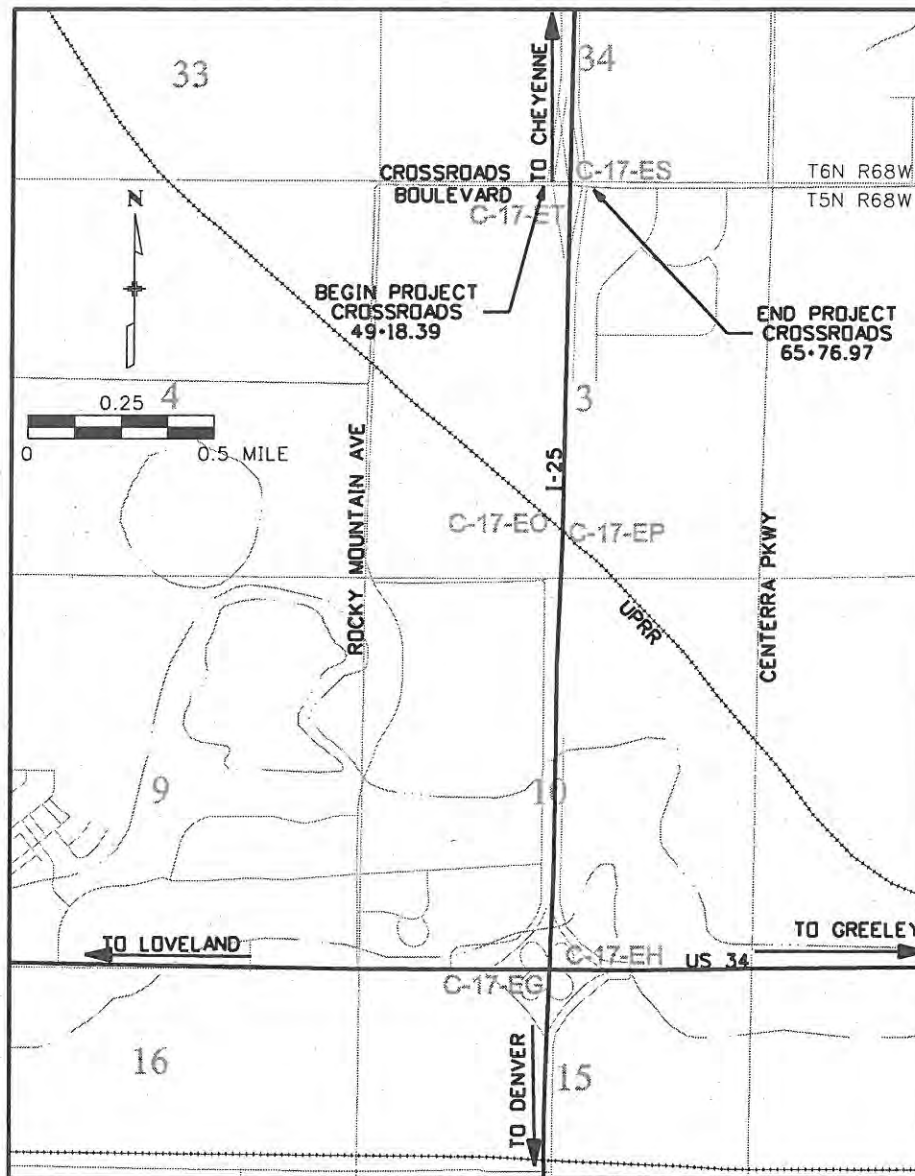
Oversight / NHS

FHWA REGION VIII OVERSIGHT?  NO  YES  
 NATIONAL HIGHWAY SYSTEM?  NO  YES

TABULATION OF LENGTH & DESIGN DATA

STATION	FEET	
	ROADWAY	
	CROSSROADS	RAMPS
<b>CROSSROADS BOULEVARD</b>		
BEGIN ES4 0253-207 STA. 49+18.39	1658.58	
END ES4 0253-207 STA. 65+76.97		
<b>SW RAMP</b>		
BEGIN SW RAMP STA. 100+00.00	602.84	
END SW RAMP STA. 106+02.84		
<b>NW RAMP</b>		
BEGIN NW RAMP STA. 200+51.70	960.30	
END NW RAMP STA. 210+12.00		
<b>NE RAMP</b>		
BEGIN NE RAMP STA. 300+24.84	848.16	
END NE RAMP STA. 308+73.00		
<b>SE RAMP</b>		
BEGIN SE RAMP STA. 399+24.00	895.35	
END SE RAMP STA. 408+19.35		
<b>TOTAL</b>	1658.58	3306.65
<b>SUMMARY OF PROJECT LENGTH</b>		
	FEET	MILES
ROADWAY (NET LENGTH)	4965.23	0.94
PROJECT GROSS LENGTH	4965.23	0.94
<b>DESIGN DATA</b>		
	CROSSROADS	RAMPS
MINIMUM RADIUS OF CURVE	140 FT	99 FT
MAXIMUM GRADE	2.02 %	4.16 %
MINIMUM S.S.D. HORIZONTAL	> 115 FT	> 115 FT
MINIMUM S.S.D. VERTICAL	> 203 FT	> 203 FT
MINIMUM DESIGN SPEED	20 MPH	20 MPH
DESIGN HOUR VOLUME (2020)	2,885 (2-WAY)	3,410
DHV TRUCKS %	10 %	12 %

CITY OF LOVELAND  
 STATE OF COLORADO  
 BID PLANS OF PROPOSED *As Constructed*  
 I-25 AND CROSSROADS BOULEVARD IMPROVEMENTS  
 LARIMER COUNTY, COLORADO



**PROJECT LOCATION MAP**  
 CITY OF LOVELAND  
**WILSON & COMPANY**  
 Engineers & Architects  
 500 E. THIRD STREET  
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 Denver, CO 80202  
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**NEW AND REVISED STANDARDS**  
 S-627-1 PAVEMENT MARKINGS 9/24/2008  
 S-630-1 TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION 7/31/2008

**Computer File Information**

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10/05/09	Sheets 1, 24	JJW
10/27/09	Sheets 1, 71, 72, 133, 136	JJW

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 Region 4 PJG

**TITLE SHEET**

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Detailer: JBK	Subst Sheets: TS1 of 1	

Project No./Code  
 ES4 0253-207  
 17244  
 Sheet Number 1 X

Oversight / NHS

FHWA REGION VIII OVERSIGHT?  NO  YES

NATIONAL HIGHWAY SYSTEM?  NO  YES

# CITY OF LOVELAND STATE OF COLORADO

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(R-4) (R-3) (R-2) (R-1)  
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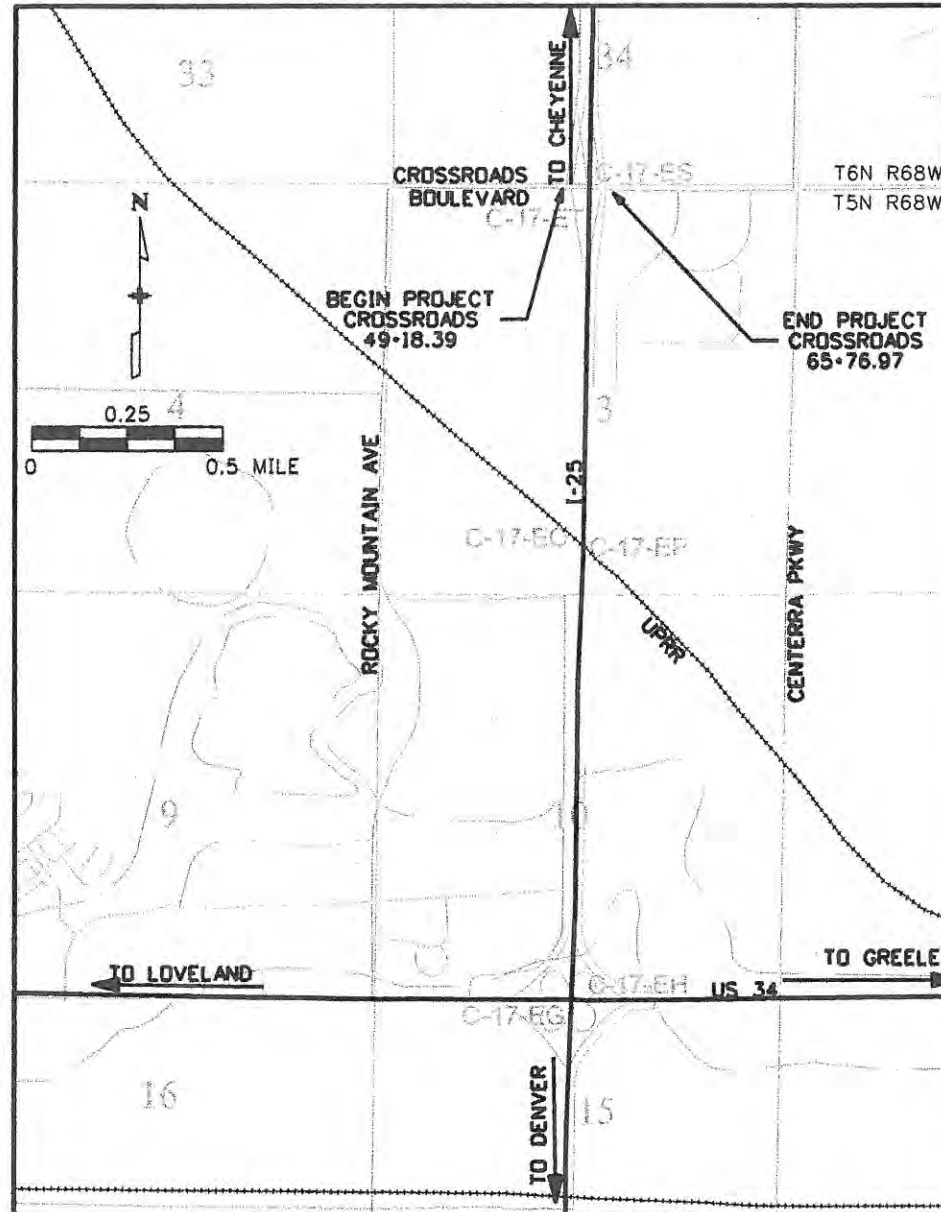
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**I-25 AND CROSSROADS BOULEVARD IMPROVEMENTS  
LARIMER COUNTY, COLORADO**



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CITY OF LOVELAND **WILSON & COMPANY**  
Engineers & Architects  
500 E. THIRD STREET  
LOVELAND, CO 80537  
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Denver, CO 80202  
Phone: 303-297-2976  
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**NEW AND REVISED STANDARDS**  
S-627-1 PAVEMENT MARKINGS 9/24/2008  
S-830-1 TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION 7/31/2008

<b>Computer File Information</b>		<b>Sheet Revisions</b>		<b>Colorado Department of Transportation</b>		<b>TITLE SHEET</b>		<b>Project No./Code</b>	
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		(R-8) 03/22/10	Sheets 1, 140	JJW					



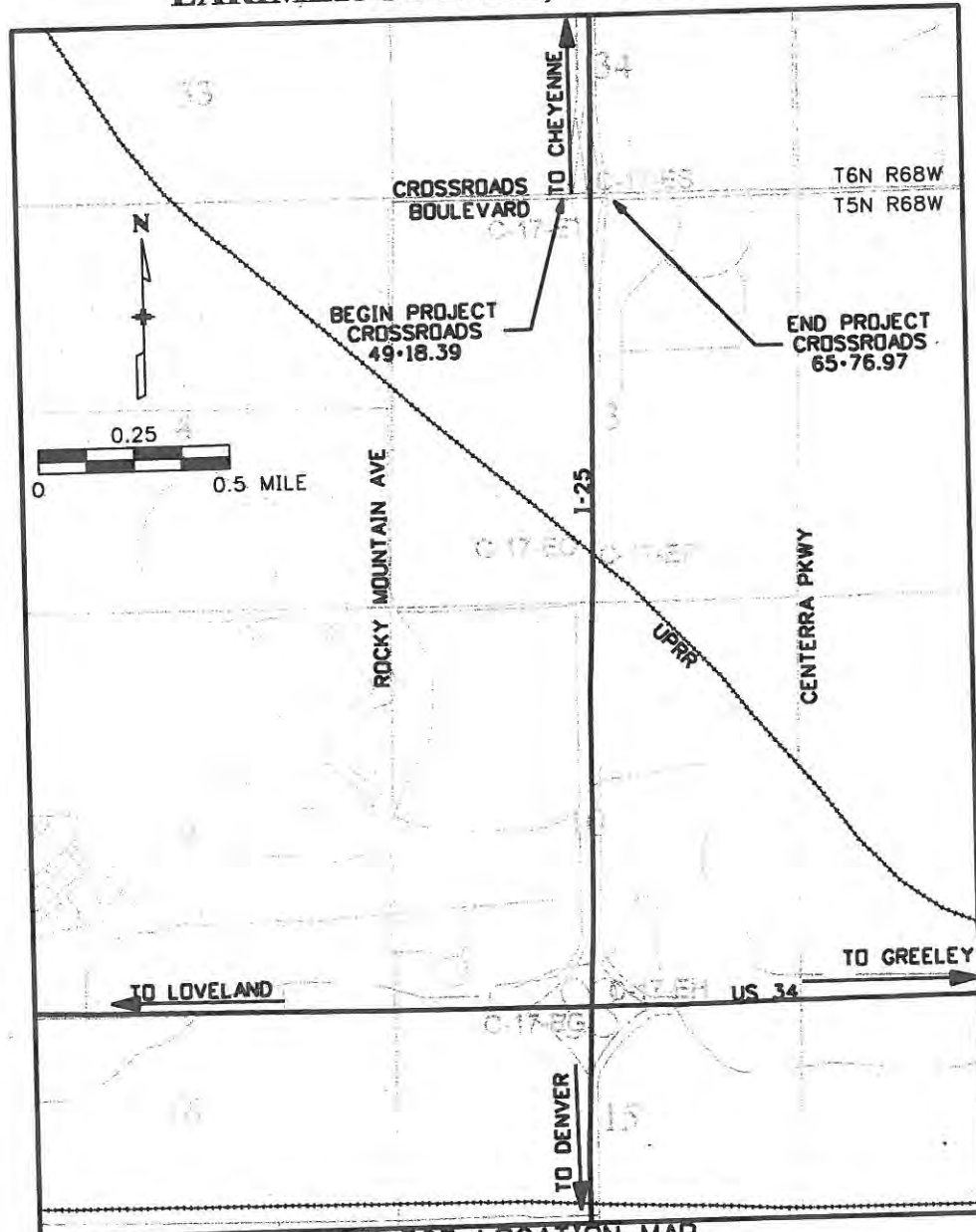
# CITY OF LOVELAND STATE OF COLORADO

## BID PLANS OF PROPOSED I-25 AND CROSSROADS BOULEVARD IMPROVEMENTS LARIMER COUNTY, COLORADO

Oversight / NHS	
FHWA REGION VIII OVERSIGHT?	<input type="checkbox"/> NO <input checked="" type="checkbox"/> YES
NATIONAL HIGHWAY SYSTEM?	<input type="checkbox"/> NO <input checked="" type="checkbox"/> YES

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**WILSON & COMPANY**  
Engineers & Architects  
999 18th Street Suite 2600  
Denver, CO 80202  
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LOVELAND, CO 80537  
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NEW AND REVISED STANDARDS		
S-627-1	PAVEMENT MARKINGS	9/24/2008
S-630-1	TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	7/31/2008

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Colorado Department of Transportation

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PJG

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Void:	9/14/11

TITLE SHEET	
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Detailer: JBK	
Sheet Subset: TitleSheet	Subset Sheets: TSI of 1

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	17244
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<input checked="" type="checkbox"/> M-603-2	<input type="checkbox"/>	REINFORCED CONCRETE PIPE.....	43					<input checked="" type="checkbox"/> S-630-3	<input type="checkbox"/>	FLASHING BEACON (PORTABLE) DETAILS.....	204
<input type="checkbox"/> M-603-3	<input type="checkbox"/>	PRECAST CONCRETE BOX CULVERT.....	44								
<input checked="" type="checkbox"/> M-603-10	<input type="checkbox"/>	CONCRETE AND METAL END SECTIONS (2 SHEETS).....	45-46								
<input type="checkbox"/> M-604-10	<input type="checkbox"/>	INLET, TYPE C.....	47								
<input type="checkbox"/> M-604-11	<input type="checkbox"/>	INLET, TYPE D.....	48								
<input checked="" type="checkbox"/> M-604-12	<input type="checkbox"/>	CURB INLET TYPE R (2 SHEETS).....	49-50								
<input type="checkbox"/> M-604-13	<input type="checkbox"/>	CONCRETE INLET TYPE 13.....	51								
<input checked="" type="checkbox"/> M-604-20	<input type="checkbox"/>	MANHOLES (3 SHEETS).....	52-54								
<input type="checkbox"/> M-604-25	<input type="checkbox"/>	VANE GRATE INLET (5 SHEETS).....	55-59								
<input type="checkbox"/> M-605-1	<input type="checkbox"/>	SUBSURFACE DRAINS.....	60								
<input checked="" type="checkbox"/> M-606-1	<input type="checkbox"/>	GUARDRAIL TYPE 3 W-BEAM (16 SHEETS).....	61-76								
<input checked="" type="checkbox"/> M-606-13	<input type="checkbox"/>	GUARDRAIL TYPE 7 F-SHAPE BARRIER (4 SHEETS).....	77-80								
<input checked="" type="checkbox"/> M-606-14	<input type="checkbox"/>	PRECAST TYPE 7 CONCRETE BARRIER (3 SHEETS).....	81-83								

THE STANDARD PLAN SHEETS INDICATED HEREON BY A MARKED BOX ARE TO BE USED TO CONSTRUCT THIS PROJECT.

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

**COLORADO**  
**DEPARTMENT OF TRANSPORTATION**  
**STANDARD PLANS LIST**  
**M&S STANDARDS**  
**July 04, 2006**

<b>Computer File Information</b>		<b>Sheet Revisions</b>			<b>CITY OF LOVELAND</b>  500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 <b>Colorado Department of Transportation</b>	<b>STANDARD PLAN LIST</b>			<b>Project No./Code</b>
Creation Date: 06/08/07	Initials: JJW	Date:	Comments	Init.			No Revisions: 9/14/11	Revised:	Void:	Designer: JJW Detailer: JJW Sheet Subset: StdPlans
Print Date: 6/18/2009	Initials: JJW	6/18/09	Added Flashing Beacon	FSW						
File Name: 0610031800StandardPlanList.dgn										
Horiz. Scale: 1:1	Vert. Scale: As Noted									

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**GENERAL NOTES**

1. NOXIOUS WEED MANAGEMENT WILL BE REQUIRED FOR THIS PROJECT. REFER TO THE PROJECT SPECIFICATIONS.
2. IT IS ESTIMATED THAT 9.1 ACRES OF CLEARING AND GRUBBING WILL BE REQUIRED.
3. IT IS ESTIMATED THAT 8 HOURS OF PROOF ROLLING WILL BE REQUIRED.
4. WHERE CUTTING OF EXISTING PAVEMENT IS REQUIRED, THE CUTTING SHALL BE DONE TO A NEAT WORK LINE WITH A SAW OR CUTTING WHEEL AS APPROVED BY THE ENGINEER. THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE WORK.
5. DEPTH OF MOISTURE-DENSITY CONTROL FOR THIS PROJECT SHALL BE AS FOLLOWS:  
 FULL DEPTH OF ALL EMBANKMENTS  
 BASES OF CUTS UNDER PAVEMENT AND STRUCTURES AND ENTIRE WIDTH OF FILL 1 FOOT  
 EXCAVATION REQUIRED FOR COMPACTION BASES OF CUTS AND FILLS SHALL BE INCLUDED IN EMBANKMENT MATERIAL (COMPLETE IN PLACE) AND WILL NOT BE PAID FOR SEPARATELY.  
 COMPACTION OF EMBANKMENT MATERIAL FOR THIS PROJECT SHALL BE AASHTO T-99.
6. ALL MATERIAL GENERATED WITHIN THE PROJECT LIMITS SHALL BE REMOVED FROM THE PROJECT SITE AT NO COST TO THE PROJECT UNLESS SPECIFIED BY THE PLANS.
7. UNLESS OTHERWISE SPECIFIED, REMOVAL MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR. REMOVALS SHALL BE DISPOSED OF OUTSIDE PROJECT LIMITS, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
8. REMOVED ASPHALT SHALL NOT BE DISPOSED OF IN ANY MANNER THAT WOULD ALLOW IT TO COME INTO CONTACT WITH GROUNDWATER. THE CONTRACTOR SHALL SUBMIT A DISPOSAL PLAN TO THE ENGINEER FOR APPROVAL.
9. FOR PRELIMINARY PLAN QUANTITIES OF PAVEMENT MATERIALS, THE FOLLOWING RATES OF APPLICATION WERE USED:  
 TACK COAT DILUTED EMULSIFIED ASPHALT (SLOW-SETTING)..... 0.1 GAL / SQ. YD. (DILUTED 1:1 WITH WATER)  
 HOT BITUMINOUS PAVEMENT..... 110 LBS. / SQ. YD. / INCH  
 AGGREGATE BASE COURSE..... 133 LBS. / CU. FT.
10. RATES OF APPLICATION SHALL BE DETERMINED BY THE ENGINEER AT THE TIME OF APPLICATION. DILUTED EMULSIFIED ASPHALT SHALL CONSIST OF 1 PART EMULSIFIED ASPHALT (SLOW-SETTING) AND 1 PART WATER.
11. THE PAVEMENT SMOOTHNESS SHALL BE CATEGORY III FOR THIS PROJECT.
12. THE FOLLOWING SHALL BE FURNISHED WITH EACH BITUMINOUS PAVER.  
 1. A SKI TYPE DEVICE AT LEAST 30 FEET IN LENGTH.  
 2. A SHORT SKI OR SHOE.  
 3. 6 INCH SHOE IS REQUIRED
13. CONCRETE JOINT FASTENERS AS SHOWN IN CDOT STANDARD PLAN M-603-10 SHALL BE INSTALLED ON ALL CONCRETE PIPES, AND ARE INCLUDED IN THE COST OF THE REINFORCED CONCRETE PIPE
14. UTILITY LINES AS SHOWN ON THE PLAN SHEET AND PROFILE SHEETS ARE PLOTTED FROM THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL CALL THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) AT 811 AT LEAST 3 WORKING DAYS PRIOR TO ANY EXCAVATION. THE CONTRACTOR'S ATTENTION IS DIRECTED TO PARAGRAPH 105.10 OF THE STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL COORDINATE WORK WITH THE UTILITY COMPANIES SO THE NECESSARY RELOCATIONS CAN BE ACCOMPLISHED WITHOUT AFFECTING THE CONSTRUCTION SCHEDULE.
15. THE CONTRACTOR SHALL CONTACT THE AFFECTED UTILITY COMPANIES DIRECTLY AT LEAST THREE BUSINESS DAYS PRIOR TO POTHOLING.
16. IT IS ESTIMATED THAT 80 HOURS OF UTILITY POTHOLING WILL BE REQUIRED FOR THIS PROJECT. POTHOLING WILL BE AS DIRECTED BY THE ENGINEER.
17. ALL ABANDONED UTILITY MATERIALS WITHIN THE PROJECT LIMITS SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL VERIFY WITH THE UTILITY OWNER THAT THE UTILITY IS ABANDONED BEFORE REMOVAL. THE CONTRACTOR WILL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OF THE MATERIALS. THE COST FOR REMOVAL AND DISPOSAL OF THE ABANDONED UTILITY MATERIALS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE PROJECT.
18. THE CONTRACTOR SHALL REPAIR OR REPLACE AT HIS EXPENSE ANY EXISTING SIGNS DAMAGED BY CONTRACTOR NOT SPECIFIED FOR REMOVAL IN THE PLANS.
19. IT IS ESTIMATED THAT 1 EACH FIELD OFFICE (CLASS 2), 1 EACH FIELD LABORATORY (CLASS 2) AND 3 EACH SANITARY FACILITY WILL BE REQUIRED FOR THIS PROJECT. ONE OF THE SANITARY FACILITIES SHALL BE DESIGNATED FOR WOMEN ONLY.
20. THE CONCRETE/SULFATE CORROSION SHALL BE CLASS 1.
21. FOSSILIFEROUS ROCK HAS BEEN FOUND ON SITE. CDOT'S PALEONTOLOGIST WILL MONITOR EXCAVATION ACTIVITIES. SEE PROJECT SPECIFICATION 107 ARCHAEOLOGICAL AND PALEONTOLOGICAL DISCOVERIES.
22. THERE SHALL BE 1/2 INCH EXPANSION JOINT MATERIAL BETWEEN THE BACK OF CURB AND THE MEDIAN COVER MATERIAL.

23. TEMPORARY PAVEMENT MARKINGS SHALL BE APPLIED AT THE END OF EACH DAY'S PAVING. TANK STABS SHALL BE OBTAINED AT THE BEGINNING AND END OF EACH DAY'S STRIPING OPERATION AND SHALL BE PROVIDED TO THE ENGINEER. REMOVAL OF ALL TEMPORARY PAVEMENT MARKINGS SHALL BE INCLUDED IN THE ITEM PAVEMENT MARKING PAINT.
24. IT IS ESTIMATED THAT 1000 LF OF 4 INCH PAVEMENT MARKING TAPE (REMOVABLE) WILL BE REQUIRED FOR TEMPORARY PAVEMENT MARKING. REMOVAL SHALL BE INCLUDED IN THE COST OF THE ITEM. IT IS TABULATED IN THE TABULATION OF CONSTRUCTION TRAFFIC CONTROL DEVICES.
25. THE CONTRACTOR SHALL PROVIDE STATIONING FOR THE PROJECT. STATIONING MARKERS SHALL BE PLACED AT MAXIMUM SPACING OF 100 FEET. STATIONING SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT. THE METHOD OF STATIONING SHALL BE AS APPROVED BY THE ENGINEER.
26. IF CONTRACTOR'S METHOD OF HANDLING TRAFFIC REQUIRED A RESTRICTION ON VEHICLE WIDTH, LENGTH, HEIGHT OR WEIGHT, CONTRACTOR SHALL SUBMIT SUCH RESTRICTION REQUEST TO THE ENGINEER A MINIMUM OF 14 CALENDAR DAYS BEFORE THE RESTRICTION IS REQUIRED TO ALLOW TIME FOR CDOT PERMITS OFFICE TO ENACT THE RESTRICTION AND CDOT PUBLIC INFORMATION OFFICE TO PUBLICIZE IT.
27. IT IS ESTIMATED THAT ~~500~~ CY OF MUCK EXCAVATION WILL BE REQUIRED FOR THE PROJECT.

623

<b>Computer File Information</b>		<b>Sheet Revisions</b>		<b>CITY OF LOVELAND</b>		<b>GENERAL NOTES</b>		<b>Project No./Code</b>	
Creation Date: 02/22/08	Initials: JJW	Date:	Comments	Init.	500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000		No Revisions:		ES4 0253-207
Print Date: 5/18/2009	Initials: JJW				 Colorado Department of Transportation		Revised: 9/14/11		17244
File Name: 0610031800GeneralNotes01.dgn							Void:		Designer: JJW
Horiz. Scale: 1:1	Vert. Scale: As Noted						Sheet Subset: Gen Notes		Subset Sheets: GNI of 1

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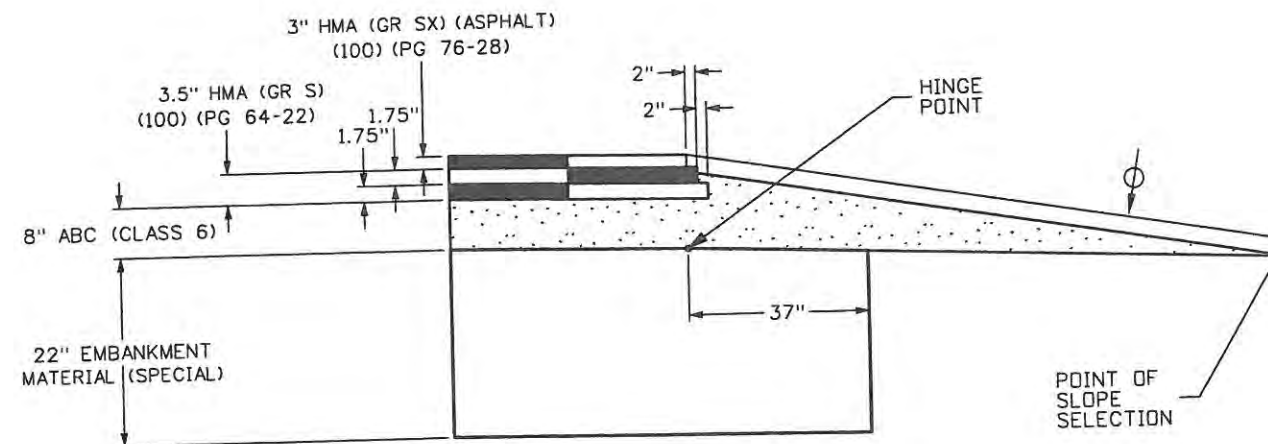
DESIGN CASE	HMA (18 kip ESAL) (10% TRUCK FACTOR)	PCCP (18 kip ESAL) (10% TRUCK FACTOR)
I-25 ON/OFF RAMPS	4.9 x 10 <sup>6</sup>	14.3 x 10 <sup>6</sup>
CROSSROADS BLVD ROUNDABOUTS	5.8 x 10 <sup>6</sup>	16.4 x 10 <sup>6</sup>
CROSSROADS BLVD UNDER I-25 BRIDGE	7.5 x 10 <sup>6</sup>	7.5 x 10 <sup>6</sup>

HBP DESIGN PARAMETERS

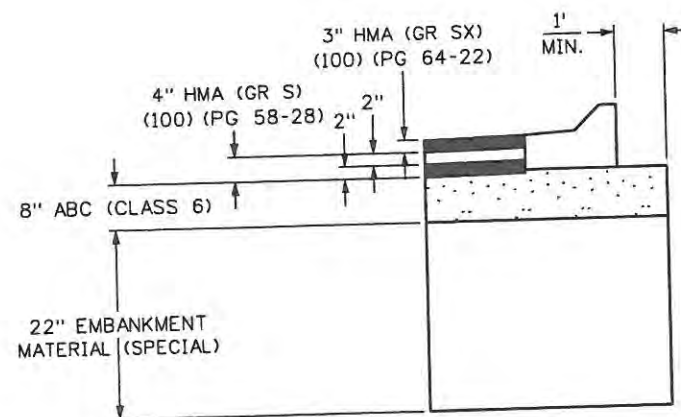
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R-VALUE	50
DESIGN LIFE	20 yrs
RELIABILITY, R	95%
STANDARD NORMAL DEVIATE, Z <sub>R</sub>	-1.645
SERVICEABILITY LOSS, ΔPSI	2.0
OVERALL DEVIATION, S <sub>o</sub>	0.44
STRUCTURAL LAYER COEFFICIENT FOR HBP, a <sub>1</sub>	0.44
STRUCTURAL LAYER COEFFICIENT FOR ABC (R-value >77), a <sub>2</sub>	0.12

PCCP DESIGN PARAMETERS

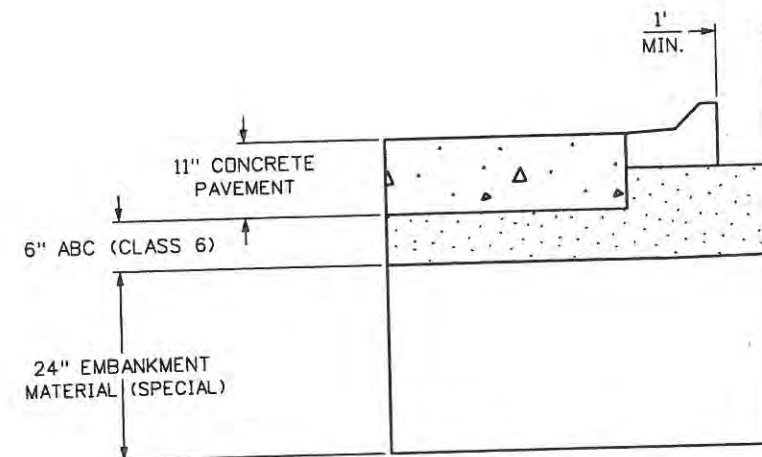
DESIGN PARAMETERS	DESIGN VALUE
R-VALUE	50
EFFECTIVE COEFFICIENT OF SUBGRADE REACTION, k <sub>eff</sub>	35 pci
DESIGN LIFE	30 yrs
RELIABILITY, R	95%
STANDARD NORMAL DEVIATE, Z <sub>R</sub>	-1.645
SERVICEABILITY LOSS, ΔPSI	2.0
OVERALL DEVIATION, S <sub>o</sub>	0.34
MODULUS OF RUPTURE, S <sub>c</sub>	650 psi
MODULUS OF ELASTICITY, E <sub>c</sub>	3.4 x 10 <sup>6</sup> psi
LOAD TRANSFER COEFFICIENT, J	2.8
DRAINAGE COEFFICIENT, C <sub>d</sub>	1.0



RAMP ASPHALT DETAIL



CROSSROADS ASPHALT DETAIL



CONCRETE DETAIL

Δ	LANDSCAPING
*	6" THICK MEDIAN COVER MATERIAL (CONCRETE)
o	CONTROL POINT
eX	ROADWAY CROSS-SLOPE SEE CURB GEOMETRY AND ROADWAY PROFILES
H	VERTICAL DISTANCE FROM OUTSIDE EDGE OF TOP OF PAVEMENT TO FILL CATCH POINT
φ	6" TOPSOIL UNDER ALL SEEDED AREAS, SOD AND ROADSIDE LANDSCAPING UNLESS OTHERWISE NOTED

LEGEND

<b>Computer File Information</b>		<b>Sheet Revisions</b>		<b>CITY OF LOVELAND</b> 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 Colorado Department of Transportation	<b>PAVEMENT DESIGN PARAMETERS</b>		<b>Project No./Code</b> ES4 0253-207
Creation Date: 6/4/07	Initials: JBK	Date:	Comments:			No Revisions:	Designer: JJW	Structure Numbers:
Print Date: 5/1/2009	Initials: JJW			Revised:	Detailer: JBK	Subset Sheets: PVT1 of 1	Sheet Number	4
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Horiz. Scale: 1:15	Vert. Scale: As Noted							



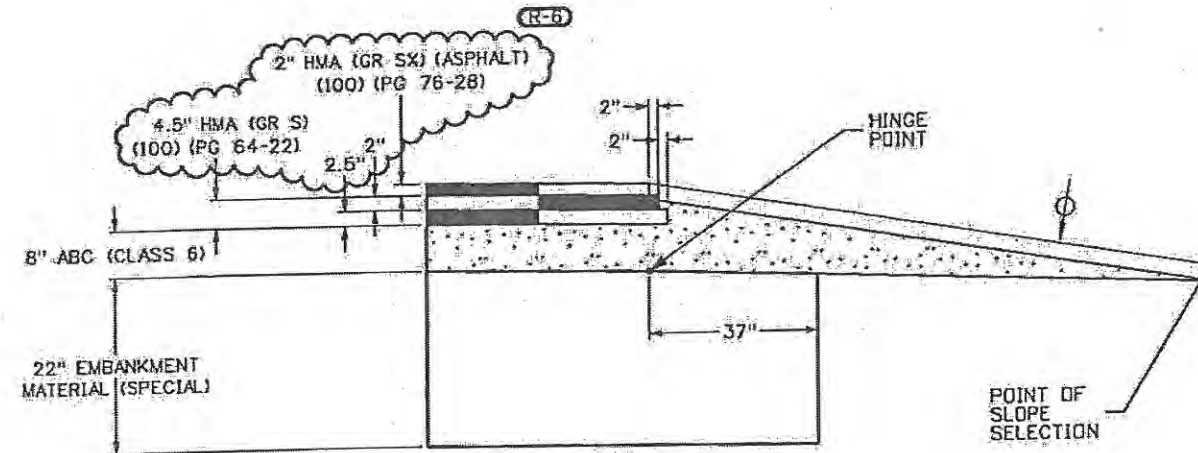
DESIGN CASE	HMA (18 kip ESAL) (10% TRUCK FACTOR)	PCCP (18 kip ESAL) (10% TRUCK FACTOR)
I-25 ON/OFF RAMP	$4.9 \times 10^6$	$14.3 \times 10^6$
CROSSROADS BLVD ROUNDABOUTS	$5.8 \times 10^6$	$16.4 \times 10^6$
CROSSROADS BLVD UNDER I-25 BRIDGE	$7.5 \times 10^6$	$7.5 \times 10^6$

HBP DESIGN PARAMETERS

DESIGN PARAMETERS	DESIGN VALUE
R-VALUE	50
DESIGN LIFE	20 yrs
RELIABILITY, R	95%
STANDARD NORMAL DEVIATE, Z <sub>R</sub>	-1.645
SERVICEABILITY LOSS, ΔPSI	2.0
OVERALL DEVIATION, S <sub>o</sub>	0.44
STRUCTURAL LAYER COEFFICIENT FOR HBP, α	0.44
STRUCTURAL LAYER COEFFICIENT FOR ABC (R-value >77), α	0.12

PCCP DESIGN PARAMETERS

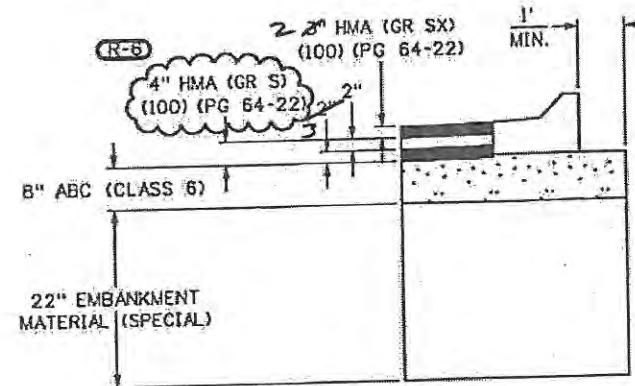
DESIGN PARAMETERS	DESIGN VALUE
R-VALUE	50
EFFECTIVE COEFFICIENT OF SUBGRADE REACTION, k <sub>st</sub>	35 pci
DESIGN LIFE	30 yrs
RELIABILITY, R	95%
STANDARD NORMAL DEVIATE, Z <sub>R</sub>	-1.645
SERVICEABILITY LOSS, ΔPSI	2.0
OVERALL DEVIATION, S <sub>o</sub>	0.34
MODULUS OF RUPTURE, S <sub>r</sub>	650 psi
MODULUS OF ELASTICITY, E <sub>c</sub>	$3.4 \times 10^6$ psi
LOAD TRANSFER COEFFICIENT, J	2.8
DRAINAGE COEFFICIENT, C <sub>d</sub>	1.0



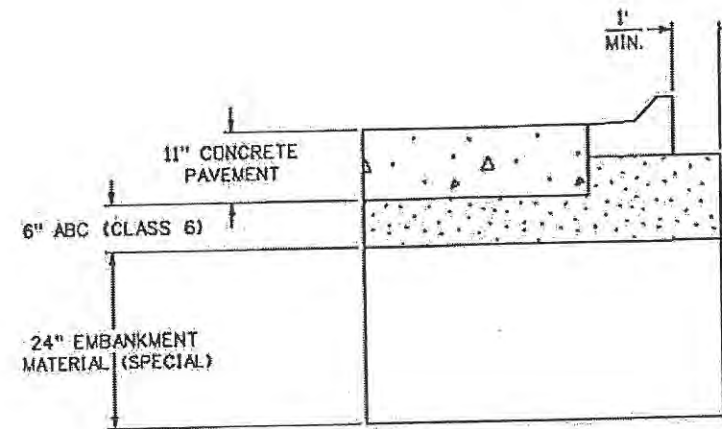
RAMP ASPHALT DETAIL

LEGEND

Δ	LANDSCAPING
*	6" THICK MEDIAN COVER MATERIAL (CONCRETE)
o	CONTROL POINT
e/2	ROADWAY CROSS-SLOPE SEE CURB GEOMETRY AND ROADWAY PROFILES
H	VERTICAL DISTANCE FROM OUTSIDE EDGE OF TOP OF PAVEMENT TO FILL CATCH POINT
φ	6" TOPSOIL UNDER ALL SEEDED AREAS, SOD AND ROADSIDE LANDSCAPING UNLESS OTHERWISE NOTED



CROSSROADS ASPHALT DETAIL



CONCRETE DETAIL



Computer File Information		Sheet Revisions		CITY OF LOVELAND		PAVEMENT DESIGN PARAMETERS		Project No./Code	
Creation Date: 6/4/07	Initials: JBK	Date:	Comments	Init.	 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000 Colorado Department of Transportation	No Revisions:	Designer: JJW	Structure Numbers:	ES4 0253-207
Print Date: 11/4/2009	Initials: JJW	11/04/09	Pavement Design	JJW		Revised: 7/14/11	Detaller: JBK	17244	Sheet Number 4X
File Name: 0610031800TypicalSection01.dgn						Void:	Sheet Subset: PVT	Subset Sheets: PVT1 of 1	
Horiz. Scale: 1:35	Vert. Scale: As Noted								

Δ	LANDSCAPING
*	6" THICK MEDIAN COVER MATERIAL (CONCRETE)
○	CONTROL POINT
e/z	ROADWAY CROSS-SLOPE SEE CURB GEOMETRY AND ROADWAY PROFILES
H	VERTICAL DISTANCE FROM OUTSIDE EDGE OF TOP OF PAVEMENT TO FILL CATCH POINT
φ	6" TOPSOIL UNDER ALL SEEDED AREAS, SOD AND ROADSIDE LANDSCAPING UNLESS OTHERWISE NOTED

H	FILL SLOPE RATIO
H < 4'	6:1
4' < H < 15'	4:1
H > 15'	3:1

**SLOPE TABLE**

NOTE: DIMENSIONS ARE MEASURED PERPENDICULAR TO THE CURB FACES AND STRIPING. SEE CURB GEOMETRY SHEETS FOR CURB LAYOUTS.

**LEGEND**

POINT OF SLOPE SELECTION  
SOD / LANDSCAPING

EXISTING GROUND

CONCRETE SIDEWALK (6 INCH)

7" HMA ON 8" ABC (CL 6) ON 22" EMB MATL (CIP)(SPEC)

4" MULCHING (DECORATIVE) ON 24" TOPSOIL W/ SOIL PREPARATION

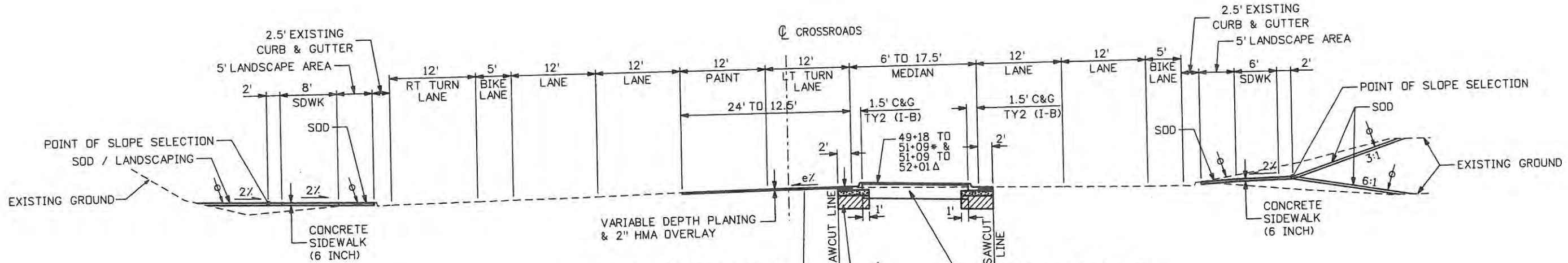
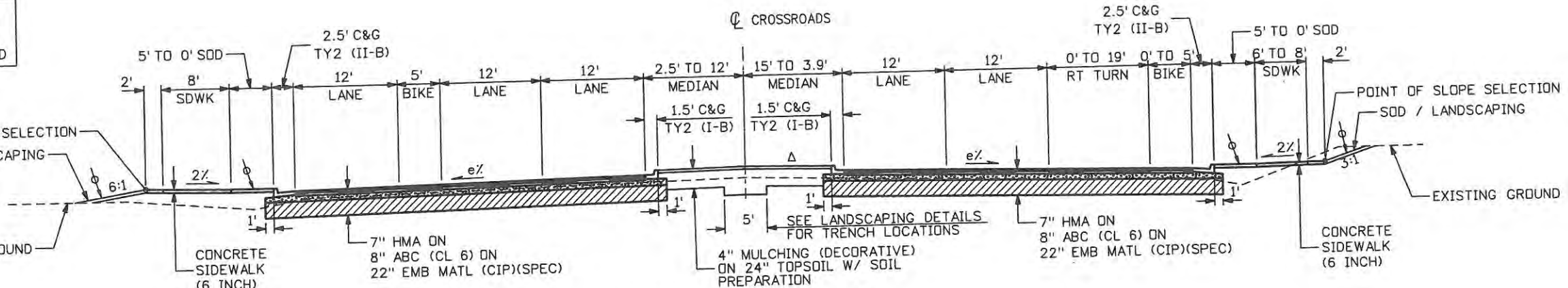
7" HMA ON 8" ABC (CL 6) ON 22" EMB MATL (CIP)(SPEC)

CONCRETE SIDEWALK (6 INCH)

POINT OF SLOPE SELECTION  
SOD / LANDSCAPING

EXISTING GROUND

**CROSSROADS BOULEVARD  
52+01 TO 53+80**



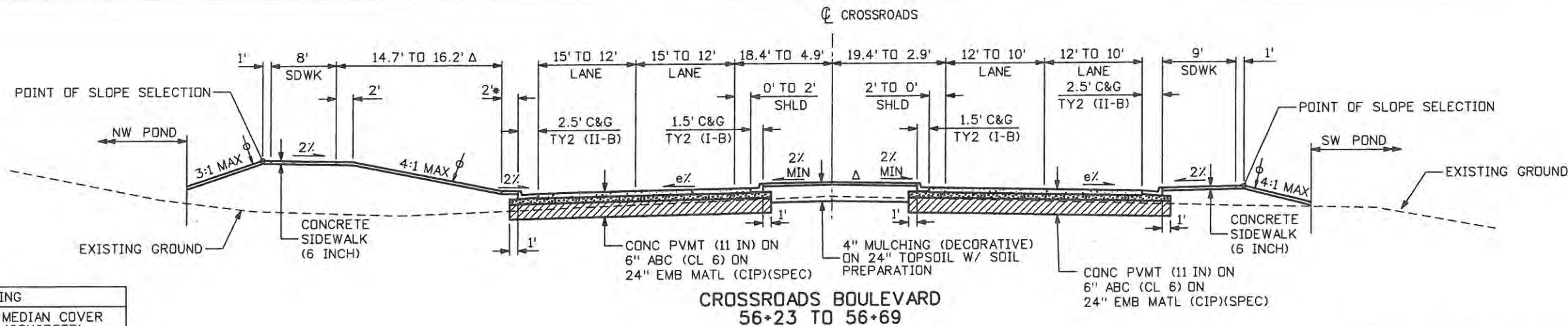
**CROSSROADS BOULEVARD  
49+18 TO 52+01**

49+18.39 TO 49+50.00: e = VARIES  
49+50 TO 52+01: e = 1.0%

<b>Computer File Information</b>		<b>Sheet Revisions</b>		<b>CITY OF LOVELAND</b> 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000		<b>TYPICAL SECTIONS CROSSROADS</b>		<b>Project No./Code</b>		
Creation Date: 6/4/07	Initials: JBK	Date:	Comments			Init.	No Revisions: 9/14/11	Revised:	Void:	Designer: JJW
Print Date: 5/1/2009	Initials: JJW							Detailer: JBK		17244
File Name: 0610031800TypicalSection01.dgn								Sheet Subset: TypSec	Subset Sheets: TS1 of 9	Sheet Number 5
Horiz. Scale: 1:15	Vert. Scale: As Noted									

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 999 18th Street Suite 2600  
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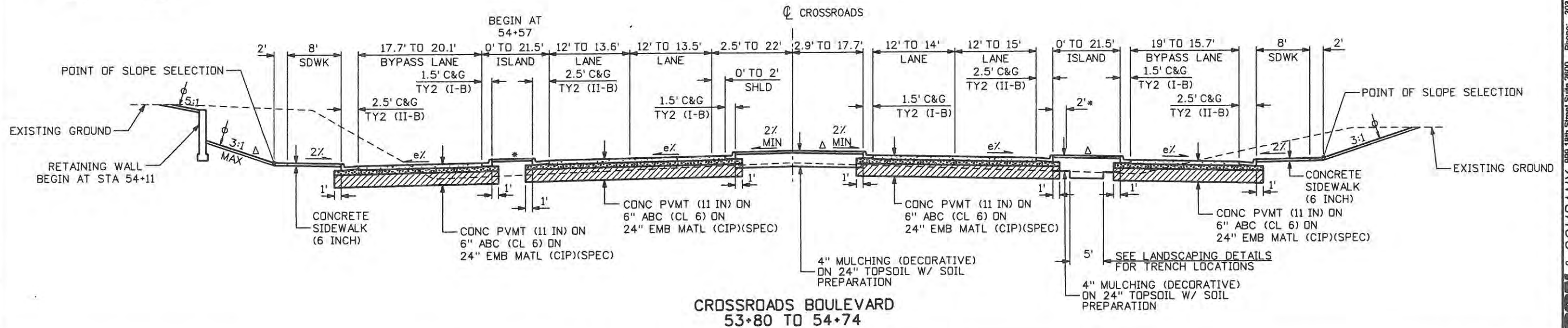
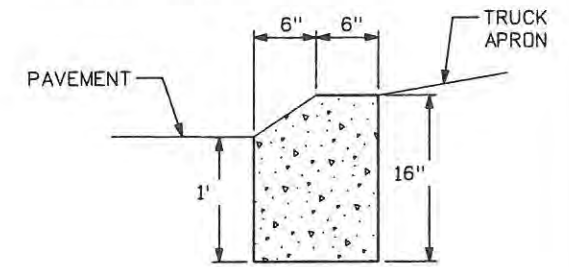
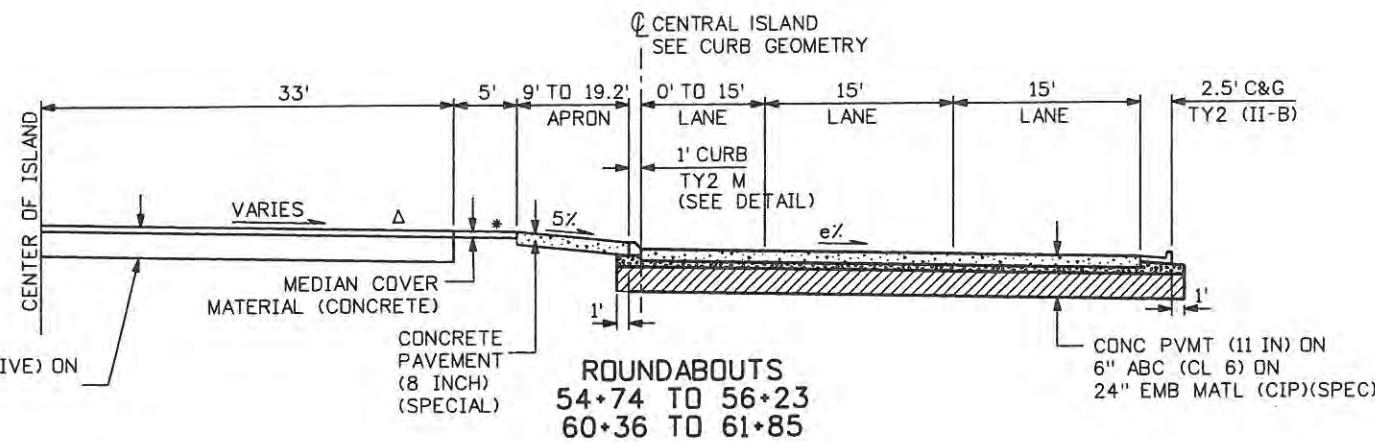
Δ	LANDSCAPING
*	6" THICK MEDIAN COVER MATERIAL (CONCRETE)
○	CONTROL POINT
e%	ROADWAY CROSS-SLOPE SEE CURB GEOMETRY AND ROADWAY PROFILES
H	VERTICAL DISTANCE FROM OUTSIDE EDGE OF TOP OF PAVEMENT TO FILL CATCH POINT
φ	6" TOPSOIL UNDER ALL SEEDED AREAS, SOD AND ROADSIDE LANDSCAPING UNLESS OTHERWISE NOTED

**LEGEND**

H	FILL SLOPE RATIO
H < 4'	6:1
4' < H < 15'	4:1
H > 15'	3:1

**SLOPE TABLE**

NOTE: DIMENSIONS ARE MEASURED PERPENDICULAR TO THE CURB FACES AND STRIPING. SEE CURB GEOMETRY SHEETS FOR CURB LAYOUTS.



**Computer File Information**

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Horiz. Scale: 1:15	Vert. Scale: As Noted

**Sheet Revisions**

Date:	Comments	Init.

**CITY OF LOVELAND**



Colorado Department of Transportation

No Revisions: 9/14/11  
Revised:  
Void:

**TYPICAL SECTIONS CROSSROADS AND ROUNDABOUTS**

Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: TypSec	Subset Sheets: TS2 of 9

**Project No./Code**

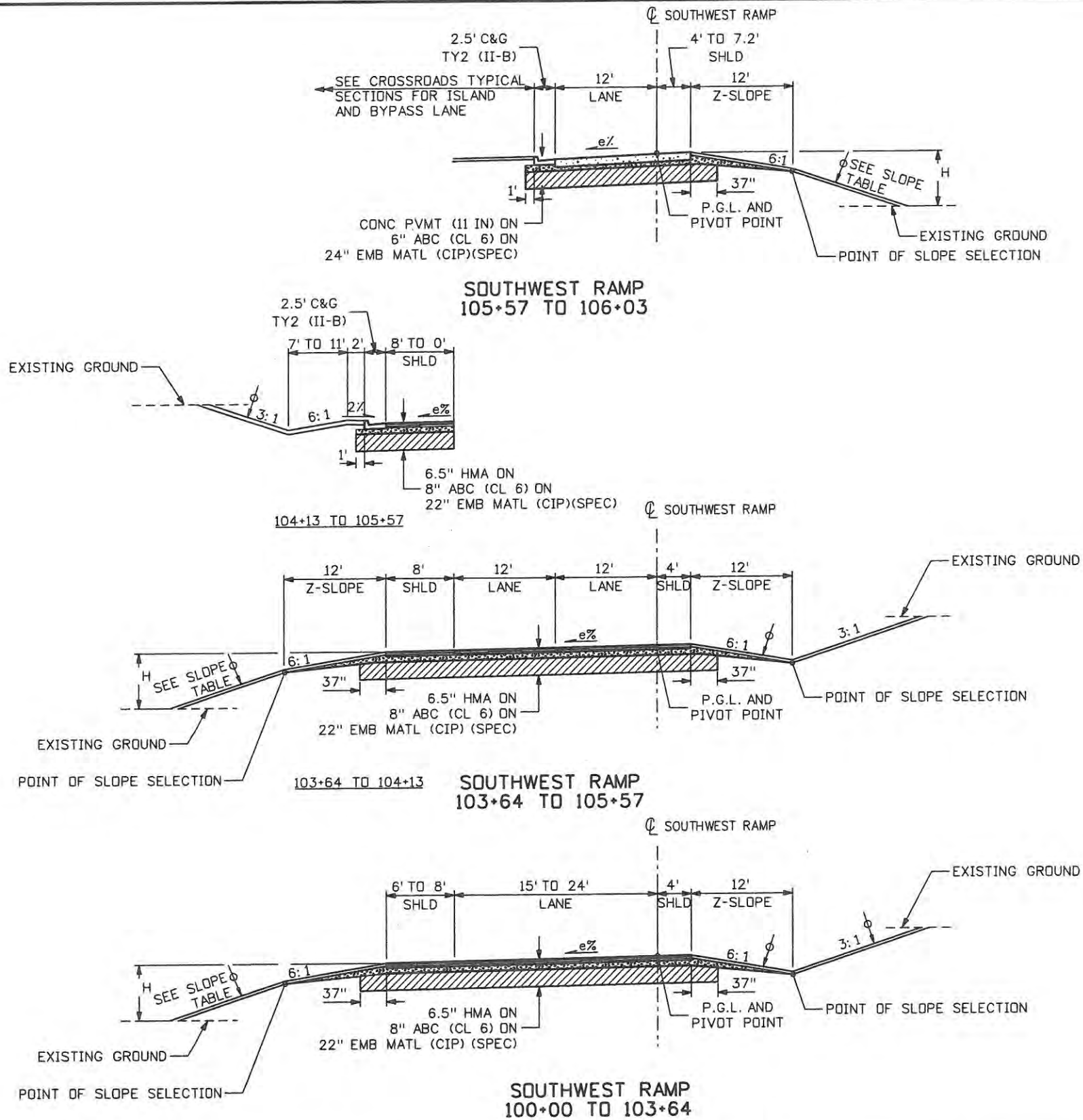
ES4 0253-207
17244
Sheet Number 6

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◦	CONTROL POINT
e/z	ROADWAY CROSS-SLOPE SEE CURB GEOMETRY AND ROADWAY PROFILES
H	VERTICAL DISTANCE FROM OUTSIDE EDGE OF TOP OF PAVEMENT TO FILL CATCH POINT
φ	6" TOPSOIL UNDER ALL SEEDED AREAS, SDD AND ROADSIDE LANDSCAPING UNLESS OTHERWISE NOTED

**LEGEND**

H	FILL SLOPE RATIO
H < 4'	6:1
4' < H < 15'	4:1
H > 15'	3:1

**SLOPE TABLE**



**Computer File Information**

Creation Date: 05/01/07	Initials: JBK
Print Date: 5/1/2009	Initials: JBK
File Name: 0610031800TypicalSection01.dgn	
Horiz. Scale: 1:15	Vert. Scale: As Noted

**Sheet Revisions**

Date:	Comments	Init.

**CITY OF LOVELAND**



500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000



Colorado Department  
of Transportation

No Revisions: 7/14/11
Revised:
Void:

**TYPICAL SECTIONS  
SOUTHWEST RAMP**

Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: TypSec	Subset Sheets: TS6 of 9

**Project No./Code**

ES4 0253-207
17244
Sheet Number 7

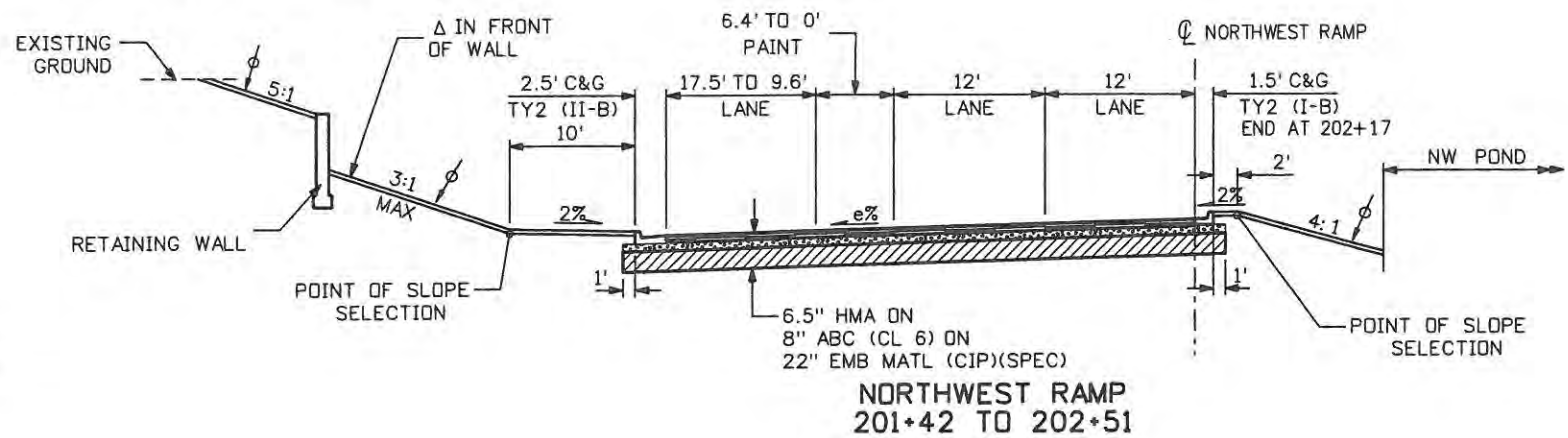
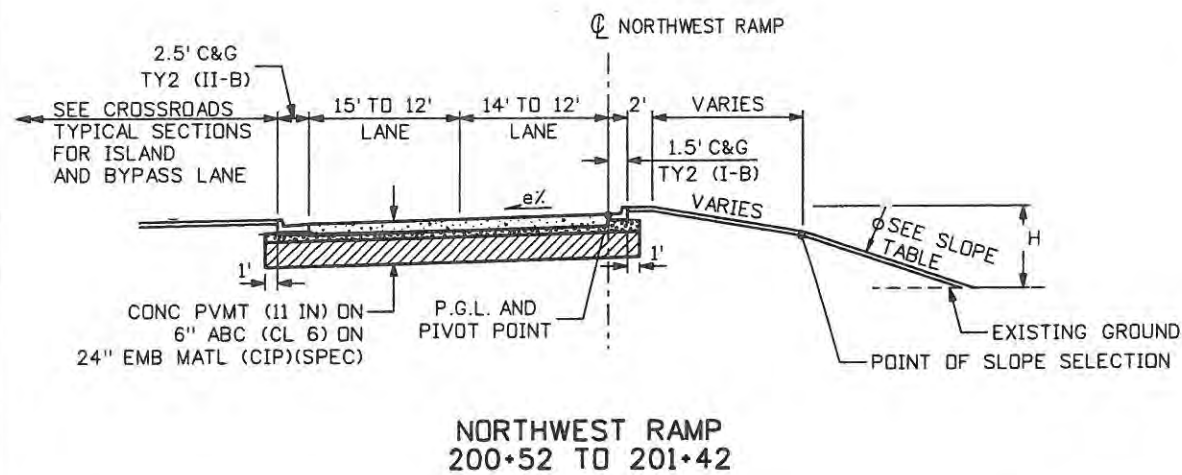
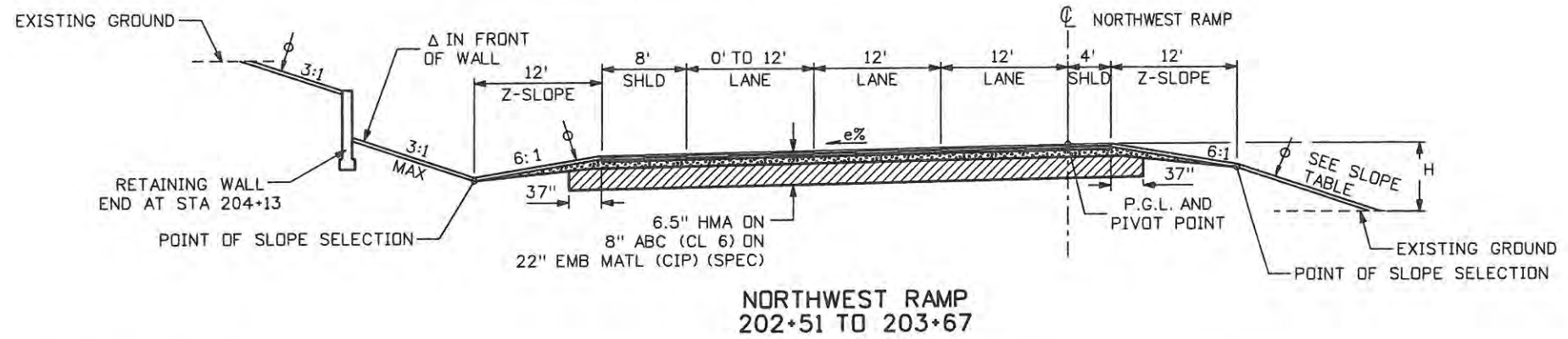
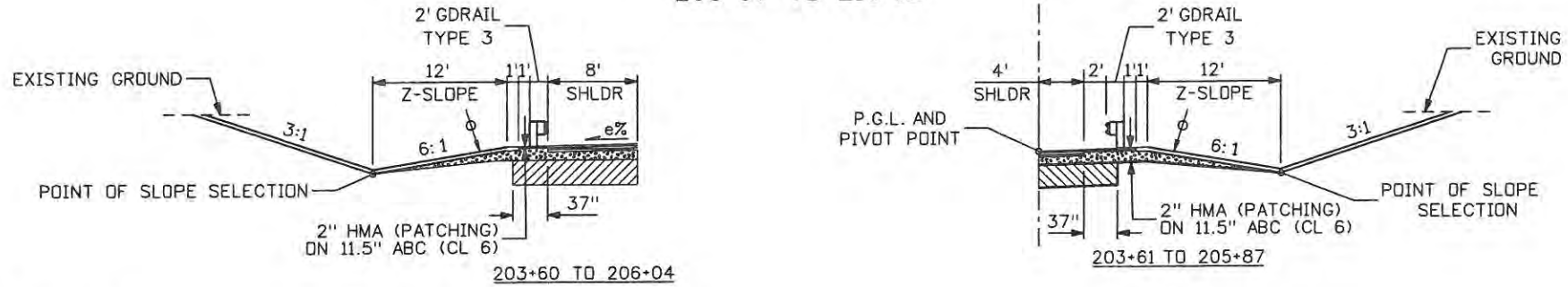
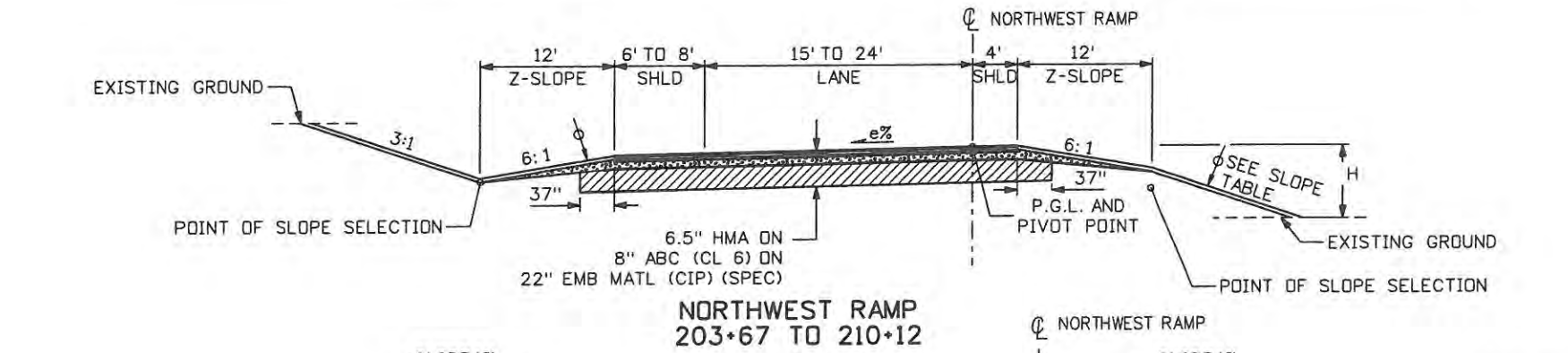


Δ	LANDSCAPING
*	6" THICK MEDIAN COVER MATERIAL (CONCRETE)
○	CONTROL POINT
e%	ROADWAY CROSS-SLOPE SEE CURB GEOMETRY AND ROADWAY PROFILES
H	VERTICAL DISTANCE FROM OUTSIDE EDGE OF TOP OF PAVEMENT TO FILL CATCH POINT
φ	6" TOPSOIL UNDER ALL SEEDED AREAS, SOD AND ROADSIDE LANDSCAPING UNLESS OTHERWISE NOTED

**LEGEND**

H	FILL SLOPE RATIO
H < 4'	6:1
4' < H < 15'	4:1
H > 15'	3:1

**SLOPE TABLE**



**Computer File Information**

Creation Date: 05/30/07	Initials: JBK
Print Date: 5/1/2009	Initials: JJW
File Name: 0610031800TypicalSection01.dgn	
Horiz. Scale: 1:15	Vert. Scale: As Noted

**Sheet Revisions**

Date:	Comments	Init.

**CITY OF LOVELAND**



500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000



Colorado Department  
of Transportation

No Revisions: 9/14/11  
Revised:  
Void:

**TYPICAL SECTIONS  
NORTHWEST RAMP**

Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: TypSec	Subset Sheets: TS7 of 9

**Project No./Code**

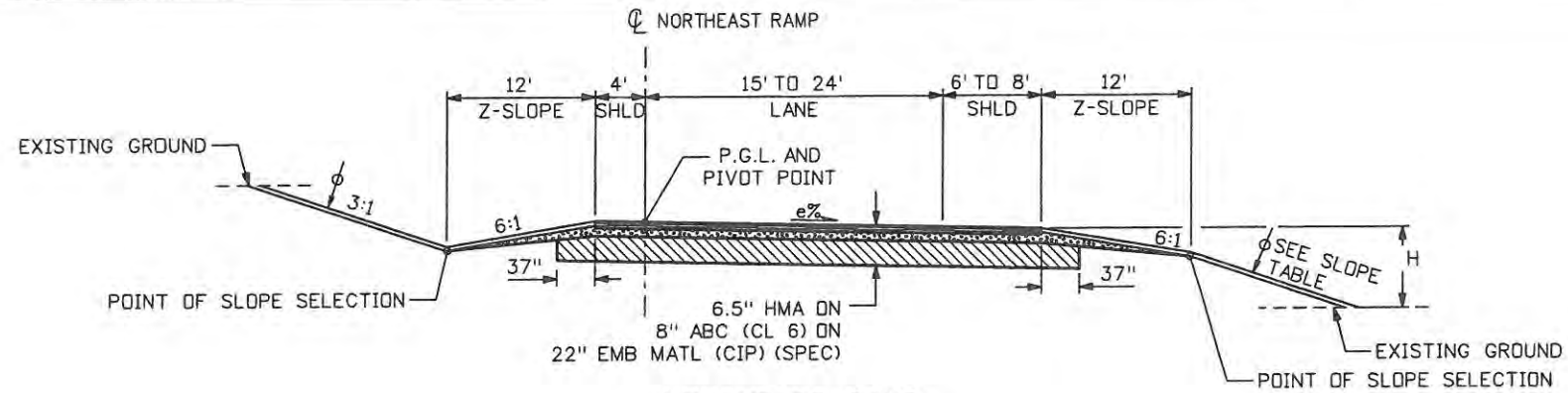
ES4 0253-207
17244
Sheet Number 8

Δ	LANDSCAPING
*	6" THICK MEDIAN COVER MATERIAL (CONCRETE)
○	CONTROL POINT
e%	ROADWAY CROSS-SLOPE SEE CURB GEOMETRY AND ROADWAY PROFILES
H	VERTICAL DISTANCE FROM OUTSIDE EDGE OF TOP OF PAVEMENT TO FILL CATCH POINT
φ	6" TOPSOIL UNDER ALL SEEDED AREAS, SOD AND ROADSIDE LANDSCAPING UNLESS OTHERWISE NOTED

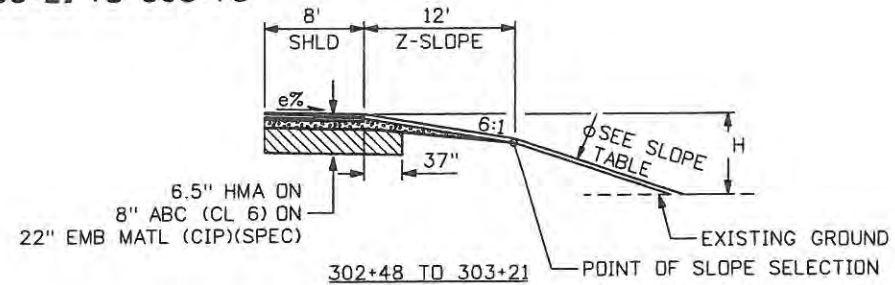
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H	FILL SLOPE RATIO
H < 4'	6:1
4' < H < 15'	4:1
H > 15'	3:1

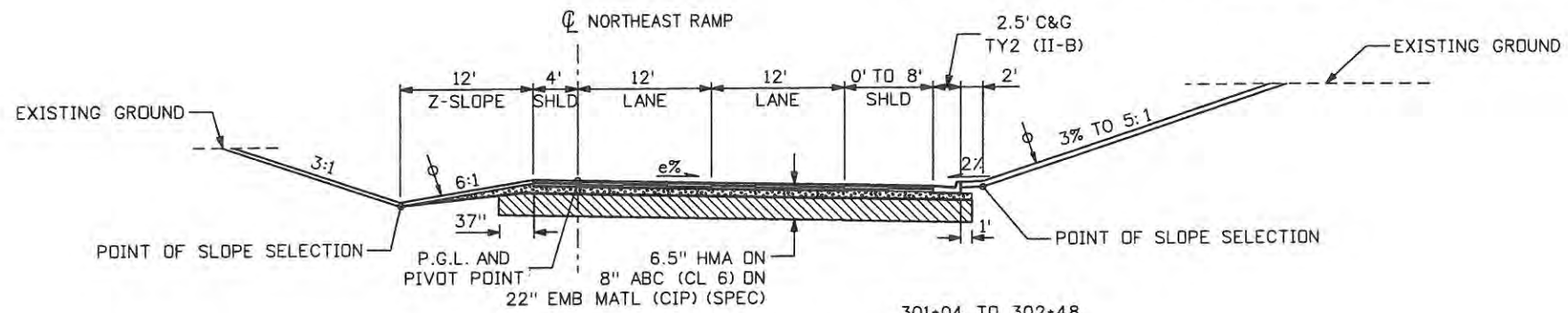
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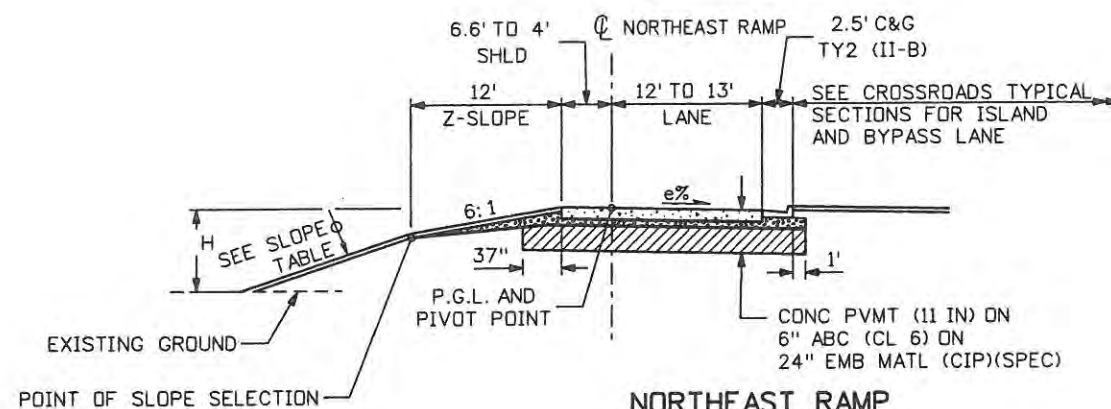
**NORTHEAST RAMP  
303+21 TO 308+73**



**302+48 TO 303+21**



**NORTHEAST RAMP  
301+04 TO 303+21**



**NORTHEAST RAMP  
300+25 TO 301+04**

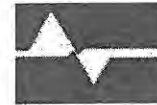
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**Sheet Revisions**

Date:	Comments	Init.

**CITY OF LOVELAND**



500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000



Colorado Department  
of Transportation

No Revisions: 9/14/11  
Revised:  
Void:

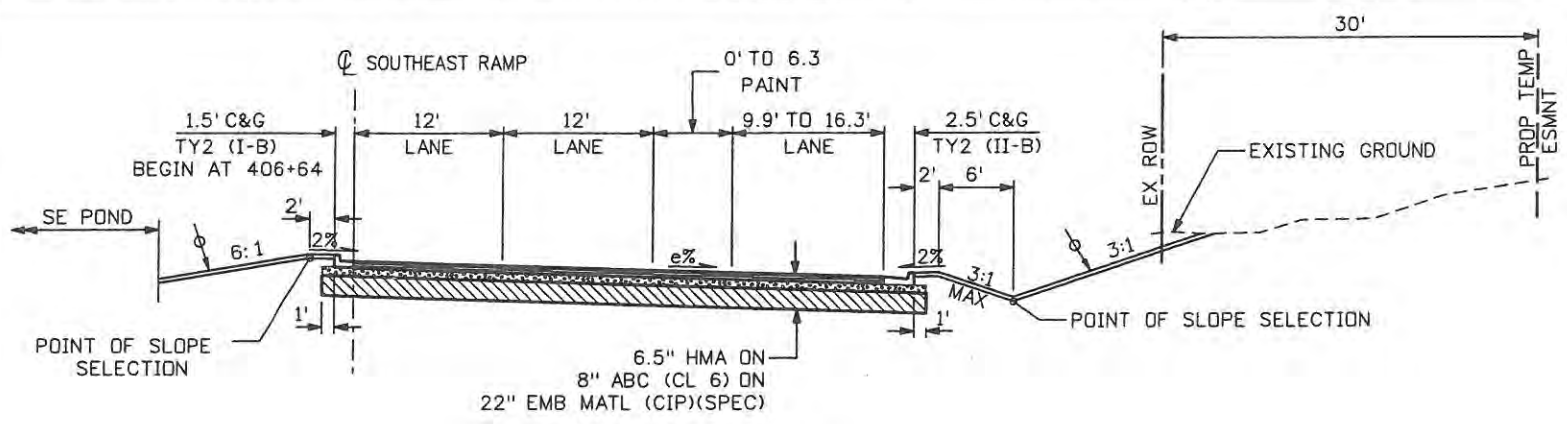
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NORTHEAST RAMP**

Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: TypSec	Subset Sheets: TS8 of 9

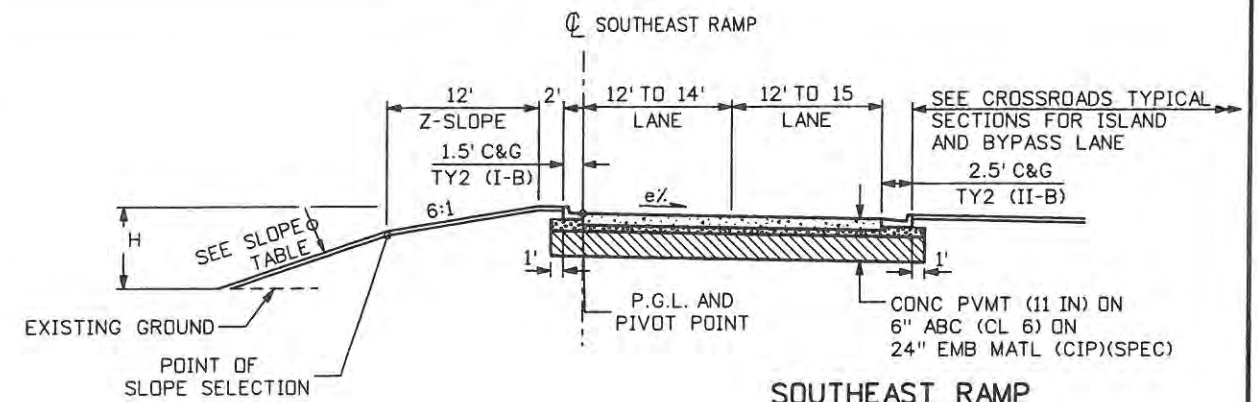
**Project No./Code**

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17244
Sheet Number 9

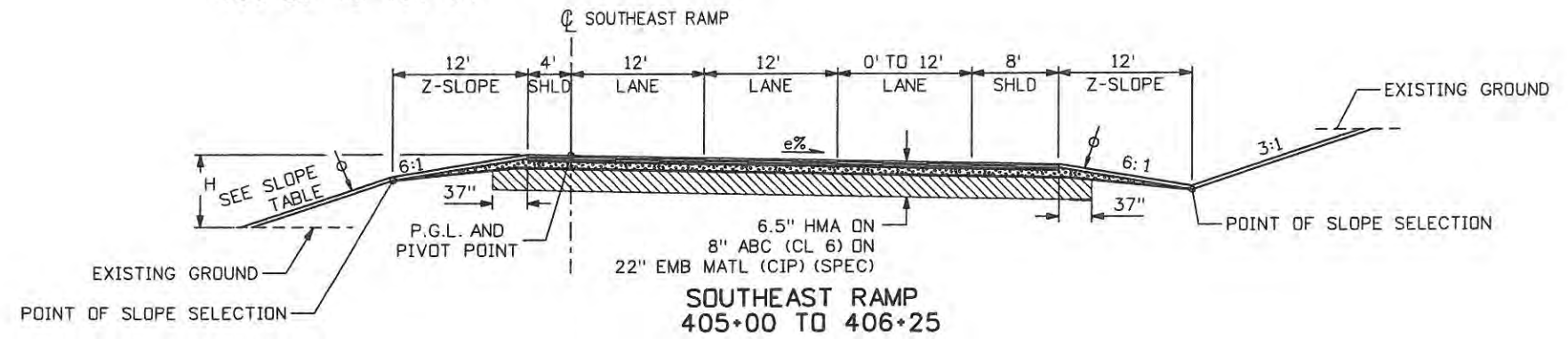




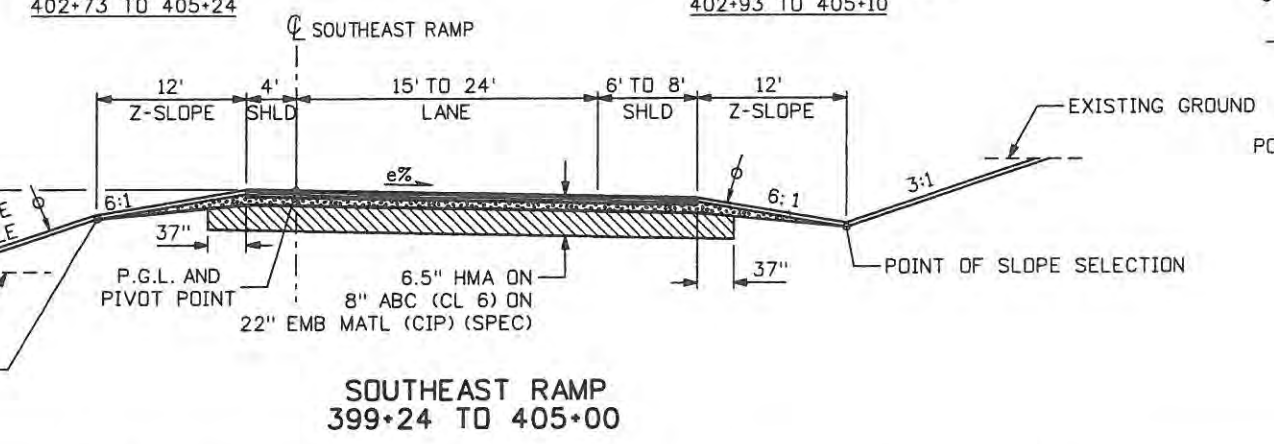
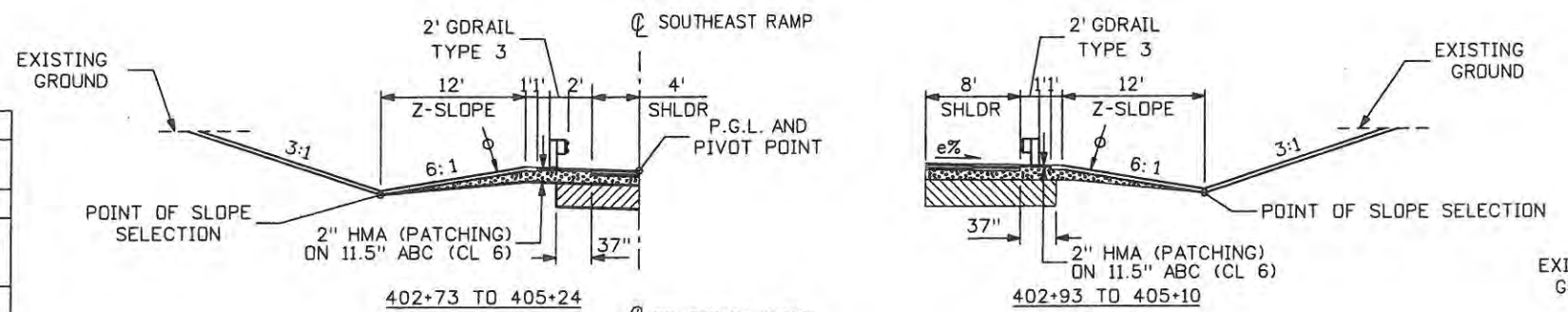
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406+25 TO 407+34**



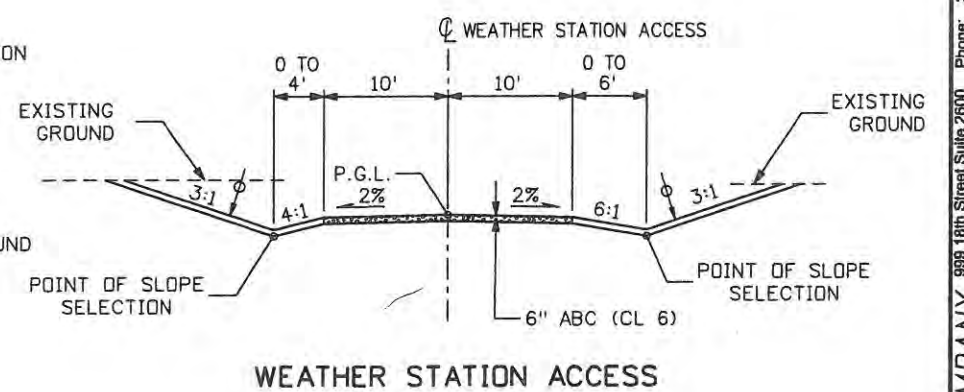
**SOUTHEAST RAMP  
407+34 TO 408+19**



**SOUTHEAST RAMP  
405+00 TO 406+25**



**SOUTHEAST RAMP  
399+24 TO 405+00**



**WEATHER STATION ACCESS**

Δ	LANDSCAPING
*	6" THICK MEDIAN COVER MATERIAL (CONCRETE)
○	CONTROL POINT
e%	ROADWAY CROSS-SLOPE SEE CURB GEOMETRY AND ROADWAY PROFILES
H	VERTICAL DISTANCE FROM OUTSIDE EDGE OF TOP OF PAVEMENT TO FILL CATCH POINT
φ	6" TOPSOIL UNDER ALL SEEDED AREAS, SOD AND ROADSIDE LANDSCAPING UNLESS OTHERWISE NOTED

**LEGEND**

H	FILL SLOPE RATIO
H < 4'	6:1
4' < H < 15'	4:1
H > 15'	3:1

**SLOPE TABLE**

<b>Computer File Information</b>		<b>Sheet Revisions</b>		<b>CITY OF LOVELAND</b>		<b>TYPICAL SECTIONS SOUTHEAST RAMP</b>		<b>Project No./Code</b>	
Creation Date: 05/30/07	Initials: JBK	Date:	Comments:	Init.:	 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000 Colorado Department of Transportation	No Revisions: 9/14/11	Designer: JJW	Structure Numbers:	ES4 0253-207
Print Date: 5/1/2009	Initials: JJW					Revised:	Detailer: JBK		17244
File Name: 0610031800TypicalSection01.dgn						Void:	Sheet Subset: TypSec	Subset Sheets: TS9 of 9	Sheet Number 10
Horiz. Scale: 1:15	Vert. Scale: As Noted								

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 Engineers & Architects  
 998 18th Street Suite 2000  
 Denver, CO 80202  
 Phone: 303-297-2876  
 Fax: 303-297-2893

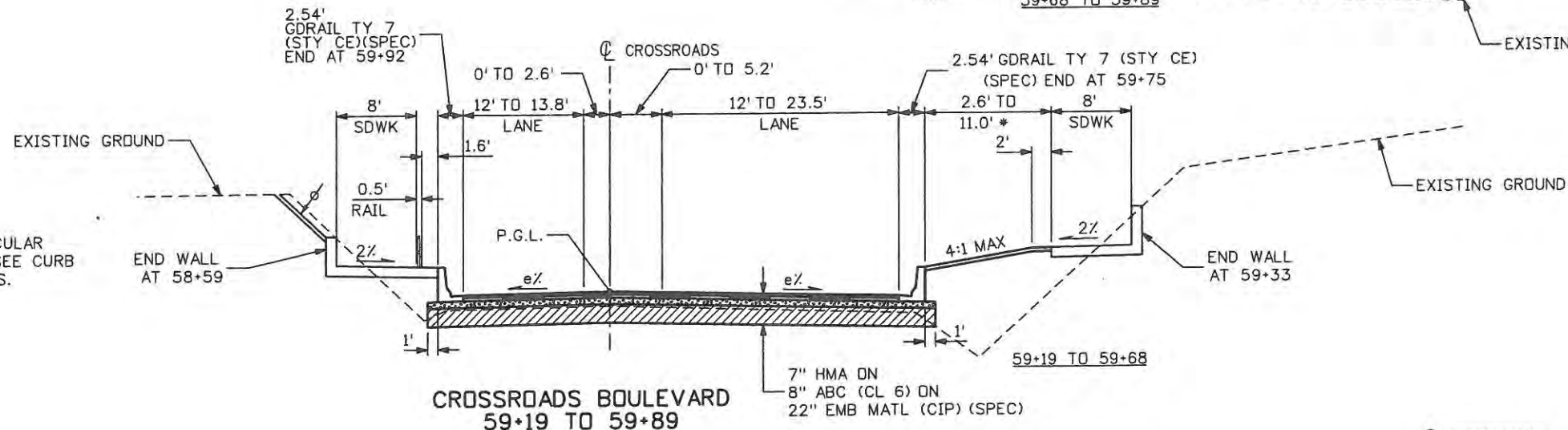
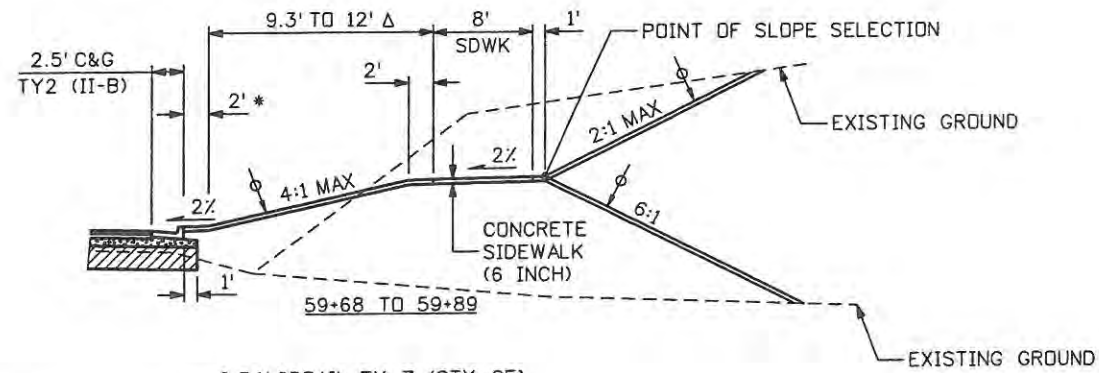
Δ	LANDSCAPING
*	6" THICK MEDIAN COVER MATERIAL (CONCRETE)
○	CONTROL POINT
e%	ROADWAY CROSS-SLOPE SEE CURB GEOMETRY AND ROADWAY PROFILES
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**LEGEND**

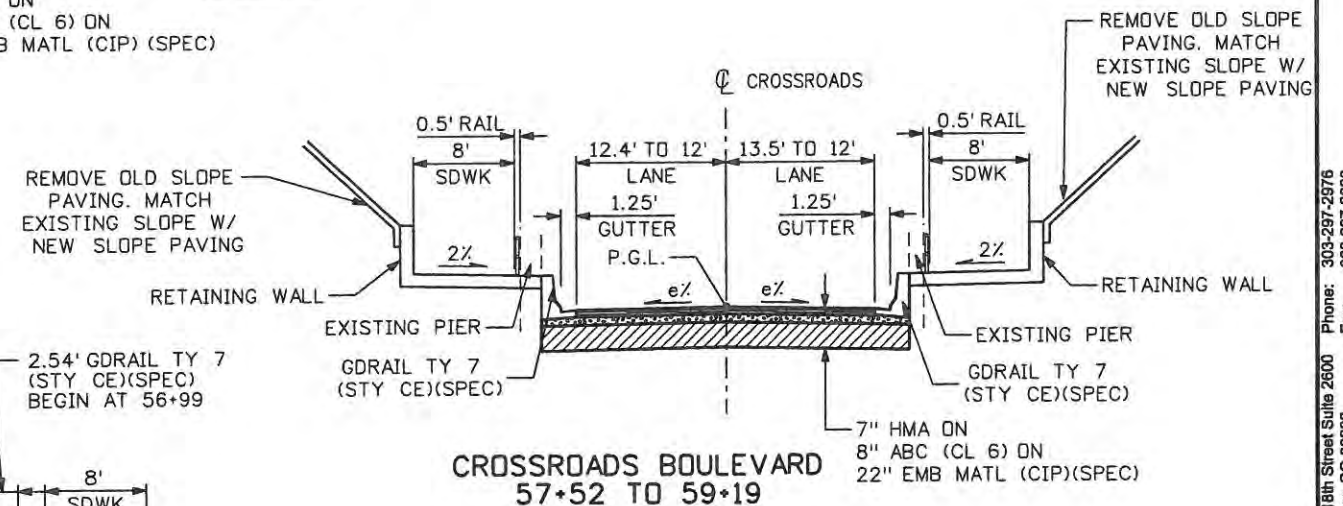
H	FILL SLOPE RATIO
H < 4'	6:1
4' < H < 15'	4:1
H > 15'	3:1

**SLOPE TABLE**

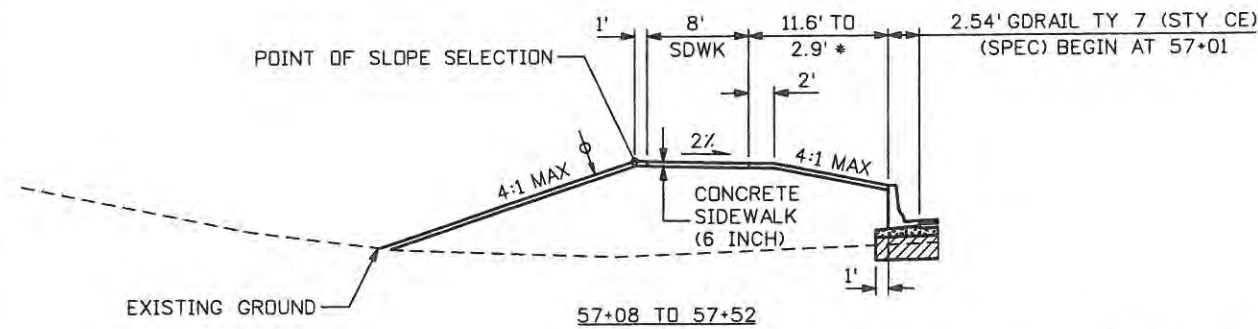
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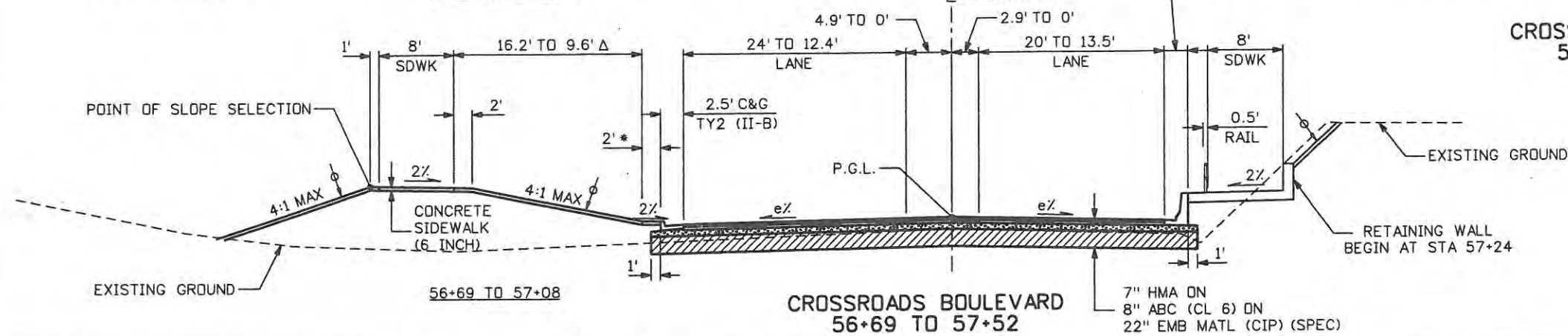
**CROSSROADS BOULEVARD  
59+19 TO 59+89**



**CROSSROADS BOULEVARD  
57+52 TO 59+19**



57+08 TO 57+52



**CROSSROADS BOULEVARD  
56+69 TO 57+08**

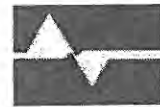
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Print Date: 5/1/2009	Initials: JJW
File Name: 0610031800TypicalSection01.dgn	
Horiz. Scale: 1:15	Vert. Scale: As Noted

**Sheet Revisions**

Date:	Comments	Init.

**CITY OF LOVELAND**



500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000



Colorado Department  
of Transportation

No Revisions: 7/14/11  
Revised:  
Void:

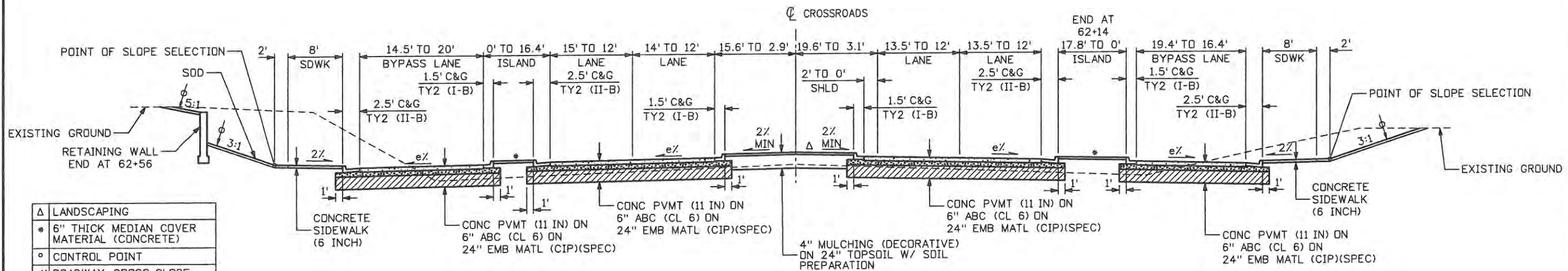
**TYPICAL SECTIONS  
CROSSROADS**

Designer: JJW	Structure Numbers
Detailer: JJW	
Sheet Subset: TypSec	Subset Sheets: TS3 of 9

**Project No./Code**

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**CROSSROADS BOULEVARD  
61+85 TO 62+72**

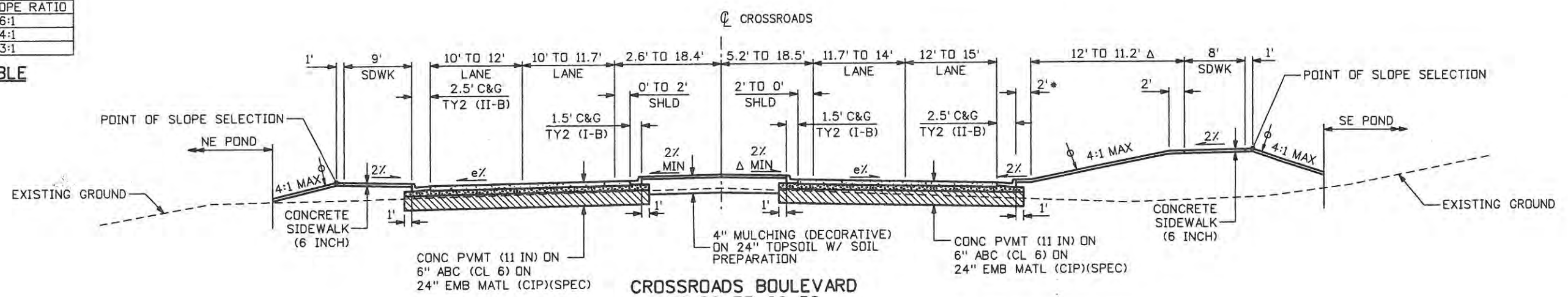
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Δ	LANDSCAPING
*	6" THICK MEDIAN COVER MATERIAL (CONCRETE)
○	CONTROL POINT
e%	ROADWAY CROSS-SLOPE SEE CURB GEOMETRY AND ROADWAY PROFILES
H	VERTICAL DISTANCE FROM OUTSIDE EDGE OF TOP OF PAVEMENT TO FILL CATCH POINT
φ	6" TOPSOIL UNDER ALL SEEDS AREAS, SOD AND ROADSIDE LANDSCAPING UNLESS OTHERWISE NOTED

**LEGEND**

H	FILL SLOPE RATIO
H < 4'	6:1
4' < H < 15'	4:1
H > 15'	3:1

**SLOPE TABLE**



**CROSSROADS BOULEVARD  
59+89 TO 60+36**

Computer File Information	
Creation Date: 10/22/08	Initials: JJW
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File Name: 0610031800TypicalSection01.dgn	
Horiz. Scale: 1:15	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

Colorado Department of Transportation

No Revisions: 9/14/11
Revised:
Void:

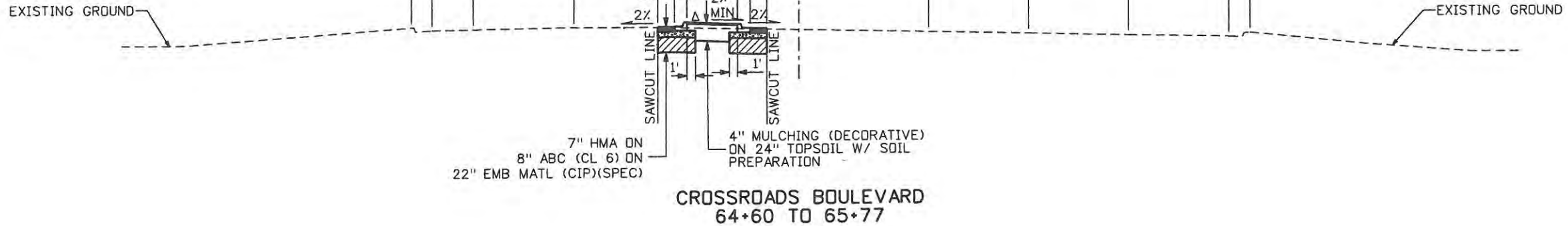
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Designer: JJW	Structure Numbers
Detailer: JJW	
Sheet Subset: TypSec	Subset Sheets: TS4 of 9

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	17244
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 Phone: 303-297-2576  
 Fax: 303-297-2893

Δ	LANDSCAPING
*	6" THICK MEDIAN COVER MATERIAL (CONCRETE)
◦	CONTROL POINT
e/	ROADWAY CROSS-SLOPE SEE CURB GEOMETRY AND ROADWAY PROFILES
H	VERTICAL DISTANCE FROM OUTSIDE EDGE OF TOP OF PAVEMENT TO FILL CATCH POINT
φ	6" TOPSOIL UNDER ALL SEEDED AREAS, SOD AND ROADSIDE LANDSCAPING UNLESS OTHERWISE NOTED

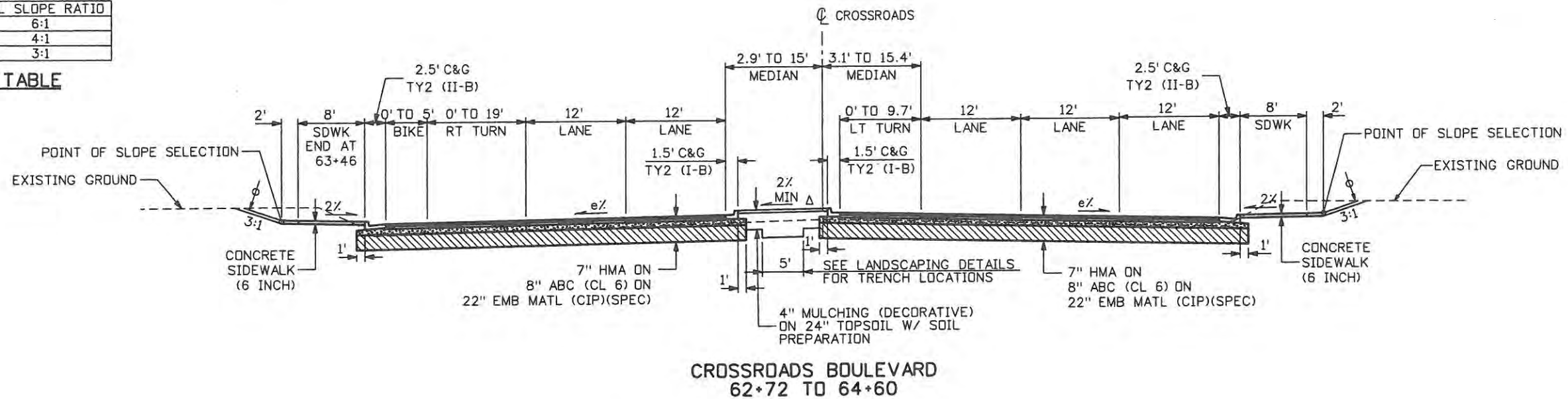
**LEGEND**



NOTE: DIMENSIONS ARE MEASURED PERPENDICULAR TO THE CURB FACES AND STRIPING. SEE CURB GEOMETRY SHEETS FOR CURB LAYOUTS.

H	FILL SLOPE RATIO
H < 4'	6:1
4' < H < 15'	4:1
H > 15'	3:1

**SLOPE TABLE**



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Print Date: 5/1/2009	Initials: JJW
File Name: 0610031800TypicalSection01.dgn	
Horiz. Scale: 1:15	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

Colorado Department of Transportation

No Revisions: 2/14/11
Revised:
Void:

TYPICAL SECTIONS CROSSROADS	
Designer: JJW	Structure Numbers
Detailer: JJW	Subst Sheets: TS5 of 9
Sheet Subset: TypSec	

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WILSON & COMPANY  
 Engineers & Architects  
 999 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2883



INDEX			LONG ITEM NO.	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	PROJECT TOTALS	
BOOK	PAGE	SHEET					PLAN	AS CONST.
			201.00001	201	Clearing and Grubbing	ACRE	9.1	9.1
			202.00010	202	Removal of Tree	EACH	5	5
			202.00019	202	Removal of Inlet	EACH	1	1
			202.00021	202	Removal of Manhole	EACH	5	5
			202.00026	202	Removal of Slope and Ditch Paving	SY	1,095	1,136
			202.00035	202	Removal of Pipe	LF	627	618
			202.00037	202	Removal of End Section	EACH	8	11
			202.00070	202	Removal of Barricade	EACH	8	8
			202.00090	202	Removal of Delineator	EACH	26	26
			202.00200	202	Removal of Sidewalk	SY	90	118
			202.00201	202	Removal of Curb	LF	654	21
			202.00203	202	Removal of Curb and Gutter	LF	1,303	1,252
			202.00210	202	Removal of Concrete Pavement	SY	10,568	10,641
			202.00220	202	Removal of Asphalt Mat	SY	11,687	11,436
			202.00240	202	Removal of Asphalt Mat (Planing) Deleted by 105	SY	632	0
			202.00250	202	Removal of Pavement Marking	SF	4,206	2,274
			202.00700	202	Removal of Light Standard	EACH	3	4
			202.00810	202	Removal of Ground Sign	EACH	34	34
			202.00821	202	Removal of Sign Panel	EACH	57	
			202.00827	202	Removal of Pull Box	EACH	8	8
			202.01000	202	Removal of Fence	LF	15	15
			202.01130	202	Removal of Guardrail Type 3	LF	253	239
			202.01140	202	Removal of Guardrail Type 4	LF	276	276
			202.01200	202	Removal of Tensioned Cable Barrier	LF	1,206	1,206
			202.01300	202	Removal of End Anchorage	EACH	4	4
			202.07000	202	Obliterate Old Road	LS	1	1
			203.00010	203	Unclassified Excavation (Complete In Place)	CY	71,841	71,841
			203.00062	203	Embankment Material (Complete In Place) (Special)	CY	16,193	16,816
			203.00100	203	Muck Excavation	CY	500	623
			203.01100	203	Proof Rolling	HOUR	8	18.5
			203.01500	203	Blading	HOUR	10	9
			203.01515	203	Backhoe (Landscaping) Deleted by 105	HOUR	20	0
			203.01555	203	Dozing (Landscaping) Deleted by 105	HOUR	20	0
			203.01597	203	Potholing	HOUR	80	96
			206.00000	206	Structure Excavation	CY	4,434	4,434
			206.00100	206	Structure Backfill (Class 1)	CY	2,983	2,983
			206.00360	206	Mechanical Reinforcement of Soil	CY	1,713	1,482
			207.00205	207	Topsoil	CY	8,295	8,295
			207.00210	207	Stockpile Topsoil	CY	4,894	4,894

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Print Date: 5/19/2009	Initials:
File Name: 0610031800SDAQ.dgn	
Horiz. Scale: 1:100	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000



Colorado Department of Transportation

No Revisions:	
Revised: 9/14/11	
Void:	

SUMMARY OF APPROXIMATE QUANTITIES	
Designer: JJW	Structure Numbers
Detailer: JJW	
Sheet Subset: SDAQ	Subset Sheets: SQ1 of 6

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 Fax: 303-297-2693

INDEX			LONG ITEM NO.	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	PROJECT TOTALS	
BOOK	PAGE	SHEET					PLAN	AS CONST.
			208.00011	208	Erosion Bales (Weed Free)	EACH	50	120
			208.00020	208	Silt Fence	LF	2,450	2,251
			208.00045	208	Concrete Washout Structure	EACH	2	2
			208.00050	208	Storm Drain Inlet Protection	EACH	24	28
			208.00070	208	Stabilized Construction Entrance	EACH	7	11
			208.00103	208	Removal and Disposal of Sediment (Labor)	HOUR	40	106
			208.00105	208	Removal and Disposal of Sediment (Equipment)	HOUR	40	27.25
			208.00205	208	Erosion Control Supervisor	HOUR	350	215.5
			210.00810	210	Reset Ground Sign	EACH	8	11
			210.00815	210	Reset Sign Panel <i>Deleted by 105</i>	EACH	10	0
			210.01200	210	Reset End Anchorage	EACH	1	1
			210.04010	210	Adjust Manhole	EACH	4	6
			210.04015	210	Modify Manhole	EACH	1	1
			210.04050	210	Adjust Valve Box	EACH	2	2
			212.00005	212	Seeding (Native)	LB	49	49
			212.00006	212	Seeding (Native)	ACRE	6	9.23
			212.00011	212	Seeding (Lawn)	ACRE	0.28	0.28
			212.00032	212	Soil Conditioning	ACRE	6	9.23
			212.00047	212	Soil Preparation (Special)	ACRE	1	1.28
			212.00050	212	Sod	SF	12,439	12,439
			213.00004	213	Mulching (Weed Free Straw)	ACRE	6	9.07
			213.00005	213	Mulching (Decorative)	CF	9,438	9,438
			213.00061	213	Mulch Tackifier	LB	1,220	1,770
			213.00460	213	Metal Landscape Border (3/16x4 Inch)	LF	1,930	2,377
			213.00700	213	Landscape Boulder	EACH	10	10
			214.00000	214	Landscape Maintenance	LS	1	1
			214.00225	214	Deciduous Tree (2.5 Inch Caliper)	EACH	7	7
			214.00230	214	Deciduous Tree (3 Inch Caliper)	EACH	19	19
			214.00350	214	Deciduous Shrub (5 Gallon Container)	EACH	230	232
			214.00370	214	Deciduous Shrub (7 Gallon Container)	EACH	11	11
			214.00450	214	Evergreen Tree (5 Gallon Container)	EACH	14	14
			214.00508	214	Evergreen Tree (8 Foot) (Ball and Burlap)	EACH	15	15
			214.00650	214	Evergreen Shrub (5 Gallon Container)	EACH	241	243
			214.00908	214	Perennials (1 Quart Container)	EACH	2,989	3,081
			216.00024	216	Soil Retention Blanket (Class 4)	SY	1,194	1,111
			216.00041	216	Soil Retention Blanket (Straw/Coconut)	SY	2,400	3,897
			218.00000	218	Noxious Weed Management	LS	1	1
			304.06000	304	Aggregate Base Course (Class 6)	TON	11,851	11,510.67
			403.00720	403	Hot Mix Asphalt (Patching) (Asphalt)	TON	271	84.7

(R-D)

(R-D)

(R-D)

Computer File Information	
Creation Date: 02/05/09	Initials: JJW
Print Date: 6/19/2009	Initials:
File Name: 0610031800SQAQ.dgn	
Horiz. Scale: 1:100	Vert. Scale: As Noted

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Sheet Revisions		
Date:	Comments	Init.
6/18/09	208 Quantities	FSW
	212 Quantity	

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000



Colorado Department of Transportation

No Revisions:
Revised: 9/14/11
Void:

SUMMARY OF APPROXIMATE QUANTITIES	
Designer: JJW	Structure Numbers
Detailer: JJW	
Sheet Subset: SQAQ	Subset Sheets: SQ2 of 6

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	17244
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999 18th Street Suite 2600  
 Phone: 303-297-2976  
 Denver, CO 80202  
 Fac: 303-297-2883  
**WILSON & COMPANY**  
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INDEX			LONG ITEM NO.	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	PROJECT TOTALS	
BOOK	PAGE	SHEET					PLAN	AS CONST.
			403.33821	403	Hot Mix Asphalt (Grading S) (100) (PG 58-28)	TON	865	
			403.33841	403	Hot Mix Asphalt (Grading S) (100) (PG 64-22)	TON	1,936	
			403.34841	403	Hot Mix Asphalt (Grading SX) (100) (PG 64-22)	TON	673	
			403.34871	403	Hot Mix Asphalt (Grading SX) (100) (PG 76-28)	TON	1,642	
			411.10255	411	Emulsified Asphalt (Slow-Setting)	GAL	1,433	
			412.00600	412	Concrete Pavement (6 Inch)	SY	28	
			412.00801	412	Concrete Pavement (8 Inch) (Special)	SY	597	
			412.01100	412	Concrete Pavement (11 Inch)	SY	7,846	
			420.00110	420	Geotextile (Drainage) (Class A)	SY	294	
			503.00048	503	Drilled Caisson (48 Inch)	LF	82	
			504.04420	504	Precast Panel Facing	SF	5,002	
			504.06400	504	Soil Nail Wall	SF	1,236	
			506.00030	506	Grouted Riprap	CY	93	
			506.00206	506	Riprap (6 Inch)	CY	6	
			506.00212	506	Riprap (12 Inch)	CY	26	
			506.00218	506	Riprap (18 Inch)	CY	4	
			507.00000	507	Concrete Slope and Ditch Paving	CY	114	
			514.00201	514	Pedestrian Railing (Steel)(Special)	LF	567	
			601.01000	601	Concrete Class B	CY	7	
			601.03000	601	Concrete Class D	CY	177	
			601.40005	601	Cut Stone Veneer	SF	1,575	
			601.40302	601	Structural Concrete Coating (Anti-Graffiti)	SF	16,084	
			602.00000	602	Reinforcing Steel	LB	7,536	
			603.01185	603	18 Inch Reinforced Concrete Pipe (Complete In Place)	LF	484	
			603.01245	603	24 Inch Reinforced Concrete Pipe (Complete In Place)	LF	942	
			603.01305	603	30 Inch Reinforced Concrete Pipe (Complete In Place)	LF	49	
			603.02185	603	23x14 Inch Reinforced Concrete Pipe (Complete In Place)	LF	190	
			603.02305	603	38x24 Inch Reinforced Concrete Pipe Elliptical (Complete In Place)	LF	93	
			603.05018	603	18 Inch Reinforced Concrete End Section	EACH	1	
			603.05024	603	24 Inch Reinforced Concrete End Section	EACH	3	
			603.05030	603	30 Inch Reinforced Concrete End Section	EACH	1	
			603.05118	603	23x14 Inch Reinforced Concrete End Section Elliptical	EACH	2	
			603.05130	603	38x24 Inch Reinforced Concrete End Section Elliptical	EACH	1	
			603.11180	603	18 Inch Corrugated Aluminum Pipe	LF	171	
			603.50006	603	6 Inch Plastic Pipe	LF	4	
			604.00305	604	Inlet Type C (5 Foot)	EACH	4	
			604.00350	604	Inlet Type C (Special)	EACH	2	
			604.00505	604	Inlet Type D (5 Foot)	EACH	1	
			604.19105	604	Inlet Type R L 5 (5 Foot)	EACH	10	

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**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000



Colorado Department  
of Transportation

SUMMARY OF APPROXIMATE QUANTITIES	
No Revisions:	
Revised:	
Void: 9/14/11	
Designer: JJW	Structure Numbers
Detailer: JJW	Subset Sheets: SQ3 of 6
Sheet Subset: SOAQ	

Project No./Code
ES4 0253-207
17244
Sheet Number 16

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INDEX			LONG ITEM NO.	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	PROJECT TOTALS	
BOOK	PAGE	SHEET					PLAN	AS CONST.
			403.33821	403	Hot Mix Asphalt (Grading S) (100) (PG 58-28)	TON	0	0
			403.33841	403	Hot Mix Asphalt (Grading S) (100) (PG 64-22)	TON	3,361	3,851.7
			403.34841	403	Hot Mlx Asphalt (Grading SX) (100) (PG 84-22)	TON	873	573.26
			403.34871	403	Hot Mlx Asphalt (Grading SX) (100) (PG 78-28)	TON	1,096	1,133.64
			411.10255	411	Emulsified Asphalt (Slow-Setting)	GAL	1,433	595
			412.00600	412	Concrete Pavement (6 Inch)	SY	28	45.4
			412.00801	412	Concrete Pavement (8 Inch) (Special)	SY	597	597
			412.01100	412	Concrete Pavement (11 Inch)	SY	7,846	7,846
			420.00110	420	Geotextile (Drainage) (Class A)	SY	294	411
			503.00048	503	Drilled Caisson (48 Inch)	LF	82	81
			504.04420	504	Precast Panel Facing	SF	5,002	4,978
			504.06400	504	Soil Nail Wall	SF	1,236	1,447
			506.00030	506	Grouted Riprap	CY	93	97
			506.00206	506	Riprap (6 Inch)	CY	8	3
			506.00212	506	Riprap (12 Inch)	CY	26	45
			506.00218	506	Riprap (18 Inch)	CY	4	6
			507.00000	507	Concrete Slope and Ditch Paving	CY	114	113.7
			514.00201	514	Pedestrian Railing (Steel)(Special)	LF	567	569
			601.01000	601	Concrete Class B	CY	7	6.9
			601.03000	601	Concrete Class D	CY	177	167.1
			601.40005	601	Cut Stone Veneer	SF	1,575	1,575
			601.40302	601	Structural Concrete Coating (Anti-Graffiti)	SF	18,084	17,897
			602.00000	602	Reinforcing Steel	LB	7,538	9,208
			603.01185	603	18 Inch Reinforced Concrete Pipe (Complete In Place)	LF	484	500
			603.01245	603	24 Inch Reinforced Concrete Pipe (Complete In Place)	LF	942	952
			603.01305	603	30 Inch Reinforced Concrete Pipe (Complete In Place)	LF	49	55
			603.02185	603	23x14 Inch Reinforced Concrete Pipe (Complete In Place)	LF	190	183
			603.02305	603	38x24 Inch Reinforced Concrete Pipe Elliptical (Complete In Place)	LF	93	95
			603.05018	603	18 Inch Reinforced Concrete End Section	EACH	1	1
			603.05024	603	24 Inch Reinforced Concrete End Section	EACH	3	3
			603.05030	603	30 Inch Reinforced Concrete End Section	EACH	1	1
			603.05118	603	23x14 Inch Reinforced Concrete End Section Elliptical	EACH	2	2
			603.05130	603	38x24 Inch Reinforced Concrete End Section Elliptical	EACH	1	1
			603.11180	603	18 Inch Corrugated Aluminum Pipe	LF	171	61
			603.50006	603	6 Inch Plastic Pipe	LF	4	4
			604.00305	604	Inlet Type C (5 Foot)	EACH	4	4
			604.00350	604	Inlet Type C (Special)	EACH	2	2
			604.00505	604	Inlet Type D (5 Foot)	EACH	1	1
			604.19105	604	Inlet Type R L 5 (5 Foot)	EACH	10	10



<b>Computer File Information</b>		<b>Sheet Revisions</b>		<b>CITY OF LOVELAND</b>  500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 Colorado Department of Transportation	<b>SUMMARY OF APPROXIMATE QUANTITIES</b>		Project No./Code
Creation Date: 02/05/09	Initials: JJW	Date: 11/04/09	Comments: Pavement Design			Init.: JJW	No Revisions:	Revised: 9/14/11
Print Date: 11/4/2009	Initials:							17244
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INDEX			LONG ITEM NO.	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	PROJECT TOTALS	
BOOK	PAGE	SHEET					PLAN	AS CONST.
			604.19405	604	Inlet Type R Special (5 Foot)	EACH	2	
			604.30005	604	Manhole Slab Base (5 Foot)	EACH	3	
			604.30010	604	Manhole Slab Base (10 Foot)	EACH	2	
			605.82100	605	Pipe Edge Drain	LF	1,214	
			605.84000	605	Subsurface Drain Outlet	LF	303	
			606.00301	606	Guardrail Type 3 (6-3 Post Spacing)	LF	800	
			606.00741	606	Guardrail Type 7 (Style CE) (Special)	LF	575	
			606.01340	606	End Anchorage Type 3D	EACH	4	
			606.02005	606	End Anchorage (Flared)	EACH	4	
			607.11525	607	Fence (Plastic)	LF	500	
			608.00006	608	Concrete Sidewalk (6 Inch)	SY	1,822	
			608.00010	608	Concrete Curb Ramp	SY	122	
			609.20011	609	Curb Type 2 (Section M)	LF	620	
			609.21010	609	Curb and Gutter Type 2 (Section I-B)	LF	3,346	
			609.21020	609	Curb and Gutter Type 2 (Section II-B)	LF	3,501	
			609.60011	609	Curb Type 6 (Section M)	LF	654	
			610.00030	610	Median Cover Material (Concrete)	SF	9,483	
			612.00001	612	Delineator (Type I)	EACH	57	
			612.00002	612	Delineator (Type II)	EACH	4	
			612.00003	612	Delineator (Type III)	EACH	4	
			612.00010	612	Delineator (Special)	EACH	10	
			613.00100	613	1 Inch Electrical Conduit	LF	360	
			613.01125	613	1-1/4 Inch Electrical Conduit (Plastic)	LF	500	
			613.01200	613	2 Inch Electrical Conduit (Plastic)	LF	8,437	
			613.01300	613	3 Inch Electrical Conduit (Plastic)	LF	960	
			613.00402	613	4 Inch Electrical Conduit (Install Only)	LF	1,316	
			613.10000	613	Wiring	LS	1	
			613.34400	613	Light Standard Metal (40 Foot)	EACH	2	
			613.40010	613	Light Standard Foundation	EACH	2	
			613.50100	613	Lighting Control Center	EACH	1	
			613.50210	613	Temporary Lighting	LS	1	
			613.70150	613	Luminaire High Pressure Sodium (150 Watt)	EACH	8	
			613.70400	613	Luminaire High Pressure Sodium (400 Watt)	EACH	2	
			614.00011	614	Sign Panel (Class I)	SF	751	
			614.00012	614	Sign Panel (Class II)	SF	235	
			614.00013	614	Sign Panel (Class III)	SF	537	
			614.00216	614	Steel Sign Post (2x2 Inch Tubing) (Special)	EACH	100	
			614.01573	614	Steel Sign Support (2-1/2 Inch Round NP-40)(Post & Slipbase)	EACH	14	
			614.41400	614	Monotube Overhead Sign Bridge (14 Inch Diameter)	EACH	2	

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**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000



Colorado Department  
of Transportation

SUMMARY OF APPROXIMATE QUANTITIES		
No Revisions:	Designer: JJW	Structure Numbers
Revised:	Detailer: JJW	
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BOOK	PAGE	SHEET					PLAN	AS CONST.
			604.19405	604	Inlet Type R Special (5 Foot)	EACH	2	2
			604.30005	604	Manhole Slab Base (5 Foot)	EACH	3	3
			604.30010	604	Manhole Slab Base (10 Foot)	EACH	2	2
			605.82100	605	Pipe Edge Drain	LF	1,214	1,214
			605.84000	605	Subsurface Drain Outlet	LF	303	303
			606.00301	606	Guardrail Type 3 (6-3 Post Spacing)	LF	800	800
			606.00741	606	Guardrail Type 7 (Style CE) (Special)	LF	575	552
			606.01340	606	End Anchorage Type 3D	EACH	4	4
			606.02005	606	End Anchorage (Flared)	EACH	4	4
			607.11525	607	Fence (Plastic)	LF	500	400
			608.00006	608	Concrete Sidewalk (6 Inch)	SY	1,822	1,958
			608.00010	608	Concrete Curb Ramp	SY	122	147
			609.20011	609	Curb Type 2 (Section M)	LF	620	649
			609.21010	609	Curb and Gutter Type 2 (Section I-B)	LF	3,346	3,282
			609.21020	609	Curb and Gutter Type 2 (Section II-B)	LF	3,501	3,437.5
			609.60011	609	Curb Type 6 (Section M) Deleted by 105	LF	654	0
			610.00030	610	Median Cover Material (Concrete)	SF	9,483	9,483
			612.00001	612	Delineator (Type I)	EACH	57	62
			612.00002	612	Delineator (Type II)	EACH	4	5
			612.00003	612	Delineator (Type III)	EACH	4	4
			612.00010	612	Delineator (Special)	EACH	10	37
			613.00100	613	1 Inch Electrical Conduit	LF	360	180
			613.01125	613	1-1/4 Inch Electrical Conduit (Plastic)	LF	500	448
			613.01200	613	2 Inch Electrical Conduit (Plastic)	LF	11,942	7,703
			613.01300	613	3 Inch Electrical Conduit (Plastic)	LF	960	979
			613.00402	613	4 Inch Electrical Conduit (Install Only)	LF	1,316	1,132
			613.10000	613	Wiring	LS	1	1
			613.34400	613	Light Standard Metal (40 Foot)	EACH	2	2
			613.40010	613	Light Standard Foundation	EACH	2	2
			613.50100	613	Lighting Control Center	EACH	1	1
			613.50210	613	Temporary Lighting	LS	1	1
			613.70150	613	Luminaire High Pressure Sodium (150 Watt)	EACH	8	8
			613.70400	613	Luminaire High Pressure Sodium (400 Watt)	EACH	2	2
			614.00011	614	Sign Panel (Class I)	SF	751	678.5
			614.00012	614	Sign Panel (Class II)	SF	235	293
			614.00013	614	Sign Panel (Class III)	SF	537	537
			614.00216	614	Steel Sign Post (2x2 Inch Tubing) (Special)	EACH	100	95
			614.01573	614	Steel Sign Support (2-1/2 Inch Round NP-40)(Post & Slipbase)	EACH	14	20
			614.41400	614	Monotube Overhead Sign Bridge (14 Inch Diameter)	EACH	2	2

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**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000



Colorado Department  
of Transportation

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SUMMARY OF APPROXIMATE QUANTITIES		
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Detailer: JJW	Subset Sheets: SQ4 of 6	
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INDEX			LONG ITEM NO.	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	PROJECT TOTALS	
BOOK	PAGE	SHEET					PLAN	AS CONST.
			614.72891	614	Telephone Interconnect Wire	LF	1,472	
			614.87010	614	Fiber Optic Cable (Single Mode) (12 Fiber)	LF	1,250	
			615.00030	615	Embankment Protector Type 3	EACH	2	
			619.40060	619	3/4 Inch Copper Pipe	LF	40	
			619.50080	619	1 Inch Plastic Pipe	LF	3,857	
			619.50100	619	1-1/4 Inch Plastic Pipe	LF	1,694	
			619.50160	619	2 Inch Plastic Pipe	LF	678	
			619.50240	619	3 Inch Plastic Pipe	LF	1,218	
			619.50320	619	4 Inch Plastic Pipe	LF	311	
			620.00002	620	Field Office (Class 2)	EACH	1	
			620.00012	620	Field Laboratory (Class 2)	EACH	1	
			620.00020	620	Sanitary Facility	EACH	3	
			621.00450	621	Detour Pavement	SY	3,341	
			623.00162	623	Drip Emitter Tubing	LF	4,554	
			623.00164	623	Drip Emitter	EACH	4,171	
			623.00186	623	3/4 Inch Flush Unit	EACH	26	
			623.01706	623	3/4 Inch Backflow Preventer	EACH	2	
			623.00205	623	4 Inch Pop-Up Spray Sprinkler	EACH	53	
			623.00332	623	4 Inch Pop-Up Rotary Sprinkler	EACH	228	
			623.03108	623	1 Inch Automatic Control Valve	EACH	40	
			623.04000	623	Control Wire 24 Volt	LF	3,200	
			623.04008	623	1 Inch Quick-Coupler Valve	EACH	6	
			623.05010	623	1-1/4 Inch Gate Valve	EACH	3	
			623.07006	623	3/4 Inch Water Meter	EACH	2	
			623.07601	623	1 Inch Flow Sensor	EACH	2	
			623.08112	623	12 Station Automatic Controller	EACH	1	
			623.08136	623	36 Station Automatic Controller	EACH	1	
			625.00000	625	Construction Surveying	LS	1	
			626.00000	626	Mobilization	LS	1	
			626.01000	626	Public Information Services	LS	1	
			627.00001	627	Pavement Marking Paint	GAL	176	
			627.00005	627	Epoxy Pavement Marking	GAL	21	
			627.00025	627	4 Inch Pavement Marking Tape (Removable)	LF	1,000	
			627.30305	627	Preformed Plastic Pavement Marking (60 Mil) (Word-Symbol)	SF	450	
			627.30310	627	Preformed Plastic Pavement Marking (60 Mil) (Xwalk-Stop)	SF	532	
			627.30405	627	Preformed Thermoplastic Pavement Marking (Word-Symbol)	SF	727	
			629.01002	629	Survey Monument (Type 2)	EACH	3	
			629.01110	629	Locate Monuments	HOUR	4	
			630.00000	630	Flagging	HOUR	5,000	

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**CITY OF LOVELAND**

500 E. THIRD STREET  
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970-962-2000



Colorado Department of Transportation

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SUMMARY OF APPROXIMATE QUANTITIES	
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INDEX			LONG ITEM NO.	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	PROJECT TOTALS	
BOOK	PAGE	SHEET					PLAN	AS CONST.
			614.72891	614	Telephone Interconnect Wire	LF	1,472	1,500
			614.75855	614	Traffic Signal Controller Cabinet (Install Only)	EACH	1	1
			614.87010	614	Fiber Optic Cable (Single Mode) (12 Fiber)	LF	1,250	1,360
			615.00030	615	Embankment Protector Type 3 Deleted by 105	EACH	2	0
			619.40060	619	3/4 Inch Copper Pipe	LF	40	40
			619.50080	619	1 Inch Plastic Pipe	LF	3,857	4,197
			619.50100	619	1-1/4 Inch Plastic Pipe	LF	1,694	2,334
			619.50160	619	2 Inch Plastic Pipe	LF	678	1,120
			619.50240	619	3 Inch Plastic Pipe	LF	1,218	1,510
			619.50320	619	4 Inch Plastic Pipe	LF	311	560
			620.00002	620	Field Office (Class 2)	EACH	1	1
			620.00012	620	Field Laboratory (Class 2)	EACH	1	1
			620.00020	620	Sanitary Facility	EACH	3	3
			621.00450	621	Detour Pavement	SY	3,341	3,727
			623.00162	623	Drip Emitter Tubing	LF	4,554	4,554
			623.00164	623	Drip Emitter	EACH	4,171	4,171
			623.00186	623	3/4 Inch Flush Unit	EACH	26	26
			623.01706	623	3/4 Inch Backflow Preventer	EACH	2	2
			623.00205	623	4 Inch Pop-Up Spray Sprinkler	EACH	53	80
			623.00332	623	4 Inch Pop-Up Rotary Sprinkler	EACH	228	228
			623.03108	623	1 Inch Automatic Control Valve	EACH	40	51
			623.04000	623	Control Wire 24 Volt	LF	3,200	3,200
			623.04008	623	1 Inch Quick-Coupler Valve	EACH	6	6
			623.05010	623	1-1/4 Inch Gate Valve	EACH	3	3
			623.07006	623	3/4 Inch Water Meter Deleted by 105	EACH	2	0
			623.07601	623	1 Inch Flow Sensor	EACH	2	2
			623.08112	623	12 Station Automatic Controller	EACH	1	1
			623.08136	623	36 Station Automatic Controller	EACH	1	1
			625.00000	625	Construction Surveying	LS	1	1
			626.00000	626	Mobilization	LS	1	1
			626.01000	626	Public Information Services	LS	1	1
			627.00001	627	Pavement Marking Paint	GAL	176	223
			627.00005	627	Epoxy Pavement Marking	GAL	21	26
			627.00025	627	4 Inch Pavement Marking Tape (Removable)	LF	1,000	622
			627.30305	627	Preformed Plastic Pavement Marking (60 Mil) (Word-Symbol) Deleted by 105	SF	450	0
			627.30310	627	Preformed Plastic Pavement Marking (60 Mil) (Xwalk-Stop) Deleted by 105	SF	532	0
			627.30405	627	Preformed Thermoplastic Pavement Marking (Word-Symbol)	SF	727	790
			629.01002	629	Survey Monument (Type 2) Deleted by 105	EACH	3	0
			629.01110	629	Locate Monuments	HOUR	4	4
			630.00000	630	Flagging	HOUR	5,000	3,367

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**CITY OF LOVELAND**

500 E. THIRD STREET  
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970-962-2000



Colorado Department  
of Transportation

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SUMMARY OF APPROXIMATE QUANTITIES	
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Detailer: JJW	
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INDEX			LONG ITEM NO.	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	PROJECT TOTALS	
BOOK	PAGE	SHEET					PLAN	AS CONST.
			630.00003	630	Uniformed Traffic Control Deleted by 105	HOUR	300	0
			630.00007	630	Traffic Control Inspection	DAY	80	159
			630.00012	630	Traffic Control Management	DAY	200	211
			630.80002	630	Flashing Beacon (Solar)	EACH	4	4 (R-1)
			630.80335	630	Barricade (Type 3 M-A) (Temporary)	EACH	12	12
			630.80341	630	Construction Traffic Sign (Panel Size A)	EACH	102	98 (R-1)
			630.80342	630	Construction Traffic Sign (Panel Size B)	EACH	37	62 (R-1)
			630.80344	630	Construction Traffic Sign (Special)	SF	191	190.5
			630.80355	630	Portable Message Sign Panel	EACH	4	4
			630.80356	630	Advance Warning Flashing or Sequencing Arrow Panel (A Type)	EACH	4	4
			630.80358	630	Advance Warning Flashing or Sequencing Arrow Panel (C Type)	EACH	1	1
			630.80359	630	Portable Message Sign Panel	DAY	45	28
			630.80360	630	Drum Channelizing Device	EACH	200	148
			630.80367	630	Portable Traffic Speed Monitor Deleted by 105	EACH	2	0
			630.80370	630	Concrete Barrier (Temporary)	LF	3,097	3,396
			630.80380	630	Traffic Cone	EACH	100	100
			630.85010	630	Impact Attenuator (Temporary)	EACH	2	2
			630.85041	630	Impact Attenuator (Truck Mounted Attenuator) (Temporary) Deleted by 105	DAY	20	0
			700.70010	700	F/A Minor Contract Revisions	FA	1	1
			700.70012	700	F/A Asphalt Pavement Incentive	FA	1	1
			700.70016	700	F/A Fuel Cost Adjustment	FA	1	1
			700.70018	700	F/A Roadway Smoothness Incentive	FA	1	0
			700.70019	700	F/A Asphalt Cement Cost Adjustment	FA	1	1
			700.70022	700	F/A OJT Colorado Training Program	FA	1	0
			700.70023	700	F/A On-The-Job Trainee	FA	1	1
			700.70230	700	F/A Communication Lines - Qwest	FA	1	1
			700.70380	700	F/A Erosion Control	FA	1	0

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6/18/09	Added 630.80002	FSW
	Updated Quantities	

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000




**Colorado Department of Transportation**

No Revisions:
Revised: 7/14/11
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SUMMARY OF APPROXIMATE QUANTITIES		
Designer: JJW	Structure	
Detailer: JJW	Numbers	
Sheet Subset: SDAQ	Subset Sheets: SQ6 of 6	

Project No./Code	ES4 0253-207
	17244
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**WILSON & COMPANY**  
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INDEX			LONG ITEM NO.	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	PROJECT TOTALS	
BOOK	PAGE	SHEET					PLAN	AS CONST.
				208.00002	EROSION LOG (12 INCH) CMO # 2	LF	0	3,280
				613.01200	2" ELECTRICAL CONDUIT (PLASTIC) (DE-ICING) CMO # 6	LF	0	4,159
				900.00014	COMPENSATION FOR QWEST DELAY CMO # 5	LS	0	1
				614.75855	TRAFFIC SIGNAL CONTROL CABINET (INSTALL ONLY) CMO # 6	EACH	0	1
				900	BLOCKOUTS CMO # 6			
				601.40301	STRUCTURAL CONCRETE COATING MCR LINE # 1	SF	0	16,084
				607.00010	END POSTS MCR LINE # 3	EACH	0	4
				607.00010	LINE AND CORNER POSTS MCR LINE # 4	EACH	0	3
				607.01100	FENCE W/ WOODEN POSTS MCR LINE # 5	LF	0	486
				202.05150	SANDBLASTING MCR LINE # 6	SF	0	165
				420.00200	GEOTEXTILE (WEED BARRIER) MCR LINE # 7	SY	0	3,751
				613.06000	METER POLE MCR LINE # 8	EACH	0	1
				615.00050	EMBANKMENT PROTECTOR TYPE 5 MCR LINE # 9	EACH	0	2
				627.30407	THERMOPLASTIC PAVEMENT MARKING (W-S) (SPECIAL) MCR LINE # 10	SF	0	851
				627.30411	THERMOPLASTIC PAVEMENT MARKING (Xwalk-Stop) (SPECIAL) MCR LINE # 11	SF	0	914
				900.00007	METAL HALIDE BULBS (100 WATT) MCR LINE # 12	EACH	0	8
				900.00004	ADDITIONAL CONCRETE FOR SLOPE PAVING MCR LINE # 13	CY	0	50
				202.00821	REMOVAL OF SIGN PANEL MCR LINE # 14	EACH	0	15
				900.00007	CONCRETE CORING MCR LINE # 15	EACH	0	23
				700	GROUND HEATING MCR LINE # 2	FA	0	1
				900.00006	PRICE REDUCTION FOR CONCRETE	00L	0	-17,587.30
				700.70013	CONCRETE INCENTIVE PAYMENT	FA	0	1
				700	RETAINING WALL MCR LINE # 16	FA	0	1

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Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-982-2000



Colorado Department of Transportation

No Revisions:	
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SUMMARY OF APPROXIMATE QUANTITIES	
Designer: JJW	Structure Numbers
Detailer: JJW	Subset Sheets: SQ6 of 6
Sheet Subset: SDAQ	

Project No./Code	ES4 0253-207
	17244
Sheet Number	19A

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TABULATION OF REMOVALS

LOCATION	SIDE	REMOVAL OF TREE		REMOVAL OF SIDEWALK		REMOVAL OF CURB		REMOVAL OF CURB AND GUTTER		REMOVAL OF CONCRETE PAVEMENT		REMOVAL OF ASPHALT MAT		REMOVAL OF ASPHALT MAT (PLANING)		REMOVAL OF FENCE		OBLITERATE OLD ROAD		REMARKS	
		EA		SY		LF		LF		SY		SY		SY		LF		LS			
<b>CROSSROADS BLVD</b>																					
49+18 TO 52+01	MEDIAN														<del>632</del>	0					
49+18 TO 56+89	LT & RT								<del>386</del>	363			<del>4284</del>	4345			15	15			
56+89 TO 59+94	LT & RT												<del>915</del>	1148							
59+94 TO 65+77	LT & RT			<del>90</del>	89				<del>574</del>	543			<del>4286</del>	3830							
62+40 TO 63+23	LT	5	5																		
64+95 TO 65+77	MEDIAN			0	29				<del>424</del>	170											
<b>SW RAMP</b>																					
100+00 TO 106+77	LT & RT									<del>2942</del>	2135										
103+15 TO 105+74	RT							<del>295</del>	10												WEST SIDE OF I-25
<b>NW RAMP</b>																					
200+18 TO 207+33	LT & RT									<del>2865</del>	2868	<del>2287</del>	2113								
200+93 TO 204+45	RT							<del>369</del>	11												WEST SIDE OF I-25
206+44 TO 213+37	LT																		1	1	
<b>NE RAMP</b>																					
299+50 TO 308+73	LT & RT									<del>2695</del>	2658										
<b>SE RAMP</b>																					
399+24 TO 408+52	LT & RT								<del>172</del>	176	<del>2996</del>	2980									
<b>PROJECT TOTAL</b>		5	5	<del>90</del>	118	<del>654</del>	21	<del>4,383</del>	1,252	10,568	<del>10,641</del>	11,687	<del>11,436</del>	692	0	15	15	1	1		

SEE UTILITY TABULATION FOR REMOVAL OF PULL BOXES AND UTILITY MANHOLES  
 SEE TABULATION OF GUARDRAIL FOR REMOVAL OF GUARDRAIL  
 SEE TABULATION OF DRAINAGE STRUCTURES FOR REMOVAL OF DRAINAGE ITEMS  
 SEE TABULATION OF DELINEATORS FOR REMOVAL OF DELINEATORS

OBLITERATE OLD ROAD (LUMP SUM) SHALL INCLUDE THE FOLLOWING:  
 - APPROXIMATELY 2162 SY REMOVAL OF ASPHALT MAT OF THE NORTHWEST FRONTAGE ROAD FROM 206+44 TO 213+37.  
 - SMOOTHING THE REMAINING DIRT WHERE THE ASPHALT MAT WAS REMOVED TO ELIMINATE LOW POINTS.  
 - SEE STORMWATER MANAGEMENT PLAN AND EROSION CONTROL PLANS FOR TOPSOIL, SEEDING, MULCHING, AND SOIL CONDITIONING.

1880 LF OF SILT FENCE WILL BE REQUIRED AROUND PRAIRIE DOG HABITAT IN THE SOUTHEAST RAMP INFIELD.  
 PAYMENT FOR THE REMOVAL OF PRAIRIE DOGS SHALL BE INCLUDED IN CLEARING AND GRUBBING.  
 SEE SHEETS RM3 AND RM8 OF 8.

<b>Computer File Information</b>		<b>Sheet Revisions</b>			<b>CITY OF LOVELAND</b>		<b>DOT</b>		<b>TABULATION OF REMOVALS</b>		<b>Project No./Code</b>	
Creation Date: 10/16/06	Initials: JMB	Date:	Comments	Init.	 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 COLORADO DEPARTMENT OF TRANSPORTATION	No Revisions:	Designer: JJW		Project No.: ES4 0253-207		
Print Date: 5/15/2009	Initials:						Revised: 9/14/11	Detailer: JBK		17244		
File Name: 0610031800Rem.dgn							Void:	Sheet Subset: QUANTITY		Subset Sheets: TB1 of 7		
Horiz. Scale: 1:100	Vert. Scale: As Noted									Sheet Number 20		

**SUMMARY OF EARTHWORK QUANTITIES**

INDEX			PROJECT TOTALS	
BOOK	PAGE	SHEET	PLAN	AS CONSTR.
			<b>EXCAVATION (CIP)(CY) *</b>	
			Crossroads Blvd	17,407 17,407
			SW Ramp	6,237 6,237
			NW Ramp	28,861 28,861
			NE Ramp	6,817 6,817
			SE Ramp	12,519 12,519
			<b>TOTAL FOR PAY QUANTITY</b>	<b>71,841 71,841</b>
			<b>-FOR INFORMATION ONLY</b>	
			<b>EMBANKMENT (CY) *</b>	
			Crossroads Blvd	2,538
			SW Ramp	0
			NW Ramp	48
			NE Ramp	240
			SE Ramp	368
			<b>TOTAL</b>	<b>3,194</b>

INDEX			FOR INFORMATION ONLY		PROJECT TOTALS	
BOOK	PAGE	SHEET	PLAN	AS CONSTR.	PLAN	AS CONSTR.
			<b>COMPACTION (AASHTO T-99)(CY)</b>			
			Roadway Embankment (Net)		3,194	
			Bases of Cuts and Fills**		11,581	
			Embankment Material (C.I.P.) (Special) ***		16,193	
			<b>Total</b>		<b>30,969</b>	
			<b>EARTHWORK BALANCE</b>			
			<b>UNCLASSIFIED EXCAVATION (CY)</b>			
			Roadway Excavation (Net)		71,841	
			Structural Excavation from Drainage		1,559	
			Structural Excavation from Walls		4,051	
			<b>EMBANKMENT MATERIAL (AASHTO T-99)(CY)</b>			
			Roadway Embankment (Net)		3,194	
			Embankment for Drainage		253	
			<b>EMBANKMENT X FACTOR</b>			
			Embankment Material (Net) (X 1.10)		3,792	
			Excavation Overage		73,659	
			<b>WETTING (M GAL)</b>			
			Compaction (.04 M Gal / CY)		1,239	

\* Includes adjustment for removal of 8" of existing surfacing as follows:  
 -Roadway excavation does not include volume of pavement removed  
 -Roadway embankment includes volume of material to replace pavement

\*\* Bases of Cuts and Fills volume assumes a 1 foot depth under roadways and structures for cuts and entire width for fills.

\*\*\* See Tabulation of Pavement for Embankment Material (C.I.P.) (Special)

Topsoil and Stockpile Topsoil are tabulated in the Stormwater Management Plan

<b>Computer File Information</b>		<b>Sheet Revisions</b>		<b>CITY OF LOVELAND</b>		<b>SUMMARY OF EARTHWORK QUANTITIES</b>		<b>Project No./Code</b>			
Creation Date: 10/16/06	Initials: JMB	Date:	Comments	Init.	 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 Colorado Department of Transportation	No Revisions:	Designer: JJW	Structure Numbers	ES4 0253-207	
Print Date: 5/4/2009	Initials:						Revised: 9/14/11	Detailer: JBK		17244	
File Name: 0610031800earthwork.dgn							Void:	Sheet Subset: TABS	Subset Sheets: TB2 of 7	Sheet Number	21
Horiz. Scale: 1:100	Vert. Scale: As Noted										



**TABULATION OF UTILITIES**

LOCATION	REMOVAL OF MANHOLE	REMOVAL OF PULL BOX	ADJUST MANHOLE (BY OTHERS)	ADJUST MANHOLE	ADJUST VALVE BOX	2 INCH ELECTRICAL CONDUIT (PLASTIC)	4 INCH ELECTRICAL CONDUIT (INSTALL ONLY)	PULL BOX (16"X24"X12") (FOR INFORMATION ONLY)	PULL BOX (24"X36"X18") (FOR INFORMATION ONLY)	TELEPHONE INTERCONNECT WIRE	FIBER OPTICS CABLE (SINGLE MODE) (12 FIBER)	ELEVATION DATA			REMARKS
	EACH	EACH	EACH	EACH	EACH	LF	LF	EACH	LF	LF	LF	EXISTING	PROP	H	
<b>CROSSROADS</b>															
52+80, 56' LT TO 52+84, 69' LT							21								
52+81, 50' RT TO 52+80, 62' RT							20								
52+84, 74' RT TO 54+60, 4' RT							102								
53+88 19' RT				1								5040.45	5040.49	0.04	OWNED BY QWEST
53+52, 59' LT TO 62+15, 149' LT						1039			5						LOVELAND TRAFFIC EMPTY CONDUIT WITH TRACER WIRE
54+11 8' RT					1							5040.62	5041.07	0.45	
54+29 3' LT				1								5040.53	5042.03	1.50	
54+67 22' RT			1									5040.01	5042.26	2.25	BY LOVELAND POWER
54+72, 112' RT TO 54+96, 73' RT							53								
54+72, 114' LT TO 55+03, 88' LT							48								
54+93, 148' LT TO 55+82, 113' LT							94								
55+02 74' LT		2													
55+16, 144' RT TO 55+80, 90' RT							99								
55+30 42' LT	1														DELIVER LID TO PRPA
55+47, 6' RT TO 56+80, 90' RT							98								
56+12, 74' LT TO 56+19, 92' LT							28								
56+40, 4' LT TO 57+18, 37' LT							90								
57+13, 26' LT TO 57+18, 37' LT							20								
58+20 4' RT					1							5040.18	5040.29	0.11	
58+32 6' LT				1								5040.44	5040.45	0.01	
59+78, 41' RT TO 60+20, 0' RT							62								
60+52, 96' RT TO 60+59, 79' RT							26								
60+96, 161' RT TO 61+61, 172' RT							84								
60+59, 84' LT TO 61+01, 4' LT							96								
61+12 72' LT		1													
61+22 77' LT		2													
61+51 75' LT		1													
61+68, 81' RT TO 61+94, 105+RT							44								
61+70, 66' LT TO 61+79, 109' LT							52								
61+84 51' RT		1													
61+90 37' LT			1									5045.17	5045.34	0.17	BY LOVELAND POWER
61+91 61' LT		1													
62+01, 2' RT TO 62+75, 60' RT							108								FROM 61+48, 75' LT
62+16 124' LT												5046.28	5044.82	-1.46	++ SEE BELOW
62+35 25' LT				1						244					
62+75, 50' RT TO 65+22, 63' RT						244									
62+75, 60' RT TO 63+00, 75' LT							144								
62+25, 66' LT TO 64+33, 51' LT							25								
<b>SOUTHEAST RAMP</b>															
62+15, 149' LT TO 399+31, 105' RT						1228			4	1228	1250				FOR LOVELAND TRAFFIC. SHALL ALSO CONTAIN TRACER WIRE
405+00, 39' RT TO 405+11, 15' LT						63		2							
<b>NORTHWEST RAMP</b>															
203+68, 13' RT TO 203+76, 41' LT						63		2							EMPTY CONDUIT FOR LOVELAND TRAFFIC
<b>PROJECT TOTAL</b>															
	1	8	2	4	2	2637	1316	4	9	1472	1250				

IN ACCORDANCE WITH SECTION 613.10 OF THE STANDARD SPECIFICATIONS, PULL BOXES ARE INCIDENTAL TO THE CONDUIT. LOVELAND TRAFFIC PULL BOXES SHALL BE 24"X36"X18" AND SHALL HAVE THE WORD "TRAFFIC" WRITTEN ON THE LID.

SEE LIGHTING PLANS FOR CONDUIT AND EQUIPMENT ASSOCIATED WITH LS32, LS33, THE UNDERDECK LIGHTING, AND THE LIGHTING AT THE RAMP GORES.

LOVELAND POWER WILL PROVIDE THE 4 INCH CONDUIT FOR THE CONTRACTOR TO INSTALL, AND WILL INSTALL THE WIRING FOR ANY LIGHTING NOT MENTIONED IN THE PREVIOUS NOTE.

THE 14 GAUGE TRACER WIRE IN THE LOVELAND TRAFFIC CONDUITS SHALL BE INCLUDED IN WIRING (LS) WHICH IS TABULATED IN THE LIGHTING PLANS.

++ 16 INCHES EXIST FROM TOP OF PAVEMENT TO TOP OF CONE. CONTRACTOR SHALL REMOVE BARRELS AND CONE, LOWER MANHOLE WALLS, AND REPLACE CONE AND BARRELS AS NECESSARY TO MATCH PROPOSED GRADE.

<b>Computer File Information</b>		<b>Sheet Revisions</b>			 <b>CITY OF LOVELAND</b> 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 COLORADO DEPARTMENT OF TRANSPORTATION	<b>TABULATION OF UTILITIES</b>		<b>Project No./Code</b>		
Creation Date: 10/16/06	Initials: JBK	Date:	Comments:	Init.			No Revisions:	Designer: JJW		ES4 0253-207	
Print Date: 5/4/2009	Initials:						Revised:	Detailer: JBK		17244	
File Name: 0610031800Utility.dgn							Void: 9/14/11	Sheet Subset: TABS		Sheet Number 22	
Horiz. Scale: 1:100	Vert. Scale: As Noted					Structure Numbers		Subset Sheets: TB3 of 7			

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TABULATION OF UTILITIES

LOCATION	REMOVAL OF MANHOLE	REMOVAL OF PULL BOX	ADJUST MANHOLE (BY OTHERS)	ADJUST MANHOLE	ADJUST VALVE BOX	2 INCH ELECTRICAL CONDUIT (PLASTIC)	4 INCH ELECTRICAL CONDUIT (INSTALL ONLY)	PULL BOX (16"X24"X12") (FOR INFORMATION ONLY)	PULL BOX (24"X36"X18") (FOR INFORMATION ONLY)	TELEPHONE INTERCONNECT WIRE	TRAFFIC SIGNAL CONTROLLER CABINET (INSTALL ONLY)	FIBER OPTICS CABLE (SINGLE MODE) (12 FIBER)	ELEVATION DATA			REMARKS
	EACH	EACH	EACH	EACH	EACH	LF	LF	EACH	LF	LF	EA	LF	EXISTING	PROP	H	
<b>CROSSROADS</b>																
52+80, 56' LT TO 52+84, 69' LT							21									
52+81, 50' RT TO 52+80, 62' RT							20									
52+84, 74' RT TO 54+60, 4' RT							102									
53+88 19' RT				1												
53+52, 59' LT TO 62+15, 149' LT													5040.45	5040.49	0.04	OWNED BY QWEST
54+11 8' RT									5				5040.62	5041.07	0.45	LOVELAND TRAFFIC EMPTY CONDUIT WITH TRACER WIRE
54+29 3' LT				1									5040.53	5042.03	1.50	
54+67 22' RT				1									5040.01	5042.26	2.25	BY LOVELAND POWER
54+72, 112' RT TO 54+96, 73' RT							53									
54+72, 114' LT TO 55+03, 88' LT							48									
54+93, 148' LT TO 55+82, 113' LT							94									
55+02 74' LT		2														
55+16, 144' RT TO 55+80, 80' RT							99									
55+30 42' LT	1															DELIVER LID TO PRPA
55+47, 6' RT TO 55+80, 90' RT							98									
56+12, 74' LT TO 56+19, 92' LT							28									
56+40, 4' LT TO 57+18, 37' LT							80									
57+13, 26' LT TO 57+18, 37' LT							20									
58+20 4' RT													5040.18	5040.29	0.11	
58+32 6' LT													5040.44	5040.45	0.01	
59+78, 41' RT TO 60+20, 0' RT				1												
60+52, 96' RT TO 60+59, 79' RT							92									
60+96, 161' RT TO 61+61, 172' RT							26									
60+59, 84' LT TO 61+01, 4' LT							81									
61+12 72' LT		1					93									
61+22 77' LT		2														
61+51 75' LT		1														
61+88, 81' RT TO 61+94, 105' RT							44									
61+70, 66' LT TO 61+79, 109' LT							52									
61+84 51' RT		1														
61+90 37' LT													5045.17	5045.34	0.17	BY LOVELAND POWER
61+91 81' LT		1														
62+01, 2' RT TO 62+75, 60' RT							108									
62+16 124' LT																
62+35 25' LT																
62+75, 50' RT TO 65+22, 83' RT													5046.28	5044.82	-1.46	FROM 61+48, 75' LT ** SEE BELOW
62+75, 80' RT TO 63+00, 75' LT							144									
62+25, 66' LT TO 64+33, 51' LT							25									
<b>SOUTHEAST RAMP</b>																
62+15, 149' LT TO 399+31, 105' RT																
405+00, 39' RT TO 405+11, 15' LT																
<b>NORTHWEST RAMP</b>																
203+68, 13' RT TO 203+76, 41' LT																
<b>TOTAL</b>																
							2492									
<b>CONDUIT FOR FUTURE DEICING SYSTEM</b>																
55+51, 10' LT TO 55+83, 84' LT							170									
55+77, 112' LT TO 55+83, 84' LT							80									
55+83, 84' LT TO 59+91, 41' LT							870									
57+54, 15' LT TO 59+91, 41' LT							260									
57+83, 14' LT TO 59+91, 41' LT							220									
57+34, 14' LT TO 59+91, 41' LT							180									
58+75, 14' LT TO 59+91, 41' LT							40									
59+16, 14' LT TO 59+91, 41' LT							100									
57+57, 17' LT TO 59+91, 41' LT							80									
59+91, 41' LT TO 80+47, 80' LT							160									
80+47, 80' LT TO 80+96, 4' LT							375									
60+47, 80' LT TO 81+40, 144' LT							220									
81+40, 144' LT TO 62+99, 69' RT							325									
62+99, 69' RT TO 62+80, 61' RT							270									
62+99, 69' LT TO 63+35, 79' LT							95									
<b>TOTAL</b>																
							4134			1500						1360
<b>PROJECT TOTAL</b>																
	1	8	2	1	2		8142			1316						1472

IN ACCORDANCE WITH SECTION 613.10 OF THE STANDARD SPECIFICATIONS, PULL BOXES ARE INCIDENTAL TO THE CONDUIT. LOVELAND TRAFFIC AND DEICING SYSTEM PULL BOXES SHALL BE 24"X36"X18" AND SHALL HAVE THE WORD "TRAFFIC" WRITTEN ON THE LID.

SEE LIGHTING PLANS FOR CONDUIT AND EQUIPMENT ASSOCIATED WITH LS32, LS33, THE UNDERDECK LIGHTING, AND THE LIGHTING AT THE RAMP GOES.

LOVELAND POWER WILL PROVIDE THE 4 INCH CONDUIT FOR THE CONTRACTOR TO INSTALL, AND WILL INSTALL THE WIRING FOR ANY LIGHTING NOT MENTIONED IN THE PREVIOUS NOTE.

(R-3) LOVELAND TRAFFIC WILL PROVIDE THE TRAFFIC SIGNAL CONTROLLER CABINET. CONTACT BILL HANGE AT 970-962-2528.

THE 14 GAUGE TRACER WIRE IN THE LOVELAND TRAFFIC CONDUITS SHALL BE INCLUDED IN WIRING (LS) WHICH IS TABULATED IN THE LIGHTING PLANS.

\*\* 16 INCHES EXIST FROM TOP OF PAVEMENT TO TOP OF CONE. CONTRACTOR SHALL REMOVE BARRELS AND CONE, LOWER MANHOLE WALLS, AND REPLACE CONE AND BARRELS AS NECESSARY TO MATCH PROPOSED GRADE.

<b>Computer File Information</b>		<b>Sheet Revisions</b>		<b>CITY OF LOVELAND</b>		<b>DOT</b>		<b>TABULATION OF UTILITIES</b>		<b>Project No./Code</b>	
Creation Date: 10/16/06	Initials: JBK	Date: 08/30/09	Comments: DEICING SYSTEM	Init.:	JJW	500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000		No Revisions:		ES4 0253-207	
Print Date: 9/30/2009	Initials:					Colorado Department of Transportation		Revised: 9/14/11		Designer: JJW	Structure Numbers:
File Name: 0610031800Utility.dgn								Void:		Detailer: JBK	
Horiz. Scale: 1:100	Vert. Scale: As Noted									Sheet Subset: TABS	Subset Sheets: TB3 of 7
										17244	Sheet Number 22X

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**TABULATION OF PAVEMENT**

LOCATION	SIDE	EMBANKMENT MATERIAL CIP (SPECIAL)		AGGREGATE BASE COURSE (CLASS 6)		HMA (PATCHING) (ASPHALT) **		HOT MIX ASPHALT (GRADING S) (100) (PG 58-28)		HOT MIX ASPHALT (GRADING S) (100) (PG 64-22)		HOT MIX ASPHALT (GRADING SX) (100) (PG 64-22)		HOT MIX ASPHALT (GRADING SX) (100) (PG 76-28)		EMULSIFIED ASPHALT (SLOW SETTING)		CONCRETE PAVEMENT (8 INCH) (SPECIAL) ***		CONCRETE PAVEMENT (11 INCH)		REMARKS
		CY		TON		TON		HOT MIX ASPHALT (GRADING S) (100) (PG 58-28)		HOT MIX ASPHALT (GRADING S) (100) (PG 64-22)		HOT MIX ASPHALT (GRADING SX) (100) (PG 64-22)		HOT MIX ASPHALT (GRADING SX) (100) (PG 76-28)		GAL		SY		SY		
								BOTTOM LIFT *	2nd LIFT	BOTTOM LIFT *	2nd LIFT	BOTTOM LIFT *	2nd LIFT	BOTTOM LIFT *	2nd LIFT							
<b>CROSSROADS</b>																						
49+18 TO 52+01	MEDIAN	173		134		54											46					
52+01 TO 53+80	LT & RT	1,017		727				167	159				251				148					
53+80 TO 56+69	LT & RT	3,014		1,578														304		3,925		
56+89 TO 59+89	LT & RT	719		506				107	102				167				97					
59+89 TO 62+72	LT & RT	3,038		1,602														293		3,921		
62+72 TO 64+60	LT & RT	1,043		747				169	161				255				150					
64+60 TO 65+79	MEDIAN	64		50		20											5					
<b>SOUTHWEST RAMP</b>																						
100+00 TO 105+57	LT & RT	1,306		1,098						181	172				300		180					
<b>NORTHWEST RAMP</b>																						
201+42 TO 210+12	LT & RT	2,079		1,960		34				290	277				481		289					
<b>NORTHEAST RAMP</b>																						
301+04 TO 308+73	LT & RT	1,791		1,517						247	236				409		246					
<b>SOUTHEAST RAMP</b>																						
399+24 TO 407+34	LT & RT	1,949		1,932		35				273	260				452		272					
<b>I-25 (RAMP STAIONING)</b>																						
103+15 TO 105+74	RT					70																8" WIDE X 4" DEEP
200+93 TO 204+45	RT					58																8" WIDE X 4" DEEP
<b>PROJECT TOTAL</b>		<b>16,193</b>		<b>11,851</b>		<b>271</b>		<b>443</b>	<b>422</b>	<b>991</b>	<b>945</b>		<b>673</b>	<b>1,642</b>	<b>1,433</b>		<b>597</b>		<b>7,846</b>			

\* ADDITIONAL 5% FOR SURFACE IRREGULARITIES  
 \*\* HMA (PATCHING) SHALL BE (GR S) (100) (PG 64-22)  
 \*\*\* CONCRETE PAVEMENT (8 INCH) (SPECIAL) IS FOR THE TRUCK APRON AND SHALL BE COLORED WITH DAVIS COLOR FLAGSTONE BROWN

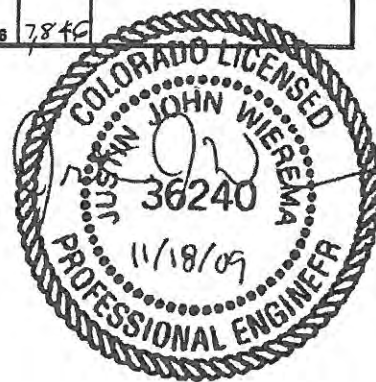
<b>Computer File Information</b>		<b>Sheet Revisions</b>			<b>CITY OF LOVELAND</b>		<b>TABULATION OF PAVEMENT</b>		<b>Project No./Code</b>		
Creation Date: 10/17/06	Initials: JMB	Date:	Comments:	Init.	 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 Colorado Department of Transportation	No Revisions:		ES4 0253-207		
Print Date: 5/15/2009	Initials:						Revised:		17244		
File Name: 0610031800Pavl.dgn							Void: 9/14/11		Designer: JJW	Structure Numbers:	
Horiz. Scale: 1:100	Vert. Scale: As Noted								Detailer: JBK	Subset Sheets: TB4 of 7	Sheet Number: 23

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TABULATION OF PAVEMENT

LOCATION	SIDE	EMBANKMENT MATERIAL CIP (SPECIAL)		AGGREGATE BASE COURSE (CLASS 6)		HMA (PATCHING) (ASPHALT) **		HOT MIX ASPHALT (GRADING S) (100) (PG 84-22) (R-6)		HOT MIX ASPHALT (GRADING S) (100) (PG 64-22)		HOT MIX ASPHALT (GRADING SX) (100) (PG 64-22)		HOT MIX ASPHALT (GRADING SX) (100) (PG 76-28)		EMULSIFIED ASPHALT (SLOW SETTING)		CONCRETE PAVEMENT (8 INCH) (SPECIAL) ***		CONCRETE PAVEMENT (11 INCH)		REMARKS
		CY	TON	TON	TON	TON	TON	TON	TON	TON	TON	TON	TON	TON	GAL	SY	SY					
																		BOTTOM LIFT *	2nd LIFT	BOTTOM LIFT *	2nd LIFT	
<b>CROSSROADS</b>																						
49+18 TO 52+01	MEDIAN	173	173	134		54											46					
52+01 TO 53+80	LT & RT	1,017	1,017	727				187	159				251				148					
53+80 TO 58+89	LT & RT	3,014	3,014	1,578															304		3,925	
58+89 TO 59+89	LT & RT	719	719	806				107	102				187				97					
59+89 TO 82+72	LT & RT	3,038	3,038	1,502															293		3,921	
62+72 TO 64+60	LT & RT	1,043	1,043	747				169	161				285				150					
64+80 TO 65+79	MEDIAN	84	64	50		20											5					
<b>SOUTHWEST RAMP</b>																						
100+00 TO 105+57	LT & RT	1,306	1,306	1,098						258	197		200				180					
<b>NORTHWEST RAMP</b>																						
201+42 TO 210+12	LT & RT	2,079	2,079	1,980		34				415	316		321				289					
<b>NORTHEAST RAMP</b>																						
301+04 TO 308+73	LT & RT	1,791	1,791	1,577						354	269		273				240					
<b>SOUTHEAST RAMP</b>																						
399+24 TO 407+34	LT & RT	1,849	1,849	1,932		35				390	297		302				272					
<b>I-25 (RAMP STATONING)</b>																						
103+15 TO 105+74	RT					70																8" WIDE X 4" DEEP
200+93 TO 204+45	RT					58																8" WIDE X 4" DEEP
To Replace Mack		624																				
<b>PROJECT TOTAL</b>		10,193	16,817	11,891	11,511	374	84.7	443	422	1,417	1,079		573.28	673	1,098	1133.64	1,433	595	697	597	7,846	7,846

\* ADDITIONAL 5% FOR SURFACE IRREGULARITIES  
 \*\* HMA (PATCHING) SHALL BE (GR S) (100) (PG 84-22)  
 \*\*\* CONCRETE PAVEMENT (8 INCH) (SPECIAL) IS FOR THE TRUCK APRON AND SHALL BE COLORED WITH DAVIS COLOR FLAGSTONE BROWN



<b>Computer File Information</b>		<b>Sheet Revisions</b>		<b>CITY OF LOVELAND</b>		<b>TABULATION OF PAVEMENT</b>		<b>Project No./Code</b>	
Creation Date: 10/17/06	Initials: JMB	Date: 11/04/09	Comments: Pavement Design	Init.: JJW	500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	No Revisions:	Designer: JJW	Structure Numbers:	ES4 0253-207
Print Date: 11/4/2009	Initials:					Revised: 9/14/11	Detailer: JBK		17244
File Name: 0610031800Pavl.dgn						Void:	Sheet Subset: TABS	Subset Sheets: TB4 of 7	Sheet Number 23X
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**TABULATION OF GUARDRAIL**

STATION	SIDE	REMOVAL OF GUARDRAIL TYPE 3	REMOVAL OF GUARDRAIL TYPE 4	REMOVAL OF TENSIONED CABLE BARRIER	REMOVAL OF END ANCHORAGE	RESET END ANCHORAGE	GUARDRAIL TYPE 3 (8-3 POST SPACING)	GUARDRAIL TYPE 7 (STYLE CE) (SPECIAL)	END ANCHORAGE TYPE 3D	END ANCHORAGE (FLARED)	REMARKS
		LF	LF	LF	EA	EA	LF	LF	EA	EA	
<b>CROSSROADS</b>											
55+47 TO 60+95	LT							287 286			
55+53 TO 61+15	RT							278 266			
56+92 TO 57+63	RT	59 66			1						
57+23 TO 57+64	LT	44 36			1						
57+63 TO 59+02	RT		138								
57+64 TO 59+03	LT		138								
59+02 TO 59+69	RT	69			1						
59+03 TO 59+75	LT	74 68			1						
<b>NORTHWEST RAMP</b>											
200+75 TO 212+82	RT & LT			1206		1					
203+60 TO 205+68	LT						212.5		1	1	
203+61 TO 205+49	RT						187.5		1	1	
<b>SOUTHEAST RAMP</b>											
403+10 TO 405+24	LT						212.5		1	1	
403+30 TO 405+10	RT						187.5		1	1	
<b>PROJECT TOTAL</b>		<del>268</del> 239	276	1,206	4	1	800	<del>576</del> 522	4	4	

**TABULATION OF DELINEATORS**

LOCATION	REMOVE DELINEATOR	DELINEATOR (TYPE I)				DELINEATOR (TYPE II)			DELINEATOR (TYPE III)			DELINEATOR (SPECIAL)		
		CRYSTAL	YELLOW	RED	GREEN	CRY-CRY	CRY-RED BACK TO BACK	YELLOW-RED BACK TO BACK	YEL-YEL-YEL	BLUE-BLUE-BLUE	GREEN-GREEN-GREEN	WHITE	YELLOW	
		EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	
<b>CROSSROADS</b>	2											46	213	
<b>SE RAMP</b>	8	14 7	4	13	2	1		2			2	13	1	
<b>SW RAMP</b>	0	25	7			10						14	1	
<b>NW RAMP</b>	8	15 8	2	13	2	10		2			2	13	1	
<b>NE RAMP</b>	8	9	10			10						14	1	
<b>PROJECT TOTAL</b>		28	<del>48</del> 29	<del>23</del> 23	<del>26</del> 26	4	<del>1</del> 1	0	<del>2</del> 4	0	0	4	<del>20</del> 20	<del>217</del> 217

DELINEATORS TYPE I, II, AND III SHALL BE PLACED ACCORDING TO M-612-1  
 DELINEATOR (SPECIAL) SHALL BE PLACED AT THE ENDS OF THE ISLANDS.  
 SEE DETAIL ON BIKE RAMP DETAILS SHEET.

<b>Computer File Information</b>		<b>Sheet Revisions</b>		<b>CITY OF LOVELAND</b>		<b>DOT</b>		<b>TABULATION OF GUARDRAIL AND TABULATION OF DELINEATORS</b>		<b>Project No./Code</b>	
Creation Date: 10/17/06	Initials: JMB	Date:	Comments:	Init.	 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 COLORADO DEPARTMENT OF TRANSPORTATION	No Revisions:	Designer: JMB		ES4 0253-207	
Print Date: 5/4/2009	Initials:						Revised: 9/14/11	Detailer: JMB		17244	
File Name: 0610031800Guardrail.dgn							Void:	Sheet Subset: TABS		Structure Numbers	
Horiz. Scale: 1:100	Vert. Scale: As Noted							Subset Sheets: TB6 of 7		Sheet Number 25	

**TABULATION OF CURB, GUTTER, AND SIDEWALK**

LOCATION	STATION	SIDE	CONCRETE PAVEMENT (6 INCH)		CONCRETE SIDEWALK (6 INCH)		CONCRETE CURB RAMP		CURB TYPE 2 (SECTION M)		CURB AND GUTTER TYPE 2 (SECTION I-B)		CURB AND GUTTER TYPE 2 (SECTION II-B)		CURB TYPE 6 (SECTION M)		MEDIAN COVER MATERIAL (CONCRETE)		REMARKS
			SY		SY		SY		LF		LF		LF		LF		SF		
WEST MEDIAN	49+28 TO 54+76	MEDIAN									-1,144	1,152					606	606	
SW CURB AND SDWK	49+25 TO 55+92	RT	<del>14</del>	21.4	<del>428</del>	434	<del>14</del>	13.7				<del>540</del>	490						
SW ISLAND	53+75 TO 55+54	RT					<del>8</del>	10.3			<del>244</del>	212	<del>234</del>	220			510	510	
NW CURB AND SDWK	49+14 TO 55+16	LT			<del>536</del>	535	<del>14</del>	13.7				<del>480</del>	492				83	83	
NW ISLAND	54+57 TO 55+40	LT					<del>8</del>	10.5			<del>157</del>	154	<del>168</del>	151			1,096	1,096	
WEST CENTRAL ISLAND	55+05 TO 56+01	MEDIAN							311	313							1,115	1,115	
WEST SPLITTER ISLAND	56+21 TO 56+69	MEDIAN									<del>138</del>	131					64	64	
WEST SIDE OF I-25 (SW RAMP STATIONING)	103+15 TO 105+74	RT												<del>295</del>	0				BITUMINOUS CURB
WEST SIDE OF I-25 (NW RAMP STATIONING)	200+93 TO 204+45	RT												<del>350</del>	0				BITUMINOUS CURB
									0	12									
MID WB CURB AND NORTH SDWK	55+47 TO 60+95	LT			<del>220</del>	227	<del>14</del>	14.2			<del>170</del>	170	<del>207</del>	314			654	654	SDWK FROM 57+52 TO 59+75 INCLUDED IN RETAINING WALL
MID EB CURB AND SOUTH SDWK	55+53 TO 61+15	RT			<del>263</del>	271	<del>15</del>	15.2			<del>158</del>	154	<del>300</del>	338			794	794	SDWK FROM 57+23 TO 59+35 INCLUDED IN RETAINING WALL
									0	14									
EAST SPLITTER ISLAND	59+89 TO 60+38	MEDIAN									<del>137</del>	128					61	61	
EAST CENTRAL ISLAND	60+58 TO 61+54	MEDIAN							<del>300</del>	310							1,115	1,115	
NE CURB AND SDWK	60+27 TO 64+60	LT	<del>14</del>	2.4	<del>170</del>	183	<del>14</del>	14				<del>546</del>	533						
NE ISLAND	60+66 TO 62+78	LT					<del>8</del>	7			<del>240</del>	196	<del>256</del>	256			1,937	1,937	
SE CURB AND SDWK	61+43 TO 64+60	RT			<del>170</del>	308	<del>14</del>	13.4				<del>484</del>	461						
SE ISLAND	61+22 TO 62+15	RT					11	11			<del>168</del>	163	<del>180</del>	183			1,388	1,388	
EAST MEDIAN	61+83 TO 65+77	MEDIAN									<del>825</del>	822					60	60	
	64+85	RT						0	12										
	65+24	RT						0	12										

<b>PROJECT TOTAL</b>			<del>28</del>	45.4	<del>1,022</del>	1,958	<del>122</del>	147	<del>620</del>	649	<del>3,040</del>	3,282	<del>3,501</del>	3,438	<del>854</del>	0	8,483	7,483	
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MEDIAN COVER MATERIAL (CONCRETE) SHALL BE 6" THICK.

THE SIDEWALK ADJACENT TO THE HANDRAIL IS TABULATED IN THE WALL PLANS AND IS NOT INCLUDED IN THIS TABULATION.

<b>Computer File Information</b>		<b>Sheet Revisions</b>			<b>CITY OF LOVELAND</b>		<b>DOT</b>		<b>TABULATION OF CURB, GUTTER, AND SIDEWALK</b>		<b>Project No./Code</b>	
Creation Date: 10/16/06	Initials: JMB	Date:	Comments:	Init.	 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 COLORADO DEPARTMENT OF TRANSPORTATION	No Revisions:		Designer: JJW		Project No./Code	
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File Name: 0610031800Misc.dgn							Void:		Sheet Subset: TABS		Structure Numbers	
Horiz. Scale: 1:100	Vert. Scale: As Noted										Subset Sheets: TB7 of 7	
											17244	26

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

- Horizontal Control
- Vertical Control
- Roadway Alignment
- Original Terrain Data
- Other: \_\_\_\_\_

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

**TYPE OF PROJECT**

- Landscaping
- Signalization
- Safety Improvement
- Asphalt Overlay
- Concrete Overlay
- Minor Widening
- Major Reconstruction
- New Roadway Construction
- Bridge Replacement
- Bridge Widening
- New Bridge
- Other: Roundabouts & Retaining Walls

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

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

- Establish and Maintain Project Centerline or Engineer Approved Offset Lines)
- Verification and Maintenance of Horizontal and Vertical Control
- Verify or Determine existing grades and alignments
- Verify or Determine existing topography
- Clearing and Grubbing Limits
- Removal Limits
- Reset Items
- Excavation and Embankment

	SLOPE STAKING (Y/N)	GRID (Y/N)	GRADE STAKES	SPECIAL INTERVAL
Excavation	YES	-	YES	50 FT
Embankment	YES	-	YES	50 FT

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

- Embankment
- Site Grading
- Erosion Control (Perm)
- Other: \_\_\_\_\_

As Staked Earthwork Quantities (See General Notes)

- Landscaping
- Top Soil
- Seeding
- Mulching
- Planting
- Herbicide: \_\_\_\_\_
- Other: \_\_\_\_\_

- Erosion Control
- Seeding (Temp)
- Silt Fences
- Straw Boles
- Temporary Berm
- Riprap (Temp)
- Other (Temp Diversion, Temp Slope Drain, Brush Barrier, Check Dam, Other): \_\_\_\_\_

- Riprap (Perm)
- Slope and Ditch Paving
- Delineators
- Temporary
- Permanent

- Roadway Bases
- Untreated Subgrade
- Treated Subgrade
- Aggregate Base Course
- Reconditioning
- PMBB - Plant Mix Bituminous Base
- Other: Emb Mat'l (CIP) (Special)

- Pavements
- HBP - Hot Bituminous Pavement
- Concrete
- Overlay
- Heating & Scarifying Treatment
- Prime Coat, Tack Coat & Rejuvenating Agent
- Seal Coat or Chip Seal
- Other: \_\_\_\_\_

- Roadway Elements
- Curb and Gutter
- Drop inlets - alignment and grades
- Retaining Walls
- Guard Rail
- Sidewalk
- Other: \_\_\_\_\_

- Minor Structures
- Structure Excavation limits
- Culverts
- Culverts w/ Headwalls and Wingwalls
- Concrete Box Culverts w/ Headwalls and Wingwalls
- Pipes

- Sanitary Sewer
- Storm Sewer
- Water
- Irrigation
- Miscellaneous

- Manholes
- Inlets
- Other: \_\_\_\_\_

- Major Structures - Overhead Signs, Concrete Box Culverts, Bridges - and all other structures assigned a structure number

- Structure Excavation limits
- Concrete Box Culverts w/ Headwalls and Wingwalls
- Piling locations and cut off elevations
- Caisson locations and elevations
- Footing locations, alignment, and elevations
- Abutment/Pier locations, alignment, and elevations
- Wingwall skew angles/offsets
- Structural concrete form locations
- Substructure As-constructed survey (Required by Subsection 601.12 for Bridges and S-614-50 for Overhead signs)
- Bridge expansion joint(s) alignment and grade (longitudinal and transverse)
- Deck grades at Girder 10th or "n" th point locations and elevations
- Slope and Ditch Paving
- Other: \_\_\_\_\_

- Fencing
- Temporary
- Permanent
- Sound Barriers
- Other: \_\_\_\_\_

- Lighting and Traffic Control Devices (Perm)
- Signal pole locations and elevations
- Light pole locations and elevations
- Signs
- Field verify sign post locations, elevations, and lengths before fabrication.
- Other: \_\_\_\_\_

- Pavement Marking
- Striping (Temp)
- Striping (Perm)
- Symbols
- Other: \_\_\_\_\_

Roadway Bases	GRID (Y/N)	SPECIAL INTERVAL	SPECIAL OFFSET
-	-	-	-
YES	50 FT	-	-
-	-	-	-
YES	50 FT	-	-

Pavements	GRID (Y/N)	SPECIAL INTERVAL	SPECIAL OFFSET
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

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

- Temporary Lighting and Construction Traffic Control Devices
- Signal pole locations and elevations (Temp)
- Light pole locations and elevations (Temp)
- Signs (Temp)
- Other: \_\_\_\_\_
- Easement (Temp)(Staking)(P.L.S. Only)
- Right of Way (Temp) (Staking)(P.L.S. Only)

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

- Monumentation
- Control
- Right of Way
- Land corners, Aliquot corners
- Easement (Perm)
- Reference the specified existing monuments: \*\* See Survey Control Diagram
- Relocate the specified existing monuments: \*\* CPI01
- Locate monuments. It is estimated 4 hours are required.

\*\* A Tabulation of Survey Monuments is provided on the survey control diagram.  
It is estimated that the Surveyor will set 3 Survey Monuments (Type 2) for secondary control

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

**GENERAL NOTES:**

Unless indicated otherwise on this Survey Tabulation Sheet, all survey work and staking intervals shall be done in accordance with the latest edition of the entire CDDT Survey Manual.

Adequate information for establishing lines, grades, and locations for all work items have been specified on the plans. Any additional information required to stake the item or element shall be generated by the Contractor's surveyor.

The Contractor's surveyor shall provide an estimate of the man-hours necessary to complete the work items indicated on this sheet. A copy of this sheet, with the estimated man-hours written on the blank line to the left of the specified items, shall be submitted with the Survey Schedule to the Engineer 3 days prior to Presurvey Conference - Construction Survey.

Stakes and Monuments which are damaged or destroyed by the progress of construction shall be replaced by the Contractor at no additional cost to the Department.

The Contractor shall furnish an As Staked earthwork quantity to the Engineer prior to completion of twenty percent (20%) of the planned earthwork in any phase as per the CDDT Survey Manual. A printed copy of the As Staked earthwork data and a computer disk in the specified format shall be submitted to the Engineer. The Contractor shall field verify original ground cross sections at a maximum 500 feet intervals.

Prior to beginning work on any subsequent operation, such as placing base course or paving, the Contractor shall certify in writing to the Engineer that the final grade is within specified tolerance.

The Contractor's surveyor shall perform all field surveying and calculations necessary to tie plan grades into field grades.

The Contractor shall coordinate construction staking on the project with any utility work.

The Contractor's surveyor shall submit the following fieldbooks to the Engineer:

- Horizontal Control (Primary & Secondary)
- Vertical Control (i.e. Benchmarks)
- Property Pin Ties
- Horizontal Alignment
- Grading
- Slope Staking
- Minor Structures
- Major Structures
- One fieldbook for each work category shown on this sheet
- Other Fieldbook(s): \_\_\_\_\_

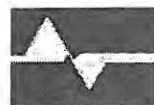
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Horiz. Scale: 1:1	Vert. Scale: As Noted

**Sheet Revisions**

Date:	Comments	Init.

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970-962-2000



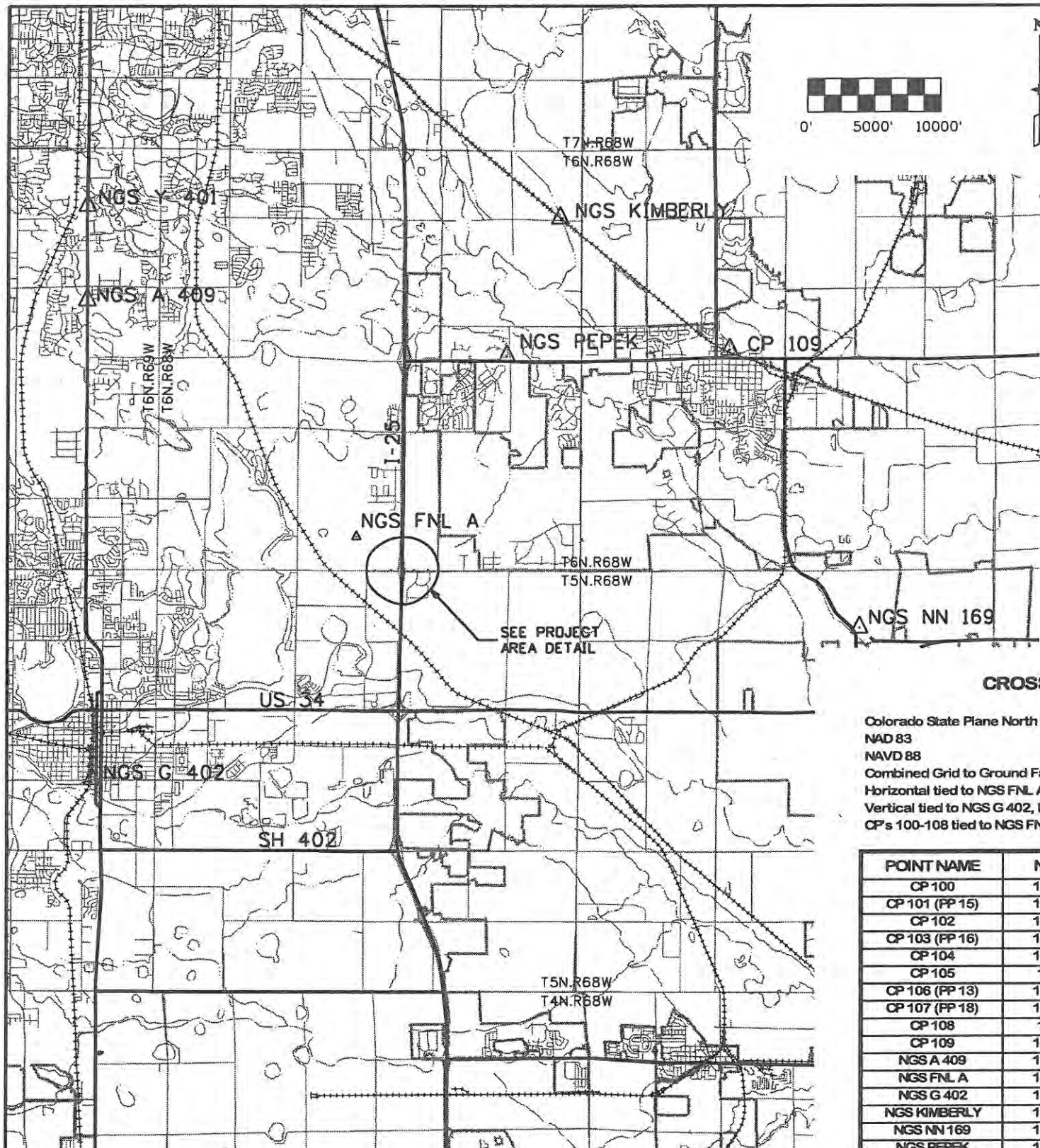
Colorado Department  
of Transportation

No Revisions: 9/14/11
Revised:
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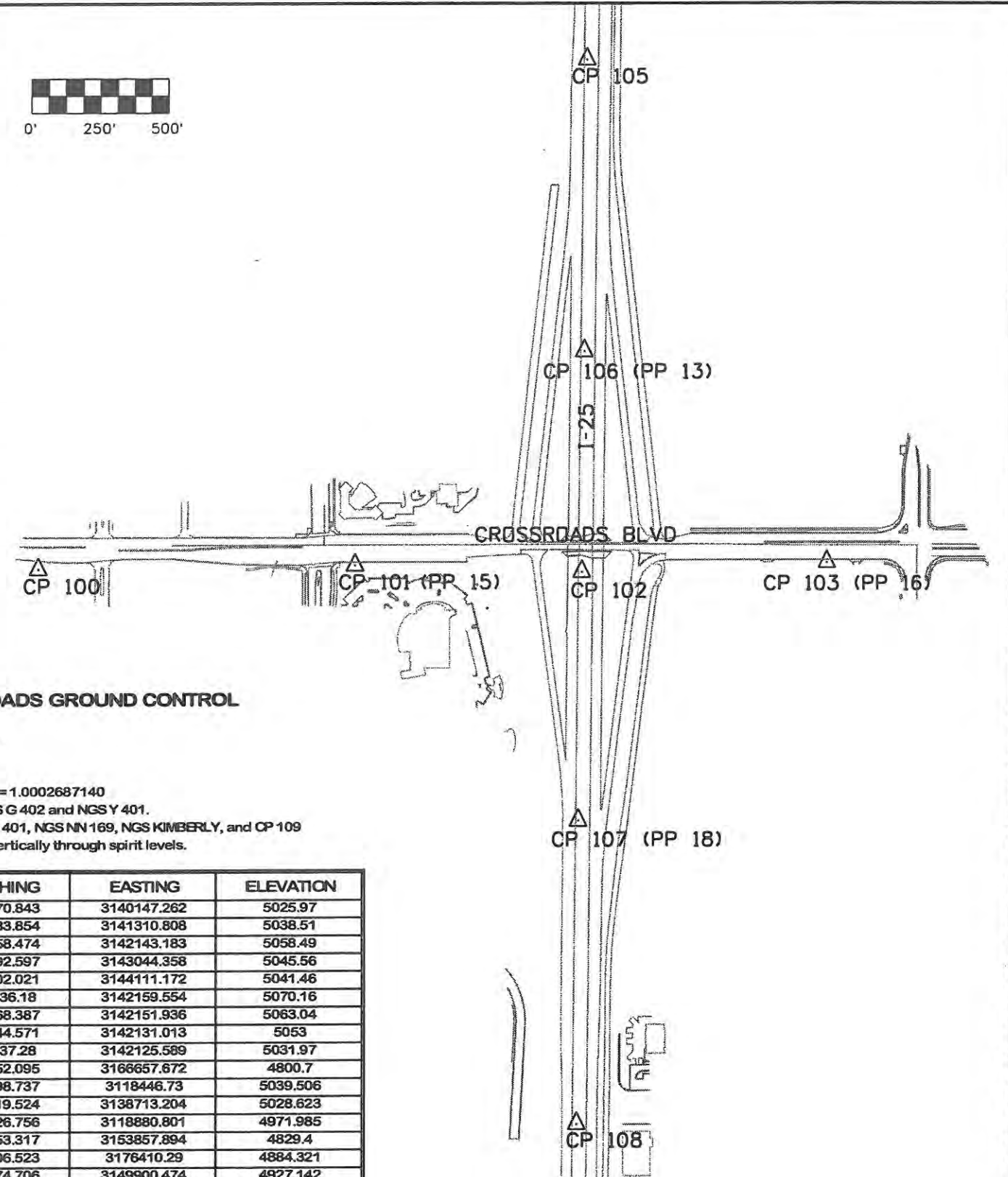
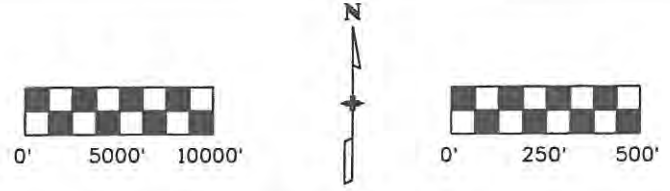
**SURVEY TABULATION**

Designer: JJW	Structure Numbers
Detailer: JJW	
Sheet Subset: Surv Tab	Subset Sheets: SVT1 of 1

Project No./Code	ES4 0253-207
	17244
Sheet Number	27



AREA MAP



CROSSROADS GROUND CONTROL

PROJECT AREA

Colorado State Plane North Zone  
 NAD 83  
 NAVD 88  
 Combined Grid to Ground Factor = 1.0002687140  
 Horizontal tied to NGS FNL A, NGS G 402 and NGS Y 401.  
 Vertical tied to NGS G 402, NGS Y 401, NGS NN 169, NGS KIMBERLY, and CP 109  
 CP's 100-108 tied to NGS FNL A vertically through spirit levels.

POINT NAME	NORTHING	EASTING	ELEVATION
CP 100	1402370.843	3140147.262	5025.97
CP 101 (PP 15)	1402383.854	3141310.808	5038.51
CP 102	1402358.474	3142143.183	5058.49
CP 103 (PP 16)	1402392.597	3143044.358	5045.56
CP 104	1402402.021	3144111.172	5041.46
CP 105	1404236.18	3142159.554	5070.16
CP 106 (PP 13)	1403168.387	3142151.936	5063.04
CP 107 (PP 18)	1401444.571	3142131.013	5053
CP 108	1400337.28	3142125.589	5031.97
CP 109	1418952.095	3166657.672	4800.7
NGS A 409	1422698.737	3118446.73	5039.506
NGS FNL A	1404919.524	3138713.204	5028.623
NGS G 402	1386626.756	3118880.801	4971.985
NGS KIMBERLY	1428853.317	3153857.894	4829.4
NGS NN 169	1398006.523	3176410.29	4884.321
NGS PEPEK	1418474.706	3149900.474	4927.142
NGS Y 401	1429804.308	3118451.095	4971.962

Computer File Information

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 Print Date: 5/1/2009 Initials: JJW  
 File Name: 0610031800suveycntrldiagram.dgn  
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Sheet Revisions

Date:	Comments	Init.

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No Revisions: 9/14/11  
 Revised:  
 Void:

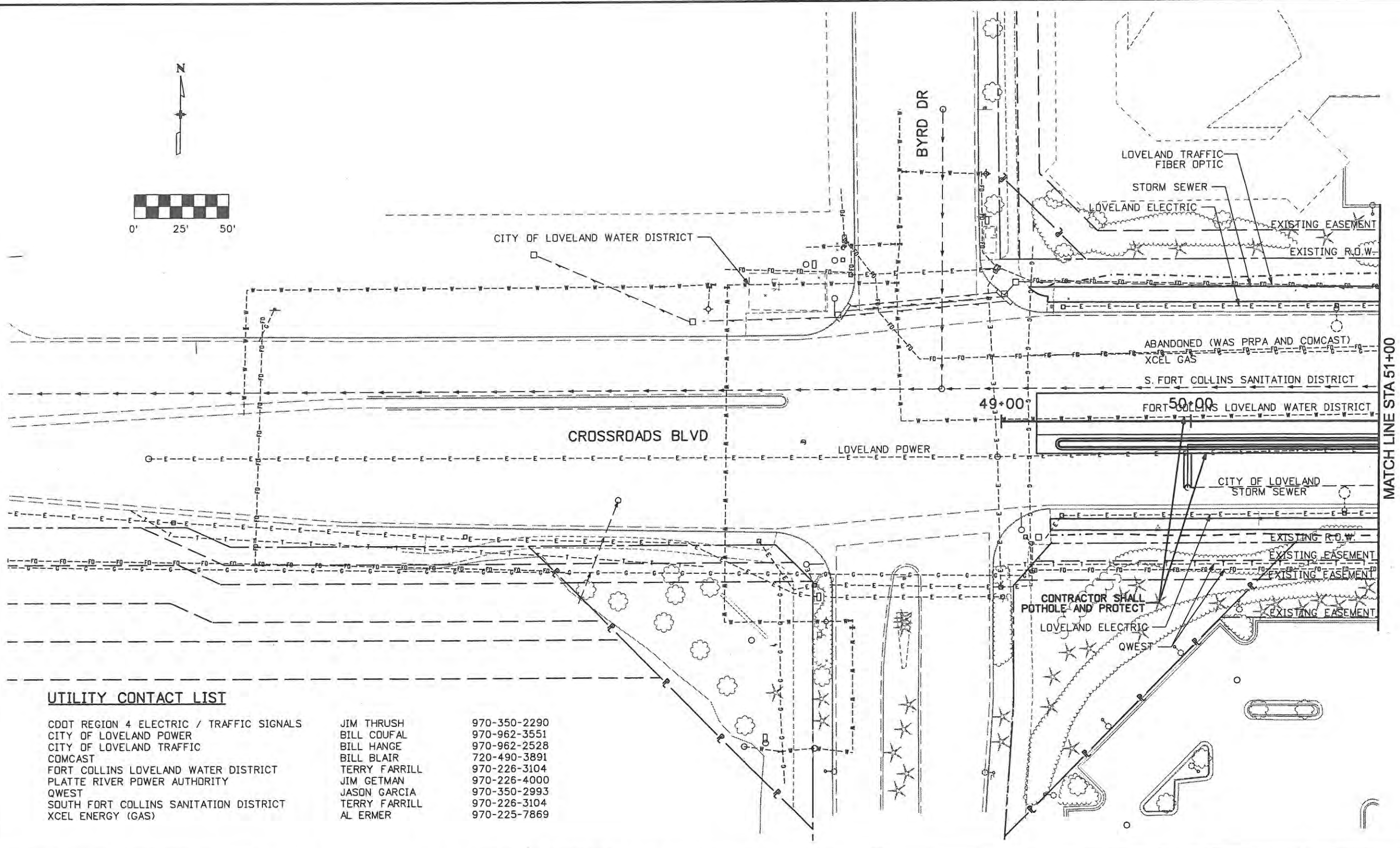
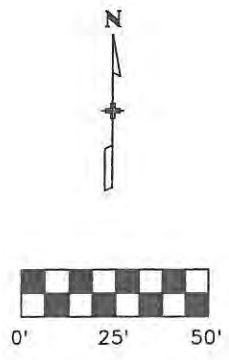
SURVEY CONTROL DIAGRAM

Designer: JJW  
 Detailer: JBK  
 Sheet Subset: Surv Ctl  
 Structure Numbers  
 Subset Sheets: SVC1 of 1

Project No./Code

ES4 0253-207  
 17244  
 Sheet Number 28





**UTILITY CONTACT LIST**

CDDT REGION 4 ELECTRIC / TRAFFIC SIGNALS	JIM THRUSH	970-350-2290
CITY OF LOVELAND POWER	BILL COUFAL	970-962-3551
CITY OF LOVELAND TRAFFIC	BILL HANGE	970-962-2528
COMCAST	BILL BLAIR	720-490-3891
FORT COLLINS LOVELAND WATER DISTRICT	TERRY FARRILL	970-226-3104
PLATTE RIVER POWER AUTHORITY	JIM GETMAN	970-226-4000
QWEST	JASON GARCIA	970-350-2993
SOUTH FORT COLLINS SANITATION DISTRICT	TERRY FARRILL	970-226-3104
XCEL ENERGY (GAS)	AL ERMER	970-225-7869

Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/1/2009	Initials:
File Name: 0610031800utp01.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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No Revisions: 7/14/11
Revised:
Void:

UTILITY PLANS CROSSROADS BOULEVARD	
Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: UTILITY	Subset Sheets: UT01 of 8

Project No./Code	ES4 0253-207
	17244
Sheet Number	29



LOVELAND POWER WILL PROVIDE THE 4" CONDUIT FOR THE CONTRACTOR TO INSTALL, AND WILL INSTALL LIGHTS AND WIRING FOR ALL LIGHTING ON THIS SHEET, EXCEPT FOR THE UNDERDECK LIGHTING.

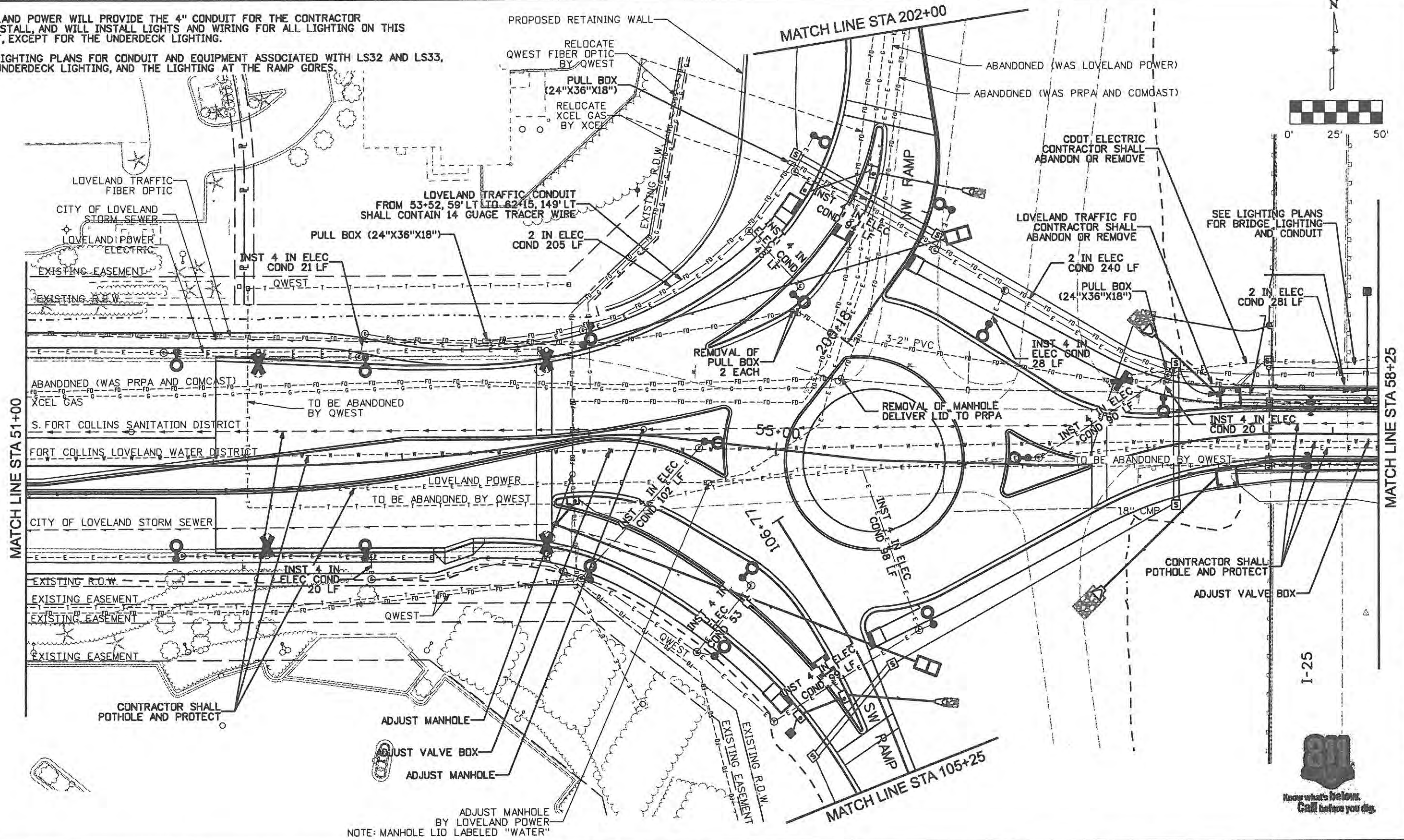
SEE LIGHTING PLANS FOR CONDUIT AND EQUIPMENT ASSOCIATED WITH LS32 AND LS33, THE UNDERDECK LIGHTING, AND THE LIGHTING AT THE RAMP GORES.

MATCH LINE STA 51+00

MATCH LINE STA 58+25

MATCH LINE STA 202+00

MATCH LINE STA 105+25



NOTE: MANHOLE LID LABELED "WATER"



Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/1/2009	Initials:
File Name: 0610031800utp02.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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Revised:	
Void:	9/14/11

UTILITY PLANS CROSSROADS BOULEVARD	
Designer: JJW	Structure Numbers
Detailer: JBK	Subset Sheets: UT02 of 8
Sheet Subset: UTILITY	

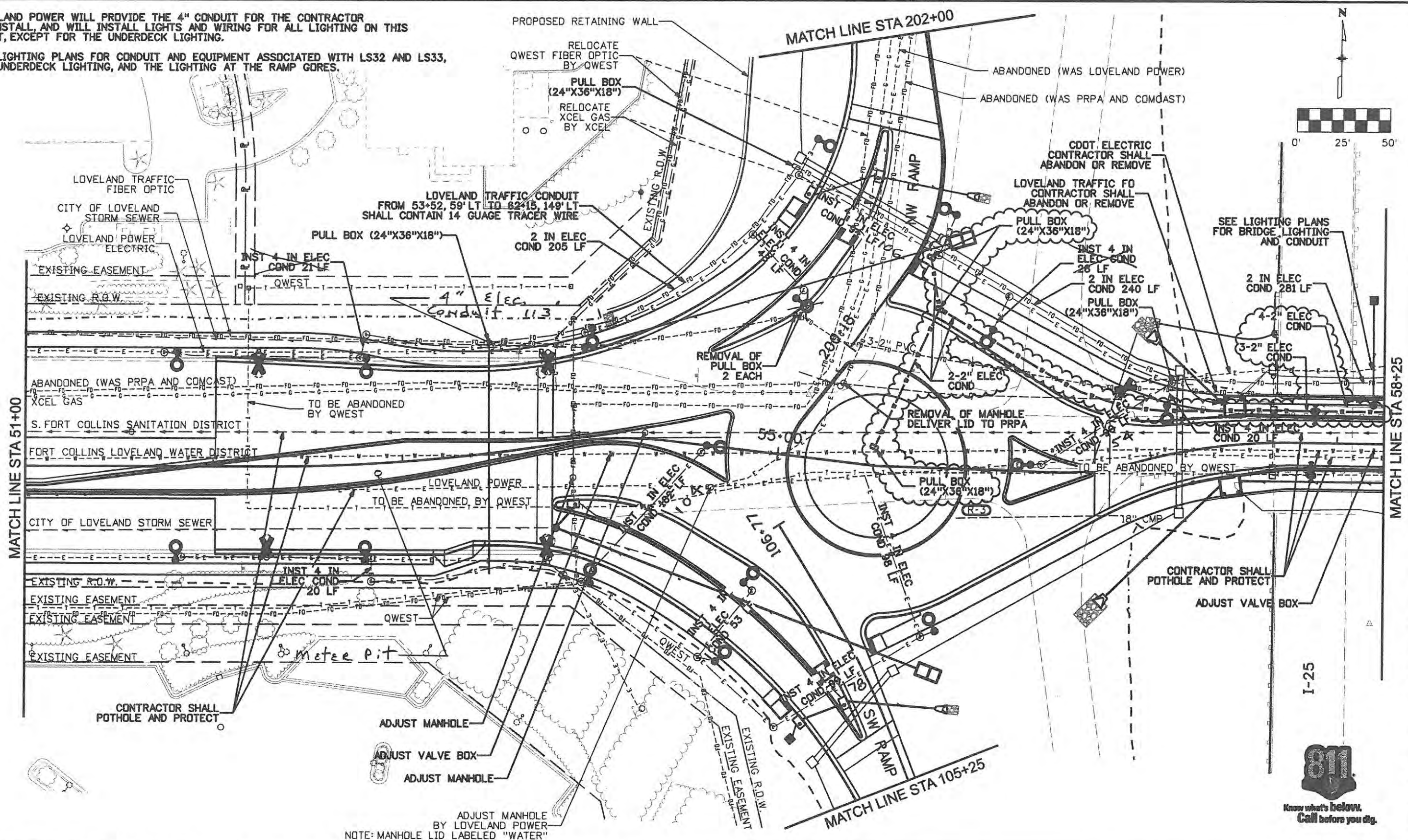
Project No./Code	
ES4 0253-207	17244
Sheet Number	30

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 989 16th Street Suite 2600  
 Denver, CO 80202  
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 Fax: 303-297-2693



LOVELAND POWER WILL PROVIDE THE 4" CONDUIT FOR THE CONTRACTOR TO INSTALL, AND WILL INSTALL LIGHTS AND WIRING FOR ALL LIGHTING ON THIS SHEET, EXCEPT FOR THE UNDERDECK LIGHTING.

SEE LIGHTING PLANS FOR CONDUIT AND EQUIPMENT ASSOCIATED WITH LS32 AND LS33, THE UNDERDECK LIGHTING, AND THE LIGHTING AT THE RAMP GORES.



Computer File Information	
Creation Date: 1/11/07	Initials: JBK
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Sheet Revisions		
Date:	Comments	Init.
09/30/09	DEICING CONDUIT	JJW

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No Revisions:
Revised: 7/14/11
Void:

UTILITY PLANS CROSSROADS BOULEVARD	
Designer: JJW	Structure Numbers:
Detailer: JBK	Subset Sheets: UT02 of 8
Sheet Subset: UTILITY	

Project No./Code	ES4 0253-207
	17244
Sheet Number	30X

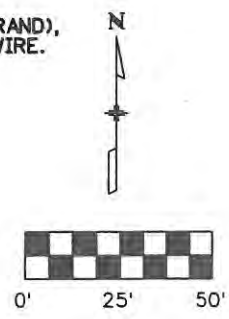
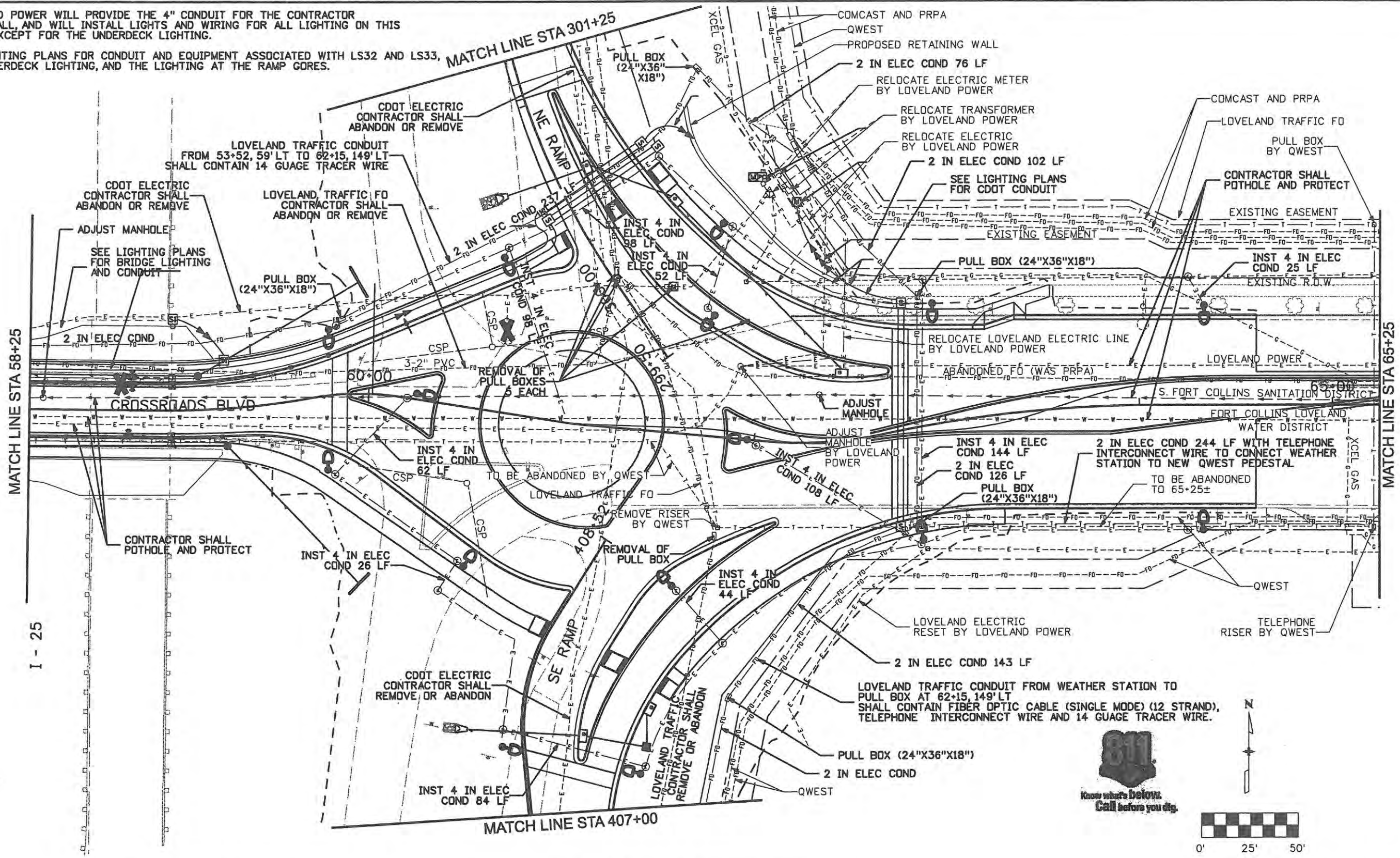
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 Engineers & Architects  
 999 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2993





LOVELAND POWER WILL PROVIDE THE 4" CONDUIT FOR THE CONTRACTOR TO INSTALL, AND WILL INSTALL LIGHTS AND WIRING FOR ALL LIGHTING ON THIS SHEET, EXCEPT FOR THE UNDERDECK LIGHTING.

SEE LIGHTING PLANS FOR CONDUIT AND EQUIPMENT ASSOCIATED WITH LS32 AND LS33, THE UNDERDECK LIGHTING, AND THE LIGHTING AT THE RAMP CORES.



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Print Date: 5/1/2009	Initials:
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Sheet Revisions		
Date:	Comments	Init.

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No Revisions:
Revised:
Void: 7/14/11

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Designer: JJW	Structure Numbers
Detailer: JBK	
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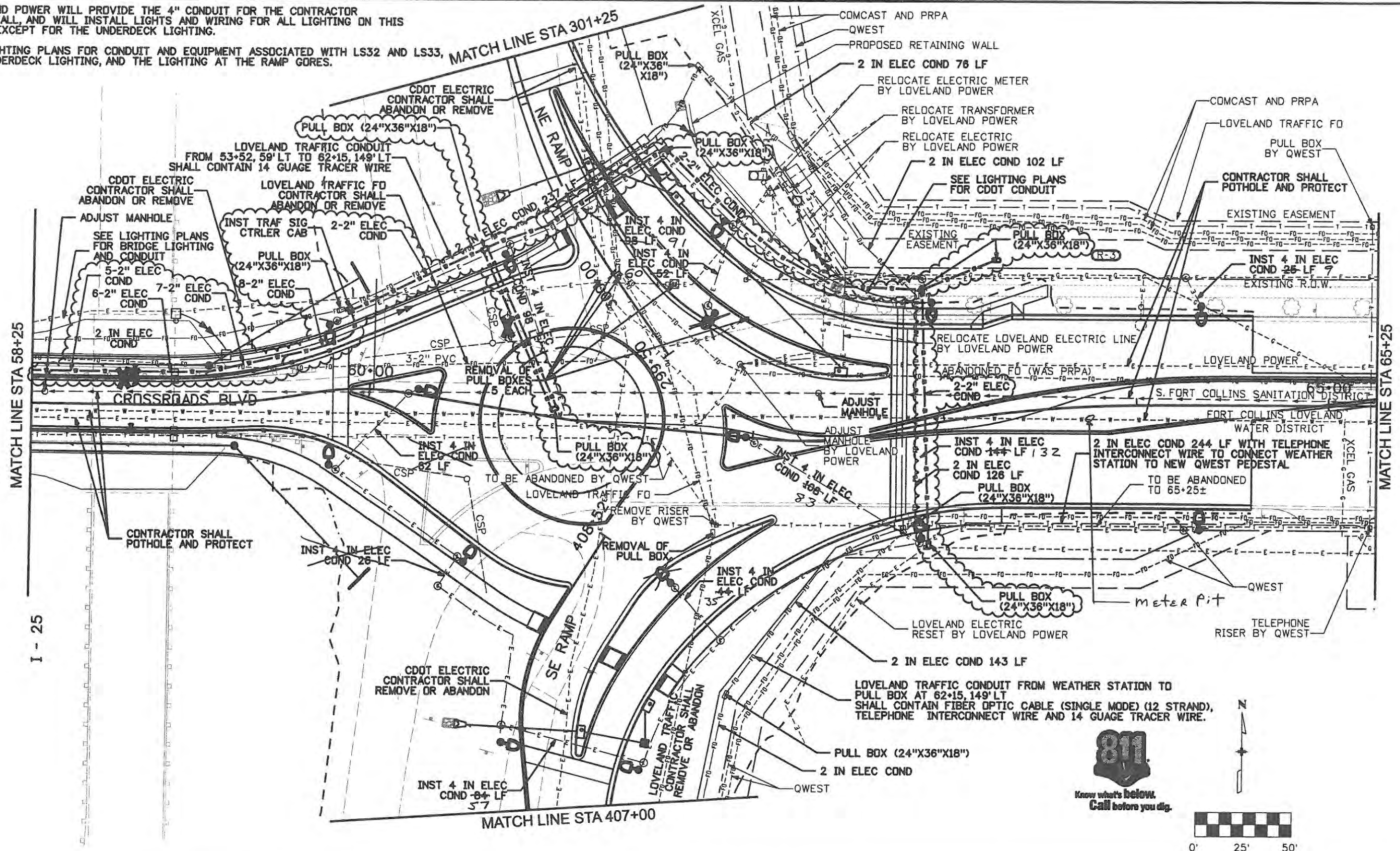
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Sheet Number	17244
Sheet Number	31

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 Denver, CO 80202  
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 Fax: 303-297-2693



LOVELAND POWER WILL PROVIDE THE 4" CONDUIT FOR THE CONTRACTOR TO INSTALL, AND WILL INSTALL LIGHTS AND WIRING FOR ALL LIGHTING ON THIS SHEET, EXCEPT FOR THE UNDERDECK LIGHTING.

SEE LIGHTING PLANS FOR CONDUIT AND EQUIPMENT ASSOCIATED WITH LS32 AND LS33, THE UNDERDECK LIGHTING, AND THE LIGHTING AT THE RAMP GORES.



**Computer File Information**

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Print Date: 9/29/2009	Initials:
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**Sheet Revisions**

Date:	Comments	Init.
09/30/09	DEICING CONDUIT	JJW

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No Revisions:  
Revised: 9/14/11  
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**UTILITY PLANS  
CROSSROADS BOULEVARD**

Designer: JJW	Structure Numbers
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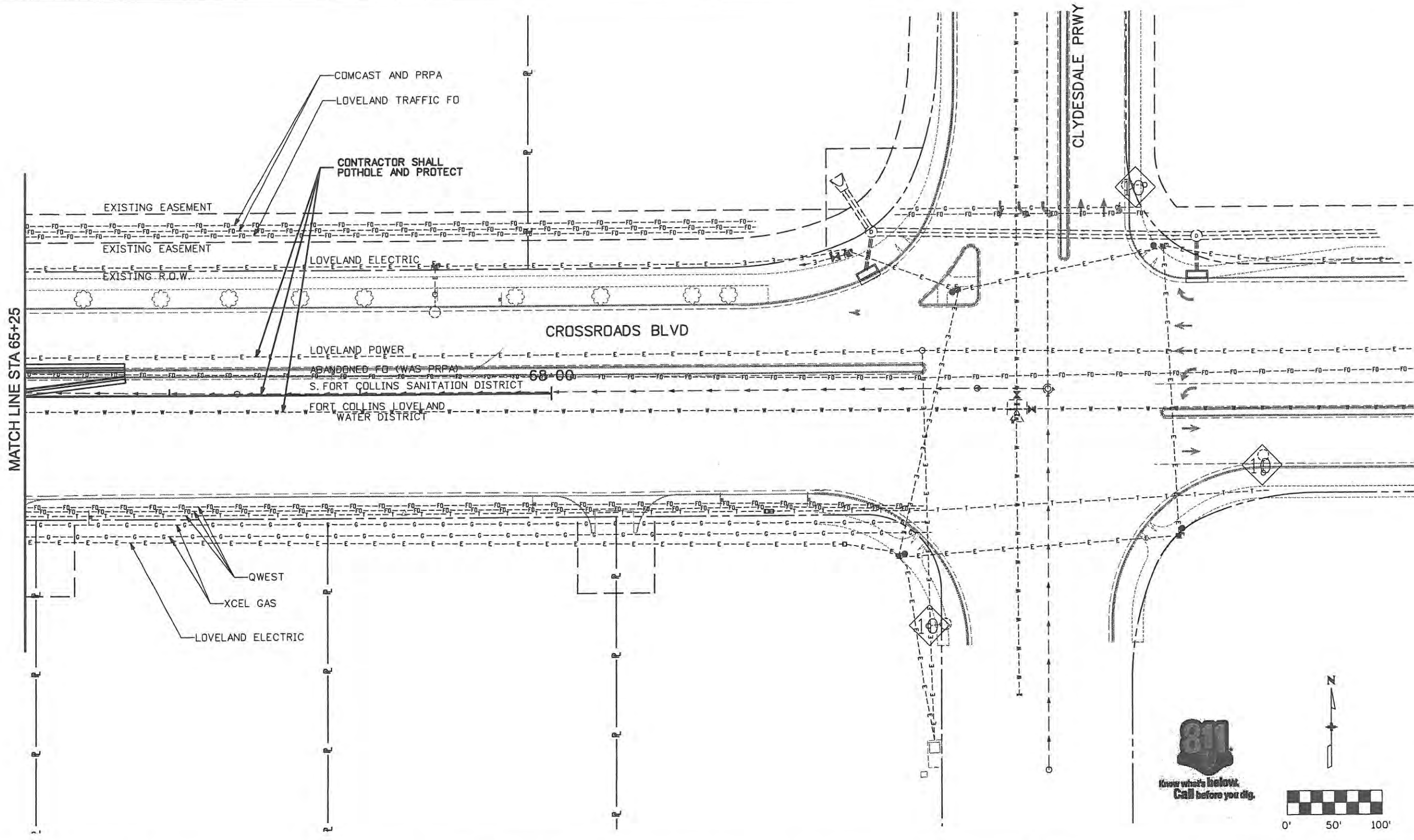
Project No./Code  
ES4 0253-207

17244

Sheet Number 31X

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 Denver, CO 80202  
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MATCH LINE STA 65+25



**Computer File Information**

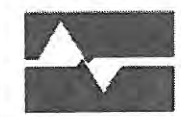
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**Sheet Revisions**

Date:	Comments	Init.

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of Transportation

**UTILITY PLANS**

No Revisions: 9/14/11

Revised:

Void:

**CROSSROADS BOULEVARD**

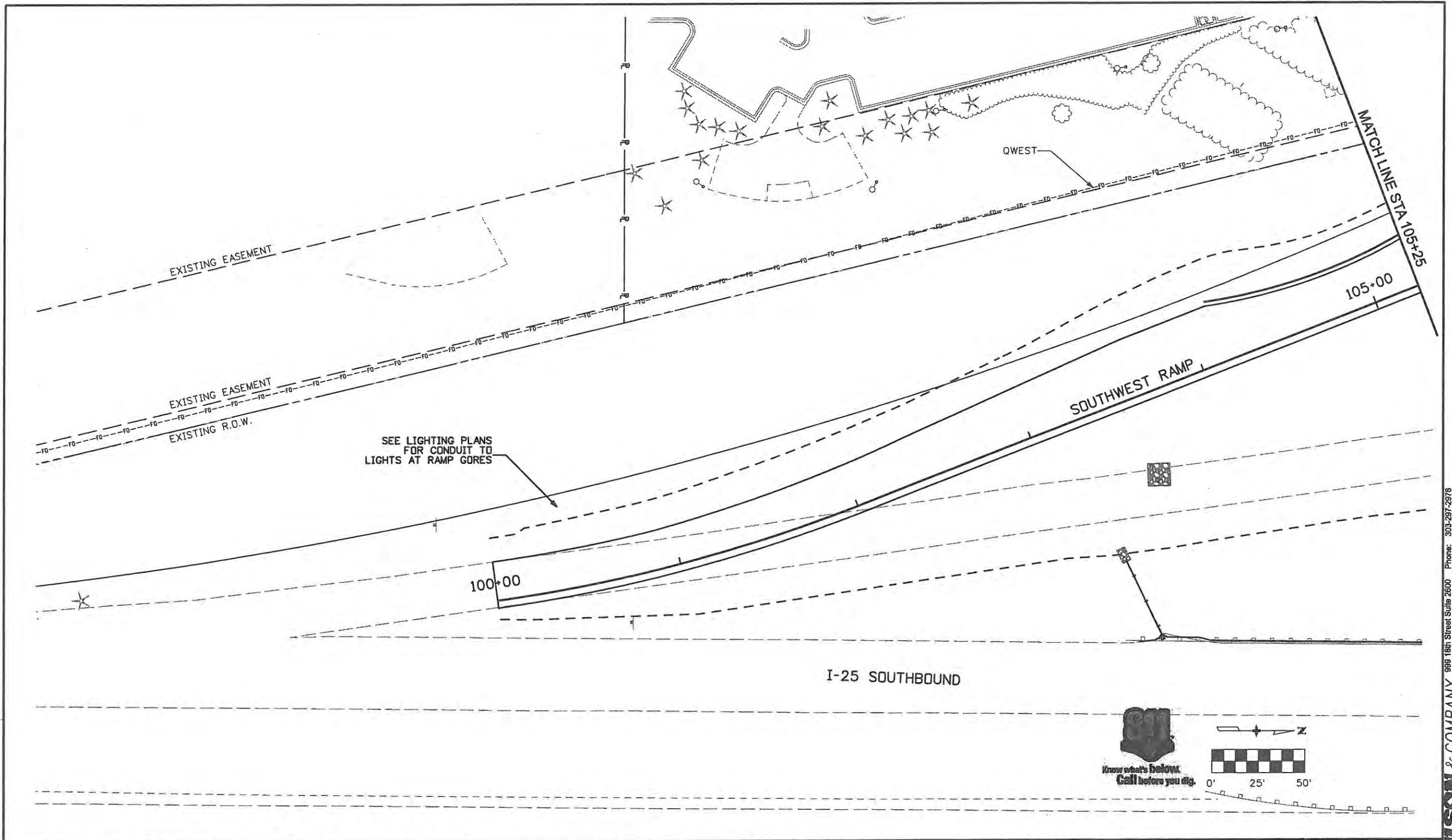
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**Project No./Code**

ES4 0253-207
17244
Sheet Number 32

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 Engineers & Architects  
 988 18th Street Suite 2600  
 Denver, CO 80202  
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Computer File Information	
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Print Date: 5/1/2009	Initials: JJW
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Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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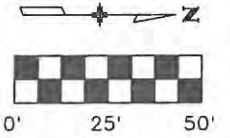
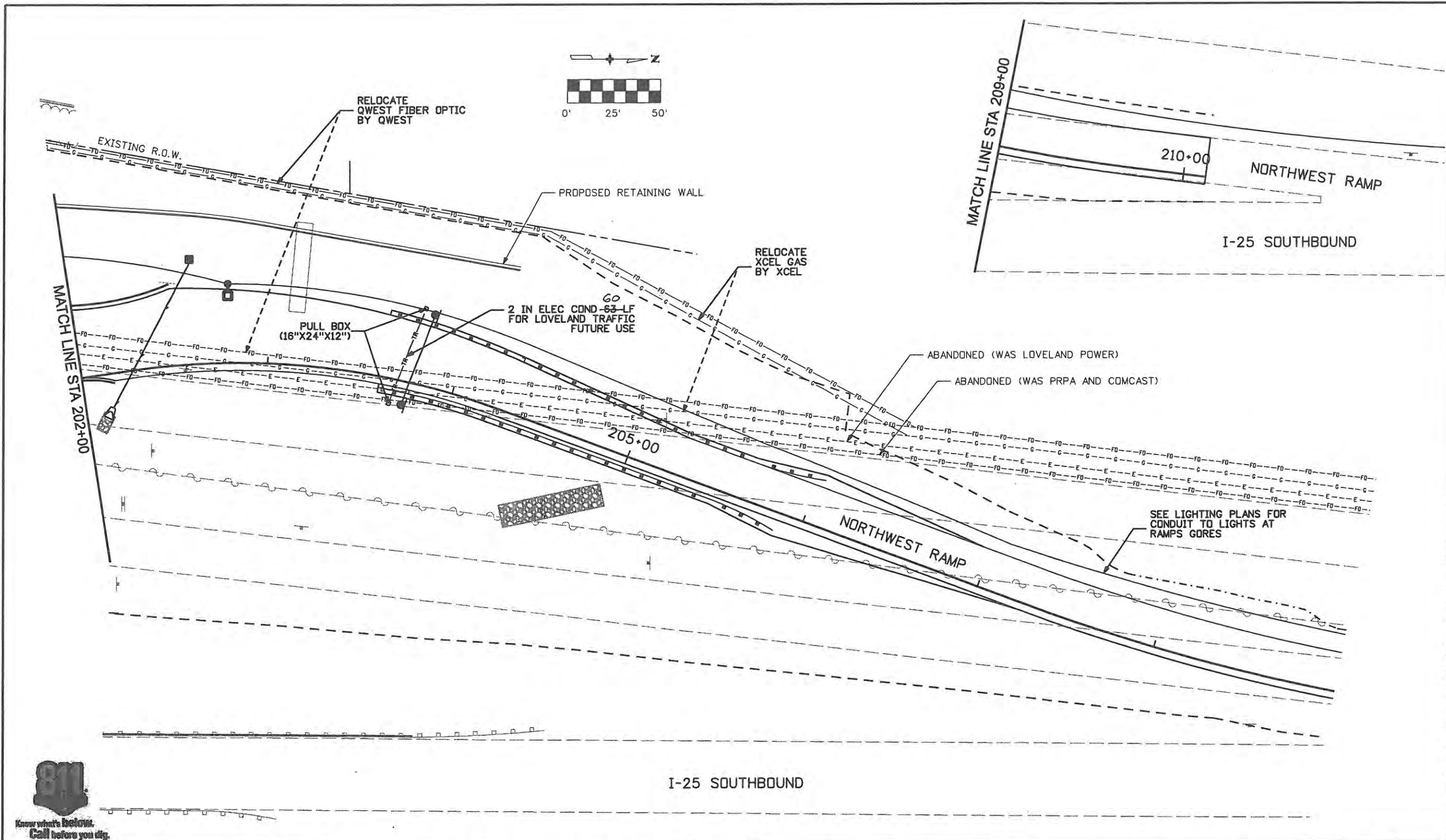
Colorado Department of Transportation

No Revisions: 9/14/11
Revised:
Void:

UTILITY PLANS SOUTHWEST RAMP	
Designer: JJW	Structure Numbers
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Sheet Subset: UTILITY	Subset Sheets: UT05 of 8

Project No./Code	ES4 0253-207
	17244
Sheet Number	33

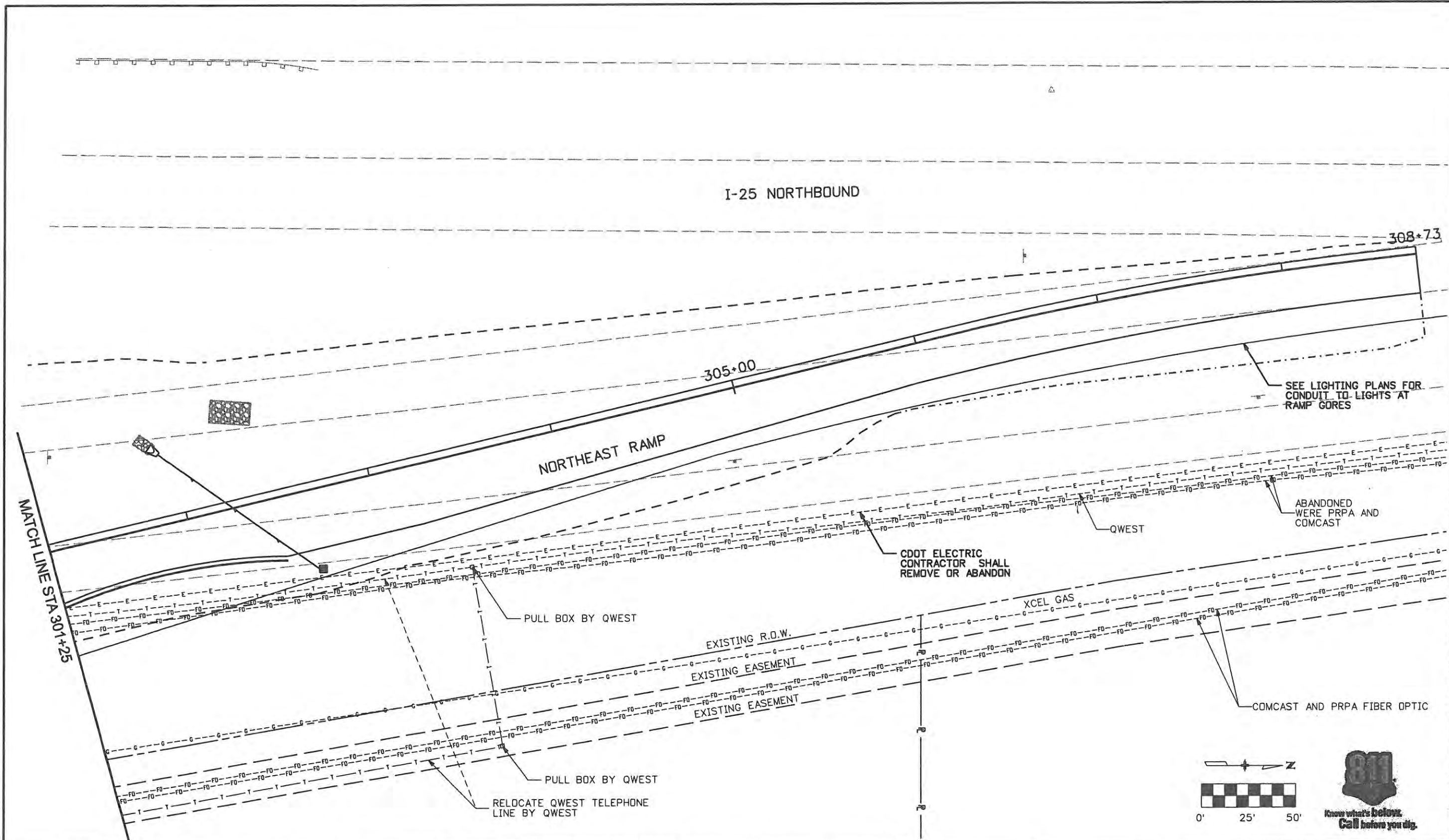
**WILSON & COMPANY**  
 Engineers & Architects  
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 Denver, CO 80202  
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<b>Computer File Information</b>		<b>Sheet Revisions</b>			<b>CITY OF LOVELAND</b>		<b>UTILITY PLANS</b>		<b>Project No./Code</b>		
Creation Date: 1/11/07	Initials: JBK	Date:	Comments:	Init.	 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 COLORADO DEPARTMENT OF TRANSPORTATION	No Revisions:		ES4 0253-207		
Print Date: 5/1/2009	Initials:							Revised: 9/14/11	Designer: JJW	Structure Numbers:	17244
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Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/1/2009	Initials:
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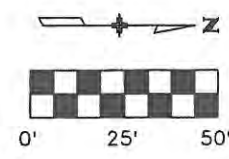
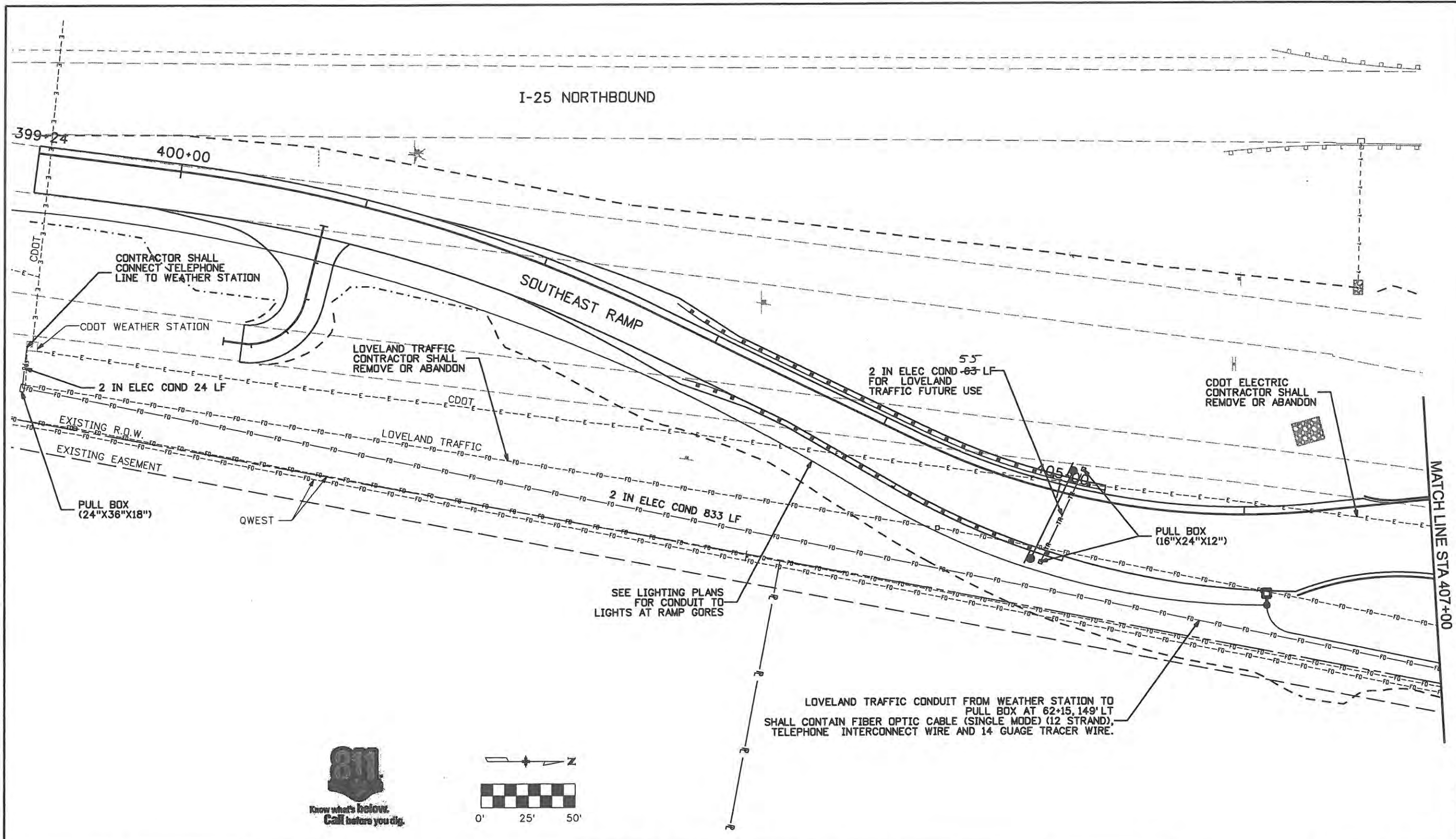
Colorado Department of Transportation

No Revisions: 9/14/11
Revised:
Void:

UTILITY PLANS NORTHEAST RAMP	
Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: UTILITY	Subset Sheets: UT07 of 8

Project No./Code	ES4 0253-207
Sheet Number	35

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Computer File Information	
Creation Date: 1/11/07	Initials: JJW
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Sheet Revisions		
Date:	Comments	Init.

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No Revisions:	
Revised: 9/14/11	
Void:	

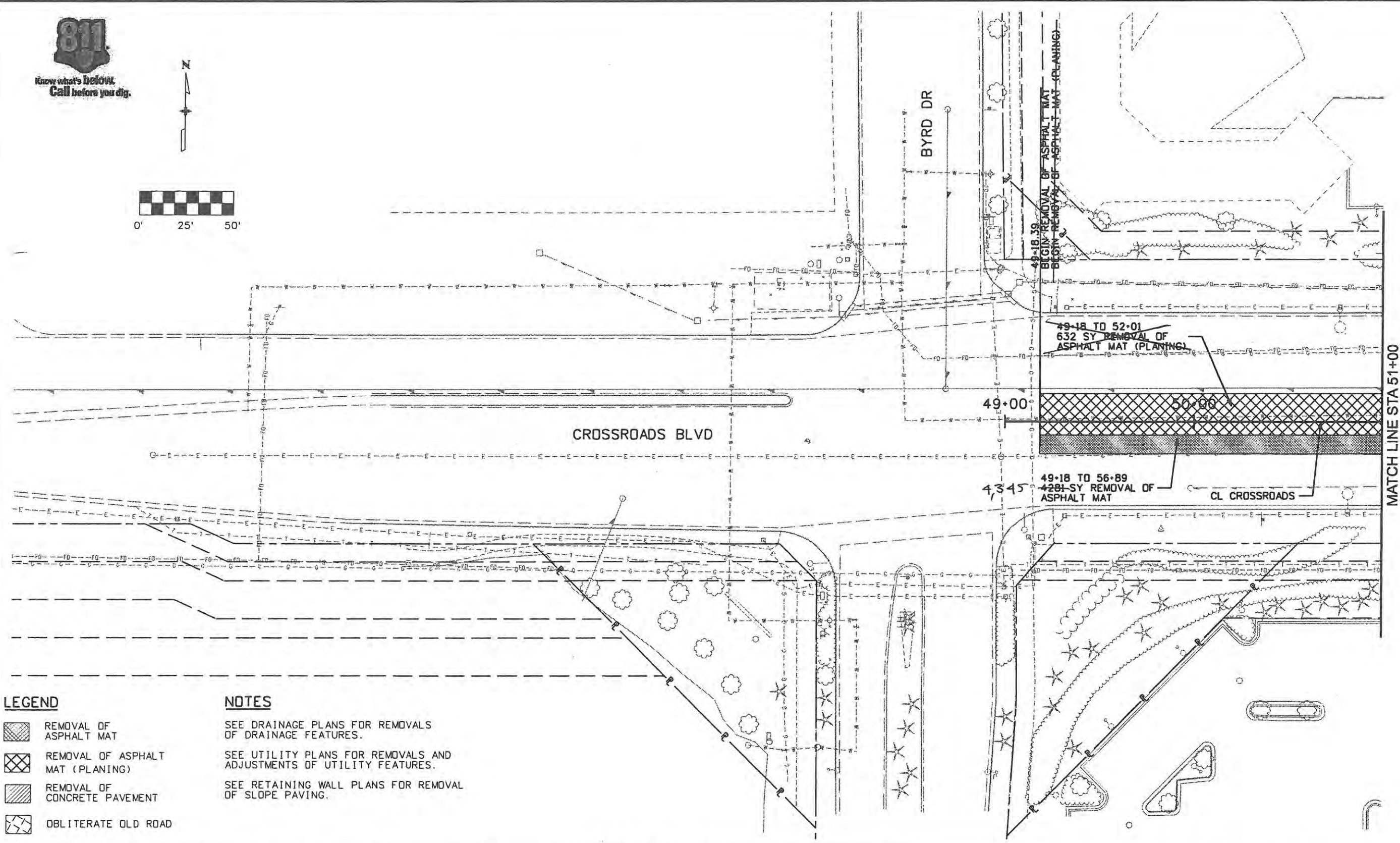
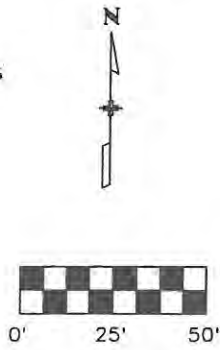
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Designer: JJW	Structure Numbers
Detailer: JJW	
Sheet Subset: UTILITY	Subset Sheets: UT08 of 8

Project No./Code	ES4 0253-207
	17244
Sheet Number	36

MATCH LINE STA 407+00

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 Fax: 303-297-2893





**LEGEND**

- REMOVAL OF ASPHALT MAT
- REMOVAL OF ASPHALT MAT (PLANING)
- REMOVAL OF CONCRETE PAVEMENT
- OBLITERATE OLD ROAD

**NOTES**

- SEE DRAINAGE PLANS FOR REMOVALS OF DRAINAGE FEATURES.
- SEE UTILITY PLANS FOR REMOVALS AND ADJUSTMENTS OF UTILITY FEATURES.
- SEE RETAINING WALL PLANS FOR REMOVAL OF SLOPE PAVING.

Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/1/2009	Initials: JJW
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Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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970-962-2000

Colorado Department of Transportation

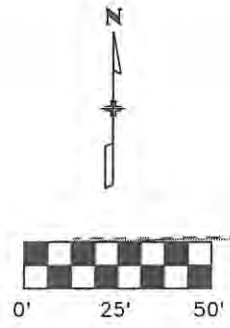
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REMOVAL PLANS CROSSROADS BOULEVARD	
Designer: JJW	Structure Numbers
Detailer: JBK	Subset Sheets: RM1 of 8
Sheet Subset: Rmvl Pln	

Project No./Code	ES4 0253-207
Sheet Number	17244
Sheet Number	37

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 Engineers & Architects  
 999 18th Street Suite 2600  
 Denver, CO 80202  
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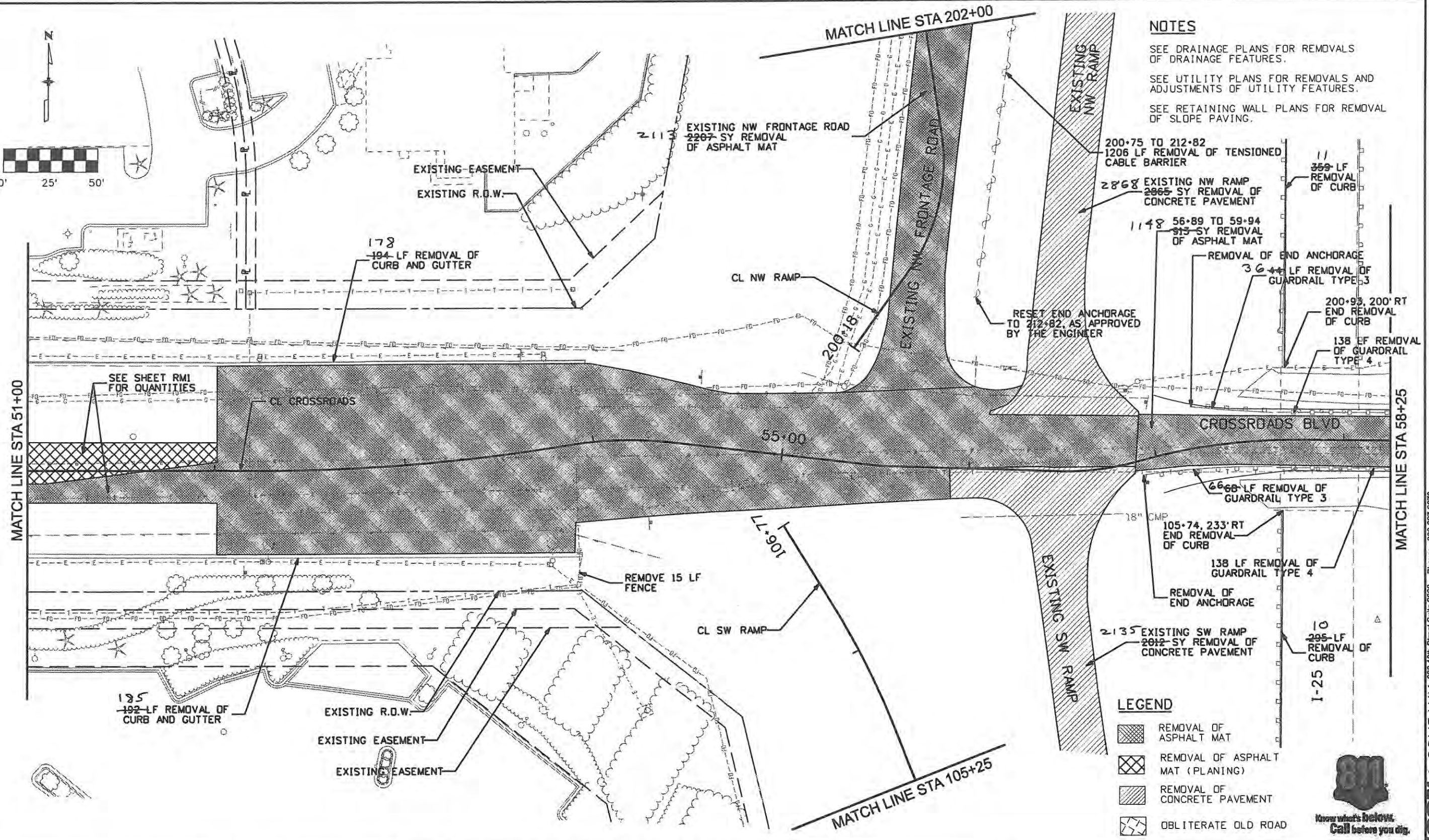
MATCH LINE STA 202+00

**NOTES**

- SEE DRAINAGE PLANS FOR REMOVALS OF DRAINAGE FEATURES.
- SEE UTILITY PLANS FOR REMOVALS AND ADJUSTMENTS OF UTILITY FEATURES.
- SEE RETAINING WALL PLANS FOR REMOVAL OF SLOPE PAVING.

MATCH LINE STA 51+00

MATCH LINE STA 58+25



**LEGEND**

- REMOVAL OF ASPHALT MAT
- REMOVAL OF ASPHALT MAT (PLANING)
- REMOVAL OF CONCRETE PAVEMENT
- OBLITERATE OLD ROAD



Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/1/2009	Initials: JJW
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Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

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Colorado Department of Transportation

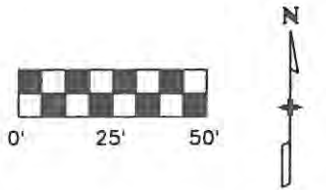
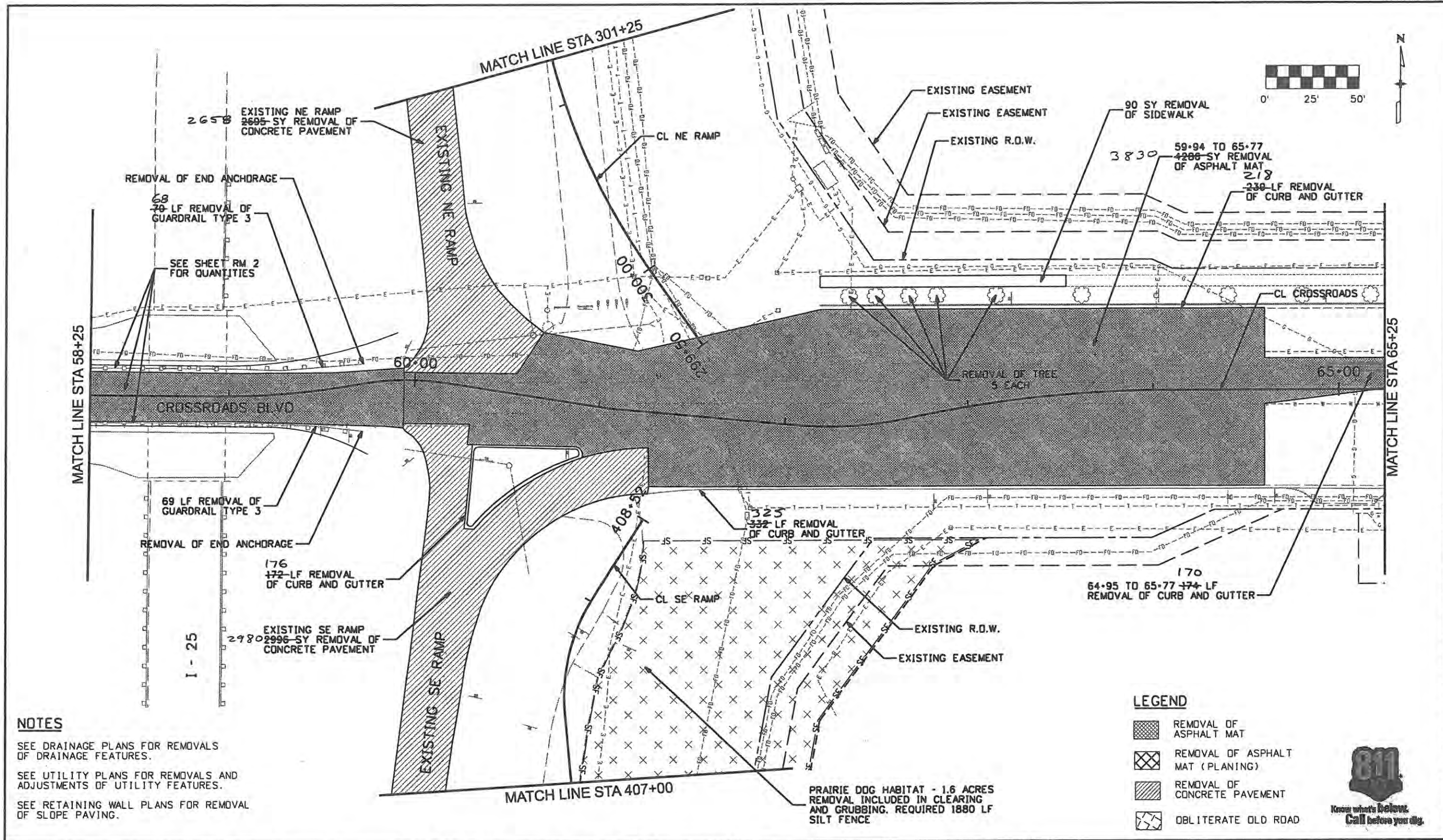
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REMOVAL PLANS CROSSROADS BOULEVARD	
Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: Rmvl Plan	Subset Sheets: RM2 of 8

Project No./Code	ES4 0253-207
	17244
Sheet Number	38

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 Denver, CO 80202  
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**NOTES**

SEE DRAINAGE PLANS FOR REMOVALS OF DRAINAGE FEATURES.  
 SEE UTILITY PLANS FOR REMOVALS AND ADJUSTMENTS OF UTILITY FEATURES.  
 SEE RETAINING WALL PLANS FOR REMOVAL OF SLOPE PAVING.

**LEGEND**

- REMOVAL OF ASPHALT MAT
- REMOVAL OF ASPHALT MAT (PLANTING)
- REMOVAL OF CONCRETE PAVEMENT
- OBLITERATE OLD ROAD



Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/8/2009	Initials: JJW
File Name: 0610031800rmp03.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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500 E. THIRD STREET  
 LOVELAND, CO 80537  
 970-962-2000

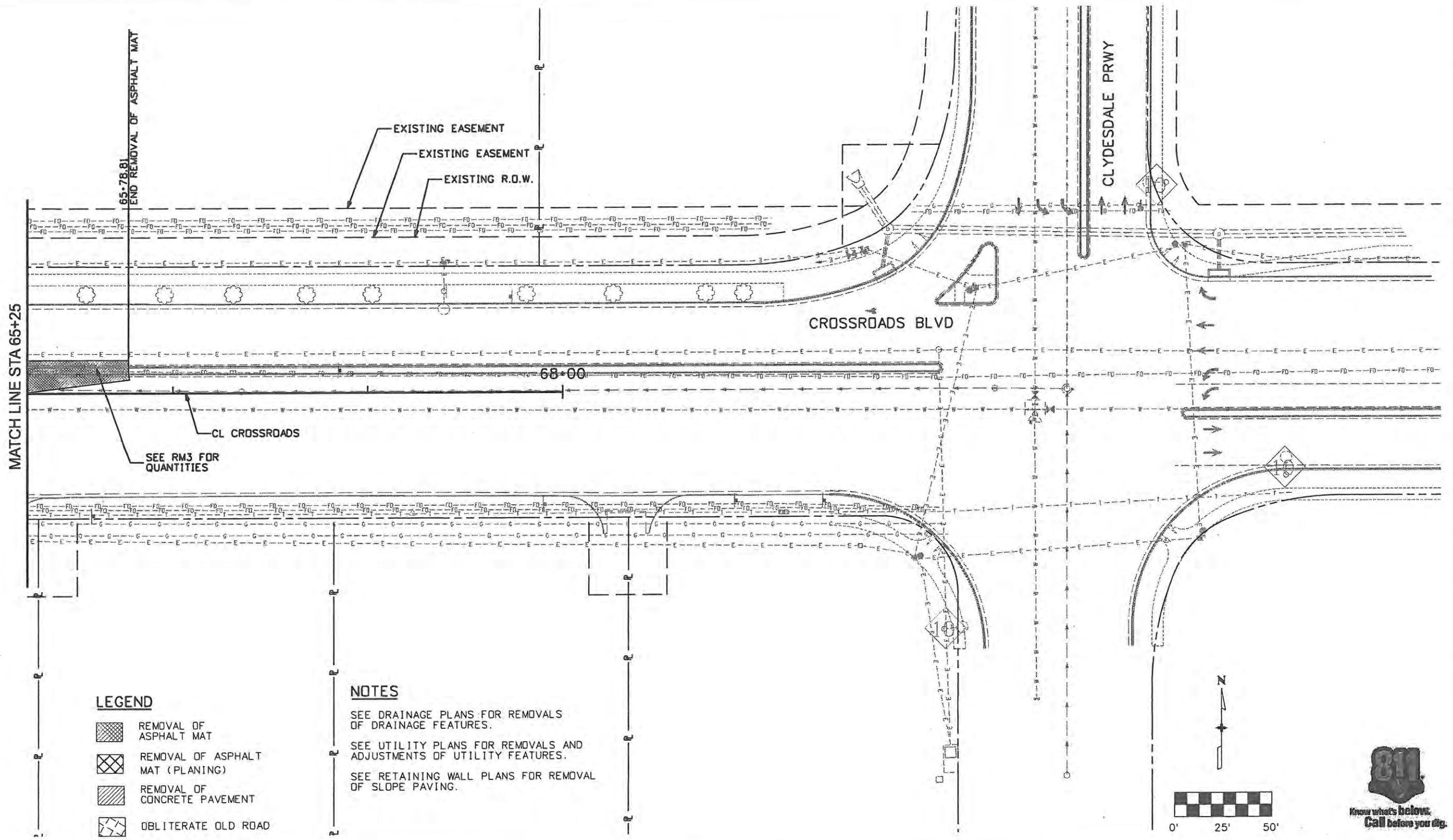
Colorado Department of Transportation

No Revisions:	
Revised: 7/14/11	
Void:	





REMOVAL PLANS CROSSROADS BOULEVARD	
Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: Rmvl Pln	Subset Sheets: RM3 of 8

Project No./Code	ES4 0253-207
	17244
Sheet Number	39

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**LEGEND**

-  REMOVAL OF ASPHALT MAT
-  REMOVAL OF ASPHALT MAT (PLANING)
-  REMOVAL OF CONCRETE PAVEMENT
-  OBLITERATE OLD ROAD

**NOTES**

- SEE DRAINAGE PLANS FOR REMOVALS OF DRAINAGE FEATURES.
- SEE UTILITY PLANS FOR REMOVALS AND ADJUSTMENTS OF UTILITY FEATURES.
- SEE RETAINING WALL PLANS FOR REMOVAL OF SLOPE PAVING.



Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/1/2009	Initials: JJW
File Name: 0610031800rmp04.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

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LOVELAND, CO 80537  
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Colorado Department of Transportation





No Revisions: 9/14/11
Revised:
Void:

REMOVAL PLANS CROSSROADS BOULEVARD	
Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: RmVI Pln	Subset Sheets: RM4 of 8

Project No./Code ES4 0253-207
17244
Sheet Number 40

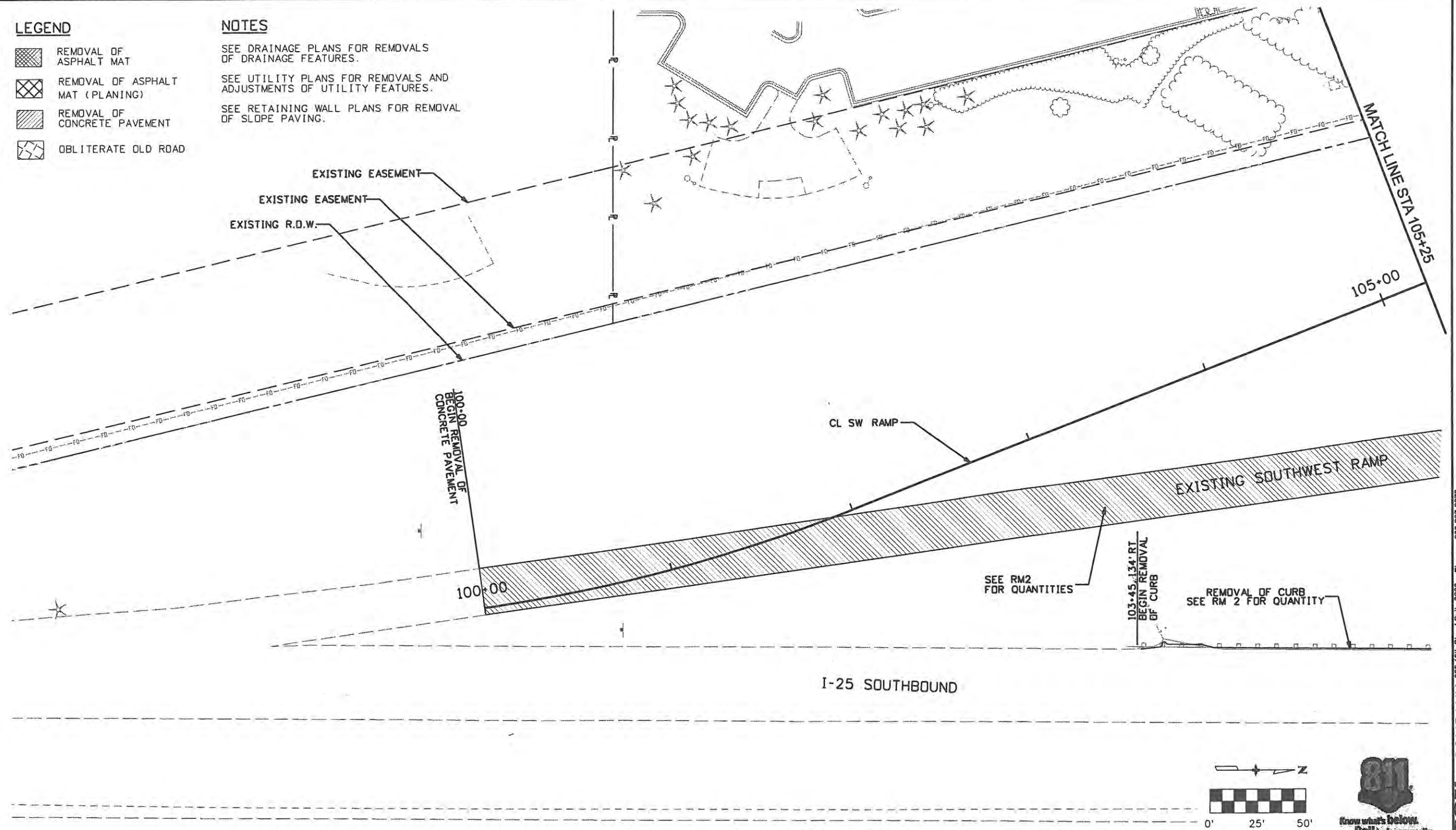


**LEGEND**

-  REMOVAL OF ASPHALT MAT
-  REMOVAL OF ASPHALT MAT (PLANING)
-  REMOVAL OF CONCRETE PAVEMENT
-  OBLITERATE OLD ROAD

**NOTES**

- SEE DRAINAGE PLANS FOR REMOVALS OF DRAINAGE FEATURES.
- SEE UTILITY PLANS FOR REMOVALS AND ADJUSTMENTS OF UTILITY FEATURES.
- SEE RETAINING WALL PLANS FOR REMOVAL OF SLOPE PAVING.



Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/1/2009	Initials: JJW
File Name: 0610031800rmp05.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

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No Revisions: 9/14/11
Revised:
Void:

REMOVAL PLANS SOUTHWEST RAMP	
Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: Rmvl Pln	Subset Sheets: RM5 of 8

Project No./Code	ES4 0253-207
	17244
Sheet Number	41





**WILSON & COMPANY**  
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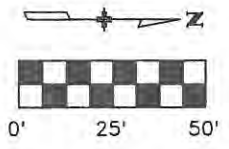
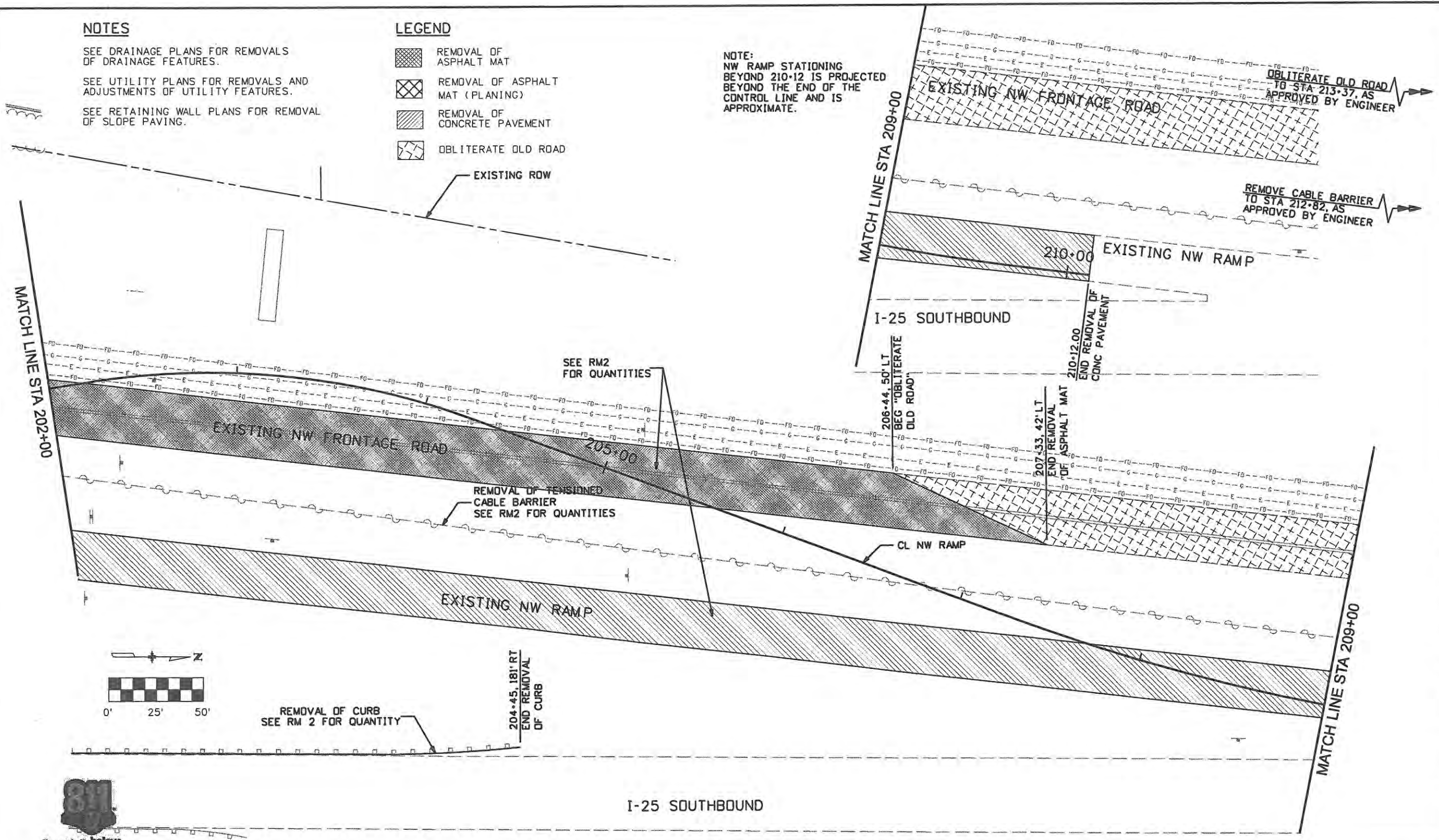
**NOTES**

SEE DRAINAGE PLANS FOR REMOVALS OF DRAINAGE FEATURES.  
 SEE UTILITY PLANS FOR REMOVALS AND ADJUSTMENTS OF UTILITY FEATURES.  
 SEE RETAINING WALL PLANS FOR REMOVAL OF SLOPE PAVING.

**LEGEND**

-  REMOVAL OF ASPHALT MAT
-  REMOVAL OF ASPHALT MAT (PLANING)
-  REMOVAL OF CONCRETE PAVEMENT
-  OBLITERATE OLD ROAD

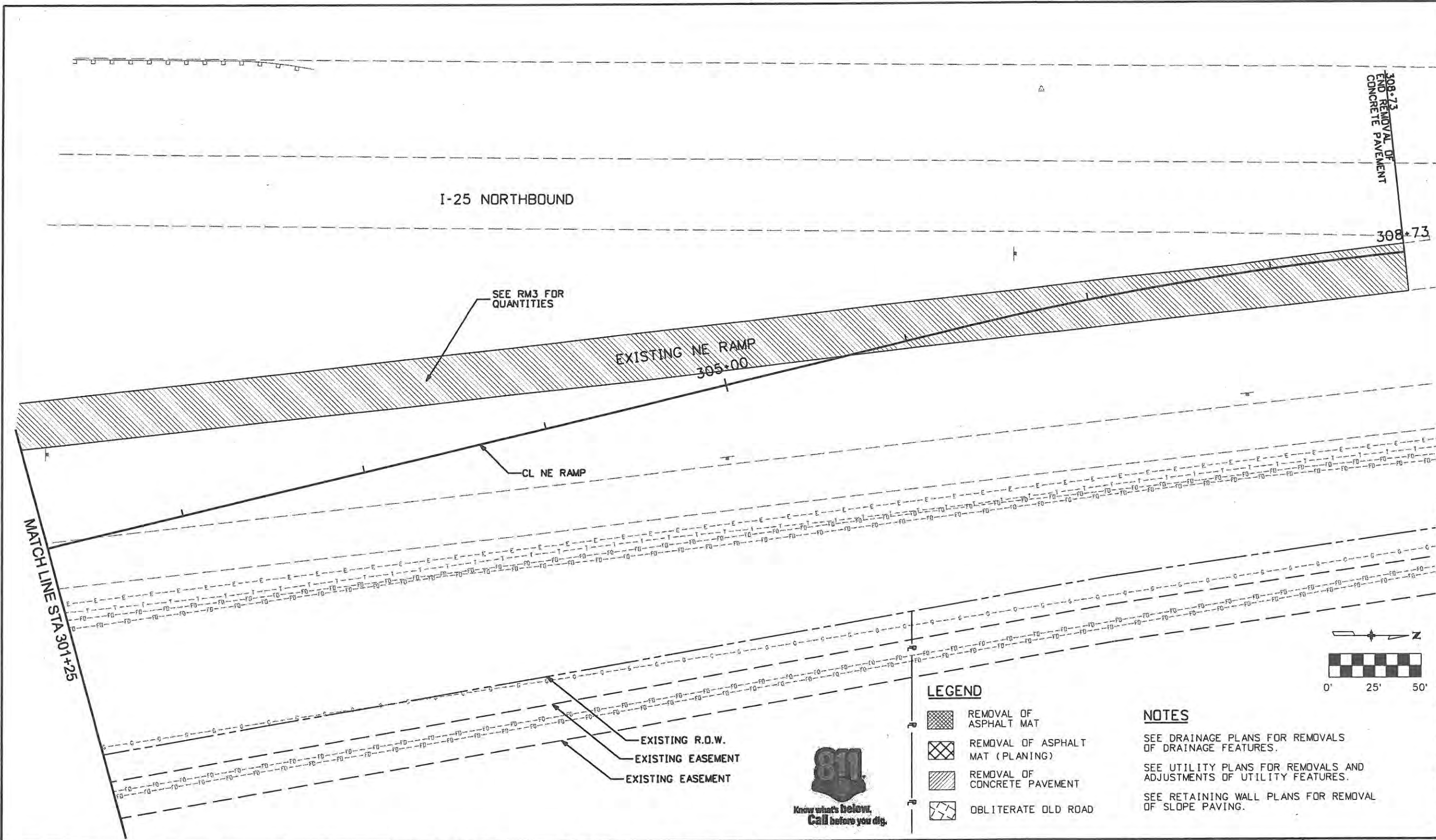
NOTE:  
 NW RAMP STATIONING BEYOND 210+12 IS PROJECTED BEYOND THE END OF THE CONTROL LINE AND IS APPROXIMATE.



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<b>Computer File Information</b>		<b>Sheet Revisions</b>		<b>CITY OF LOVELAND</b>		<b>REMOVAL PLANS</b>		<b>Project No./Code</b>		
Creation Date: 1/11/07	Initials: JBK	Date:	Comments:	Init.	 Colorado Department of Transportation	No Revisions: 9/14/11		NORTHWEST RAMP		ES4 0253-207
Print Date: 5/1/2009	Initials:					Revised:	Designer: JJW	Structure Numbers:	17244	
File Name: 0610031800rmp06.dgn						Void:	Detailer: JBK		Sheet Number 42	
Horiz. Scale: 1:50	Vert. Scale: As Noted						Sheet Subset: Rmvl Pln	Subset Sheets: RM6 of 8		





Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/1/2009	Initials:
File Name: 0610031800rmp07.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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No Revisions: 9/14/11
Revised:
Void:

REMOVAL PLANS NORTHEAST RAMP	
Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: RmvlPln	Subset Sheets: RM7 of 8

Project No./Code	ES4 0253-207
	17244
Sheet Number	43

- LEGEND**
- REMOVAL OF ASPHALT MAT
  - REMOVAL OF ASPHALT MAT (PLANING)
  - REMOVAL OF CONCRETE PAVEMENT
  - OBLITERATE OLD ROAD

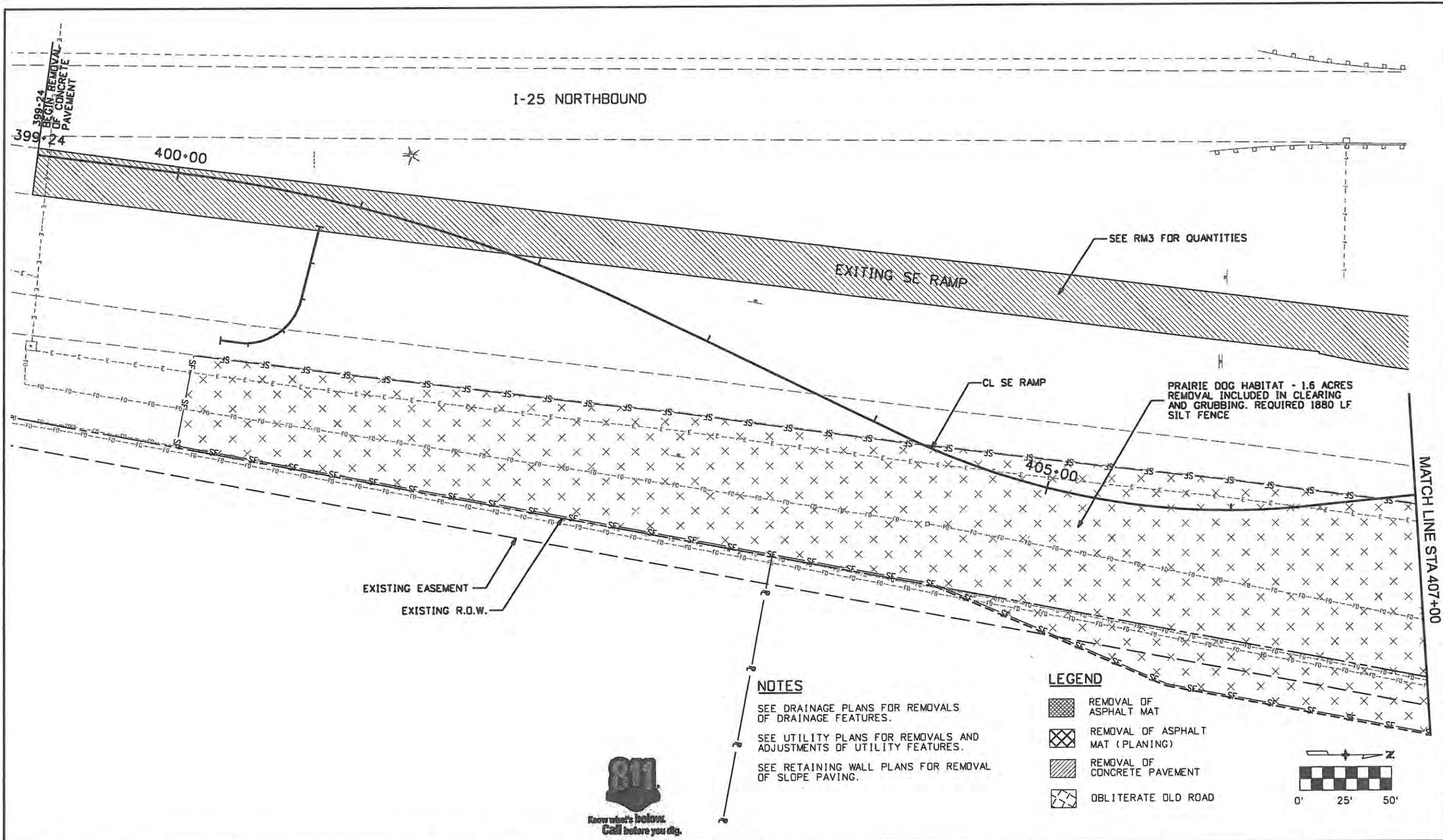
**NOTES**

SEE DRAINAGE PLANS FOR REMOVALS OF DRAINAGE FEATURES.

SEE UTILITY PLANS FOR REMOVALS AND ADJUSTMENTS OF UTILITY FEATURES.

SEE RETAINING WALL PLANS FOR REMOVAL OF SLOPE PAVING.

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**NOTES**

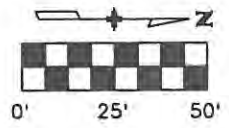
SEE DRAINAGE PLANS FOR REMOVALS OF DRAINAGE FEATURES.

SEE UTILITY PLANS FOR REMOVALS AND ADJUSTMENTS OF UTILITY FEATURES.

SEE RETAINING WALL PLANS FOR REMOVAL OF SLOPE PAVING.

**LEGEND**

- REMOVAL OF ASPHALT MAT
- REMOVAL OF ASPHALT MAT (PLANING)
- REMOVAL OF CONCRETE PAVEMENT
- OBLITERATE OLD ROAD



MATCH LINE STA 407+00

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Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/8/2009	Initials: JJW
File Name: 0610031800rmp08.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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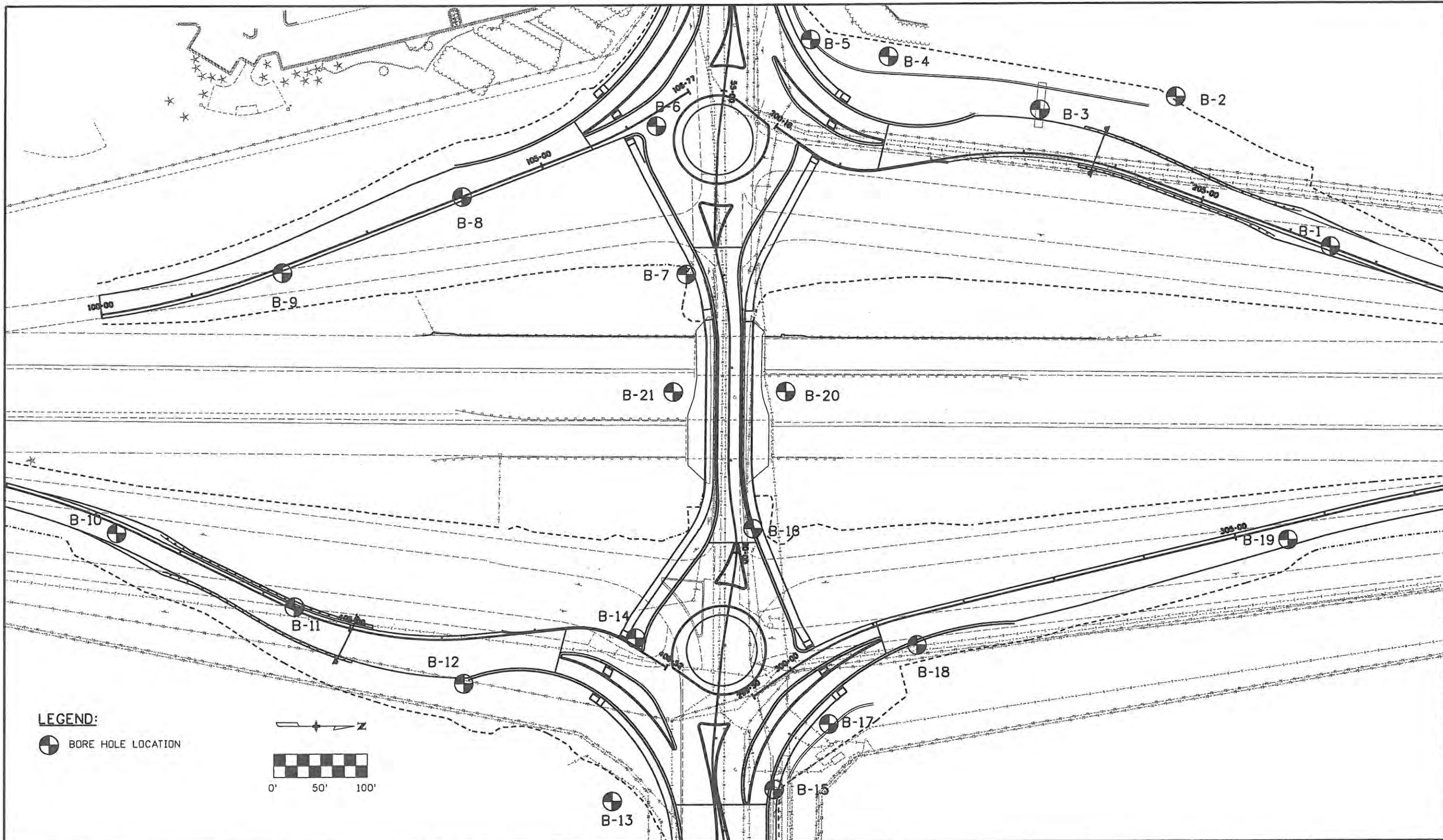
Colorado Department of Transportation

No Revisions: 9/14/11
Revised:
Void:

REMOVAL PLANS SOUTHEAST RAMP	
Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: Rmvl Pln	Subset Sheets: RMB of B

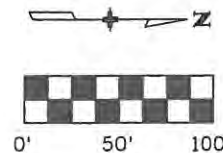
Project No./Code	ES4 0253-207
Sheet Number	17244 44





**LEGEND:**

BORE HOLE LOCATION



Computer File Information	
Creation Date: 08/29/07	Initials: JBK
Print Date: 5/1/2009	Initials: JJW
File Name: 0610031800Borings.dgn	
Horiz. Scale: 1:100	Vert. Scale: As Noted

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Date:	Comments	Init.

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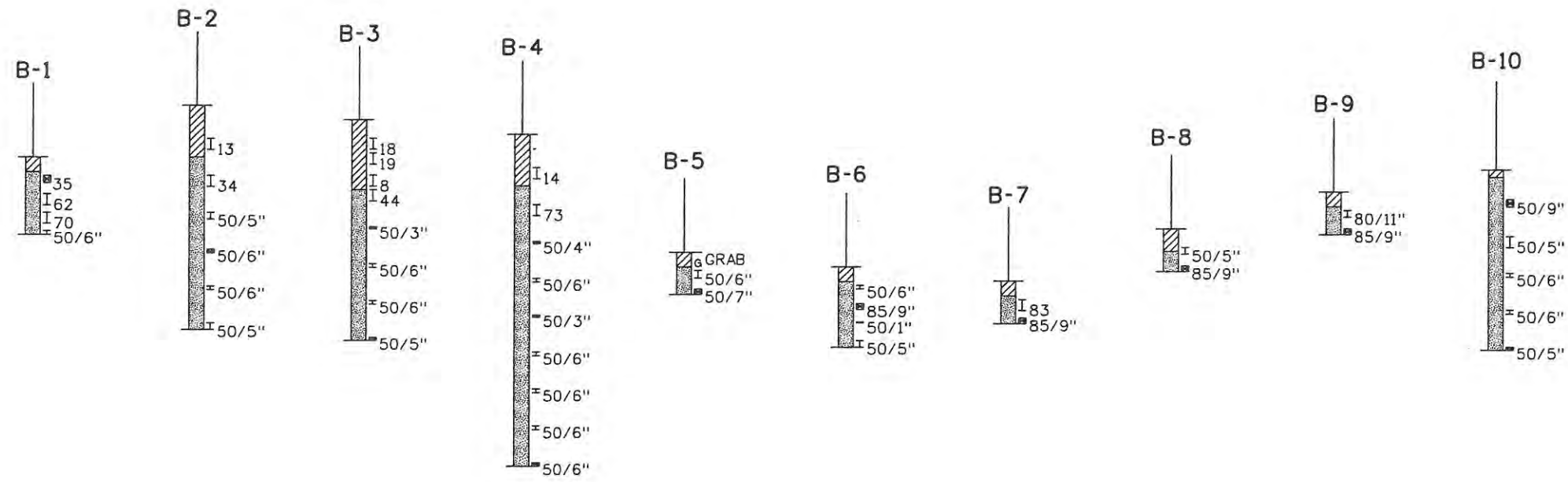
Colorado Department of Transportation

No Revisions: 9/14/11
Revised:
Void:

ENGINEERING GEOLOGY SITE PLAN	
Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: GEOLOGY	Subset Sheets: EG1 of 3

Project No./Code	ES4 0253-207
	17244
Sheet Number	45

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**LEGEND:**

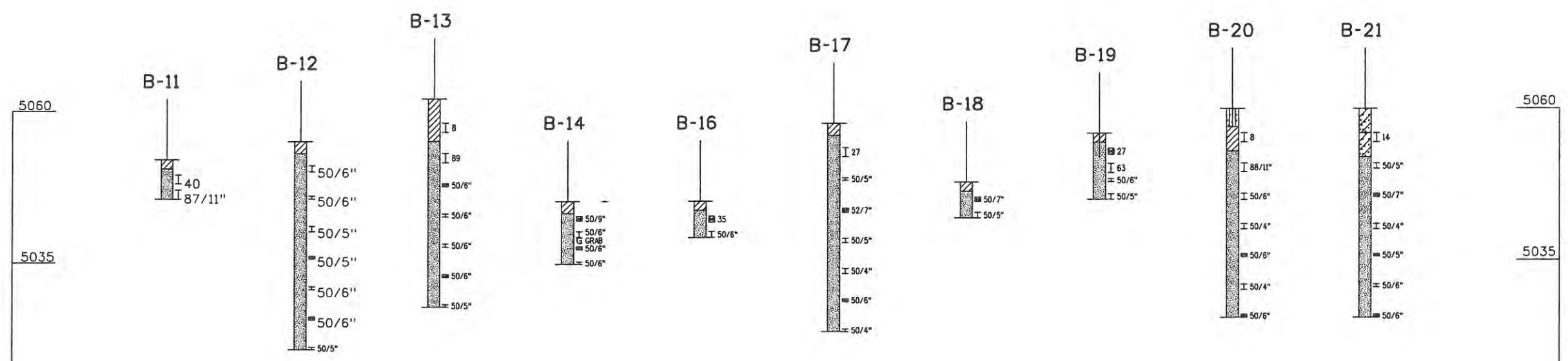
- SAND: Slightly clayey, fine
- SAND: Gravelly, clayey, fine
- CLAY: Slightly fine sandy
- SANDSTONE/CLAYSTONE

79/11" Drive Sample Blow Count, Indicates Blows per Foot (Ex. 23) or Blows per Inches (Ex. 50/2") of a 140-Pound Hammer Falling 30 Inches

- I Drive Sample, Standard Split Spoon
- ☒ Drive Sample, 2-inch I.D. California Liner Sample
- ∇ Ground Water Level at Time of Drilling

<b>Computer File Information</b>		<b>Sheet Revisions</b>			<b>CITY OF LOVELAND</b>		<b>ENGINEERING GEOLOGY BORING LOGS</b>		<b>Project No./Code</b>	
Creation Date: 8/29/07	Initials: JBK	Date:	Comments	Init.	500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	Colorado Department of Transportation	No Revisions: 9/14/11	Designer: JJW	Structure Numbers	ES4 0253-207
Print Date: 5/1/2009	Initials:						Revised:	Detailer: JBK		17244
File Name: sticklogs20.dgn							Void:	Sheet Subset: GEOLOGY	Subset Sheets: EG2 of 3	
Horiz. Scale: 1:20	Vert. Scale: As Noted									Sheet Number 46





**LEGEND:**

- SAND: Slightly clayey, fine
- SAND: Gravelly, clayey, fine
- CLAY: Slightly fine sandy
- SANDSTONE/CLAYSTONE

- 79/11" Drive Sample Blow Count, Indicates Blows per Foot (Ex. 23) or Blows per Inches (Ex. 50/2") of a 140-Pound Hammer Falling 30 Inches
- I Drive Sample, Standard Split Spoon
- ☒ Drive Sample, 2-inch I.D. California Liner Sample
- ⚡ Ground Water Level at Time of Drilling

Computer File Information	
Creation Date: 08/31/07	Initials: JBK
Print Date: 5/1/2009	Initials: JJW
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Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

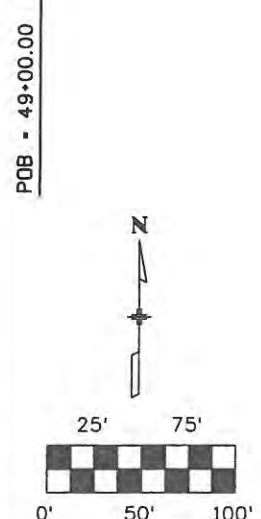
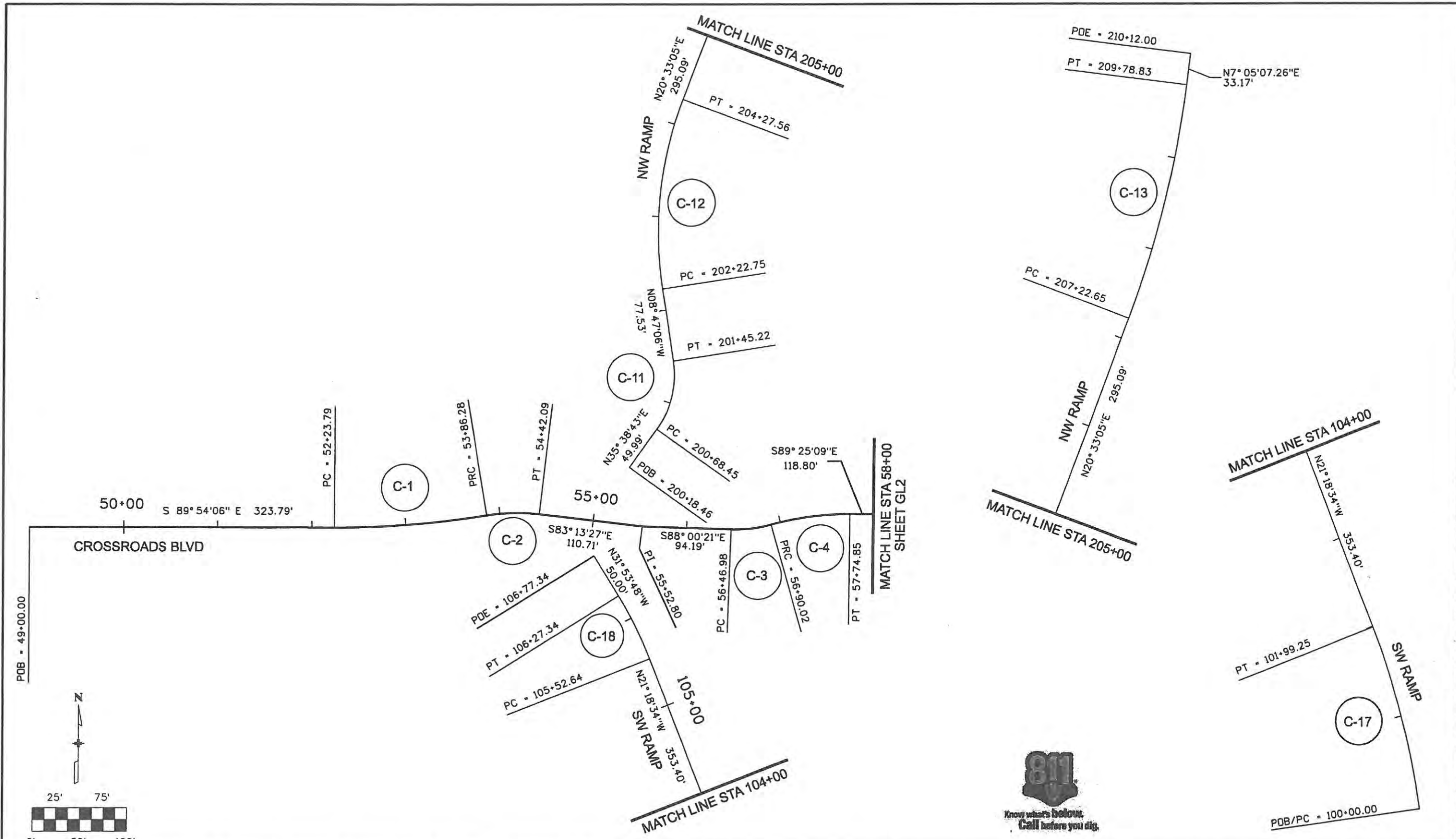
500 E. THIRD STREET  
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970-982-2000

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No Revisions: 9/14/11
Revised:
Void:

ENGINEERING GEOLOGY BORING LOGS	
Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: GEOLOGO	Subset Sheets: EG3 of 3

Project No./Code	ES4 0253-207
	17244
Sheet Number	47



Computer File Information	
Creation Date: 4/29/08	Initials: DVD
Print Date: 5/1/2009	Initials: DVD
File Name: 0610031800Geom_Layout01.dgn	
Horiz. Scale: 1:100	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

**Colorado Department of Transportation**

No Revisions: 9/14/11
Revised:
Void:

GEOMETRIC LAYOUT		
Designer: JJW	Structure Numbers	
Detailer: DVD		
Sheet Subset: GEOM	Subset Sheets: GL1 of 3	

Project No./Code	ES4 0253-207
	17244
Sheet Number	48

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 Fax: 303-287-2693





CROSSROADS CONTROL LINE DATAPOINTS							
Curve ID	Station	Type	R	DELTA	L	Northing	Easting
	49+00.00	POB				1402440.87	3141228.27
	52+23.79	PC				1402440.31	3141552.06
C-1	53+05.22	PI	1000.00	9°18'35.47"	162.49'	1402440.17	3141633.48
	53+86.28	PRC				1402453.21	3141713.85
C-2	54+14.37	PI	200.00	15°59'15.04"	55.81'	1402457.70	3141741.58
	54+42.09	PT				1402454.39	3141769.47
	55+52.80	PI				1402441.33	3141879.40
	56+46.98	PC				1402438.05	3141973.53
C-3	56+68.67	PI	140.00	17°36'53.47"	43.04'	1402437.29	3141995.21
	56+90.02	PRC				1402443.13	3142016.10
C-4	57+32.72	PI	300.00	16°12'05.05"	84.83'	1402454.63	3142057.22
	57+74.85	PT				1402454.20	3142099.92
	58+93.65	PC				1402453.00	3142218.72
C-5	59+31.79	PI	400.00	10°53'28.81"	76.04'	1402452.61	3142256.85
	59+69.69	PRC				1402459.43	3142294.36
C-6	59+93.55	PI	140.00	19°21'16.56"	47.29'	1402463.71	3142317.85
	60+16.98	PT				1402459.95	3142341.43
	61+05.79	PI				1402445.99	3142429.13
	62+05.44	PC				1402436.65	3142529.34
C-7	62+36.89	PI	200.00	17°19'07.46"	60.45'	1402433.82	3142559.67
	62+66.89	PRC				1402440.14	3142589.47
C-8	63+38.37	PI	661.00	11°59'05.16"	142.45'	1402454.99	3142659.39
	64+09.34	PT				1402455.00	3142730.87
	69+00.00	POE				1402455.03	3143121.54

SWRAMP CONTROL LINE DATAPOINTS							
Curve ID	Station	Type	R	DELTA	L	Northing	Easting
	100+00.00	POB/PC				1401779.19	3142066.09
C-17	101+00.08	PI	848.00	13°27'44.21"	199.25'	1401878.33	3142062.42
	101+99.25	PT				1401971.58	3142016.05
	105+52.64	PC				1402300.81	3141887.63
C-18	105+90.10	PI	404.23	10°35'14.00"	74.69'	1402336.70	3141874.02
	106+27.34	PT				1402367.50	3141854.23
	106+77.34	POE				1402409.95	3141827.81

NWRAMP CONTROL LINE DATAPOINTS							
Curve ID	Station	Type	R	DELTA	L	Northing	Easting
	200+18.46	POB				1402504.11	3141865.48
	200+68.45	PC				1402544.74	3141894.61
C-11	201+08.88	PI	99.00	44°25'49.61"	76.77'	1402577.59	3141918.18
	201+45.22	PT				1402617.55	3141912.00
	202+22.75	PC				1402694.17	3141900.16
C-12	203+27.45	PI	400.00	29°20'11.35"	204.81'	1402797.64	3141884.17
	204+27.55	PT				1402895.68	3141920.92
	207+22.65	PC				1403171.99	3142024.52
C-13	208+51.33	PI	1090.00	13°27'57.71"	256.18'	1403292.49	3142069.69
	209+78.83	PT				1403420.19	3142085.56
	210+12.00	POE				1403453.10	3142089.65

NE RAMP CONTROL LINE DATAPOINTS							
Curve ID	Station	Type	R	DELTA	L	Northing	Easting
	299+50.00	POB				1402480.07	3142478.66
	300+00.00	PC				1402521.12	3142450.11
C-9	300+69.16	PI	366.21'	21°23'24.44"	136.71'	1402577.90	3142410.62
	301+36.71	PT				1402645.18	3142394.56
	306+23.09	PC				1403118.26	3142281.64
C-10	307+38.19	PI	1840.00	7°09'33.14"	229.91'	1403230.22	3142254.92
	308+53.00	PT				1403344.63	3142242.35
	308+73.00	POE				1403364.51	3142240.17

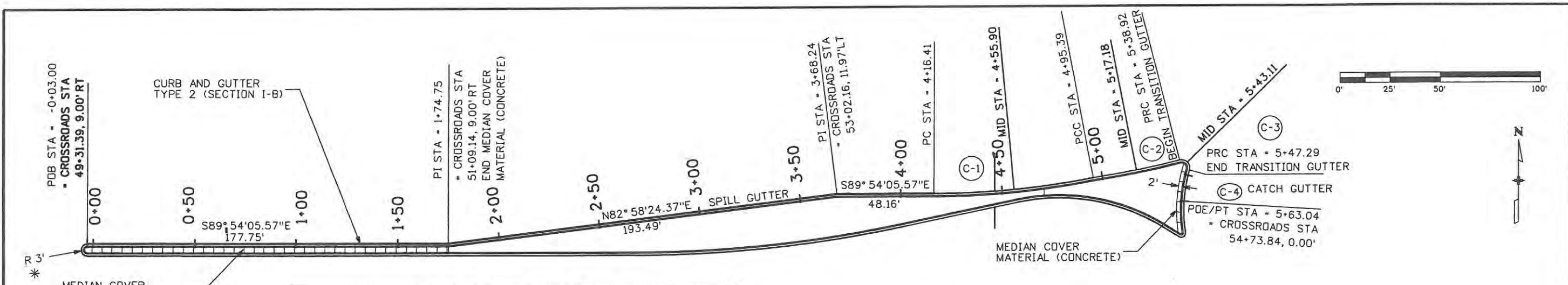
SE RAMP CONTROL LINE DATAPOINTS							
Curve ID	Station	Type	R	DELTA	L	Northing	Easting
	399+24.00	POB				1401504.31	3142222.28
	400+00.00	PC				1401579.67	3142232.12
C-14	401+31.90	PI	806.00	18°35'16.24"	261.48'	1401710.46	3142249.20
	402+61.48	PT				1401828.98	3142307.07
	404+18.72	PC				1401970.27	3142376.07
C-15	405+32.06	PI	400.00	31°38'25.92"	220.89'	1402072.12	3142425.80
	406+39.61	PT				1402184.92	3142414.71
	407+36.26	PC				1402281.11	3142405.26
C-16	407+70.38	PI	99.00	38°01'41.13"	65.71'	1402315.06	3142401.92
	408+01.97	PT				1402343.86	3142420.21
	408+52.03	POE				1402366.12	3142447.04



<b>Computer File Information</b>		<b>Sheet Revisions</b>			<b>CITY OF LOVELAND</b>		<b>GEOMETRIC LAYOUT</b>		<b>Project No./Code</b>		
Creation Date: 4/29/08	Initials: DVD	Date:	Comments:	Init.	 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 Colorado Department of Transportation	No Revisions: 9/14/11	Designer: JJW		ES4 0253-207	
Print Date: 5/1/2009	Initials: DVD						Revised:	Detailer: DVD		17244	
File Name: 0610031800Geom_Layout03.dgn							Void:	Sheet Subset: GEDM		Sheet Number 50	
Horiz. Scale: 1:100	Vert. Scale: As Noted							Subset Sheets: GL3 of 3			

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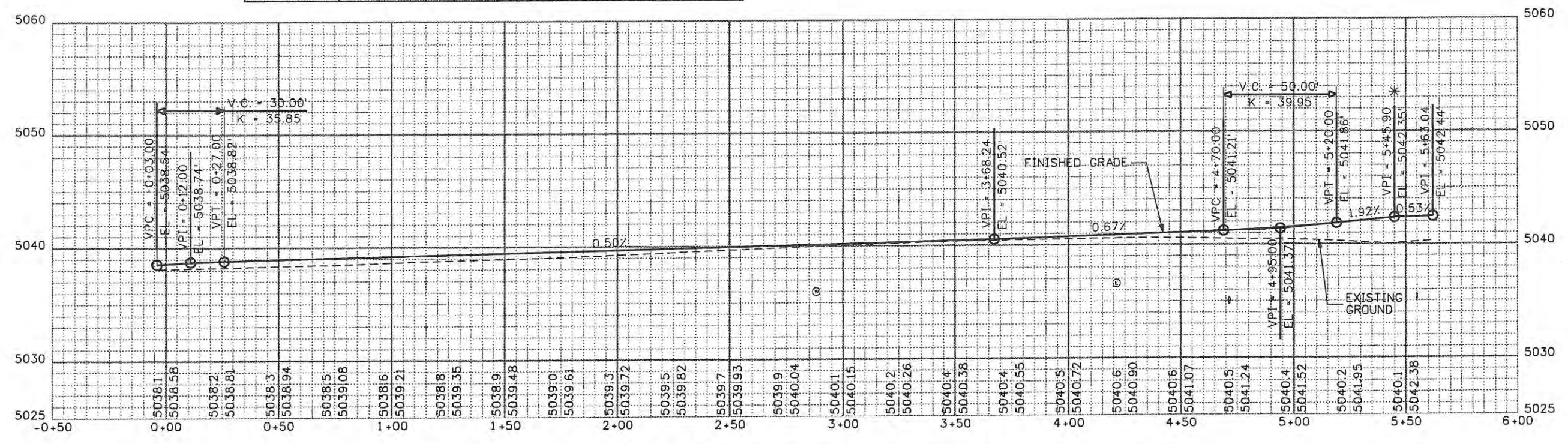


Station	Type	Northing	Easting	Elevation
-0+03.00	POB	1402431.81	3141259.64	5038.54
1+74.75	PI	1402431.51	3141437.39	5039.55
3+68.24	PI	1402455.18	3141629.43	5040.52
4+16.41	PC	1402455.09	3141677.60	5040.85
4+55.90	MID	1402456.93	3141717.03	5041.15
4+95.39	PCC	1402462.54	3141758.11	5041.46
5+17.18	MID	1402466.26	3141777.57	5041.84
5+38.92	PRC	1402471.09	3141798.77	5042.22
5+43.11	MID	1402470.01	3141802.62	5042.29*
5+47.29	PRC	1402466.14	3141803.61	5042.36
5+63.04	PT	140450.64	3141801.00	5042.44

CURVE ID	R	DELTA	L
C-1	410.12'	11°02'05.798"	78.99'
C-2	410.62'	6°04'25.08"	43.53'
C-3	4.00'	119°57'16.29"	8.37'
C-4	75.00'	12°01'43.00"	15.75'

ALL COORDINATES AND DIMENSIONS ON THIS SHEET ARE TO THE LIP OF THE GUTTER

\* THE CONTRACTOR SHALL PROVIDE A SMOOTH VERTICAL TRANSITION AROUND THE NOSE OF THE ISLAND TO MATCH THE PROFILE GRADES SHOWN. THE TRANSITION LENGTH SHALL MATCH THE LENGTH OF THE HORIZONTAL CURVE.



Creation Date: 5/2/08	Initials: BSH
Print Date: 5/1/2009	Initials:
File Name: 061003180CurbGeometry W Median WB.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
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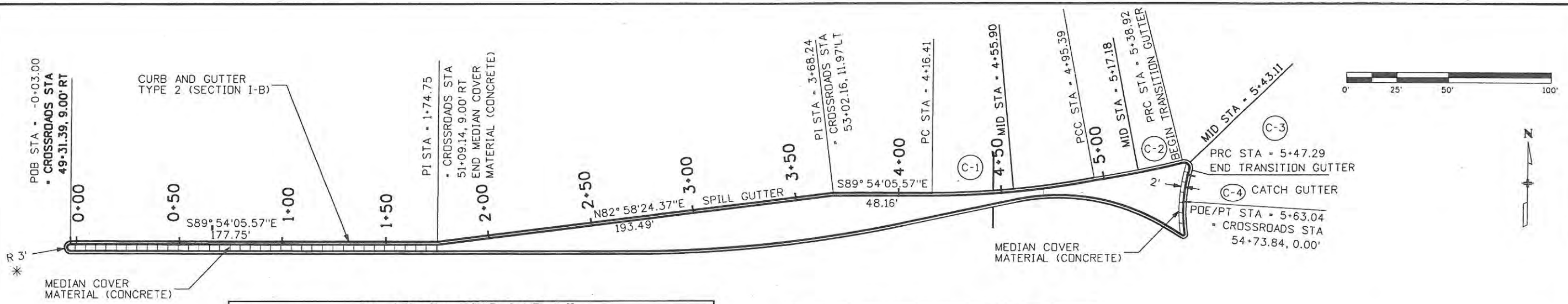
Colorado Department of Transportation

No Revisions:
Revised:
Void: 9/14/11

Designer: JJW	Structure Numbers:
Detailer: BSH	Subset Sheets: CG1 of 18
Sheet Subset: CURB	

Project No./Code	ES4 0253-207
	17244
Sheet Number	51





**West Median WB Point Details**

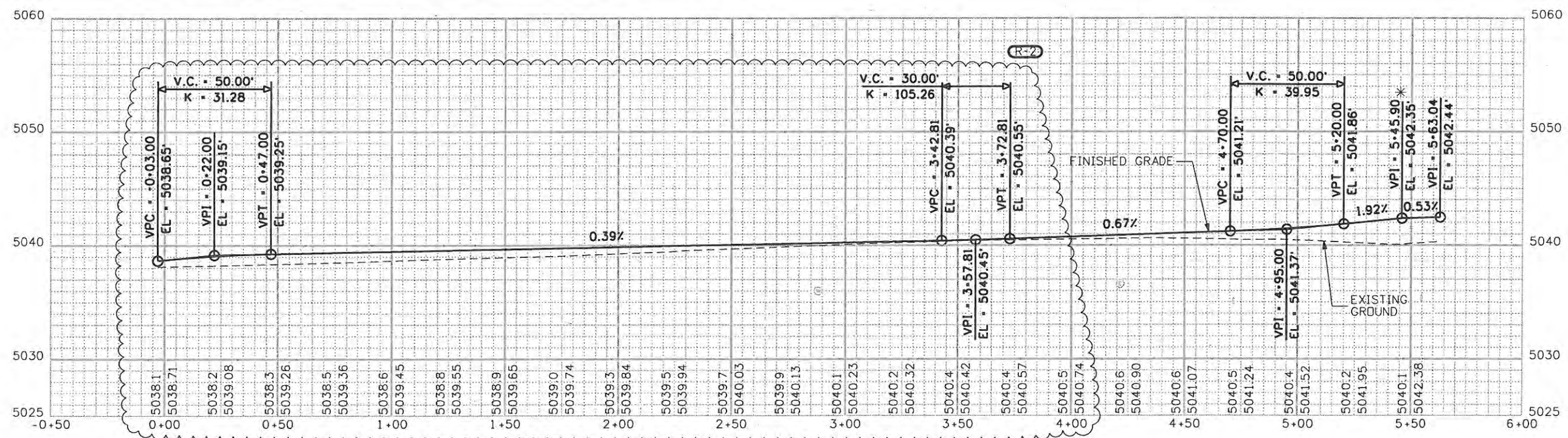
Station	Point Type	Northing	Easting	Elevation
-0+03.00	POB	1402431.81	3141259.64	5038.65
1+74.75	PI	1402431.51	3141437.39	5039.74
3+68.24	PI	1402455.18	3141629.43	5040.52
4+16.41	PC	1402455.09	3141677.60	5040.85
4+55.90	MID	1402456.93	3141717.03	5041.15
4+95.39	PCC	1402462.54	3141756.11	5041.46
5+17.18	MID	1402466.26	3141777.57	5041.84
5+38.92	PRC	1402471.09	3141798.77	5042.22
5+43.11	MID	1402470.01	3141802.62	5042.29 *
5+47.29	PRC	1402466.14	3141803.61	5042.36
5+63.04	PT	140450.64	3141801.00	5042.44

**West Median WB Curve Details**

CURVE ID	R	DELTA	L
C-1	410.12'	11°02'05.798"	78.99'
C-2	410.62'	6°04'25.08"	43.53'
C-3	4.00'	119°57'16.29"	8.37'
C-4	75.00'	12°01'43.00"	15.75'

ALL COORDINATES AND DIMENSIONS ON THIS SHEET ARE TO THE LIP OF THE GUTTER

\* THE CONTRACTOR SHALL PROVIDE A SMOOTH VERTICAL TRANSITION AROUND THE NOSE OF THE ISLAND TO MATCH THE PROFILE GRADES SHOWN. THE TRANSITION LENGTH SHALL MATCH THE LENGTH OF THE HORIZONTAL CURVE.



**Computer File Information**

Creation Date: 5/2/08	Initials: BSH
Print Date: 9/23/2009	Initials:
File Name: 061003180CurbGeometry W Median WB.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

**Sheet Revisions**

Date	Comments	Init.
09/24/09	TIE TO EXIST	JJW

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

**Colorado Department of Transportation**

No Revisions: 9/14/11

Revised:

Void:

**CURB GEOMETRY WEST MEDIAN WB**

Designer: JJW	Structure Numbers:
Detailer: BSH	
Sheet Subset: CURB	Subset Sheets: CG1 of 18

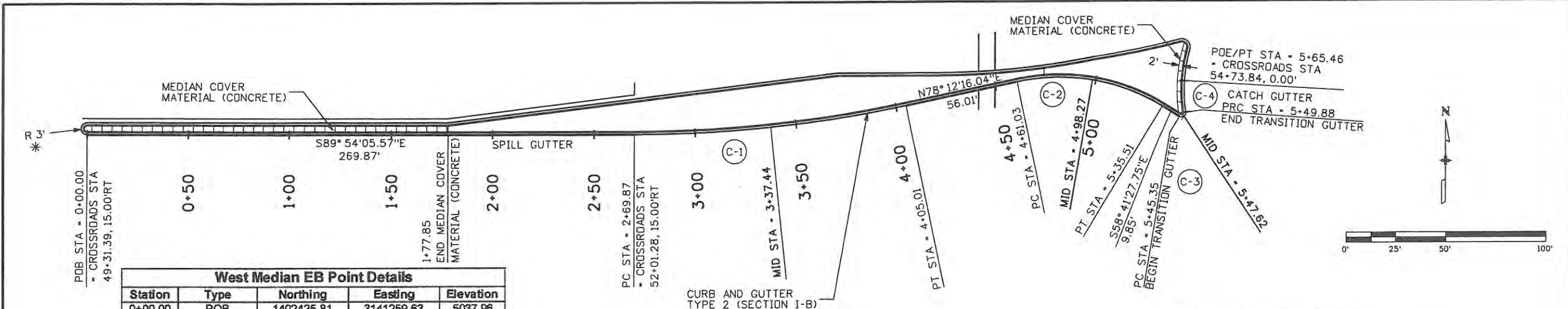
**Project No./Code**

ES4 0253-207

17244

Sheet Number 51X





**West Median EB Point Details**

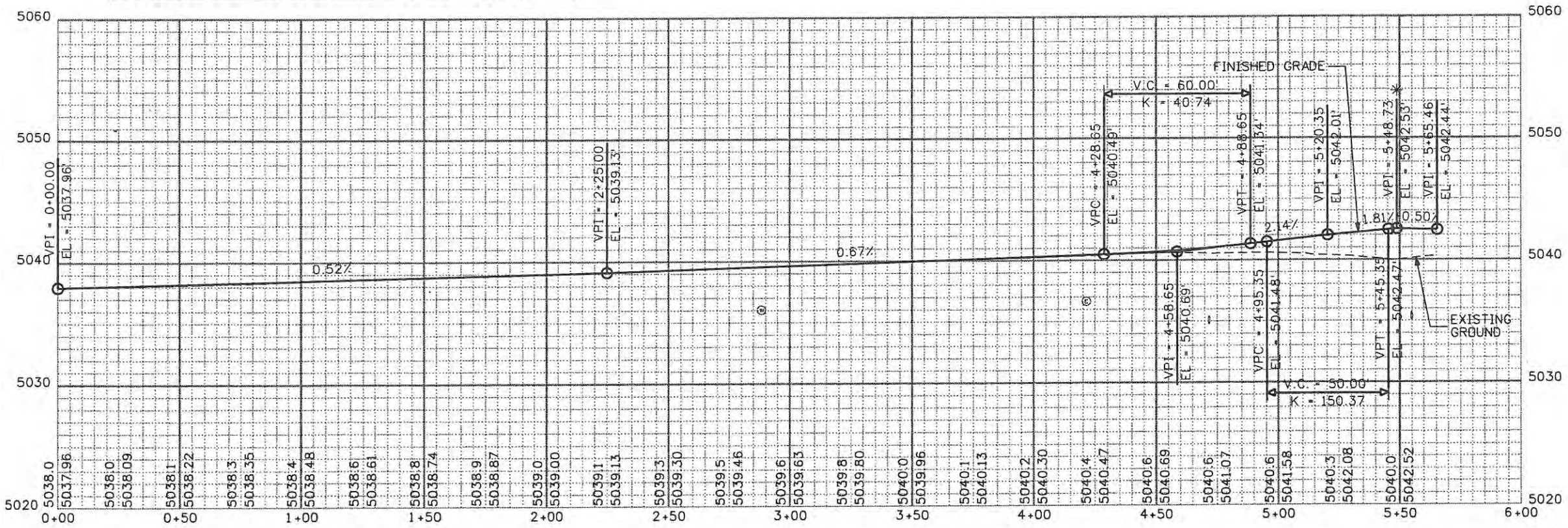
Station	Type	Northing	Easting	Elevation
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3+37.44	MID	1402428.74	3141596.96	5039.88
4+05.01	PT	1402439.10	3141663.70	5040.33
4+61.03	PC	1402450.55	3141718.53	5040.84
4+98.27	MID	1402451.20	3141755.55	5041.54
5+35.51	PT	1402438.22	3141790.22	5042.27
5+45.35	PC	1402433.10	3141798.63	5042.45
5+47.62	MID	1402433.14	3141800.77	5042.49*
5+49.88	PRC	1402435.10	3141801.65	5042.50
5+65.46	PT	1402450.64	3141801.00	5042.44

**West Median EB Curve Details**

CURVE ID	R	DELTA	L
C-1	651.00'	11°53'38.39"	135.14'
C-2	99.00'	43°06'16.21"	74.48'
C-3	2.00'	129°39'05.77"	4.53'
C-4	75.00'	11°54'11.97"	15.58'

ALL COORDINATES AND DIMENSIONS ON THIS SHEET ARE TO THE LIP OF THE GUTTER

\* THE CONTRACTOR SHALL PROVIDE A SMOOTH VERTICAL TRANSITION AROUND THE NOSE OF THE ISLAND TO MATCH THE PROFILE GRADES SHOWN. THE TRANSITION LENGTH SHALL MATCH THE LENGTH OF THE HORIZONTAL CURVE.



**Computer File Information**

Creation Date: 5/2/08	Initials: BSH
Print Date: 5/1/2009	Initials: Last Mod
File Name: 061003180CurbGeometry W Median EB.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

**Sheet Revisions**

Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

Colorado Department of Transportation

No Revisions:

Revised:

Void: 9/14/11

**CURB GEOMETRY WEST MEDIAN EB**

Designer: JJW	Structure Numbers
Detailer: BSH	
Sheet Subset: CURB	Subset Sheets: CG2 of 18

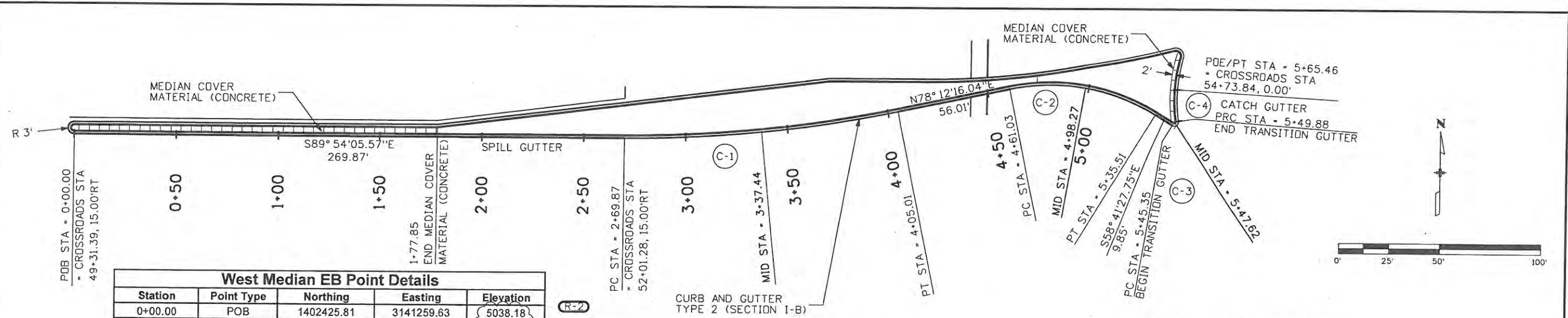
**Project No./Code**

ES4 0253-207

17244

Sheet Number 52





**West Median EB Point Details**

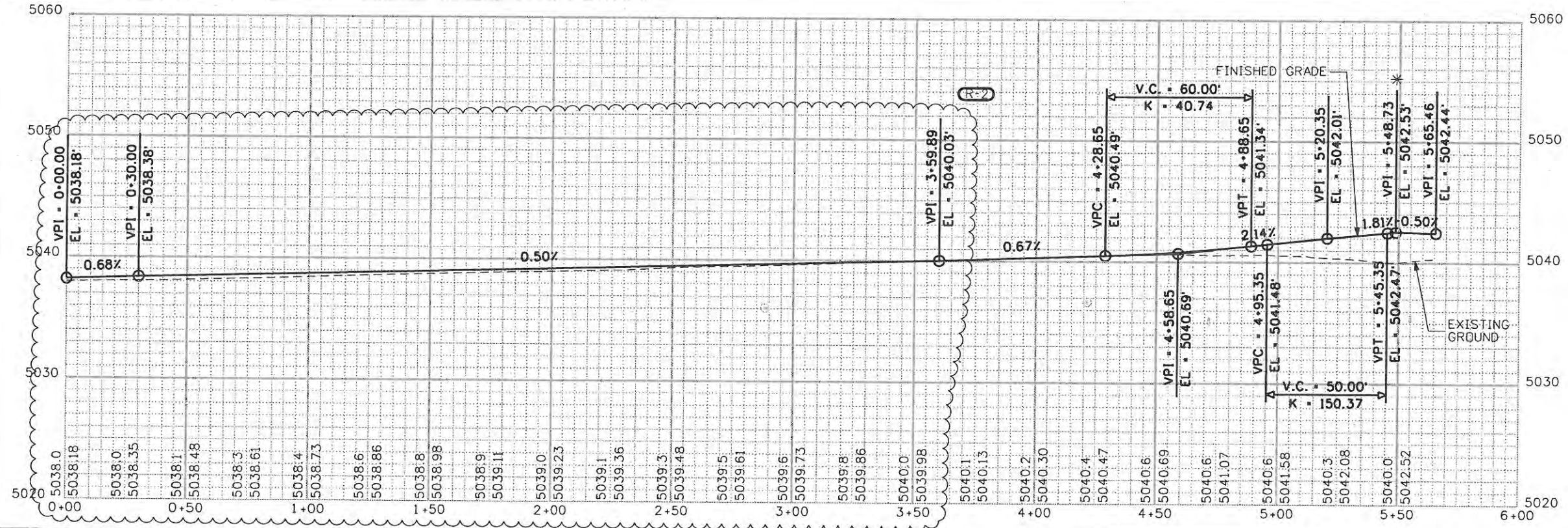
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2+69.87	PC	1402425.35	3141529.51	5039.58
3+37.44	MID	1402428.74	3141596.96	5039.92
4+05.01	PT	1402439.10	3141663.70	5040.33
4+61.03	PC	1402450.55	3141718.53	5040.84
4+98.27	MID	1402451.20	3141755.55	5041.54
5+35.51	PT	1402438.22	3141790.22	5042.27
5+45.35	PC	1402433.10	3141798.63	5042.45
5+47.62	MID	1402433.14	3141800.77	5042.49*
5+49.88	PRC	1402435.10	3141801.65	5042.50
5+65.46	PT	1402450.64	3141801.00	5042.44

**West Median EB Curve Details**

CURVE ID	R	DELTA	L
C-1	651.00'	11°53'38.39"	135.14'
C-2	99.00'	43°06'16.21"	74.48'
C-3	2.00'	129°39'05.77"	4.53'
C-4	75.00'	11°54'11.97"	15.58'

ALL COORDINATES AND DIMENSIONS ON THIS SHEET ARE TO THE LIP OF THE GUTTER

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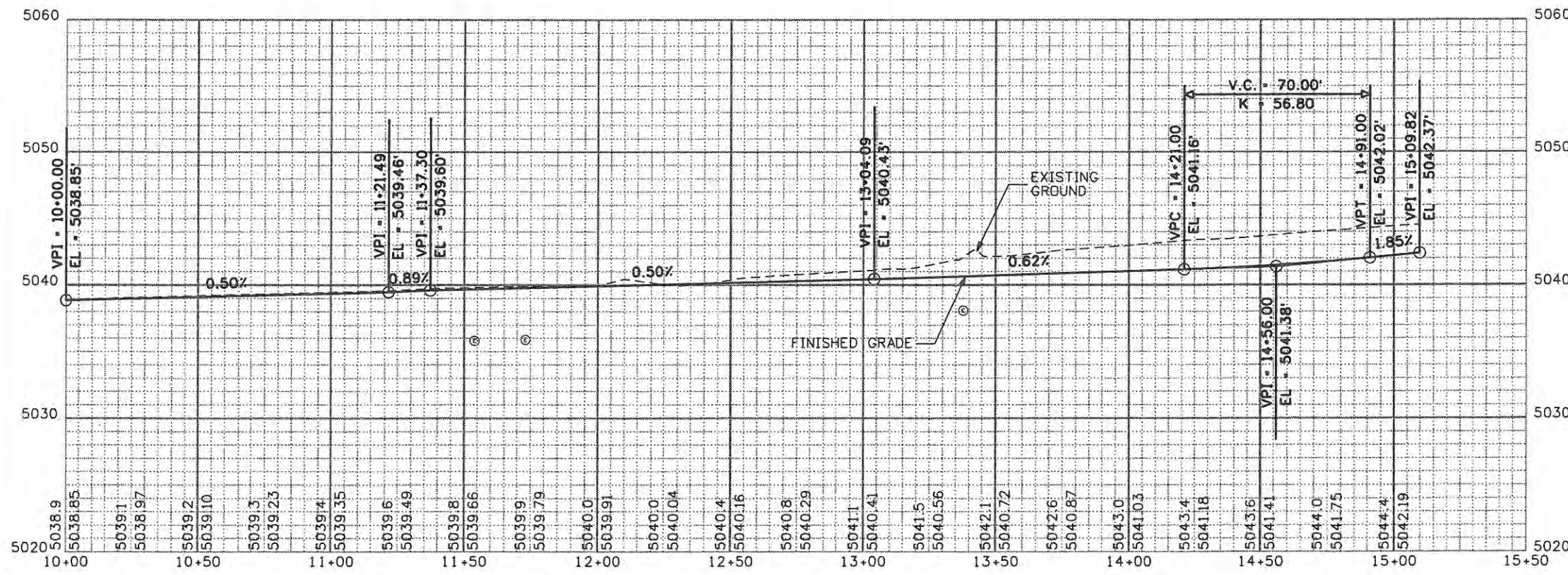
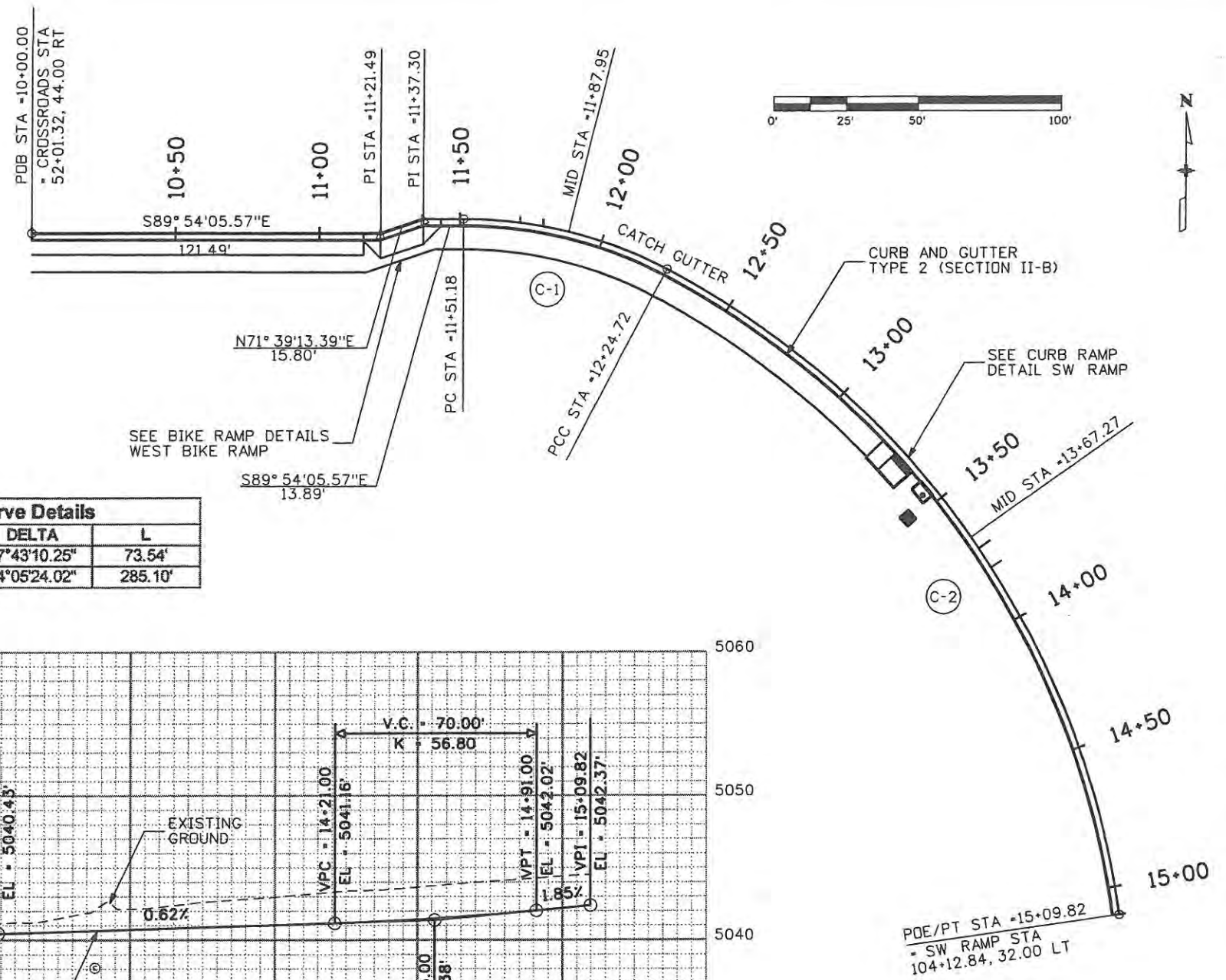
<b>Computer File Information</b>		<b>Sheet Revisions</b>		<b>CITY OF LOVELAND</b>		<b>CURB GEOMETRY WEST MEDIAN EB</b>		<b>Project No./Code</b>	
Creation Date: 5/2/08	Initials: BSH	Date: 9/24/09	Comments: TIE TO EXIST	Init.:	JJW	No Revisions: 9/14/11		ES4 0253-207	
Print Date: 9/23/2009	Initials: Last Mod								
File Name: 061003180CurbGeometry W Median EB.dgn						Revised:		Designer: JJW	
Horiz. Scale: 1:50	Vert. Scale: As Noted								
						Sheet Subset: CURB		Subset Sheets: CG2 of 18	



ALL COORDINATES AND DIMENSIONS  
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SW Curb Point Details				
Station	Description	Northing	Easting	Elevation
10+00.00	POB	1402396.35	3141529.51	5038.85
11+21.49	PI	1402396.14	3141651.00	5039.46
11+37.30	PI	1402401.11	3141666.00	5039.60
11+51.18	PC	1402401.09	3141679.89	5039.67
11+87.95	MID	1402396.60	3141716.29	5039.85
12+24.72	PCC	1402383.53	3141750.56	5040.04
13+67.27	MID	1402290.24	3141856.59	5040.83
15+09.82	POE/PT	1404158.94	314190862.00	5042.37

SW Curb Curve Details			
CURVE ID	R	DELTA	L
C-1	152.00'	27°43'10.25"	73.54'
C-2	302.00'	54°05'24.02"	285.10'



POE/PT STA +15+09.82  
= SW RAMP STA  
104+12.84, 32.00 LT

Computer File Information	
Creation Date: 5/2/08	Initials: BSH
Print Date: 5/1/2009	Initials: Last Mod
File Name: 061003180CurbGeometry SW Curb.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

**DOT**  
DEPARTMENT OF TRANSPORTATION

Colorado Department  
of Transportation

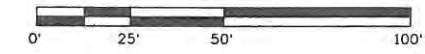
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Void:	9/14/11

CURB GEOMETRY SW CURB	
Designer: JJW	Structure Numbers
Detailer: BSH	
Sheet Subset: CURB	Subset Sheets: CG3 of 18

Project No./Code	
ES4 0253-207	
17244	
Sheet Number	53

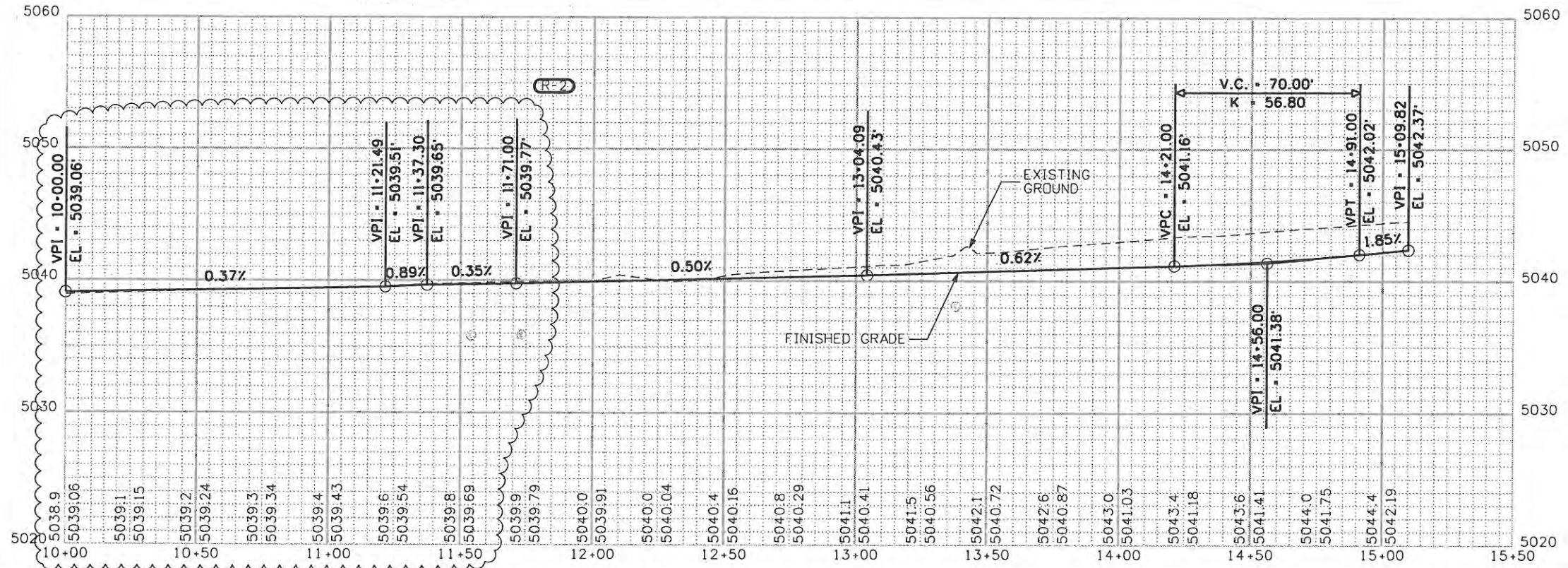
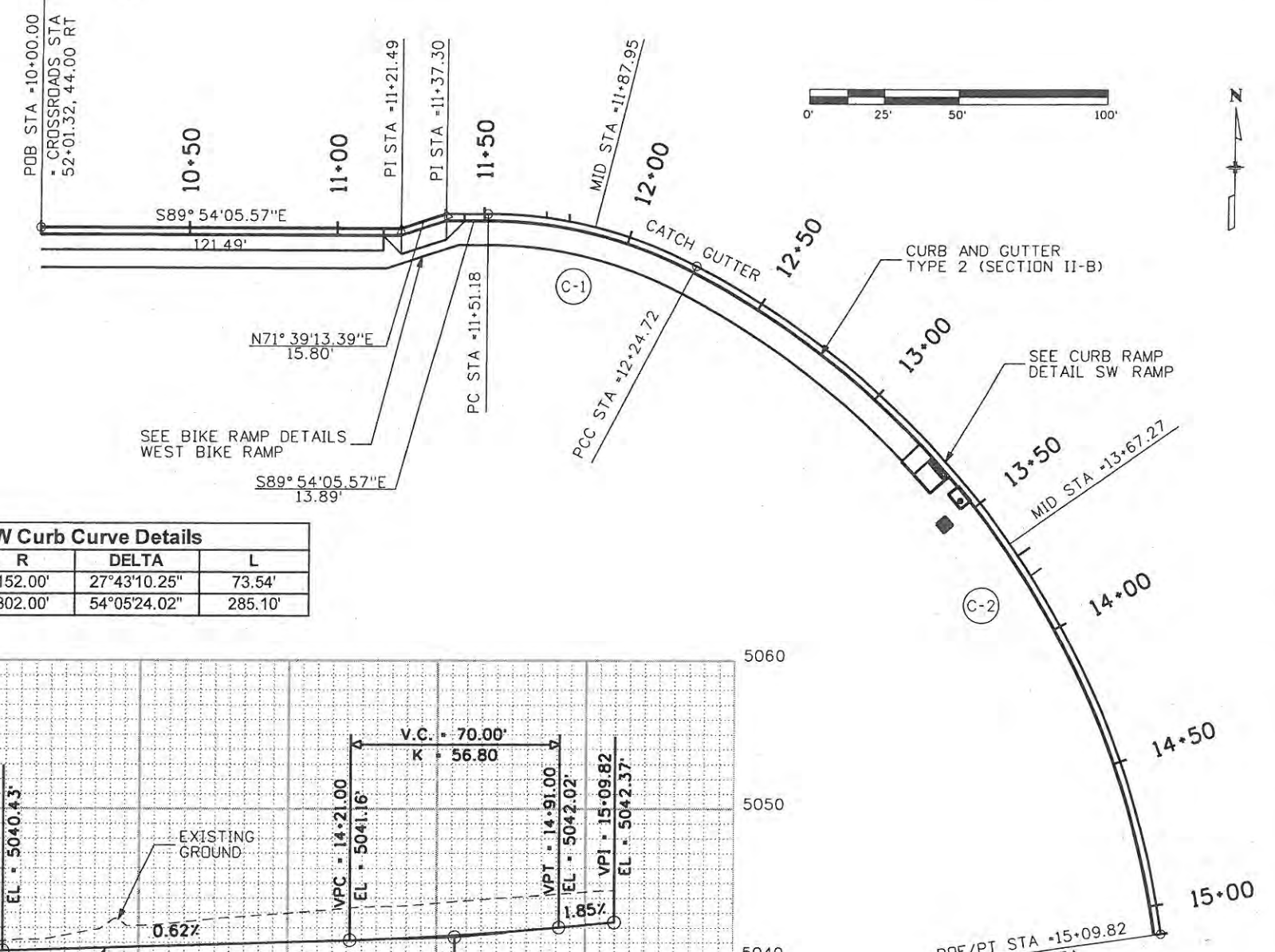


ALL COORDINATES AND DIMENSIONS ON THIS SHEET ARE TO THE LIP OF THE GUTTER



Station	Point Type	Northing	Easting	Elevation
10+00.00	POB	1402396.35	3141529.51	5039.06
11+21.49	PI	1402396.14	3141651.00	5039.51
11+37.30	PI	1402401.11	3141666.00	5039.65
11+51.18	PC	1402401.09	3141679.89	5039.70
11+87.95	MID	1402396.60	3141716.29	5039.85
12+24.72	PCC	1402383.53	3141750.56	5040.04
13+67.27	MID	1402290.24	3141856.59	5040.83
15+09.82	POE/PT	1404158.94	31419862.00	5042.37

CURVE ID	R	DELTA	L
C-1	152.00'	27°43'10.25"	73.54'
C-2	302.00'	54°05'24.02"	285.10'



Creation Date: 5/2/08	Initials: BSH
Print Date: 9/23/2009	Initials: Last Mod
File Name: 061003180CurbGeometry SW Curb.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Date	Comments	Init.
09/24/09	TIE TO EXIST	JJW

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

Colorado Department of Transportation

No Revisions: 9/14/11
Revised:
Void:

Designer: JJW	Structure Numbers
Detailer: BSH	Subset Sheets: CG3 of 18
Sheet Subset: CURB	

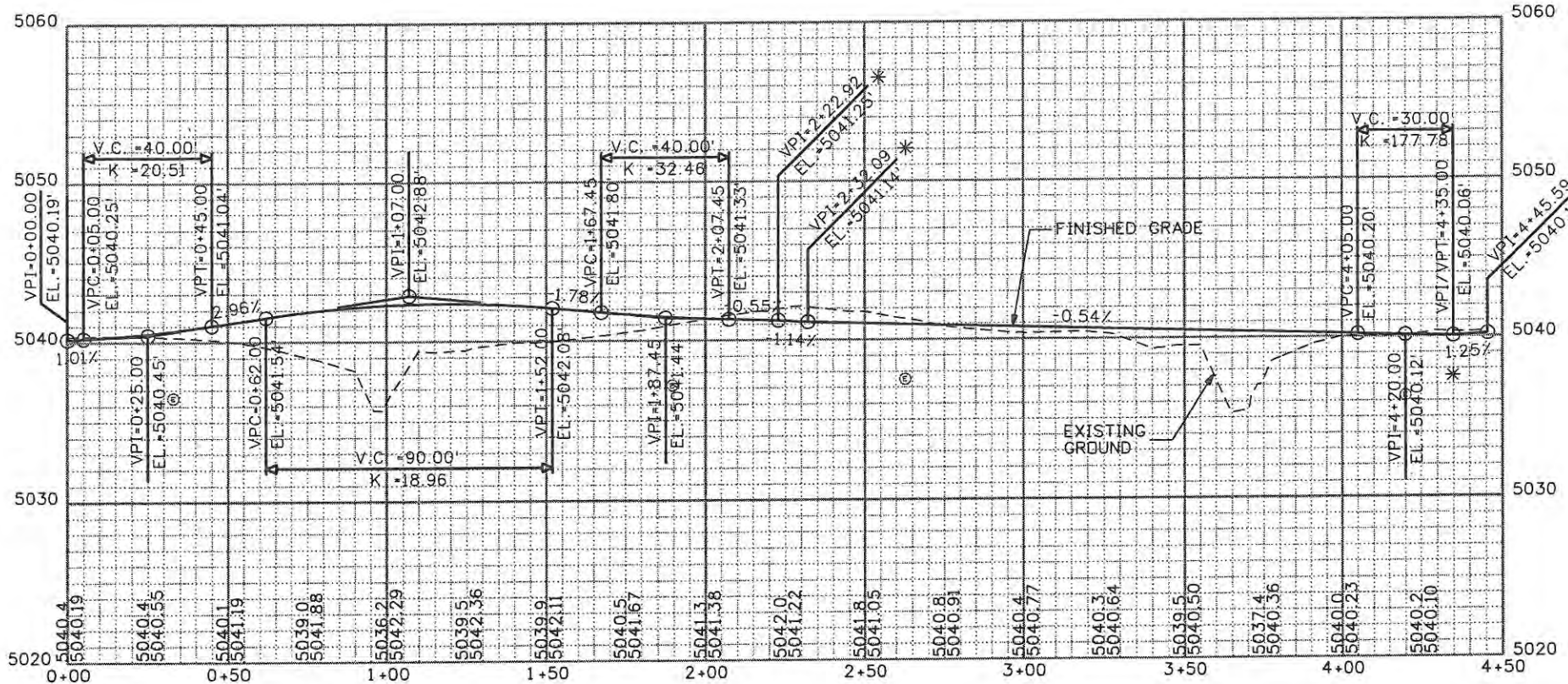
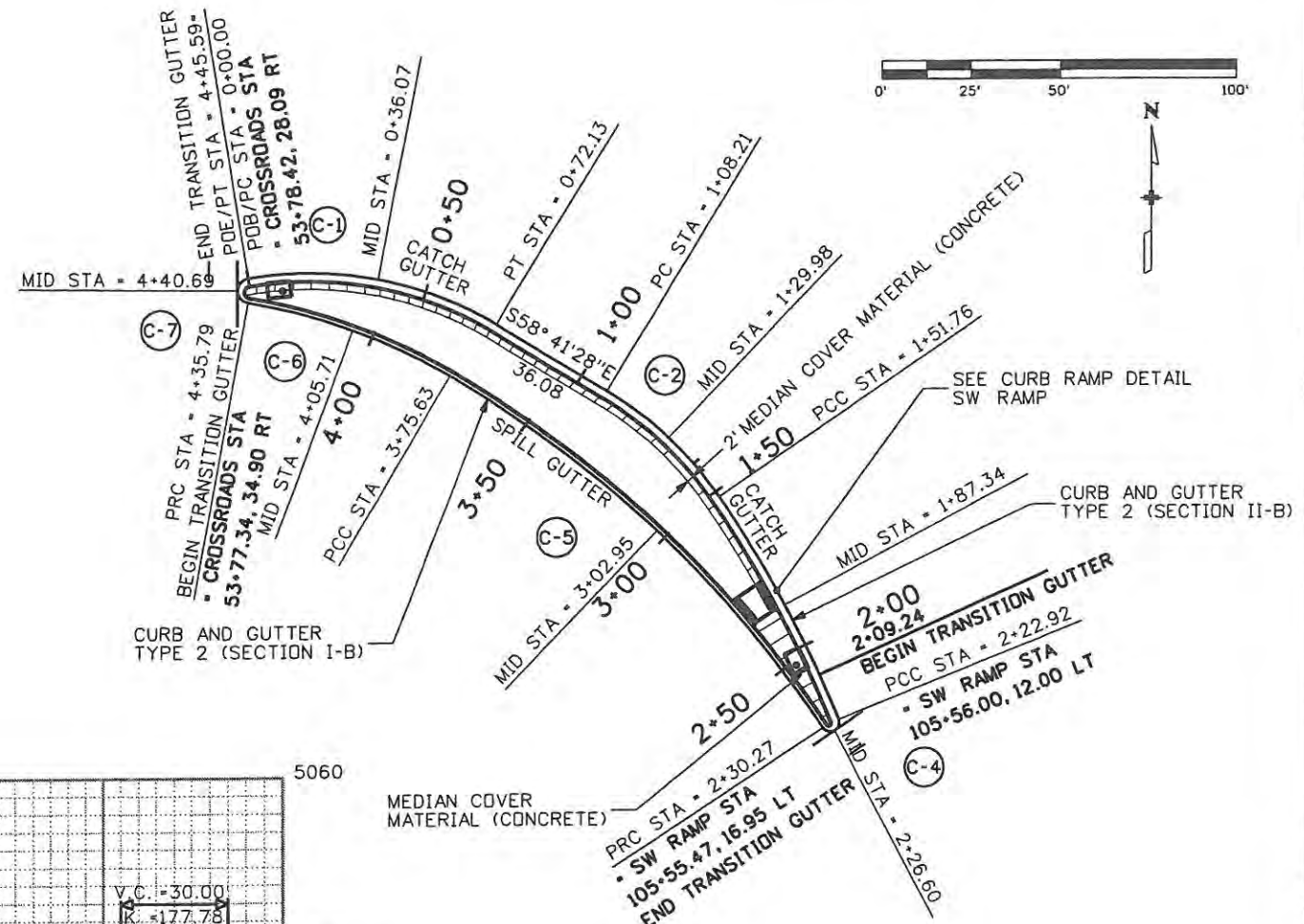
Project No./Code	ES4 0253-207
17244	
Sheet Number	53X

**WILSON & COMPANY**  
 Engineers & Architects  
 989 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2693



SW Island Point Details				
Station	Description	Northing	Easting	Elevation
0+00.00	PC	1402424.22	3141710.36	5040.19
0+36.07	MID	1402423.64	3141746.24	5040.80
0+72.13	PT	1402410.68	3141779.69	5041.82
1+08.21	PC	1402391.93	3141810.52	5042.35
1+29.98	MID	1402378.72	3141827.78	5042.34
1+51.76	PCC	1402362.16	3141841.84	5042.08
1+87.34	MID	1402331.72	3141860.24	5041.51
2+22.92	PCC	1402299.48	3141875.25	5041.25
2+26.60	MID	1402296.33	3141874.09	5041.21*
2+30.27	PRC	1402297.17	3141870.84	5041.16
3+02.95	MID	1402352.78	3141824.29	5040.76
3+75.63	PCC	1402396.44	3141766.39	5040.36
4+05.71	MID	1402409.35	3141739.26	5040.20
4+35.79	PRC	1402417.32	3141710.30	5040.07
4+40.69	MID	1402420.80	3141707.42	5040.13*
4+45.59	PT	1402424.22	3141710.36	5040.19

SW Island Curve Details			
CURVE ID	R	DELTA	L
C-1	102.00'	40°31'05.88"	72.13'
C-2	102.00'	24°27'37.05"	43.55'
C-3	330.00'	12°21'21.91"	71.17'
C-4	2.50'	168°28'22.88"	7.35'
C-5	319.00'	26°06'27.03"	145.36'
C-6	171.00'	20°09'28.95"	60.16'
C-7	3.50'	160°27'28.22"	9.80'



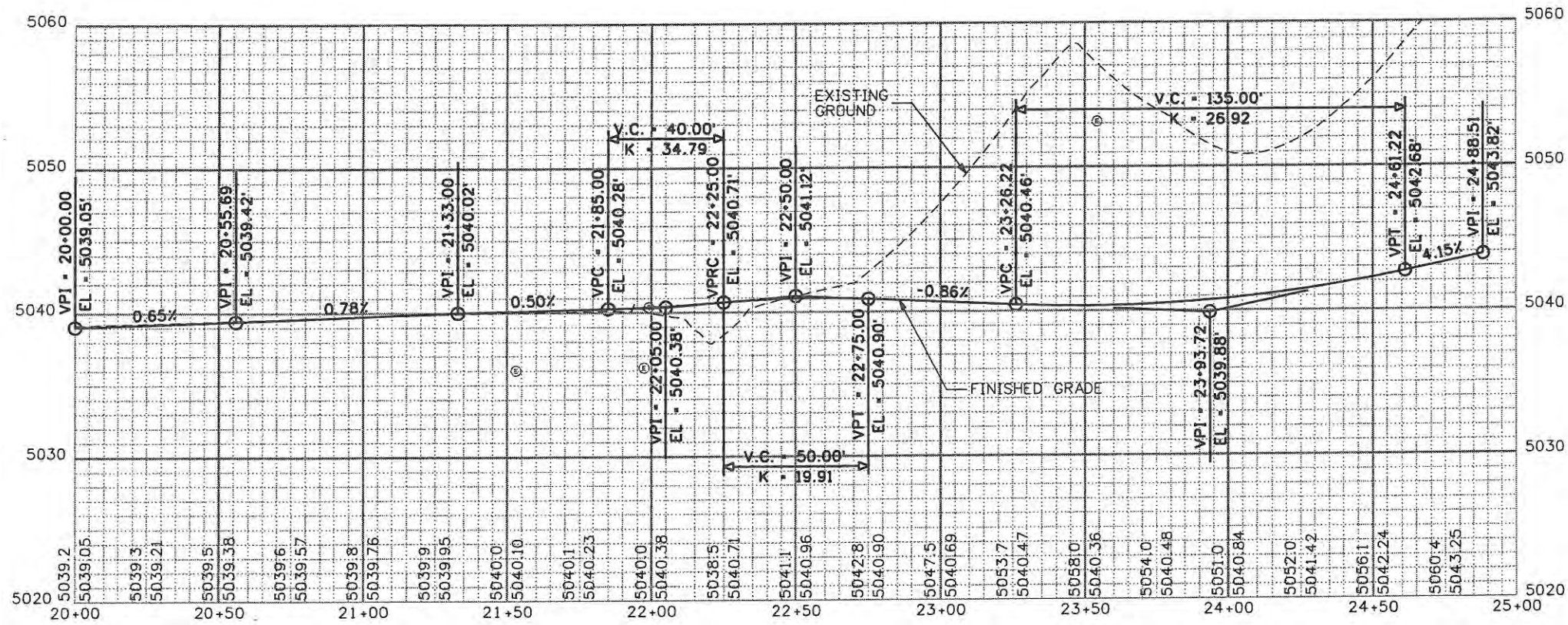
ALL COORDINATES AND DIMENSIONS ON THIS SHEET ARE TO THE LIP OF THE GUTTER

\* THE CONTRACTOR SHALL PROVIDE A SMOOTH VERTICAL TRANSITION AROUND THE NOSE OF THE ISLAND TO MATCH THE PROFILE GRADES SHOWN. THE TRANSITION LENGTH SHALL MATCH THE LENGTH OF THE HORIZONTAL CURVE.

<b>Computer File Information</b>		<b>Sheet Revisions</b>		<b>CITY OF LOVELAND</b> 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 Colorado Department of Transportation	<b>CURB GEOMETRY SW ISLAND</b>		<b>Project No./Code</b>		
Creation Date: 5/2/08	Initials: BSH	Date:	Comments:			Init.:	No Revisions: 9/14/11	Revised:	Void:	Designer: JJW
Print Date: 5/1/2009	Initials: Last Mod							Detailer: BSH		17244
File Name: 061003180CurbGeometry SW Island.dgn								Sheet Subset: CURB	Subset Sheets: CG4 of 18	Sheet Number 54
Horiz. Scale: 1:50	Vert. Scale: As Noted									

**WILSON & COMPANY**  
 Engineers & Architects  
 999 16th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2693

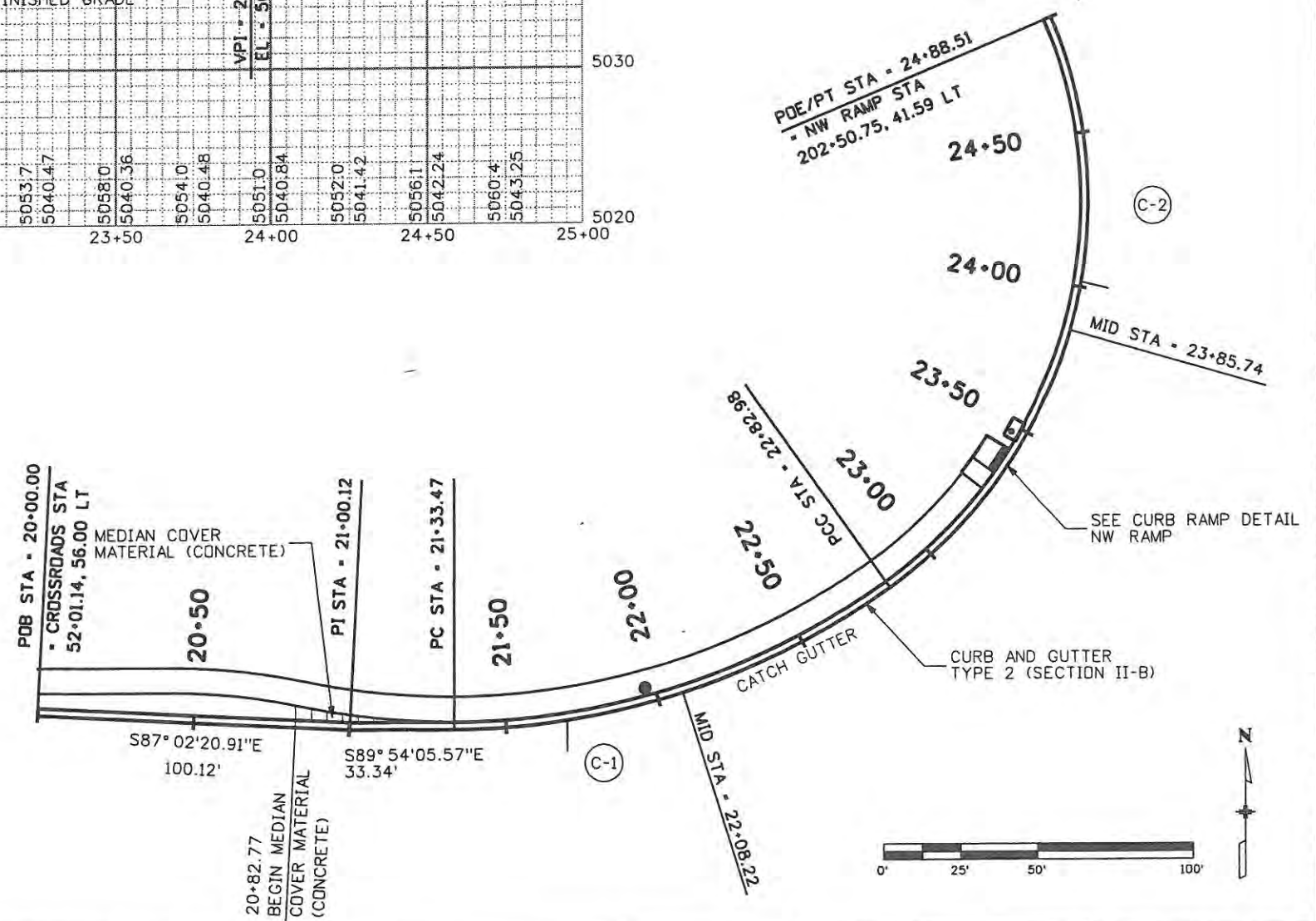




ALL COORDINATES AND DIMENSIONS ON THIS SHEET ARE TO THE LIP OF THE GUTTER

NW Curb Point Details				
Station	Type	Northing	Easting	Elevation
20+00.00	POB	1402496.35	3141529.51	5039.05
21+00.12	PI	1402491.18	3141629.50	5039.76
21+33.47	PC	1402491.12	3141662.84	5040.02
22+08.22	MID	1402502.45	3141736.43	5040.47
22+82.98	PCC	1402535.61	3141803.09	5040.83
23+85.74	MID	1402617.86	3141861.40	5040.61
24+88.51	POE/PT	1402718.50	3141855.41	5043.82

NW Curb Curve Details			
CURVE ID	R	DELTA	L
C-1	242.00'	35°23'53.86"	149.51'
C-2	152.00'	77°28'24.43"	205.53'



Computer File Information	
Creation Date: 5/2/08	Initials: BSH
Print Date: 5/1/2009	Initials: Last Mod
File Name: 061003180CurbGeometry NW Curb.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

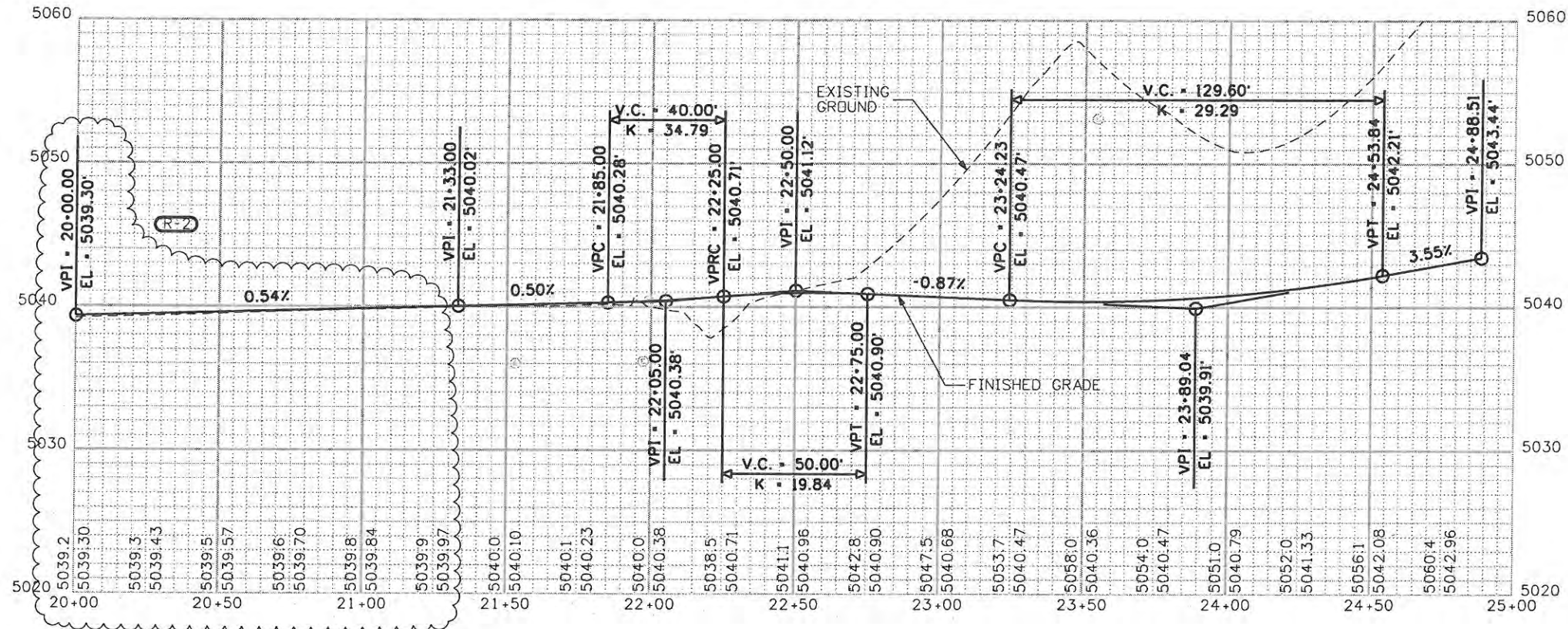
Colorado Department of Transportation

No Revisions:	
Revised:	
Void:	9/14/11

CURB GEOMETRY NW CURB	
Designer: JJW	Structure Numbers
Detailer: BSH	
Sheet Subset: CURB	Subset Sheets: CG5 of 18

Project No./Code	
ES4 0253-207	
17244	
Sheet Number	55

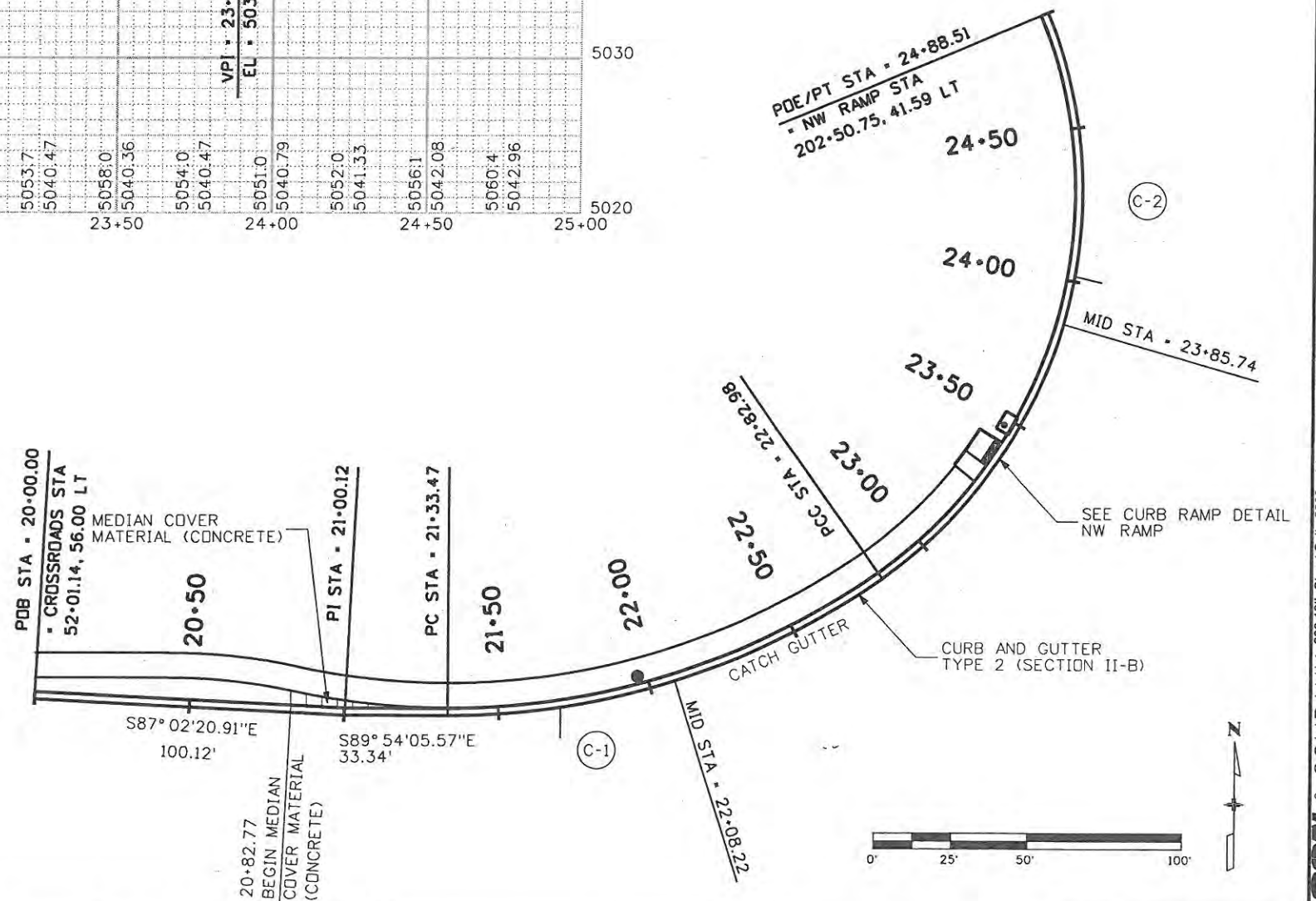




ALL COORDINATES AND DIMENSIONS ON THIS SHEET ARE TO THE LIP OF THE GUTTER

NW Curb Point Details				
Station	Point Type	Northing	Easting	Elevation
20+00.00	POB	1402496.35	3141529.51	5039.30
21+00.12	PI	1402491.18	3141629.50	5039.84
21+33.47	PC	1402491.12	3141662.84	5040.02
22+08.22	MID	1402502.45	3141736.43	5040.47
22+82.98	PCC	1402535.61	3141803.09	5040.83
23+85.74	MID	1402617.86	3141861.40	5040.61
24+88.51	POE/PT	1402718.50	3141855.41	5043.82

NW Curb Curve Details			
CURVE ID	R	DELTA	L
C-1	242.00'	35°23'53.86"	149.51'
C-2	152.00'	77°28'24.43"	205.53'



Computer File Information	
Creation Date: 5/2/08	Initials: BSH
Print Date: 9/23/2009	Initials: Last Mod
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Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date	Comments	Init.
09/24/09	TIE TO EXIST	JJW

**CITY OF LOVELAND**

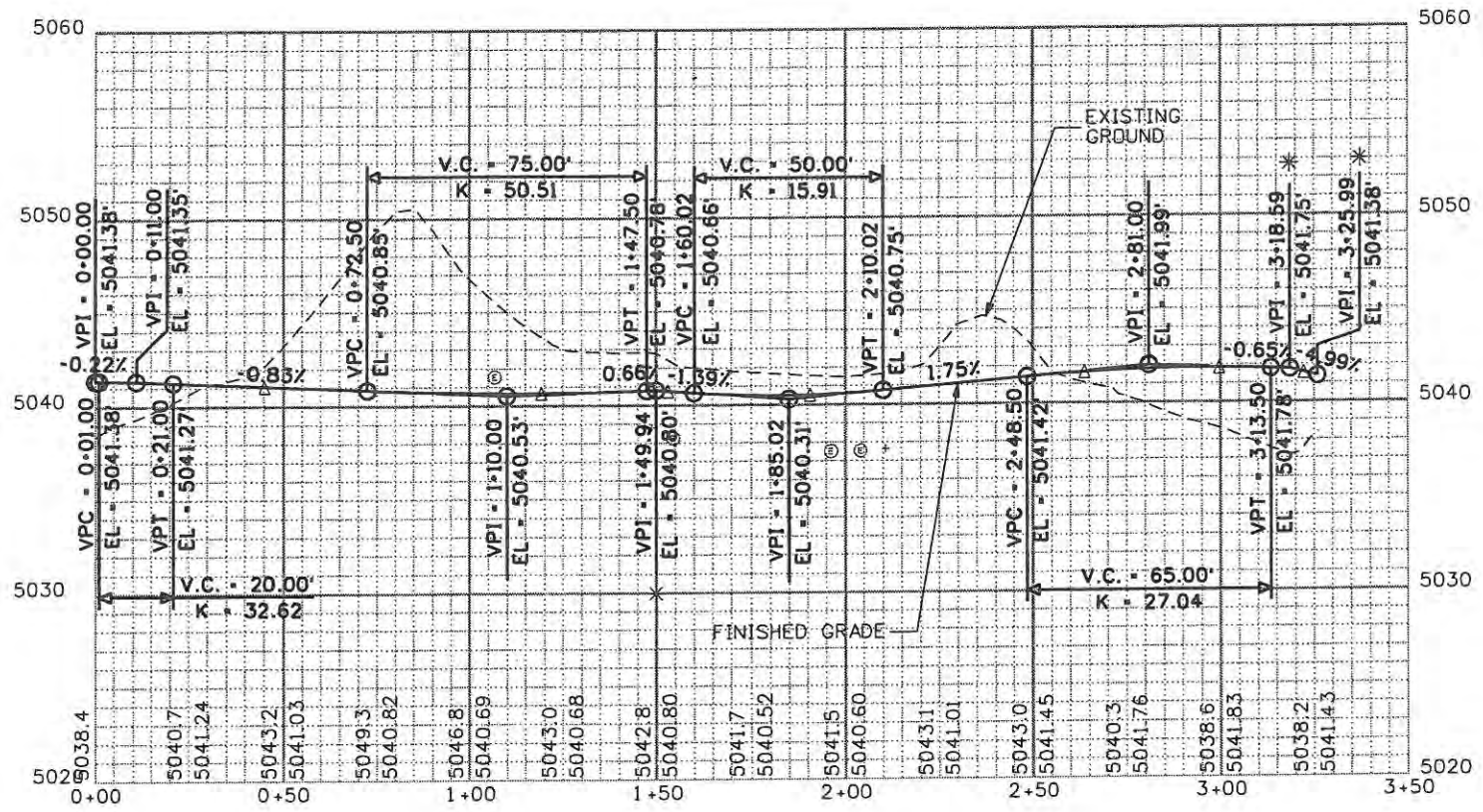
500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

**Colorado Department of Transportation**

No Revisions:	9/14/11
Revised:	
Void:	

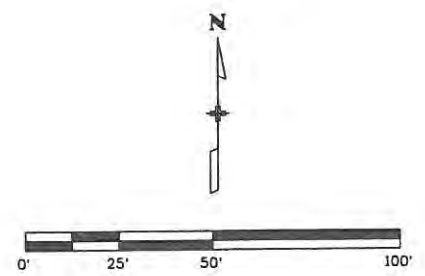
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Designer: JJW	Structure Numbers
Detailer: BSH	
Sheet Subset: CURB	Subset Sheets: CG5 of 18

Project No./Code	ES4 0253-207
Sheet Number	17244
Sheet Number	55X



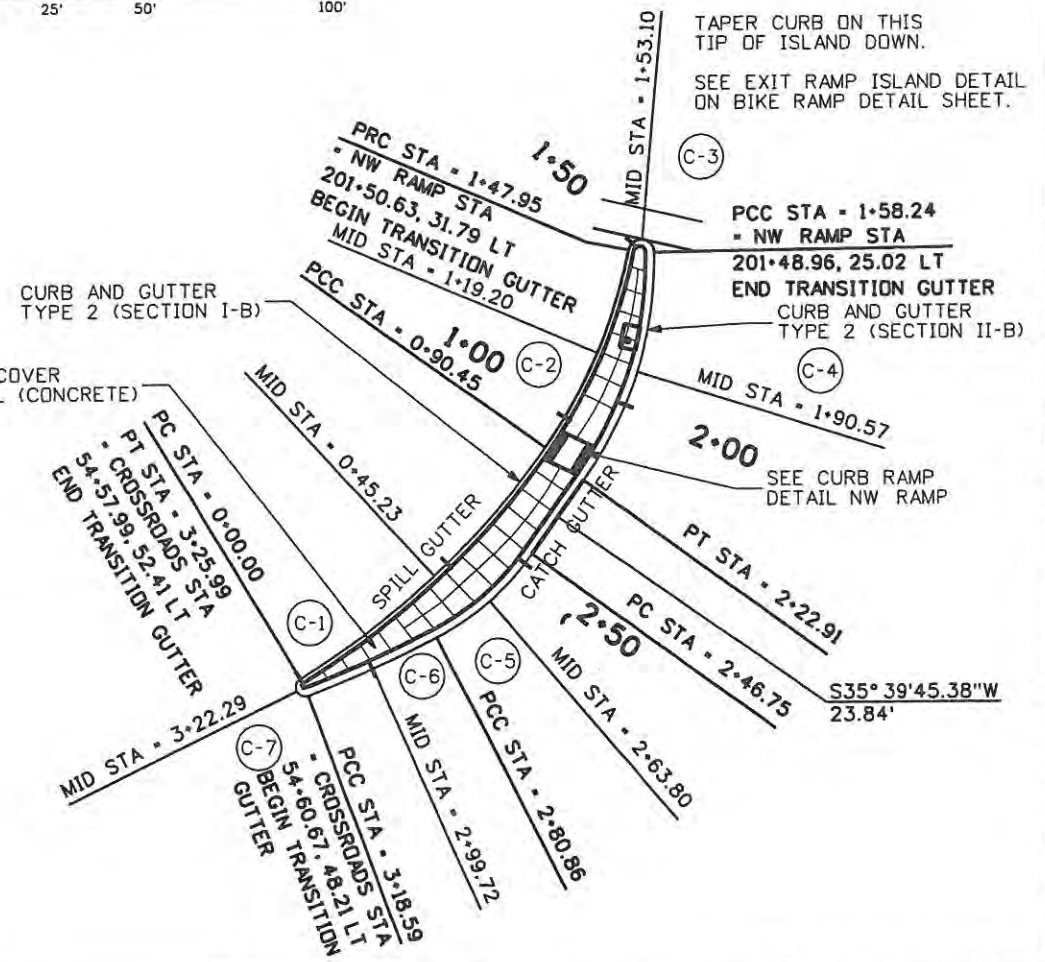
ALL COORDINATES AND DIMENSIONS ON THIS SHEET ARE TO THE LIP OF THE GUTTER

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Station	Type	Northing	Easting	Elevation
0+00.00	PC	1402504.55	3141791.44	5041.38
0+45.23	MID	1402531.67	3141827.54	5041.07
0+90.45	PCC	1402565.57	3141857.35	5040.73
1+19.20	MID	1402590.60	3141871.38	5040.67
1+47.95	PRC	1402618.04	3141879.76	5040.78
1+53.10	MID	1402620.87	3141883.52	5040.75 *
1+58.24	PCC	1402617.42	3141886.70	5040.68
1+90.57	MID	1402585.58	3141881.99	5040.53
2+22.91	PT	1402556.78	3141867.58	5040.97
2+46.75	PC	1402537.41	3141853.68	5041.39
2+63.80	MID	1402524.85	3141842.20	5041.65
2+80.86	PCC	1402515.34	3141828.08	5041.80
2+99.72	MID	1402507.21	3141811.07	5041.84
3+18.59	PCC	1402500.07	3141793.61	5041.75
3+22.29	MID	1402501.32	3141790.48	5041.56 *
3+44.77	PT	1402504.55	3141791.44	5041.38

CURVE ID	R	DELTA	L
C-1	220.00'	23°33'23.48"	90.45'
C-2	134.00'	24°35'06.13"	57.50'
C-3	3.50'	168°29'49.80"	10.29'
C-4	102.00'	36°19'26.78"	64.67'
C-5	72.00'	27°08'45.40"	34.11'
C-6	328.00'	6°35'25.74"	37.73'
C-7	2.50'	169°35'01.88"	7.40'



TAPER CURB ON THIS TIP OF ISLAND DOWN.

SEE EXIT RAMP ISLAND DETAIL ON BIKE RAMP DETAIL SHEET.

PCC STA - 1-58.24 - NW RAMP STA  
201+48.96, 25.02 LT  
END TRANSITION GUTTER CURB AND GUTTER TYPE 2 (SECTION II-B)

MID STA - 1-53.10 (C-3)  
MID STA - 1-90.57 (C-4)  
SEE CURB RAMP DETAIL NW RAMP

PT STA - 2-22.91  
PC STA - 2-46.75  
MID STA - 2-63.80  
S35° 39'45.38"W 23.84'

Creation Date: 5/2/08	Initials: BSH
Print Date: 5/1/2009	Initials: Last Mod
File Name: 061003180CurbGeometry NW Island.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Date	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

Colorado Department of Transportation

No Revisions: 9/14/11

Revised:

Void:

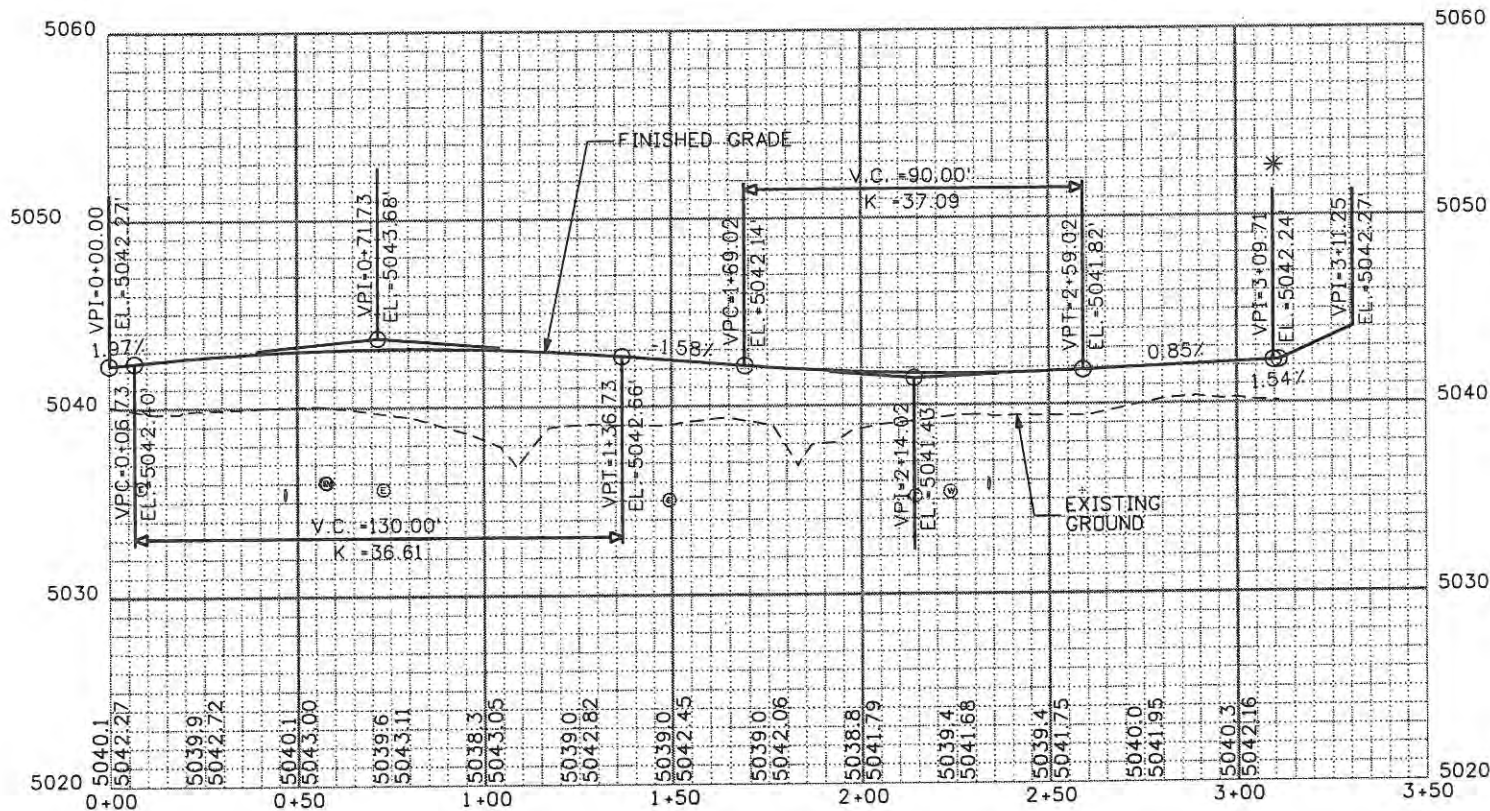
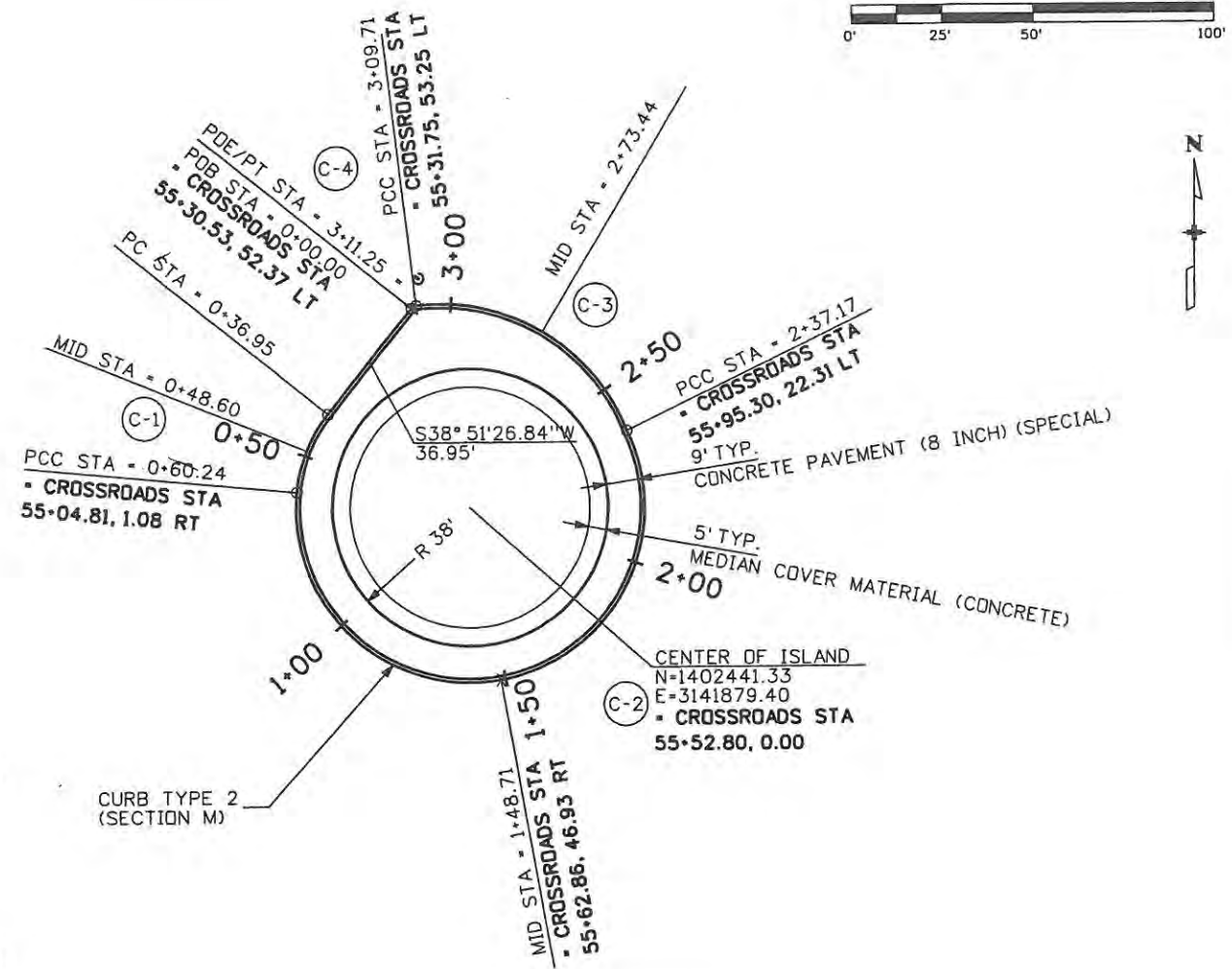
Designer: JJW	Structure Numbers
Detailer: BSH	Subset Sheets: CG6 of 18
Sheet Subset: CURB	

Project No./Code	ES4 0253-207
	17244
Sheet Number	56



West Central Island Point Details				
Station	Type	Northing	Easting	Elevation
0+00.00	POB	1402495.96	3141863.47	5042.27
0+36.95	PC	1402467.19	3141840.29	5042.87
0+48.60	MID	1402457.19	3141834.40	5042.99
0+60.24	PCC	1402445.91	3141831.62	5043.06
1+48.71	MID	1402394.07	3141887.83	5042.47
2+37.17	PCC	1402462.14	3141922.65	5041.69
2+73.44	MID	1402489.32	3141899.63	5041.94
3+09.71	PCC	1402496.69	3141864.79	5042.24
3+11.25	PT	1402495.96	3141863.47	5042.27

West Central Island Curve Details			
CURVE ID	R	DELTA	L
C-1	40.00'	33°22'21.86"	23.30'
C-2	48.00'	211°11'19.18"	176.92'
C-3	55.00'	75°33'51.56"	72.54'
C-4	2.00'	44°11'39.09"	1.54'



ALL COORDINATES AND DIMENSIONS ON THIS SHEET ARE TO THE LIP OF THE GUTTER

\* THE CONTRACTOR SHALL PROVIDE A SMOOTH VERTICAL TRANSITION AROUND THE NOSE OF THE ISLAND TO MATCH THE PROFILE GRADES SHOWN. THE TRANSITION LENGTH SHALL MATCH THE LENGTH OF THE HORIZONTAL CURVE.

Computer File Information	
Creation Date: 5/2/08	Initials: BSH
Print Date: 5/1/2009	Initials: Last Mod
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Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

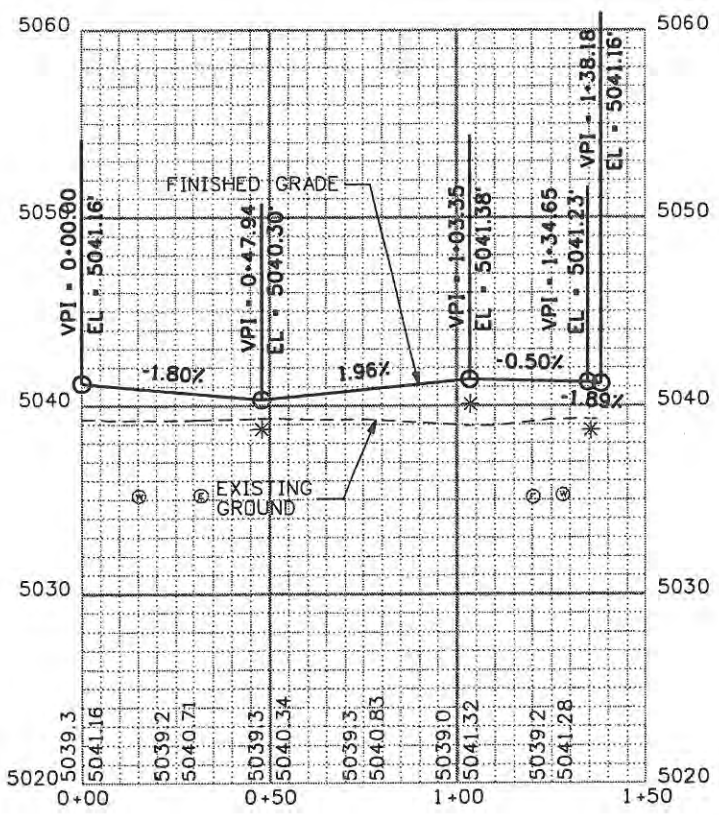
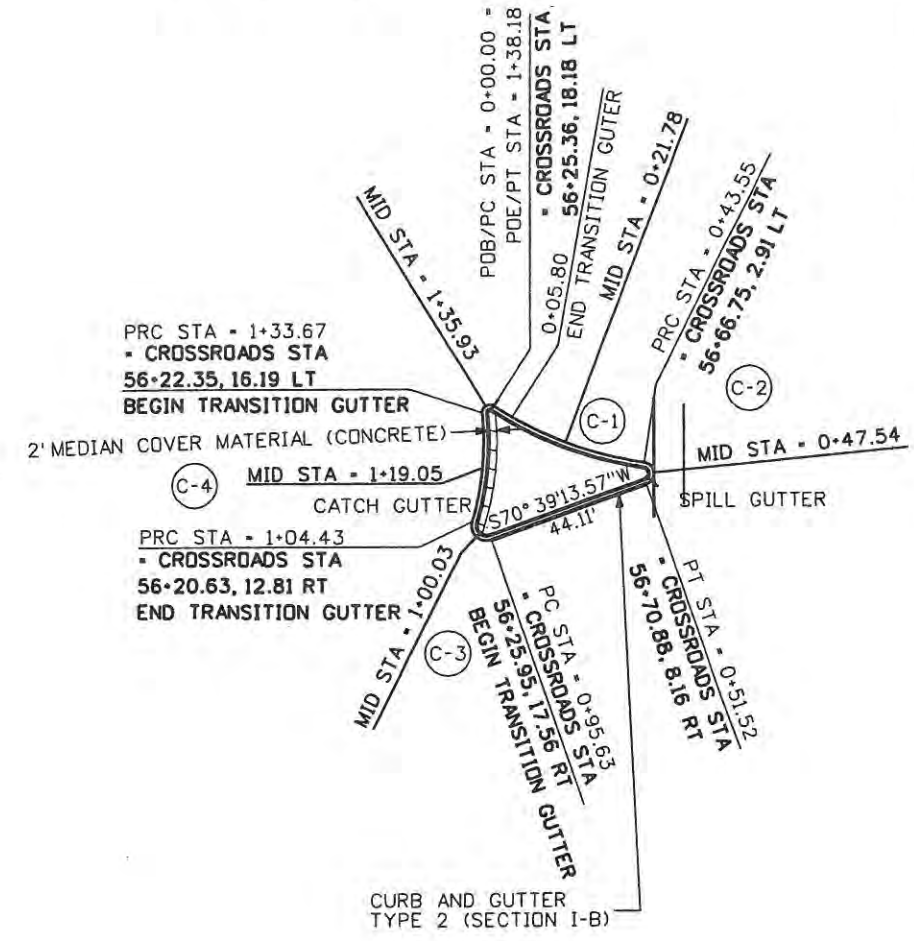
500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

Colorado Department of Transportation

No Revisions: 9/14/11
Revised:
Void:

CURB GEOMETRY WEST CENTRAL ISLAND	
Designer: JJW	Structure Numbers
Detailer: BSH	
Sheet Subset: CURB	Subset Sheets: CG7 of 18

Project No./Code	ES4 0253-207
	17244
Sheet Number	57



West Splitter Island Curve Details			
CURVE ID	R	DELTA	L
C-1	101.00'	24°42'21.92"	43.55'
C-2	3.00'	152°14'37.25"	7.97'
C-3	4.00'	126°03'23.48"	8.80'
C-4	74.00'	22°38'29.65"	29.24'
C-5	2.00'	129°02'50.85"	4.50'

West Splitter Island Point Details				
Station	Description	Northing	Easting	Elevation
0+00.00	PC	1402456.97	3141952.56	5041.16
0+21.78	MID	1402447.12	3141971.93	5040.77
0+43.55	PRC	1402441.65	3141992.97	5040.38
0+47.54	MID	1402438.96	3141995.51	5040.31*
0+51.52	PT	1402435.85	3141993.52	5040.37
0+95.63	PC	1402421.24	3141951.90	5041.23
1+00.03	MID	1402422.12	3141947.81	5041.32*
1+04.43	PRC	1402426.16	3141946.75	5041.38
1+19.05	MID	1402440.49	3141949.54	5041.31
1+33.67	PRC	1402455.08	3141949.48	5041.23
1+35.93	MID	1402457.00	3141950.42	5041.20*
1+38.18	PT	1402456.97	3141952.56	5041.16

ALL COORDINATES AND DIMENSIONS ON THIS SHEET ARE TO THE LIP OF THE GUTTER

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Computer File Information	
Creation Date: 5/2/08	Initials: BSH
Print Date: 5/1/2009	Initials: Last Mod
File Name: 061003180CurbGeometry West Splitter.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

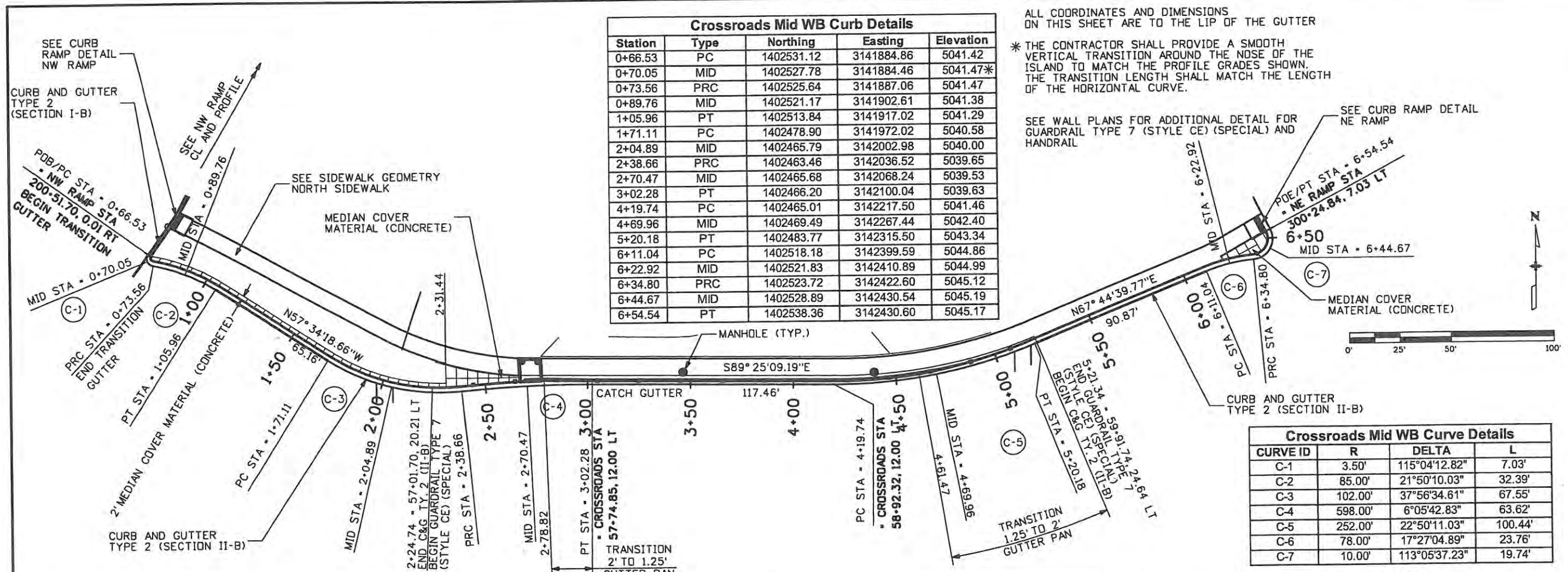
Colorado Department of Transportation

No Revisions: 9/14/11
Revised:
Void:

CURB GEOMETRY WEST SPLITTER ISLAND	
Designer: JJW	Structure Numbers
Detailer: BSH	
Sheet Subset: CURB	Subset Sheets: CG8 of 18

Project No./Code	ES4 0253-207
Sheet Number	58





Station	Type	Northing	Easting	Elevation
0+66.53	PC	1402531.12	3141884.86	5041.42
0+70.05	MID	1402527.78	3141884.46	5041.47*
0+73.56	PRC	1402525.64	3141887.06	5041.47
0+89.76	MID	1402521.17	3141902.61	5041.38
1+05.96	PT	1402513.84	3141917.02	5041.29
1+71.11	PC	1402478.90	3141972.02	5040.58
2+04.89	MID	1402465.79	3142002.98	5040.00
2+38.66	PRC	1402463.46	3142036.52	5039.65
2+70.47	MID	1402465.68	3142068.24	5039.53
3+02.28	PT	1402466.20	3142100.04	5039.63
4+19.74	PC	1402465.01	3142217.50	5041.46
4+69.96	MID	1402469.49	3142267.44	5042.40
5+20.18	PT	1402483.77	3142315.50	5043.34
6+11.04	PC	1402518.18	3142399.59	5044.86
6+22.92	MID	1402521.83	3142410.89	5044.99
6+34.80	PRC	1402523.72	3142422.60	5045.12
6+44.67	MID	1402528.89	3142430.54	5045.19
6+54.54	PT	1402538.36	3142430.60	5045.17

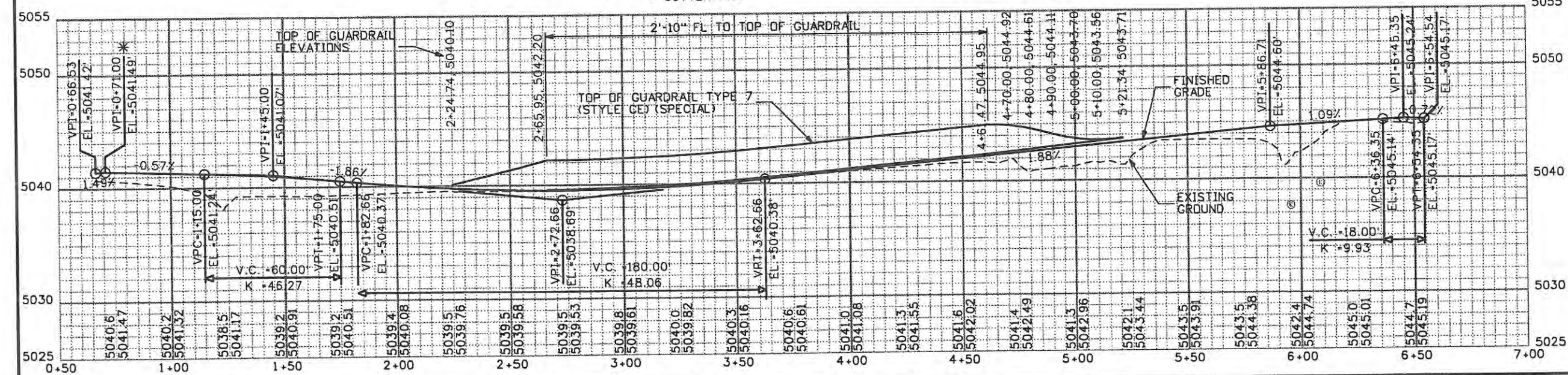
ALL COORDINATES AND DIMENSIONS ON THIS SHEET ARE TO THE LIP OF THE GUTTER

\* THE CONTRACTOR SHALL PROVIDE A SMOOTH VERTICAL TRANSITION AROUND THE NOSE OF THE ISLAND TO MATCH THE PROFILE GRADES SHOWN. THE TRANSITION LENGTH SHALL MATCH THE LENGTH OF THE HORIZONTAL CURVE.

SEE WALL PLANS FOR ADDITIONAL DETAIL FOR GUARDRAIL TYPE 7 (STYLE CE) (SPECIAL) AND HANDRAIL

SEE CURB RAMP DETAIL NE RAMP

CURVE ID	R	DELTA	L
C-1	3.50'	115°04'12.82"	7.03'
C-2	85.00'	21°50'10.03"	32.39'
C-3	102.00'	37°56'34.61"	67.55'
C-4	598.00'	6°05'42.83"	63.62'
C-5	252.00'	22°50'11.03"	100.44'
C-6	78.00'	17°27'04.89"	23.76'
C-7	10.00'	113°05'37.23"	19.74'



Creation Date: Date	Initials: Creator
Print Date: 5/15/2009	Initials: Last Mod
File Name: 061003180CurbGeometry Mid WB Curb.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Date	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

Colorado Department of Transportation

No Revisions:	9/14/11
Revised:	
Void:	

Designer: JJW	Structure Numbers
Detailer: BSH	
Sheet Subset: CURB	Subset Sheets: CG9 of 18

Project No./Code	ES4 0253-207
	17244
Sheet Number	59

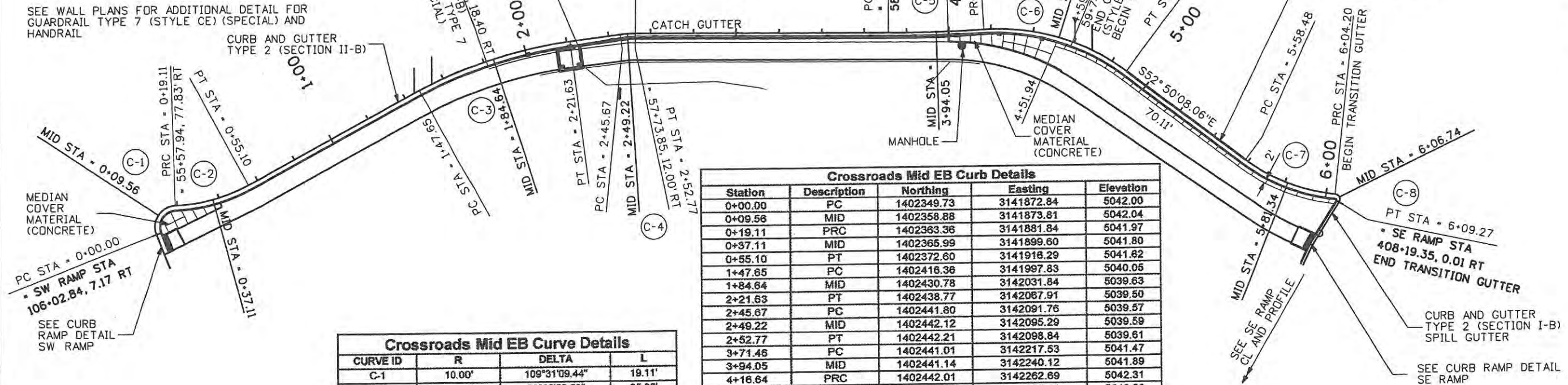


ALL COORDINATES AND DIMENSIONS ON THIS SHEET ARE TO THE LIP OF THE GUTTER

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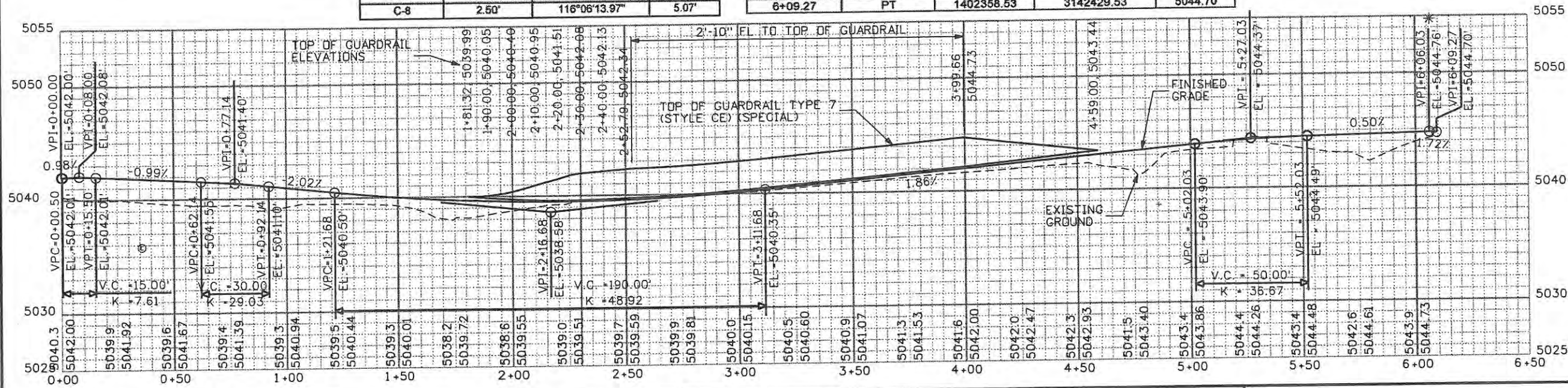
SEE WALL PLANS FOR ADDITIONAL DETAIL FOR GUARDRAIL TYPE 7 (STYLE CE) (SPECIAL) AND HANDRAIL

CURB AND GUTTER TYPE 2 (SECTION II-B)



CURVE ID	R	DELTA	L
C-1	10.00'	109°31'09.44"	19.11'
C-2	78.00'	26°25'58.50"	35.98'
C-3	202.00'	20°59'10.18"	73.99'
C-4	52.00'	7°49'03.24"	7.09'
C-5	698.00'	3°42'31.08"	45.18'
C-6	102.00'	40°17'32.21"	71.73'
C-7	85.00'	30°49'15.08"	45.72'
C-8	2.50'	116°06'13.97"	5.07'

Station	Description	Northing	Easting	Elevation
0+00.00	PC	1402349.73	3141872.84	5042.00
0+09.58	MID	1402358.88	3141873.81	5042.04
0+19.11	PRC	1402363.36	3141881.84	5041.97
0+37.11	MID	1402365.99	3141899.60	5041.80
0+55.10	PT	1402372.60	3141918.29	5041.82
1+47.65	PC	1402416.36	3141997.83	5040.05
1+84.64	MID	1402430.78	3142031.84	5039.63
2+21.63	PT	1402438.77	3142067.91	5039.50
2+45.67	PC	1402441.80	3142091.76	5039.57
2+49.22	MID	1402442.12	3142095.29	5039.59
2+52.77	PT	1402442.21	3142098.84	5039.61
3+71.46	PC	1402441.01	3142217.53	5041.47
3+94.05	MID	1402441.14	3142240.12	5041.89
4+16.64	PRC	1402442.01	3142262.69	5042.31
4+52.51	MID	1402437.70	3142298.11	5042.98
4+88.37	PT	1402421.45	3142329.87	5043.65
5+58.48	PC	1402379.10	3142385.74	5044.52
5+81.34	MID	1402367.89	3142405.59	5044.64
6+04.20	PRC	1402362.35	3142427.70	5044.75
6+06.74	MID	1402360.95	3142429.68	5044.75*
6+09.27	PT	1402358.53	3142429.53	5044.70



Creation Date: 5/2/08	Initials: BSH
Print Date: 5/1/2009	Initials: Last Mod
File Name: 061003180CurbGeometry Mid EB Curb.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Date	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

Colorado Department of Transportation

No Revisions: 9/14/11	CURB GEOMETRY MID EB CURB		Project No./Code ES4 0253-207
Revised:	Designer: JJW	Structure Numbers	17244
Void:	Detailer: BSH	Subset Sheets: CG10 of 18	Sheet Number 60

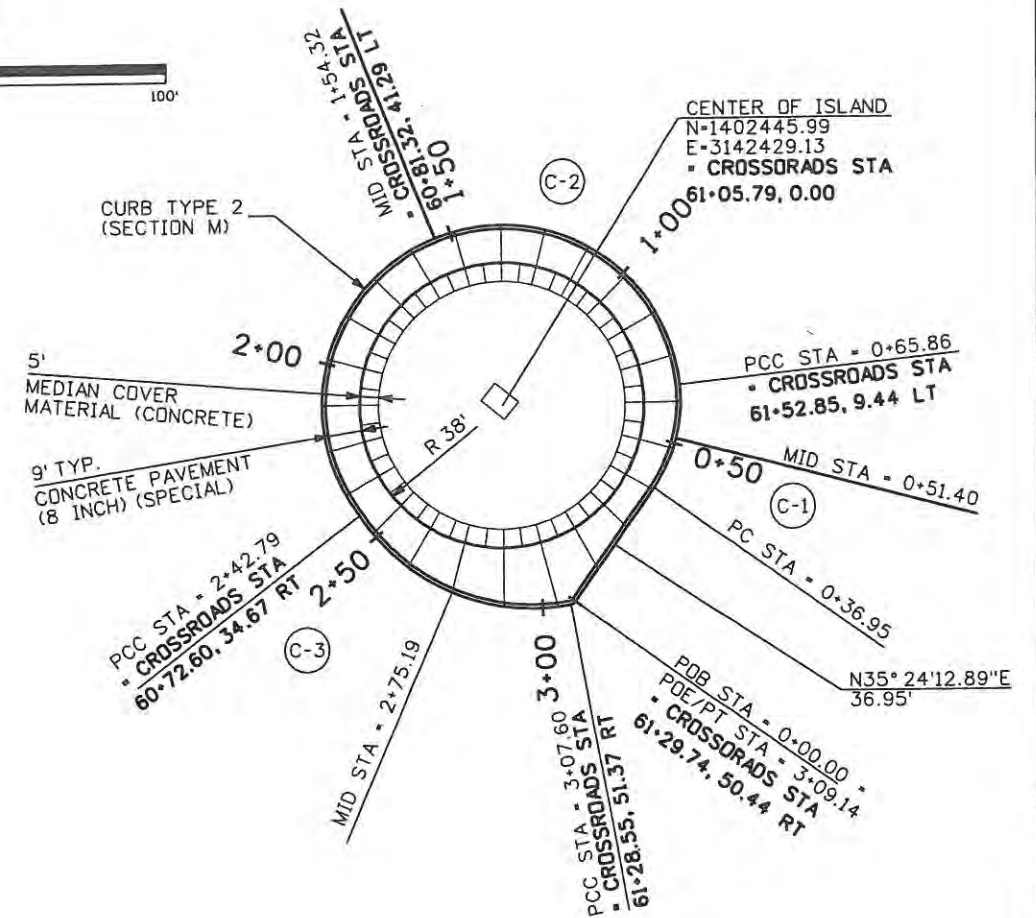
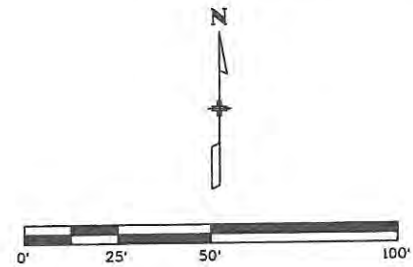
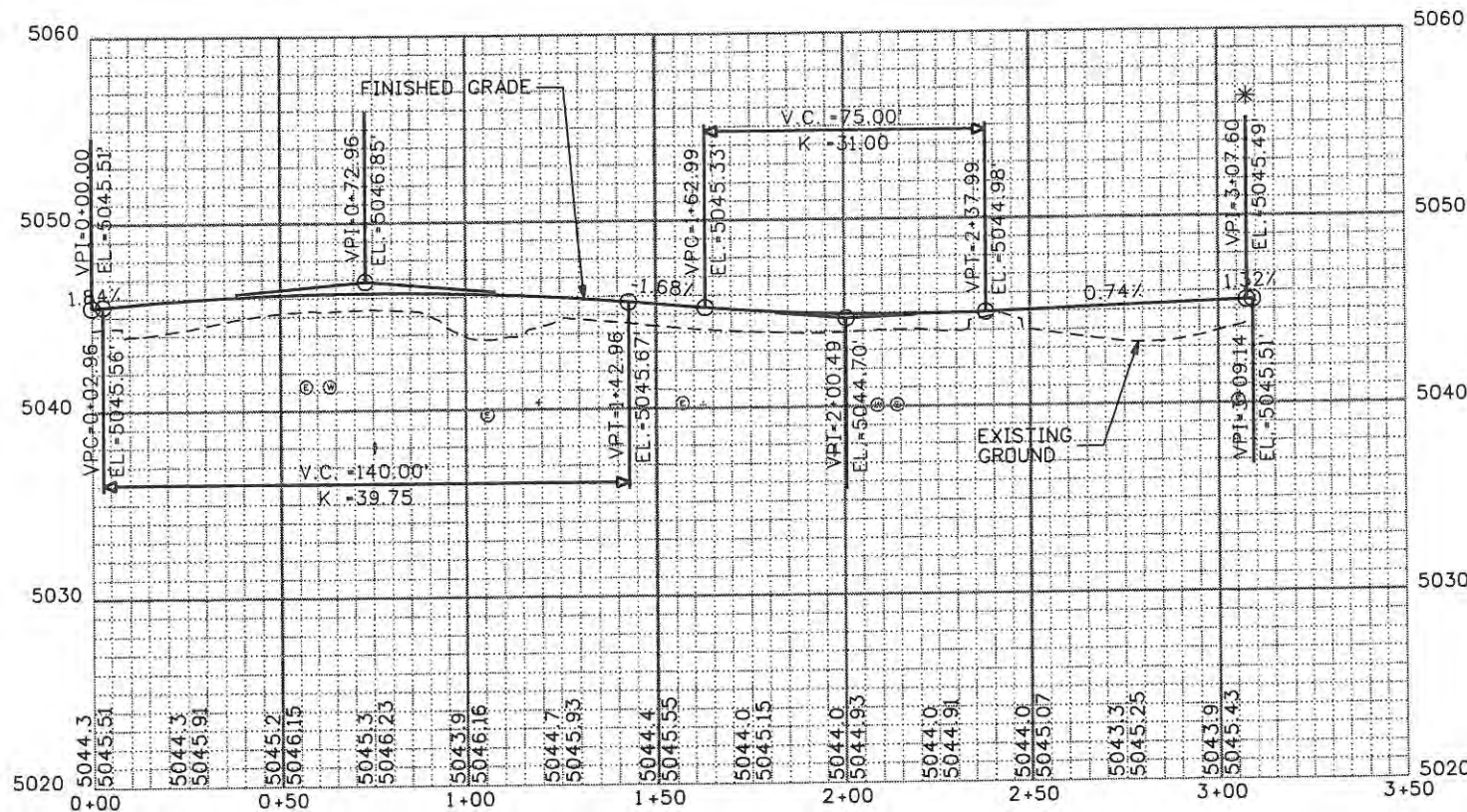
**WILSON & COMPANY**  
 Engineers & Architects  
 966 16th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2983





East Central Island Point Details				
Station	Type	Northing	Easting	Elevation
0+00.00	POB	1402393.54	3142448.29	5045.51
0+36.95	PC	1402423.66	3142469.69	5046.04
0+51.40	MID	1402436.69	3142475.78	5046.16
0+65.86	PCC	1402451.02	3142476.87	5046.22
1+54.32	MID	1402490.62	3142411.46	5045.48
2+42.79	PCC	1402416.97	3142390.90	5045.01
2+75.19	MID	1402396.34	3142415.29	5045.25
3+07.60	PCC	1402392.74	3142447.02	5045.49
3+09.14	PT	1402393.54	3142448.29	5045.51

East Central Island Curve Details			
CURVE ID	R	DELTA	L
C-1	40.00'	41°25'12.19"	28.92'
C-2	48.00'	211°11'19.18"	176.93'
C-3	55.00'	67°31'01.24"	64.81'



ALL COORDINATES AND DIMENSIONS ON THIS SHEET ARE TO THE LIP OF THE GUTTER

\* THE CONTRACTOR SHALL PROVIDE A SMOOTH VERTICAL TRANSITION AROUND THE NOSE OF THE ISLAND TO MATCH THE PROFILE GRADES SHOWN. THE TRANSITION LENGTH SHALL MATCH THE LENGTH OF THE HORIZONTAL CURVE.

Computer File Information	
Creation Date: 5/2/08	Initials: BSH
Print Date: 5/1/2009	Initials: Last Mod
File Name: 061003180CurbGeometry East Central.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

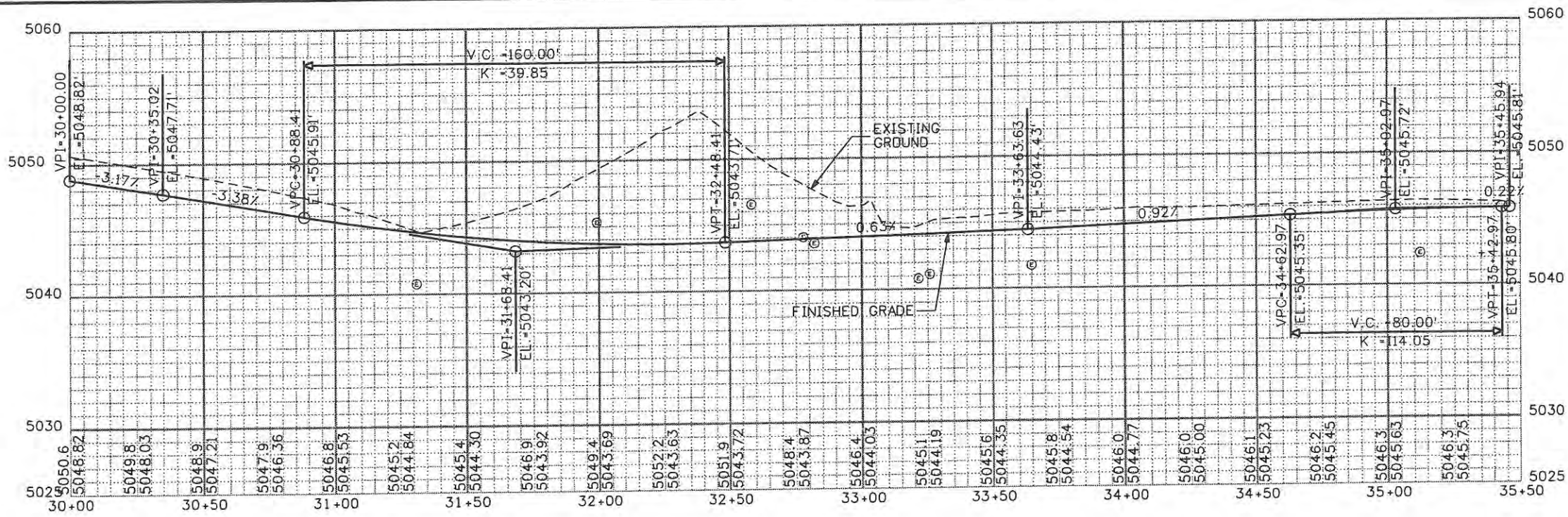
Colorado Department of Transportation

No Revisions: 9/14/11
Revised:
Void:

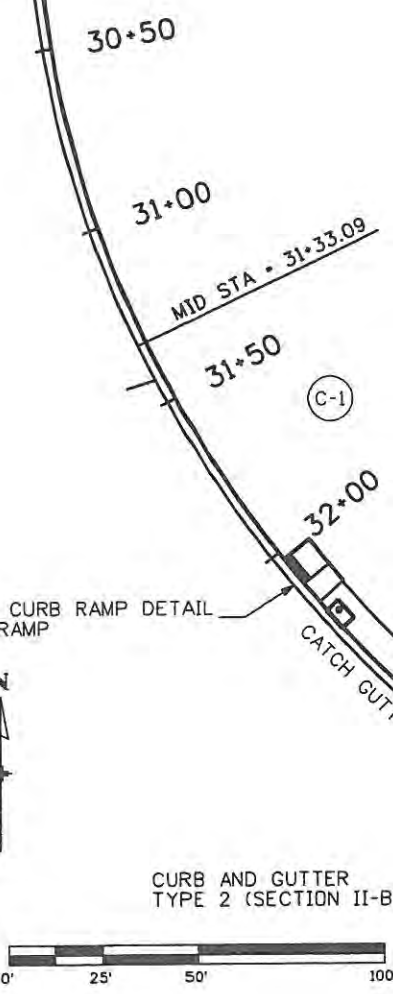
CURB GEOMETRY EAST CENTRAL ISLAND	
Designer: JJW	Structure Numbers
Detailer: BSH	
Sheet Subset: CURB	Subset Sheets: CG12 of 18

Project No./Code	ES4 0253-207
	17244
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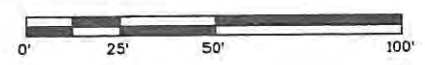
PDB/PC STA = 30+00.00  
 • NE RAMP STA  
 302+48.14, 32.00 RT



CURVE ID	R	DELTA	L
C-1	302.00'	50°30'02.92"	266.18'
C-2	152.00'	39°17'45.14"	104.25'

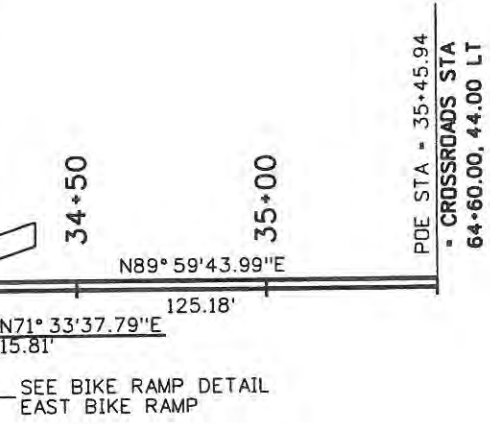
Station	Type	Northing	Easting	Elevation
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31+33.09	MID	1402632.26	3142429.14	5044.65
32+66.18	PCC	1402528.35	3142510.57	5043.82
33+18.31	MID	1402502.83	3142555.73	5044.15
33+70.43	PT	1402493.99	3142606.84	5044.50
34+04.95	PI	1402493.99	3142641.36	5044.81
34+20.76	PI	1402498.99	3142656.36	5044.96
35+45.94	POE	1402499.00	3142781.54	5045.81

SEE CURB RAMP DETAIL  
 NE RAMP



CURB AND GUTTER  
 TYPE 2 (SECTION II-B)

CATCH GUTTER



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Creation Date: 5/2/08	Initials: BSH
Print Date: 5/1/2009	Initials: Last Mod
File Name: 061003180CurbGeometry NE Curb.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Date	Comments	Init.

**CITY OF LOVELAND**

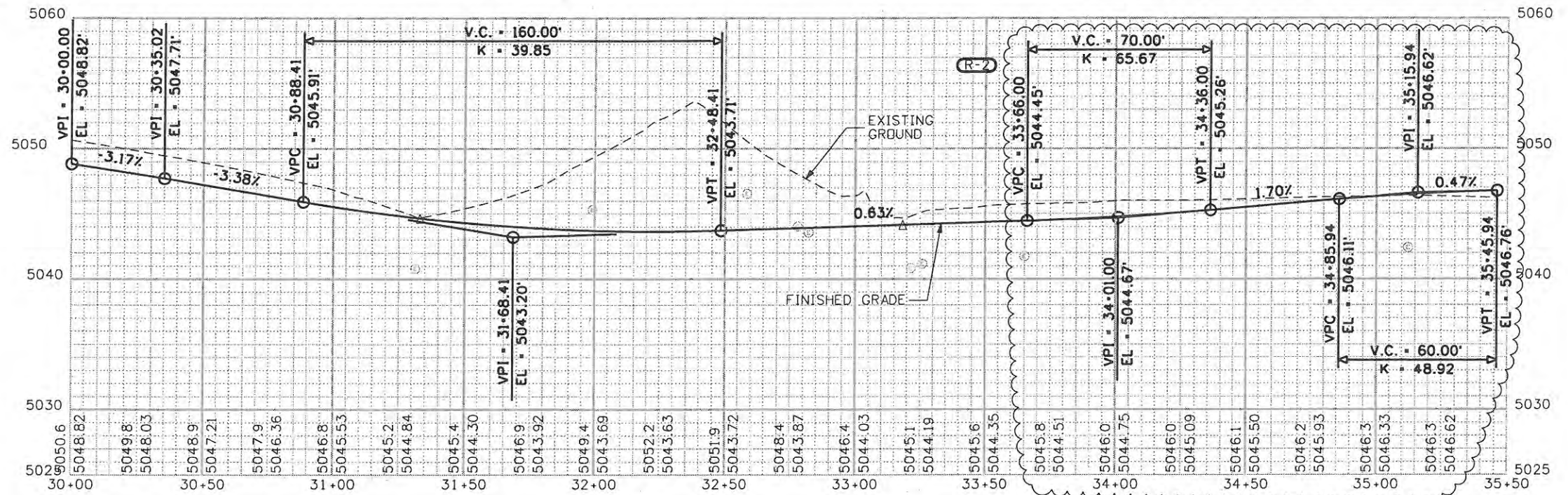
500 E. THIRD STREET  
 LOVELAND, CO 80537  
 970-962-2000

**Colorado Department of Transportation**

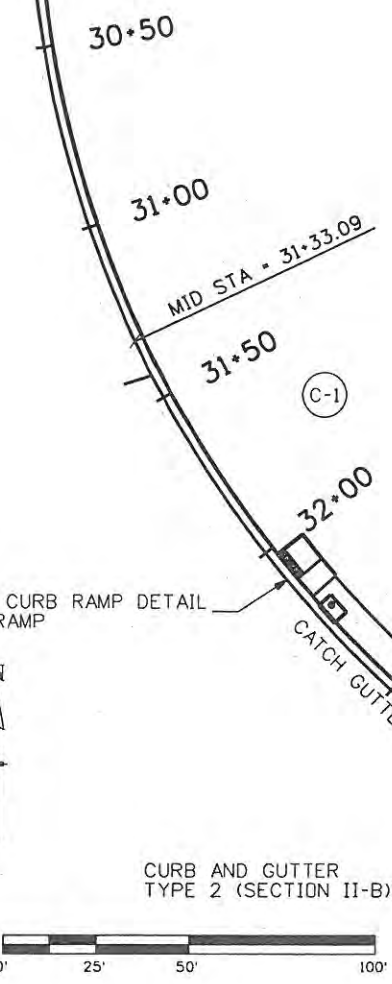
No Revisions:
Revised:
Void: 9/14/11

Designer: JJW	Structure Numbers
Detailer: BSH	Subset Sheets: CG13 of 18
Sheet Subset: CURB	

Project No./Code	ES4 0253-207
	17244
Sheet Number	63



PQB/PC STA = 30+00.00  
 NE RAMP STA  
 302+48.14, 32.00 RT



CURVE ID	R	DELTA	L
C-1	302.00'	50°30'02.92"	266.18'
C-2	152.00'	39°17'45.14"	104.25'

Station	Point Type	Northing	Easting	Elevation
30+00.00	PC	1402760.98	3142399.82	5048.82
31+33.09	MID	1402632.26	3142429.14	5044.65
32+66.18	PCC	1402528.35	3142510.57	5043.82
33+18.31	MID	1402502.83	3142555.73	5044.15
33+70.43	PT	1402493.99	3142606.84	5044.48
34+04.95	PI	1402493.99	3142641.36	5044.81
34+20.76	PI	1402498.99	3142656.36	5045.02
35+45.94	POE	1402499.00	3142781.54	5046.76

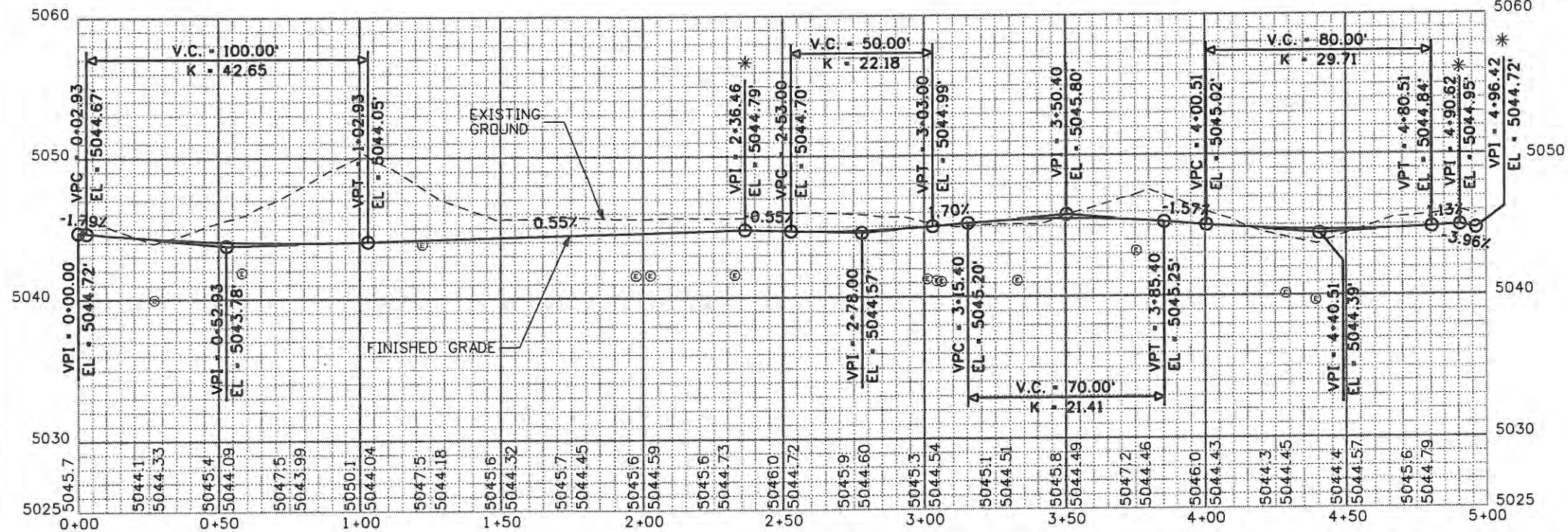
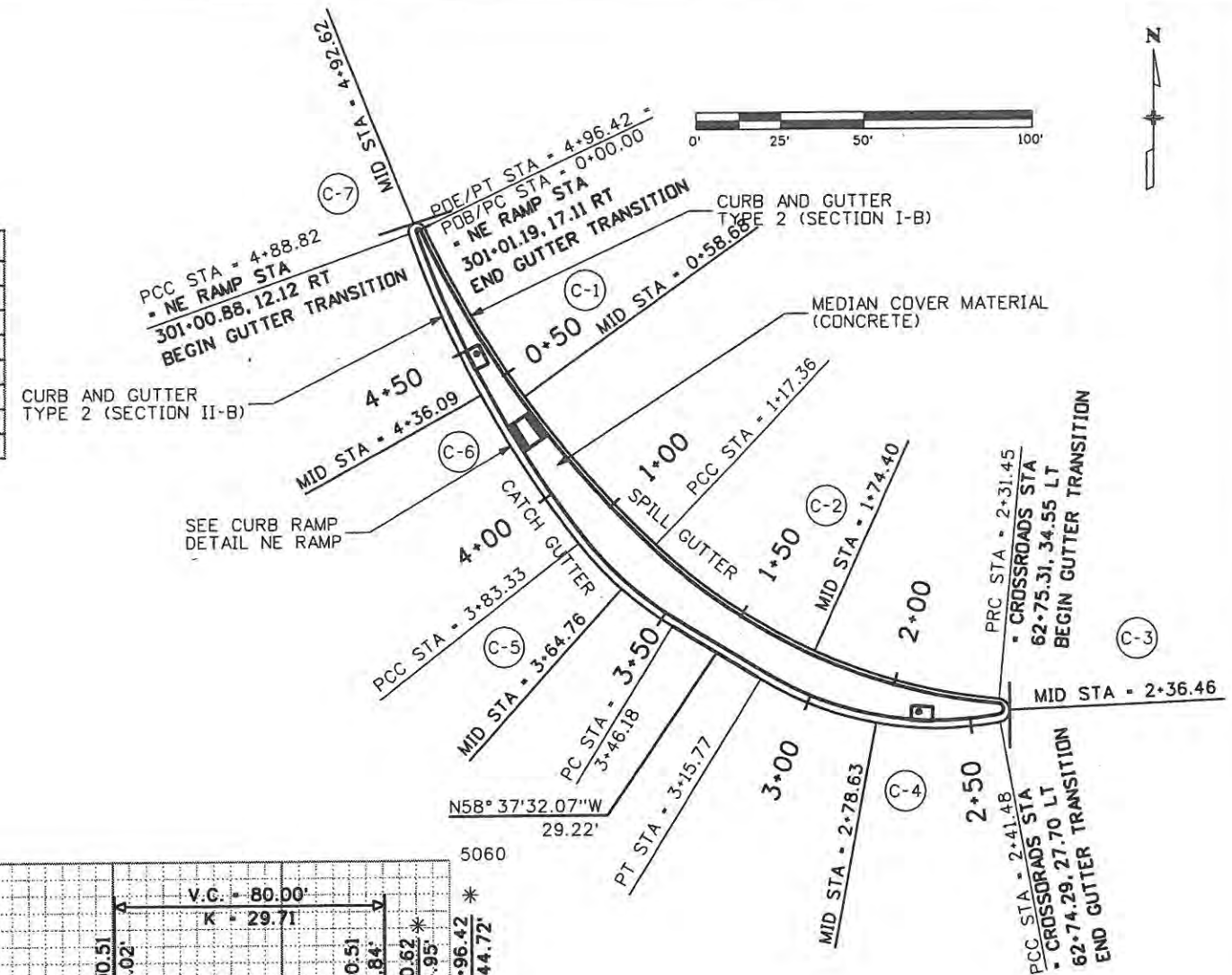
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<b>Computer File Information</b> Creation Date: 5/2/08 Initials: BSH Print Date: 9/24/2009 Initials: Last Mod File Name: 061003180CurbGeometry NE Curb.dgn Horiz. Scale: 1:50 Vert. Scale: As Noted		<b>Sheet Revisions</b> <table border="1"> <thead> <tr> <th>Date</th> <th>Comments</th> <th>Init.</th> </tr> </thead> <tbody> <tr> <td>09/24/09</td> <td>TIE TO EXIST</td> <td>JJW</td> </tr> </tbody> </table>		Date	Comments	Init.	09/24/09	TIE TO EXIST	JJW	<b>CITY OF LOVELAND</b> 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000 		<b>Colorado Department of Transportation</b> 		<b>CURB GEOMETRY</b> <b>NE CURB</b> No Revisions: 9/14/11 Revised: Void:		<b>Project No./Code</b> ES4 0253-207 17244 Sheet Number 63X	
Date	Comments	Init.															
09/24/09	TIE TO EXIST	JJW															



NE Island Point Details				
Station	Description	Northing	Easting	Elevation
0+00.00	PC	1402616.64	3142420.65	5044.72
0+58.68	MID	1402566.18	3142450.45	5044.04
1+17.36	PCC	1402522.08	3142489.01	5044.13
1+74.40	MID	1402490.31	3142536.08	5044.45
2+31.45	PRC	1402475.73	3142590.95	5044.77
2+36.46	MID	1402472.40	3142594.12	5044.79*
2+41.48	PCC	1402468.80	3142591.26	5044.77
2+78.63	MID	1402468.85	3142554.32	5044.71
3+15.77	PT	1402482.05	3142519.82	5045.21
3+46.18	PC	1402497.89	3142493.85	5045.50
3+64.76	MID	1402508.94	3142478.96	5045.47
3+83.33	PCC	1402522.52	3142466.31	5045.28
4+36.09	MID	1402566.63	3142437.48	5044.67
4+88.82	PCC	1402614.74	3142416.03	5044.94
4+92.62	MID	1402617.88	3142417.44	5044.98*
4+96.42	PT	1402616.64	3142420.65	5044.72

NE Island Curve Details			
CURVE ID	R	DELTA	L
C-1	317.42'	21°11'05.11"	117.36'
C-2	171.00'	38°13'30.18"	114.08'
C-3	3.50'	164°19'08.11"	10.04'
C-4	102.00'	41°43'41.65"	74.29'
C-5	102.00'	20°52'08.21"	37.15'
C-6	330.00'	18°18'54.05"	105.49'
C-7	2.50'	174°10'43.28"	7.60'



ALL COORDINATES AND DIMENSIONS ON THIS SHEET ARE TO THE LIP OF THE GUTTER

\* THE CONTRACTOR SHALL PROVIDE A SMOOTH VERTICAL TRANSITION AROUND THE NOSE OF THE ISLAND TO MATCH THE PROFILE GRADES SHOWN. THE TRANSITION LENGTH SHALL MATCH THE LENGTH OF THE HORIZONTAL CURVE.

Computer File Information	
Creation Date: 5/2/08	Initials: BSH
Print Date: 5/1/2009	Initials: Last Mod
File Name: 061003180CurbGeometry NE Island.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

**Colorado Department of Transportation**

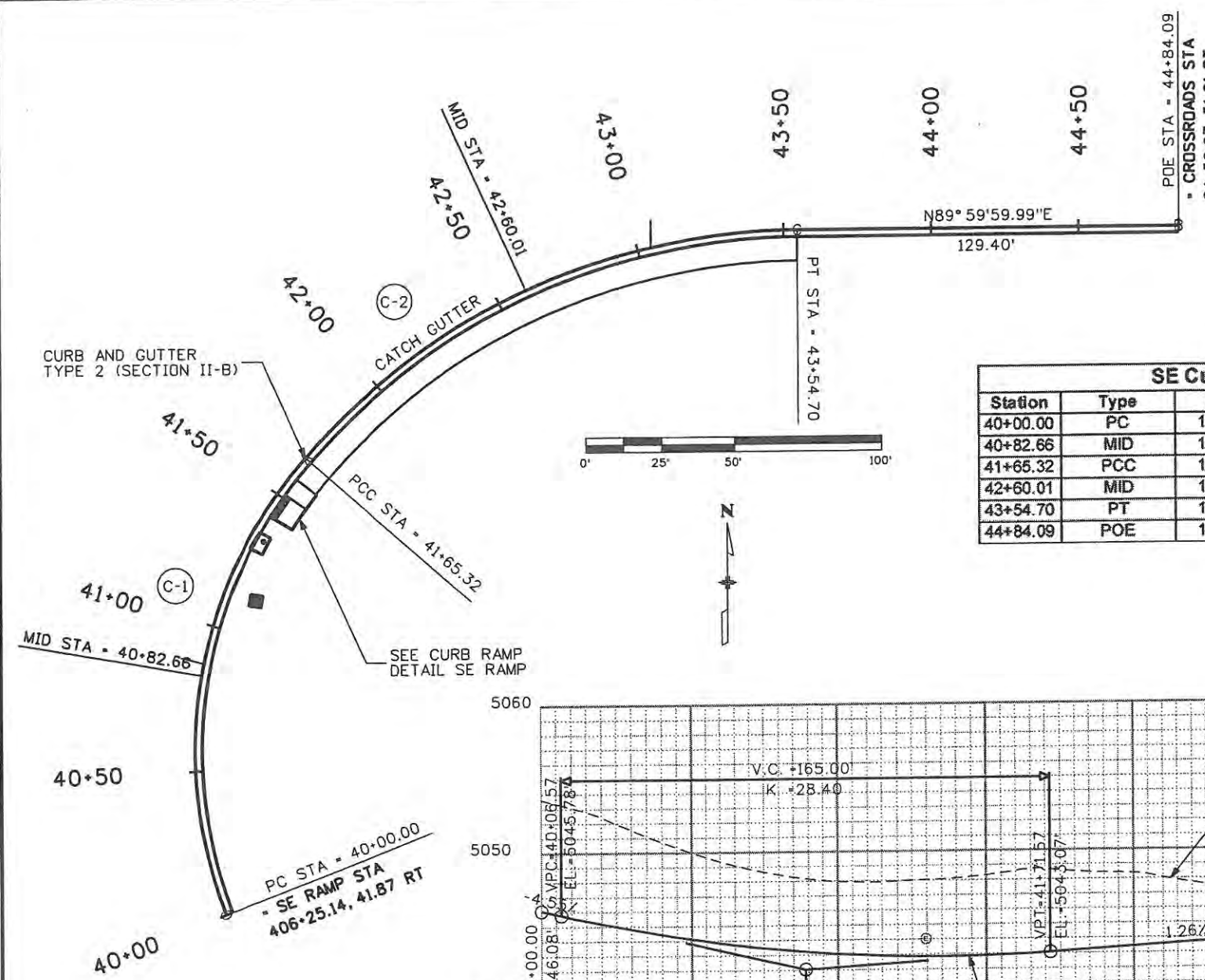
No Revisions: 9/14/11
Revised:
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CURB GEOMETRY NE ISLAND	
Designer: JJW	Structure Numbers
Detailer: BSH	
Sheet Subset: CURB	Subset Sheets: CG14 of 18

Project No./Code	
ES4 0253-207	
17244	
Sheet Number	64

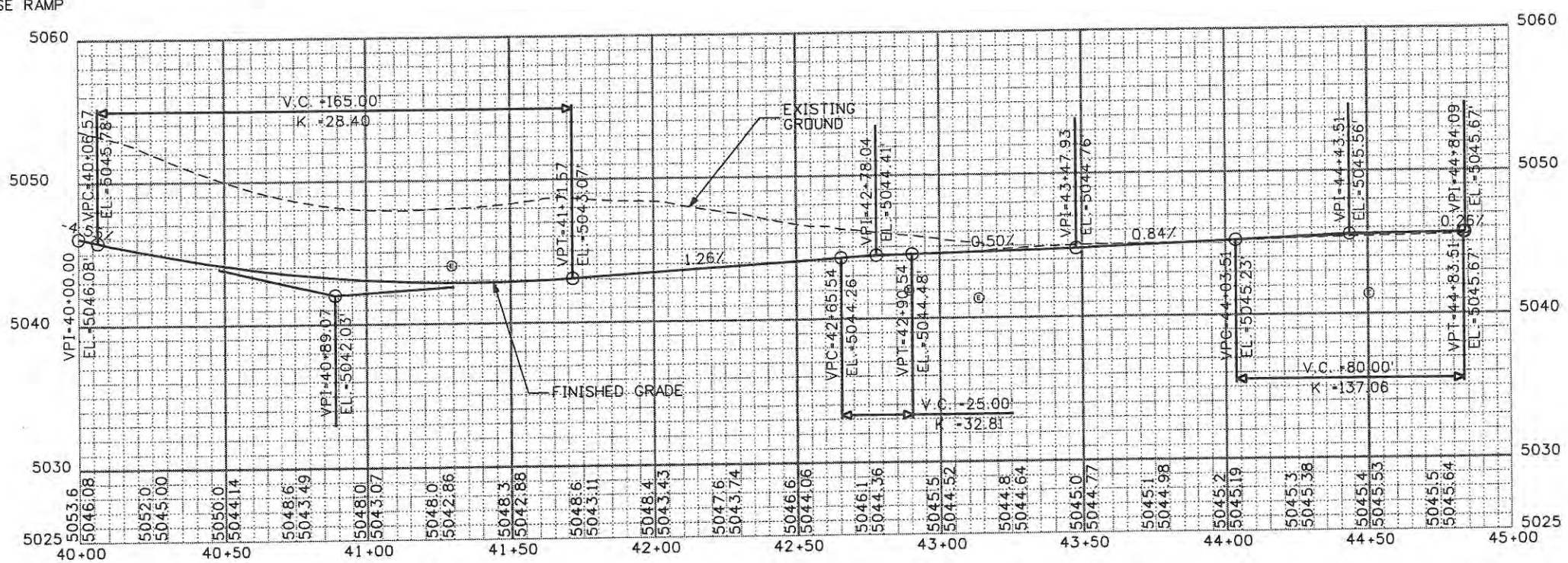


ALL COORDINATES AND DIMENSIONS  
ON THIS SHEET ARE TO THE LIP OF THE GUTTER



SE Curb Point Details				
Station	Type	Northing	Easting	Elevation
40+00.00	PC	1402173.08	3142457.66	5046.08
40+82.66	MID	1402254.34	3142449.68	5043.34
41+65.32	PCC	1402328.00	3142484.88	5043.00
42+60.01	MID	1402384.10	3142560.27	5044.19
43+54.70	PT	1402403.99	3142642.11	5044.82
44+84.09	POE	1402403.99	3142781.51	5045.67

SE Curb Curve Details			
CURVE ID	R	DELTA	L
C-1	152.00'	62°18'58.70"	165.32'
C-2	222.00'	48°52'33.48"	189.38'



Computer File Information	
Creation Date: 5/2/08	Initials: BSH
Print Date: 5/1/2009	Initials: Last Mod
File Name: 061003180CurbGeometry SE Curb.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date	Comments	Init.

**CITY OF LOVELAND**  
500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

Colorado Department of Transportation

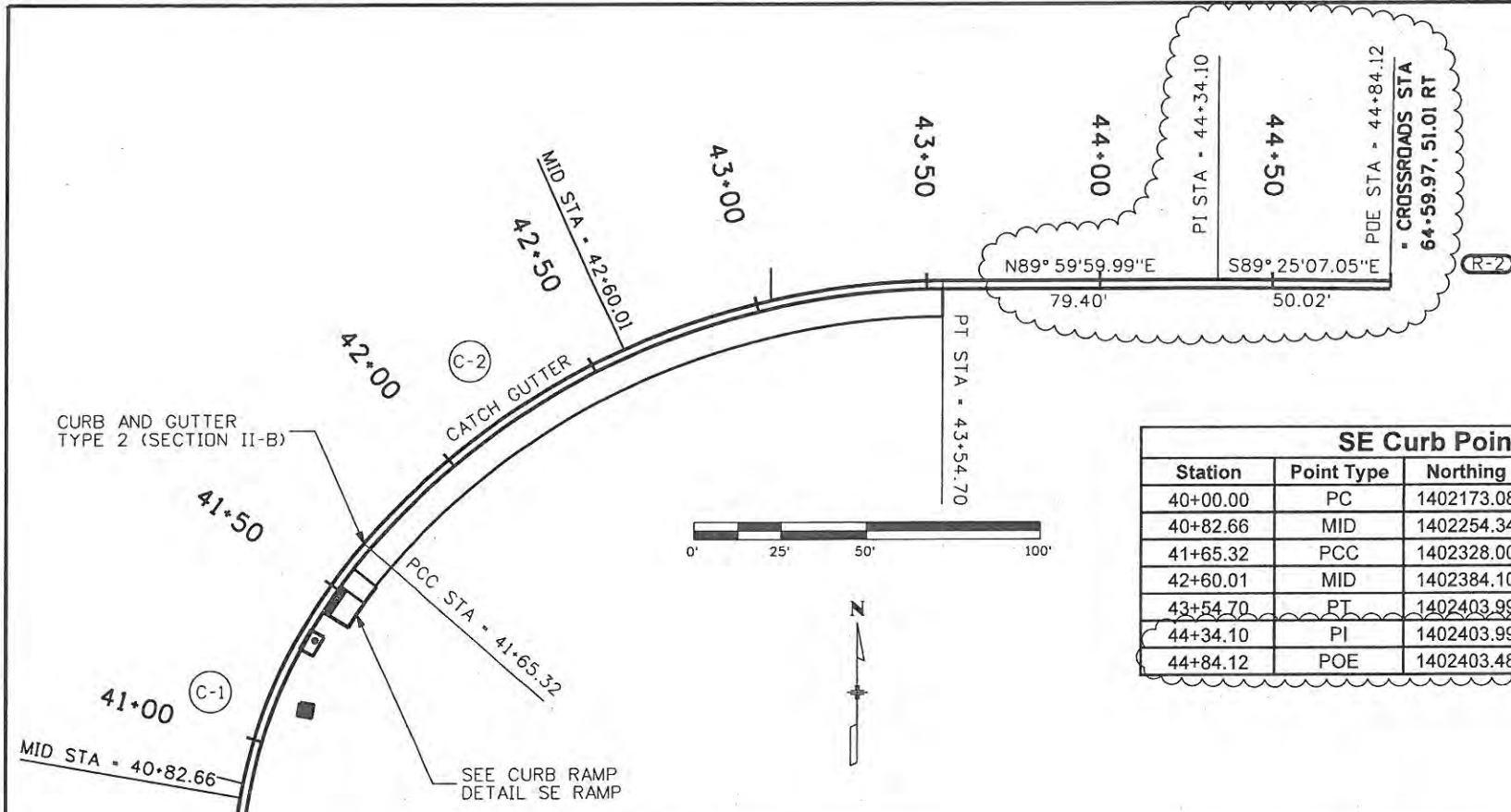
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Revised:  
Void: 9/14/11

CURB GEOMETRY SE CURB	
Designer: JJW	Structure Numbers
Detailer: BSH	Subset Sheets: CG15 of 18
Sheet Subset: CURB	

Project No./Code	
ES4 0253-207	
17244	
Sheet Number	65

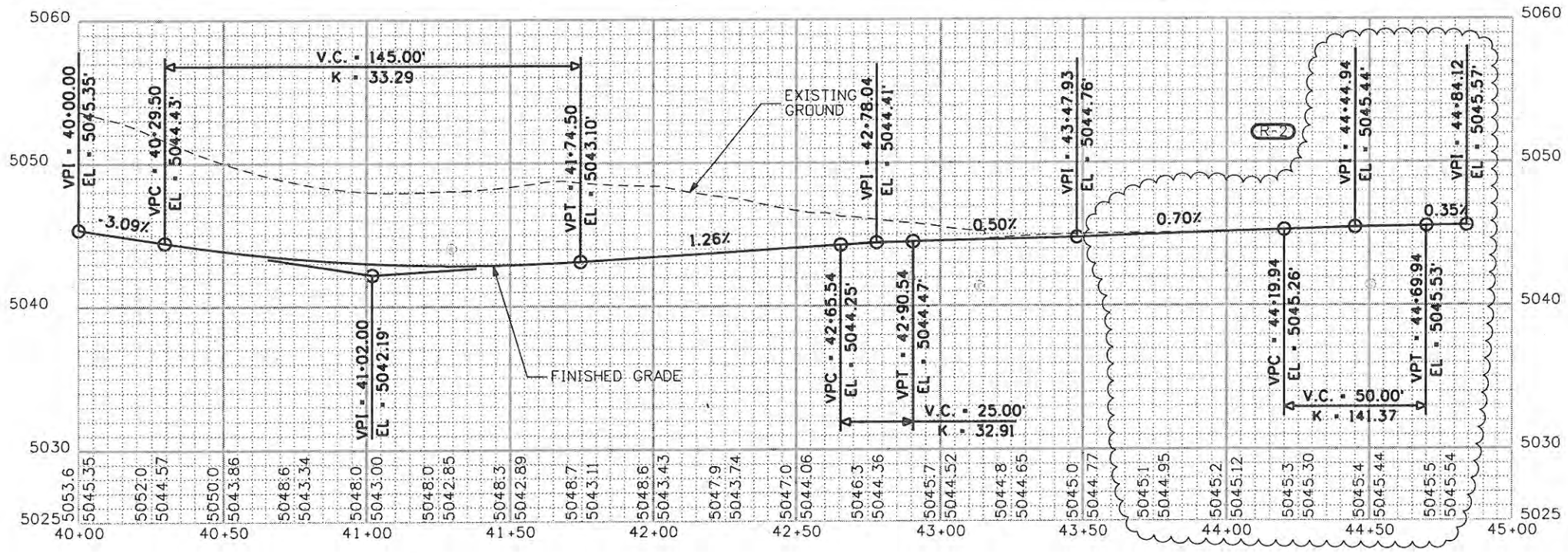


ALL COORDINATES AND DIMENSIONS ON THIS SHEET ARE TO THE LIP OF THE GUTTER



Station	Point Type	Northing	Easting	Elevation
40+00.00	PC	1402173.08	3142457.66	5045.35
40+82.66	MID	1402254.34	3142449.68	5044.54
41+65.32	PCC	1402328.00	3142484.88	5043.00
42+60.01	MID	1402384.10	3142560.27	5043.19
43+54.70	RT	1402403.99	3142652.11	5044.81
44+34.10	PI	1402403.99	3142731.51	5045.36
44+84.12	POE	1402403.48	3142781.53	5045.57

CURVE ID	R	DELTA	L
C-1	152.00'	62°18'58.70"	165.32'
C-2	222.00'	48°52'33.48"	189.38'



Creation Date: 5/2/08	Initials: BSH
Print Date: 9/24/2009	Initials: Last Mod
File Name: 061003180CurbGeometry SE Curb.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Date	Comments	Init.
09/24/09	TIE TO EXIST	JJW

**CITY OF LOVELAND**

500 E. THIRD STREET  
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Colorado Department of Transportation

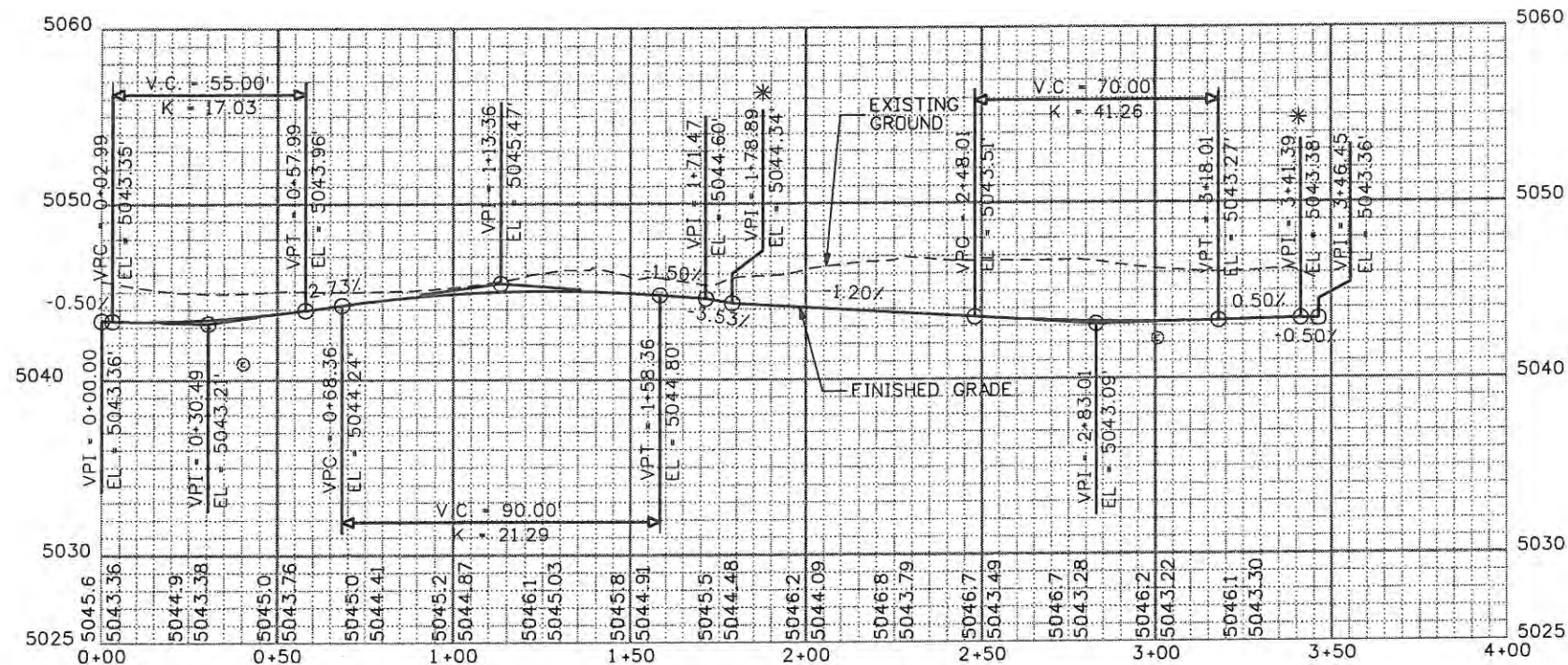
No Revisions: 9/14/11

Revised:

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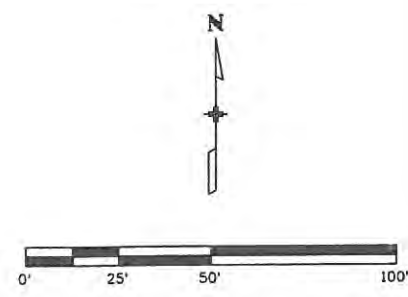
Designer: JJW	Structure Numbers
Detailer: BSH	
Sheet Subset: CURB	Subset Sheets: CG15 of 18

Project No./Code	ES4 0253-207
	17244
Sheet Number	65X



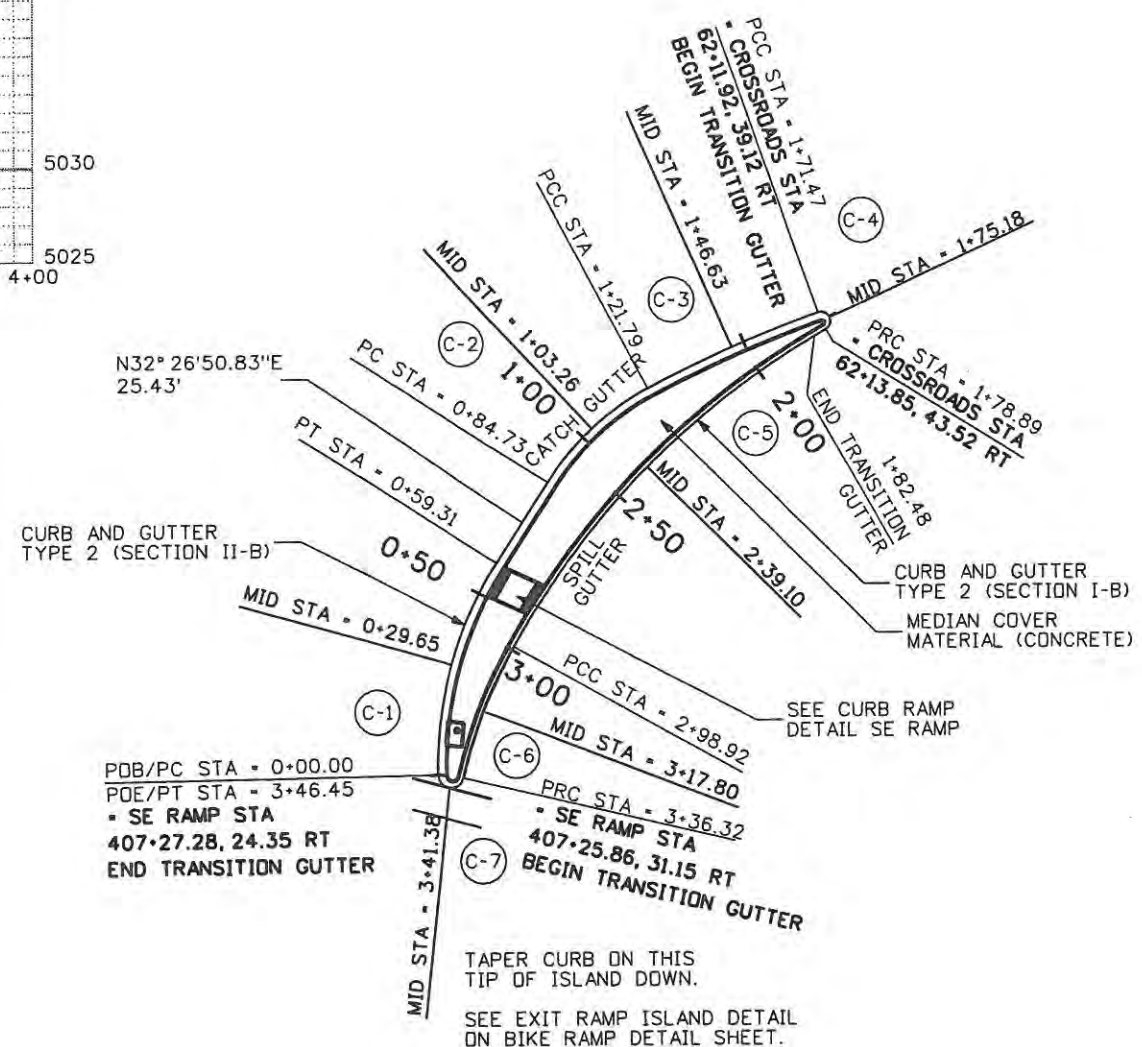
ALL COORDINATES AND DIMENSIONS ON THIS SHEET ARE TO THE LIP OF THE GUTTER

\* THE CONTRACTOR SHALL PROVIDE A SMOOTH VERTICAL TRANSITION AROUND THE NOSE OF THE ISLAND TO MATCH THE PROFILE GRADES SHOWN. THE TRANSITION LENGTH SHALL MATCH THE LENGTH OF THE HORIZONTAL CURVE.



Station	Description	Northing	Easting	Elevation
0+00.00	PC	1402274.55	3142430.37	5043.36
0+29.65	MID	1402303.85	3142434.21	5043.42
0+59.31	PT	1402330.82	3142446.28	5043.99
0+84.73	PC	1402352.28	3142459.93	5044.63
1+03.26	MID	1402366.47	3142471.76	5044.91
1+21.79	PCC	1402377.18	3142486.81	5045.03
1+46.63	MID	1402388.03	3142509.15	5044.01
1+71.47	PCC	1402397.18	3142532.24	5044.60
1+75.18	MID	1402395.85	3142535.35	5044.47
1+78.89	PRC	1402392.84	3142534.30	5044.34
2+39.10	MID	1402356.22	3142486.59	5043.62
2+98.92	PCC	1402308.57	3142450.75	5043.22
3+17.80	MID	1402291.49	3142442.73	5043.27
3+36.32	PRC	1402273.80	3142437.28	5043.36
3+41.38	MID	1402271.13	3142433.50	5043.38 *
3+46.45	PT	1402274.55	3142430.37	5043.36

CURVE ID	R	DELTA	L
C-1	102.00'	33°18'48.01"	59.31'
C-2	72.00'	29°29'07.31"	37.05'
C-3	330.00'	8°37'34.73"	49.68'
C-4	2.50'	169°57'50.29"	7.42'
C-5	219.00'	31°24'09.91"	120.03'
C-6	135.00'	15°52'24.65"	37.40'
C-7	3.50'	165°53'14.22"	10.13'



Creation Date: 5/2/08	Initials: BSH
Print Date: 5/1/2009	Initials: Last Mod
File Name: 061003180CurbGeometry SE Island.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Date	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

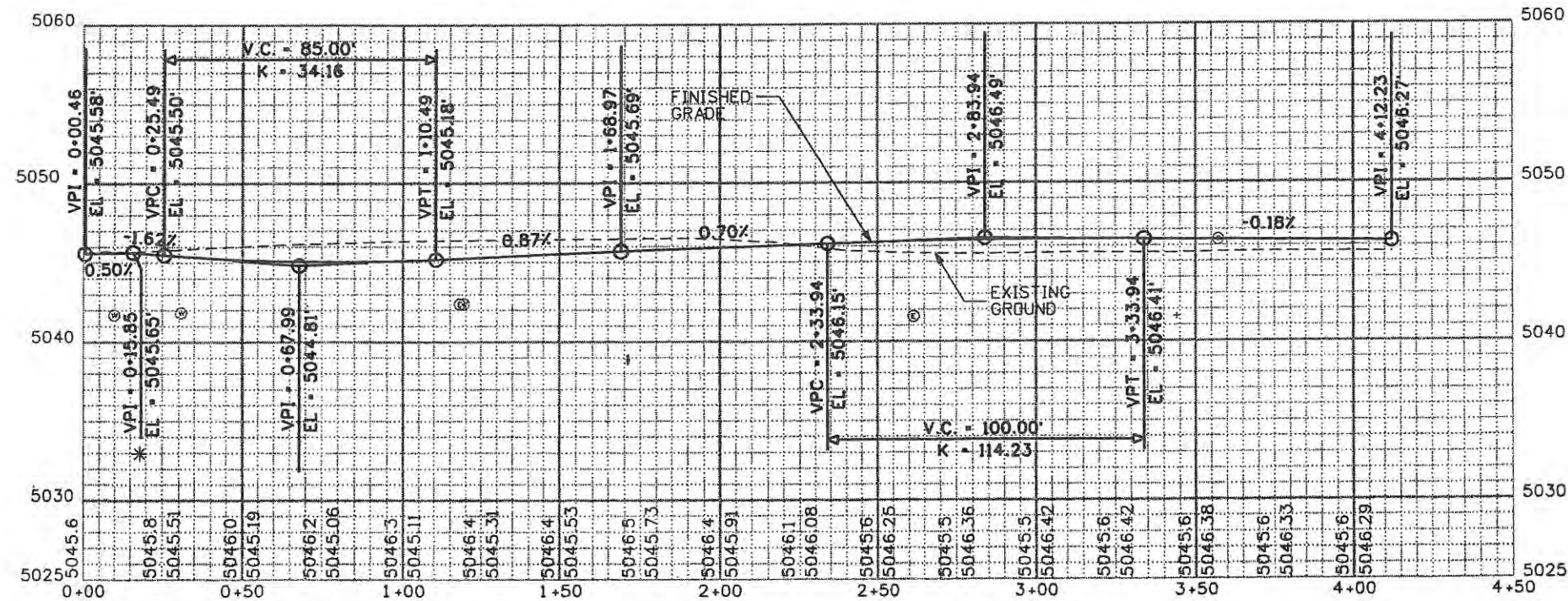
Colorado Department of Transportation

No Revisions: 9/14/11	Designer: JJW	Structure Numbers
Revised:	Detailer: BSH	Subset Sheets: CG16 of 18
Void:	Sheet Subset: CURB	

ES4 0253-207
17244
Sheet Number 66

WILSON & COMPANY  
 Engineers & Architects  
 999 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2853



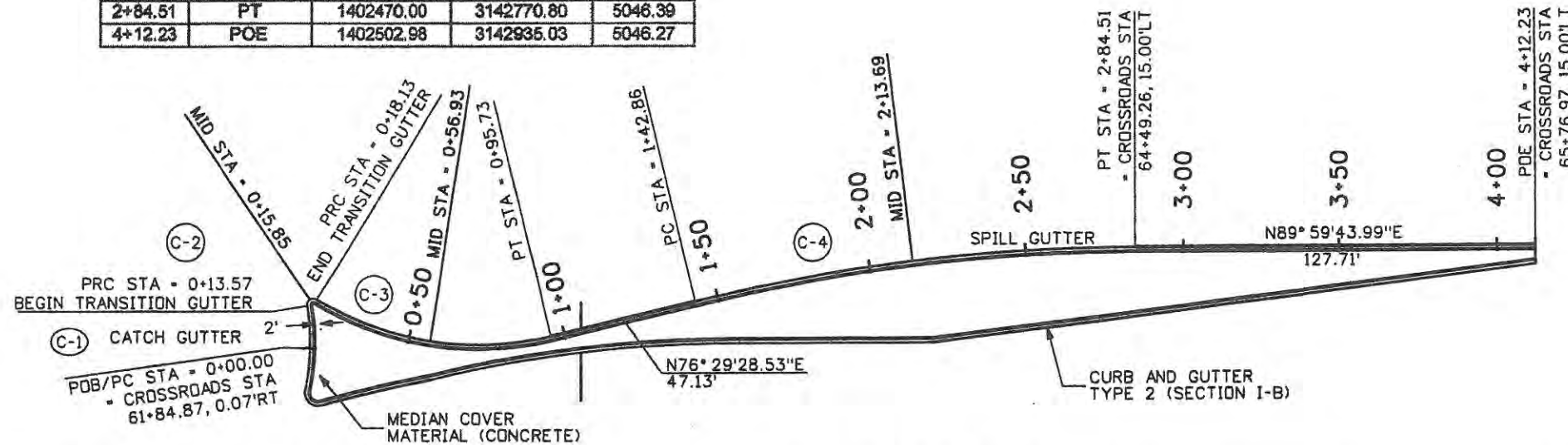


ALL COORDINATES AND DIMENSIONS ON THIS SHEET ARE TO THE LIP OF THE GUTTER

\* THE CONTRACTOR SHALL PROVIDE A SMOOTH VERTICAL TRANSITION AROUND THE NOSE OF THE ISLAND TO MATCH THE PROFILE GRADES SHOWN. THE TRANSITION LENGTH SHALL MATCH THE LENGTH OF THE HORIZONTAL CURVE.

East Median WB Point Details				
Station	Type	Northing	Easting	Elevation
0+00.00	PC	1402438.58	3142507.86	5045.58
0+13.57	PRC	1402452.10	3142506.90	5045.62
0+15.85	MID	1402454.08	3142507.76	5045.60*
0+18.13	PRC	1402454.12	3142509.92	5045.56
0+58.93	MID	1402440.83	3142546.10	5045.12
0+95.73	PT	1402442.36	3142584.62	5045.08
1+42.88	PC	1402453.37	3142630.45	5045.46
2+13.69	MID	1402465.83	3142700.13	5046.00
2+84.51	PT	1402470.00	3142770.80	5046.39
4+12.23	POE	1402502.98	3142935.03	5046.27

East Median WB Curve Details			
CURVE ID	R	DELTA	L
C-1	75.00'	10°22'06.36"	13.57'
C-2	2.00'	130°37'59.48"	4.86'
C-3	99.00'	44°54'33.43"	77.60'
C-4	601.00'	13°30'15.46"	141.65'



Computer File Information	
Creation Date: 5/2/08	Initials: BSH
Print Date: 5/1/2009	Initials: Last Mod
File Name: 061003180CurbGeometry E Median WB.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

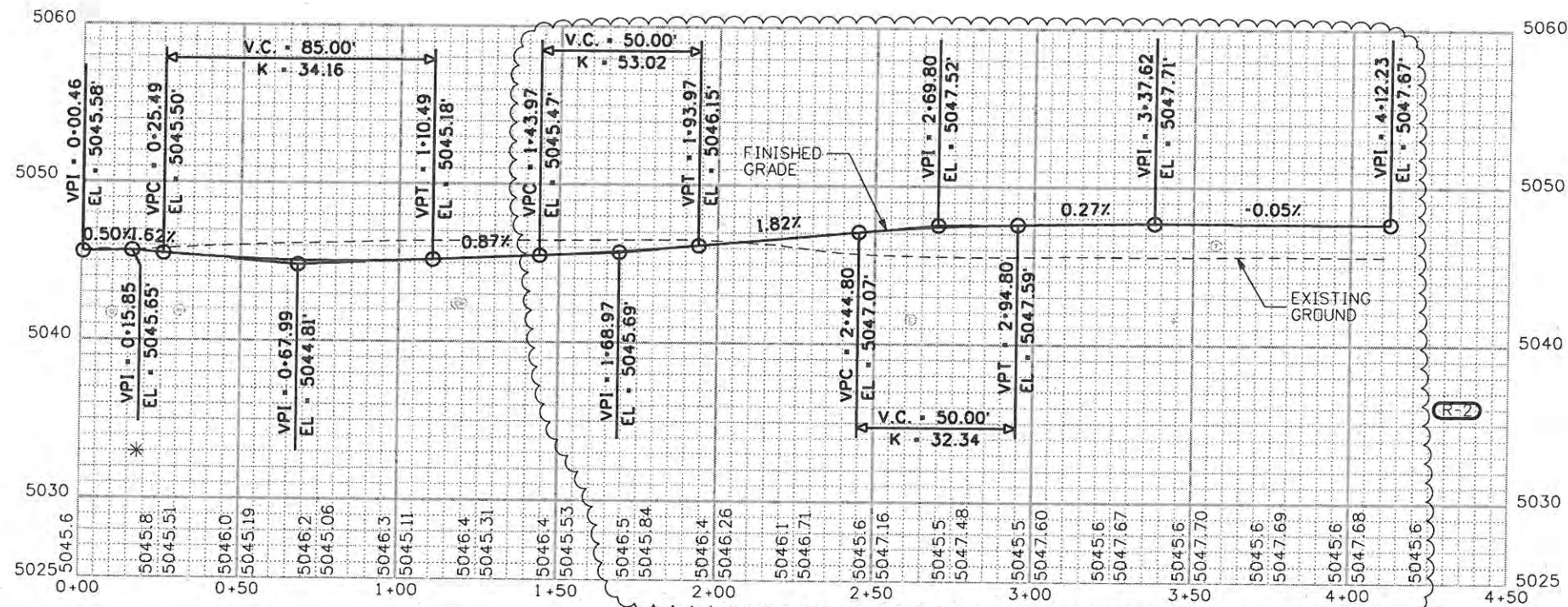
500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

Colorado Department of Transportation

No Revisions:
Revised:
Void: 9/14/11

CURB GEOMETRY EAST MEDIAN WB	
Designer: JJW	Structure
Detailer: BSH	Numbers
Sheet Subset:	Subset Sheets: CG17 of 18

Project No./Code	ES4 0253-207
	17244
Sheet Number	67

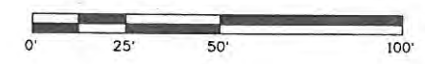
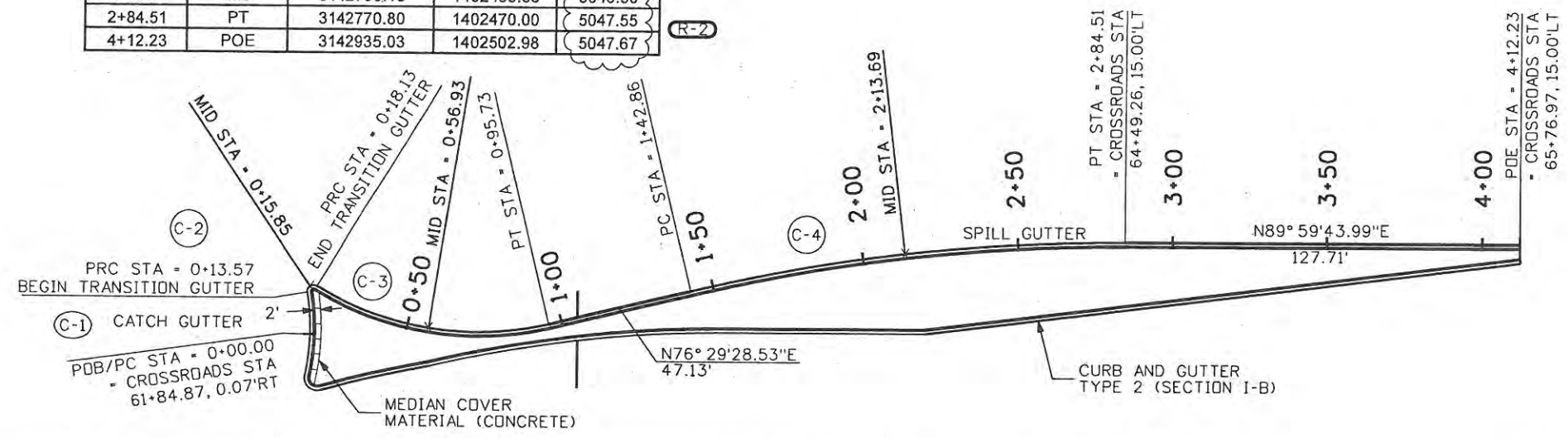


ALL COORDINATES AND DIMENSIONS ON THIS SHEET ARE TO THE LIP OF THE GUTTER

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Station	Point Type	Easting	Northing	Elevation
0+00.00	PC	3142507.86	1402438.58	5045.58
0+13.57	PRC	3142506.90	1402452.10	5045.62
0+15.85	MID	3142507.76	1402454.08	5045.60*
0+18.13	PRC	3142509.92	1402454.12	5045.56
0+56.93	MID	3142546.10	1402440.83	5045.12
0+95.73	PT	3142584.62	1402442.36	5045.08
1+42.86	PC	3142630.45	1402453.37	5045.46
2+13.69	MID	3142700.13	1402465.83	5046.50
2+84.51	PT	3142770.80	1402470.00	5047.55
4+12.23	POE	3142935.03	1402502.98	5047.67

CURVE ID	R	DELTA	L
C-1	75.00'	10°22'06.36"	13.57'
C-2	2.00'	130°37'59.48"	4.56'
C-3	99.00'	44°54'33.43"	77.60'
C-4	601.00'	13°30'15.46"	141.65'



Creation Date: 5/2/08	Initials: BSH
Print Date: 9/23/2009	Initials: Last Mod
File Name: 061003180CurbGeometry E Median WB.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Date	Comments	Init.
09/24/09	TIE TO EXIST	JJW

**CITY OF LOVELAND**

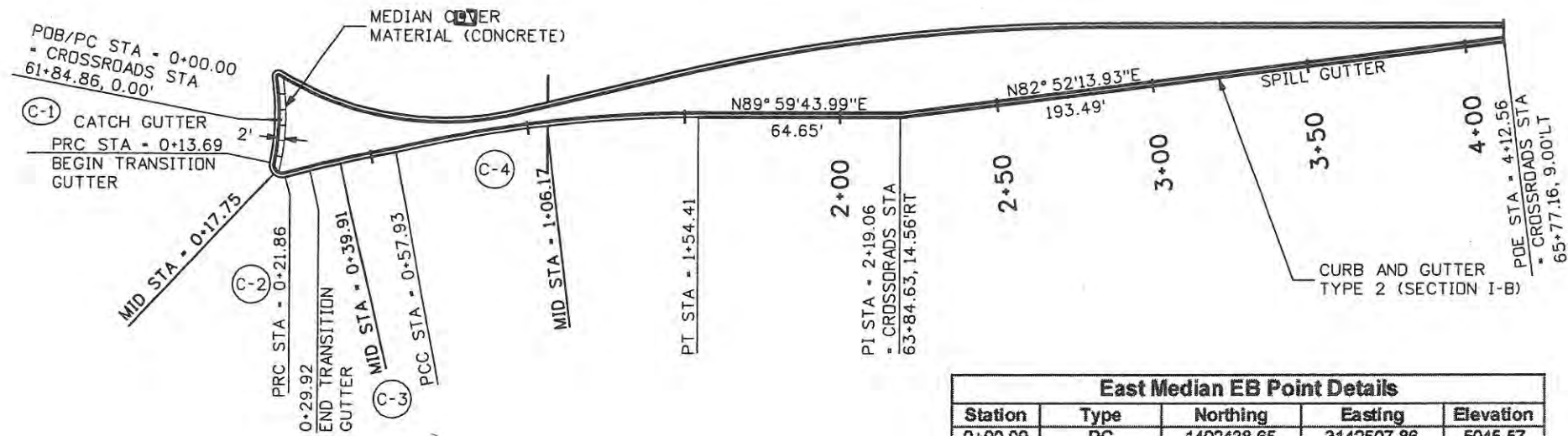
500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

Colorado Department of Transportation

No Revisions: 9/14/11	Revised:	Void:
CURB GEOMETRY EAST MEDIAN WB		Structure Numbers
Designer: JJW	Sheet Subset:	
Detailer: BSH		Subset Sheets: CG17 of 18

Project No./Code	ES4 0253-207
17244	Sheet Number 67X



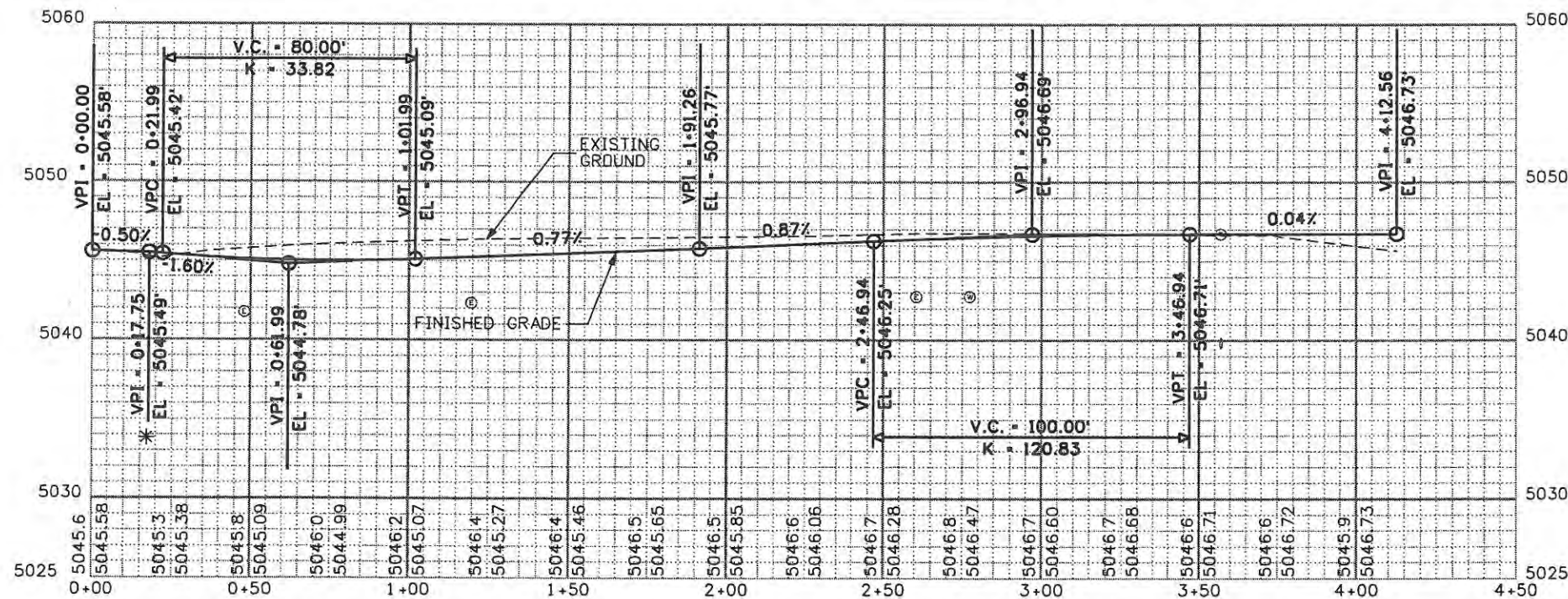


CURVE ID	R	DELTA	L
C-1	75.00'	10°27'22.18"	13.69'
C-2	4.00'	117°08'22.91"	8.18'
C-3	405.85'	5°05'29.68"	36.07'
C-4	405.35'	13°38'15.87"	96.48'

Station	Type	Northing	Easting	Elevation
0+00.00	PC	1402438.65	3142507.86	5045.57
0+13.69	PRC	1402425.06	3142506.36	5045.49
0+17.75	MID	1402421.38	3142507.56	5045.43*
0+21.86	PRC	1402420.41	3142511.35	5045.37
0+39.91	MID	1402424.90	3142528.83	5045.16
0+57.93	PCC	1402428.56	3142546.48	5045.04
1+06.17	MID	1402437.12	3142593.92	5045.12
1+54.41	PT	1402439.99	3142642.05	5045.49
2+19.06	PI	1402440.00	3142706.70	5046.01
4+12.56	POE	1402464.01	3142898.70	5046.73

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Creation Date: 05/02/08	Initials: BSH
Print Date: 5/1/2009	Initials: Last Mod
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Horiz. Scale: 1:50	Vert. Scale: As Noted

Date	Comments	Init.

**CITY OF LOVELAND**

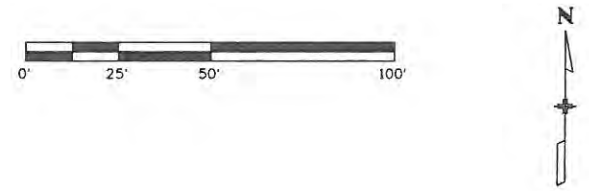
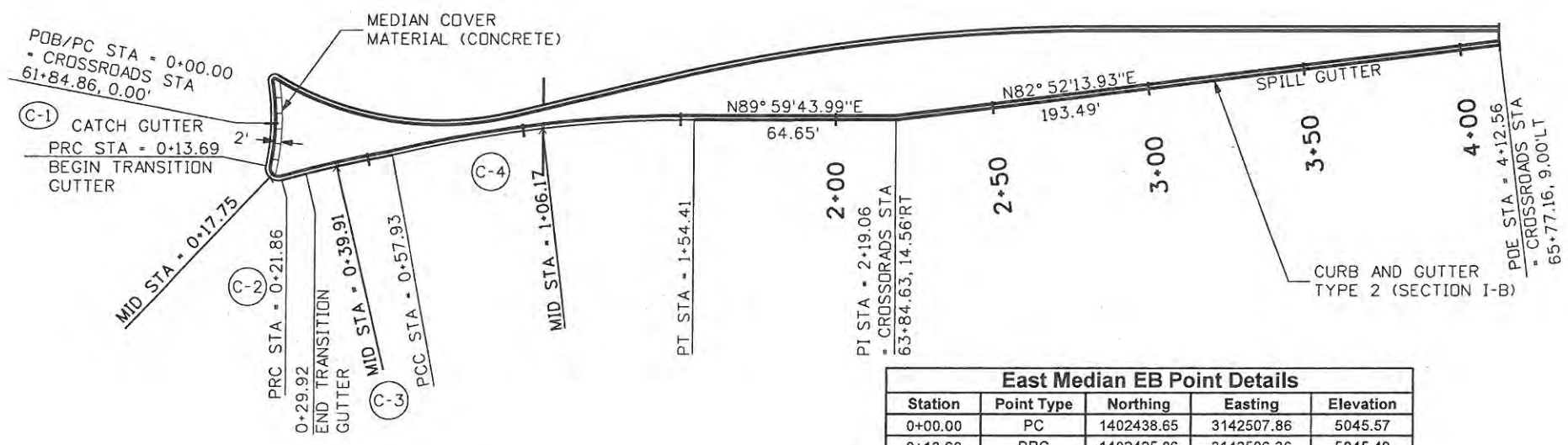
500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

Colorado Department of Transportation

No Revisions:	
Revised:	
Void:	9/14/11

Designer: JJW	Structure Numbers
Detailer: BSH	
Sheet Subset: CURB	Subset Sheets: CG18 of 18

Project No./Code	ES4 0253-207
	17244
Sheet Number	68

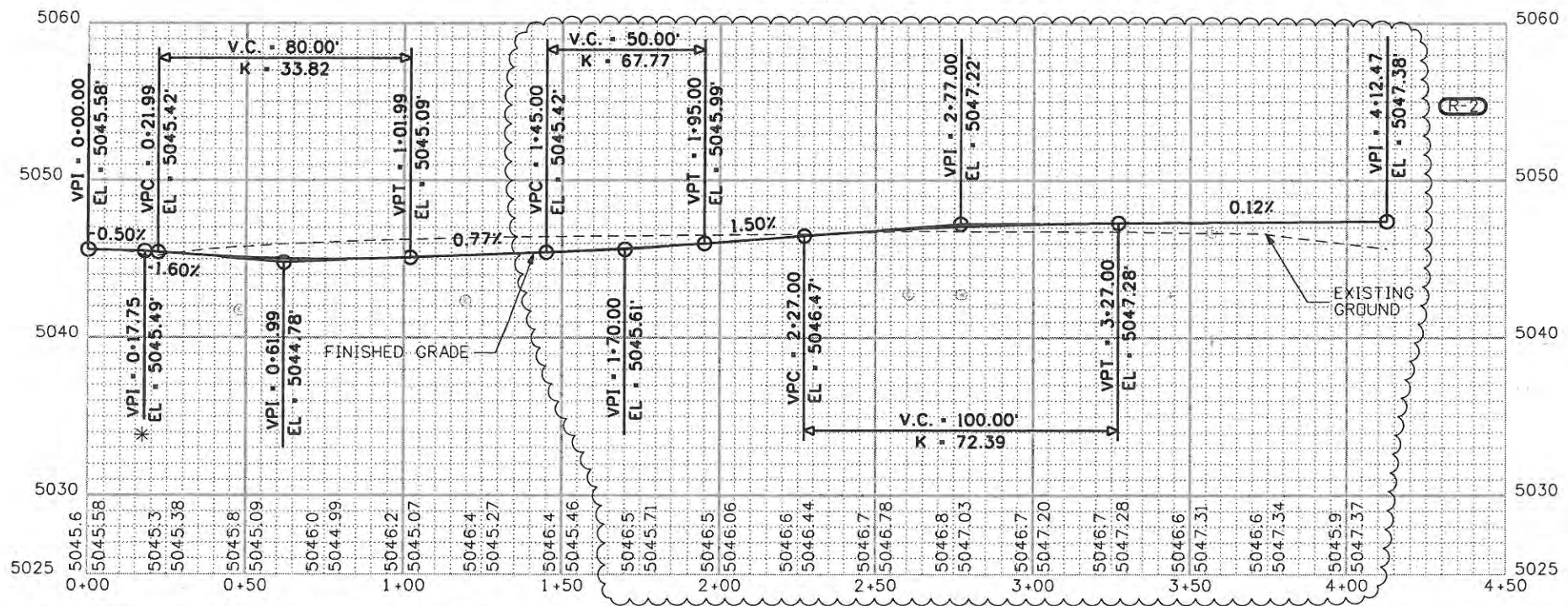


CURVE ID	R	DELTA	L
C-1	75.00'	10°27'22.18"	13.69'
C-2	4.00'	117°08'22.91"	8.18'
C-3	405.85'	5°05'29.68"	36.07'
C-4	405.35'	13°38'15.87"	96.48'

Station	Point Type	Northing	Easting	Elevation
0+00.00	PC	1402438.65	3142507.86	5045.57
0+13.69	PRC	1402425.06	3142506.36	5045.49
0+17.75	MID	1402421.35	3142507.53	5045.43*
0+21.86	PRC	1402420.41	3142511.35	5045.37
0+39.91	MID	1402424.88	3142528.84	5045.16
0+57.93	PCC	1402428.56	3142546.48	5045.04
1+06.17	MID	1402437.12	3142593.92	5045.12
1+54.41	PT	1402439.99	3142642.05	5045.50
2+19.06	PI	1402440.00	3142706.70	5046.35
3+31.10	PI	1402453.90	3142817.86	5047.28
4+12.56	POE	1402464.01	3142898.70	5047.38

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Creation Date: 05/02/08	Initials: BSH
Print Date: 9/23/2009	Initials: Last Mod
File Name: 061003180CurbGeometry E Median EB.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Date	Comments	Init.
09/24/09	TIE TO EXIST	JJW

**CITY OF LOVELAND**

500 E. THIRD STREET  
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970-962-2000

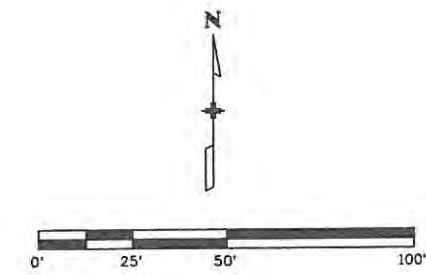
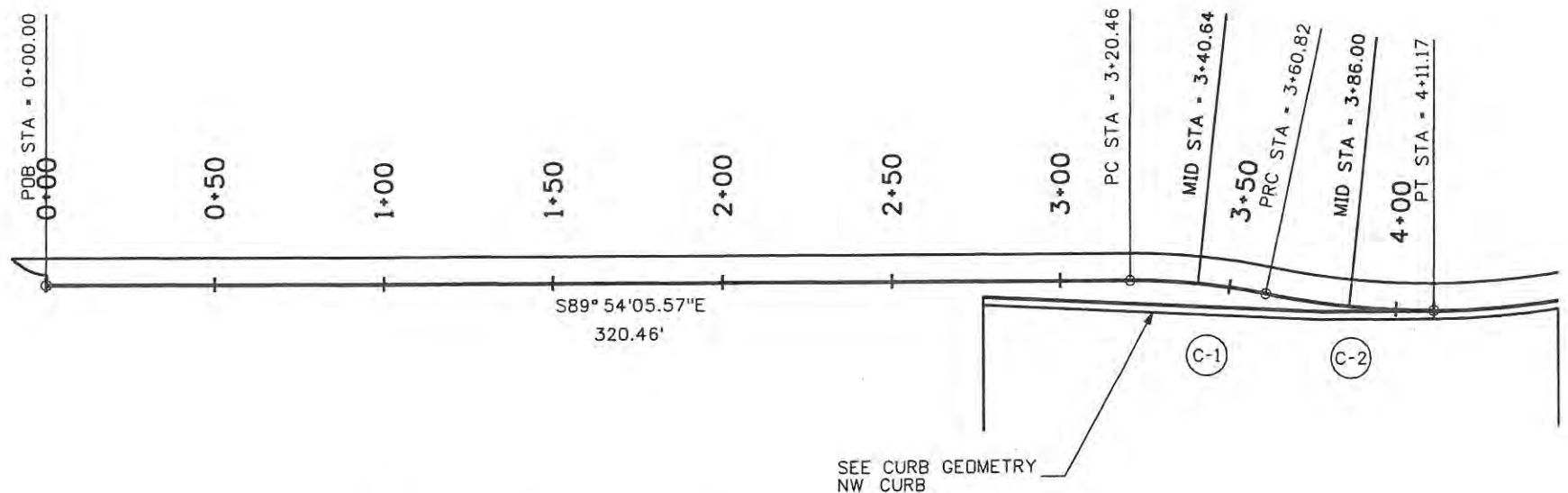
Colorado Department of Transportation

No Revisions: 9/14/11
Revised:
Void:

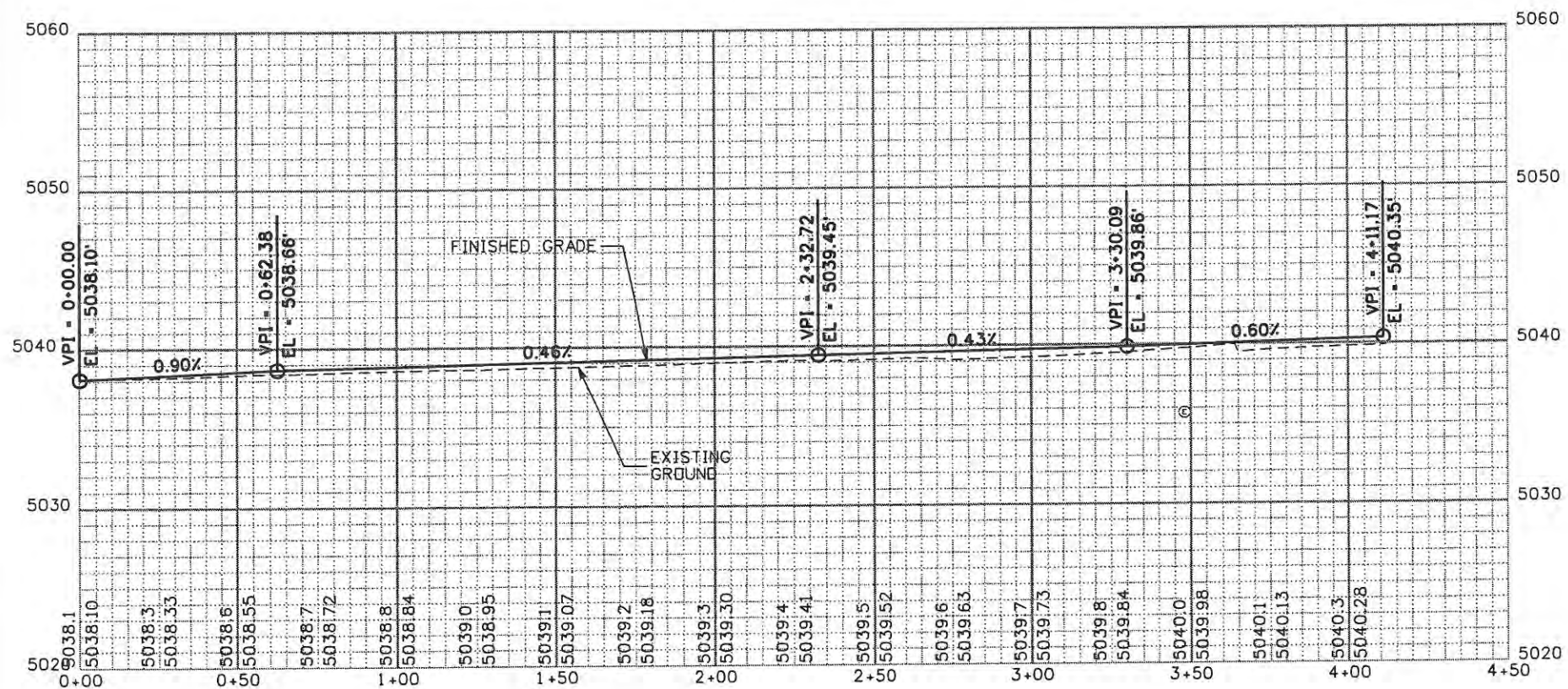
Designer: JJW	Structure Numbers
Detailer: BSH	
Sheet Subset: CURB	Subset Sheets: CG18 of 18

Project No./Code	ES4 0253-207
Sheet Number	17244 68X





ALL COORDINATES AND DIMENSIONS ON THIS SHEET ARE TO THE RIGHT EDGE OF SIDEWALK



NW Sidewalk Point Details				
Station	Type	Northing	Easting	Elevation
0+00.00	POB	1402503.83	3141252.36	5038.10
3+20.46	PC	1402503.28	3141572.81	5039.82
3+40.64	MID	1402502.18	3141592.96	5039.93
3+60.82	PRC	1402498.98	3141612.87	5040.05
3+86.00	MID	1402494.99	3141637.72	5040.20
4+11.17	POE/PT	1402493.62	3141662.84	5040.35

NW Sidewalk Curve Details			
CURVE ID	R	DELTA	L
C-1	192.00'	12°02'42.22"	40.36'
C-2	-239.50'	12°02'43.10"	50.35'

Computer File Information	
Creation Date: 7/3/08	Initials: JJW
Print Date: 5/1/2009	Initials: JJW
File Name: 061003180SdwkGeometry NW.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

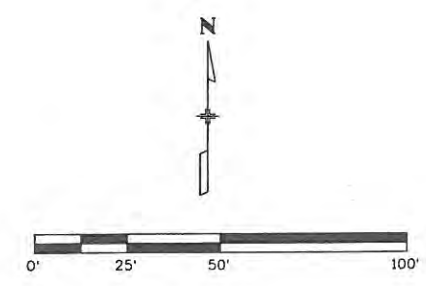
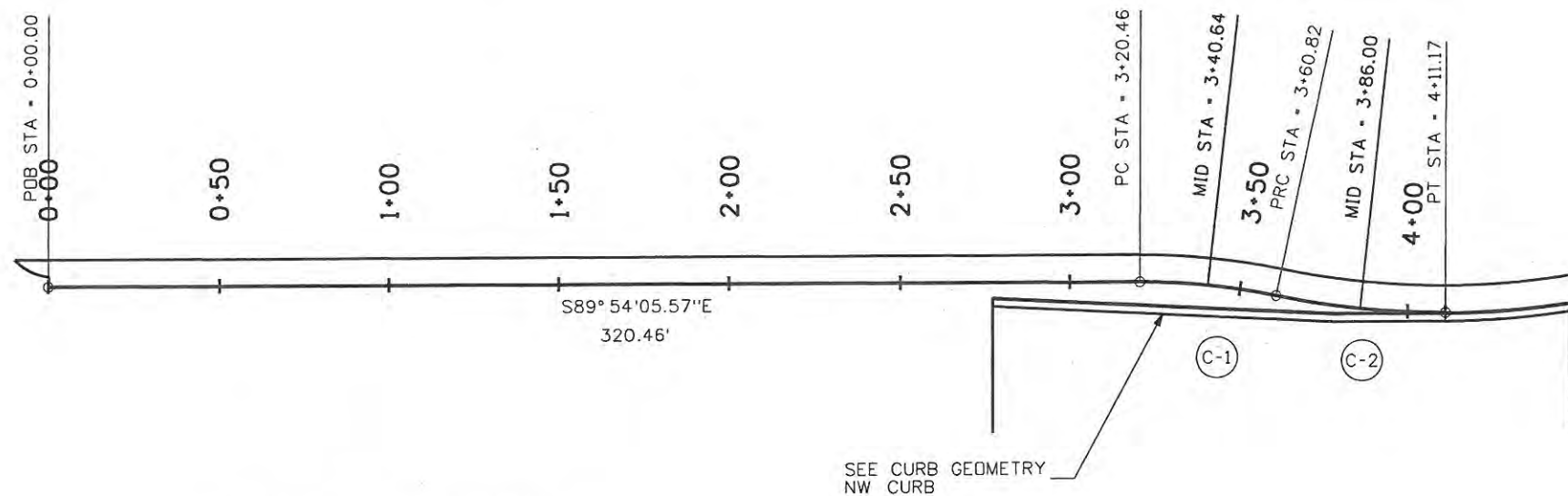
500 E. THIRD STREET  
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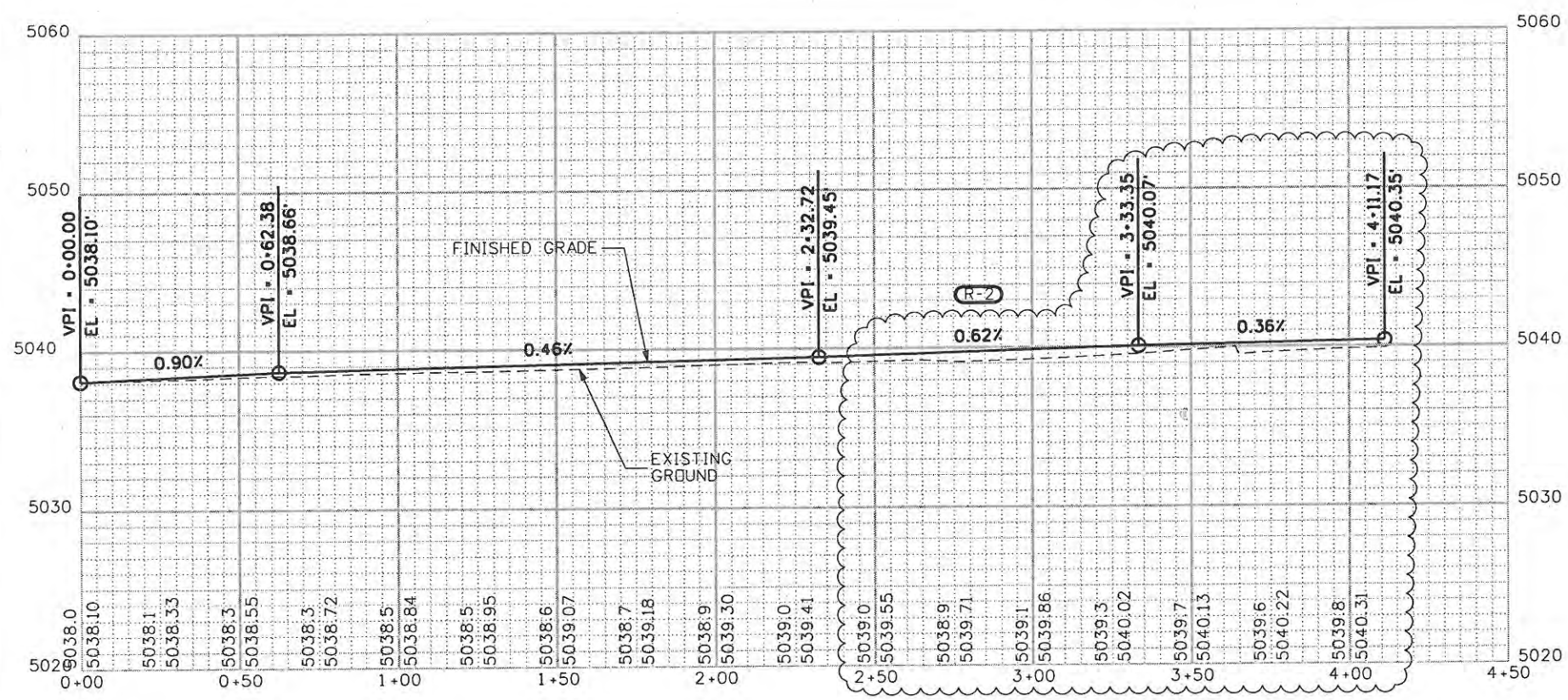
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Revised:  
Void: 9/14/11

SIDEWALK GEOMETRY NW SIDEWALK	
Designer: JJW	Structure Numbers
Detailer: JJW	Subset Sheets: SW1 of 4
Sheet Subset: SDWK	

Project No./Code	
ES4 0253-207	
17244	
Sheet Number	69



ALL COORDINATES AND DIMENSIONS ON THIS SHEET ARE TO THE RIGHT EDGE OF SIDEWALK



NW Sidewalk Point Details				
Station	Point Type	Northing	Easting	Elevation
0+00.00	POB	1402503.83	3141252.36	5038.10
3+20.46	PC	1402503.28	3141572.81	5039.99
3+40.64	MID	1402502.18	3141592.96	5040.10
3+60.82	PRC	1402498.98	3141612.87	5040.17
3+86.00	MID	1402494.99	3141637.72	5040.26
4+11.17	POE/PT	1402493.62	3141662.84	5040.35

NW Sidewalk Curve Details			
CURVE ID	R	DELTA	L
C-1	192.00'	12°02'42.22"	40.36'
C-2	-239.50'	12°02'43.10"	50.35'

Computer File Information	
Creation Date: 7/3/08	Initials: JJW
Print Date: 9/23/2009	Initials: JJW
File Name: 061003180SdwkGeometry NW.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.
09/24/09	TIE TO EXIST	JJW

**CITY OF LOVELAND**

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LOVELAND, CO 80537  
970-962-2000

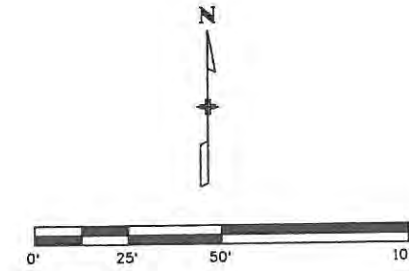
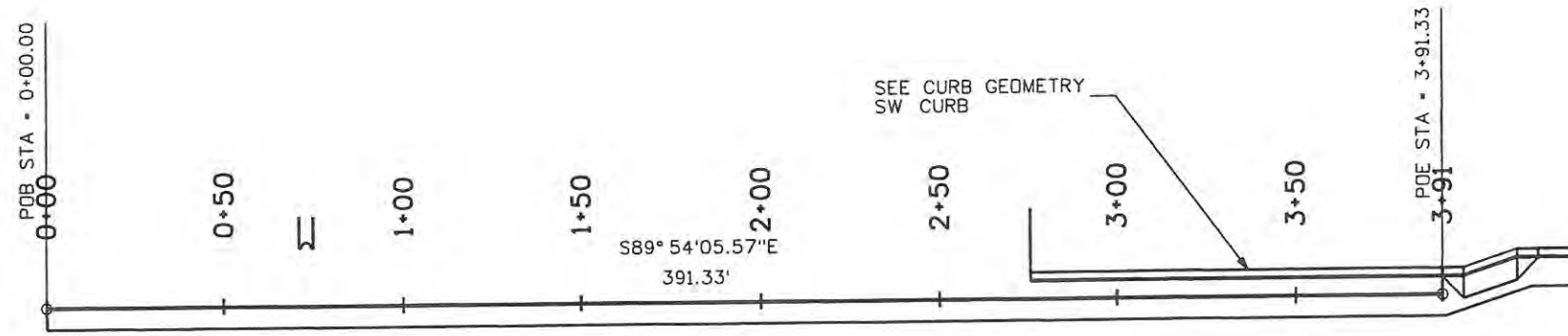
Colorado Department of Transportation

No Revisions: 9/14/11
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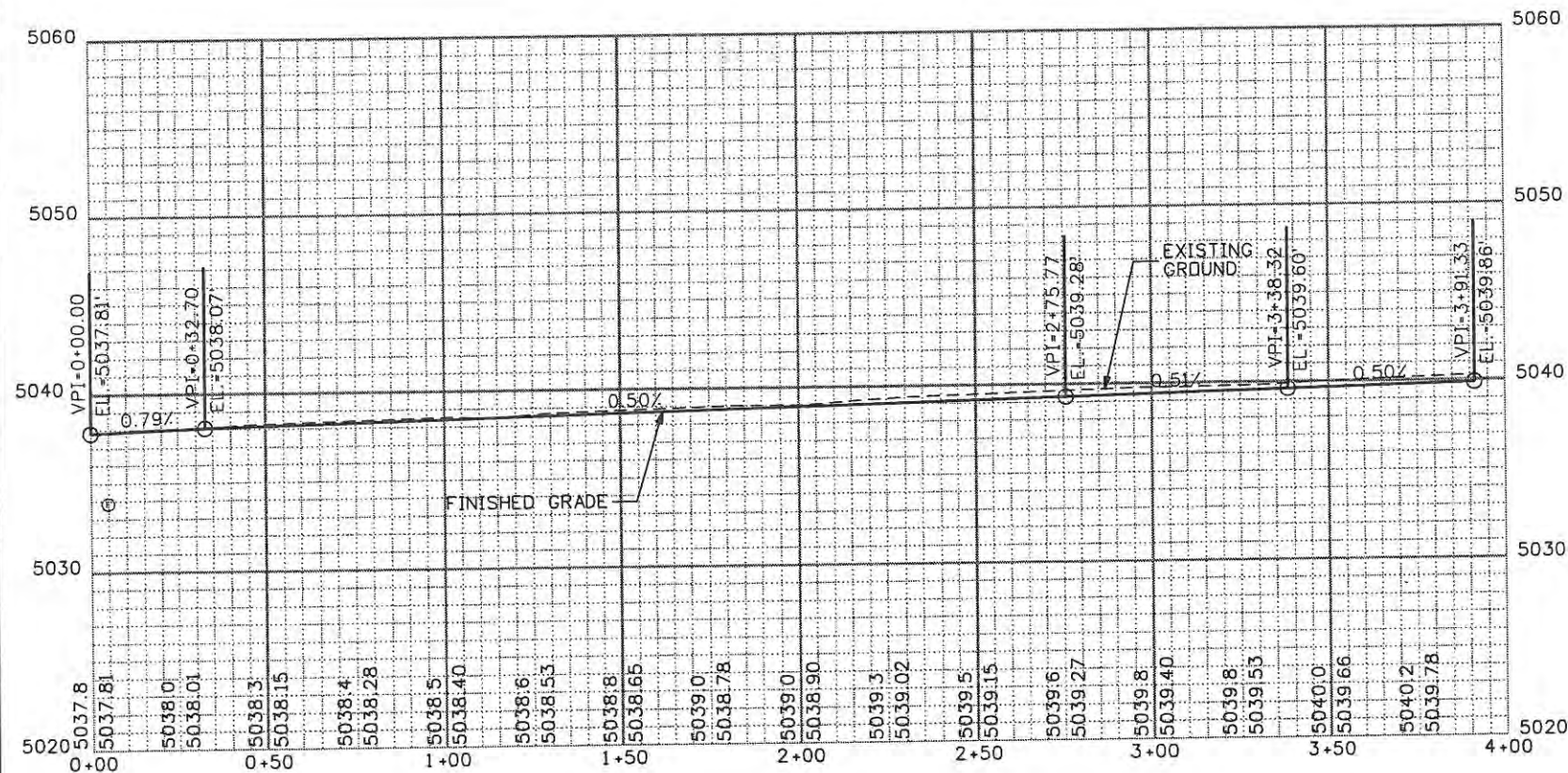
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Designer: JJW	Structure Numbers
Detailer: JJW	Subset Sheets: SW1 of 4
Sheet Subset: SDWK	

Project No./Code ES4 0253-207
17244
Sheet Number 69X





ALL COORDINATES AND DIMENSIONS  
ON THIS SHEET ARE TO THE LEFT EDGE OF SIDEWALK



Station	Point Type	Northing	Easting	Elevation
0+00.00	POB	1402389.32	3141253.67	5037.81
3+91.33	POE	1402388.65	3141645.00	5039.83

Computer File Information	
Creation Date: 7/3/08	Initials: JJW
Print Date: 5/1/2009	Initials: JJW
File Name: 061003180SdwkGeometry SW.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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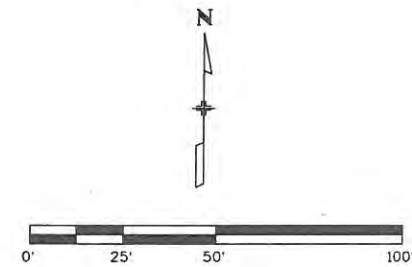
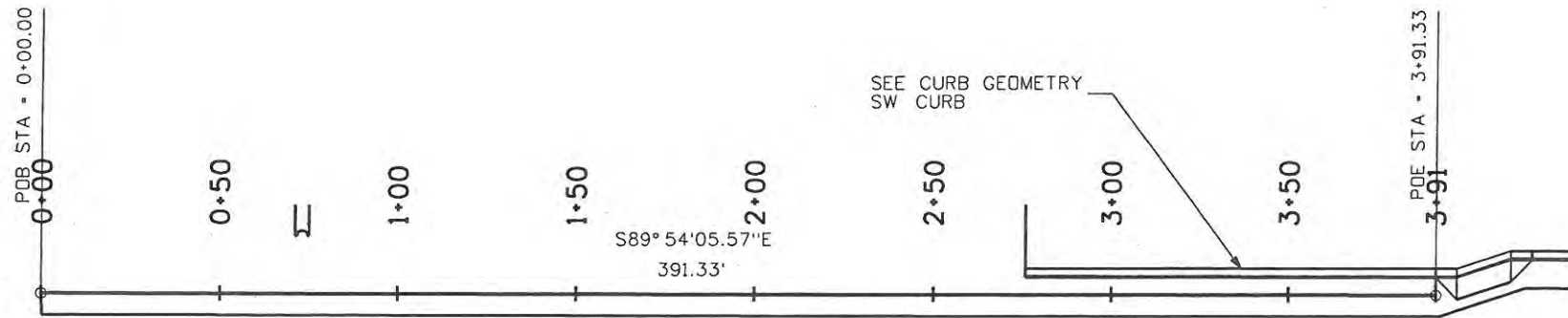
500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

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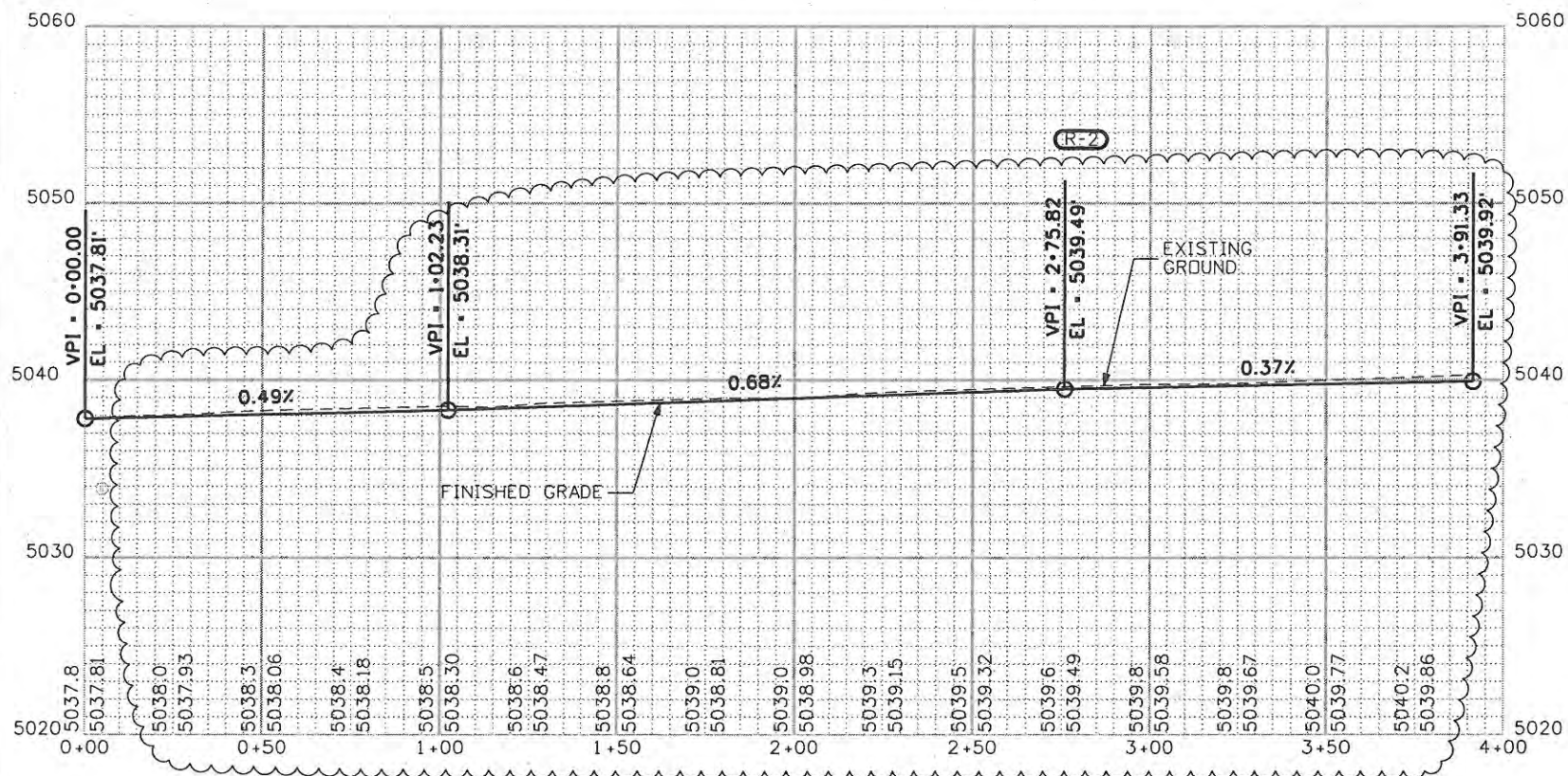
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SIDEWALK GEOMETRY SW SIDEWALK	
Designer: JJW	Structure Numbers
Detailer: JJW	
Sheet Subset: SDWK	Subset Sheets: SW2 of 4

Project No./Code	ES4 0253-207
	17244
Sheet Number	70



ALL COORDINATES AND DIMENSIONS  
ON THIS SHEET ARE TO THE LEFT EDGE OF SIDEWALK



SW Sidewalk Point Details				
Station	Point Type	Northing	Easting	Elevation
0+00.00	POB	1402389.32	3141253.67	5037.81
3+91.33	POE	1402388.65	3141645.00	5039.92

(R-2)

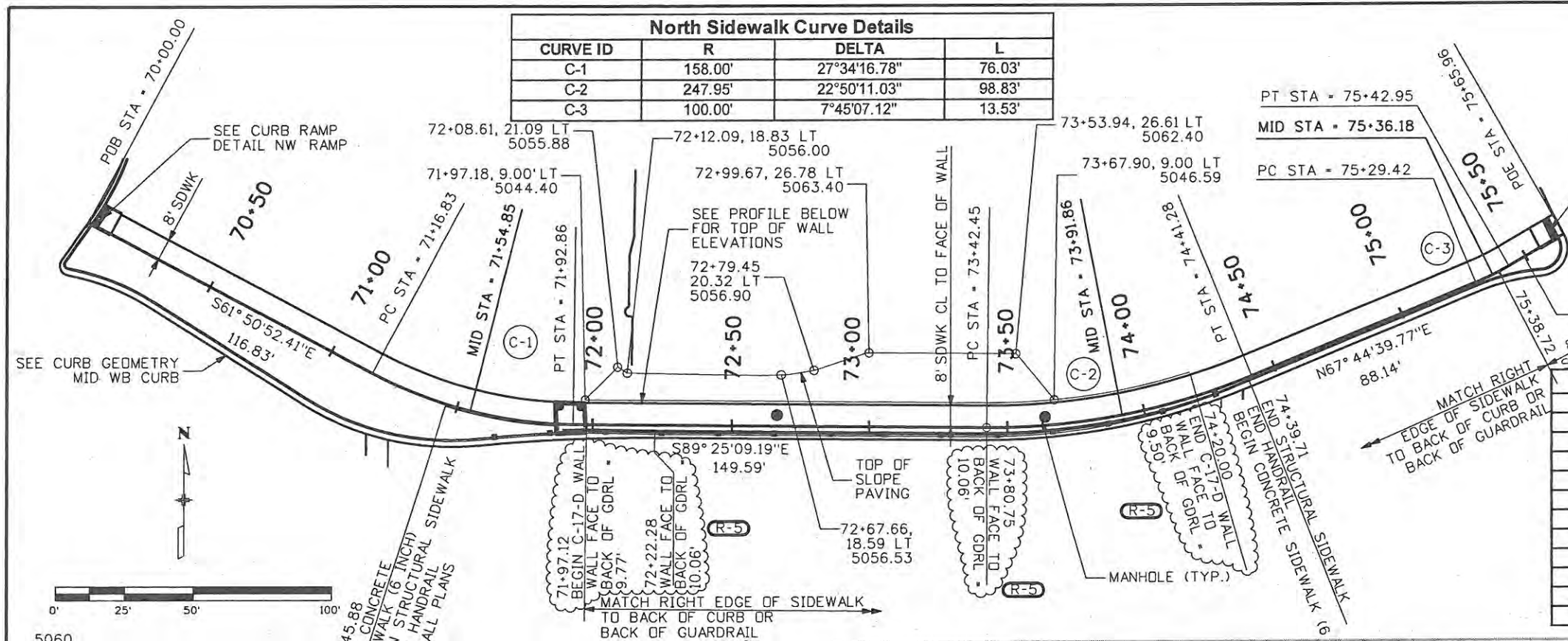
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Print Date: 9/23/2009	Initials: JJW	09/24/09	TIE TO EXIST	JJW			Revised:	Designer: JJW	Structure Numbers	17244	
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Horiz. Scale: 1:50	Vert. Scale: As Noted										

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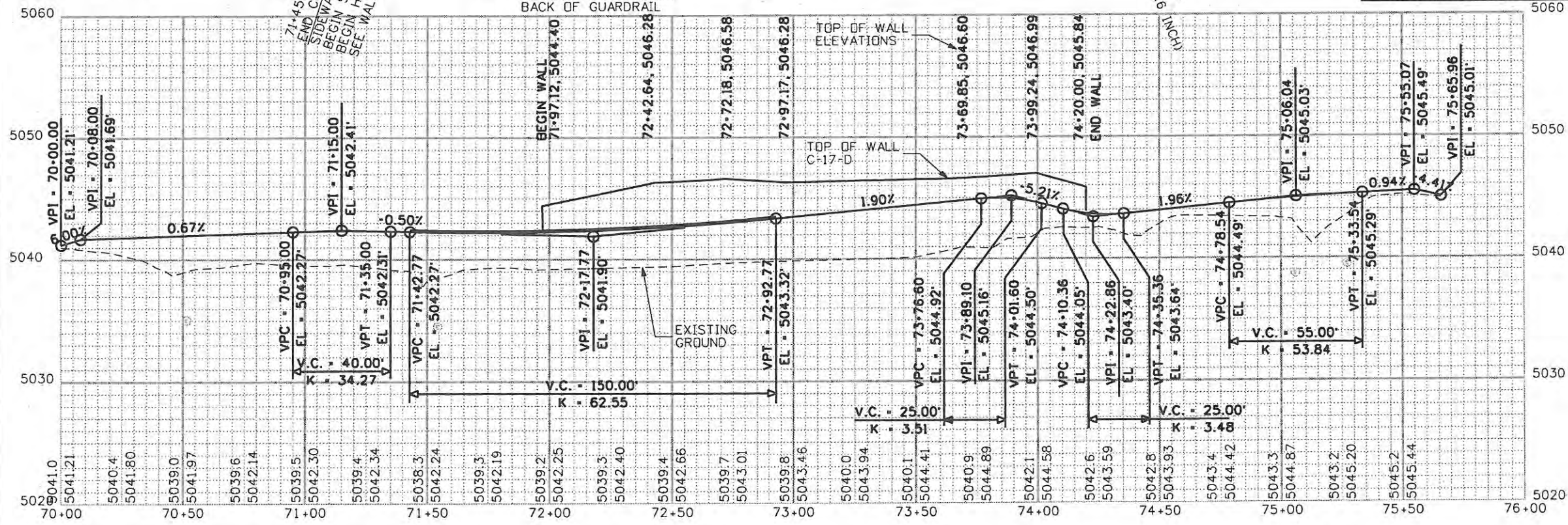


ALL COORDINATES AND DIMENSIONS ON THIS SHEET ARE TO THE RIGHT EDGE OF SIDEWALK

North Sidewalk Curve Details			
CURVE ID	R	DELTA	L
C-1	158.00'	27°34'16.78"	76.03'
C-2	247.95'	22°50'11.03"	98.83'
C-3	100.00'	7°45'07.12"	13.53'



North Sidewalk Point Details				
Station	Description	Northing	Easting	Elevation
70+00.00	POB	1402544.90	3141894.73	5041.21
71+16.83	PC	1402489.78	3141997.74	5042.35
71+54.85	MID	1402476.03	3142033.09	5042.22
71+92.86	PT	1402471.10	3142070.69	5042.22
73+42.45	PC	1402469.58	3142220.27	5044.27
73+91.86	MID	1402473.99	3142269.40	5044.88
74+41.28	PT	1402488.04	3142316.69	5043.76
75+29.42	PC	1402521.42	3142398.27	5045.25
75+36.18	MID	1402524.19	3142404.44	5045.31
75+42.95	PT	1402527.38	3142410.40	5045.38
75+65.96	POE	1402538.88	3142430.33	5045.01

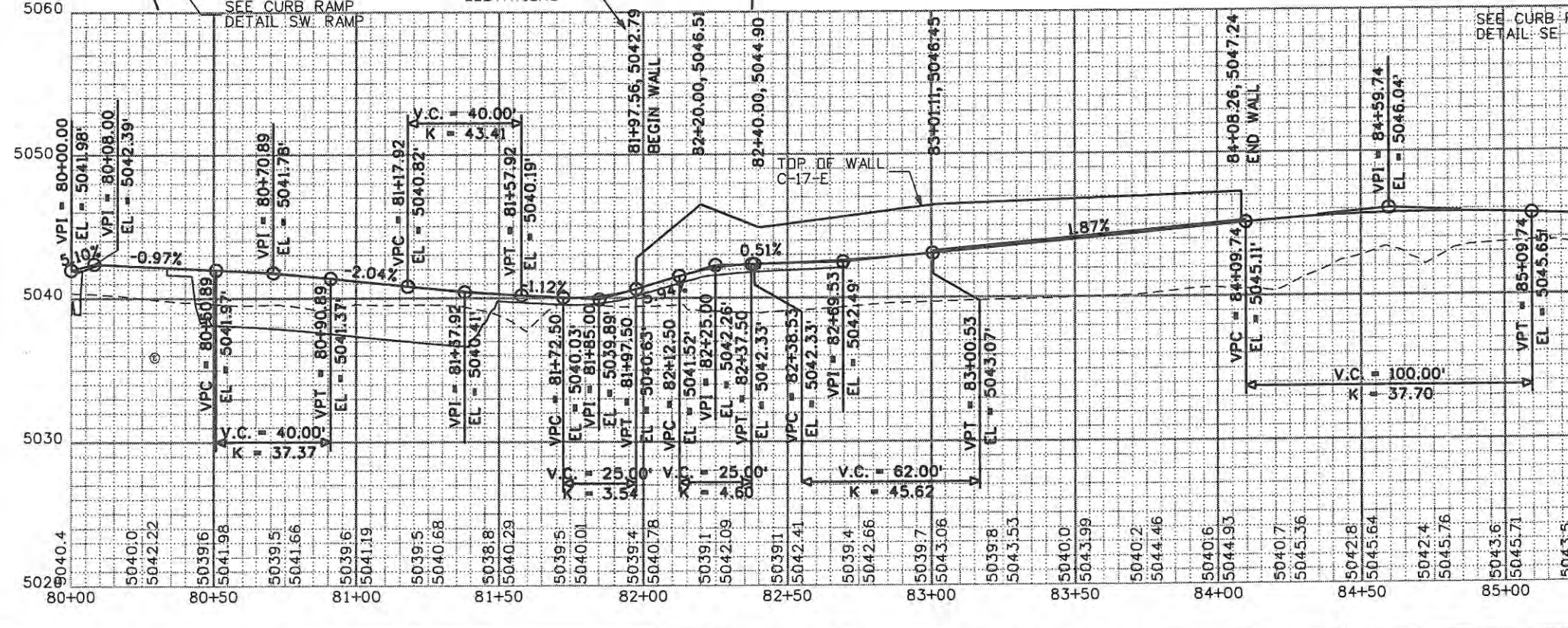
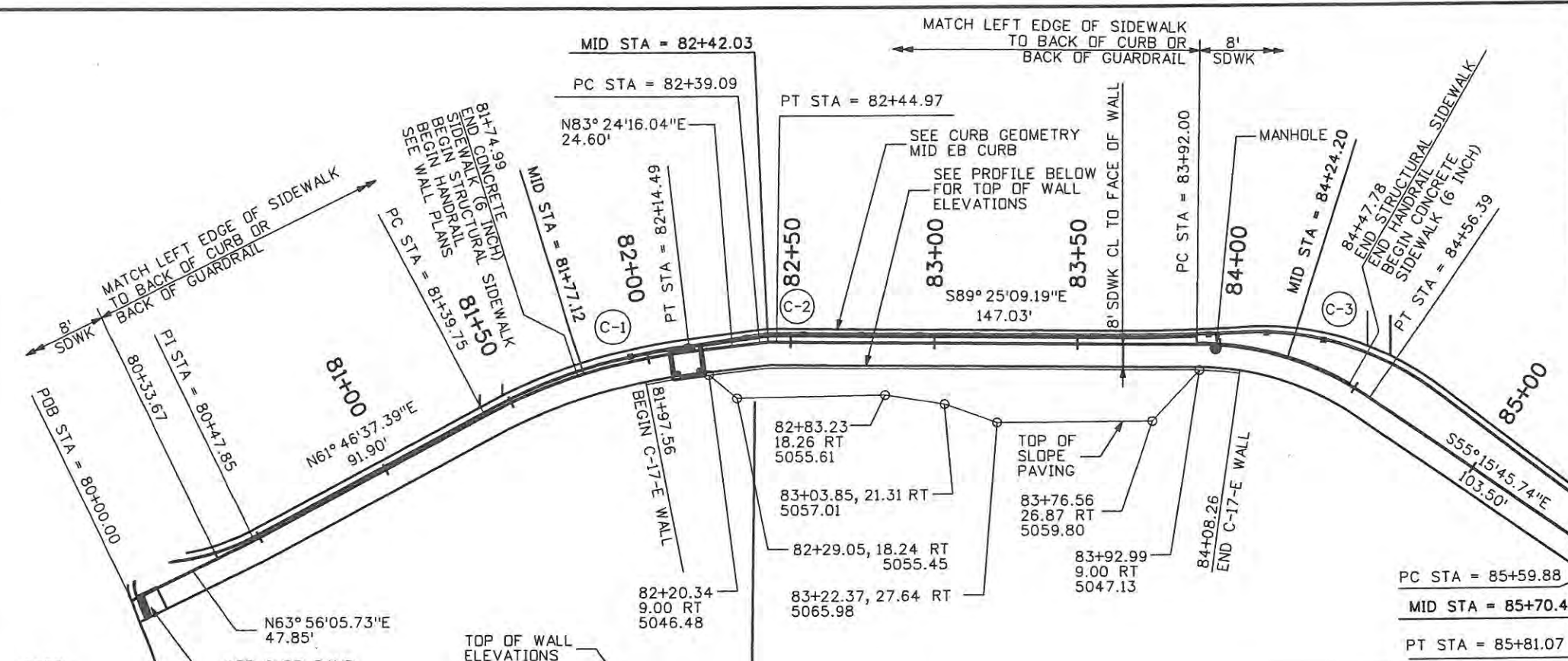


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Date	Comments	Init.													
10/27/09	SDWK CALLOUTS	JJW													
		<b>Colorado Department of Transportation</b>		Designer: JJW Detailer: JJW Sheet Subset: SDWK		Structure Numbers Subset Sheets: SW3 of 4									

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South Sidewalk Point Details				
Station	Type	Northing	Easting	Elevation
80+00.00	POB	1402347.76	3141873.60	5041.98
80+47.85	PI	1402368.79	3141916.59	5042.00
81+39.75	PC	1402412.25	3141997.56	5040.43
81+77.12	MID	1402426.72	3142031.96	5040.01
82+14.49	PT	1402434.48	3142068.46	5041.64
82+39.09	PC	1402437.30	3142092.89	5042.34
82+42.03	MID	1402437.55	3142095.82	5042.35
82+44.97	PT	1402437.61	3142098.76	5042.37
83+92.00	PC	1402436.12	3142245.79	5044.78
84+24.20	MID	1402431.04	3142277.46	5045.35
84+56.39	PT	1402416.88	3142306.23	5045.69
85+59.88	PC	1402357.90	3142391.28	5045.25
85+70.48	MID	1402352.23	3142400.23	5045.17
85+81.07	PT	1402347.30	3142409.60	5045.09
85+91.96	POE	1402347.30	3142409.60	5044.38



South Sidewalk Curve Details			
CURVE ID	R	DELTA	L
C-1	198.00'	21°37'38.65"	74.74'
C-2	47.00'	7°10'34.77"	5.89'
C-3	108.00'	34°09'23.45"	64.38'
C-4	130.00'	9°20'11.43"	21.18'

Computer File Information	
Creation Date: 7/3/08	Initials: JJW
Print Date: 5/18/2009	Initials: JJW
File Name: 061003180SdwkGeometry South.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

Colorado Department  
of Transportation

No Revisions: 9/14/11
Revised:
Void:

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Designer: JJW	Structure Numbers
Detailer: JJW	
Sheet Subset: SDWK	Subset Sheets: SW4 of 4

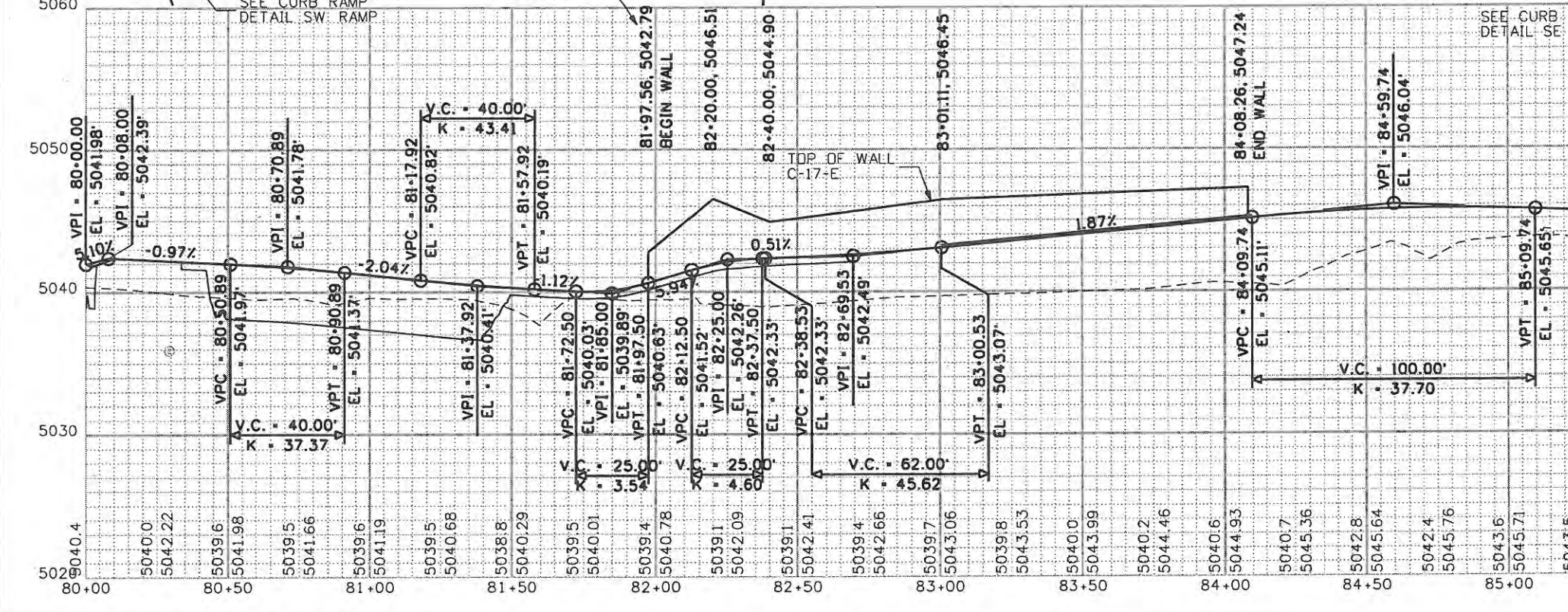
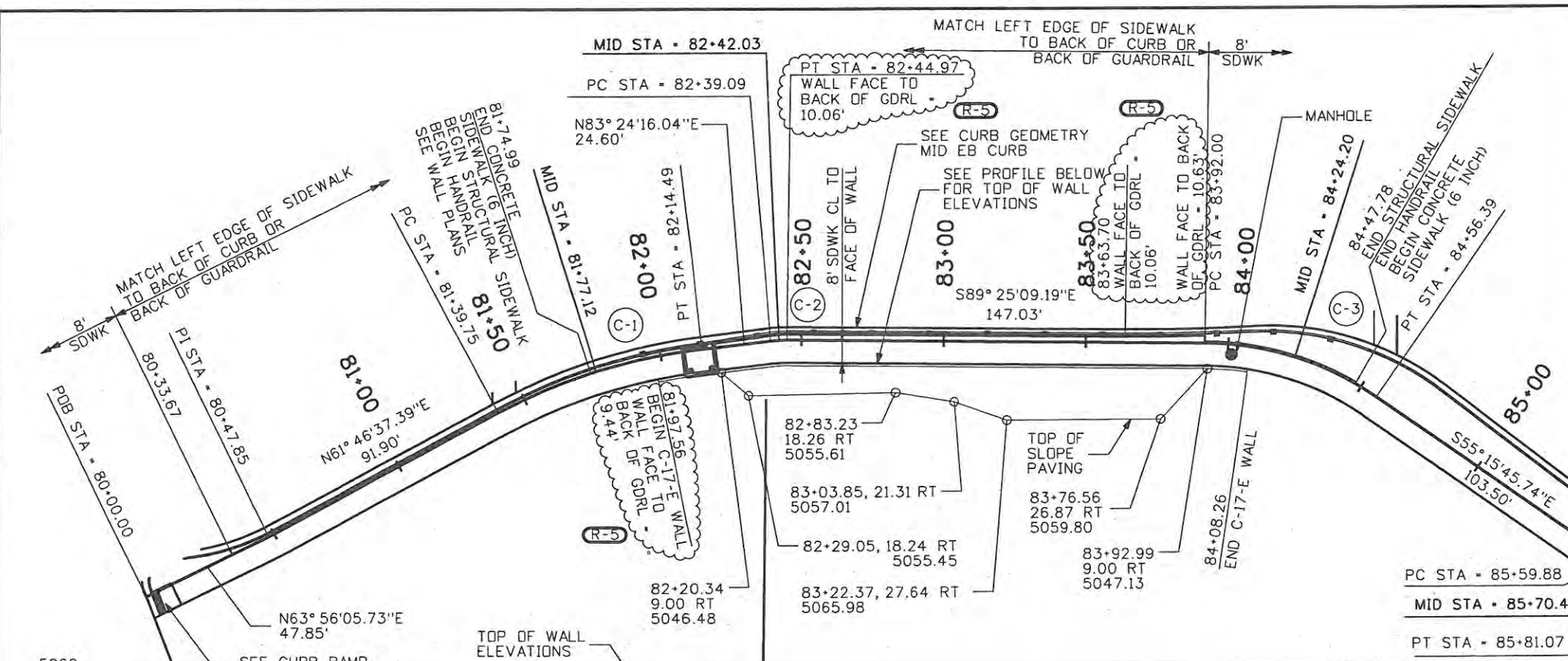
Project No./Code	
ES4 0253-207	
17244	
Sheet Number 72	

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South Sidewalk Point Details				
Station	Type	Northing	Easting	Elevation
80+00.00	POB	1402347.76	3141873.60	5041.98
80+47.85	PI	1402368.79	3141916.59	5042.00
81+39.75	PC	1402412.25	3141997.56	5040.43
81+77.12	MID	1402426.72	3142031.96	5040.01
82+14.49	PT	1402434.48	3142068.46	5041.64
82+39.09	PC	1402437.30	3142092.89	5042.34
82+42.03	MID	1402437.55	3142095.82	5042.35
82+44.97	PT	1402437.61	3142098.76	5042.37
83+92.00	PC	1402436.12	3142245.79	5044.78
84+24.20	MID	1402431.04	3142277.46	5045.35
84+56.39	PT	1402416.88	3142306.23	5045.69
85+59.88	PC	1402357.90	3142391.28	5045.25
85+70.48	MID	1402352.23	3142400.23	5045.17
85+81.07	PT	1402347.30	3142409.60	5045.09
85+91.96	POE	1402347.30	3142409.60	5044.38



South Sidewalk Curve Details			
CURVE ID	R	DELTA	L
C-1	198.00'	21°37'38.65"	74.74'
C-2	47.00'	7°10'34.77"	5.89'
C-3	108.00'	34°09'23.45"	64.38'
C-4	130.00'	9°20'11.43"	21.18'

Computer File Information	
Creation Date: 7/3/08	Initials: JJW
Print Date: 10/27/2009	Initials: JJW
File Name: 061003180SdwkGeometry South.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date	Comments	Init.
10/27/09	SDWK CALLOUTS	JJW

**CITY OF LOVELAND**  
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 970-962-2000

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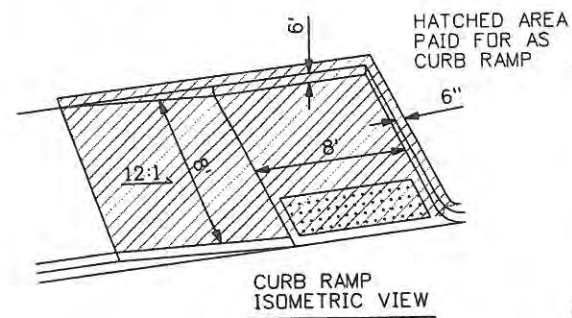
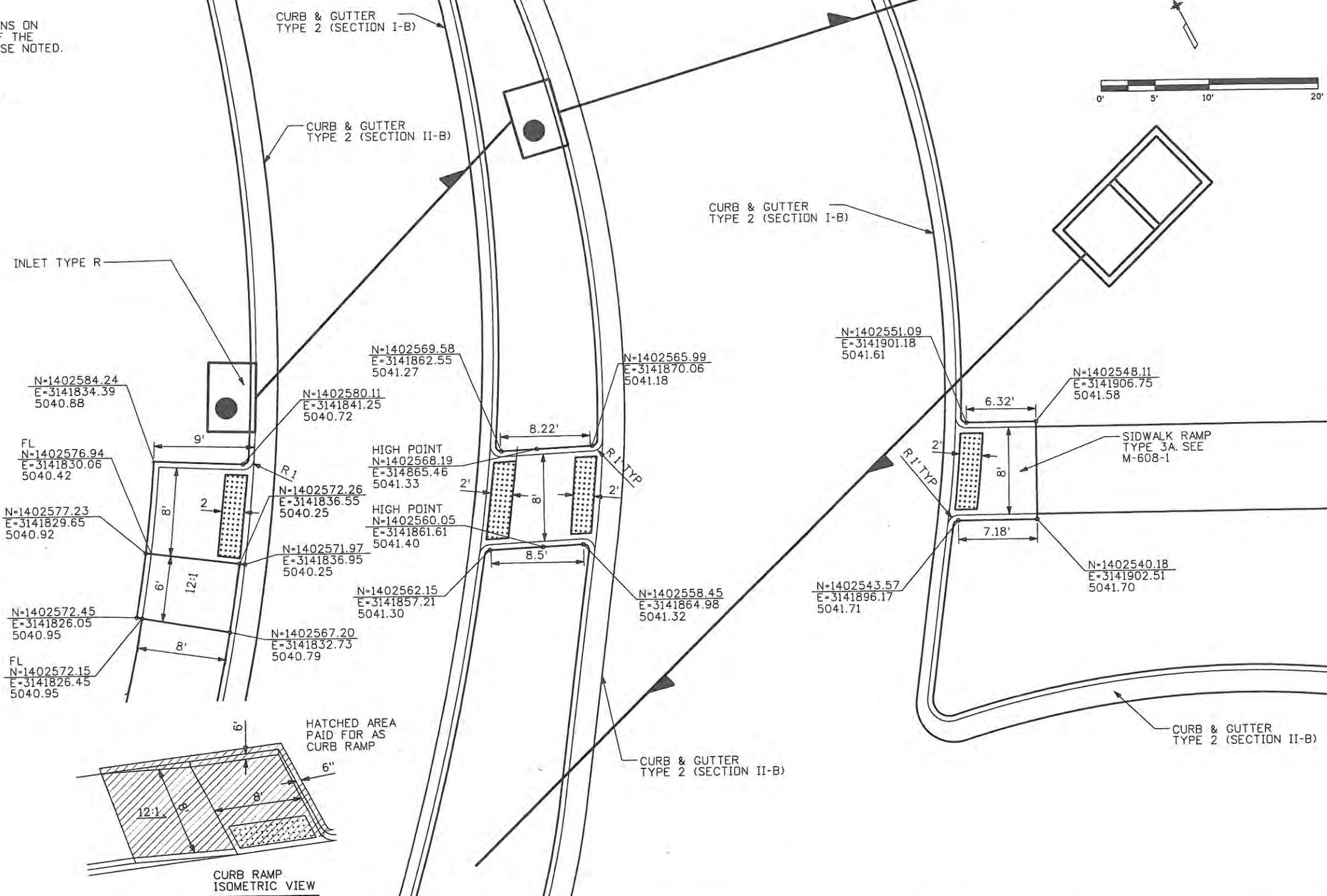
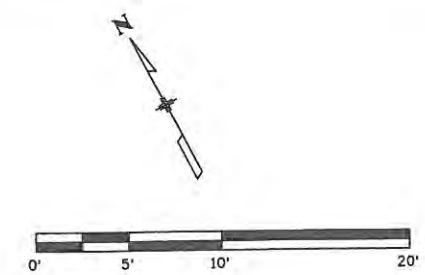
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Revised:	
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Designer: JJW	Structure Numbers
Detailer: JJW	
Sheet Subset: SDWK	Subset Sheets: SW4 of 4

Project No./Code	
ES4 0253-207	
17244	
Sheet Number 72X	

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DETECTABLE WARNING AND WELL



Computer File Information	
Creation Date: 07-08-08	Initials: Creator
Print Date: 5/1/2009	Initials: Last Mod
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Horiz. Scale: 1:10	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**  
500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

Colorado Department of Transportation

No Revisions: 9/14/11
Revised:
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Designer: JJW	Structure Numbers
Detailer: MAB	
Sheet Subset: CURB RMP	Subset Sheets: CR1 of 5

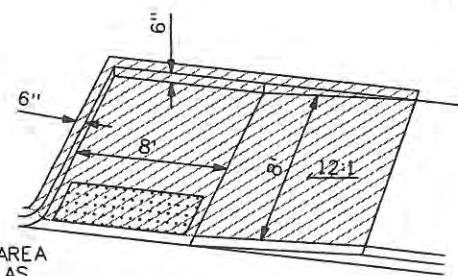
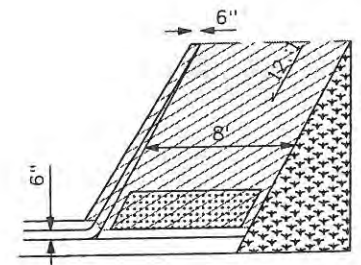
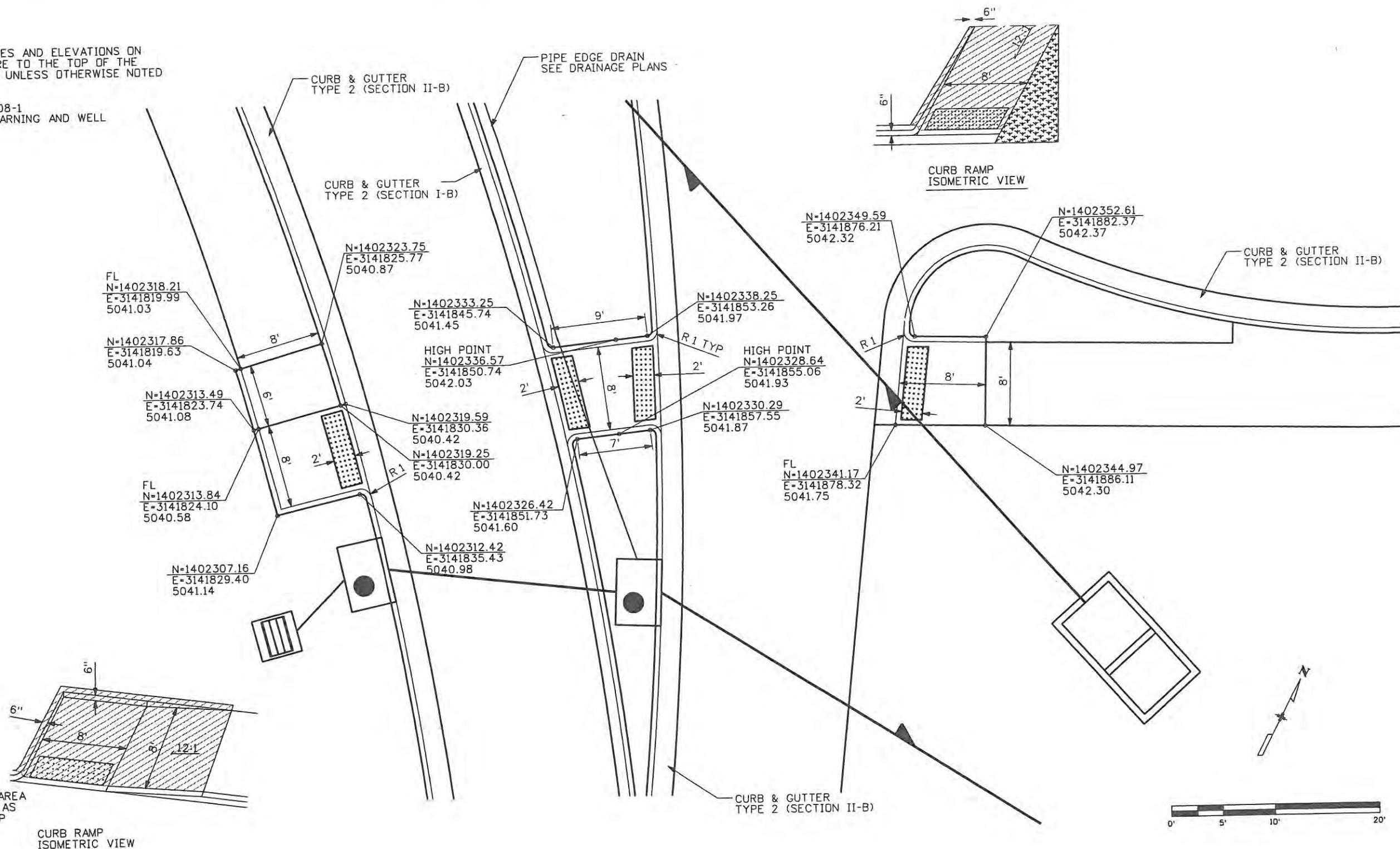
Project No./Code	ES4 0253-207
	17244
Sheet Number	73

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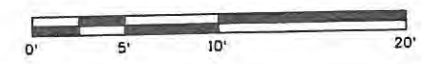
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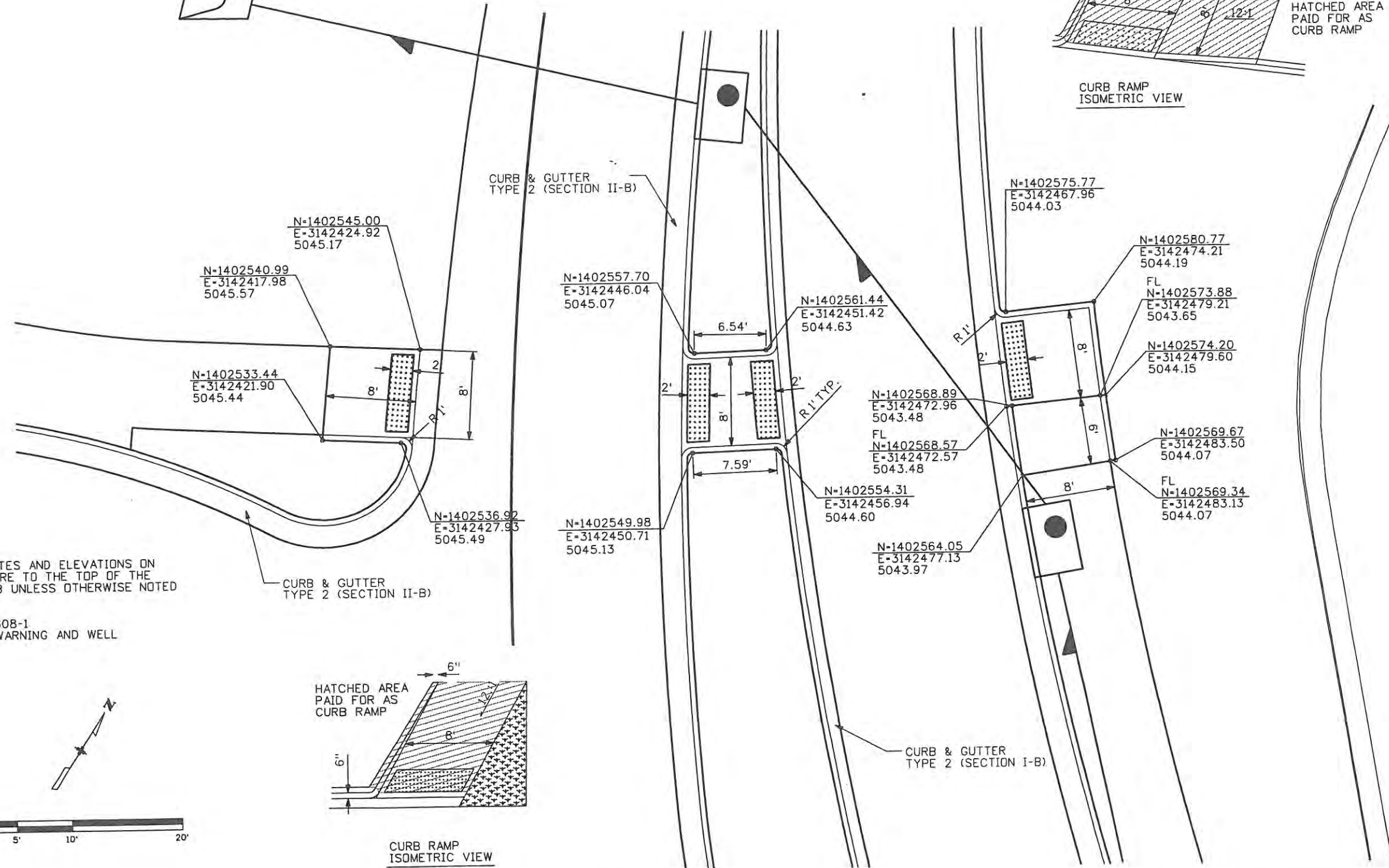
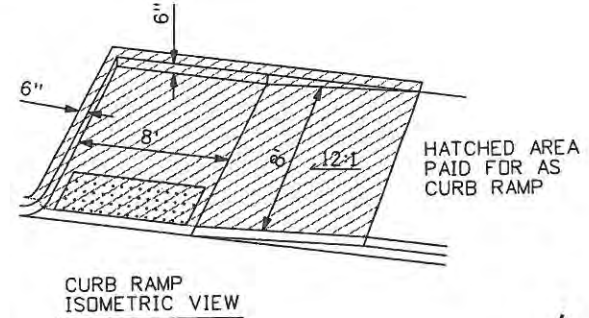
HATCHED AREA  
PAID FOR AS  
CURB RAMP

CURB RAMP  
ISOMETRIC VIEW



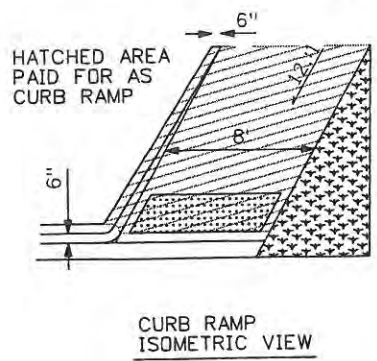
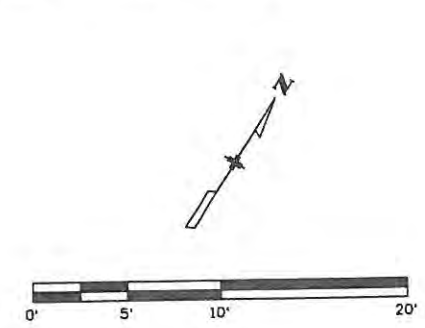
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Creation Date: 07-11-08	Initials: MAB	Date:	Comments			Init.	<b>SW RAMP</b>	
Print Date: 5/1/2009	Initials: Last Mod				No Revisions: 9/14/11	Designer: JJW	Structure Numbers	17244
File Name: 0610031800CurbRampDetailsSW.dgn					Revised:	Detailer: MAB		Sheet Number 74
Horiz. Scale: 1:10	Vert. Scale: As Noted				Void:	Sheet Subset: CURB RMP	Subset Sheets: CR2 of 5	

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Computer File Information	
Creation Date: Date	Initials: MAB
Print Date: 5/1/2009	Initials: Last Mod
File Name: 0610031800CurbRampDetailsNE.dgn	
Horiz. Scale: 1:10	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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970-962-2000

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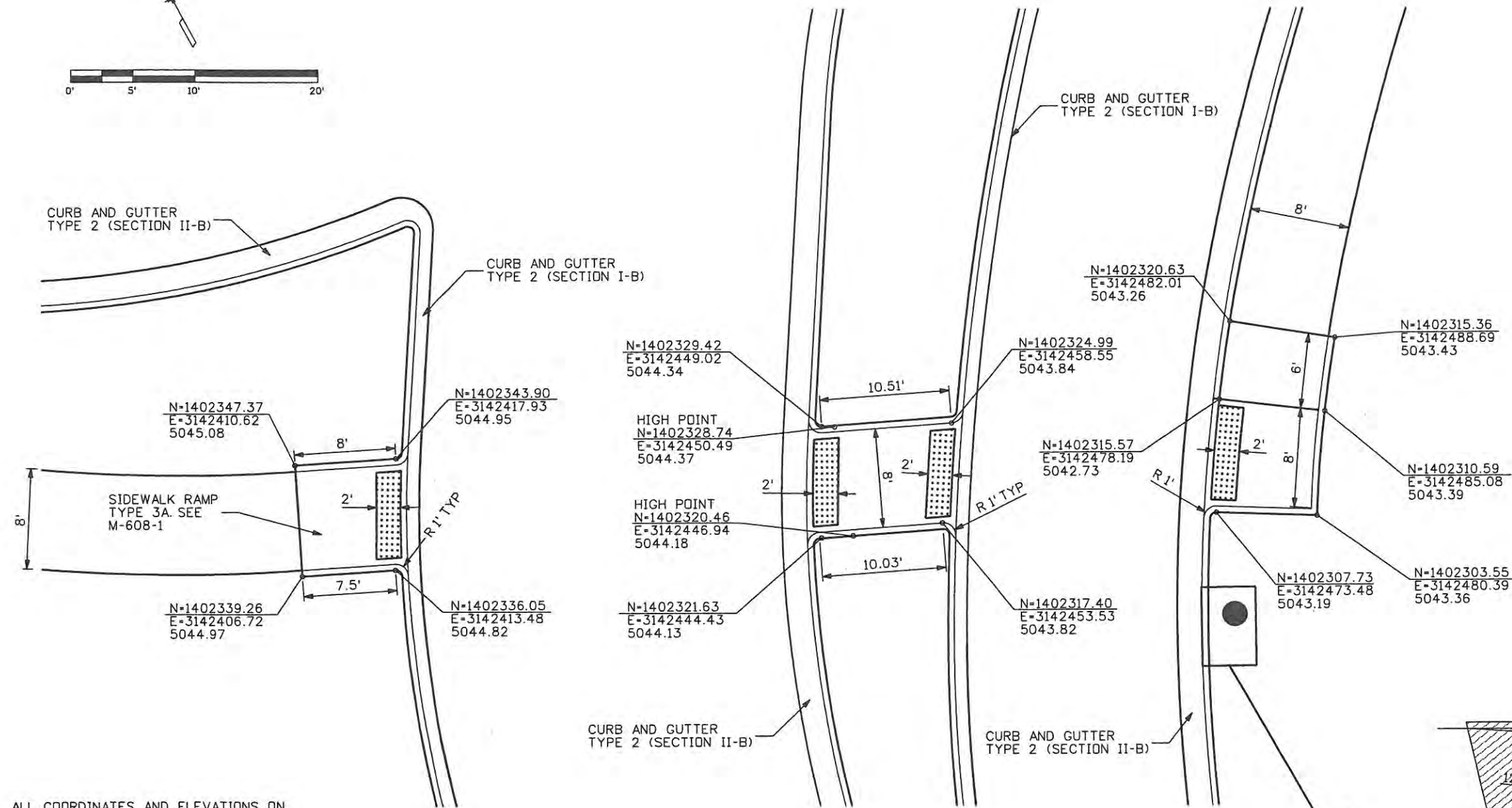
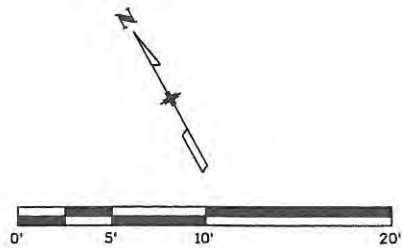
No Revisions: 7/14/11
Revised:
Void:

CURB RAMP DETAIL NE RAMP		
Designer: JJW	Structure Numbers	Sheet Subset: CURB RMP
Detailer: MAB	Subset Sheets: CR3 of 5	

Project No./Code	ES4 0253-207
Sheet Number	75

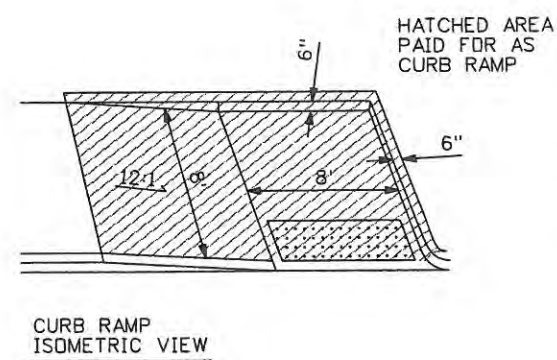
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DETECTABLE WARNING AND WELL



Computer File Information	
Creation Date: 07-08-08	Initials: MAB
Print Date: 5/1/2009	Initials: Last Mod
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Horiz. Scale: 1:10	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

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970-962-2000

Colorado Department of Transportation

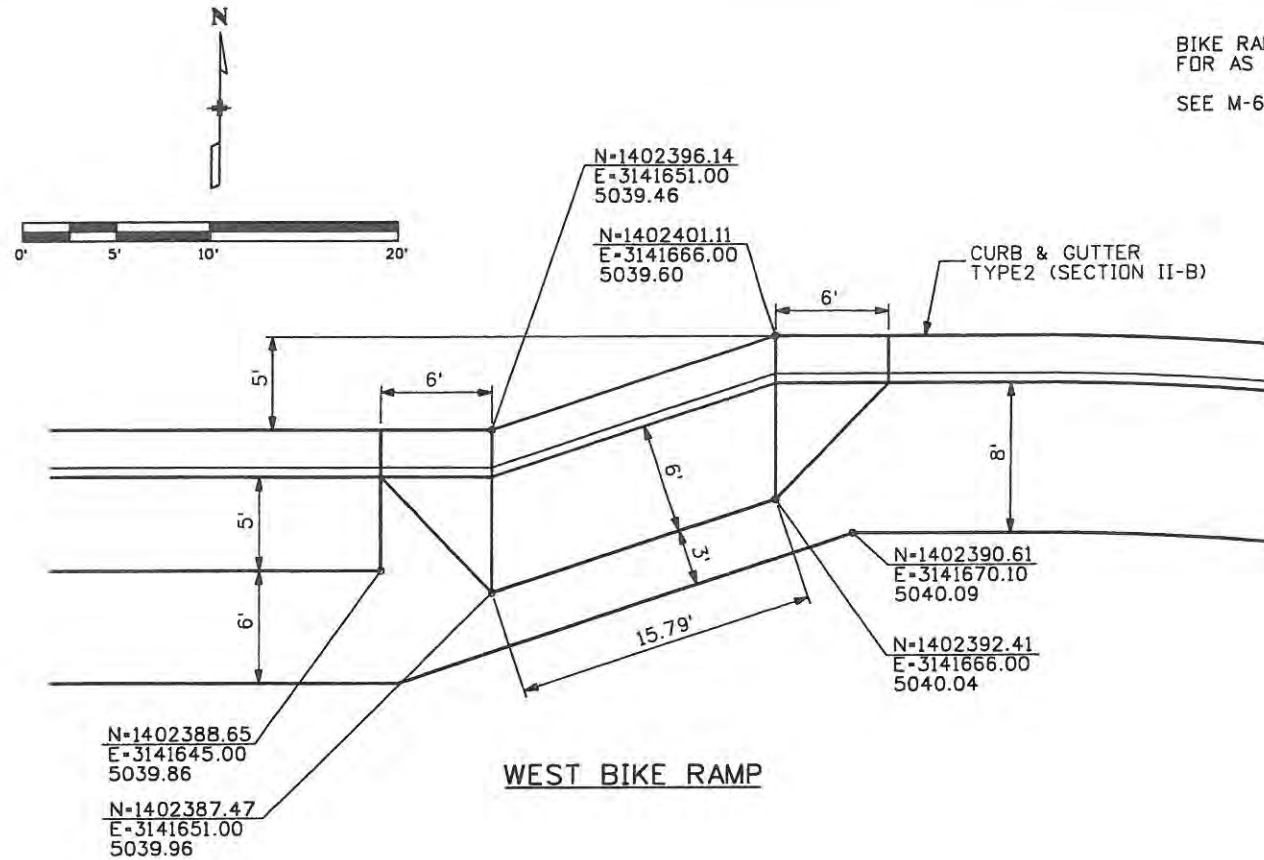
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CURB RAMP DETAIL SE RAMP	
Designer: JJW	Structure Numbers
Detailer: MAB	
Sheet Subset: CURB RMP	Subset Sheets: CR4 of 5

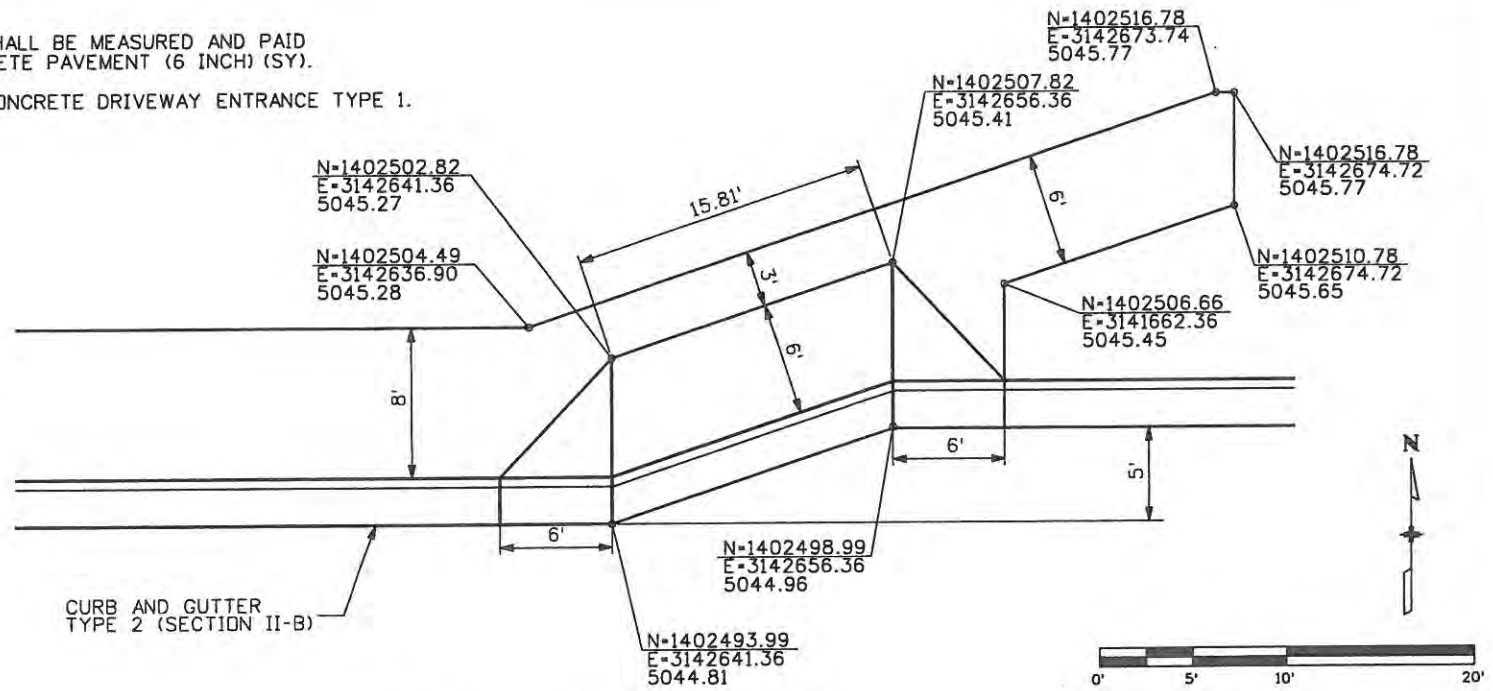
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	17244
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 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2693

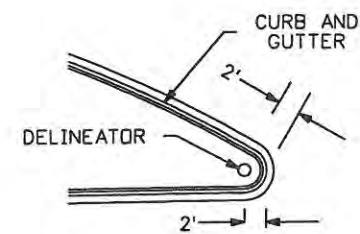
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SEE M-609-1 CONCRETE DRIVEWAY ENTRANCE TYPE 1.



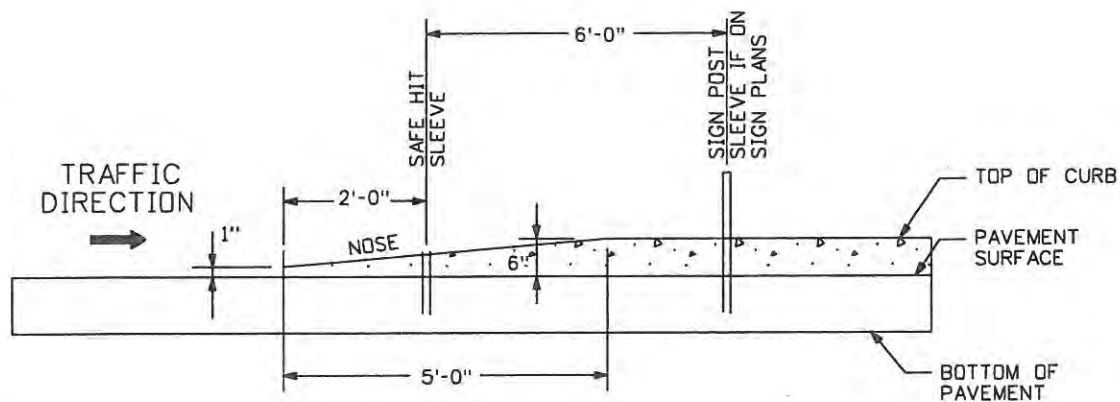
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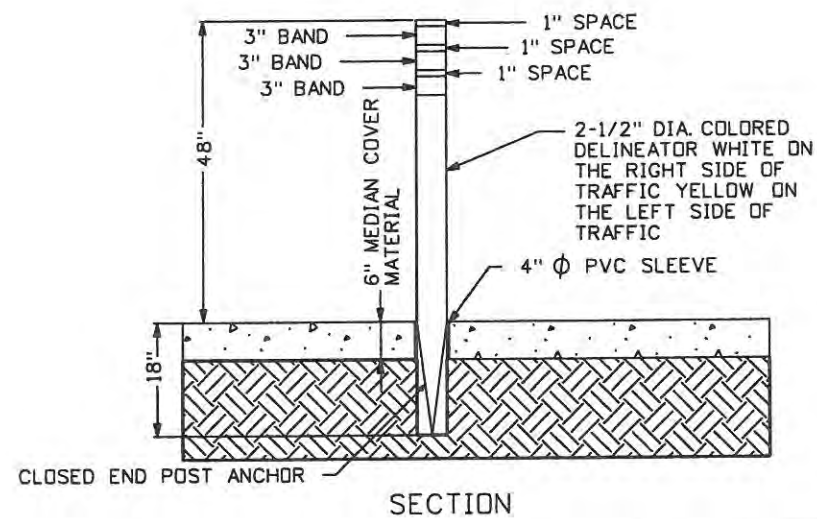
EAST BIKE RAMP



TYPICAL PLAN



EXIT RAMP ISLAND DETAIL  
NORTH TIP OF NW ISLAND &  
SOUTH TIP OF SE ISLAND



SECTION

ALIGNMENT	STATION	OFFSET	DELINEATOR (SPECIAL)	
			WHITE	YELLOW
CROSSROADS	53+78.36	32.09 RT	1	
CROSSROADS	54+60.12	51.40 LT	1	
CROSSROADS	56+66.00	0.00		1
CROSSROADS	59+92.01	0.36 RT		1
CROSSROADS	62+12.20	42.34 RT	1	
CROSSROADS	62+74.43	31.70 LT	1	
SW RAMP	105+56.97	15.11 LT	1	
NW RAMP	201+49.57	29.98 LT	1	
NE RAMP	300+99.89	15.16 RT	1	
SE RAMP	407+26.89	28.33 RT	1	

DELINEATORS TYPE I, II, AND III SHALL BE PLACED ACCORDING TO CDDT S-612-1

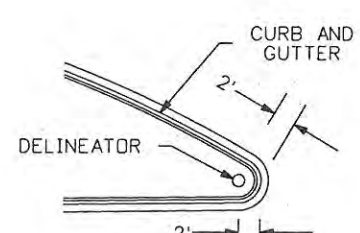
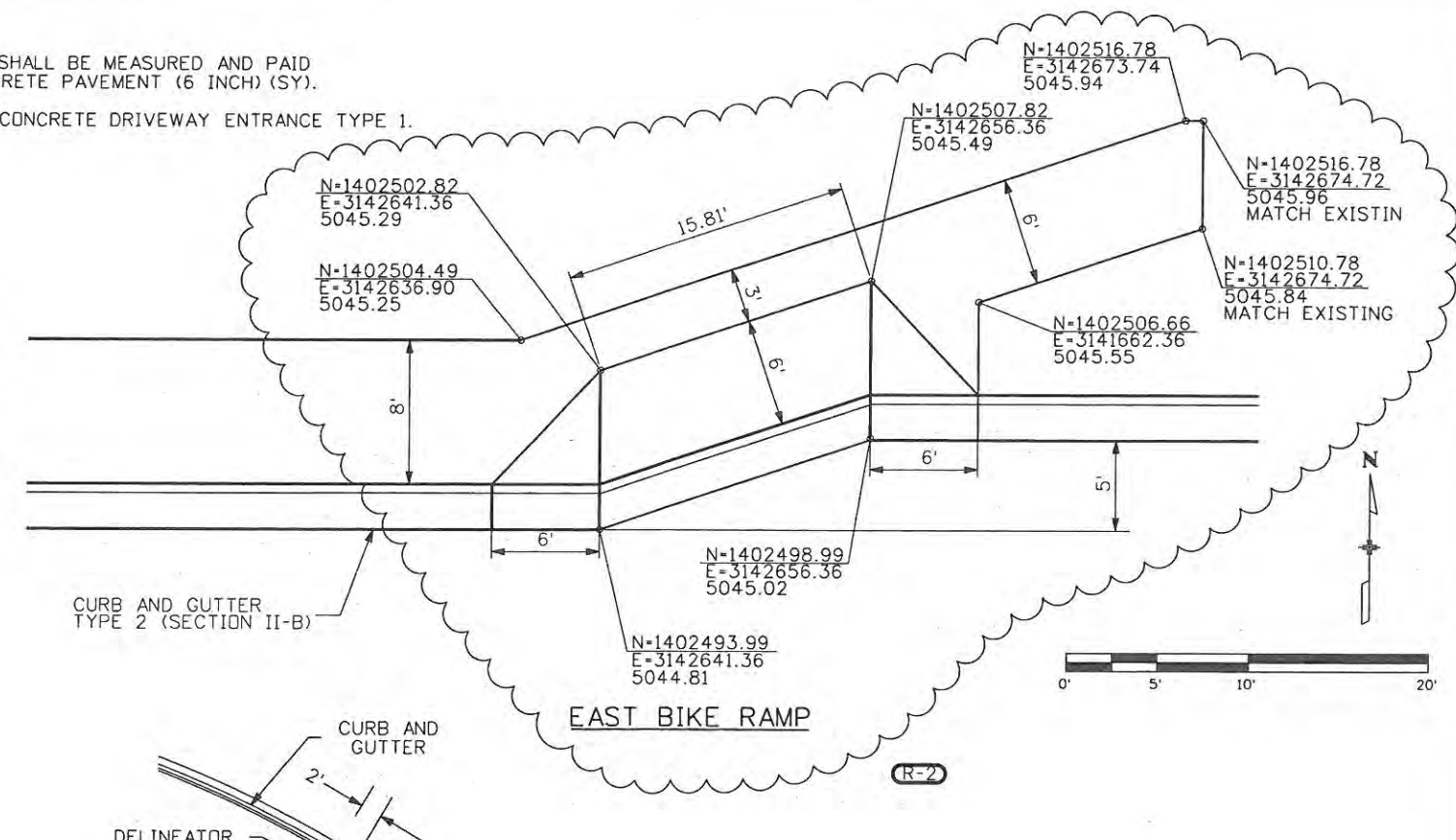
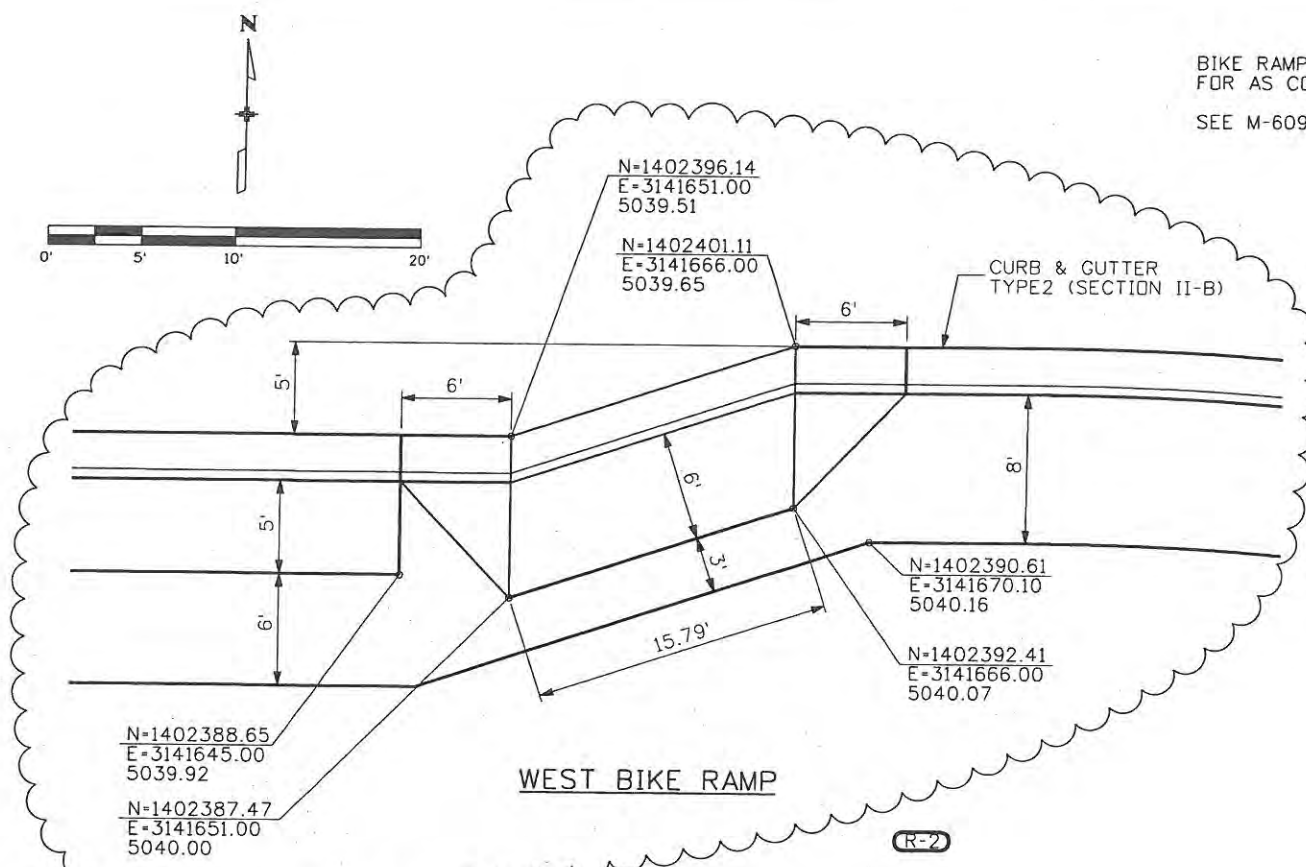
DELINEATOR (SPECIAL) DETAIL

<b>Computer File Information</b>		<b>Sheet Revisions</b>		<b>CITY OF LOVELAND</b>		<b>BIKE RAMP DETAILS EAST AND WEST RAMPS</b>		<b>Project No./Code</b>	
Creation Date: 07-15-08	Initials: MAB	Date:	Comments:	Init.	<p>500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000</p>	No Revisions:	Designer: JJW	Structure Numbers:	ES4 0253-207
Print Date: 5/1/2009	Initials: Last Mod					Revised:	Detailer: MAB		17244
File Name: 0610031800BikeRampDetails.dgn						Void: 9/14/11	Sheet Subset: CURB RMP	Subset Sheets: CR5 of 5	Sheet Number 77
Horiz. Scale: 1:10	Vert. Scale: As Noted								

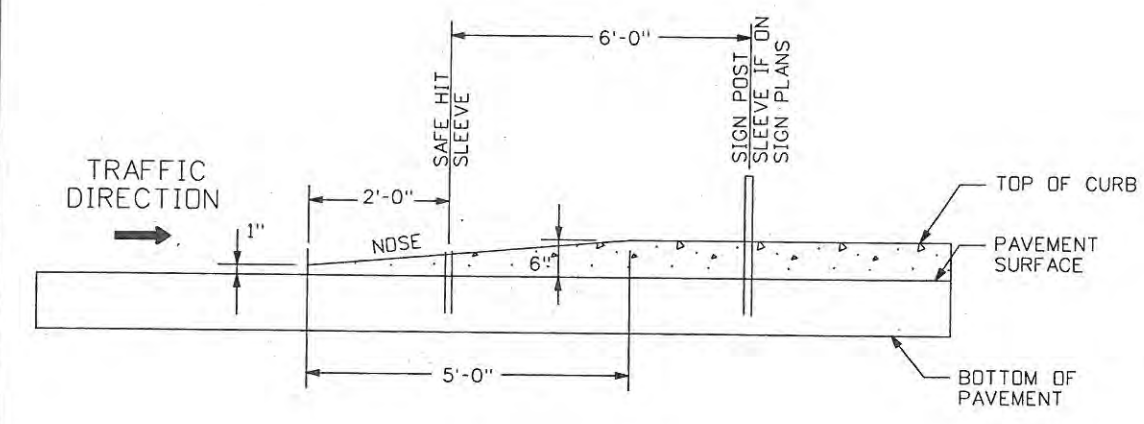
WILSON & COMPANY  
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 Fax: 303-297-2693



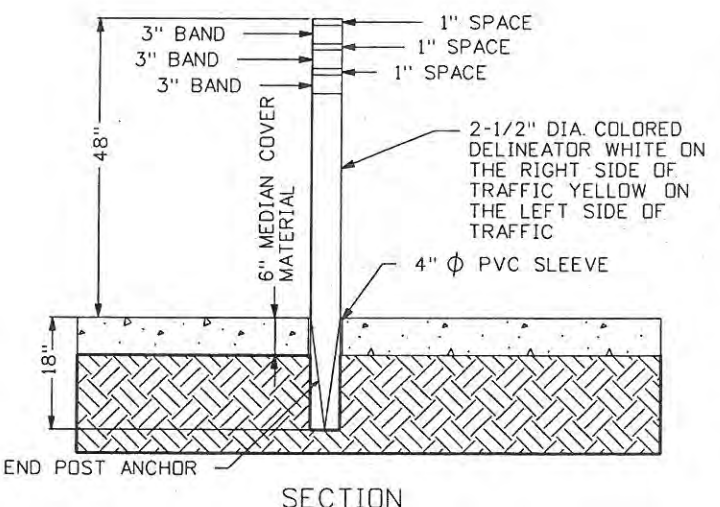
BIKE RAMPS SHALL BE MEASURED AND PAID FOR AS CONCRETE PAVEMENT (6 INCH) (SY).  
SEE M-609-1 CONCRETE DRIVEWAY ENTRANCE TYPE 1.



TYPICAL PLAN



EXIT RAMP ISLAND DETAIL  
NORTH TIP OF NW ISLAND &  
SOUTH TIP OF SE ISLAND



SECTION

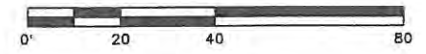
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			WHITE	YELLOW
CROSSROADS	53+78.36	32.09 RT	1	
CROSSROADS	54+60.12	51.40 LT	1	
CROSSROADS	56+66.00	0.00		1
CROSSROADS	59+92.01	0.36 RT		1
CROSSROADS	62+12.20	42.34 RT	1	
CROSSROADS	62+74.43	31.70 LT	1	
SW RAMP	105+56.97	15.11 LT	1	
NW RAMP	201+49.57	29.98 LT	1	
NE RAMP	300+99.89	15.16 RT	1	
SE RAMP	407+26.89	28.33 RT	1	

DELINEATORS TYPE I, II, AND III SHALL BE PLACED ACCORDING TO CDDT S-612-1

DELINEATOR (SPECIAL) DETAIL

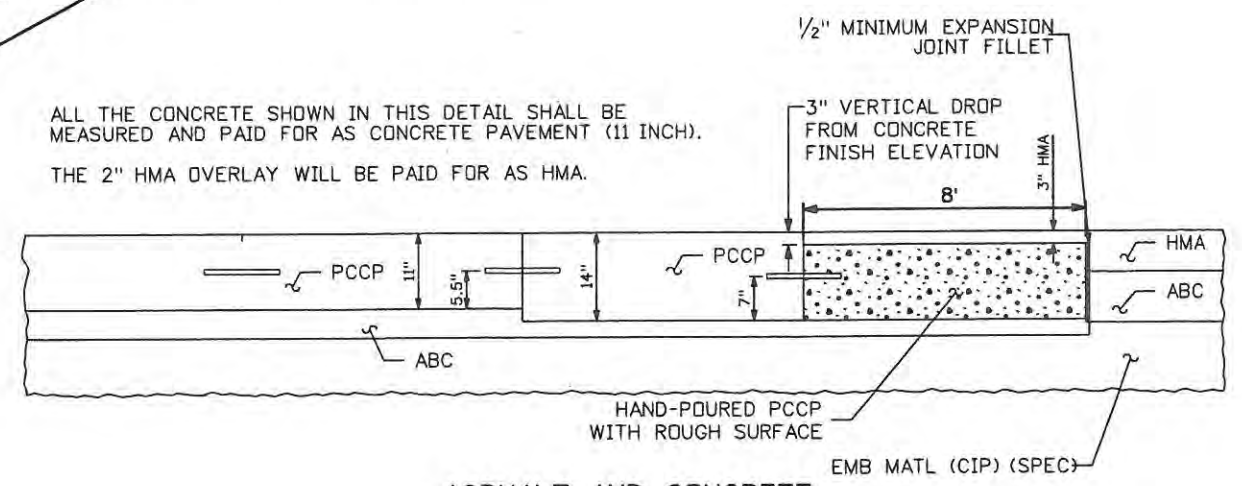
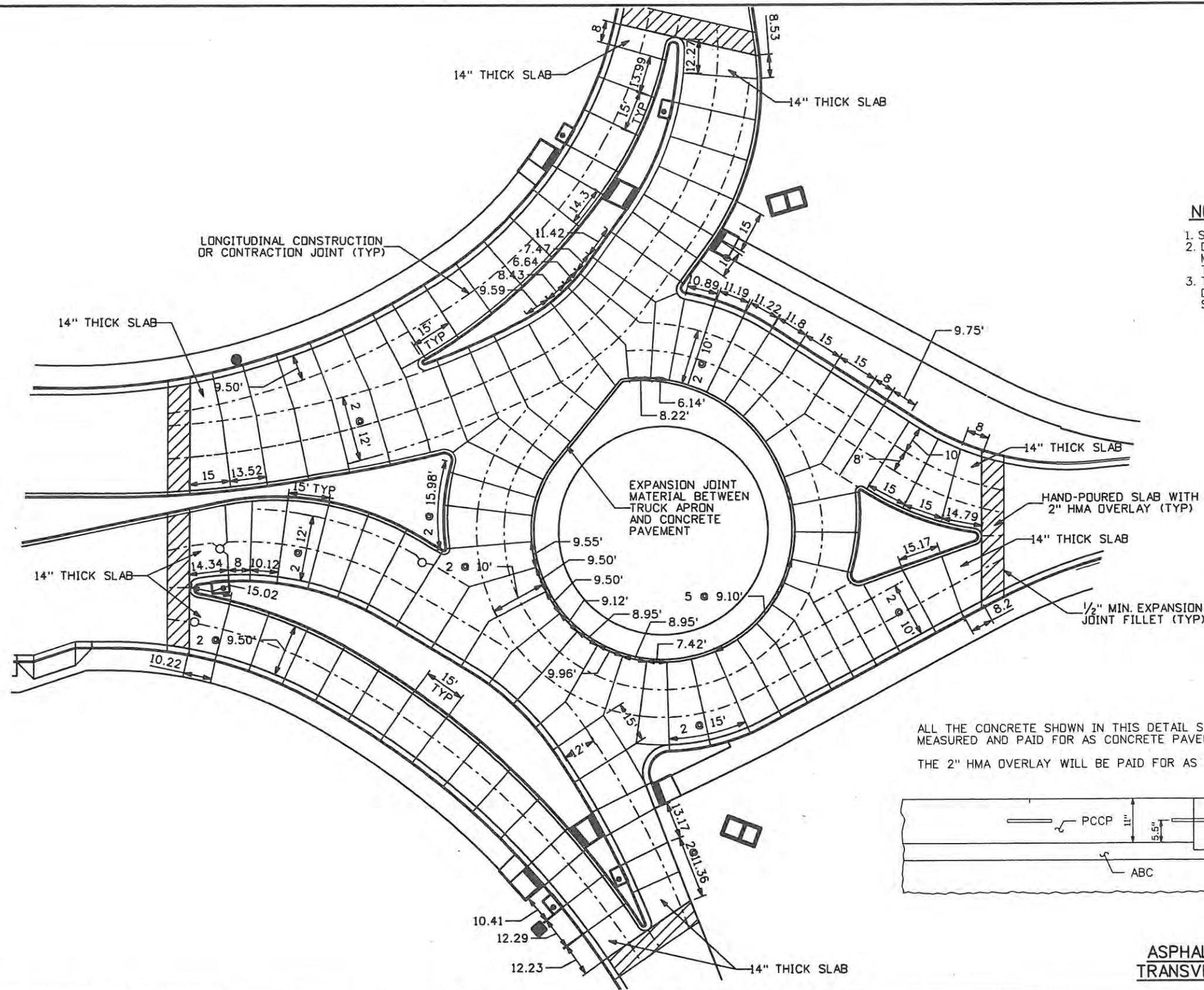
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Creation Date: 07-15-08	Initials: MAB	Date:	Comments	Init.	 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 Colorado Department of Transportation	No Revisions: 9/14/11	Designer: JJW	Structure Numbers	ES4 0253-207	
Print Date: 9/23/2009	Initials: Last Mod	09/24/09	TIE TO EXIST	JJW			Revised:	Detailer: MAB	Sheet Subset: CURB RMP	Subset Sheets: CR5 of 5	17244
File Name: 0610031800BikeRampDetails.dgn							Void:				Sheet Number 77X
Horiz. Scale: 1:10	Vert. Scale: As Noted										

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**NOTES:**

1. SEE M-412-1 FOR MORE INFORMATION
2. DOWELS, TIE BARS, JOINT MATERIALS, AND EPOXY WILL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT SHALL INCLUDED IN THE WORK.
3. TRANSVERSE JOINTS GREATER THAN 9 FEET IN LENGTH SHALL BE DOWELED 1 FOOT O.C. AND 6 INCHES FROM THE EDGE OF THE SLAB, SIMILAR TO DC JOINT WITH 14 FT. AND 12 FT. LANES IN M-412-1.



ALL THE CONCRETE SHOWN IN THIS DETAIL SHALL BE MEASURED AND PAID FOR AS CONCRETE PAVEMENT (11 INCH).  
THE 2" HMA OVERLAY WILL BE PAID FOR AS HMA.

**ASPHALT AND CONCRETE  
TRANSVERSE JOINT DETAIL**

Computer File Information	
Creation Date: 4/20/08	Initials: JMB
Print Date: 5/3/2009	Initials: JMB
File Name: 0610031800jtdet01.dgn	
Horiz. Scale: 1:40	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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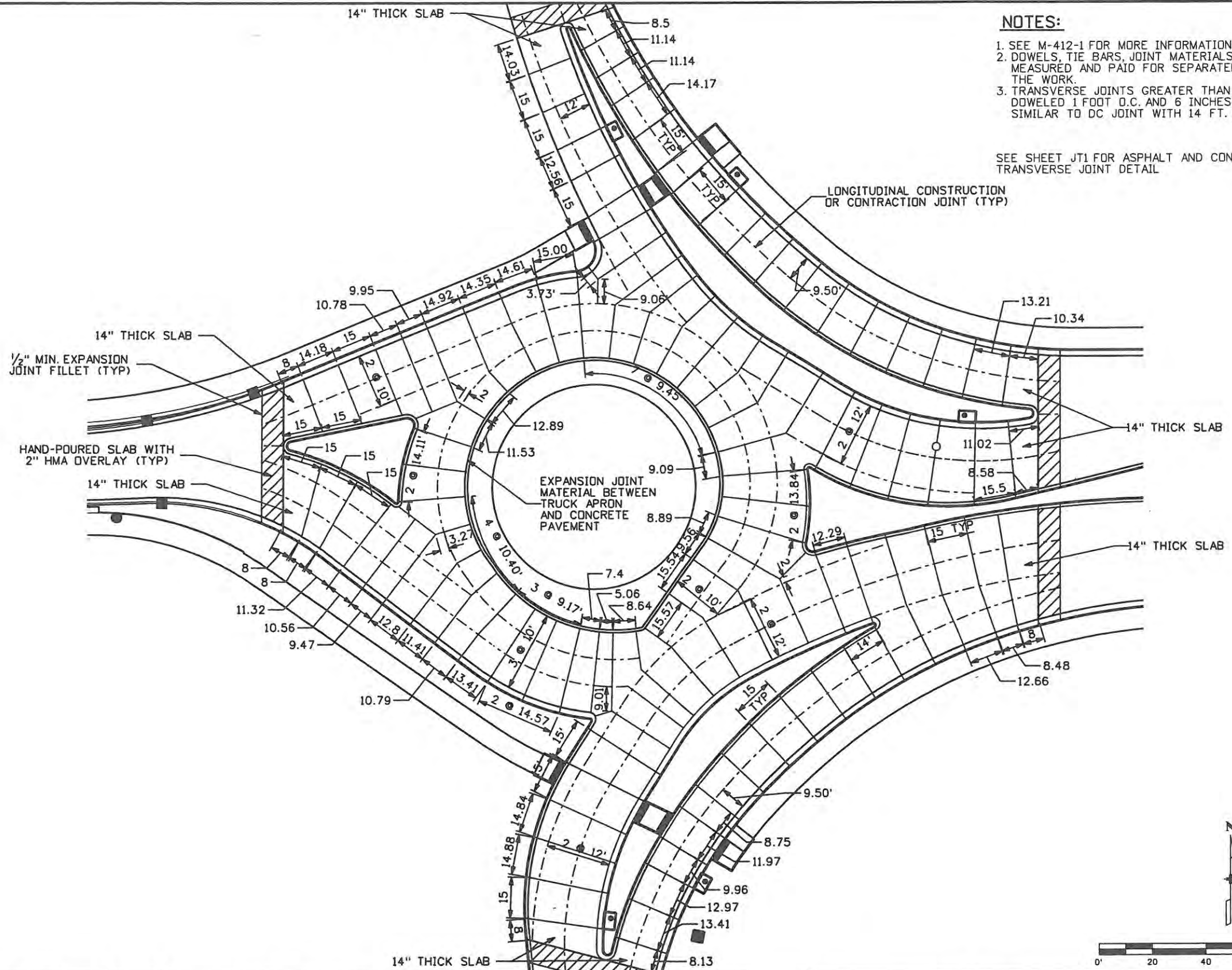
Colorado Department  
of Transportation

No Revisions: 9/14/11
Revised:
Void:

JOINT DETAILS WEST ROUNDABOUT	
Designer: JMB	Structure Numbers
Detailer: JMB	
Sheet Subset: Jnt Det	Subset Sheets: JT1 of 2

Project No./Code	ES4 0253-207
	17244
Sheet Number	78



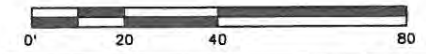


**NOTES:**

1. SEE M-412-1 FOR MORE INFORMATION
2. DOWELS, TIE BARS, JOINT MATERIALS, AND EPOXY WILL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT SHALL INCLUDED IN THE WORK.
3. TRANSVERSE JOINTS GREATER THAN 9 FEET IN LENGTH SHALL BE DOWELED 1 FOOT O.C. AND 6 INCHES FROM THE EDGE OF THE SLAB, SIMILAR TO DC JOINT WITH 14 FT. AND 12 FT. LANES IN M-412-1.

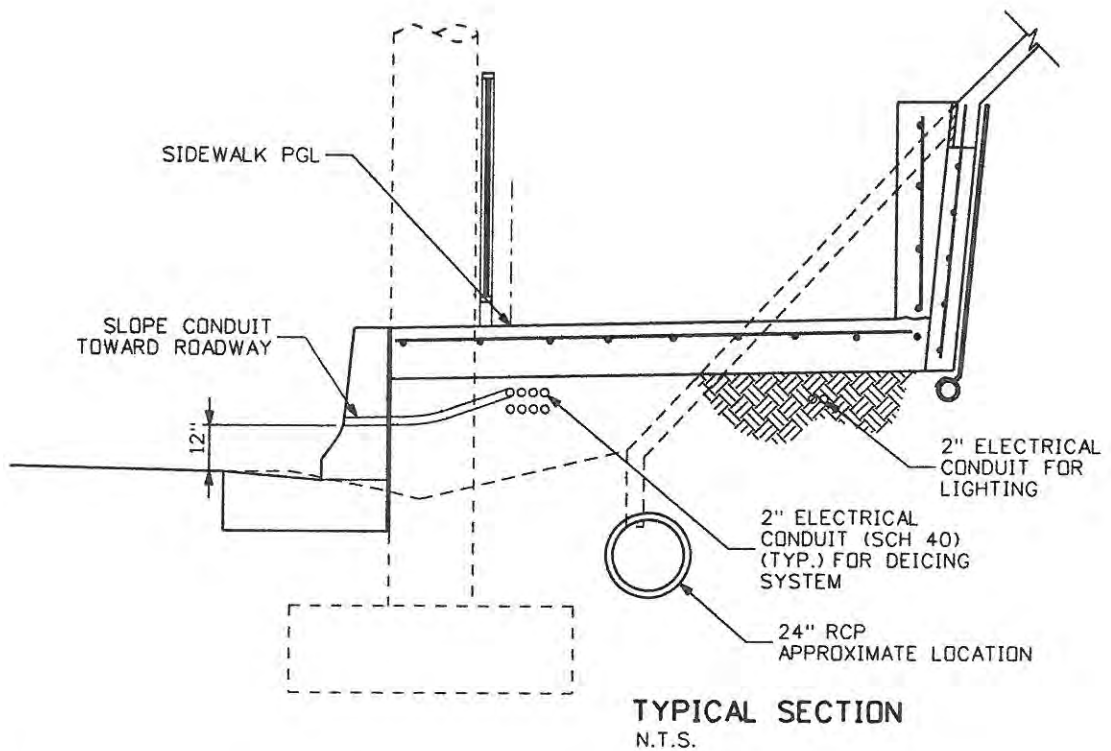
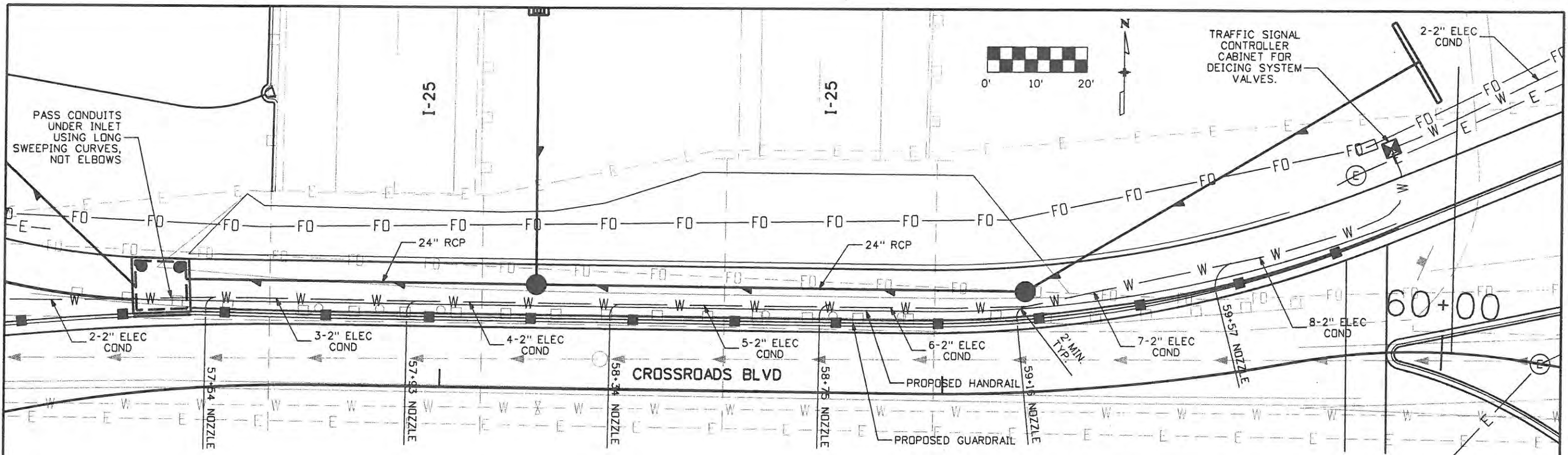
SEE SHEET JT1 FOR ASPHALT AND CONCRETE TRANSVERSE JOINT DETAIL

LONGITUDINAL CONSTRUCTION OR CONTRACTION JOINT (TYP)



<b>Computer File Information</b>		<b>Sheet Revisions</b>			<b>CITY OF LOVELAND</b>		<b>JOINT DETAILS</b>		<b>Project No./Code</b>			
Creation Date: 04/20/08	Initials: JMB	Date:	Comments:	Init.:	 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000		<b>EAST ROUNDABOUT</b>		<b>ES4 0253-207</b>			
Print Date: 5/3/2009	Initials: JMB						 Colorado Department of Transportation		No Revisions: 9/14/11		<b>17244</b>	
File Name: 0610031800jtdet02.dgn							Revised:		Designer: JMB		Structure Numbers	
Horiz. Scale: 1:40	Vert. Scale: As Noted						Void:		Detailer: JMB		Sheet Number <b>79</b>	
							Sheet Subset: Jnt Det		Subset Sheets: JT2 of 2			

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TYPICAL SECTION  
N.T.S.

**Computer File Information**

Creation Date: 9/21/09	Initials: JJW
Print Date: 9/30/2009	Initials: JJW
File Name: DeIcing Detail.dgn	
Horiz. Scale: 1:20	Vert. Scale: As Noted

**Sheet Revisions**

Date:	Comments	Init.
09/30/09	DEICING CONDUIT	JJW

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Colorado Department of Transportation

No Revisions: 7/14/11
Revised:
Void:

**ROADWAY DETAILS  
DEICING SYSTEM CONDUIT**

Designer: JJW	Structure Numbers
Detailer: JJW	
Sheet Subset: Rdwy Det	Subset Sheets: DT1 of 1

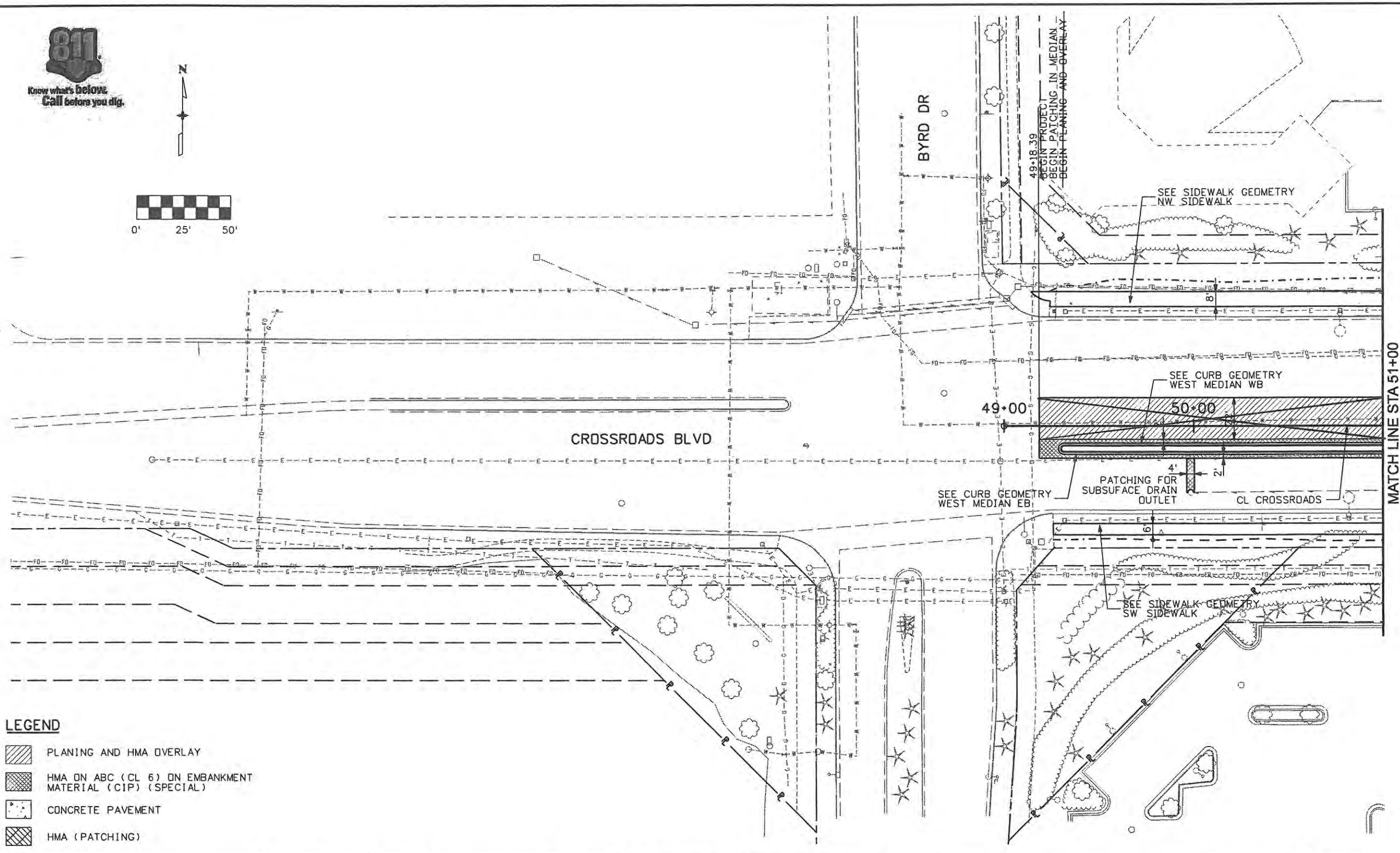
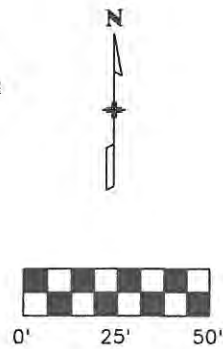
Project No./Code  
ES4 0253-207

17244  
Sheet Number 79A



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**LEGEND**

- PLANING AND HMA OVERLAY
- HMA ON ABC (CL 6) ON EMBANKMENT MATERIAL (CIP) (SPECIAL)
- CONCRETE PAVEMENT
- HMA (PATCHING)

Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/3/2009	Initials: JJW
File Name: 0610031800rdp01.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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No Revisions:
Revised: 9/14/11
Void:





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Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: Rdwy Pln	Subset Sheets: PL1 of 8

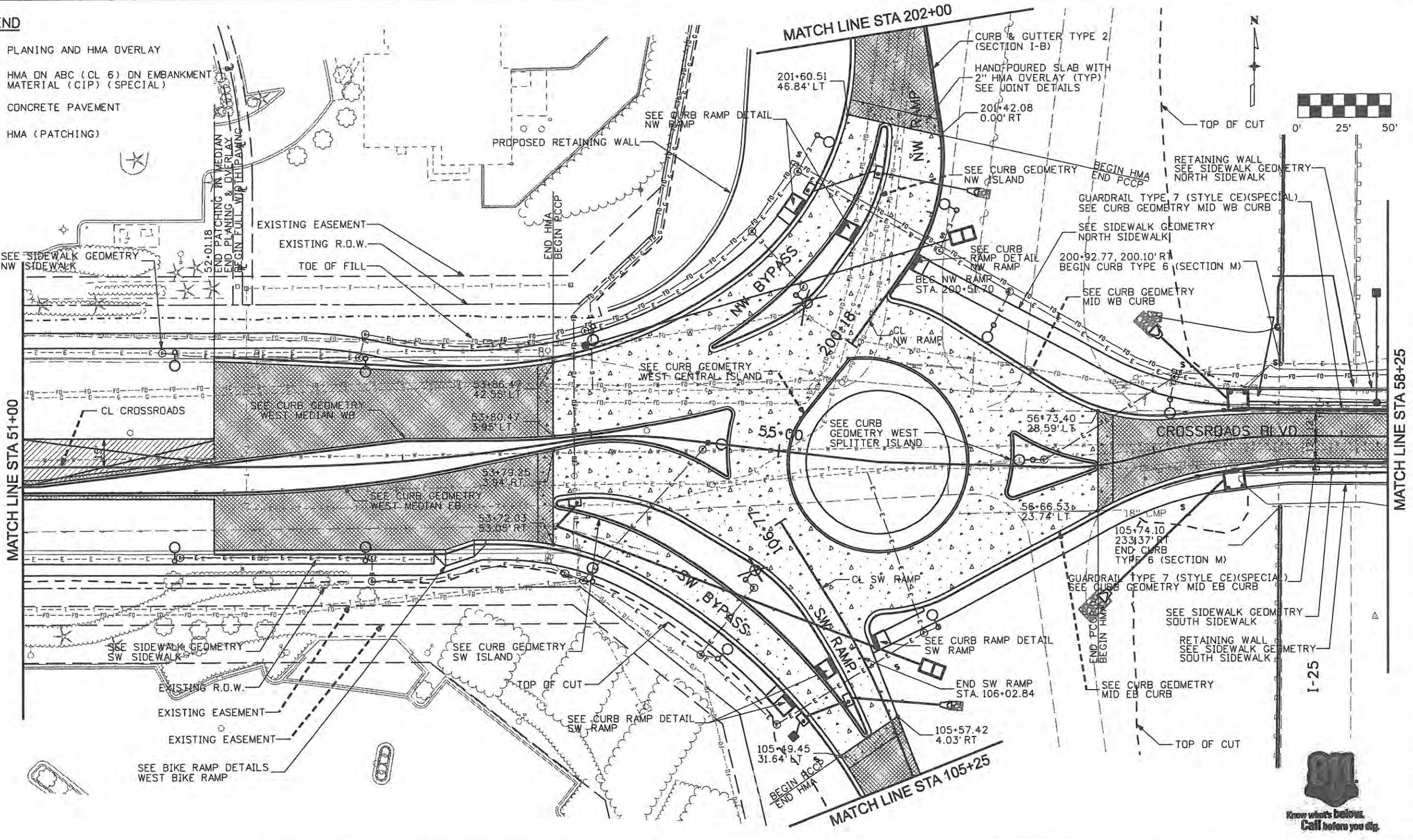
Project No./Code	ES4 0253-207
	17244
Sheet Number	80

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**LEGEND**

-  PLANING AND HMA OVERLAY
-  HMA ON ABC (CL 6) ON EMBANKMENT MATERIAL (CIP) (SPECIAL)
-  CONCRETE PAVEMENT
-  HMA (PATCHING)



MATCH LINE STA 51+00

MATCH LINE STA 58+25

Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/3/2009	Initials: JJW
File Name: 0610031800rdp02.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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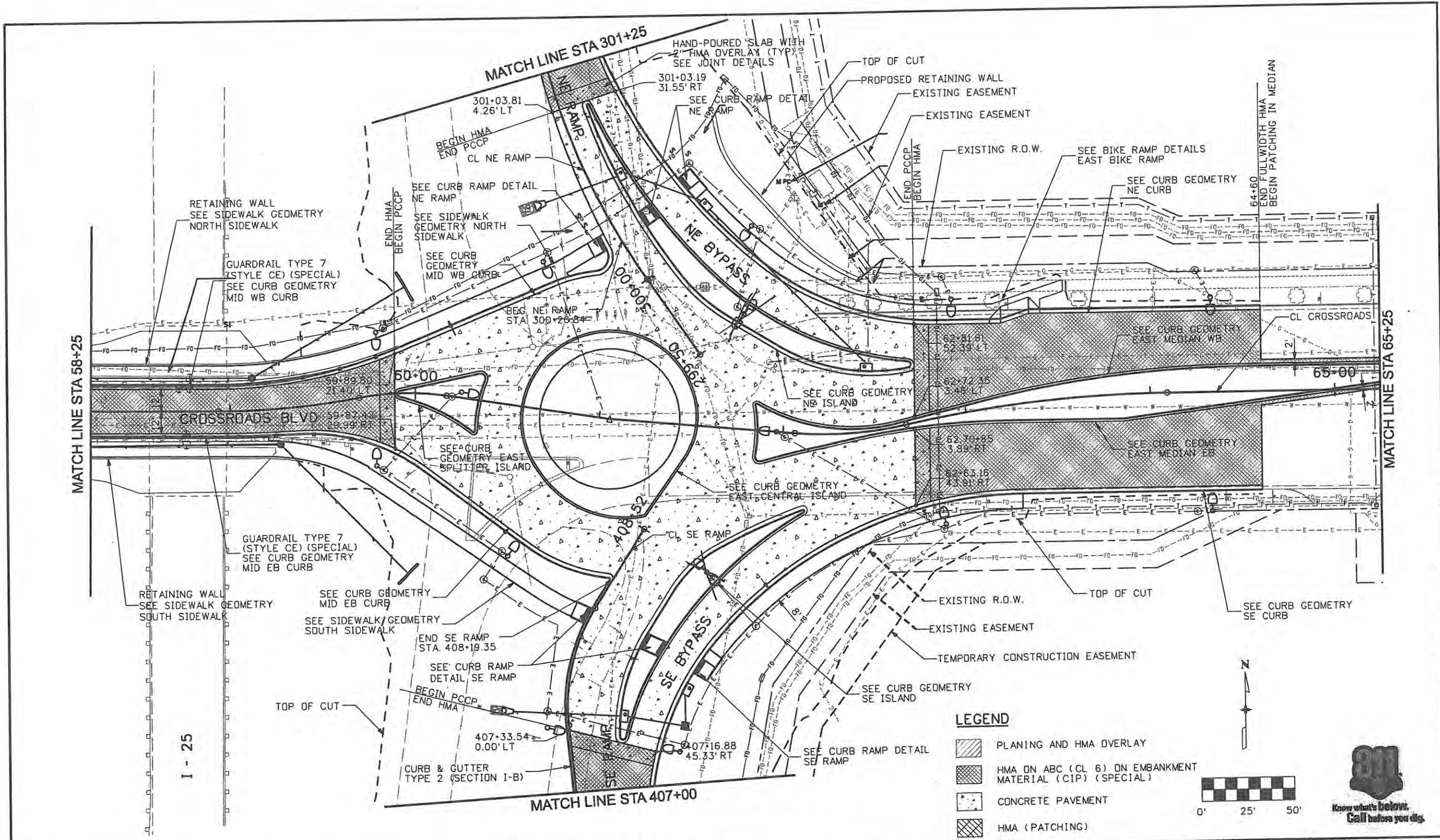
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Revised:	9/14/11
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ROADWAY PLANS	
CROSSROADS BOULEVARD	
Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: Rdwy Pln	Subset Sheets: PL2 of 8

Project No./Code	ES4 0253-207
	17244
Sheet Number	81

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MATCH LINE STA 58+25

MATCH LINE STA 65+25

I - 25

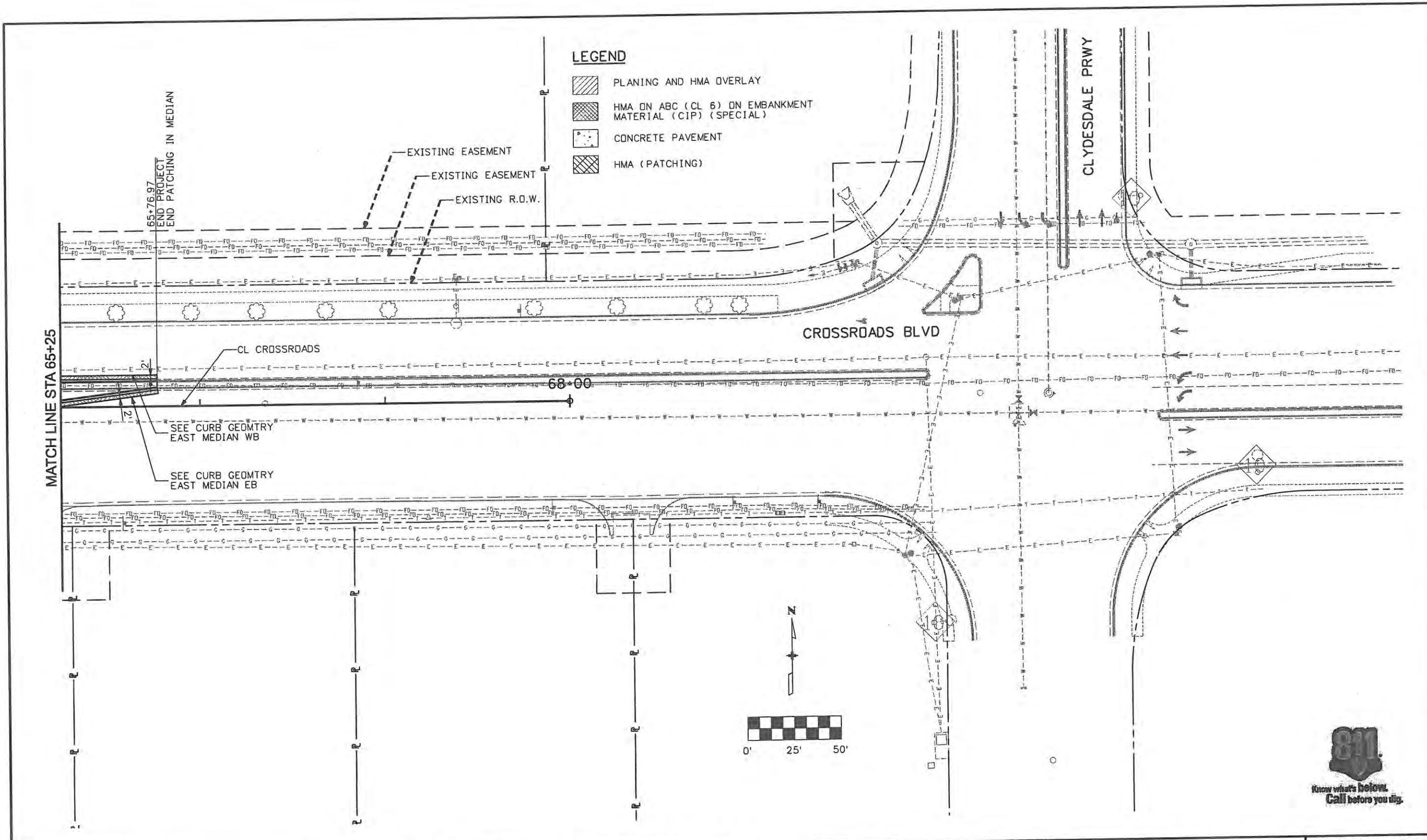
**LEGEND**

- PLANING AND HMA OVERLAY
- HMA ON ABC (CL 6) ON EMBANKMENT MATERIAL (CIP) (SPECIAL)
- CONCRETE PAVEMENT
- HMA (PATCHING)



<b>Computer File Information</b>		<b>Sheet Revisions</b>		<b>CITY OF LOVELAND</b>		<b>ROADWAY PLANS</b>		<b>Project No./Code</b>		
Creation Date: 1/11/07	Initials: JBK	Date:	Comments:	Init.	 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	<b>CROSSROADS BOULEVARD</b>		ES4 0253-207		
Print Date: 5/3/2009	Initials: JJW					No Revisions:			17244	
File Name: 0610031800rdp03.dgn						Revised: 9/14/11	Designer: JJW	Structure Numbers:		
Horiz. Scale: 1:50	Vert. Scale: As Noted					Void:	Detailer: JBK	Sheet Subset: Rdwy Pln	Subset Sheets: PL3 of 8	Sheet Number 82

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Computer File Information	
Creation Date: Date	Initials: JBK
Print Date: 5/3/2009	Initials: JJW
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Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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**DOT**  
DEPARTMENT OF TRANSPORTATION

Colorado Department of Transportation

No Revisions: 9/14/11
Revised:
Void:





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Detailer: JBK	
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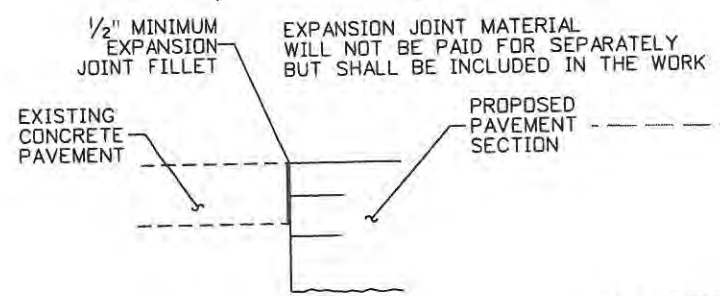
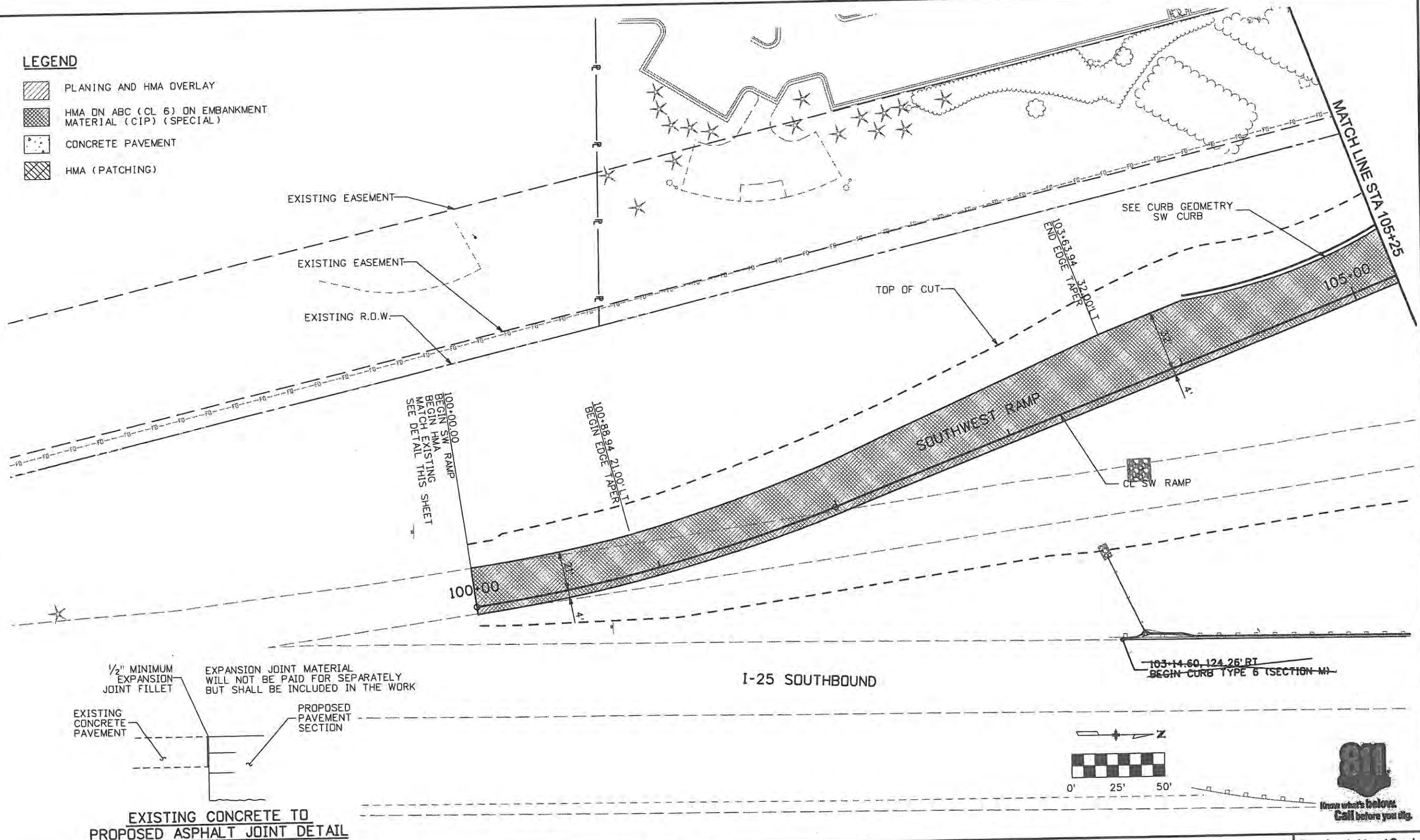
Project No./Code ES4 0253-207
17244
Sheet Number 83

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**LEGEND**

-  PLANING AND HMA OVERLAY
-  HMA ON ABC (CL 6) ON EMBANKMENT MATERIAL (CIP) (SPECIAL)
-  CONCRETE PAVEMENT
-  HMA (PATCHING)



**EXISTING CONCRETE TO PROPOSED ASPHALT JOINT DETAIL**

EXPANSION JOINT MATERIAL WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK

I-25 SOUTHBOUND

Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/3/2009	Initials: JJW
File Name: 0610031800rdp05.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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No Revisions:
Revised: 9/14/11
Void:





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Designer: JJW	Structure Numbers
Detailer: JBK	Subsets: PL5 of 8
Sheet Subset: Rdwy Pln	

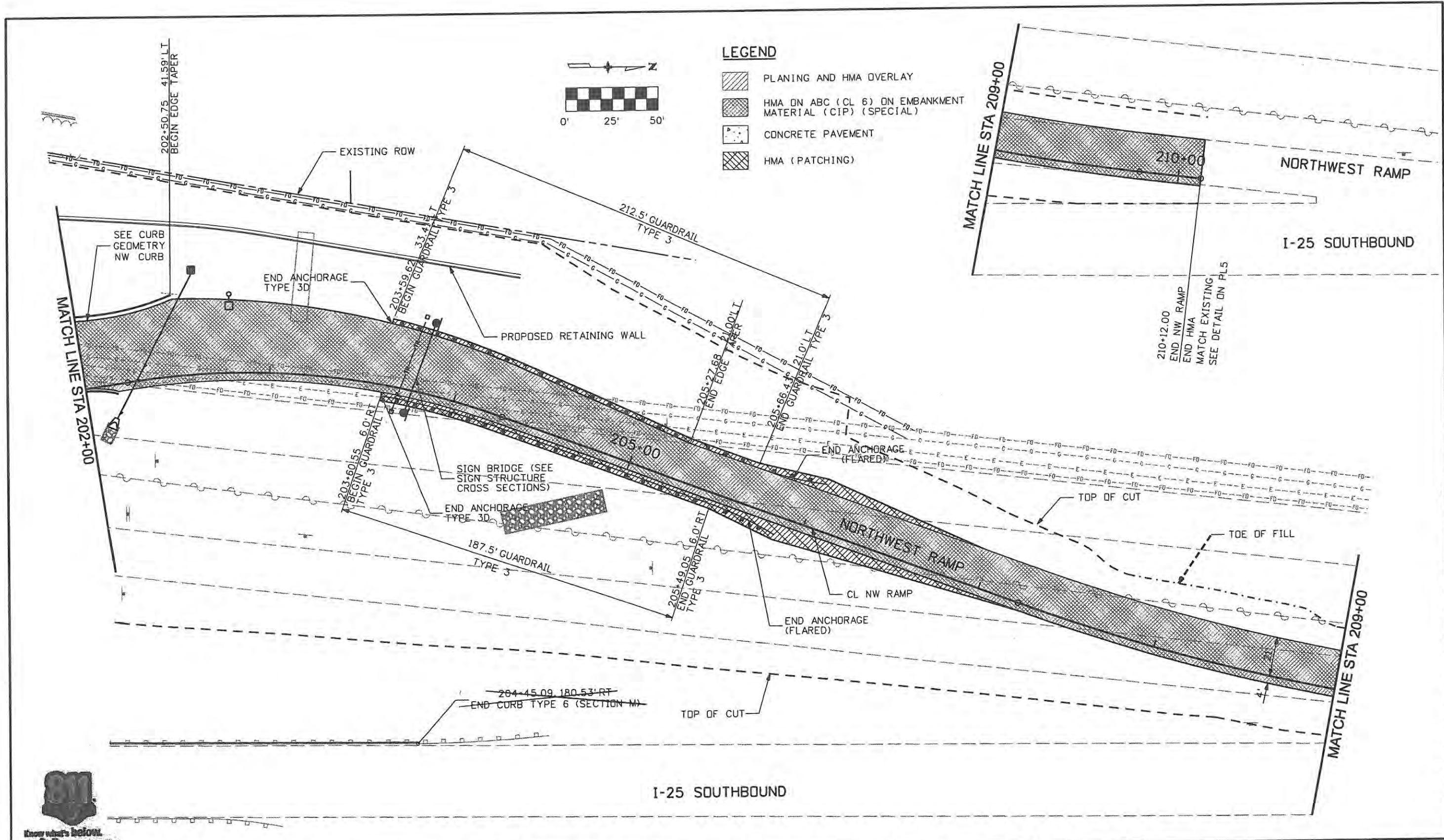
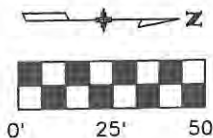
Project No./Code	ES4 0253-207
Sheet Number	17244 84

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**LEGEND**

-  PLANING AND HMA OVERLAY
-  HMA ON ABC (CL 6) ON EMBANKMENT MATERIAL (CIP) (SPECIAL)
-  CONCRETE PAVEMENT
-  HMA (PATCHING)



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Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/3/2009	Initials:
File Name: 0610031800r dp06.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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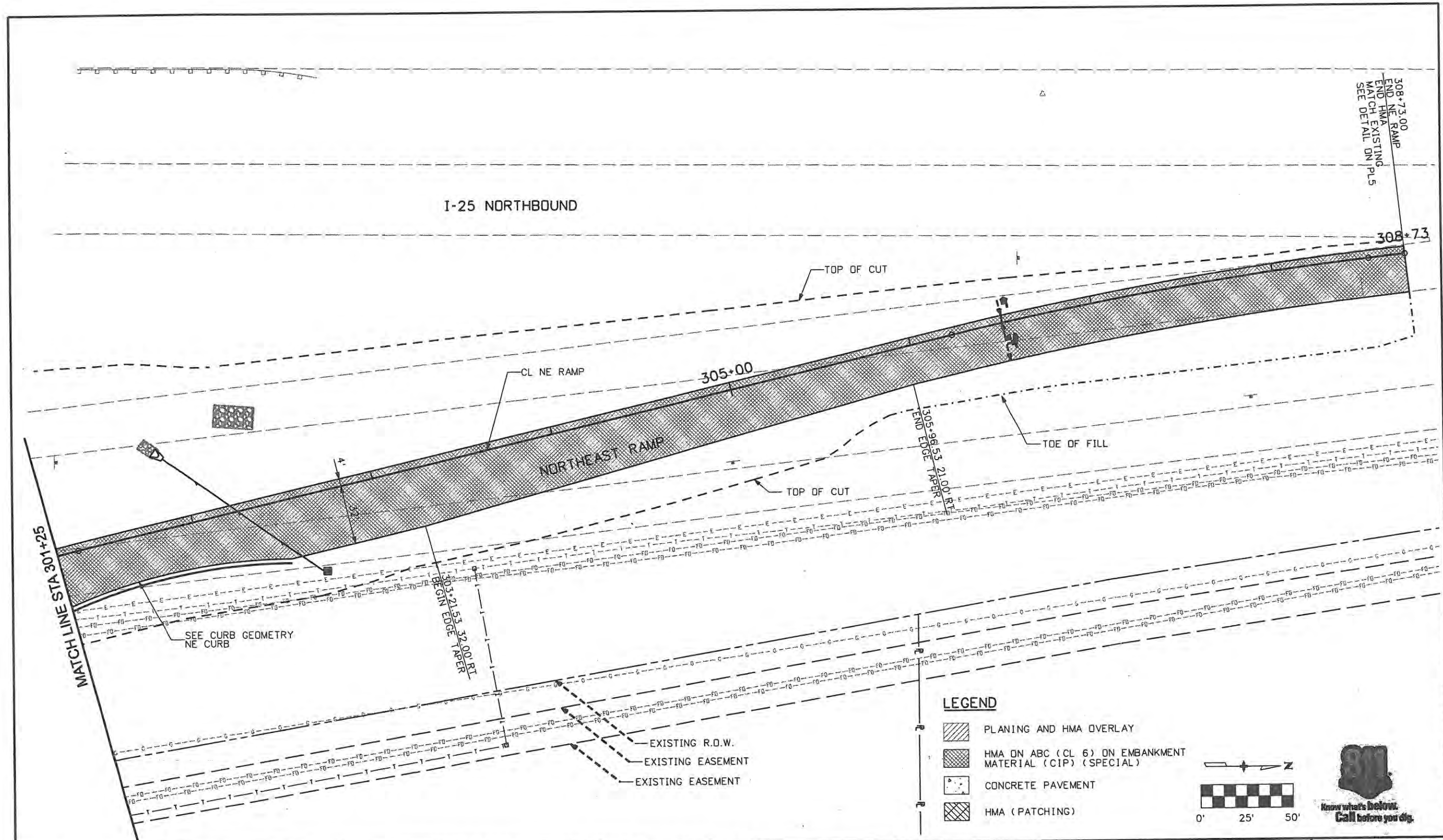
No Revisions:
Revised: 9/14/11
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ROADWAY PLANS NORTHWEST RAMP	
Designer: JJW	Structure Numbers
Detailer: JBK	Subset Sheets: PL6 of 8
Sheet Subset: Rdwy Pln	

Project No./Code	ES4 0253-207
Sheet Number	85

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Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/3/2009	Initials:
File Name: 0610031800rdp07.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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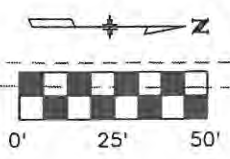
Colorado Department of Transportation

No Revisions: 7/14/11
Revised:
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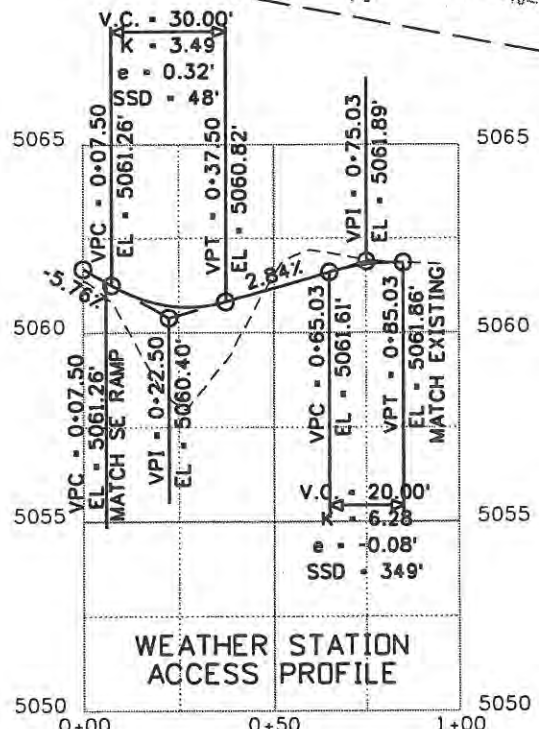
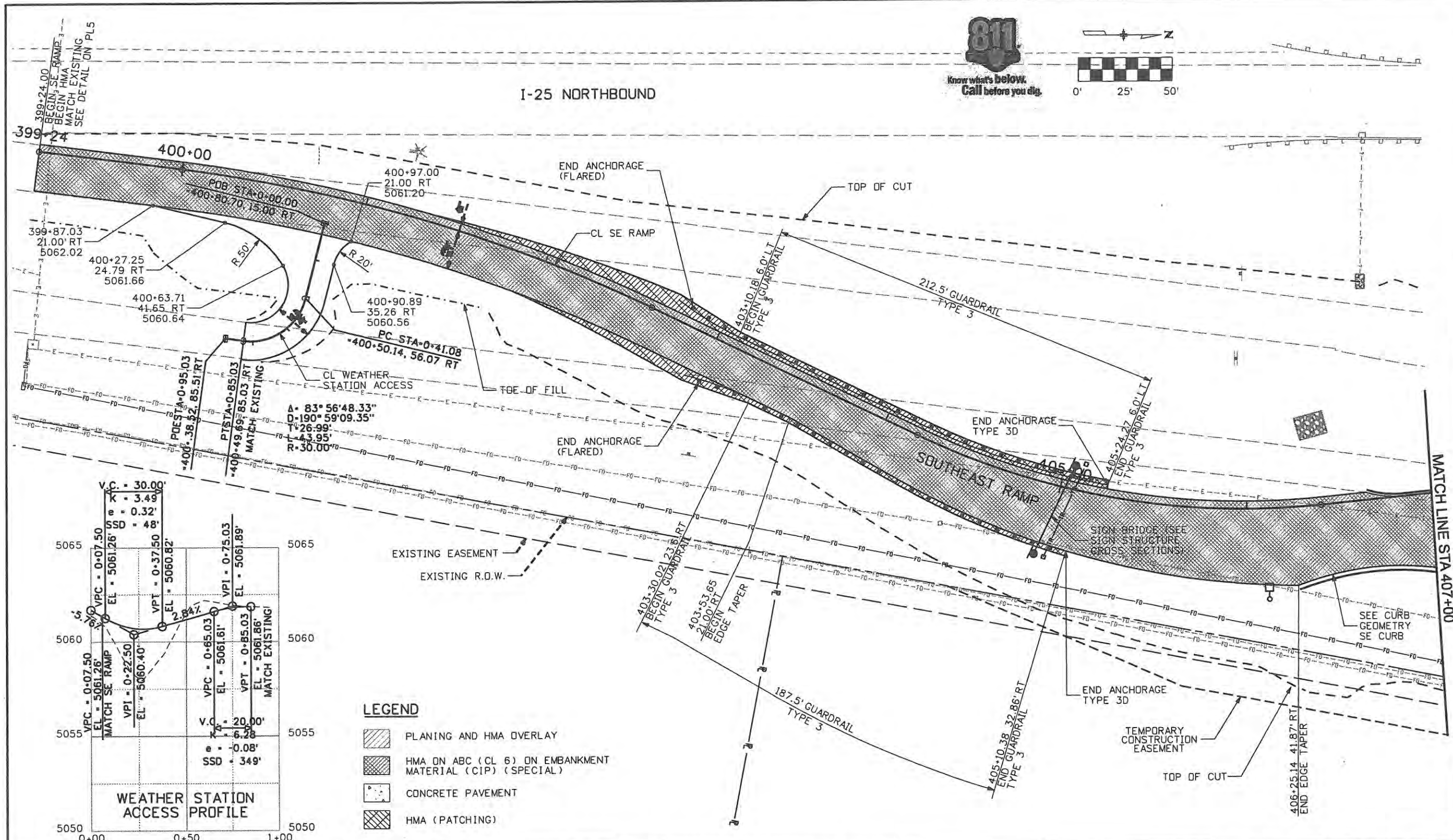
ROADWAY PLANS NORTHEAST RAMP	
Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: Rdwy Pln	Subset Sheets: PL7 of 8

Project No./Code ES4 0253-207
17244
Sheet Number 86

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# I-25 NORTHBOUND



- LEGEND**
- PLANING AND HMA OVERLAY
  - HMA ON ABC (CL 6) ON EMBANKMENT MATERIAL (CIP) (SPECIAL)
  - CONCRETE PAVEMENT
  - HMA (PATCHING)

Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/3/2009	Initials: JJW
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Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

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No Revisions:	
Revised:	
Void:	9/14/11

ROADWAY PLANS SOUTHEAST RAMP	
Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: Rdwy Pln	Subset Sheets: PL8 of 8

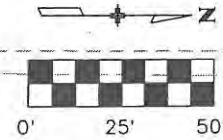
Project No./Code	ES4 0253-207
	17244
Sheet Number	87

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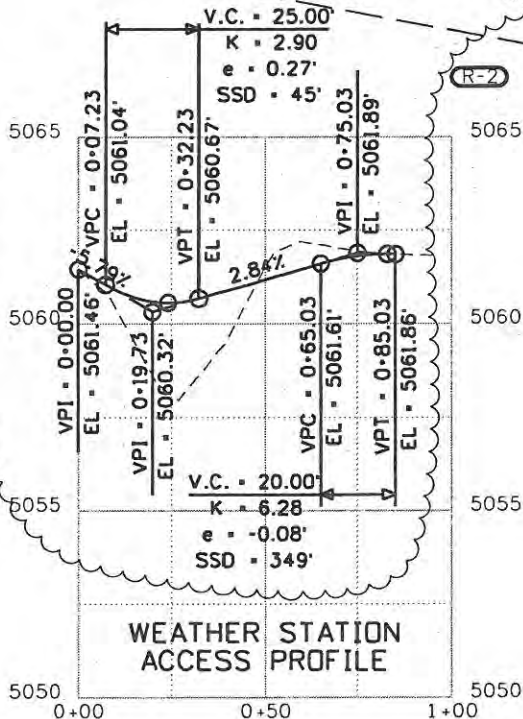
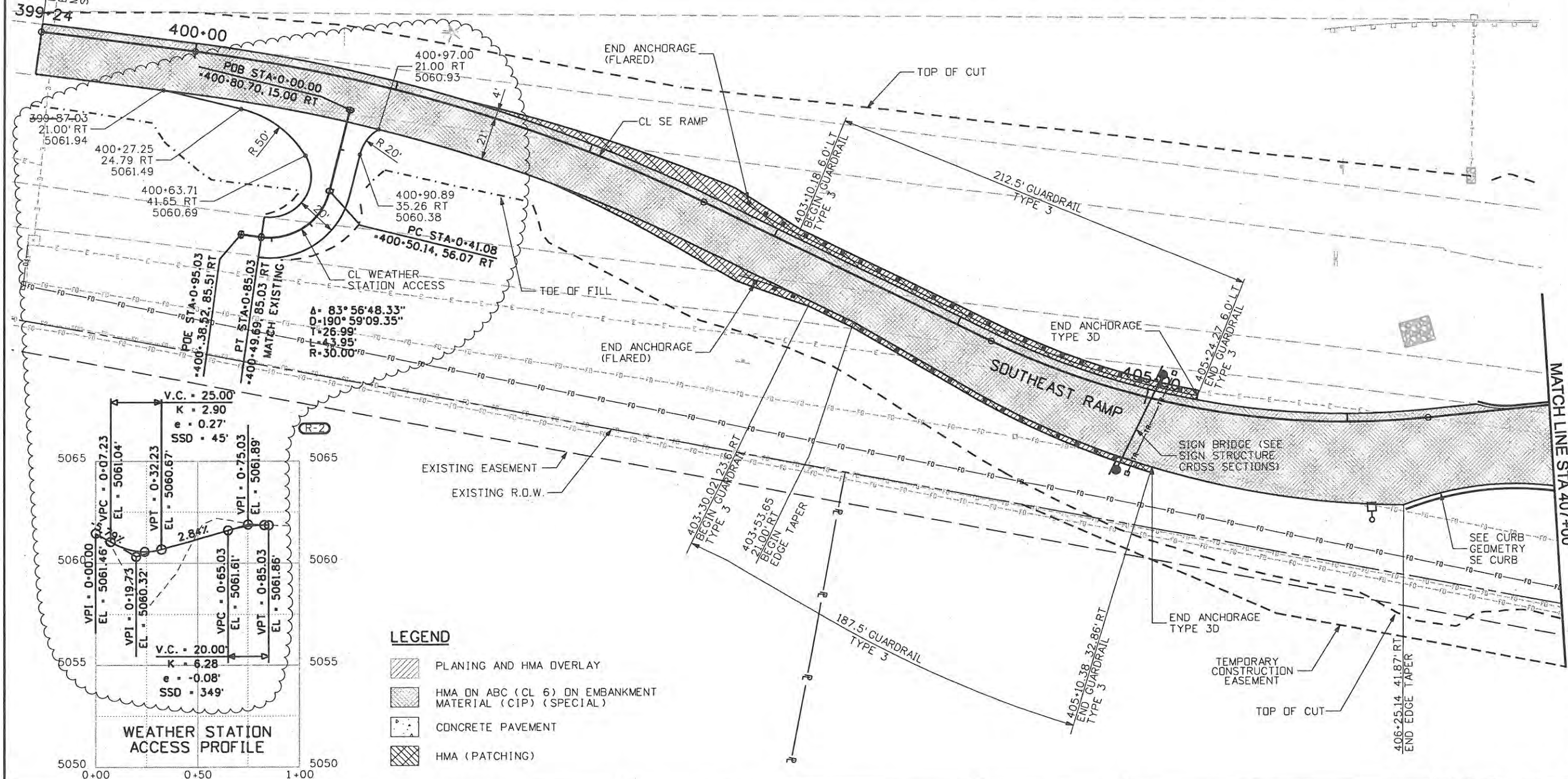




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# I-25 NORTHBOUND



**LEGEND**

- PLANING AND HMA OVERLAY
- HMA ON ABC (CL 6) ON EMBANKMENT MATERIAL (CIP) (SPECIAL)
- CONCRETE PAVEMENT
- HMA (PATCHING)

**Computer File Information**

Creation Date: 1/11/07	Initials: JBK
Print Date: 9/23/2009	Initials: JJW
File Name: 0610031800rdp08.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

**Sheet Revisions**

Date	Comments	Init.
09/24/09	TIE TO EXIST	JJW

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Colorado Department of Transportation

No Revisions: 9/14/11

Revised:

Void:

**ROADWAY PLANS**  
SOUTHEAST RAMP

Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: Rdwy Pln	Subset Sheets: PL8 of 8

**Project No./Code**

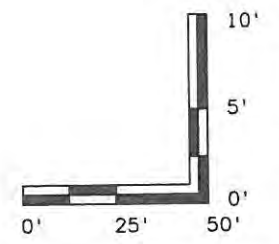
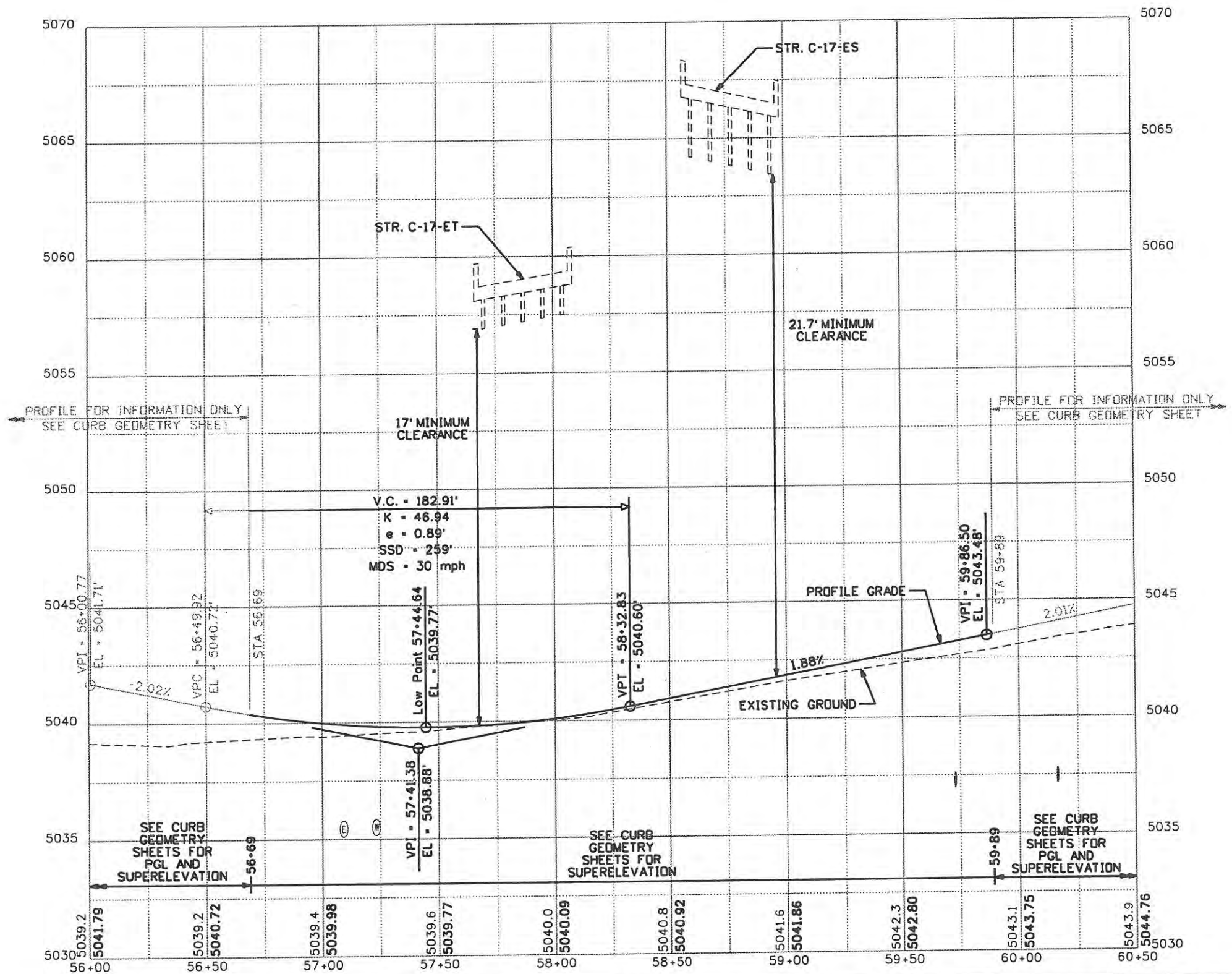
ES4 0253-207

17244

Sheet Number 87X

MATCH LINE STA 407+00

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Computer File Information	
Creation Date: 06/05/07	Initials: JJW
Print Date: 5/3/2009	Initials: JJW
File Name: Profile Crossroads.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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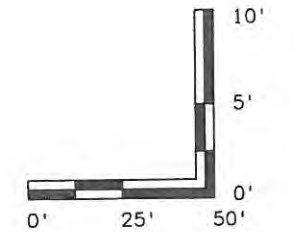
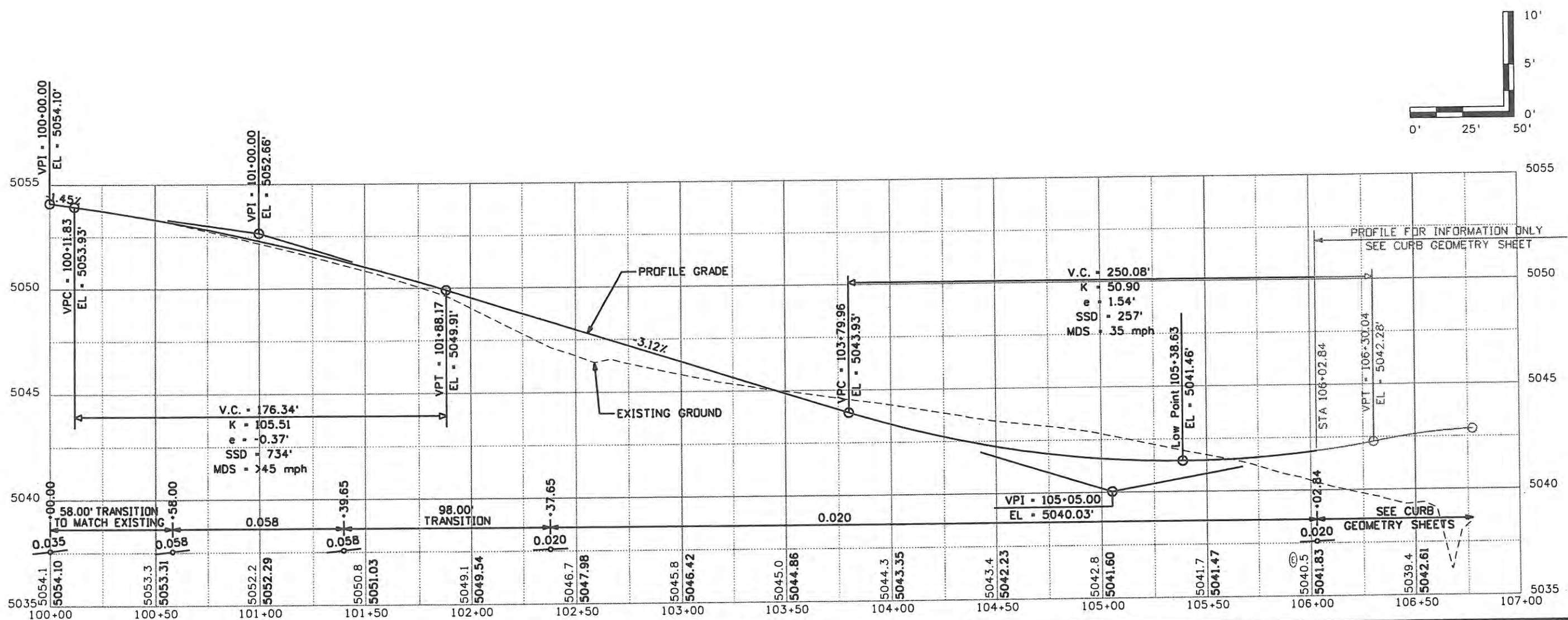
No Revisions: 9/19/11
Revised:
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ROADWAY PROFILE CROSSROADS BLVD	
Designer: JJW	Structure Numbers
Detailer: JJW	
Sheet Subset: Rdwy Prof	Subset Sheets: PR1 of 5

Project No./Code ES4 0253-207
17244
Sheet Number 88

**WILSON & COMPANY**  
 Engineers & Architects  
 999 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2693





Computer File Information	
Creation Date: 06/05/07	Initials: JJW
Print Date: 5/3/2009	Initials: JJW
File Name: Profile SW Quad.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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970-962-2000

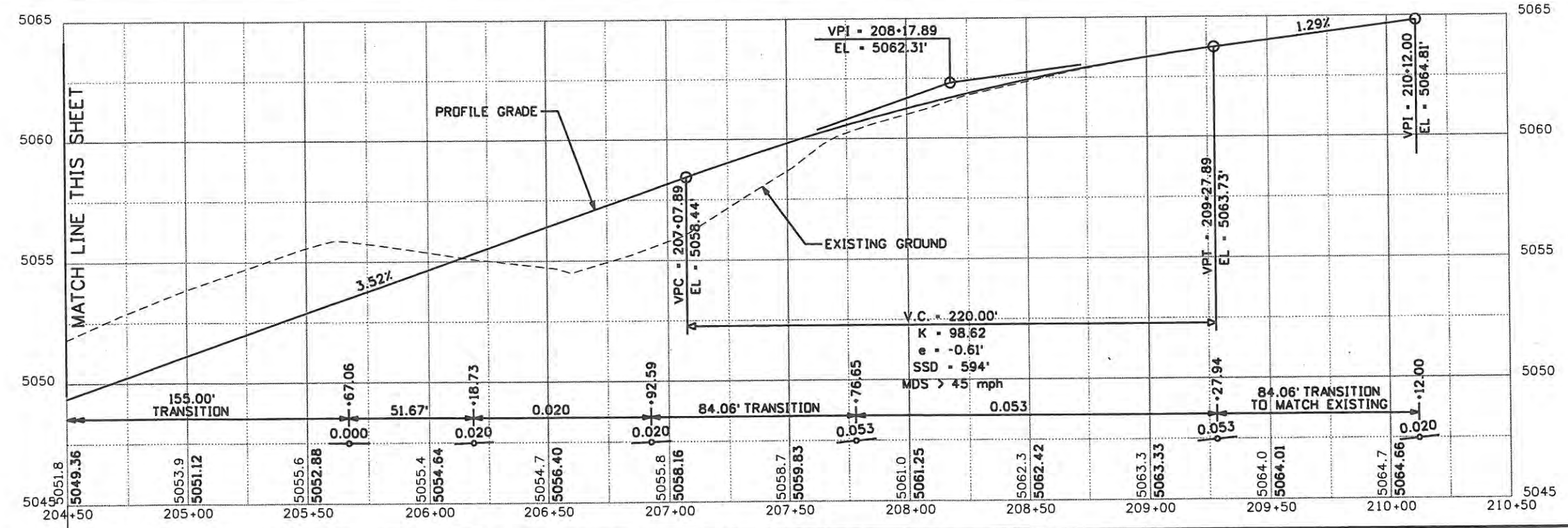
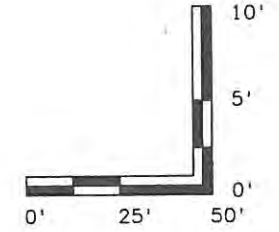
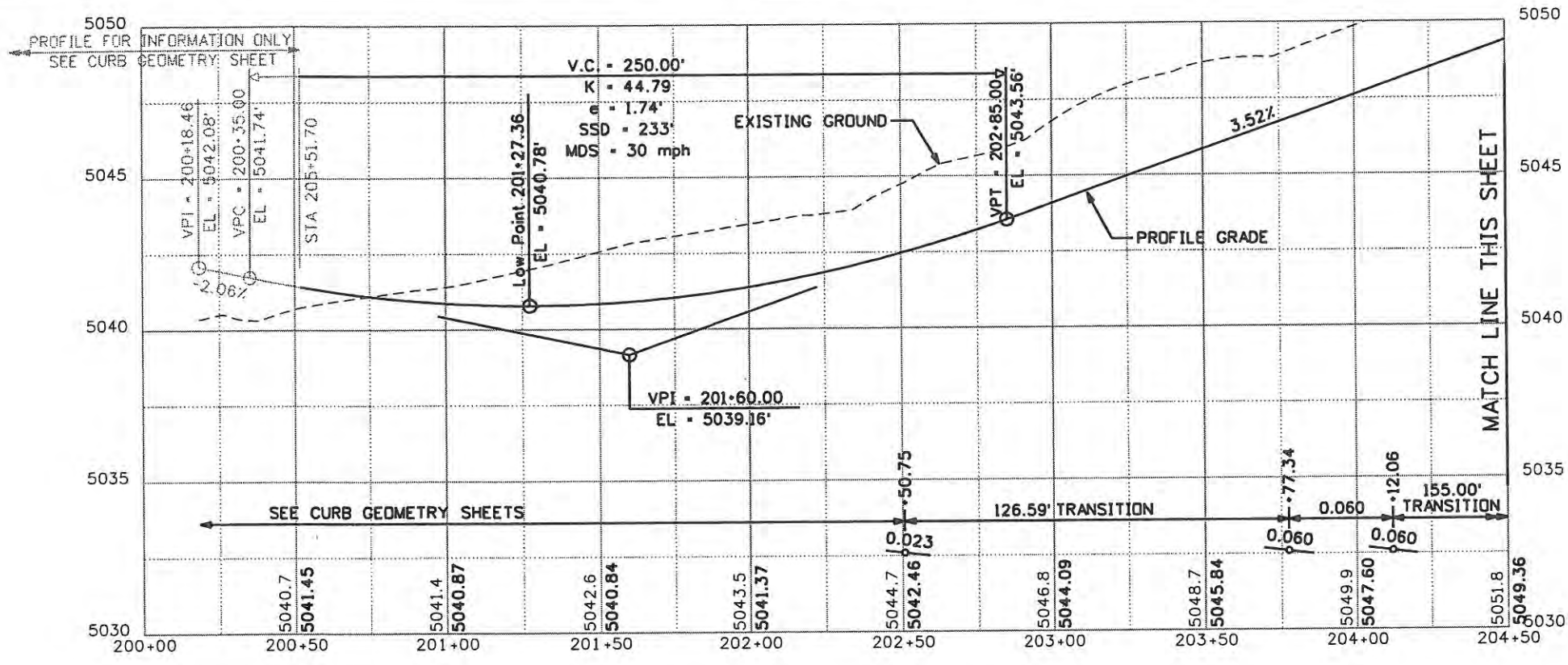
Colorado Department of Transportation

No Revisions: 9/19/11
Revised:
Void:

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SW RAMP	
Designer: JJW	Structure Numbers
Detailer: JJW	
Sheet Subset: Rdwy Prof	Subset Sheets: PR2 of 5

Project No./Code	ES4 0253-207
	17244
Sheet Number	89

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 889 18th Street Suite 2600  
 Denver, CO 80202  
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Computer File Information	
Creation Date: 06/05/07	Initials: JJW
Print Date: 5/3/2009	Initials: JJW
File Name: Profile NW Quad.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date	Comments	Init.

**CITY OF LOVELAND**

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LOVELAND, CO 80537  
970-962-2000

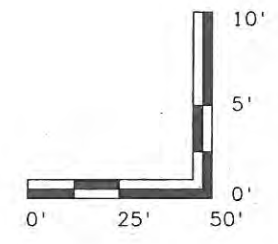
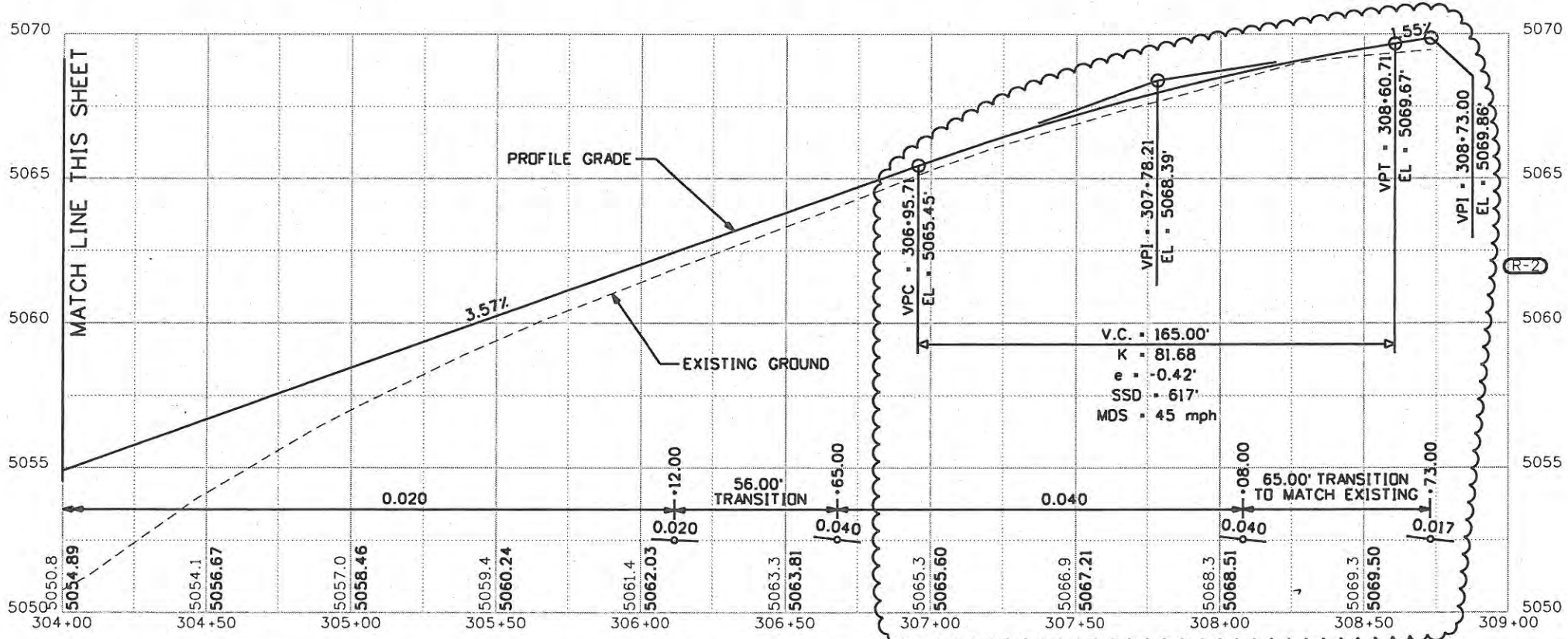
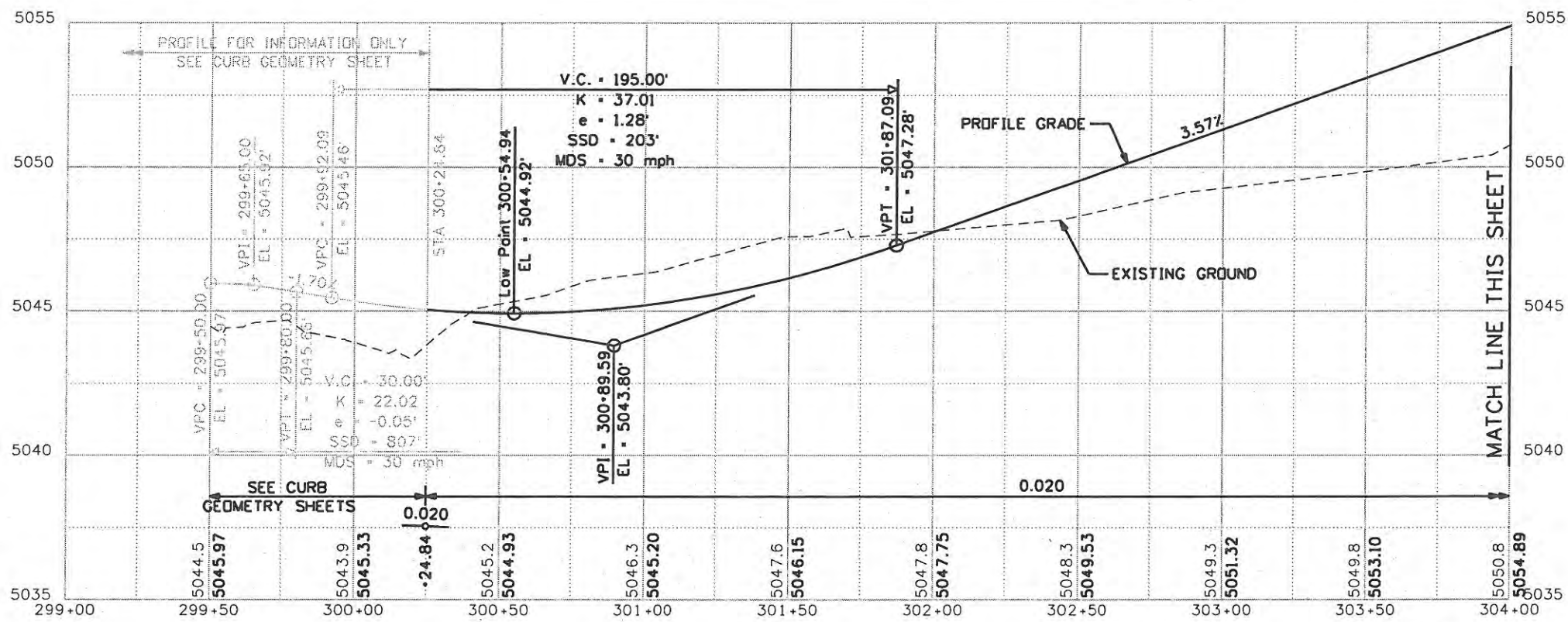
Colorado Department of Transportation

No Revisions: 9/14/11
Revised:
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ROADWAY PROFILE	
NW RAMP	
Designer: JJW	Structure Numbers
Detailer: JJW	
Sheet Subset: Rdwy Prof	Subset Sheets: PR3 of 5

Project No./Code	ES4 0253-207
	17244
Sheet Number	90





Computer File Information	
Creation Date: 06/05/07	Initials: JJW
Print Date: 9/23/2009	Initials: JJW
File Name: Profile NE Quad.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.
09/24/09	TIE TO EXIST	JJW

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970-962-2000

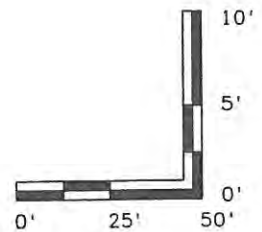
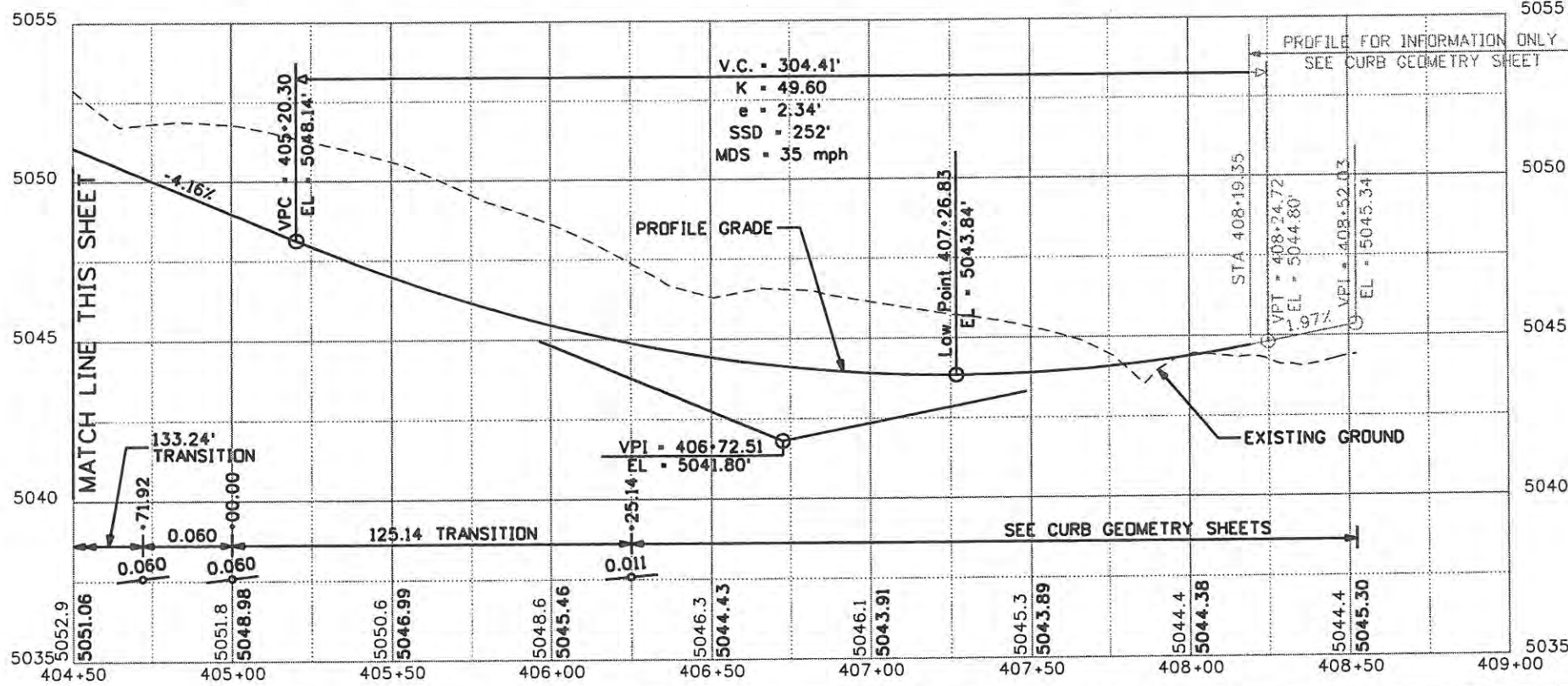
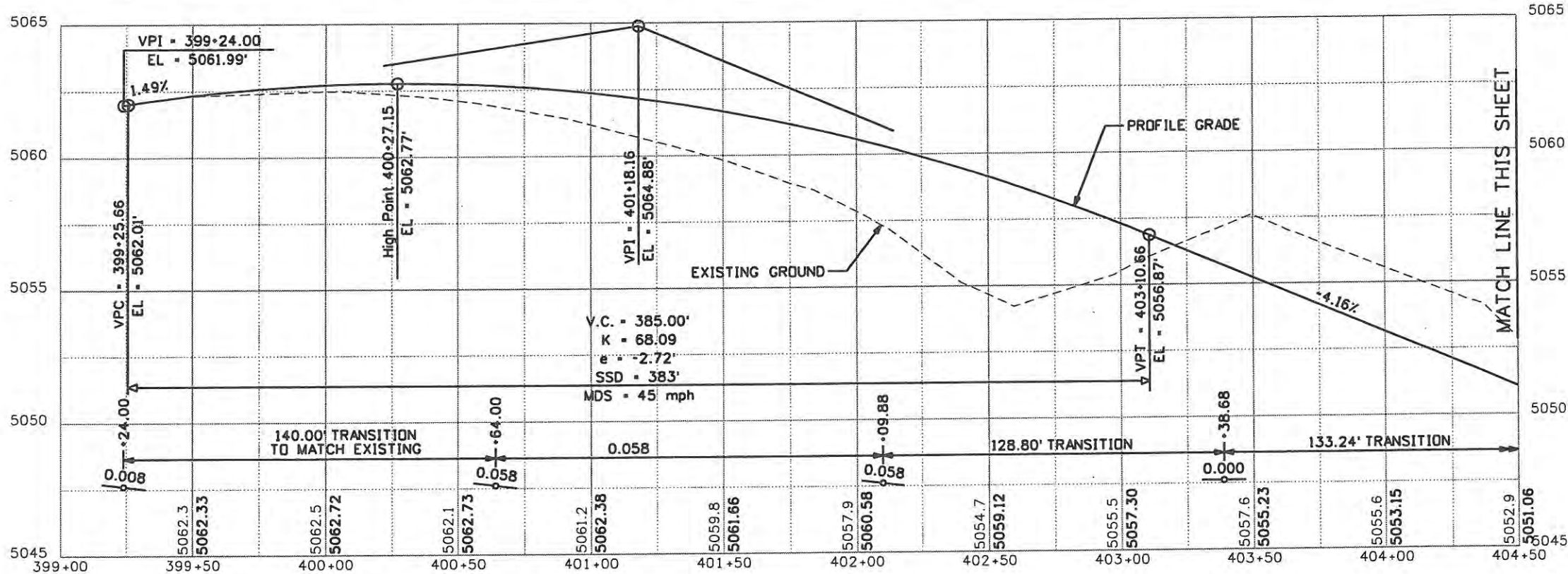
Colorado Department of Transportation

No Revisions: 9/14/11
Revised:
Void:

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Designer: JJW	Structure Numbers
Detailer: JJW	
Sheet Subset: Rdwy Prof	Subset Sheets: PR4 of 5

Project No./Code	ES4 0253-207
	17244
Sheet Number	91X

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 Fax: 303-297-2893



Computer File Information	
Creation Date: 06/05/07	Initials: JJW
Print Date: 5/3/2009	Initials: JJW
File Name: Profile SE Quad.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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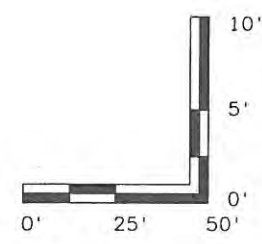
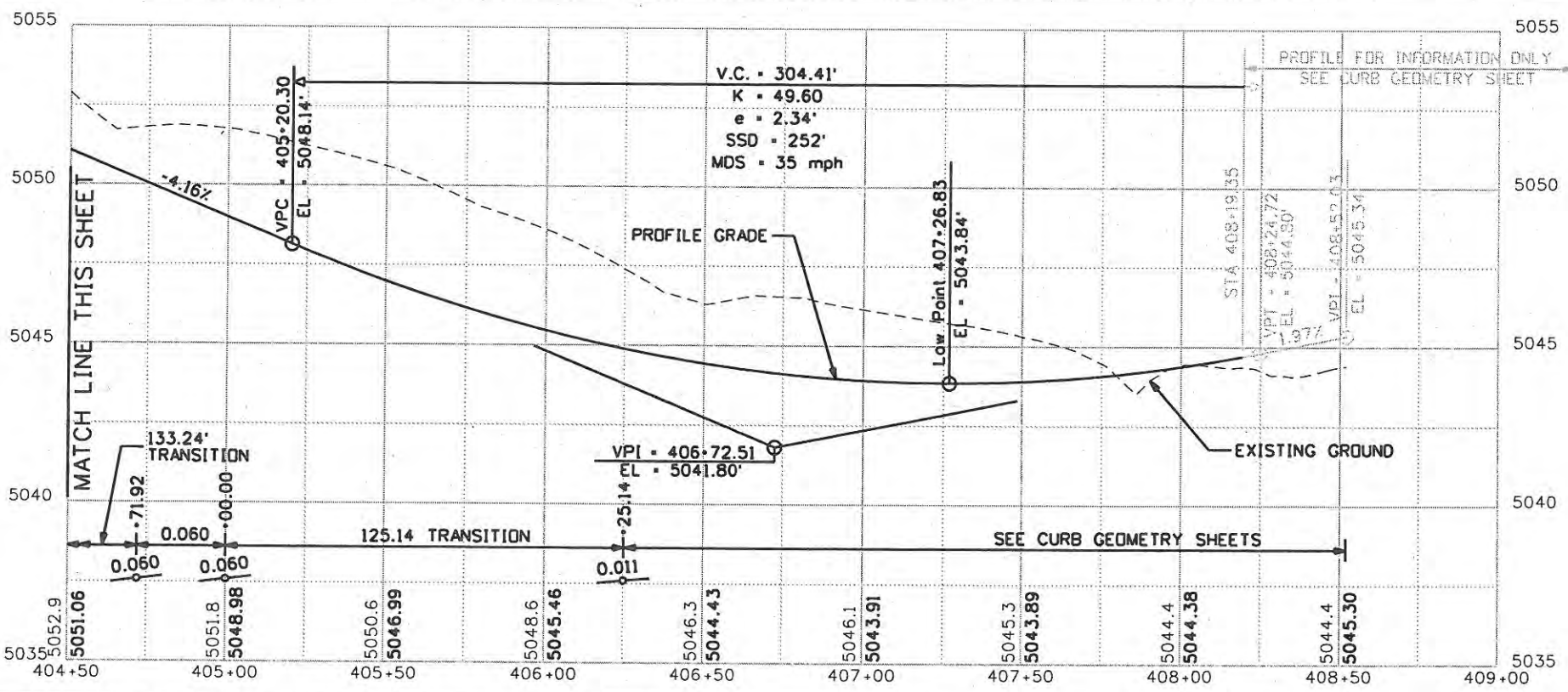
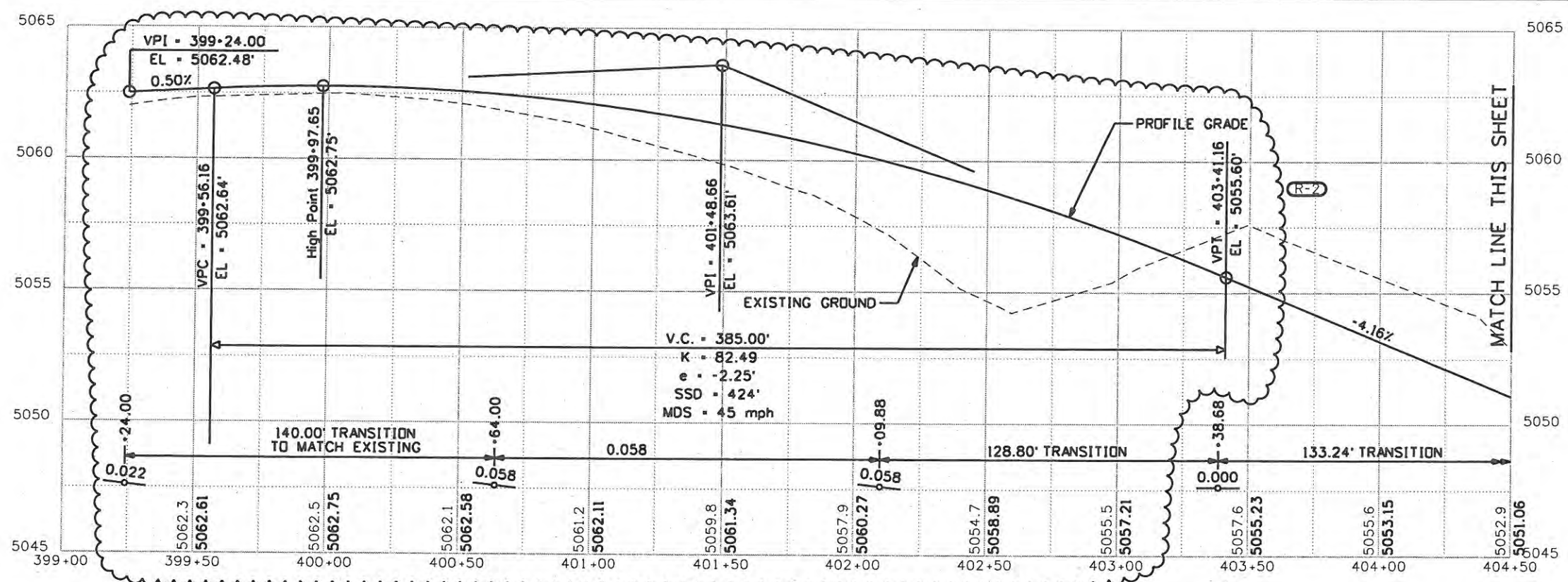
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ROADWAY PROFILE SE RAMP		
Designer: JJW	Structure Numbers	
Detailer: JJW		
Sheet Subset: Rdwy Prof	Subset Sheets: PR5 of 5	

Project No./Code	ES4 0253-207
	17244
Sheet Number	92

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Computer File Information	
Creation Date: 06/05/07	Initials: JJW
Print Date: 9/23/2009	Initials: JJW
File Name: Profile SE Quad.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.
09/24/09	TIE TO EXIST	JJW

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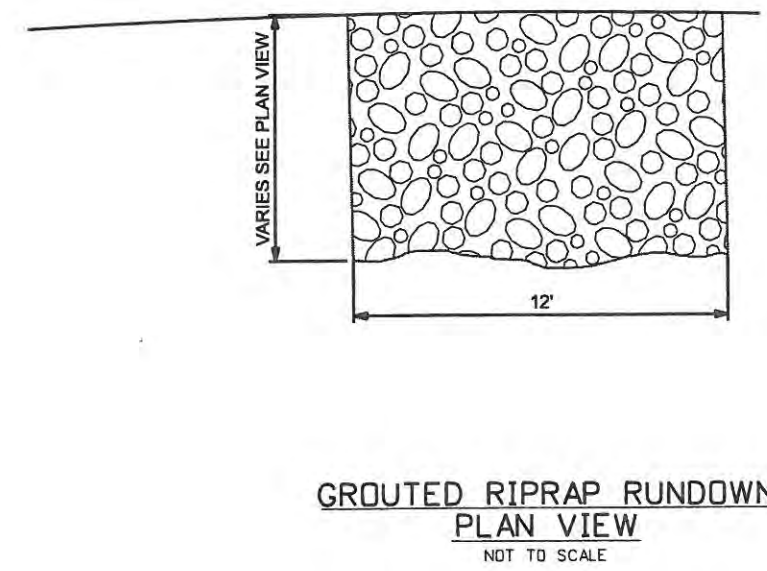
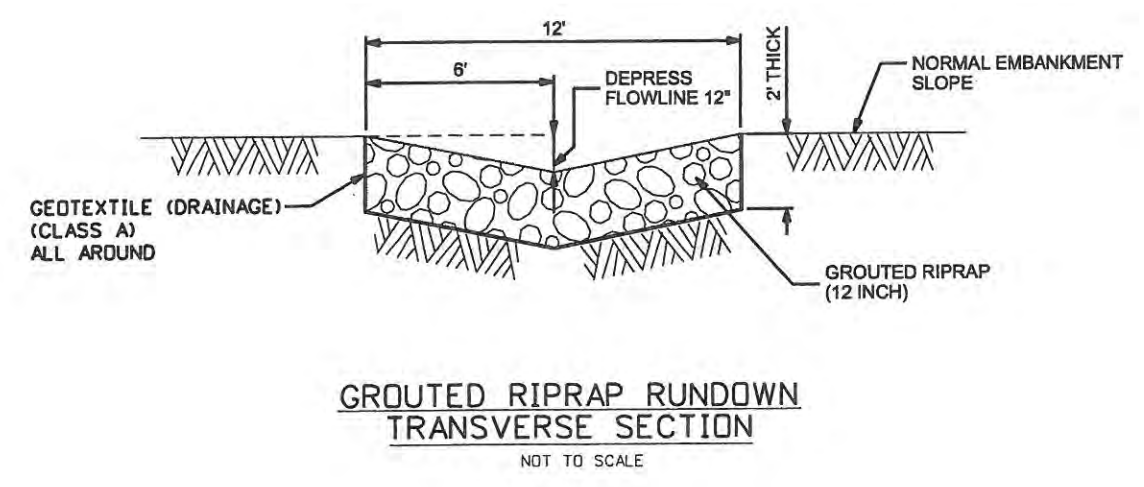
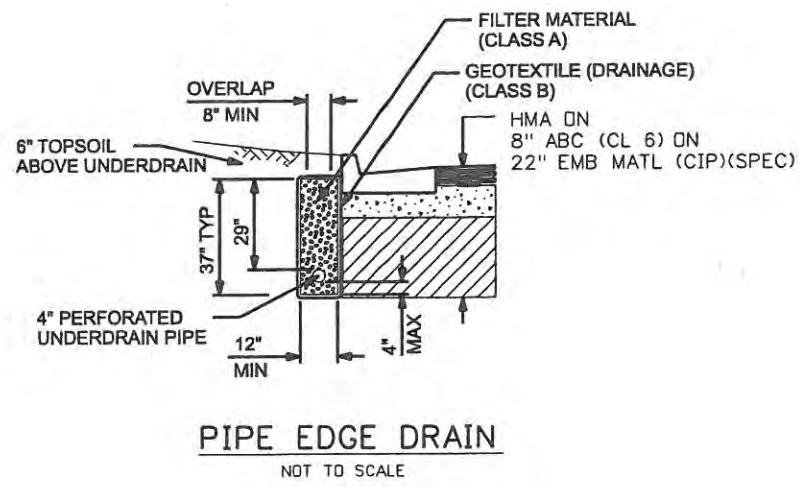
Colorado Department of Transportation

No Revisions: 9/14/11
Revised:
Void:

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Designer: JJW	Structure Numbers
Detailer: JJW	
Sheet Subset: Rdwy Prof	Subset Sheets: PR5 of 5

Project No./Code ES4 0253-207
17244
Sheet Number 92X

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 995 18th Street Suite 2600  
 Denver, CO 80202  
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Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/3/2009	Initials:
File Name: 0610031800dr_dtl.dgn	
Horiz. Scale: 1:5	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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 970-962-2000  
  
**Colorado Department of Transportation**

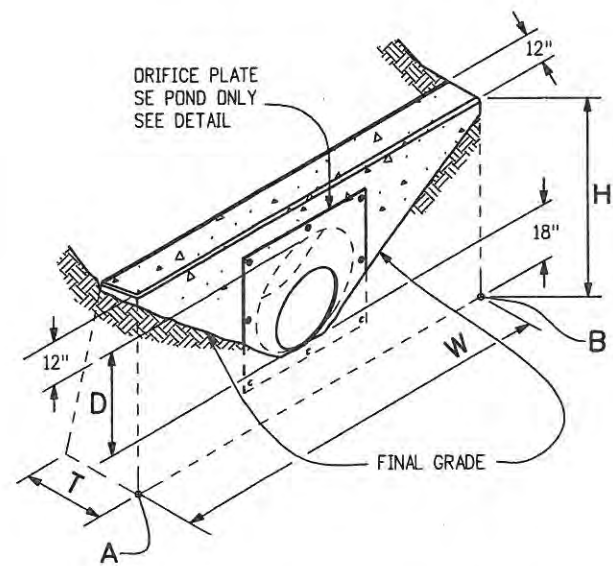
No Revisions: 9/14/11
Revised:
Void:

DRAINAGE PLANS CROSSROADS BOULEVARD	
Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: DRAINAGE	Subset Sheets: DR1 of 8

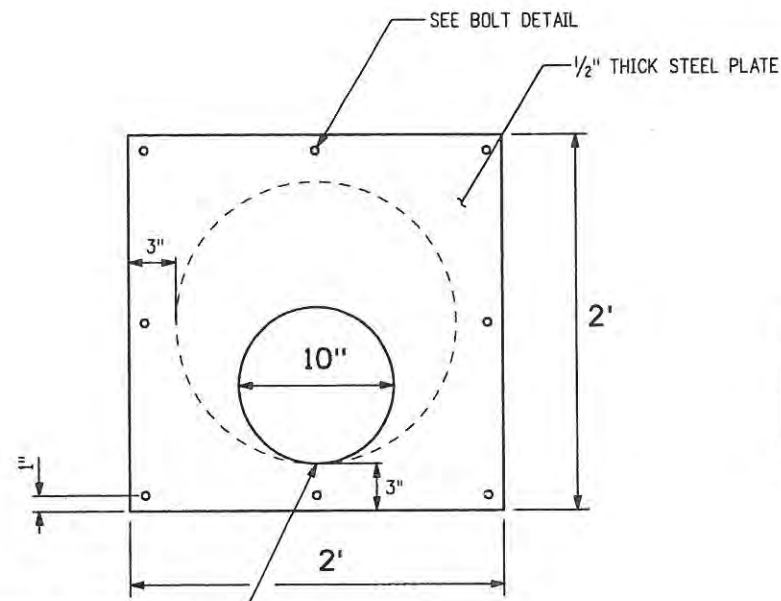
Project No./Code	ES4 0253-207
	17244
Sheet Number	93

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 Engineers & Architects  
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 Denver, CO 80202  
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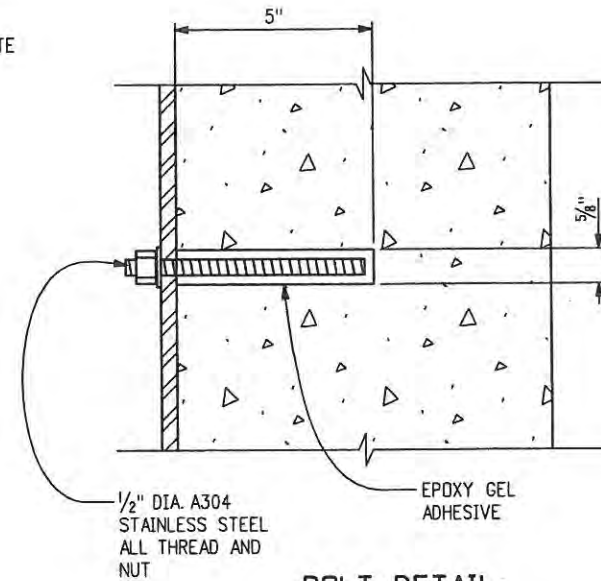


**CONCRETE HEADWALL INSTALLATIONS**



MATCH INVERT OF DRIFICE PLATE OPENING TO INVERT OF PIPE.

**ORIFICE PLATE DETAIL**  
ORIFICE PLATE ON SE POND ONLY



**BOLT DETAIL**

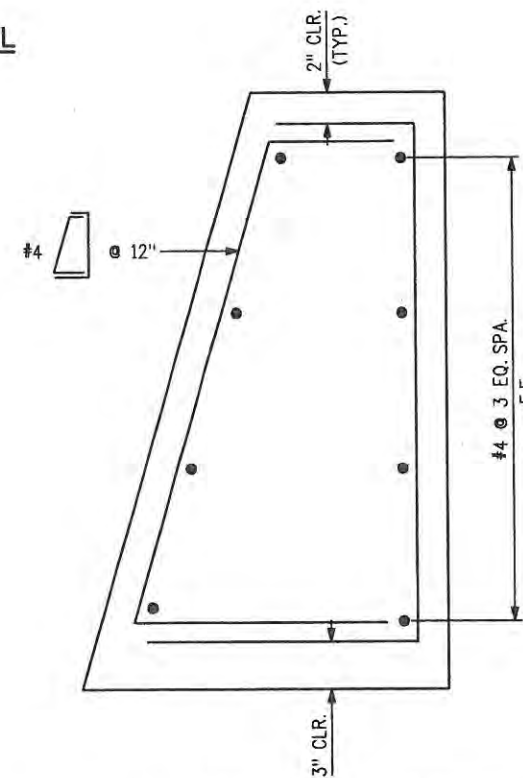
**GENERAL NOTES**

1. ALL CONCRETE SHALL BE CLASS B.
2. FOOTINGS IN ROCK SHALL BE POURED OUT TO ROCK AND NOT FORMED IN ACCORDANCE WITH SUBSECTION 601.09(b).
3. EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 3/4 IN.
4. VOLUME OCCUPIED BY PIPE HAS BEEN DEDUCTED FROM STEEL AND CONCRETE QUANTITIES.
5. DRIFICE PLATE WILL NOT BE MEASURED AND PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.

	NE POND	SE POND
A	N = 1402511.69	N = 1402358.05
	E = 3142324.10	E = 3142314.97
B	N = 1402527.19	N = 1402368.72
	E = 3142314.95	E = 3142325.51
BASE ELEVATION	5037.68	5037.95
D = PIPE DIAMETER (INSIDE)	24"	18"
H = D + 30"	54"	48"
W = 6D + 72"	18'	15'
T = 0.4 H (NEAREST IN.)	22"	19"
PAY QTY'S	CONCRETE (CUBIC YARDS)	4.1
	REINFORCING STEEL (LBS)	260

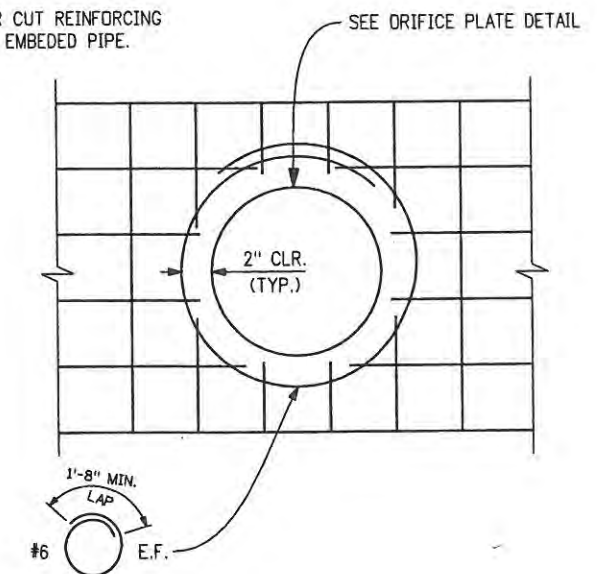
**HEADWALL DIMENSIONS**

PAY QUANTITIES CARRIED FORWARD TO THE TABULATION OF DRAINAGE STRUCTURES



**TYPICAL REINFORCING DETAIL**

NOTE: FIELD BEND OR CUT REINFORCING BARS TO MISS EMBEDDED PIPE.



**INLET REINFORCING DETAIL**

Computer File Information	
Creation Date: 11/3/08	Initials: JJW
Print Date: 5/3/2009	Initials: JJW
File Name: 0610031800Drain_Det_Headwall.dgn	
Horiz. Scale: 1:1	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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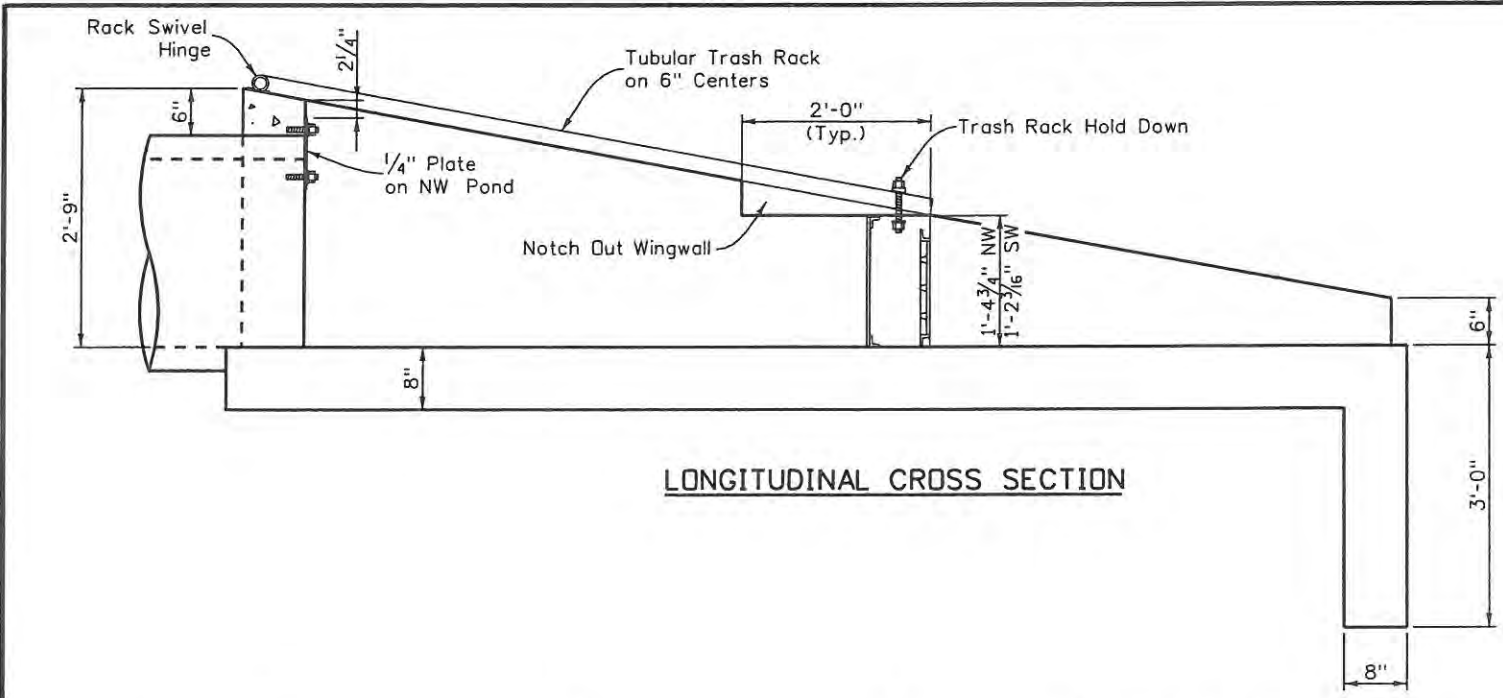


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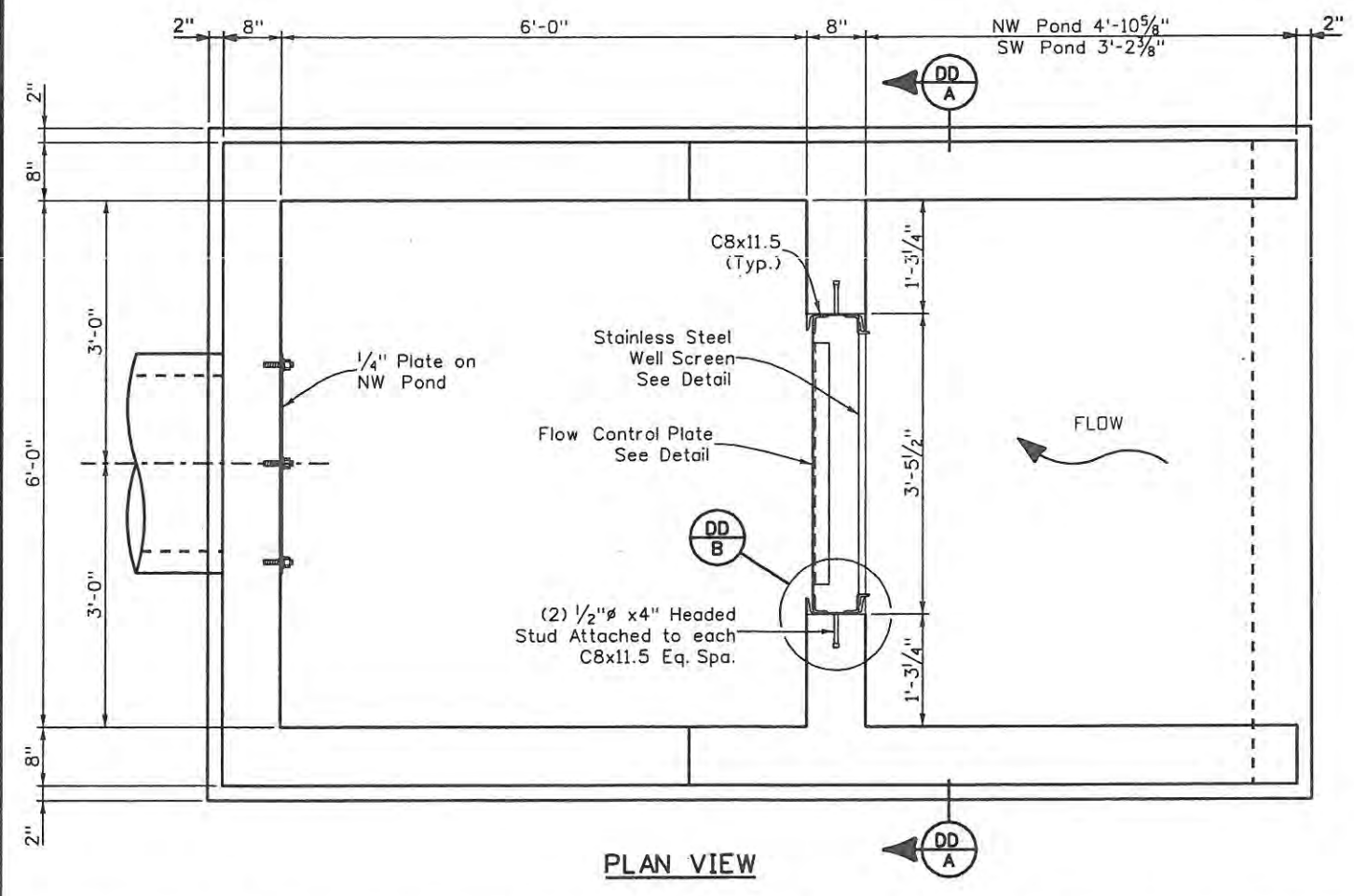
No Revisions: 7/14/08
Revised:
Void:

DRAINAGE DETAILS	
HEADWALLS WITH DRIFICE PLATES	
Designer: JJW	Structure Numbers
Detailer: JJW	
Sheet Subset: Drn Det	Subset Sheets: DD2 of 4

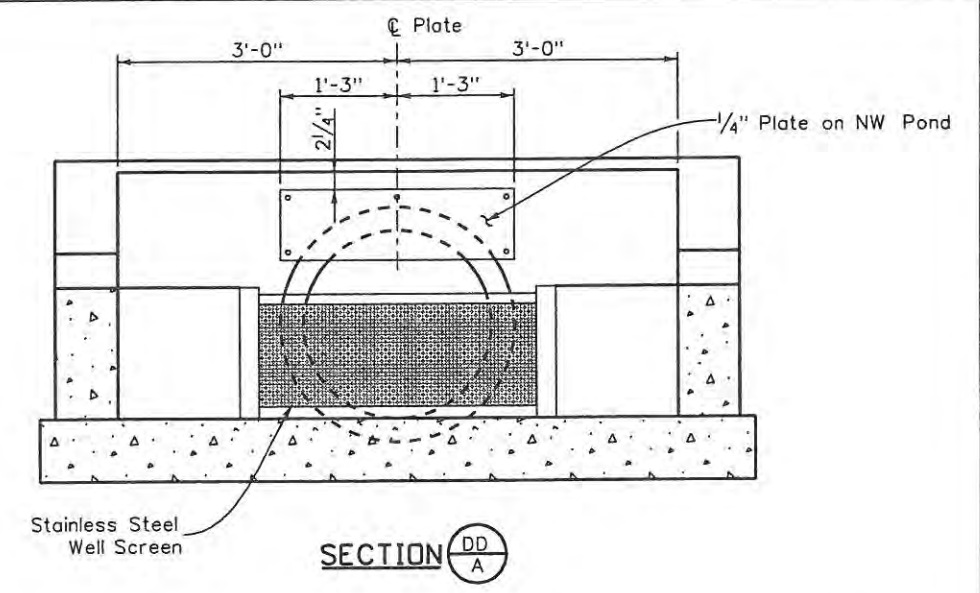
Project No./Code	
ES4 0253-207	17244
Sheet Number	94



LONGITUDINAL CROSS SECTION

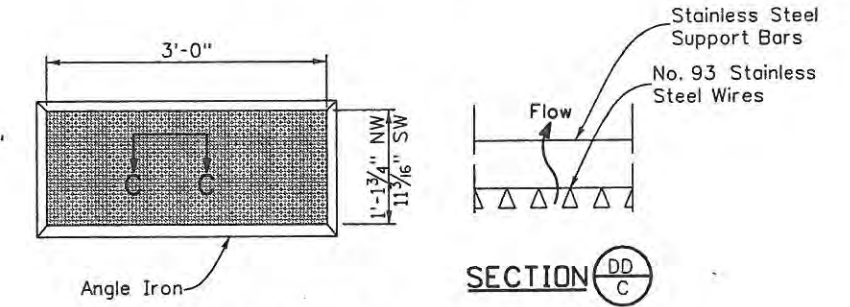


PLAN VIEW

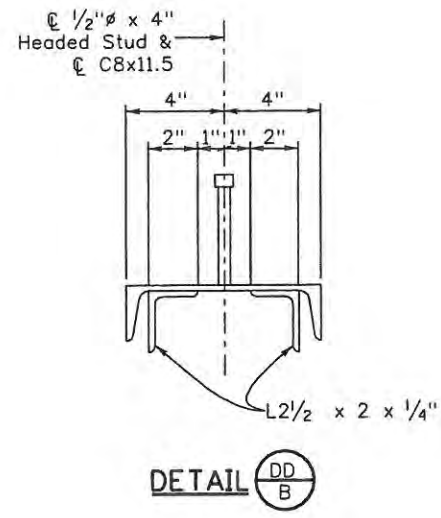


SECTION DD A

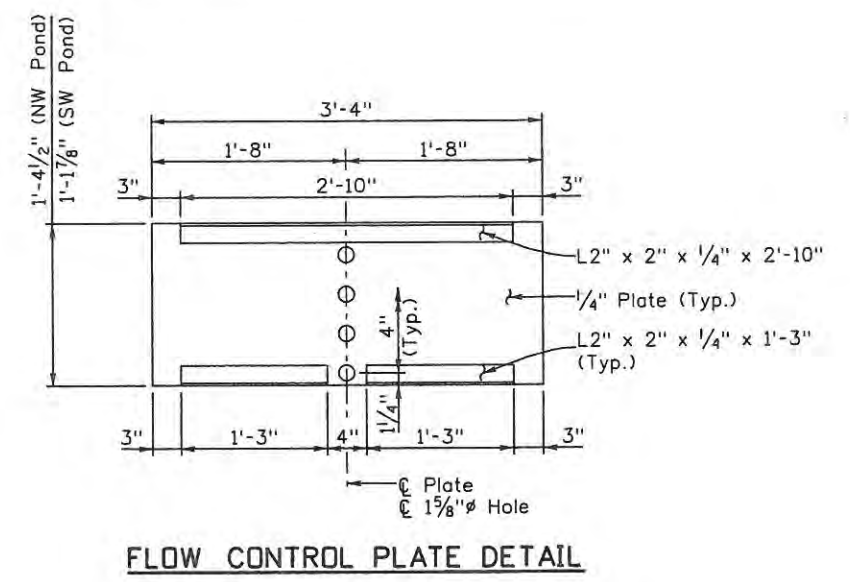
Johnson Vee wire (or equal) stainless steel screen with #93 Vee wire, 0.139" openings between wires, TE 0.074" x 1.0" support rods on 1" center spacing, total rack thickness of 1.155", and 1/4" x 1/2" angle carbon steel frame.



SECTION DD C  
STAINLESS STEEL WELL SCREEN



DETAIL DD B



FLOW CONTROL PLATE DETAIL

Computer File Information

Creation Date: 01/29/09	Initials: JJW
Print Date: 5/3/2009	Initials: JJW
File Name: 0610031800Drain_Det_WQ Outlet01.dgn	
Horiz. Scale: 1:1	Vert. Scale: As Noted

Sheet Revisions

Date:	Comments	Init.

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No Revisions: 9/14/11  
Revised:  
Void:

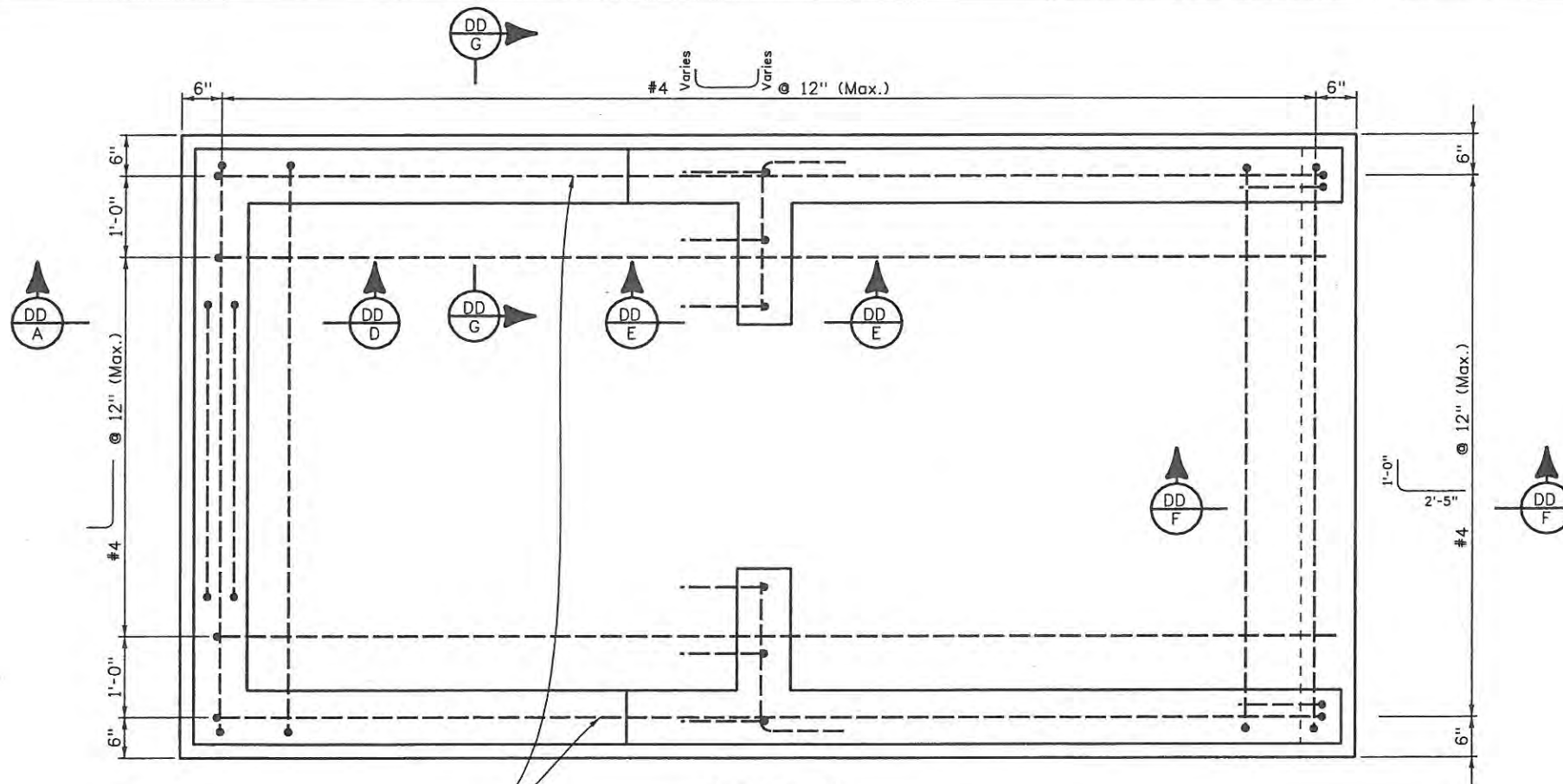
DRAINAGE DETAILS  
INLET TYPE C (SPECIAL)  
(1 OF 2)

Designer: JJW	Structure Numbers
Detailer: JJW	
Sheet Subset:	Subset Sheets: DD3 of 4

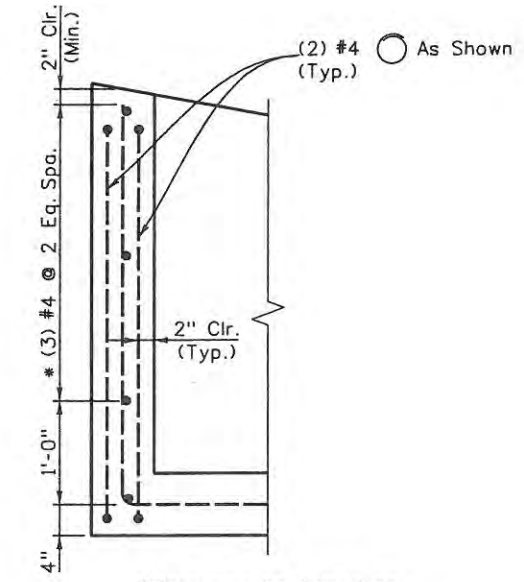
Project No./Code

ES4 0253-207
17244
Sheet Number 95

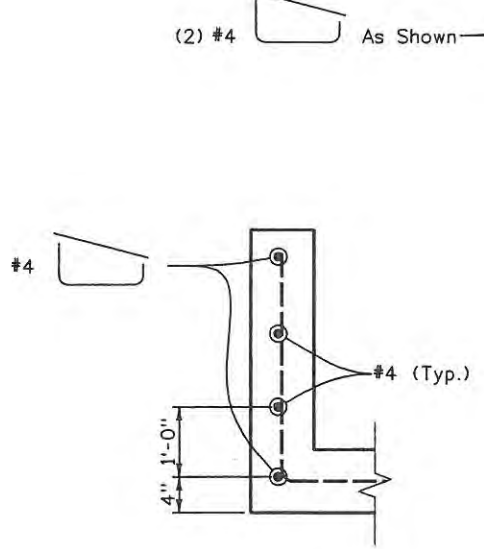




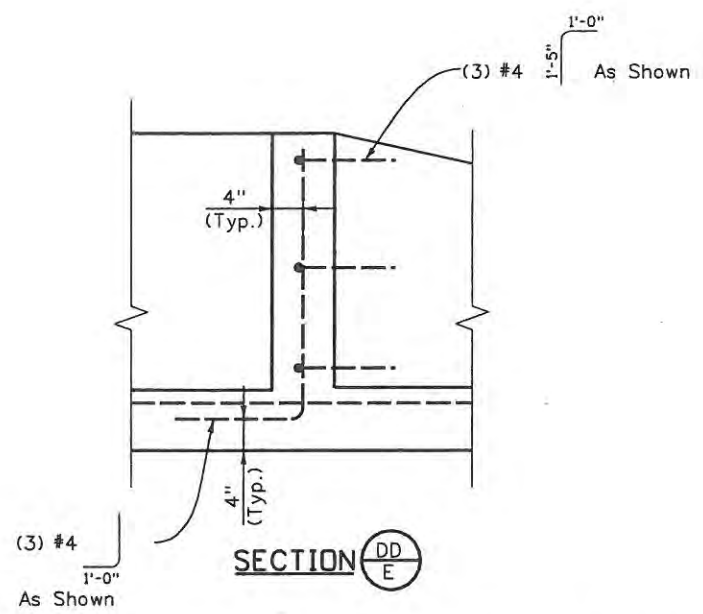
PLAN VIEW



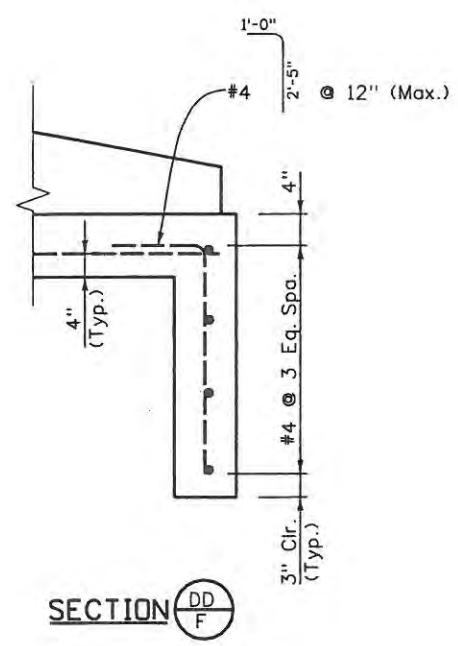
SECTION DD D



SECTION DD G



SECTION DD E



SECTION DD F

Computer File Information	
Creation Date: 01/29/09	Initials: JJW
Print Date: 5/3/2009	Initials: JJW
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Horiz. Scale: 1:1	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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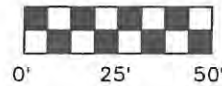
500 E. THIRD STREET  
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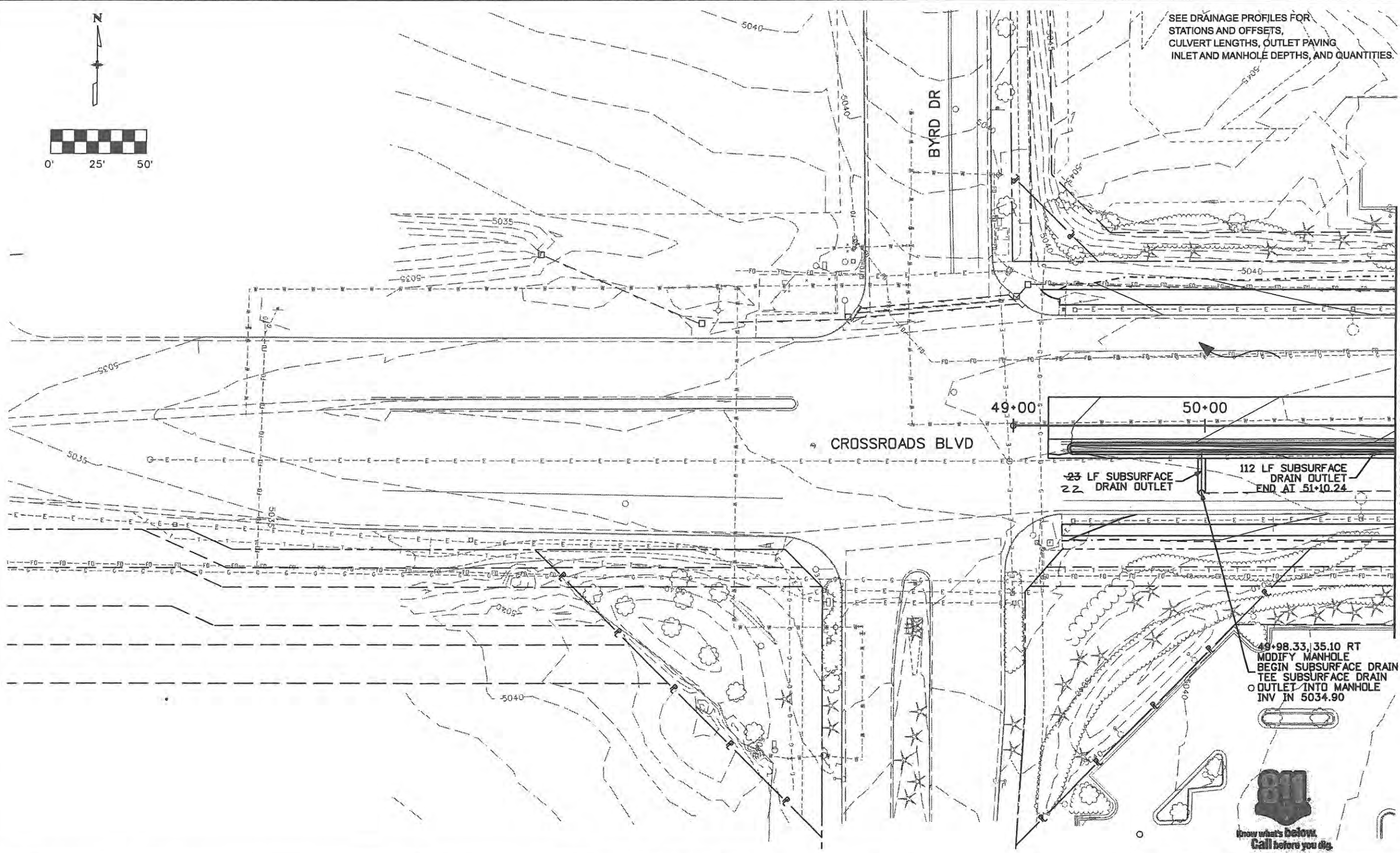
Colorado Department of Transportation

DRAINAGE DETAILS INLET TYPE C (SPECIAL) (2 OF 2)	
No Revisions: 9/14/11	Revised:
Void:	
Designer: JJW	Structure Numbers
Detailer:	
Sheet Subset:	Subset Sheets: DD4 of 4

Project No./Code	
ES4 0253-207	17244
Sheet Number	96



SEE DRAINAGE PROFILES FOR STATIONS AND OFFSETS, CULVERT LENGTHS, OUTLET PAVING INLET AND MANHOLE DEPTHS, AND QUANTITIES.



MATCH LINE STA 51+00

23 LF SUBSURFACE DRAIN OUTLET

112 LF SUBSURFACE DRAIN OUTLET END AT 51+0.24

49+98.33, 35.10 RT  
MODIFY MANHOLE  
BEGIN SUBSURFACE DRAIN OUTLET  
TEE SUBSURFACE DRAIN  
OUTLET INTO MANHOLE  
INV IN 5034.90



Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 6/4/2009	Initials:
File Name: 0610031800drp01.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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DEPARTMENT OF TRANSPORTATION

Colorado Department of Transportation

No Revisions:	
Revised: 9/14/11	
Void:	

DRAINAGE PLANS CROSSROADS BOULEVARD	
Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: DRAINAGE	Subset Sheets: DR1 of 8

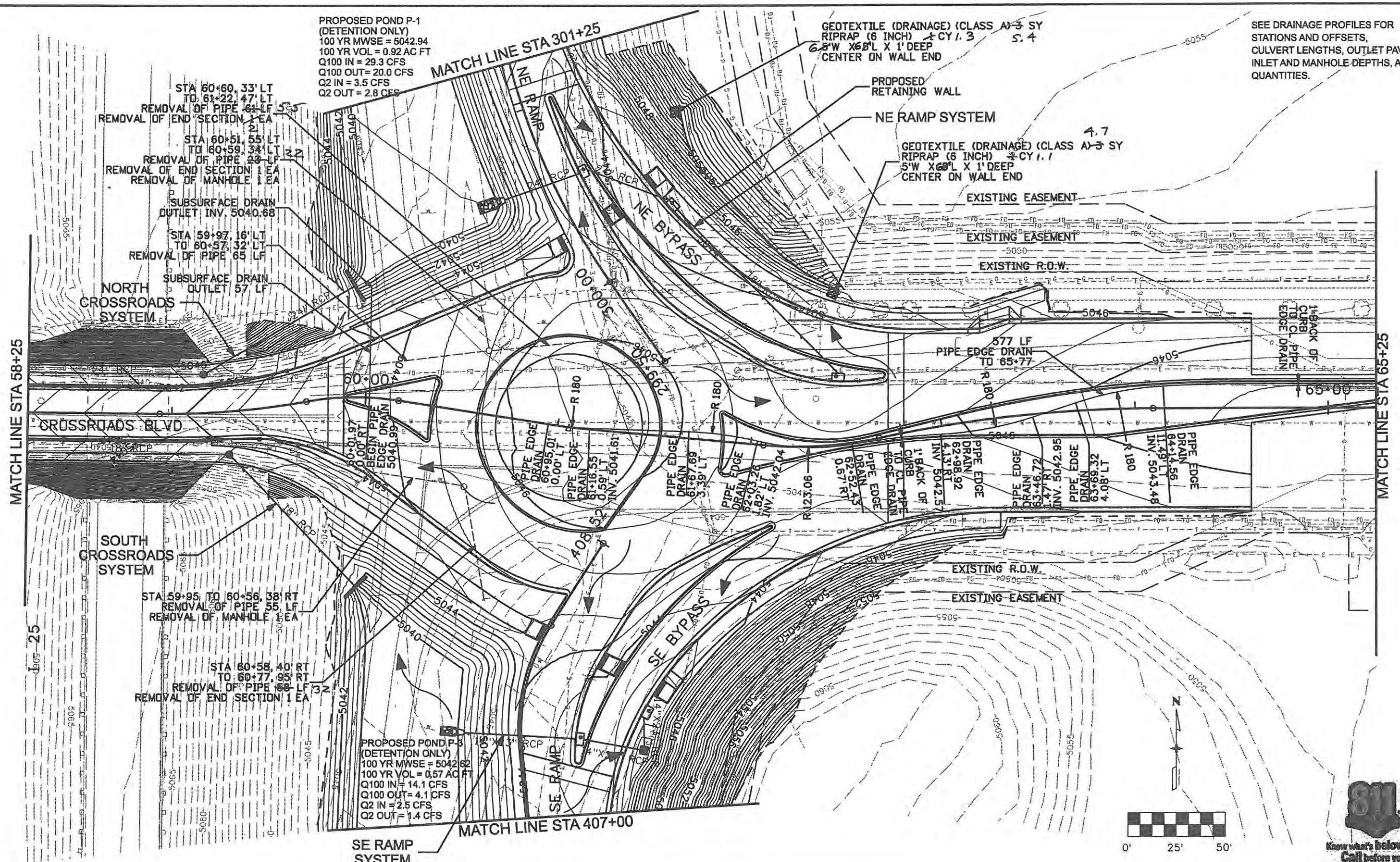
Project No./Code	ES4 0253-207
	17244
Sheet Number	97

**WILSON & COMPANY**  
Engineers & Architects  
988 18th Street Suite 2600  
Denver, CO 80202  
Phone: 303-297-2976  
Fax: 303-297-2693









PROPOSED POND P-1  
(DETENTION ONLY)  
100 YR MWSE = 5042.94  
100 YR VOL = 0.92 AC FT  
Q100 IN = 29.3 CFS  
Q100 OUT = 20.0 CFS  
Q2 IN = 3.5 CFS  
Q2 OUT = 2.8 CFS

GEOTEXTILE (DRAINAGE) (CLASS A-3 SY  
RIPRAP (6 INCH) ±CY 1.3 S. 4  
6" W X 6" L X 1' DEEP  
CENTER ON WALL END

SEE DRAINAGE PROFILES FOR  
STATIONS AND OFFSETS,  
CULVERT LENGTHS, OUTLET PAVING,  
INLET AND MANHOLE DEPTHS, AND  
QUANTITIES.

STA 60+60, 33' LT  
TO 61+22, 47' LT  
REMOVAL OF PIPE 61 LF  
REMOVAL OF END SECTION 1 EA  
2  
STA 60+51, 55' LT  
TO 60+59, 34' LT  
REMOVAL OF PIPE 22 LF  
REMOVAL OF END SECTION 1 EA  
REMOVAL OF MANHOLE 1 EA

STA 59+97, 16' LT  
TO 60+57, 32' LT  
REMOVAL OF PIPE 65 LF  
SUBSURFACE DRAIN  
OUTLET 57 LF

STA 59+95 TO 60+56, 38' RT  
REMOVAL OF PIPE 55 LF  
REMOVAL OF MANHOLE 1 EA

STA 60+58, 40' RT  
TO 60+77, 95' RT  
REMOVAL OF PIPE 68 LF  
REMOVAL OF END SECTION 1 EA

PROPOSED POND P-3  
(DETENTION ONLY)  
100 YR MWSE = 5042.62  
100 YR VOL = 0.57 AC FT  
Q100 IN = 14.1 CFS  
Q100 OUT = 4.1 CFS  
Q2 IN = 2.5 CFS  
Q2 OUT = 1.4 CFS

Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 6/4/2009	Initials:
File Name: 0610031800drp03.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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No Revisions:	
Revised: 9/14/11	
Void:	

DRAINAGE PLANS CROSSROADS BOULEVARD	
Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: DRAINAGE	Subset Sheets: DR3 of 8

Project No./Code	ES4 0253-207
	17244
Sheet Number	99

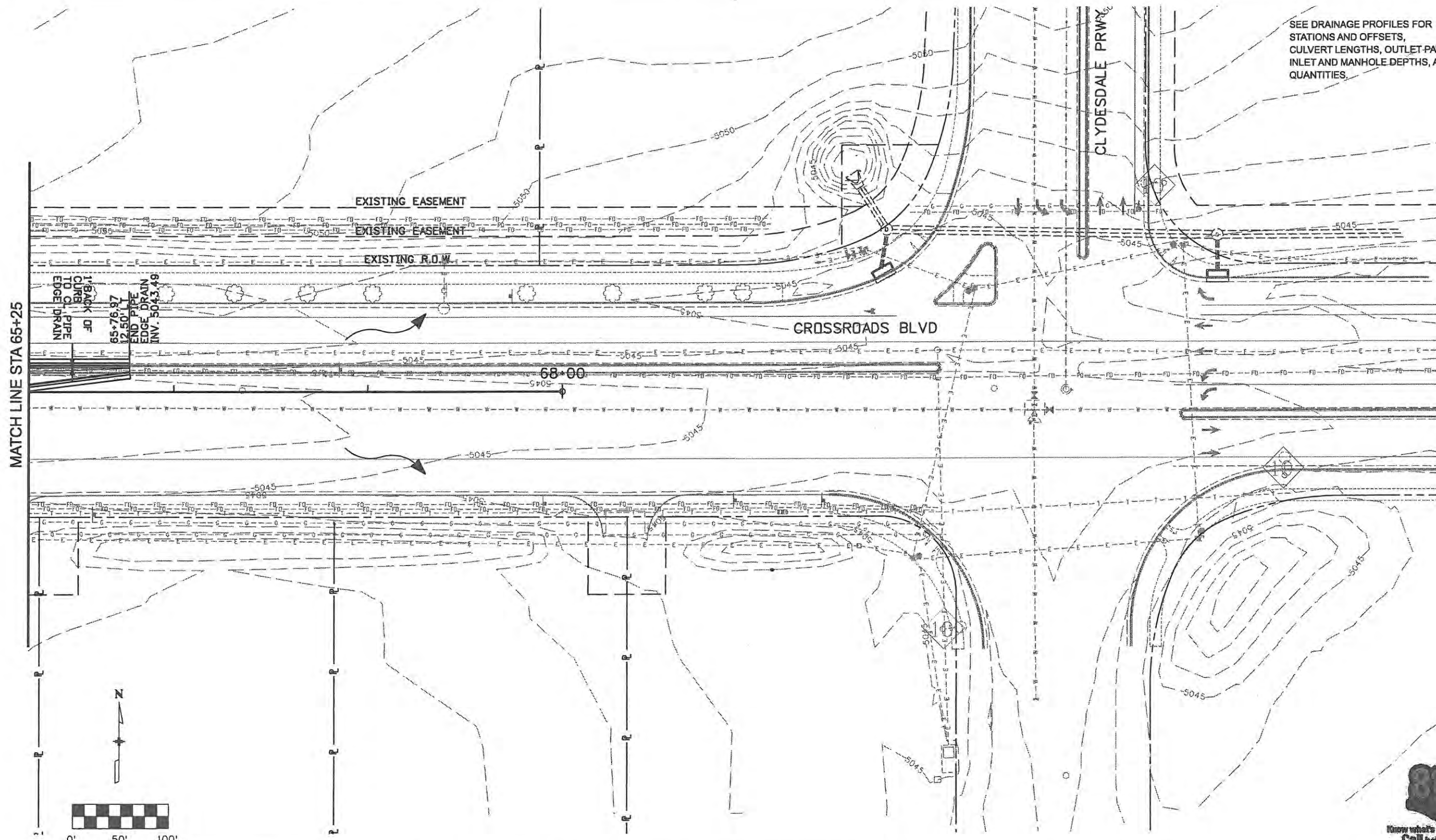
WILSON & COMPANY  
 Engineers & Architects  
 999 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2683





SEE DRAINAGE PROFILES FOR STATIONS AND OFFSETS, CULVERT LENGTHS, OUTLET PAVING, INLET AND MANHOLE DEPTHS, AND QUANTITIES.

MATCH LINE STA 65+25



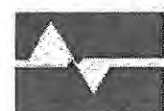
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**Sheet Revisions**

Date	Comments	Init.

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No Revisions: 9/14/11
Revised:
Void:

**DRAINAGE PLANS  
CROSSROADS BOULEVARD**

Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: DRAINAGE	Subset Sheets: DR4 of 8

**Project No./Code**

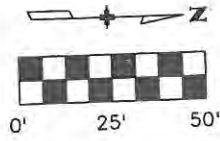
ES4 0253-207
17244
Sheet Number 100

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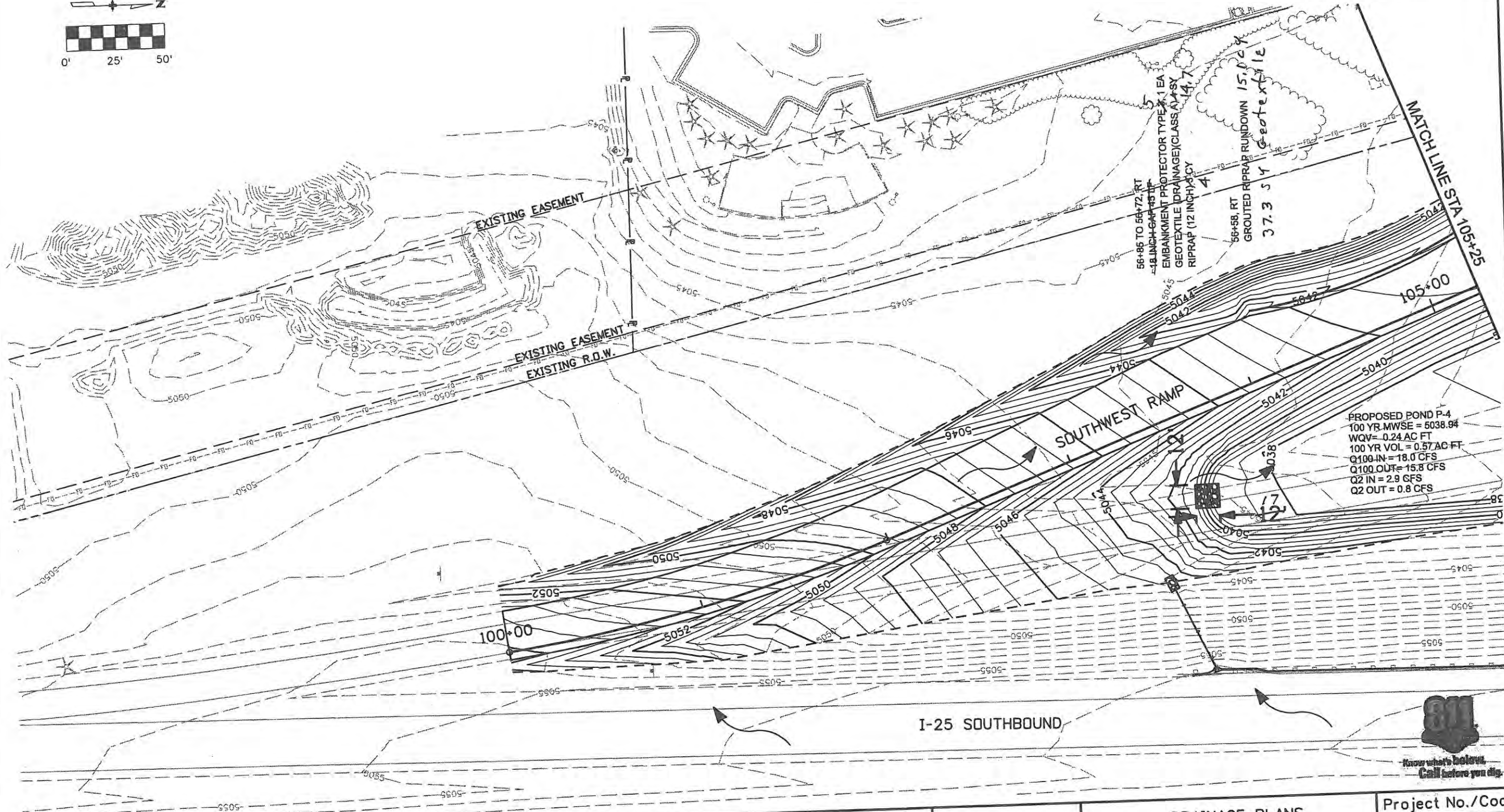


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SEE DRAINAGE PROFILES FOR STATIONS AND OFFSETS, CULVERT LENGTHS, OUTLET PAVING, INLET AND MANHOLE DEPTHS, AND QUANTITIES.



PROPOSED POND P-4  
 100 YR MWSE = 5038.94  
 WQV = 0.24 AC FT  
 100 YR VOL = 0.57 AC FT  
 Q100 IN = 18.0 CFS  
 Q100 OUT = 15.8 CFS  
 Q2 IN = 2.9 CFS  
 Q2 OUT = 0.8 CFS

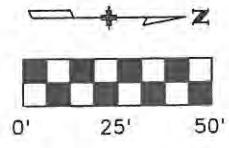
I-25 SOUTHBOUND



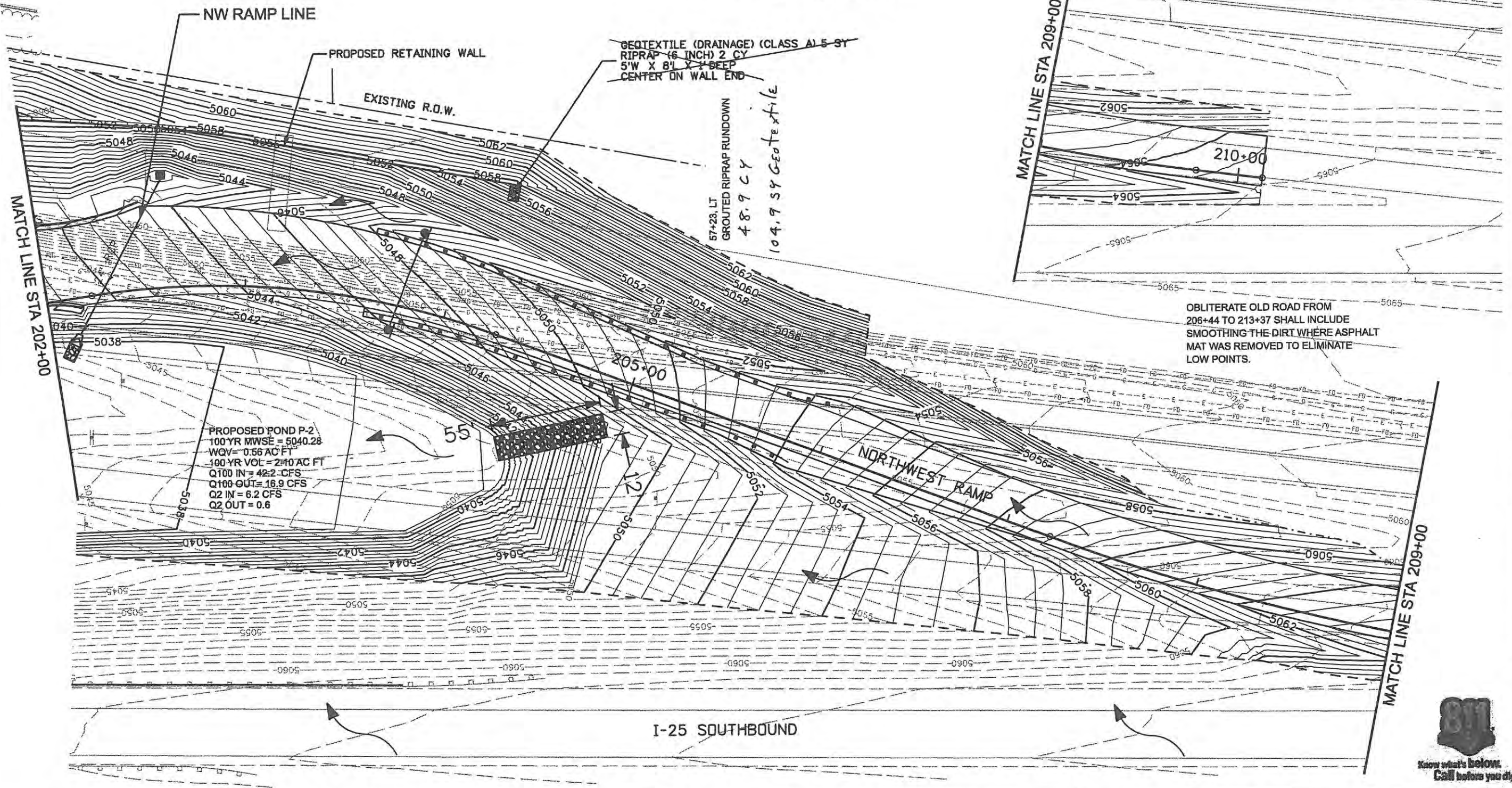
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Creation Date: Date	Initials: JBK	Date:	Comments:			Init.:	No Revisions:	Revised: 9/14/11	Void:	Designer: JJW
Print Date: 6/4/2009	Initials: JBK							Detailer: JBK	Subset Sheets: DR 5 of 8	17244
File Name: 0610031800drp05.dgn								Sheet Subset: DRAINAGE		Sheet Number 101
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SEE DRAINAGE PROFILES FOR STATIONS AND OFFSETS, CULVERT LENGTHS, OUTLET PAVING, INLET AND MANHOLE DEPTHS, AND QUANTITIES.



GEOTEXTILE (DRAINAGE) (CLASS A) 5' ST  
RIPRAP (6 INCH) 2' CY  
5' W X 8' X 1' DEEP  
CENTER ON WALL END

57+23, LT  
GROUTED RIPRAP RUNDOWN  
48.9 CY  
104.9 SY Geotextile

PROPOSED POND P-2  
100 YR MWSE = 5040.28  
WQV = 0.56 AC FT  
100 YR VOL = 2.10 AC FT  
Q100 IN = 42.2 CFS  
Q100 OUT = 16.9 CFS  
Q2 IN = 6.2 CFS  
Q2 OUT = 0.6

OBLITERATE OLD ROAD FROM 206+44 TO 213+37 SHALL INCLUDE SMOOTHING THE DIRT WHERE ASPHALT MAT WAS REMOVED TO ELIMINATE LOW POINTS.

I-25 SOUTHBOUND



**Computer File Information**

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Print Date: 6/4/2009	Initials:
File Name: 0610031800drp06.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

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**Sheet Revisions**

Date:	Comments	Init.

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970-962-2000



Colorado Department  
of Transportation

No Revisions:
Revised: 9/14/11
Void:

**DRAINAGE PLANS  
NORTHWEST RAMP**

Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: DRAINAGE	Subset Sheets: DR6 of 8

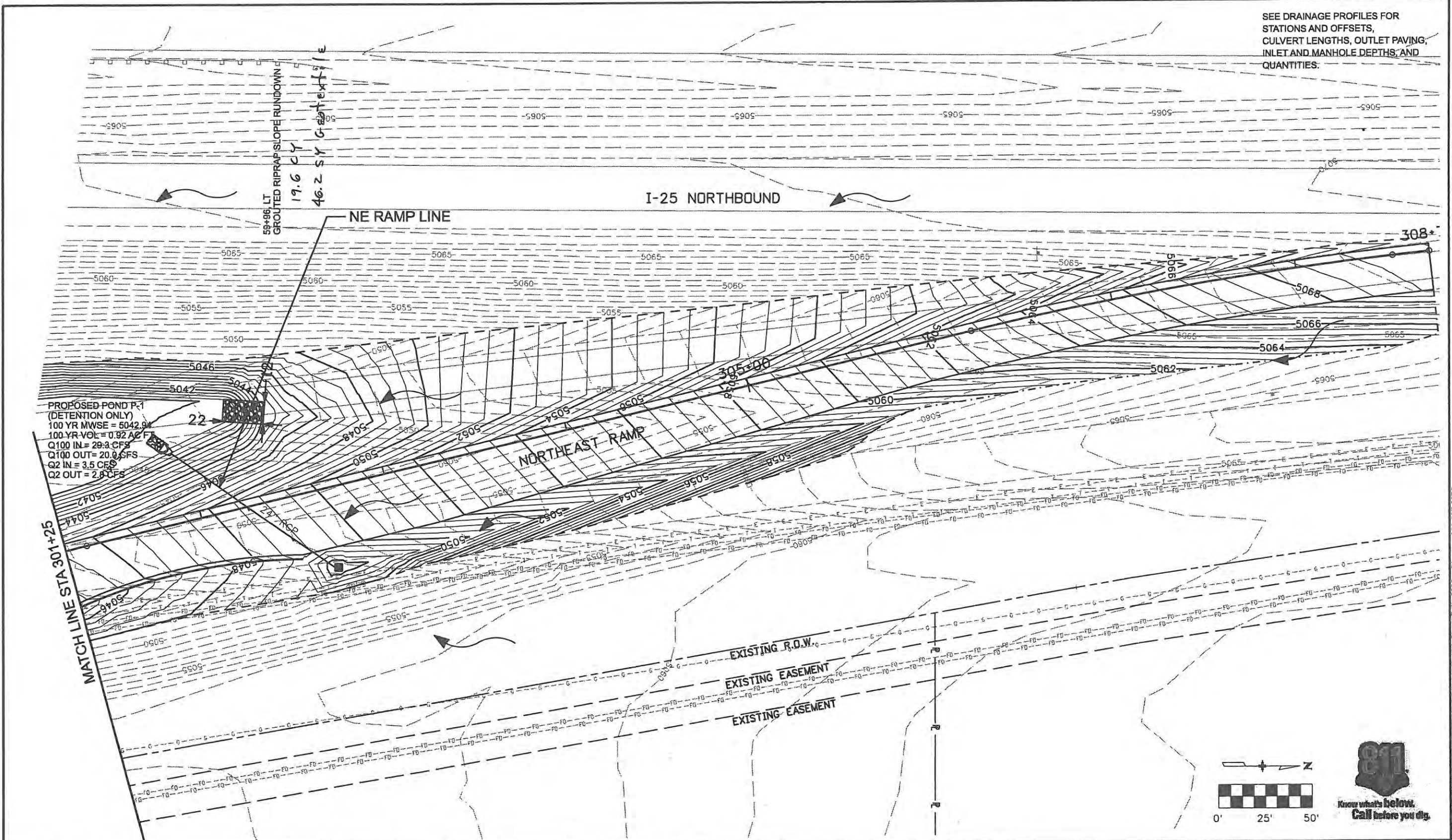
**Project No./Code**

ES4 0253-207
17244
Sheet Number 102

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SEE DRAINAGE PROFILES FOR STATIONS AND OFFSETS, CULVERT LENGTHS, OUTLET PAVING, INLET AND MANHOLE DEPTHS, AND QUANTITIES.



**Computer File Information**

Creation Date: 1/11/07	Initials: JBK
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Horiz. Scale: 1:50	Vert. Scale: As Noted

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**Sheet Revisions**

Date:	Comments	Init.

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970-962-2000



Colorado Department of Transportation

No Revisions:  
Revised: 9/14/11  
Void:

**DRAINAGE PLANS  
NORTHEAST RAMP**

Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: DRAINAGE	Subset Sheets: DR7 of 8

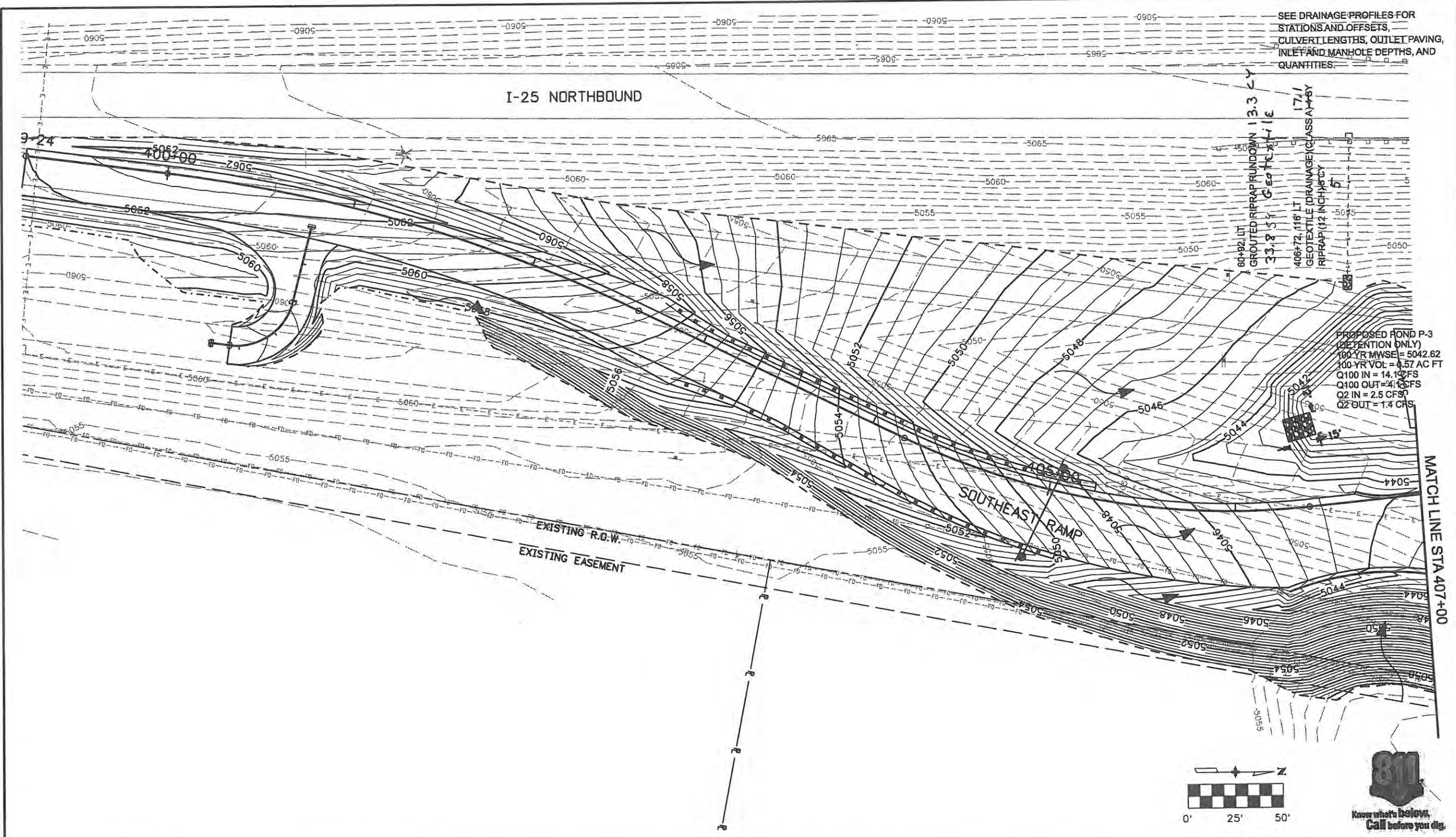
**Project No./Code**

ES4 0253-207
17244
Sheet Number 103

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SEE DRAINAGE PROFILES FOR STATIONS AND OFFSETS, CULVERT LENGTHS, OUTLET PAVING, INLET AND MANHOLE DEPTHS, AND QUANTITIES.



PROPOSED FOND P-3 (RETENTION ONLY)  
 100 YR MWSE = 5042.62  
 100 YR VOL = 4.57 AC FT  
 Q100 IN = 14.1 CFS  
 Q100 OUT = 4.1 CFS  
 Q2 IN = 2.5 CFS  
 Q2 OUT = 1.4 CFS

60+92.117  
 GROUDED RIPRAP RUNDOWN 13.3 CY  
 33.8 SY GEOTEXTILE  
 406+72.118 LT  
 GEOTEXTILE (DRAINAGE) CLASS A+BY  
 RIPRAP (12 INCH) 5 CY

MATCH LINE STA 407+00

Computer File Information	
Creation Date: 1/11/07	Initials: JBK
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File Name: 0610031800drp08.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

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Colorado Department of Transportation

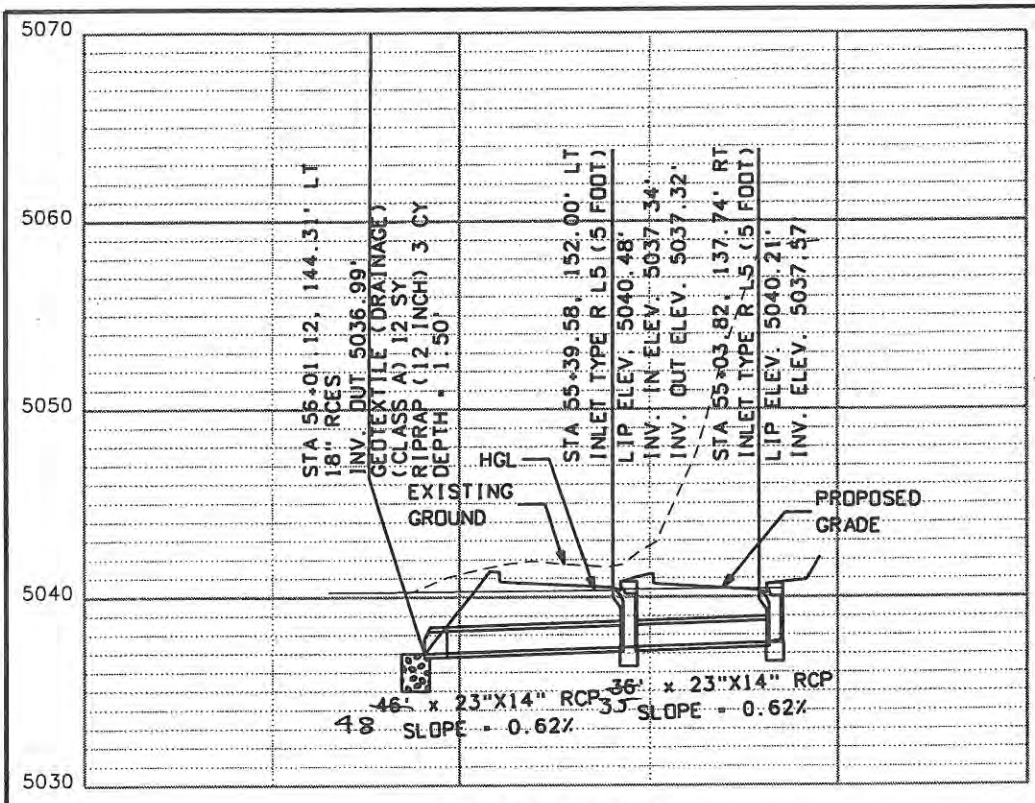
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Revised: 7/14/11
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Designer: JJW	Structure Numbers
Detailer: JBK	
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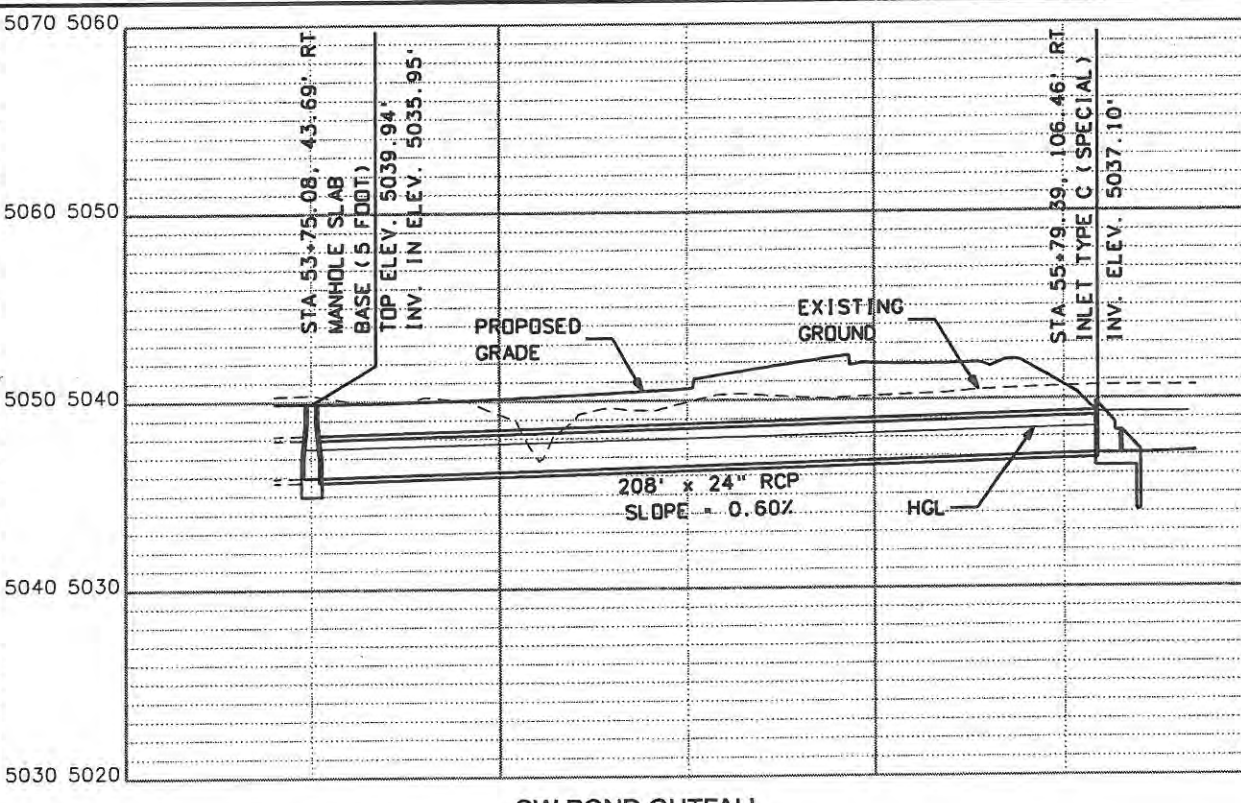
Project No./Code	ES4 0253-207
	17244
Sheet Number	104

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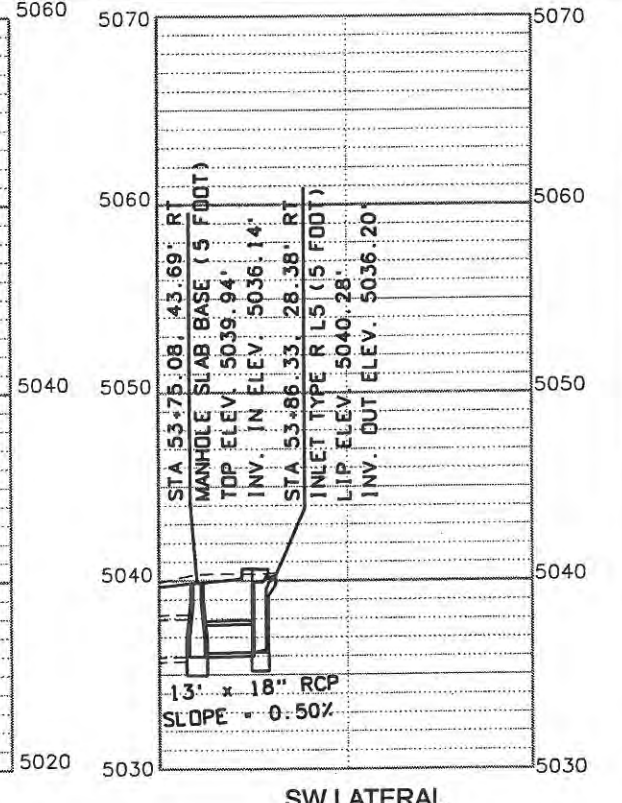




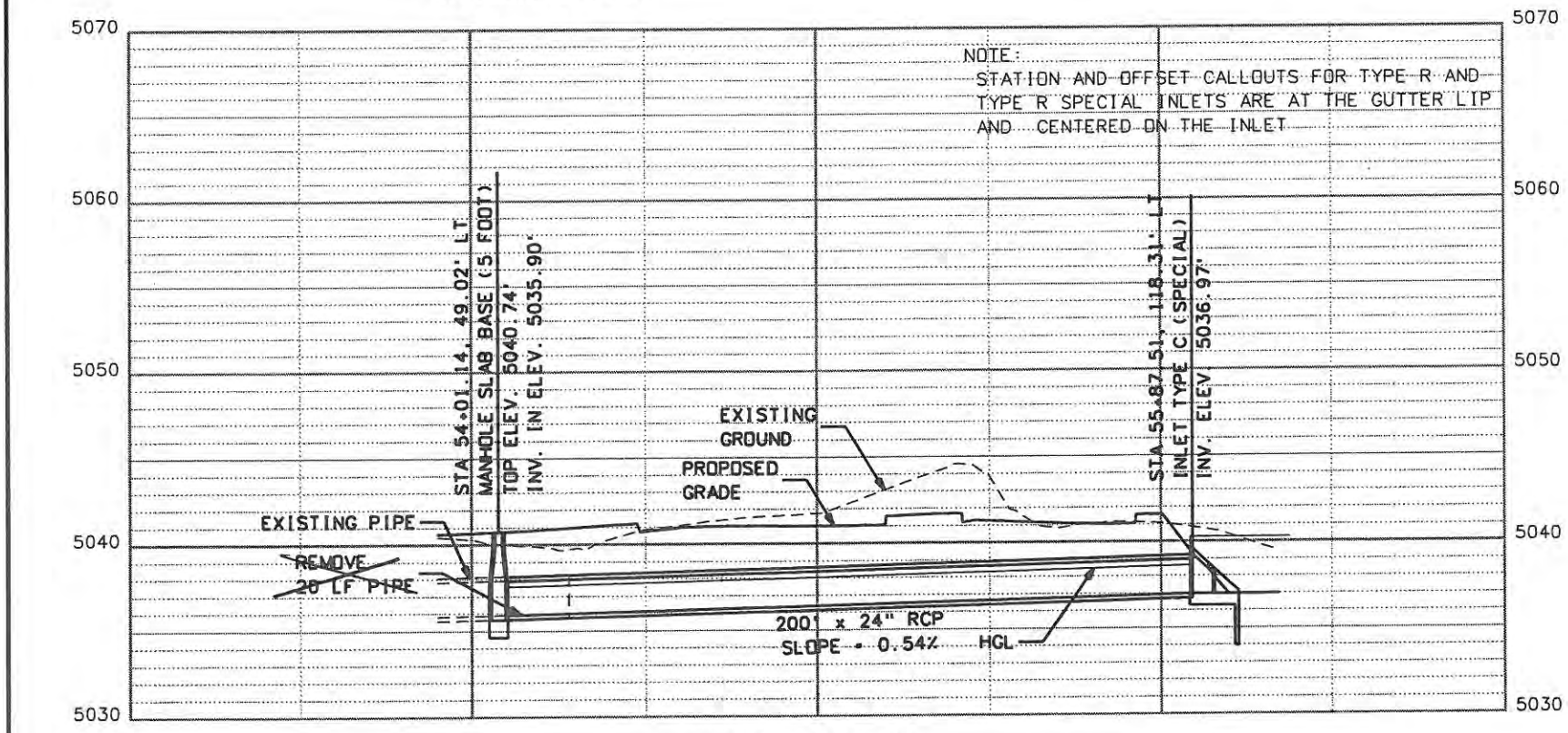
NW RAMP SYSTEM



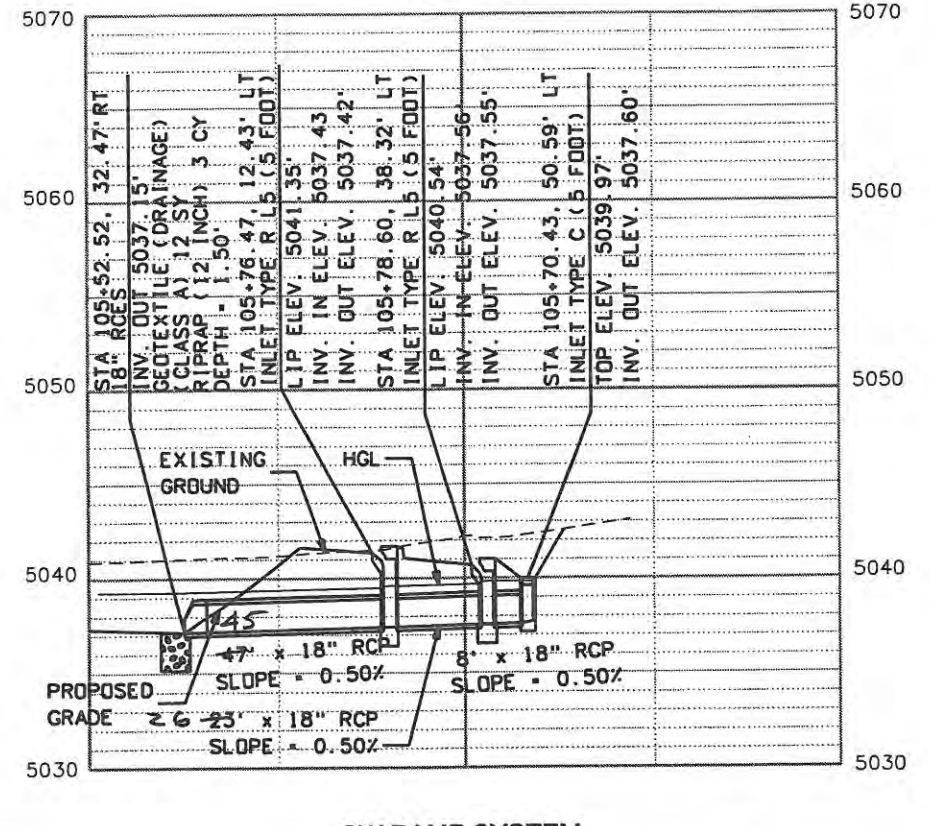
SW POND OUTFALL



SW LATERAL



NW POND OUTFALL



SW RAMP SYSTEM

NOTE:  
STATION AND OFFSET CALLOUTS FOR TYPE R AND TYPE R SPECIAL INLETS ARE AT THE CUTTER LIP AND CENTERED ON THE INLET

Computer File Information	
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Print Date: 6/4/2009	Initials: JMB
File Name: 061003180drprofnw.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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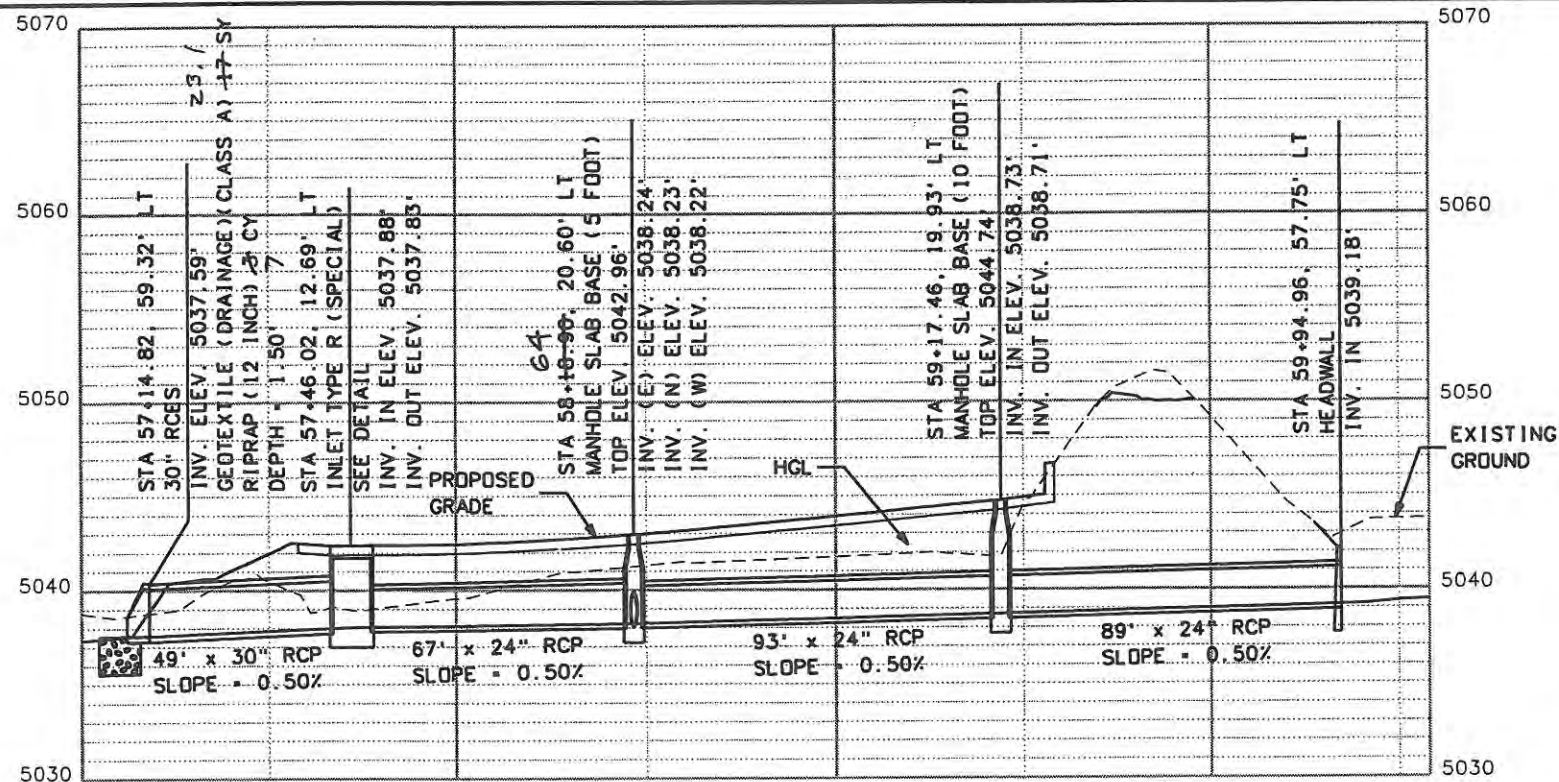
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No Revisions:
Revised: 9/14/11
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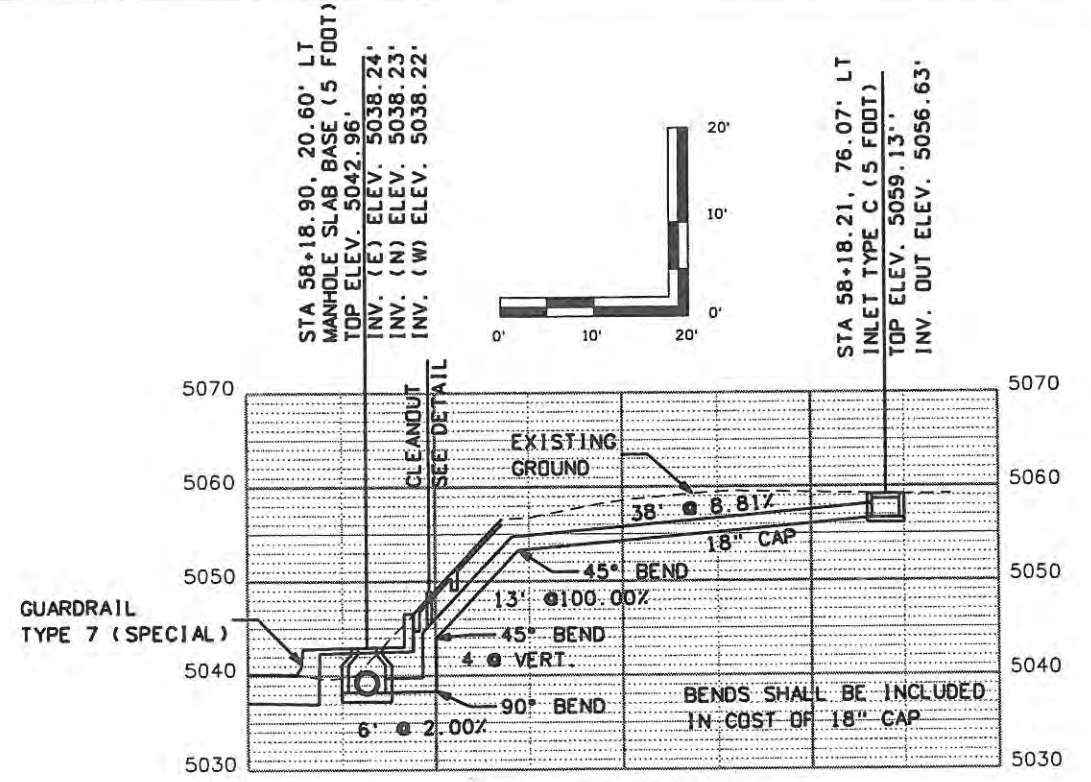
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Designer: JMB	Structure Numbers
Detailer: JMB	
Sheet Subset: DRN PROF	Subset Sheets: DP1 of 3

Project No./Code	ES4 0253-207
	17244
Sheet Number	105

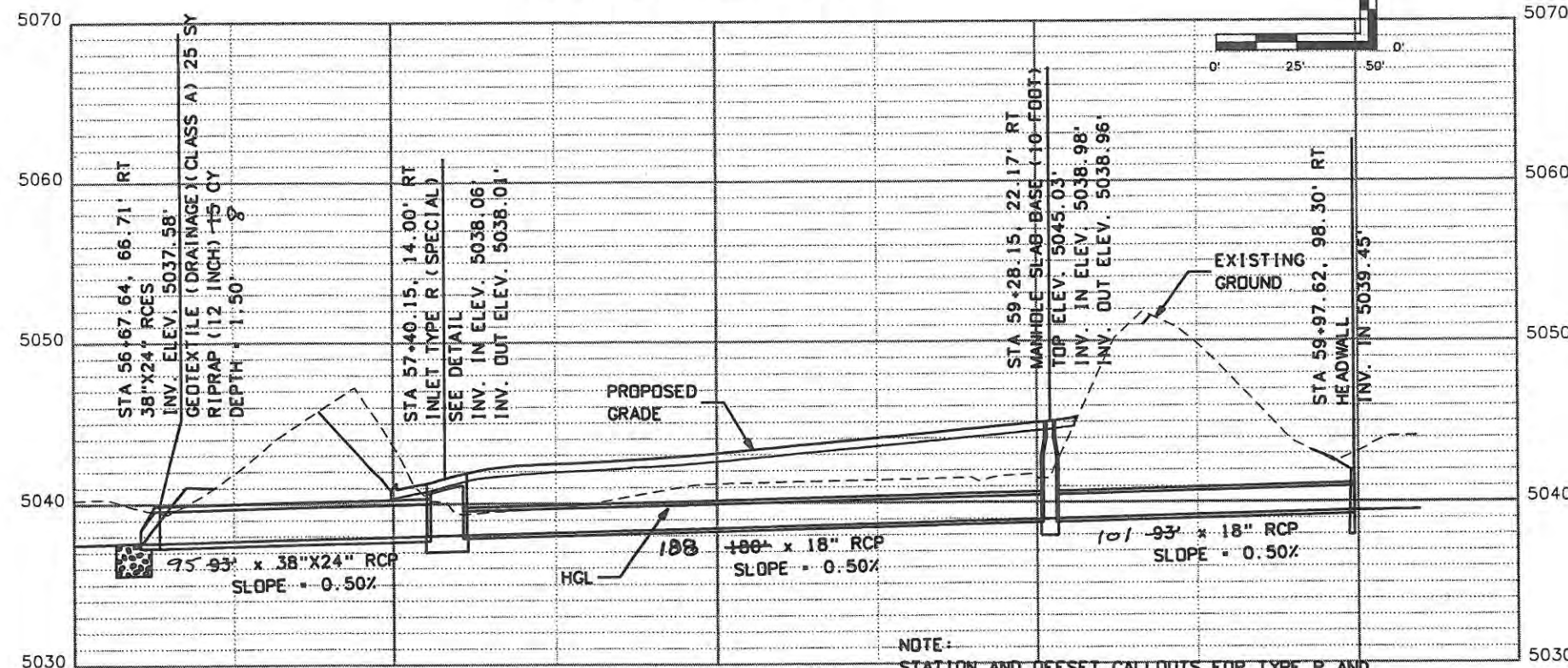




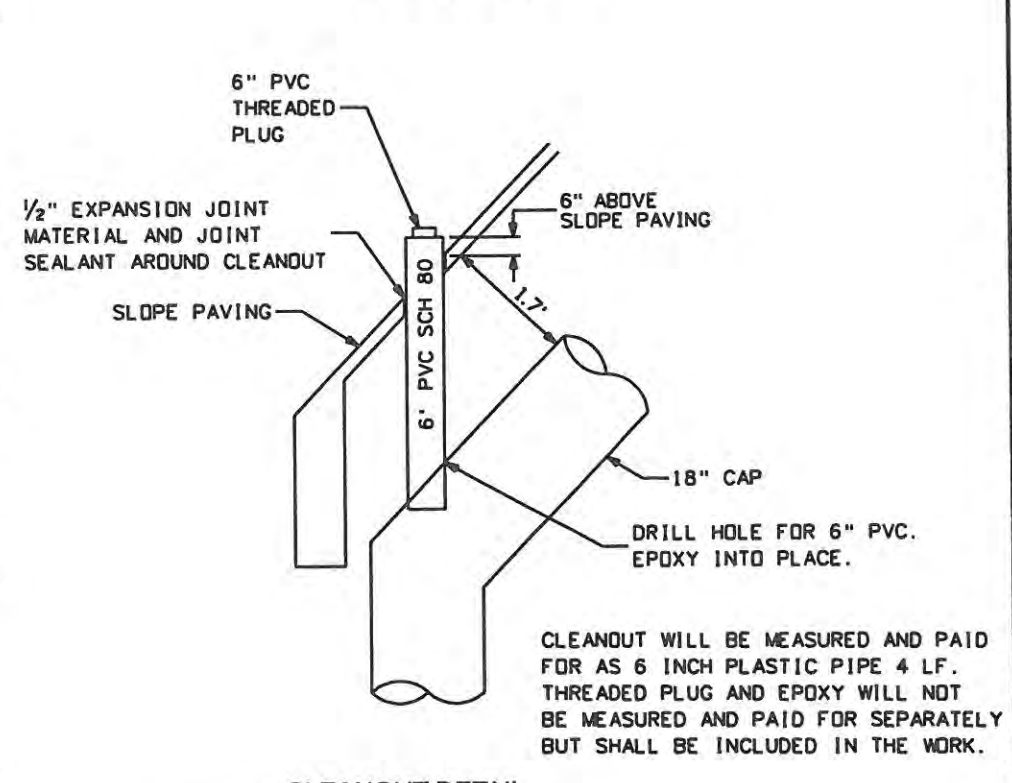
NORTH CROSSROADS SYSTEM



NORTH WALL LINE



SOUTH CROSSROADS SYSTEM



CLEANOUT DETAIL

NOTE:  
 STATION AND OFFSET CALLOUTS FOR TYPE R AND TYPE R SPECIAL INLETS ARE AT THE GUTTER LIP AND CENTERED ON THE INLET

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Print Date: 6/4/2009	Initials: JMB
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Date	Comments	Init.

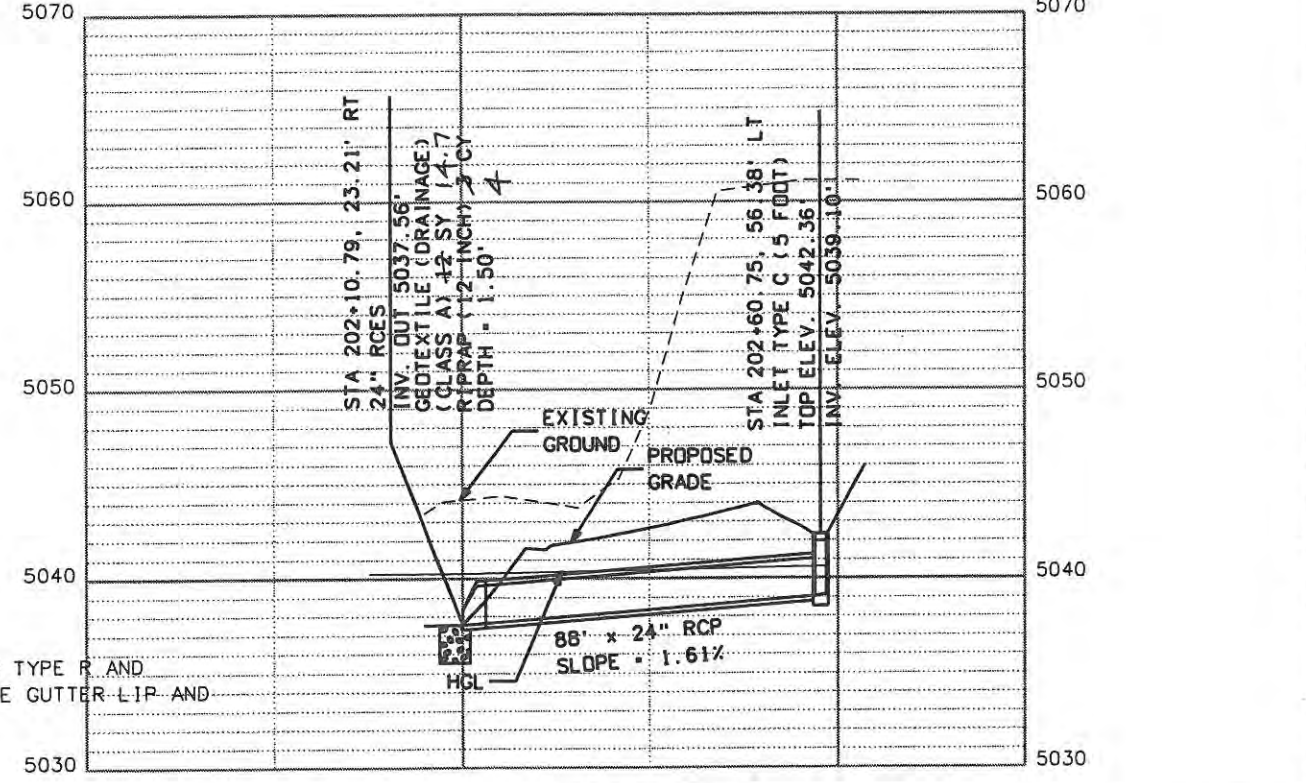
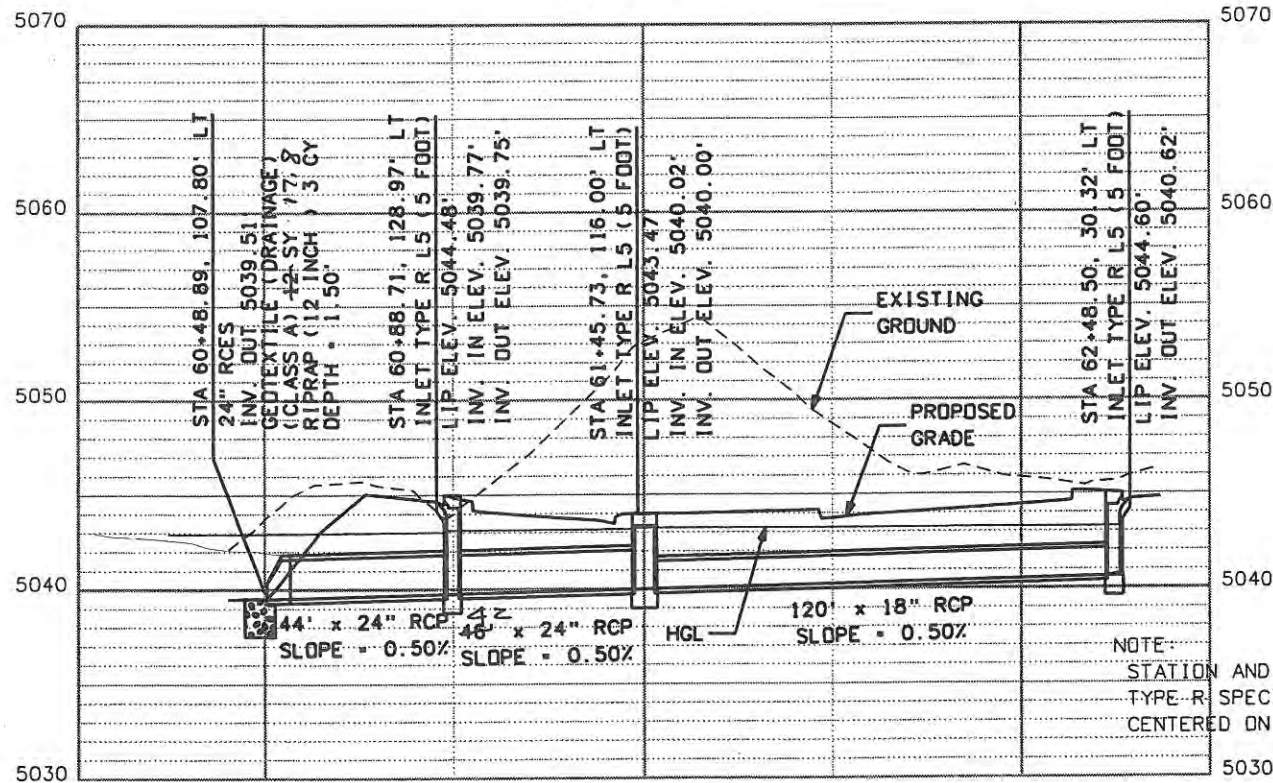
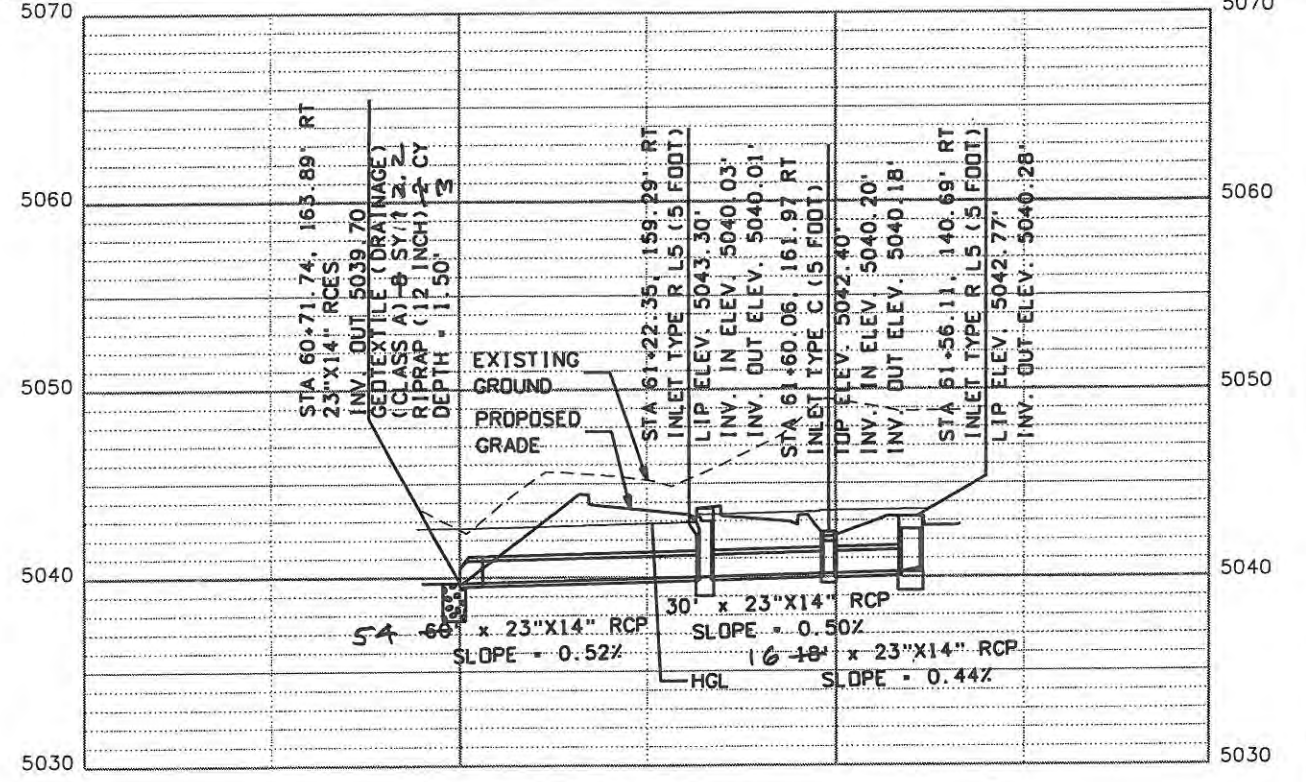
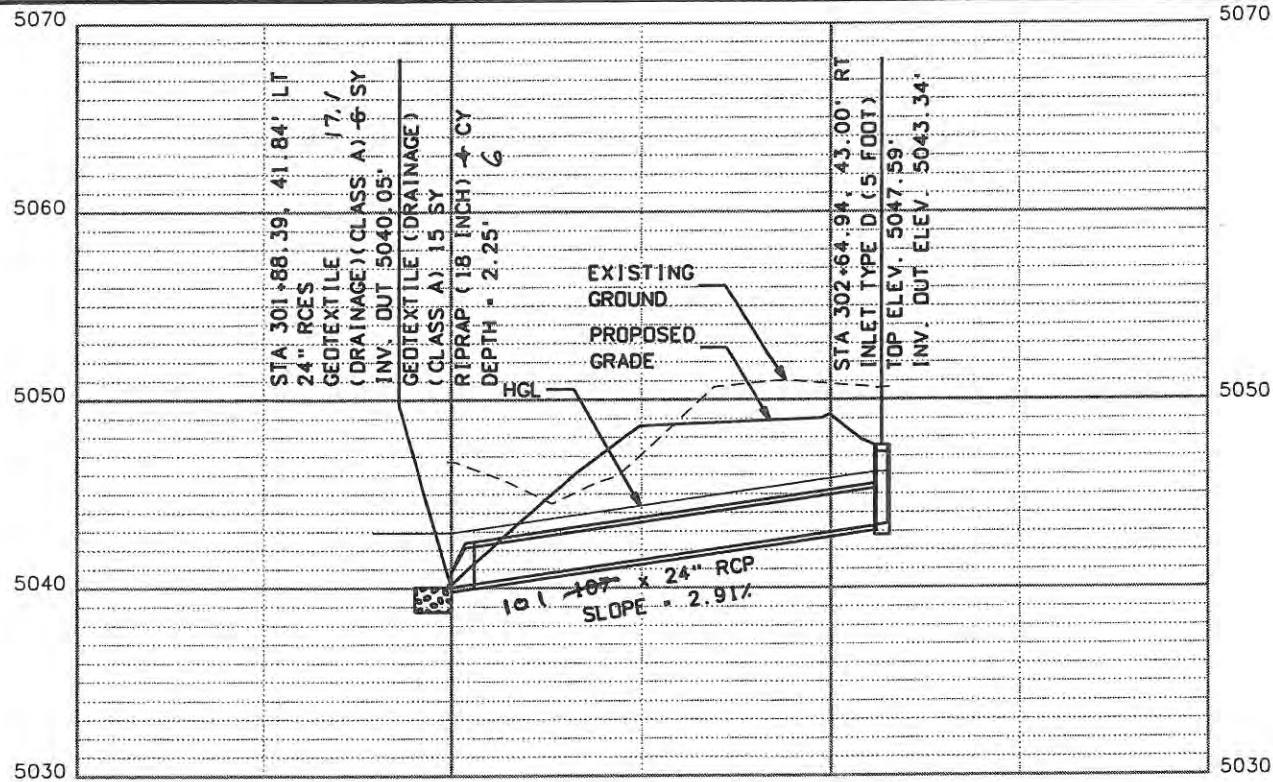
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No Revisions:
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DRAINAGE PROFILES	
Designer: JMB	Structure Numbers
Detailer: JMB	
Sheet Subset: DRN PROF	Subset Sheets: DP2 of 3

Project No./Code	ES4 0253-207
	17244
Sheet Number	106





Computer File Information	
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No Revisions:	
Revised: 9/14/11	
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DRAINAGE PROFILES	
Designer: JMB	Structure Numbers
Detailer: JMB	
Sheet Subset: DRN PROF	Subset Sheets: DP3 of 3

Project No./Code	ES4 0253-207
	17244
Sheet Number	107



**1. Site Description**

Additional information for permitted projects. For information only to fulfill the CDPS-SCP (Colorado Discharge Permit System - Stormwater Construction Permit)

**A. Project Site Description:** This project involves the construction of roundabouts at the ramp termini and reconstruction of the ramps at I-25 and Crossroads Blvd. The work includes grading, storm drain construction, utility relocation, paving and landscaping. The site will be seeded upon completion of construction.

**B. Proposed Sequencing For Major Activities:**

- Phase 1: Remove portions of curb and construct detour pavement.
- Phase 2: Construct the NW and SE ramps and portions of roundabouts.
- Phase 3: Construct the SW and NE ramps and portions of roundabouts. Tie in new ramps to I-25.
- Phase 4: Remove existing SW and NE ramps. Construct portions of roundabouts.
- Phase 5: Construct Crossroads Blvd under I-25.
- Phase 6: Construct remainder of roundabouts and sidewalk under I-25.
- Phase 7: Construct splitter islands and central islands, and sidewalk in NW and SE quadrants.

**C. Acres Of Disturbance:**

- 1. Total area of construction site: 30.8 acres
- 2. Total area of disturbance: 14.7 acres
- 3. Total area of vegetation disturbed: 9.1 acres
- 4. Acreage of seeding: SWMP: 6.2 acres Landscape Plans: 1.7 acres Total: 7.9 acres

**D. Existing Soil Data:** Stiff to medium stiff fine sandy clay and dense gravelly, clayey sand fill. It is resistant to erosion

**E. Existing Vegetation Including Percent Cover:** 65% vegetation cover - smooth brome, Kochia, field bindweed, downy brome, thistle, wheatgrass, rabbit brush.

**F. Potential Pollutants Sources:** See First Construction Activities under Potential Pollutant Sources. The ECS shall prepare a list of all potential pollutants and their locations in accordance with subsection 107.25.

**G. Receiving Water:**

- 1. Outfall locations: NW and SW quadrants under Crossroads Boulevard
- 2. Names of receiving water(s) on site and the ultimate receiving water: Hout's Reservoir
- 3. Distance ultimate receiving water is from project: 2 miles
- 4. Does the receiving water have an approved TMDL? No

**H. Allowable Non-Stormwater Discharges:** Landscape irrigation return flow from the edges and medians of Crossroads Boulevard will flow into the storm sewer system.

1. Groundwater and stormwater dewatering: Discharges to the ground of water from construction dewatering activities may be authorized provided that:

- A. The source is groundwater and/or groundwater combined with stormwater that does not contain pollutants.
- B. The source and BMP's are identified in the SWMP.
- C. Discharges do not leave the site as surface runoff or to surface waters.

2. If discharges do not meet the above criteria, a separate permit from the Department of Health will be required. Contaminated groundwater requiring coverage under a separate permit may include groundwater contaminated with pollutants from a landfill, mining activities, industrial pollutant plumes, underground storage tank, etc.

**I. Environmental Impacts:**

- 1. Wetland Impacts: No
- 2. Stream Impacts: No
- 3. Threatened and Endangered Species: None

**2. Site Map Components:**

Pre-construction

- A. Construction Site Boundaries
- B. All Areas Of Ground Surface Disturbance
- C. Areas Of Cut And Fill
- D. Location Of All Structural BMP's Identified In The SWMP
- E. Location Of Non-Structural BMP's As Applicable In The SWMP
- F. Springs, Streams, Wetlands And Other Surface Water
- G. Protection Of Trees, Shrubs, Cultural Resources And Mature Vegetation

**3. SWMP Administrator For Design:** Justin J Wierema, P.E. Wilson & Co.

**4. Stormwater Management Controls First Construction Activities**

The contractor shall perform the following:

**A. Designate A SWMP Administrator/Erosion Control Supervisor** (To be filled out at time of construction; designate the individual(s) responsible for implementing, maintaining and revising SWMP, including the title and contact information. The activities and responsibilities of the administrator shall address all aspects of the project's SWMP.)

**B. Potential Pollutant Sources**

Evaluate, identify and describe all potential sources of pollutants at the site in accordance with subsection 107.25 and place in the SWMP notebook. All BMP's related to potential pollutants shall be shown on the SWMP site map by the contractor's ECS.

**C. Best Management Practices (BMPs) For Stormwater Pollution Prevention**

**Phased BMP Implementation**

During design: Fields are marked when used in the SWMP. During construction: The ECS shall update the checked boxes to match site conditions. Clearly describe the relationship between the phases of construction and the implementation of BMP controls. Add a narrative to the table or to the site map describing why the BMP's are being used in specific locations.

**Structural BMP Practices For Erosion And Sediment Control:** Practices may include, but are not limited to:

BMP	Type of Control	BMP As Designed	In Use On Site	First Construction Activities	During Construction	Interim/Final Stabilization
Earth Berm/Diversion	Erosion					
Check Dams	Sediment					
Silt Fence	Sediment			X	X	
Erosion Logs	Sediment			X	X	
Temporary Sediment Trap/Basin	Sediment					
Permanent Sediment Trap/Basin	Sediment				X	X
Embankment Protector	Erosion				X	X
Inlet Protection	Erosion			X	X	
Outlet Protection	Erosion				X	X
Concrete Washouts	Construction			X	X	
Stabilized Construction Entrance	Construction			X	X	
Dewatering	Sediment					
Temporary Stream Crossing	Erosion					
Other						

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Sheet Revisions		
Date:	Comments	Init.

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No Revisions: 9/14/11
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STORMWATER MANAGEMENT PLAN		
Designer: JJW	Structure Numbers	
Detailer: JJW		
Sheet Subset: SWMP	Subset Sheets: SW01 of 3	

Project No./Code	ES4 0253-207
	17244
Sheet Number	108

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Non-Structural BMP Practices For Erosion And Sediment Control: Practices may include, but are not limited to:

BMP	Type Of Control	BMP As Designed	In Use On Site	First Construction Activities	During Construction	Interim/Final Stabilization
Surface Roughening/Grading Techniques	Erosion			X	X	
Seeding Permanent	Erosion				X	X
Seeding Temporary	Erosion					
Mulch/Mulch Tackifier	Erosion				X	X
Soil Binder	Erosion				X	X
Soil Retention Blanket	Erosion				X	X
Vegetative Buffer Strips	Erosion			X	X	X
Protection of Trees	Erosion					
Preservation of Mature Vegetation	Erosion					
Other						

- Erosion control devices are used to limit the amount of erosion on site.
- Sediment control devices are designed to capture sediment on the project site.
- Construction control are BMP's related to construction access and staging.
- BMP locations are indicated on the site map.
- BMP installation details and general narratives are in the SWMP notebook.

D. Offsite Drainage (Run On Water)

- Describe and record BMP's on the SWMP site map that have been implemented to address run-on water in accordance with subsection 208.03.

E. Stabilized Construction Entrance/Vehicle Tracking Control

- BMP's shall be implemented in accordance with subsection 208.04.

F. Perimeter Control

- 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 may consist of vegetation buffers, berms, silt fence, erosion logs existing landforms, or other BMP's as approved.
- Perimeter control shall be in accordance with subsection 208.04.

5. During Construction

Responsibilities Of The SWMP Administrator/Erosion control Supervisor During Construction

The SWMP should be considered a "Living Document" that is continuously reviewed and modified. During construction, the following items shall be added, updated, or amended as needed by the SWMP Administrator/Erosion Control Supervisor (ECS) in accordance with section 208. Unless tabulated in these plans, the following items shall be incidental to the work.

- Materials Handling And Spill Prevention
- Stockpile Management
- Grading And Slope Stabilization
- Surface Roughening
- Vehicle Tracking

F. Temporary Stabilization

G. Concrete Washout

- Concrete wash out water or waste from field laboratories and paving equipment shall be contained in accordance with subsection 208.05.

H. Saw Cutting

I. New Inlet/Culvert Protection

J. Street Cleaning

6. Inspections

- Inspections shall be in accordance with subsection 208.03 (c).

7. BMP Maintenance

- Maintenance shall be in accordance with subsection 208.04 (e).

8. Record Keeping

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

9. Interim And Final Stabilization

A. Seeding Plan

Soil preparation, soil conditioning or topsoil, seeding (native), mulching (weed free), and mulch tackifier will be required for an estimated 7.4 acres of disturbed area within the right-of-way limits which are not surfaced. 5.7 acres are covered under this SWMP and 1.7 acres are covered under the Landscape Plans.

4894 CY of topsoil is available for stockpile, assuming 4" acceptable topsoil over the 9.1 acres of disturbed vegetation.

8295 CY of topsoil will be required for the entire site 6" deep under all seeding, landscaping and sod, and 24" deep in medians, with an additional 1 foot deep trench under trees. See landscaping details.

See the landscape plans for seeded areas that are not hatched on the Erosion Control/SWMP Plans. For the areas hatched in the Erosion Control/SWMP plans, the following types and rates shall be used:

Common Name	Botanical Name	Pounds PLS/Acre
Sideoats grama, Vaughn	Bouteloua curtipendula	3.0
Blue grama, Hachita	Bouteloua gracilis	2.0
Buffalograss Texoka	Buchloe doctyloides	7.0
Salt grass	Distichlis specata	1.0
Slender wheatgrass, Pryo	Elymus trachycaulus ssp. trachycaulus	4.0
Junegrass, native	Koeleria macrantha	1.0
Western wheatgrass, Arriba	Pascopyrum smithii	6.0
Little bluestem, Posturo	Schizachyrium scoparium	2.0
Prairie coneflower	Rotibidia columnaris	0.3
Purple prairie clover	Petalostemum purpurea	0.5
Gaillardio	Gaillardia aristata	1.0
Blue flax	Liniurn lewisii	0.5
Coreopsis	Coreopsis tinctoria	0.2
Triticale	Sterile Triticale	15.0
<b>Total</b>		<b>43.5</b>

<b>Computer File Information</b>		<b>Sheet Revisions</b>		<b>CITY OF LOVELAND</b>		<b>STORMWATER MANAGEMENT PLAN</b>		<b>Project No./Code</b>
Creation Date: 11/05/08	Initials: JJW	Date:	Comments			Init.	No Revisions: 9/14/11	Revised:
Print Date: 6/5/2009	Initials: 11/05/08					Designer: FSW	Structure Numbers:	17244
File Name: SWMP02.dgn						Detailer: JJW	Subset Sheets: SW02 of 3	Sheet Number 109
Horiz. Scale: 1:100	Vert. Scale: As Noted					Sheet Subset: SWMP		

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B. Seeding Application: Drill seed 0.25 inch to 0.5 inch into the soil. In small areas not accessible to a drill, hand broadcast at double the rate and rake 0.25 inch to 0.5 into soil.

C. Mulching Application: Apply 1/2 tons of certified weed free hay per acre mechanically crimped into the soil in combination with an organic mulch tackifier.

D. Special Requirements: Due to high failure rates, hyromulching and/or hydroseeding will not be allowed.

E. Soil Conditioning And Fertilizer Requirements:

1. Fertilizer will not be required on the project.
2. Soil conditioner, organic amendment shall be applied to all seeded areas at 3 CY/1000 SF.

F. Blanket Application: On slopes and ditches requiring a blanket, the blanket shall be placed in lieu of mulch and mulch tackifier. See SWMP for blanket locations.

G. Reseeding Operations/Corrective Stabilization

Prior to final acceptance.

1. Seeded areas shall be reviewed during the 14 day inspections by the Erosion Control Supervisor for bare soils caused by surface or wind erosion. Bare areas caused by surface or gully erosion, blown away mulch etc., shall be regraded, seeded, mulched and have mulch tackifier (or blanket) applied as necessary.
2. Areas where seed has not germinated after one season shall be evaluated by the Engineer and CDDT Landscape Architect. Areas that have not germinated, shall have seed, mulch and mulch tackifier (or blanket) reapplied. Work shall be paid for by the appropriate bid item.
3. The Contractor shall maintain seeding/mulch/tackifier, mow to control weeds or apply herbicide to control weeds in the seeded areas until Final Acceptance.

### 10. Prior To Final Acceptance

A. Final Acceptance shall be in accordance with subsection 208.061.

### 11. Tabulation Of Stormwater Quantities

Pay Item	Description	Unit	Quantity
203-01500	Blading	Hour	10 9
203-01515	Backhoe (Landscaping)	Hour	20 0
203-01555	Dozing (Landscaping)	Hour	20 0
207-00205	Topsoil	CY	8295
207-00210	Stockpile Topsoil	CY	4894
208-00003	Erosion Log (18 Inch)	LF	1120 32 80
208-00011	Erosion Bales (Weed Free)	Each	50 120
208-00020	Silt Fence	LF	570 22 51
208-00045	Concrete Washout Structure	Each	2
208-00050	Storm Drain Inlet Protection	Each	24 28
208-00070	Stabilized Construction Entrance	Each	7 11
208-00103	Removal and Disposal of Sediment (Labor)	HOURL	40 100 (R-D)
208-00105	Removal and Disposal of Sediment (Equipment)	HOURL	40 27,25 (R-D)
208-00205	Erosion Control Supervisor	Hour	350 215 5
212-00006	Seeding (Native)	Acre	62 9,23
212-00032	Soil Conditioning	Acre	62 9,23
213-00004	Mulching (Weed Free Straw)	Acre	62 9,07
213-00061	Mulch Tackifier	LB	1220 17 70
216-00024	Soil Retention Blanket (Class 4)	SY	1184 111
216-00041	Soil Retention Blanket (Straw/Coconut)	SY	2400 38 97
607-11525	Fence (Plastic)	LF	500 460
700-70380	F/A Erosion Control	FA	1

1. BMP Maintenance shall be paid for as: 208 Removal and Disposal of Sediment (Labor) and 208 Removal and Disposal of Sediment (Equipment).

2. It is estimated that 2 concrete washout structures will be required on the project. One of which shall be used for the field laboratories.

3. It is estimated that 0 hours of labor, 10 hours of blading (150 horsepower), 20 hours of dozing (150 horsepower), 20 hours of backhoe (98 horsepower) may be required for miscellaneous erosion control work as directed by the Engineer. Work shall be paid for as: 203 Labor, 203 Blading, 203 Dozing, 203 Backhoe.

4. It is estimated that 7 stabilized construction entrance(s) will be required as directed to minimize vehicle tracking control. Locate BMP on the SWMP site map.

5. Maintenance of seeded areas shall be included in the price of the work

6. Erosion control log totals include one (1) full replacement during construction (2x quantity).

7. Soil retention blanket (straw/coconut) totals include 30% replacement.

8. Seeding (Native), Soil Conditioning, Mulching (Weed Free Straw) & Mulch Tackifier shall be paid for based on the limits and quantities shown on these plans and the landscape plans. Areas disturbed outside of these limits shall be seeded and restored at no additional cost to the project.

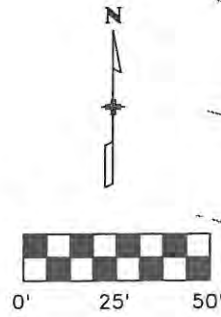
9. The cost for removal of any temporary BMP shall be included in the price.

10. The Contractor shall obtain the Construction Stormwater permit and the Fugitive Dust Permit.

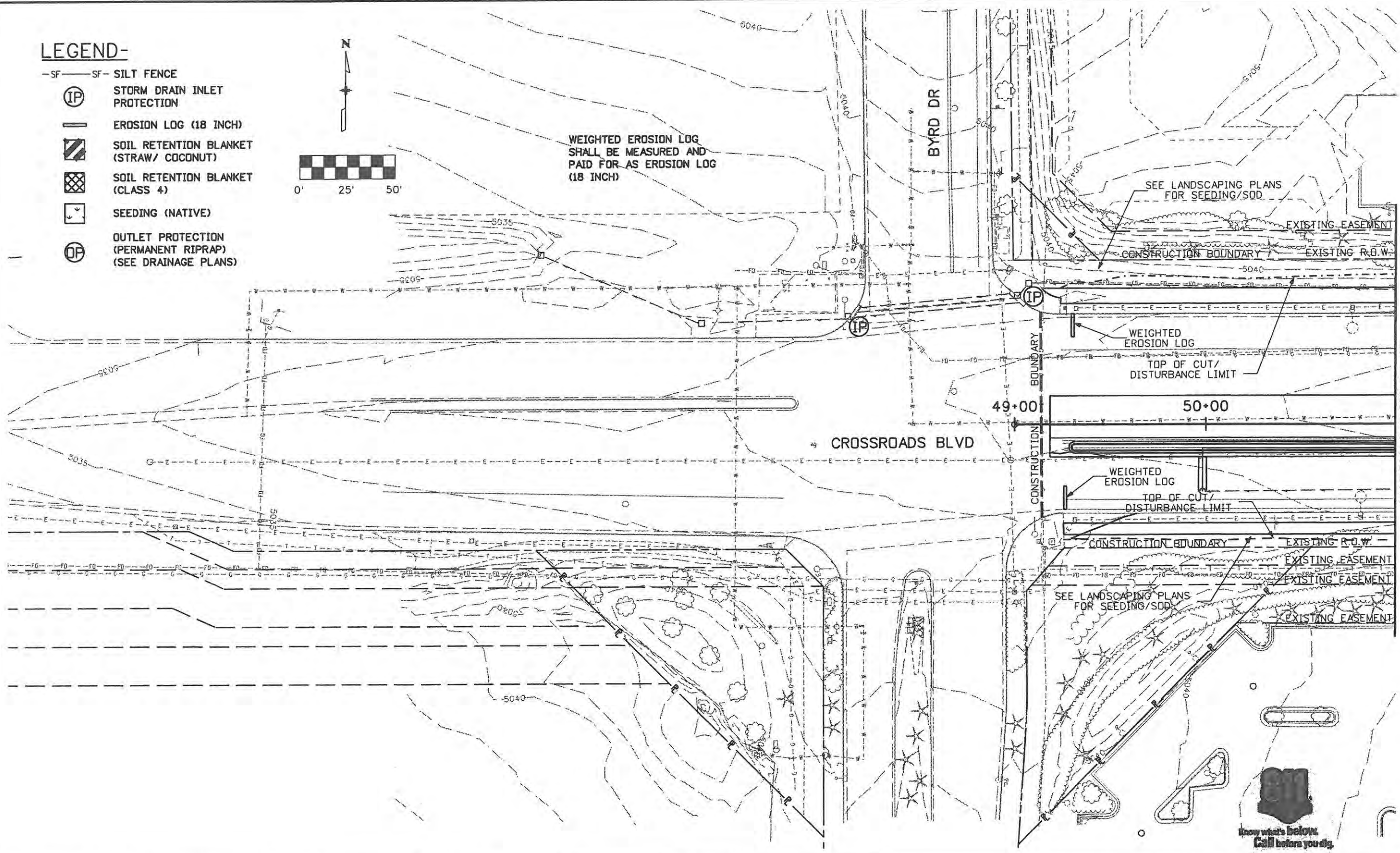
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Creation Date: 11/05/08	Initials: JJW	Date:	Comments	Init.	 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 COLORADO DEPARTMENT OF TRANSPORTATION	No Revisions:		ES4 0253-207		
Print Date: 6/18/2009	Initials: 11/05/08	6/18/09	Quantity Update	FSW			Revised: 7/14/11		Designer: JJW	Structure Numbers	17244
File Name: SWMP03.dgn							Void:		Detailer: JJW		
Horiz. Scale: 1:100	Vert. Scale: As Noted								Sheet Subset: SWMP	Subset Sheets: SW03 of 3	Sheet Number 110

**LEGEND-**

- SF- SF- SILT FENCE
- (IP) STORM DRAIN INLET PROTECTION
- EROSION LOG (18 INCH)
- [Diagonal Hatching] SOIL RETENTION BLANKET (STRAW/ COCONUT)
- [Cross-hatching] SOIL RETENTION BLANKET (CLASS 4)
- [Square with X] SEEDING (NATIVE)
- (OP) OUTLET PROTECTION (PERMANENT RIPRAP) (SEE DRAINAGE PLANS)



WEIGHTED EROSION LOG SHALL BE MEASURED AND PAID FOR AS EROSION LOG (18 INCH)



MATCH LINE STA 51+00

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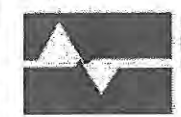
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**CITY OF LOVELAND**



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970-962-2000



Colorado Department  
of Transportation

**EROSION CONTROL/SWMP  
CROSSROADS BOULEVARD**

No Revisions: 9/14/11
Revised:
Void:

**EROSION CONTROL/SWMP  
CROSSROADS BOULEVARD**

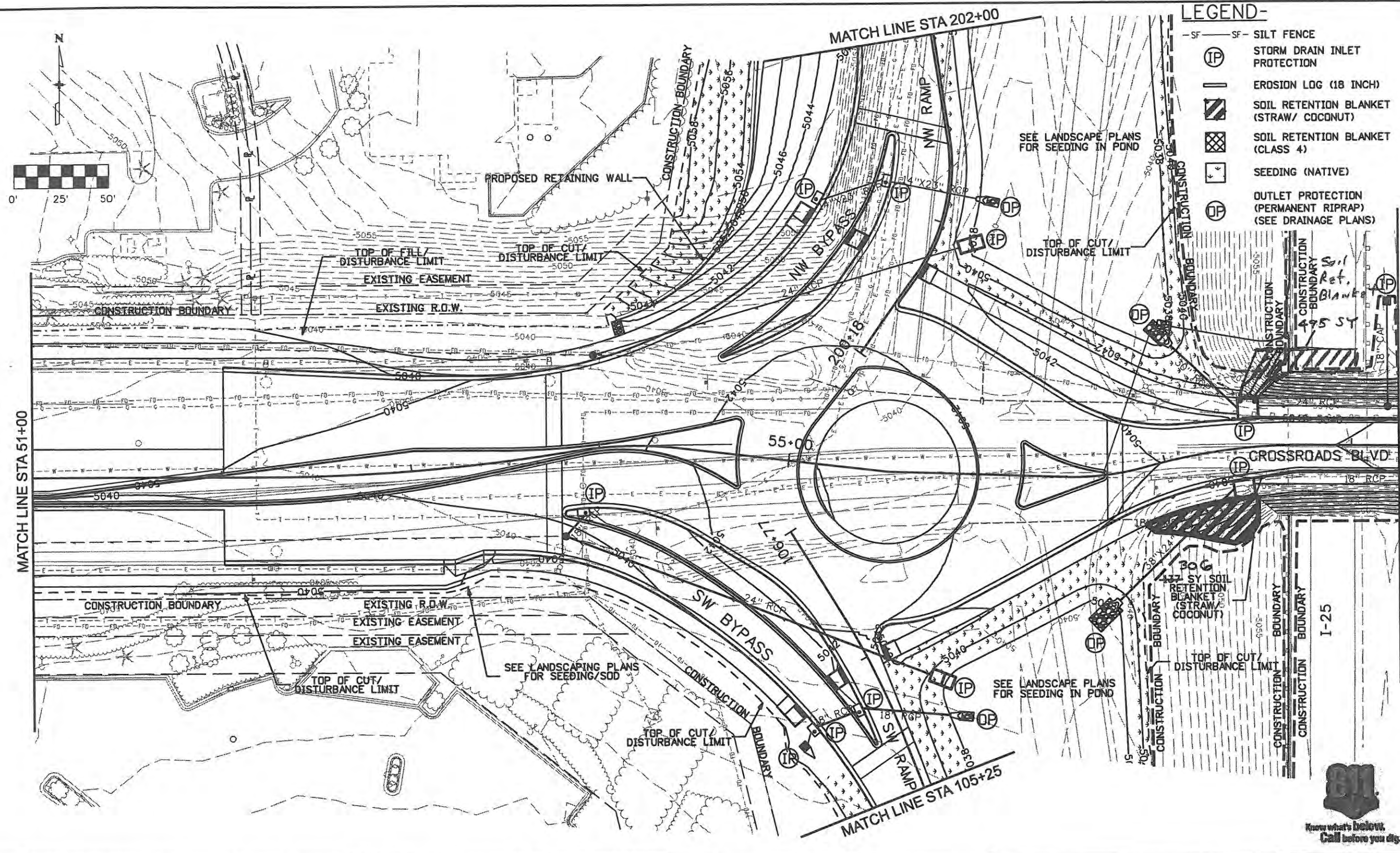
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Detailer: JBK	
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**Project No./Code**

ES4 0253-207
17244
Sheet Number 111

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 Denver, CO 80202  
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- LEGEND-**
- SF- SF- SILT FENCE
  - (IP) STORM DRAIN INLET PROTECTION
  - EROSION LOG (18 INCH)
  - [Hatched Box] SOIL RETENTION BLANKET (STRAW/ COCONUT)
  - [Cross-hatched Box] SOIL RETENTION BLANKET (CLASS 4)
  - [Dotted Box] SEEDING (NATIVE)
  - (OP) OUTLET PROTECTION (PERMANENT RIPRAP) (SEE DRAINAGE PLANS)



MATCH LINE STA 51+00

MATCH LINE STA 58+25

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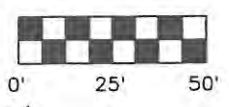
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No Revisions:
Revised: 9/14/11
Void:

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Designer: JJW	Structure Numbers
Detailer: JBK	
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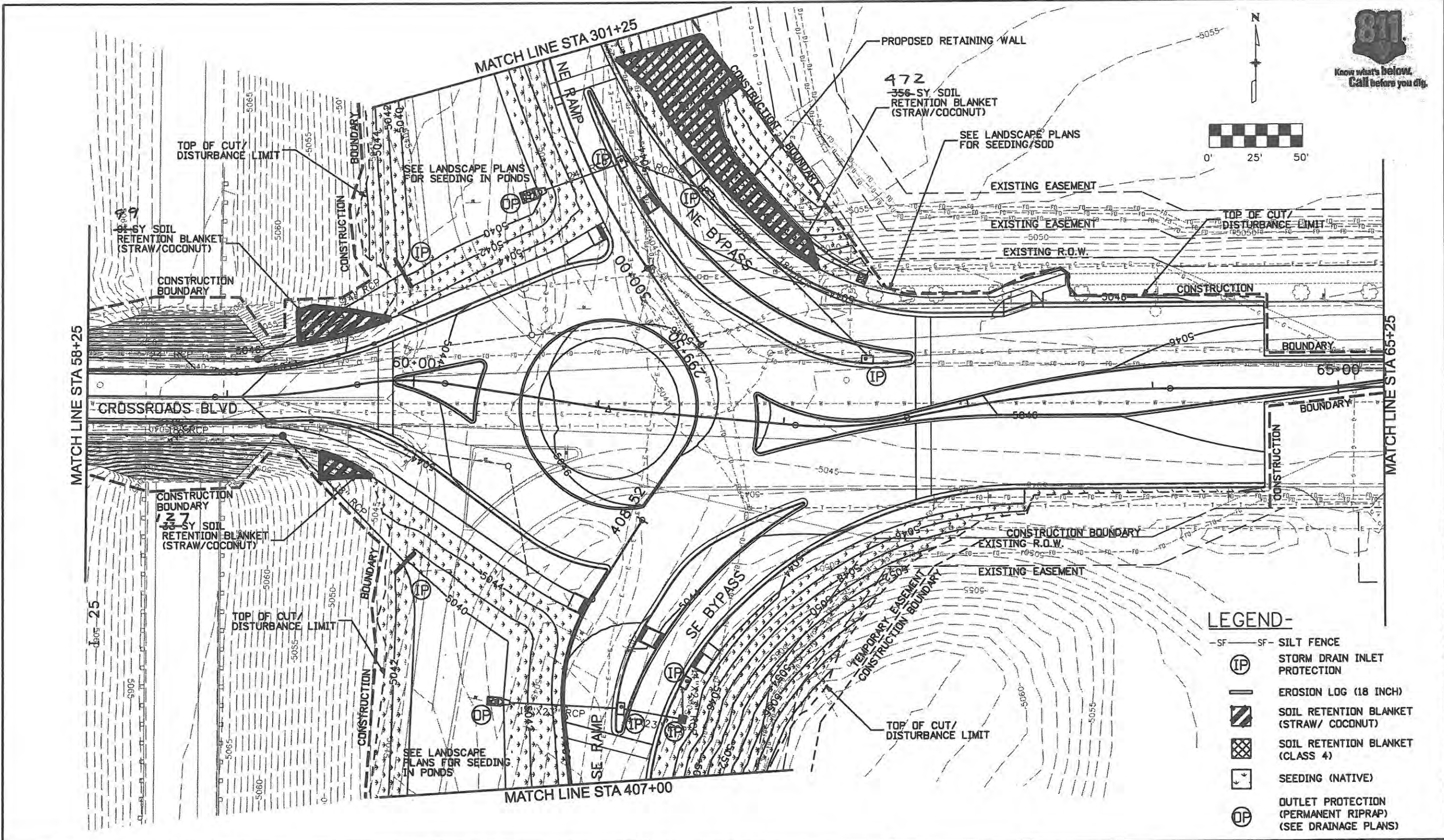
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	17244
Sheet Number	112





**LEGEND-**

-SF -SF-	SILT FENCE
⊙	STORM DRAIN INLET PROTECTION
▨	EROSION LOG (18 INCH)
▩	SOIL RETENTION BLANKET (STRAW/ COCONUT)
▩	SOIL RETENTION BLANKET (CLASS 4)
□	SEEDING (NATIVE)
⊙	OUTLET PROTECTION (PERMANENT RIPRAP) (SEE DRAINAGE PLANS)



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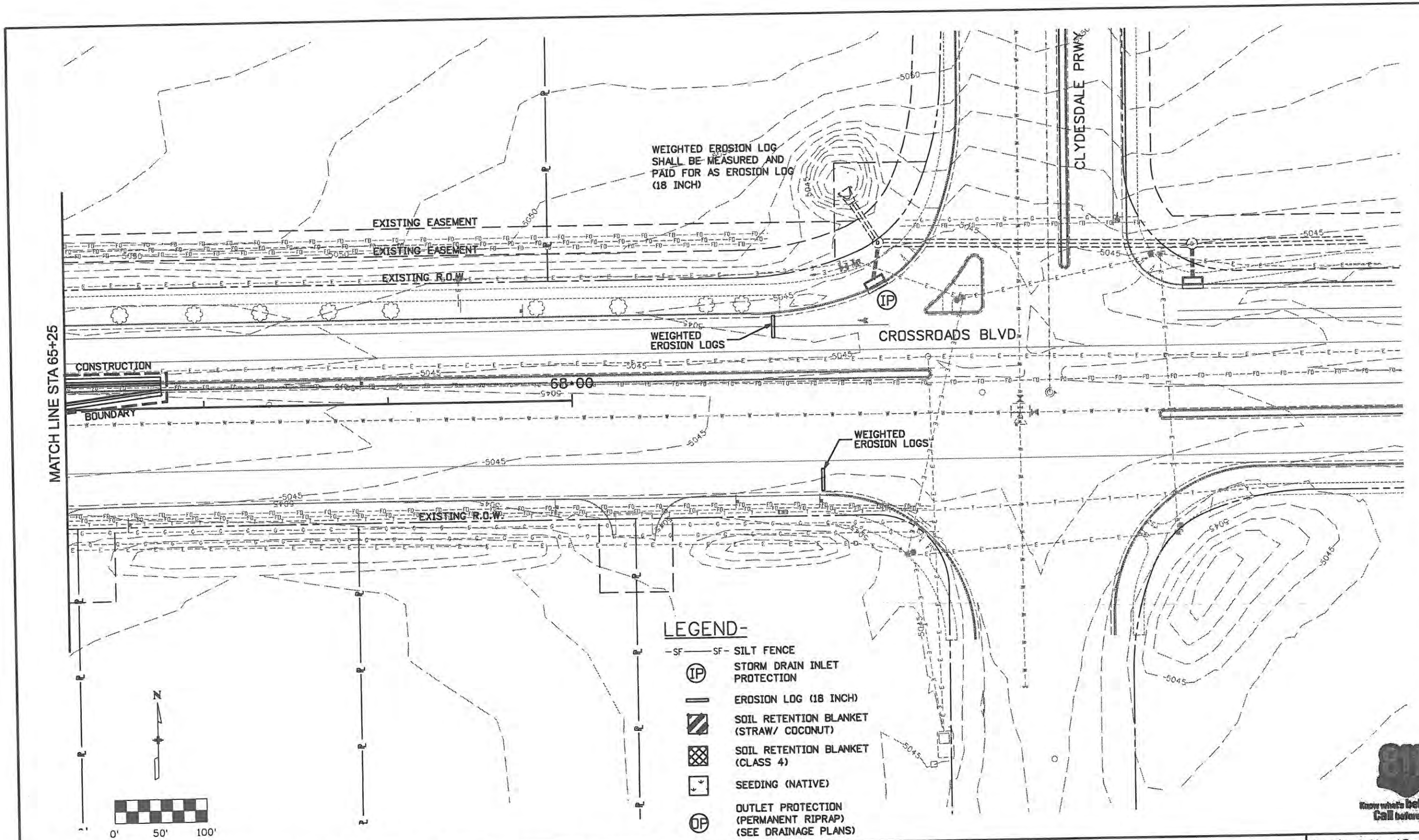
ES4 0253-207

17244

Sheet Number 113

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 Denver, CO 80202  
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 Fax: 303-297-2693





**LEGEND-**

- SF- SF- SILT FENCE
- (IP) STORM DRAIN INLET PROTECTION
- EROSION LOG (18 INCH)
- [Hatched Box] SOIL RETENTION BLANKET (STRAW/ COCONUT)
- [Cross-hatched Box] SOIL RETENTION BLANKET (CLASS 4)
- [Square with Arrow] SEEDING (NATIVE)
- (OP) OUTLET PROTECTION (PERMANENT RIPRAP) (SEE DRAINAGE PLANS)



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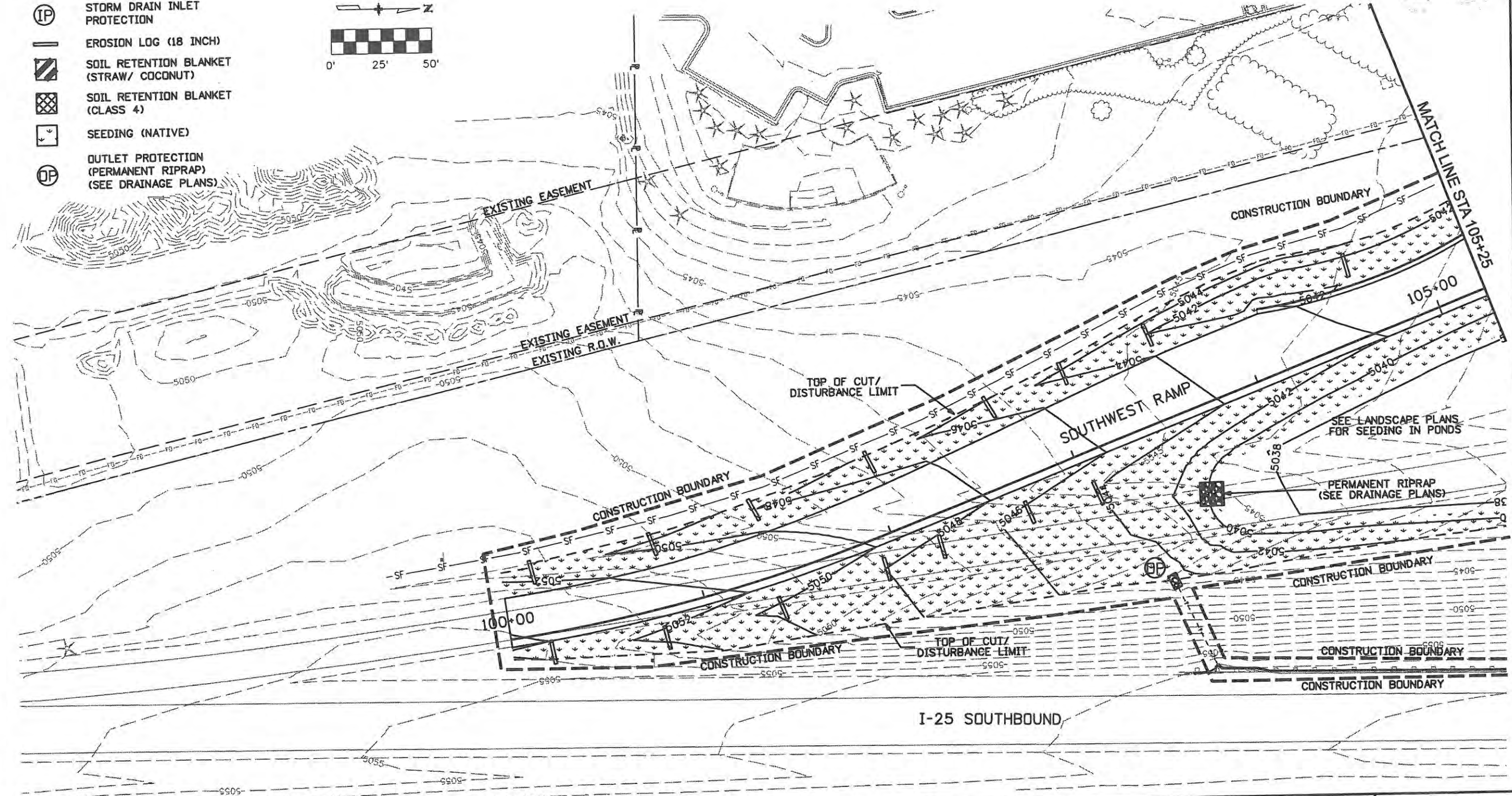
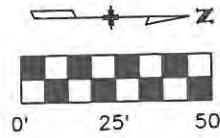
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	17244
Sheet Number	114





**LEGEND-**

- SF- SF- SILT FENCE
- (IP) STORM DRAIN INLET PROTECTION
- EROSION LOG (18 INCH)
- [Hatched Box] SOIL RETENTION BLANKET (STRAW/ COCONUT)
- [Cross-hatched Box] SOIL RETENTION BLANKET (CLASS 4)
- [Square with Arrow] SEEDING (NATIVE)
- (OP) OUTLET PROTECTION (PERMANENT RIPRAP) (SEE DRAINAGE PLANS)



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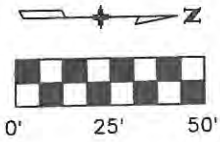
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Detailer: JBK	
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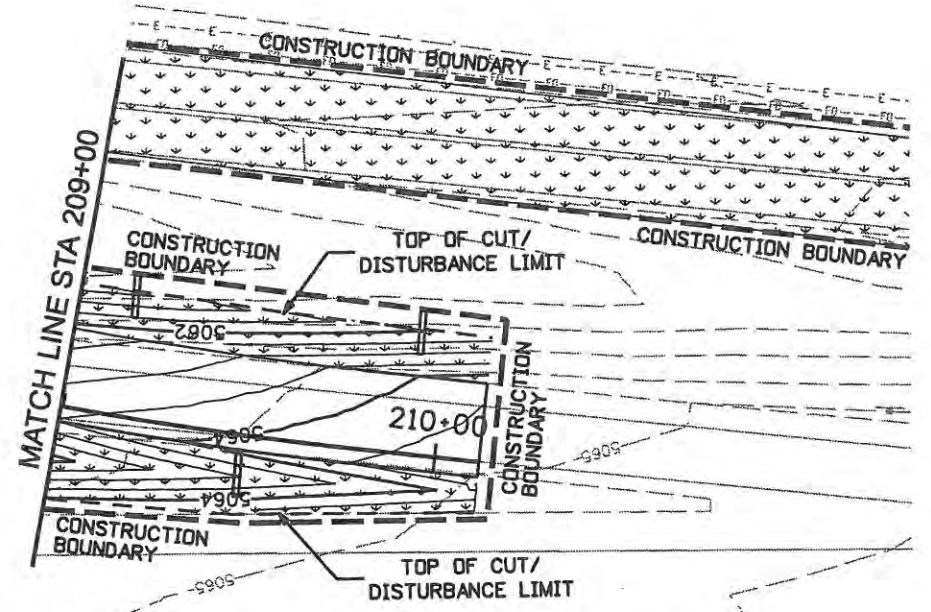
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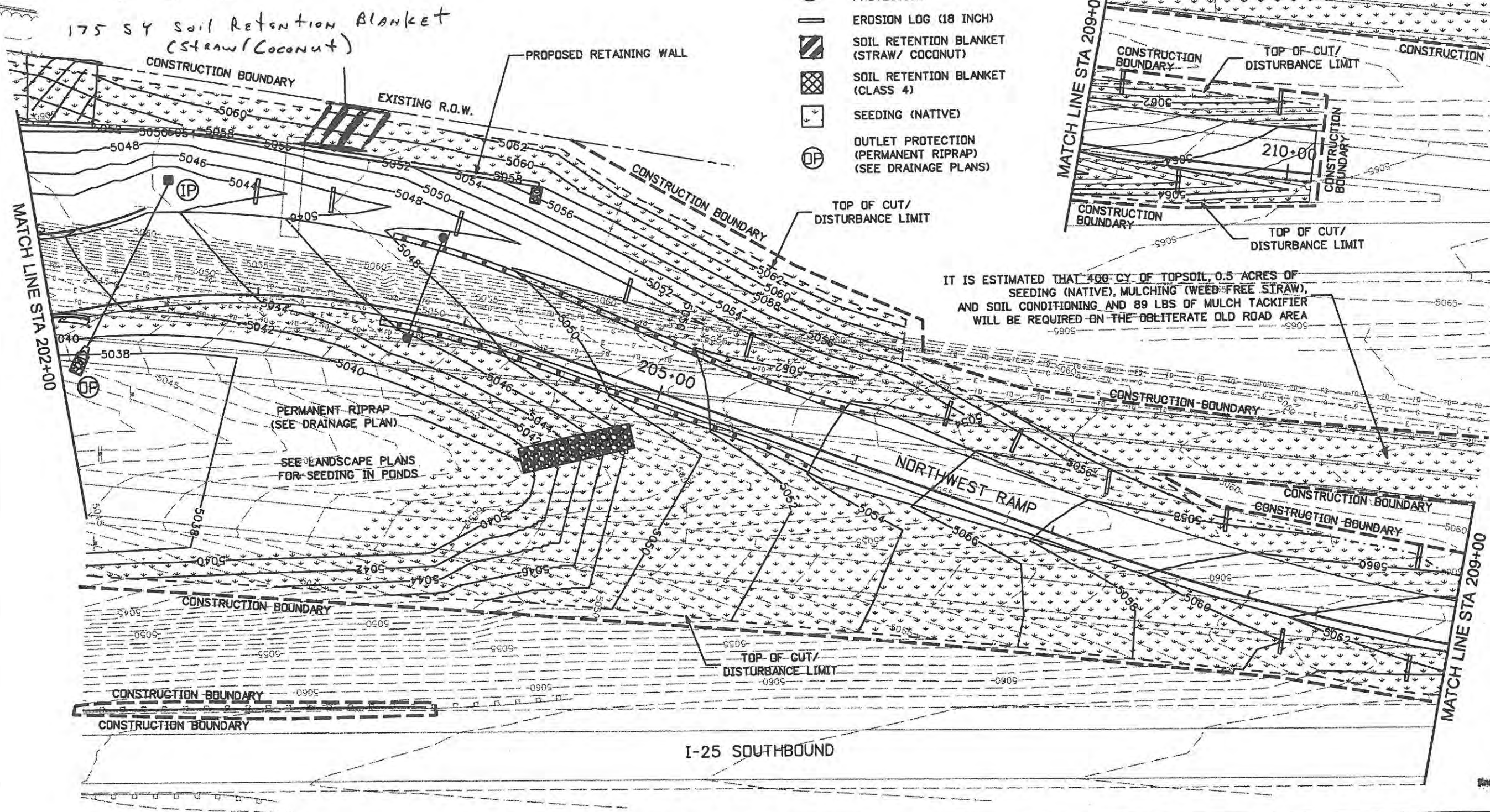


**LEGEND-**

- SF- SF SILT FENCE
- (IP) STORM DRAIN INLET PROTECTION
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- [Cross-hatched Box] SOIL RETENTION BLANKET (CLASS 4)
- [Square with X] SEEDING (NATIVE)
- (DP) OUTLET PROTECTION (PERMANENT RIPRAP) (SEE DRAINAGE PLANS)



IT IS ESTIMATED THAT 400 CY OF TOPSOIL, 0.5 ACRES OF SEEDING (NATIVE), MULCHING (WEED-FREE STRAW), AND SOIL CONDITIONING AND 89 LBS OF MULCH TACKIFIER WILL BE REQUIRED ON THE OBLITERATE OLD ROAD AREA



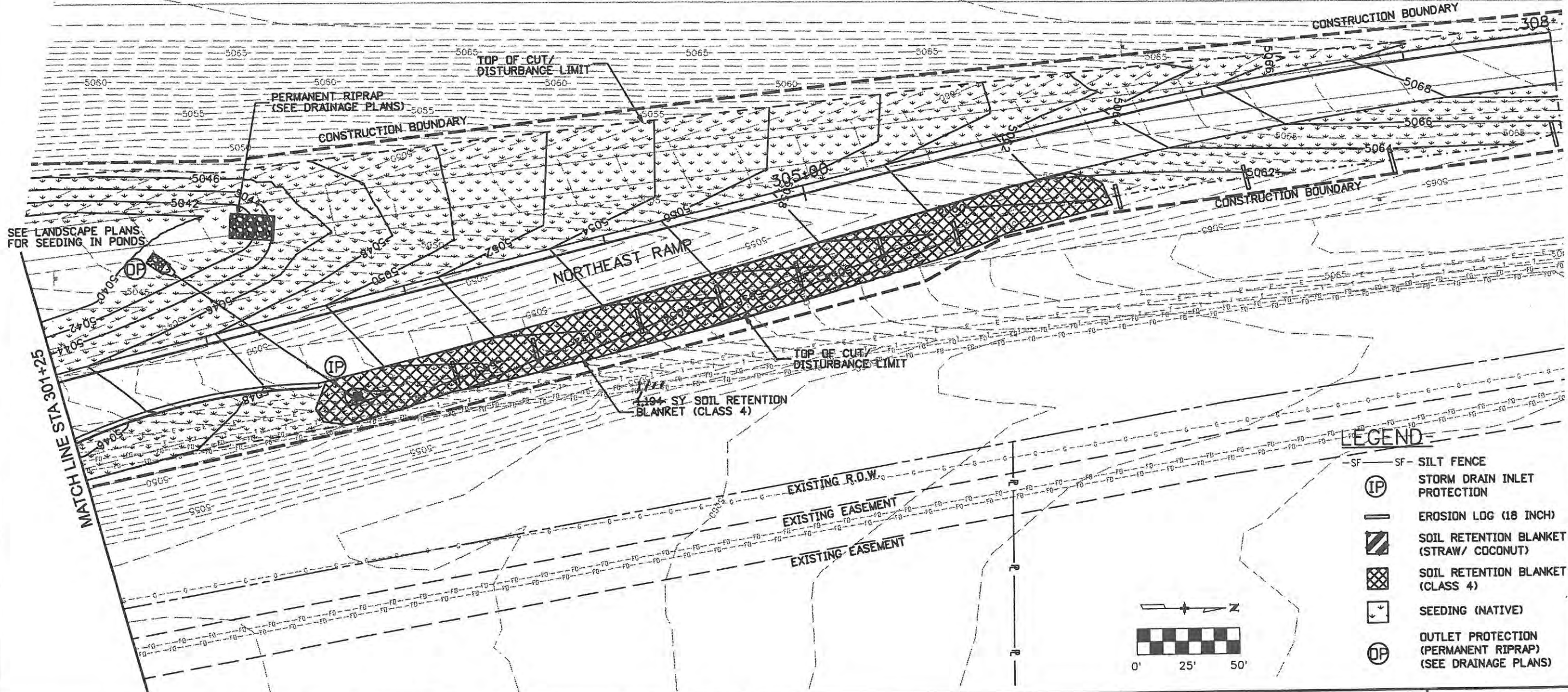
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Date:	Comments	Init.																
Designer: JJW Detailer: JBK Sheet Subset: EROSION		Structure Numbers Subset Sheets: EC6 of 8																





I-25 NORTHBOUND



**LEGEND**

-SF-	SF - SILT FENCE
(IP)	STORM DRAIN INLET PROTECTION
—	EROSION LOG (18 INCH)
[Diagonal Hatching]	SOIL RETENTION BLANKET (STRAW/ COCONUT)
[Cross Hatching]	SOIL RETENTION BLANKET (CLASS 4)
[Square with Arrow]	SEEDING (NATIVE)
(OP)	OUTLET PROTECTION (PERMANENT RIPRAP) (SEE DRAINAGE PLANS)

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**EROSION CONTROL/SWMP  
NORTHEAST RAMP**

Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: EROSION	Subset Sheets: EC7 of 8

**Project No./Code**

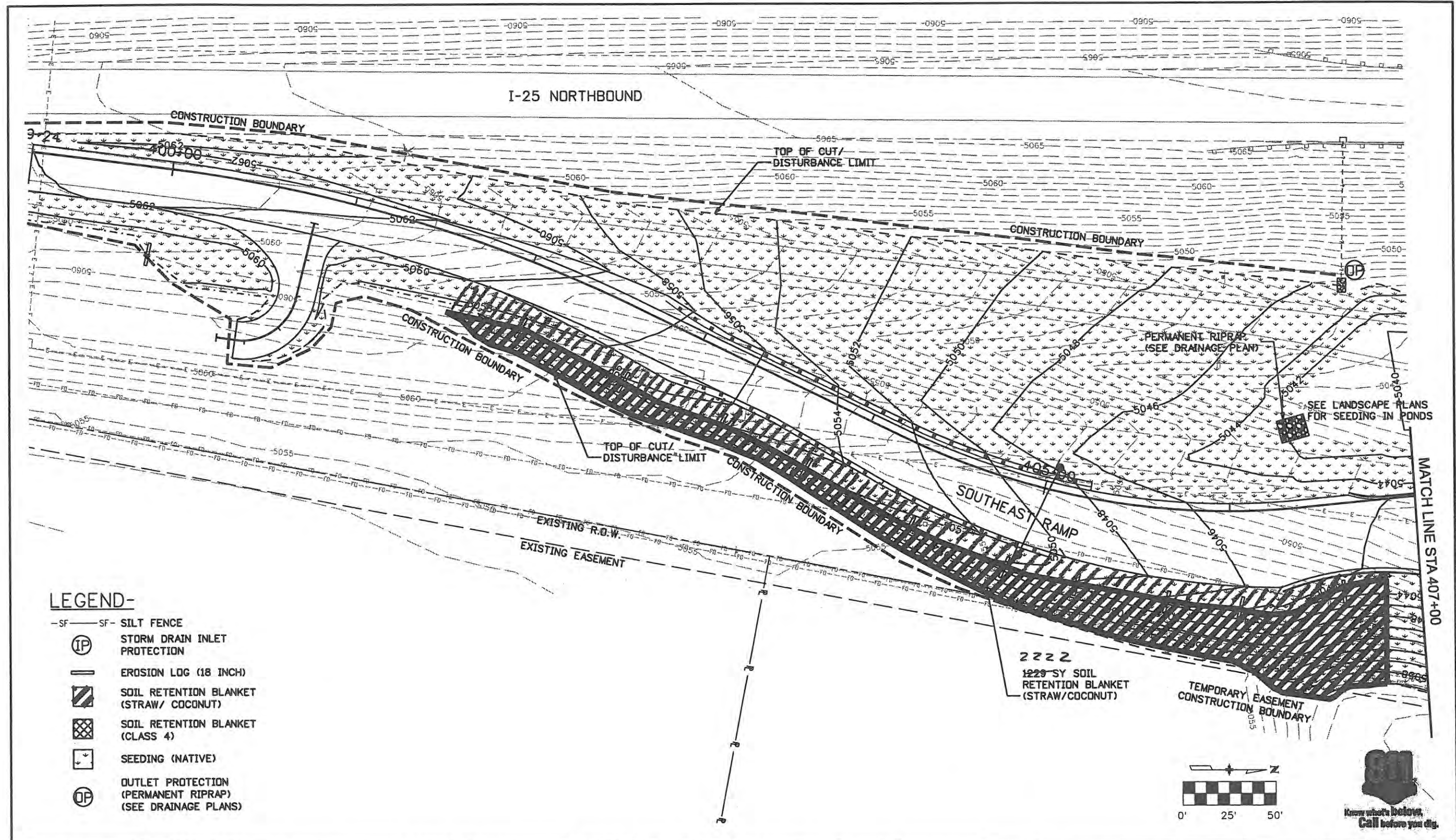
ES4 0253-207

17244

Sheet Number 117

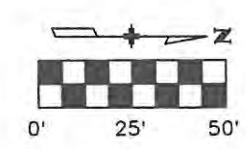
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 Fax: 303-297-2883





**LEGEND-**

- SF - SF - SILT FENCE
- ⊙ IP STORM DRAIN INLET PROTECTION
- ▬ EROSION LOG (18 INCH)
- ▨ SOIL RETENTION BLANKET (STRAW/ COCONUT)
- ▩ SOIL RETENTION BLANKET (CLASS 4)
- ⊞ SEEDING (NATIVE)
- ⊙ OP OUTLET PROTECTION (PERMANENT RIPRAP) (SEE DRAINAGE PLANS)



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Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: EROSION	Subset Sheets: ECB of 8

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ES4 0253-207
17244
Sheet Number 118

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**GENERAL NOTES**

EXCEPT AS SHOWN ON THE PLANS, STRUCTURE EXCAVATION AND BACKFILL SHALL BE IN ACCORDANCE WITH M-206-2.

A COLORED STRUCTURAL CONCRETE COATING WITH ANTI-GRAFFITI FINISH WILL BE REQUIRED, AS SHOWN ON THE PLANS, ON ALL EXPOSED CONCRETE SURFACES. COLOR #1 SHALL BE FEDERAL STANDARD COLOR NO. 33722 OR APPROVED EQUAL. COLOR #2 SHALL BE FEDERAL STANDARD COLOR NO. 30340 OR APPROVED EQUAL. THE COATINGS SHALL BE SELECTED FROM TEST PANELS PROVIDED BY THE CONTRACTOR.

THE FINAL FINISH FOR THE SURFACES OF THE TYPE 7 GUARDRAIL (STYLE CE) (SPECIAL) AND CURBS SHALL BE CLASS 2. ALL OTHER EXPOSED CONCRETE SURFACES SHALL RECEIVE A CLASS 1 FINAL FINISH TO ONE FOOT BELOW THE GROUND LINE.

GRADE 60 REINFORCING STEEL IS REQUIRED.

ALL REINFORCING STEEL SHALL BE NON-EPOXY COATED UNLESS OTHERWISE NOTED.

EXPANSION JOINT MATERIAL SHALL MEET AASHTO SPECIFICATION M213.

M.S.E. = MECHANICALLY STABILIZED EARTH

UNSUITABLE FOUNDATION MATERIAL SHALL BE REPLACED WITH SUITABLE FOUNDATION MATERIAL IN ACCORDANCE WITH SECTION 206.03 OF THE STANDARD SPECIFICATIONS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.

STATIONS, ELEVATIONS, AND DIMENSIONS CONTAINED IN THESE PLANS ARE CALCULATED FROM THE "AS CONSTRUCTED PLANS" AND A RECENT FIELD SURVEY. THE STATIONS, ELEVATIONS, AND DIMENSIONS MAY BE ADJUSTED TO MEET THE EXISTING STRUCTURE. THE CONTRACTOR SHALL VERIFY ALL DEPENDENT DIMENSIONS IN THE FIELD BEFORE ORDERING OR FABRICATING ANY MATERIAL.

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 HIS 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 1-800-922-1987 AT LEAST 2 DAYS (NOT INCLUDING THE DAY OF NOTIFICATION) PRIOR TO ANY EXCAVATION OR OTHER EARTHWORK.

USE TYPE II CEMENT FOR CONCRETE IN CONTACT WITH SOIL.

**DESIGN DATA**

DESIGN METHOD (EXCEPT AS NOTED BELOW): LOAD AND RESISTANCE FACTOR DESIGN  
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 4TH ED. 2007 W/2008 INTERIMS.

MSE: SERVICE LOAD DESIGN: AASHTO SIXTEENTH EDITION

PANELS: LRFD STRENGTH I LIMIT STATE & SERVICE I LIMIT STATE:  
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 4TH ED. 2007 W/2008 INTERIMS.

REINFORCED CONCRETE:

CLASS D CONCRETE:  $f'_c = 4,500$  psi  
REINFORCING STEEL:  $f_y = 60,000$  psi

STRUCTURAL STEEL (UNLESS OTHERWISE NOTED):

AASHTO M-270 (ASTM A-36) GRADE 36 ( $f_y = 36,000$  psi)  
COLD FORMED ASTM A-500 GRADE B ( $f_y = 46,000$  psi)

THE FOLLOWING TABLE GIVES THE MINIMUM LAP SPLICE LENGTH FOR EPOXY COATED REINFORCING BARS PLACED IN ACCORDANCE WITH SUBSECTION 602.06. THESE SPLICE LENGTHS SHALL BE INCREASED BY 25% FOR BARS SPACED AT LESS THAN 6" ON CENTER.

BAR SIZE	#4	#5	#6	#7	#8	#9	#10	#11
SPLICE LENGTH FOR CLASS D CONCRETE	1'-3"	1'-6"	1'-10"	2'-2"	3'-8"	4'-8"	5'-11"	7'-3"

WHEN THE CONTRACTOR ELECTS TO SUBSTITUTE EPOXY COATED REINFORCEMENT FOR BLACK REINFORCING BARS, THE MINIMUM LAP SPLICE SHALL BE AS DESCRIBED ABOVE.

THE FOLLOWING TABLE GIVES THE MINIMUM LAP SPLICE LENGTH FOR BLACK REINFORCING BARS PLACED IN ACCORDANCE WITH SUBSECTION 602.06. THESE SPLICE LENGTHS SHALL BE INCREASED BY 25% FOR BARS SPACED AT LESS THAN 6" ON CENTER.

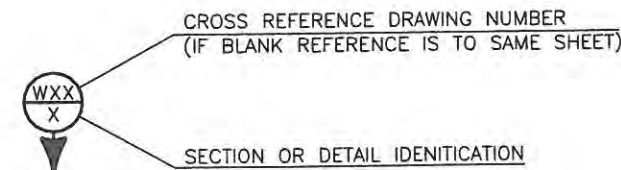
BAR SIZE	#4	#5	#6	#7	#8	#9	#10	#11
SPLICE LENGTH FOR CLASS D CONCRETE	1'-0"	1'-4"	1'-7"	1'-10"	2'-5"	3'-1"	3'-11"	4'-10"

**INDEX OF DRAWINGS**

- W-1 GENERAL INFORMATION
- W-2 SUMMARY OF QUANTITIES
- W-3 WALL AND BORING LOCATION PLAN
- W-4 ENGINEERING GEOLOGY
- W-5 WALL C-17-A PLAN AND ELEVATION ( 1 OF 2 )
- W-6 WALL C-17-A PLAN AND ELEVATION ( 2 OF 2 )
- W-7 WALL C-17-B PLAN AND ELEVATION
- W-8 M.S.E. WALL RETAINING WALL DETAILS ( 1 OF 3 )
- W-9 M.S.E. WALL RETAINING WALL DETAILS ( 2 OF 3 )
- W-10 M.S.E. WALL RETAINING WALL DETAILS ( 3 OF 3 )
- W-11 M.S.E. WALL PRECAST PANEL DETAILS ( 1 OF 2 )
- W-12 M.S.E. WALL PRECAST PANEL DETAILS ( 2 OF 2 )
- W-13 M.S.E. WALL ARCHITECTURAL DETAILS ( 1 OF 2 )
- W-14 M.S.E. WALL ARCHITECTURAL DETAILS ( 2 OF 2 )
- W-15 GUARDRAIL TYPE 7 ( STYLE CE ) ( SPECIAL ) DETAILS
- W-16 INLET TYPE R ( SPECIAL ) DETAILS ( 1 OF 2 )
- W-17 INLET TYPE R ( SPECIAL ) DETAILS ( 2 OF 2 )
- W-18 WALL-C-17-D AND WALL-C-17-E TYPICAL SECTION
- W-19 HANDRAIL DETAILS
- W-20 SLOPE PAVING DETAIL

**RETAINING WALL TABLE**

WALL	TYPE	LENGTH	MAXIMUM EXPOSED HEIGHT
WALL-C-17-A	PRECAST PANEL FACE M.S.E. WALL	420'-0"	10'-0"
WALL-C-17-B	PRECAST PANEL FACE M.S.E. WALL	130'-0"	6'-9"
WALL-C-17-D	SOIL NAIL WALL	222'-9"	-
WALL-C-17-E	SOIL NAIL WALL	210'-9"	-



**811**

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BEFORE YOU DIG**  
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(or 1-800-922-1987)  
UTILITY NOTIFICATION  
CENTER OF COLORADO (UNCC)  
www.uncc.org

Design		Detail		Quantities	
INITIAL	DATE	INITIAL	DATE	INITIAL	DATE
JSM	3/09	KCT	3/09	JSM	3/09
TWM	3/09	TWM	3/09	TRJ	3/09
Designed By	Checked By	Detailed By	Checked By	Quantities By	Checked By

Print Date: 5/1/2009 File Name: GenInfo.dgn Horiz. Scale: N/A Unit Information	Vert. Scale: N/A Unit Leader	Sheet Revisions			CITY OF LOVELAND 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	WILSON & COMPANY Engineers & Architects 999 18th Street Suite 2600 Denver, CO 80202 Phone: 303-297-2976 Fax: 303-297-2693	As Constructed		GENERAL INFORMATION		Project No./Code
		Date:	Comments	Init.			No Revisions: 9/14/11	Revised:	Void:	Designer: J. Mills Detailer: K. Tucker Sheet Subset: WALL	Structure Numbers Subset Sheets: W1 of W20



**SUMMARY OF QUANTITIES**

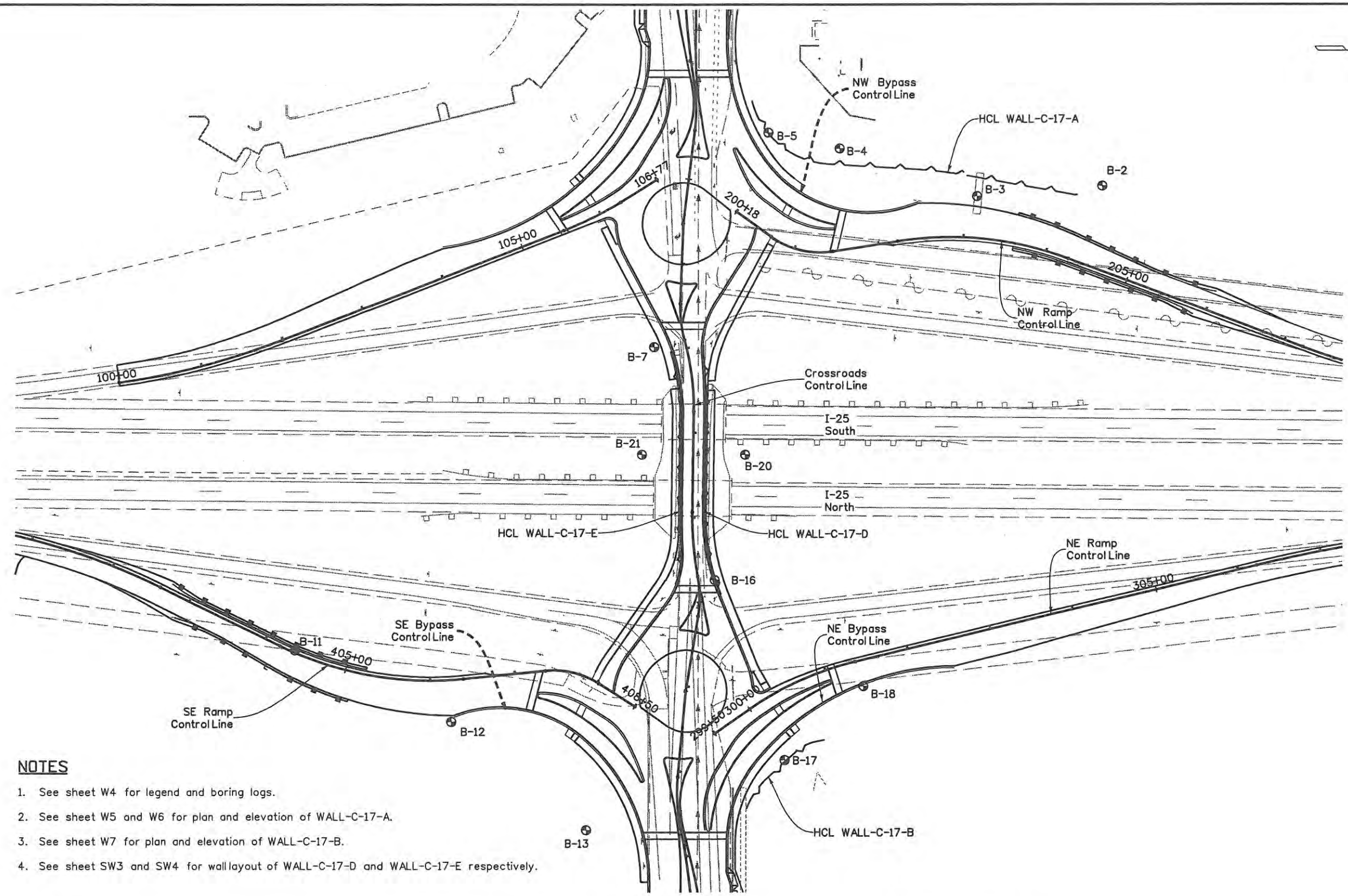
Item No.	Description	Unit	WALL-C-17-A	WALL-C-17-B	WALL-C-17-D	WALL-C-17-E	BRIDGE C-17-ES	BRIDGE C-17-ET	Total
202-00026	Removal of Slope and Ditch Paving	SY	-	-	545-566	550-570	-	-	1095
206-00000	Structure Excavation	CY	3260	791	-	-	-	-	4051
206-00100	Structure Backfill (Class 1)	CY	2523	460	-	-	-	-	2983
206-00360	Mechanical Reinforcement of Soil	CY	<del>138</del> 1208	<del>332</del> 274	-	-	-	-	4743
504-04420	Precast Panel Facing	SF	<del>4030</del> 4013	<del>872</del> 965	-	-	-	-	5002
504-06100	Soil Nail Wall	SF	-	-	603-732	633-715	-	-	1236
507-00000	Concrete Slope and Ditch Paving	CY	<del>110</del> 2	<del>4</del> 3.1	5446.4	6045.3	-	-	<del>120</del> 113.7
514-00201	Pedestrian Railing (Steel) (Special)	LF	-	-	294293	273276	-	-	567569
601-01050	Concrete Class D	CY	<del>28</del> 13.2	<del>2</del> 3.5	7378.2	6772.2	-	-	14150.4
601-40005	Cut Stone Veneer	SF	1278	297	-	-	-	-	1575
601-40301	Structural Concrete Coating (Anti-Graffiti)	SF	2791	743	3628	4024	2423	2475	16084
602-00000	Reinforcing Steel	LB	<del>287</del> 1189	<del>82</del> 278	34703710	32223556	-	-	706+
601-40302	Struc. Conc. Coating (Anti-Graffiti)	SF	1443	346	-	-	-	-	1789

1,482  
4,978  
1,447  
8,733

\* Includes 5.3 CY for emb. protector at sta. 57+16 LT & 3.4 CY for emb. protector at sta. 56+72 RT

Design		Detail		Quantities	
Designed By	Checked By	INITIAL	DATE	INITIAL	DATE
JSM	TWM	JSM	3/09	JSM	3/09
Checked By	Checked By	RRW	3/09	TRJ	3/09
TWM	TWM	TWM	3/09	TRJ	3/09

Print Date: 6/3/2009	Sheet Revisions			 <b>CITY OF LOVELAND</b> 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 <b>WILSON &amp; COMPANY</b> Engineers & Architects 999 18th Street Suite 2600 Denver, CO 80202 Phone: 303-297-2976 Fax: 303-297-2693	As Constructed		SUMMARY OF QUANTITIES		Project No./Code	
File Name: Summary of Quantities.dgn	Date:	Comments	Init.			No Revisions:	Designer: J. Mills Detailer: R. Wipf Sheet Subset: WALL			ES4 0253-207	
Horiz. Scale: N/A						Revised: 7/14/11			Structure Numbers		17244
Unit Information						Void:	Subset Sheets: W2 of W20		Sheet Number 120		



**NOTES**

1. See sheet W4 for legend and boring logs.
2. See sheet W5 and W6 for plan and elevation of WALL-C-17-A.
3. See sheet W7 for plan and elevation of WALL-C-17-B.
4. See sheet SW3 and SW4 for wall layout of WALL-C-17-D and WALL-C-17-E respectively.

PLAN

Design		Detail		Quantities	
Designed By	Checked By	INITIAL	DATE	INITIAL	DATE
JSM	TWM	JSM	3/09	JSM	3/09
TWM	TWM	TWM	3/09	TRU	3/09

Print Date: 5/18/2009	<b>Sheet Revisions</b>			<b>CITY OF LOVELAND</b>	<b>WILSON &amp; COMPANY</b> Engineers & Architects	<b>As Constructed</b>		<b>WALL AND BORING LOCATION PLAN</b>		<b>Project No./Code</b>
File Name: KeyPlan.dgn	Date:	Comments:	Init.			No Revisions: 9/14/11			ES4 0253-207	
Horiz. Scale: N/A				500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	999 18th Street Suite 2600 Denver, CO 80202 Phone: 303-297-2976 Fax: 303-297-2593	Revised:	Designer: J. Mills	Structure	17244	
Unit Information						Void:	Detailer: K. Tucker	Numbers	Sheet Subset: WALL	Subset Sheets: W3 of W20

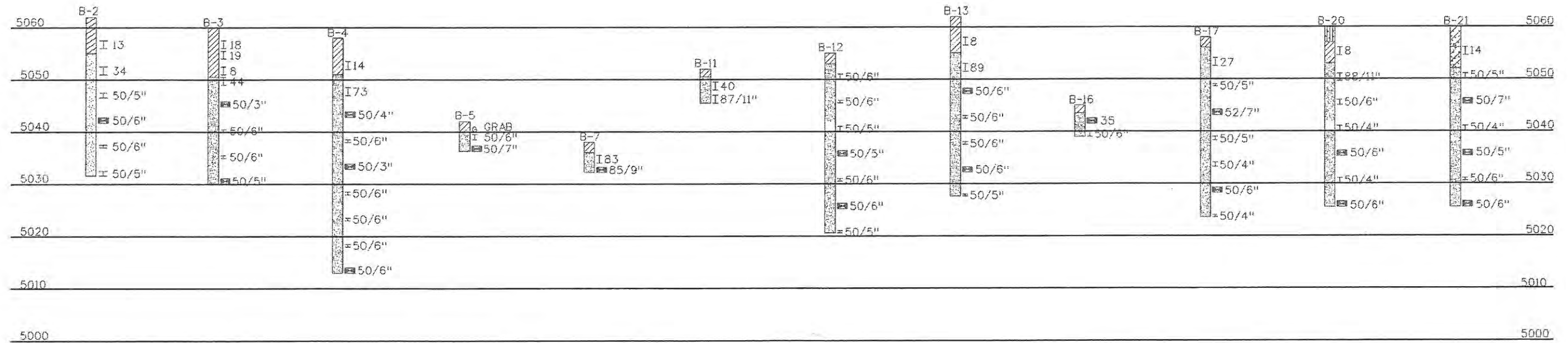


**LEGEND**

- 79/11" Drive sample blow count, indicates blows per foot (Ex. 23) or blows per inches (Ex. 50/2") of a 140-pound hammer falling 30 inches
- I Drive sample, standard split spoon
- ☒ Drive sample, 2-inch I.D. California liner sample
- ∇ Ground water level at time of drilling
- B-1 ⊕ Boring location and identification number

**WALL NUMBER TABLE**

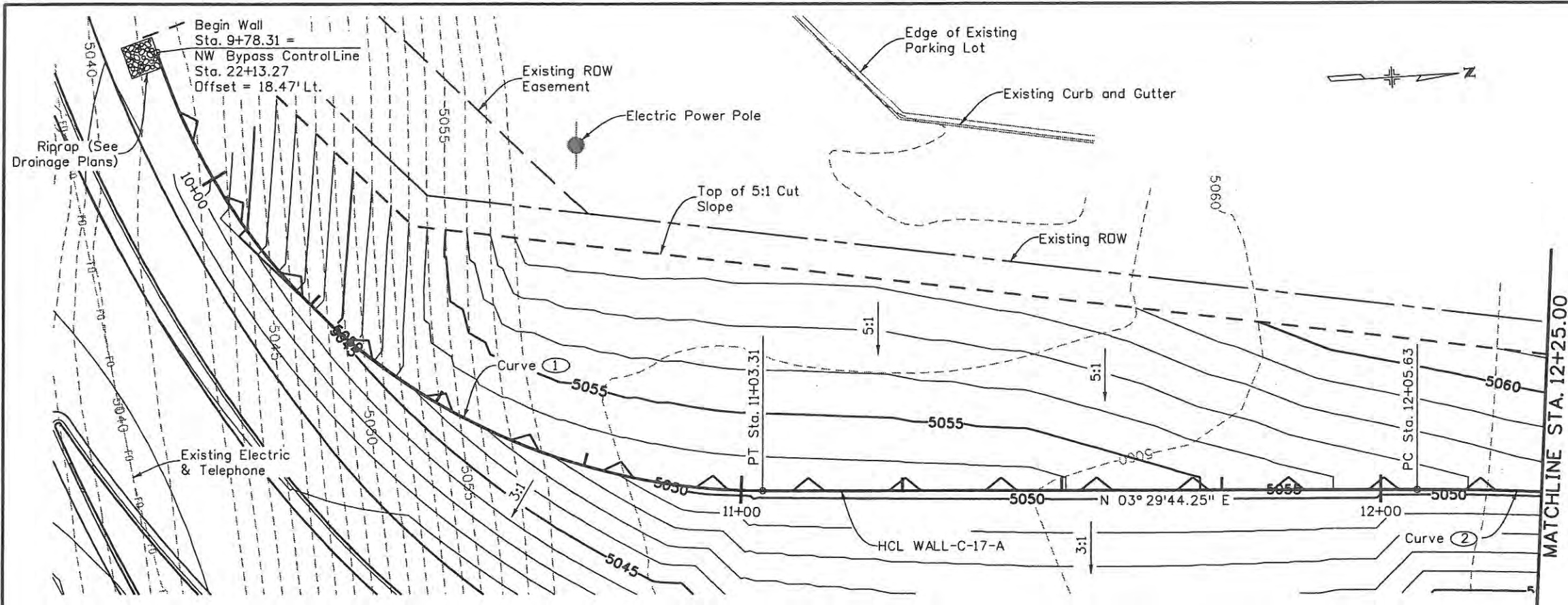
Geotechnical Report Wall No.	CDOT Wall No.
Wall A	WALL-C-17-A
Wall B	WALL-C-17-B
Wall E1	WALL-C-17-D
Wall E2	WALL-C-17-E



Design		Detail		Quantities	
DATE	INITIAL	DATE	INITIAL	DATE	INITIAL
3/09	JSM	3/09	TWM	3/09	JSM
3/09	TWM	3/09	TWM	3/09	TRJ
Checked By	Checked By	Checked By	Checked By	Checked By	Checked By

SUMMARY OF TEST RESULTS										TYPE OF MATERIAL										LEGEND									
Sample No.	Depth	Classification		Grading Analysis (AASHTO)				Atterberg Limits			Water Content %	Dry Unit Weight P.C.F.	SAND: Slightly clayey, fine	SAND: Gravelly, clayey, fine	CLAY: Slightly fine sandy	SANDSTONE/CLAYSTONE	TEST BORING			CONTINUOUS PENETRATION TEST									
		Corps of Engrs. or Visual	AASHTO	Gravel	Coarse Sand	Fine Sand	Silt and Clay	Liquid Limit %	Plastic Limit %	Plasticity Index %							Hole Size	Blows per Foot	R = Refusal	Water Level	Sample Number	2 Inch Diameter Drive Point	30 Inch Free Fall	140 Pound Hammer					
Refer to Geotech Report																													

Print Date: 4/29/2009	<b>Sheet Revisions</b>		<b>CITY OF LOVELAND</b>	<b>WILSON &amp; COMPANY</b> Engineers & Architects	<b>As Constructed</b>		<b>ENGINEERING GEOLOGY</b>		<b>Project No./Code</b>	
File Name: EngGeo.dgn	Date:	Comments:			Init.:	No Revisions: 9/14/11	Revised:	Void:	Designer: M. Hallman	Structure Numbers:
Horiz. Scale: N/A				500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000			Detailer: D. Anderson		17244	
Unit Information									Sheet Subset: WALL	



**CURVE DATA**

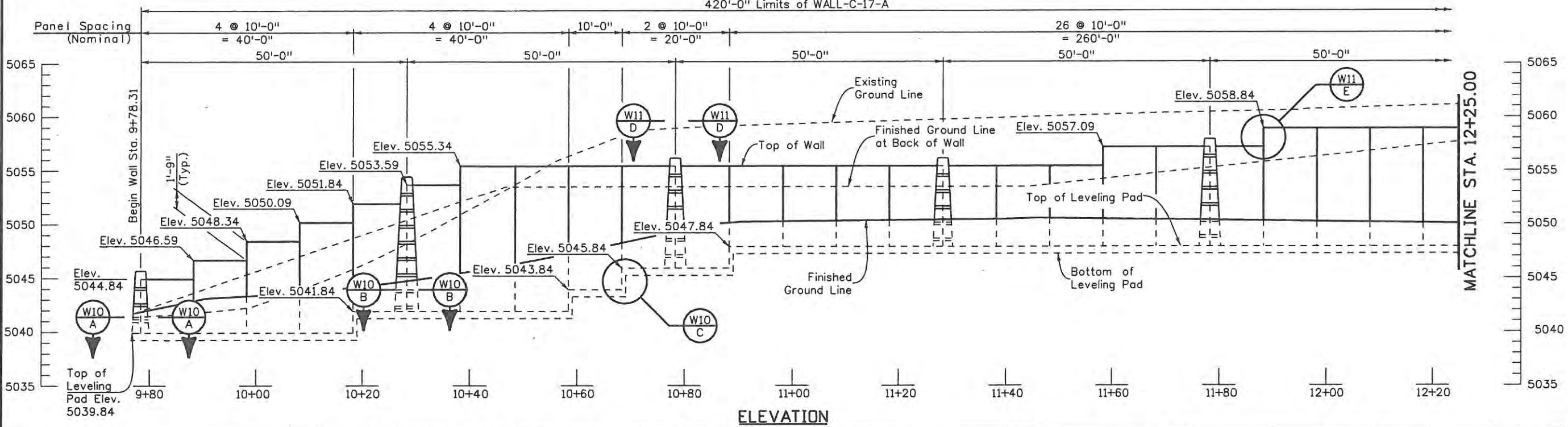
Curve ①
Δ = 71° 37' 11.01"
D = 57° 17' 44.81"
T = 72.15'
L = 125.00'
R = 100.00'
Curve ②
Δ = 6° 32' 26.49"
D = 11° 27' 32.96"
T = 28.57'
L = 57.08'
R = 500.00'

**NOTES**

1. Retaining wall shall be MSE panel facing wall.
2. Refer to roadway plans for roadway details.
3. Panels shall be on chorded layout through curves.
4. Top and bottom of wall elevations are level.

**PLAN**

420'-0" Limits of WALL-C-17-A



**ELEVATION**

Design		Detail		Quantities	
INITIAL	DATE	INITIAL	DATE	INITIAL	DATE
JSM	3/09	RJA	3/09	JSM	3/09
Designed By	Detailed By	Checked By	Checked By	Quantities By	Checked By
TWM	TWM	TWM	TWM	TRU	TRU

Print Date: 6/3/2009
File Name: Wall_Layout_A_01.dgn
Horiz. Scale: 1:1
Unit Information

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

**WILSON & COMPANY**  
Engineers & Architects

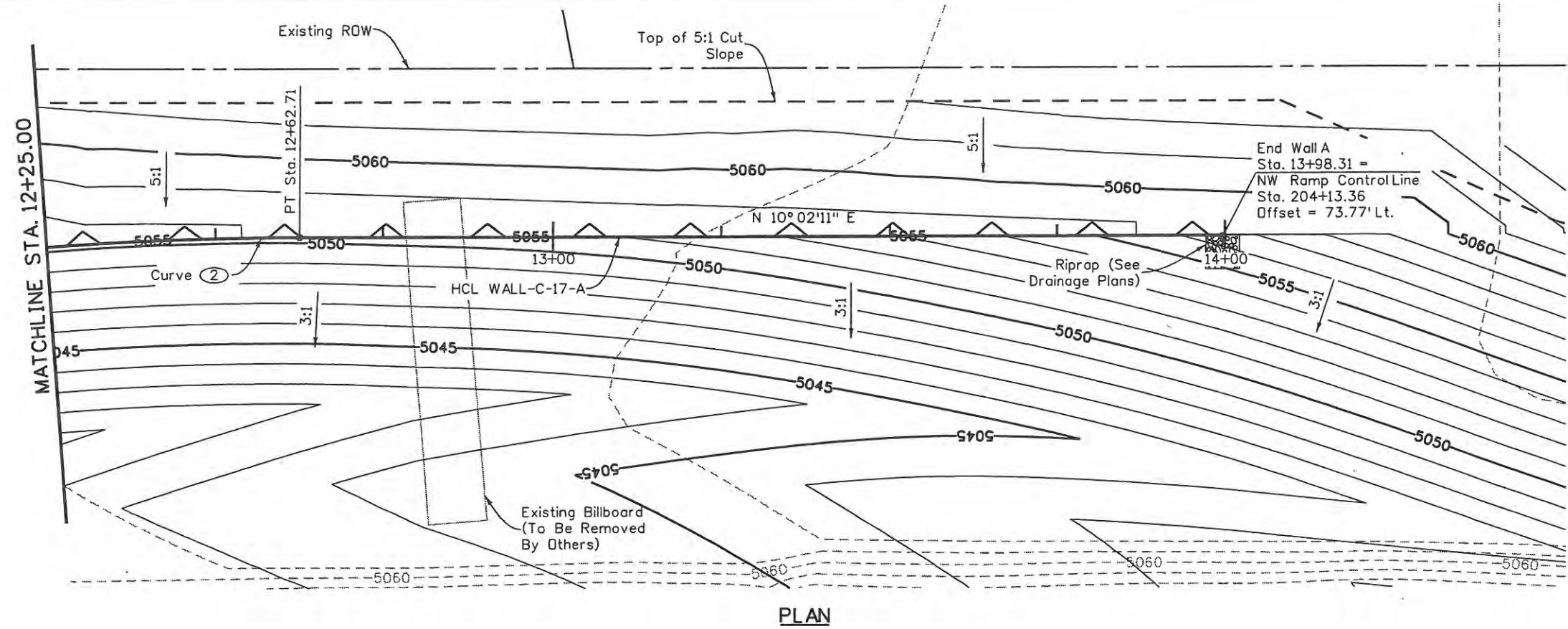
999 18th Street Suite 2600  
Denver, CO 80202  
Phone: 303-297-2976  
Fax: 303-297-2693

As Constructed
No Revisions: 9/14/11
Revised:
Void:

<b>WALL C-17-A</b>			
<b>PLAN AND ELEVATION (1 OF 2)</b>			
Designer:	J. Mills	Structure Numbers	WALL C-17-A
Detailer:	R. Artman	Subset Sheets:	W5 of W20

Project No./Code
ES4 0253-207
Sheet Number
123





**CURVE DATA**

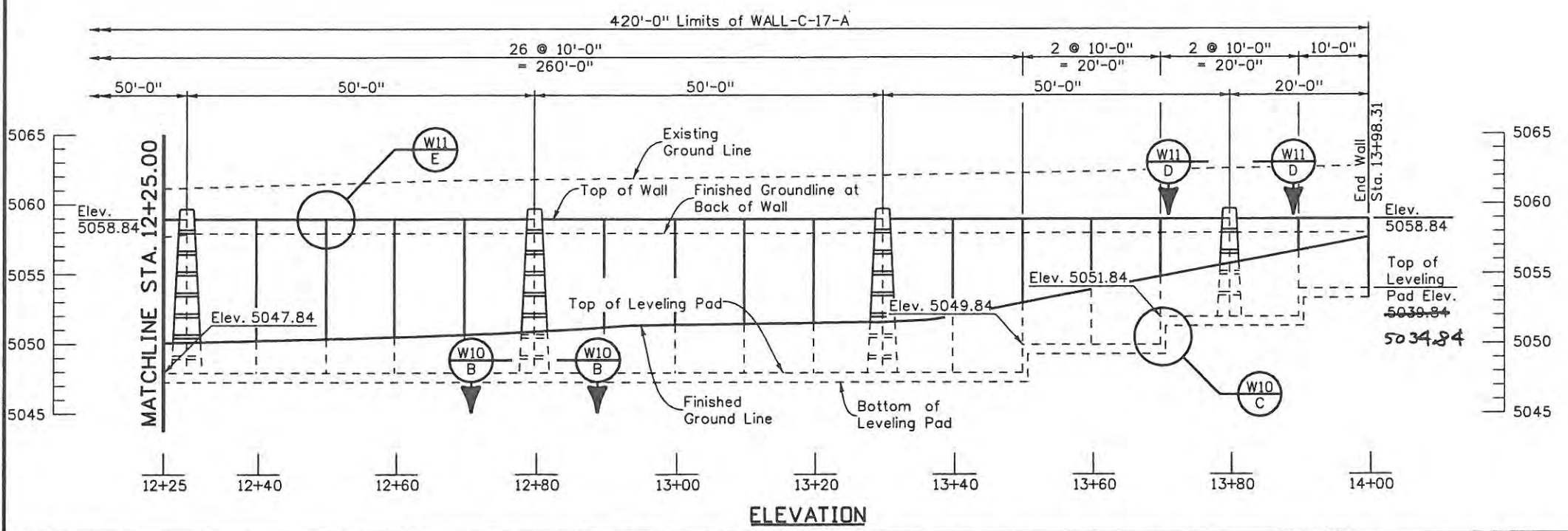
Curve ②

Δ = 6° 32' 26.49"  
 D = 11° 27' 32.96"  
 T = 28.57'  
 L = 57.08'  
 R = 500.00'

**NOTES**

1. Retaining wall shall be MSE panel facing wall.
2. Refer to roadway plans for roadway details.
3. Panels shall be on chorded layout through curves.
4. Top and bottom of wall elevations are level.

Design		Detail		Quantities	
INITIAL	DATE	INITIAL	DATE	INITIAL	DATE
JSM	3/09	TWM	3/09	JSM	3/09
Checked By		Checked By		Checked By	
TWM		TWM		TRU	



Print Date: 6/3/2009

File Name: Wall\_Layout\_A\_02.dgn

Horiz. Scale: 1:1      Vert. Scale: As Noted

Unit Information      Unit Leader Initials

**Sheet Revisions**

Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
 LOVELAND, CO 80537  
 970-962-2000

**WILSON & COMPANY**  
 Engineers & Architects

999 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2693

**As Constructed**

No Revisions:

Revised: 9/14/11

Void:

**WALL C-17-A  
 PLAN AND ELEVATION (2 OF 2)**

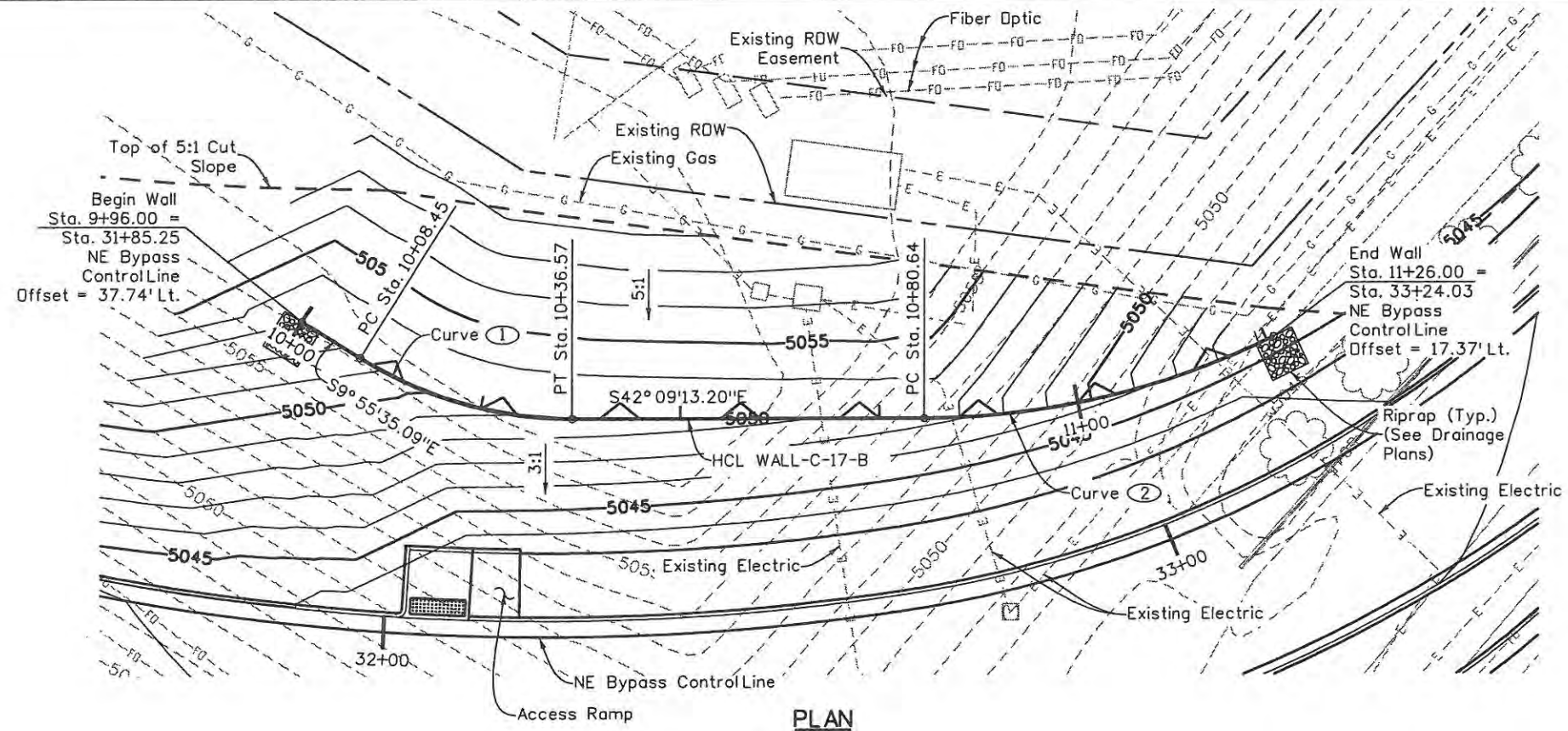
Designer:	J. Mills	Structure Numbers	WALL C-17-A
Detailer:	R. Artman	Subset Sheets:	W6 of W20

**Project No./Code**

ES4 0253-207

17244

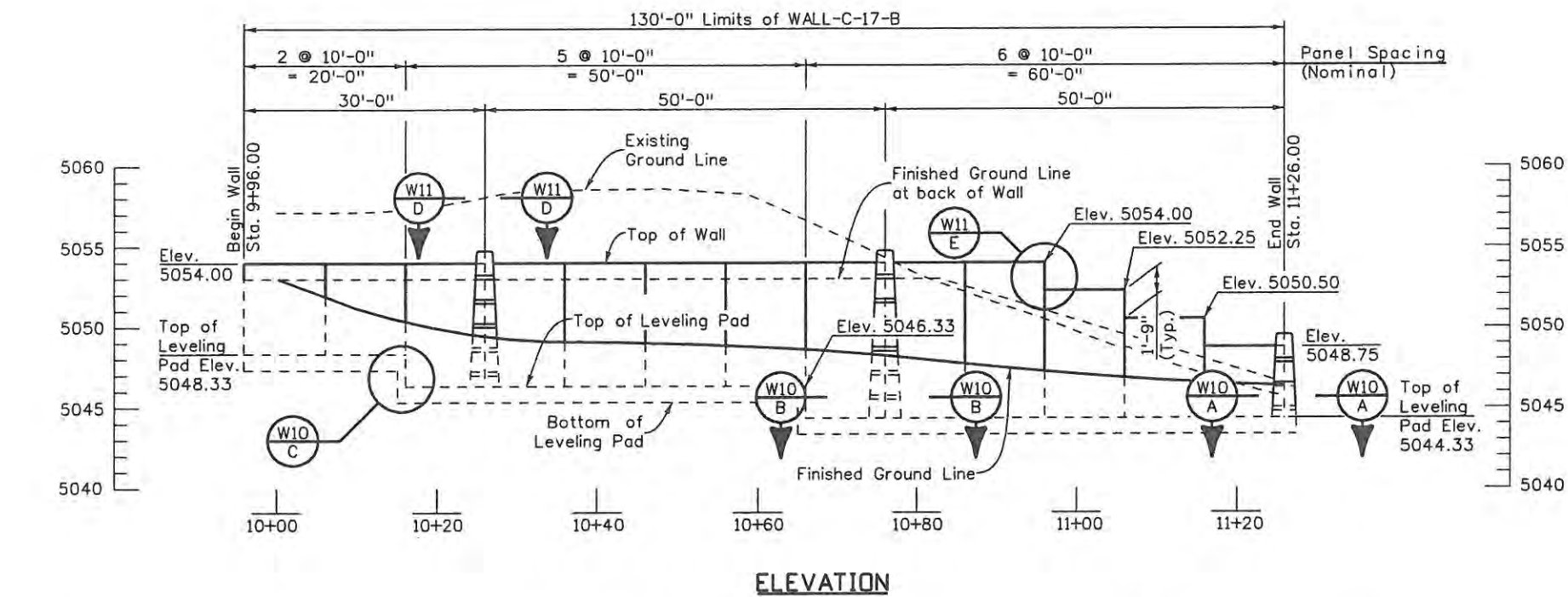
Sheet Number 124



**CURVE DATA**

Curve ①  
 $\Delta = 32^\circ 13' 38.11''$   
 $D = 114^\circ 35' 29.61''$   
 $T = 14.44'$   
 $L = 28.12'$   
 $R = 50.00'$

Curve ②  
 $\Delta = 25^\circ 59' 28.24''$   
 $D = 57^\circ 17' 44.81''$   
 $T = 23.08'$   
 $L = 45.36'$   
 $R = 100.00'$



**NOTES**

1. Retaining wall shall be MSE panel facing wall.
2. Refer to roadway plans for roadway details.
3. Panels shall be on chorded layout through curves.
4. Top and bottom of wall elevations are level.

Design		Detail		Quantities	
DATE	INITIAL	DATE	INITIAL	DATE	INITIAL
3/09	JSM	3/09	TWM	3/09	JSM
					TRU
Checked By		Detailed By		Quantities By	
Checked By		Checked By		Checked By	

Print Date: 6/3/2009
File Name: Wall_Layout_B.dgn
Horiz. Scale: 1:1
Unit Information
Vert. Scale: As Noted
Unit Leader Initials

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
 LOVELAND, CO 80537  
 970-962-2000

**WILSON & COMPANY**  
 Engineers & Architects

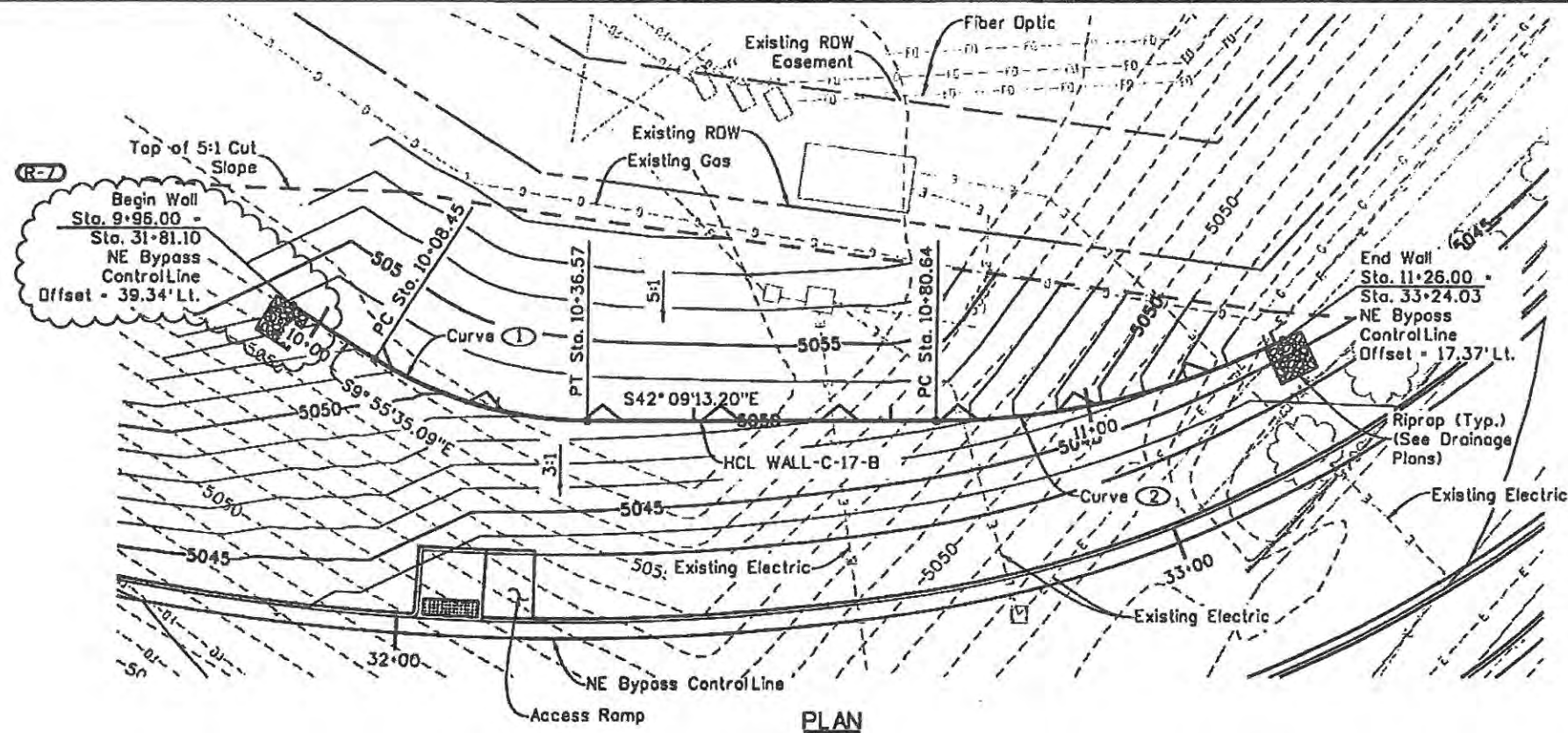
999 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2693

As Constructed
No Revisions:
Revised:
Void: 9/14/11

WALL C-17-B PLAN AND ELEVATION			
Designer:	J. Mills	Structure Numbers	WALL C-17-B
Detailer:	D. Anderson	Subset Sheets:	W7 of W20
Sheet Subset:	WALL		

Project No./Code	ES4 0253-207
Sheet Number	125



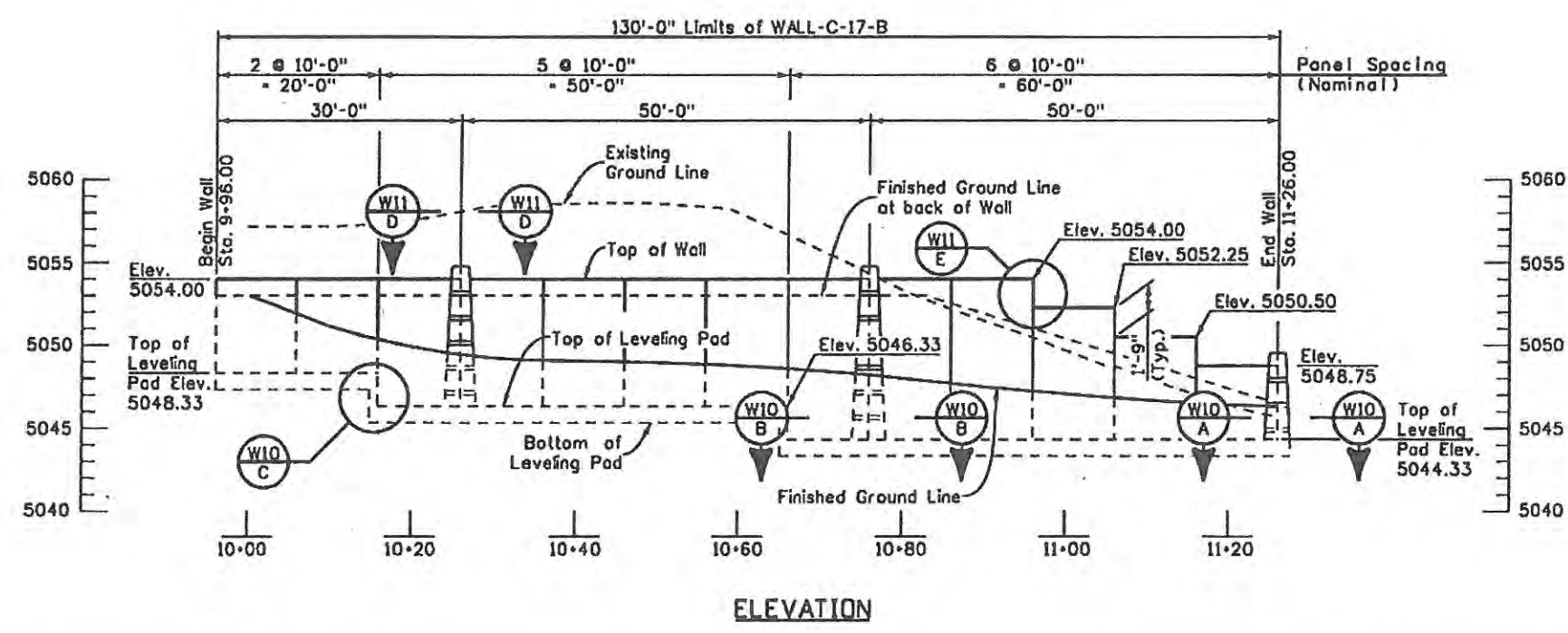


**CURVE DATA**

- Curve ①  
 A= 32° 13' 38.11"  
 D= 114° 35' 29.61"  
 T= 14.44'  
 L= 28.12'  
 R= 50.00'
- Curve ②  
 A= 25° 59' 28.24"  
 D= 57° 17' 44.81"  
 T= 23.08'  
 L= 45.36'  
 R= 100.00'



**PLAN**



**ELEVATION**

**NOTES**

- Retaining wall shall be MSE panel facing wall.
- Refer to roadway plans for roadway details.
- Panels shall be on chorded layout through curves.
- Top and bottom of wall elevations are level.



Design		Detail		Quantities	
DATE	INITIAL	DATE	INITIAL	DATE	INITIAL
3/09	JSM	3/09	JSM	3/09	JSM
3/09	TWM	3/09	TWM	3/09	TRJ

Print Date: 12/1/2009	File Name: Wall_Layout_B.dgn
Horiz. Scale: 1:1	Vert. Scale: As Noted
Unit Information	Unit Leader Initials

Sheet Revisions		
Date:	Comments	Init.
12/01/09	NE WALL ALIGNMENT	JJW

**CITY OF LOVELAND**  
 600 E. THIRD STREET  
 LOVELAND, CO 80537  
 970-962-2000

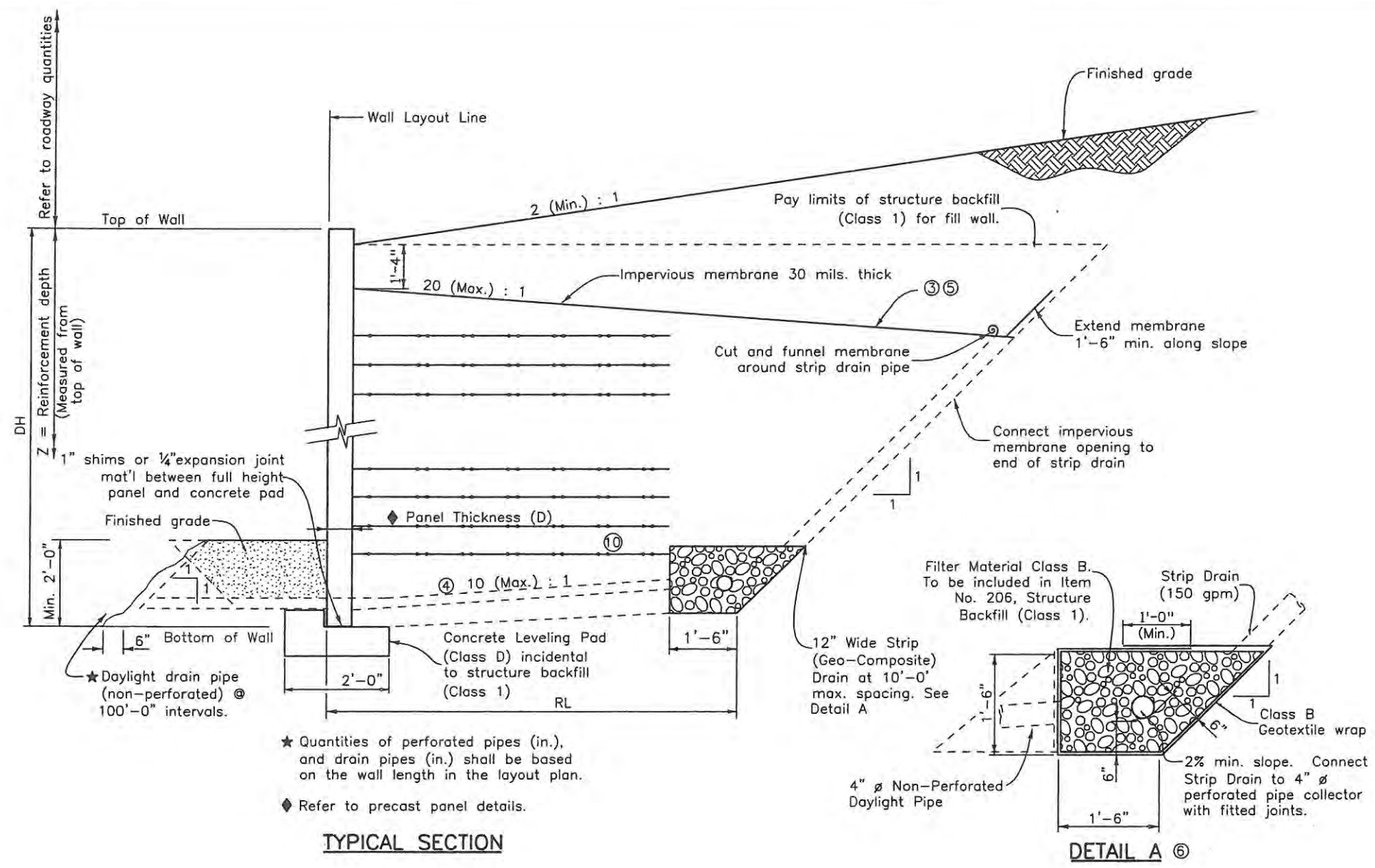
**WILSON & COMPANY**  
 Engineers & Architects  
 999 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2693

As Constructed	No Revisions: 9/14/11
Revised:	
Void:	

WALL C-17-B PLAN AND ELEVATION			
Designer:	J. Mills	Structure Numbers	WALL C-17-B
Detailer:	D. Anderson	Sheet Subset:	WALL
		Subset Sheets:	W7 of W20

Project No./Code	ES4 0253-207
	17244
Sheet Number	125X

Design		Detail		Quantities	
Designed By	Checked By	INITIAL	DATE	INITIAL	DATE
JSM	TWM	JSM	3/09	JSM	3/09
Checked By	Checked By	Checked By	Checked By	Checked By	Checked By
JSM	TWM	JSM	3/09	JSM	3/09



TYPICAL SECTION

DETAIL A @

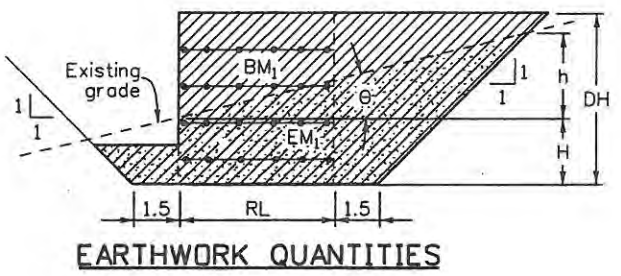
$$EM_1 = [(H + \frac{h}{2})(h/TAN\theta) + 0.75H + \frac{(H - 1.5 TAN\theta)(0.5H + 0.75)}{1 - TAN\theta} - 0.5(H+h)^2]/27$$

$$h = (H+RL+1.5) \frac{TAN\theta}{1 - TAN\theta}$$

$$BM_1 = [DH(RL+1.5) + 0.5(DH)^2 + 1.5(1.5)^2]/27$$

$$MRS = (DH)(RL)/27$$

θ = Average angle of existing ground line



EARTHWORK QUANTITIES

NOTES

- The 1'-4" dimension is estimated for the installation of impervious membrane.
- 2'-0" (min.) Structure Backfill (Class 2) is required for erosion control and to conceal and protect a stepped leveling pad. The cost for this material shall be included in the cost for Structure Backfill (Class 1).
- Impervious membrane and pipe collector for metal or geosynthetic reinforced walls.
- Soil Reinforcement may be cut to accommodate pipe installation. The cut shall be made in a direction parallel to the pipe centerline, as seen in a plan view.
- The membrane can be installed with a constant slope from the facing block all way to the back in conjunction with the geo-composite down drains at and along the temporary cut slope. The geo-composite drains that connect to the water collector system shall be minimum 12" in width with 10' maximum spacing.
- All Pipes and Connectors shall be schedule 40 H.D.P.E.
- Wall connection plate and necessary attachment shall not be paid for separately but shall be included in Item 504 Precast Panel Facing.
- One side temporary forming board is required to build detail A. The filter material shall be wrapped with erosion control Class B Geotextiles.
- Bottom layer of Soil reinforcement is required no more than 1'-4" above bottom of precast panel for external stability and global stability.

ABBREVIATIONS USED

- BM = Quantities of Structure Backfill (Class 1) without Shoring (c.y./ft.)
- BM1 = Quantities of Structure Backfill (Class 1) with Shoring (c.y./ft.)
- BP2 = Maximum Required Allowable Bearing Pressure (ksf)
- DH = Design Height (or, Avg. ht. for qty. calculations) (ft.)
- EM = Quantity of Structure Excavation without Shoring (c.y./ft.)
- EM1 = Quantity of Structure Excavation with Shoring (c.y./ft.)
- H2 = Depth of Excavation at Wall Layout Line (ft.)
- LTDS = Required Long Term Design Strength (lb./in.)
- MARV = Minimum Average roll Value (lb./in.)
- RL = Reinforcement Length (ft.)
- S = Tributary reinforcement spacing (ft.)
- Total = Sum of required LTDS for all layers (lb/in)

DESIGN DATA

AASHTO, 16th Edition without interims for internal design only  
 Unit weight of conc = 150 pcf  
 Unit weight of soil = 125 pcf is assumed.  
 Maximum allowable bearing capacity 4000 psf.  
 Internal friction angle of soil for Structure Backfill (Class 1) is assumed to be φ = 34°. Ka = 0.4067 for 2:1 slope.  
 Ka = 0.2827, K0 = 0.4408. for horizontal slope  
 Coefficient of resistance to direct sliding = 0.9 (Geogrid)  
 = 0.6 (Geotextile)  
 See Project Special Provisions for the relationship between LTDS and MARV of Geosynthetic Soil Reinforcement, and sacrificial thickness of Metallic Soil Reinforcement.

Print Date: 5/1/2009	Sheet Revisions			CITY OF LOVELAND	WILSON & COMPANY Engineers & Architects	As Constructed		M.S.E. RETAINING WALL DETAILS (1 OF 3)		Project No./Code
File Name: MSE_WallDet_01.dgn	Date:	Comments:	Init.			No Revisions: 9/14/11	Revised:	Void:	Designer: J. Mills	Structure Numbers: WALL-C-17-A
Horiz. Scale: N/A				500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	999 18th Street Suite 2600 Denver, CO 80202 Phone: 303-297-2976 Fax: 303-297-2693			Detailer: K. Tucker	WALL-C-17-B	17244
Unit Information	Unit Leader Initials							Sheet Subset: WALL	Subset Sheets: W8 of W20	Sheet Number



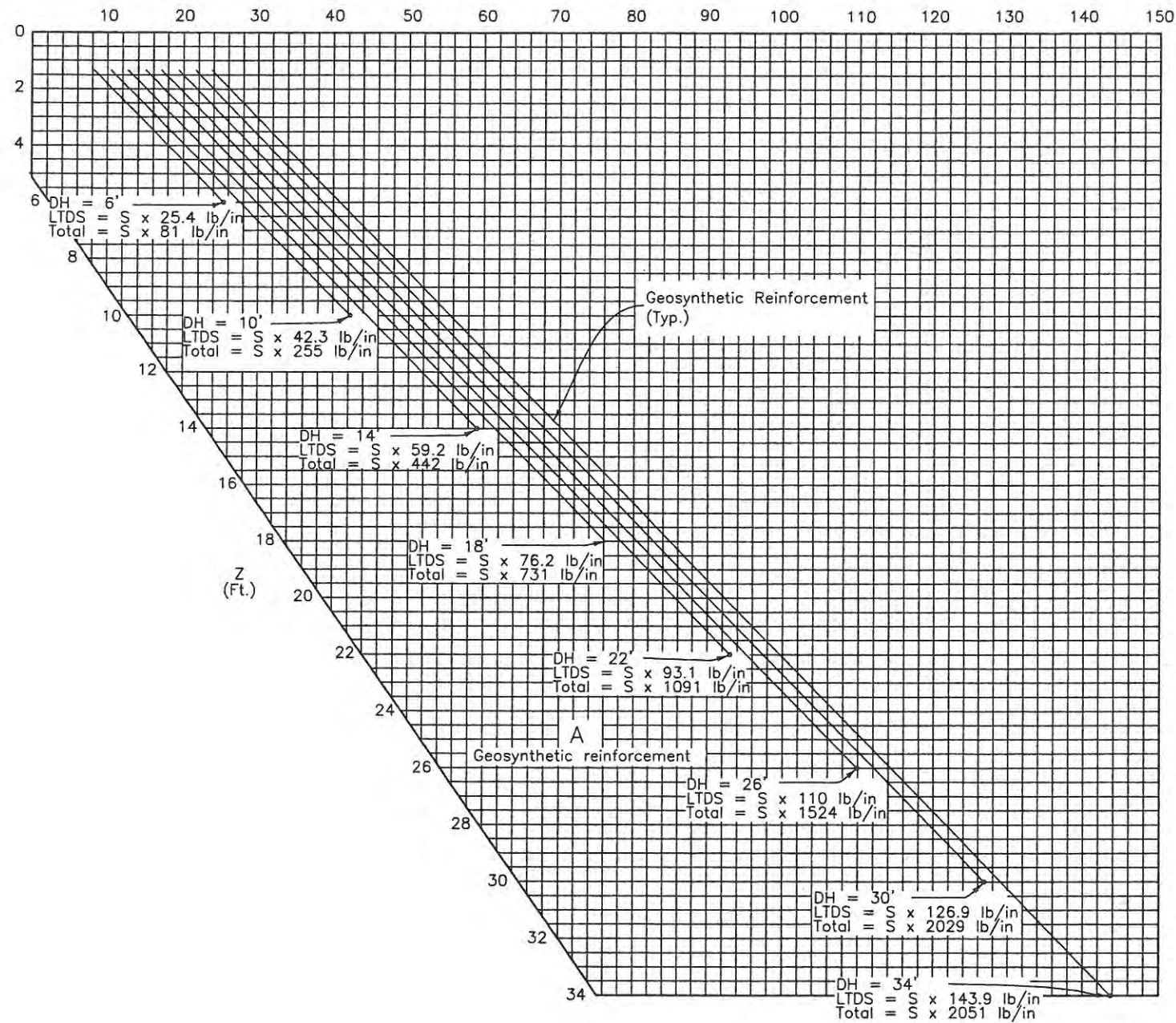
**GENERAL NOTES**

The required LTDS for different reinforcement layer depths (Z) is determined with the following equations:

$$LTDS \geq (K) \cdot (\sigma_v) \cdot S / 12$$

Where A. (Geosynthetic reinforcement)  
 $\sigma_v = 0.5(Z + Z')\gamma$  soil as depicted in the Loading Diagram.  
 $K = K_a = 0.4067$

LTDS (lb/in of wall length) (See Note 3)

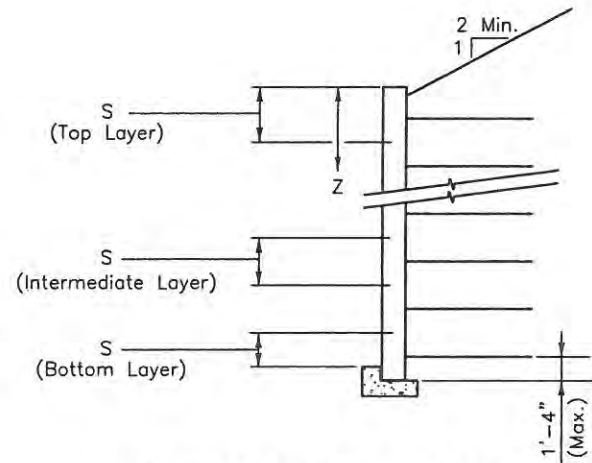


**TABLE**

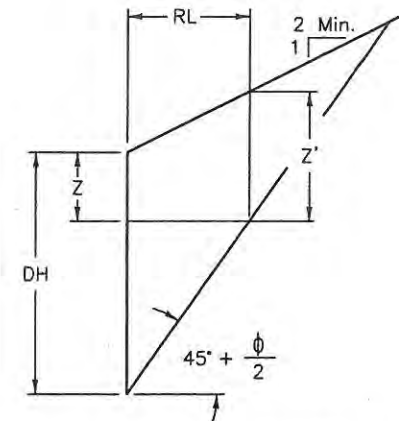
Design parameters for wall heights from 3.00' to 14.00'

DH (ft)	RL** (ft)	BP (ksf)
3.0	6.00	0.65
4.0	6.00	0.87
5.0	6.00	1.09
6.0	6.00	1.31
7.0	7.00	1.52
8.0	8.00	1.75
9.0	8.00	1.96
10.0	8.00	2.18
11.0	8.00	2.40
12.0	8.40	2.62
13.0	9.10	2.83
14.0	9.80	3.06

\*\* See Project Special Provisions for minimum RL requirements.



**REINFORCEMENT PATTERN**



**LOADING DIAGRAM**

**NOTES**

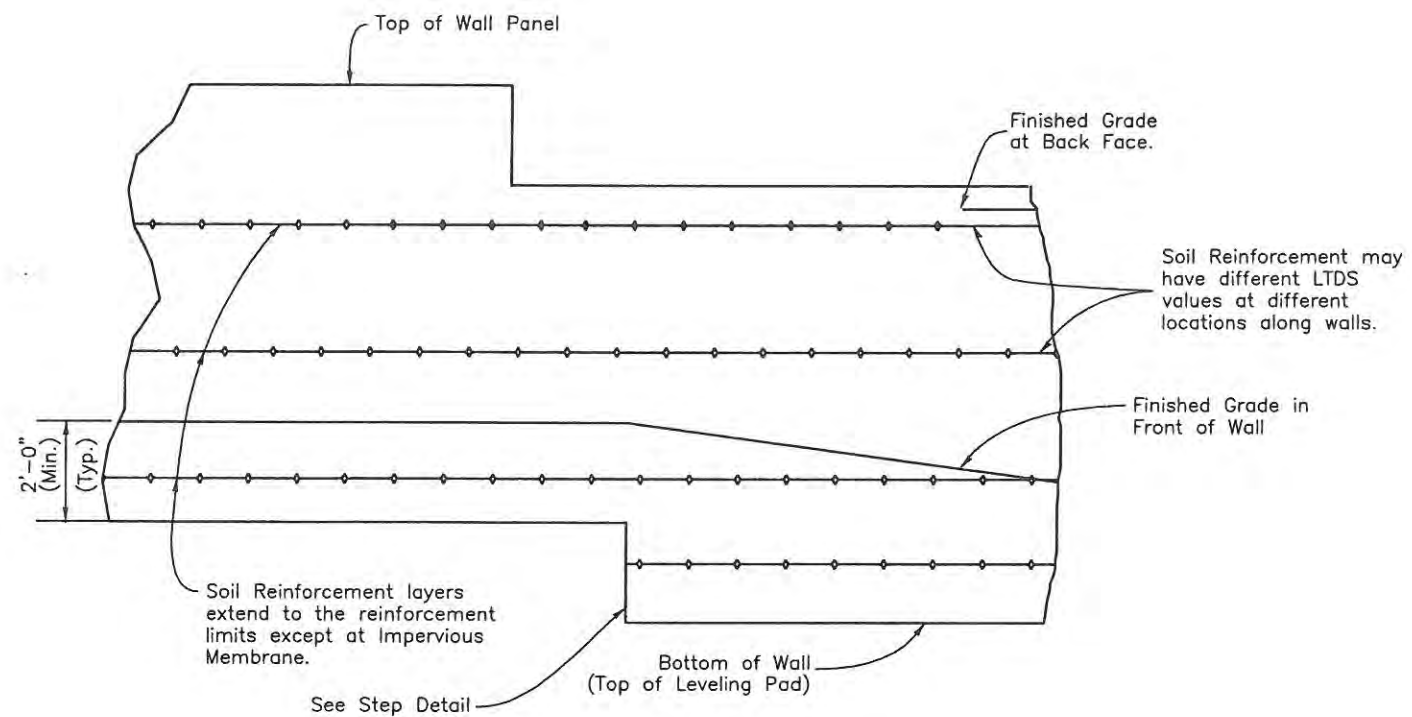
1. See Project Special Provisions for minimum reinforcement lengths.
2. Spacing S in the vertical distance from the center of reinforced fill layers.
3. Graph values must be multiplied by S in feet to obtain the required LTDS per inch of wall.

Design		Detail		Quantities	
Designed By	Checked By	INITIAL	DATE	INITIAL	DATE
JSM	TWM	KCT	3/09	JSM	3/09
		TWM	3/09	TRJ	3/09

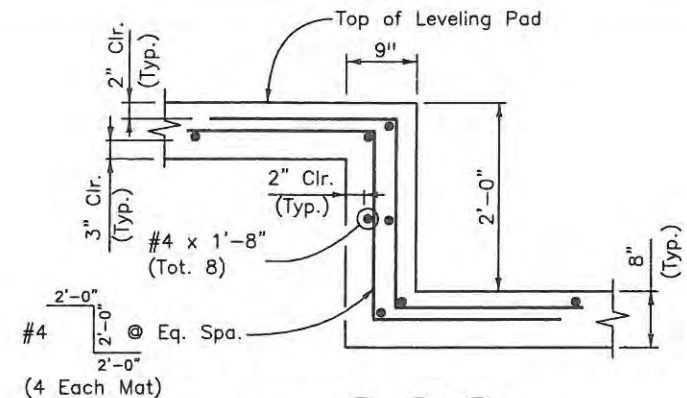
Print Date: 5/1/2009		<b>Sheet Revisions</b>		<b>CITY OF LOVELAND</b>	<b>WILSON &amp; COMPANY</b> Engineers & Architects	<b>As Constructed</b>		<b>M.S.E. RETAINING WALL DETAILS (2 OF 3)</b>		<b>Project No./Code</b>	
File Name: Retaining_Wall_Layout_03.dgn		Date:	Comments			Init.	No Revisions: 9/14/11	Revised:		Designer: J. Mills	
Horiz. Scale: N/A		Vert. Scale: N/A				Revised:		Detailer: K. Tucker		17244	
Unit Information		Unit Leader Initials				Void:		Sheet Subset: WALL		Subset Sheets: W9 of W20	
								Structure Numbers		Sheet Number 127	
								WALL-C-17-A			
								WALL-C-17-B			

500 E. THIRD STREET  
 LOVELAND, CO 80537  
 970-962-2000

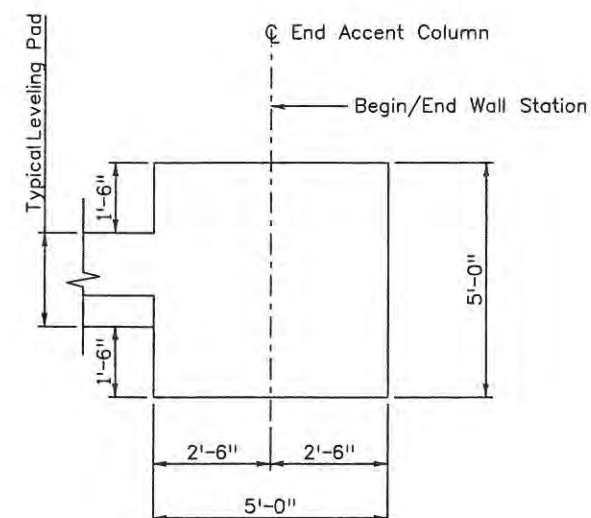
999 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2978  
 Fax: 303-297-2693



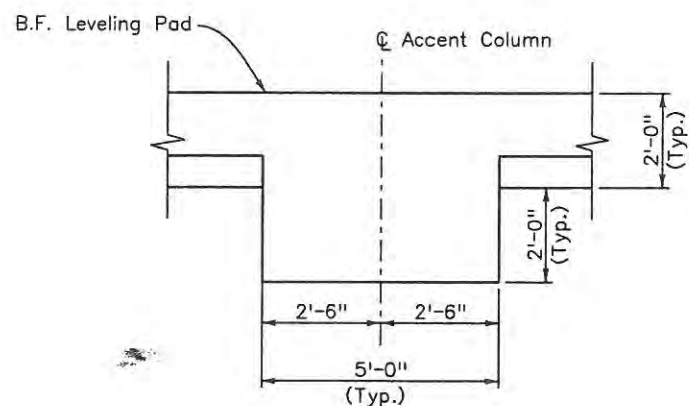
TYPICAL ELEVATION (WALL)



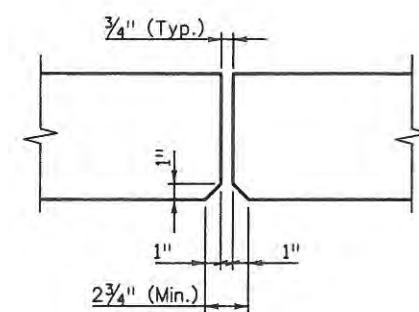
DETAIL W5 W6 W7  
C C C  
(Typical of all steps)



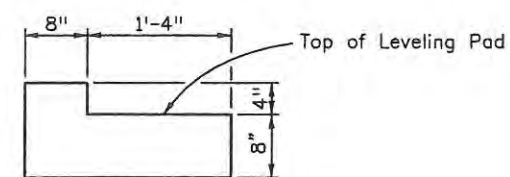
SECTION W5 W7  
A A



SECTION W5 W6 W7  
B B B



WALL PANEL JOINT DETAIL



LEVELING PAD TYPICAL SECTION

Design		Detail		Quantities	
INITIAL	DATE	INITIAL	DATE	INITIAL	DATE
JSM	3/09	KCT	3/09	JSM	3/09
TWM	3/09	TWM	3/09	TRJ	3/09
Designed By	Checked By	Detailed By	Checked By	Quantities By	Checked By

Print Date: 4/29/2009	File Name: Retaining_Wall_Layout_02.dgn
Horiz. Scale: N/A	Vert. Scale: N/A
Unit Information	Unit Leader

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**  
 500 E. THIRD STREET  
 LOVELAND, CO 80537  
 970-962-2000

**WILSON & COMPANY**  
 Engineers & Architects  
 999 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2693

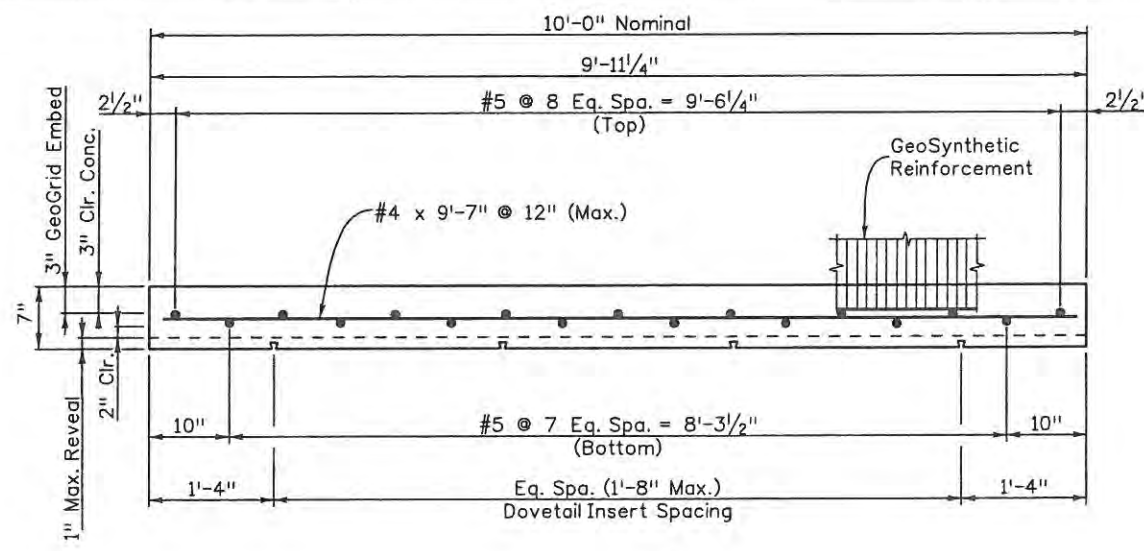
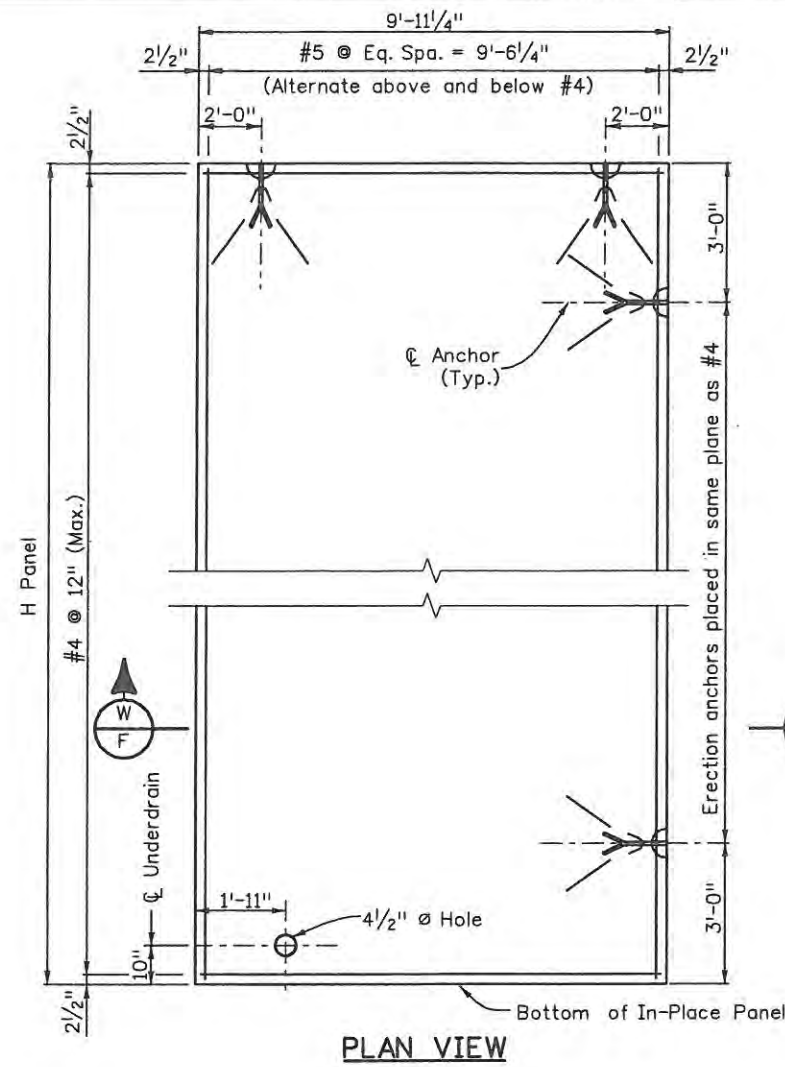
As Constructed	No Revisions: 9/14/11
Revised:	
Void:	

M.S.E. RETAINING WALL DETAILS (3 OF 3)			
Designer:	J. Mills	Structure	WALL-C-17-A
Detailer:	K. Tucker	Numbers	WALL-C-17-B
Sheet Subset:	WALL	Subset Sheets:	W10 of W20

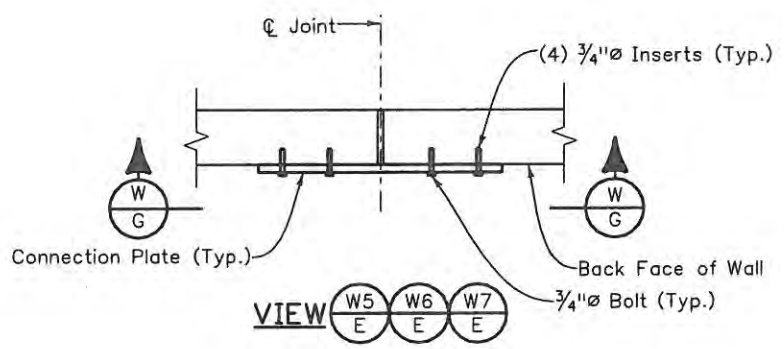
Project No./Code	ES4 0253-207
	17244
Sheet Number	128



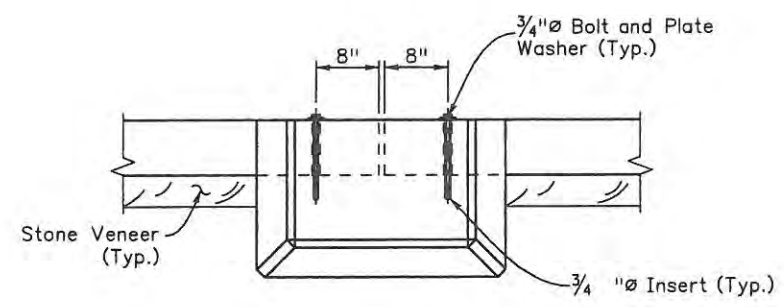
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Designed By	Checked By	INITIAL	DATE	INITIAL	DATE
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Checked By	Checked By	Checked By	Checked By	Checked By	Checked By
TWM	TWM	TWM	3/09	TRJ	3/09



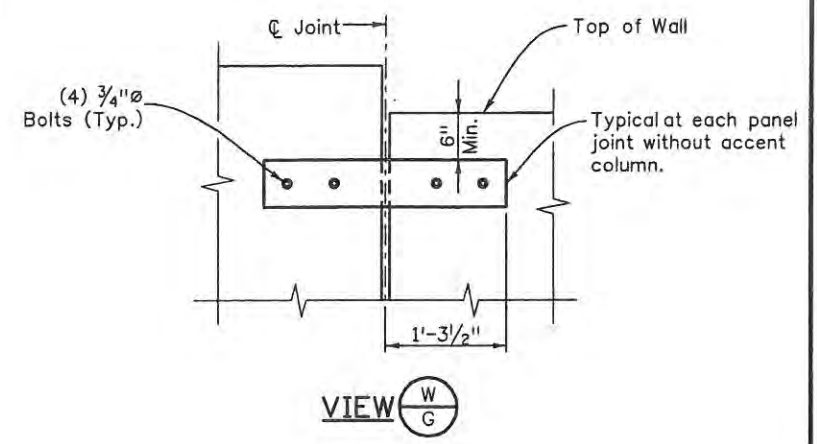
DETAIL W/F



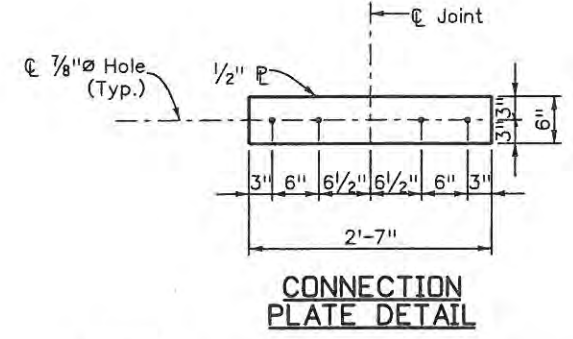
VIEW W5 W6 W7



SECTION W5 W6 W7



VIEW W/G



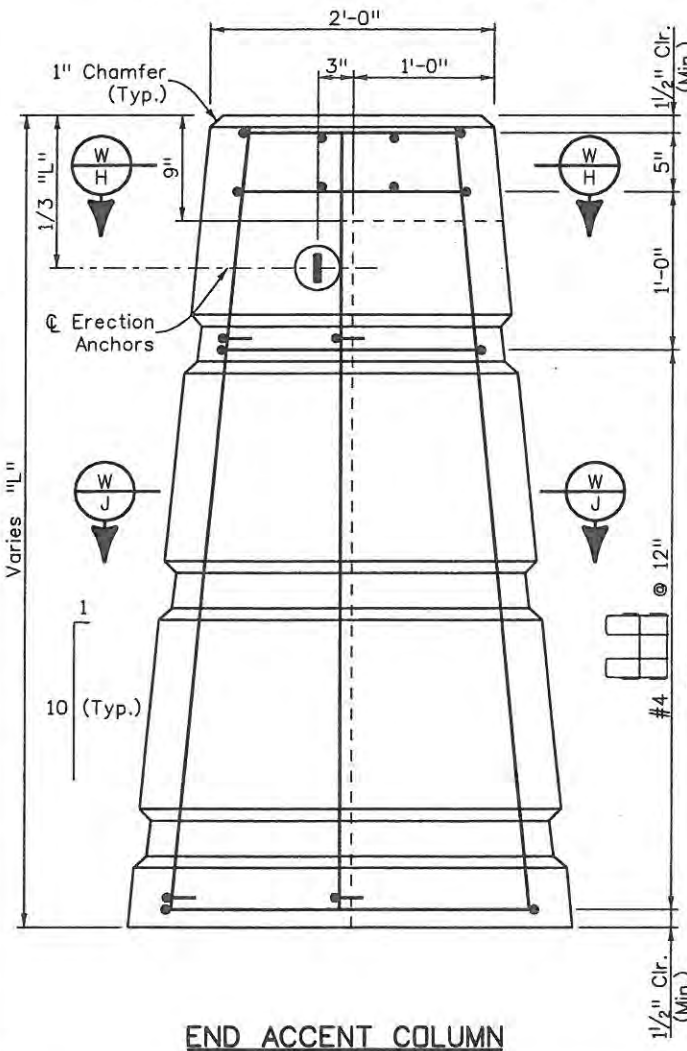
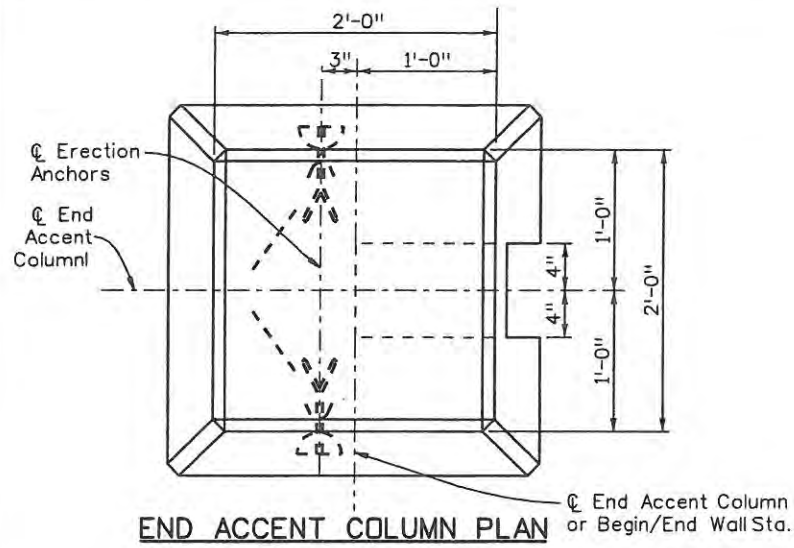
CONNECTION PLATE DETAIL

**NOTES**

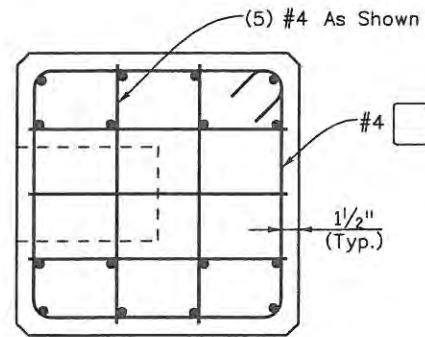
1. Concrete Class D f'c = 4,500 psi, f'ci = 2,500 psi.
2. All precast panel reinforcing steel shall be non-epoxy coated.
3. Panel design valid to maximum H panel = 13'-6".
4. GeoSynthetic reinforcement tabs per MSE internal design.
5. Dayton Superior/Richmond Fleet Lift P-94 Ton erection anchors or approved equal.
6. Dovetail inserts on Type I panels only.
7. Maximum vertical masonry tie spacing to be 18" on center.
8. All connection plates shall be shop fabricated, no field bending shall be allowed.
9. All connection plates, bolts, and washers shall be galvanized after fabricated.
10. All attachment inserts shall be Hilti HDI Drop-In anchor or approved equal.
11. See sheet W14 for Accent Column Attachment Details.

Print Date: 4/29/2009	<b>Sheet Revisions</b>			<b>CITY OF LOVELAND</b>	<b>WILSON &amp; COMPANY</b> Engineers & Architects	As Constructed	<b>M.S.E. WALL</b>		Project No./Code
File Name: MSE_Precast_PanelDet_01.dgn	Date:	Comments	Init.				PRECAST PANEL DETAILS (1 OF 2)		
Horiz. Scale: N/A				500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	999 18th Street Suite 2600 Denver, CO 80202 Phone: 303-297-2976 Fax: 303-297-2693	No Revisions: 9/14/11	Designer: J. Mills	Structure: WALL-C-17-A	17244
Unit Information						Revised:	Detailer: K. Tucker	Numbers: WALL-C-17-B	
						Void:	Sheet Subset: WALL	Subset Sheets: W11 of W20	Sheet Number 129

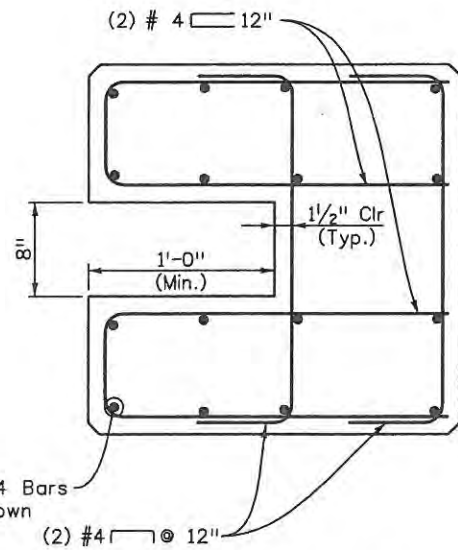
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INITIAL	DATE	INITIAL	DATE	INITIAL	DATE
JSW	3/09	TRJ	3/09	JSW	3/09
TWM	3/09	TWM	3/09	TRJ	3/09
Designed By	Checked By	Designed By	Checked By	Quantities By	Checked By
JSW	TWM	TRJ	TWM	JSW	TRJ



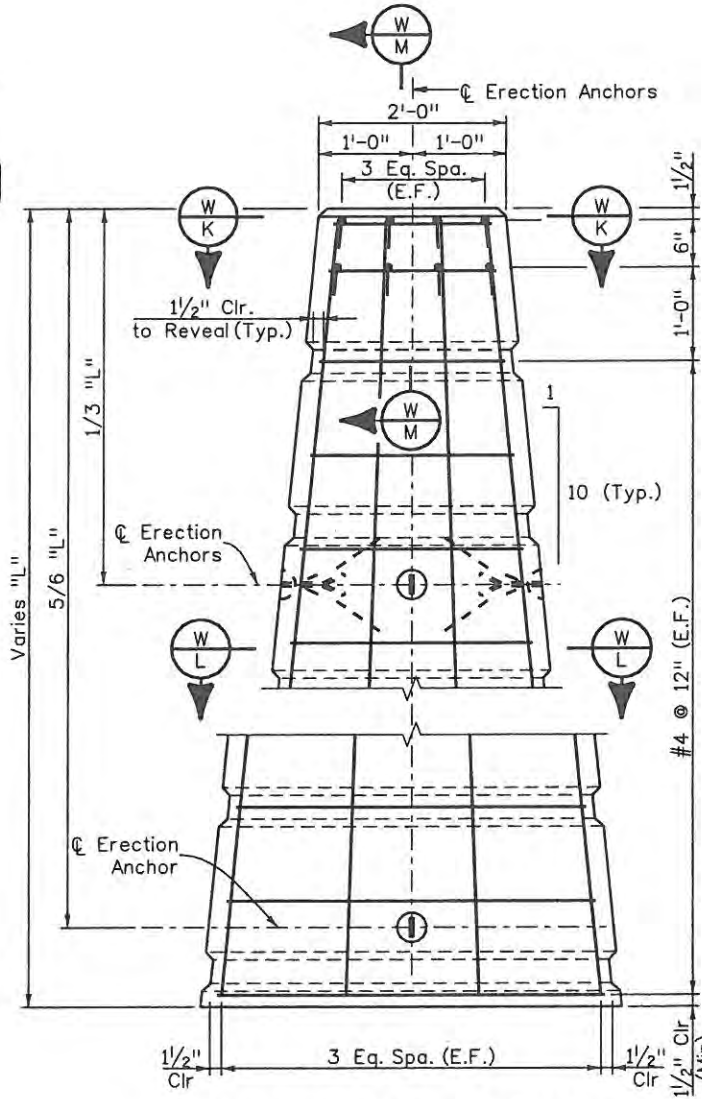
END ACCENT COLUMN



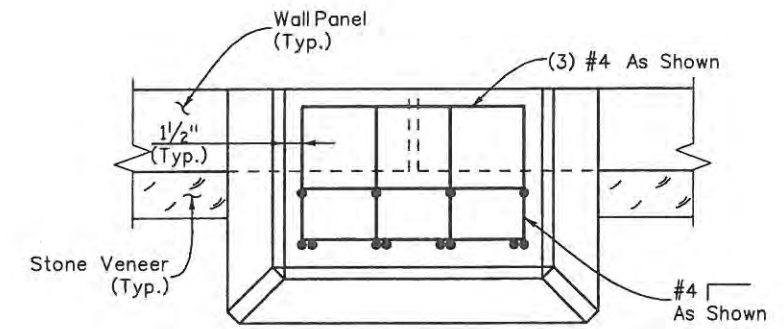
SECTION W-H



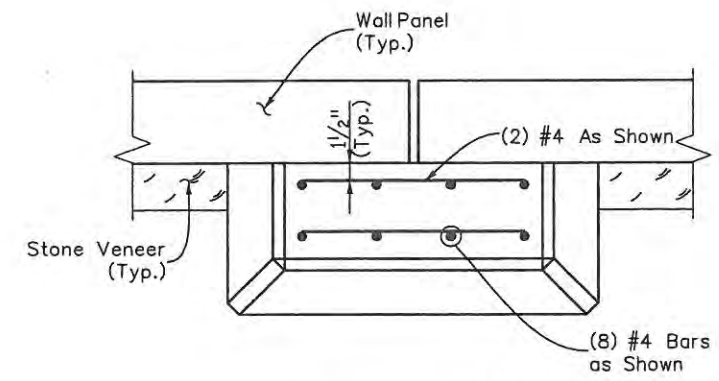
SECTION W-L



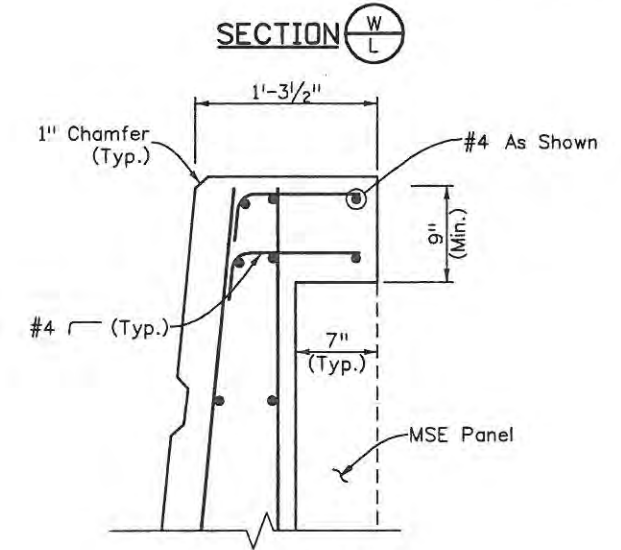
ACCENT COLUMN ELEVATION  
(Looking at Back Face)



SECTION W-K



SECTION W-L



SECTION W-M

**NOTES:**

1. See sheet W14 for column attachment details.

Print Date: 4/29/2009  
 File Name: MSE\_Precast\_PanelDet\_02.dgn  
 Horiz. Scale: N/A Vert. Scale: N/A  
 Unit Information Unit Leader Initials

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**  
 500 E. THIRD STREET  
 LOVELAND, CO 80537  
 970-962-2000

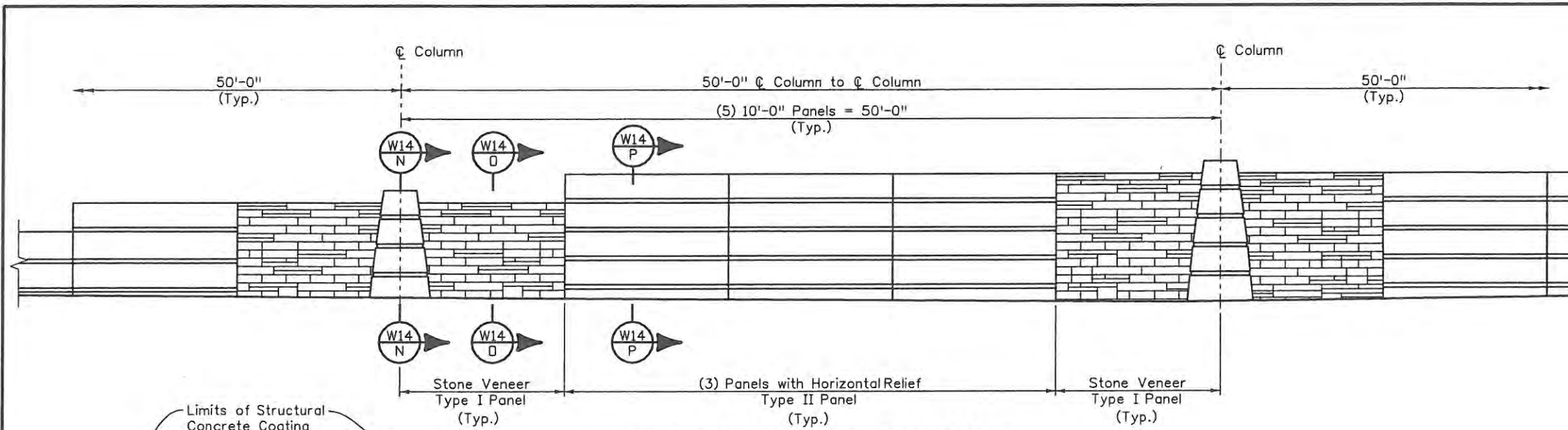
**WILSON & COMPANY**  
 Engineers & Architects  
 999 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2693

As Constructed	
No Revisions:	9/14/11
Revised:	
Void:	

M.S.E. WALL PRECAST PANEL DETAILS (2 OF 2)			
Designer:	J. Mills	Structure	WALL-C-17-A
Detailer:	R. Wipf	Numbers	WALL-C-17-B
Sheet Subset:	WALL	Subset Sheets:	W12 of W20

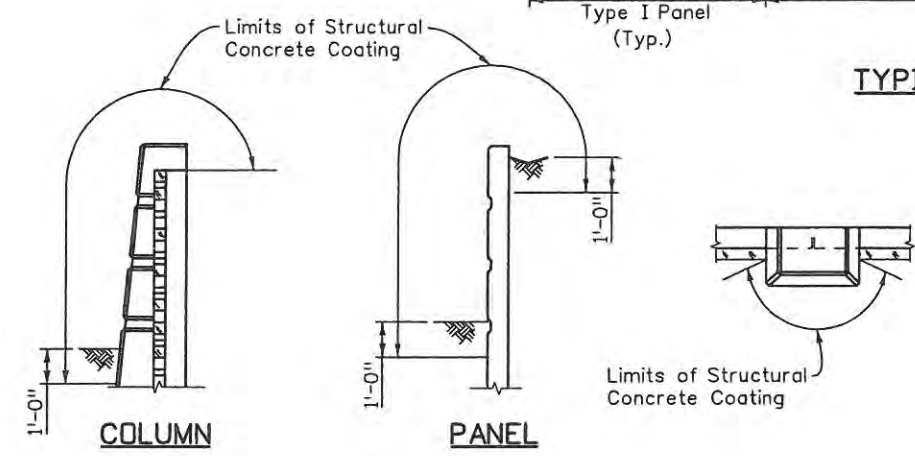
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ES4	0253-207
	17244
Sheet Number	130





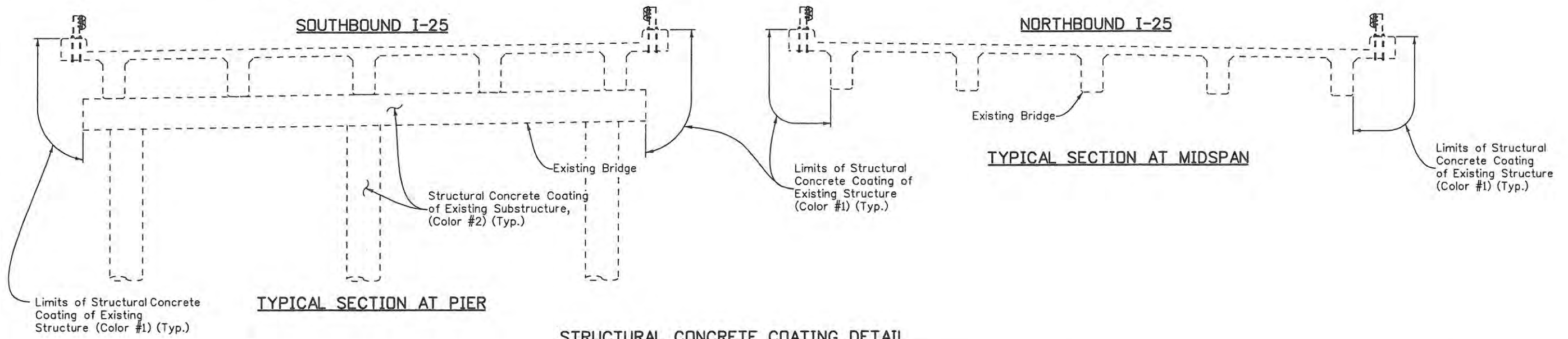
**TYPICAL ARCHITECTURAL ELEVATION**

- NOTES**
1. See Sheet W1 for structural concrete color numbers.
  2. All exposed surfaces of accent columns shall receive a Structural Concrete Coating Color #1 finish to 1'-0" below ground.
  3. All exposed surfaces of Type II wall panels shall receive a Structural Concrete Coating Color #1 to 1'-0" below ground.
  4. Stone Veneer support shelf consisting of L4x4x1/4", 1/2" diameter bolts, and Hilti Expansion Anchor (or approved equal) shall be galvanized prior to field installation.
  5. All stone for Wall Veneer and Capstones shall be Masonville Buff Sandstone or approved equal.
  6. Veneer Stones shall be 6" to 16" long x 2" to 6" high x 2" to 4" wide.
  7. Capstones shall be 24"x16"x4". All Face of Cap stones shall be snap cut.
  8. Wall backfill shall be completed prior to installation of Stone Veneer and Capstones.
  9. Grout all stone in place using a masonry dovetail anchor system. All joints shall be raked.
  10. Contractor shall build a test panel of wall showing stone pattern and wall colors for approval by owner prior to installation.
  11. All materials required for the attachment and stability of Stone Veneer and Capstones to precast panels shall be included in the cost of item 601-4005, Cut Stone Veneer.



**SOUTHBOUND I-25**

**NORTHBOUND I-25**



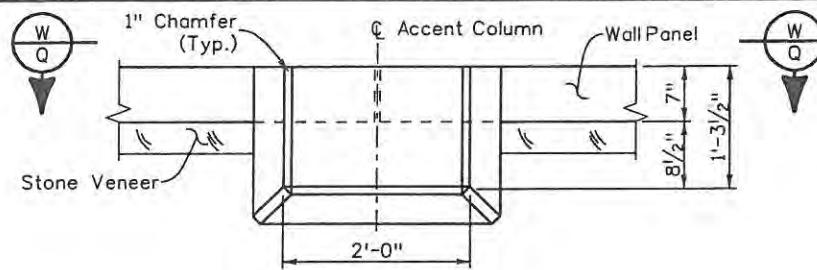
**TYPICAL SECTION AT PIER**

**TYPICAL SECTION AT MIDSPAN**

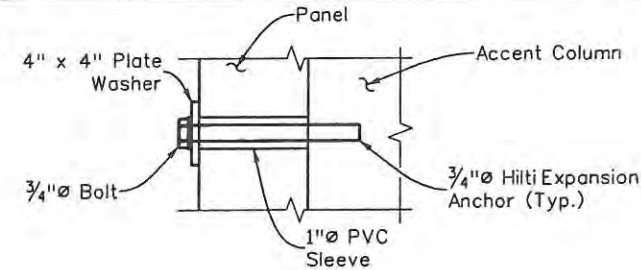
**STRUCTURAL CONCRETE COATING DETAIL**

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Checked By	Checked By	Checked By	Checked By	Checked By	Checked By
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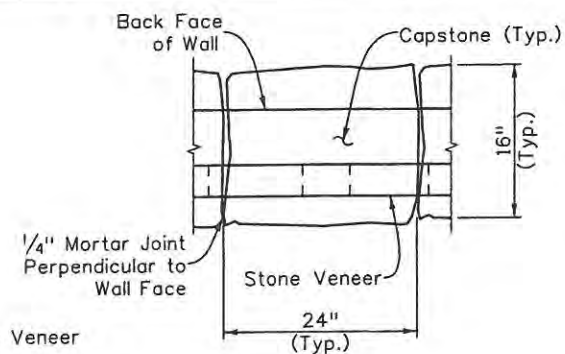
Print Date: 4/29/2009		<b>Sheet Revisions</b>			<b>CITY OF LOVELAND</b>	<b>WILSON &amp; COMPANY</b> Engineers & Architects	<b>As Constructed</b>		<b>M.S.E. WALL ARCHITECTURAL DETAILS (1 OF 2)</b>		<b>Project No./Code</b>	
File Name: Arch_Details_02.dgn		Date:	Comments	Init.			No Revisions: 9/14/11		Revised:		ES4-0253-207	
Horiz. Scale: N/A					500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	999 18th Street Suite 2600 Denver, CO 80202 Phone: 303-297-2976 Fax: 303-297-2693	Void:		Designer: J. Mills		Structure Numbers	
Unit Information											Detailer: R. Wipf	
Unit Leader Initials									Sheet Subset: WALL		Subset Sheets: W13 of W20	
											Sheet Number <b>131</b>	



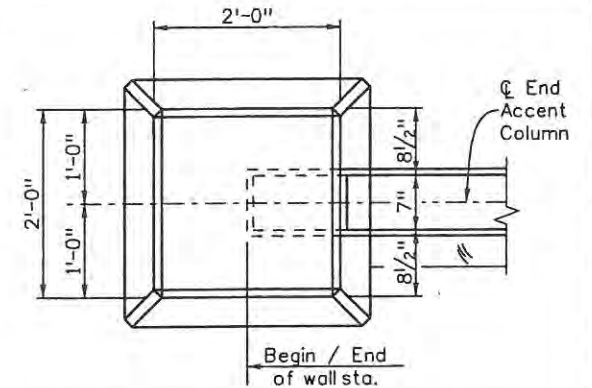
PLAN



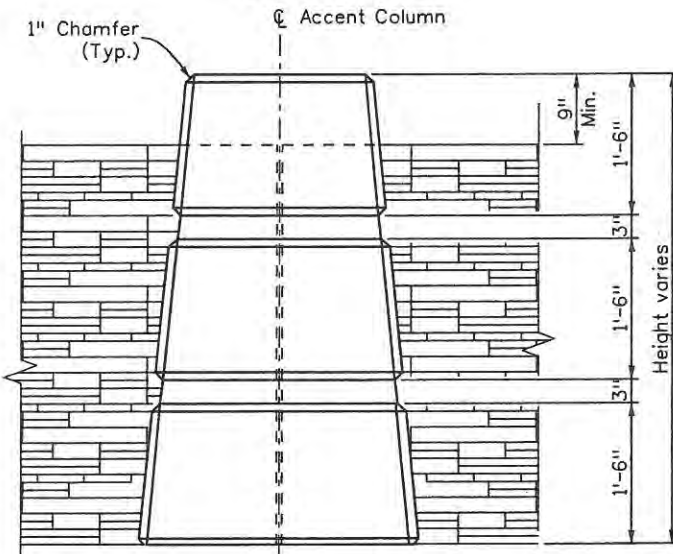
SECTION W-R



VIEW W-S



END ACCENT COLUMN DETAIL



ELEVATION

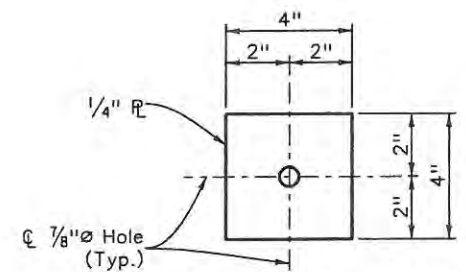
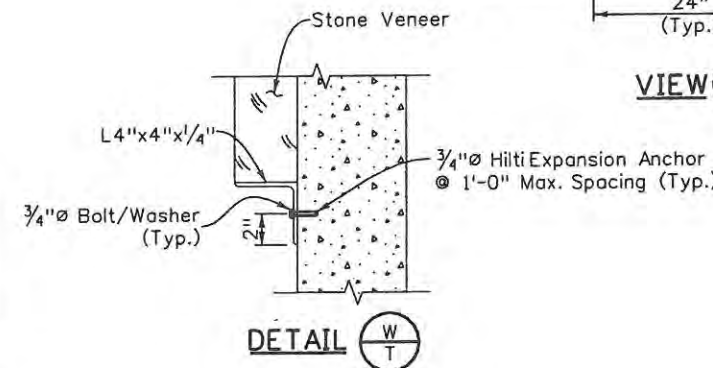
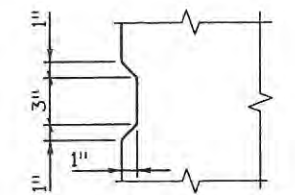


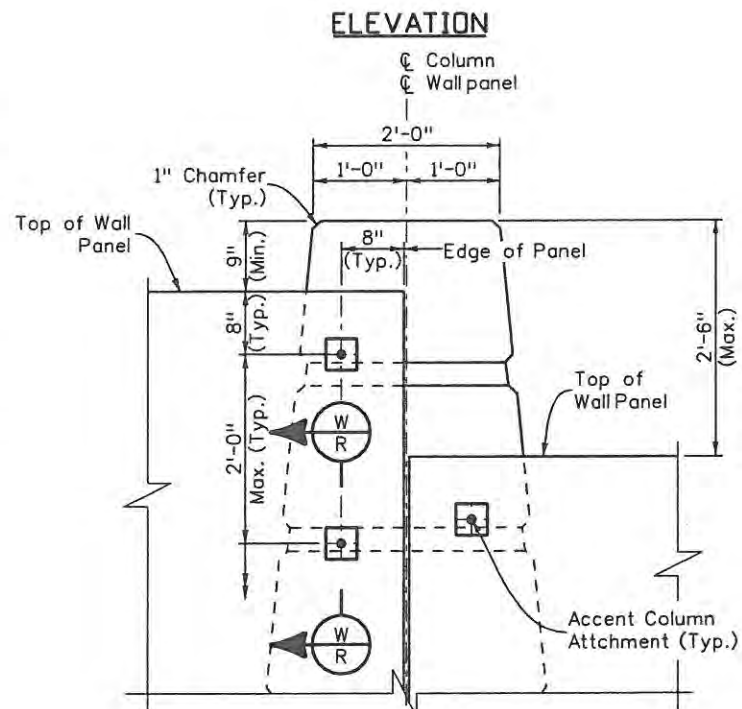
PLATE WASHER DETAIL



DETAIL W-T

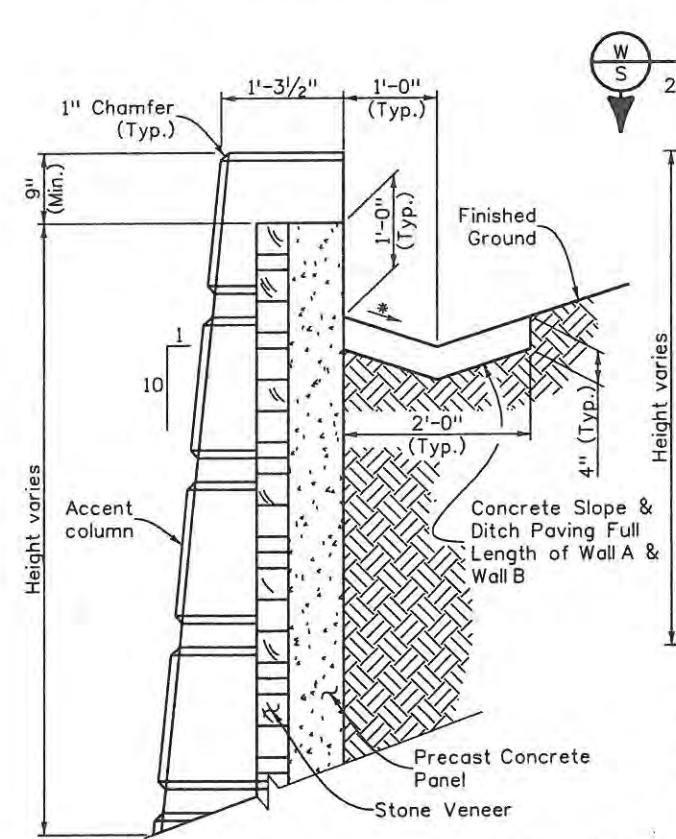


REVEAL DETAIL



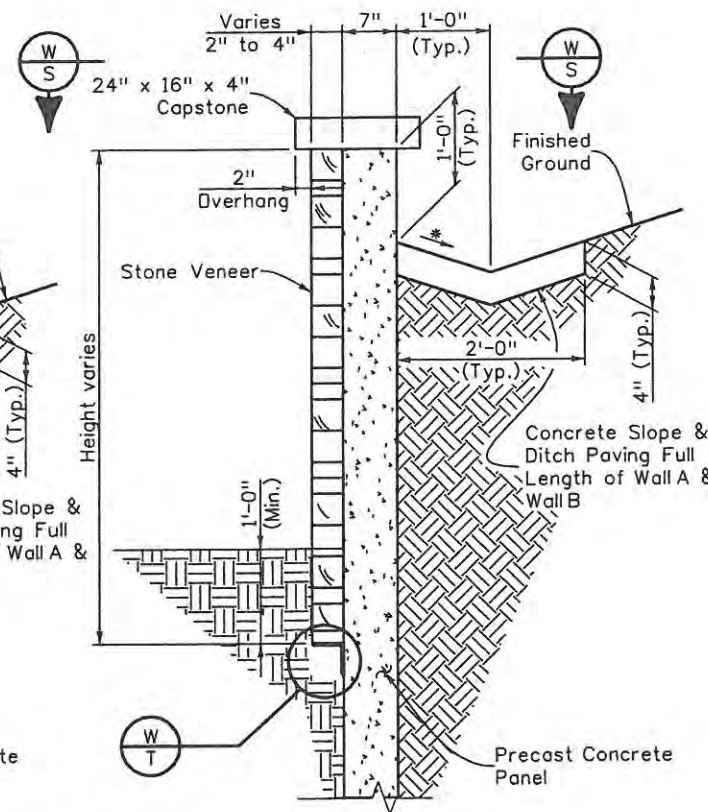
VIEW W-Q

(Looking at back face of wall)

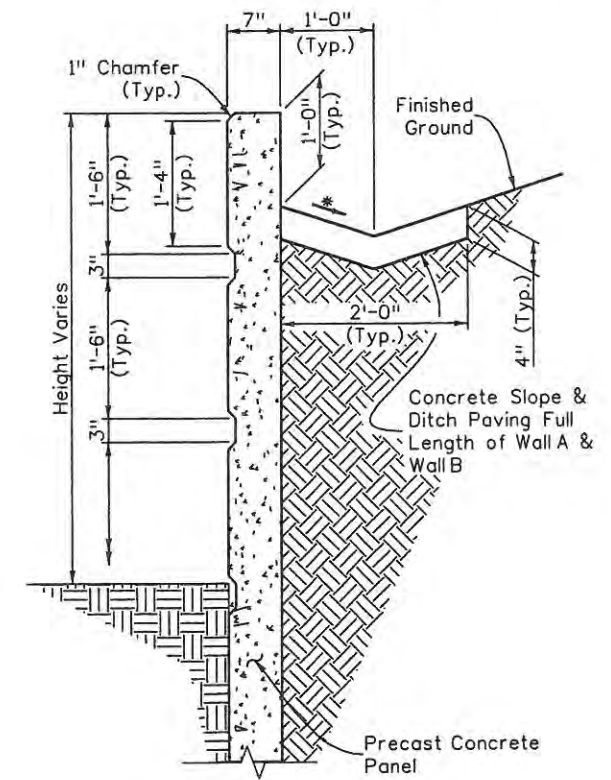


SECTION W13-N

\* Slope 2:1 (Max.)



SECTION W13-O



SECTION W13-P

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INITIAL	DATE	INITIAL	DATE	INITIAL	DATE
SM	3/09	RRW	3/09	JSR	3/09
TW	3/09	TW	3/09	TR	3/09
Designed By	Checked By	Detailed By	Checked By	Quantities By	Checked By

Print Date: 6/3/2009	File Name: Arch_Details_01.dgn
Horiz. Scale: N/A	Vert. Scale: N/A
Unit Information	Unit Leader Initials

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**  
 500 E. THIRD STREET  
 LOVELAND, CO 80537  
 970-962-2000

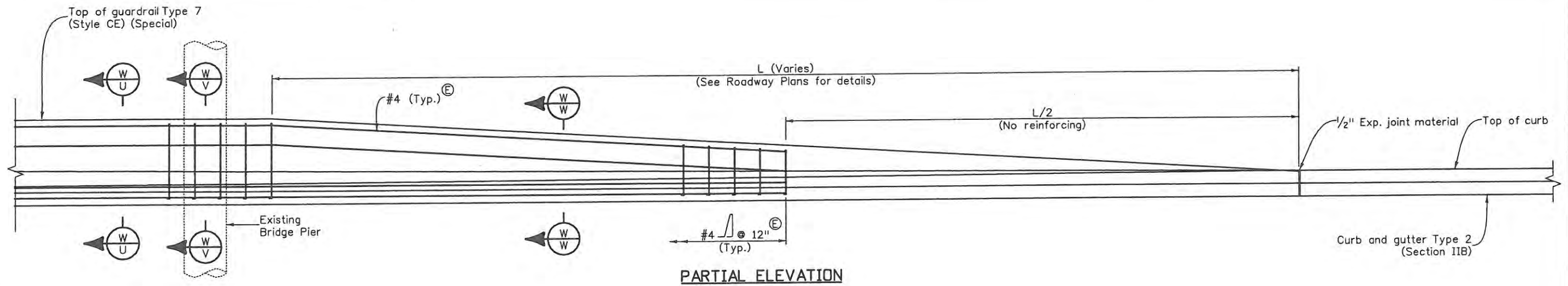
**WILSON & COMPANY**  
 Engineers & Architects  
 999 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2893

As Constructed	No Revisions: 9/14/11
Revised:	
Void:	

M.S.E. WALL			
ARCHITECTURAL DETAILS (2 OF 2)			
Designer:	J. Mills	Structure Numbers	WALL-C-17-A
Detailer:	R. Wipf	Structure Numbers	WALL-C-17-B
Sheet Subset:	WALL	Subset Sheets:	W14 of W20

Project No./Code	ES4 0253-207
	17244
Sheet Number	132

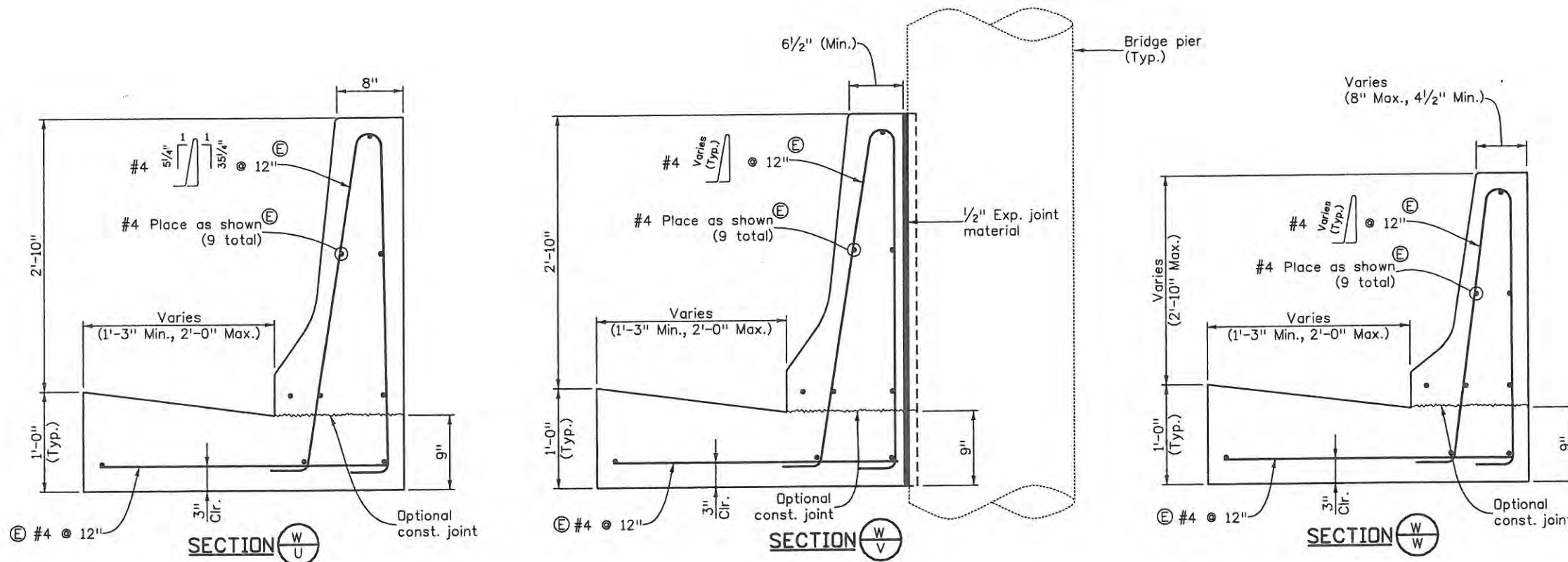




PARTIAL ELEVATION

**GENERAL NOTES**

1. All edges shall be rounded with a 1" radius except as shown.
2. Barrier may be cast-in-place or slip formed (See standard plan M-606-14).
3. Construction joints shall be used on barrier at the end of the day's pour or after any interruption longer than 30 minutes. All construction joints shall be thoroughly cleaned before fresh concrete is poured.
4. All reinforcing steel in Guardrail Type 7 shall be epoxy coated bars.
5. Concrete shall be Class D.
6. Epoxy coated longitudinal rebar shall have a minimum lap splice of 3'-2".
7. All incidental work and material such as dowels, grout, anchors, bolts, pins, joint material, excavation for bases, continuous longitudinal reinforcement, shall be included in the cost of guardrail type 7 (Style CE)(Special).
8. All reinforcement shall have 2" minimum cover except where noted.



Design		Detail		Quantities	
Designed By	Checked By	INITIAL	DATE	INITIAL	DATE
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TJM	TJM	TJM	3/09	TRJ	3/09

Print Date: 4/29/2009  
 File Name: MOD\_BarrierDET.dgn  
 Horiz. Scale: N/A  
 Unit Information

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Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**  
 500 E. THIRD STREET  
 LOVELAND, CO 80537  
 970-962-2000

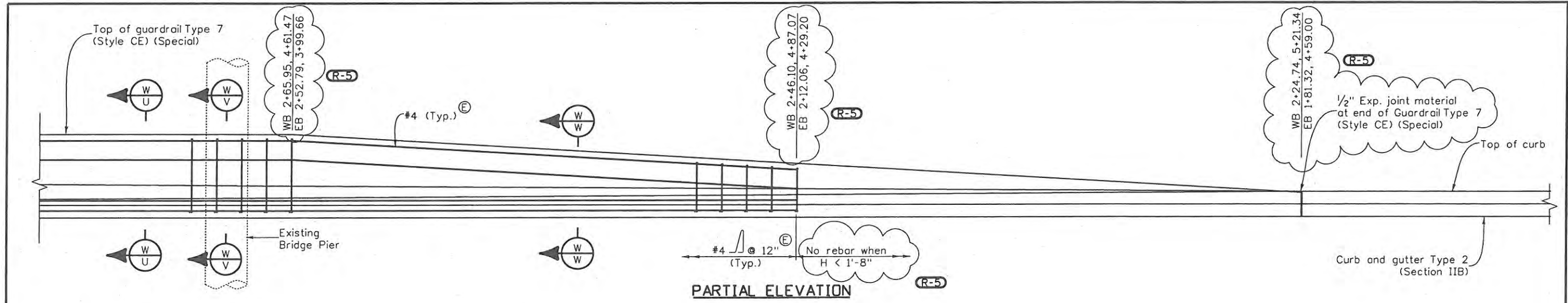
**WILSON & COMPANY**  
 Engineers & Architects  
 999 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2693

As Constructed
No Revisions:
Revised:
Void: 7/14/11

GUARDRAIL TYPE 7 (STYLE CE)(SPECIAL) DETAILS			
Designer:	J. Mills	Structure Numbers	
Detailer:	K. Tucker		
Sheet Subset:	WALL	Subset Sheets:	W15 of W20

Project No./Code
ES4 0253-207
17244
Sheet Number 133

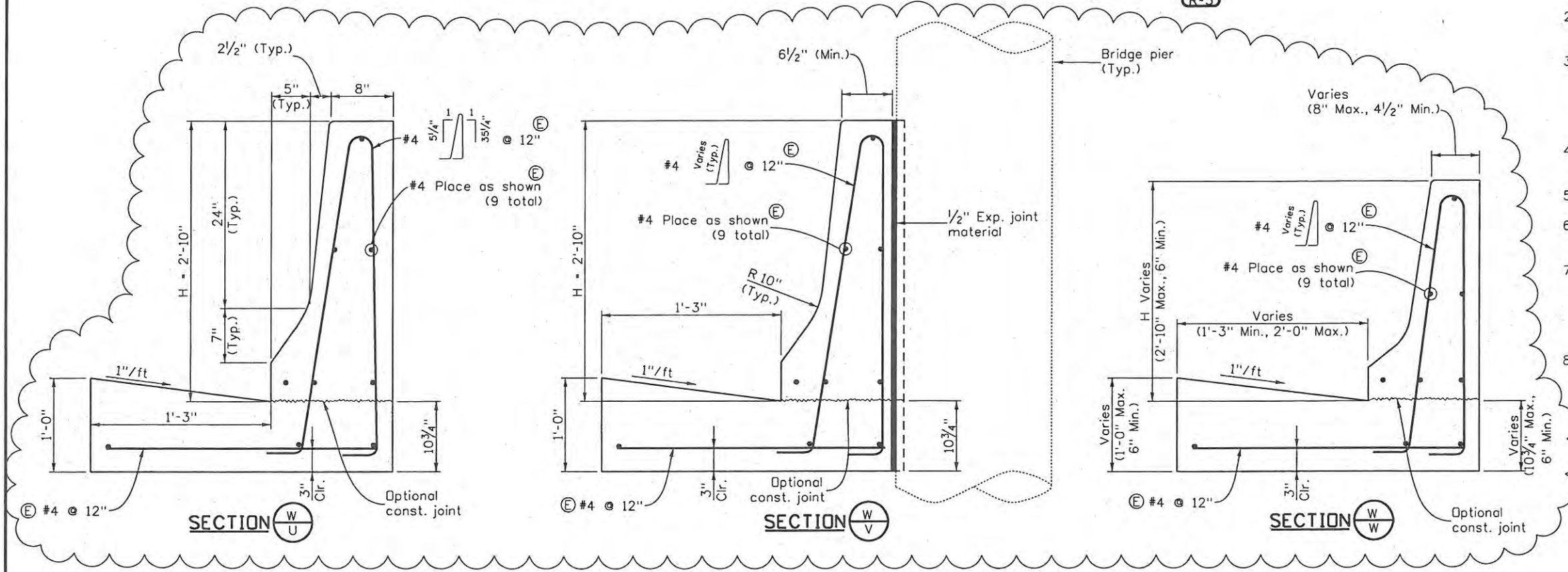
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TWM	3/09	TWM	3/09	TRJ	3/09
Designed By	Detailed By	Checked By	Checked By	Quantities By	Checked By
JSM	KLT	TWM	TWM	JSM	TRJ



**PARTIAL ELEVATION**

**GENERAL NOTES**

- All edges shall be rounded with a 1" radius except as shown.
- Barrier may be cast-in-place or slip formed (See standard plan M-606-14).
- Construction joints shall be used on barrier at the end of the day's pour or after any interruption longer than 30 minutes. All construction joints shall be thoroughly cleaned before fresh concrete is poured.
- All reinforcing steel in Guardrail Type 7 shall be epoxy coated bars.
- Concrete shall be Class D.
- Epoxy coated longitudinal rebar shall have a minimum lap splice of 3'-2".
- All incidental work and material such as dowels, grout, anchors, bolts, pins, joint material, excavation for bases, continuous longitudinal reinforcement, shall be included in the cost of guardrail type 7 (Style CE)(Special).
- All reinforcement shall have 2" minimum cover except where noted.



**SECTION**

**SECTION**

**SECTION**

Print Date: 10/28/2009  
 File Name: MOD\_BarrierDET.dgn  
 Horiz. Scale: N/A      Vert. Scale: N/A  
 Unit Information      Unit Leader

Sheet Revisions		
Date:	Comments	Init.
10/27/09	Add Dimensions	JJW

**CITY OF LOVELAND**  
 500 E. THIRD STREET  
 LOVELAND, CO 80537  
 970-962-2000

**WILSON & COMPANY**  
 Engineers & Architects  
 999 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2693

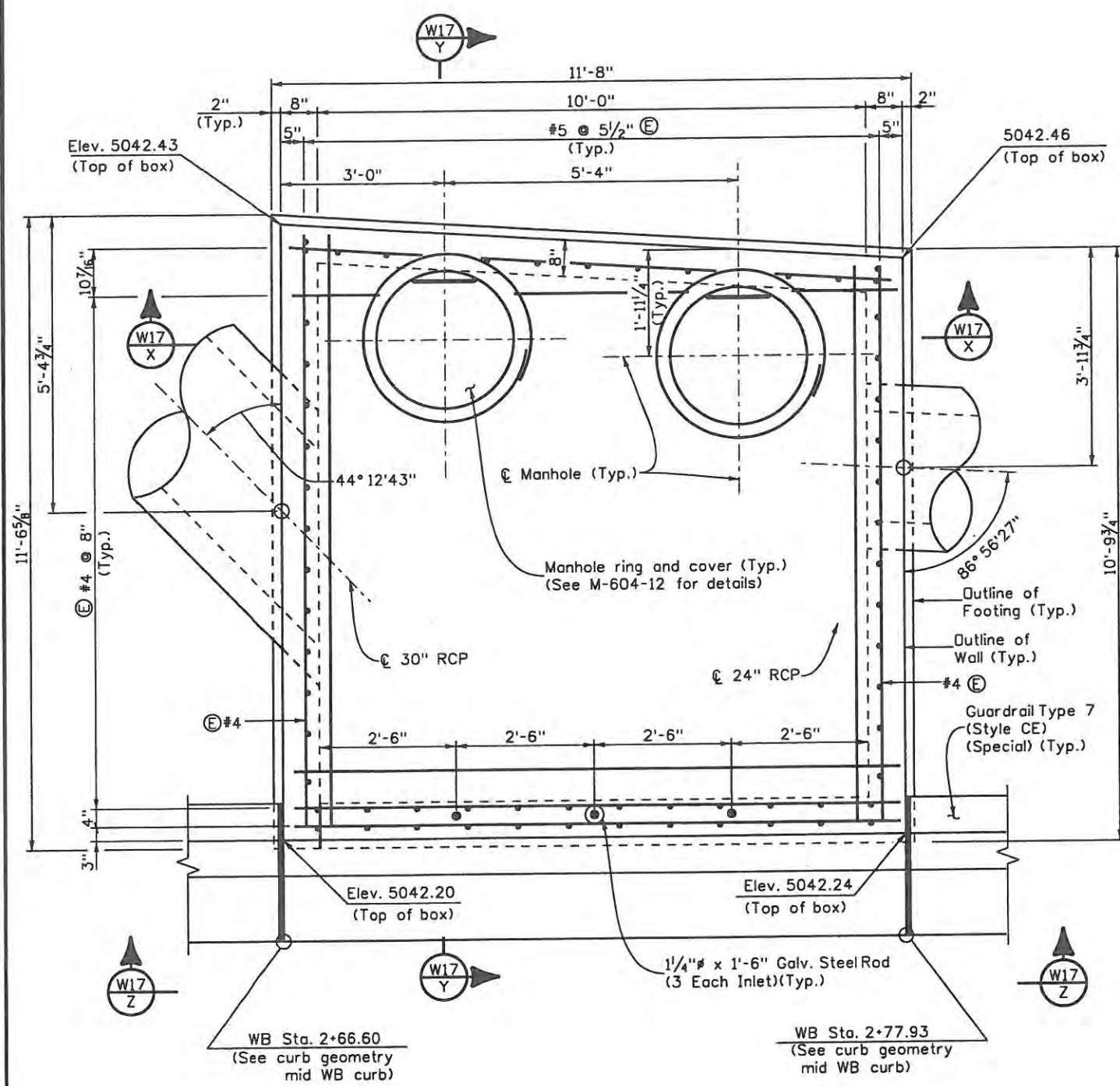
As Constructed
No Revisions: 7/14/11
Revised:
Void:

GUARDRAIL TYPE 7 (STYLE CE)(SPECIAL) DETAILS		
Designer: J. Mills	Structure Numbers	
Detailer: K. Tucker		
Sheet Subset: WALL	Subset Sheets: W15 of W20	

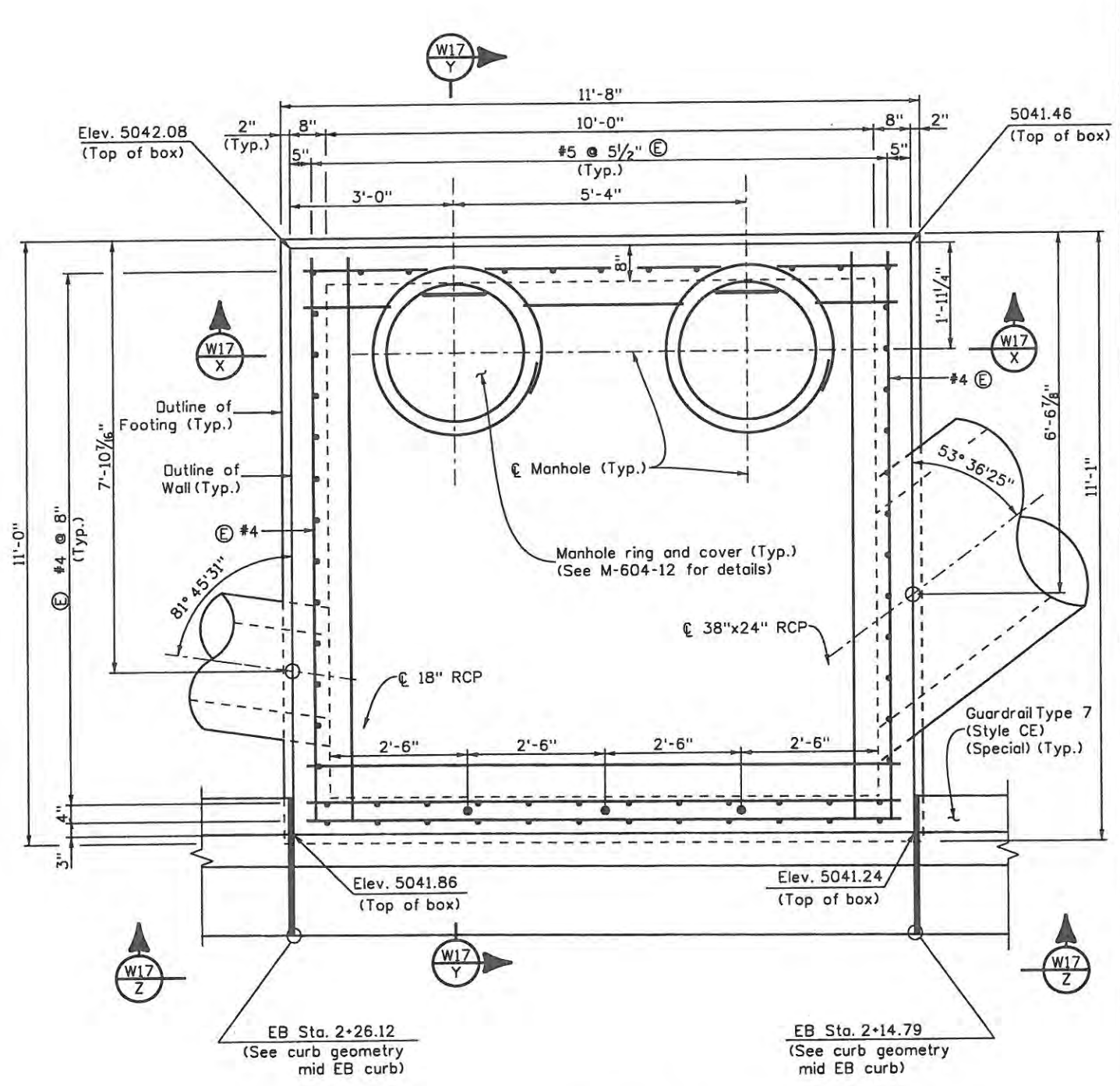
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17244
Sheet Number <b>133X</b>



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Checked By	TWM	Checked By	TWM	Checked By	TRU
	3/09		3/09		3/09



**NORTH PLAN**  
(Cut or bend bars to clear manhole and RCP.)



**SOUTH PLAN**  
(Cut or bend bars to clear manhole and RCP.)

Print Date: 6/4/2009	Unit Leader
File Name: Inlet_TypeR(Special)_01.dgn	
Horiz. Scale: N/A	Unit Leader
Unit Information	

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

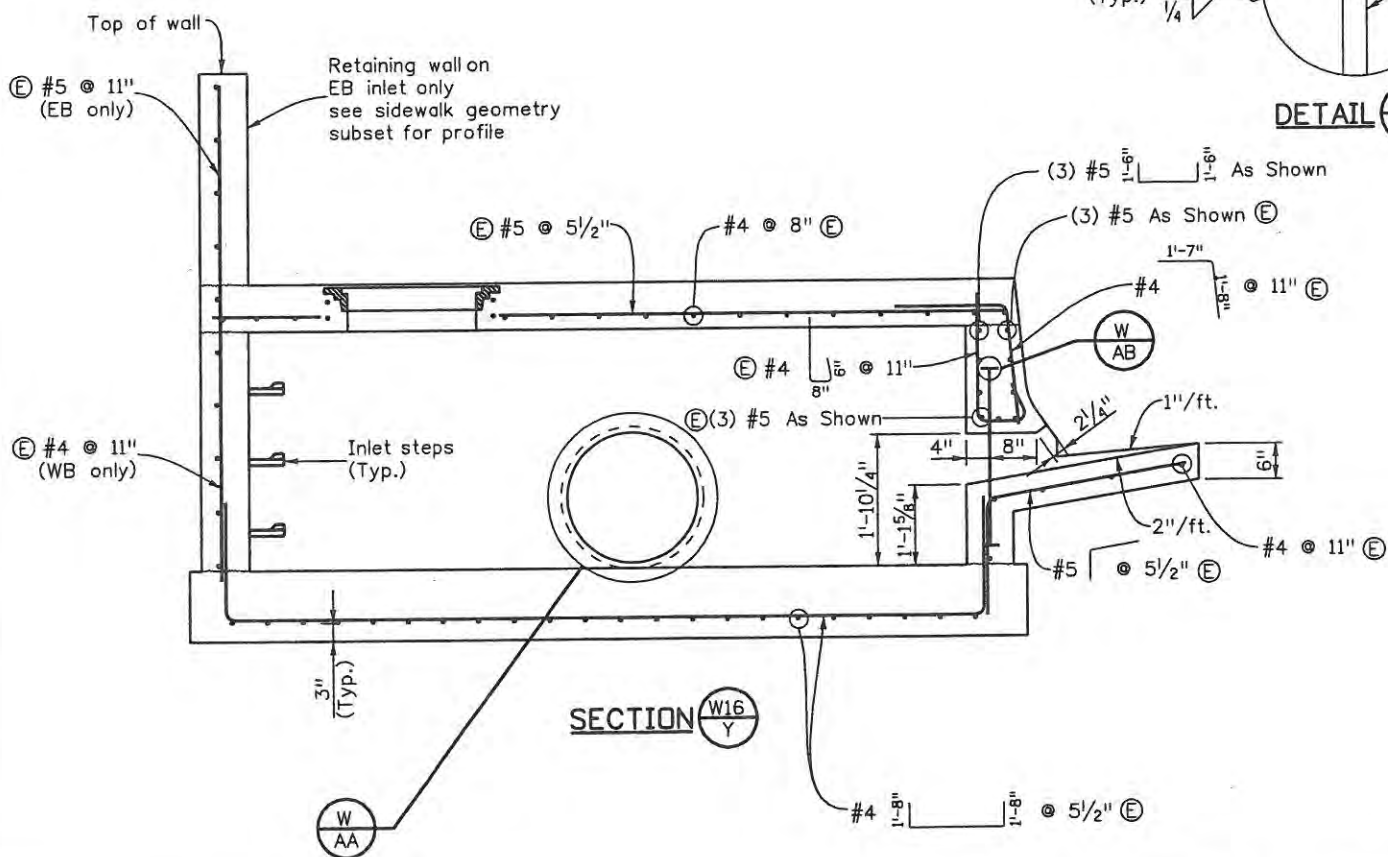
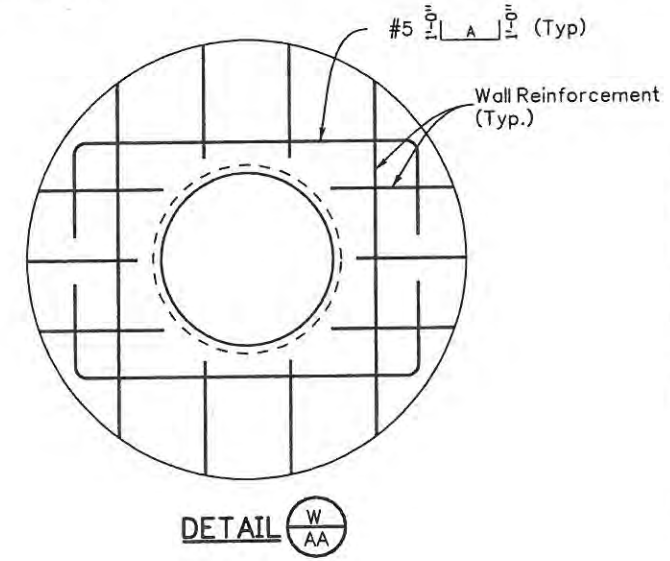
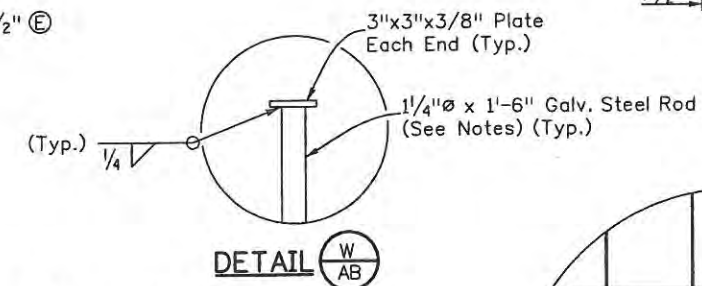
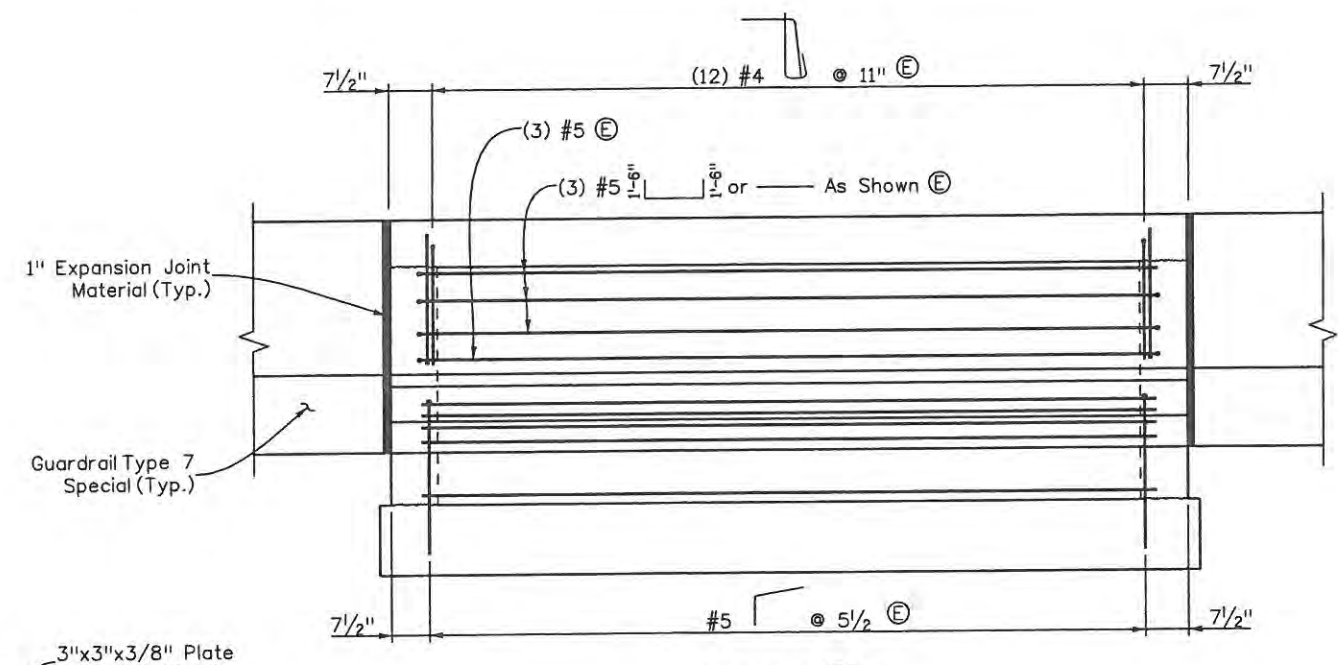
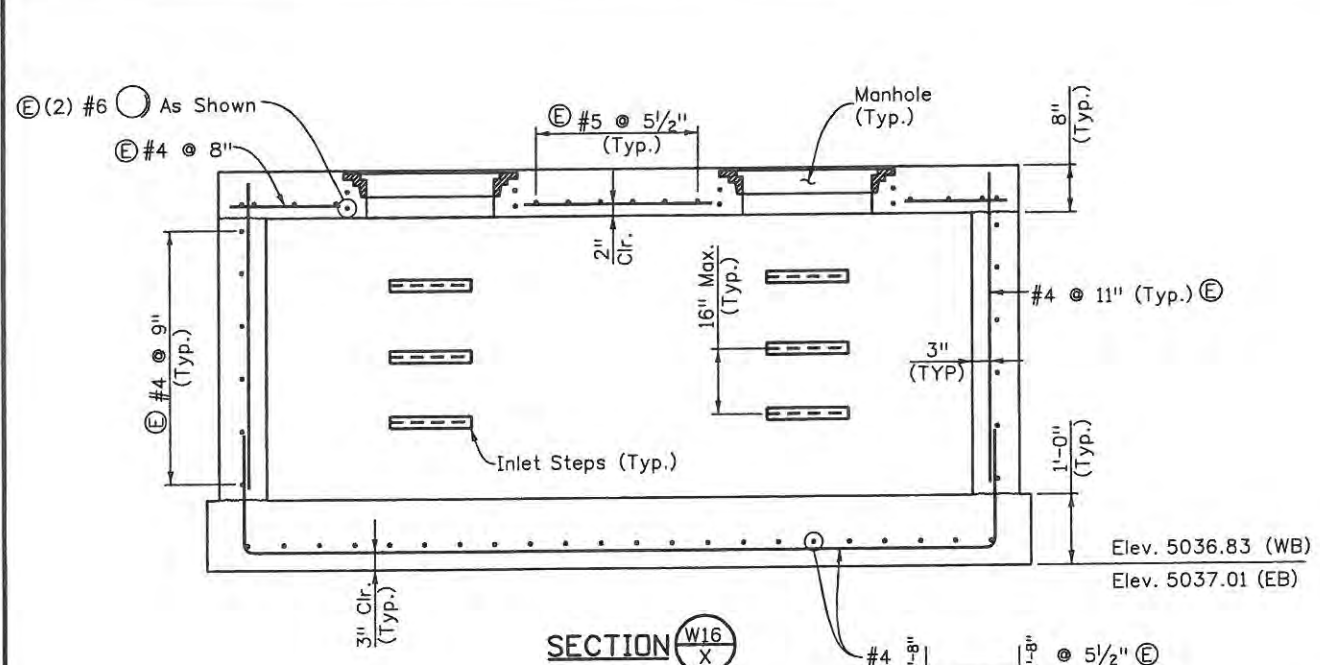
**WILSON & COMPANY**  
Engineers & Architects

990 18th Street Suite 2600  
Denver, CO 80202  
Phone: 303-297-2976  
Fax: 303-297-2693

As Constructed	No Revisions: 9/14/11
Revised:	
Void:	

INLET TYPE R (SPECIAL) DETAILS (1 OF 2)		
Designer:	J. Mills	Structure Numbers
Detailer:	K. Tucker	
Sheet Subset:	WALL	Subset Sheets: W16 of W20

Project No./Code	ES4 0253-207
	17244
Sheet Number	134



- NOTES**
- Concrete shall be Class D.
  - Inlet shall be cast-in-place.
  - Concrete walls shall be formed on both sides.
  - Inlet steps shall conform to AASHTO M199.
  - Exposed concrete corners shall be chamfered 3/4" curb and gutter corners shall be finished to match the existing curb and gutter beyond the transition gutter.
  - Reinforcing bars shall have a 3" minimum clearance except where noted.
  - Material for manhole rings and covers shall be gray or ductile cast iron in accordance with subsection 712.06. of the standard specifications.
  - Galvanized Steel Rods shall be embedded equally top and bottom.

RCP	A
18"	3'-2"
24"	3'-8"
30"	5'-8"
38"X24"	8'-6"

Design		Detail		Quantities	
INITIAL	DATE	INITIAL	DATE	INITIAL	DATE
Designed By	3/09	KCT	3/09	Quantities By	JSM
Checked By	3/09	TWM	3/09	Checked By	TRJ

Print Date: 4/29/2009  
 File Name: Inlet\_TypeR(Special)\_02.dgn  
 Horiz. Scale: N/A Vert. Scale: N/A  
 Unit Information Unit Leader

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**  
 500 E. THIRD STREET  
 LOVELAND, CO 80537  
 970-962-2000

**WILSON & COMPANY**  
 Engineers & Architects  
 999 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2693

As Constructed  
 No Revisions: 7/14/11  
 Revised:  
 Void:

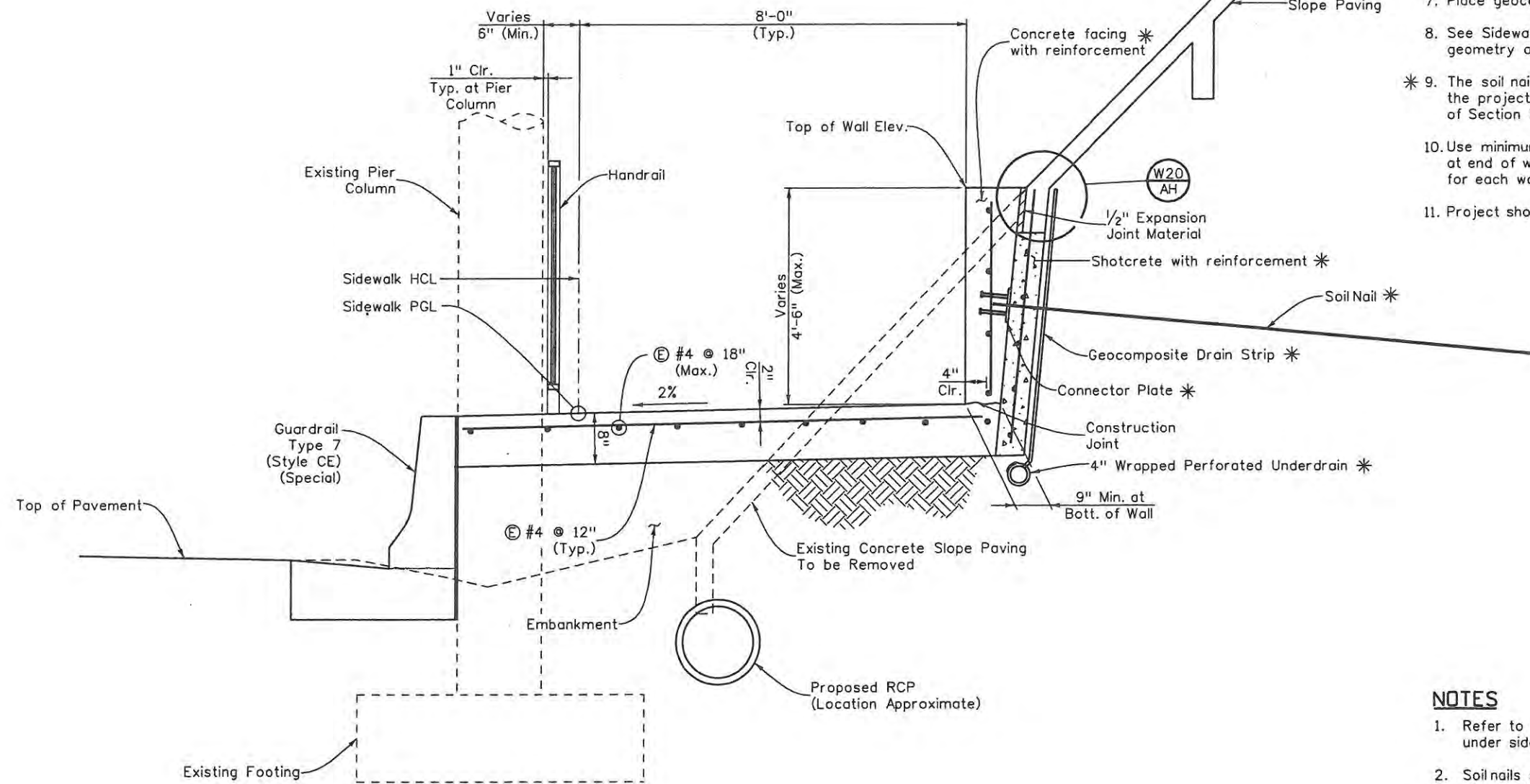
**INLET TYPE R (SPECIAL) DETAILS (2 OF 2)**

Designer:	J. Mills	Structure Numbers	
Detailer:	K. Tucker	Sheet Subset:	WALL
Subset Sheets:		W17 of W20	

Project No./Code  
 ES4 0253-200  
 17244  
 Sheet Number 135



Design		Detail		Quantities	
INITIAL	DATE	INITIAL	DATE	INITIAL	DATE
JSM	3/09	KCT	3/09	JSM	3/09
TWM	3/09	TWM	3/09	TRJ	3/09
Designed By	Checked By	Detailed By	Checked By	Quantities By	Checked By



TYPICAL SECTION

**WALL INSTALLATION NOTES**

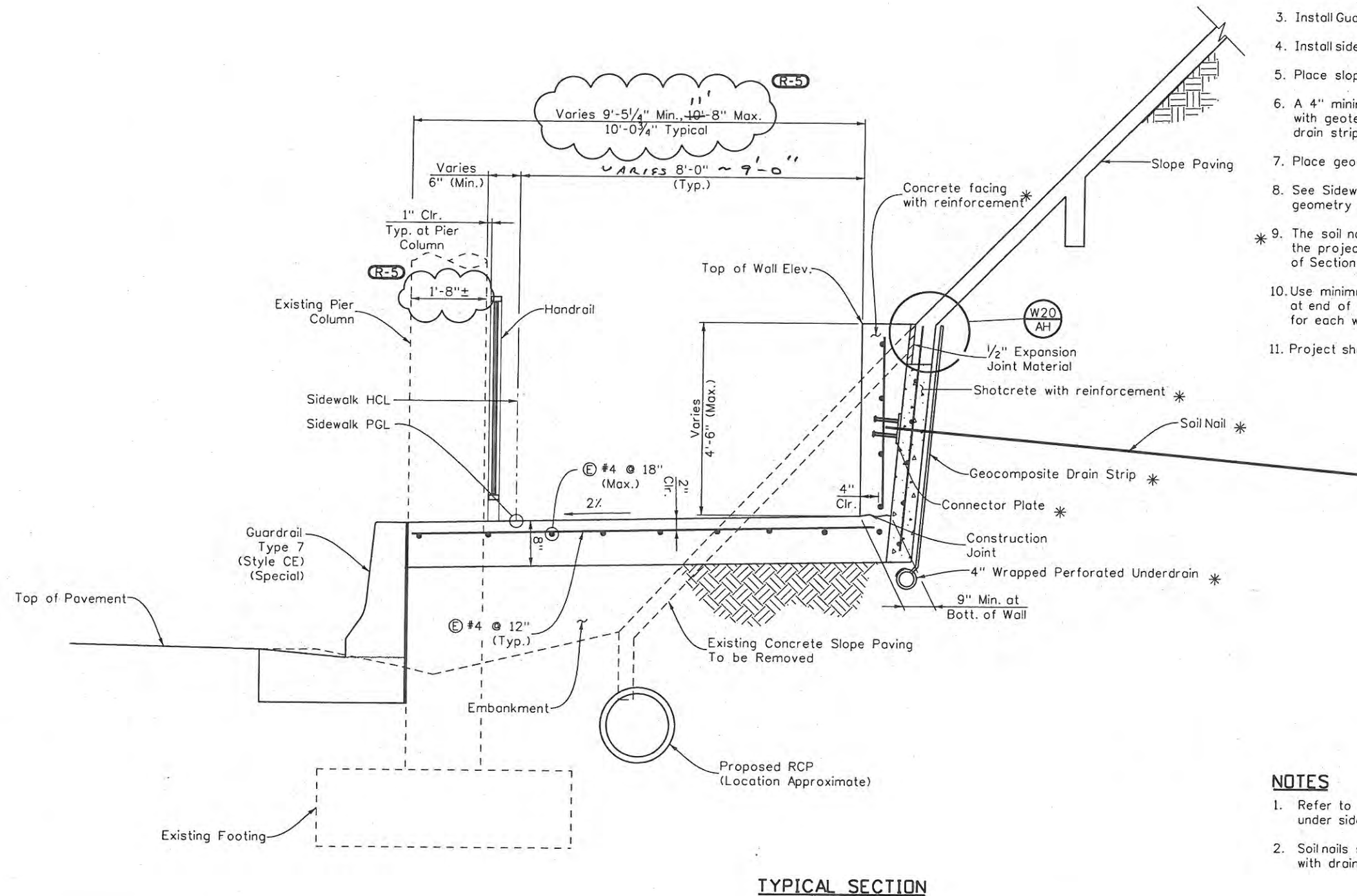
1. Remove existing slope paving. (Contractor shall be responsible for slope stability during construction.)
2. Create soil bench, install shotcrete, and soil nails.
3. Install Guardrail Type 7 (Style CE) (Special) and backfill.
4. Install sidewalk and concrete facing.
5. Place slope paving and install handrail.
6. A 4" minimum perforated underdrain pipe wrapped with geotextile fabric and connected to geocomposite drain strips shall be placed under the walls as shown.
7. Place geocomposite drain strips between Soil Nails.
8. See Sidewalk Plans SW3 and SW4 for soil nail wall geometry and limits of 8" thick sidewalk.
- \* 9. The soil nail wall is a design-build item as per the project special provision for the Revision of Section 504, Soil Nail Wall.
10. Use minimum 1% slope on underdrain and daylight at end of wall. Assume 50 additional feet of underdrain for each wall.
11. Project shotcrete reinforcement 8" into cutoff wall.

**NOTES**

1. Refer to drainage plans for location of RCP under sidewalk.
2. Soil nails shall be placed to avoid conflict with drainage structures.

Print Date: 6/3/2009		<b>Sheet Revisions</b>			<b>CITY OF LOVELAND</b>		<b>WILSON &amp; COMPANY</b> Engineers & Architects		<b>As Constructed</b>		<b>WALL-C-17-D AND WALL-C-17-E</b>		<b>Project No./Code</b>	
File Name: MSE_WallDet.dgn		Date:	Comments	Init.	500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000		999 18th Street Suite 2600 Denver, CO 80202 Phone: 303-297-2976 Fax: 303-297-2693		No Revisions:		TYPICAL SECTION		ES4 0253-207	
Horiz. Scale: N/A		Unit Information			Unit Leader Initials				Revised:		Designer: J. Mills		Structure: WALL-C-17-D	
Vert. Scale: N/A									Void: 9/14/11		Detailer: K. Tucker		Numbers: WALL-C-17-E	
											Sheet Subset: WALL		Subset Sheets: W18 of W20	
													Sheet Number 136	

Design	INITIAL	DATE	Detail	INITIAL	DATE	Quantities	INITIAL	DATE
	JSM	3/09		KCT	3/09		JSM	3/09
Designed By	JSM		Checked By	TWM		Checked By	TRJ	
	Checked By			Checked By			Checked By	



### WALL INSTALLATION NOTES

1. Remove existing slope paving. (Contractor shall be responsible for slope stability during construction.)
2. Create soil bench, install shotcrete, and soil nails.
3. Install Guardrail Type 7 (Style CE) (Special) and backfill.
4. Install sidewalk and concrete facing.
5. Place slope paving and install handrail.
6. A 4" minimum perforated underdrain pipe wrapped with geotextile fabric and connected to geocomposite drain strips shall be placed under the walls as shown.
7. Place geocomposite drain strips between Soil Nails.
8. See Sidewalk Plans SW3 and SW4 for soil nail wall geometry and limits of 8" thick sidewalk.
- \* 9. The soil nail wall is a design-build item as per the project special provision for the Revision of Section 504, Soil Nail Wall.
10. Use minimum 1% slope on underdrain and daylight at end of wall. Assume 50 additional feet of underdrain for each wall.
11. Project shotcrete reinforcement 8" into cutoff wall.

### NOTES

1. Refer to drainage plans for location of RCP under sidewalk.
2. Soil nails shall be placed to avoid conflict with drainage structures.

Print Date: 10/28/2009  
 File Name: MSE\_WallDet.dgn  
 Horiz. Scale: N/A Vert. Scale: N/A  
 Unit Information Unit Leader Initials

Sheet Revisions		
Date:	Comments	Init.
10/27/09	Add Dimensions	JJW

**CITY OF LOVELAND**  
 500 E. THIRD STREET  
 LOVELAND, CO 80537  
 970-962-2000

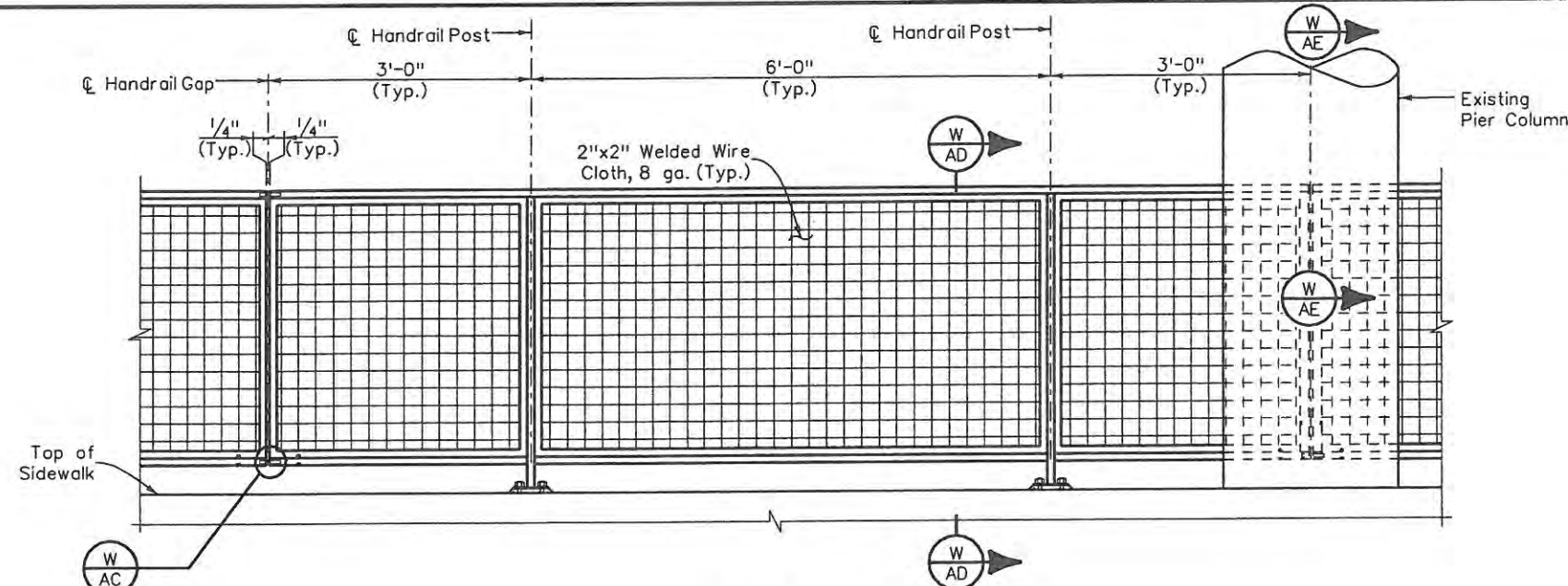
**WILSON & COMPANY**  
 Engineers & Architects  
 999 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2693

As Constructed
No Revisions:
Revised: 9/14/11
Void:

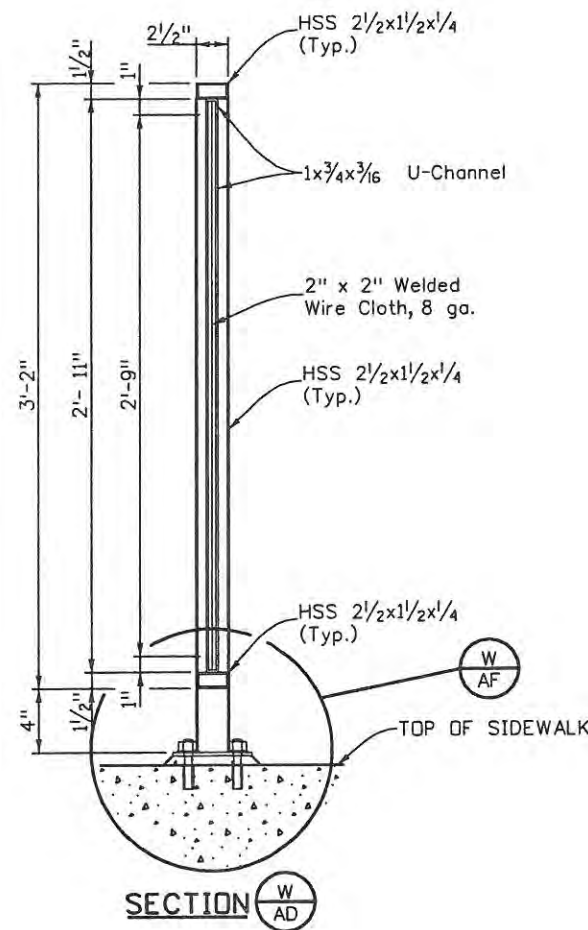
WALL-C-17-D AND WALL-C-17-E TYPICAL SECTION			
Designer:	J. Mills	Structure	WALL-C-17-D
Detailer:	K. Tucker	Numbers	WALL-C-17-E
Sheet Subset:	WALL	Subset Sheets:	W18 of W20

Project No./Code	ES4 0253-207
	17244
Sheet Number	136X

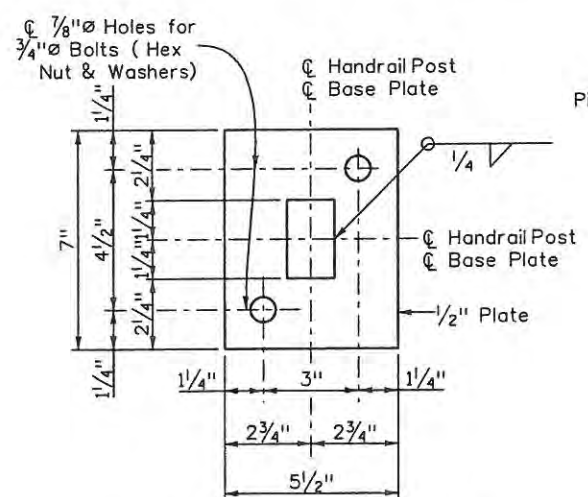




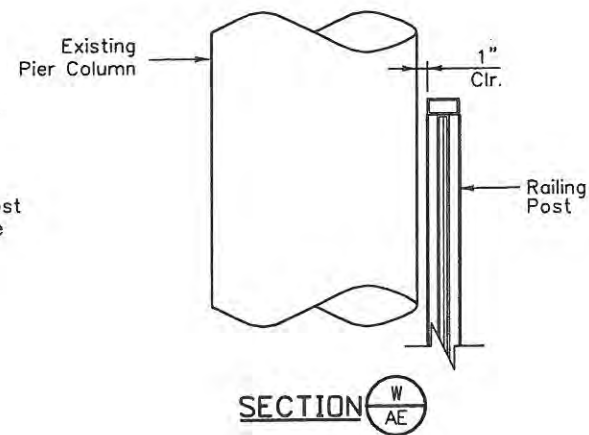
**RAILING ELEVATION**



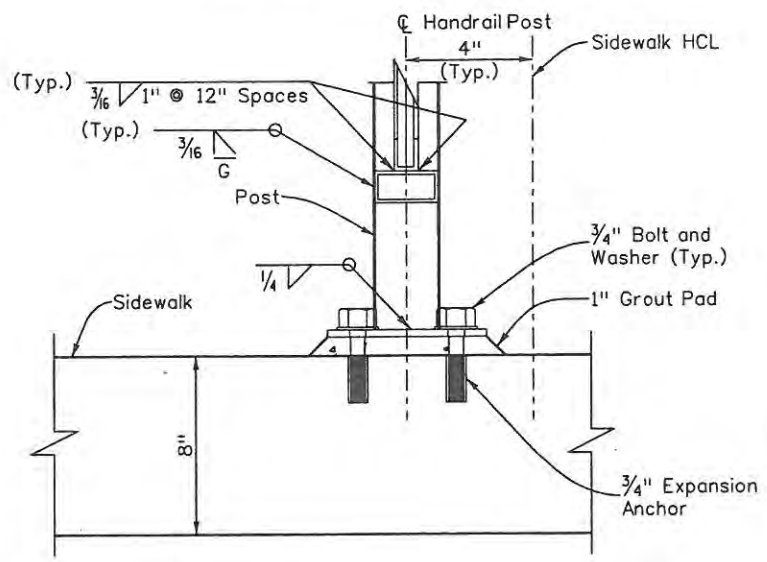
**SECTION W/AD**



**BASE PLATE DETAIL**

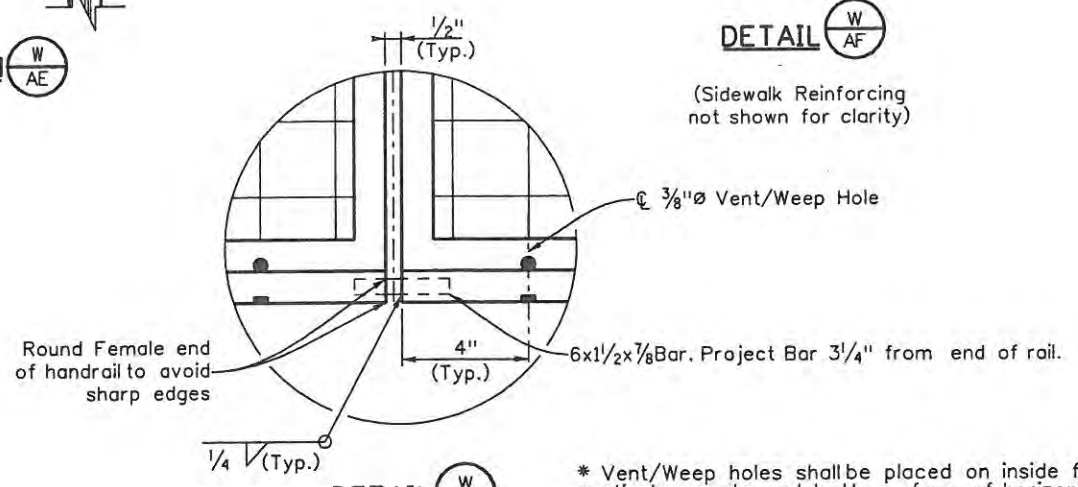


**SECTION W/AE**



**DETAIL W/AF**

(Sidewalk Reinforcing not shown for clarity)



**DETAIL W/AC**

(Placement for bar at top similar)

**NOTES:**

1. All railing panels shall be shop fabricated.
2. See the project special provision for the Revision of Section 514, Pedestrian and Bikeway Railing for material requirements.
3. Railing components shall be galvanized and painted Federal Color Number 30117 as per Revision of Section 509, Steel Structures.
4. Space posts to miss existing pier columns.
5. See Sidewalk sheets SW3 and SW4 for limits of handrails. Handrail shall follow horizontal alignment of sidewalk.
6. Expansion anchor shall be HILTI 3/4" Expansion Anchor or approved equal. Expansion anchor shall have a minimum allowable load pull out resistance of 4000 lbs.

Design		Detail		Quantities	
INITIAL	DATE	INITIAL	DATE	INITIAL	DATE
JSM	3/09	KCI	3/09	JSM	3/09
TWM	3/09	TWM	3/09	TRJ	3/09
Designed By	Checked By	Detailed By	Checked By	Quantities By	Checked By

Print Date: 5/14/2009	
File Name: Railing_Det_01.dgn	
Horiz. Scale: N/A	Vert. Scale: N/A
Unit Information	Unit Leader

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

**WILSON & COMPANY**  
Engineers & Architects

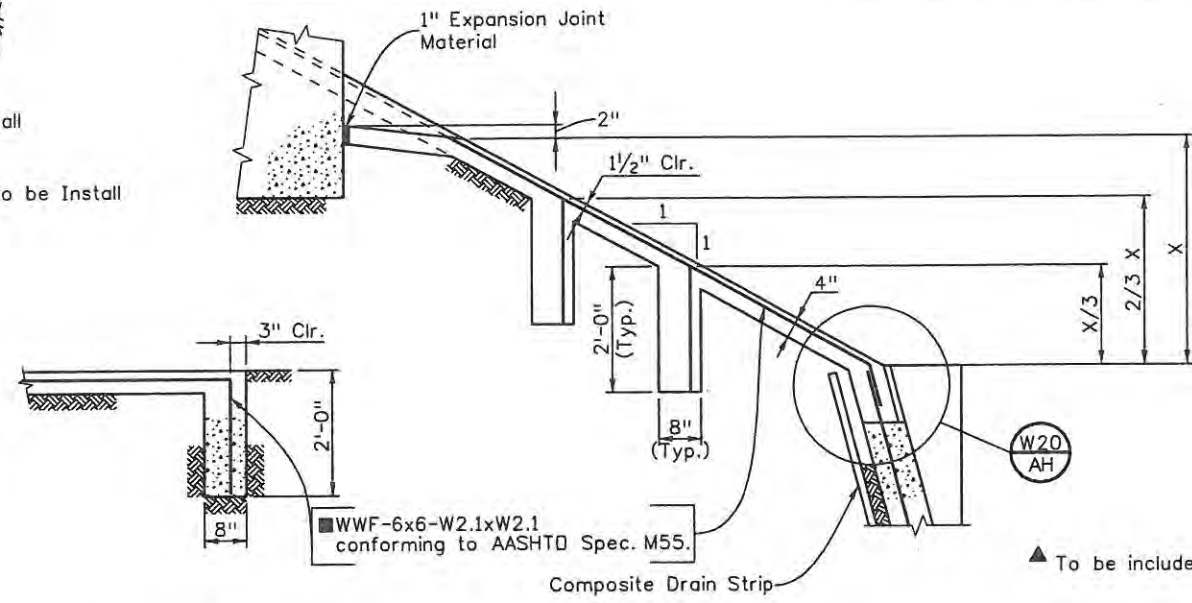
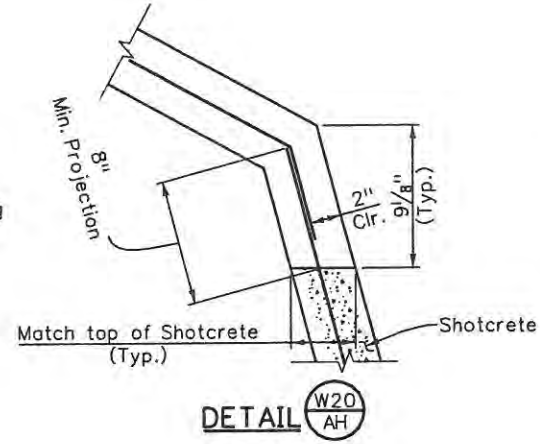
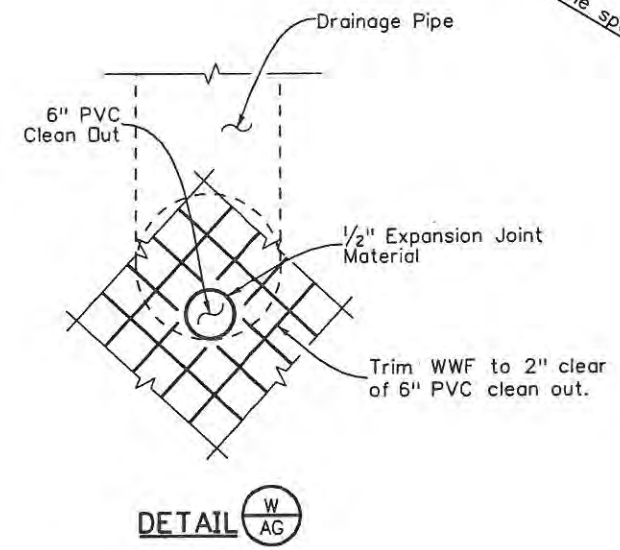
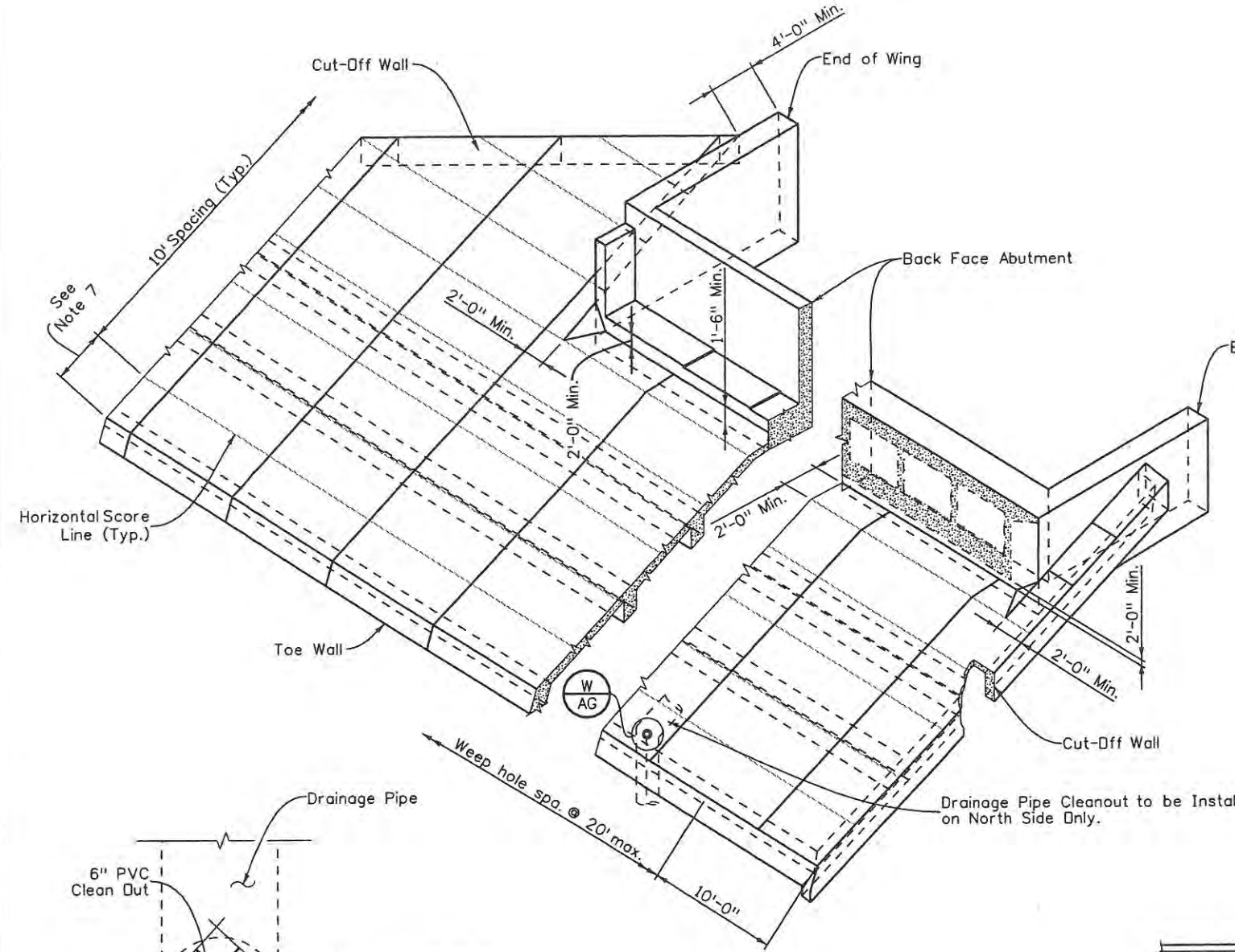
999 18th Street Suite 2600  
Denver, CO 80202  
Phone: 303-297-2976  
Fax: 303-297-2693

As Constructed	
No Revisions:	9/14/11
Revised:	
Void:	

HANDRAIL DETAILS		
Designer:	J. Mills	Structure Numbers
Detailer:	K. Tucker	
Sheet Subset:	WALL	Subset Sheets: W19 of W20

Project No./Code	
ES4 0253-207	
17244	
Sheet Number 137	

Design		Detail		Quantities	
INITIAL	DATE	INITIAL	DATE	INITIAL	DATE
JSM	3/09	RRW	3/09	JSM	3/09
TWM	3/09	TWM	3/09	TRJ	3/09
Designed By	Checked By	Detailed By	Checked By	Quantities By	Checked By



**NOTES**

- Slope paving shall be poured in 10 ft. transverse sections with a tooled construction joint at each section.
- Wire fabric shall be 2" from the end of joints and shall lap 8" at splices.
- Where slope or berm paving butts against structural concrete, separate with 1" expansion joint material.
- Expansion joint material and welded wire fabric shall not be paid for separately, but shall be included in the work.
- Structure excavation for concrete slope and ditch paving shall be limited to the actual volume occupied by the slope paving concrete.
- All exposed surfaces of slope paving shall receive a structural concrete coating Federal Color Number 30340 with anti-graffiti finish.
- First score line shall be placed 5'-0" above highest point of wall.
- These drawings show general details only. For limits of slope paving see Roadway sheets SW3 and SW4.
- See sheet DP2 for drain clean out details.

Print Date: 5/1/2009  
 File Name: SlopePaving.dgn  
 Horiz. Scale: N/A  
 Unit Information

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
 LOVELAND, CO 80537  
 970-962-2000

**WILSON & COMPANY**  
 Engineers & Architects

999 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2693

As Constructed

No Revisions:

Revised:

Void: 9/14/11

**SLOPE PAVING DETAILS**

Designer:	J. Mills	Structure Numbers	
Detailer:	K. Tucker		
Sheet Subset:	WALL	Subset Sheets:	W20 of W20

Project No./Code

ES4 0253-207

17244

Sheet Number 138

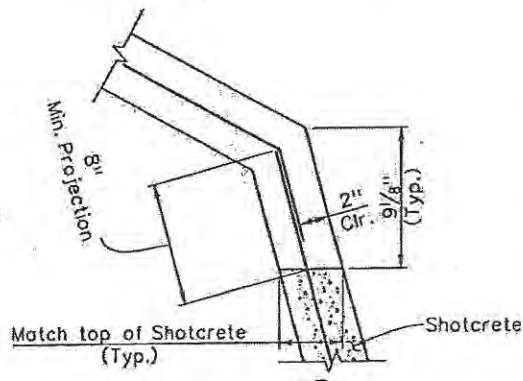
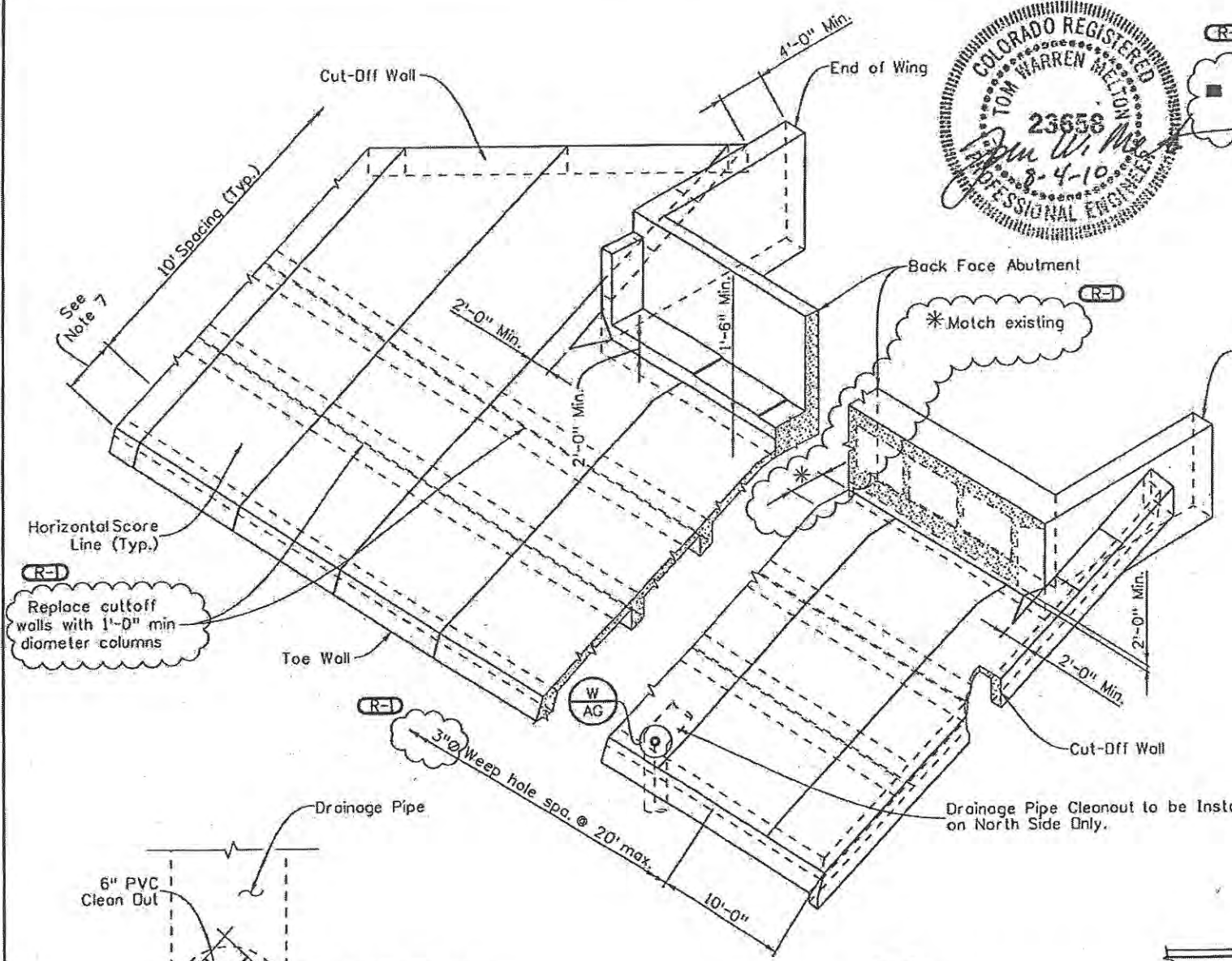




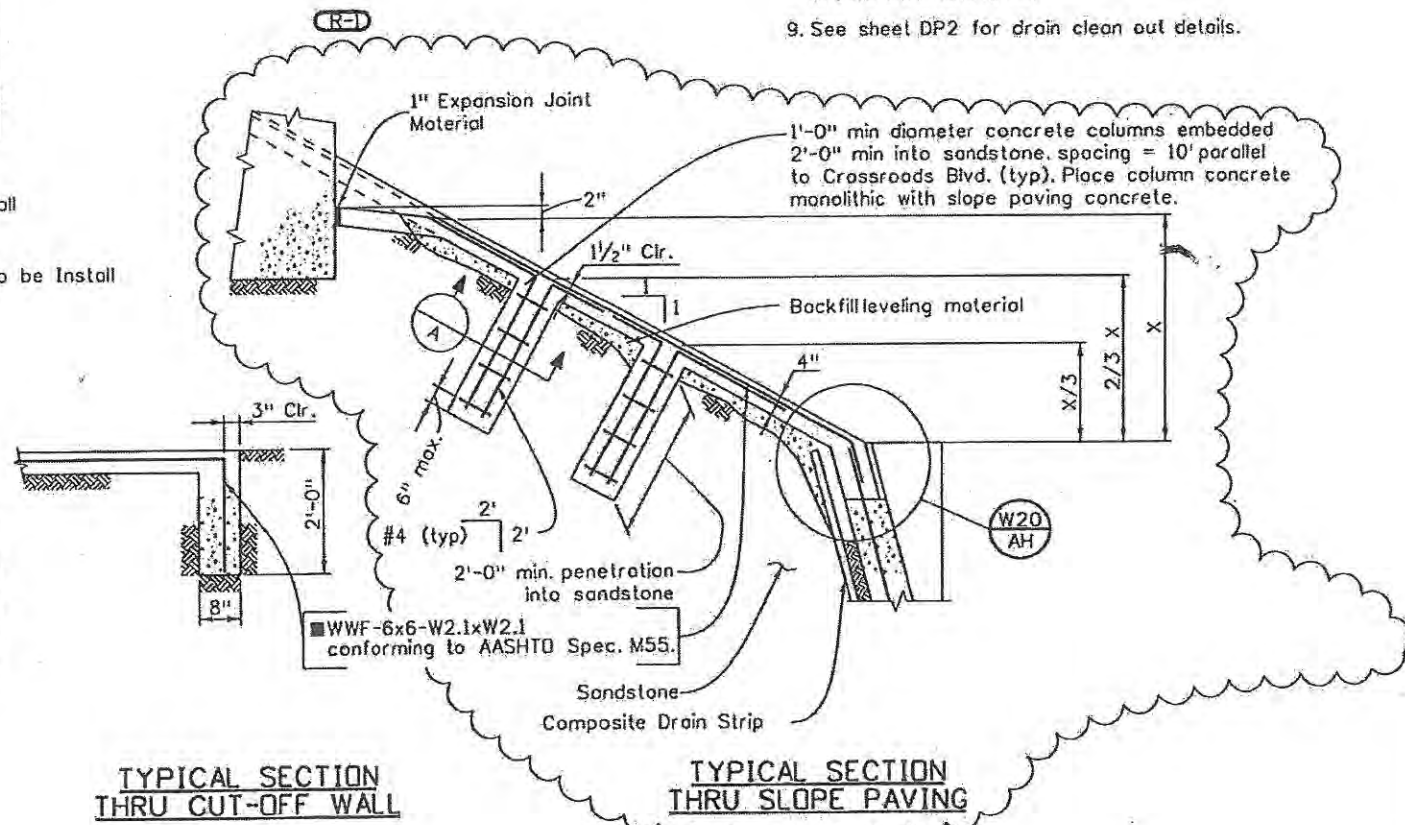
(R-1) 2.5 lbs of an approved polypropylene fiber, per cubic yard of concrete, maybe substituted for the WWF in this slope paving.

**NOTES**

- Slope paving shall be poured in 10 ft. transverse sections with a tooled construction joint at each section.
- Wire fabric shall be 2" from the end of joints and shall lap 8" at splices.
- Where slope or berm paving butts against structural concrete, separate with 1" expansion joint material.
- Expansion joint material and welded wire fabric shall not be paid for separately, but shall be included in the work.
- Structure excavation for concrete slope and ditch paving shall be limited to the actual volume occupied by the slope paving concrete.
- All exposed surfaces of slope paving shall receive a structural concrete coating Federal Color Number 30340 with anti-graffiti finish.
- First score line shall be placed 5'-0" above highest point of wall.
- These drawings show general details only. For limits of slope paving see Sidewalk sheets SW3 and SW4.
- See sheet DP2 for drain clean out details.



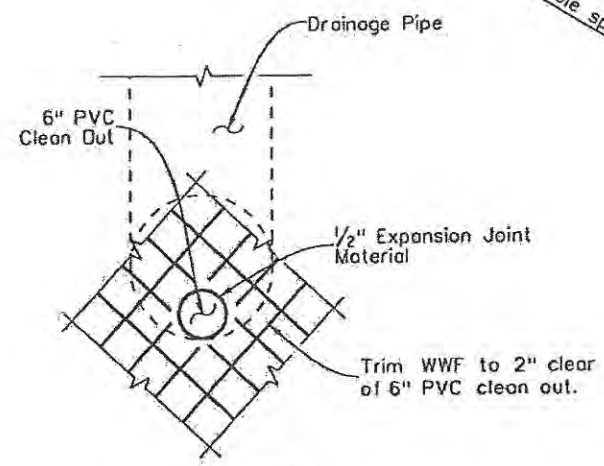
DETAIL W20 AH



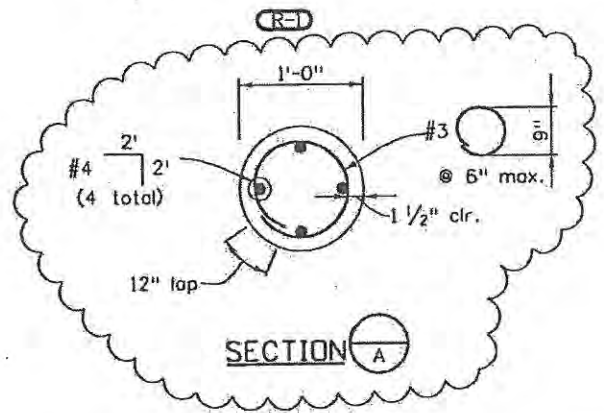
TYPICAL SECTION THRU CUT-OFF WALL

TYPICAL SECTION THRU SLOPE PAVING

(R-1) Replace cutoff walls with 1'-0" min diameter columns



DETAIL W AG



SECTION A

Design		Detail		Quantities	
INITIAL	DATE	INITIAL	DATE	INITIAL	DATE
JSK	3/09	RRW	3/09	JSK	3/09
TWM	3/09	TWM	3/09	TRJ	3/09
Designed By		Detailed By		Quantities By	
Checked By		Checked By		Checked By	

Print Date: 8/4/2010	
File Name: SlopePavingRev2.dgn	
Horiz. Scale: N/A	
Unit Information	

Sheet Revisions			
Date	Comments	Init.	
8-3-10	FIELD DESIGN CHANGE	TWM	

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

**WILSON & COMPANY**  
Engineers & Architects

999 18th Street Suite 2600  
Denver, CO 80202  
Phone: 303-297-2876  
Fax: 303-297-2693

As Constructed	No Revisions: 9/14/11 Revised: Void:

SLOPE PAVING DETAILS			
Designer:	T. Melton	Structure Numbers	
Detailer:	K. Tucker		
Sheet Subset:	WALL	Subset Sheets:	W20 of W20

Project No./Code	ES4 0253-207
	17244
Sheet Number	138X





# SCHEDULE OF LIGHTING DEVICES

Metal Halide 100w

LONG DESCRIPTION					LUMINAIRE METAL HALIDE (250 WATT)	LUMINAIRE HIGH PRESSURE SODIUM (250 WATT)	DIRECT BURY POLE (35'-0")	TAPERED STEEL LIGHT POLE (30'-0") DIA. 4" X 4" CONC. FOUNDATION	LUMINAIRE HIGH PRESSURE SODIUM (400W)	LIGHT STANDARD METAL (40' FOOT)	LIGHT STANDARD FOUNDATION	LUMINAIRE HIGH PRESSURE SODIUM (400 WATT)	LIGHTING CONTROL CENTER (METER/POWER PEDESTAL)	REMOVAL OF LIGHT STANDARD (BY CONTRACTOR)	REMOVAL OF LIGHT STANDARD (BY CITY OF LOVELAND)	REMOVAL OF LIGHT STANDARD (UNDERDECK)	NOTES
ADDITIONAL INFORMATION					FOR INFORMATION ONLY	FOR INFORMATION ONLY	FOR INFORMATION ONLY	FOR INFORMATION ONLY	EACH	EACH	EACH	EACH	EACH	EACH	EACH		
UNITS					EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH		
SUBSET SHT	I.D. NO.	BASELINE	STATION	R/L OFFSET													
LE.4	LS01	CROSSROADS BLVD	52+77.35	R 51.20	1		1									1	
	LS02	CROSSROADS BLVD	52+83.36	L 55.89	1		1									1	
	LS03	CROSSROADS BLVD	53+89.PL	R 75.67	1		1									1	
	LS04	CROSSROADS BLVD	54+05.00	L 58.90	1		1									1	
	LS05	SW RAMP	106+33.59	L 66.29	1		1									1	
	LS06	SW RAMP	106+61.19	L 31.86	1		1									1	
	LS07	CROSSROADS BLVD	54+62.32	R 00.00	1		1									1	
	LS08	NW RAMP	200+22.00	L 39.00	1		1									1	
	LS09	NW RAMP	201+52.17	L 64.42	1		1									1	
	LS10	NW RAMP	201+04.72	R 11.51	1		1									1	
	LS11	SW RAMP	106+33.59	R 42.98	1		1									1	
	LS12	NW RAMP	200+69.00	R 55.66	1		1									1	
	LS13	CROSSROADS BLVD	57+13.40	L 25.71	1		1									1	
	LS14	CROSSROADS BLVD	56+34.46	L 3.50	1		1									1	
LE.5	LS15	CROSSROADS BLVD	59+73.00	R 38.05		1		1								1	
	LS16	CROSSROADS BLVD	59+82.10	L 33.80		1		1								1	
	LS17	CROSSROADS BLVD	60+24.38	L 3.00		1		1								1	
	LS18	SE RAMP	408+01.27	L 54.83		1		1								1	
	LS19	NE RAMP	300+36.47	L 42.00		1		1								1	
	LS20	SE RAMP	408+50.00	R 41.35		2		1								1	
	LS21	CROSSROADS BLVD	61+96.40	R 00.00		1		1								1	
	LS22	NE RAMP	299+54.00	R 32.06		2		1								1	
	LS23	NE RAMP	299+90.30	R 62.87		1		1								1	
	LS24	SE RAMP	407+36.26	L 11.50		1		1								1	
	LS25	SE RAMP	407+15.37	R 58.13		1		1								1	
	LS26	CROSSROADS BLVD	62+76.95	R 57.30		1		1								1	
	LS27	CROSSROADS BLVD	63+02.22	L 61.67		1		1								1	
	LS28	CROSSROADS BLVD	64+33.15	R 64.37		1		1								1	
	LS29	CROSSROADS BLVD	64+33.15	L 51.25		1		1								1	
	LS30	CROSSROADS BLVD	51+80.00	R 49.70	1		1									1	
	LS31	CROSSROADS BLVD	51+80.00	L 61.00	1		1									1	
LE.4	LS32	NW RAMP	202+68.25	L 42.26				1	1	1						4	
LE.5	LS33	SE RAMP	406+10.92	R 48.45				1	1	1						4	
LE.4	LU01	CROSSROADS BLVD									1					2	
	LU02	CROSSROADS BLVD									1					2	
	LU03	CROSSROADS BLVD									1					2	
	LU04	CROSSROADS BLVD									1					2	
LE.4	LU05	CROSSROADS BLVD									1					2	
	LU06	CROSSROADS BLVD									1					2	
	LU07	CROSSROADS BLVD									1					2	
	LU08	CROSSROADS BLVD									1					2	
LE.4	LR01	CROSSROADS BLVD	52+23.80	R 48.30										1		7	
	LR02	CROSSROADS BLVD	52+28.14	L 59.42										1		7	
	LR03	CROSSROADS BLVD	53+76.90	R 59.14										1		7	
	LR04	CROSSROADS BLVD	53+76.90	L 49.63										1		7	
	LR05	CROSSROADS BLVD	57+00.00	L 41.00									1			3	
LE.5	LR06	CROSSROADS BLVD	60+64.00	L 47.10									1			3	
	LR07	CROSSROADS BLVD													1	3	
	5902	CROSSROADS BLVD	62+18.00	L 125.00												5	
	5903	CROSSROADS BLVD	61+91.33	L 133.00							1					6	
<b>TOTALS</b>					<b>16</b>	<b>17</b>	<b>16</b>	<b>15</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>8</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>1</b>	

## TABULATION OF APPROXIMATE QUANTITIES

ITEM NUMBER	LONG DESCRIPTION	UNIT	QUANTITY	NOTES
202-00700	REMOVAL OF LIGHT STANDARD	EA	2	3
202-00700	REMOVAL OF LIGHT STANDARD (UNDERDECK)	EA	2	3
613-00100	1 INCH ELECTRICAL CONDUIT	LF	380	180
613-01125	1-1/4 INCH ELECTRICAL CONDUIT (PLASTIC)	LF	500	448
613-01200	2 INCH ELECTRICAL CONDUIT (PLASTIC)	LF	5,800	5,211
613-01300	3 INCH ELECTRICAL CONDUIT (PLASTIC)	LF	960	979
613-10000	WIRING	LS	1	
613-34400	LIGHT STANDARD METAL (40 FOOT)	EA	2	
613-40010	LIGHT STANDARD FOUNDATION	EA	2	
613-50100	LIGHTING CONTROL CENTER (METER/POWER PEDESTAL)	EA	1	6
613-70150	LUMINAIRE (HIGH PRESSURE SODIUM) (150W) (UNDERDECK)	EA	8	2
613-70400	LUMINAIRE HIGH PRESSURE SODIUM (400 WATT) (COBRA HEAD)	EA	2	

### LIGHTING SCHEDULE NOTES:

- CITY OF LOVELAND SHALL PROVIDE AND INSTALL LIGHT STANDARDS LS01 TO LS31. CONTRACTOR TO COORDINATE WITH CITY STAFF TO SCHEDULE & PROVIDE SLEEVES AT ROADWAY CROSSINGS AS REQUIRED. ALL ASSOCIATED ELECTRICAL WIRING BY CITY OF LOVELAND.
- NEW WALL MOUNT UNDER BRIDGE LUMINAIRE INSTALLED BY CONTRACTOR UNDER EXISTING BRIDGE. CDDT STAFF BRIDGE STRUCTURAL ENGINEER TO APPROVE FINAL LOCATIONS PRIOR TO INSTALLATION.
- ALL LIGHT STANDARDS AND LUMINAIRES REMOVED BY CONTRACTOR SHALL BE RETURNED TO THE OWNERS IN WORKING CONDITION. LR05, LR06 AND UNDERDECK LUMINAIRE LR07 SHALL BE RETURNED TO CDDT.
- CONTRACTOR SHALL PROVIDE AND INSTALL LIGHT STANDARDS LS32 & LS33. REFER TO CDDT M-STANDARD DETAILS M-613-1 FOR MORE INFORMATION.
- EXISTING (RELOCATED) CDDT METER/POWER PEDESTAL 5902. LISTED IN THIS SCHEDULE FOR NEW LOCATION ONLY. INCLUDED UNDER CDDT WIRING PAY ITEM 613-10000.
- NEW CITY OF LOVELAND METER/POWER PEDESTAL 5903 (CLMPP).
- REMOVAL BY CITY OF LOVELAND.

**CLANTON & ASSOCIATES**  
 LIGHTING DESIGN AND ENGINEERING  
 4699 NAUTILUS COURT SOUTH STE. 102  
 BOULDER, CO 80301  
 303-530-7229

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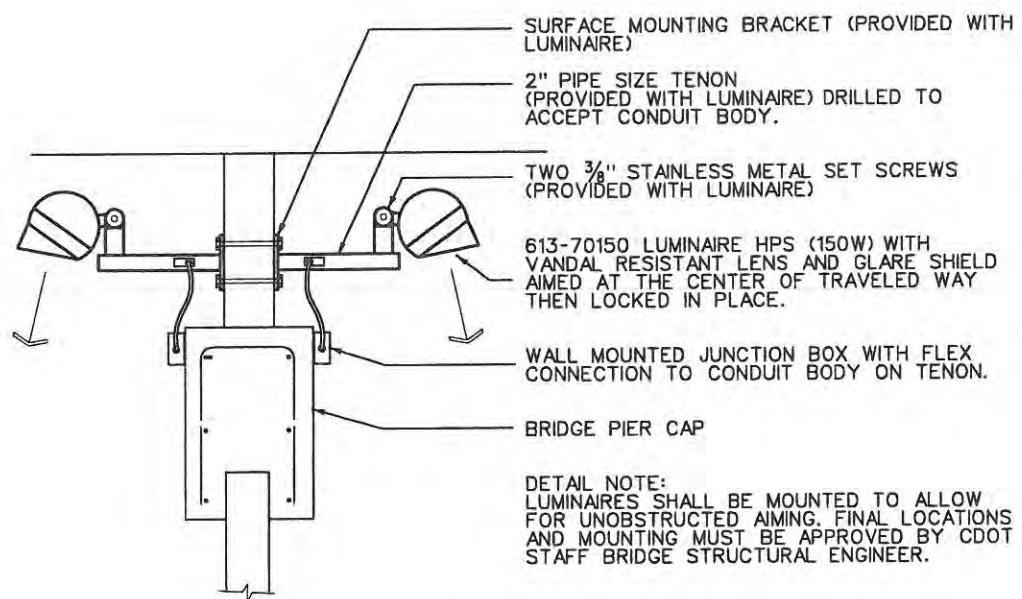
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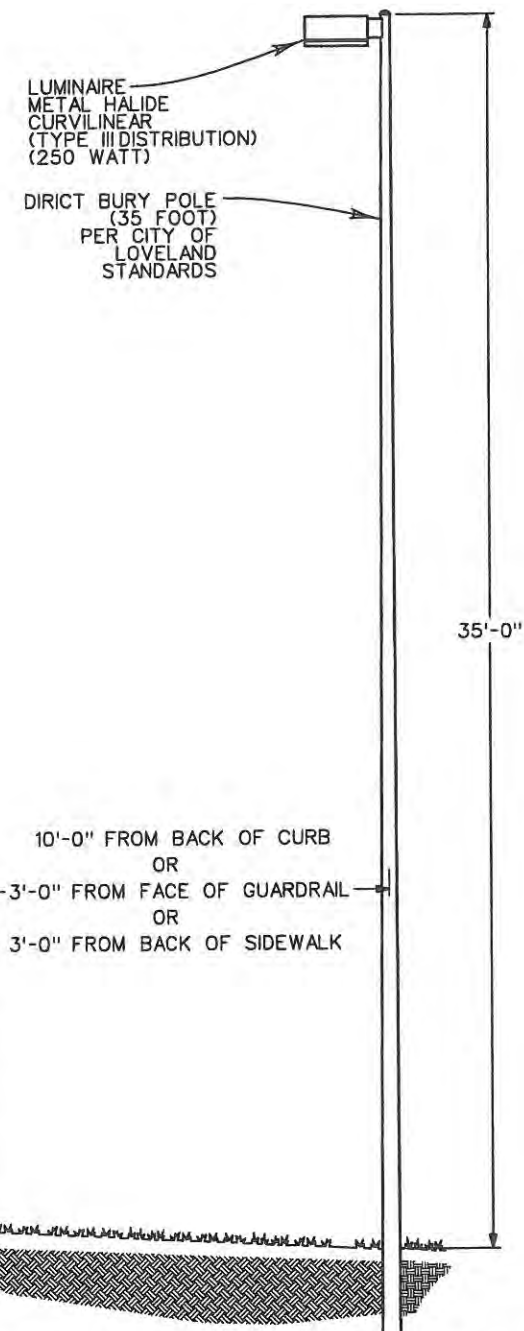
ROADWAY LIGHTING SCHEDULES CROSSROADS BOULEVARD	
Designer: DS	Structure Numbers
Detailer: JE	
Sheet Subset: LE	Subset Sheets: 1 of 7

Project No./Code	SHE 0253-200
	16315
Sheet Number	139

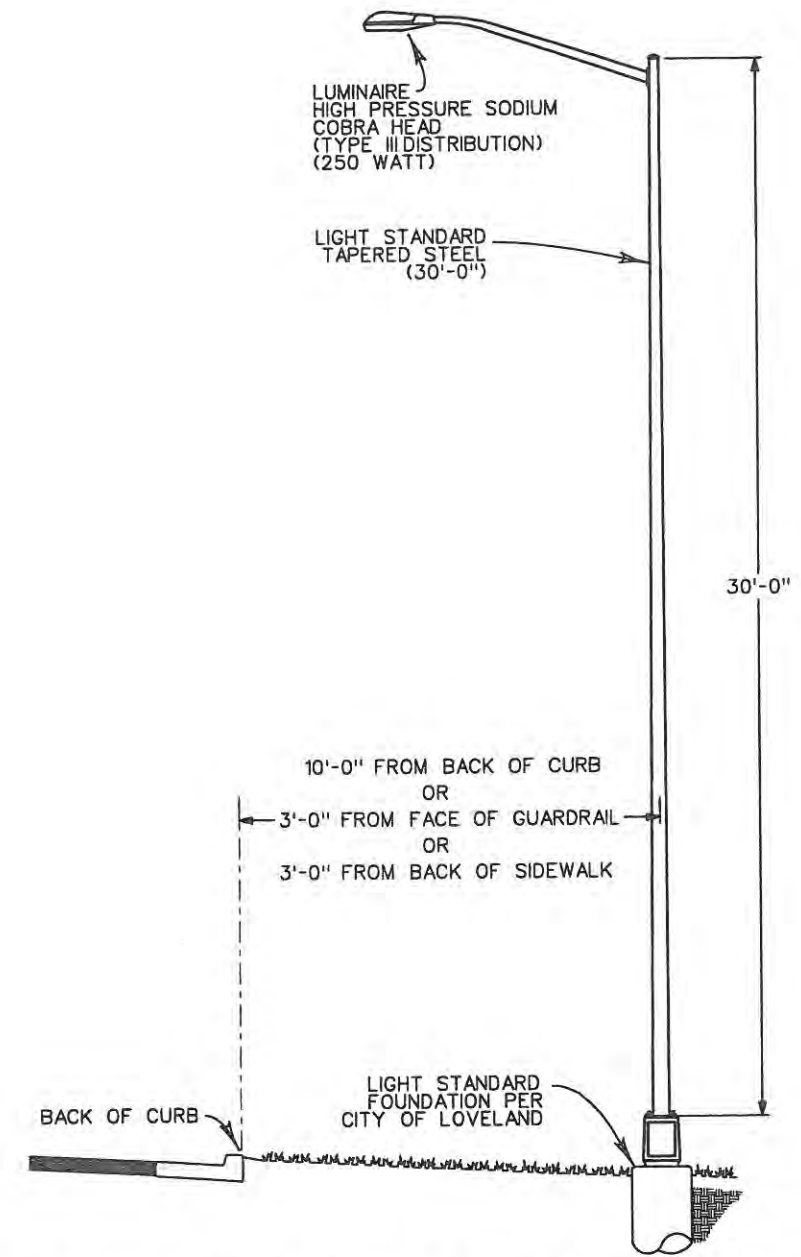




**3** WALL MOUNTING DETAIL  
LUMINAIRE ON PIER CAP  
LE.2 NOT TO SCALE



**1** TYPICAL ROADWAY LIGHT STANDARD  
(CURVILINEAR)  
LE.2 NOT TO SCALE



**2** TYPICAL ROADWAY LIGHT STANDARD  
(COBRA HEAD)  
LE.2 NOT TO SCALE

NOTE: LIGHT STANDARDS LS32 & LS33 SHALL BE A 40'-0" METAL POLE AND CONCRETE FOUNDATION PER CDOT M-STANDARD M-613-1. ALL OTHER COBRA HEAD LIGHT STANDARDS SHALL BE ACCORDING TO THIS DETAIL.

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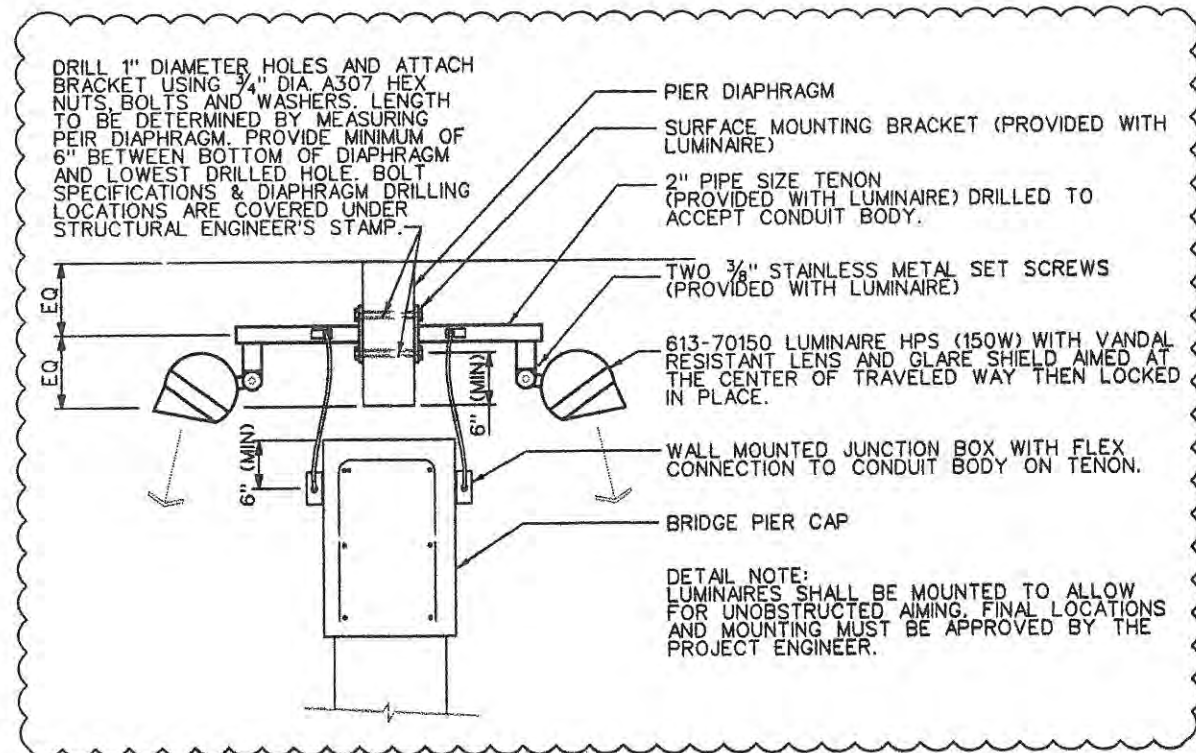
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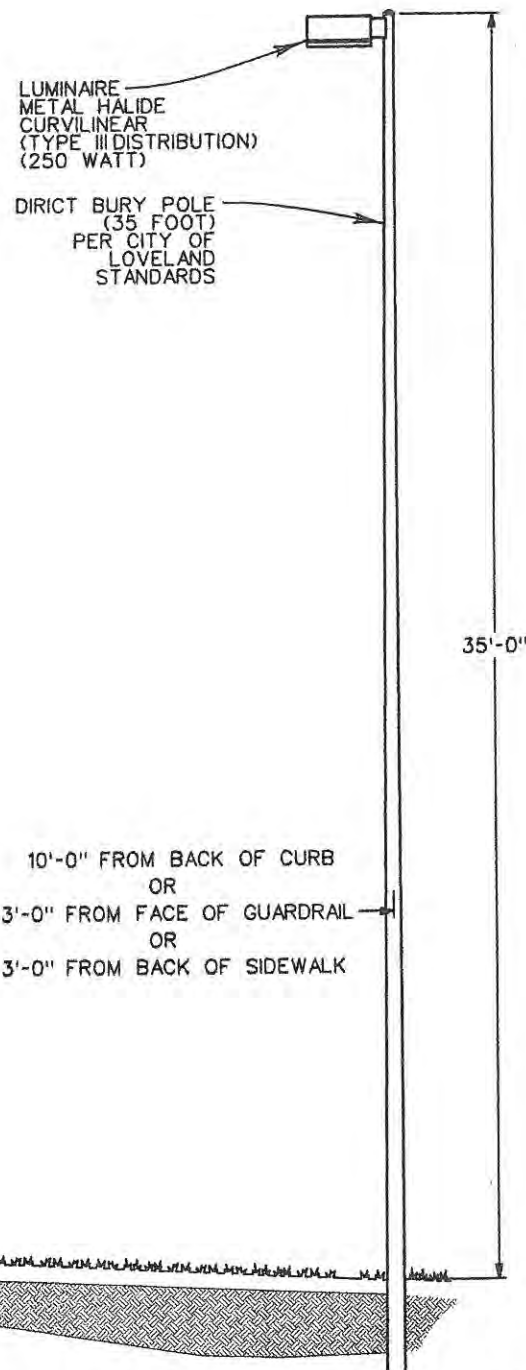


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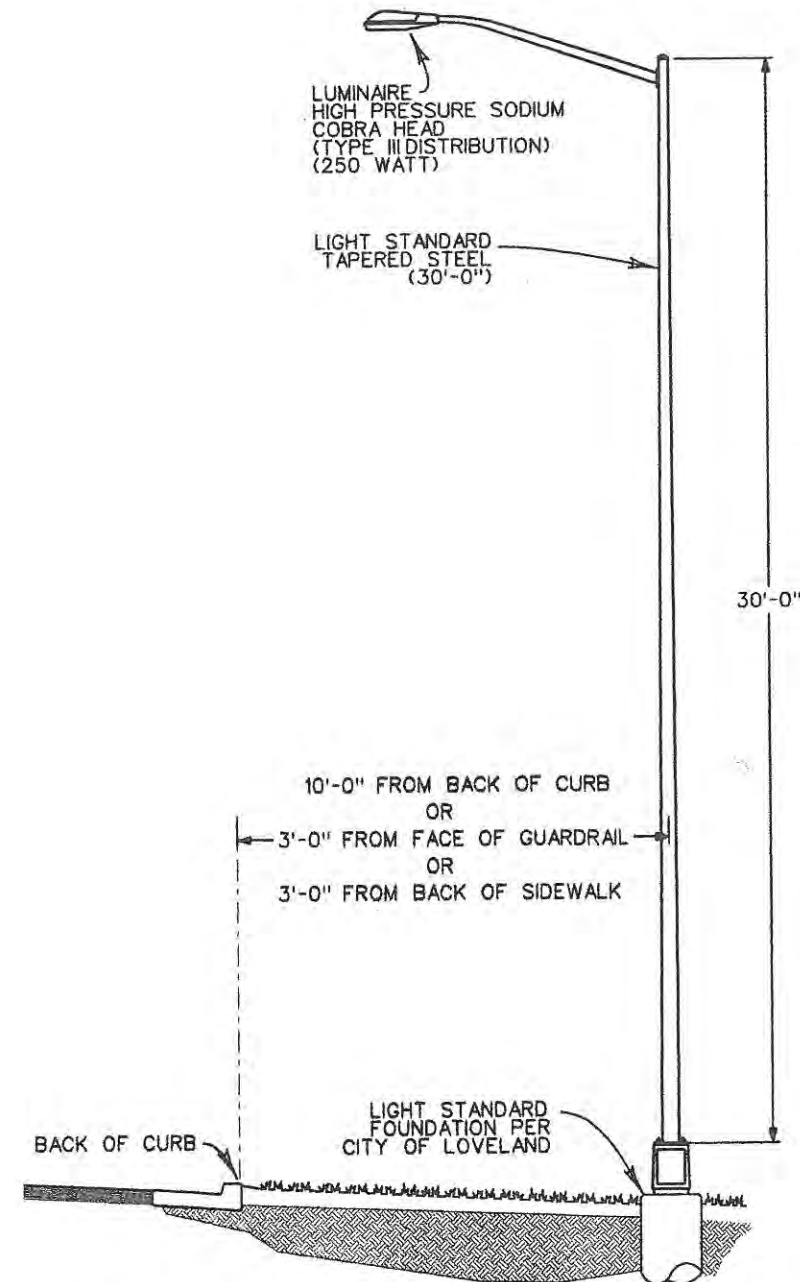


WALL MOUNTING DETAIL  
LUMINAIRE ON PIER CAP

3  
LE.2 NOT TO SCALE



1  
LE.2 NOT TO SCALE  
TYPICAL ROADWAY LIGHT STANDARD  
(CURVILINEAR)



2  
LE.2 NOT TO SCALE  
TYPICAL ROADWAY LIGHT STANDARD  
(COBRA HEAD)

NOTE: LIGHT STANDARDS LS32 & LS33 SHALL BE A 40'-0" METAL POLE AND CONCRETE FOUNDATION PER CDOT M-STANDARD M-613-1. ALL OTHER COBRA HEAD LIGHT STANDARDS SHALL BE ACCORDING TO THIS DETAIL.

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ROADWAY LIGHTING DETAILS CROSSROADS BOULEVARD	
Designer: DS	Structure Numbers
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Project No./Code SHE 0253-200
16315
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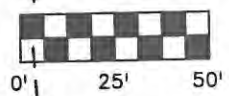
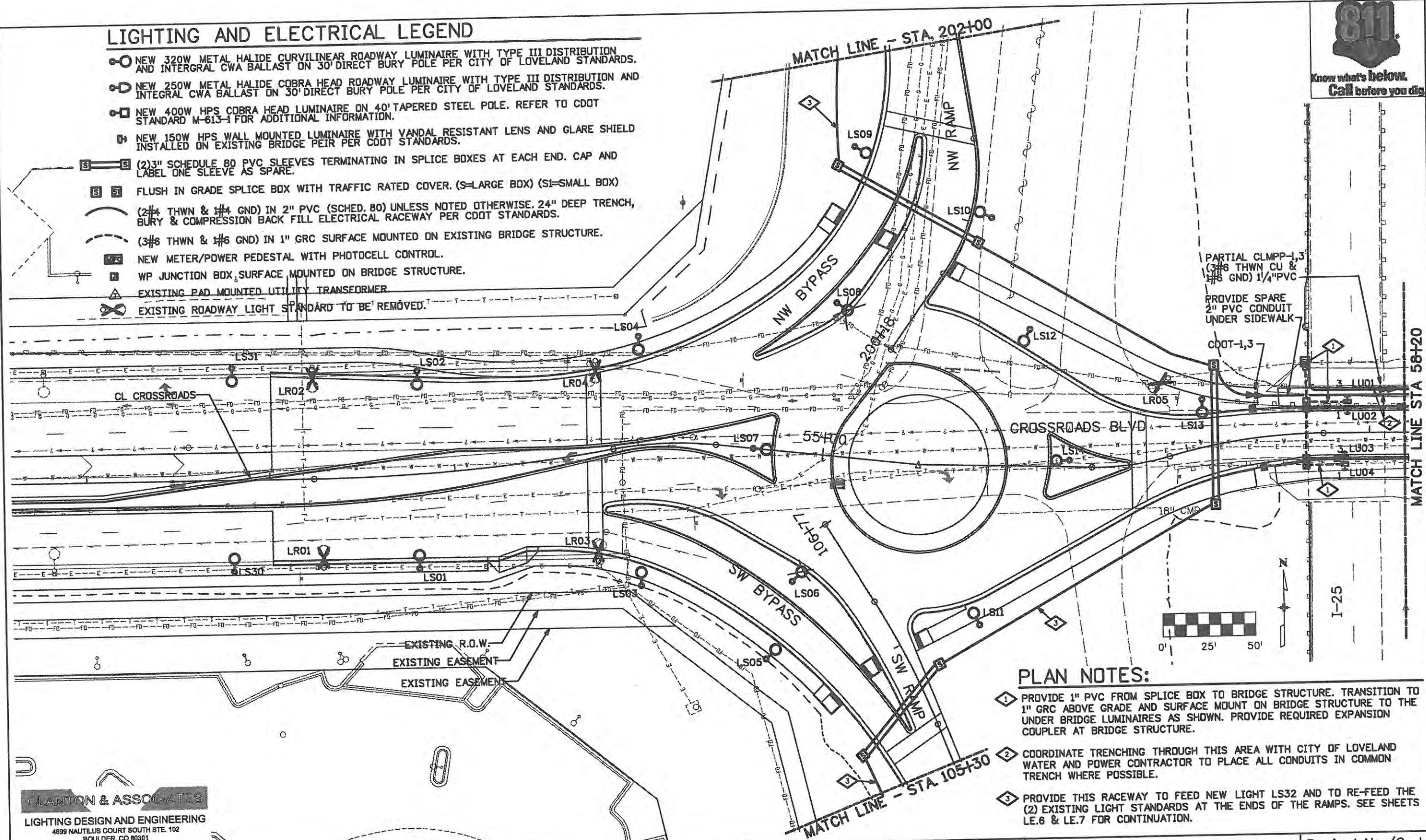






# LIGHTING AND ELECTRICAL LEGEND

- NEW 320W METAL HALIDE CURVILINEAR ROADWAY LUMINAIRE WITH TYPE III DISTRIBUTION AND INTEGRAL CWA BALLAST ON 30' DIRECT BURY POLE PER CITY OF LOVELAND STANDARDS.
- NEW 250W METAL HALIDE COBRA HEAD ROADWAY LUMINAIRE WITH TYPE III DISTRIBUTION AND INTEGRAL CWA BALLAST ON 30' DIRECT BURY POLE PER CITY OF LOVELAND STANDARDS.
- NEW 400W HPS COBRA HEAD LUMINAIRE ON 40' TAPERED STEEL POLE. REFER TO CDOT STANDARD M-613-1 FOR ADDITIONAL INFORMATION.
- ▣ NEW 150W HPS WALL MOUNTED LUMINAIRE WITH VANDAL RESISTANT LENS AND GLARE SHIELD INSTALLED ON EXISTING BRIDGE PEIR PER CDOT STANDARDS.
- (2) 3" SCHEDULE 80 PVC SLEEVES TERMINATING IN SPLICE BOXES AT EACH END. CAP AND LABEL ONE SLEEVE AS SPARE.
- FLUSH IN GRADE SPLICE BOX WITH TRAFFIC RATED COVER. (S=LARGE BOX) (SI=SMALL BOX)
- (2) #4 THWN & #4 GND IN 2" PVC (SCHED. 80) UNLESS NOTED OTHERWISE. 24" DEEP TRENCH, BURY & COMPRESSION BACK FILL ELECTRICAL RACEWAY PER CDOT STANDARDS.
- (3) #6 THWN & #6 GND IN 1" GRC SURFACE MOUNTED ON EXISTING BRIDGE STRUCTURE.
- ⊞ NEW METER/POWER PEDESTAL WITH PHOTOCELL CONTROL.
- ⊞ WP JUNCTION BOX, SURFACE MOUNTED ON BRIDGE STRUCTURE.
- ⊞ EXISTING PAD MOUNTED UTILITY TRANSFORMER.
- ⊞ EXISTING ROADWAY LIGHT STANDARD TO BE REMOVED.



- PLAN NOTES:**
- 1 PROVIDE 1" PVC FROM SPLICE BOX TO BRIDGE STRUCTURE. TRANSITION TO 1" GRC ABOVE GRADE AND SURFACE MOUNT ON BRIDGE STRUCTURE TO THE UNDER BRIDGE LUMINAIRES AS SHOWN. PROVIDE REQUIRED EXPANSION COUPLER AT BRIDGE STRUCTURE.
  - 2 COORDINATE TRENCHING THROUGH THIS AREA WITH CITY OF LOVELAND WATER AND POWER CONTRACTOR TO PLACE ALL CONDUITS IN COMMON TRENCH WHERE POSSIBLE.
  - 3 PROVIDE THIS RACEWAY TO FEED NEW LIGHT LS32 AND TO RE-FEED THE (2) EXISTING LIGHT STANDARDS AT THE ENDS OF THE RAMPS. SEE SHEETS LE.6 & LE.7 FOR CONTINUATION.

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ROADWAY LIGHTING PLAN CROSSROADS BOULEVARD	
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Sheet Subset: LE	Subset Sheets: 4 of 7

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 16315  
 Sheet Number 142

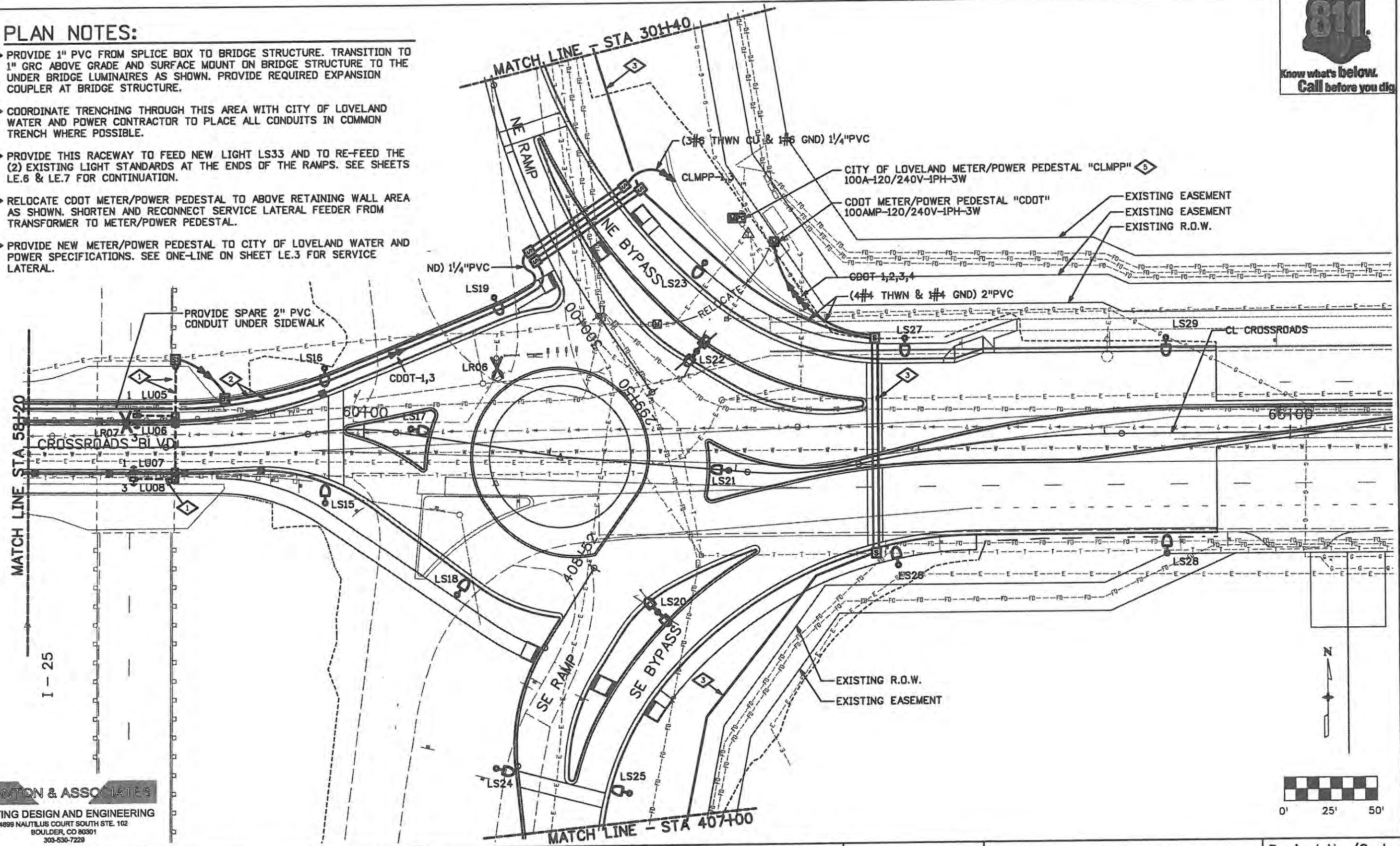




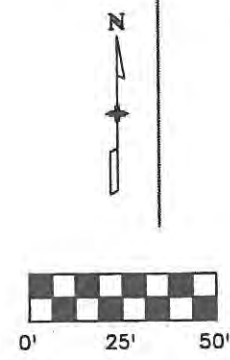
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### PLAN NOTES:

- 1 PROVIDE 1" PVC FROM SPLICE BOX TO BRIDGE STRUCTURE. TRANSITION TO 1" GRC ABOVE GRADE AND SURFACE MOUNT ON BRIDGE STRUCTURE TO THE UNDER BRIDGE LUMINAIRES AS SHOWN. PROVIDE REQUIRED EXPANSION COUPLER AT BRIDGE STRUCTURE.
- 2 COORDINATE TRENCHING THROUGH THIS AREA WITH CITY OF LOVELAND WATER AND POWER CONTRACTOR TO PLACE ALL CONDUITS IN COMMON TRENCH WHERE POSSIBLE.
- 3 PROVIDE THIS RACEWAY TO FEED NEW LIGHT LS33 AND TO RE-FEED THE (2) EXISTING LIGHT STANDARDS AT THE ENDS OF THE RAMPS. SEE SHEETS LE.6 & LE.7 FOR CONTINUATION.
- 4 RELOCATE CDDT METER/POWER PEDESTAL TO ABOVE RETAINING WALL AREA AS SHOWN. SHORTEN AND RECONNECT SERVICE LATERAL FEEDER FROM TRANSFORMER TO METER/POWER PEDESTAL.
- 5 PROVIDE NEW METER/POWER PEDESTAL TO CITY OF LOVELAND WATER AND POWER SPECIFICATIONS. SEE ONE-LINE ON SHEET LE.3 FOR SERVICE LATERAL.



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ROADWAY LIGHTING PLAN CROSSROADS BOULEVARD		
Designer: DS	Structure Numbers	
Detailer: JE	Subset Sheets: 5 of 7	
Sheet Subset: LE		

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	16315
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MATCH LINE - STA. 105+30  
00+00  
105+00

SW RAMP

I-25

I-25

MATCH LINE - STA 407+00

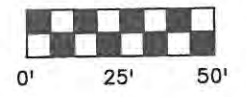
SE RAMP

LS33

2,4

BREAKLINE

BREAKLINE



**PLAN NOTES:**

- 1 EXISTING CDOT LIGHT STANDARD TO BE RE-FED. CONTRACTOR TO FURNISH AND INSTALL APPROXIMATELY 780' OF 2" PVC IN 24" DEEP TRENCH ALONG THE SE RAMP BETWEEN THIS EXISTING LIGHT STANDARD AND THE NEW SPLICE BOX SHOWN ON SHEET 04.
- 2 EXISTING CDOT LIGHT STANDARD TO BE RE-FED. CONTRACTOR TO FURNISH AND INSTALL APPROXIMATELY 890' OF 2" PVC IN 24" DEEP TRENCH ALONG THE SW RAMP BETWEEN THIS EXISTING LIGHT STANDARD AND NEW LIGHT STANDARD LS33.
- 3 PROVIDE 2" PVC TO NEW IN-GRADE SPLICE BOX TO RE-FEED EXISTING WEATHER STATION. LOCATION SHOWN IS APPROXIMATE. CONTRACTOR TO FIELD VERIFY EXACT LOCATION PRIOR TO INSTALLATION.
- 4 INTERCEPT #6, 3/C DBC JUST OUTSIDE OF LIGHT STANDARD FOUNDATION AND SPLICE TO NEW FEEDER IN SPLICE BOX AS SHOWN.

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**CROSSROADS BOULEVARD**  
 Designer: DS  
 Detailer: JE  
 Sheet Subset: LE  
 Structure Numbers  
 Subset Sheets: 6 of 7

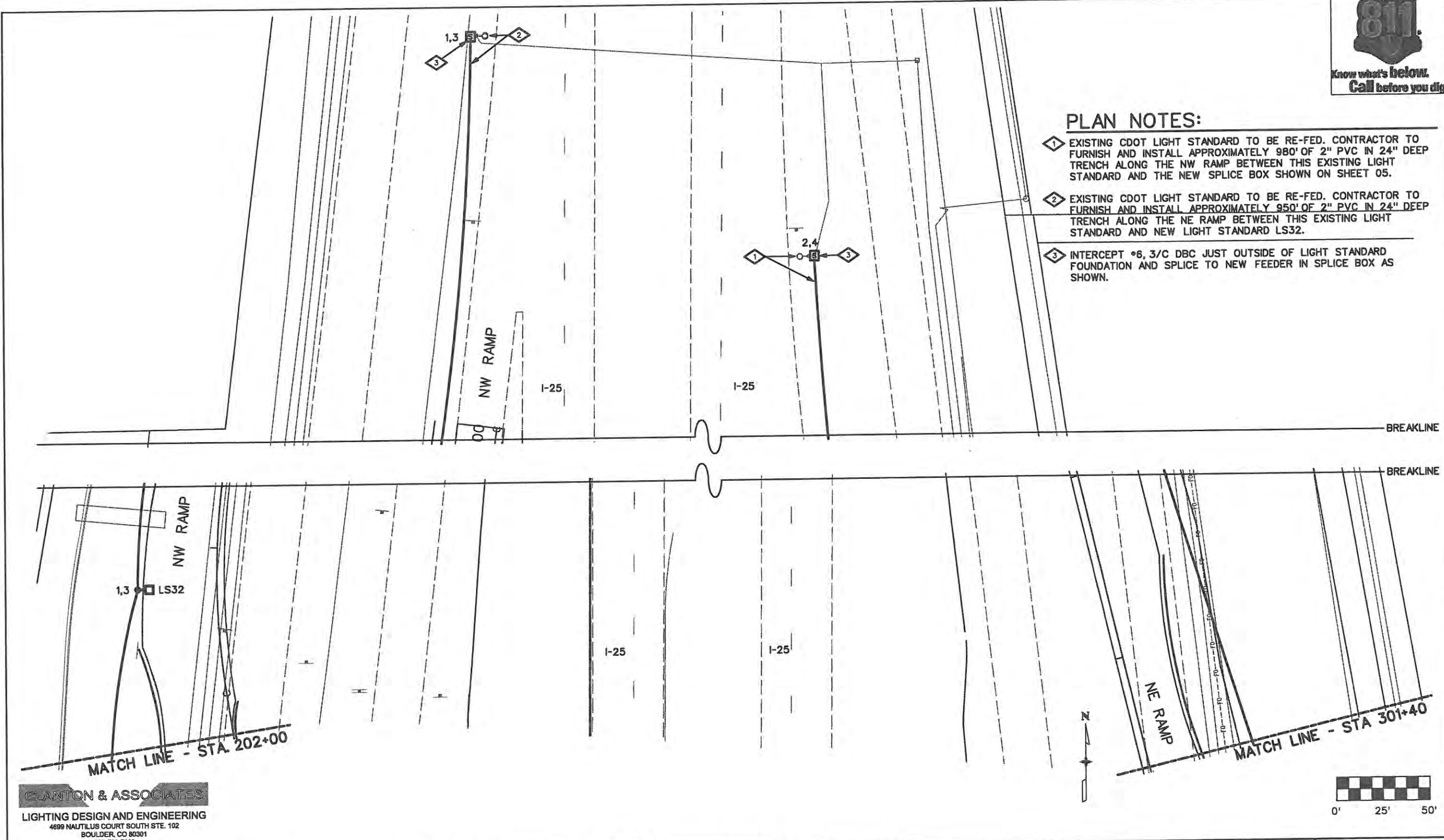
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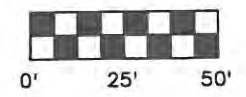


**PLAN NOTES:**

- 1 EXISTING CDOT LIGHT STANDARD TO BE RE-FED. CONTRACTOR TO FURNISH AND INSTALL APPROXIMATELY 980' OF 2" PVC IN 24" DEEP TRENCH ALONG THE NW RAMP BETWEEN THIS EXISTING LIGHT STANDARD AND THE NEW SPLICE BOX SHOWN ON SHEET 05.
- 2 EXISTING CDOT LIGHT STANDARD TO BE RE-FED. CONTRACTOR TO FURNISH AND INSTALL APPROXIMATELY 950' OF 2" PVC IN 24" DEEP TRENCH ALONG THE NE RAMP BETWEEN THIS EXISTING LIGHT STANDARD AND NEW LIGHT STANDARD LS32.
- 3 INTERCEPT #6, 3/C DBC JUST OUTSIDE OF LIGHT STANDARD FOUNDATION AND SPLICE TO NEW FEEDER IN SPLICE BOX AS SHOWN.



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**SUGGESTED PHASING OVERVIEW**

- PHASE 1 - CLOSE BIKE LANES BETWEEN BYRD DRIVE AND CLYDESDALE PARKWAY. CONSTRUCT TEMPORARY DETOUR PAVEMENT SOUTH OF CROSSROADS PRECEDING THE EXISTING SOUTHWEST RAMP. REMOVE THE ISLAND AT THE SOUTHEAST RAMP AND REPLACE WITH DETOUR PAVEMENT. REMOVE A PORTION OF MEDIAN AT APPROXIMATELY 65+00 AND REPLACE WITH DETOUR PAVEMENT.
- PHASE 2 - SHIFT TRAFFIC ONTO DETOUR ALIGNMENTS AND CONSTRUCT NORTHWEST AND SOUTHEAST RAMPS AND DETOUR PAVEMENT AT THE NORTHWEST AND SOUTHEAST CORNERS OF THE INTERCHANGE. PORTIONS OF THE DETOUR PAVEMENT WILL HAVE TO BE BUILT DURING NIGHT TIME, ONE-WAY FLAGGING ON CROSSROADS.
- PHASE 3 - KEEP RAMP TRAFFIC ON EXISTING RAMPS AND SHIFT CROSSROADS TRAFFIC ONTO DETOUR ALIGNMENT. CONSTRUCT NORTHEAST AND SOUTHWEST RAMPS. CONSTRUCT DETOUR PAVEMENT IN THE MEDIAN PRECEDING THE WEST ROUNDABOUT, IN THE WEST HALF OF THE WEST ROUNDABOUT, AT THE NORTH END OF THE SOUTHWEST RAMP, IN THE EAST HALF OF THE EAST ROUNDABOUT, AT THE SOUTH END OF THE NORTHEAST RAMP, AND IN THE MEDIAN EAST OF THE EAST ROUNDABOUT.
- PHASE 4 - MAINTAIN TRAFFIC ON CROSSROADS DETOUR ALIGNMENT AND MOVE RAMP TRAFFIC TO COMPLETED RAMPS. CONSTRUCT THE SE CORNER OF THE WEST ROUNDABOUT AND THE NW CORNER OF THE EAST ROUNDABOUT.
- PHASE 5 - ALL WORK FOR PHASE 5 SHALL BE DONE IN WEEKEND CLOSURES OF CROSSROADS UNDER I-25. THE RAMPS WILL REMAIN OPEN. WORK INCLUDES CONSTRUCTION OF THE GUARDRAIL TYPE 7 (STYLE CE) (SPECIAL) AND ASPHALT PAVING UNDER THE I-25 BRIDGES.
- PHASE 6 - SHIFT TRAFFIC TOWARD THE CENTERS OF THE ROUNDABOUTS. CONSTRUCT THE NORTHEAST CORNER OF THE WEST ROUNDABOUT AND THE SOUTHWEST CORNER OF THE EAST ROUNDABOUT. CONSTRUCT THE INLETS, SIDEWALKS AND SLOPE PAVING ADJACENT TO THE GUARDRAIL TYPE 7 (STYLE CE) (SPECIAL)
- PHASE 7 - ROUNDABOUTS TO FUNCTION AS ONE-LANE. REMOVE DETOUR PAVEMENT AND COMPLETE REMAINING CURB, GUTTER, BARRIER, SLOPE PAVING AND SIDEWALK. CONSTRUCT ROUNDABOUT CENTRAL ISLANDS. AT THE END OF PHASE 7, PLACE REMAINING PERMANENT STRIPING AND SIGNS.

**TRAFFIC CONTROL NOTES**

- SEE TRAFFIC CONTROL PLANS FOR MORE INFORMATION ON MAINTAINING TRAFFIC AND TEMPORARY PAVEMENT.
- CONTRACTOR SHALL MAINTAIN MINIMUM 12' LANES AND 2' SHOULDERS EXCEPT AS SHOWN ON THESE PLANS AND APPROVED BY THE ENGINEER. APPROACH ENDS OF CONCRETE BARRER (TEMPORARY) SHALL BE FLARED TO PROVIDE MINIMUM 2' SHOULDERS AT IMPACT ATTENUATORS
- IMPACT ATTENUATORS (TEMPORARY) SHALL MEET 25 MPH DESIGN ON CROSSROADS AND 45 MPH ON RAMPS.
- CONTRACTOR SHALL COMPLETELY REMOVE EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE TEMPORARY PAVEMENT MARKINGS. REMOVAL OF TEMPORARY PAVEMENT MARKINGS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCIDENTAL TO PAVEMENT MARKING PAINT.
- CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE THROUGH ALL THE PHASES OF CONSTRUCTION. TEMPORARY CULVERTS WILL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE WORK.
- REMOVAL OF DETOUR PAVEMENT WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN DETOUR PAVEMENT (SY).
- PORTABLE MESSAGE SIGN PANELS AND PORTABLE TRAFFIC SPEED MONITORS SHALL BE USED AS DIRECTED BY THE ENGINEER.
- STAGED CONSTRUCTION AT ACCESS POINTS MAY BE REQUIRED WITHIN THE CONSTRUCTION PHASES SHOWN IN THESE PLANS. SEPARATE STAGING PLANS ARE NOT INCLUDED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN VEHICLE ACCESS TO ALL BUSINESSES, RESIDENCES, PROPERTIES, DRIVEWAYS, AND SIDESTREETS.
- LIGHTING FOR RAMP TERMINALS SHALL BE MAINTAINED AT ALL TIMES WITH EITHER EXISTING, TEMPORARY, OR PROPOSED LIGHTING
- EXISTING ROUTE MARKER ASSEMBLIES SHALL BE RESET AS NEEDED TO MAINTAIN VISIBILITY DURING ALL PHASES OF CONSTRUCTION. TEMPORARY RESETS WILL NOT BE MEASURED AND PAID FOR BUT SHALL BE INCLUDED IN THE WORK.
- REMOVAL OF GROUND SIGN MAY INCLUDE MULTIPLE RESETS TO ACCOMMODATE THE DIFFERENT PHASES OF CONSTRUCTION PRIOR TO ITS ULTIMATE REMOVAL. PAYMENTS FOR TEMPORARY RESETS WILL NOT BE PAID FOR SEPARATELY.
- CONCRETE BARRIER (TEMPORARY) SHALL INCLUDE MULTIPLE RESETS AS NEEDED TO ACCOMMODATE THE DIFFERENT PHASES OF CONSTRUCTION PRIOR TO ITS ULTIMATE REMOVAL. THE LARGEST AMOUNT OF BARRIER IN USE IN ANY ONE TIME, AS APPROVED BY THE ENGINEER, WILL BE THE BASIS FOR PAYMENT.
- DETOURS SHALL ACCOMMODATE WB-67 DESIGN VEHICLES FOR ALL MOVEMENTS WITH NO ENCROACHMENT INTO THE OPPOSING LANE.
- THE CONTRACTOR SHALL MAINTAIN TEMPORARY 4:1 OR FLATTER ROADSIDE SLOPE ADJACENT TO PAVEMENT SAWCUT AND REMOVAL IF A VERTICAL DROP OF 2 INCHES OR GREATER REMAINS AND PAVING OR PATCHING OPERATIONS ARE NOT COMPLETED PRIOR TO DAILY SHUTDOWN.

**TABULATION OF CONSTRUCTION TRAFFIC CONTROL DEVICES**

ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL/MAX
613-50210	TEMPORARY LIGHTING	LS	1
621-00450	DETOUR PAVEMENT	SY	3341.37
<del>627-00001</del>	<del>PAVEMENT MARKING PAINT (WHITE)</del>	GAL	72
627-00001	PAVEMENT MARKING PAINT (YELLOW)	GAL	66.135
627-00025	4 INCH PAVEMENT MARKING TAPE (REMOVABLE)	LF	1000.622
630-00000	FLAGGING	HR	5000.33
630-00003	UNIFORMED TRAFFIC CONTROL Deleted by 105	HR	300.0
630-00007	TRAFFIC CONTROL INSPECTION	DAY	80.159
630-00012	TRAFFIC CONTROL MANAGEMENT	DAY	200.211
630-80335	BARRICADE (TYPE 3 M-A) (TEMPORARY)	EA	12
630-80341	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE A)	EA	102.98
630-80342	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE B)	EA	97.62
630-80344	CONSTRUCTION TRAFFIC SIGN (SPECIAL)	SF	190.5
630-80355	PORTABLE MESSAGE SIGN PANEL	EA	4
630-80356	ADVANCE WARNING FLASHING OR SEQUENCING ARROW PANEL (A TYPE)	EA	4
630-80358	ADVANCE WARNING FLASHING OR SEQUENCING ARROW PANEL (C TYPE)	EA	1
630-80359	PORTABLE MESSAGE SIGN PANEL	DAY	45.28
630-80360	DRUM CHANNELIZING DEVICE	EA	200.148
630-80367	PORTABLE TRAFFIC SPEED MONITOR Deleted by 105	EA	2.0
630-80370	CONCRETE BARRIER (TEMPORARY)	LF	3,007.33
630-80380	TRAFFIC CONE	EA	100
630-85010	IMPACT ATTENUATOR (TEMPORARY) Deleted by 105	EA	2.0
630-85041	IMPACT ATTENUATOR (TRUCK MOUNTED ATTENUATOR) Deleted by 105	DAY	20.0

FRESH STRIPING FOR ALL TEMPORARY STRIPING WAS ASSUMED AT THE BEGINNING OF EACH PHASE EXCEPT PHASES 5 AND 7, EVEN IF THE STRIPING MATCHES THE PREVIOUS PHASE. THE STRIPING QUANTITIES MEASURED FOR PHASES 2 AND 3 WERE DOUBLED TO ACCOUNT FOR RESTRIPIING.

PORTABLE MESSAGE SIGN PANEL (EACH) SHALL REMAIN IN PLACE THROUGH THE DURATION OF THE PROJECT. PORTABLE MESSAGE SIGN PANEL (DAY) SHALL BE IN PLACE FOR DETOURS. THE FOLLOWING WAS ASSUMED:  
 -PHASE 3 NB DETOUR - 4 SIGNS FOR 3 DAYS - 12 DAYS  
 -PHASE 3 SB DETOUR - 3 SIGNS FOR 3 DAYS - 9 DAYS  
 -PHASE 5 DETOUR - 4 SIGNS FOR 6 DAYS - 24 DAYS

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Colorado Department of Transportation

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TRAFFIC CONTROL PLAN GENERAL NOTES	
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Sheet Subset: TCP NOTES	Subset Sheets: TCNI of 2

Project No./Code	ES4 0253-207
Sheet Number	17244
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WILSON & COMPANY  
 Engineers & Architects  
 959 15th Street Suite 2800  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2893



**SCHEDULE OF CONSTRUCTION TRAFFIC SIGNS**

SIGN CODE	LEGEND	DIMENSIONS	PANEL AREA (SF)	BACKGROUND COLOR	PHASE											PANEL SIZE (EACH)		(SF)	
					ADVANCE	1	2	3	3 DETOURS	4	5 DETOUR	5	6	7	A	B	SPECIAL		
SPECIAL	ARRA	120X96	80	GREEN	1														91.5
SPECIAL	ARRA	84X72	40	GREEN	2														99
E5-2a	EXIT CLOSED	48x36	12	ORANGE						2									2
G20-5	WORK ZONE	24X18	3	ORANGE	8														5
G20-10	XYZ CONSTRUCTION THANKS YOU	48X48	16	ORANGE	4														1
M1-1	INTERSTATE 25	24x24	4	BLUE						4		6							6
M3-1	NORTH	24x12	2	ORANGE						4		2							4
M3-3	SOUTH	24x12	2	ORANGE						2		4							4
M4-5	TO	24X12	2	ORANGE						4		6							6
M4-8	DETOUR	24x12	2	ORANGE						10		15							15
M4-8a	END DETOUR	24x18	3	ORANGE						1		2							2
M4-9L	DETOUR LEFT ARROW	30X24	5	ORANGE						2		1							2
M4-9R	DETOUR RIGHT ARROW	30X24	5	ORANGE						1		2							2
M6-1	RIGHT TURN	21x15	2.1875	ORANGE						3		3							3
M6-3	STRAIGHT	21x15	2.1875	ORANGE						7		9							9
R1-1	STOP	36x36	9	RED			4	4		4				4					8
R2-1 (25)	SPEED LIMIT (25MPH)	24x30	5	WHITE	8										4				4
R3-7R	RIGHT LANE MUST TURN RIGHT	30x30	6.25	WHITE			4												1
R9-9	SIDEWALK CLOSED	24X12	2	WHITE	1														1
R11-2	ROAD CLOSED	48x30	10	WHITE															2
R11-3	ROAD CLOSED XMI AHEAD	60X30	12.5	ORANGE															2
R52-6a	BEGIN FINES DOUBLE	36X48	12	WHITE	8														2
R52-6b	END FINES DOUBLE	36X48	12	WHITE	8														2
W1-4L	REVERSE CURVE ARROW	36 DIAMOND	9	ORANGE				2											1
W1-4R	REVERSE CURVE ARROW	36 DIAMOND	9	ORANGE			1												2
W4-2	LANE ENDS SYMBOL	36 DIAMOND	9	ORANGE			1	2		2		2			2				1
W7-3a	NEXT X MILES	24X18	3	ORANGE															1
W16-2a	1500 FT	30X18	3.75	ORANGE															1
(R-1) W20-1	ROAD WORK AHEAD	36 DIAMOND	9	ORANGE	2														2
(R-1) W20-1	ROAD WORK AHEAD	48 DIAMOND	16	ORANGE	4														4
W20-2	DETOUR AHEAD	48 DIAMOND	16	ORANGE								2							2
W20-3	ROAD CLOSED (WITH DISTANCE)	48 DIAMOND	16	ORANGE								4							4
W20-4	ONE LANE ROAD XX FT	36 DIAMOND	9	ORANGE			2	2											2
W20-5	BIKE LANE CLOSED	36 DIAMOND	9	ORANGE	2														2
W20-5	BIKE LANE CLOSED AHEAD	36 DIAMOND	9	ORANGE	2														2
W20-5	LEFT LANE CLOSED AHEAD	36 DIAMOND	9	ORANGE			1	1		1		1		1					2
W20-5	RIGHT LANE CLOSED AHEAD	36 DIAMOND	9	ORANGE			1	1		1		1		1					1
W20-7a	FLAGGING	36 DIAMOND	9	ORANGE			2	2											2
W21-5	SHOULDER WORK	48 DIAMOND	16	ORANGE		2													2
W21-5a	RIGHT SHOULDER CLOSED	48 DIAMOND	16	ORANGE															2
W24-1L	TWO REVERSING CURVES LEFT	36 DIAMOND	9	ORANGE				2		2									2
W24-1R	TWO REVERSING CURVES RIGHT	36 DIAMOND	9	ORANGE				2		2									2
<b>SIGN TOTALS</b>																			102
																			98
																			62
																			190.5

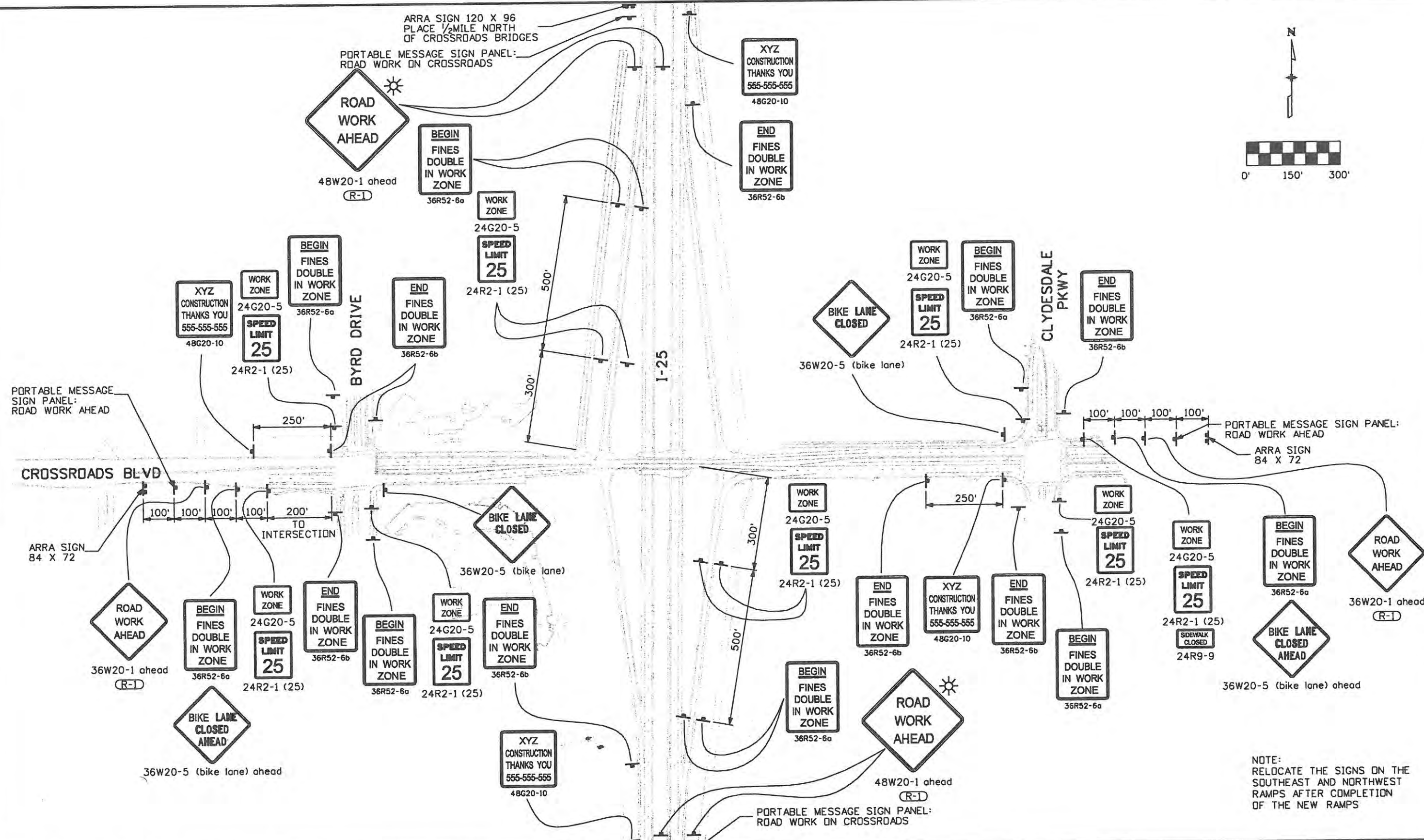
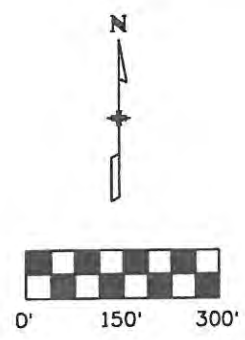
(R-1)

CONSTRUCTION TRAFFIC SIGNS HAVE BEEN CARRIED FORWARD TO THE TABULATION OF CONSTRUCTION TRAFFIC CONTROL DEVICES.

THE ARRA SIGNS SHALL BE CLASS III AND SHALL BE 0.125 IN MINIMUM THICKNESS SHEET ALUMINUM.

<b>Computer File Information</b>		<b>Sheet Revisions</b>			<b>CITY OF LOVELAND</b>		<b>TRAFFIC CONTROL PLAN TABULATIONS</b>		<b>Project No./Code</b>	
Creation Date: 10/19/06	Initials: BSH	Date:	Comments:	Init.	 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 COLORADO DEPARTMENT OF TRANSPORTATION	No Revisions:	Designer: JJW	Structure Numbers:	ES4 0253-207
Print Date: 6/18/2009	Initials: JMB	6/18/09	W20-1 Additions	FSW			Revised: 9/14/11	Detailer: JMB	17244	
File Name: 0610031800TCPTypicals.dgn							Void:	Sheet Subset: TCP NOTES	Subset Sheets: TCN2 of 2	Sheet Number 147
Horiz. Scale: 1:10	Vert. Scale: As Noted									





NOTE:  
RELOCATE THE SIGNS ON THE  
SOUTHEAST AND NORTHWEST  
RAMPS AFTER COMPLETION  
OF THE NEW RAMPS

Computer File Information	
Creation Date: 4/3/09	Initials: JJW
Print Date: 6/18/2009	Initials: JJW
File Name: 0610031800Advance Signing.dgn	
Horiz. Scale: 1:300	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.
6/18/09	W20-1 & Beacons	FSW

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970-962-2000

Colorado Department  
of Transportation

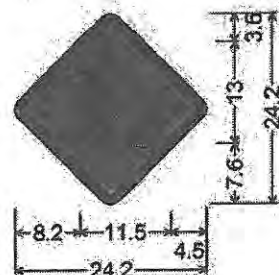
ADVANCE SIGNING PLAN		
No Revisions: 9/14/11	Designer: JJW	Structure Numbers
Revised:	Detailer: JJW	
Void:	Sheet Subset: ADV SIGN	Subset Sheets: ADV1 of 1

Project No./Code
ES4 0253-207
17244
Sheet Number 148

**WILSON & COMPANY**  
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 988 18th Street Suite 2800  
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 Phone: 303-297-2976  
 Fax: 303-297-2693







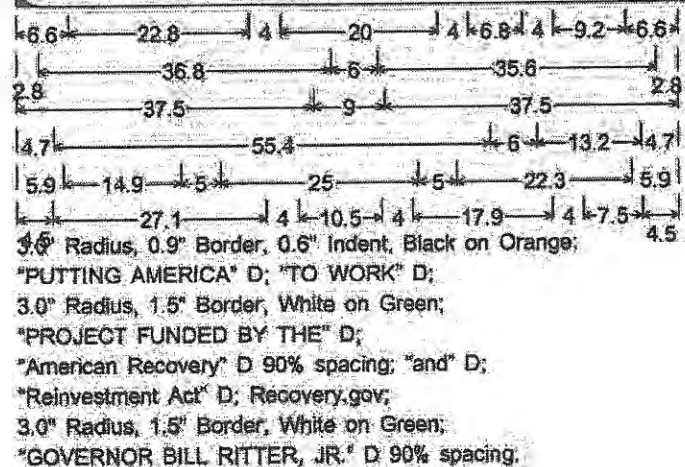
W21-1A MIN;  
18.0" across sides 1.5" Radius, 0.6" Border, 0.5" Indent, Black on Orange;

THIS SIGN SHALL BE PLACED WEST OF BYRD DRIVE AND EAST OF CLYDESDALE PARKWAY AS SHOWN ON THE ADVANCED SIGNING PLAN

THE EDGE OF THE SIGN SHALL BE NO CLOSER THAN 18 FEET FROM THE EDGE OF TRAVELED WAY.

IT SHALL BE MOUNTED ON TWO 6X6 WOOD POSTS..

THE SIGN AND THE POSTS SHALL BE MEASURED AND PAID FOR AS CONSTRUCTION SIGN PANEL (SPECIAL).



RECOVERY  
Vector-Based, Vinyl-Ready Pictograph

COLORS: LEGEND, OUTLINE - WHITE (RETROREFLECTIVE)  
 BORDER - BLUE (RETROREFLECTIVE)  
 BACKGROUND (UPPER) - BLUE (RETROREFLECTIVE)  
 BACKGROUND (LOWER RIGHT) - RED (RETROREFLECTIVE)



USDOT TIGER  
Vector-Based, Vinyl-Ready Pictograph

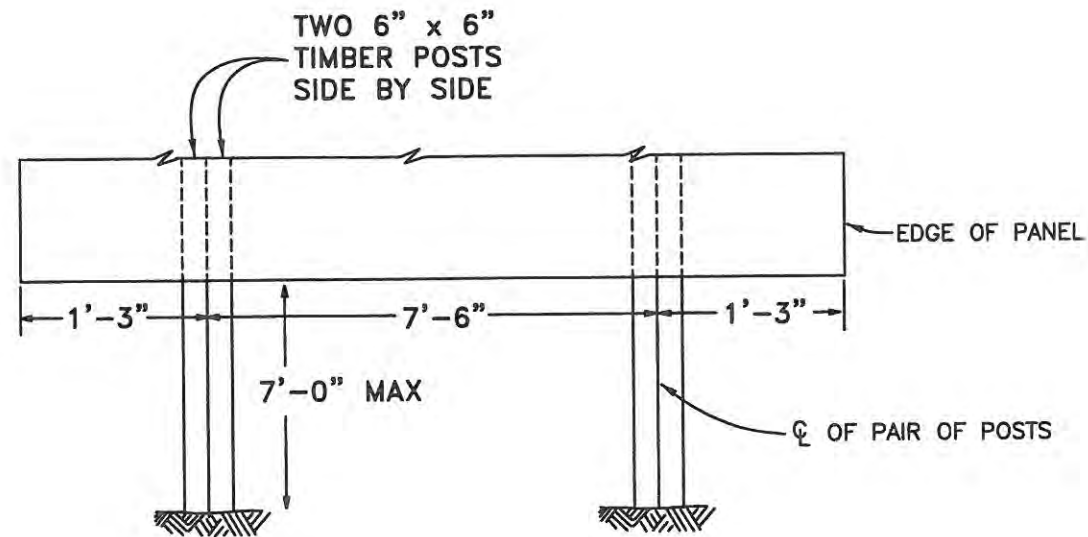
COLORS: OUTLINE - WHITE (RETROREFLECTIVE)  
 USDOT LEGEND - BLACK  
 TIGER DIAGONALS - BLACK  
 ORANGE (RETROREFLECTIVE)

<b>Computer File Information</b>		<b>Sheet Revisions</b>		<b>CITY OF LOVELAND</b>		<b>TRAFFIC CONTROL PLAN</b>		<b>Project No./Code</b>		
Creation Date: 4/3/09	Initials: jJW	Date:	Comments	Init.	 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000 Colorado Department of Transportation	ARRA SIGN DETAILS		ES4 0253-207		
Print Date: 5/4/2009	Initials: JJW					No Revisions: 2/14/11	Designer: JJW	Structure Numbers	17244	
File Name: 0610031800_ARRA_Sign.dgn						Revised:	Detailer: JJW		Sheet Number 150	
Horiz. Scale: 1:100	Vert. Scale: As Noted					Void:	Sheet Subset: TCP DET	Subset Sheets: TCD2 of 3		



ZEE SPACING TABLE			
SIGN PANEL HEIGHT	NUMBER OF ZEES	OVERHANG "F"	SPACING "G"
9'-0"	4	1'-3"	2'-2"

FOR 3" X 2<sup>11</sup>/<sub>16</sub>" X 2.33 ALUMINUM BACKING ZEES



FOUR POST INSTALLATION FOR 10' WIDE SIGN PANEL

TYPICAL POST SPACING

NOTE: THIS POST CONFIGURATION HAS NOT BEEN CRASH TESTED FOR NCHRP 350 COMPLIANCE. THEREFORE THIS SIGN STRUCTURE MUST BE PLACED OUTSIDE THE CLEAR ZONE OR PROTECTED FROM TRAFFIC.

Computer File Information	
Creation Date: 03-19-09	Initials: KCM
Last Modification Date: 03-19-09	Initials: JSW
Full Path: www.dot.state.co.us/DesignSupport/	
Drawing File Name:	
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	



Sheet Revisions	
Date:	Comments

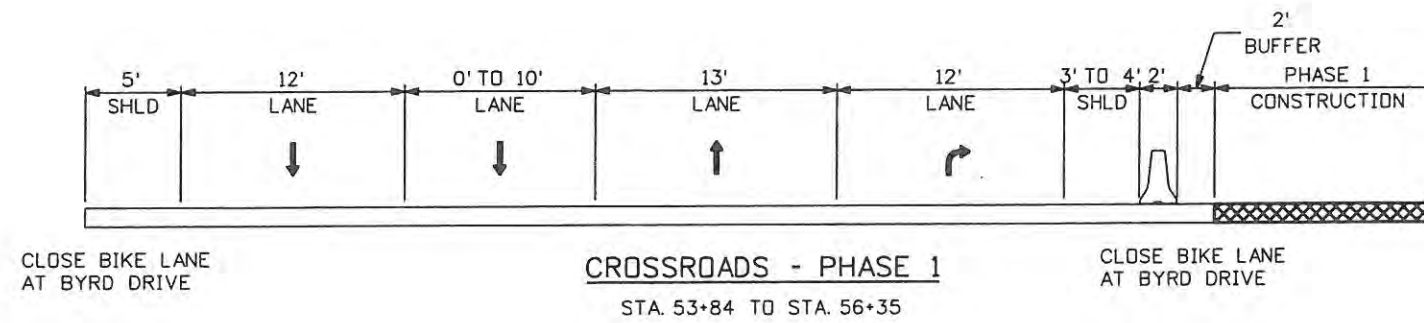
Colorado Department of Transportation  
 4201 East Arkansas Avenue  
 Denver, Colorado 80222  
 Phone: (303) 757-9543  
 Fax: (303) 757-9820

**Staff Traffic Branch**      **KCM/JSW**

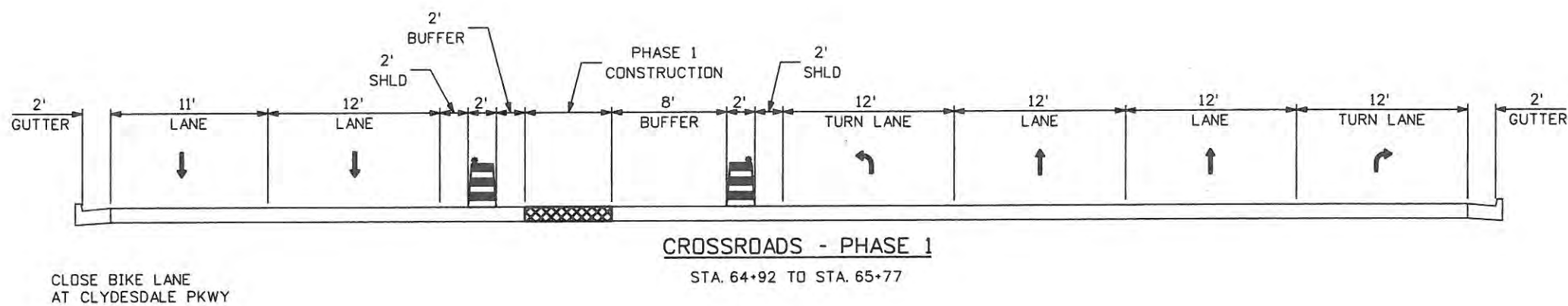
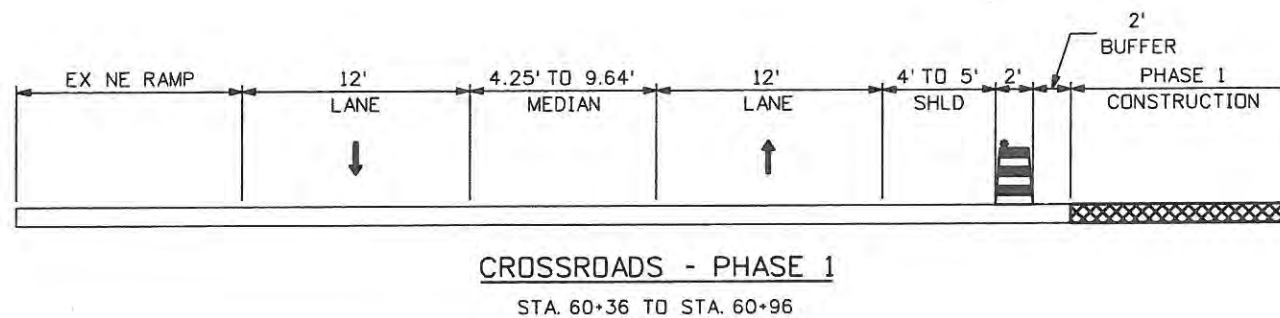
**CLASS III SIGNS ON  
FOUR TIMBER POSTS**

Issued By: Traffic Engineering Unit March 20, 2009

PROJECT DETAIL NO.
Sheet No. 1 of 1



THE STATION LIMITS AND DIMENSIONS SHOWN ON THESE TYPICAL SECTIONS ARE FOR GENERAL GUIDANCE ONLY. REFER TO THE TRAFFIC CONTROL NOTES AND PLANS FOR SPECIFIC INFORMATION.



Computer File Information	
Creation Date: 10/19/06	Initials: BSH
Print Date: 5/4/2009	Initials: JMB
File Name: 0610031800TCPTypicals.dgn	
Horiz. Scale: 1:10	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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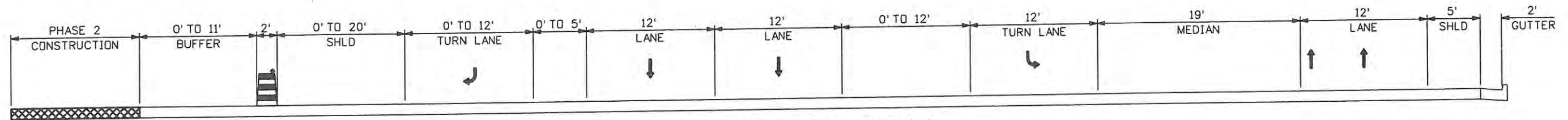
**Colorado Department of Transportation**

No Revisions: 9/14/11
Revised:
Void:

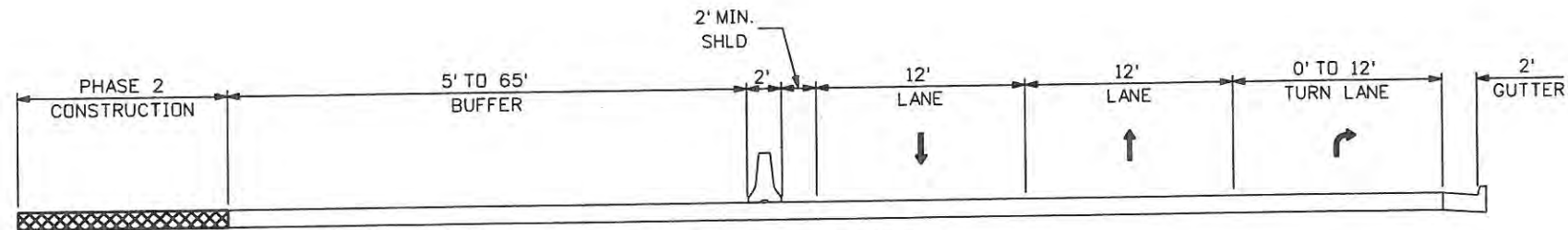
TRAFFIC CONTROL PLAN TYPICAL SECTIONS - PHASE 1	
Designer: JJW	Structure Numbers
Detailer: JMB	Subset Sheets: TYP1 of 7
Sheet Subset: TCP	

Project No./Code ES4 0253-207
17244
Sheet Number 152

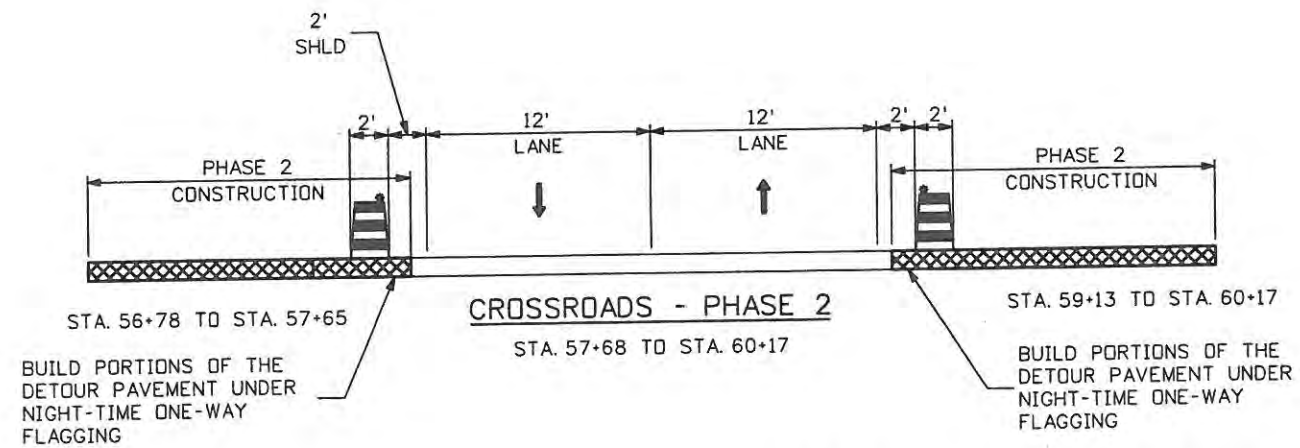




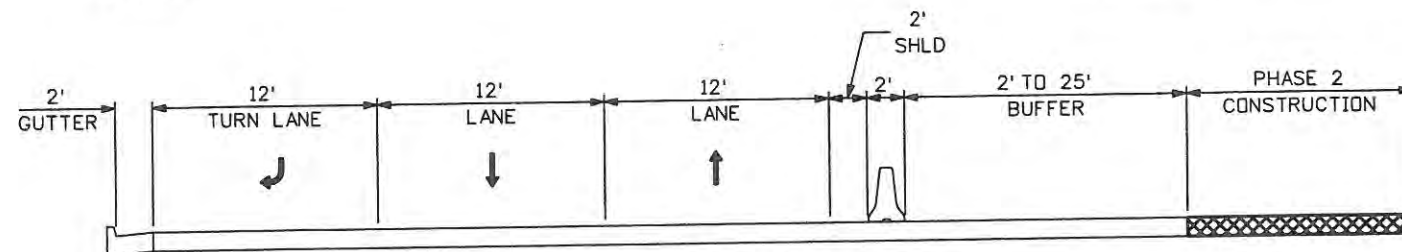
**CROSSROADS - PHASE 2**  
STA. 49+23 TO STA. 50+88



**CROSSROADS - PHASE 2**  
STA. 50+88 TO STA. 56+11



**CROSSROADS - PHASE 2**  
STA. 57+68 TO STA. 60+17



**CROSSROADS - PHASE 2**  
STA. 60+17 TO STA. 64+61

Computer File Information	
Creation Date: 10/19/06	Initials: BSH
Print Date: 5/4/2009	Initials: JMB
File Name: 0610031800TCPTypicals.dgn	
Horiz. Scale: 1:10	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

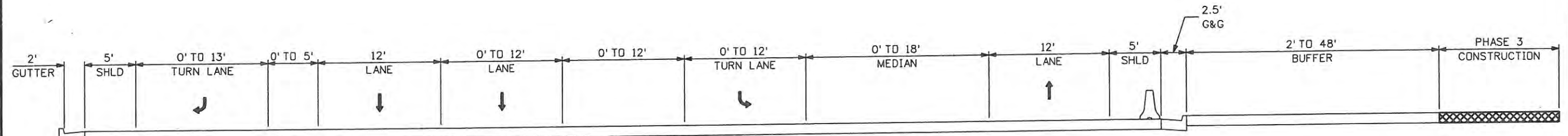
500 E. THIRD STREET  
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970-962-2000

Colorado Department of Transportation

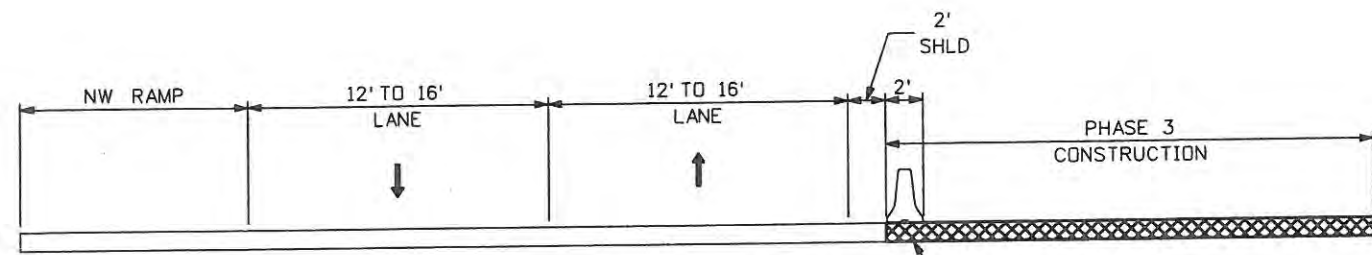
No Revisions: 7/14/11
Revised:
Void:

TRAFFIC CONTROL PLAN TYPICAL SECTIONS- PHASE 2	
Designer: JJW	Structure Numbers
Detailer: JMB	Subset Sheets: TYP2 of 7
Sheet Subset: TCP	

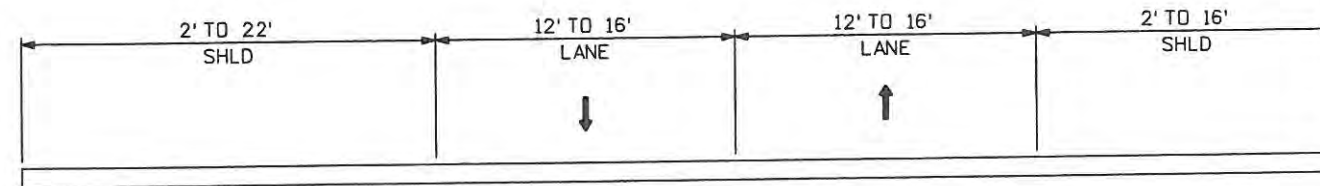
Project No./Code	ES4 0253-207
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Sheet Number	153



**CROSSROADS - PHASE 3**  
STA. 49+25 TO STA. 53+91



**CROSSROADS - PHASE 3**  
STA. 53+91 TO STA. 56+13



**CROSSROADS - PHASE 3**  
STA. 56+13 TO STA. 60+55

Computer File Information	
Creation Date: 10/19/06	Initials: BSH
Print Date: 5/4/2009	Initials: JMB
File Name: 0610031800TCPTypicals.dgn	
Horiz. Scale: 1:10	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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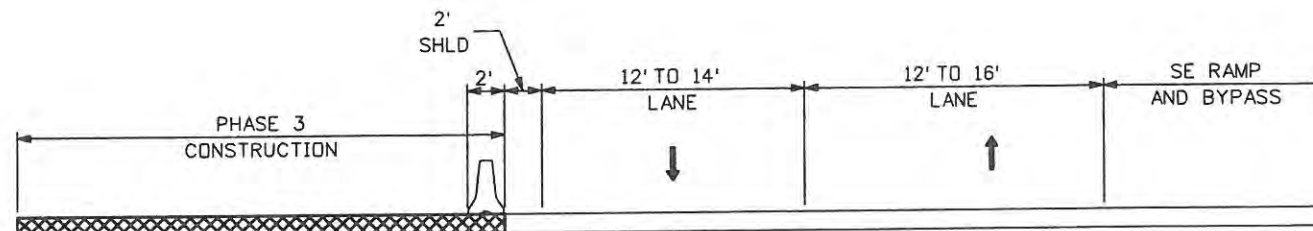
Colorado Department of Transportation

No Revisions: 9/14/11
Revised:
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TRAFFIC CONTROL PLAN TYPICAL SECTIONS - PHASE 3	
Designer: JJW	Structure Numbers
Detailer: JMB	
Sheet Subset: TCP	Subset Sheets: TYP3 of 7

Project No./Code	ES4 0253-207
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Sheet Number	154

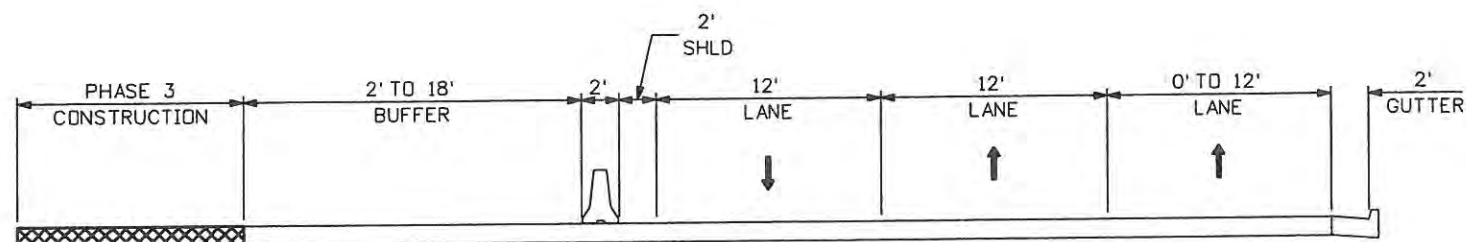




**CROSSROADS - PHASE 3**

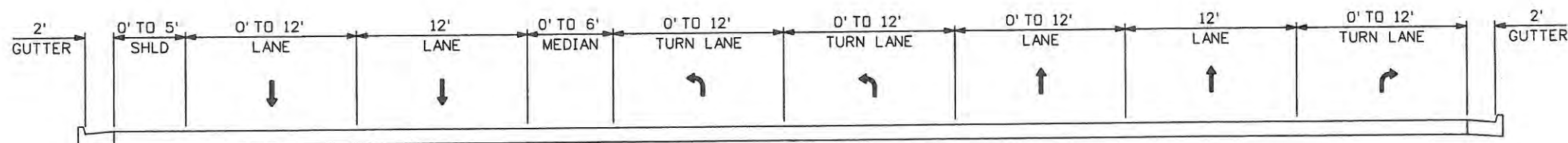
STA. 60+55 TO STA. 62+62

BUILD PORTIONS OF THE  
DETOUR PAVEMENT UNDER  
NIGHT-TIME ONE-WAY  
FLAGGING



**CROSSROADS - PHASE 3**

STA. 62+62 TO STA. 64+61



**CROSSROADS - PHASE 3**

STA. 64+61 TO STA. 68+00

Computer File Information	
Creation Date: 10/19/06	Initials: BSH
Print Date: 5/4/2009	Initials: JMB
File Name: 0610031800TCPTypicals.dgn	
Horiz. Scale: 1:10	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

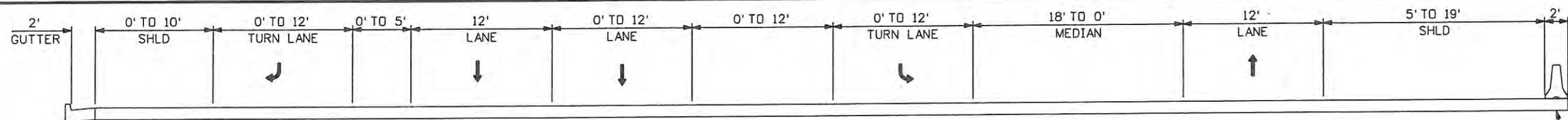
500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

Colorado Department  
of Transportation

No Revisions: 9/14/11
Revised:
Void:

TRAFFIC CONTROL PLAN TYPICAL SECTIONS - PHASE 3	
Designer: JJW	Structure Numbers
Detailer: JMB	Subset Sheets: TYP4 of 7
Sheet Subset: TCP	

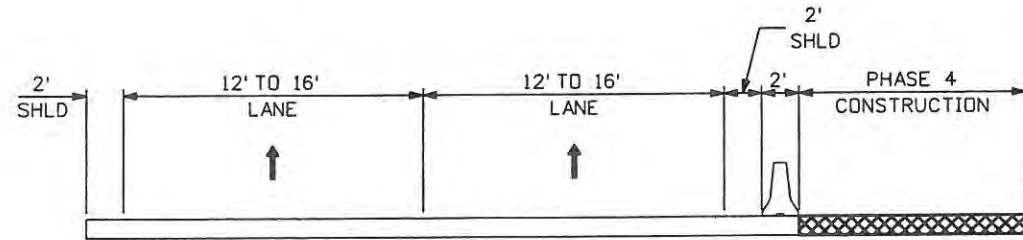
Project No./Code	ES4 0253-207
	17244
Sheet Number	155



**CROSSROADS - PHASE 4**

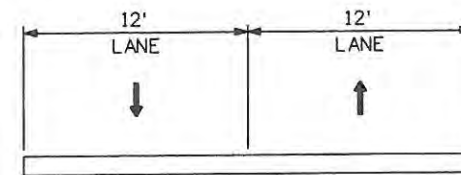
STA. 49+24 TO STA. 55+40

CURB & GUTTER  
49+24 TO 50+68 AND  
52+00 TO 53+80  
TEMPORARY BARRIER  
50+68 TO 52+00  
DRUM CHANNELIZING DEVICE  
53+80 TO 54+78



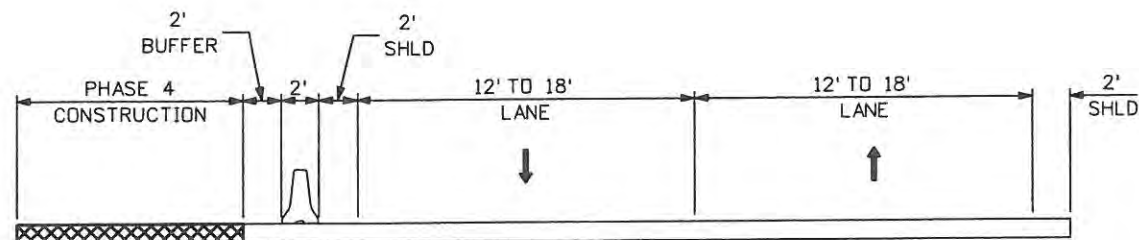
**CROSSROADS - PHASE 4**

STA. 55+40 TO STA. 57+66



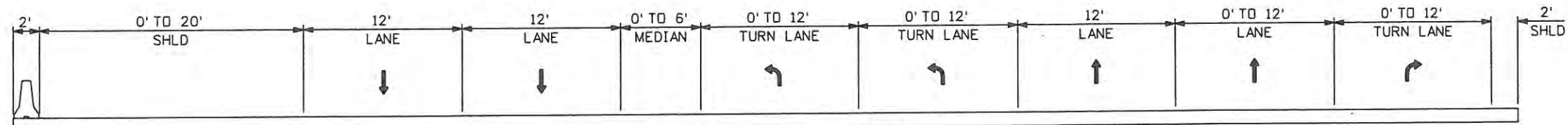
**CROSSROADS - PHASE 4**

STA. 57+66 TO STA. 59+08



**CROSSROADS - PHASE 4**

STA. 59+08 TO STA. 61+13



**CROSSROADS - PHASE 4**

STA. 61+13 TO STA. 68+00

DRUM CHANNELIZING DEVICE  
62+00 TO 62+68  
CURB & GUTTER  
62+68 TO 64+60 AND 65+55 TO 68+00  
TEMPORARY BARRIER  
64+60 TO 65+55

Computer File Information	
Creation Date: 10/19/06	Initials: BSH
Print Date: 5/4/2009	Initials: JMB
File Name: 0610031800TCPTypicals.dgn	
Horiz. Scale: 1:10	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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Colorado Department of Transportation

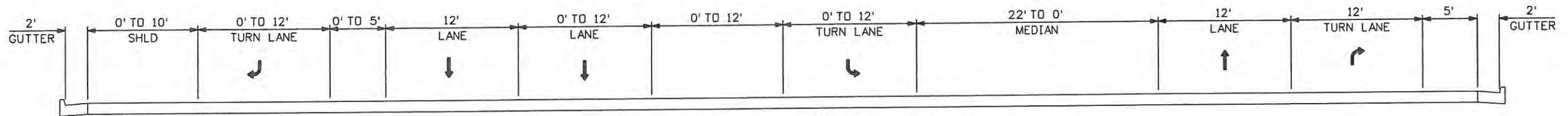
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Revised:
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Designer: JJW	Structure Numbers
Detailer: JMB	Subset Sheets: TYP5 of 7
Sheet Subset: TCP	

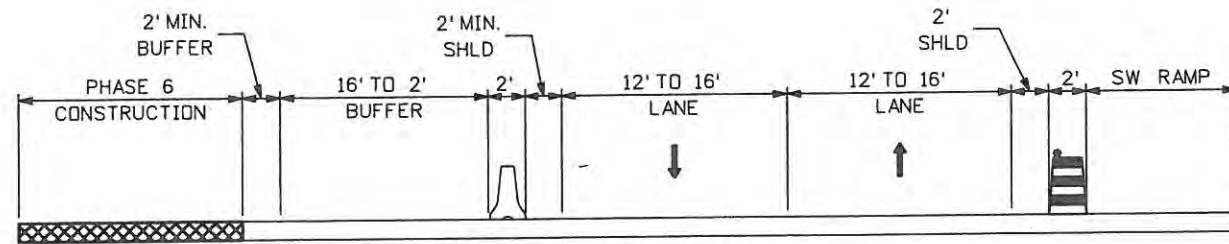
Project No./Code	ES4 0253-207
	17244
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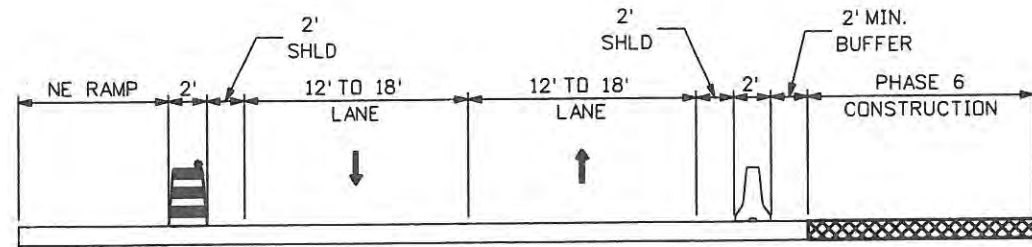
**CROSSROADS - PHASE 5**  
**CONSTRUCTION OF GUARDRAIL TYPE 7 (STYLE CE) (SPECIAL) AND PAVEMENT**  
**UNDER I-25 BRIDGES CROSSROADS BLVD CLOSED**



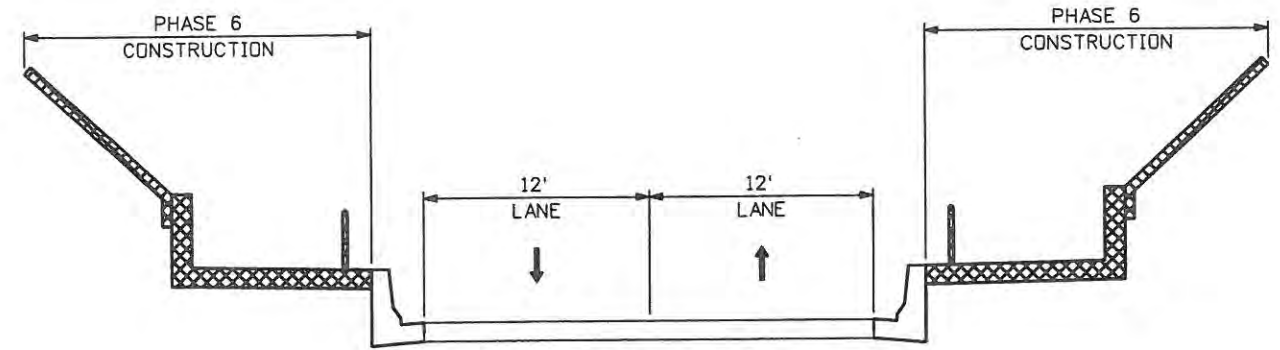
**CROSSROADS - PHASE 4**  
 STA. 49+24 TO STA. 55+46



**CROSSROADS - PHASE 6**  
 STA. 55+46 TO STA. 57+64



**CROSSROADS - PHASE 6**  
 STA. 59+02 TO STA. 61+15



**CROSSROADS - PHASE 6**  
 STA. 57+64 TO STA. 59+02

Computer File Information	
Creation Date: 10/19/06	Initials: BSH
Print Date: 5/4/2009	Initials: JMB
File Name: 0610031800TCPTypicals.dgn	
Horiz. Scale: 1:10	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

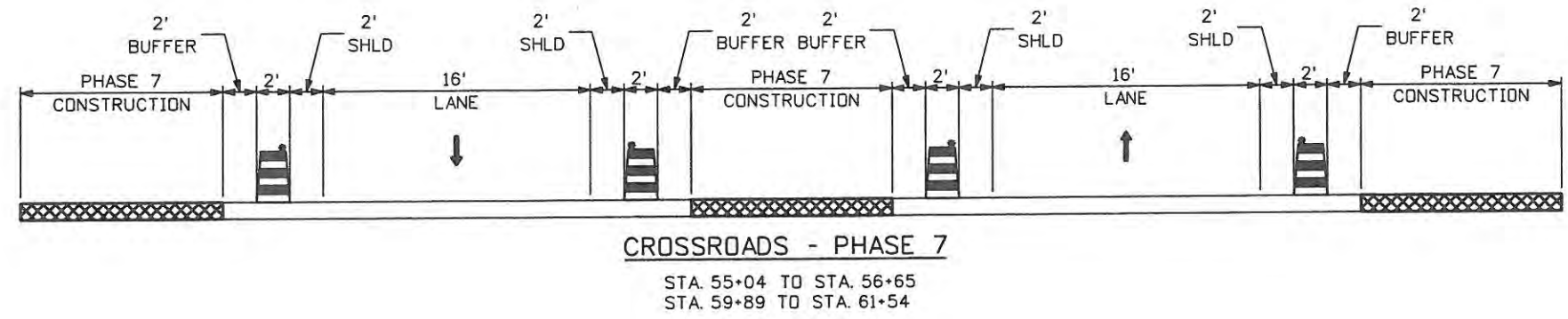
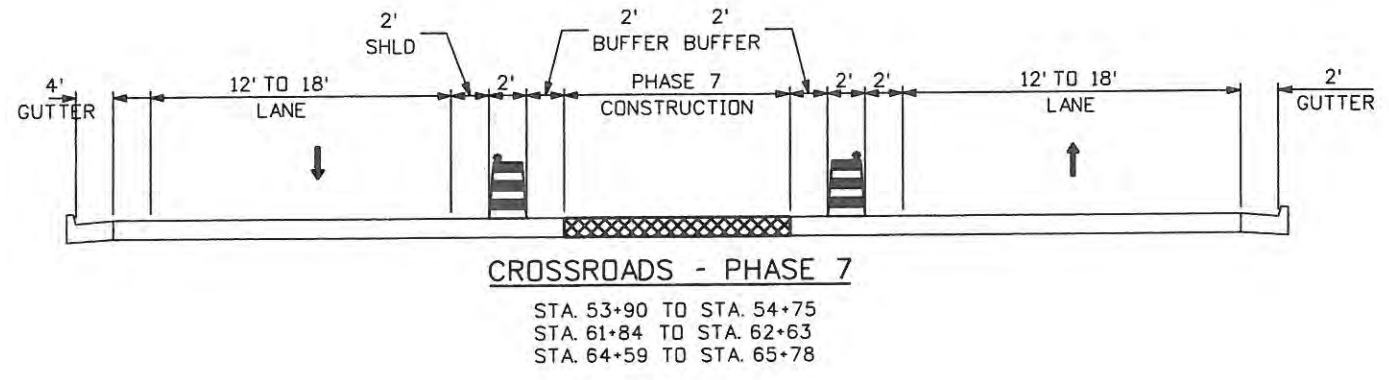
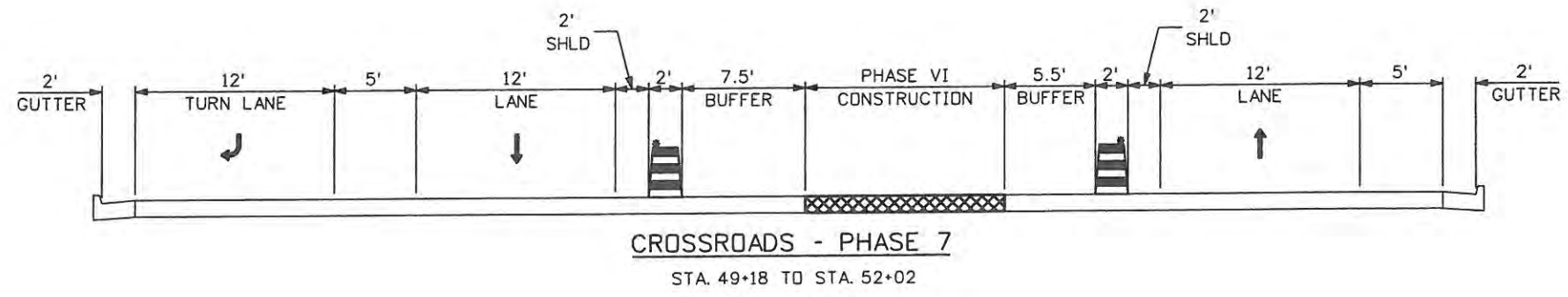
500 E. THIRD STREET  
 LOVELAND, CO 80537  
 970-962-2000

Colorado Department  
 of Transportation

No Revisions: 9/14/11
Revised:
Void:

TRAFFIC CONTROL PLAN	
TYP SECTIONS - PHASES 5 AND 6	
Designer: JJW	Structure Numbers
Detailer: JMB	
Sheet Subset: TCP	Subset Sheets: TYP6 of 7

Project No./Code	ES4 0253-207
	17244
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Computer File Information	
Creation Date: 10/19/06	Initials: BSH
Print Date: 5/4/2009	Initials: JMB
File Name: 0610031800TCPTypicals.dgn	
Horiz. Scale: 1:10	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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970-962-2000



**Colorado Department of Transportation**

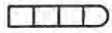



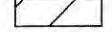



No Revisions: 9/14/11
Revised:
Void:

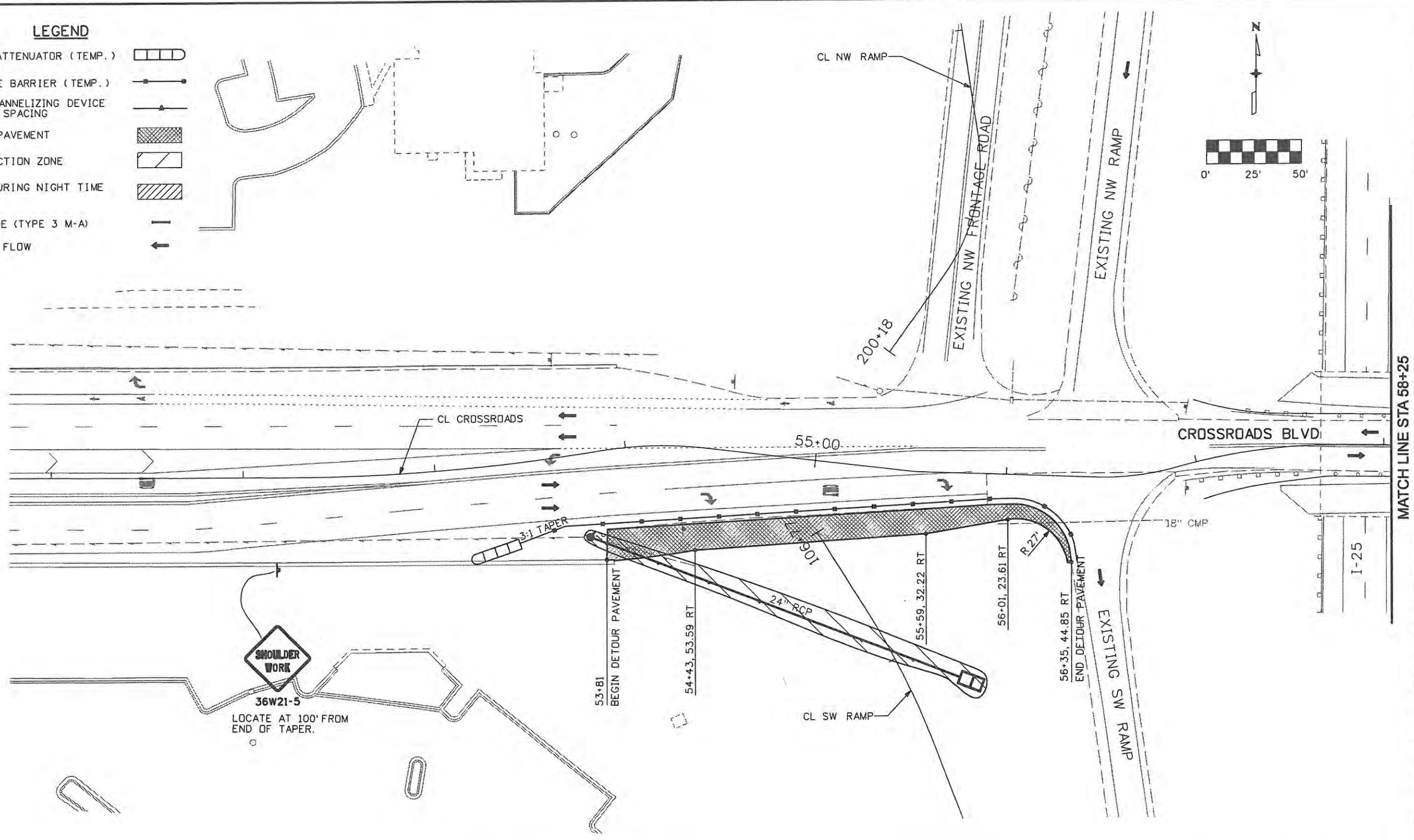
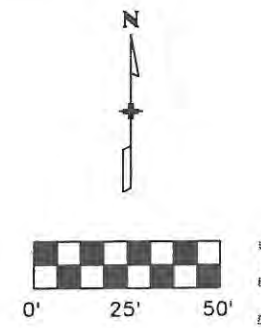
TRAFFIC CONTROL PLAN TYPICAL SECTIONS - PHASE 7	
Designer: JJW	Structure Numbers
Detailer: JMB	Subset Sheets: TYP7 of 7
Sheet Subset: TCP	

Project No./Code	ES4 0253-207
	17244
Sheet Number	158



**LEGEND**

- IMPACT ATTENUATOR (TEMP.) 
- CONCRETE BARRIER (TEMP.) 
- DRUM CHANNELIZING DEVICE 25 FOOT SPACING 
- DETOUR PAVEMENT 
- CONSTRUCTION ZONE 
- BUILD DURING NIGHT TIME CLOSURE 
- BARRICADE (TYPE 3 M-A) 
- TRAFFIC FLOW 



**SHOULDER WORK**

36W21-5  
LOCATE AT 100' FROM  
END OF TAPER.

MATCH LINE STA 58+25

**WILSON & COMPANY**  
Engineers & Architects  
999 16th Street Suite 2600  
Denver, CO 80202  
Phone: 303-297-2976  
Fax: 303-297-2693

Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials: JJW
File Name: 0610031800tcp101.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

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LOVELAND, CO 80537  
970-962-2000

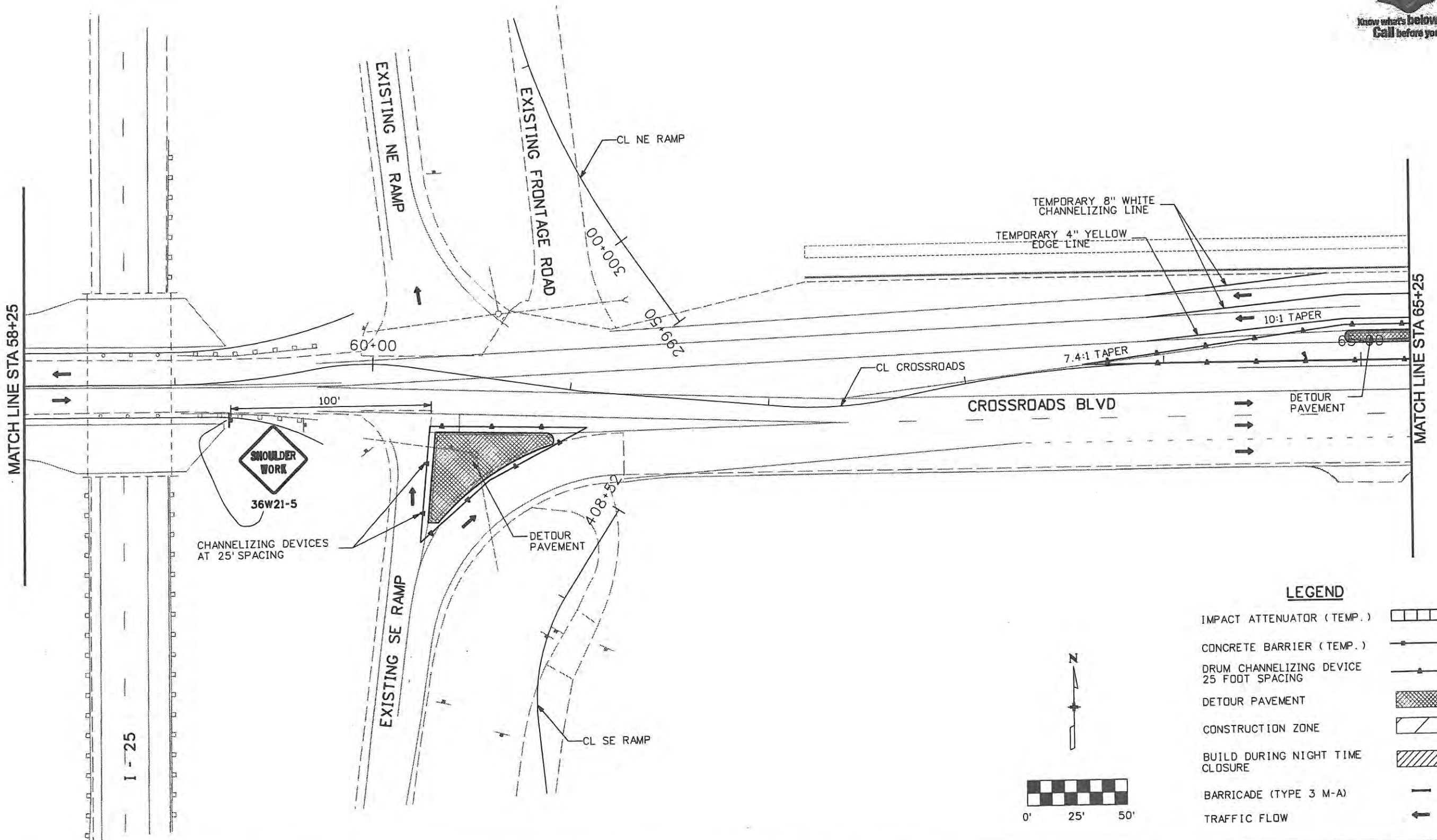


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of Transportation

No Revisions: 9/14/11
Revised:
Void:

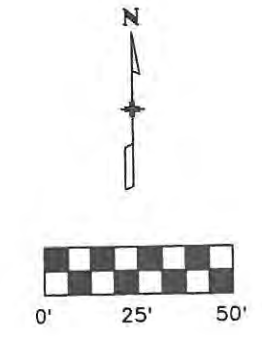
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Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: Rdwy Pln	Subset Sheets: TC1 of 47

Project No./Code ES4 0253-207
17244
Sheet Number 159



**LEGEND**

IMPACT ATTENUATOR (TEMP.)	
CONCRETE BARRIER (TEMP.)	
DRUM CHANNELIZING DEVICE 25 FOOT SPACING	
DETOUR PAVEMENT	
CONSTRUCTION ZONE	
BUILD DURING NIGHT TIME CLOSURE	
BARRICADE (TYPE 3 M-A)	
TRAFFIC FLOW	



Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials: JJW
File Name: 0610031800tcp102.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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970-962-2000

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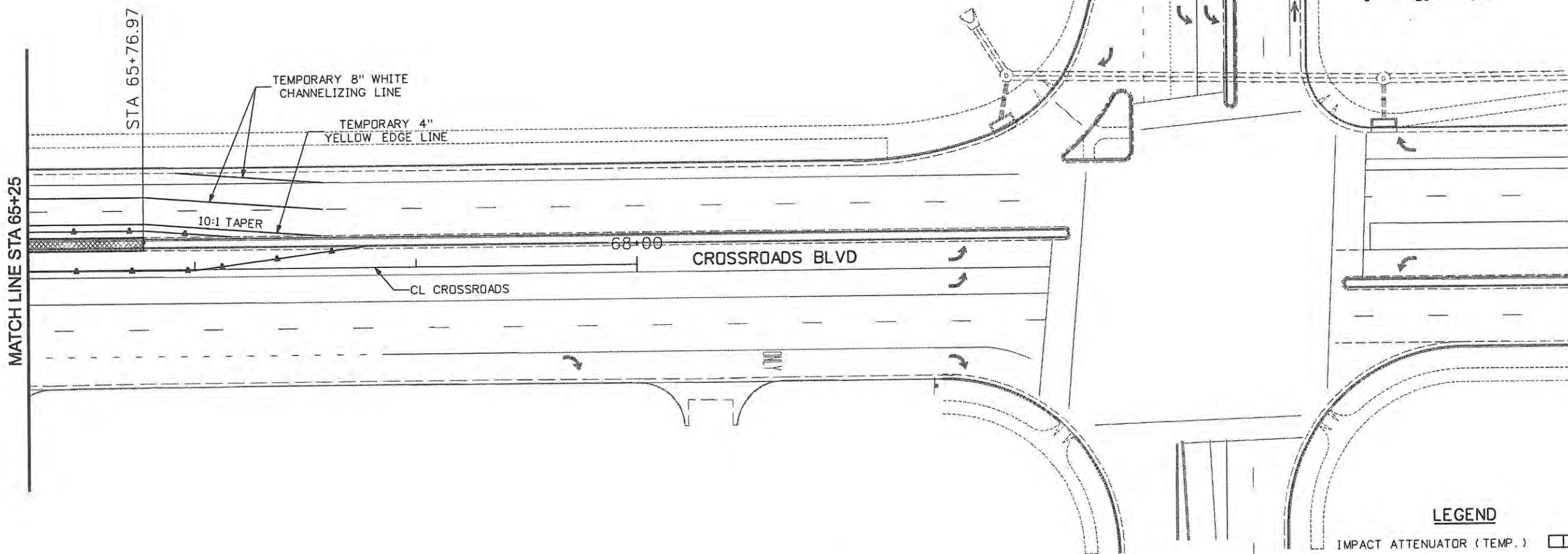
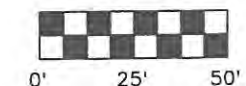
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Revised:
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Designer: JJW	Structure Numbers	
Detailer: JBK	Subset Sheets: TC2 of 47	
Sheet Subset: TCP		

Project No./Code	ES4 0253-207
Sheet Number	160

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 Engineers & Architects  
 889 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2683





**LEGEND**

IMPACT ATTENUATOR (TEMP.)	
CONCRETE BARRIER (TEMP.)	
DRUM CHANNELIZING DEVICE 25 FOOT SPACING	
DETOUR PAVEMENT	
CONSTRUCTION ZONE	
BUILD DURING NIGHT TIME CLOSURE	
BARRICADE (TYPE 3 M-A)	
TRAFFIC FLOW	

Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials: JJW
File Name: 0610031800tcp103.dgn	
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Sheet Revisions		
Date:	Comments	Init.

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No Revisions: 9/14/11
Revised:
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Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: TCP	Subset Sheets: TC3 of 47

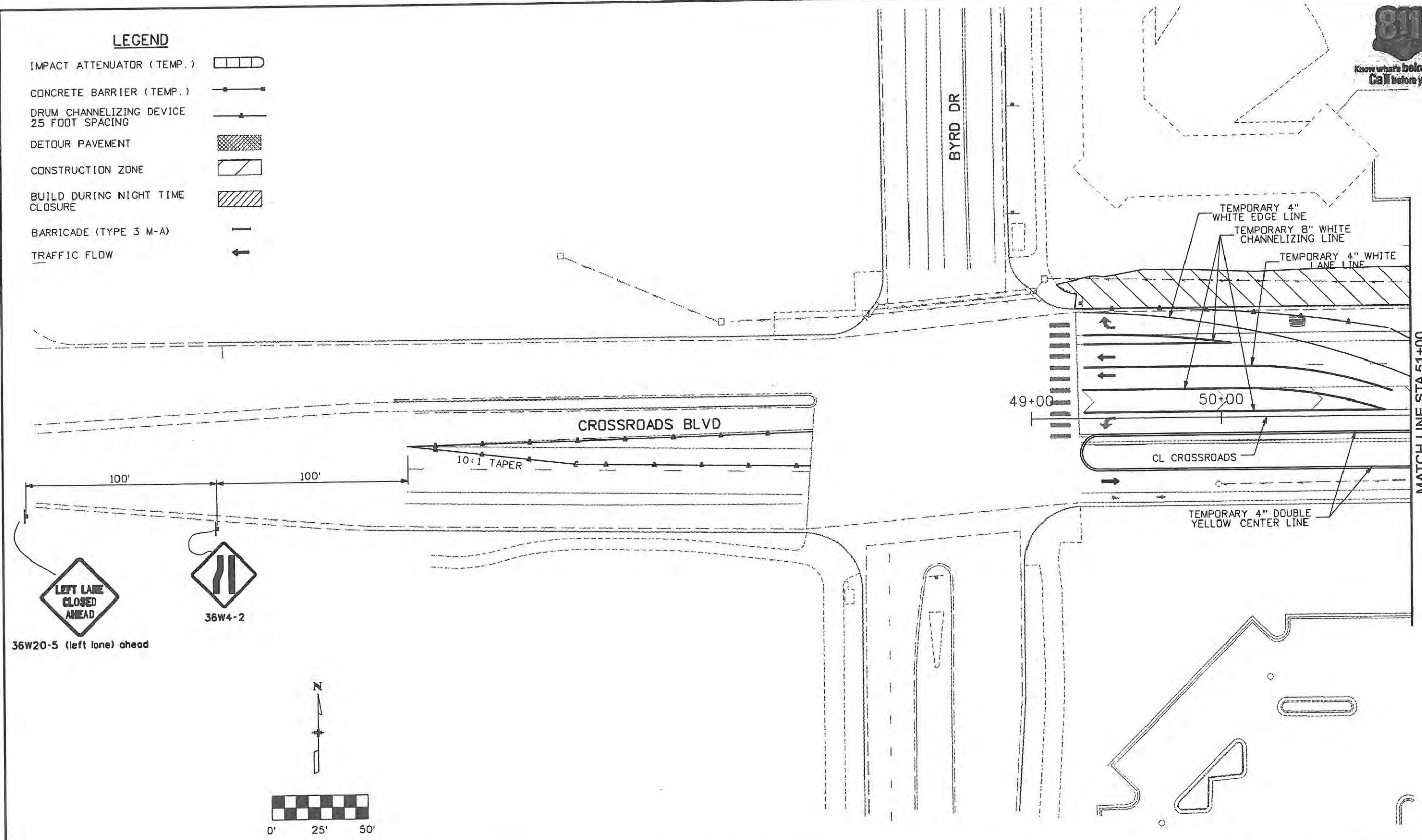
Project No./Code ES4 0253-207
17244
Sheet Number 161

998 18th Street Suite 2600  
 Denver, CO 80202  
**WILSON & COMPANY**  
 Engineers & Architects  
 Phone: 303-297-2976  
 Fax: 303-297-2693



**LEGEND**

- IMPACT ATTENUATOR (TEMP.)
- CONCRETE BARRIER (TEMP.)
- DRUM CHANNELIZING DEVICE 25 FOOT SPACING
- DETOUR PAVEMENT
- CONSTRUCTION ZONE
- BUILD DURING NIGHT TIME CLOSURE
- BARRICADE (TYPE 3 M-A)
- TRAFFIC FLOW



Computer File Information	
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Print Date: 5/4/2009	Initials: JJW
File Name: 0610031800tcp201.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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No Revisions: 9/14/11
Revised:
Void:

TRAFFIC CONTROL PLANS PHASE 2	
Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: TCP	Subset Sheets: TC4 of 47

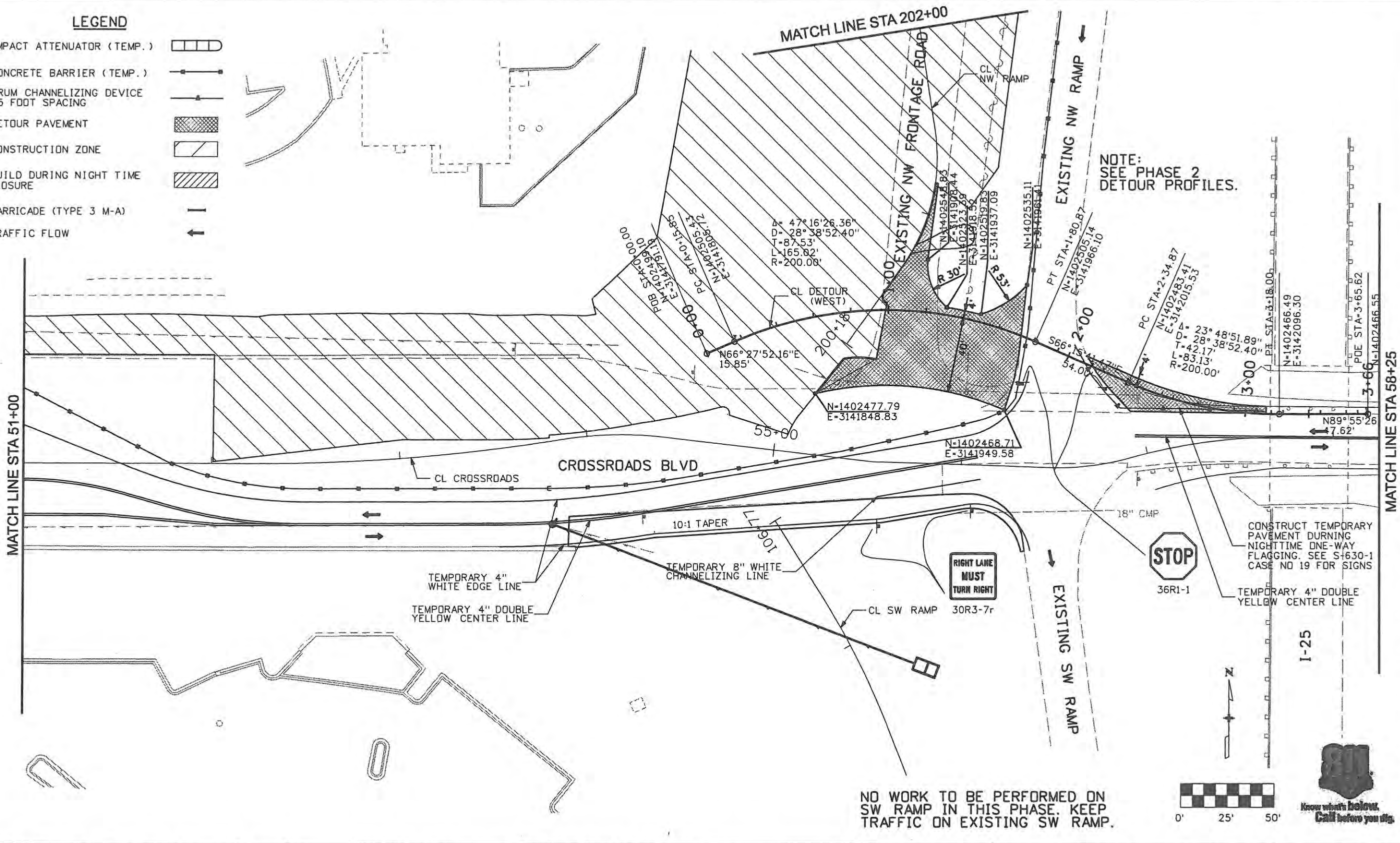
Project No./Code ES4 0253-207
17244
Sheet Number 162

**WILSON & COMPANY**  
 Engineers & Architects  
 988 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2876  
 Fax: 303-297-2683



**LEGEND**

- IMPACT ATTENUATOR (TEMP.)
- CONCRETE BARRIER (TEMP.)
- DRUM CHANNELIZING DEVICE 25 FOOT SPACING
- DETOUR PAVEMENT
- CONSTRUCTION ZONE
- BUILD DURING NIGHT TIME CLOSURE
- BARRICADE (TYPE 3 M-A)
- TRAFFIC FLOW



Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials: JJW
File Name: 0610031800tcp202.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date	Comments	Init.

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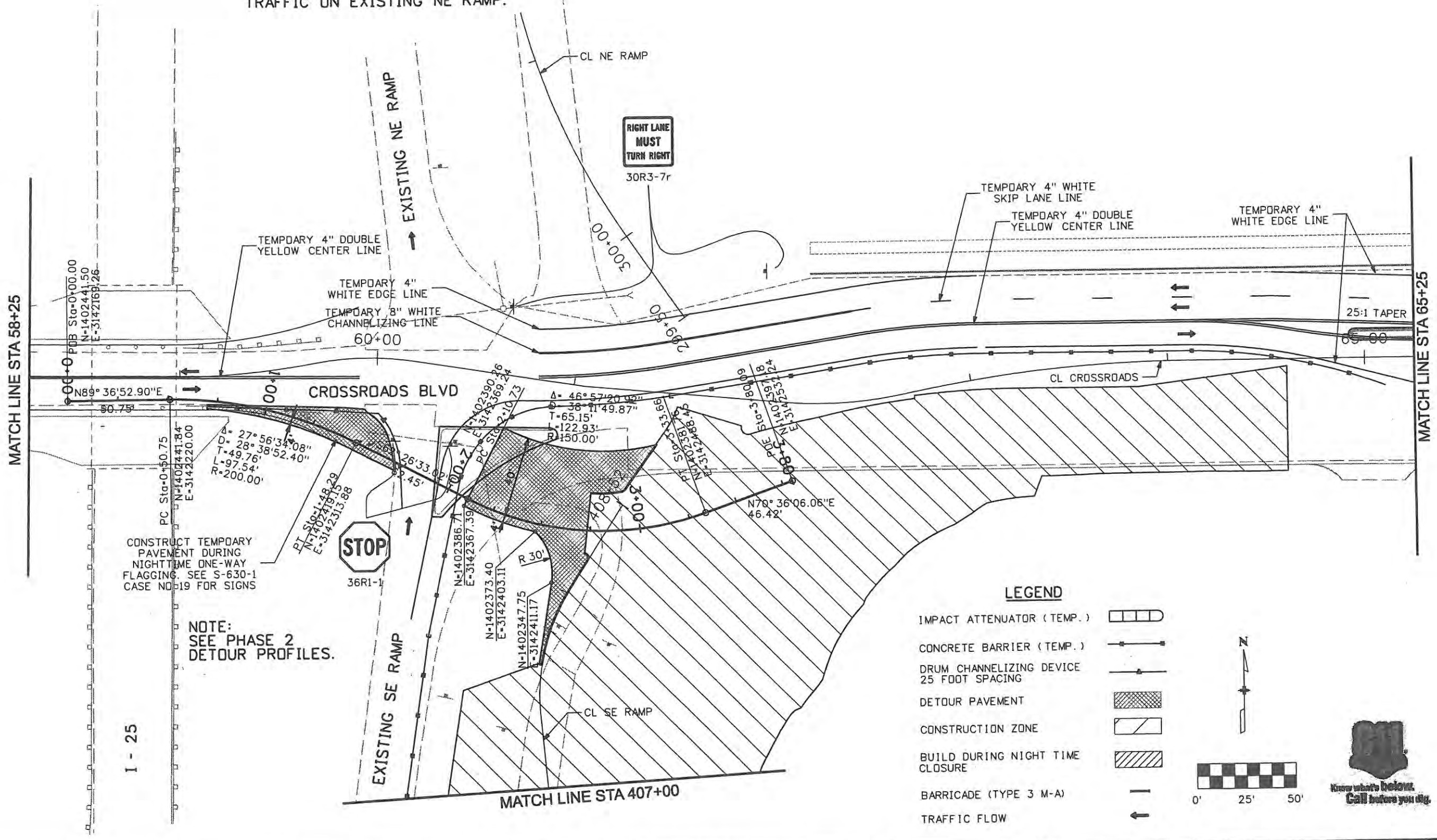
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Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: TCP	Subset Sheets: TC5 of 47

Project No./Code	ES4 0253-207
Sheet Number	163

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 Engineers & Architects  
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 Denver, CO 80202  
 Phone: 303-297-2876  
 Fax: 303-297-2893

NO WORK TO BE PERFORMED ON NE RAMP IN THIS PHASE. KEEP TRAFFIC ON EXISTING NE RAMP.

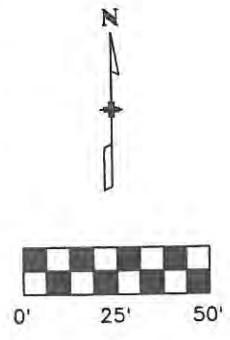


CONSTRUCT TEMPORARY PAVEMENT DURING NIGHTTIME ONE-WAY FLAGGING. SEE S-630-1 CASE NO:19 FOR SIGNS

NOTE: SEE PHASE 2 DETOUR PROFILES.

**LEGEND**

- IMPACT ATTENUATOR (TEMP.)
- CONCRETE BARRIER (TEMP.)
- DRUM CHANNELIZING DEVICE 25 FOOT SPACING
- DETOUR PAVEMENT
- CONSTRUCTION ZONE
- BUILD DURING NIGHT TIME CLOSURE
- BARRICADE (TYPE 3 M-A)
- TRAFFIC FLOW



Computer File Information	
Creation Date: 1/11/07	Initials:JBK
Print Date: 5/4/2009	Initials:JJW
File Name: 0610031800tcp203.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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970-962-2000

Colorado Department of Transportation

No Revisions: 9/14/11

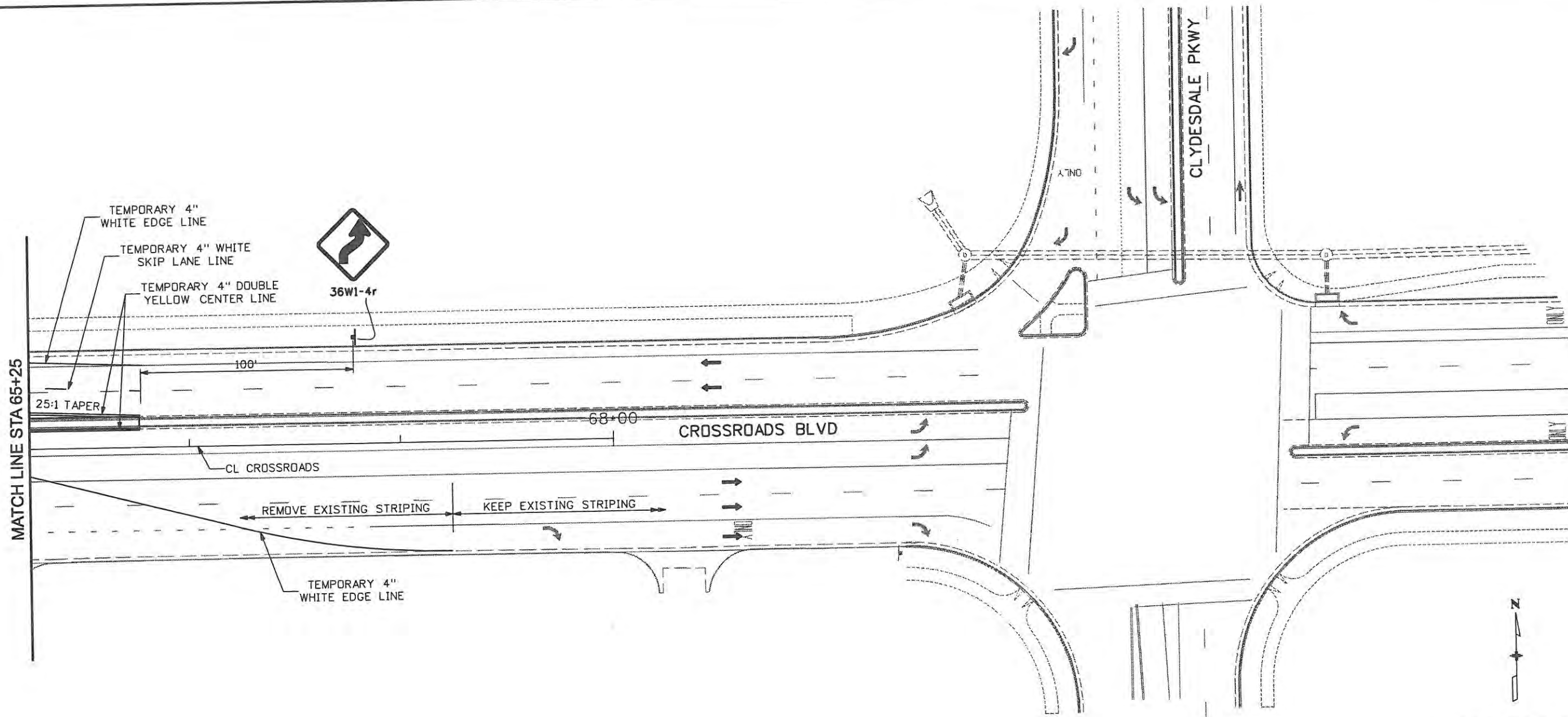
Revised:

Void:

TRAFFIC CONTROL PLANS PHASE 2		
Designer: JJW	Structure Numbers	
Detailer: JBK		
Sheet Subset: TCP	Subset Sheets: TC6 of 47	

Project No./Code	
ES4 0253-207	
17244	
Sheet Number	164





MATCH LINE STA 65+25

TEMPORARY 4" WHITE EDGE LINE  
 TEMPORARY 4" WHITE SKIP LANE LINE  
 TEMPORARY 4" DOUBLE YELLOW CENTER LINE



36W1-4r

100'

25:1 TAPER

68+00

CROSSROADS BLVD

CL CROSSROADS

REMOVE EXISTING STRIPING

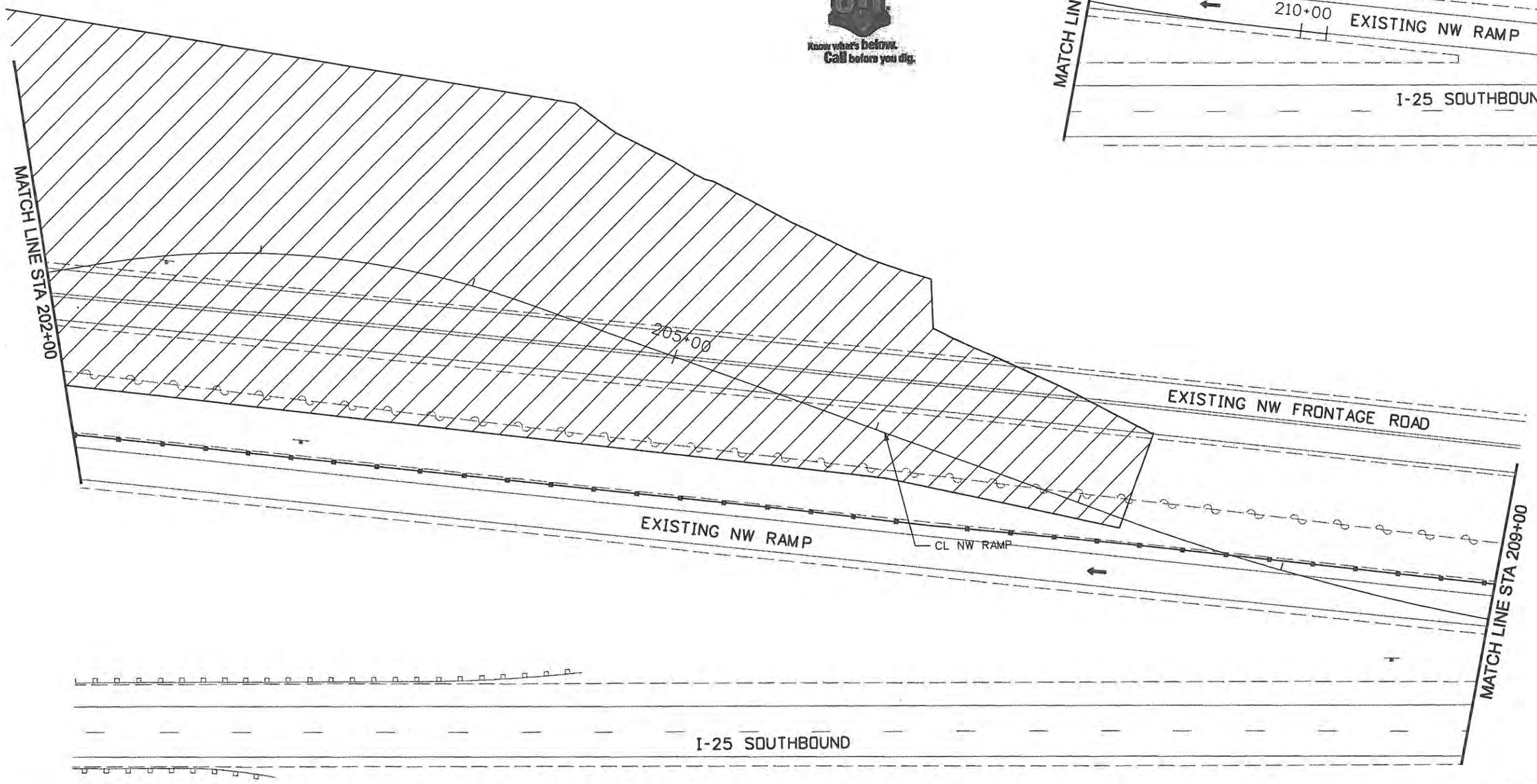
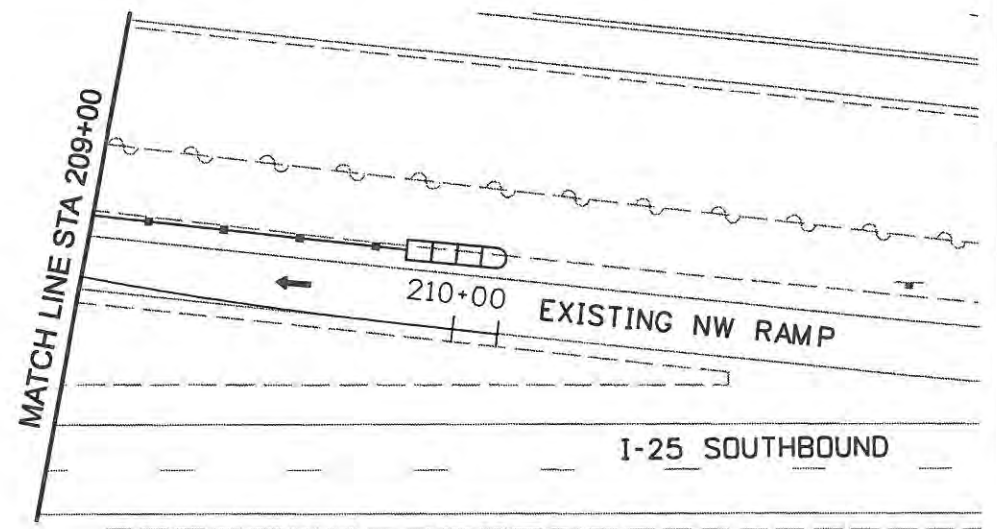
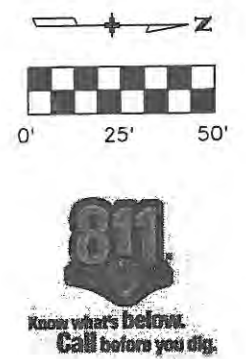
KEEP EXISTING STRIPING

TEMPORARY 4" WHITE EDGE LINE



<b>Computer File Information</b>		<b>Sheet Revisions</b>			<b>CITY OF LOVELAND</b>  500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 Colorado Department of Transportation	<b>TRAFFIC CONTROL PLANS</b>		<b>Project No./Code</b> ES4 0253-207 17244 Sheet Number 165
Creation Date: Date	Initials: JBK	Date:	Comments	Init.			No Revisions: 9/14/11	<b>PHASE 2</b>	
Print Date: 5/4/2009	Initials: JJW				Revised:	Designer: JJW	Structure Numbers		
File Name: 0610031800tcp204.dgn					Void:	Detailer: JBK			
Horiz. Scale: 1:50	Vert. Scale: As Noted					Sheet Subset: TCP	Subset Sheets: TC7 of 47		

889 18th Street Suite 2600 Phone: 303-297-2976  
 Denver, CO 80202 Fax: 303-297-2693  
**WILSON & COMPANY**  
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Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials:
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Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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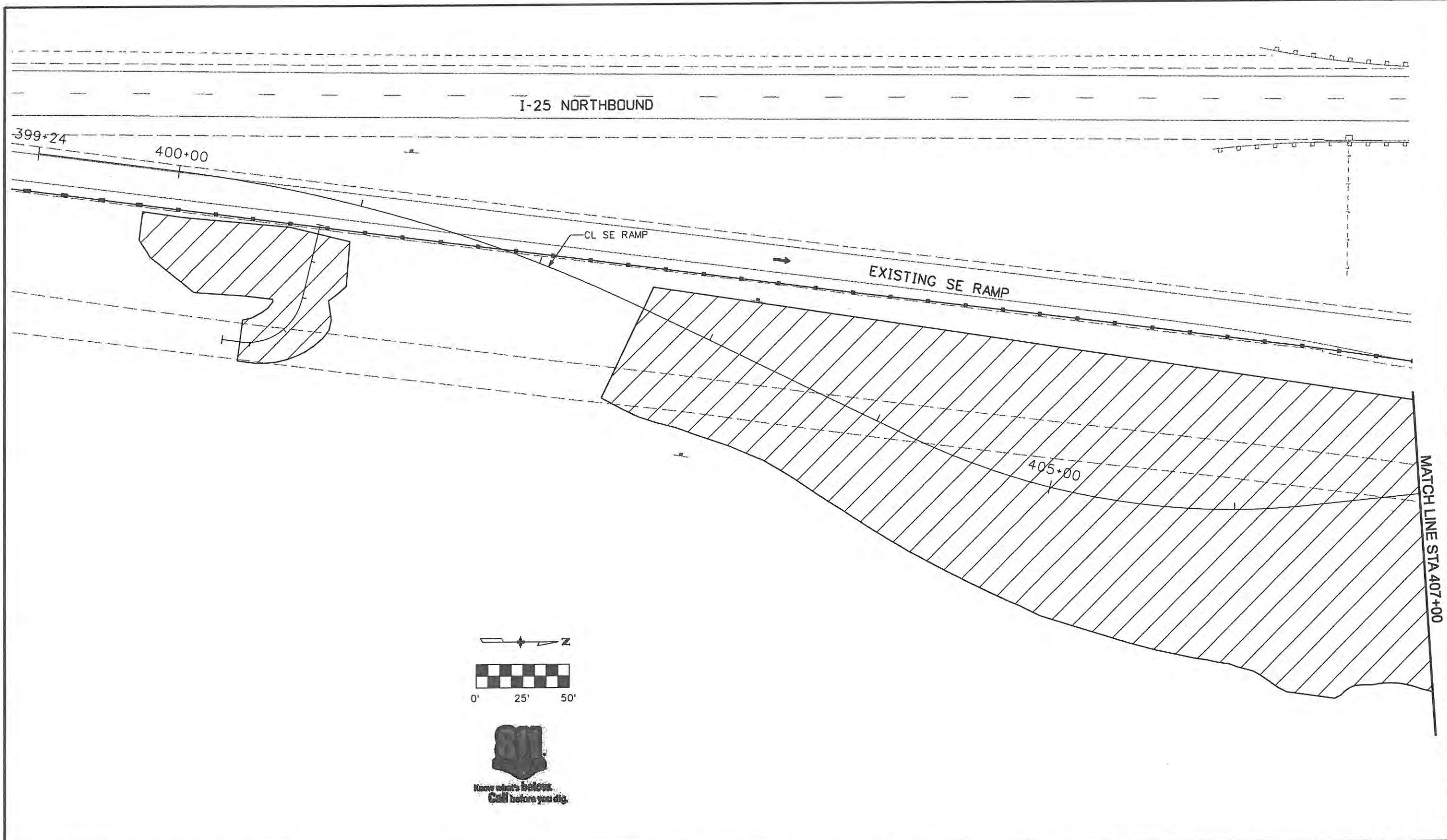
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Designer: JJW	Structure Numbers
Detailer: JBK	Subset Sheets: TC8 of 47
Sheet Subset: TCP	

Project No./Code ES4 0253-207
17244
Sheet Number 166

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 Engineers & Architects  
 998 16th Street Suite 2600  
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 Phone: 303-297-2976  
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 Denver, CO 80202  
 Phone: 303-297-2976  
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Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials: JJW
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Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

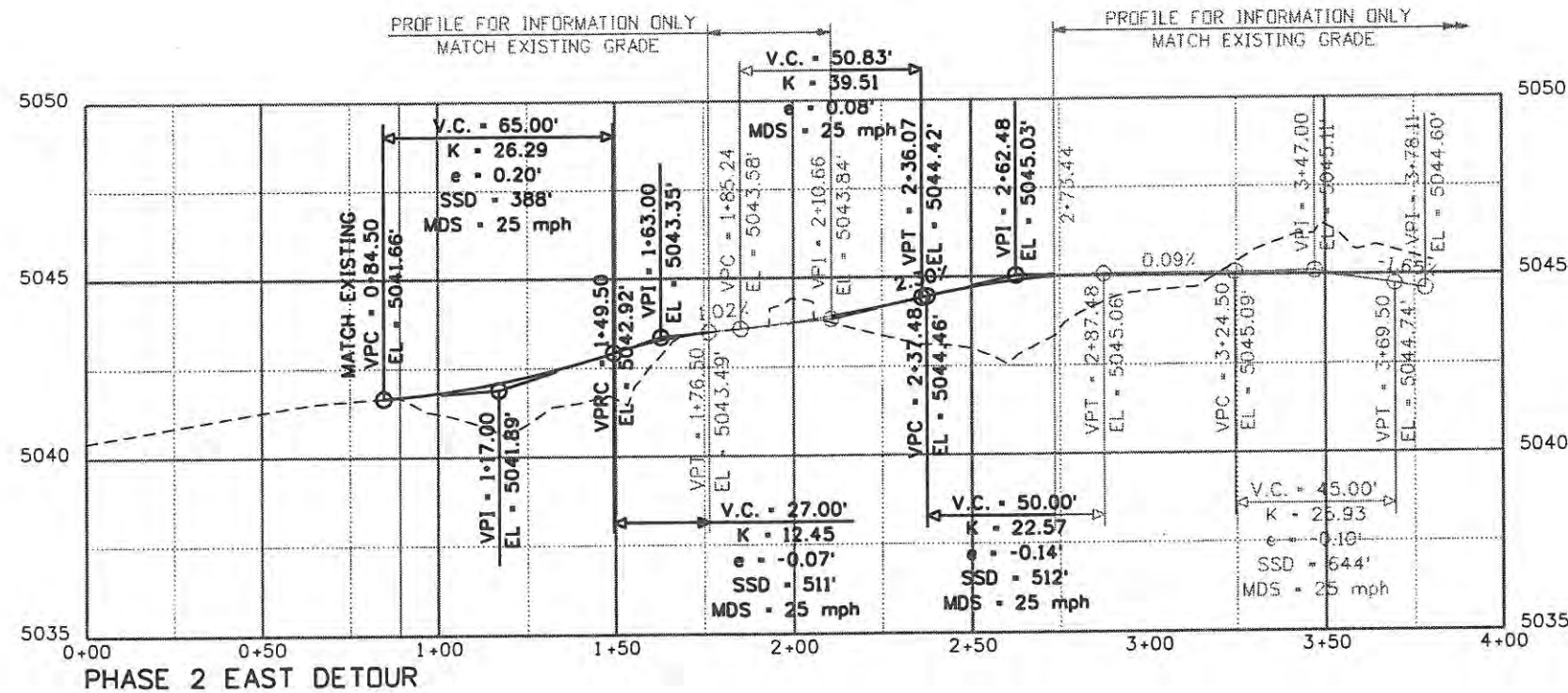
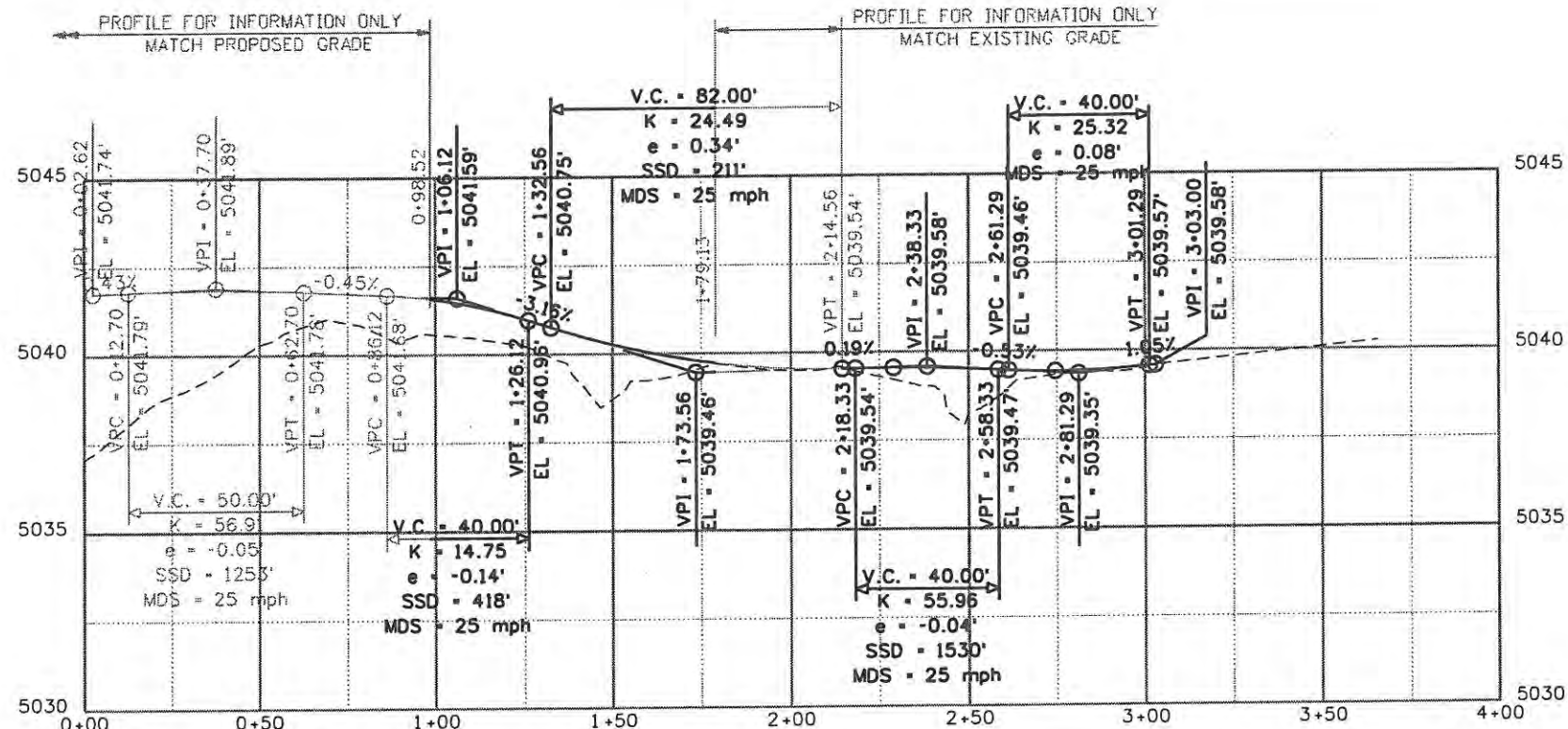
500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

Colorado Department of Transportation

No Revisions: 9/14/11
Revised:
Void:

TRAFFIC CONTROL PLANS PHASE 2	
Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: TCP	Subset Sheets: TC9 of 47

Project No./Code	ES4 0253-207
	17244
Sheet Number	167



Computer File Information	
Creation Date: Date	Initials: Creator
Print Date: 5/4/2009	Initials: Last Mod
File Name: 0610031800pPROFILES.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

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Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

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LOVELAND, CO 80537  
970-962-2000

**DOT**  
DEPARTMENT OF TRANSPORTATION

Colorado Department  
of Transportation

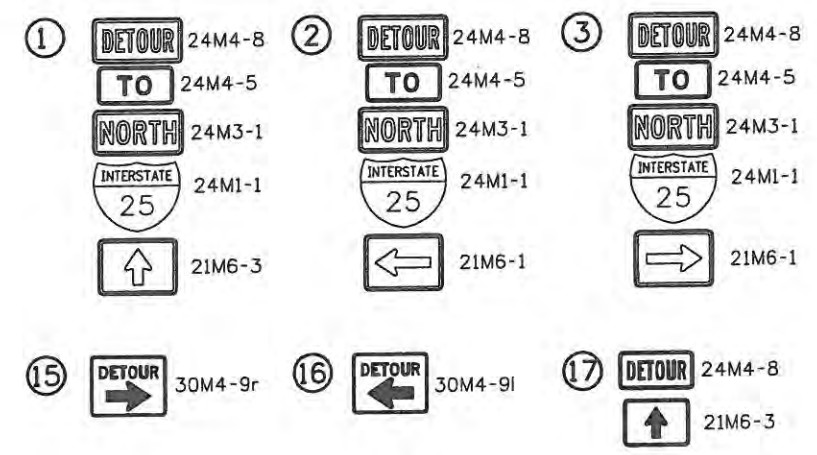
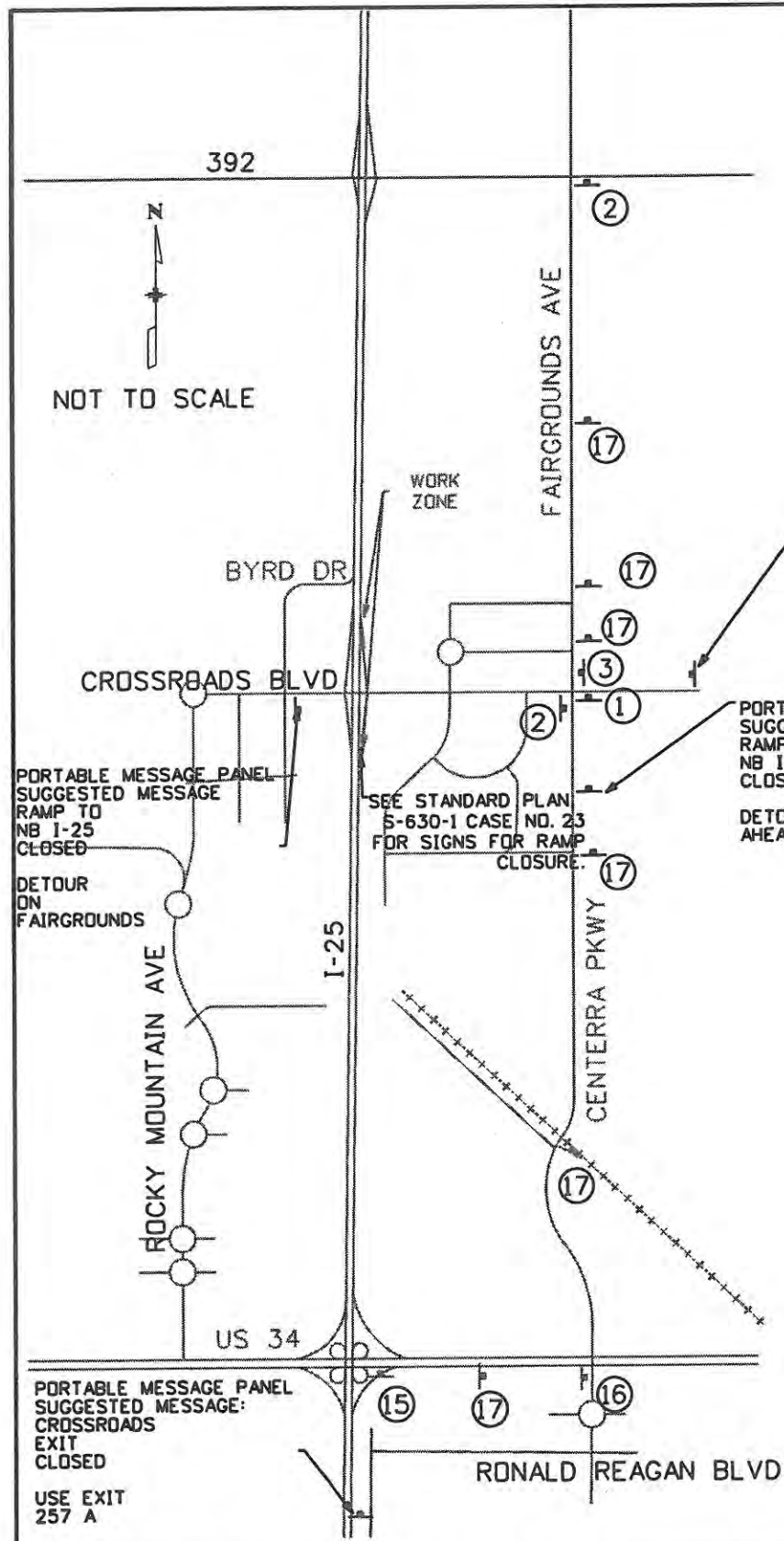
No Revisions: 9/14/11
Revised:
Void:

TRAFFIC CONTROL PLANS PHASE 2 DETOUR PROFILES	
Designer: JJW	Structure Numbers
Detailer: JBK	Subset Sheets: TC10 of 47
Sheet Subset: TCP	

Project No./Code ES4 0253-207
17244
Sheet Number 168







**NOTES:**

1. ALL TRAFFIC CONTROL DEVICES SHALL COMPLY WITH THE MUTCD AND THE COLORADO SUPPLEMENT THERETO, THE STANDARD HIGHWAY SIGNS AND THE COLORADO SUPPLEMENT THERETO, THE NCHRP 350 REQUIREMENTS, AND THE CDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
2. SPACING OF SIGNS WILL VARY DEPENDING ON LOCAL CONDITIONS.
3. FLASHING BEACONS AND/OR FLAGS MAY BE USED TO CALL ATTENTION TO THE ADVANCE WARNING SIGNS. THEY MAY ALSO BE USED ON TYPE III BARRICADES.
4. FOR NIGHTTIME USE, CHANNELIZING DEVICES SHALL BE RETROREFLECTORIZED OR EQUIPPED WITH LIGHTING DEVICES TO MAXIMIZE VISIBILITY.
5. PAYMENT FOR TRAFFIC CONTROL DEVICES SHALL BE FOR THE MAXIMUM NUMBER IN USE AT ANY ONE TIME. PAYMENT SHALL INCLUDE THE REMOVAL OF THE ITEM, AND SHALL INCLUDE RESETS.
6. CONTACT CDOT TRAFFIC OPERATIONS CENTER AT 303-512-5830 TO CHANGE MESSAGES ON PERMANENT VARIABLE MESSAGE SIGNS ON I-25.

IT IS ASSUMED THIS DETOUR WILL BE IN PLACE FOR 1 WEEKEND AT THE END OF PHASE 3.

Computer File Information	
Creation Date: 04/24/08	Initials: JMB
Print Date: 5/4/2009	Initials: JMB
File Name: 0610031800TCPDetour.dgn	
Horiz. Scale: 1:100	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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970-962-2000

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No Revisions: 9/14/11
Revised:
Void:

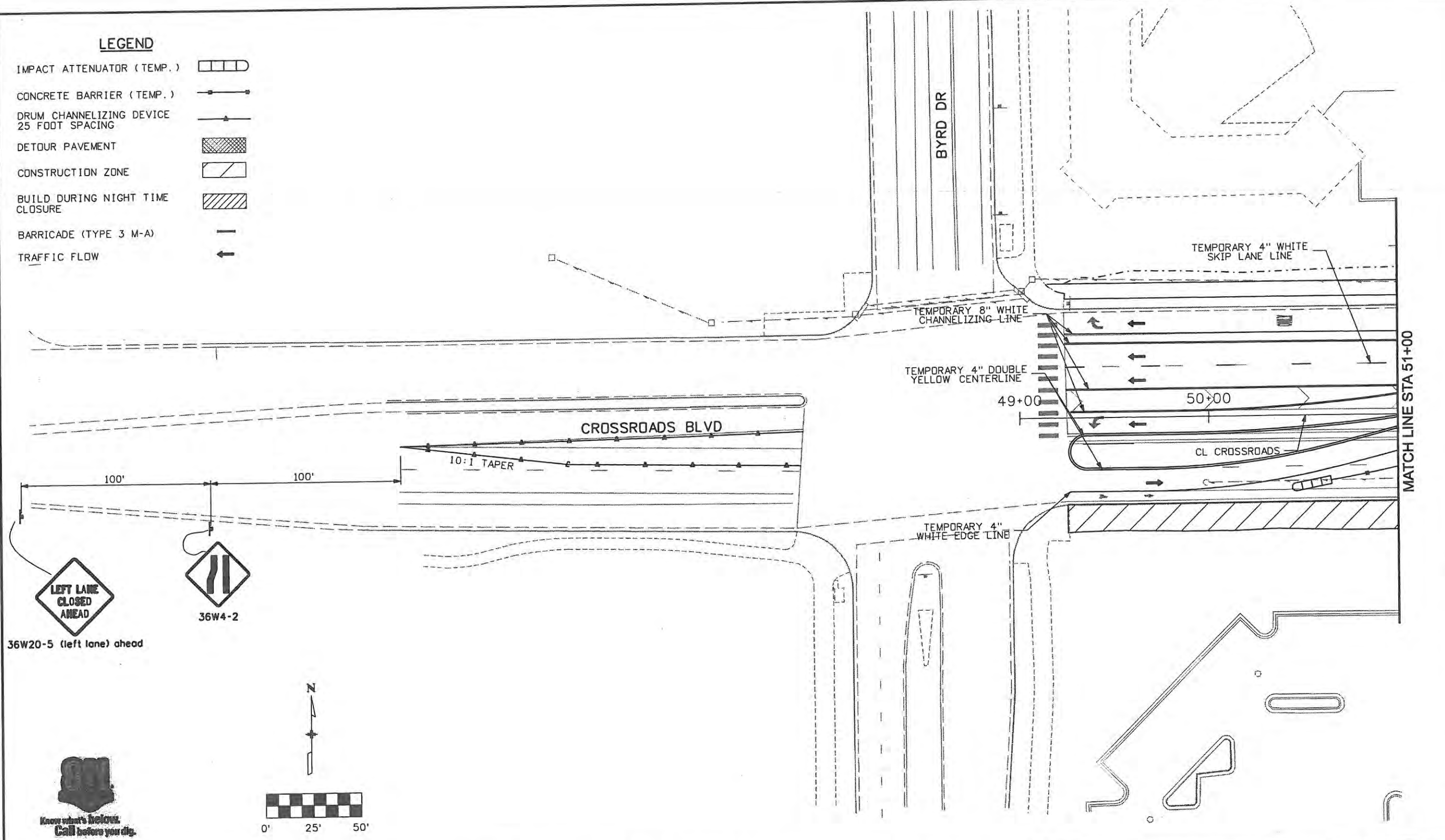
TRAFFIC CONTROL PLANS PHASE 3 DETOUR NB RAMPS	
Designer: JJW	Structure Numbers:
Detailer: JBK	
Sheet Subset: DETOUR	Subset Sheets: TC12 of 47

Project No./Code	ES4 0253-207
	17244
Sheet Number	170



**LEGEND**

- IMPACT ATTENUATOR (TEMP.)
- CONCRETE BARRIER (TEMP.)
- DRUM CHANNELIZING DEVICE 25 FOOT SPACING
- DETOUR PAVEMENT
- CONSTRUCTION ZONE
- BUILD DURING NIGHT TIME CLOSURE
- BARRICADE (TYPE 3 M-A)
- TRAFFIC FLOW



Computer File Information	
Creation Date: 1/11/07	Initials:JBK
Print Date: 5/4/2009	Initials:JJW
File Name: 0610031800tcp301.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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No Revisions: 9/14/11
Revised:
Void:

TRAFFIC CONTROL PLANS PHASE 3	
Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: TCP	Subset Sheets: TC13 of 47

Project No./Code ES4 0253-207
17244
Sheet Number 171

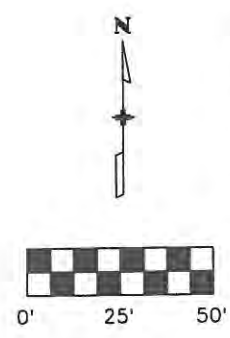
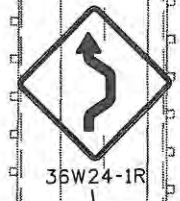
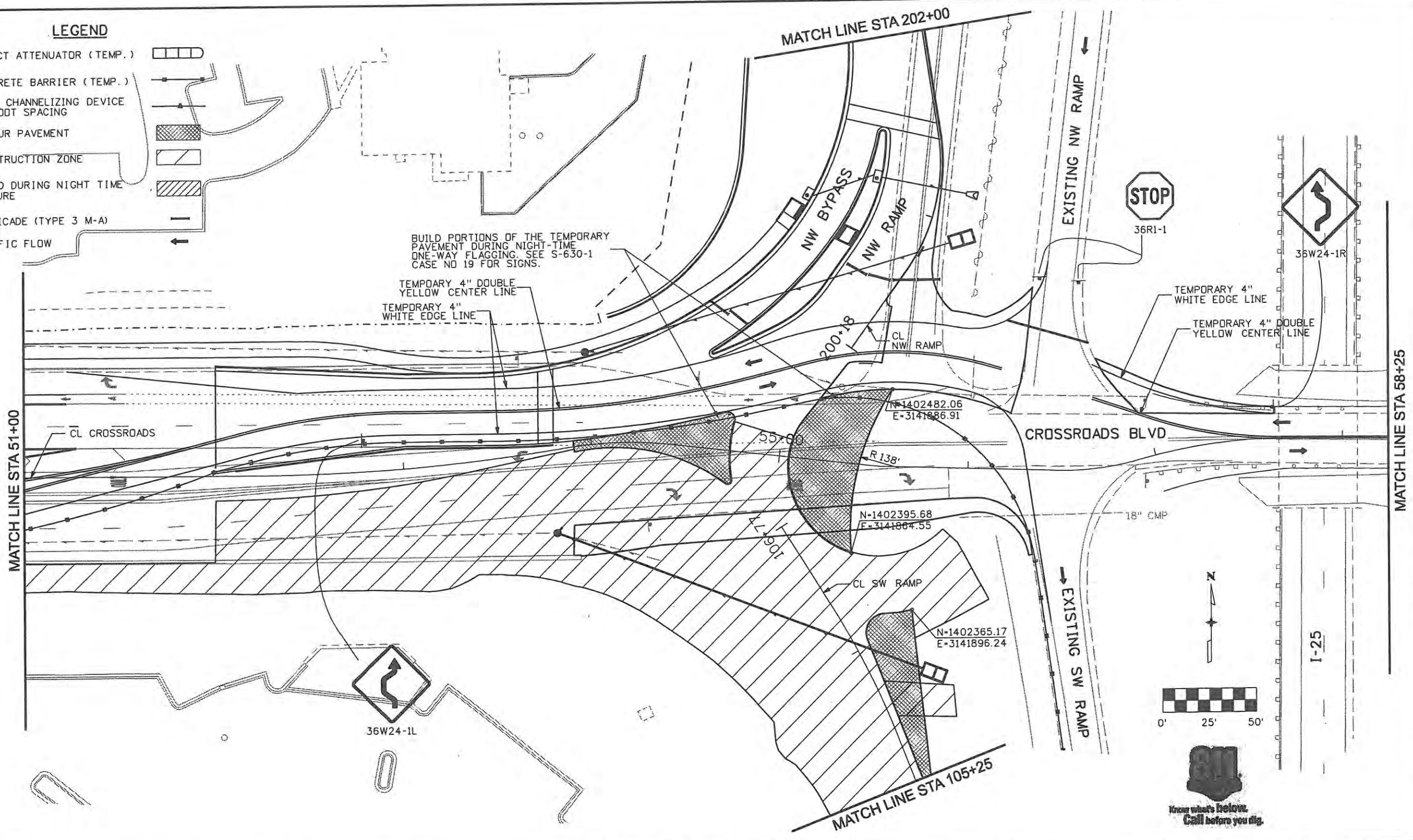
**WILSON & COMPANY**  
 Engineers & Architects  
 959 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2876  
 Fax: 303-297-2893

**LEGEND**

- IMPACT ATTENUATOR (TEMP.)
- CONCRETE BARRIER (TEMP.)
- DRUM CHANNELIZING DEVICE 25 FOOT SPACING
- DETOUR PAVEMENT
- CONSTRUCTION ZONE
- BUILD DURING NIGHT TIME CLOSURE
- BARRICADE (TYPE 3 M-A)
- TRAFFIC FLOW

BUILD PORTIONS OF THE TEMPORARY PAVEMENT DURING NIGHT-TIME ONE-WAY FLAGGING. SEE S-630-1 CASE NO 19 FOR SIGNS.

TEMPORARY 4" DOUBLE YELLOW CENTER LINE  
TEMPORARY 4" WHITE EDGE LINE



**Computer File Information**

Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials: JJW
File Name: 0610031800tcp302.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

**Sheet Revisions**

Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
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970-962-2000



Colorado Department of Transportation

**TRAFFIC CONTROL PLANS**

No Revisions: 9/14/11
Revised:
Void:

**PHASE 3**

Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: TCP	Subset Sheets: TC14 of 47

**Project No./Code**

ES4 0253-207
17244
Sheet Number 172

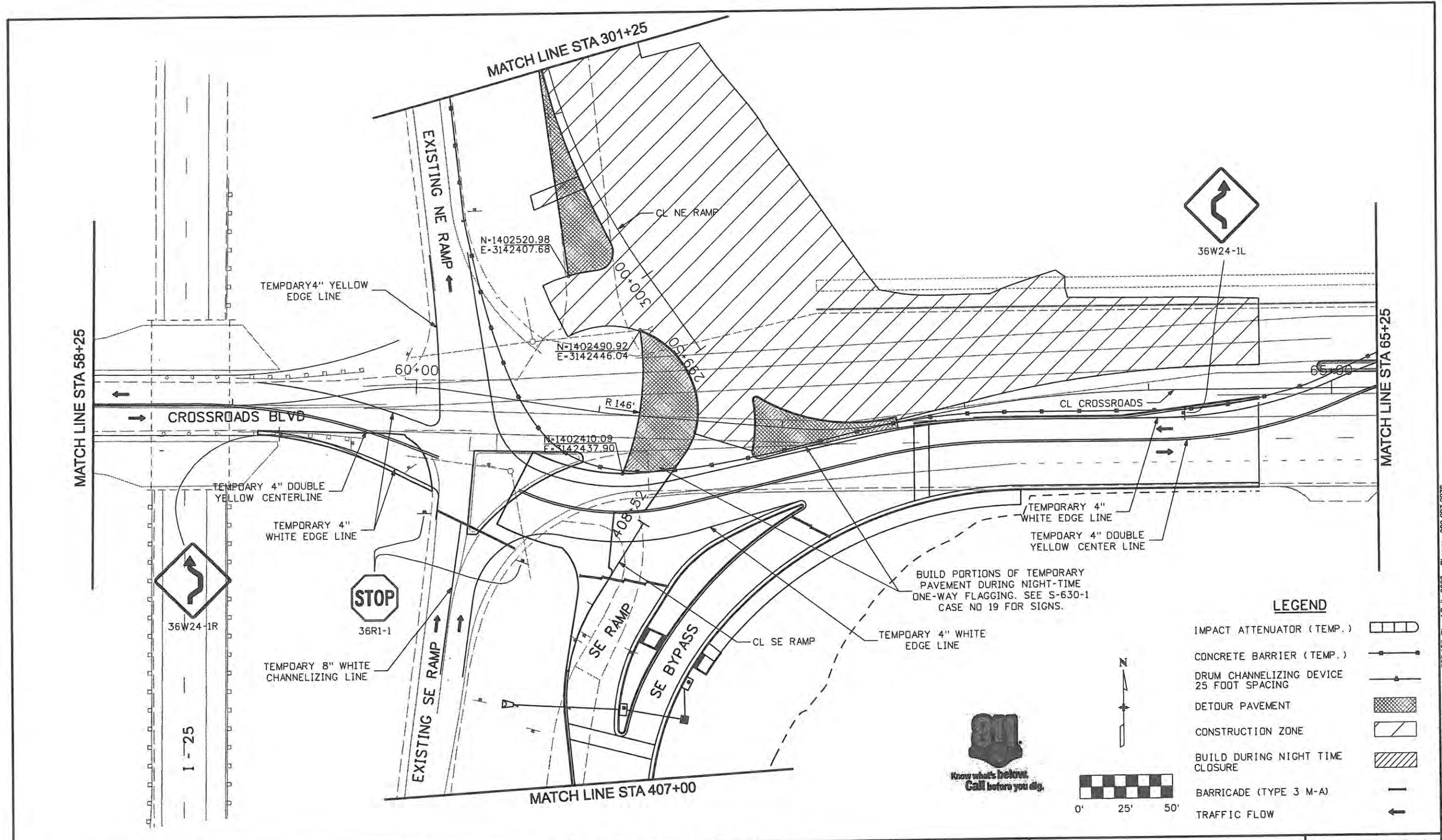
MATCH LINE STA 58+25

MATCH LINE STA 51+00

MATCH LINE STA 105+25

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 Engineers & Architects  
 999 16th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2993





**LEGEND**

IMPACT ATTENUATOR (TEMP.)	
CONCRETE BARRIER (TEMP.)	
DRUM CHANNELIZING DEVICE 25 FOOT SPACING	
DETOUR PAVEMENT	
CONSTRUCTION ZONE	
BUILD DURING NIGHT TIME CLOSURE	
BARRICADE (TYPE 3 M-A)	
TRAFFIC FLOW	

Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials: JJW
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Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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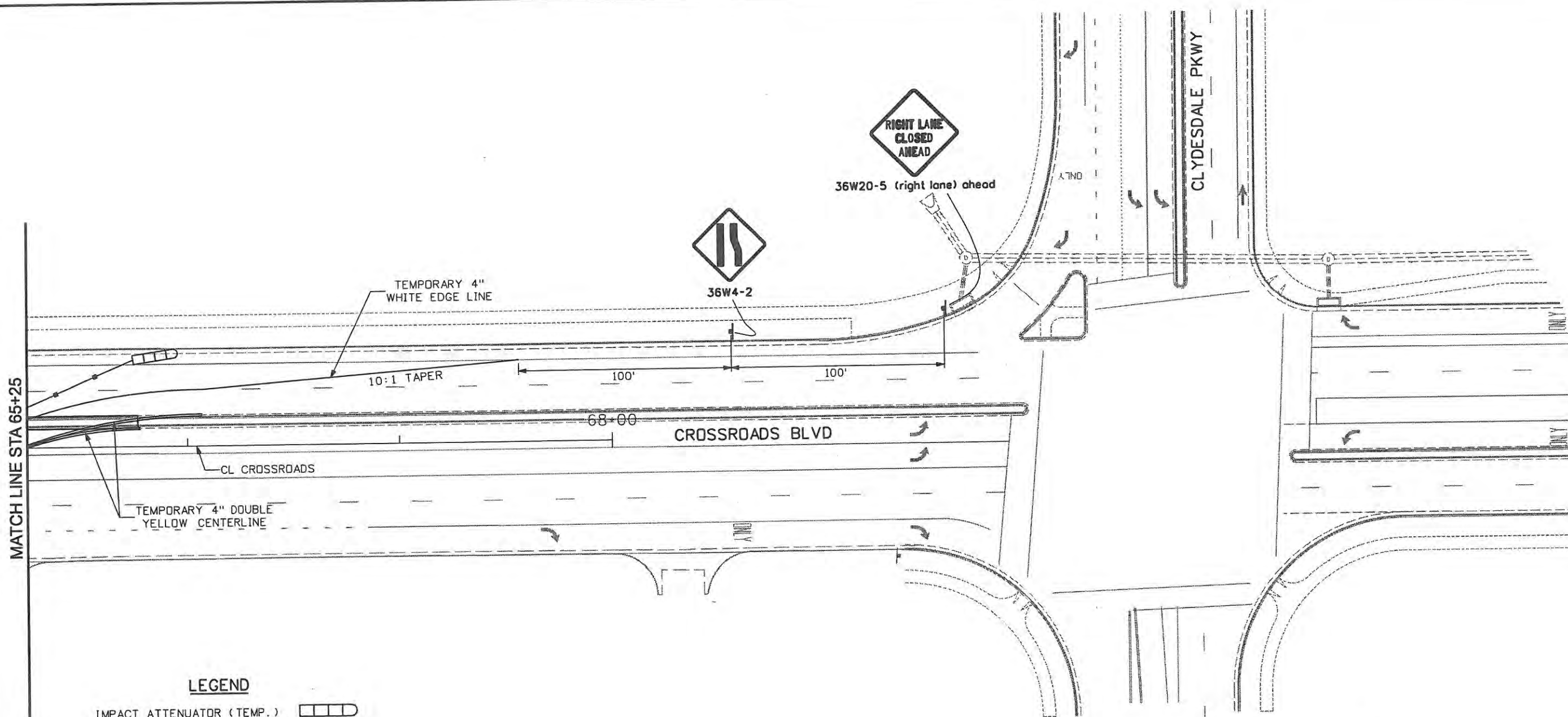
**Colorado Department of Transportation**

No Revisions: 9/14/11
Revised:
Void:

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Designer: JJW	Structure Numbers
Detailer: JBK	Subset Sheets: TC15 of 47
Sheet Subset: TCP	

Project No./Code ES4 0253-207
17244
Sheet Number 173

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 Engineers & Architects  
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 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2693



**LEGEND**

- IMPACT ATTENUATOR (TEMP.)
- CONCRETE BARRIER (TEMP.)
- DRUM CHANNELIZING DEVICE 25 FOOT SPACING
- DETOUR PAVEMENT
- CONSTRUCTION ZONE
- BUILD DURING NIGHT TIME CLOSURE
- BARRICADE (TYPE 3 M-A)
- TRAFFIC FLOW

MATCH LINE STA 65+25

Computer File Information	
Creation Date: Date	Initials: JBK
Print Date: 5/4/2009	Initials: JJW
File Name: 0610031800tcp304.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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970-962-2000

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No Revisions: 9/14/11
Revised:
Void:

TRAFFIC CONTROL PLANS PHASE 3	
Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: TCP	Subset Sheets: TC16 of 47









Project No./Code	ES4 0253-207
	17244
Sheet Number	174

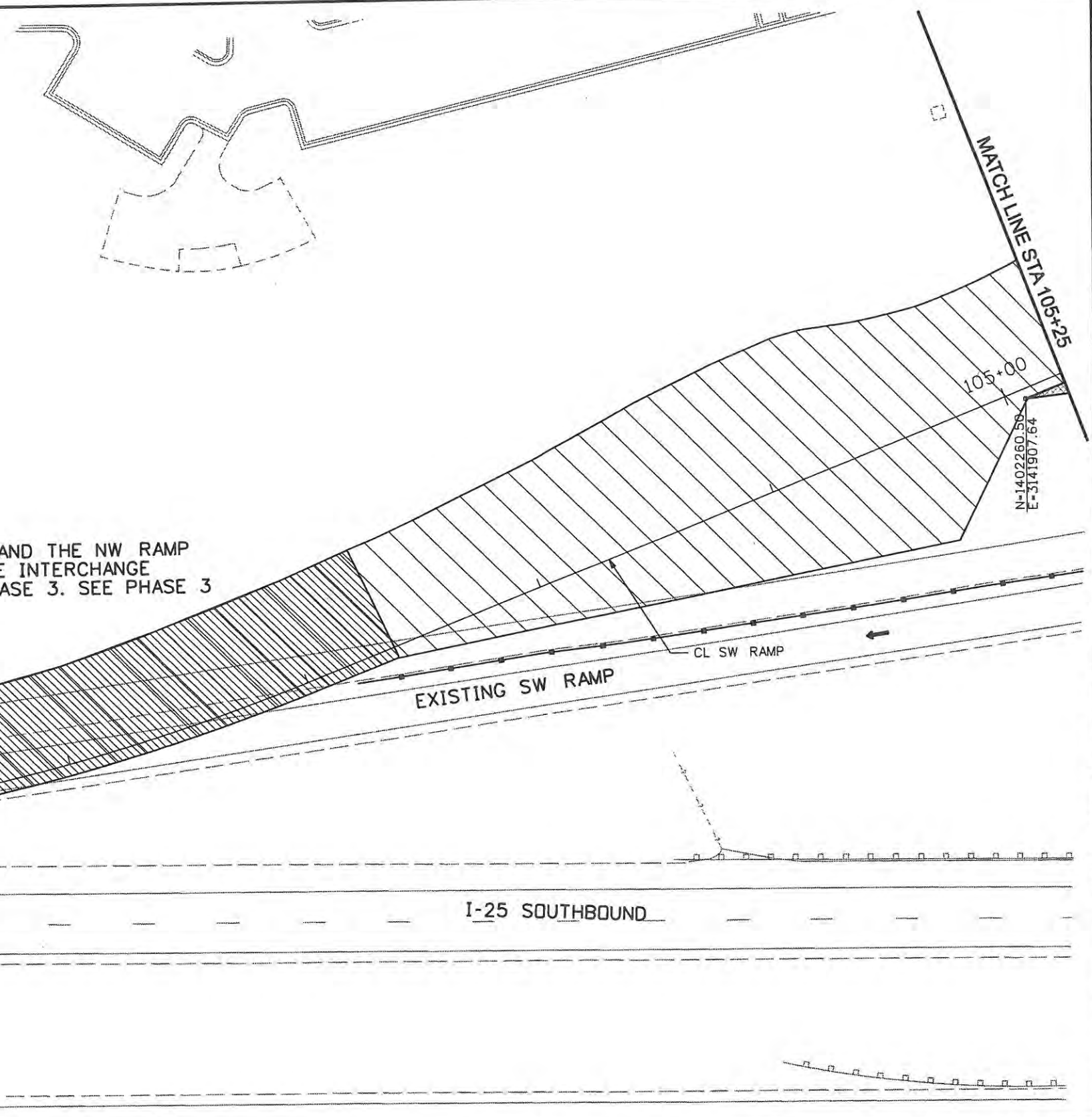
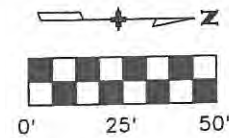
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**LEGEND**

- IMPACT ATTENUATOR (TEMP.) 
- CONCRETE BARRIER (TEMP.) 
- DRUM CHANNELIZING DEVICE 25 FOOT SPACING 
- DETOUR PAVEMENT 
- CONSTRUCTION ZONE 
- BUILD DURING NIGHT TIME CLOSURE 
- BARRICADE (TYPE 3 M-A) 
- TRAFFIC FLOW 



CONSTRUCT THIS AREA AND THE NW RAMP CONNECTION DURING ONE INTERCHANGE CLOSURE AT END OF PHASE 3. SEE PHASE 3 DETOUR SB RAMPS.

Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials: JJW
File Name: 0610031800tcp305.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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970-962-2000



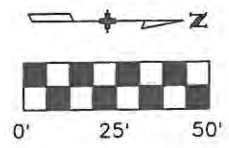
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No Revisions: 9/14/11
Revised:
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Sheet Subset: TCP	Subset Sheets: TC17 of 47

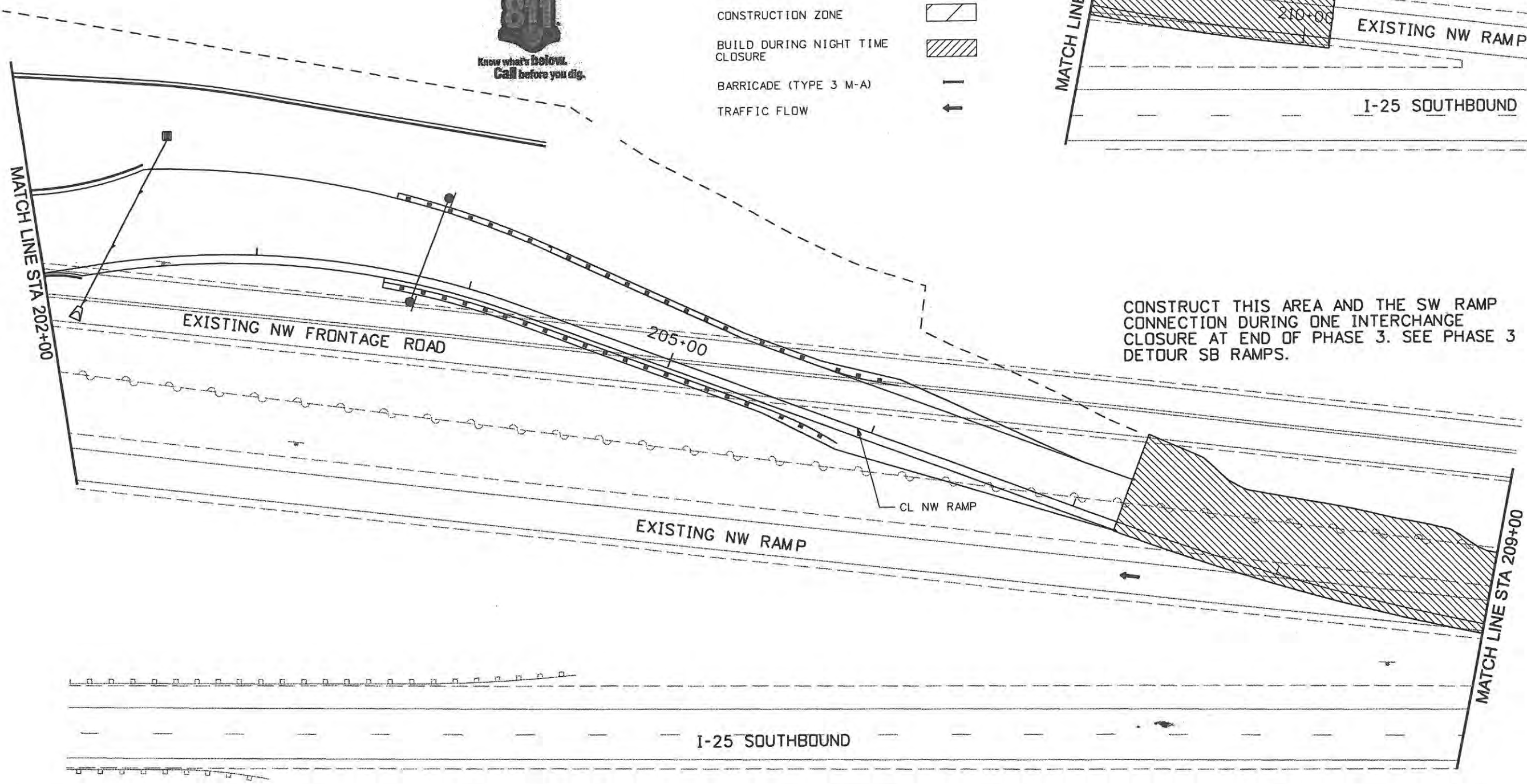
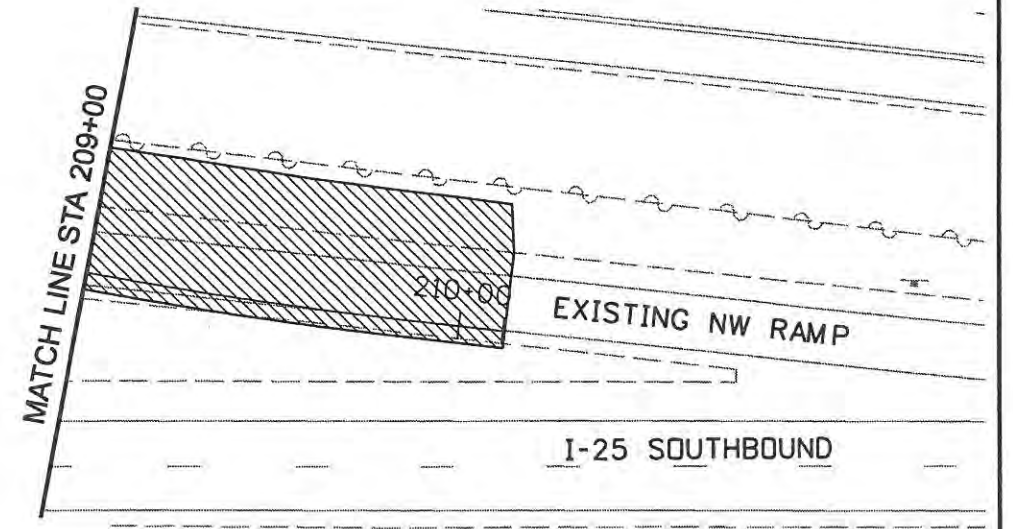
Project No./Code	ES4 0253-207
	17244
Sheet Number	175

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**LEGEND**

- IMPACT ATTENUATOR (TEMP.)
- CONCRETE BARRIER (TEMP.)
- DRUM CHANNELIZING DEVICE 25 FOOT SPACING
- DETOUR PAVEMENT
- CONSTRUCTION ZONE
- BUILD DURING NIGHT TIME CLOSURE
- BARRICADE (TYPE 3 M-A)
- TRAFFIC FLOW



CONSTRUCT THIS AREA AND THE SW RAMP CONNECTION DURING ONE INTERCHANGE CLOSURE AT END OF PHASE 3. SEE PHASE 3 DETOUR SB RAMPS.

Computer File Information	
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Print Date: 5/4/2009	Initials:
File Name: 0610031800tcp306.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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 970-962-2000

**Colorado Department of Transportation**

No Revisions: 9/14/11
Revised:
Void:

TRAFFIC CONTROL PLANS PHASE 3	
Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: TCP	Subset Sheets: TC18 of 47

Project No./Code ES4 0253-207
17244
Sheet Number 176

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I-25 NORTHBOUND

CONSTRUCT THIS AREA AND THE SE RAMP CONNECTION DURING ONE INTERCHANGE CLOSURE AT END OF PHASE 3. SEE PHASE 3 DETOUR NB RAMPS.

308+73

305+00









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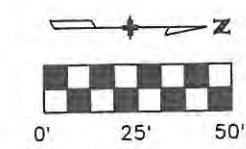
CL NE RAMP

EXISTING NE FRONTAGE ROAD

MATCH LINE STA 301+25

**LEGEND**

- IMPACT ATTENUATOR (TEMP.) 
- CONCRETE BARRIER (TEMP.) 
- DRUM CHANNELIZING DEVICE 25 FOOT SPACING 
- DETOUR PAVEMENT 
- CONSTRUCTION ZONE 
- BUILD DURING NIGHT TIME CLOSURE 
- BARRICADE (TYPE 3 M-A) 
- TRAFFIC FLOW 



**Computer File Information**

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 Print Date: 5/4/2009      Initials:  
 File Name: 0610031800tcp307.dgn  
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**Sheet Revisions**

Date:	Comments	Init.

**CITY OF LOVELAND**



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No Revisions: 9/14/11

Revised:

Void:

**TRAFFIC CONTROL PLANS  
 PHASE 3**

Designer: JJW      Structure Numbers:  
 Detailer: JBK  
 Sheet Subset: TCP      Subset Sheets: TC19 of 47

Project No./Code

ES4 0253-207

17244

Sheet Number 177

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I-25 NORTHBOUND

399+24

400+00

CL SE RAMP

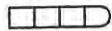



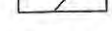
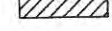


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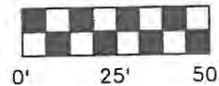
CONSTRUCT THIS AREA AND THE NE RAMP CONNECTION DURING ONE INTERCHANGE CLOSURE AT END OF PHASE 3. SEE PHASE 3 DETOUR NB RAMPS.

405+00

MATCH LINE STA 407+00

**LEGEND**

- IMPACT ATTENUATOR (TEMP.) 
- CONCRETE BARRIER (TEMP.) 
- DRUM CHANNELIZING DEVICE 25 FOOT SPACING 
- DETOUR PAVEMENT 
- CONSTRUCTION ZONE 
- BUILD DURING NIGHT TIME CLOSURE 
- BARRICADE (TYPE 3 M-A) 
- TRAFFIC FLOW 



Computer File Information	
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Print Date: 5/4/2009	Initials: JJW
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Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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Revised:
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**TRAFFIC CONTROL PLANS  
PHASE 3**

Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: TCP	Subset Sheets: TC20 of 47

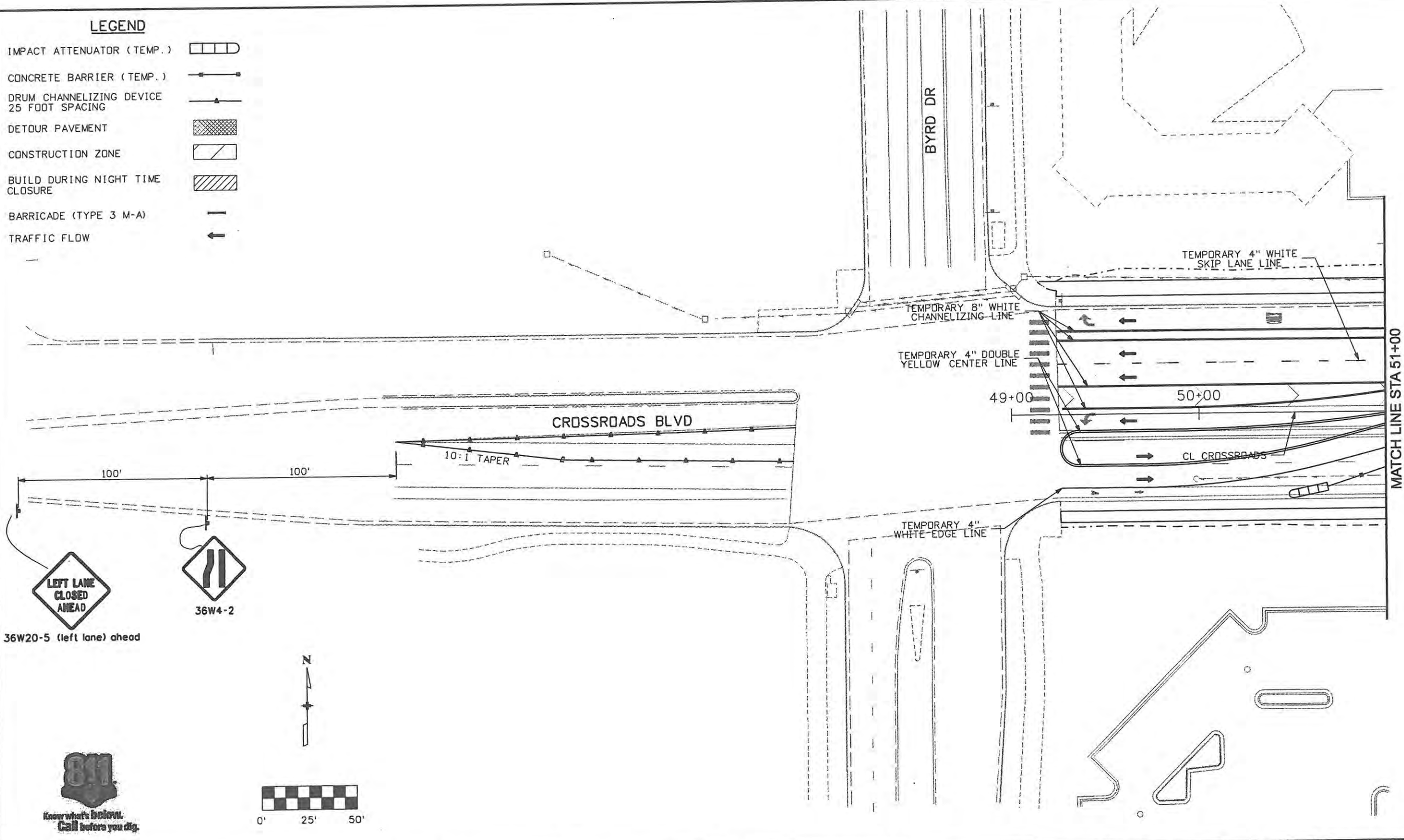
Project No./Code	ES4 0253-207
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**LEGEND**

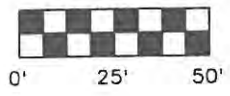
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- CONCRETE BARRIER (TEMP.)
- DRUM CHANNELIZING DEVICE 25 FOOT SPACING
- DETOUR PAVEMENT
- CONSTRUCTION ZONE
- BUILD DURING NIGHT TIME CLOSURE
- BARRICADE (TYPE 3 M-A)
- TRAFFIC FLOW



36W20-5 (left lane) ahead



36W4-2



Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials: JJW
File Name: 0610031800tcp401.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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No Revisions: 9/14/11
Revised:
Void:

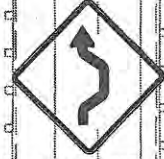
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Designer: JJW	Structure Numbers
Detailer: JBK	Subset Sheets: TC21 of 47
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Project No./Code	ES4 0253-207
	17244
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**LEGEND**

- IMPACT ATTENUATOR (TEMP.)
- CONCRETE BARRIER (TEMP.)
- DRUM CHANNELIZING DEVICE 25 FOOT SPACING
- DETOUR PAVEMENT
- CONSTRUCTION ZONE
- BUILD DURING NIGHT TIME CLOSURE
- BARRICADE (TYPE 3 M-A)
- TRAFFIC FLOW



TEMPORARY 4" WHITE EDGE LINE

TEMPORARY 4" DOUBLE YELLOW CENTER LINE

I-25

MATCH LINE STA 51+00

MATCH LINE STA 58+25

MATCH LINE STA 202+00

MATCH LINE STA 105+25

CROSSROADS BLVD

TEMPORARY 4" DOUBLE YELLOW CENTER LINE

TEMPORARY 4" WHITE EDGE LINE

10:1 TAPER

CL CROSSROADS

200+18

55+00

SW BYPASS

CL NW RAMP

CL SW RAMP

TEMPORARY 4" WHITE EDGE LINE  
TEMPORARY 4" YELLOW EDGE LINE

PERMANENT STRIPING  
SEE STRIPING PLANS

Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials: JJW
File Name: 0610031800tcp402.dgn	
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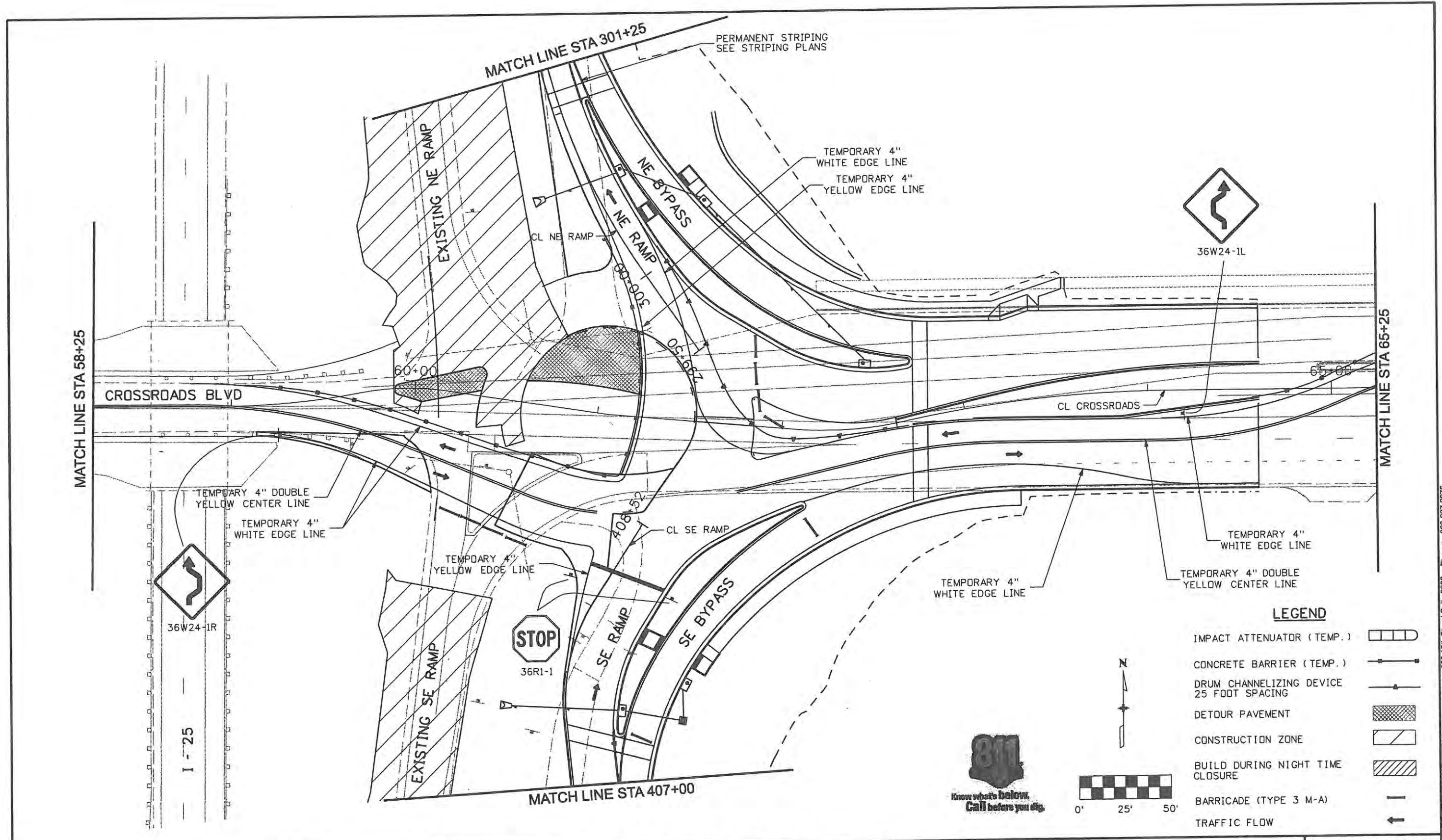
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Detailer: JBK	
Sheet Subset: TCP	Subset Sheets: TC22 of 47

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17244
Sheet Number 180

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**LEGEND**

IMPACT ATTENUATOR (TEMP.)	
CONCRETE BARRIER (TEMP.)	
DRUM CHANNELIZING DEVICE 25 FOOT SPACING	
DETOUR PAVEMENT	
CONSTRUCTION ZONE	
BUILD DURING NIGHT TIME CLOSURE	
BARRICADE (TYPE 3 M-A)	
TRAFFIC FLOW	

Computer File Information	
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Print Date: 5/4/2009	Initials: JJW
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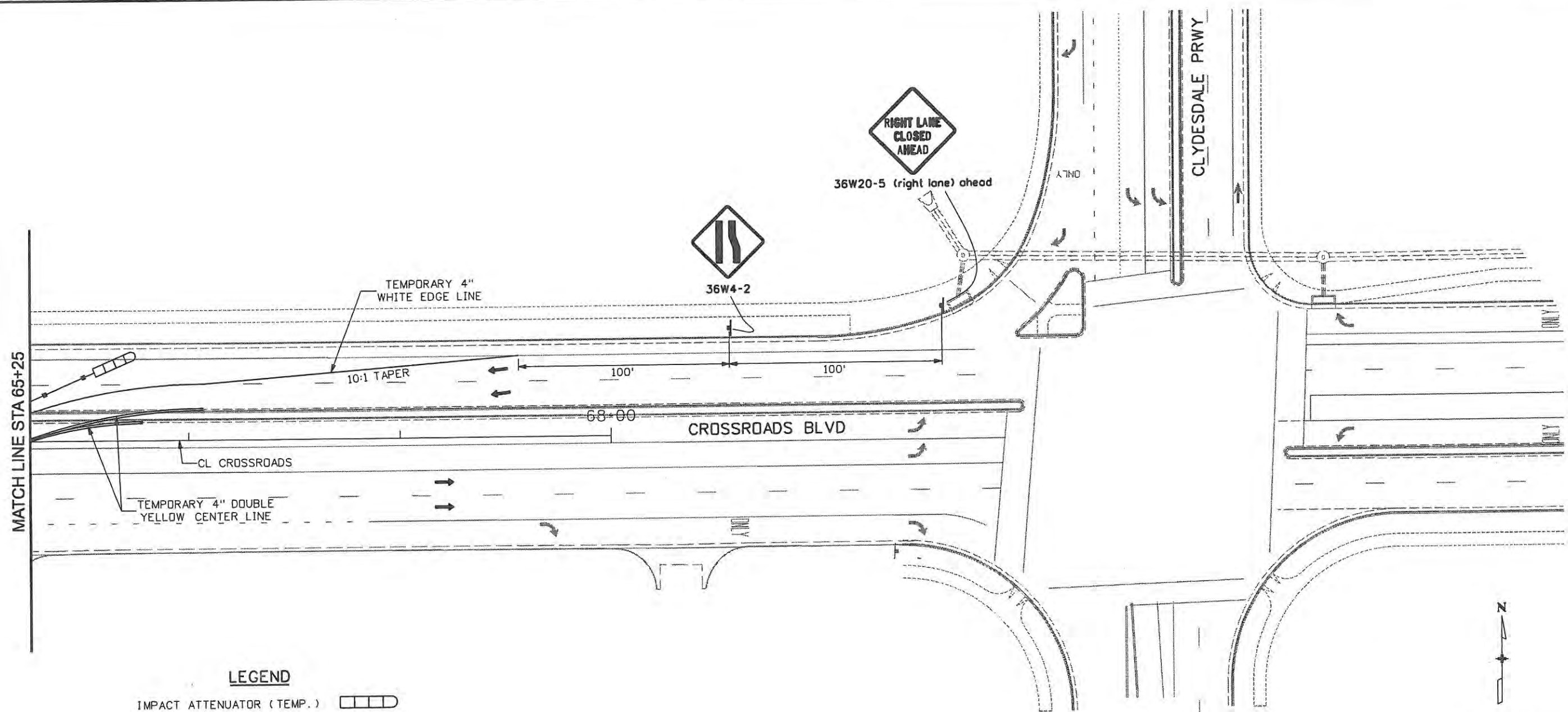
**Colorado Department of Transportation**

No Revisions: 9/14/11
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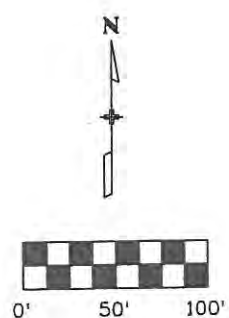
Project No./Code ES4 0253-207
17244
Sheet Number 181

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**LEGEND**

IMPACT ATTENUATOR (TEMP.)	
CONCRETE BARRIER (TEMP.)	
DRUM CHANNELIZING DEVICE 25 FOOT SPACING	
DETOUR PAVEMENT	
CONSTRUCTION ZONE	
BUILD DURING NIGHT TIME CLOSURE	
BARRICADE (TYPE 3 M-A)	
TRAFFIC FLOW	





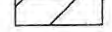





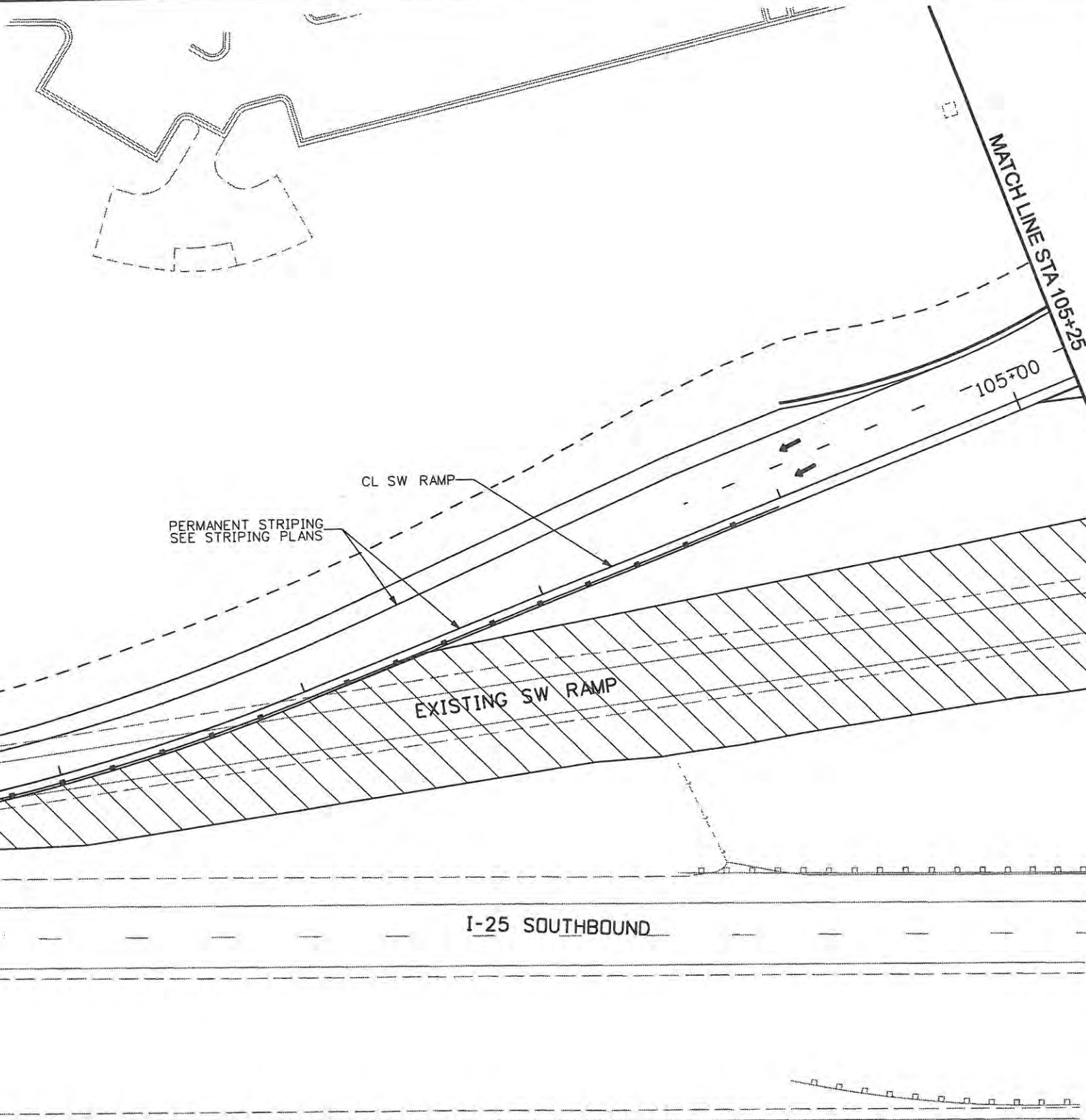
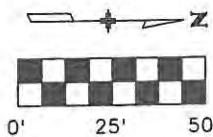
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Creation Date: Date	Initials: JBK	Date:	Comments	Init.	 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 Colorado Department of Transportation	No Revisions: 9/14/11		ES4 0253-207	
Print Date: 5/4/2009	Initials: JJW						Revised:		17244	
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Horiz. Scale: 1:50	Vert. Scale: As Noted						Designer: JJW		Structure Numbers	
					Detailer: JBK		Subset Sheets: TC24 of 47			
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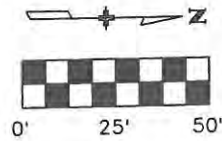
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- IMPACT ATTENUATOR (TEMP.) 
- CONCRETE BARRIER (TEMP.) 
- DRUM CHANNELIZING DEVICE 25 FOOT SPACING 
- DETOUR PAVEMENT 
- CONSTRUCTION ZONE 
- BUILD DURING NIGHT TIME CLOSURE 
- BARRICADE (TYPE 3 M-A) 
- TRAFFIC FLOW 



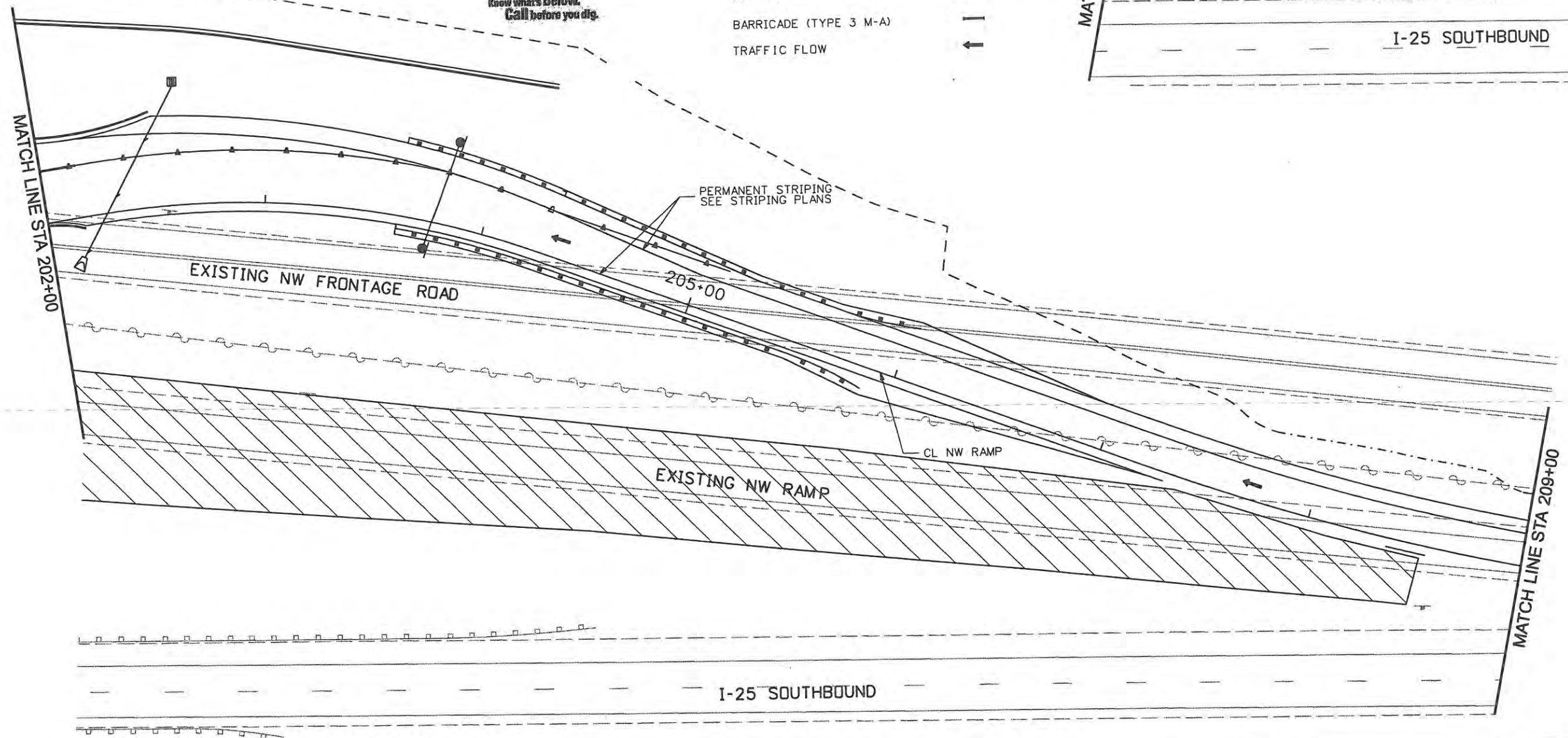
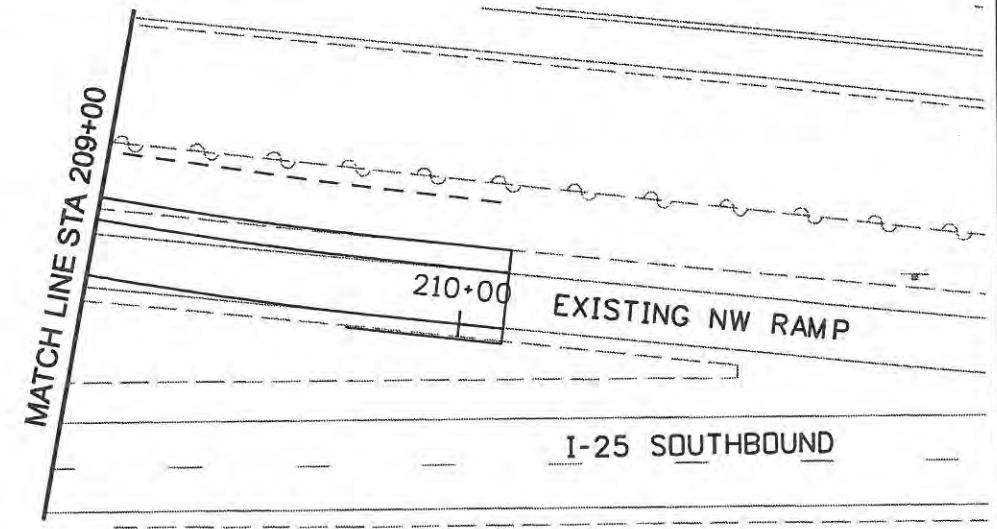
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Creation Date: 1/11/07	Initials: JBK	Date:	Comments:	Init.	 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000 <b>Colorado Department of Transportation</b>	PHASE 4 No Revisions: 9/14/11		ES4 0253-207		
Print Date: 5/4/2009	Initials: JJW					Revised:	Designer: JJW	Structure Numbers:	17244	
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Horiz. Scale: 1:50	Vert. Scale: As Noted						Sheet Subset: TCP	Subset Sheets: TC25 of 47		

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**LEGEND**

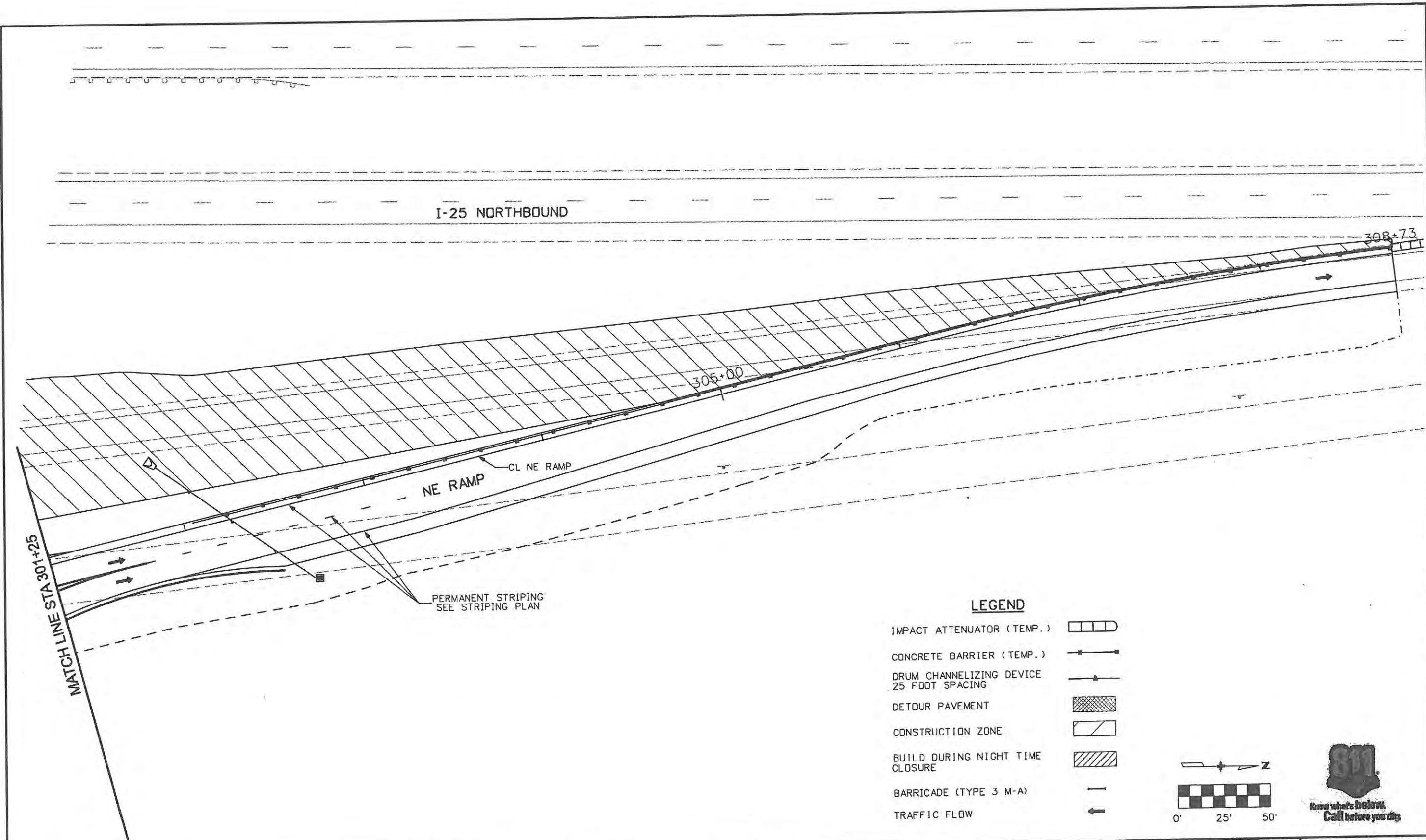
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- CONCRETE BARRIER (TEMP.)
- DRUM CHANNELIZING DEVICE 25 FOOT SPACING
- DETOUR PAVEMENT
- CONSTRUCTION ZONE
- BUILD DURING NIGHT TIME CLOSURE
- BARRICADE (TYPE 3 M-A)
- TRAFFIC FLOW



<b>Computer File Information</b>		<b>Sheet Revisions</b>			<b>CITY OF LOVELAND</b>		<b>TRAFFIC CONTROL PLANS</b>		<b>Project No./Code</b>		
Creation Date: 1/11/07	Initials: JBK	Date:	Comments:	Init.	 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000 <b>Colorado Department of Transportation</b>		<b>PHASE 4</b>		ES4 0253-207		
Print Date: 5/4/2009	Initials:						No Revisions: 9/14/11	Designer: JJW	Structure Numbers	17244	
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Horiz. Scale: 1:50	Vert. Scale: As Noted						Void:	Sheet Subset: TCP	Subset Sheets: TC26 of 47		

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Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials:
File Name: 0610031800tcp407.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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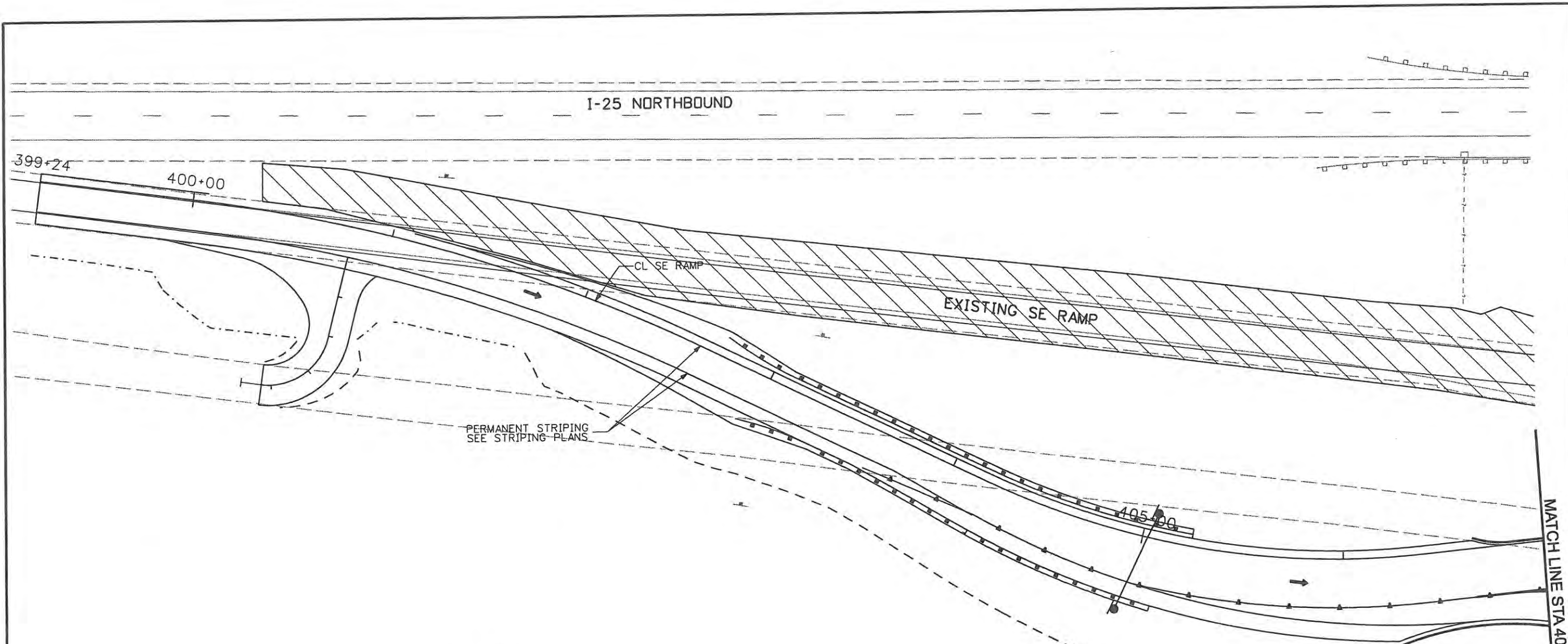
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TRAFFIC CONTROL PLANS PHASE 4		
Designer: JJW	Structure Numbers	
Detailer: JBK		
Sheet Subset: TCP	Subset Sheets: TC27 of 47	

Project No./Code	ES4 0253-207
	17244
Sheet Number	185

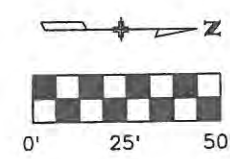
**WILSON & COMPANY**  
 Engineers & Architects  
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**LEGEND**

- IMPACT ATTENUATOR (TEMP.)
- CONCRETE BARRIER (TEMP.)
- DRUM CHANNELIZING DEVICE 25 FOOT SPACING
- DETOUR PAVEMENT
- CONSTRUCTION ZONE
- BUILD DURING NIGHT TIME CLOSURE
- BARRICADE (TYPE 3 M-A)
- TRAFFIC FLOW



Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials: JJW
File Name: 0610031800tcp408.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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No Revisions: 9/14/11
Revised:
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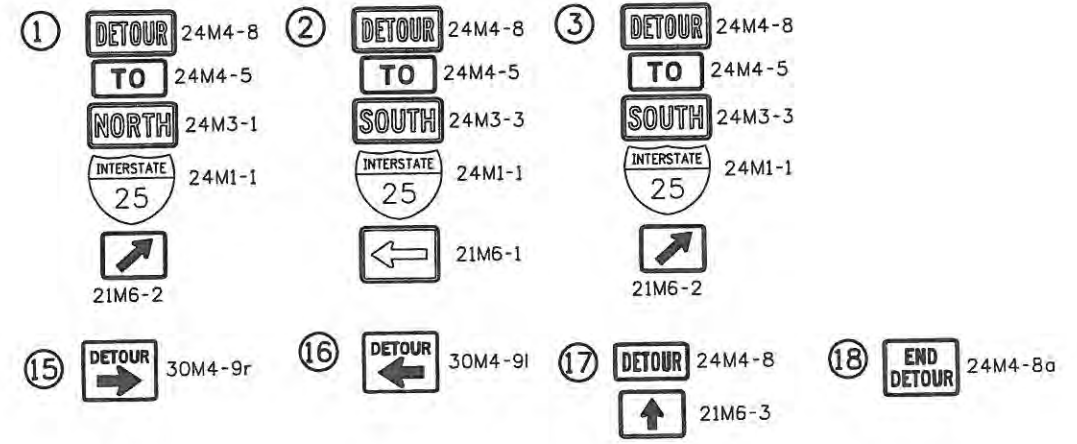
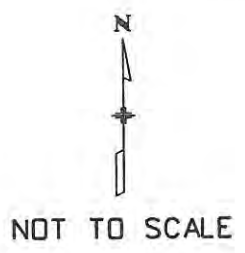
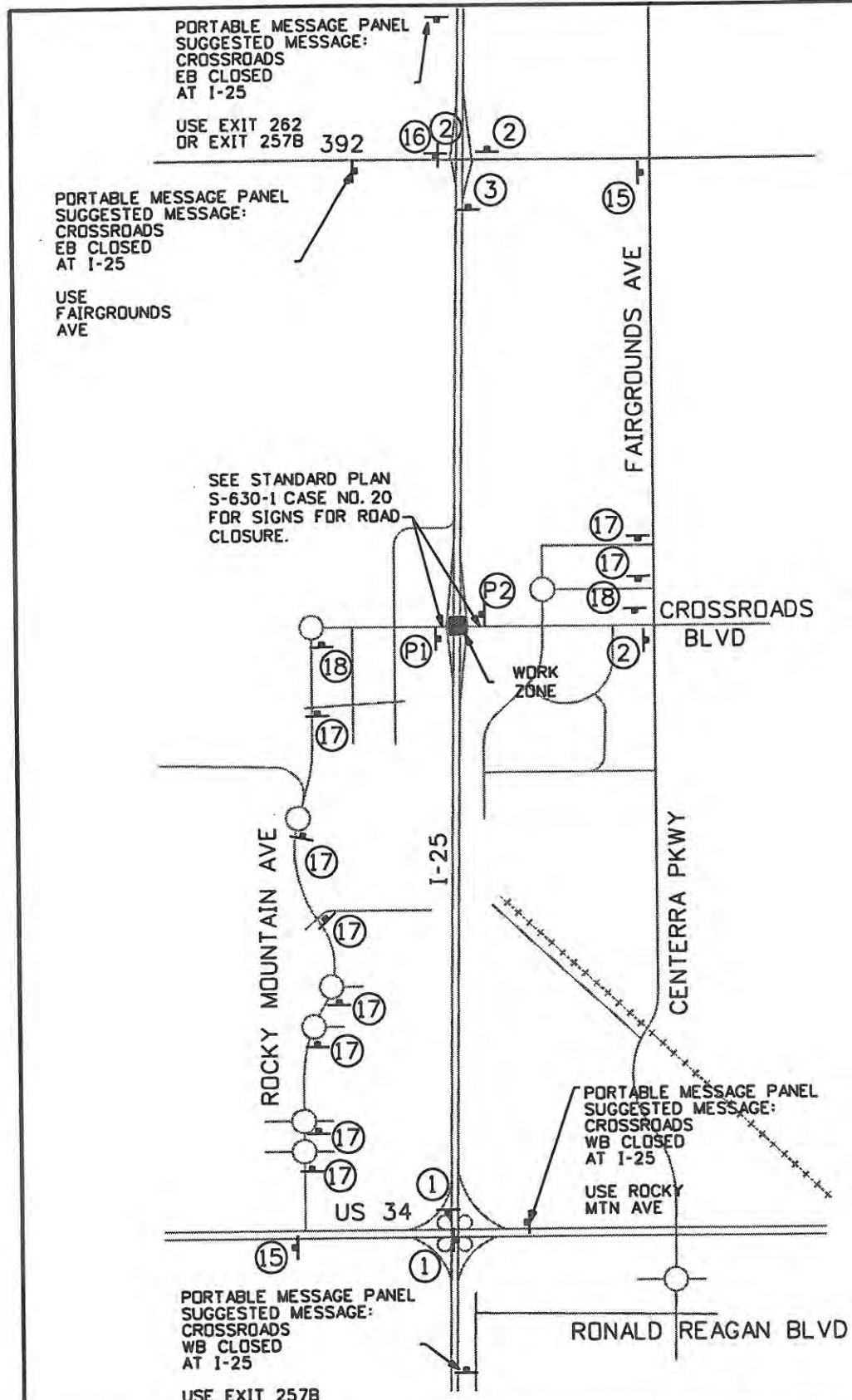
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Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: TCP	Subset Sheets: TC28 of 47

Project No./Code ES4 0253-207
17244
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MATCH LINE STA 407+00

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IT IS ASSUMED THIS DETOUR WILL  
BE IN PLACE FOR 2 WEEKENDS DURNING PHASE 5.

- NOTES:
1. ALL TRAFFIC CONTROL DEVICES SHALL COMPLY WITH THE MUTCD AND THE COLORADO SUPPLEMENT THERETO, THE STANDARD HIGHWAY SIGNS AND THE COLORADO SUPPLEMENT THERETO, THE NCHRP 350 REQUIREMENTS, AND THE CDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
  2. SPACING OF SIGNS WILL VARY DEPENDING ON LOCAL CONDITIONS.
  3. FLASHING BEACONS AND/OR FLAGS MAY BE USED TO CALL ATTENTION TO THE ADVANCE WARNING SIGNS. THEY MAY ALSO BE USED ON TYPE III BARRICADES.
  4. FOR NIGHTTIME USE, CHANNELIZING DEVICES SHALL BE RETROREFLECTORIZED OR EQUIPPED WITH LIGHTING DEVICES TO MAXIMIZE VISIBILITY.
  5. PAYMENT FOR TRAFFIC CONTROL DEVICES SHALL BE FOR THE MAXIMUM NUMBER IN USE AT ANY ONE TIME. PAYMENT SHALL INCLUDE THE REMOVAL OF THE ITEM, AND SHALL INCLUDE RESETS.
  6. CONTACT CDOT TRAFFIC OPERATIONS CENTER AT 303-512-5830 TO CHANGE MESSAGES ON PERMANENT VARIABLE MESSAGE SIGNS ON I-25.

Computer File Information	
Creation Date: Date	Initials: JBK
Print Date: 5/4/2009	Initials: JBK
File Name: 0610031800TCPDetour.dgn	
Horiz. Scale: 1:100	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

Colorado Department  
of Transportation

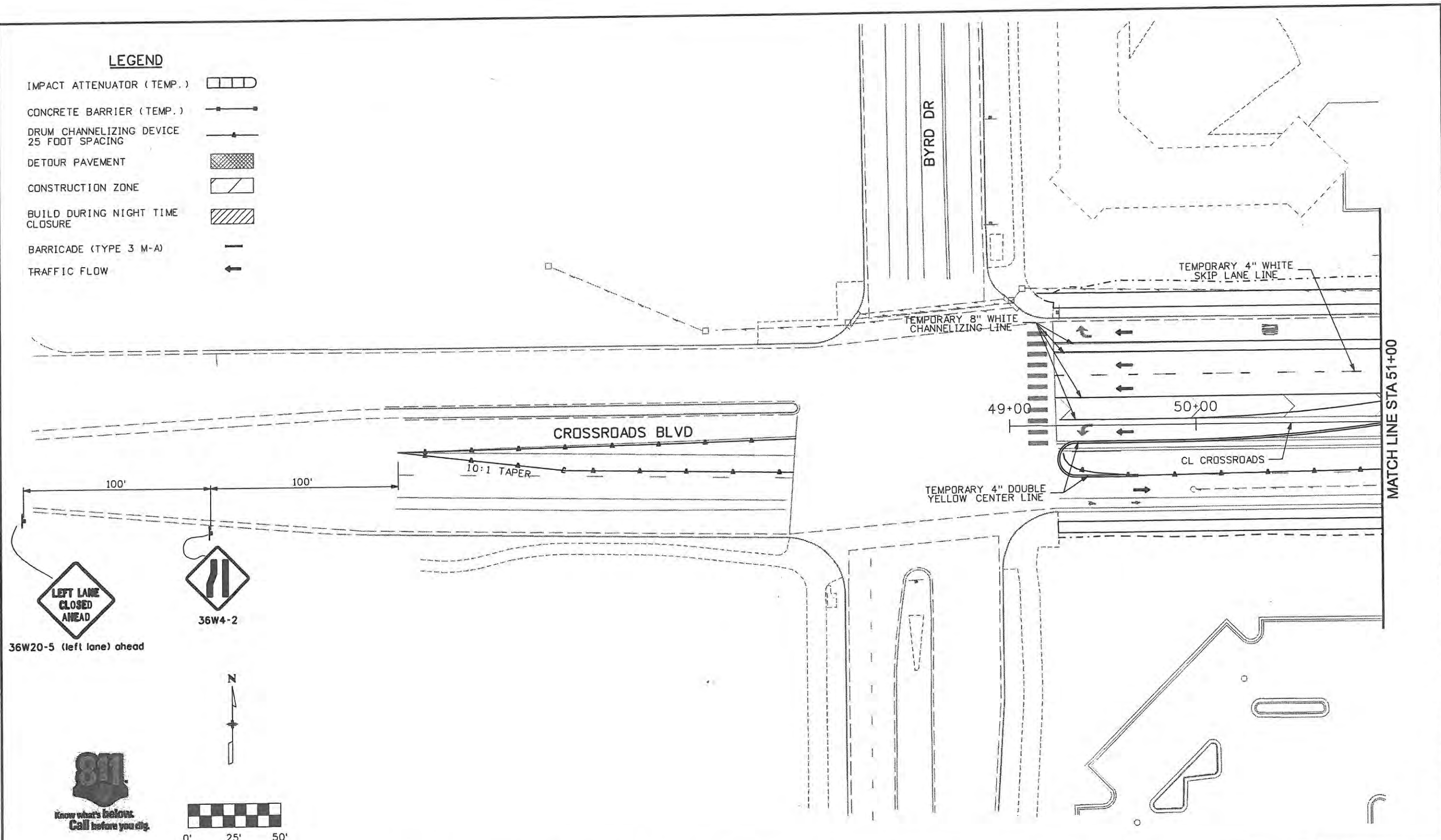
No Revisions: 9/14/11
Revised:
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TRAFFIC CONTROL PLANS PHASE 5 DETOUR	
Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: Subset	Subset Sheets: TC29 of 47

Project No./Code ES4 0253-207
17244
Sheet Number 187

**LEGEND**

- IMPACT ATTENUATOR (TEMP.)
- CONCRETE BARRIER (TEMP.)
- DRUM CHANNELIZING DEVICE 25 FOOT SPACING
- DETOUR PAVEMENT
- CONSTRUCTION ZONE
- BUILD DURING NIGHT TIME CLOSURE
- BARRICADE (TYPE 3 M-A)
- TRAFFIC FLOW



Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials: JJW
File Name: 0610031800tcp501.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**  
 500 E. THIRD STREET  
 LOVELAND, CO 80537  
 970-962-2000

**Colorado Department of Transportation**

No Revisions: 9/14/11
Revised:
Void:

TRAFFIC CONTROL PLANS PHASE 5	
Designer: JJW	Structure Numbers
Detailer: JBK	Subset Sheets: TC30 of 47
Sheet Subset: TCP	

Project No./Code ES4 0253-207
17244
Sheet Number 188

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 999 18th Street Suite 2600  
 Denver, CO 80202  
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 Fax: 303-297-2693



**LEGEND**

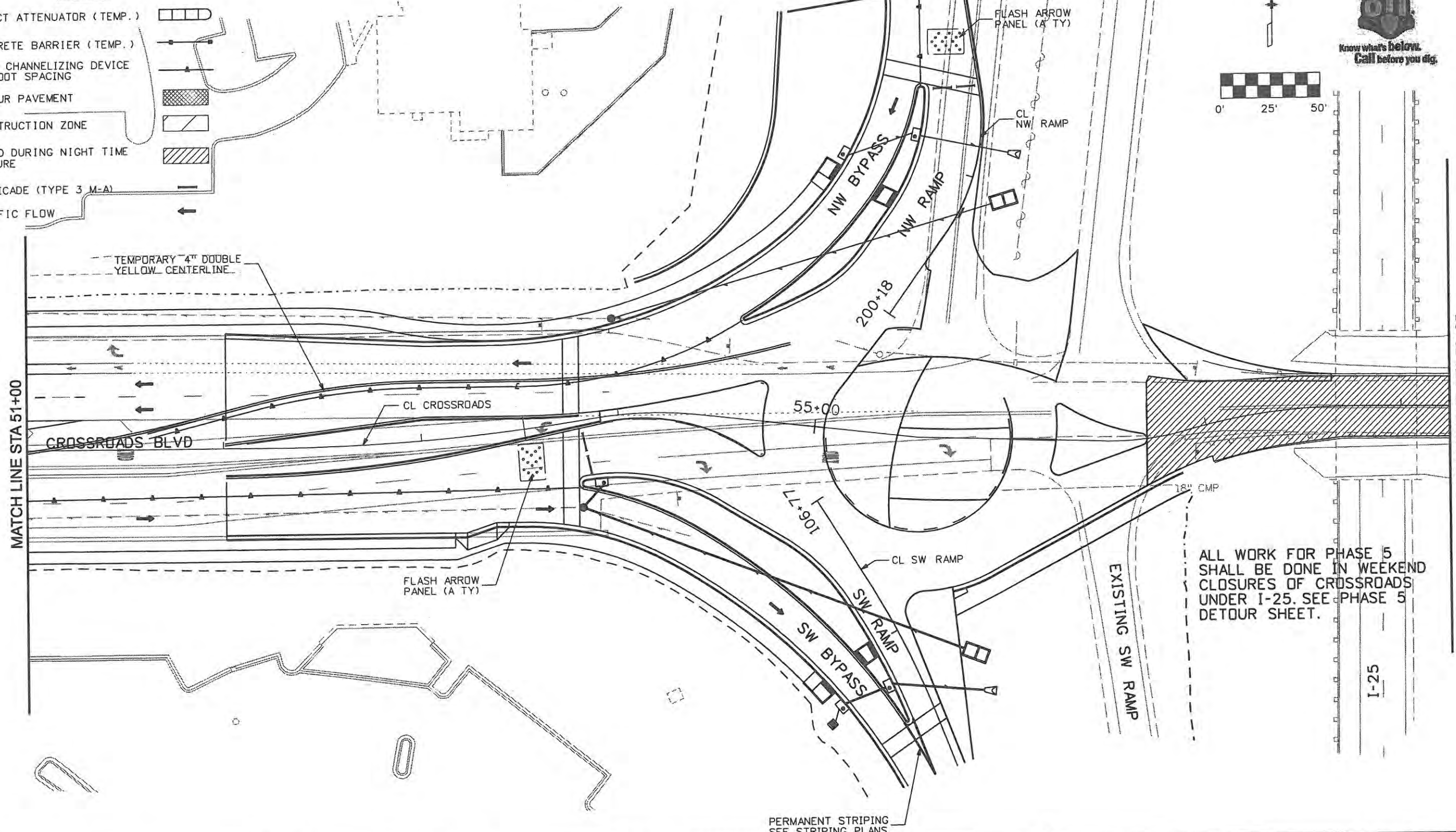
- IMPACT ATTENUATOR (TEMP.)
- CONCRETE BARRIER (TEMP.)
- DRUM CHANNELIZING DEVICE 25 FOOT SPACING
- DETOUR PAVEMENT
- CONSTRUCTION ZONE
- BUILD DURING NIGHT TIME CLOSURE
- BARRICADE (TYPE 3 M-A)
- TRAFFIC FLOW



MATCH LINE STA 51+00

MATCH LINE STA 58+25

MATCH LINE STA 202+00



ALL WORK FOR PHASE 5 SHALL BE DONE IN WEEKEND CLOSURES OF CROSSROADS UNDER I-25. SEE PHASE 5 DETOUR SHEET.

PERMANENT STRIPING SEE STRIPING PLANS

Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials: JJW
File Name: 0610031800tcp502.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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970-962-2000

Colorado Department of Transportation

No Revisions: 7/14/11
Revised:
Void:

TRAFFIC CONTROL PLANS PHASE 5	
Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: TCP	Subset Sheets: TC31 of 47

Project No./Code ES4 0253-207
17244
Sheet Number 189

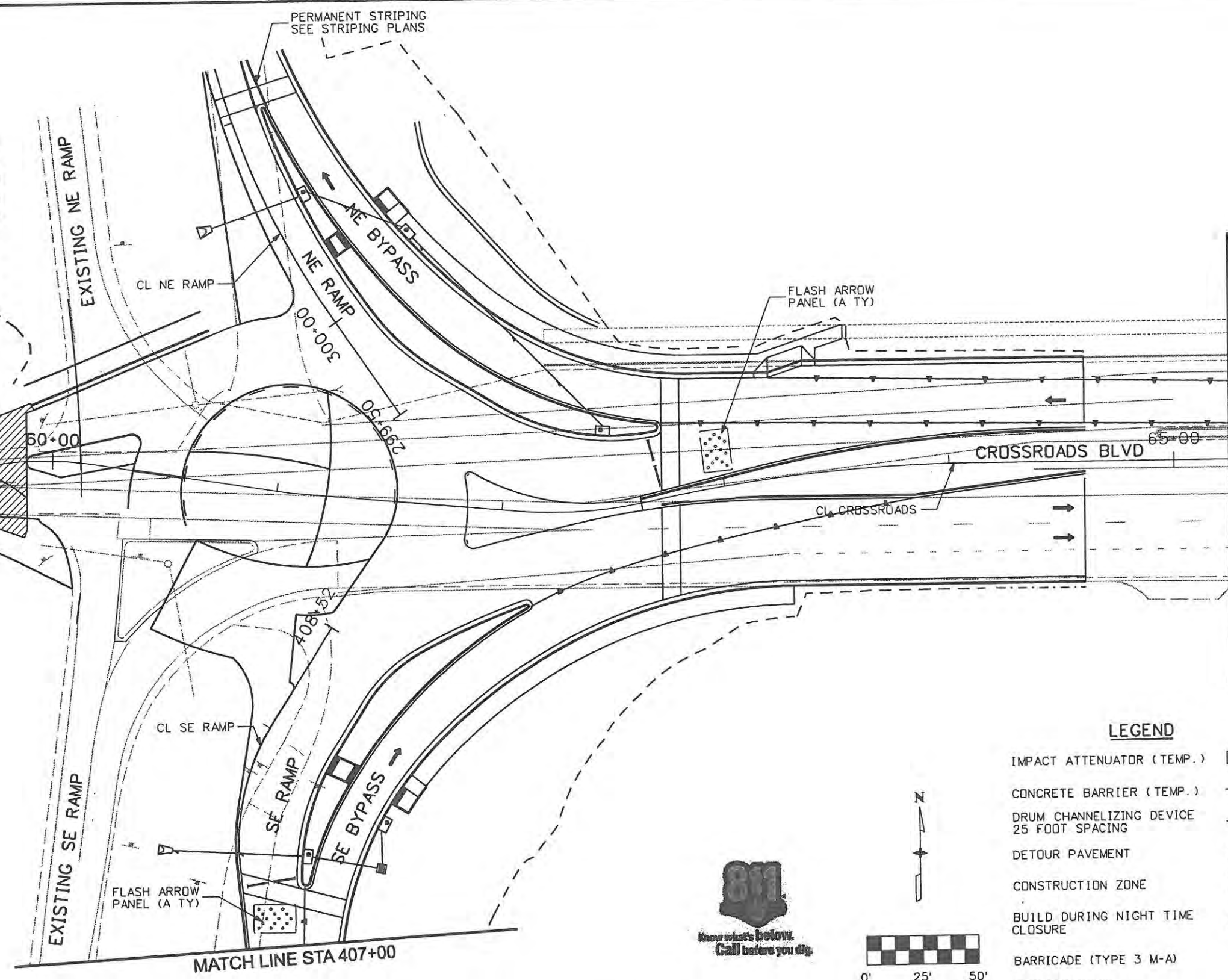
**WILSON & COMPANY**  
 Engineers & Architects  
 999 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2693

MATCH LINE STA 58+25

MATCH LINE STA 65+25

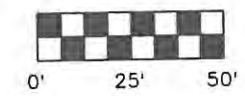
ALL WORK FOR PHASE 5 SHALL BE DONE IN WEEKEND CLOSURES OF CROSSROADS UNDER I-25. SEE PHASE 5 DETOUR SHEET.

I-25



**LEGEND**

- IMPACT ATTENUATOR (TEMP.)
- CONCRETE BARRIER (TEMP.)
- DRUM CHANNELIZING DEVICE 25 FOOT SPACING
- DETOUR PAVEMENT
- CONSTRUCTION ZONE
- BUILD DURING NIGHT TIME CLOSURE
- BARRICADE (TYPE 3 M-A)
- TRAFFIC FLOW



Computer File Information	
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File Name: 0610031800tcp503.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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970-962-2000

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No Revisions: 9/14/11
Revised:
Void:

TRAFFIC CONTROL PLANS PHASE 5		
Designer: JJW	Structure Numbers	
Detailer: JBK	Subset Sheets: TC32 of 47	
Sheet Subset: TCP		

Project No./Code ES4 0253-207
17244
Sheet Number 190

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 899 16th Street Suite 2600  
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 Phone: 303-297-2976  
 Fax: 303-297-2683



MATCH LINE STA 65+25

TEMPORARY 4" WHITE  
EDGE LINE

10:1 TAPER

100'

36W20-5 (right lane) ahead



36W4-2



36W20-5 (right lane) ahead

CLYDESDALE PKWY

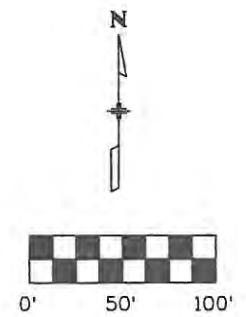
CROSSROADS BLVD

CL CROSSROADS

68+00

**LEGEND**

- IMPACT ATTENUATOR (TEMP.)
- CONCRETE BARRIER (TEMP.)
- DRUM CHANNELIZING DEVICE  
25 FOOT SPACING
- DETOUR PAVEMENT
- CONSTRUCTION ZONE
- BUILD DURING NIGHT TIME  
CLOSURE
- BARRICADE (TYPE 3 M-A)
- TRAFFIC FLOW



Computer File Information	
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Print Date: 5/4/2009	Initials: JJW
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Sheet Revisions		
Date:	Comments	Init.

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970-962-2000

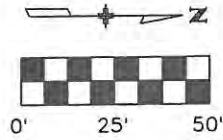
Colorado Department  
of Transportation

No Revisions: 9/14/11
Revised:
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Detailer: JBK	
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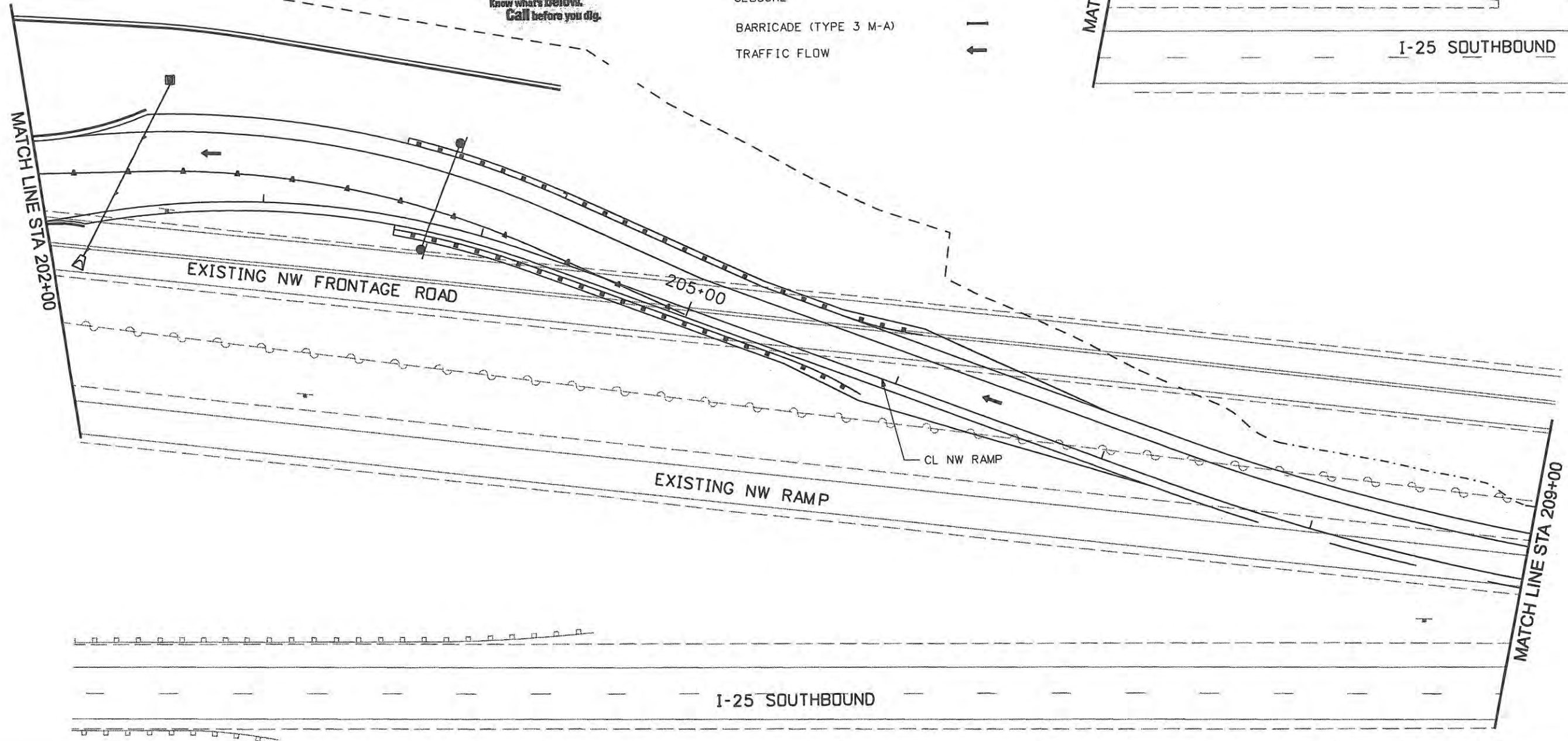
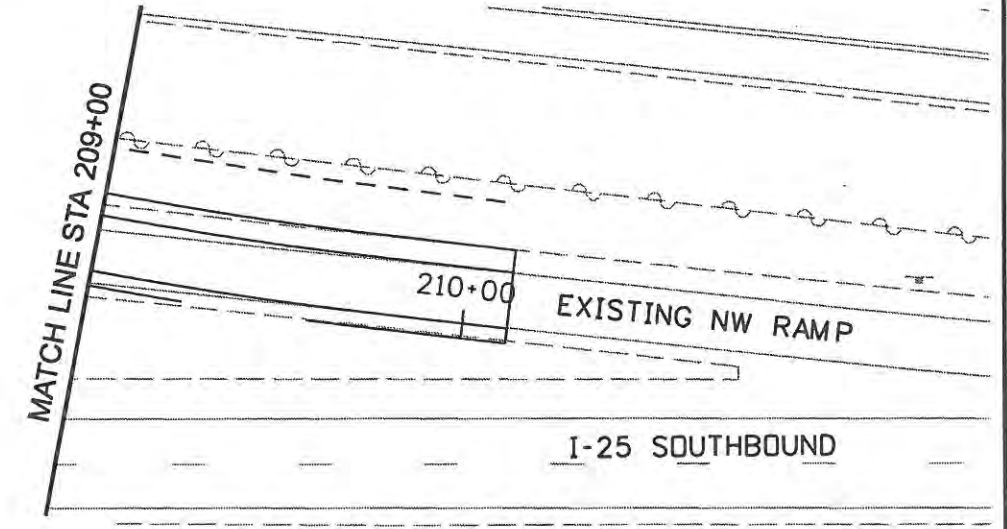
Project No./Code	ES4 0253-207
	17244
Sheet Number	191

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 Engineers & Architects  
 999 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2693



**LEGEND**

- IMPACT ATTENUATOR (TEMP.)
- CONCRETE BARRIER (TEMP.)
- DRUM CHANNELIZING DEVICE 25 FOOT SPACING
- DETOUR PAVEMENT
- CONSTRUCTION ZONE
- BUILD DURING NIGHT TIME CLOSURE
- BARRICADE (TYPE 3 M-A)
- TRAFFIC FLOW



Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials:
File Name: 0610031800tcp506.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

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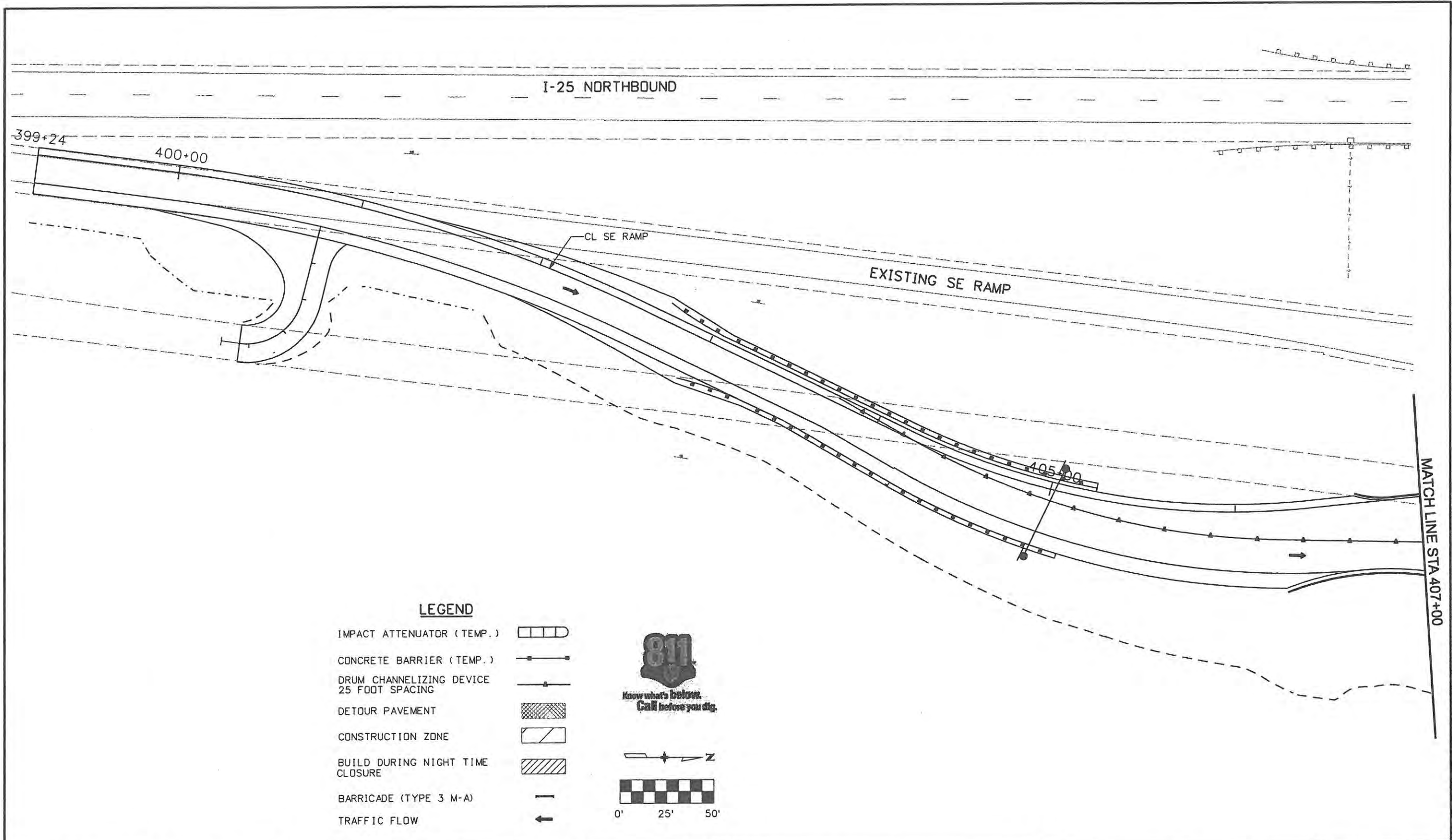
Colorado Department of Transportation

No Revisions: 9/14/11
Revised:
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Designer: JJW	Structure Numbers
Detailer: JBK	Subset Sheets: TC34 of 47
Sheet Subset: TCP	

Project No./Code ES4 0253-207
17244
Sheet Number 192





Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials: JJW
File Name: 0610031800tcp508.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
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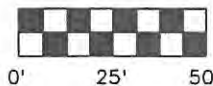
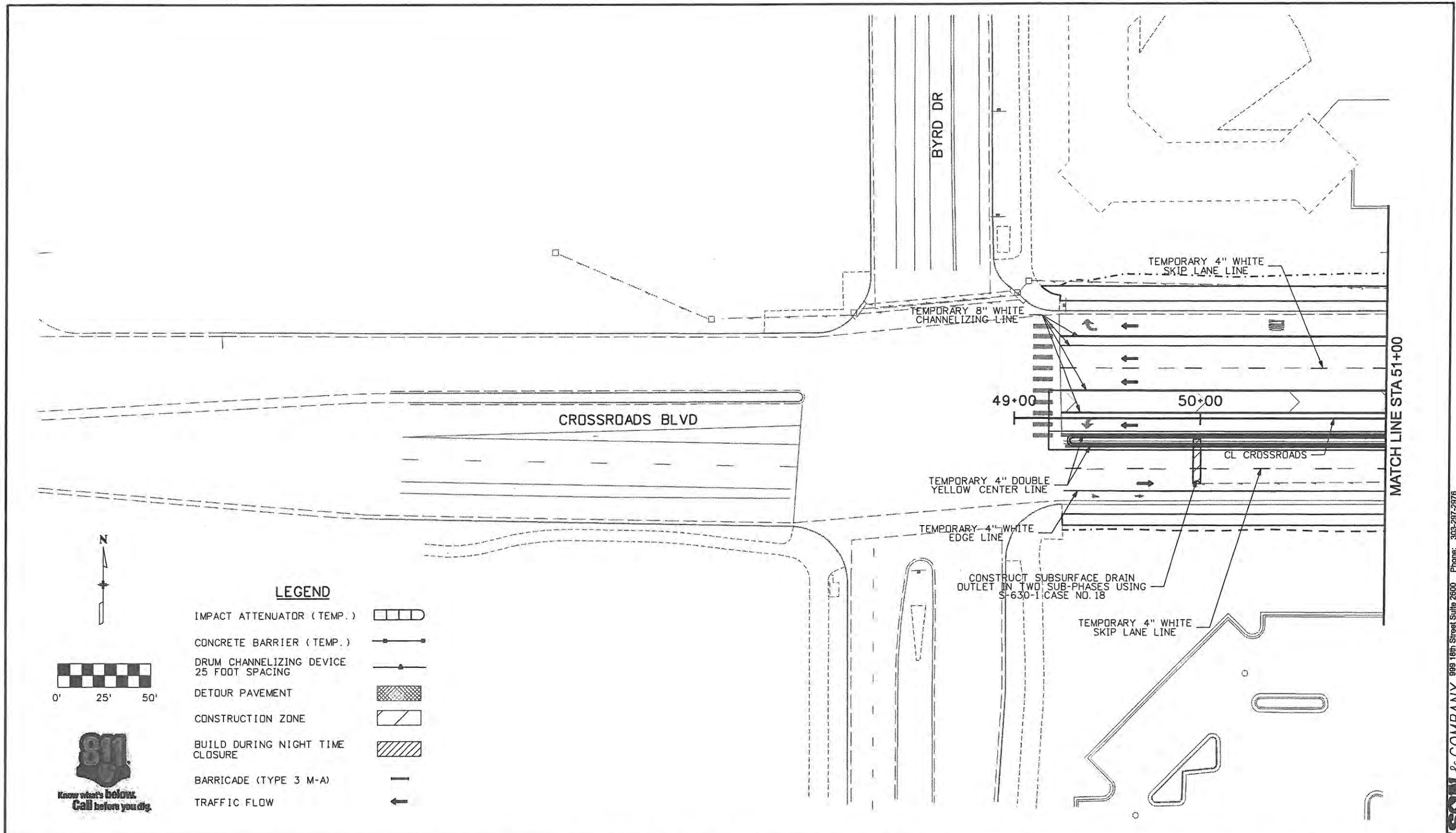
Colorado Department  
of Transportation

No Revisions: 9/14/11
Revised:
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Designer: JJW	Structure Numbers
Detailer: JBK	Subset Sheets: TC35 of 47
Sheet Subset: TCP	

Project No./Code ES4 0253-207
17244
Sheet Number 193

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 Engineers & Architects  
 999 18th Street Suite 2800    Phone: 303-297-2876  
 Denver, CO 80202            Fax: 303-297-2893



**LEGEND**

- IMPACT ATTENUATOR (TEMP.)
- CONCRETE BARRIER (TEMP.)
- DRUM CHANNELIZING DEVICE 25 FOOT SPACING
- DETOUR PAVEMENT
- CONSTRUCTION ZONE
- BUILD DURING NIGHT TIME CLOSURE
- BARRICADE (TYPE 3 M-A)
- TRAFFIC FLOW

Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials: JJW
File Name: 0610031800tcp601.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

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Colorado Department of Transportation

No Revisions: 9/14/11
Revised:
Void:

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Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: TCP	Subset Sheets: TC36 of 47

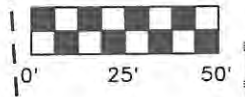
Project No./Code ES4 0253-207
17244
Sheet Number 194

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 Engineers & Architects  
 889 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
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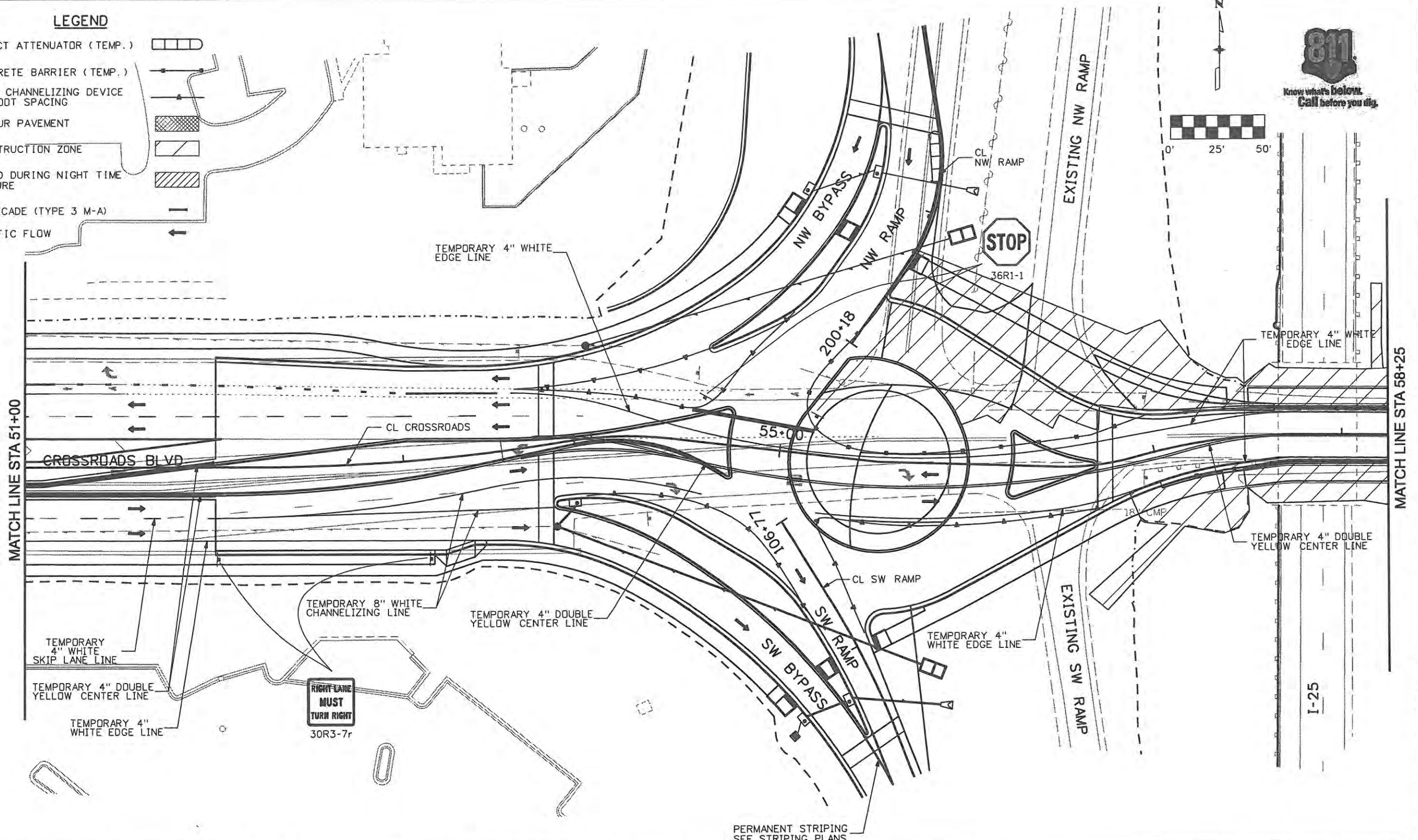
**LEGEND**

- IMPACT ATTENUATOR (TEMP.)
- CONCRETE BARRIER (TEMP.)
- DRUM CHANNELIZING DEVICE 25 FOOT SPACING
- DETOUR PAVEMENT
- CONSTRUCTION ZONE
- BUILD DURING NIGHT TIME CLOSURE
- BARRICADE (TYPE 3 M-A)
- TRAFFIC FLOW



MATCH LINE STA 51+00

MATCH LINE STA 58+25



PERMANENT STRIPING  
SEE STRIPING PLANS

**Computer File Information**

Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials: JJW
File Name: 06100318001tcp602.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

**Sheet Revisions**

Date:	Comments	Init.

**CITY OF LOVELAND**



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970-962-2000



Colorado Department  
of Transportation

**TRAFFIC CONTROL PLANS**

No Revisions: 9/14/11
Revised:
Void:

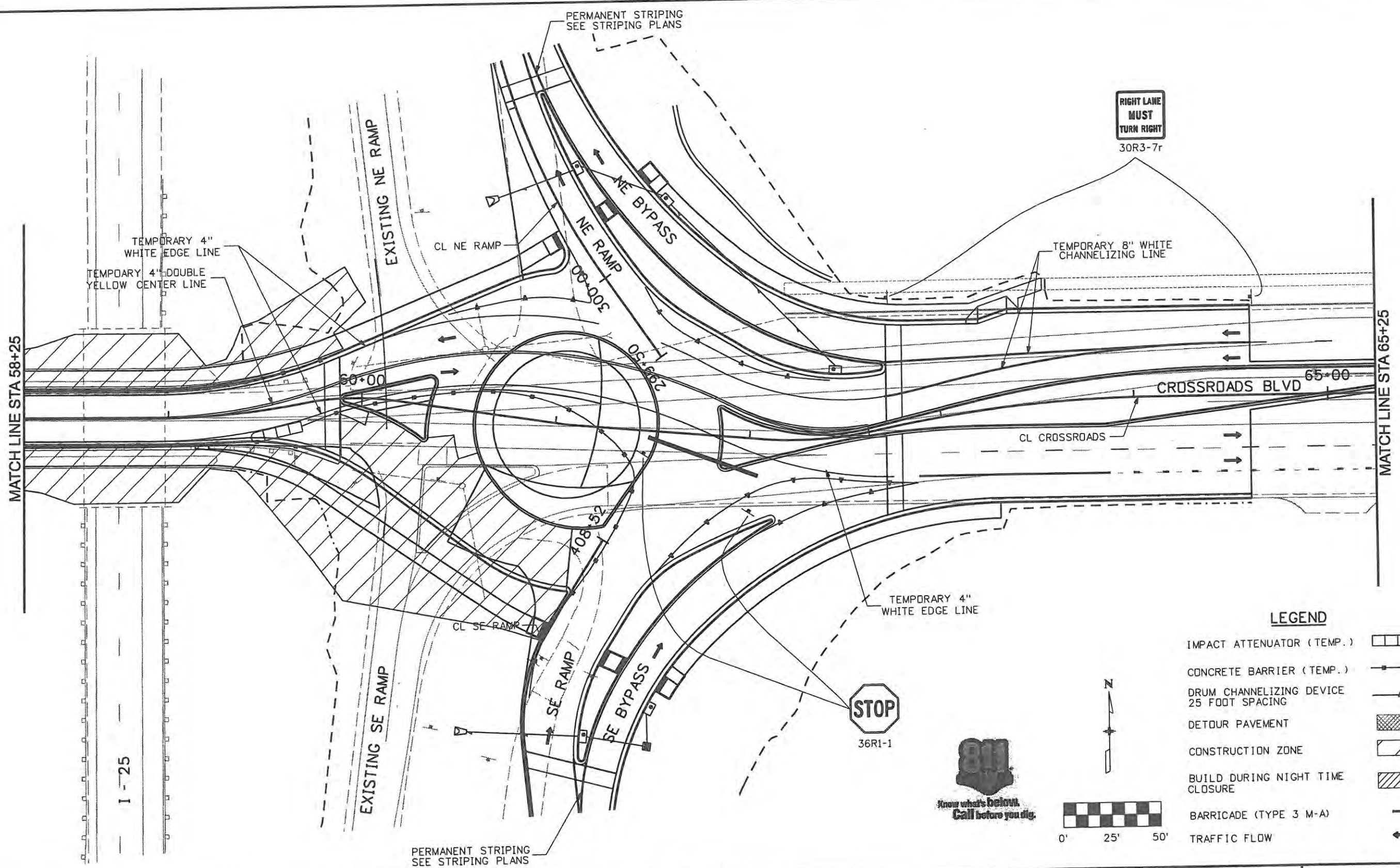
**TRAFFIC CONTROL PLANS  
PHASE 6**

Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: TCP	Subset Sheets: TC37 of 47

**Project No./Code**

ES4 0253-207
17244
Sheet Number 195

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Denver, CO 80202  
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Fax: 303-297-2893



Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials: JJW
File Name: 0610031800tcp603.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

Colorado Department of Transportation

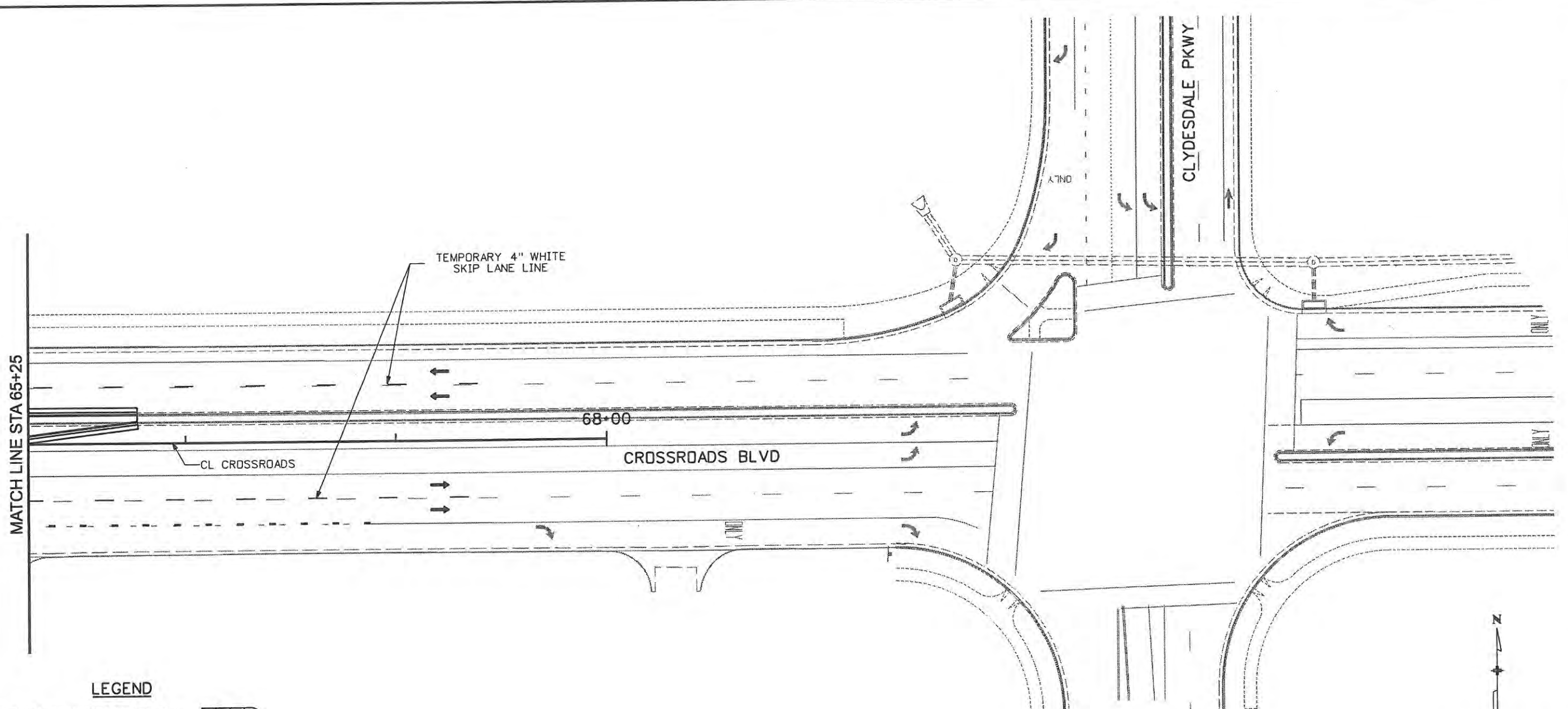
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Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: TCP	Subset Sheets: TC38 of 47

Project No./Code ES4 0253-207
17244
Sheet Number 196

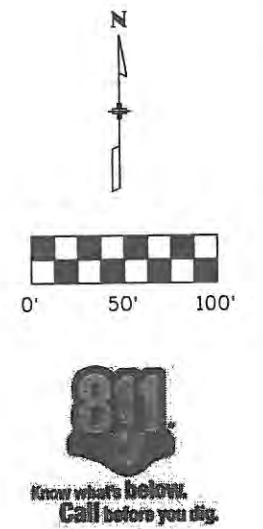
WILSON & COMPANY  
 Engineers & Architects  
 999 16th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2576  
 Fax: 303-297-2683





**LEGEND**

- IMPACT ATTENUATOR (TEMP.)
- CONCRETE BARRIER (TEMP.)
- DRUM CHANNELIZING DEVICE 25 FOOT SPACING
- DETOUR PAVEMENT
- CONSTRUCTION ZONE
- BUILD DURING NIGHT TIME CLOSURE
- BARRICADE (TYPE 3 M-A)
- TRAFFIC FLOW



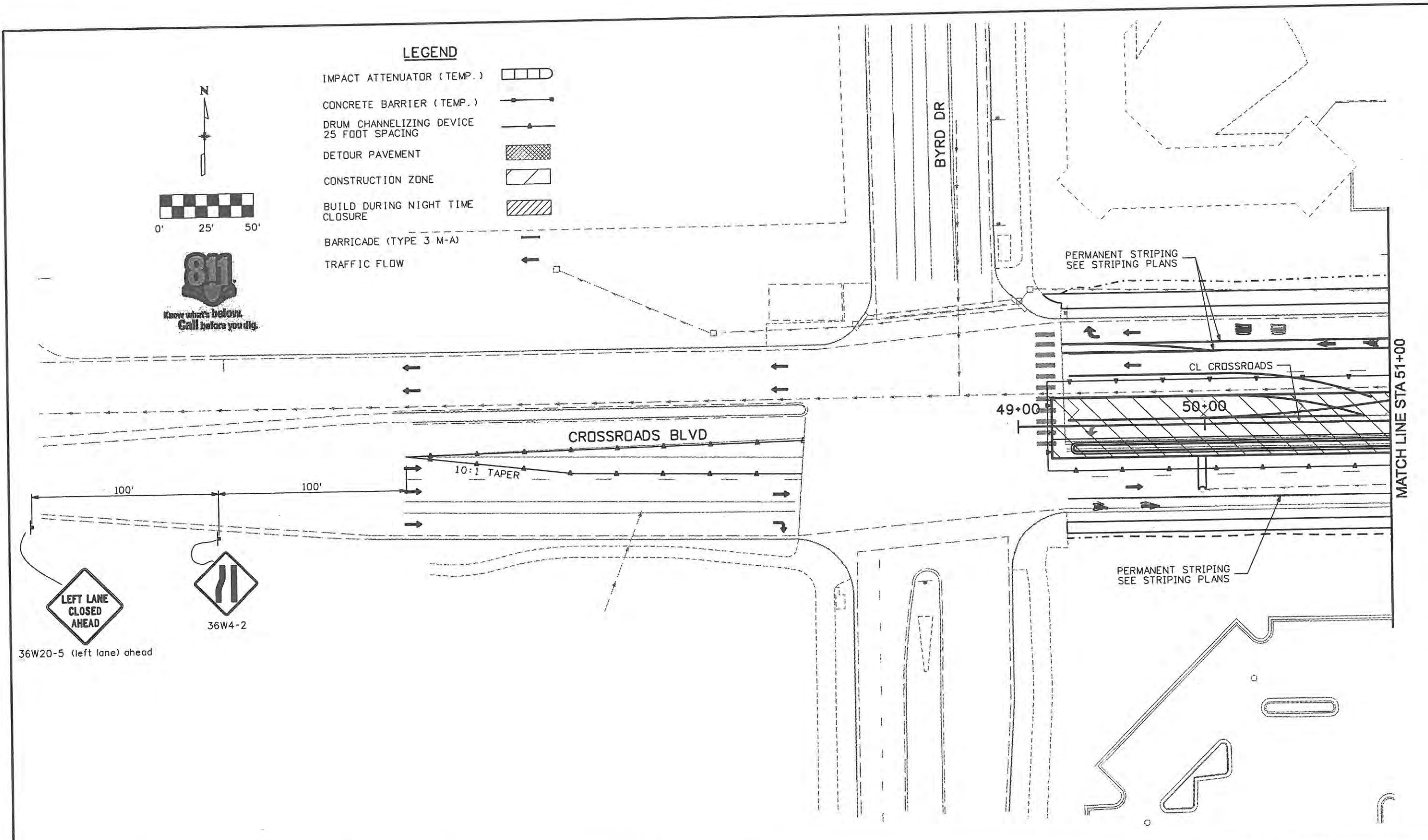
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Creation Date: Date	Initials: JBK	Date:	Comments	Init.	 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000		<b>PHASE 6</b>		ES4 0253-207		
Print Date: 5/4/2009	Initials: JJW						 Colorado Department of Transportation		Designer: JJW	Structure	17244
File Name: 0610031800tcp604.dgn							No Revisions: 9/14/11	Detailer: JBK	Numbers		
Horiz. Scale: 1:50	Vert. Scale: As Noted						Revised:	Sheet Subset: TCP	Subset Sheets: TC39 of 47	Sheet Number 197	
						Void:					

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 Fax: 303-297-2893



**LEGEND**

IMPACT ATTENUATOR (TEMP.)	
CONCRETE BARRIER (TEMP.)	
DRUM CHANNELIZING DEVICE 25 FOOT SPACING	
DETOUR PAVEMENT	
CONSTRUCTION ZONE	
BUILD DURING NIGHT TIME CLOSURE	
BARRICADE (TYPE 3 M-A)	
TRAFFIC FLOW	



Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials: JJW
File Name: 0610031800tcp701.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

Colorado Department of Transportation

No Revisions: 9/14/11
Revised:
Void:

TRAFFIC CONTROL PLANS PHASE 7		
Designer: JJW	Structure Numbers	
Detailer: JBK	Subset Sheets: TC40 of 47	
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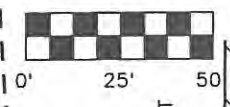
Project No./Code ES4 0253-207
17244
Sheet Number 198

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 Engineers & Architects  
 999 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2876  
 Fax: 303-297-2693



**LEGEND**

- IMPACT ATTENUATOR (TEMP.)
- CONCRETE BARRIER (TEMP.)
- DRUM CHANNELIZING DEVICE 25 FOOT SPACING
- DETOUR PAVEMENT
- CONSTRUCTION ZONE
- BUILD DURING NIGHT TIME CLOSURE
- BARRICADE (TYPE 3 M-A)
- TRAFFIC FLOW



CONSTRUCT CURB AND EMBANKMENT PROTECTOR USING S-630-1 CASE NO. 11 SHOULDER WORK

CONSTRUCT CURB AND EMBANKMENT PROTECTOR USING S-630-1 CASE NO. 11 SHOULDER WORK

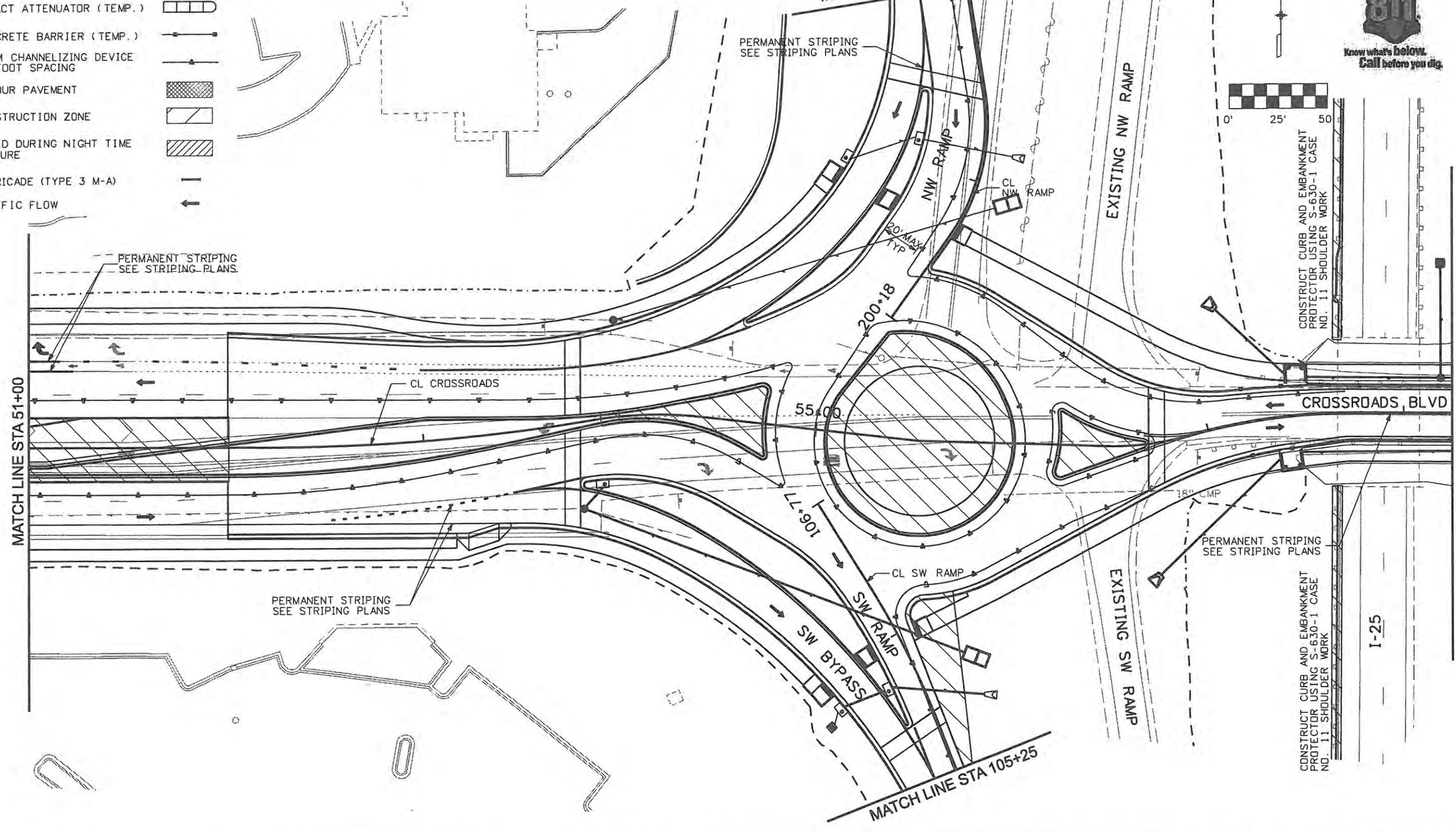
I-25

MATCH LINE STA 51+00

MATCH LINE STA 202+00

MATCH LINE STA 58+25

MATCH LINE STA 105+25



Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials: JJW
File Name: 0610031800tcp702.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

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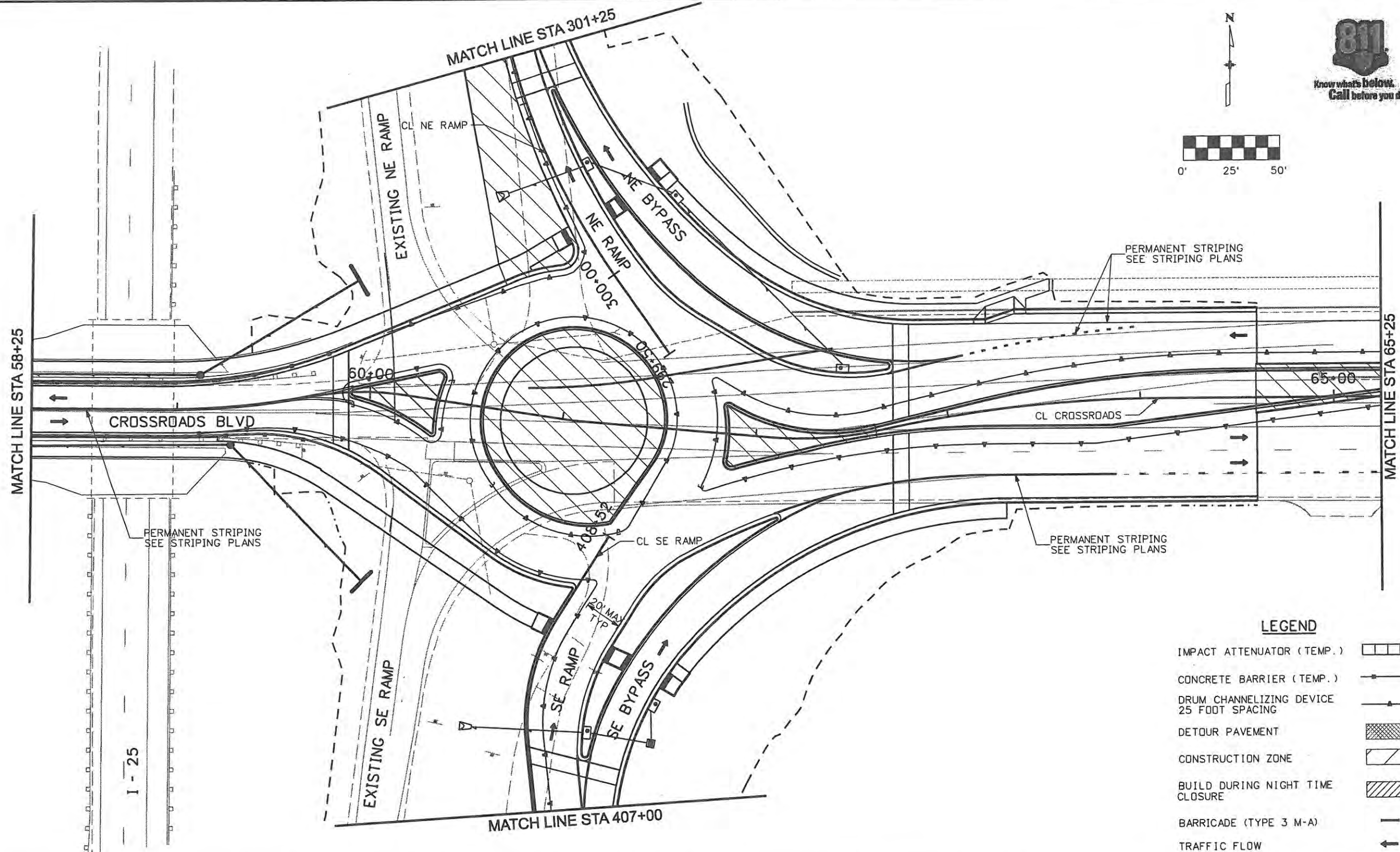
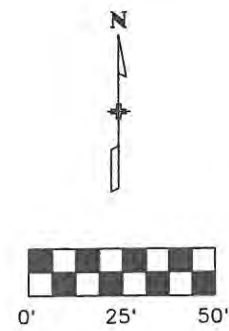
Colorado Department of Transportation

No Revisions: 9/14/11
Revised:
Void:

TRAFFIC CONTROL PLANS PHASE 7	
Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: TCP	Subset Sheets: TC41 of 47

Project No./Code ES4 0253-207
17244
Sheet Number 199

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 Denver, CO 80202  
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 Fax: 303-297-2893



**LEGEND**

IMPACT ATTENUATOR (TEMP.)	
CONCRETE BARRIER (TEMP.)	
DRUM CHANNELIZING DEVICE 25 FOOT SPACING	
DETOUR PAVEMENT	
CONSTRUCTION ZONE	
BUILD DURING NIGHT TIME CLOSURE	
BARRICADE (TYPE 3 M-A)	
TRAFFIC FLOW	

Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials: JJW
File Name: 0610031800tcp703.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

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970-962-2000

Colorado Department  
of Transportation

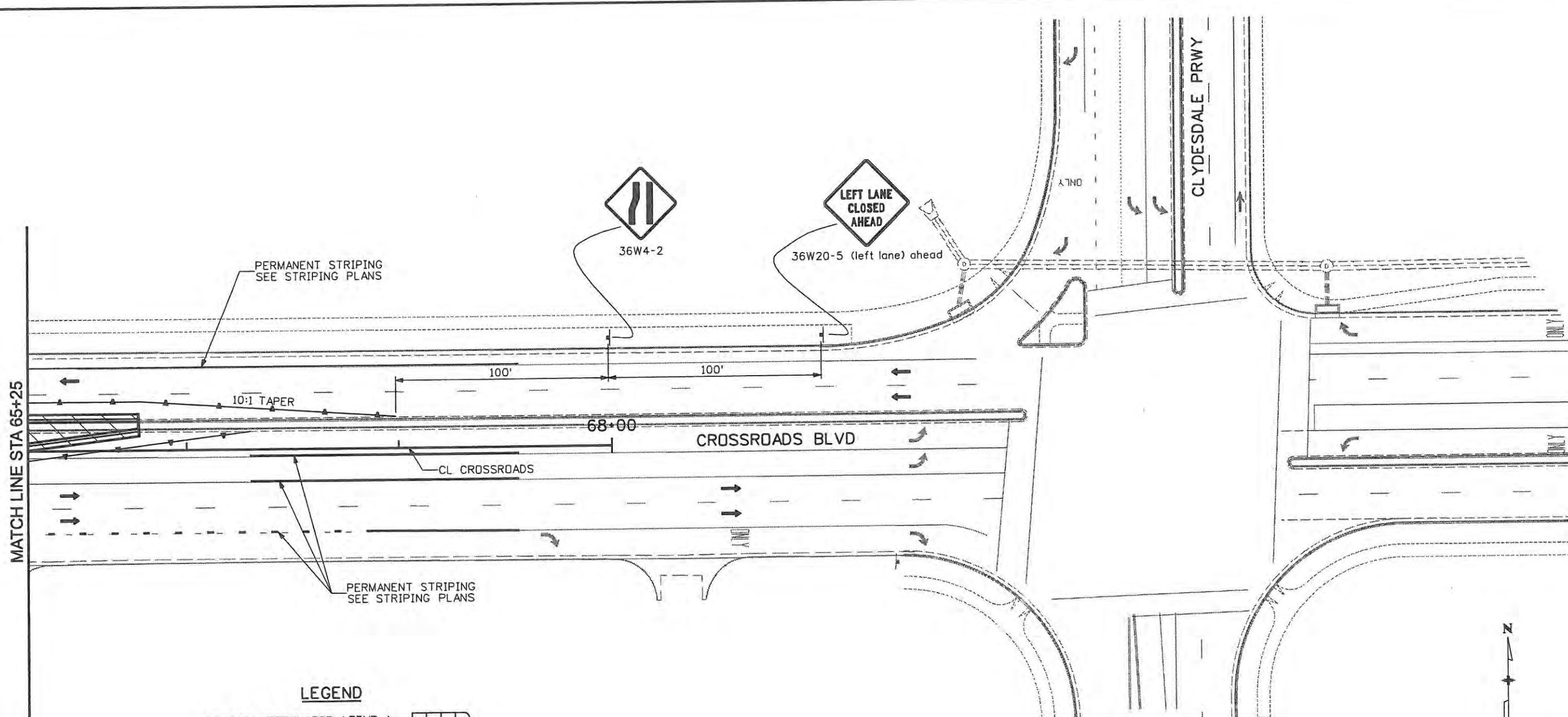
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Revised:
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TRAFFIC CONTROL PLANS PHASE 7	
Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: TCP	Subset Sheets: TC42 of 47

Project No./Code ES4 0253-207
17244
Sheet Number 200

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 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2693





MATCH LINE STA 65+25

PERMANENT STRIPING  
SEE STRIPING PLANS

36W4-2

36W20-5 (left lane) ahead

10:1 TAPER

100'

100'

68+00

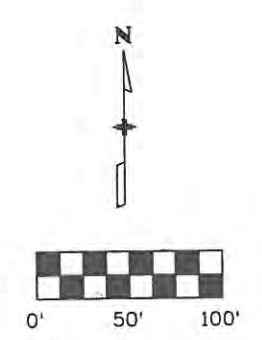
CROSSROADS BLVD

CL CROSSROADS

PERMANENT STRIPING  
SEE STRIPING PLANS

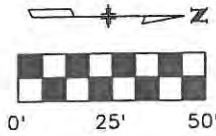
**LEGEND**

- IMPACT ATTENUATOR (TEMP.)
- CONCRETE BARRIER (TEMP.)
- DRUM CHANNELIZING DEVICE  
25 FOOT SPACING
- DETOUR PAVEMENT
- CONSTRUCTION ZONE
- BUILD DURING NIGHT TIME  
CLOSURE
- BARRICADE (TYPE 3 M-A)
- TRAFFIC FLOW



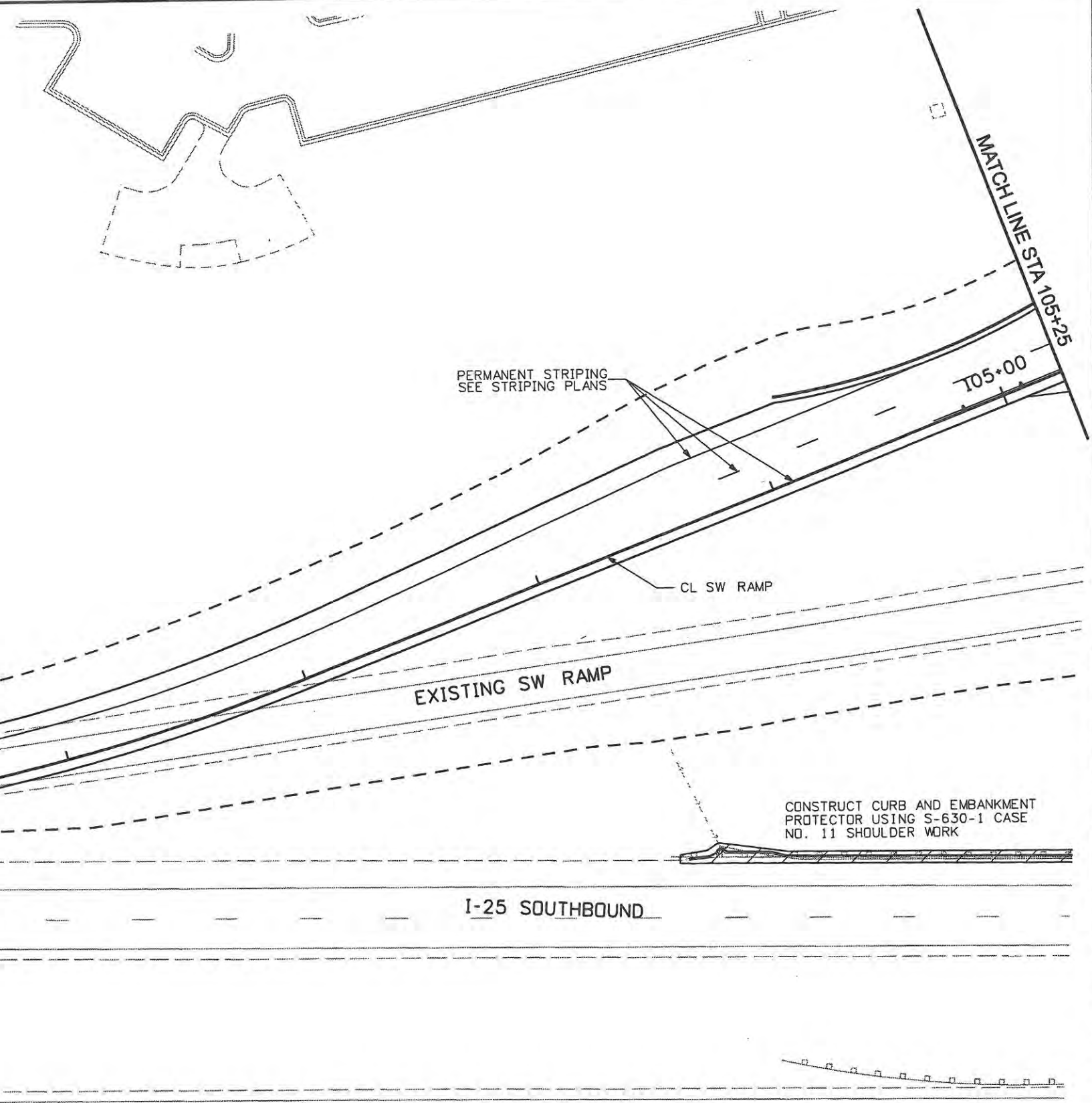
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Creation Date: Date	Initials: JBK	Date:	Comments	Init.	 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	No Revisions: 9/14/11		ES4 0253-207		
Print Date: 5/4/2009	Initials: JJW					Revised:		17244		
File Name: 0610031800tcp704.dgn						Void:		Sheet Number 201		
Horiz. Scale: 1:50	Vert. Scale: As Noted					 Colorado Department of Transportation		Designer: JJW Detailer: JBK Sheet Subset: TCP		Structure Numbers Subset Sheets: TC43 of 47

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 Denver, CO 80202  
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 Fax: 303-297-2693



**LEGEND**

- IMPACT ATTENUATOR (TEMP.)
- CONCRETE BARRIER (TEMP.)
- DRUM CHANNELIZING DEVICE 25 FOOT SPACING
- DETOUR PAVEMENT
- CONSTRUCTION ZONE
- BUILD DURING NIGHT TIME CLOSURE
- BARRICADE (TYPE 3 M-A)
- TRAFFIC FLOW

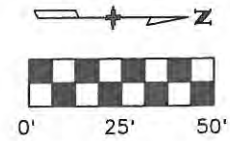


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Creation Date: 1/11/07	Initials: JBK	Date:	Comments:	Init.	 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000		<b>PHASE 7</b>		ES4 0253-207			
Print Date: 5/4/2009	Initials: JJW						 Colorado Department of Transportation		Designer: JJW	Structure Numbers	17244	
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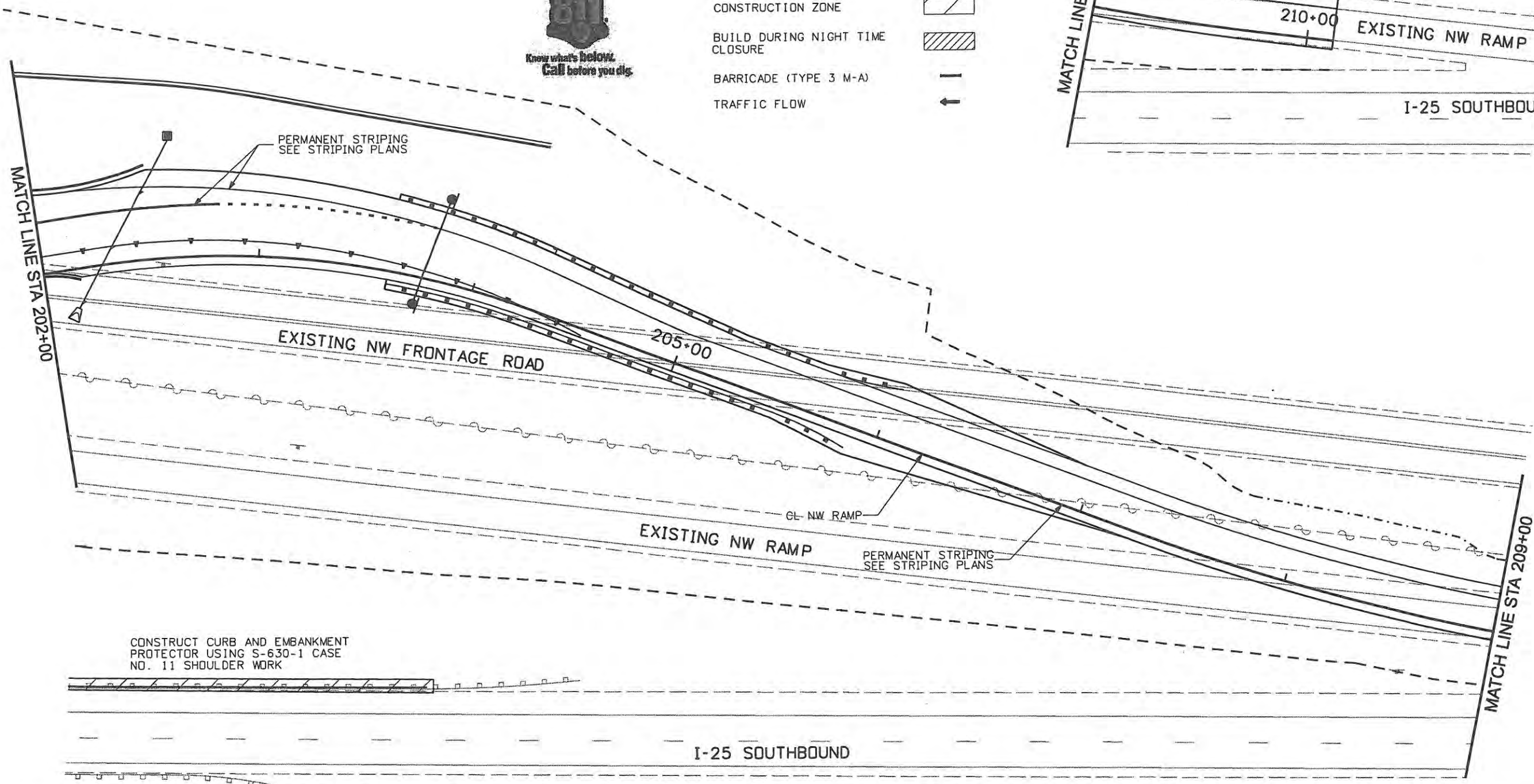
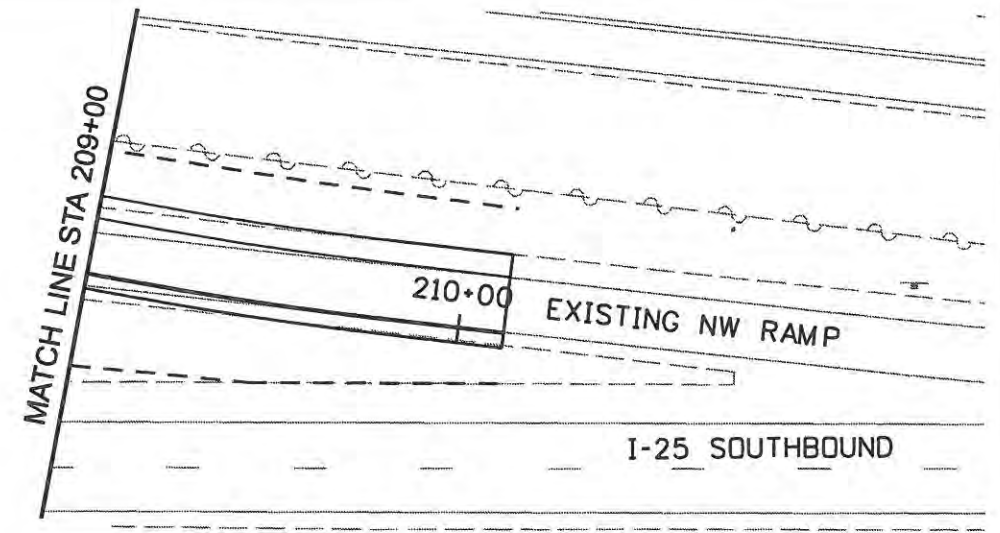
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 Denver, CO 80202  
 Phone: 303-297-2876  
 Fax: 303-297-2893



**LEGEND**



- IMPACT ATTENUATOR (TEMP.)
- CONCRETE BARRIER (TEMP.)
- DRUM CHANNELIZING DEVICE 25 FOOT SPACING
- DETOUR PAVEMENT
- CONSTRUCTION ZONE
- BUILD DURING NIGHT TIME CLOSURE
- BARRICADE (TYPE 3 M-A)
- TRAFFIC FLOW



Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials:
File Name: 0610031800tcp706.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

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970-962-2000

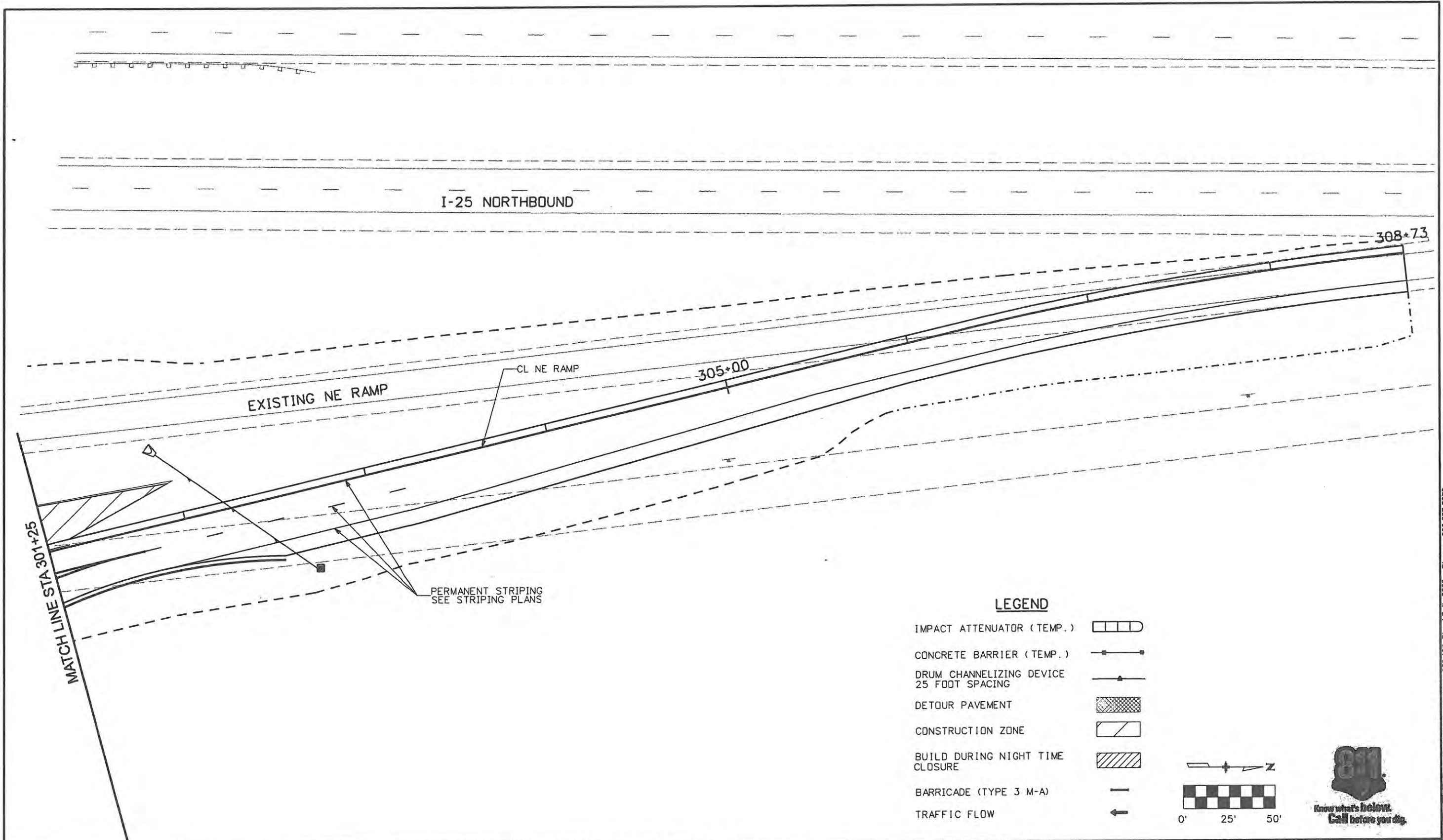
Colorado Department of Transportation

No Revisions:	7/14/11
Revised:	
Void:	

TRAFFIC CONTROL PLANS PHASE 7	
Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: TCP	Subset Sheets: TC45 of 47

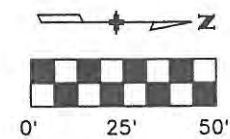
Project No./Code	ES4 0253-207
	17244
Sheet Number	203

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**LEGEND**

- IMPACT ATTENUATOR (TEMP.)
- CONCRETE BARRIER (TEMP.)
- DRUM CHANNELIZING DEVICE 25 FOOT SPACING
- DETOUR PAVEMENT
- CONSTRUCTION ZONE
- BUILD DURING NIGHT TIME CLOSURE
- BARRICADE (TYPE 3 M-A)
- TRAFFIC FLOW



Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials:
File Name: 0610031800tcp707.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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970-962-2000

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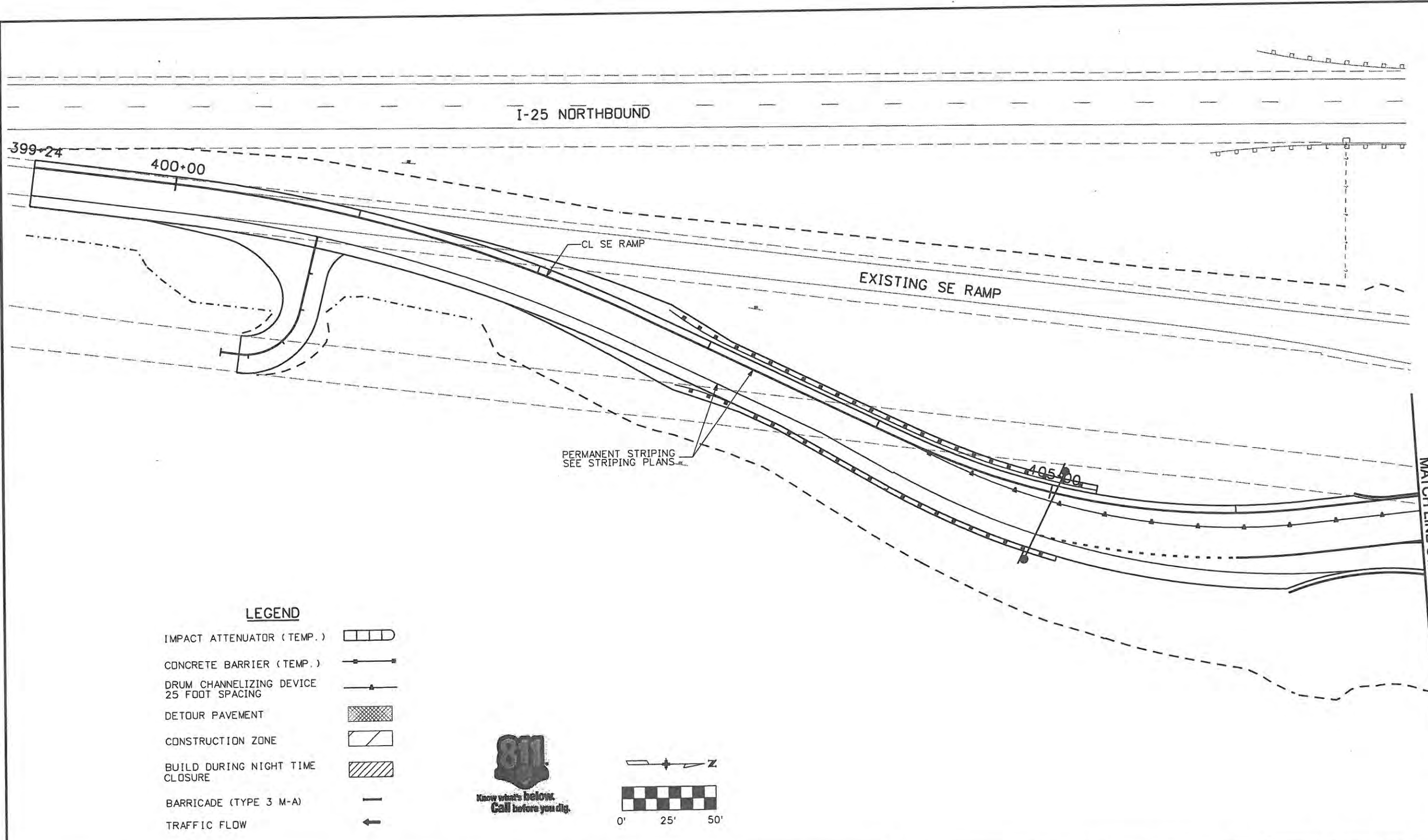
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Revised:
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Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: TCP	Subset Sheets: TC46 of 47

Project No./Code	ES4 0253-207
	17244
Sheet Number	204

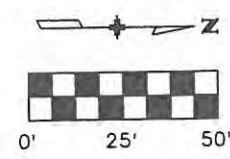
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 Fax: 303-297-2693





**LEGEND**

- IMPACT ATTENUATOR (TEMP.)
- CONCRETE BARRIER (TEMP.)
- DRUM CHANNELIZING DEVICE 25 FOOT SPACING
- DETOUR PAVEMENT
- CONSTRUCTION ZONE
- BUILD DURING NIGHT TIME CLOSURE
- BARRICADE (TYPE 3 M-A)
- TRAFFIC FLOW



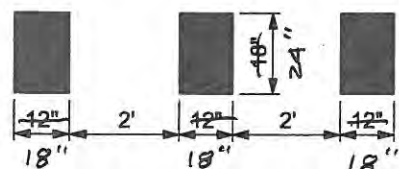
MATCH LINE STA 407+00

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<b>Computer File Information</b>		<b>Sheet Revisions</b>			<b>CITY OF LOVELAND</b>		<b>TRAFFIC CONTROL PLANS</b>		<b>Project No./Code</b>	
Creation Date: 1/11/07	Initials: JBK	Date:	Comments:	Init.	 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	<b>PHASE 7</b>		ES4 0253-207		
Print Date: 5/4/2009	Initials: JJW					No Revisions: 9/14/11	Designer: JJW	Structure Numbers	17244	
File Name: 0610031800tcp708.dgn						Revised:	Detailer: JBK		Sheet Number 205	
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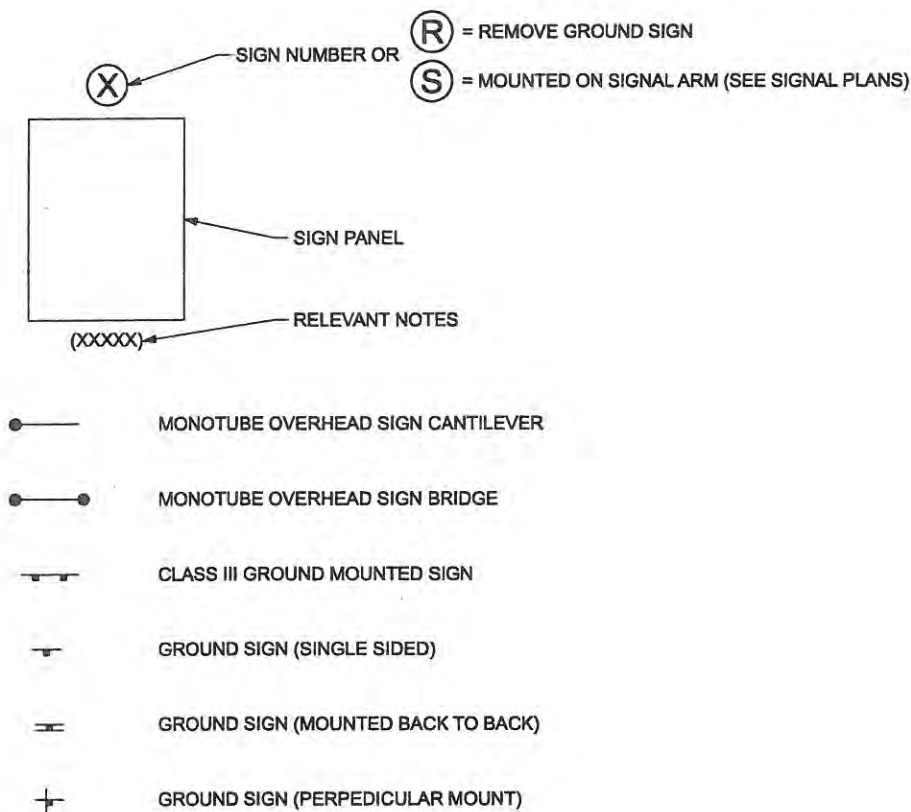
**PAVEMENT MARKING LEGEND**

- 1 CENTER LINES, BROKEN YELLOW, 4" WIDE - 10' SEGMENTS W/ 30' GAPS [NOT USED]
- 1A SOLID YELLOW, 4" WIDE
- 1B SOLID YELLOW, 4" WIDE (DOUBLE)
- 2 LANE LINES, SOLID WHITE, 4" WIDE - 10' SEGMENTS W/ 30' GAPS
- 3 EDGE LINES, SOLID WHITE, 4" WIDE
- 4 DOTTED LINES, BROKEN WHITE, 8" WIDE - 2' SEGMENTS W/ 4' GAPS
- 5 CHANNELIZING LINES, SOLID WHITE, 8" WIDE
- 6 CROSS-HATCHING LINES, WHITE, 8" WIDE
- 7 PARKING LINES, SOLID WHITE, 4" WIDE [NOT USED]
- 8 STOP LINES, SOLID WHITE, 24" WIDE [NOT USED]
- 9 LANE DROP, BROKEN WHITE, 8" WIDE - 3' SEGMENTS W/ 12' GAPS
- 10 CROSSWALK LINES, SOLID WHITE, 24" WIDE
- 11 WORD, ARROW AND SYMBOL MARKINGS, CDOT STANDARD SIZE
- 12 YIELD LINE, BROKEN WHITE, 18" WIDE [LARIMER COUNTY STANDARD] [SEE DETAIL BELOW]
- 13 ARROW MARKINGS (ELONGATED) PER LARIMER COUNTY URBAN AREA STREET STANDARDS DRAWING 1420
- ME MATCH EXISTING STRIPING



12 **WHITE STRIPE DETAIL**  
(PREFORMED THERMOPLASTIC) w/ contrast border

**SIGNING LEGEND**



<b>Computer File Information</b>		<b>Sheet Revisions</b>		<b>CITY OF LOVELAND</b>	500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	<b>SIGNING &amp; STRIPING GENERAL NOTES</b>		<b>Project No./Code</b>
Creation Date: 4/23/08	Initials: DVD	Date:	Comments			Init.	No Revisions:	Designer: MAK
Print Date: 5/4/2009	Initials: DVD				Revised: 9/14/11	Detailer: DVD		17244
File Name: 0610031800sjpGenNotes01.dgn					Void:	Sheet Subset: S&S GEN	Subset Sheets: 1 of 1	Sheet Number 206
Horiz. Scale: 1:100	Vert. Scale: As Noted							



**TABULATION OF OVERHEAD SIGN STRUCTURES**

SIGN NO.	STATION	LOCATION	STRUCTURE NUMBER +	MILEPOST	PANEL DIMENSIONS (W X H) * (FT X FT)	PANEL AREA * (SQ FT)	MONOTUBE OVERHEAD SIGN BRIDGE		HORIZONTAL SPAN (FT)	DRILLED CAISSON				REMARKS	
							14" DIA (EA)	16" DIA (EA)		MIN. DEPTH (FT)	PAY LENGTH **				
											42" DIA. (LF)	48" DIA. (LF)	54" DIA. (LF)		
74	203+78	NW RAMP		259.380	9.5 X 11.5 9.5 X 11.5	109.25 109.25	1		53.4	19		40.6 <del>41.00</del>		2- CAISSONS (20.58' & 20.07'); SKEW 7° 19' 33"	
81	405+00	SE RAMP		259.230	9.5 X 12 9.5 X 12	114 114	1		53.83	19		40.6 <del>41.00</del>		2- CAISSONS (20.48' & 20.14'); SKEW 12° 00' 17"	
<b>PROJECT TOTALS</b>						446.5	2	0				0	<del>82.81</del>	0	

**NOTES:**

- \* FOR INFORMATION ONLY. ALL SIGNS ARE CLASS III AND INCLUDED IN THE TABULATION OF SIGNS.
- + A STRUCTURE ID PANEL SHALL BE PROVIDED PER STANDARD PLAN S-614-12.  
THE PANEL WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE STRUCTURE.
- \*\* CAISSON LENGTH TOTALS ROUNDED UP TO NEXT EVEN FOOT.

**TABULATION OF MISCELLANEOUS SIGNING ITEMS**

LOCATION	REMOVAL OF BARRICADE	REMOVAL OF PAVEMENT MARKING +	REMOVAL OF GROUND SIGN	REMOVAL OF SIGN PANEL (FOR INFORMATION ONLY)	RESET SIGN PANEL
	(EA)	(SQ FT)	(EA)	(EA)	(EA)
CROSSROADS	8	<del>3516</del> 2274	22	44	<del>10</del> 0
NW RAMP			5	6	
NE RAMP			3	3	
SE RAMP		<del>690</del>	3	4	
* I-25 ARRA			1		
<b>PROJECT TOTALS</b>	8	<del>4206</del> 2274	34	57	<del>10</del> 0

- + ALL EXISTING PAVEMENT MARKING IN CONFLICT WITH PROPOSED PAVEMENT MARKING SHALL BE REMOVED COMPLETELY.
- \* AT THE COMPLETION OF CONSTRUCTION, 1 ADDITIONAL SIGN WILL BEED TO BE REMOVED ON I-25 NORTHBOUND JUST SOUTH OF CROSSROADS INTERCHANGE. THIS SIGN WILL HAVE BEEN INSTALLED BY OTHERS. REFER TO CONSTRUCTION TRAFFIC CONTROL PLANS FOR SIMILAR SIGN.

<b>Computer File Information</b>		<b>Sheet Revisions</b>		<b>CITY OF LOVELAND</b> 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000		Colorado Department of Transportation		<b>TABULATION OF SIGNING</b> No Revisions: Revised: 9/14/11 Void:		Project No./Code ES4 0253-207 17244 Sheet Number 207	
Creation Date: 02/04/09	Initials: JMB	Date:	Comments:								
Print Date: 5/19/2009	Initials:				Detailer: JMB	Subset Sheets: TB1 of 6					
File Name: 0610031800Signing_Misc.dgn					Sheet Subset: TABS						
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TABULATION OF SIGNS

SIGN NO.	SIGN CODE	STATION	SIGN PANEL DIMENSIONS (W x H) (IN x IN)	BACKGROUND COLOR	RESET GROUND SIGN		POST TYPE (EACH)			POST TYPE (LF)		CONC. FOOTING TYPE (EACH)								SIGN PANEL (SQ. FEET)			REMARKS
					(EACH)	EX. LOCATION	2" RND P	2.5" RND P1	2 x 2 Tube	WBx18 BEAM	U-2	1	2	3	4	5	6	7	8	CLASS I	CLASS II	CLASS III	
1	M2-1 (1) M1-1	49+51	21 X 15 24 X 24	BLUE BLUE/RED	NEW SIGN PANEL				1										2.19 4.00				
2	W2-6 SPECIAL	50+50	30 X 30 30 X 12	YELLOW YELLOW	NEW SIGN PANEL				1										6.25 2.50				
2A	W2-6 SPECIAL	50+50	30 X 30 30 X 12	YELLOW YELLOW	NEW SIGN PANEL				1										6.25 2.50				
2B	R7-9a	50+82	12 x 18	WHITE	NEW SIGN PANEL														1.50		MOUNT ON LIGHT POLE		
3	R3-7r	51+08	30 X 30	WHITE	1	53+68																	
4	R2-1 (35)	52+25	24 X 30	WHITE	1	54+53																	
5	R3-17 R3-17a	53+58	30 X 24 30 X 12	WHITE WHITE	NEW SIGN PANEL				1										5.00 2.50		MOUNT ON LIGHT POLE		
6	W3-2a W13-1 (20)	52+50	36 X 36 24 X 24	YELLOW YELLOW	NEW SIGN PANEL				1										9.00 4.00				
7	W3-2a W13-1 (20)	52+50	36 X 36 24 X 24	YELLOW YELLOW	NEW SIGN PANEL				1										9.00 4.00				
8	SPECIAL	51+50	60 X 30	WHITE	NEW SIGN PANEL				2											12.50			
8A	SPECIAL	51+50	60 X 30	WHITE	NEW SIGN PANEL				2											12.50			
9	SPECIAL	53+50	60 X 30	WHITE	NEW SIGN PANEL				2											12.50			
9A	SPECIAL	53+50	60 X 30	WHITE	NEW SIGN PANEL				2											12.50			
10	R3-17 R3-17b	53+12	30 X 24 30 X 12	WHITE WHITE	1 1	52+16 52+16																	
11	M4-5 (1) M3-1 (1) M1-1 M6-3 (1) M3-3 (1) M1-1 M6-2 (1) OM-3C	53+87	24 X 12 24 X 12 24 X 24 21 X 15 24 X 12 24 X 24 21 X 15 12 X 36	BLUE BLUE BLUE/RED BLUE BLUE BLUE/RED BLUE YELLOW	NEW SIGN PANEL				2										2.00 2.00 4.00 2.19 2.00 4.00 2.19 3.00		Assembly mounted side by side on 2 separate sign posts		
12	R1-2	54+70	36 X 36 X 36	RED	NEW SIGN PANEL				1										4.50				
13	R1-2	54+81	36 X 36 X 36	RED	NEW SIGN PANEL				1										4.50				
14	SPECIAL	54+65	120 X 12	GREEN	NEW SIGN PANEL				2											10.00			
15	W4-3	54+62	36 X 36	YELLOW	NEW SIGN PANEL				1										9.00				
16	R1-2	55+09	36 X 36 X 36	RED	NEW SIGN PANEL				1										4.50				
17	R5-1	55+12	30 X 30	WHITE	NEW SIGN PANEL				1										6.25				
18	R6-1 (R) SPECIAL	55+20	54 X 18 67.5 X 24	WHITE WHITE	NEW SIGN PANEL				2										<del>6.75</del> 11.25	6.75	MOUNT BOTTOM OF SIGN AT 4 FT		
19	W11-2 W16-7pL	54+91	30 X 30 24 X 12	YELLOW YELLOW	NEW SIGN PANEL				1										6.25 2.00				
20	W11-2 W16-7pL W16-7pR	55+26	30 X 30 24 X 12 24 X 12	YELLOW YELLOW YELLOW	NEW SIGN PANEL				1										6.25 2.00 2.00				
21	W12-1 OM-3C	55+35	36 X 36 12 X 36	YELLOW YELLOW	NEW SIGN PANEL				1										9.00 3.00				
22	R6-1 (R) SPECIAL	55+49	54 X 18 67.5 X 24	WHITE WHITE	NEW SIGN PANEL				2										<del>6.75</del> 11.25	6.75	MOUNT BOTTOM OF SIGN AT 4 FT		
23	W11-2 W16-7pR	55+81	30 X 30 24 X 12	YELLOW YELLOW	NEW SIGN PANEL				1										6.25 2.00				
1A	24R4-7	49+30	24x30	white					1										5.00				

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Print Date: 5/4/2009	Initials:
File Name: 0610031800Signing.dgn	
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Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
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970-962-2000



Colorado Department of Transportation

No Revisions:	
Revised: 9/14/11	
Void:	

TABULATION OF SIGNING	
Designer: JJW	Structure Numbers:
Detailer: JMB	Subset Sheets: TB2 of 8
Sheet Subset: TABS	

Project No./Code	ES4 0253-207
	17244
Sheet Number	208

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TABULATION OF SIGNS

SIGN NO.	SIGN CODE	STATION	SIGN PANEL DIMENSIONS (W x H) (IN x IN)	BACKGROUND COLOR	RESET GROUND SIGN		POST TYPE (EACH)			POST TYPE (LF)		CONC. FOOTING TYPE (EACH)								SIGN PANEL (SQ. FEET)			REMARKS	
					(EACH)	EX. LOCATION	2" RND	2.5" RND		2 x 2 Tube	WBx18 BEAM	U-2	1	2	3	4	5	6	7	8	CLASS I	CLASS II		CLASS III
							P	P1	P2															
24	R1-2	55+61	36 X 36 X 36	RED	NEW SIGN PANEL				1										4.50					
25	R8-1 (R)	55+85	54 X 18	WHITE	NEW SIGN PANEL				2									<del>6.75</del> 6.75			MOUNT BOTTOM OF SIGN AT 4 FT			
	SPECIAL		67.5 X 24	WHITE																11.25				
26	R1-2	56+25	36 X 36 X 36	RED	NEW SIGN PANEL				1									4.50						
27	R1-2	56+27	36 X 36 X 36	RED	NEW SIGN PANEL				1									4.50						
28	SPECIAL	57+12	42 X 30	WHITE	NEW SIGN PANEL													<del>6.25</del> 8.75			MOUNT ON LIGHT POLE			
29	W11-2	55+04	30 X 30	YELLOW	NEW SIGN PANEL				1									6.25						
	W16-7pL		24 X 12	YELLOW															2.00					
30	W4-3	55+47	36 X 36	YELLOW	NEW SIGN PANEL				1									9.00						
31	SPECIAL	55+55	72 X 12	GREEN	NEW SIGN PANEL				2									8.00						
32	W11-2	55+35	30 X 30	YELLOW	NEW SIGN PANEL													6.25						
	W16-7pL		24 X 12	YELLOW															2.00					
	W16-7pR		24 X 12	YELLOW															2.00					
33	W4-2	56+54	36 X 36	YELLOW	NEW SIGN PANEL													9.00						
	R4-7		24 X 30	WHITE															5.00		MOUNT BACK TO BACK			
	CM-3C		12 X 36	YELLOW																3.00				
33A	W4-2	56+60	36 X 36	YELLOW	NEW SIGN PANEL				1															
34	SPECIAL	57+73	36 X 66	GREEN	NEW SIGN PANEL															16.50	MOUNT ON BRIDGE PIER			
35	SPECIAL	56+27	114 X 36	GREEN	NEW SIGN PANEL															28.50				
36	SPECIAL	58+93	36 X 66	GREEN	NEW SIGN PANEL															16.50	MOUNT ON BRIDGE PIER			
37	W4-2	60+03	36 X 36	YELLOW	NEW SIGN PANEL													9.00						
	R4-7		24 X 30	WHITE															5.00		MOUNT BACK TO BACK			
	CM-3C		12 X 36	YELLOW																3.00				
37A	W4-2	60+00	36 X 36	YELLOW	NEW SIGN PANEL				1									9.00						
38	SPECIAL	60+90	72 X 12	GREEN	NEW SIGN PANEL													6.00						
39	W11-2	61+21	30 X 30	YELLOW	NEW SIGN PANEL													6.25						
	W16-7pL		24 X 12	YELLOW															2.00					
	W16-7pR		24 X 12	YELLOW															2.00					
40	W4-3	60+71	36 X 36	YELLOW	NEW SIGN PANEL				1									9.00						
41	W11-2	61+54	30 X 30	YELLOW	NEW SIGN PANEL													6.25						
	W16-7pL		24 X 12	YELLOW															2.00					
42	R1-2	61+85	36 X 36 X 36	RED	NEW SIGN PANEL				1									4.50						
43	R1-2	61+89	36 X 36 X 36	RED	NEW SIGN PANEL				1										4.50					
44	M4-5 (I)	62+86	24 X 12	BLUE	NEW SIGN PANEL													2.00						
	M3-3 (I)		24 X 12	BLUE															2.00					
	M1-1		24 X 24	BLUE															4.00					
	M6-3 (I)		21 X 15	BLUE							2									2.19		Assembly mounted side by side on 2 separate sign posts		
	M3-1 (I)		24 X 12	BLUE																2.00				
	M1-1		24 X 24	BLUE																4.00				
	M6-2 (I)		21 X 15	BLUE																2.19				
CM-3C	12 X 36	YELLOW															3.00							
45	SPECIAL	62+96	60 X 30	WHITE	NEW SIGN PANEL														12.50					
45A	SPECIAL	62+96	60 X 30	WHITE	NEW SIGN PANEL														12.50					
46	SPECIAL	65+30	60 X 30	WHITE	NEW SIGN PANEL														12.50					
46A	SPECIAL	65+30	60 X 30	WHITE	NEW SIGN PANEL														12.50					
47	R3-17	63+50	30 X 24	WHITE	NEW SIGN PANEL													5.00						
	R3-17b		30 X 12	WHITE															2.50					
48	R7-9a	64+30	12 X 18	WHITE	NEW SIGN PANEL														1.50					
	W3-2a		36 X 36	YELLOW															9.00		MOUNT ON LIGHT POLE			
	W13-1 (20)		24 X 24	YELLOW															4.00					

Computer File Information	
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Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

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Colorado Department of Transportation

No Revisions:	
Revised: 9/14/11	
Void:	

TABULATION OF SIGNING	
Designer: JJW	Structure Numbers
Detailer: JMB	Subset Sheets: TB3 of 8
Sheet Subset: TABS	

Project No./Code	ES4 0253-207
	17244
Sheet Number	209

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TABULATION OF SIGNS

SIGN NO.	SIGN CODE	STATION	SIGN PANEL DIMENSIONS (W x H) (IN x IN)	BACKGROUND COLOR	RESET GROUND SIGN		POST TYPE (EACH)			POST TYPE (LF)		CONC. FOOTING TYPE (EACH)								SIGN PANEL (SQ. FEET)			REMARKS	
					(EACH)	EX. LOCATION	2" RND	2.5" RND		2 x 2 Tube	W8x18 BEAM	U-2	1	2	3	4	5	6	7	8	CLASS I	CLASS II		CLASS III
							P	P1	P2															
49	W3-2a	64+30	36 X 36	YELLOW	NEW SIGN PANEL				1									9.00						
	W13-1 (20)		24 X 24	YELLOW															4.00					
50	SPECIAL	60+32	108 X 12	GREEN	NEW SIGN PANEL				2									9.00						
51	R6-1 (R)	60+76	54 X 18	WHITE	NEW SIGN PANEL				2									<del>6.75</del>	6.75		MOUNT BOTTOM OF SIGN AT 4 FT			
	SPECIAL		67.5 x 24	WHITE															11.25					
52	R6-1 (R)	61+15	54 X 18	WHITE	NEW SIGN PANEL				2									<del>6.75</del>	6.75		MOUNT BOTTOM OF SIGN AT 4 FT			
	SPECIAL		67.5 x 24	WHITE															11.25					
53	R6-1 (R)	61+39	54 X 18	WHITE	NEW SIGN PANEL				2									<del>6.75</del>	6.75		MOUNT BOTTOM OF SIGN AT 4 FT			
	SPECIAL		67.5 x 24	WHITE															11.25					
54	SPECIAL	59+42	42 X 30	WHITE	NEW SIGN PANEL				1									<del>8.75</del>	8.75					
55	R1-2	60+28	36 X 36 X 36	RED	NEW SIGN PANEL				1									4.50						
56	R1-2	60+36	36 X 36 X 36	RED	NEW SIGN PANEL				1									4.50						
57	R1-2	61+07	36 X 36 X 36	RED	NEW SIGN PANEL				1									4.50						
58	W11-2	60+97	30 X 30	YELLOW	NEW SIGN PANEL				1									6.25						
	W16-7pR		24 X 12	YELLOW															2.00					
59	W12-1	61+28	36 X 36	YELLOW	NEW SIGN PANEL				1									9.00						
	OM-3C		12 X 36	YELLOW															3.00					
60	W11-2	61+35	30 X 30	YELLOW	NEW SIGN PANEL				1									6.25						
	W16-7pL		24 X 12	YELLOW															2.00					
	W16-7pR		24 X 12	YELLOW															2.00					
61	W11-2	61+70	30 X 30	YELLOW	NEW SIGN PANEL				1									6.25						
	W16-7pL		24 X 12	YELLOW															2.00					
62	R5-1	61+50	30 X 30	WHITE	NEW SIGN PANEL				1								6.25							
63	R1-2	61+52	36 X 36 X 36	RED	NEW SIGN PANEL				1									4.50						
64	W4-3	62+07	36 X 36	YELLOW	NEW SIGN PANEL				1									9.00						
65	SPECIAL	61+95	114 X 36	GREEN	NEW SIGN PANEL				2											28.50				
66		63+52		WHITE	1	63+04																		
67		64+30		WHITE	1	61+41															MOUNT ON LIGHT POLE			
68	R7-9a	66+40	12 X 18	WHITE	NEW SIGN PANEL				1									1.50						
	W2-6		30 X 30	YELLOW															6.25					
	SPECIAL		30 X 12	YELLOW															2.50					
69	W2-6	66+40	30 X 30	YELLOW	NEW SIGN PANEL				1									6.25						
	SPECIAL		30 X 12	YELLOW															2.00					
70	W4-2	103+60	36 X 36	YELLOW	NEW SIGN PANEL					1							9.00							
70A	W4-2	103+60	36 X 36	YELLOW	NEW SIGN PANEL					1								9.00						
71	W9-1 ( R)	104+73	36 X 36	YELLOW	NEW SIGN PANEL					1								9.00						
71A	W9-1 ( R)	104+73	36 X 36	YELLOW	NEW SIGN PANEL					1								9.00						
72	SPECIAL	202+04	69 X 30	WHITE	NEW SIGN PANEL														14.38		MOUNT BACK TO BACK			
	R5-1a		42 X 30	RED						Z		20							8.75					
73	SPECIAL	202+04	69 X 30	WHITE	NEW SIGN PANEL														14.38		MOUNT BACK TO BACK			
	R5-1a		42 X 30	RED						Z		2							8.75					

Computer File Information

Creation Date: 02/04/09	Initials: JMB
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File Name: 0610031800Signing.dgn	
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Sheet Revisions

Date:	Comments	Init.

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Colorado Department of Transportation

No Revisions:
Revised: 9/14/11
Void:

TABULATION OF SIGNING

Designer: JJW	Structure Numbers
Detailer: JMB	Subset Sheets: TB4 of 8
Sheet Subset: TABS	

Project No./Code

ES4 0253-207
17244
Sheet Number 210







TABULATION OF PAVEMENT MARKING

FROM STATION	TO STATION	LOCATION	EPOXY PAVEMENT MARKING (LF)						PAVEMENT MARKING PAINT (LF)						PREFORMED PLASTIC PAVEMENT MARKING (80 MIL)		PREFORMED THERMOPLASTIC PAVEMENT MARKING		REMARKS		
			CENTER LINE		LANE LINE	EDGE LINE	DOTTED LINE	CHANNELIZING	LANE DROP	CENTER LINE		LANE LINE	EDGE LINE	DOTTED LINE	CHANNELIZING	LANE DROP	WORD-SYMBOL	XWALK-STOP LINE		WORD-SYMBOL	XWALK-STOP LINE
			SOLID YELLOW	DOUBLE SOLID YELLOW	BROKEN WHITE	SOLID WHITE	BROKEN WHITE	SOLID WHITE	BROKEN WHITE	SOLID YELLOW	DOUBLE SOLID YELLOW	BROKEN WHITE	SOLID WHITE	BROKEN WHITE	SOLID WHITE	BROKEN WHITE	SQ FT	SQ FT		SQ FT	SQ FT
4 INCH	4 INCH	4 INCH	4 INCH	4 INCH	8 INCH	8 INCH	4 INCH	4 INCH	4 INCH	4 INCH	8 INCH	8 INCH	8 INCH								
49+24	51+13	XRDS													188						
49+24	54+28	XRDS													504						
49+24	52+04	XRDS														639					
49+26	51+50	XRDS													223						
49+26	53+33	XRDS													411						
49+44		XRDS																43	1 LEFT & 1 RIGHT ARROW & 1 BIKE		
49+66		XRDS																11	STRAIGHT ARROW		
50+25		XRDS																22.5	ONLY		
50+46		XRDS																22.5	ONLY		
50+71		XRDS																11	STRAIGHT ARROW		
50+94		XRDS																12	BIKE		
51+10		XRDS																15.5	RIGHT ARROW		
51+13	53+04	XRDS																189			
51+50	54+79	XRDS																331			
51+58		XRDS																36	1 STRAGHT LEFT & 1 STRAIGHT RIGHT		
52+04	53+02	XRDS																97			
52+04		XRDS																15.5	RIGHT ARROW		
52+52	53+42	XRDS																93			
53+04	54+61	XRDS																209			
53+41		XRDS																75			
53+42	53+78	XRDS																10	RIGHT ARROW +		
53+47		XRDS																36	1 STRAGHT LEFT & 1 STRAIGHT RIGHT +		
54+28	54+84	XRDS																63			
54+31	54+68	XRDS																41			
54+62		XRDS																22	YIELD		
54+70		XRDS																22	YIELD		
54+68	54+80	WRDBT																26			
54+75	54+77	WRDBT																31			
54+76	54+94	WRDBT																13.5	YIELD LINE		
54+82		WRDBT																18	STRAIGHT LEFT ARROW +		
54+84	55+36	WRDBT																58			
54+90	54+98	WRDBT																60			
54+96	55+27	WRDBT																43			
54+98		WRDBT																10	LEFT ARROW +		
54+99	55+30	WRDBT																40			
55+27	55+64	WRDBT																157			
55+36	55+93	WRDBT																55			
55+37	55+58	WRDBT																52			
55+53		WRDBT																26	1 STRAIGHT LEFT & 1 STRAIGHT ARROW +		
55+81		WRDBT																26	1 STRAIGHT LEFT & 1 STRAIGHT ARROW +		
56+08	56+22	WRDBT																13.5	YIELD LINE		
56+13	56+27	WRDBT																31			
56+19	56+23	WRDBT																29	1 STRAIGHT LEFT & 1 STRAIGHT ARROW		

Computer File Information	
Creation Date: 02/04/09	Initials: JMB
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File Name: 0610031800Striping.dgn	
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Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000



Colorado Department of Transportation

No Revisions:
Revised: 9/14/11
Void:

TABULATION OF PAVEMENT MARKINGS	
Designer: JJW	Structure Numbers
Detailer: JMB	Subset Sheets: TB6 of 8
Sheet Subset: TABS	

Project No./Code	ES4 0253-207
Sheet Number	17244
Sheet Number	212

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 Fax: 303-297-2693



TABULATION OF PAVEMENT MARKING

FROM STATION	TO STATION	LOCATION	EPOXY PAVEMENT MARKING (LF)								PAVEMENT MARKING PAINT (LF)						PREFORMED PLASTIC PAVEMENT MARKING (60 MIL)		PREFORMED THERMOPLASTIC PAVEMENT MARKING		REMARKS		
			CENTER LINE		LANE LINE	EDGE LINE	DOTTED LINE		CHANNELIZING	LANE DROP	CENTER LINE		LANE LINE	EDGE LINE	DOTTED LINE		CHANNELIZING	LANE DROP	WORD-SYMBOL	XWALK-STOP LINE		WORD-SYMBOL	XWALK-STOP LINE
			SOLID YELLOW	DOUBLE SOLID YELLOW	BROKEN WHITE	SOLID WHITE	BROKEN WHITE	SOLID WHITE	BROKEN WHITE	SOLID YELLOW	DOUBLE SOLID YELLOW	BROKEN WHITE	SOLID WHITE	BROKEN WHITE	SOLID WHITE	BROKEN WHITE	SOLID WHITE	BROKEN WHITE	SQ FT	SQ FT		SQ FT	SQ FT
			4 INCH	4 INCH	4 INCH	4 INCH	4 INCH	8 INCH	8 INCH	4 INCH	4 INCH	4 INCH	4 INCH	8 INCH	8 INCH	8 INCH	8 INCH						
58+20	57+08	XRDS														88							
56+25	58+67	XRDS								87								22			YIELD		
56+30		XRDS																22			YIELD		
56+34		XRDS																					
56+67	59+91	XRDS																	26		1 STRAIGHT LEFT & 1 STRAIGHT ARROW +		
56+89		XRDS																					
59+64	60+38	XRDS													83				26		1 STRAIGHT LEFT & 1 STRAIGHT ARROW +		
59+89		XRDS																					
59+91	60+33	XRDS								87													
60+00	61+33	ERDBT														143					YIELD		
60+24		XRDS																22			YIELD		
60+29		XRDS																22			YIELD		
60+31	60+46	ERDBT														33							
60+36	60+40	ERDBT														27							
60+37	60+49	ERDBT																	13.5		YIELD LINE		
60+67	61+27	ERDBT														61							
60+87	61+20	ERDBT														49					1 STRAIGHT LEFT & 1 STRAIGHT ARROW +		
60+88		ERDBT																26			1 STRAIGHT LEFT & 1 STRAIGHT ARROW +		
60+99		ERDBT																					
61+21	61+70	ERDBT														55							
61+30	61+61	ERDBT														40							
61+33	61+64	ERDBT														44							
61+61	61+69	ERDBT														54					LEFT ARROW +		
61+61		ERDBT																10			YIELD LINE		
61+65	61+83	ERDBT																	13.5				
61+70	62+47	ERDBT																			STRAIGHT LEFT ARROW +		
61+77		ERDBT																					
61+80	61+91	ERDBT																					
61+83	61+84	ERDBT														27							
61+81	64+60	XRDS														205							
61+90		XRDS																22			YIELD		
61+91	62+24	XRDS														36					YIELD		
61+97		XRDS																					
62+12	63+84	XRDS																					
62+47	67+56	XRDS														507							
62+74	63+10	XRDS																					
63+07		XRDS																					
63+10	64+00	XRDS																					
63+25	67+56	XRDS																					
63+84	66+88	XRDS																					
63+85	66+77	XRDS																					
64+60	67+56	XRDS														296					1 STRAGHT LEFT & 1 STRAIGHT RIGHT +		
64+99	67+56	XRDS																					
65+77	67+56	XRDS																358			2 LEFT ARROWS		
65+80		XRDS																					
66+86	67+56	XRDS																			2 ONLY		
67+41		XRDS																					

Computer File Information	
Creation Date: 02/04/09	Initials: JMB
Print Date: 5/4/2009	Initials:
File Name: 0610031800Striping.dgn	
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Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000



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No Revisions:
Revised: 7/14/11
Void:

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Designer: JJW	Structure Numbers:
Detailer: JMB	Subset Sheets: TB7 of 8
Sheet Subset: TABS	

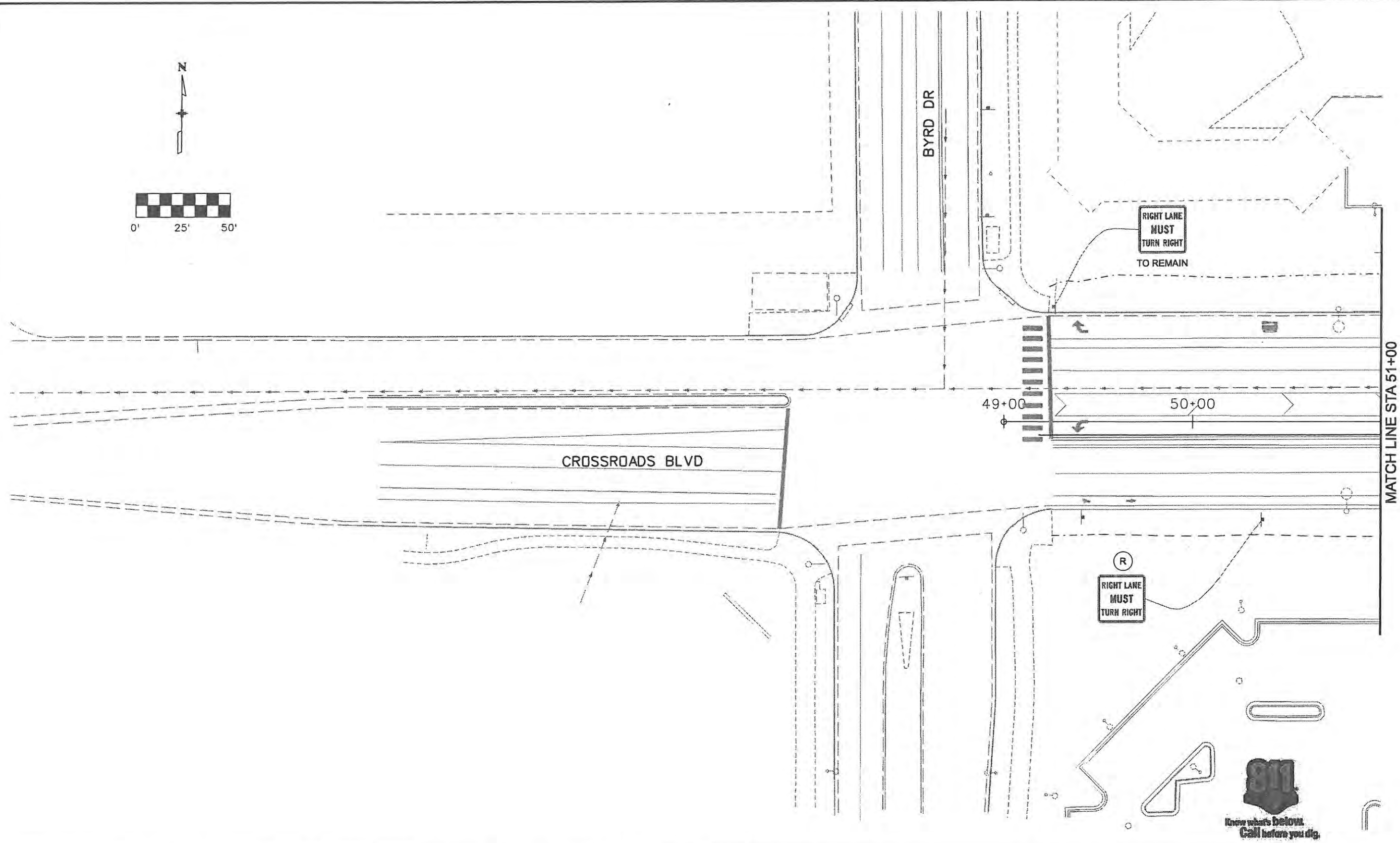
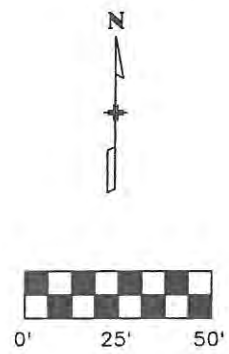
Project No./Code	
ES4 0253-207	
17244	
Sheet Number 213	

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Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials: JJW
File Name: 0610031800sip01.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

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970-962-2000

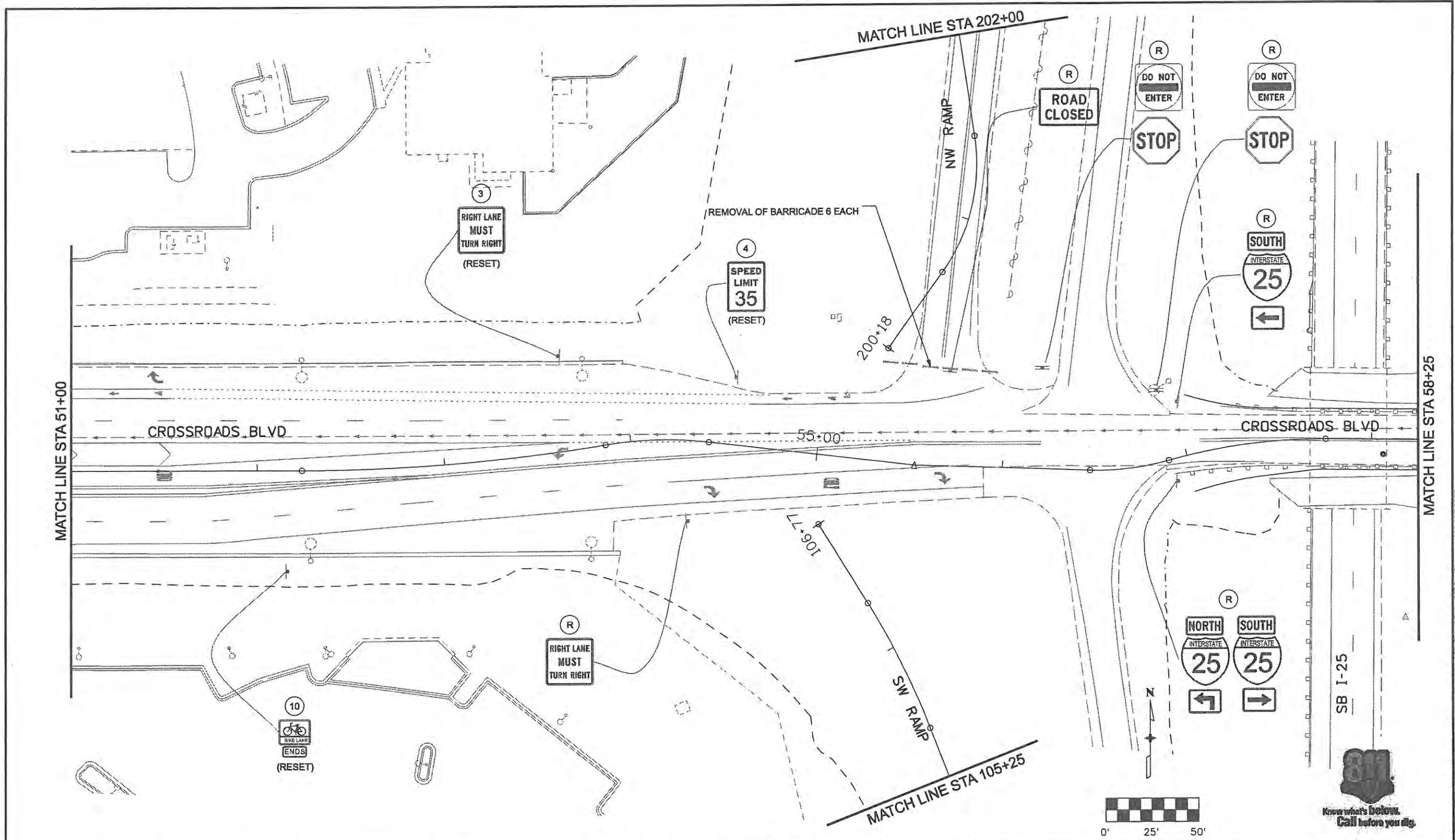
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No Revisions: 9/14/11
Revised:
Void:

EXISTING SIGNING PLAN CROSSROADS BOULEVARD	
Designer: MAK	Structure Numbers
Detailer: DVD	
Sheet Subset: EX S&S	Subset Sheets: 1 of 8

Project No./Code	ES4 0253-207
	17244
Sheet Number	215

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MATCH LINE STA 51+00

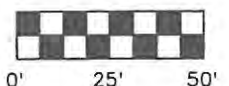
MATCH LINE STA 58+25

CROSSROADS BLVD

CROSSROADS BLVD

MATCH LINE STA 105+25

SB I-25



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Sheet Revisions		
Date:	Comments	Init.

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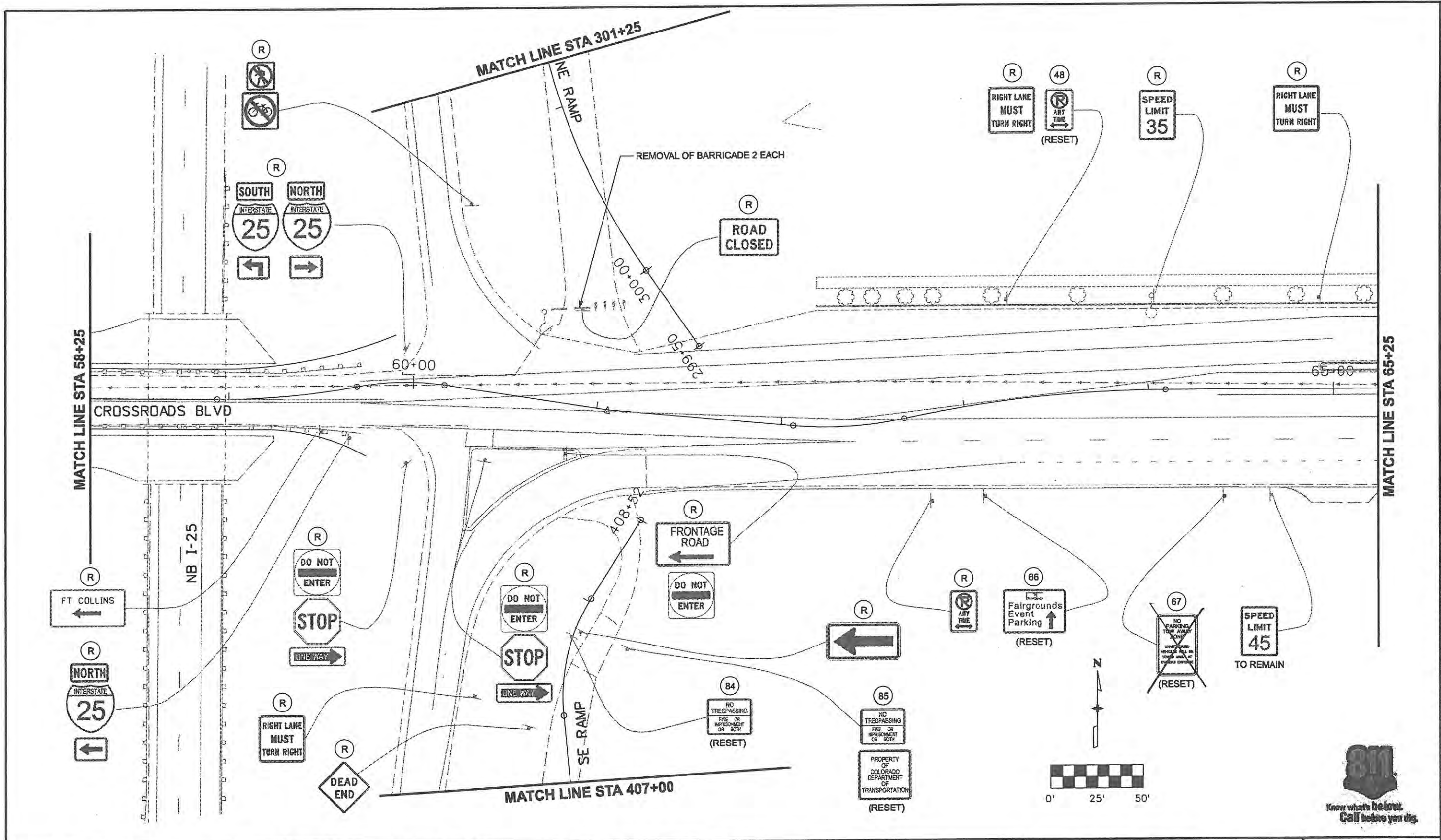
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Designer: MAK	Structure Numbers
Detailer: DVD	
Sheet Subset: EX S&S	Subset Sheets: 2 of 8

Project No./Code	ES4 0253-207
	17244
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Print Date: 5/4/2009	Initials: JJW
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Date:	Comments	Init.

**CITY OF LOVELAND**

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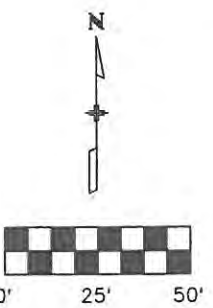
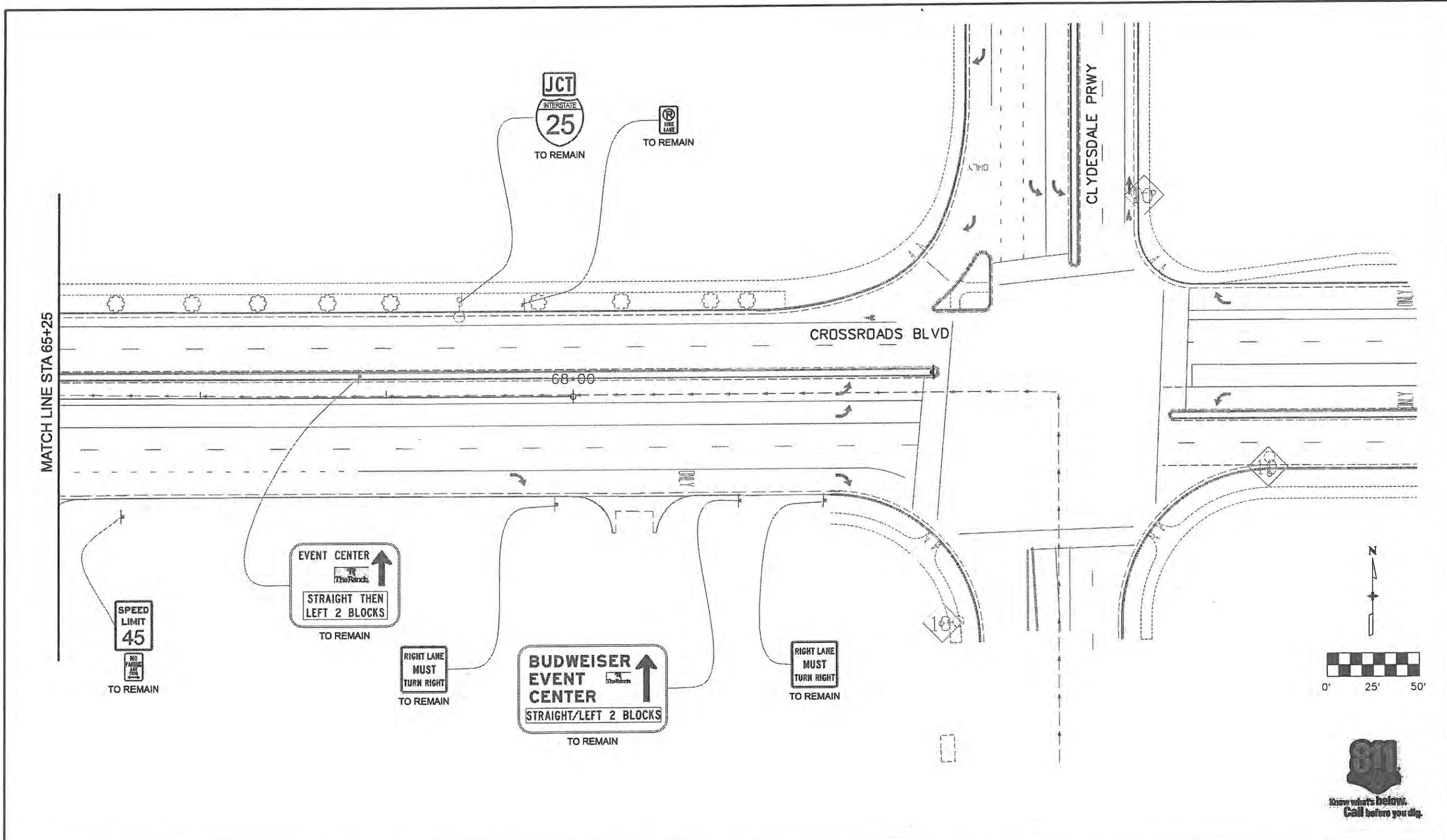
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No Revisions:
Revised: 9/14/11
Void:

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Designer: MAK	Structure Numbers
Detailer: DVD	
Sheet Subset: EX S&S	Subset Sheets: 3 of 8

Project No./Code	ES4 0253-207
	17244
Sheet Number	217

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Computer File Information	
Creation Date: Date	Initials: JBK
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Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

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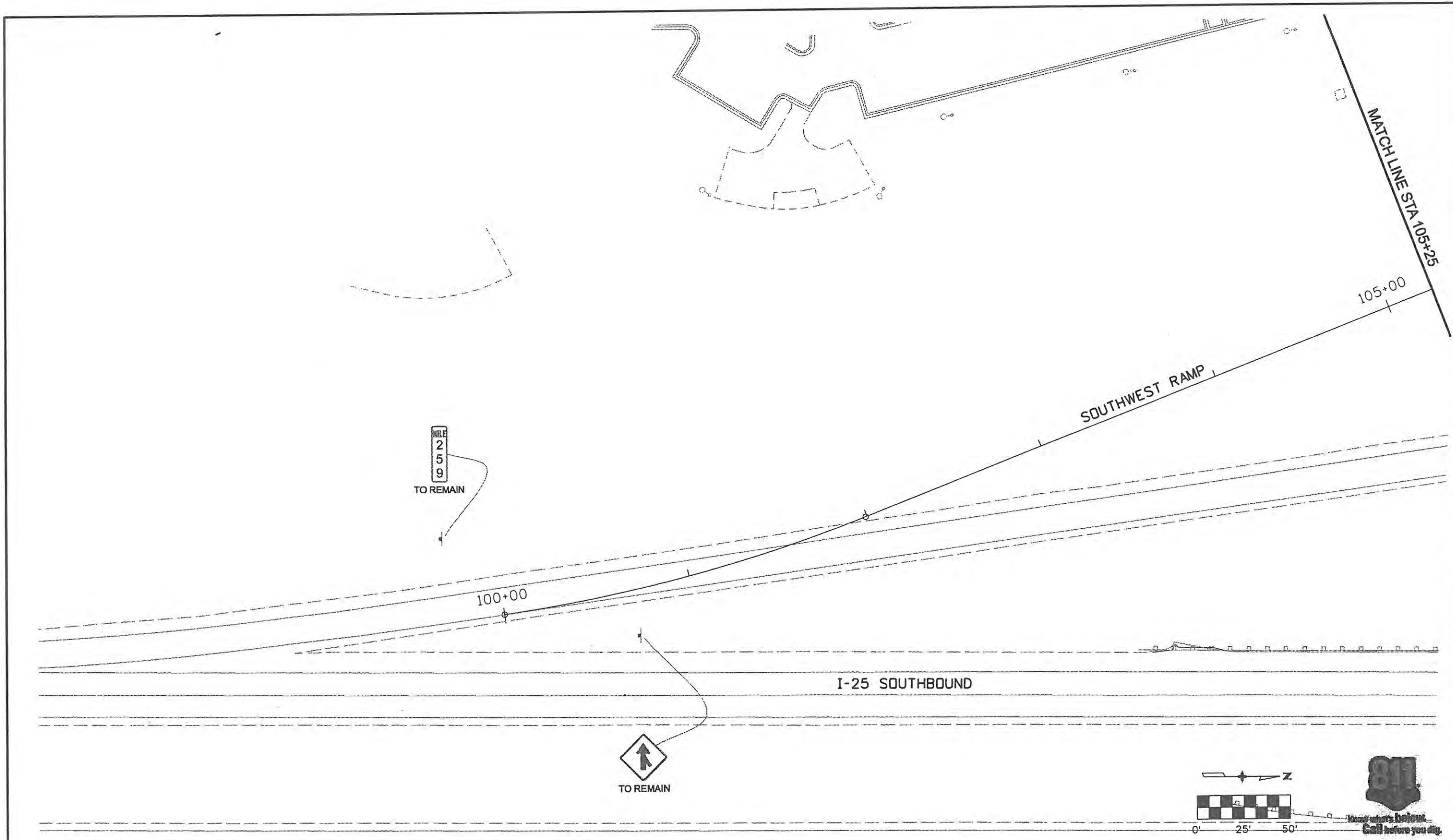
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Designer: MAK	Structure Numbers
Detailer: DVD	
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Project No./Code	ES4 0253-207
	17244
Sheet Number	218

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Computer File Information	
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Print Date: 5/4/2009	Initials:
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**CITY OF LOVELAND**

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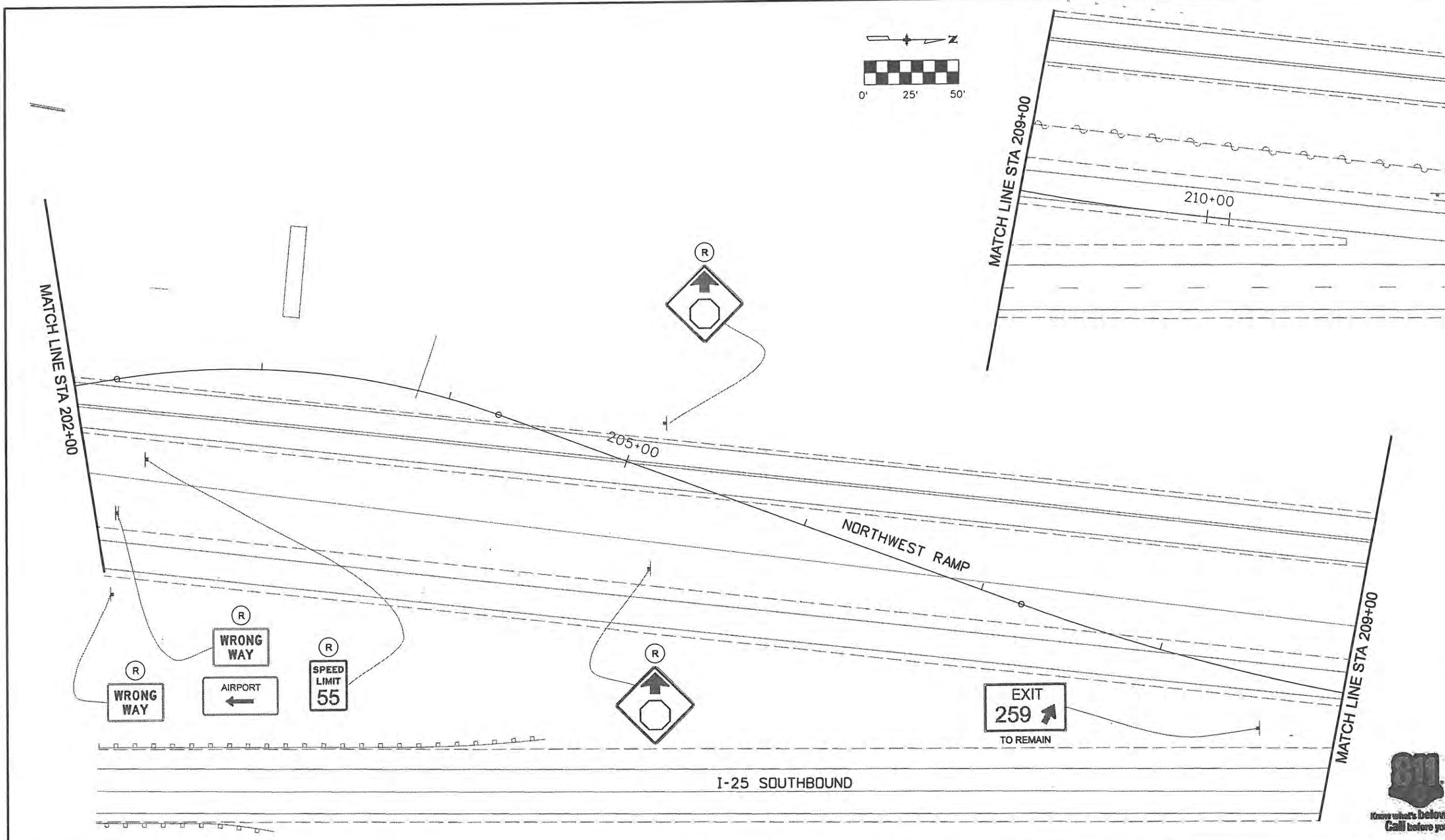
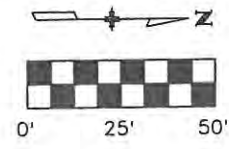

Colorado Department  
of Transportation

No Revisions: 9/14/11
Revised:
Void:

EXISTING SIGNING PLAN SOUTHWEST RAMP		
Designer: MAK	Structure Numbers	
Detailer: DVD		
Sheet Subset: EX S&S	Subset Sheets: 5 of 8	

Project No./Code	ES4 0253-207
	17244
Sheet Number	219

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 988 18th Street Suite 2600  
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Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials: JJW
File Name: 0610031800sip06.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

Colorado Department of Transportation

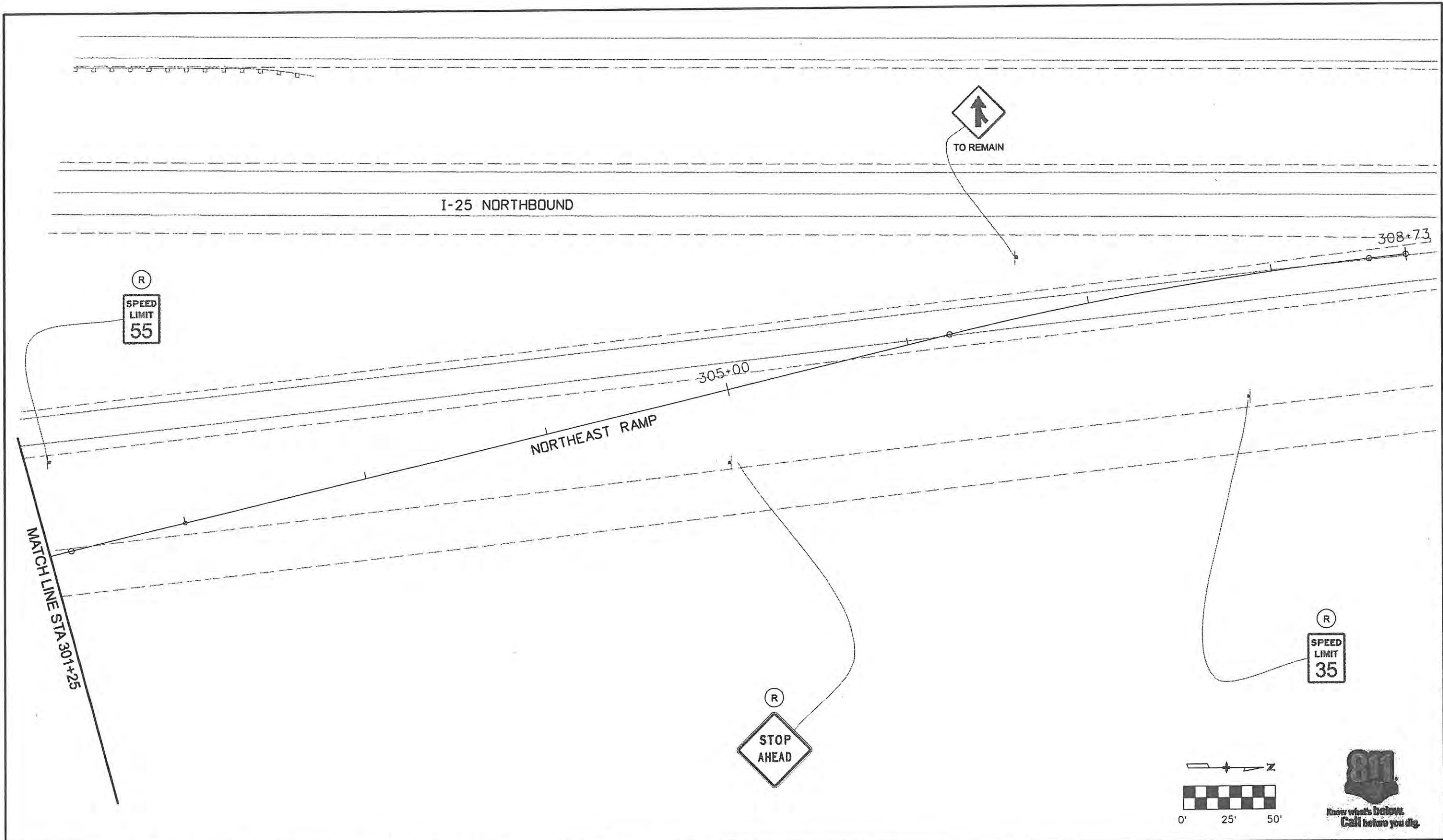
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Revised:
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Designer: MAK	Structure Numbers
Detailer: DVD	
Sheet Subset: EX S&S	Subset Sheets: 6 of 8

Project No./Code	ES4 0253-207
	17244
Sheet Number	220

WILSON & COMPANY  
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 899 16th Street Suite 2600  
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Computer File Information	
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Print Date: 5/4/2009	Initials: JJW
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**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

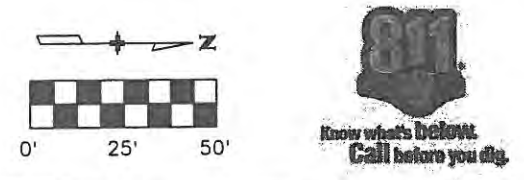



Colorado Department  
of Transportation

No Revisions: 9/14/11
Revised:
Void:

EXISTING SIGNING PLAN NORTHEAST RAMP	
Designer: MAK	Structure Numbers
Detailer: DVD	
Sheet Subset: EX S&S	Subset Sheets: 7 of 8

Project No./Code	ES4 0253-207
	17244
Sheet Number	221



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I-25 NORTHBOUND

399+24

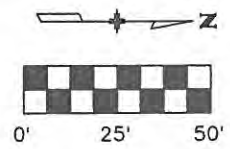
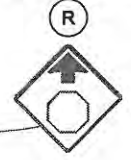
400+00

405+00

SOUTHEAST RAMP

MATCH LINE STA 407+00

EXIT  
259  
TO REMAIN



Computer File Information

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Print Date: 5/4/2009	Initials: JJW
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Sheet Revisions

Date:	Comments	Init.

CITY OF LOVELAND

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LOVELAND, CO 80537  
970-962-2000



Colorado Department  
of Transportation

No Revisions: 9/14/11
Revised:
Void:

EXISTING SIGNING PLAN  
SOUTHEAST RAMP

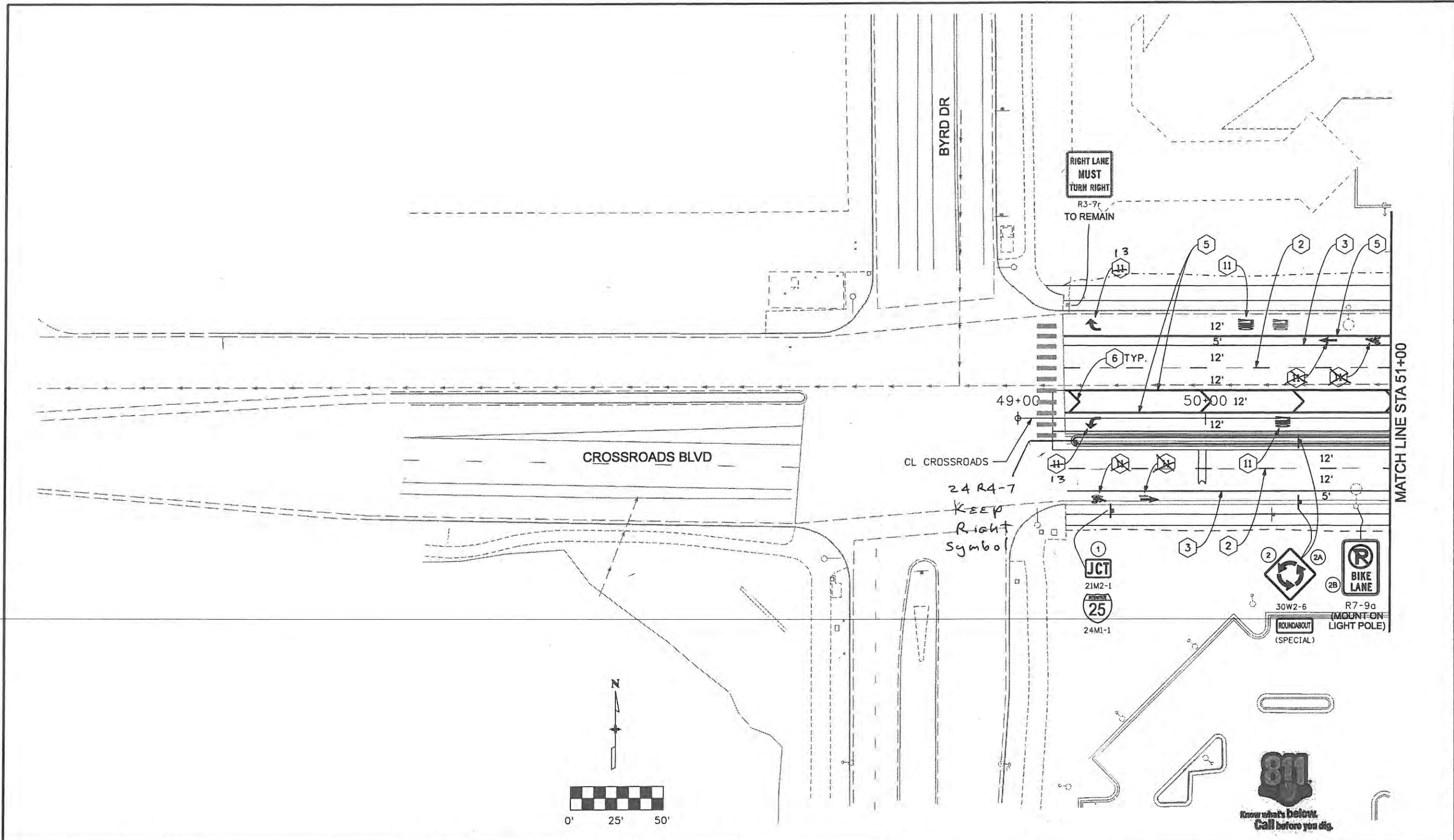
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Detailer: DVD	
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Project No./Code

ES4 0253-207
17244
Sheet Number 222

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 Fax: 303-297-2693





Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials: JJW
File Name: 0610031800sip09.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

Colorado Department of Transportation

No Revisions:
Revised: 9/14/11
Void:

SIGNING AND PAVEMENT MARKING CROSSROADS BOULEVARD	
Designer: MAK	Structure Numbers
Detailer: DVD	
Sheet Subset: S&S	Subset Sheets: 1 of 8

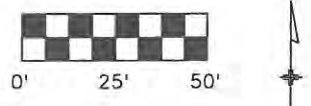
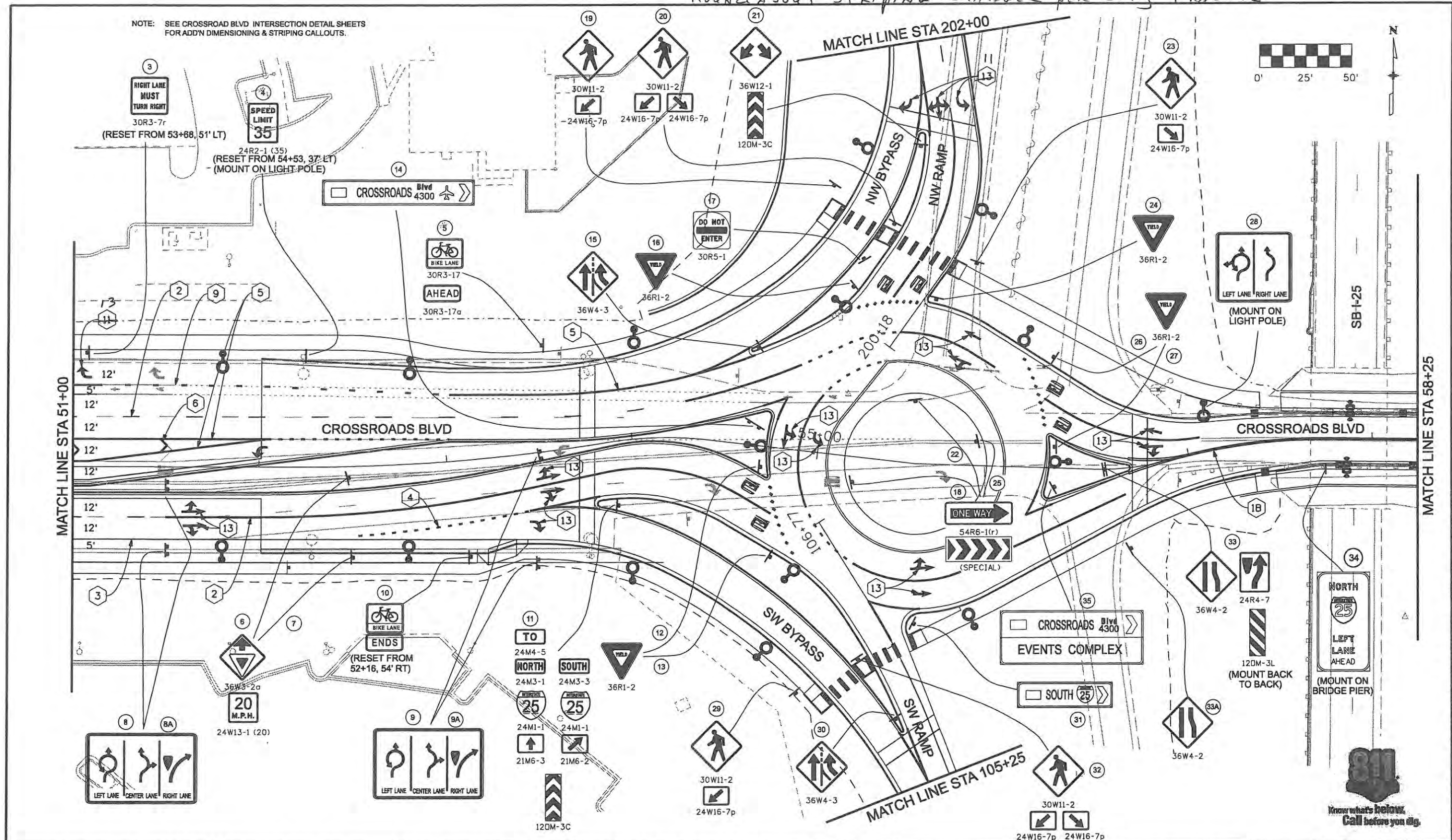
Project No./Code
ES4 0253-207
17244
Sheet Number 223

**WILSON & COMPANY**  
 Engineers & Architects  
 999 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2665



Roundabout striping changed per City Traffic

NOTE: SEE CROSSROAD BLVD INTERSECTION DETAIL SHEETS FOR ADD'N DIMENSIONING & STRIPING CALLOUTS.



Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials: JJW
File Name: 0610031800sip10.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

Colorado Department of Transportation

No Revisions:
Revised: 9/14/11
Void:

SIGNING AND PAVEMENT MARKING CROSSROADS BOULEVARD	
Designer: MAK	Structure Numbers
Detailer: DVD	
Sheet Subset: S&S	Subset Sheets: 2 of 8

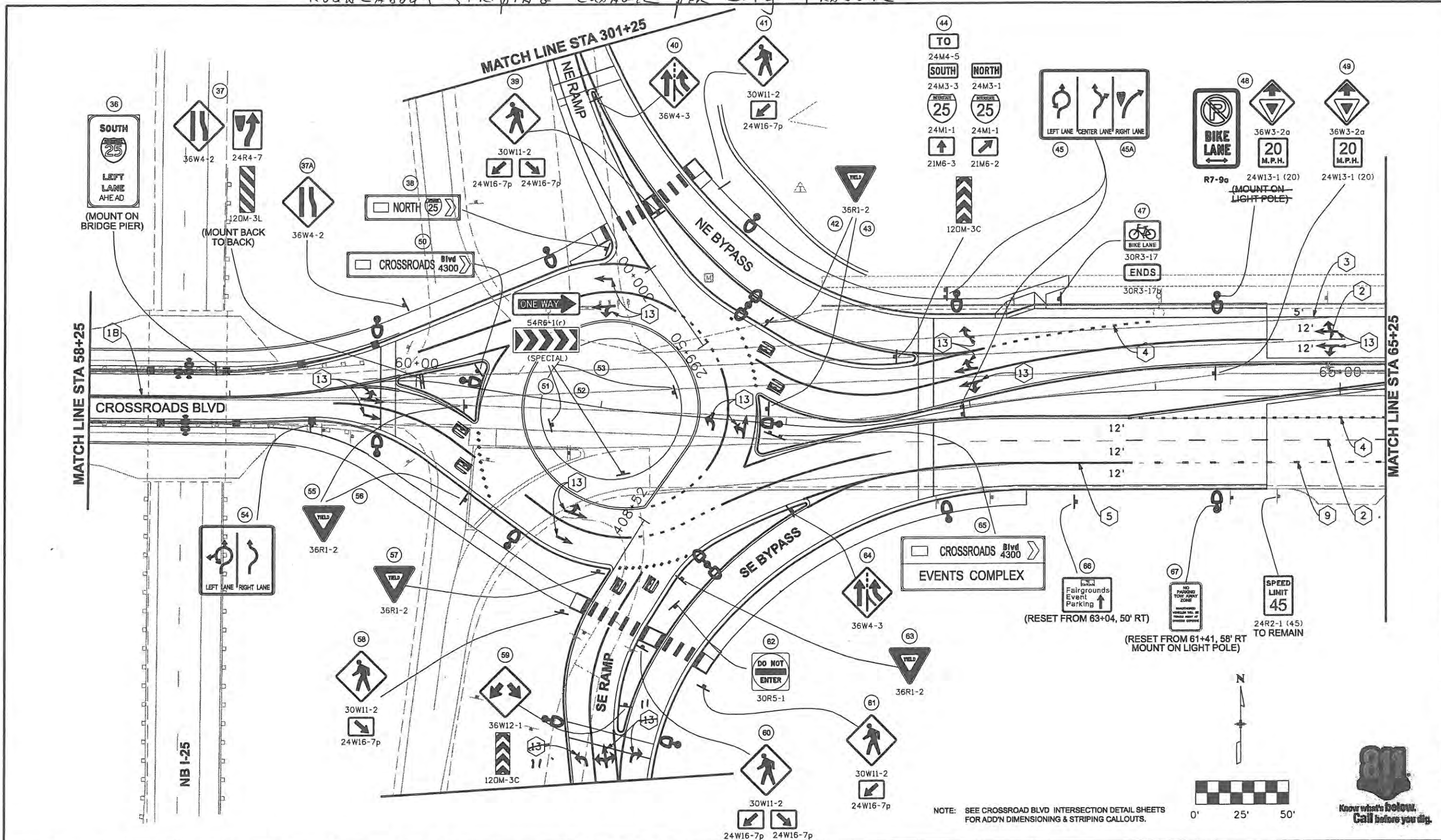
Project No./Code
ES4 0253-207
17244
Sheet Number 224

**WILSON & COMPANY**  
 Engineers & Architects  
 959 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
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Roundabout striping changed per City Traffic



Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials: JJW
File Name: 0610031800sip11.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
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970-962-2000

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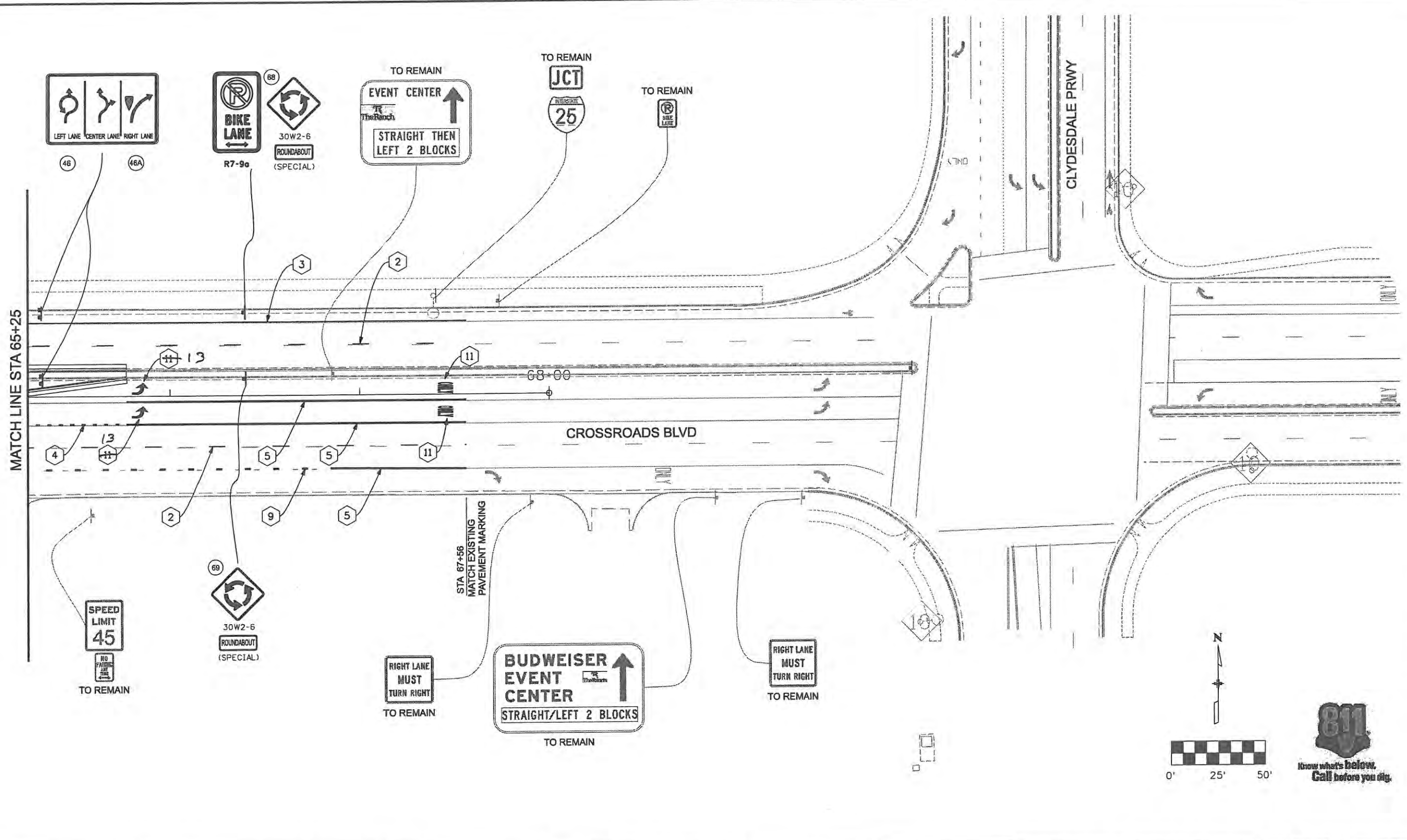
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Designer: MAK	Structure Numbers
Detailer: DVD	
Sheet Subset: S&S	Subset Sheets: 3 of 8

Project No./Code	ES4 0253-207
	17244
Sheet Number	225

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Computer File Information	
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Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

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LOVELAND, CO 80537  
970-962-2000

Colorado Department of Transportation

No Revisions:	
Revised:	9/14/11
Void:	

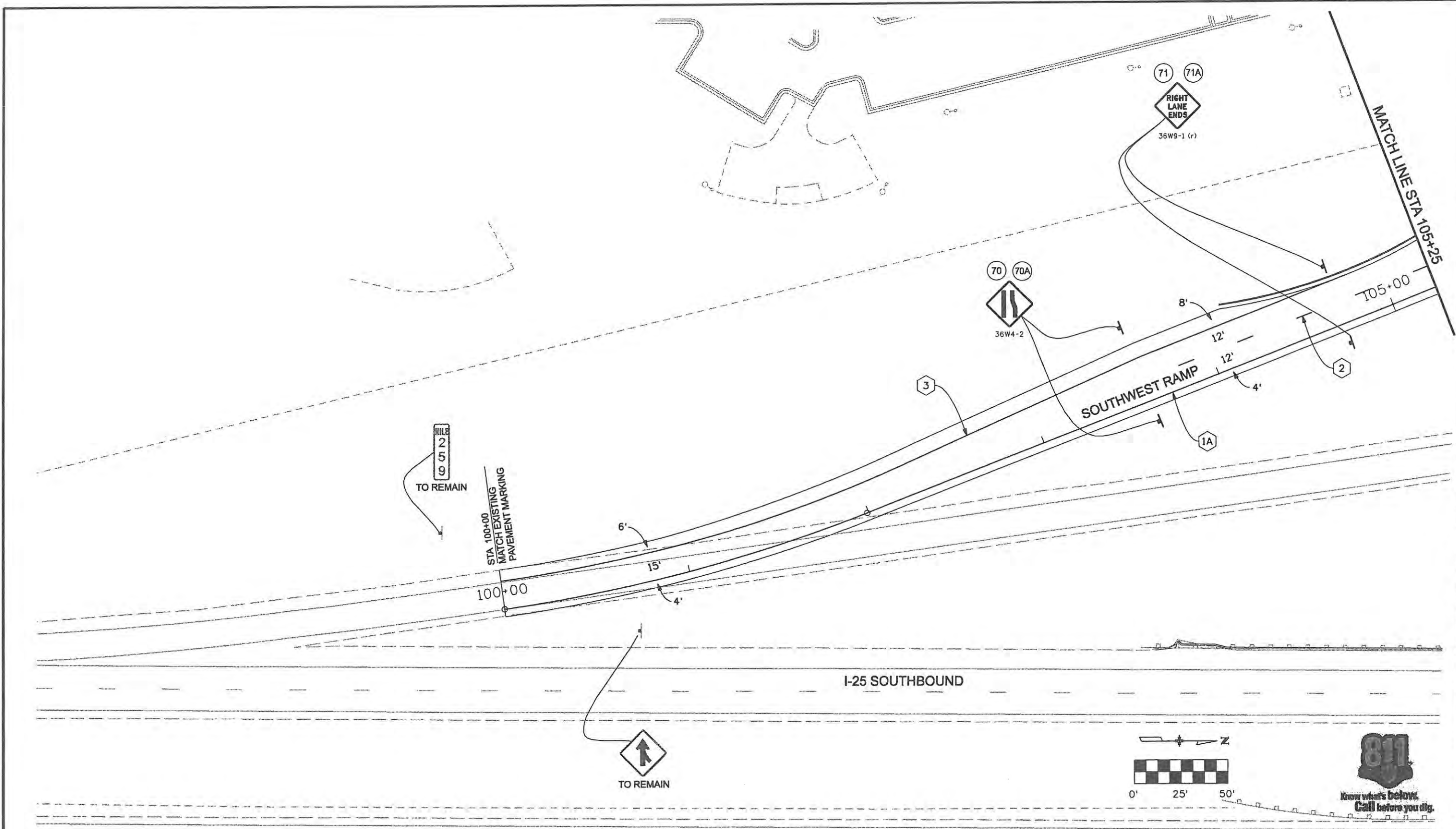
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Designer: MAK	Structure Numbers
Detailer: DVD	
Sheet Subset: S&S	Subset Sheets: 4 of 8

Project No./Code	ES4 0253-207
	17244
Sheet Number	226

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 Denver, CO 80202  
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Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials:
File Name: 0610031800sip13.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

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LOVELAND, CO 80537  
970-962-2000

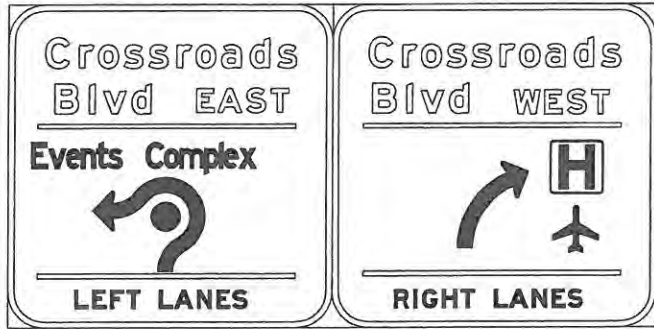
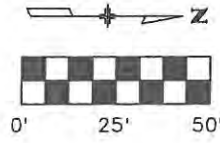
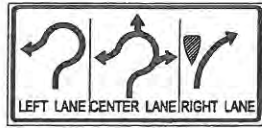
Colorado Department of Transportation

No Revisions: 9/14/11
Revised:
Void:

SIGNING AND PAVEMENT MARKING SOUTHWEST RAMP	
Designer: MAK	Structure Numbers
Detailer: DVD	
Sheet Subset: S&S	Subset Sheets: 5 of 8

Project No./Code ES4 0253-207
17244
Sheet Number 227

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MATCH LINE STA 202+00

MATCH LINE STA 209+00

MATCH LINE STA 209+00

I-25 SOUTHBOUND

NORTHWEST RAMP

STA 210+12  
MATCH EXISTING  
PAVEMENT MARKING



Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials: JJW
File Name: 0610031800sip14.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

Colorado Department of Transportation

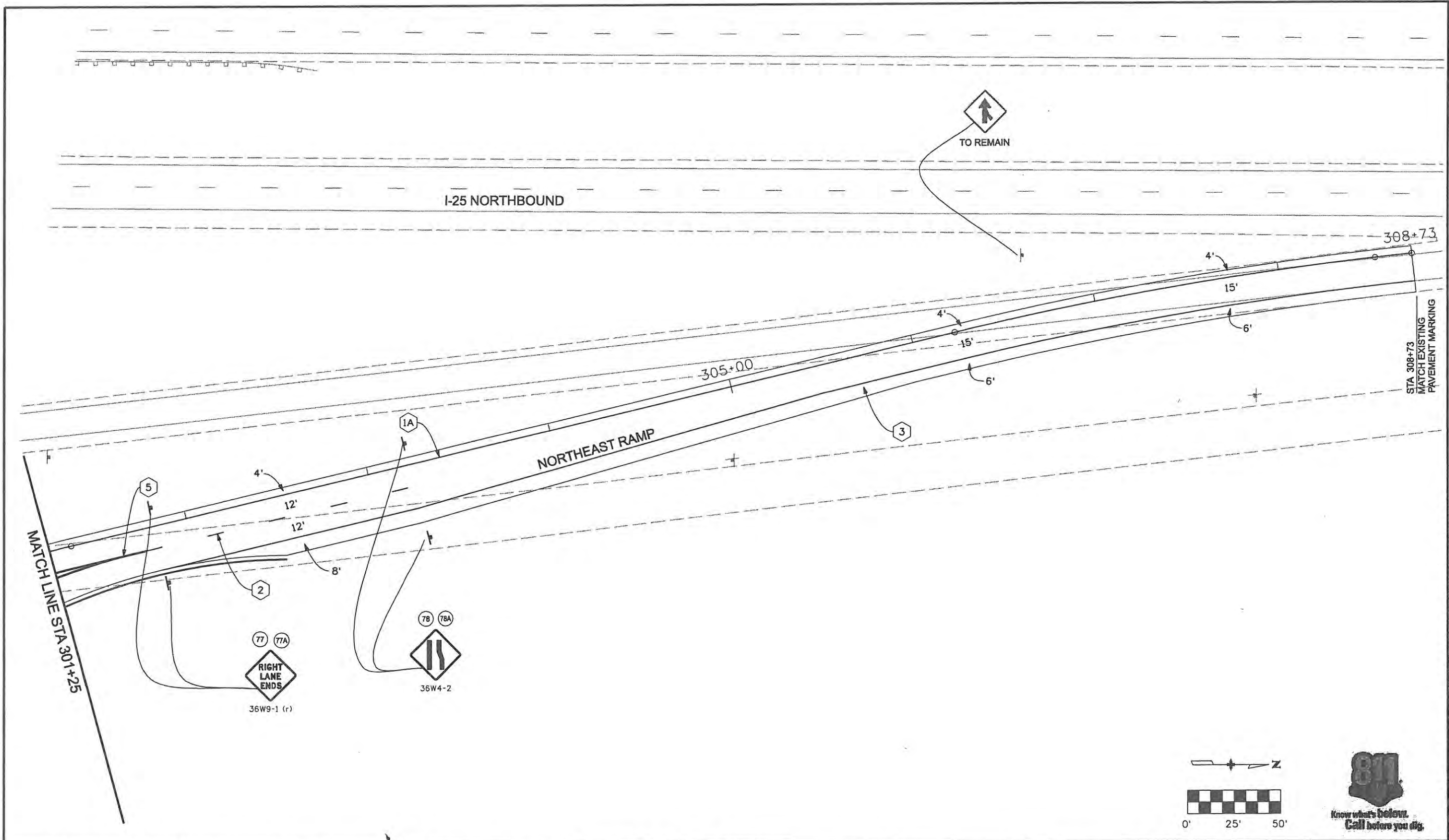
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Revised: 9/14/11	
Void:	

SIGNING AND PAVEMENT MARKING NORTHWEST RAMP	
Designer: MAK	Structure Numbers
Detailer: DVD	
Sheet Subset: S&S	Subset Sheets: 6 of 8

Project No./Code	ES4 0253-207
	17244
Sheet Number	228

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Computer File Information	
Creation Date: 1/11/07	Initials: JBK
Print Date: 5/4/2009	Initials: JJW
File Name: 0610031800sip15.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

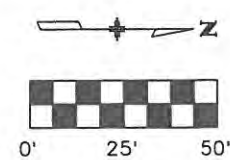



Colorado Department  
of Transportation

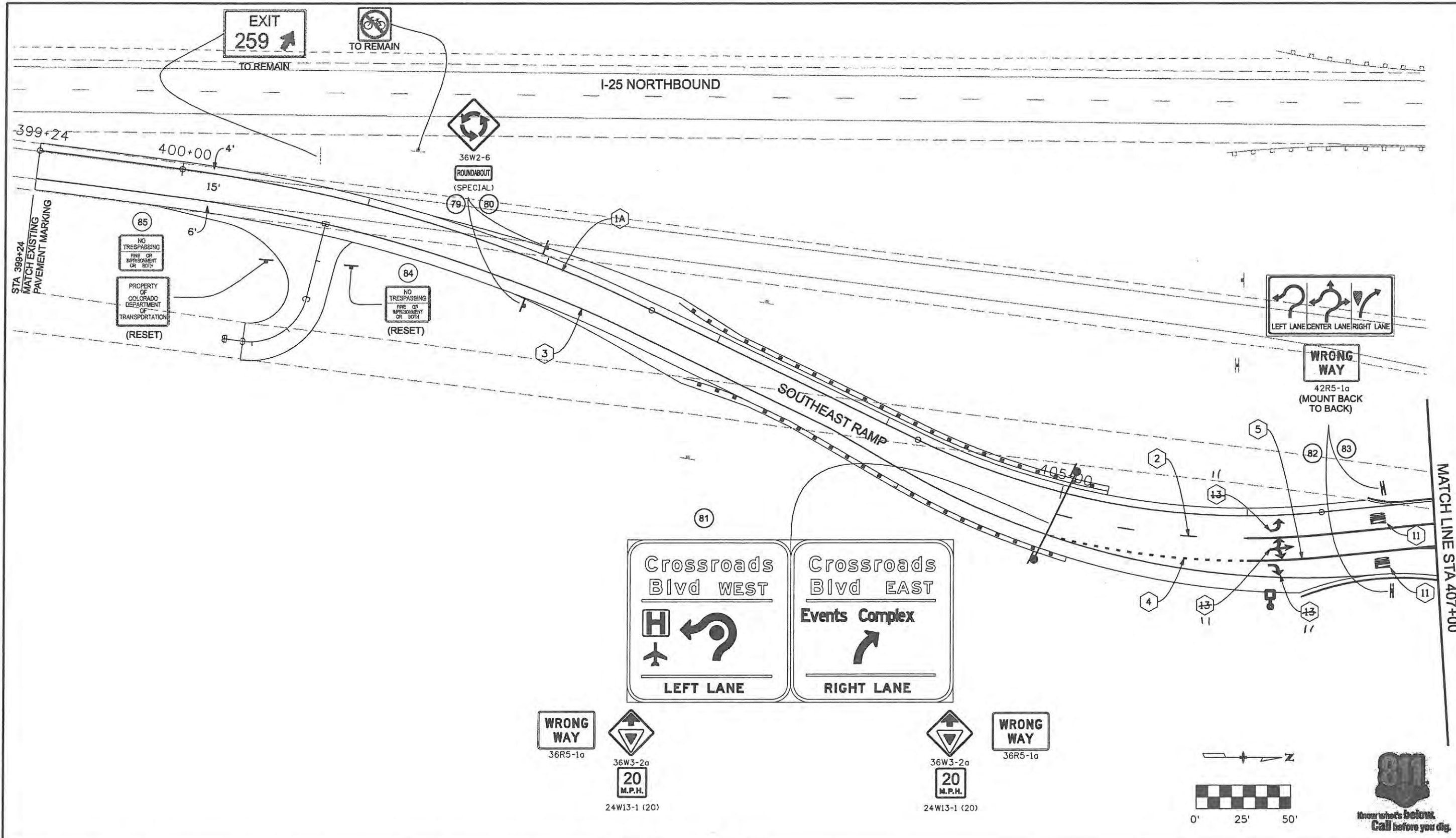
No Revisions: 9/14/11
Revised:
Void:

SIGNING AND PAVEMENT MARKING NORTHEAST RAMP		
Designer: MAK	Structure Numbers	
Detailer: DVD		
Sheet Subset: S&S	Subset Sheets: 7 of 8	

Project No./Code	ES4 0253-207
	17244
Sheet Number	229



**WILSON & COMPANY**  
 Engineers & Architects  
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 Denver, CO 80202  
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MATCH LINE STA 407+00

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 Engineers & Architects  
 999 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2688

Computer File Information	
Creation Date: 08/06/07	Initials: JJW
Print Date: 5/4/2009	Initials: JJW
File Name: 0610031800sip16.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

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LOVELAND, CO 80537  
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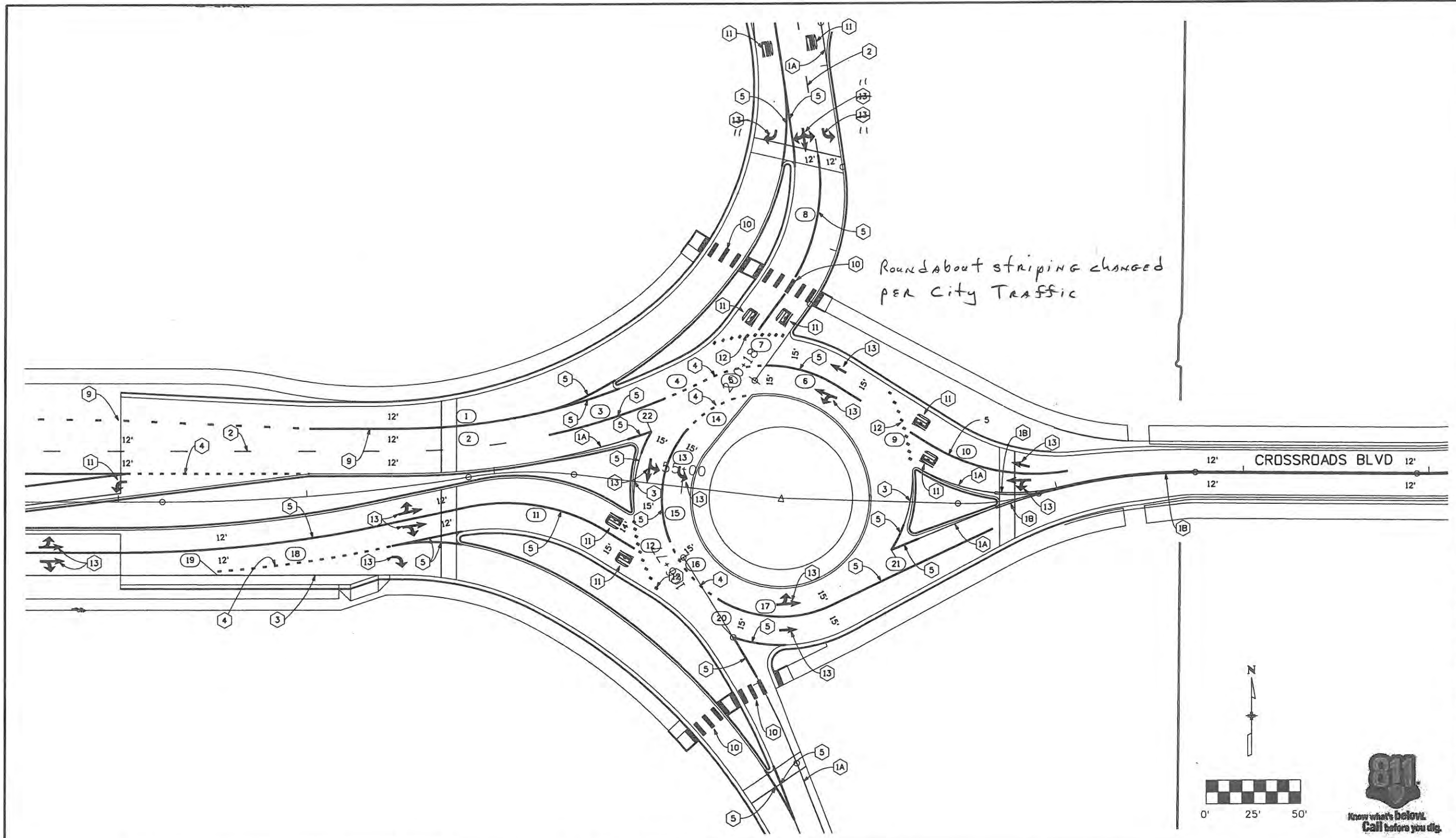
**Colorado Department of Transportation**

No Revisions:	
Revised: 9/14/11	
Void:	

SIGNING AND PAVEMENT MARKING SOUTHEAST RAMP		
Designer: MAK	Structure Numbers	
Detailer: DVD	Subset Sheets: 8 of 8	
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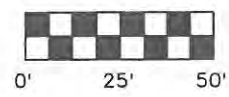
Project No./Code	ES4 0253-207
	17244
Sheet Number	230





Roundabout striping changed  
per City Traffic

CROSSROADS BLVD



Computer File Information	
Creation Date: 4/21/08	Initials: DVD
Print Date: 5/4/2009	Initials: DVD
File Name: 0610031800sipIntDet01.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

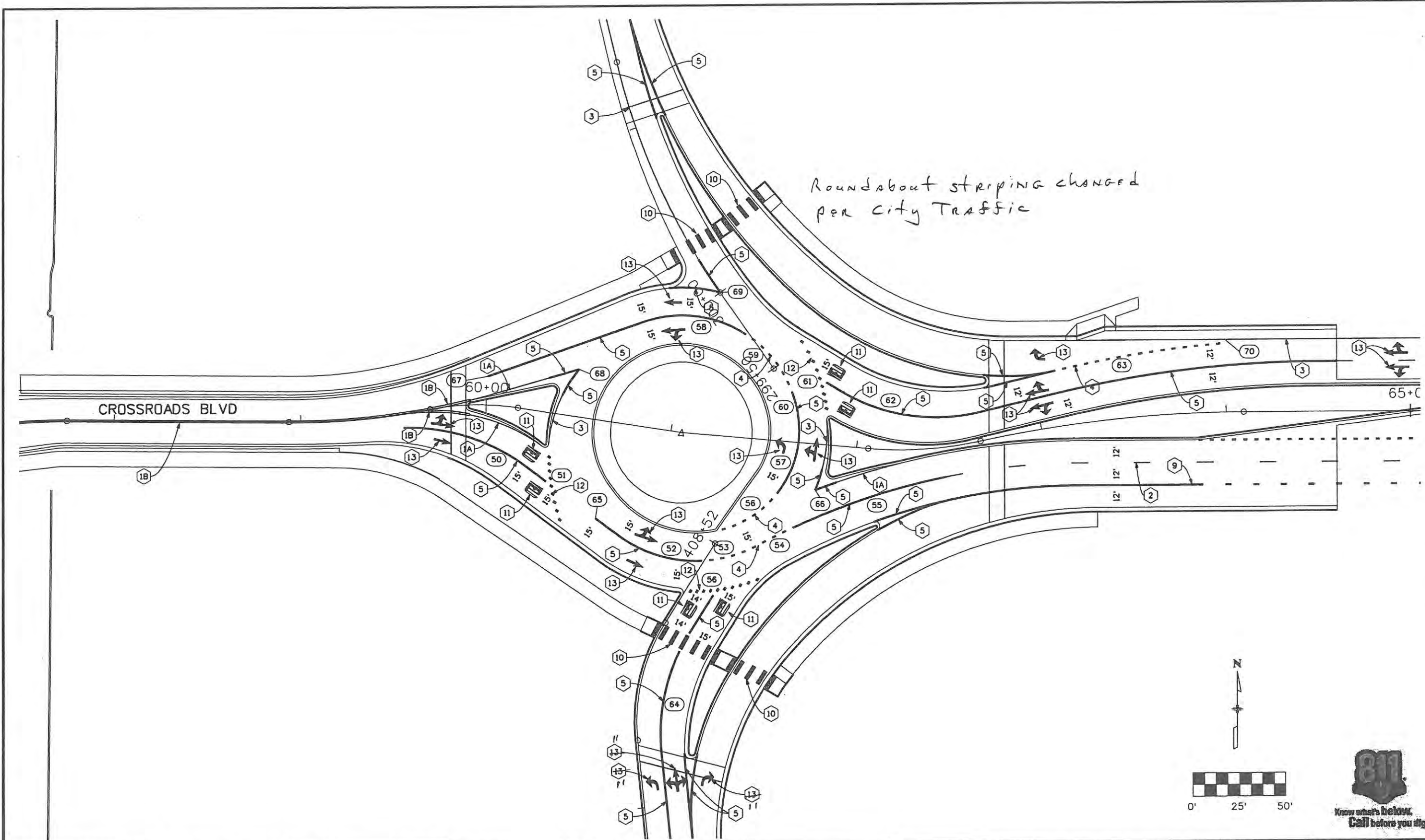
Colorado Department  
of Transportation

No Revisions:	
Revised:	9/14/11
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INTERSECTION DETAIL CROSSROADS BOULEVARD	
Designer: MAK	Structure Numbers:
Detailer: DVD	
Sheet Subset: INT DET	Subset Sheets: 1 of 3

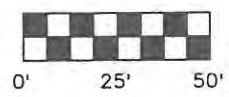
Project No./Code	
ES4 0253-207	
17244	
Sheet Number	231

WILSON & COMPANY  
 Engineers & Architects  
 999 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2663



Roundabout striping changed  
per City Traffic

CROSSROADS BLVD



Computer File Information	
Creation Date: 4/21/08	Initials: DVD
Print Date: 5/4/2009	Initials: DVD
File Name: 0610031800sipIntDet02.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**



500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000



Colorado Department  
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No Revisions:
Revised: 9/14/11
Void:

INTERSECTION DETAIL CROSSROADS BOULEVARD	
Designer: MAK	Structure Numbers
Detailer: DVD	
Sheet Subset: INT DET	Subset Sheets: 2 of 3

Project No./Code	
ES4 0253-207	17244
Sheet Number	232

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 Denver, CO 80202  
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PAVEMENT MARKING GEOMETRY				
SEGMENT NO.	RADIUS	NORTHING	EASTING	PAVEMENT MARKING CODE
BEGIN	328'	1402479.09	3141677.64	9
1 MIDPOINT	328'	1402481.05	3141715.80	9
END	328'	1402487.87	3141753.57	9
BEGIN	367.2'	1402467.09	3141677.62	2
2 MIDPOINT	367.2'	1402469.16	3141717.17	2
END	367.2'	1402475.48	3141756.27	2
BEGIN	367.2'	1402475.48	3141756.27	5
3 MIDPOINT	367.2'	1402483.49	3141786.75	5
END	367.2'	1402494.09	3141816.44	5
BEGIN	367.2'	1402494.09	3141816.44	4
4 MIDPOINT	367.2'	1402499.27	3141828.57	4
END	367.2'	1402504.89	3141840.51	4
BEGIN	70'	1402504.89	3141840.51	4
5 MIDPOINT	70'	1402510.24	3141855.46	4
END	70'	1402512.09	3141871.23	4
BEGIN	70'	1402512.09	3141871.23	5
6 MIDPOINT	70'	1402509.34	3141890.89	5
END	70'	1402501.18	3141908.98	5
BEGIN				12
7 MIDPOINT				12
END				12
BEGIN	100'	1402561.79	3141888.49	5
8 MIDPOINT	100'	1402591.94	3141898.69	5
END	100'	1402623.77	3141898.90	5
BEGIN				12
9 MIDPOINT				12
END				12
BEGIN	104.47'	1402469.93	3141958.16	5
10 MIDPOINT	104.47'	1402455.70	3141993.51	5
END	104.47'	1402455.10	3142031.61	5
BEGIN	100'	1402437.15	3141713.09	5
11 MIDPOINT	100'	1402437.82	3141750.48	5
END	100'	1402424.70	3141785.50	5
BEGIN				12
12 MIDPOINT				12
END				12
BEGIN	55'	1402447.35	3141816.69	5
13 MIDPOINT	55'	1402463.11	3141820.62	5
END	55'	1402477.05	3141828.98	5

PAVEMENT MARKING GEOMETRY				
SEGMENT NO.	RADIUS	NORTHING	EASTING	PAVEMENT MARKING CODE
BEGIN	55'	1402477.05	3141828.98	4
14 MIDPOINT	55'	1402489.75	3141843.99	4
END	55'	1402496.36	3141862.52	4
BEGIN	63'	1402447.35	3141816.69	5
15 MIDPOINT	63'	1402433.50	3141816.89	5
END	63'	1402420.04	3141820.11	5
BEGIN	63'	1402420.04	3141820.11	4
16 MIDPOINT	63'	1402401.49	3141830.59	4
END	63'	1402387.50	3141846.66	4
BEGIN	63'	1402387.50	3141846.66	5
17 MIDPOINT	63'	1402378.42	3141876.02	5
END	63'	1402384.30	3141906.17	5
BEGIN	675'	1402403.26	3141581.39	4
18 MIDPOINT	675'	1402409.40	3141634.03	4
END	675'	1402416.57	3141673.25	4
19		1402401.26	3141581.39	4
20		1402367.50	3141854.23	5
21		1402413.50	3141938.25	5
22		1402477.09	3141810.82	5

PAVEMENT MARKING GEOMETRY				
SEGMENT NO.	RADIUS	NORTHING	EASTING	PAVEMENT MARKING CODE
BEGIN	104.58'	1402449.49	3142280.38	5
50 MIDPOINT	104.58'	1402444.40	3142314.83	5
END	104.58'	1402428.28	3142345.70	5
BEGIN				12
51 MIDPOINT				12
END				12
BEGIN	70'	1402391.05	3142394.80	5
52 MIDPOINT	70'	1402380.33	3142415.23	5
END	70'	1402376.84	3142438.03	5
BEGIN	70'	1402376.84	3142438.03	4
53 MIDPOINT	70'	1402379.03	3142454.49	4
END	70'	1402385.04	3142469.98	4
BEGIN	366.25'	1402385.04	3142469.98	4
54 MIDPOINT	366.25'	1402389.93	3142479.50	4
END	366.25'	1402394.54	3142489.17	4
BEGIN	366.25'	1402394.54	3142489.17	5
55 MIDPOINT	366.25'	1402410.23	3142529.41	5
END	366.25'	1402421.07	3142571.22	5
BEGIN	55'	1402393.00	3142448.38	4
56 MIDPOINT	55'	1402401.66	3142468.25	4
END	55'	1402414.45	3142481.55	4
BEGIN	55'	1402414.45	3142481.55	5
57 MIDPOINT	55'	1402432.58	3142490.21	5
END	55'	1402452.60	3142491.79	5
BEGIN	63'	1402505.59	3142408.70	5
58 MIDPOINT	63'	1402508.62	3142435.96	5
END	63'	1402499.78	3142461.93	5
BEGIN	63'	1402499.78	3142461.93	4
59 MIDPOINT	63'	1402483.24	3142479.79	4
END	63'	1402465.73	3142488.96	4
BEGIN	63'	1402465.73	3142488.96	5
60 MIDPOINT	63'	1402459.24	3142490.73	5
END	63'	1402452.60	3142491.79	5
BEGIN				12
61 MIDPOINT				12
END				12
BEGIN	100'	1402467.80	3142514.38	5
62 MIDPOINT	100'	1402454.39	3142550.91	5
END	100'	1402455.95	3142589.80	5

PAVEMENT MARKING GEOMETRY				
SEGMENT NO.	RADIUS	NORTHING	EASTING	PAVEMENT MARKING CODE
BEGIN	625'	1402477.37	3142627.63	4
63 MIDPOINT	625'	1402486.45	3142673.96	4
END	625'	1402492.00	3142720.83	4
BEGIN	100'	1402274.59	3142417.96	5
64 MIDPOINT	100'	1402300.69	3142418.82	5
END	100'	1402325.67	3142426.40	5
65		1402400.05	3142382.92	5
66		1402414.45	3142500.47	5
67		1402477.04	3142325.45	5
68		1402480.42	3142374.34	5
69		1402521.12	3142450.11	5
70		1402494.00	3142720.83	4



Computer File Information	
Creation Date: 4/21/08	Initials: DVD
Print Date: 5/4/2009	Initials: DVD
File Name: 0610031800sipIntDet03.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

Colorado Department of Transportation

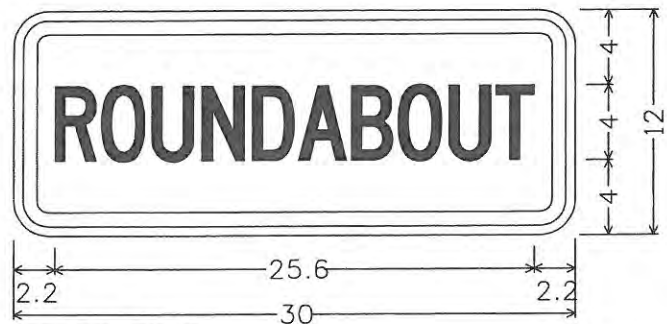
No Revisions: 9/14/11
Revised:
Void:

INTERSECTION DETAIL CROSSROADS BOULEVARD		
Designer: MAK	Structure Numbers	
Detailer: DVD		
Sheet Subset: INT DET	Subset Sheets: 3 of 3	

Project No./Code	ES4 0253-207
	17244
Sheet Number	233

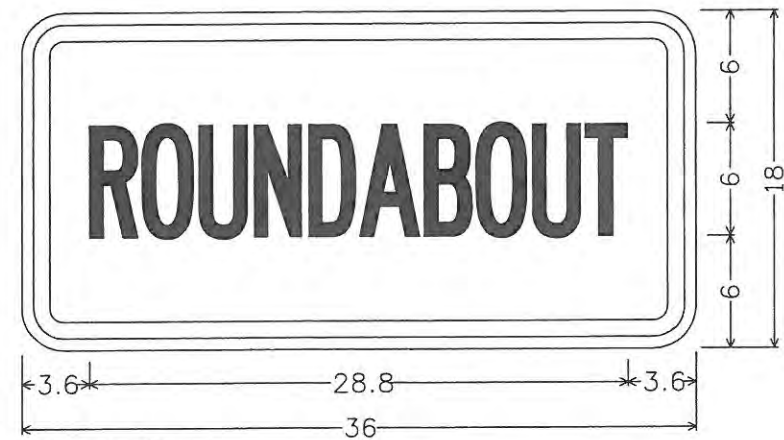
999 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2693  
**WILSON & COMPANY**  
 Engineers & Architects

2



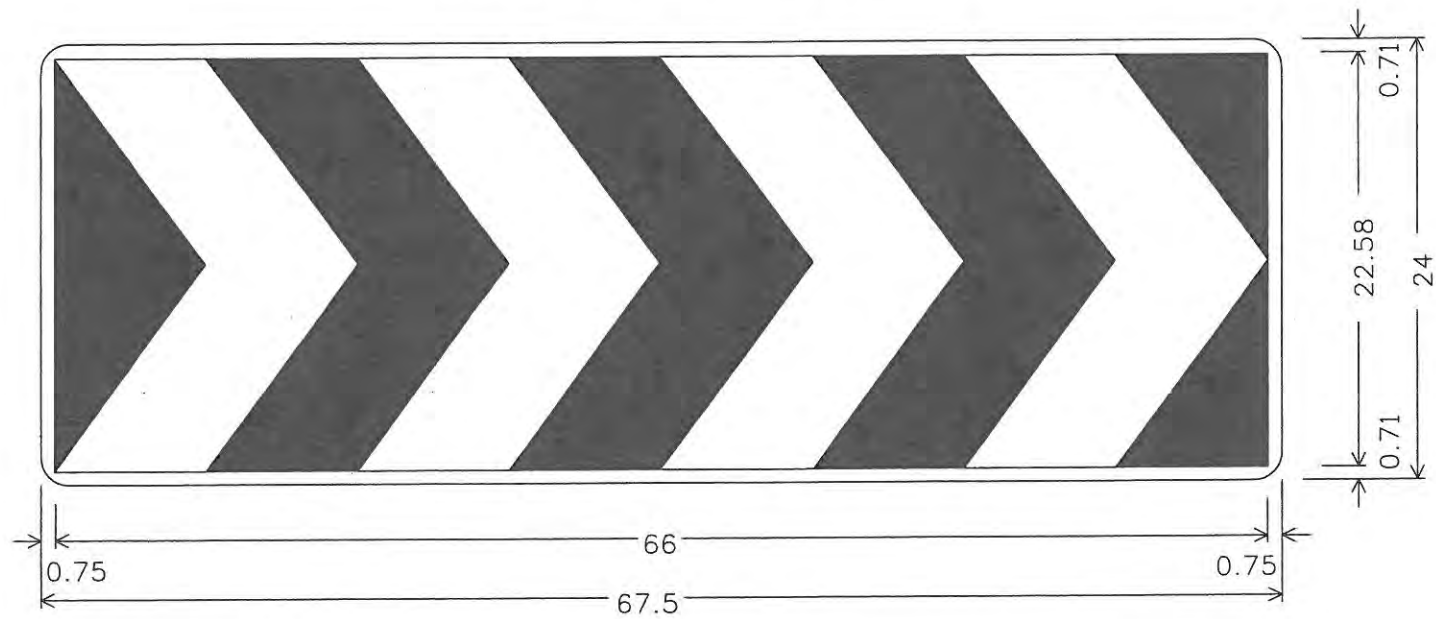
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75 76 79 80



W16-12\_36x18;  
 2.3" Radius, 0.9" Border, 0.6" Indent, Black on White;  
 [ROUNDAABOUT] B 2K specified length;

18 22 25 51 52 53

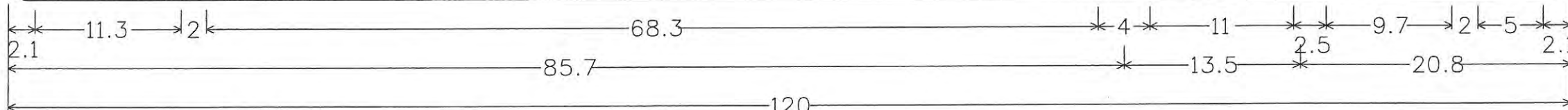


1.50" Radius, No border, White on White;

<b>Computer File Information</b>		<b>Sheet Revisions</b>			<b>CITY OF LOVELAND</b>		<b>SIGN PANEL</b>		<b>Project No./Code</b>	
Creation Date: 4/22/08	Initials: DVD	Date:	Comments:	Init.	 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 COLORADO DEPARTMENT OF TRANSPORTATION	No Revisions: 9/14/11	Designer: MAK	Structure Numbers	ES4 0253-207
Print Date: 5/4/2009	Initials: DVD						Revised:	Detailer: DVD		17244
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Horiz. Scale: 1:50	Vert. Scale: As Noted									

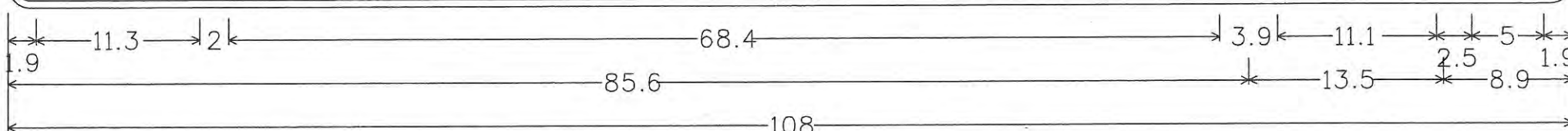
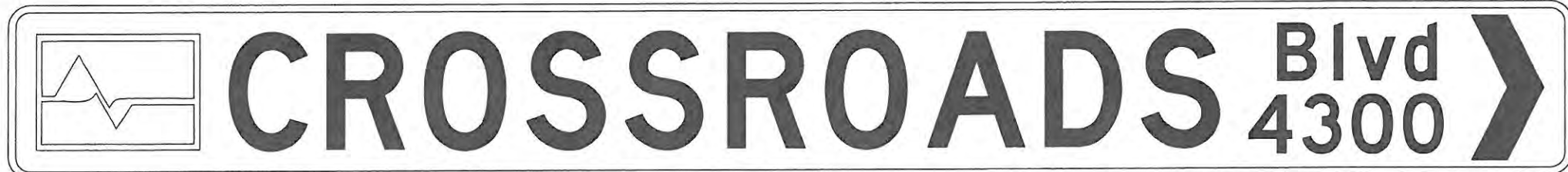


14



D1-1; 1.5" Radius, 0.5" Border, White on Green;  
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50

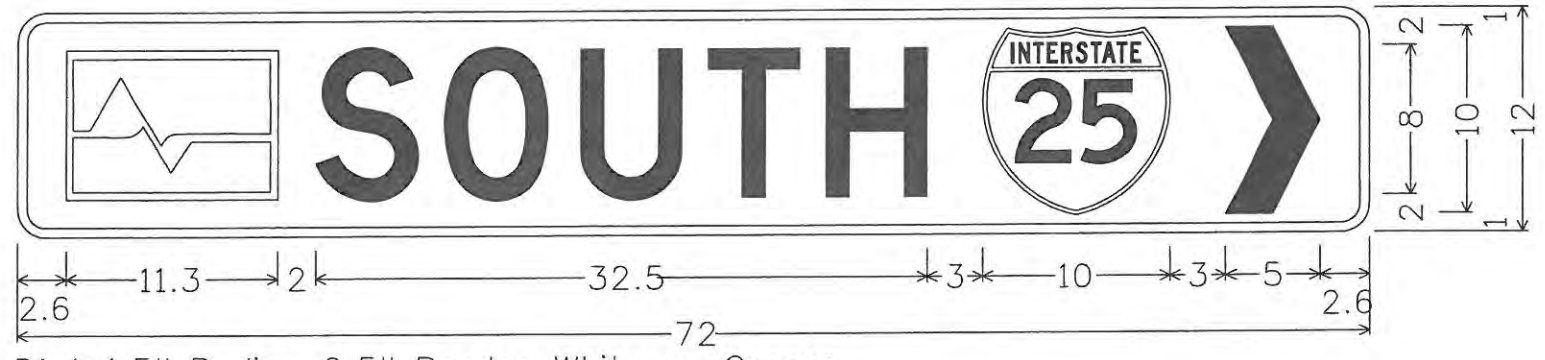


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<b>Computer File Information</b>		<b>Sheet Revisions</b>			<b>CITY OF LOVELAND</b>		<b>SIGN PANEL</b>		<b>Project No./Code</b>	
Creation Date: 4/22/08	Initials: DVD	Date:	Comments:	Init.	500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	Colorado Department of Transportation	No Revisions: 9/14/11	Designer: MAK	Structure	ES4 0253-207
Print Date: 5/4/2009	Initials: DVD						Revised:	Detailer: DVD	Numbers	17244
File Name: 0610031800sipSignPanel02.dgn							Void:	Sheet Subset: SN PANEL	Subset Sheets: SP2 of 11	Sheet Number 235
Horiz. Scale: 1:50	Vert. Scale: As Noted									

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 959 18th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2576  
 Fax: 303-297-2683

31



D1-1; 1.5" Radius, 0.5" Border, White on Green;  
 Loveland Logo; [SOUTH] D 92} spacing; [ ] D; [ ] D; I-25\_Shield; Chevron;

38



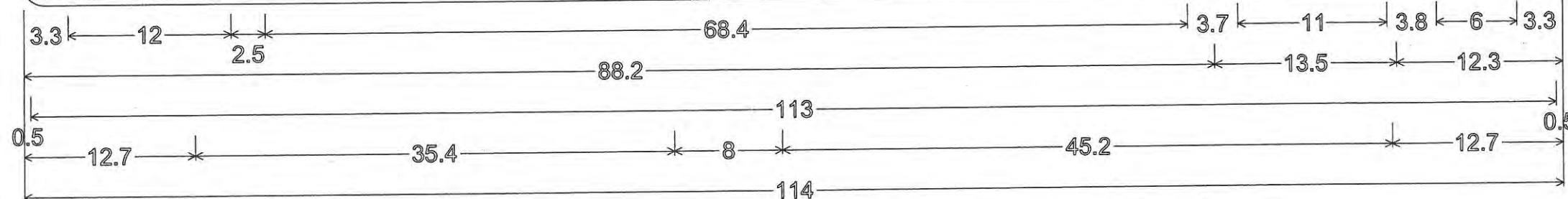
D1-1; 1.5" Radius, 0.5" Border, White on Green;  
 Loveland Logo; [NORTH] D 92} spacing; [ ] D; [ ] D; I-25\_Shield; Chevron;

<b>Computer File Information</b>		<b>Sheet Revisions</b>			<b>CITY OF LOVELAND</b>		<b>SIGN PANEL</b>		<b>Project No./Code</b>		
Creation Date: 4/22/08	Initials: DVD	Date:	Comments	Init.	 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 Colorado Department of Transportation	No Revisions: 9/14/11		ES4 0253-207		
Print Date: 5/4/2009	Initials: DVD						Revised:	Designer: MAK	Structure Numbers	17244	
File Name: 0610031800sipSignPanel03.dgn							Void:	Detailer: DVD			
Horiz. Scale: 1:50	Vert. Scale: As Noted							Sheet Subset: SN PANEL	Subset Sheets: SP3 of 11	Sheet Number 236	



35

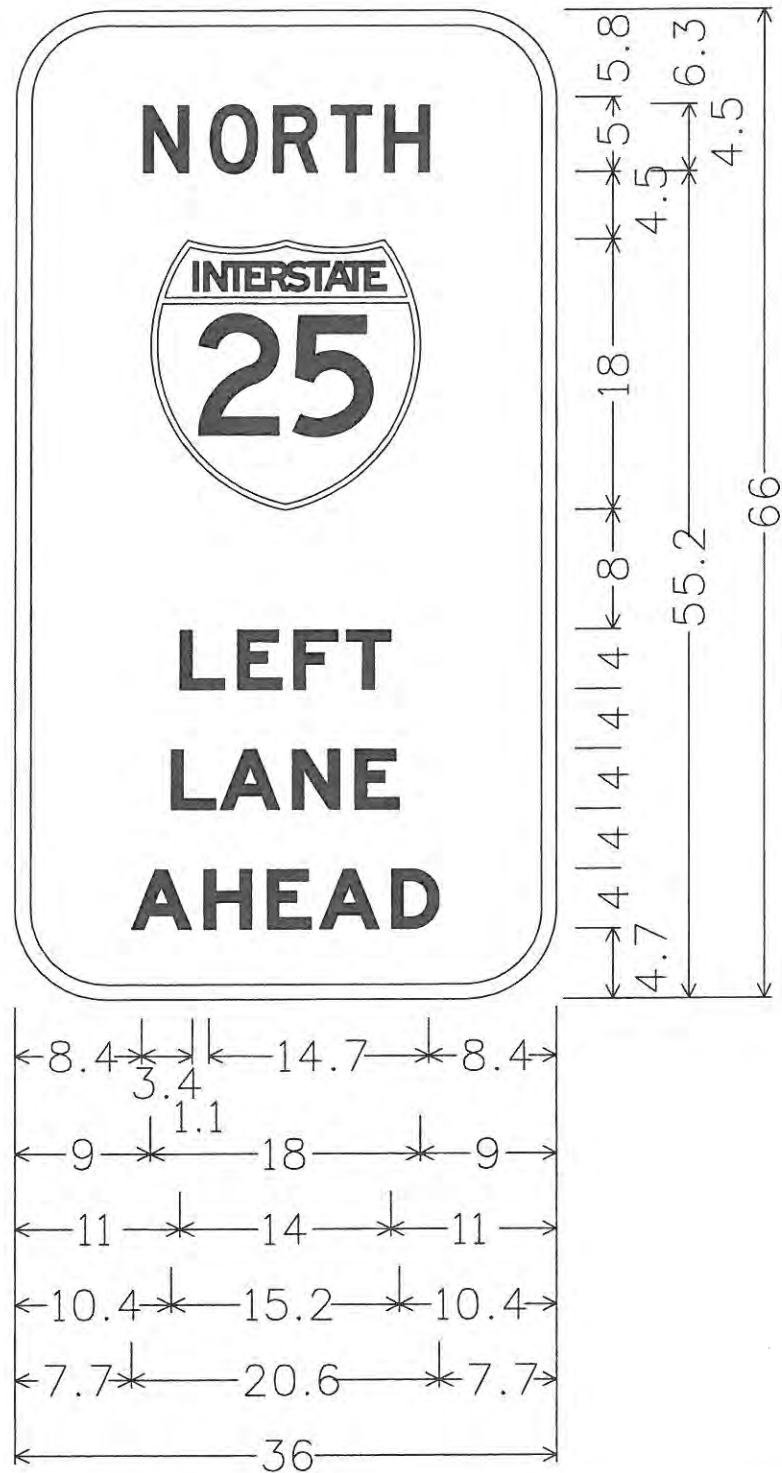
65



D1-1; 1.5" Radius, 0.5" Border, White on Green;  
 Loveland Logo; "CROSSROADS" D 92% spacing; " " D; "Blvd" D; " " D; "4300" D; Chevron; "Events Complex" D;

<b>Computer File Information</b>		<b>Sheet Revisions</b>			<b>CITY OF LOVELAND</b>  500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 COLORADO DEPARTMENT OF TRANSPORTATION	<b>SIGN PANEL</b>		<b>Project No./Code</b>
Creation Date: 4/22/08	Initials: DVD	Date:	Comments:	Init.:			No Revisions: 9/14/11	Revised:	Void:
Print Date: 5/4/2009	Initials: DVD							Designer: MAK	Structure Numbers
File Name: 0610031800sipSignPanel04.dgn								Detailer: DVD	
Horiz. Scale: 1:50	Vert. Scale: As Noted							Sheet Subset: SN PANEL	Subset Sheets: SP4 of 11
									Sheet Number 237

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6.0" Radius, 1.0" Border, White on Green;  
 [NORTH] D;  
 [LEFT] E Mod;  
 [LANE] E Mod;  
 [AHEAD] E Mod;  
 Table of letter and object lefts.

N	O	R	T	H
8.4	12.9	17.1	21.0	24.6


9.0

L	E	F	T
11.0	14.8	18.5	22.1

L	A	N	E
10.4	13.6	18.4	22.7

A	H	E	A	D
7.7	12.5	16.8	20.3	25.1

Computer File Information	
Creation Date: 4/22/08	Initials: DVD
Print Date: 5/4/2009	Initials: DVD
File Name: 0610031800sipSignPanel05.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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 LOVELAND, CO 80537  
 970-962-2000

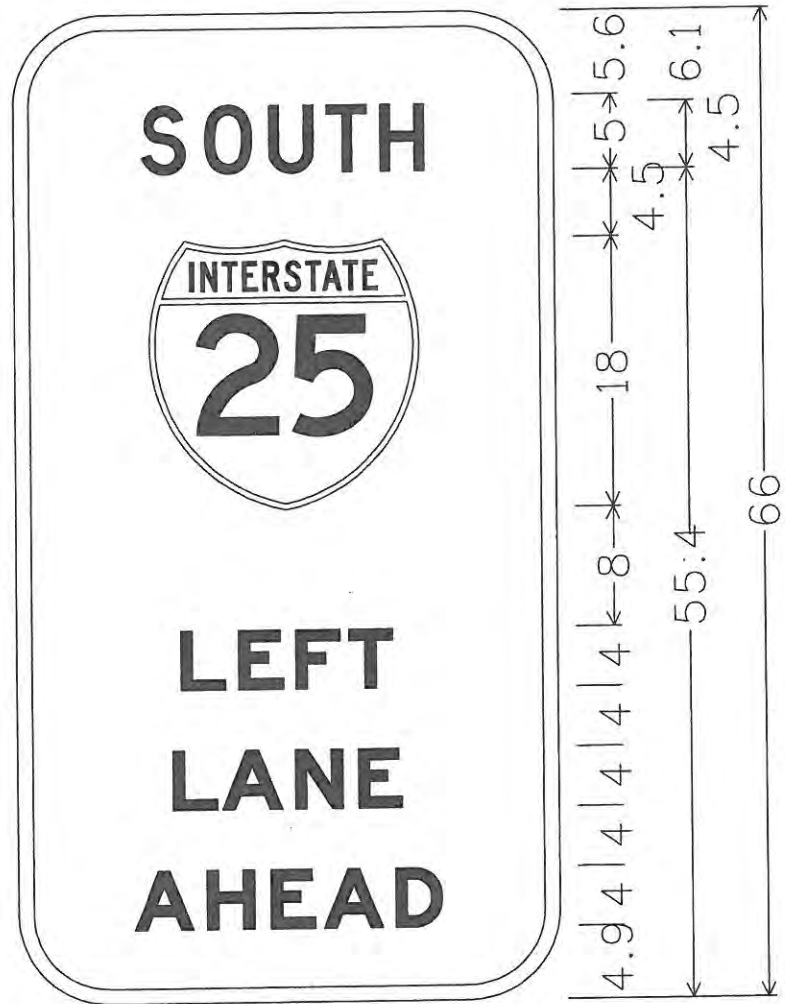


Colorado Department  
 of Transportation

SIGN PANEL		
No Revisions: 9/14/11	Designer: MAK	Structure Numbers
Revised:	Detailer: DVD	
Void:	Sheet Subset: SN PANEL	Subset Sheets: SP5 of 11

Project No./Code
ES4 0253-207
17244
Sheet Number 238





6.0" Radius, 1.0" Border, White on Green;  
 [SOUTH] D;  
 [LEFT] E Mod;  
 [LANE] E Mod;  
 [AHEAD] E Mod;

Table of letter and object lefts.

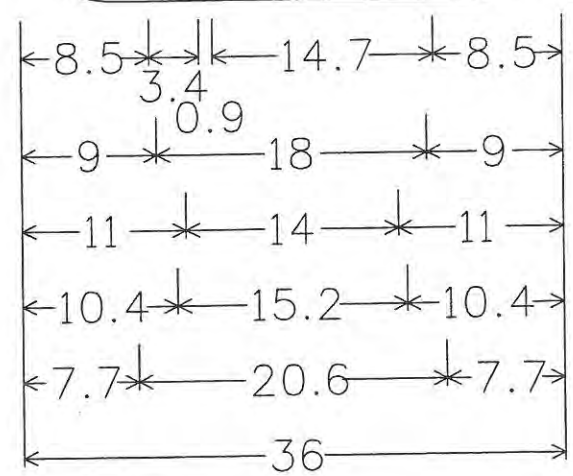
S	O	U	T	H
8.5	12.8	17.0	20.9	24.4

9.0

L	E	F	T
11.0	14.8	18.5	22.1

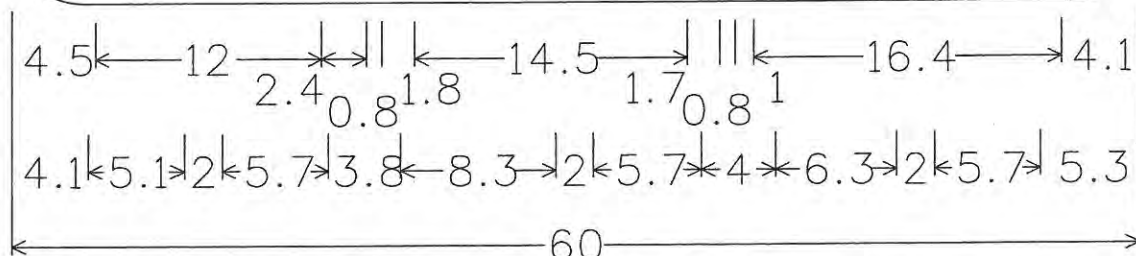
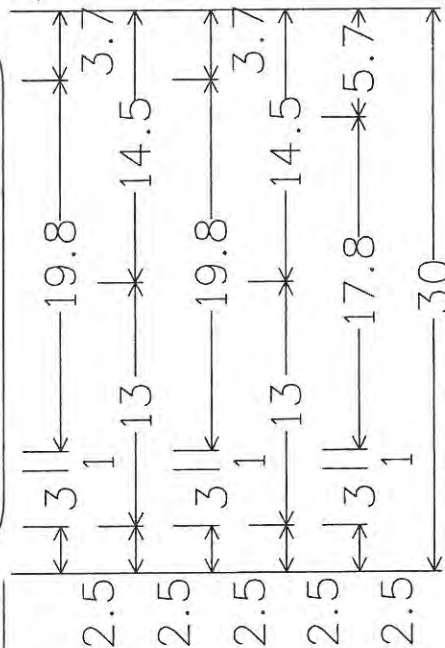
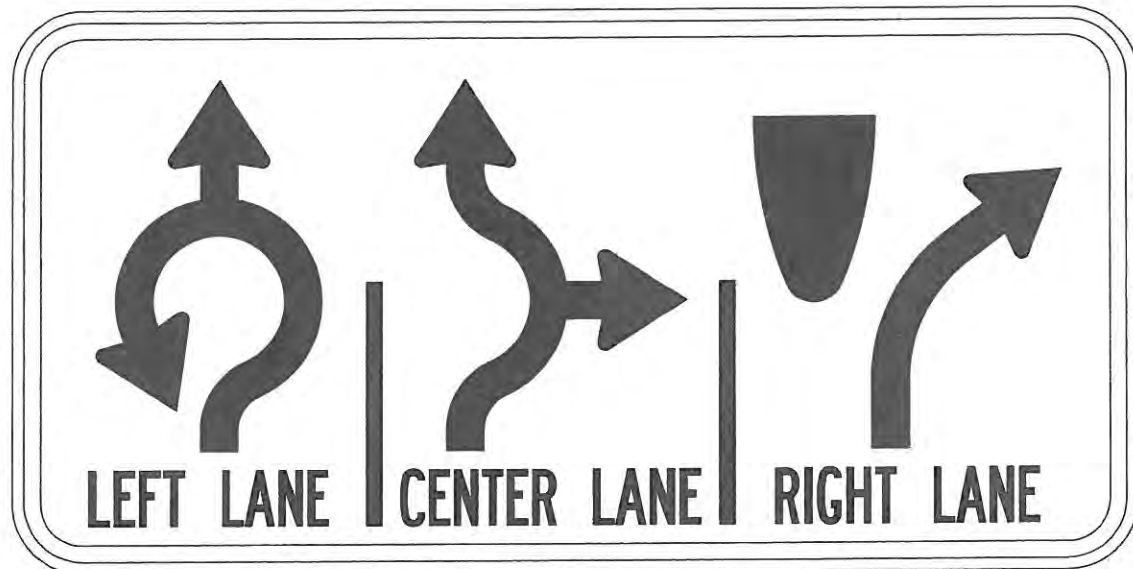
L	A	N	E
10.4	13.6	18.4	22.7

A	H	E	A	D
7.7	12.5	16.8	20.3	25.1



<b>Computer File Information</b>		<b>Sheet Revisions</b>			<b>CITY OF LOVELAND</b>		<b>SIGN PANEL</b>		<b>Project No./Code</b>	
Creation Date: 4/22/08	Initials: DVD	Date:	Comments	Init.	500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	Colorado Department of Transportation	No Revisions: 9/14/11		ES4 0253-207	
Print Date: 5/4/2009	Initials: DVD						Designer: MAK	Structure	17244	
File Name: 0610031800sipSignPanel06.dgn							Detailer: DVD	Numbers		
Horiz. Scale: 1:50	Vert. Scale: As Noted						Sheet Subset: SN PANEL	Subset Sheets: SP6 of 11	Sheet Number 239	

8 8A 9 9A 45 45A 46 46A



3.8" Radius, 0.9" Border, 0.6" Indent, Black on White;  
 Signs; [LEFT LANE] B 50} spacing; Signs;  
 [CENTER LANE] B 50} spacing; Signs;  
 [RIGHT LANE] B 50} spacing;

Table of letter and object lefts.

4.5	18.9	21.5	37.7	39.5

L	E	F	T	L	A	N	E
4.1	5.5	6.8	8.1	11.2	12.4	14.2	15.8

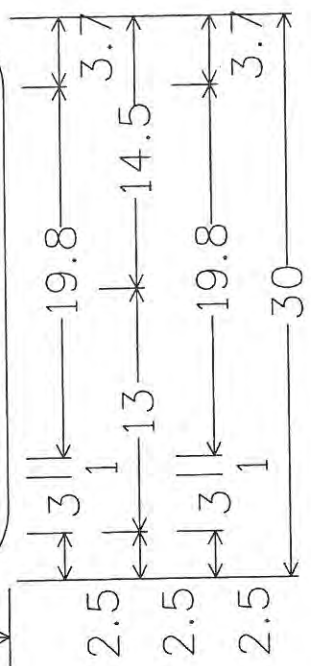
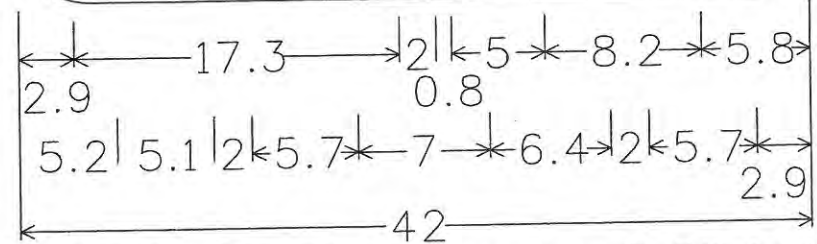
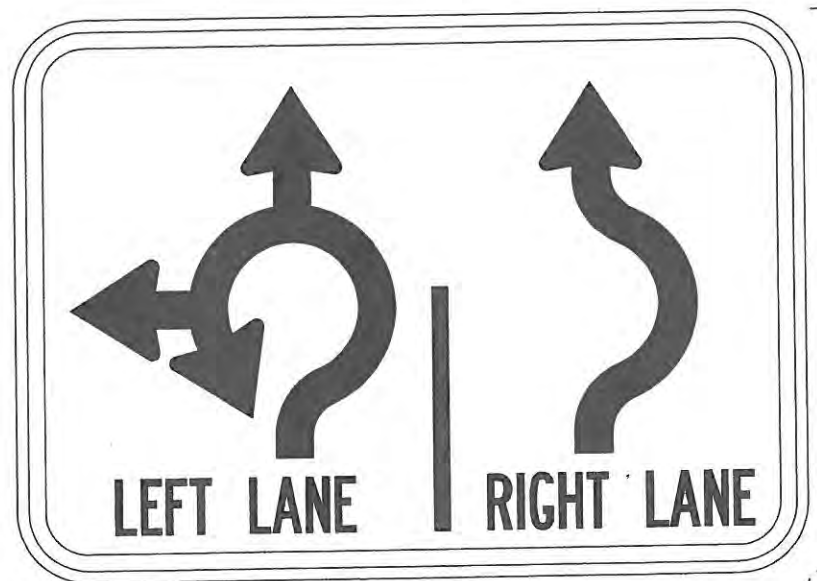
C	E	N	T	E	R
20.7	22.2	23.6	25.0	26.4	27.7

L	A	N	E	R	I	G	H	T
31.0	32.2	34.0	35.6	40.7	42.2	42.9	44.4	45.9

L	A	N	E
49.0	50.2	52.0	53.6

<b>Computer File Information</b>		<b>Sheet Revisions</b>			<b>CITY OF LOVELAND</b>		<b>SIGN PANEL</b>		<b>Project No./Code</b>		
Creation Date: 4/22/08	Initials: DVD	Date:	Comments	Init.	500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	COLORADO DEPARTMENT OF TRANSPORTATION	No Revisions: 9/14/11		ES4 0253-207		
Print Date: 5/4/2009	Initials: DVD						Revised:	Designer: MAK	Structure Numbers	17244	
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Horiz. Scale: 1:50	Vert. Scale: As Noted							Sheet Subset: SN PANEL	Subset Sheets: SP7 of 11		



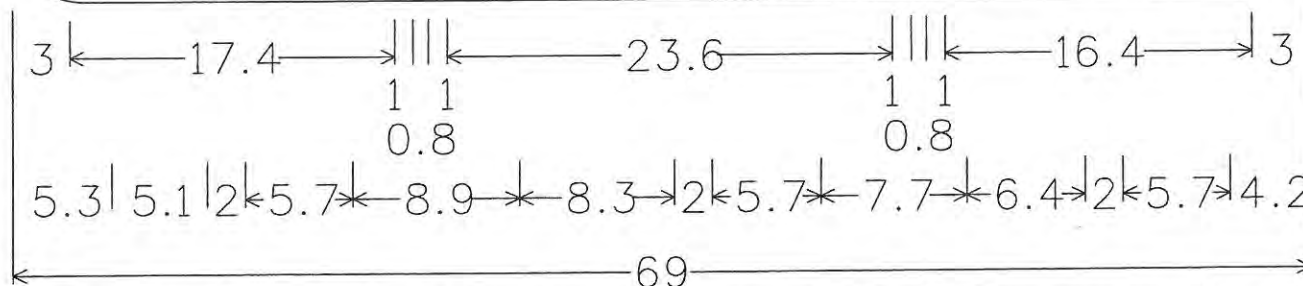
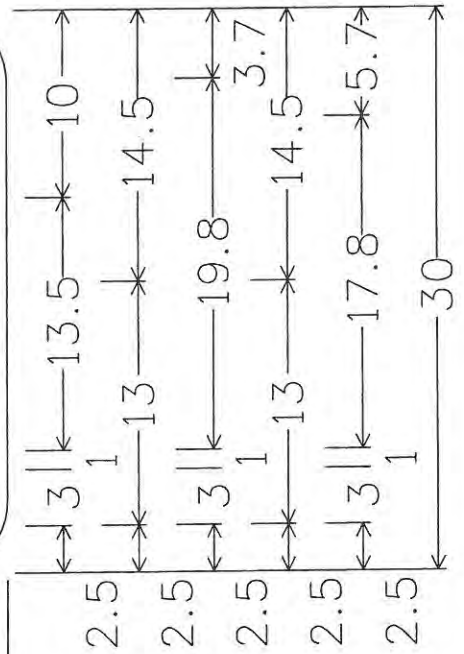
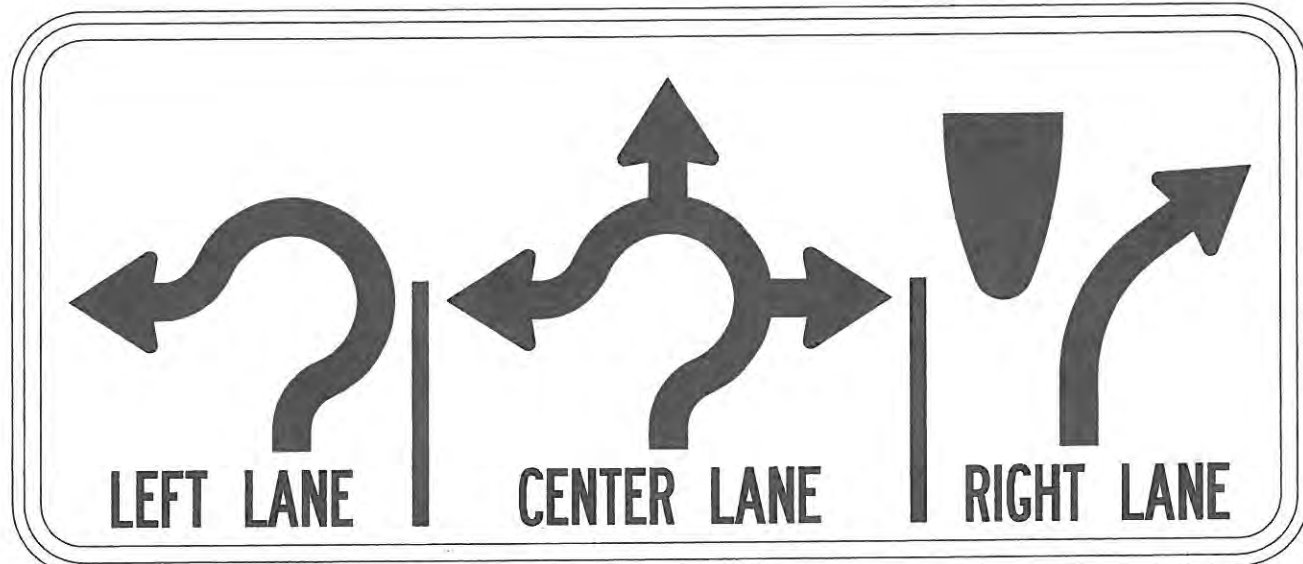


3.8" Radius, 0.9" Border, 0.6" Indent, Black on White;  
 Signs; [LEFT LANE] B 50 } spacing;  
 Signs; [RIGHT LANE] B 50 } spacing;

Table of letter and object lefts.

⤴		⤵					
2.9	22.2	28.0					
L	E	F	T	L	A	N	E
5.2	6.5	7.9	9.2	12.3	13.5	15.3	16.8
R		I	G	H	T		
25.0		26.6	27.2	28.8	30.3		
L	A	N	E				
33.4	34.6	36.4	38.0				

<b>Computer File Information</b>		<b>Sheet Revisions</b>			<b>CITY OF LOVELAND</b>		<b>SIGN PANEL</b>		<b>Project No./Code</b>		
Creation Date: 4/22/08	Initials: DVD	Date:	Comments	Init.	500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	Colorado Department of Transportation	No Revisions: 9/14/11		ES4 0253-207		
Print Date: 5/4/2009	Initials: DVD						Revised:	Designer: MAK	Structure Numbers	17244	
File Name: 0610031800sipSignPanel08.dgn							Void:	Detailer: DVD	Subst Sheets: SP8 of 11	Sheet Number 241	
Horiz. Scale: 1:50	Vert. Scale: As Noted							Sheet Subset: SN PANEL			



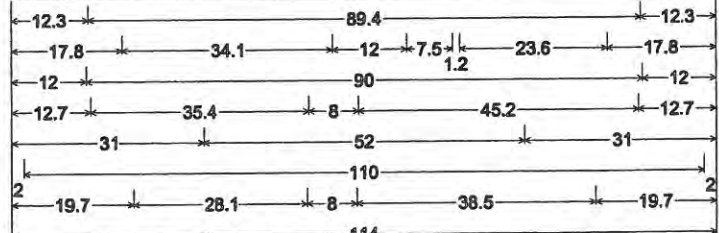
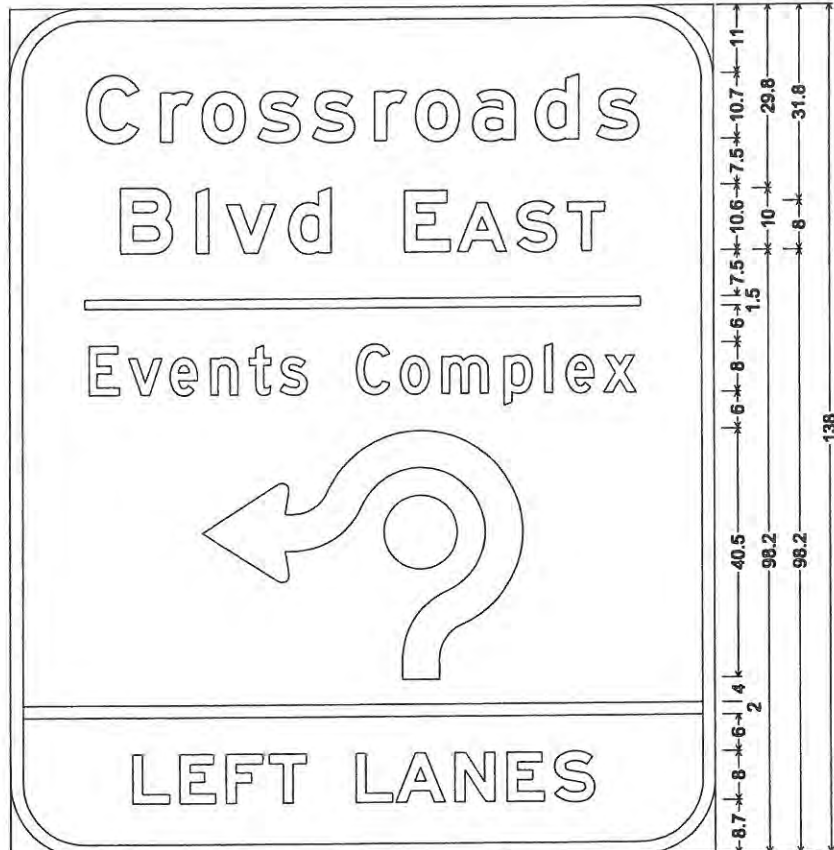
3.8" Radius, 0.9" Border, 0.6" Indent, Black on White;  
 Signs; [LEFT LANE] B 50 } spacing; Signs;  
 [CENTER LANE] B 50 } spacing; Signs;  
 [RIGHT LANE] B 50 } spacing;

Table of letter and object lefts.

3.0	21.4	23.2	47.8	49.6						
<b>L</b>	<b>E</b>	<b>F</b>	<b>T</b>	<b>L</b>	<b>A</b>	<b>N</b>	<b>E</b>			
5.3	6.7	8.0	9.3	12.4	13.6	15.4	17.0			
<b>C</b>	<b>E</b>	<b>N</b>	<b>T</b>	<b>E</b>	<b>R</b>	<b>L</b>	<b>A</b>	<b>N</b>	<b>E</b>	
27.0	28.5	29.8	31.3	32.7	34.0	37.3	38.5	40.3	41.8	
<b>R</b>	<b>I</b>	<b>G</b>	<b>H</b>	<b>T</b>	<b>L</b>	<b>A</b>	<b>N</b>	<b>E</b>		
50.7	52.3	52.9	54.5	56.0	59.1	60.3	62.1	63.7		

<b>Computer File Information</b>		<b>Sheet Revisions</b>		<b>CITY OF LOVELAND</b>		<b>SIGN PANEL</b>		<b>Project No./Code</b>		
Creation Date: 4/22/08	Initials: DVD	Date:	Comments	Init.	500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	COLORADO DEPARTMENT OF TRANSPORTATION	No Revisions: 9/14/11	Designer: MAK	Structure	ES4 0253-207
Print Date: 5/4/2009	Initials: DVD						Revised:	Detailer: DVD	Numbers	17244
File Name: 0610031800sipSignPanel09.dgn							Void:	Sheet Subset: SN PANEL	Subset Sheets: SP9 of 11	Sheet Number 242
Horiz. Scale: 1:50	Vert. Scale: As Noted									



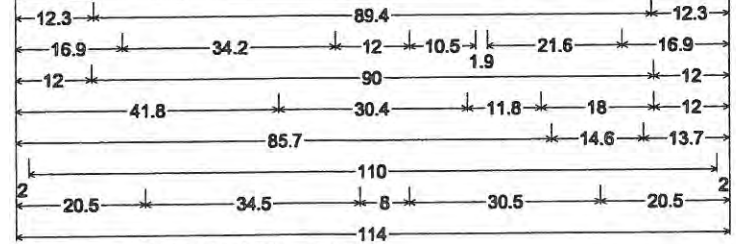
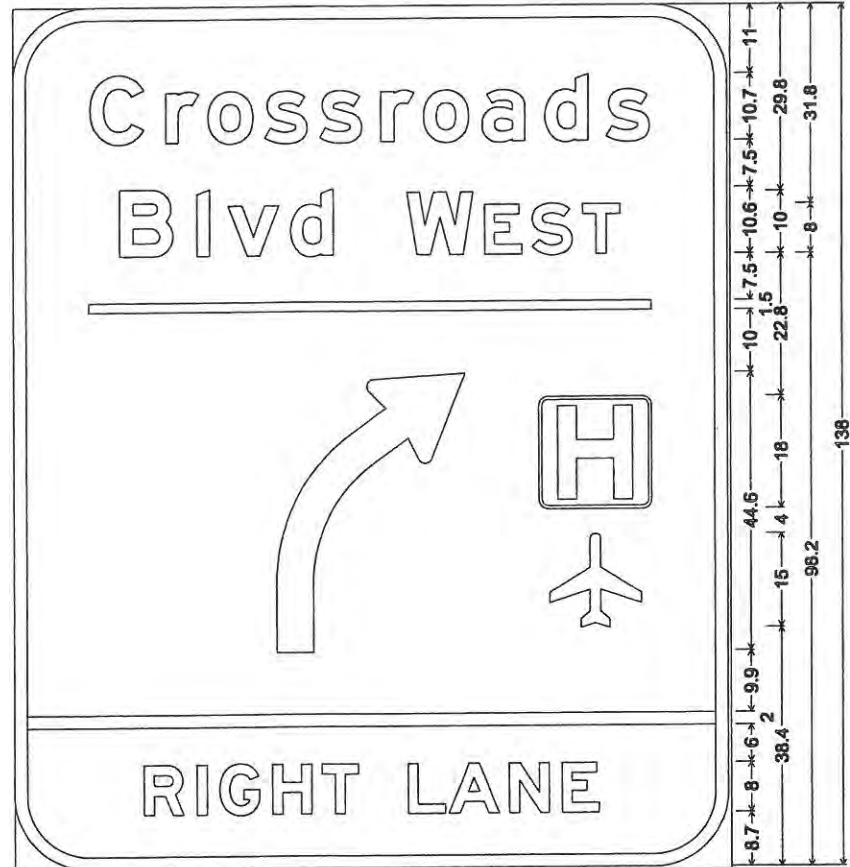


12.0" Radius, 2.0" Border, White on Green;  
 "Crossroads" E Mod; "Blvd" E Mod; "EAST" E Mod; "Events Complex" D; Signs;  
 "LEFT LANES" E Mod;

Table of letter and object lefts.

C	r	e	s	s	r	e	a	d	s			
12.3	24.3	31.1	40.2	49.0	59.0	65.8	75.1	85.1	94.9			
B	i	v	d	E	A	S	T					
17.8	30.1	35.1	45.1	63.9	72.6	82.3	90.3					
—												
12.0												
E	v	e	n	t	s	C	o	m	p	i	e	x
12.7	19.1	25.8	32.4	38.8	43.6	56.1	63.3	70.0	80.1	86.6	90.0	96.0
↩												
31.0												
—												
2.0												
L	E	F	T	L	A	N	E	S				
19.7	27.2	34.8	41.9	55.8	62.3	72.0	80.4	88.0				

SIGN PANELS 74 AND 81 SHALL BE HIGH INTENSITY BACKGROUND WITH DIAMOND GRADE LETTERS



12.0" Radius, 2.0" Border, White on Green;  
 "Crossroads" E Mod; "Blvd" E Mod; "WEST" E Mod; Signs; Signs; Symbol RA010;  
 "RIGHT LANE" E Mod;

Table of letter and object lefts.

C	r	e	s	s	r	e	a	d	s
12.3	24.3	31.1	40.2	49.0	59.0	65.8	75.1	85.1	94.9
B	i	v	d	W	E	S	T		
16.9	29.3	34.3	44.3	63.1	75.5	83.1	91.1		
—									
12.0									
↪									
41.8 84.0									
↪									
85.7									
—									
2.0									
R	I	G	H	T	L	A	N	E	
20.5	28.9	32.6	41.0	49.0	63.0	69.5	79.1	87.5	

Computer File Information	
Creation Date: 4/22/08	Initials: DVD
Print Date: 5/4/2009	Initials: DVD
File Name: 0610031800sipSignPanel10.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

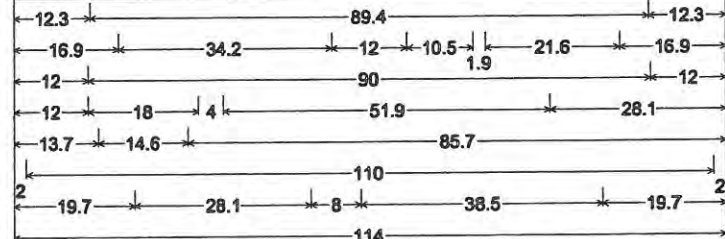
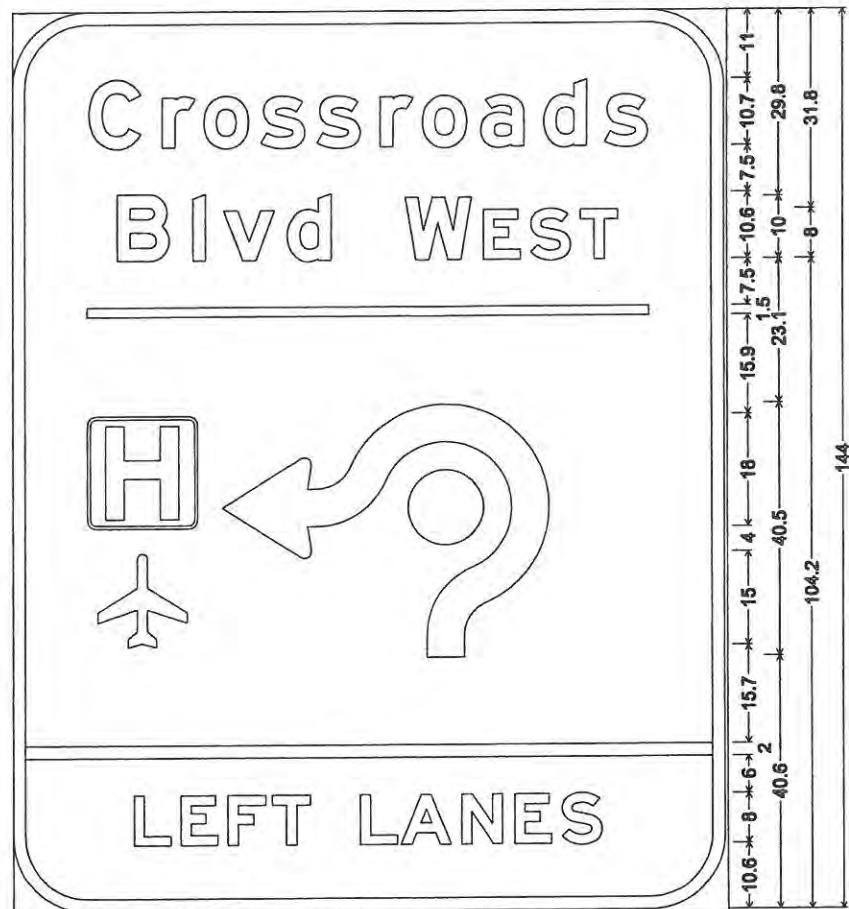
**CITY OF LOVELAND**  
 500 E. THIRD STREET  
 LOVELAND, CO 80537  
 970-962-2000

**Colorado Department of Transportation**

No Revisions: 9/14/11
Revised:
Void:

SIGN PANEL	
Designer: MAK	Structure Numbers
Detailer: DVD	
Sheet Subset: SN PANEL	Subset Sheets: SP10 of 11

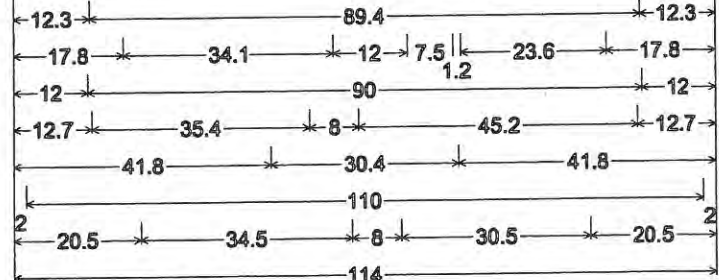
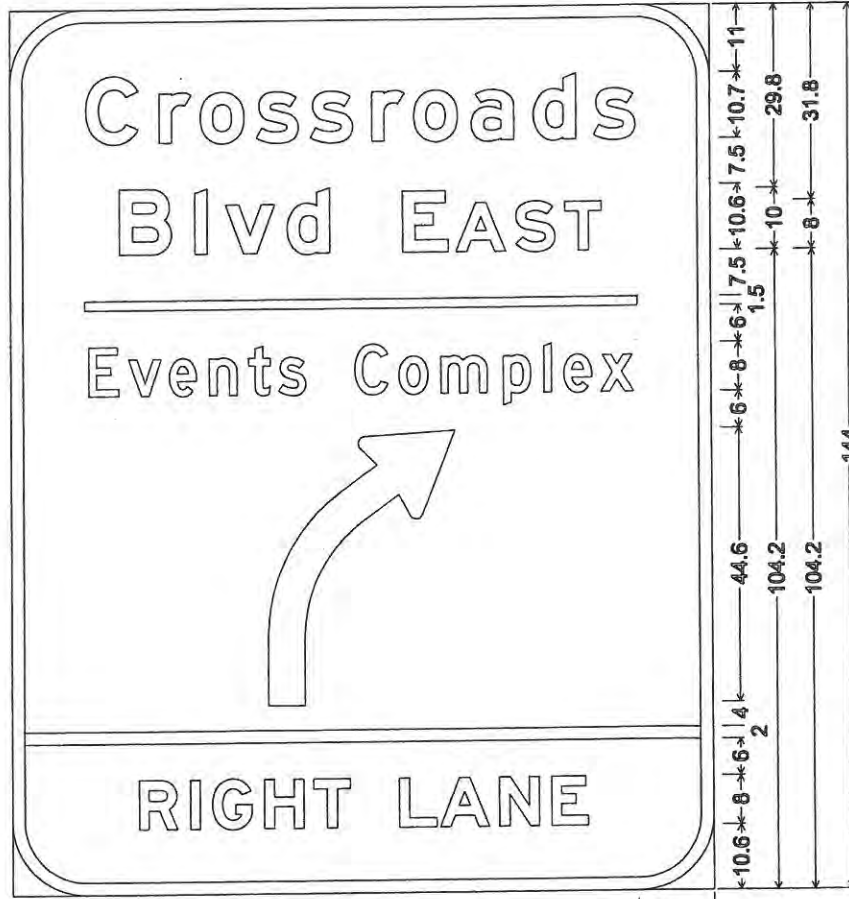
Project No./Code
ES4 0253-207
17244
Sheet Number 243



12.0" Radius, 2.0" Border, White on Green;  
 "Crossroads" E Mod; "Blvd" E Mod; "WEST" E Mod; Signs; Symbol RA010; Signs;  
 "LEFT LANES" E Mod;

Table of letter and object lefts.

C	r	o	s	s	r	e	a	d	s
12.3	24.3	31.1	40.2	49.0	59.0	65.8	75.1	85.1	94.9
B	I	v	d	W	E	S	T		
16.9	29.3	34.3	44.3	63.1	75.5	83.1	91.1		
12.0									
12.0									
13.7									
2.0									
L	E	F	T	L	A	N	E	S	
19.7	27.2	34.8	41.9	55.8	62.3	72.0	80.4	88.0	



12.0" Radius, 2.0" Border, White on Green;  
 "Crossroads" E Mod; "Blvd" E Mod; "EAST" E Mod;  
 "Events Complex" D; Signs; "RIGHT LANE" E Mod;

Table of letter and object lefts.

C	r	o	s	s	r	e	a	d	s
12.3	24.3	31.1	40.2	49.0	59.0	65.8	75.1	85.1	94.9
B	I	v	d	E	A	S	T		
17.8	30.1	35.1	45.1	63.9	72.6	82.3	90.3		
12.0									
12.0									
12.7									
41.8									
2.0									
R	I	G	H	T	L	A	N	E	
20.5	28.9	32.6	41.0	49.0	63.0	69.5	79.1	87.5	

SIGN PANELS 74 AND 81 SHALL BE  
 HIGH INTENSITY BACKGROUND WITH  
 DIAMOND GRADE LETTERS

Computer File Information	
Creation Date: 4/22/08	Initials: DVD
Print Date: 5/4/2009	Initials: DVD
File Name: 0610031800sipSignPanel11.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

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 LOVELAND, CO 80537  
 970-962-2000

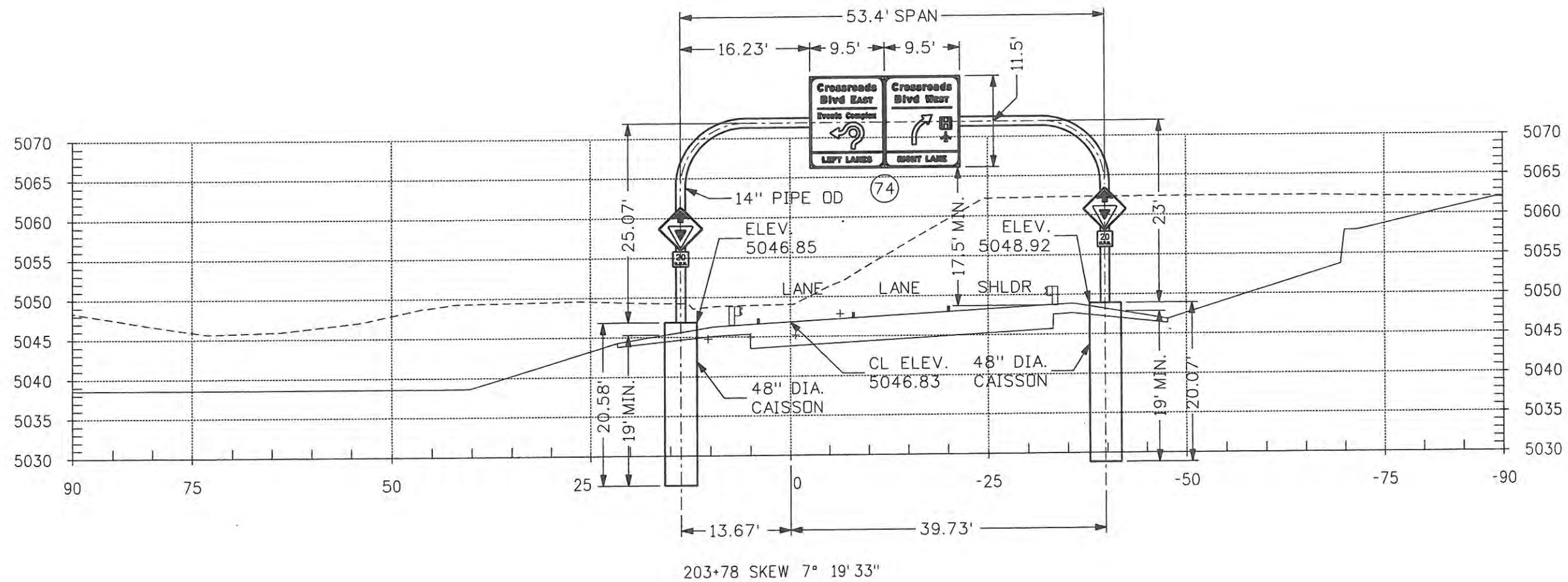
Colorado Department  
 of Transportation

No Revisions: 9/14/11
Revised:
Void:

SIGN PANEL	
Designer: MAK	Structure Numbers
Detailer: DVD	
Sheet Subset: SN PANEL	Subset Sheets: SP11 of 11

Project No./Code	ES4 0253-207
	17244
Sheet Number	244





Computer File Information	
Creation Date: 4/22/08	Initials: DVD
Print Date: 5/4/2009	Initials: JJW
File Name: 0610031800sipSignPanel12.dgn	
Horiz. Scale: 1:50	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

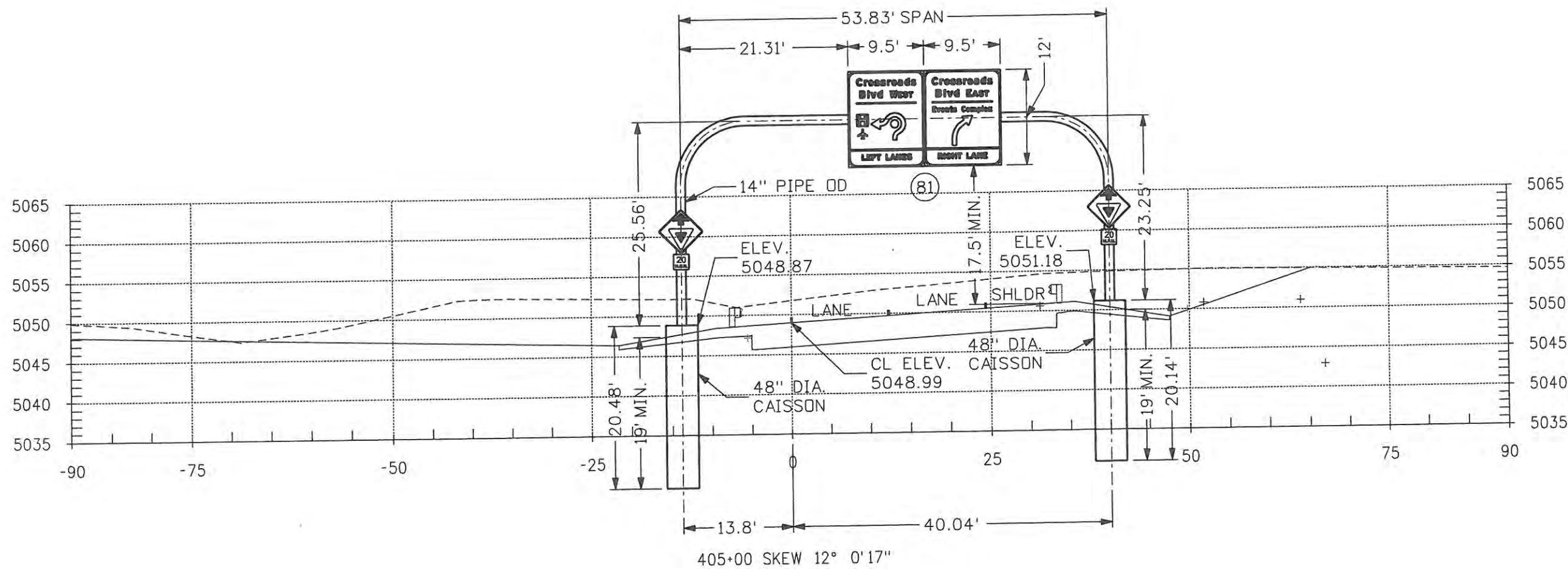
**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

Colorado Department of Transportation

SIGN STRUCTURE CROSS SECTION		
No Revisions: 9/14/11	Designer: MAK	Structure Numbers
Revised:	Detailer: DVD	
Void:	Sheet Subset: SN XS	Subset Sheets: XS1 of 2

Project No./Code
ES4 0253-207
17244
Sheet Number 245



<b>Computer File Information</b>		<b>Sheet Revisions</b>			<b>CITY OF LOVELAND</b> 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 Colorado Department of Transportation	<b>SIGN STRUCTURE CROSS SECTION</b>		<b>Project No./Code</b>
Creation Date: 4/22/08	Initials: DVD	Date:	Comments	Init.			No Revisions: 9/14/11	Revised:	Void:
Print Date: 5/4/2009	Initials: DVD							17244	
File Name: 0610031800sipSignPanel13.dgn								Sheet Subset: SN PANEL	Sheet Number 246
Horiz. Scale: 1:50	Vert. Scale: As Noted							Structure Numbers	Subset Sheets: XS2 of 2

WILSON & COMPANY  
 Engineers & Architects  
 999 16th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2683



**PLANTING NOTES:**

1. CONTRACTOR SHALL BE RESPONSIBLE FOR BECOMING AWARE OF ALL RELATED EXISTING CONDITIONS, UTILITIES, PIPES AND STRUCTURES, ETC. PRIOR TO BIDDING AND CONSTRUCTION. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES FOR FIELD LOCATION OF ALL UNDERGROUND UTILITY LINES, INCLUDING DEPTHS, PRIOR TO ANY EXCAVATION. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR ANY AND ALL COST OR OTHER LIABILITIES INCURRED DUE TO DAMAGE OF SAID UTILITIES/STRUCTURES/ETC.
2. THE CONTRACTOR SHALL NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS APPARENT THAT UNKNOWN OBSTRUCTIONS AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE FOR CLARIFICATION. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL LIABILITIES, INCLUDING NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COORDINATION WITH SUBCONTRACTORS AS REQUIRED TO ACCOMPLISH ALL PLANTING AND RELATED OPERATIONS.
4. SEE SPECIFICATIONS AND DETAILS FOR PLANTING METHODS, REQUIREMENTS, SOIL TESTING, MATERIALS, EXECUTION AND PLANT PROTECTION.
5. THE ACCEPTABLE TOLERANCES FOR THIS PROJECT ARE MINIMAL AND SPECIFIC LAYOUT IS REQUIRED AS SHOWN ON THE LAYOUT, PLANTING, AND OTHER PLANS. PLANTS SHALL BE SPACED AS PER PLAN. FINAL LOCATION AND STAKING OF ALL PLANT MATERIALS SHALL BE ACCEPTED BY THE OWNER'S REPRESENTATIVE IN ADVANCE OF PLANTINGS.
6. CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE 48 HOURS PRIOR TO COMMENCEMENT OF WORK TO COORDINATE PROJECT INSPECTION SCHEDULE.
7. IF CONFLICTS ARISE BETWEEN SIZE OF AREAS AND PLANS, CONTRACTOR IS REQUIRED TO CONTACT OWNER'S REPRESENTATIVE FOR RESOLUTION. FAILURE TO MAKE CONFLICTS KNOWN TO THE OWNER'S REPRESENTATIVE WILL RESULT IN CONTRACTOR'S LIABILITY TO RELOCATE THE MATERIALS.
8. SEE PLANT LEGEND FOR SYMBOLS, ABBREVIATIONS, BOTANICAL/COMMON NAMES, SIZES, ESTIMATED QUANTITIES (IF GIVEN) AND OTHER REMARKS.
9. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FURNISH ALL PLANT MATERIALS FREE OF PESTS OR PLANT DISEASES. PRE-SELECTED OR "TAGGED" MATERIAL MUST BE INSPECTED BY THE OWNER'S REPRESENTATIVE AND/OR LANDSCAPE ARCHITECT AND CERTIFIED PEST AND DISEASE FREE. IT IS THE CONTRACTOR'S OBLIGATION TO MAINTAIN AND WARRANTY ALL PLANT MATERIALS PER THE SPECIFICATIONS. ALL TREES SHALL BE APPROVED BY OWNER'S REPRESENTATIVE AND/OR LANDSCAPE ARCHITECT PRIOR TO PLANTING.
10. THE CONTRACTOR SHALL FINE GRADE, RAKE AND BE RESPONSIBLE FOR POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES AND THROUGHOUT SITE, WITH ACCURATELY SET FLOW LINES. NO LOW SPOTS OR PONDING OF SURFACE WATER WILL BE ACCEPTED IN THE FINAL WORK. NO ROCKS OR DEBRIS WILL BE ACCEPTED. FINAL GRADE TOLERANCES ARE +/- 0.1 FOOT MINIMUM.
11. ALL PLANTING BEDS TO BE SEPARATED FROM ADJACENT TURF AREAS WITH STEEL EDGER PER SPECIFICATIONS. ALL ORNAMENTAL GRASS BEDS SHALL RECEIVE CRUSHER FINES MULCH SEPARATED FROM ADJACENT TURF AND OTHER PLANTING BEDS WITH METAL EDGER. STAKE PER PLANS FOR REVIEW/ACCEPTANCE BY OWNER'S REPRESENTATIVE, PRIOR TO INSTALLATION.
12. WHERE PROVIDED, AREA TAKEOFFS AND PLANT QUANTITY ESTIMATES IN PLANT LIST ARE FOR INFORMATION ONLY. CONTRACTOR IS RESPONSIBLE TO DO THEIR OWN QUANTITY TAKE-OFFS FOR ALL PLANT MATERIALS AND SIZES SHOWN ON PLANS. IN CASE OF A DISCREPANCIES, PLANS TAKE PRECEDENCE OVER CALL-OUTS AND/OR PLANT LIST.
13. COORDINATE INSTALLATION OF ALL PLANT MATERIAL WITH INSTALLATION OF ALL ADJACENT IRRIGATION, PAVEMENTS, CURB AND RELATED STRUCTURES. ANY DAMAGE TO EXISTING IMPROVEMENTS IS THE RESPONSIBILITY OF THE CONTRACTOR.
14. UNLESS OTHERWISE INDICATED:
  - A. ALL SHRUBS AND ORNAMENTAL GRASSES SHALL BE TRIANGULARLY SPACED (EQUAL WIDTH).
  - B. ALL PLANTING AREAS INCLUDING NATIVE SEEDING (ENHANCED), SOD, PLANTING BEDS, SHALL RECEIVE SOIL AMENDMENTS PER SPECIFICATIONS, OTHER DRAWINGS, AND/OR APPROVED METHODS. DETENTION POND AREAS AND GENERAL ROADSIDE SEEDING SHALL RECEIVE SOIL CONDITIONING ONLY AS DEFINED IN THE STORMWATER MANAGEMENT PLANS.

**PLANTING NOTES: (CONT.)**

16. THE CONTRACTOR IS RESPONSIBLE TO "RESTORE" ALL AREAS OF THE SITE, OR ADJACENT AREAS WHERE DISTURBED. NATIVE AREAS DISTURBED, IF NOT ALREADY IMPROVED TO MEET OTHER REQUIREMENTS OF THIS CONTRACT, SHALL BE RESTORED WITH APPROVED NATIVE OR ENHANCED NATURAL RESEEDING, SEE SPECIFICATIONS.
17. THE LANDSCAPE CONTRACTOR SHALL TAKE ALL NECESSARY SCHEDULING AND OTHER PRECAUTIONS TO AVOID WINTER, CLIMATIC, OR OTHER DAMAGE TO PLANTS. A PLANTING WINDOW OF SPECIFIC CALENDAR DAYS IS REQUIRED TO BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL AND PLANTING OPERATIONS SHOULD OCCUR PER THIS APPROVED SCHEDULE. SEE SPECIFICATIONS FOR MORE INFORMATION.
18. SEE EROSION CONTROL PLANS FOR ALL OTHER ROADSIDE NATIVE SEEDING AREAS AND MIXES.

NATIVE SEEDING (ENHANCED)  
PAID FOR AS SEEDING (LAWN) / AC

BOTANICAL NAME	COMMON NAME/VARIETY	LBS/AC - PLS
Agropyron riparium	Streambank wheatgrass 'Sodar'	5.0

DETENTION BASIN SEED MIX  
PAID FOR AS SEEDING (NATIVE) / LB



BOTANICAL NAME	COMMON NAME/VARIETY	LBS/AC - PLS
Agrostis alba	Redtop	0.5
Panicum virgatum	Switchgrass, Pathfinder	3.0
Pascopyrum smithii	Western wheatgrass, Arriba	7.0
Distichlis spicata	Inland saltgrass	1.0
Spolobolus airoides	Alkai sacaton	0.5
Elymus trachycaulus	Slender wheatgrass	5.5
Spartina pectinata	Prairie cordgrass	1.0
Elymus Canadensis	Canada wildrye	1.5
Triticale	Sterile Triticale	15.0
TOTAL SEED		35.0

**SOD BLEND:**

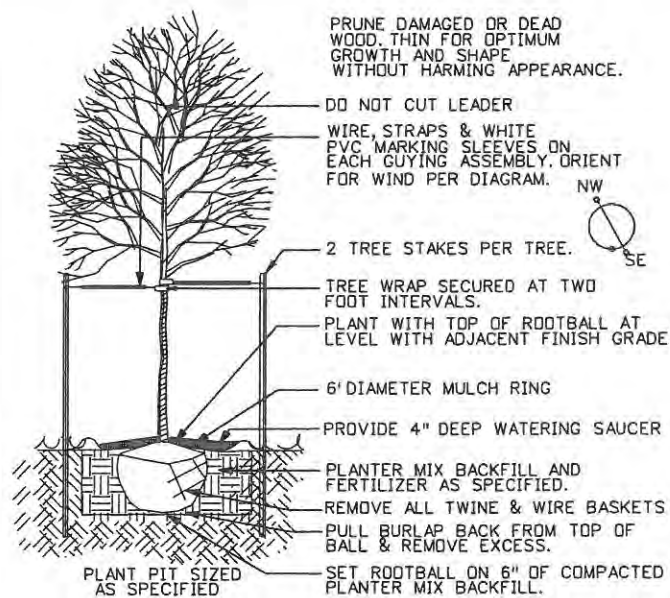
Tall Fescue, Excalibur	30%
Tall Fescue, Crew Cut	30%
Tall Fescue, Rebel Jr.	30%
Kentucky Bluegrass, Nassau	10%

**LANDSCAPE SCHEDULE**

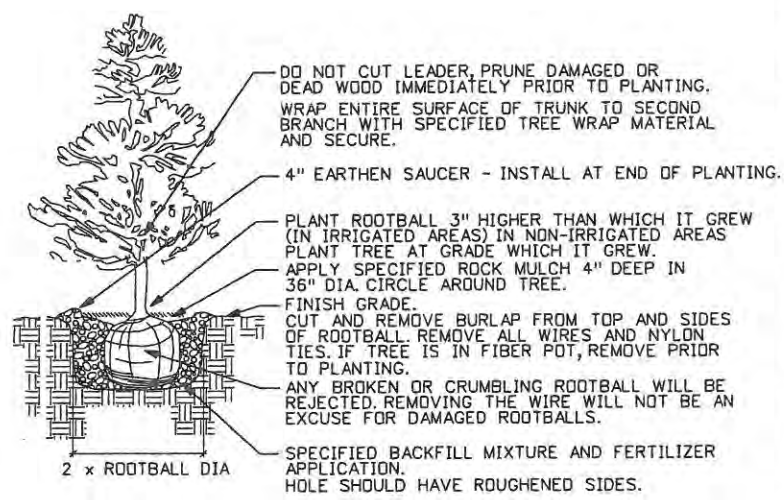
ITEM NO.	DESCRIPTION	UNIT	WEST SIDE	EAST SIDE	TOTAL	
212-00005	SEEDING (NATIVE)	LB	37	12	49	
212-00011	SEEDING (LAWN)	AC	.28	-	.28	
212-00047	SOIL PREPARATION (SPECIAL)	AC	1.02	.26	1.28	
213-00001	MULCHING (DECORATIVE) (CRUSHER FINES)	CF	1,184	610	1,794	
213-00001	MULCHING (DECORATIVE) (1-1/2"-3" COBBLE)	CF	5,422	2,222	7,644	
213-00460	METAL LANDSCAPE BORDER (3/16 IN. x 4 IN.)	LF	<del>1,591</del>	<del>330</del>	<del>1,930</del>	2,377
213-00700	LANDSCAPE BOULDER	EA	5	5	10	
214-00000	LANDSCAPE MAINTENANCE	LS	X	X	1	
214-00050	SOD	SF	11,562	877	12,439	
214-00225	DECIDUOUS TREE (2.5 INCH CALIPER)	EA	4	3	7	
214-00230	DECIDUOUS TREE (3 INCH CALIPER)	EA	13	6	19	
214-00350	DECIDUOUS SHRUB (5 GAL. CONTAINER)	EA	<del>130</del>	<del>100</del>	<del>230</del>	232
214-00370	DECIDUOUS SHRUB (7 GAL. CONTAINER)	EA	5	6	11	
214-00450	EVERGREEN TREE (5 GAL. CONTAINER)	EA	14	0	14	
214-00508	EVERGREEN TREE (8' HT.) (BALL AND BURLAP)	EA	11	4	15	
214-00650	EVERGREEN SHRUB (5 GAL CONTAINER)	EA	<del>150</del>	<del>81</del>	<del>231</del>	243
214-00908	PERENNIAL (1 QUART CONTAINER)	EA	<del>1,850</del>	<del>1,130</del>	<del>2,980</del>	3081

<b>Computer File Information</b>		<b>Sheet Revisions</b>			 7553 S. ALTON WAY, SUITE A125 CENTENNIAL, CO. 80112 PH. (303) 804-0080 FAX (303) 804-0070	 Colorado Department of Transportation		<b>CROSSROADS LANDSCAPE NOTES</b>		<b>Project No./Code</b>	
Creation Date: 8/30/07	Initials: PAF	Date:	Comments	Init.		No Revisions:			ES4 0253-207		
Print Date: 5/4/2009	Initials:					Revised: 7/14/11	Designer: PKM	Structure Numbers	17244		
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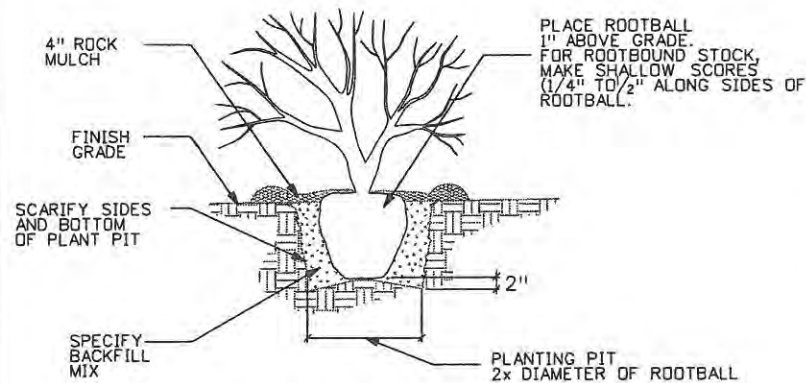
999 18th Street Suite 2600 Phone: 303-297-2976  
 Denver, CO 80202 Fax: 303-297-2693  
**WILSON & COMPANY**  
 Engineers & Architects



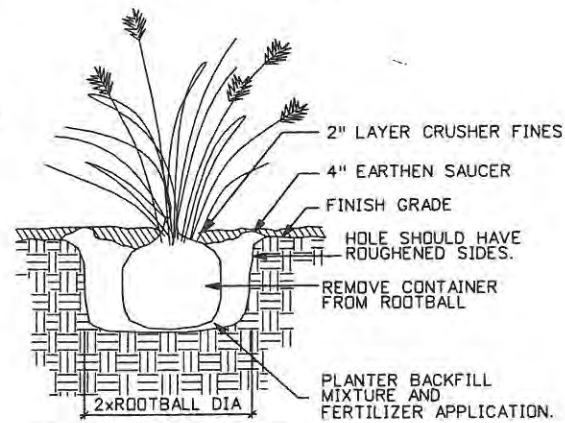
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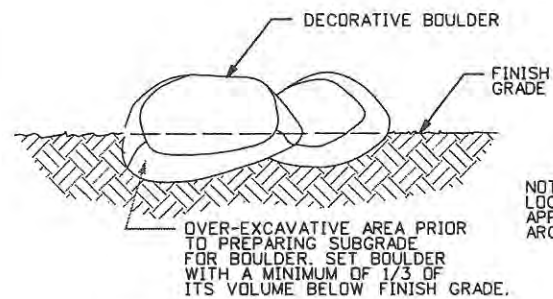
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3 SHRUB PLANTING  
NOT TO SCALE



4 ORNAMENTAL GRASS  
NOT TO SCALE



5 BOULDER PLACEMENT  
NOT TO SCALE

PLANT LIST

DECIDUOUS SHADE TREES

KEY	WEST SIDE	EAST SIDE	QTY	COMMON NAME	BOTANICAL NAME	SIZE	SPACING
NRO	10	3	13	NORTHERN RED OAK	QUERCUS RUBRA	3" CAL	AS SHOWN
IH	3	3	6	IMPERIAL HONEYLOCUST	GLEDITSIA TRIACANTHOS INERMIS IMPERIAL	3" CAL.	

ORNAMENTAL TREES

KEY	WEST SIDE	EAST SIDE	QTY	COMMON NAME	BOTANICAL NAME	SIZE	SPACING
SSC	4	3	7	SPRING SNOW CRABAPPLE	MALUS SPRING SNOW	2 1/2" CAL.	AS SHOWN

EVERGREEN TREES

KEY	WEST SIDE	EAST SIDE	QTY	COMMON NAME	BOTANICAL NAME	SIZE	SPACING
CS	6	4	10	COLORADO BLUE SPRUCE	PICEA PUNGENS	8' HT.	
HS	5	-	5	HOOPSII SPRUCE	PICEA PUNGENS 'HOOPSII'	6' HT.	AS SHOWN
SJ	14	-	14	SKYROCKET JUNIPER	JUNIPERUS VIRGINIANA SKYROCKET	5 GAL.	

DECIDUOUS SHRUBS

KEY	WEST SIDE	EAST SIDE	QTY	COMMON NAME	BOTANICAL NAME	SIZE	SPACING
BMS	17	18	35	BLUE MIST SPIREA	CARYOPTERIS X CLANDONENSIS 'BLUE MIST'	5 GAL.	3'
HC	47	54	101	HANCOCK CORALBERRY	SYMPHORICARPOS X CHENAULTII 'HANCOCK'	5 GAL.	6'
AW	28	28	56	ANTHONY WATERER SPIREA	SPIRAEA JAPONICA ANTHONY WATERER	5 GAL.	3'
DFS	18	-	18	DWARF FRAGRANT SUMAC	RHUS AROMATICA GRO-LOW	5 GAL.	6'
RS	20	-	20	REGENT SERVICEBERRY	AMELANCHIER ALNIFOLIA REGENT	5 GAL.	8'
SS	5	6	11	SHADBLOW SERVICEBERRY	AMELANCHIER CANADENSIS	7 GAL.	

EVERGREEN SHRUBS

KEY	WEST SIDE	EAST SIDE	QTY	COMMON NAME	BOTANICAL NAME	SIZE	SPACING
BCJ	77	53	130	BLUE CHIP JUNIPER	JUNIPERUS HORIZONTALIS BLUE CHIP	5 GAL.	6'
HJ	82	28	110	HUGHES JUNIPER	JUNIPERUS HORIZONTALIS 'HUGHES'	5 GAL.	6'

ORNAMENTAL GRASSES (PERENNIALS)

KEY	WEST SIDE	EAST SIDE	QTY	COMMON NAME	BOTANICAL NAME	SIZE	SPACING
BAG	971	548	1519	BLUE AVENA GRASS	HELICTOTRICHON SEMPERVIRENS	1 QT.	2' O.C.
DFG	150	-	150	DWARF FOUNTAIN GRASS	PENNISETUM ALOPECUROIDES 'HAMELN'	1 QT.	2' O.C.
EBF	384	384	768	ELIJAH BLUE FESCUE	FESTUCA GLAUCA 'ELIJAH BLUE'	1 QT.	1' O.C.
FRG	171	68	239	FEATHER REED GRASS	CALAMAGROSTIS ACUTIFLORA KARL FOERSTER	1 QT.	X
MGR	51	50	101	MAIDEN GRASS GRAZIELLA	MISCANTHUS SINENSIS GRAZIELLA	1 QT.	X

PERENNIALS

KEY	WEST SIDE	EAST SIDE	QTY	COMMON NAME	BOTANICAL NAME	SIZE	SPACING
DYD	80	80	160	DWARF YELLOW DAYLILY	HEMEROCALLIS 'HAPPY RETURNS'	1 GAL.	18' O.C.
PW	52	-	52	PRAIRIE WINECUPS	CALLIRHOE INVOLUCRATA	1 GAL.	3' O.C.

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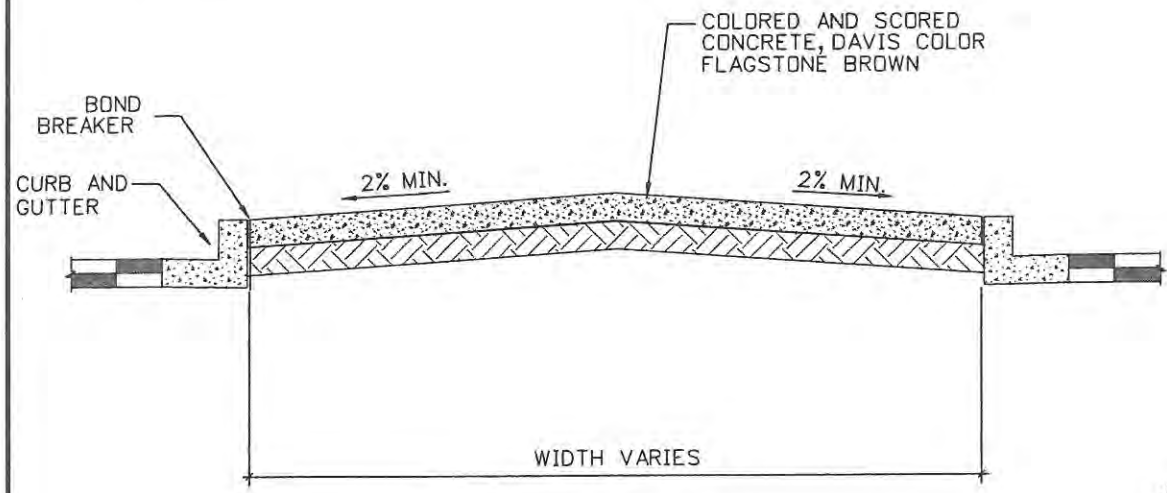
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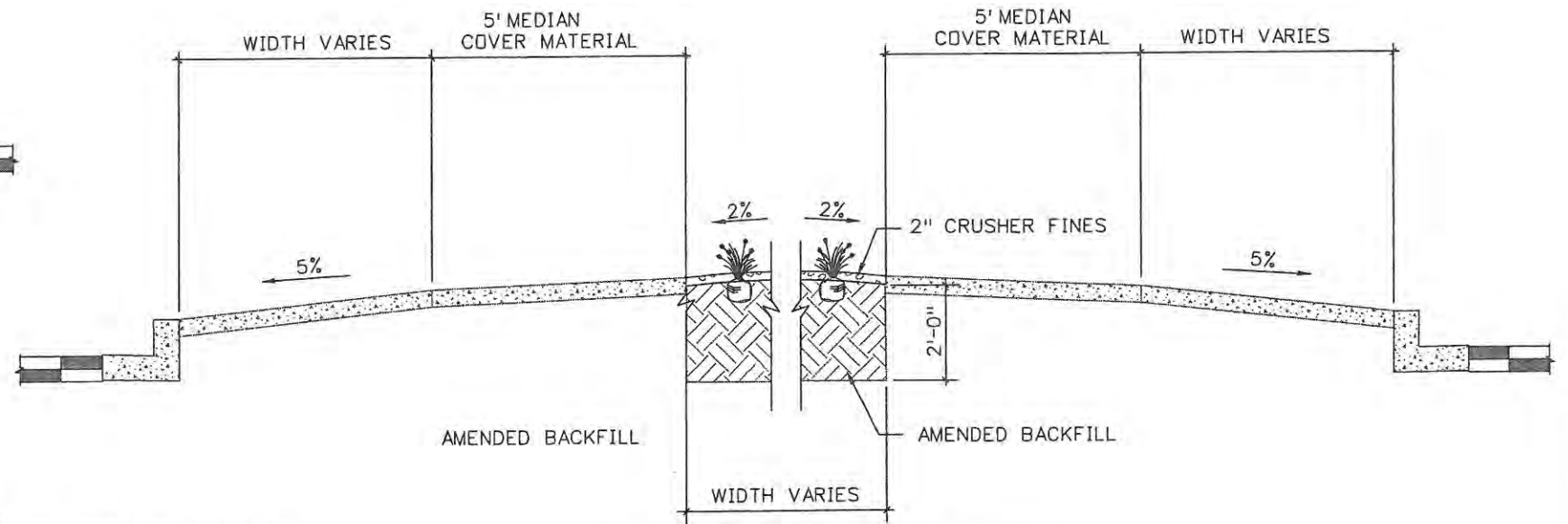
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Project No./Code
ES4 0253-207
17244
Sheet Number 248



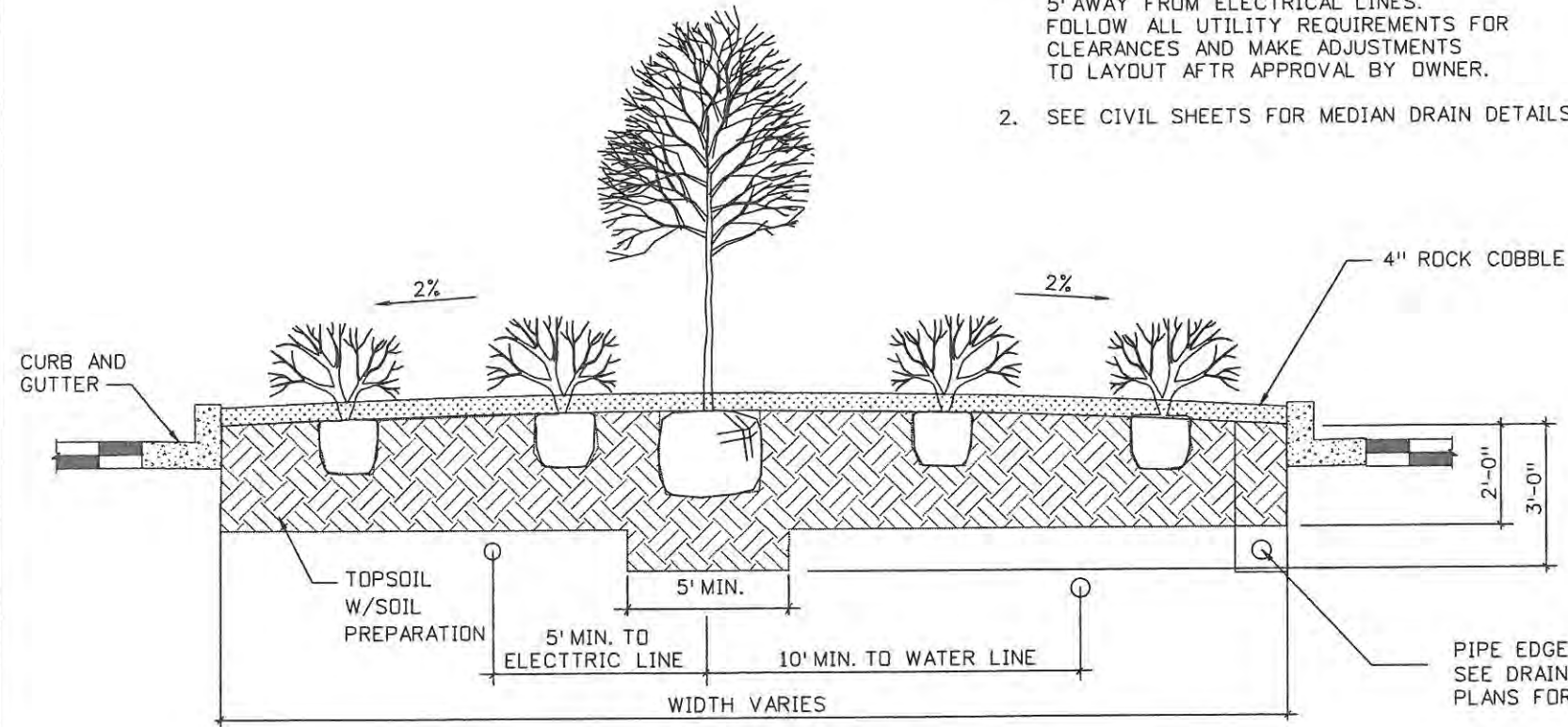


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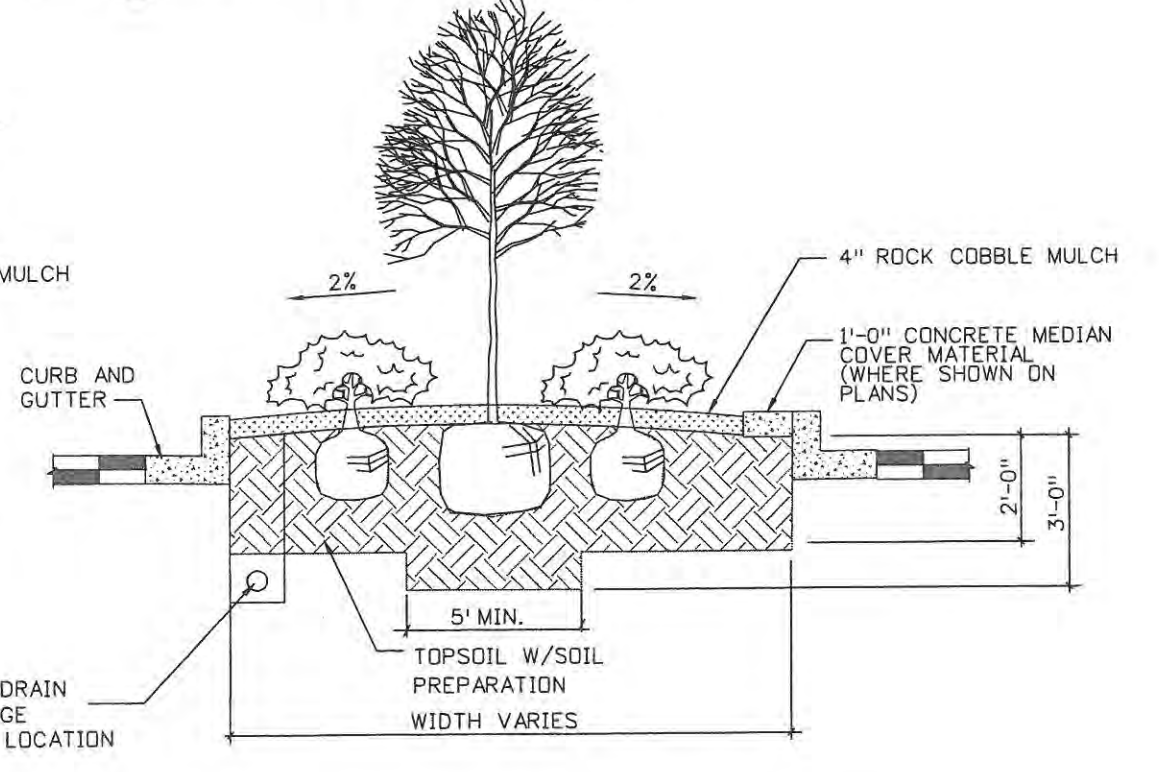


2 ROUNDABOUT DETAIL NOT TO SCALE

- NOTE:
1. PLACE TREES A MINIMUM OF 10' AWAY FROM WATERLINES AND 5' AWAY FROM ELECTRICAL LINES. FOLLOW ALL UTILITY REQUIREMENTS FOR CLEARANCES AND MAKE ADJUSTMENTS TO LAYOUT AFTR APPROVAL BY OWNER.
  2. SEE CIVIL SHEETS FOR MEDIAN DRAIN DETAILS.



3 MEDIAN DETAIL NOT TO SCALE



4 ISLAND DETAIL WITH CONC. MEDIAN COVER MATERIAL NOT TO SCALE

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Print Date: 3/24/2009	Initials:
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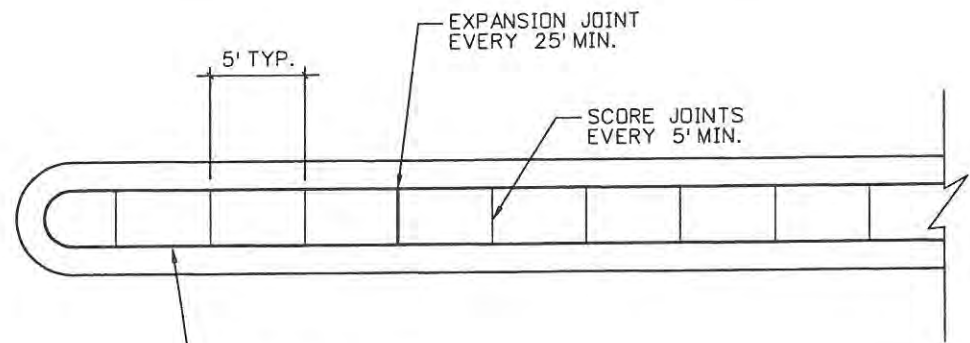
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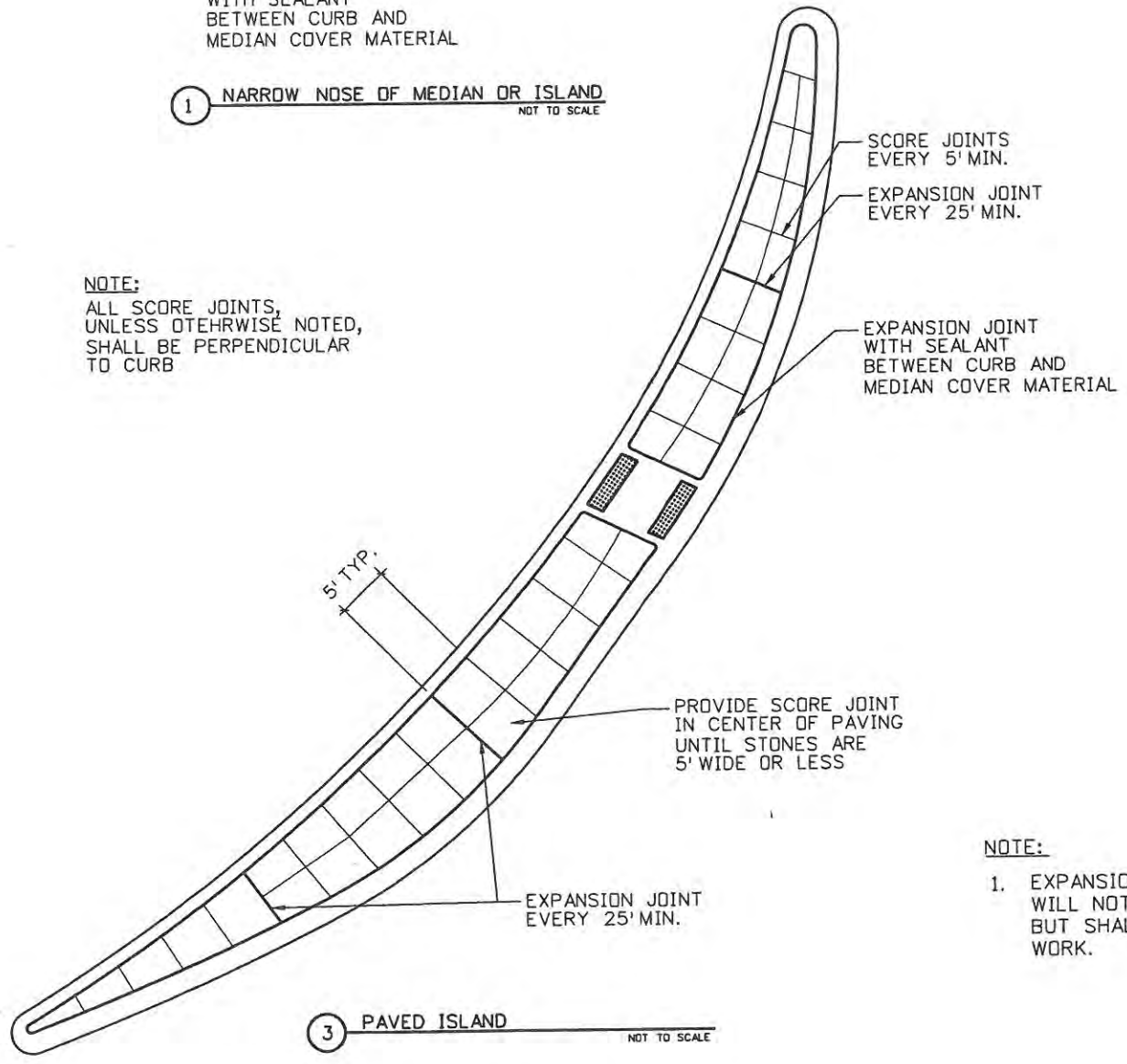
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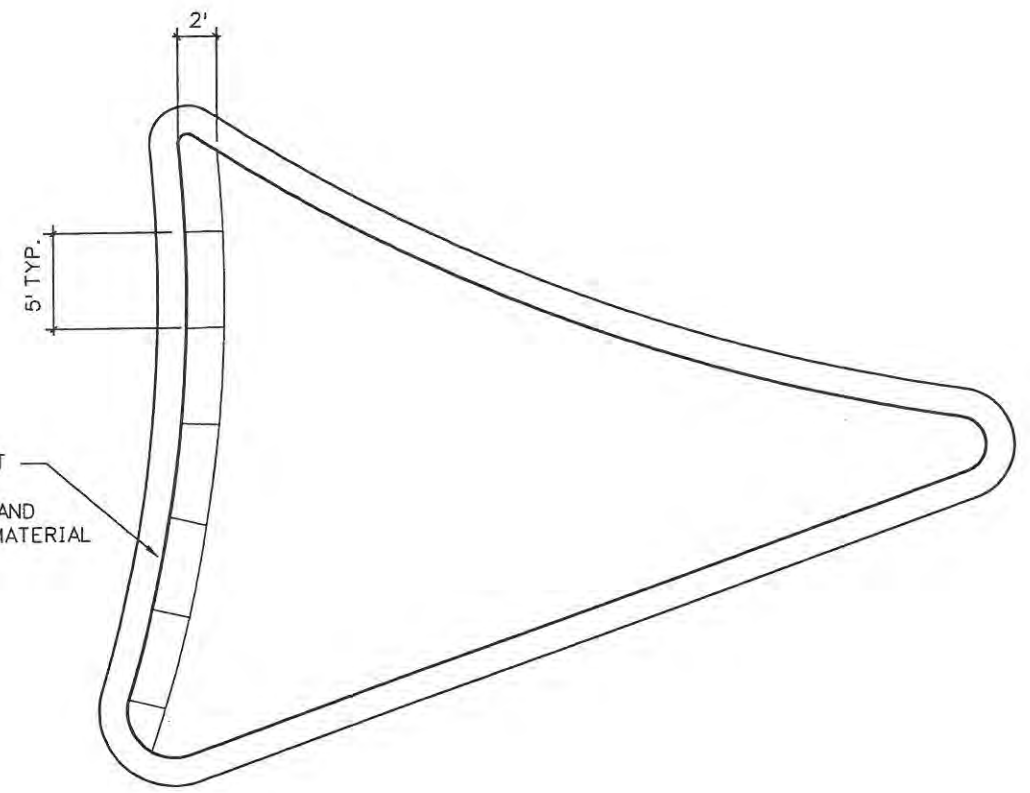
EXPANSION JOINT EVERY 25' MIN.  
SCORE JOINTS EVERY 5' MIN.  
5' TYP.  
EXPANSION JOINT WITH SEALANT BETWEEN CURB AND MEDIAN COVER MATERIAL  
**1** NARROW NOSE OF MEDIAN OR ISLAND  
NOT TO SCALE

NOTE:  
ALL SCORE JOINTS, UNLESS OTHERWISE NOTED, SHALL BE PERPENDICULAR TO CURB

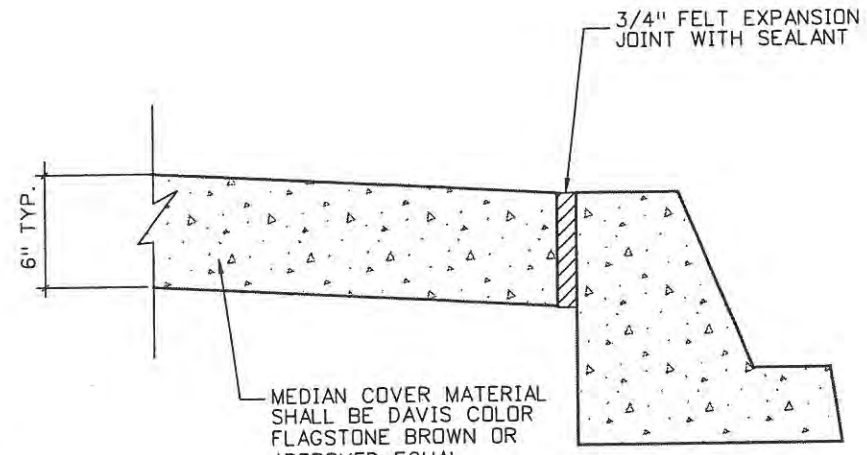


SCORE JOINTS EVERY 5' MIN.  
EXPANSION JOINT EVERY 25' MIN.  
EXPANSION JOINT WITH SEALANT BETWEEN CURB AND MEDIAN COVER MATERIAL  
PROVIDE SCORE JOINT IN CENTER OF PAVING UNTIL STONES ARE 5' WIDE OR LESS  
5' TYP.  
**3** PAVED ISLAND  
NOT TO SCALE

NOTE:  
1. EXPANSION JOINT AND SEALANT WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.



2' 5' TYP.  
EXPANSION JOINT WITH SEALANT BETWEEN CURB AND MEDIAN COVER MATERIAL  
**2** CURVED ENDS OF MEDIANS  
NOT TO SCALE



6' TYP. 3/4" FELT EXPANSION JOINT WITH SEALANT  
MEDIAN COVER MATERIAL SHALL BE DAVIS COLOR FLAGSTONE BROWN OR APPROVED EQUAL  
**4** MEDIAN COVER MATERIAL DETAILS  
NOT TO SCALE

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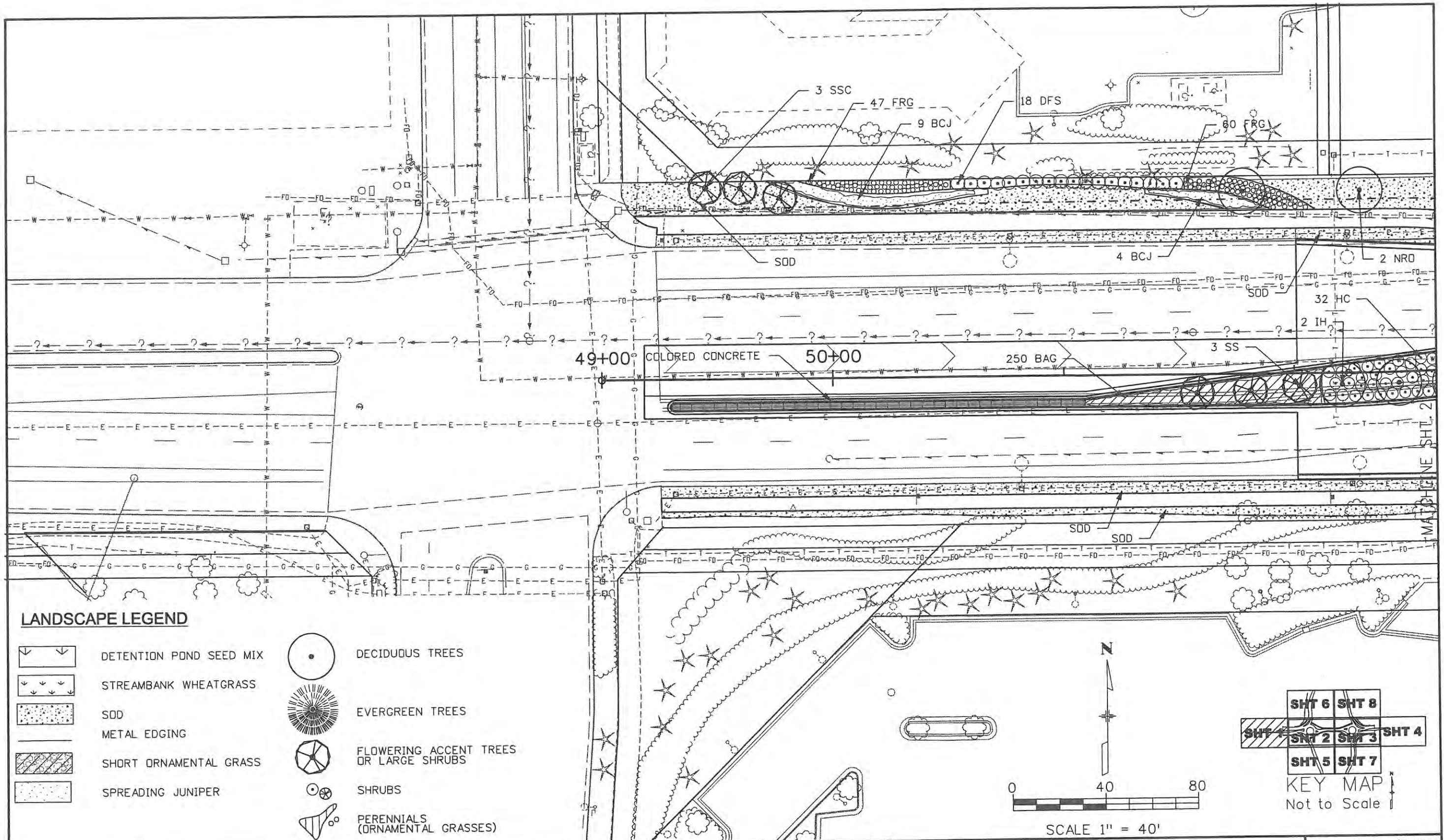
  
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Detailer: PAF	Subset Sheets: 4 of 12
Sheet Subset: PLANTING	

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	17244
Sheet Number	250





**LANDSCAPE LEGEND**

- DETENTION POND SEED MIX
- STREAMBANK WHEATGRASS
- SOD
- METAL EDGING
- SHORT ORNAMENTAL GRASS
- SPREADING JUNIPER
- DECIDUOUS TREES
- EVERGREEN TREES
- FLOWERING ACCENT TREES OR LARGE SHRUBS
- SHRUBS
- PERENNIALS (ORNAMENTAL GRASSES)

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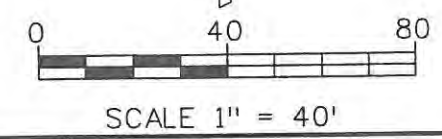
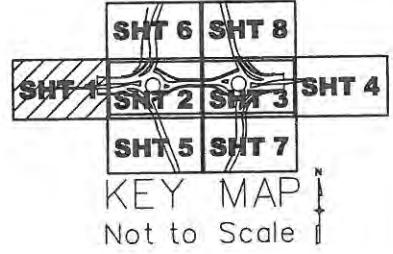
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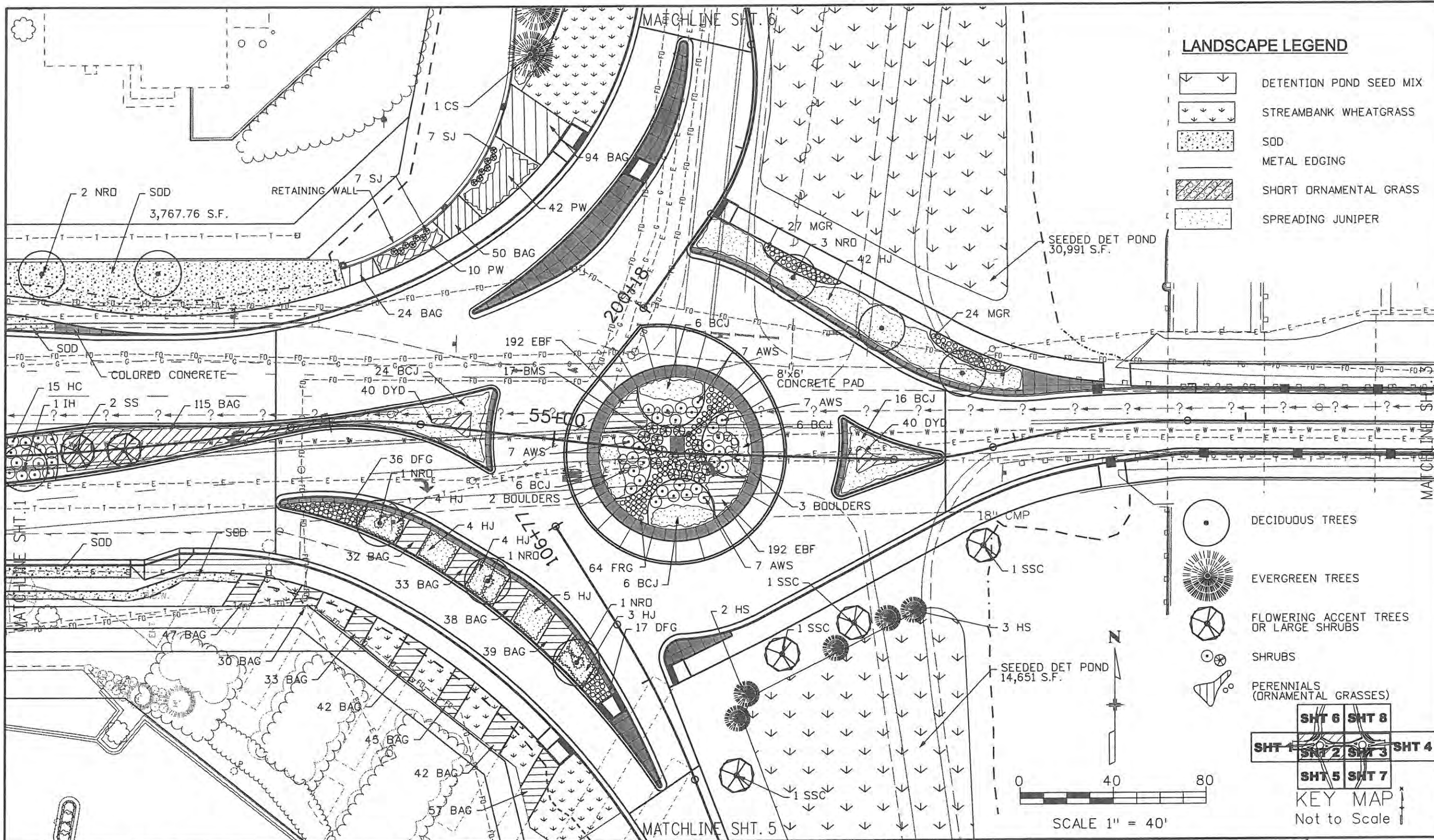
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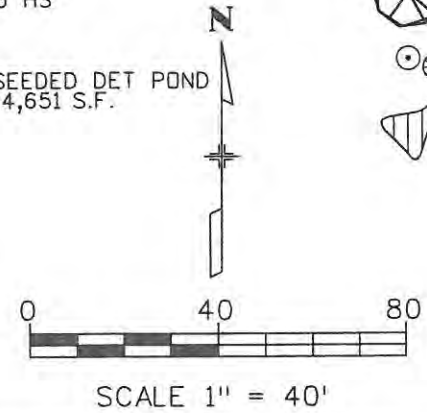
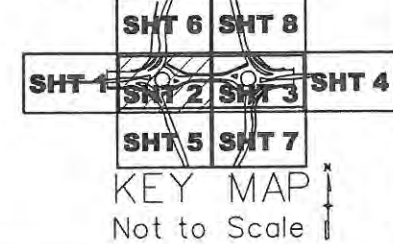




**LANDSCAPE LEGEND**

	DETENTION POND SEED MIX
	STREAMBANK WHEATGRASS
	SOD
	METAL EDGING
	SHORT ORNAMENTAL GRASS
	SPREADING JUNIPER

	DECIDUOUS TREES
	EVERGREEN TREES
	FLOWERING ACCENT TREES OR LARGE SHRUBS
	SHRUBS
	PERENNIALS (ORNAMENTAL GRASSES)



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**CROSSROADS WEST SIDE LANDSCAPE**

Designer: PKM	Structure Numbers:
Detailer: PAF	Subst Sheets: 6 of 12

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**ES4 0253-207**

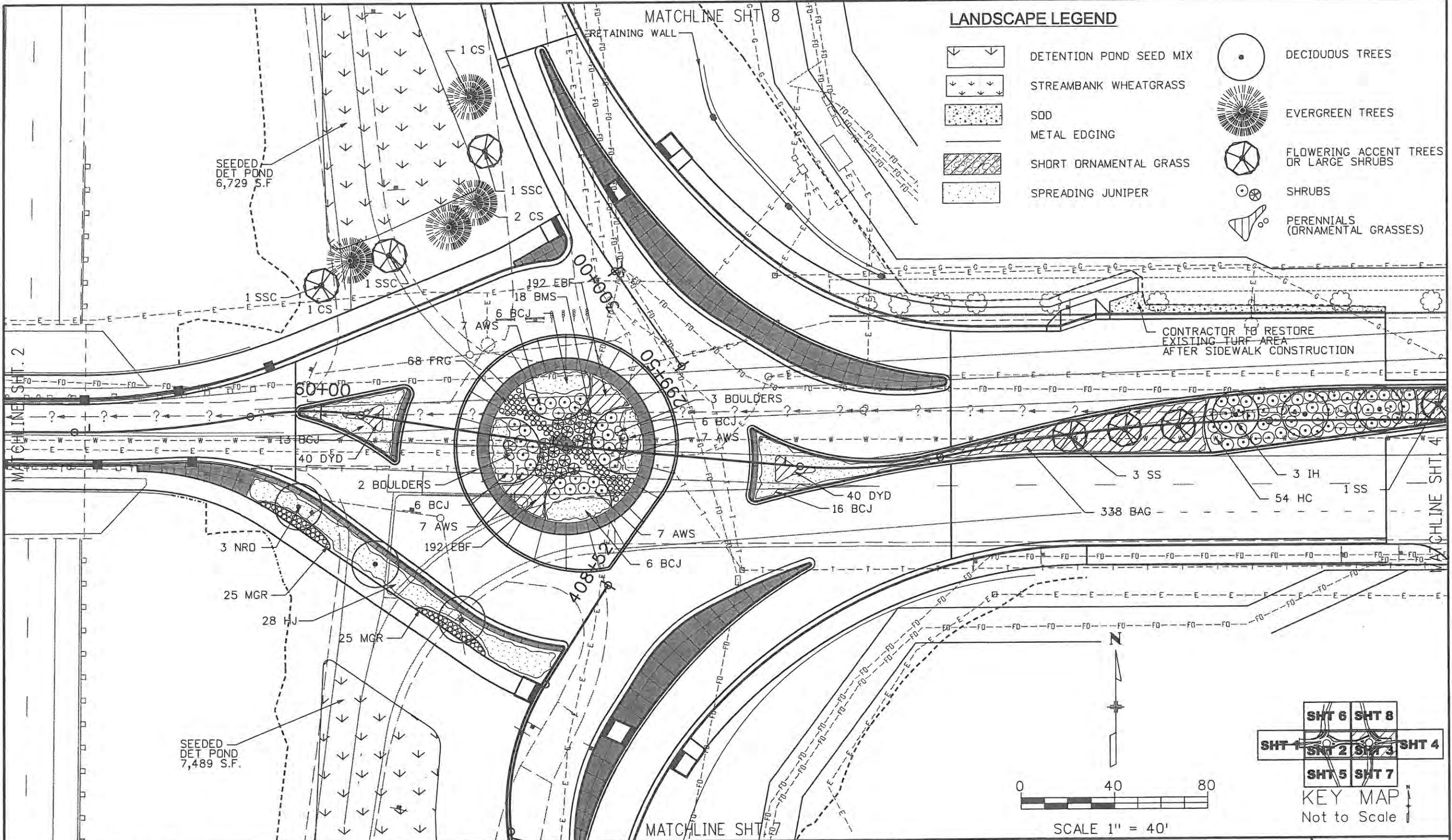
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Sheet Number **252**



**LANDSCAPE LEGEND**


-  DETENTION POND SEED MIX
-  STREAMBANK WHEATGRASS
-  SOD
-  METAL EDGING
-  SHORT ORNAMENTAL GRASS
-  SPREADING JUNIPER
-  DECIDUOUS TREES
-  EVERGREEN TREES
-  FLOWERING ACCENT TREES OR LARGE SHRUBS
-  SHRUBS
-  PERENNIALS (ORNAMENTAL GRASSES)



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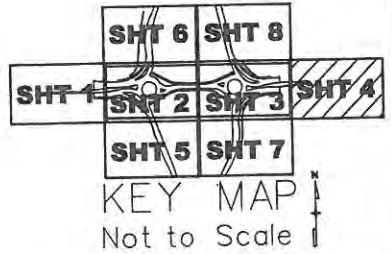
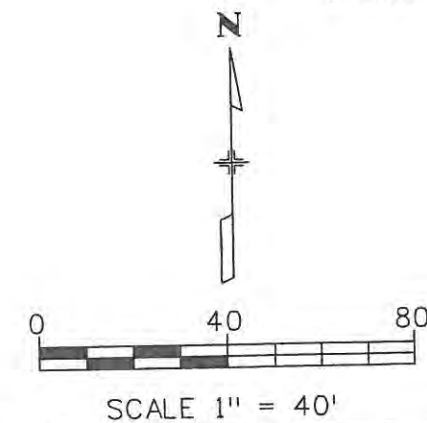
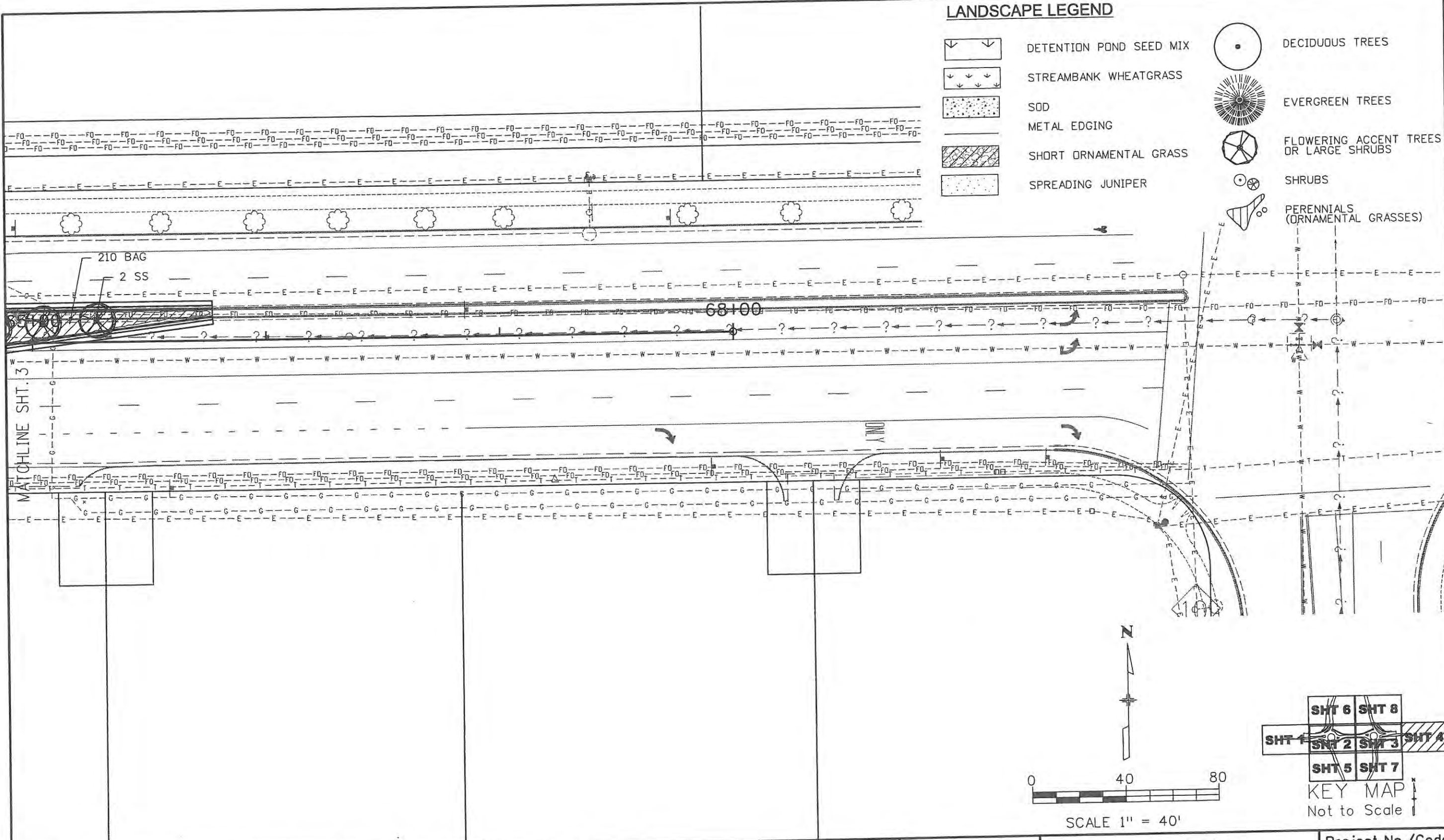
  
Colorado Department  
of Transportation

CROSSROADS EAST SIDE LANDSCAPING	
No Revisions: 9/14/11	Revised:
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Designer: PKM	Structure Numbers:
Detailer: PAF	
Sheet Subset: PLANTING	Subset Sheets: 7 of 12

Project No./Code
ES4 0253-207
17244
Sheet Number 253

**LANDSCAPE LEGEND**


-  DETENTION POND SEED MIX
-  STREAMBANK WHEATGRASS
-  SOD
-  METAL EDGING
-  SHORT ORNAMENTAL GRASS
-  SPREADING JUNIPER
-  DECIDUOUS TREES
-  EVERGREEN TREES
-  FLOWERING ACCENT TREES OR LARGE SHRUBS
-  SHRUBS
-  PERENNIALS (ORNAMENTAL GRASSES)



Computer File Information	
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File Name: 0610031800Design-2D-04.dgn	
Horiz. Scale: 1:40	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

**PKM**  
 DESIGN GROUP, INC.  
 7353 S. ALTON WAY, SUITE A125  
 CENTENNIAL, CO. 80112  
 PH. (303) 804-0080  
 FAX (303) 804-0070

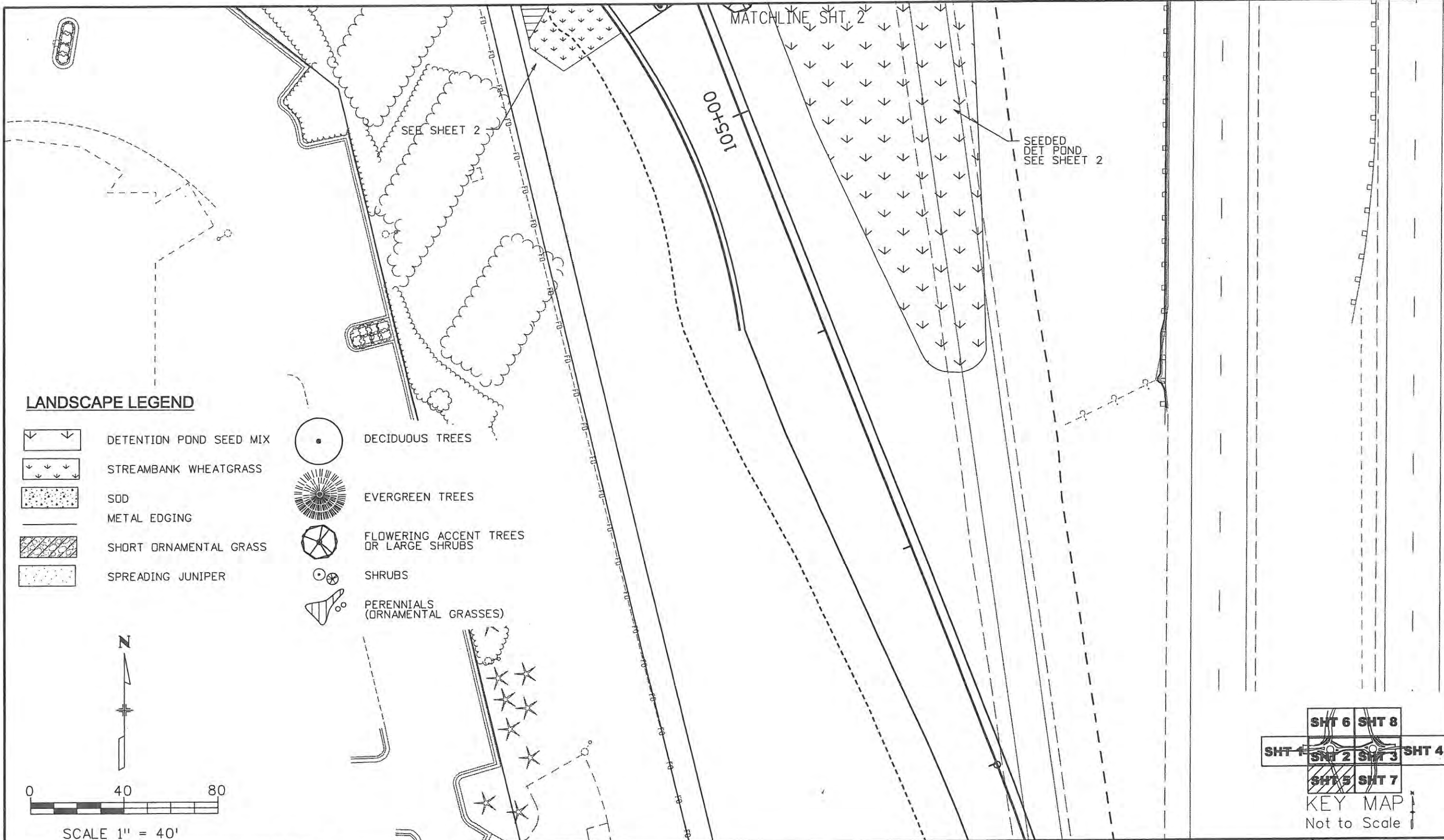
  
 Colorado Department  
 of Transportation

No Revisions: 9/14/11  
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CROSSROADS EAST SIDE LANDSCAPE	
Designer: PKM	Structure Numbers
Detailer: PAF	
Sheet Subset: PLANTING	Subset Sheets: 8 of 12

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Computer File Information	
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**Colorado Department of Transportation**

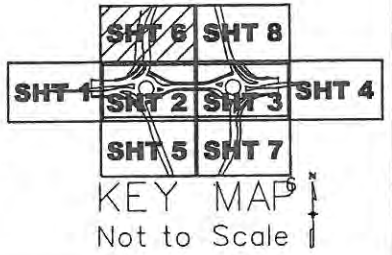
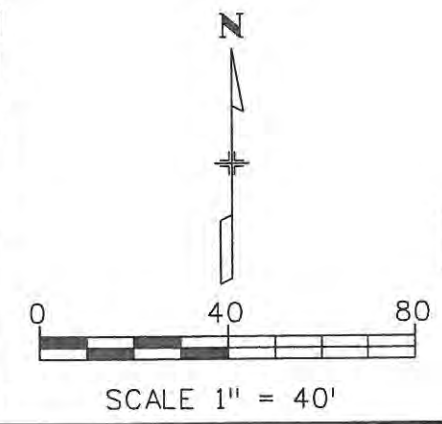
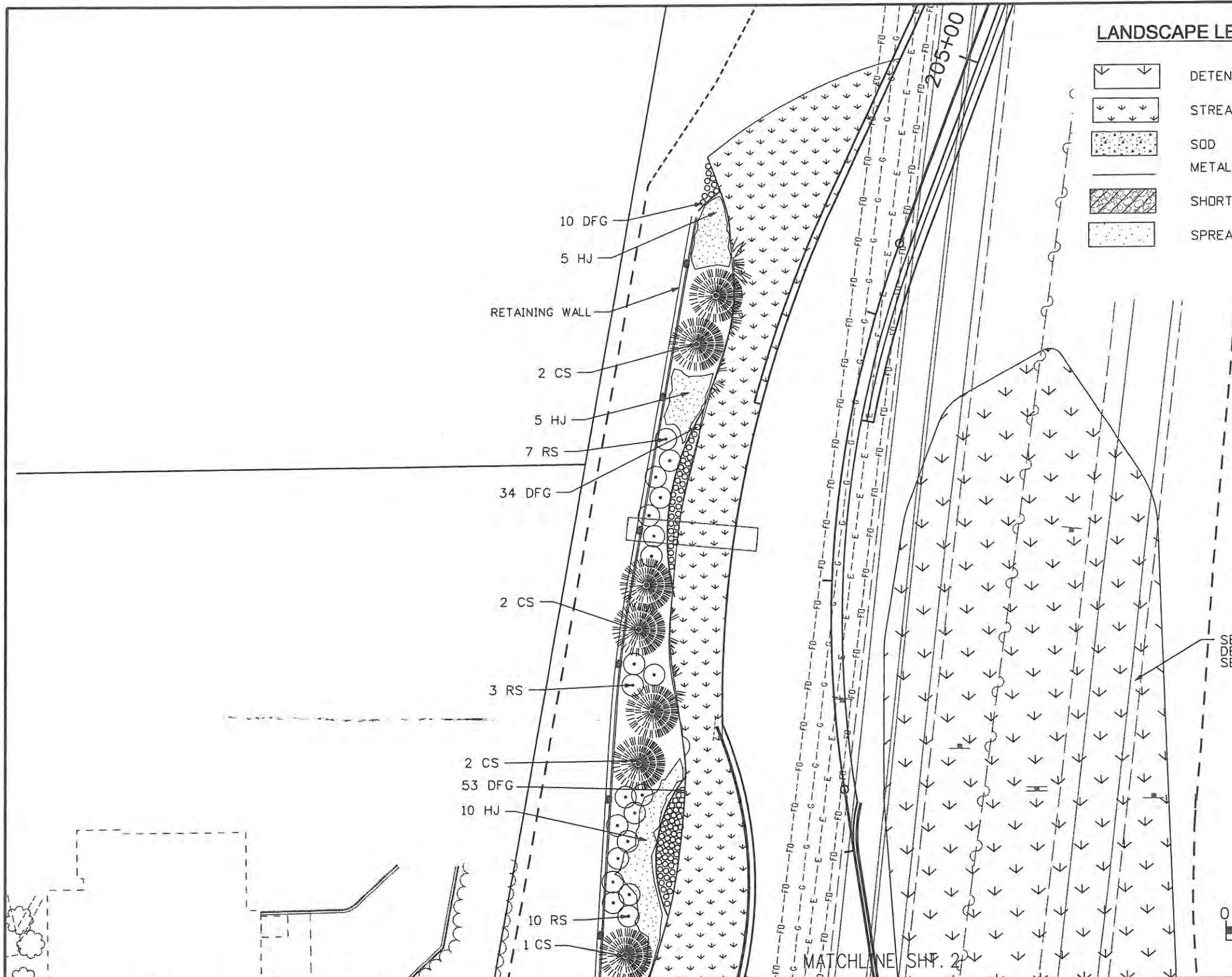
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Designer: PKM	Structure Numbers
Detailer: PAF	
Sheet Subset: PLANTING	Subset Sheets: 9 of 12

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**LANDSCAPE LEGEND**


-  DETENTION POND SEED MIX
-  STREAMBANK WHEATGRASS
-  SOD
-  METAL EDGING
-  SHORT ORNAMENTAL GRASS
-  SPREADING JUNIPER
-  DECIDUOUS TREES
-  EVERGREEN TREES
-  FLOWERING ACCENT TREES OR LARGE SHRUBS
-  SHRUBS
-  PERENNIALS (ORNAMENTAL GRASSES)



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Sheet Revisions		
Date:	Comments	Init.

**PKM**  
DESIGN GROUP, INC.  
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**Colorado Department of Transportation**

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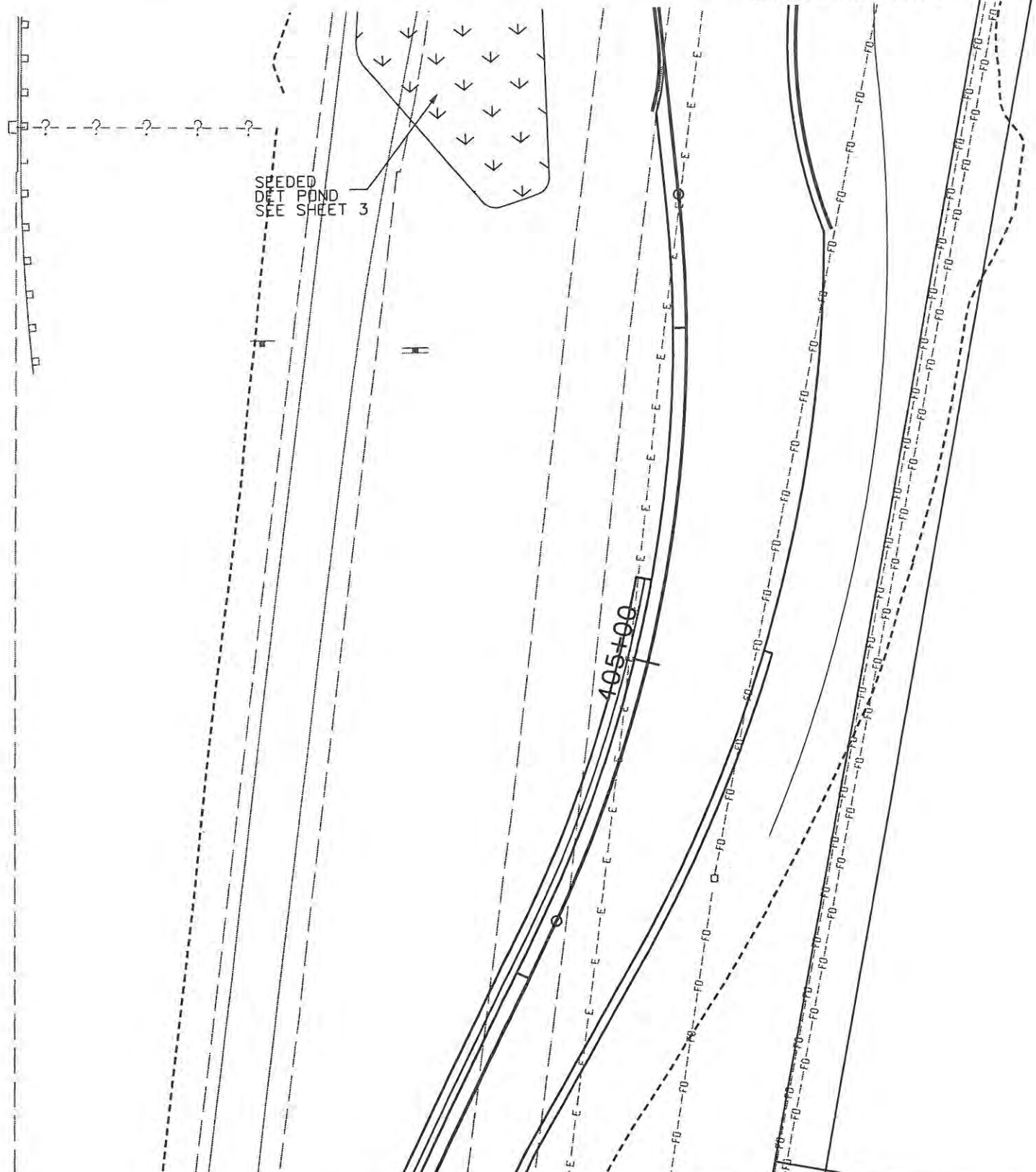
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17244
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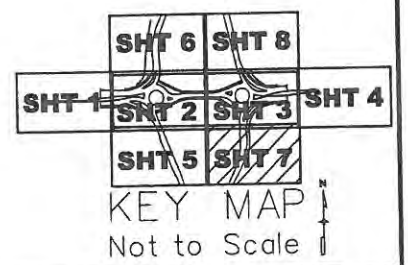
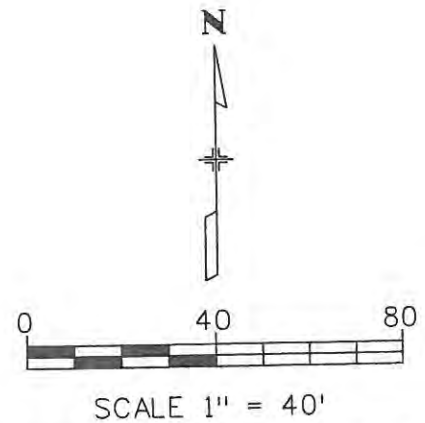
**LANDSCAPE LEGEND**

-  DETENTION POND SEED MIX
-  STREAMBANK WHEATGRASS
-  SOD
-  METAL EDGING
-  SHORT ORNAMENTAL GRASS
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DET POND  
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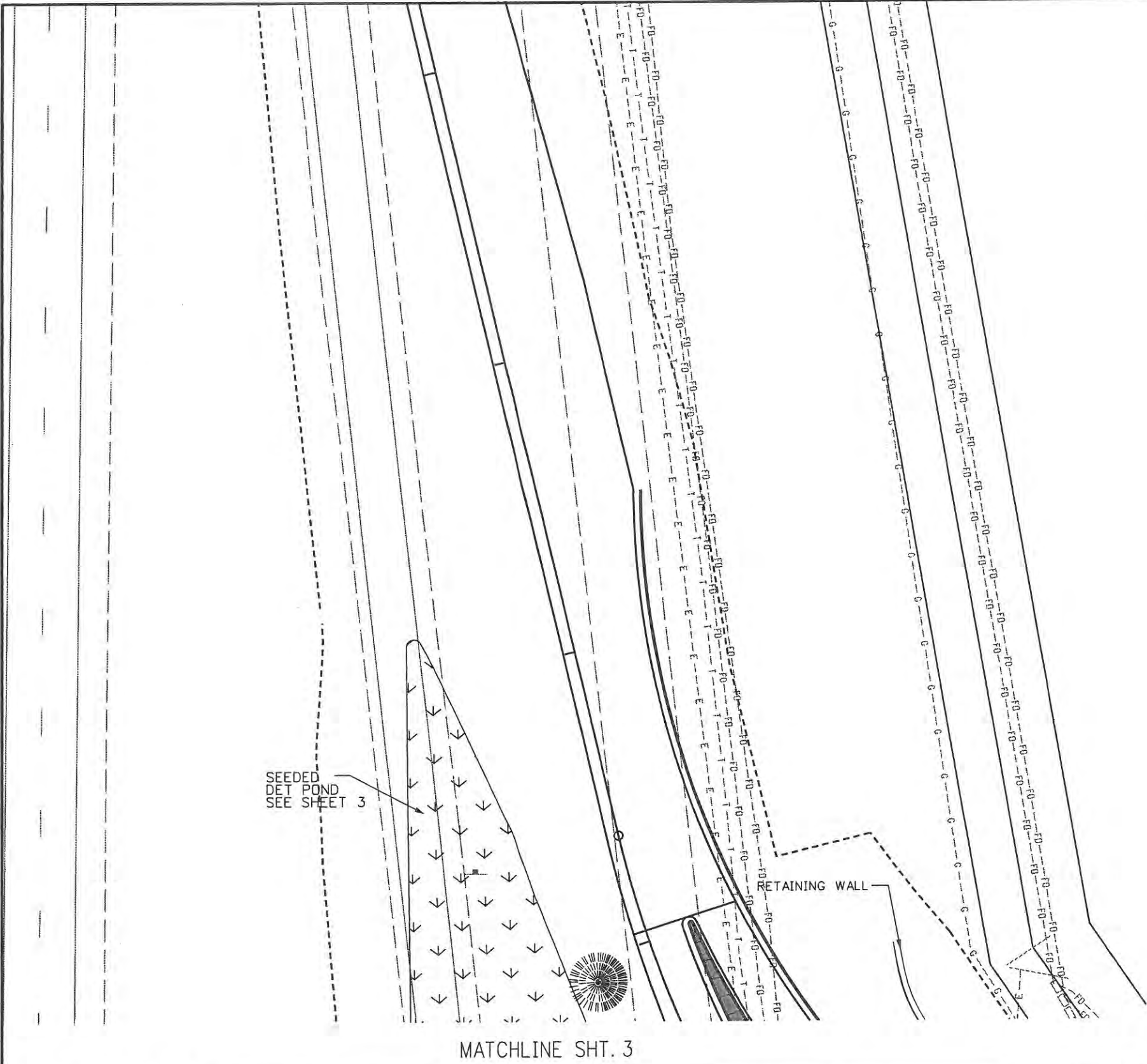
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**PKM**  
DESIGN GROUP, INC.  
7353 S. ALTON WAY, SUITE A125  
CENTENNIAL, CO. 80112  
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FAX: (303) 804-0070

  
Colorado Department  
of Transportation

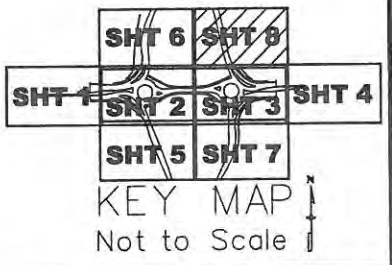
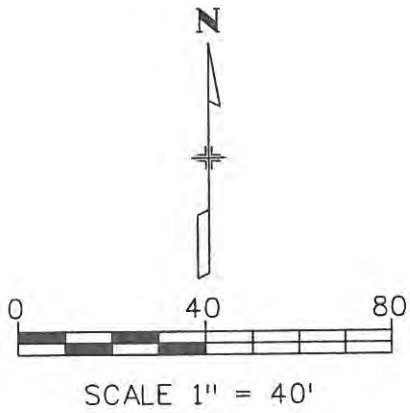
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No Revisions: 9/14/11	Designer: PKM	Structure Numbers	
Revised:	Detailer: PAF	Subset Sheets: 11 of 12	
Void:	Sheet Subset: PLANTING		

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**LANDSCAPE LEGEND**

- DETENTION POND SEED MIX
- STREAMBANK WHEATGRASS
- SOD
- METAL EDGING
- SHORT ORNAMENTAL GRASS
- SPREADING JUNIPER
- DECIDUOUS TREES
- EVERGREEN TREES
- FLOWERING ACCENT TREES OR LARGE SHRUBS
- SHRUBS
- PERENNIALS (ORNAMENTAL GRASSES)



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




  
**Colorado Department of Transportation**

CROSSROADS EAST SIDE LANDSCAPING		
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Revised:	Detailer: PAF	
Void:	Sheet Subset: PLANTING	Subset Sheets: 12 of 12




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Sheet Number 258



# IRRIGATION MASTER LEGEND

-  SLEEVES: CLASS 200 PVC
-  MAINLINE PIPE: CLASS 200 PVC
-  POINT-OF-CONNECTION ASSEMBLY
-  WATER METER AND CURB STOP ASSEMBLY
-  BACKFLOW PREVENTION ASSEMBLY: FEBCO 825-YA
-  ISOLATION GATE VALVE ASSEMBLY
-  IRRIGATION CONTROLLER UNIT:  
CONTROLLER A: TORO SENTINEL

# SLEEVING LEGEND

-  IRRIGATION SLEEVES: PVC CLASS 200 PVC
-  "A" INDICATES 1-4", 2-2" SLEEVES
-  "B" INDICATES 2-3" SLEEVES

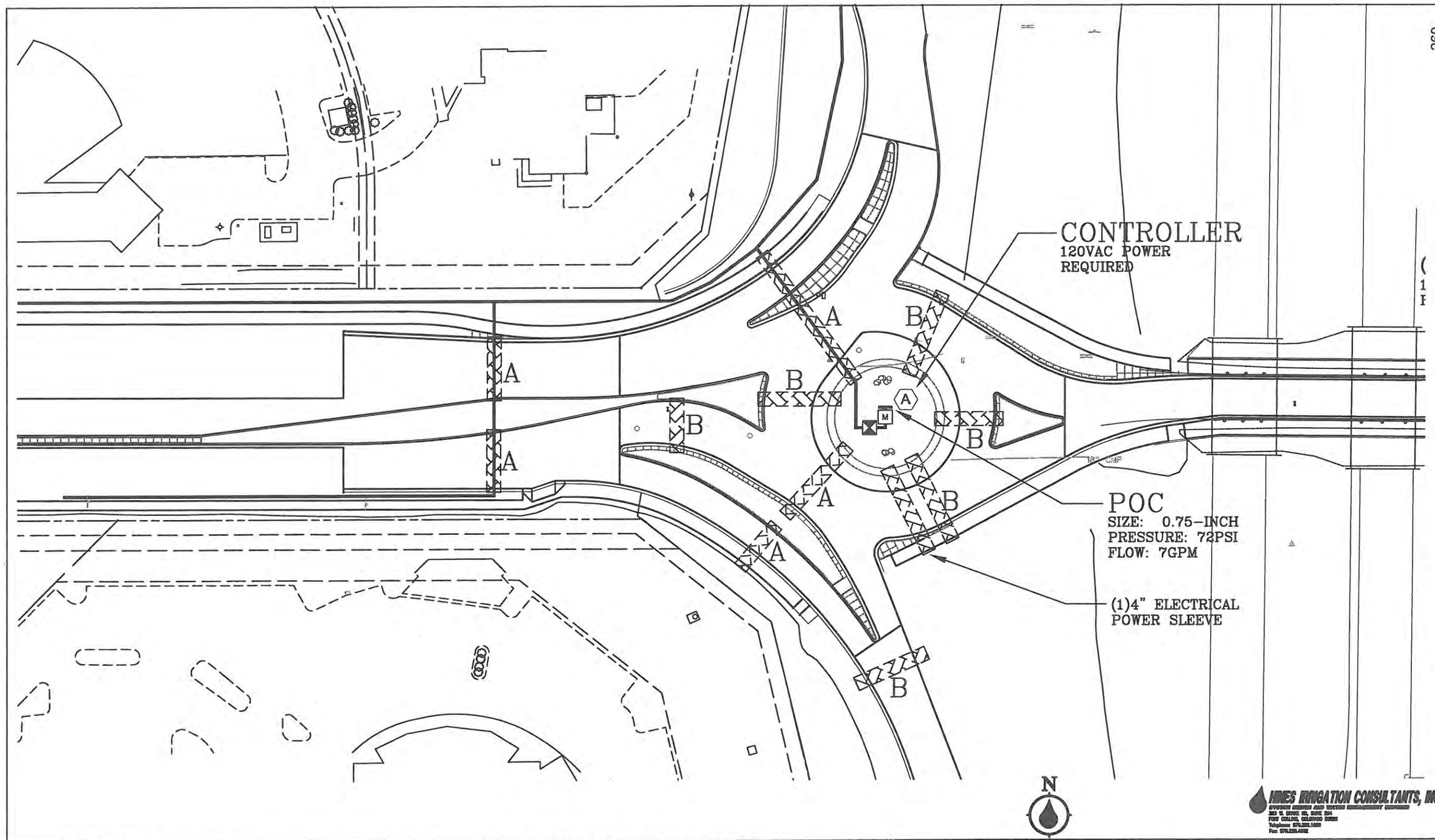
# IRRIGATION SLEEVING NOTES

1. INSTALL QUANTITY AND SIZE OF SLEEVES BENEATH PAVED AND HARDSCAPE AREAS AS NOTED ON PLAN. SLEEVES WILL BE USED FOR THE INSTALLATION OF IRRIGATION MAINLINE PIPE, LATERAL PIPE, CONTROL WIRING, AND DRIP LATERAL PIPE AFTER THE HARDSCAPE IS IN PLACE.
2. SLEEVING MATERIAL BENEATH PEDESTRIAN PAVEMENTS, DRIVES AND STREETS SHALL BE PVC CLASS 200 PIPE WITH SOLVENT WELDED JOINTS.
3. BACK FILL SLEEVES BY DEPOSITING THE BACK FILL MATERIAL EQUALLY ON BOTH SIDES OF THE PIPE IN 6-INCH LAYERS AND COMPACTING EACH LAYER TO 95% PROCTOR DENSITY, ASTM D698-78. USE OF WATER FOR COMPACTION AROUND SLEEVES, "PUDDLING", WILL NOT BE PERMITTED.
4. MINIMUM COVER (DISTANCE FROM TOP OF SLEEVE TO FINISH GRADE): 24-INCHES OVER SLEEVES UNDER STREETS AND DRIVES, AND 18-INCHES OVER SLEEVES UNDER SIDEWALKS AND PEDESTRIAN PAVEMENTS.
5. EXTEND SLEEVE ENDS SIX INCHES BEYOND THE EDGE OF THE PAVED SURFACE. COVER PIPE ENDS AND MARK WITH STAKES. MARK CONCRETE WITH A CHISELED "X" AT SLEEVE END LOCATIONS.
6. BORE FOR SLEEVES UNDER OBSTRUCTIONS WHICH CANNOT BE REMOVED. EMPLOY EQUIPMENT AND METHODS DESIGNED FOR HORIZONTAL BORING.



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File Name:					Revised:	Detailer: MLP		
Horiz. Scale: 1"=40'	Vert. Scale:				Void:	Sheet Subset: IRRIGATION	Subset Sheets: 1 of 3	

WILSON & COMPANY  
 Engineers & Architects  
 999 16th Street Suite 2600  
 Denver, CO 80202  
 Phone: 303-297-2976  
 Fax: 303-297-2693



**HINES IRRIGATION CONSULTANTS, INC.**  
 IRRIGATION DESIGN AND SYSTEM MANAGEMENT CONSULTANTS  
 303 N. BRUCE BL., SUITE 204  
 FORT COLLINS, COLORADO 80526  
 Telephone: 970.222.1800  
 Fax: 970.222.4022

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**CITY OF LOVELAND**

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 LOVELAND, CO 80537  
 970-962-2000



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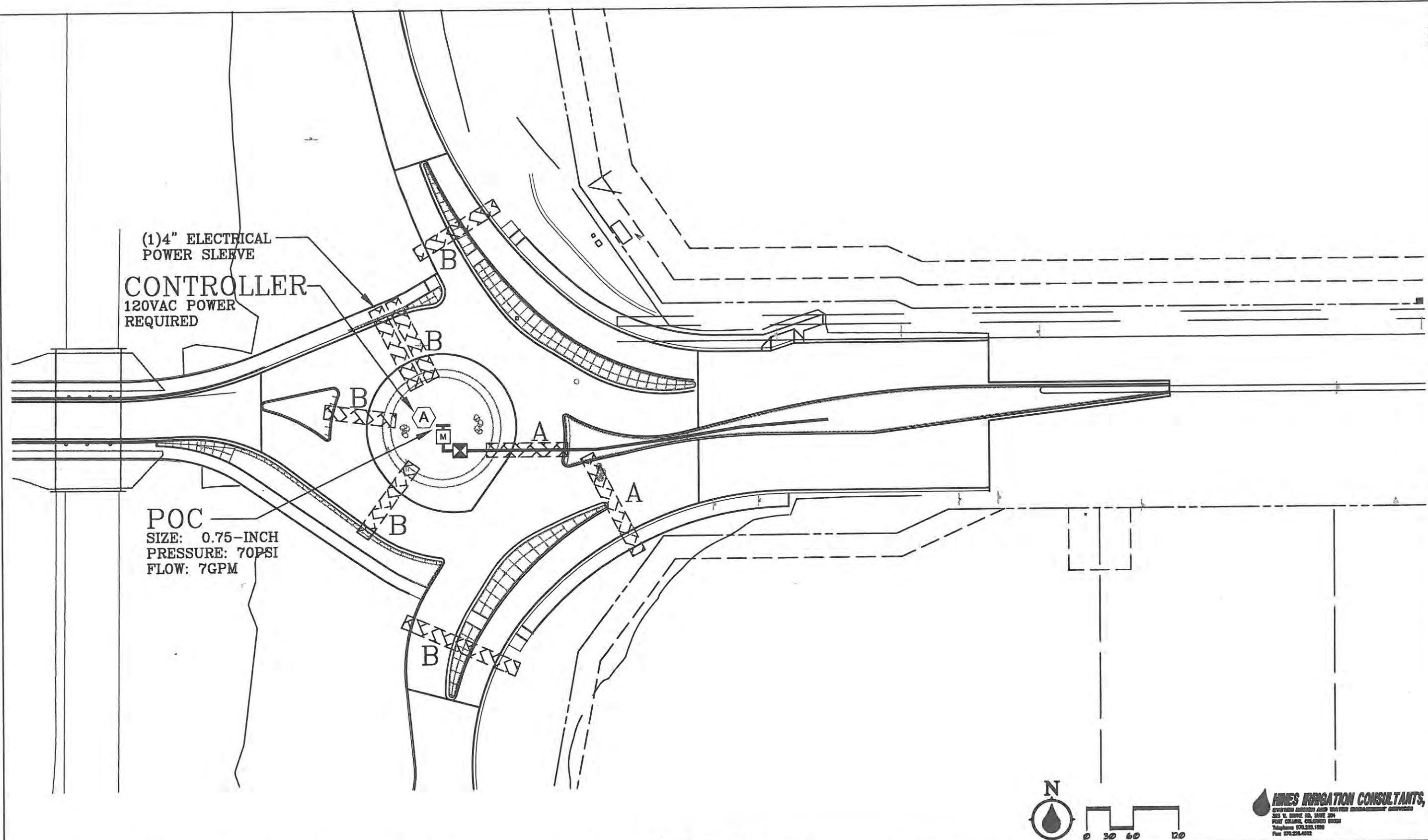
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Detailer: MLP	
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Project No./Code
ES4 0253-207
17244
Sheet Number MP2

**WILSON & COMPANY** Engineers & Architects  
 959 18th Street Suite 2600 Phone: 303-297-2976  
 Denver, CO 80202 Fax: 303-297-2663





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Sheet Revisions		
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**CITY OF LOVELAND**

500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

**Colorado Department of Transportation**

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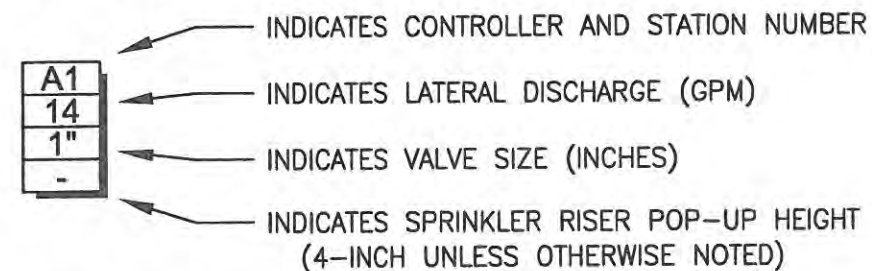
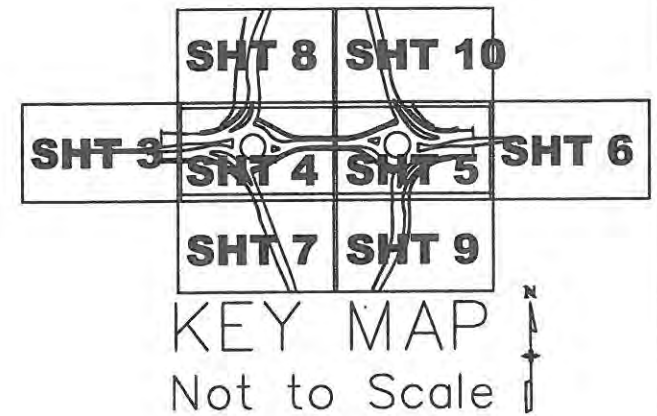
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Sheet Number	MP3

**HINES IRRIGATION CONSULTANTS, INC.**  
SYSTEMS DESIGN AND WATER MANAGEMENT SERVICES  
303 W. BOWNE RD., SUITE 204  
FORT COLLINS, COLORADO 80504  
Telephone: 970.225.1500  
Fax: 970.225.4022

# IRRIGATION LEGEND

- SLEEVES: CLASS 200 PVC
- MAINLINE PIPE: CLASS 200 PVC  
1.25-INCH SIZE UNLESS OTHERWISE INDICATED
- LATERAL PIPE TO SPRINKLERS: CLASS 200 PVC  
1-INCH SIZE UNLESS OTHERWISE INDICATED
- LATERAL PIPE TO EMITTERS: UV RADIATION RESISTANT  
POLYETHYLENE 0.75-INCH SIZE, ROUTING IS DIAGRAMMATIC
- LATERAL PIPE TO TREE EMITTERS: UV RADIATION RESISTANT  
POLYETHYLENE 0.75-INCH SIZE, ROUTING IS DIAGRAMMATIC
- UNCONNECTED PIPE CROSSING
- POINT-OF-CONNECTION ASSEMBLY
- WATER METER AND CURB STOP ASSEMBLY
- BACKFLOW PREVENTOR ASSEMBLY
- FLOW SENSOR ASSEMBLY
- MASTER VALVE ASSEMBLY: RAINBIRD PEB VALVE
- ISOLATION GATE VALVE ASSEMBLY
- QUICK COUPLING VALVE ASSEMBLY
- AUTOMATIC CONTROL VALVE ASSEMBLY FOR SPRINKLER LATERALS  
RAINBIRD PEB (SIZED PER PLAN)
- AUTOMATIC CONTROL VALVE ASSEMBLY FOR DRIP: RAINBIRD XCZ100BCOM
- FLUSH CAP ASSEMBLY

- POP-UP SPRAY SPRINKLER: RAIN BIRD 1804-SAM-PRS W/8  
SERIES NOZZLE PRESSURE: 30 PSI RADIUS: 8 FEET  
FLOW (GPM): Q-0.26 H-0.52 F-1.05
- POP-UP SPRAY SPRINKLER: RAIN BIRD 1804-SAM-PRS W/10  
SERIES NOZZLE PRESSURE: 30 PSI RADIUS: 10 FEET  
FLOW (GPM): Q-0.39 H-0.79 F-1.57
- POP-UP SPRAY SPRINKLER: RAIN BIRD 1804-SAM-PRS W/12  
NOZZLE PRESSURE: 30 PSI RADIUS: 12 FEET SERIES  
FLOW (GPM): Q-0.65 H-1.30 F-2.60
- POP-UP SPRAY SPRINKLER: RAIN BIRD 1804-SAM-PRS W/15  
SERIES NOZZLE PRESSURE: 30 PSI RADIUS: 15 FEET  
FLOW (GPM): Q-0.93 H-1.85 F-3.70
- POP-UP ROTATING SPRAY SPRINKLER: MP ROTATOR ON HUNTER MPR40-04CV,  
MP1000 SERIES NOZZLE ADJUSTABLE RADIUS: 8 TO 14 FEET  
PRESSURE:40PSI FLOW (GPM): Q-0.19 H-0.37 F-0.75
- POP-UP ROTATING SPRAY SPRINKLER: MP ROTATOR ON HUNTER MPR40-04CV,  
MP2000 SERIES NOZZLE ADJUSTABLE RADIUS: 13 TO 21 FEET  
PRESSURE:40PSI FLOW (GPM): Q-0.40 H-0.74 F-1.47
- POP-UP ROTATING SPRAY SPRINKLER: MP ROTATOR ON HUNTER MPR40-04CV,  
MP3000 SERIES NOZZLE ADJUSTABLE RADIUS: 20 TO 30 FEET  
PRESSURE:40PSI FLOW (GPM): Q-0.86 H-1.82 F-3.64
- POP-UP ROTATING SPRAY SPRINKLER: MP ROTATOR ON HUNTER MPR40-04CV,  
MPSTRIP SERIES NOZZLE ADJUSTABLE RECTANGULAR AREA SPRAY  
SIDE STRIP FLOW (GPM): 4X24ft - 0.34, 5X30ft - 0.47  
LEFT/RIGHT STRIP FLOW (GPM): 4X12ft - 0.17 5X15ft - 0.23



- AUTOMATIC CONTROLLER:  
CONTROLLER A: TORO SENTINEL ESBTW-U2-PS1-VRA: 35 STA. USED  
CONTROLLER B: TORO SENTINEL SSAK12PS16NS4: 4 STA. USED

REFER TO SHEET IR9 FOR BID TAB



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Creation Date: 01/30/09	Initials: MLP	Date:	Comments	Init.	No Revisions: 9/14/11		ES4 0253-207		
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Horiz. Scale: 1"=40'	Vert. Scale:								Sheet Number IR1



# INSTALLATION GENERAL NOTES

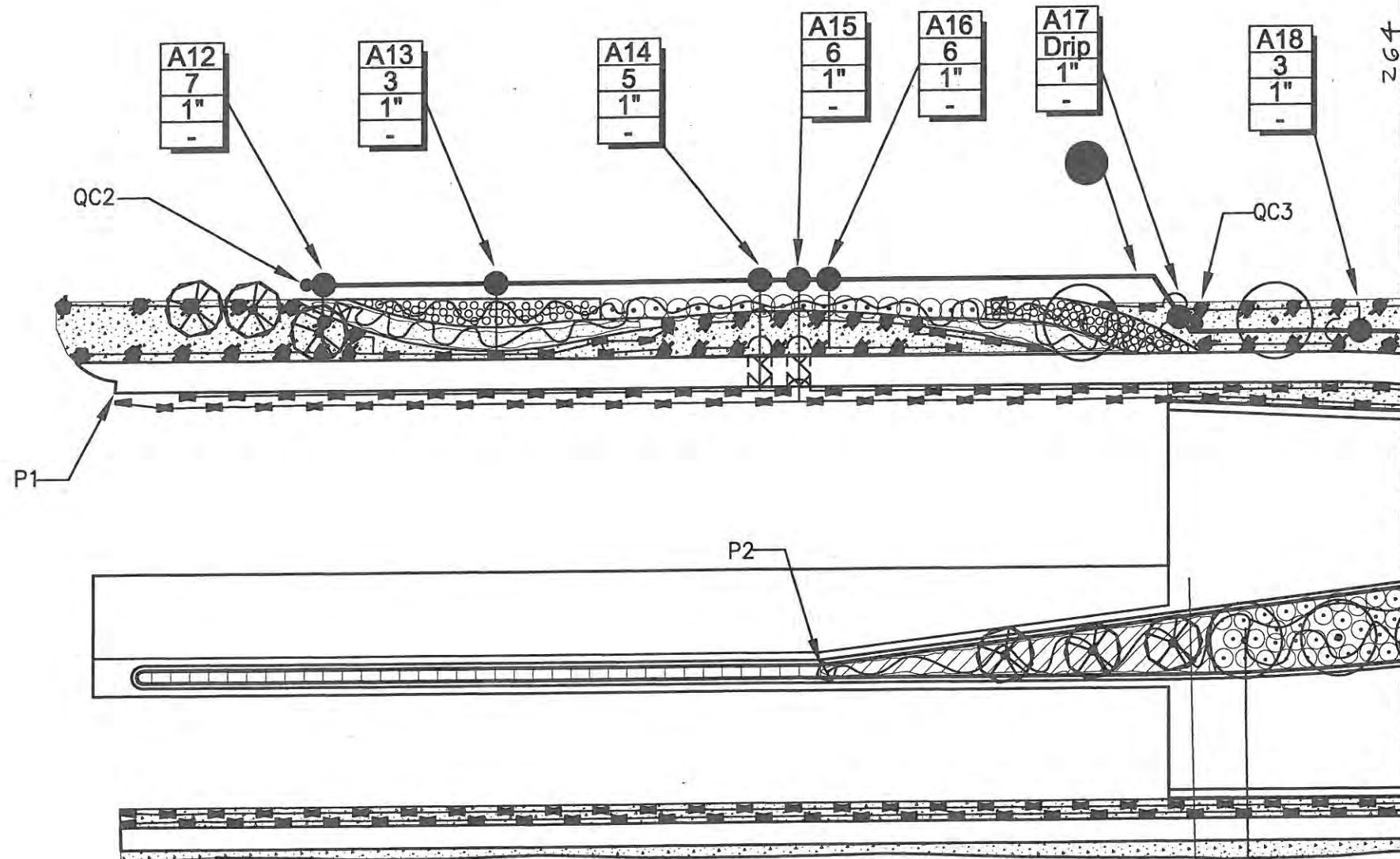
1. THE SYSTEM DESIGN ASSUMES A MINIMUM DYNAMIC PRESSURE FOR THE IRRIGATION SYSTEM OF 72 PSI, AT A MINIMUM DISCHARGE OF 7 GPM AT THE 0.75-INCH POINT-OF-CONNECTION. VERIFY PRESSURE AND FLOW ON SITE PRIOR TO CONSTRUCTION.
2. READ THOROUGHLY AND BECOME FAMILIAR WITH THE SPECIFICATIONS AND INSTALLATION DETAILS FOR THIS AND RELATED WORK PRIOR TO CONSTRUCTION.
3. COORDINATE UTILITY LOCATES ("CALL BEFORE YOU DIG") OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
4. DO NOT PROCEED WITH THE INSTALLATION OF THE IRRIGATION SYSTEM WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS OR GRADE DIFFERENCES EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. IF DISCREPANCIES IN CONSTRUCTION DETAILS, LEGEND, NOTES, OR SPECIFICATIONS ARE DISCOVERED, BRING ALL SUCH OBSTRUCTIONS OR DISCREPANCIES TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE.
5. THE DRAWINGS ARE DIAGRAMMATIC. THEREFORE, THE FOLLOWING SHOULD BE NOTED:
  - A. ALTHOUGH IRRIGATION COMPONENTS MAY BE SHOWN OUTSIDE PLANTING AREAS FOR CLARITY, INSTALL IRRIGATION PIPE AND WIRING IN LANDSCAPED AREAS WHENEVER POSSIBLE.
  - B. TREE AND SHRUB LOCATIONS AS SHOWN ON LANDSCAPE PLANS TAKE PRECEDENCE OVER IRRIGATION EQUIPMENT LOCATIONS. AVOID CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING MATERIALS, AND ARCHITECTURAL FEATURES.
  - C. USE ONLY STANDARD TEES AND ELBOW FITTINGS. USE OF CROSS TYPE FITTINGS IS NOT ALLOWED.
6. PROVIDE THE FOLLOWING COMPONENTS TO THE OWNER PRIOR TO THE COMPLETION OF THE PROJECT:
  - A. TWO (2) OPERATING KEYS FOR EACH TYPE OF MANUALLY OPERATED VALVES.
  - B. TWO (2) OF EACH SERVICING WRENCH OR TOOL NEEDED FOR COMPLETE ACCESS, ADJUSTMENT, AND REPAIR OF ALL ROTARY SPRINKLERS.
7. SELECT NOZZLES FOR SPRAY AND ROTARY SPRINKLERS WITH ARCS WHICH PROVIDE COMPLETE AND ADEQUATE COVERAGE WITH MINIMUM OVERSPRAY FOR THE SITE CONDITIONS. CAREFULLY ADJUST THE RADIUS OF THROW AND ARC OF COVERAGE OF EACH ROTARY SPRINKLER TO PROVIDE THE BEST PERFORMANCE.
8. THE IRRIGATION CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF IRRIGATION SLEEVING. SLEEVES ARE REQUIRED FOR BOTH PIPING AND ELECTRICAL WIRING AT EACH HARDSCAPE CROSSING. COORDINATE INSTALLATION OF SLEEVING WITH OTHER TRADES. ANY PIPE OR WIRE WHICH PASSES BENEATH EXISTING HARDSCAPE WHERE SLEEVING WAS NOT INSTALLED WILL REQUIRE HORIZONTAL BORING BY THE IRRIGATION CONTRACTOR.
9. INSTALL ALL ELECTRICAL POWER TO THE IRRIGATION CONTROL SYSTEM IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND ALL APPLICABLE LOCAL ELECTRIC UTILITY CODES.
10. THE FOLLOWING SHOULD BE NOTED REGARDING PIPE SIZING: IF A SECTION OF UNSIZED PIPE IS LOCATED BETWEEN THE IDENTICALLY SIZED SECTIONS, THE UNSIZED PIPE IS THE SAME NOMINAL SIZE AS THE TWO SIZED SECTIONS. THE UNSIZED PIPE SHOULD NOT BE CONFUSED WITH THE DEFAULT PIPE SIZE NOTED IN THE LEGEND.
11. INSTALL TWO (2) #14 AWG CONTROL WIRES FROM CONTROLLER LOCATION TO EACH DEAD-END OF MAINLINE FOR USE AS SPARES IN CASE OF CONTROL WIRE FAILURE. COIL 3 FEET OF WIRE IN VALVE BOX.
12. EXISTING IRRIGATION ON SOUTH SIDE OF CROSSROADS BOULEVARD SHALL NOT BE CONNECTED TO THE NEW IRRIGATION SYSTEM SHOWN HERE. FIELD LOCATE ALL EXISTING IRRIGATION PRIOR TO CONSTRUCTION.
13. REFER TO IRRIGATION MASTER PLAN AND CIVIL DRAWINGS FOR PROPOSED IRRIGATION SLEEVES AND SIZES.

# CONSTRUCTION NOTES

- 1 THE IRRIGATION SYSTEM POINT-OF-CONNECTION SHALL BE DOWNSTREAM OF THE IRRIGATION WATER TAP AND METER INSTALLED BY OTHERS (RE: CIVIL DRAWINGS) AT THE APPROXIMATE LOCATION SHOWN. INSTALL BACKFLOW PREVENTION UNIT AND MASTER VALVE ASSEMBLY AS INDICATED. VERIFY EXACT LOCATION OF POC WITH OWNER'S REPRESENTATIVE.
- 2 PEDESTAL MOUNT THE IRRIGATION CONTROLLER AT THE APPROXIMATE LOCATION SHOWN. COORDINATE ELECTRICAL POWER TO THE CONTROLLER WITH THE OWNER'S REPRESENTATIVE. CARE SHOULD BE TAKEN TO INSTALL THE IRRIGATION CONTROLLER IN A LOCATION THAT IS ACCESSIBLE FOR MAINTENANCE, AND SCREENED FROM VIEW EITHER BEHIND ENTRY WALLS, NEXT TO BUILDINGS, OR BEHIND PLANT MATERIAL. FINAL LOCATION TO BE APPROVED BY OWNER'S REPRESENTATIVE.
- 3 IRRIGATION SHOWN IN HARDSCAPE FOR CLARITY ONLY. ALL IRRIGATION EQUIPMENT SHALL BE INSTALLED WITHIN LANDSCAPED AREAS.
- 4 NEW SPRINKLERS IN THIS AREA SHALL BE INSTALLED TO COMPLETE HEAD-TO-HEAD COVERAGE.



<b>Computer File Information</b>		<b>Sheet Revisions</b>		<p>500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000</p> <p>Colorado Department of Transportation</p>	<b>I-25 &amp; CROSSROADS IRRIGATION LEGEND/NOTES</b>		<b>Project No./Code</b>	
Creation Date: 01/30/09	Initials: MLP	Date:	Comments:		Init.:	No Revisions: 9/14/11	Designer: MLP	ES4 0253-207
Print Date: 03/17/09	Initials: MLP					Revised:	Structure Numbers	17244
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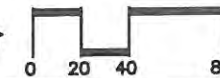


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 A# - CONTROL VALVE, QC# - QUICK COUPLING VALVE, GV# - GATE VALVE  
 P# - REFERENCE POINT, FS - FLOW SENSOR, MV - MASTER VALVE

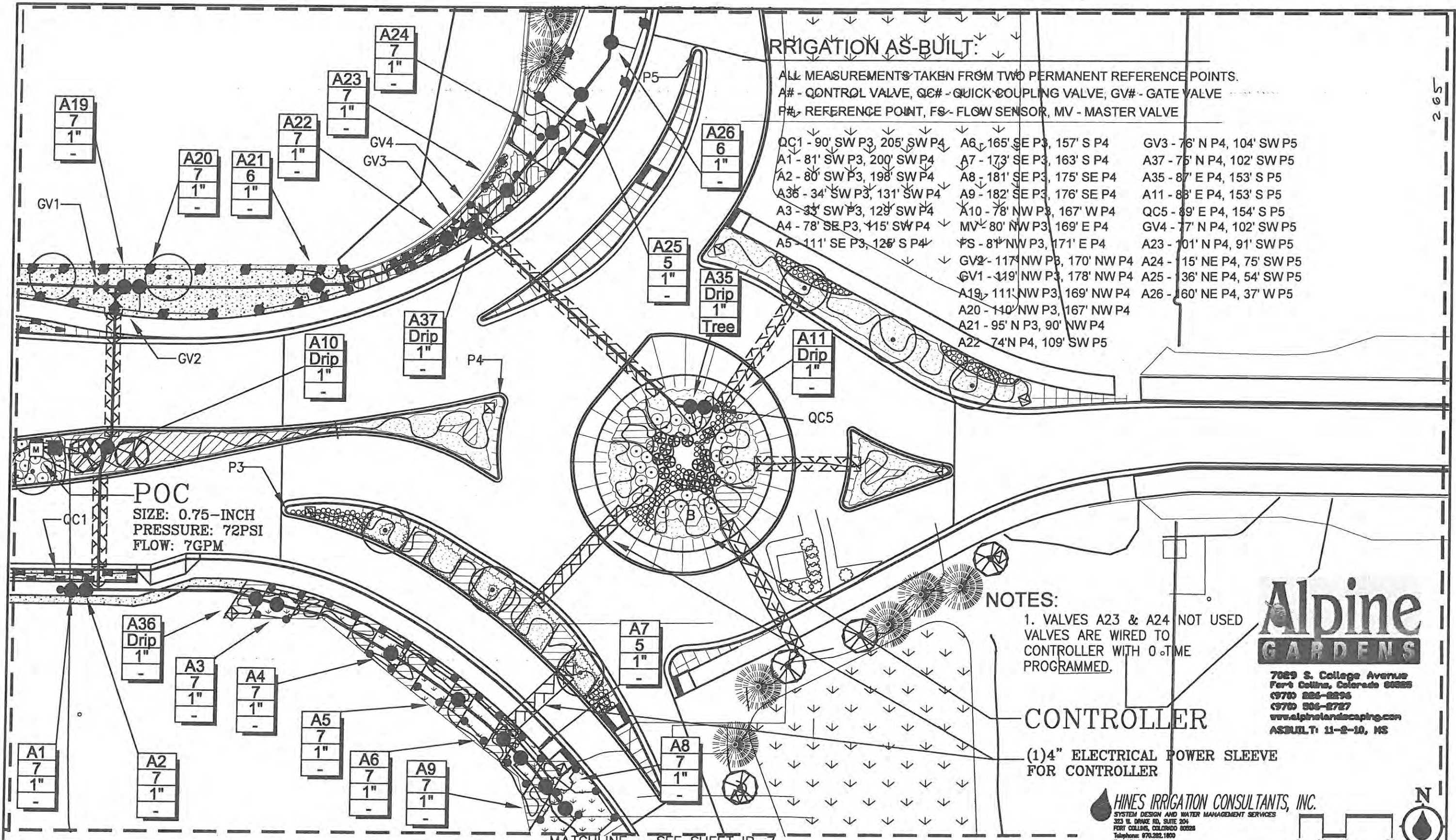
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|-----------------------------|------------------------------|
| QC2 - 50' NE P1, 162' NW P2 | A16 - 174' NE P1, 88' N P2   |
| A12 - 52' NE P1, 160' NW P2 | A17 - 259' NE P1, 114' NE P2 |
| A13 - 96' NE P1, 125' NW P2 | QC3 - 260' NE P1, 115' NE P2 |
| A14 - 170' NE P1, 88' N P2  | A18 - 303' NE P1, 147' NE P2 |
| A15 - 172' NE P1, 88' N P2  |                              |



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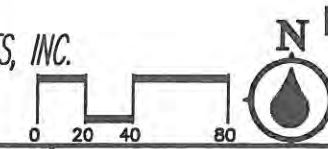
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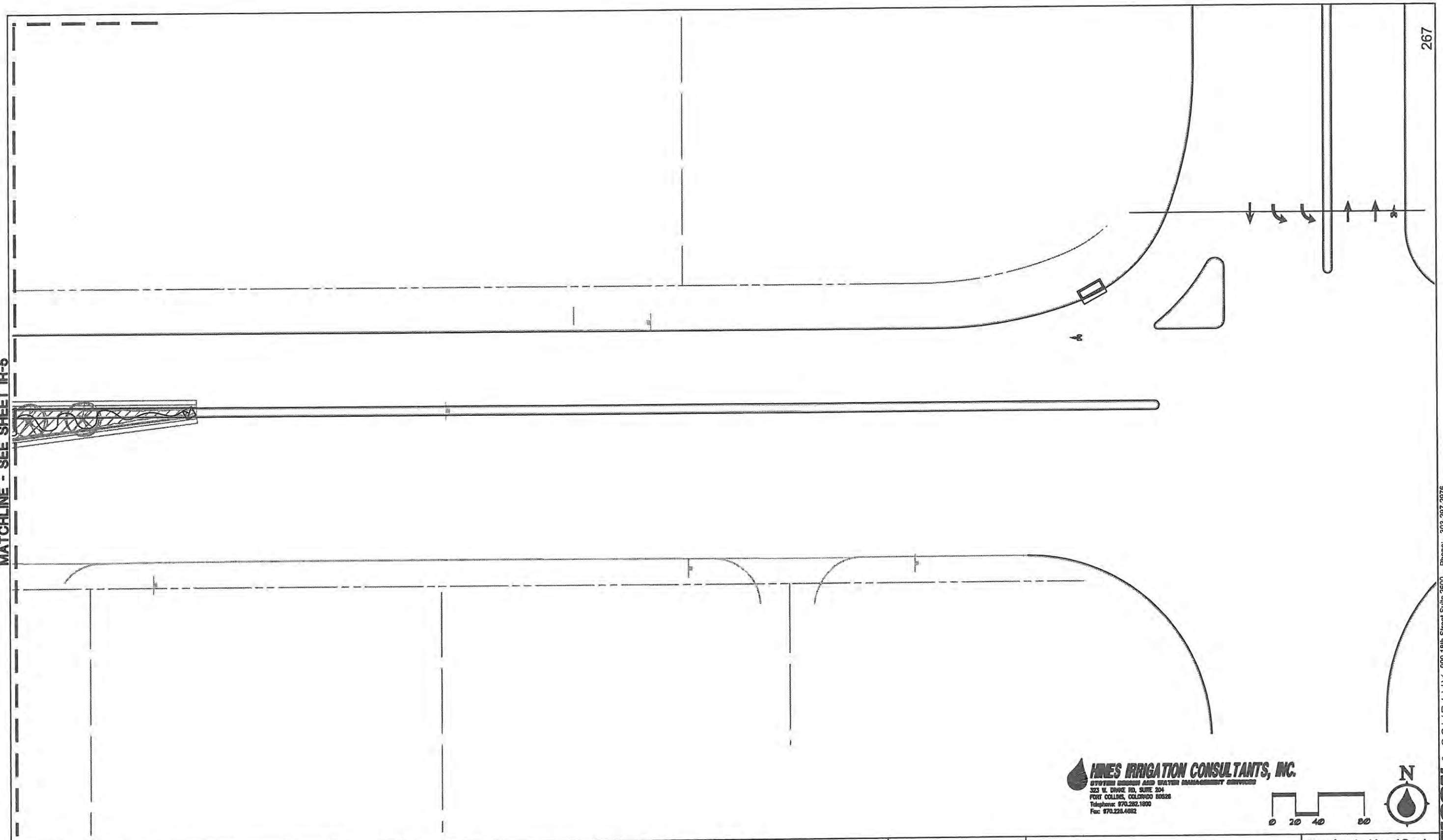
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Sheet Number	IR4



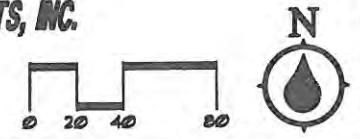




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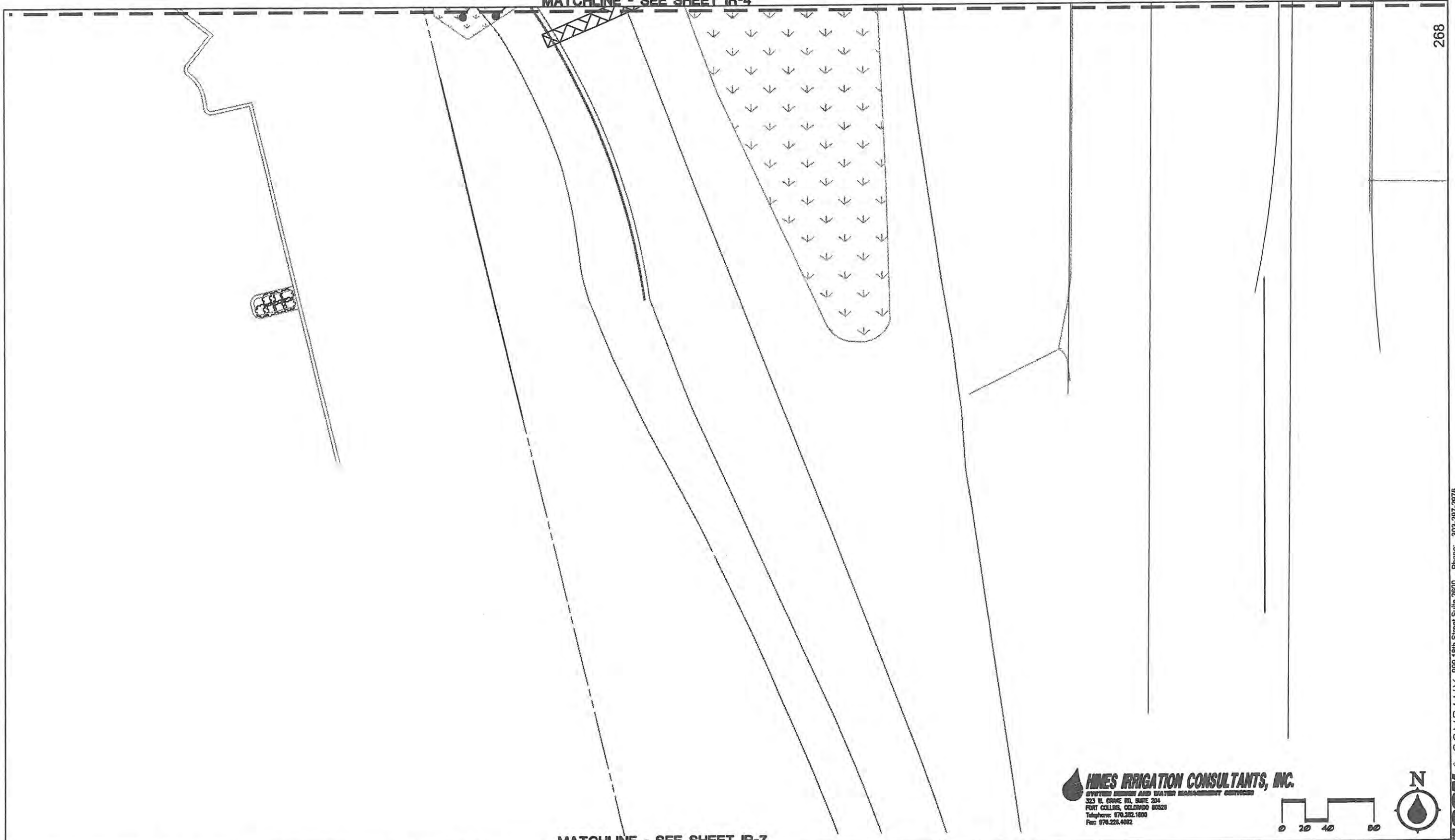
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Detailer: MLP	
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17244
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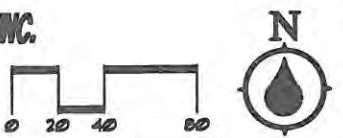
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268



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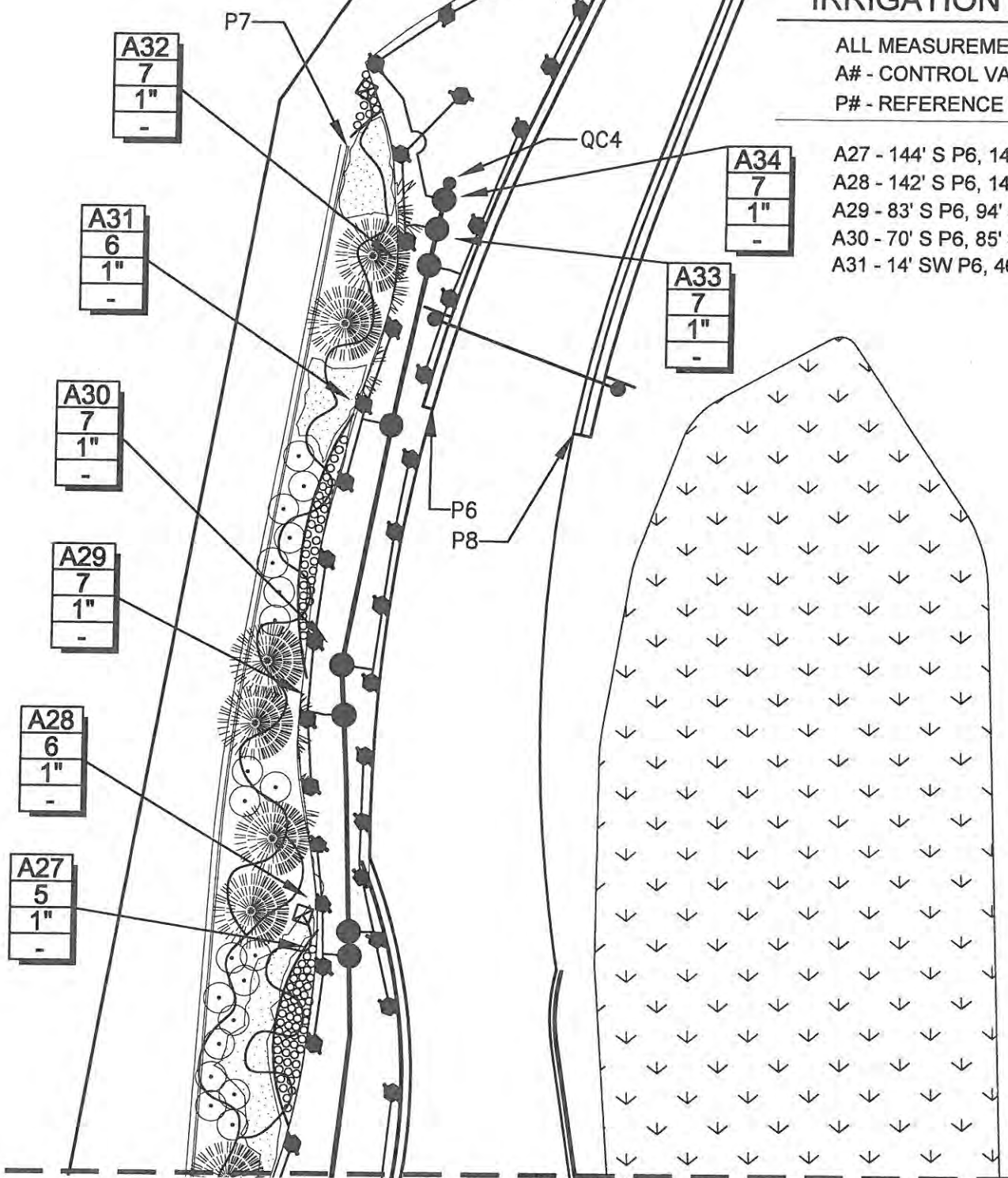


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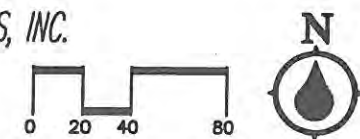
- A27 - 144' S P6, 149' SW P8
- A28 - 142' S P6, 147' SW P8
- A29 - 83' S P6, 94' SW P8
- A30 - 70' S P6, 85' SW P8
- A31 - 14' SW P6, 46' W P8

- A32 - 42' N P6, 30' SE P7
- A33 - 45' N P6, 27' SE P7
- A34 - 47' N P6, 25' SE P7
- QC4 - 50' N P6, 22' SE P7



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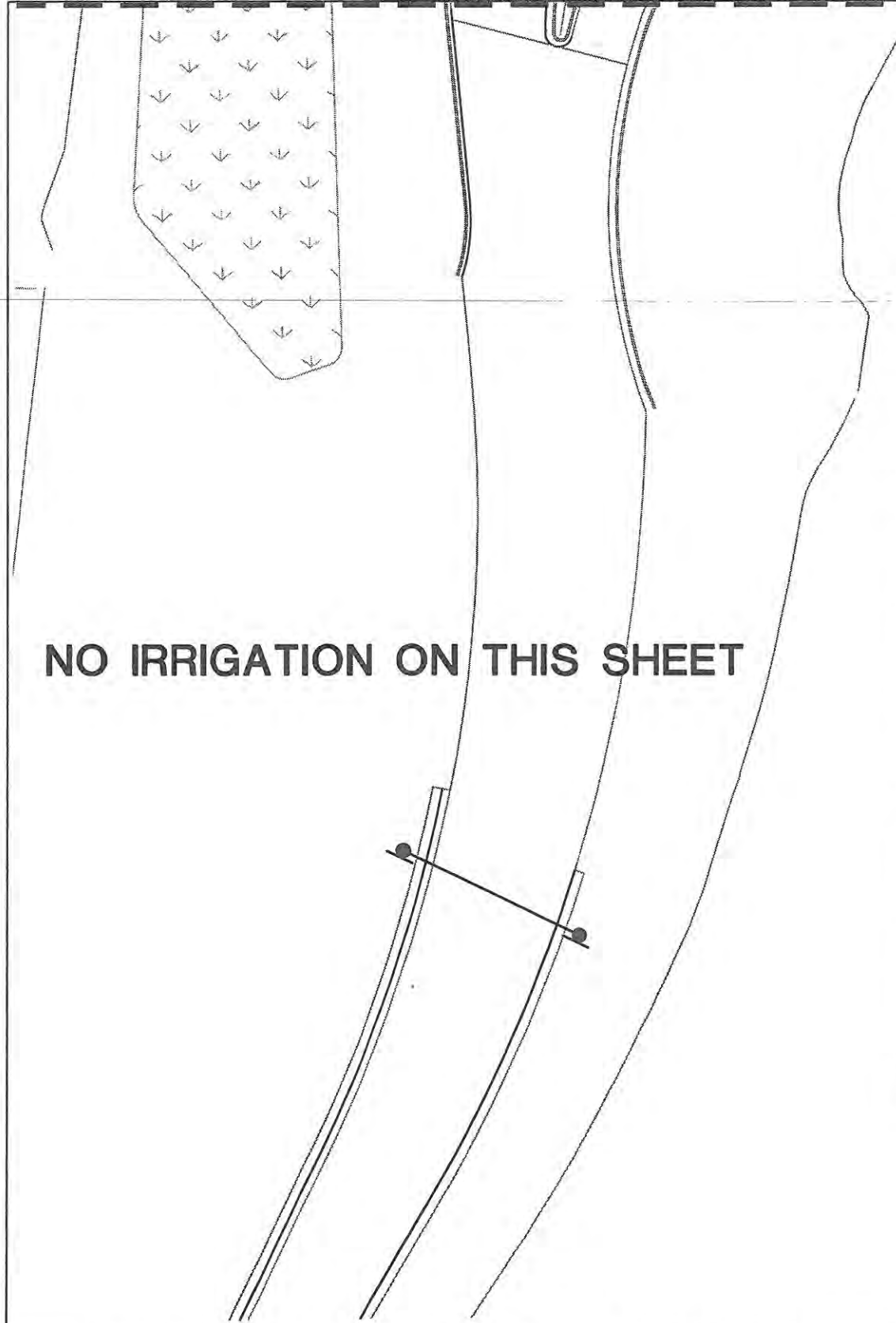
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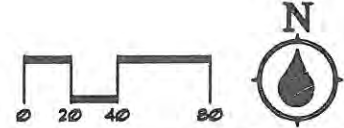
MATCHLINE - SEE SHEET IR-5



Item Number	Description	West Side	East Side	Total	Units	Short Description
619-40060	3/4-Inch Copper Pipe	20	20	40	LF	includes pipe and fittings
619-50080	1-Inch Plastic Pipe	<del>4,197</del> 3,857	0	<del>4,197</del> 3,857	LF	includes mainline, drip laterals, and fittings
619-50100	1-1/4-Inch Plastic Pipe	<del>2,053</del> 1,420	<del>281</del> 274	<del>2,334</del> 1,694	LF	includes mainline and fittings
619-50160	2-Inch Plastic Pipe	<del>834</del> 388	<del>286</del> 290	<del>1,120</del> 678	LF	irrigation sleeves for mainline, laterals, and wire runs
619-50240	3-Inch Plastic Pipe	<del>878</del> 608	<del>632</del> 612	<del>1,510</del> 1,218	LF	irrigation sleeves for mainline, laterals, and wire runs
619-50320	4-Inch Plastic Pipe	<del>344</del> 188	<del>216</del> 125	<del>560</del> 311	LF	irrigation sleeves for mainline, laterals, and wire runs
623-00162	Drip Emitter Tubing	<del>2,258</del> 2,787	<del>2,296</del> 4,767	4,554	LF	3/4-inch UV Radiation Resistant Polyethylene tubing to point source emitters and inline drip tubing to
623-00164	Drip Emitter	<del>910</del> 2,645	<del>3,261</del> 1,556	4,171	EA	Point source drip emitters - includes all parts shown in details
623-00186	3/4-Inch Flush Unit	747	19	26	EA	Drip Flush Cap for both inline and point source - includes all parts shown in details
623-01706	3/4-Inch Backflow Preventer	1	1	2	EA	includes enclosure and stop and waste valves
623-00205	4-Inch Pop up Spray Sprinkler	<del>8053</del>	0	<del>8053</del>	EA	Rainbird 1804-SAM PRS, spray nozzles included
623-00332	4-Inch Pop up Rotary Sprinkler	228	0	228	EA	Rainbird 1804-SAM PRS, MRPotator nozzles included
623-03108	1-Inch Automatic Control Valve	<del>3736</del>	14	<del>5148</del>	EA	Master valve, turf valves, and Drip valve assembly - includes all parts shown in details
623-04000	Control Wire 24 Volt	<del>2,740</del> 2,200	<del>460</del> 1,000	3,200	LF	24 volt, 14awg, 2-wire control bundle, and single strand traditional 14awg wire
623-04008	1-Inch Quick-Coupler Valve	45	24	6	EA	includes all parts shown in details
623-05010	1-1/4-Inch Gate Valve	3	0	3	EA	includes all parts shown in details
623-07006	3/4-Inch Water Meter	<del>04</del>	<del>04</del>	<del>02</del>	EA	per local codes
623-07601	1-Inch Flow Sensor	1	1	2	EA	includes all parts shown in details
623-08112	12 station Automatic Controller	0	1	1	EA	Toro Sentinel 12 station controller
623-08136	36 station Automatic Controller	1	0	1	EA	Toro Sentinel 96 station 2-wire controller

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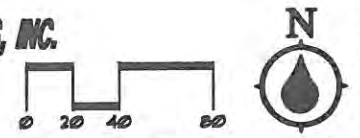
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Subset Sheets: 9 of 13	

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ES4 0253-207
17244
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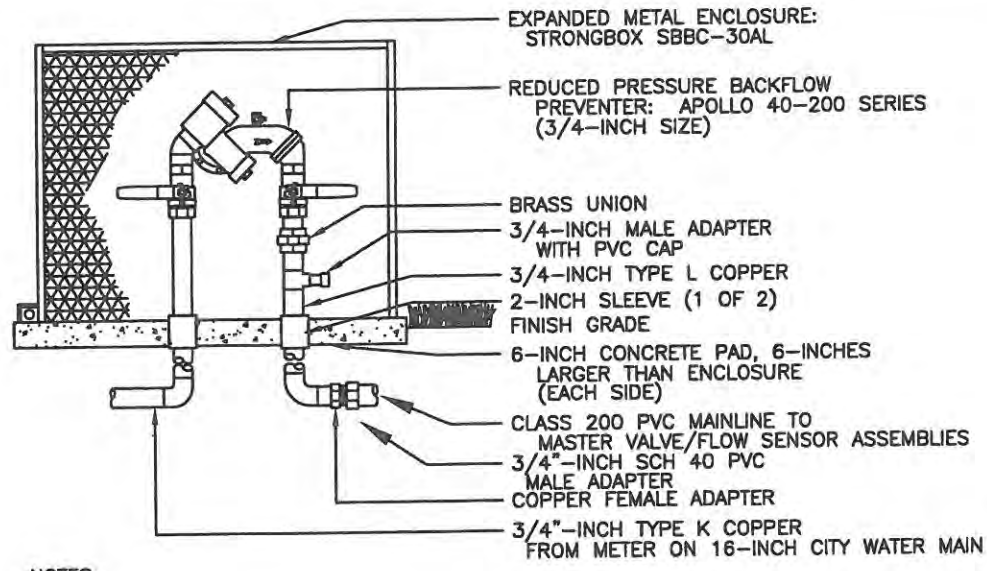
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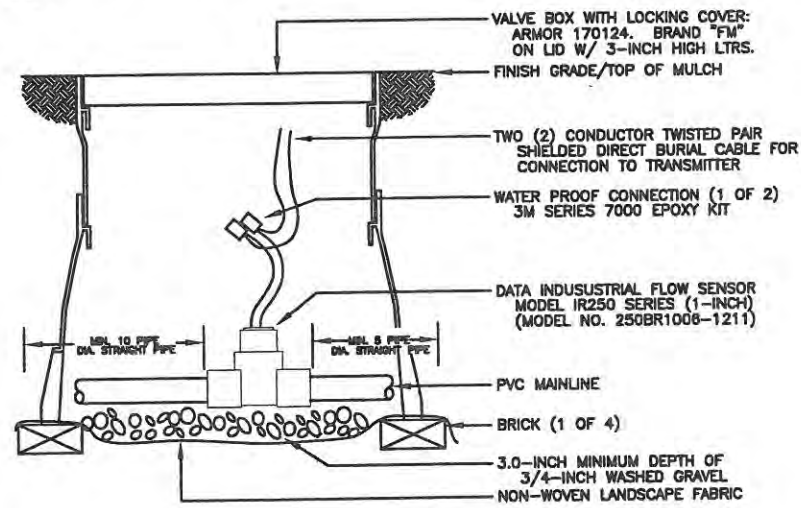
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								Sheet Number IR10	



NOTES:

1. INSTALL BACKFLOW DEVICE IN ACCORDANCE WITH ALL STATE AND LOCAL CODE REQUIREMENTS.
2. SLOPE TOP SURFACE OF PAD AT 0.5 % WITH BROOM FINISH. MAKE PIPE SLEEVES WITH 1-1/2 INCH LARGER DIAMETER PIPE THAN PENETRATING PIPE SIZE.
3. ALL HINGED CONNECTION LOCATIONS AND HARDWARE TO BE TAMPER PROOF.
4. ALL WELD JOINTS SHALL BE CONTINUOUS AND GROUND SMOOTH.
5. ALL PARTS DETAILED SHALL BE PAID FOR BY PAY ITEM 623-01706

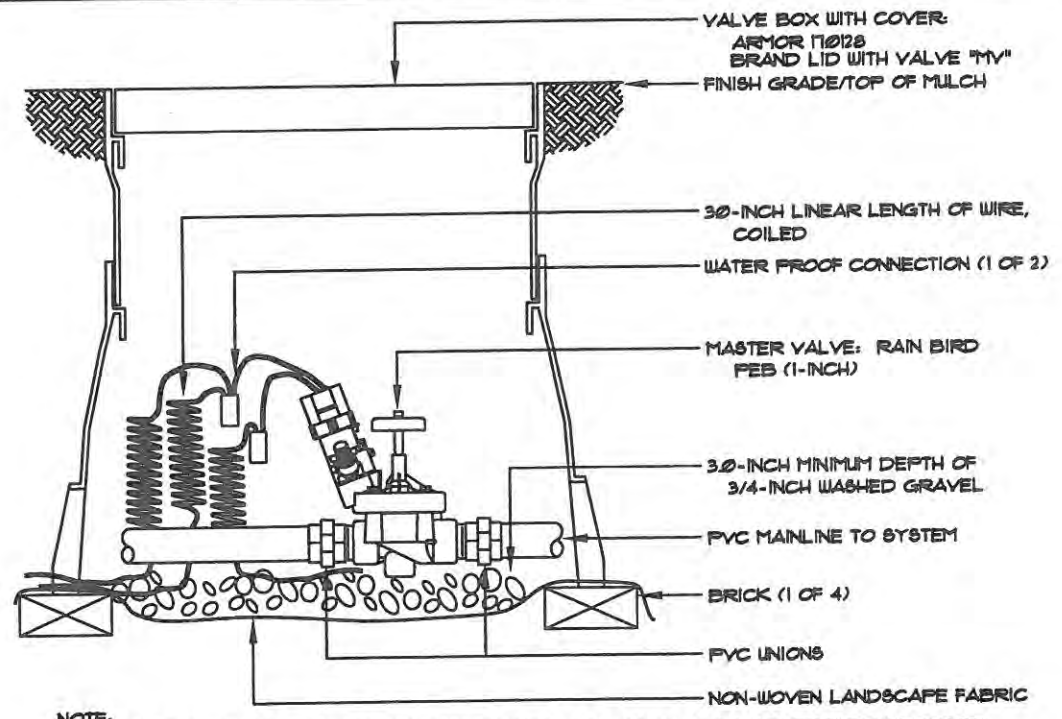
**1 BACKFLOW PREVENTION ASSEMBLY**



NOTE:

1. WIRE FLOW SENSOR DIRECTLY INTO THE CONTROLLER. SENSOR DOES NOT REQUIRE DECODER
2. ALL PARTS DETAILED SHALL BE PAID FOR BY PAY ITEM 623-07601.

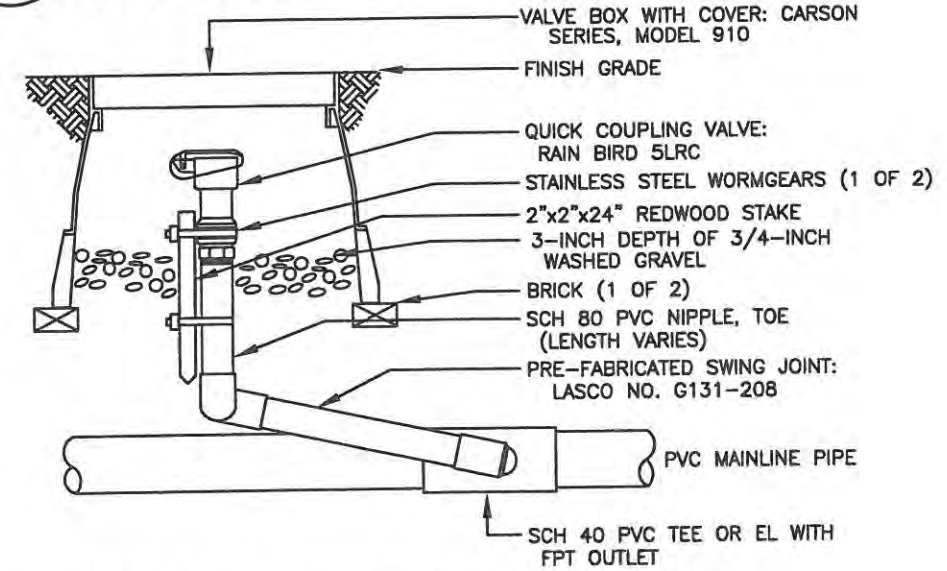
**3 FLOW SENSOR ASSEMBLY**



NOTE:

1. WIRE MASTER VALVE DIRECTLY INTO THE CONTROLLER. VALVE DOES NOT REQUIRE DECODER
2. ALL PARTS DETAILED SHALL BE PAID FOR BY PAY ITEM 623-03108

**2 MASTER VALVE ASSEMBLY**



ALL PARTS DETAILED SHALL BE PAID FOR BY PAY ITEM 623-04008

**4 QUICK COUPLING VALVE ASSEMBLY**

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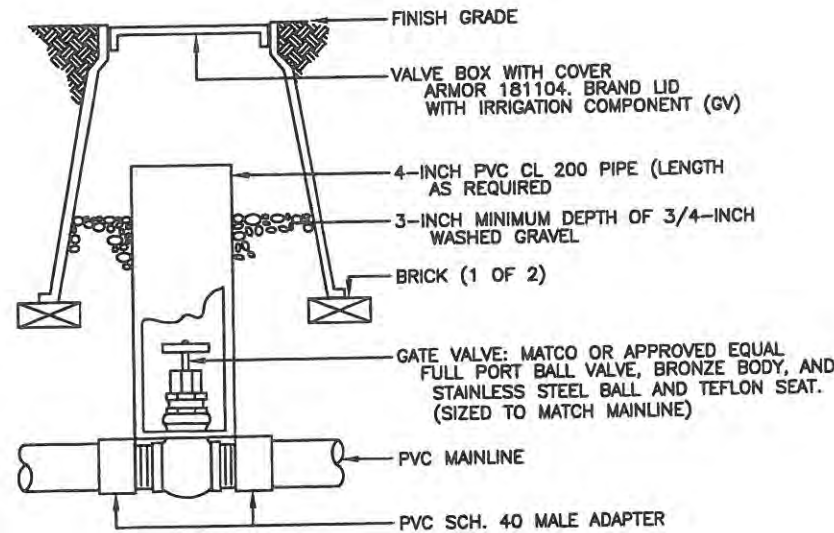
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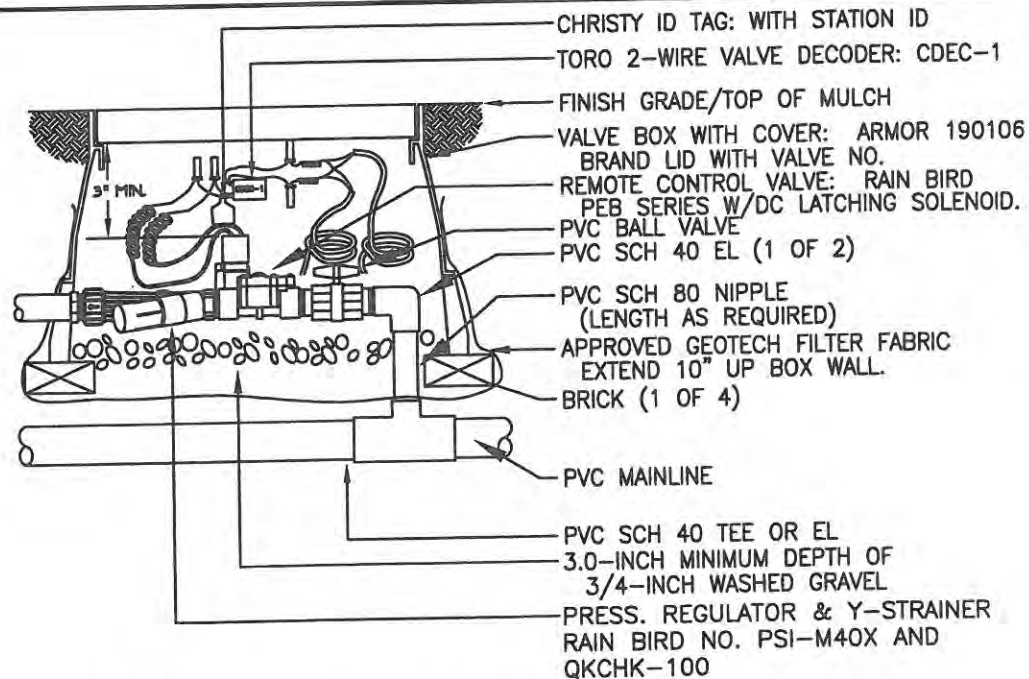
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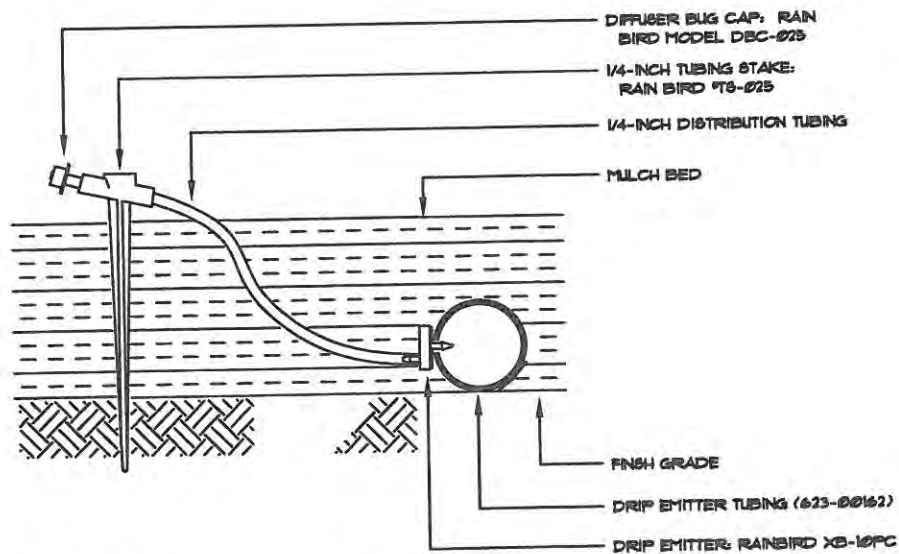
- NOTES:  
 1. NOMINAL SIZE OF GATE VALVE TO MATCH NOMINAL MAINLINE SIZE.  
 2. ALL PARTS DETAILED SHALL BE PAID FOR BY PAY ITEM 623-05024

**5 ISOLATION GATE VALVE ASSEMBLY**



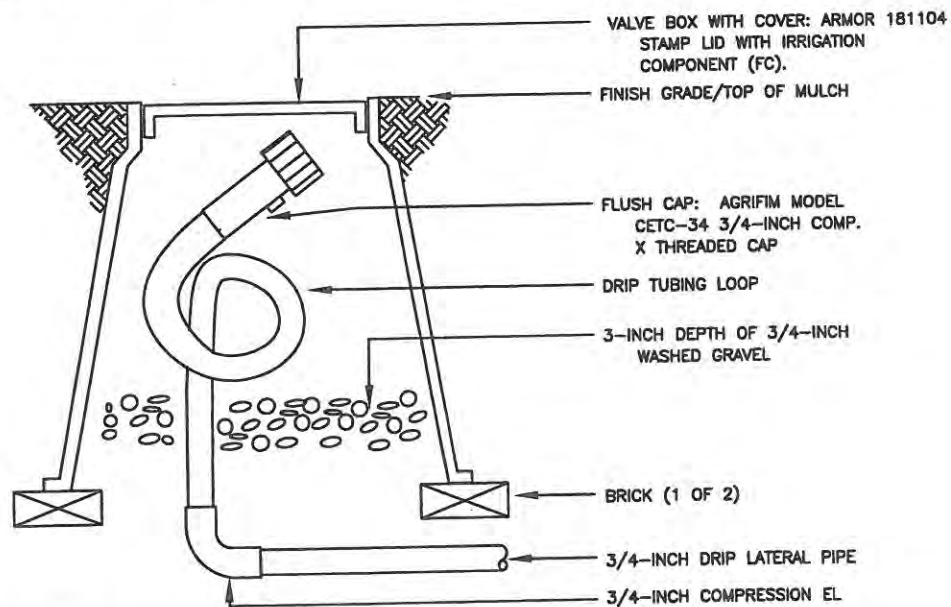
- NOTES:  
 1. USE BARBED INSERT FITTINGS ON DRIP LATERAL PIPE WITH HOSE CLAMPS. PLACE CLAMPS ON DRIP TUBING DIRECTLY OVER BARBED AREA OF FITTING. PINCH CLAMPS ARE NOT ACCEPTABLE.  
 2. UTILIZE RAIN BIRD XCZ-100-B-COM DRIP VALVE ASSEMBLY.  
 3. UTILIZE RAIN BIRD XCZ-LF-100 FOR LOW FLOWS UNDER 3.0 GPM.  
 4. ALL PARTS DETAILED SHALL BE PAID FOR BY PAY ITEM 623-03108.  
 5. UTILIZE RAINBIRD DC LATCHING SOLENOID FOR 2-WIRE DECODERS TO COMMUNICATE WITH CONTROLLER.

**6 REMOTE CONTROL DRIP VALVE ASSEMBLY**



NOTE: ALL PARTS DETAILED SHALL BE PAID FOR BY PAY ITEM 623-00164.

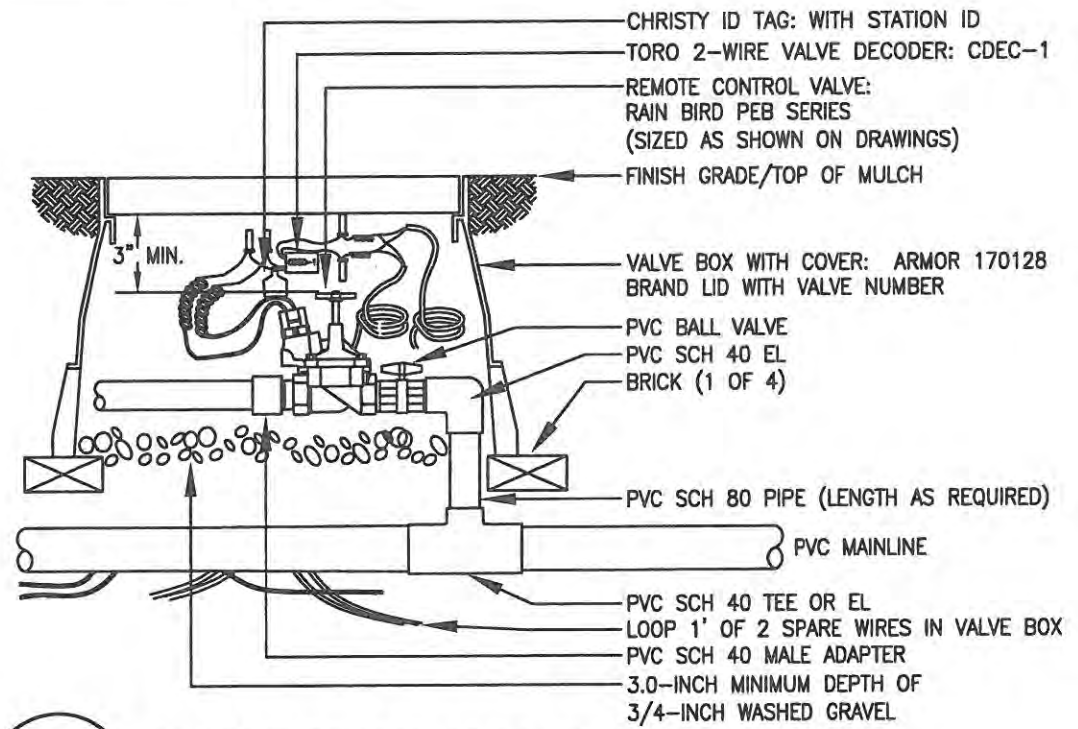
**7 SINGLE-OUTLET DRIP EMITTER ASSEMBLY**



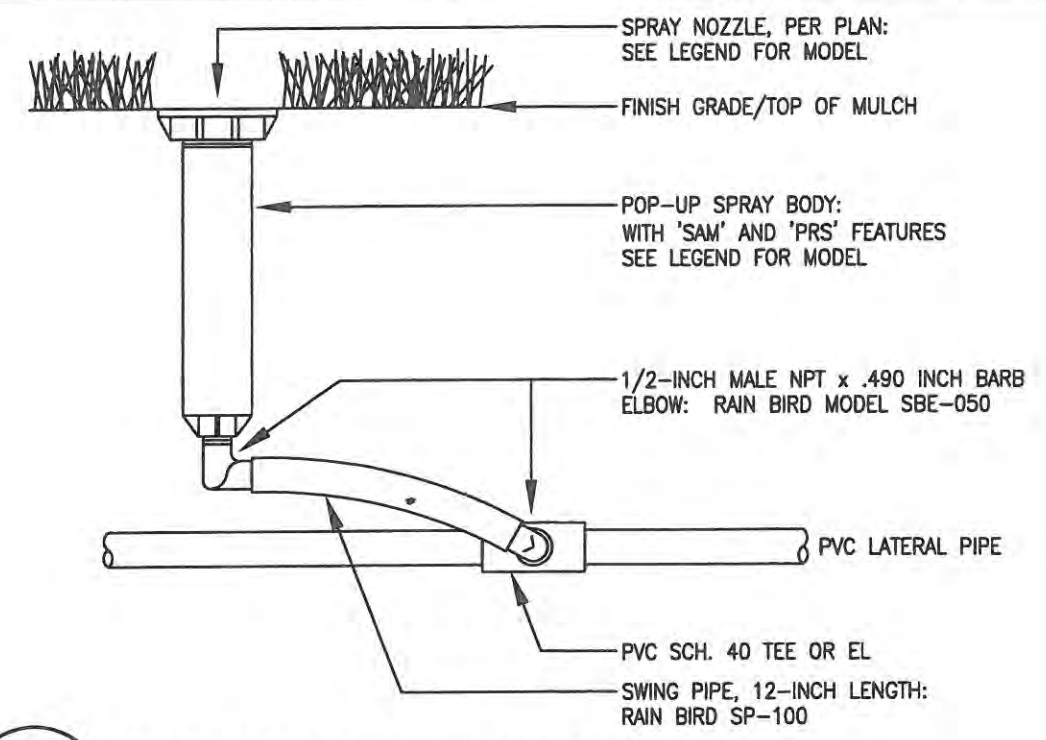
- NOTE:  
 1. LOOP IRRIGATION DRIP TUBING INSIDE VALVE BOX FOR EXTENSION OUTSIDE OF BOX DURING BLOWOUT.  
 2. ALL PARTS DETAILED SHALL BE PAID FOR BY PAY ITEM 623-00186.

**8 FLUSH CAP ASSEMBLY**

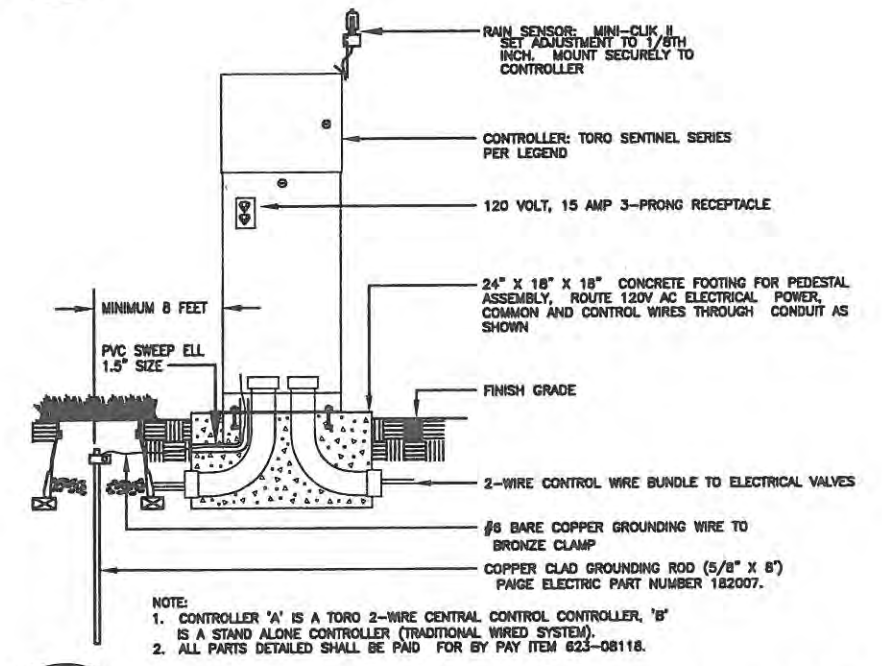
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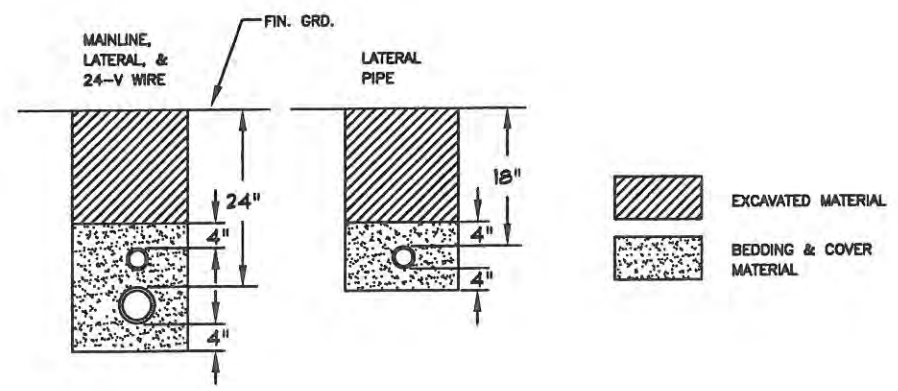
**9** REMOTE CONTROL TURF VALVE ASSEMBLY



**10** 4-INCH POP-UP SPRAY SPRINKLER ASSEMBLY



**11** PEDESTAL MOUNT CONTROLLER ASSEMBLY



**12** TYPICAL TRENCHING DETAIL

NOTES:  
 1. MAINLINE AND 2-WIRE BUNDLE SHALL UTILIZE THE SAME SLEEVE. PLACE 2-WIRE BUNDLE IN A 1/2-INCH OR 3/4-INCH CONDUIT INSIDE SLEEVE.  
 2. ALL PIPE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. "SNAKE" UNSLEEVED PLASTIC PIPE IN TRENCH. PROVIDE A MIN. OF 2" CLEARANCE TO SIDE OF TRENCH AND BETWEEN PIPES.  
 3. ALL 120-V WIRING SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS. TAPE AND BUNDLE 24-V WIRE EVERY 10' AND PROVIDE LOOSE 20" LOOP AT ALL CHANGES OF DIRECTION OVER 30 DEGREES.

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Creation Date: 01/30/09	Initials: MLP	Date:	Comments:			Init.:	No Revisions: 9/14/11	Revised:
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## GENERAL NOTES

1. ALL CONSTRUCTION ZONE TRAFFIC CONTROL DEVICES, INCLUDING BUT NOT LIMITED TO BARRICADES, SIGNS, ARROW PANELS, FLASHING BEACON (PORTABLE), AND CHANNELIZING DEVICES, SHALL BE FURNISHED, INSTALLED, MAINTAINED (INCLUDING WASHING), REPLACED IF DAMAGED, REMOVED WHEN TEMPORARILY NOT IN USE AND RETURNED WHEN REQUIRED, RESET AS NECESSARY DURING THE PROGRESS OF CONSTRUCTION, AND REMOVED ENTIRELY WHEN THE PROJECT IS COMPLETED. ALL DEVICES SHALL MEET THE REQUIREMENTS OF ATSSA "QUALITY STANDARDS FOR WORK ZONE TRAFFIC CONTROL - 1992"
2. WORK ON THE PROJECT SHALL NOT BE STARTED UNTIL ALL REQUIRED TRAFFIC CONTROL DEVICES ARE IN PLACE, AND APPROVED BY THE ENGINEER.
3. WHEN SPEED LIMIT REDUCTION IS REQUIRED, SUCH REDUCTION SHALL BE IN ACCORDANCE WITH CDOT FORM 568, "AUTHORIZATION AND DECLARATION OF TEMPORARY SPEED LIMITS."  
  
WHEN A CHANGE IN AN EXISTING SPEED LIMIT IS REQUIRED, THE R2-1 SIGNS, SHOWN ON THE SCHEDULE OF CONSTRUCTION TRAFFIC CONTROL DEVICES, SHOULD BE INSTALLED AT THE LOCATIONS SHOWN ON THE TYPICAL CASES BY R2-1 (OPTIONAL) SIGNS.  
  
AN ADVISORY SPEED PLATE (W13-1) MAY BE USED WITH A WARNING SIGN WHEN THE MAXIMUM RECOMMENDED SPEED FOR CONDITION NAMED IS LOWER THAN THE POSTED SPEED LIMIT.  
  
THE REGULATORY OR ADVISORY SPEED REDUCTION DISPLAYED SHALL NOT EXCEED 15 MPH PER SIGN INSTALLATION.
4. ANY TRAFFIC CONTROL DEVICE THAT IS DAMAGED, WEATHERED, WORN, OR OTHERWISE DEEMED UNACCEPTABLE BY THE ENGINEER, SHALL BE REPLACED.
5. CONTRACTOR AND PERSONAL VEHICLE PARKING IS PROHIBITED WITHIN THE RIGHT-OF-WAY UNLESS DESIGNATED ON THE PLANS, OR APPROVED BY THE ENGINEER.
6. CONSTRUCTION TRAFFIC SIGNS SHALL BE MEASURED BY THE FOLLOWING SIZES AND DESCRIPTIONS:  
  

PANEL SIZE A	0.01 TO 9.00 SQ. FT. (INCLUDING TYPE 1 AND TYPE 2 BARRICADES).
PANEL SIZE B	9.01 TO 16.00 SQ. FT.
PANEL SIZE C	GREATER THAN 16 SQ. FT.

CONSTRUCTION TRAFFIC SIGN (SPECIAL), SQ. FT., MAY BE USED FOR SOME PROJECT SPECIFIC INFORMATION SIGNS.

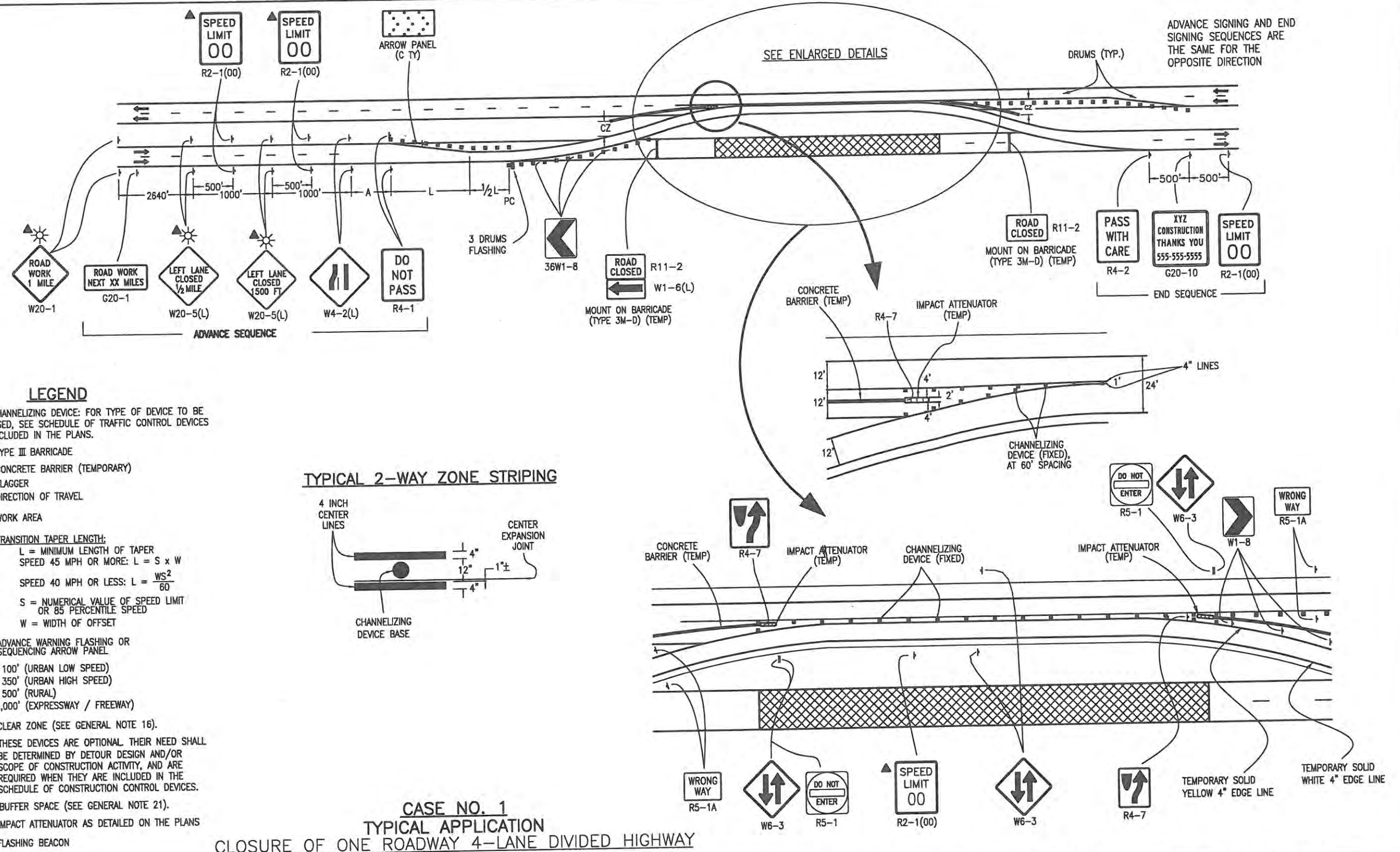
FOR DETAILED DIMENSIONS OF SIGNS WITH SIGN CODE NUMBERS, SEE "STANDARD HIGHWAY SIGNS" AND THE "COLORADO SUPPLEMENT" THERETO. SIGN LAYOUTS FOR OTHER SIGNS WILL BE FURNISHED IN THE PLANS, TRANSMITTED TO THE ENGINEER AFTER AWARD, OR MAY BE AVAILABLE UPON REQUEST.

W20-5 WARNING SIGNS SHALL BE FURNISHED WITH EXCHANGEABLE PLAQUES READING "RIGHT", "LEFT", "CENTER", "RIGHT 2", ETC. AT NO ADDITIONAL COST.
7. ALL WARNING AND REGULATORY SIGNS SHALL BE POSTED ON BOTH SIDES OF THE ROADWAY ON DIVIDED HIGHWAYS, MULTI-LANE RAMPS, ONE-WAY STREETS, AND AS DIRECTED BY THE ENGINEER, EXCEPT WHERE ONLY ONE SHOULDER IS CLOSED (EX: CASE 11 ON SHEET 6).
8. ADDITIONAL TRAFFIC CONTROL DEVICES ADDRESSING FLAGGING, SPEED REDUCTION, ETC. WILL BE NECESSARY FOR SET-UP AND TAKE-DOWN OF MOST CASE APPLICATIONS; DAILY WORK SITE ACCESS; AND PAVEMENT MARKING REMOVAL AND INSTALLATION OPERATIONS.

9. BASED ON SIGHT DISTANCE AND OTHER CONSIDERATIONS, THE FINAL LOCATIONS OF SIGNS ARE SUBJECT TO APPROVAL OF THE ENGINEER.
10. IF CONSTRUCTION RELATED TRAFFIC CONGESTION BACKS UP BEYOND THE INSTALLED ADVANCE SIGN SEQUENCE, ADDITIONAL ADVANCE SIGNING SHALL BE PLACED BEYOND THE CONGESTION.
11. ALL SIGN MATERIAL SHALL BE SOUND AND DURABLE TO THE DEGREE NECESSARY FOR MAINTAINING EFFECTIVE AND NEAT APPEARING TRAFFIC CONTROLS, AND:
  - a. SIGN PANELS MAY BE FABRICATED FROM PLYWOOD, STEEL, ALUMINUM, OR OTHER SUITABLE MATERIAL.
  - b. REFLECTIVE SHEETING SHALL CONFORM TO ASTM D4956. THE TYPE SHALL BE AS DESCRIBED IN THE STANDARD SPECIFICATIONS AND/OR AS SHOWN ON THE PLANS.
  - c. SYMBOLS AND LEGEND SHALL BE OF GOOD WORKMANSHIP (UNEVEN OR HAND LETTERING WILL NOT BE ACCEPTED).
  - d. PORTABLE OR TEMPORARY MOUNTING SHALL NOT BE CONSTRUCTED OR WEIGHTED BY ANY METHOD OR MATERIAL THAT MAKES THEM HAZARDOUS TO TRAFFIC.
  - e. CERTAIN POST SIZES AND SHAPES REQUIRE A "BREAK-AWAY" DEVICE. SEE THE APPLICABLE STANDARD PLAN. OTHER POST DESIGNS OR SYSTEMS REQUIRE THE SUBMITTAL OF AN FHWA LETTER OF ACCEPTANCE TO THE ENGINEER, AND MUST BE APPROVED BY THE ENGINEER PRIOR TO THEIR USE.
12. ALL CONSTRUCTION SIGN PLACEMENT SHALL BE IN ACCORDANCE WITH STANDARD PLAN "TYPICAL GROUND SIGN PLACEMENT" UNLESS OTHERWISE APPROVED.  
  
SIGNS APPROVED TO BE MOUNTED ON PORTABLE SUPPORTS, OR APPROPRIATE SIGNS MOUNTED ON BARRICADES, MAY BE AT LOWER HEIGHTS, BUT THE BOTTOM OF THE SIGNS SHALL NOT BE LESS THAN ONE FOOT ABOVE THE PAVEMENT ELEVATION.
13. SIGNS MOUNTED ON THE MEDIAN OF DIVIDED HIGHWAYS WHERE MEDIAN BARRIER IS IN PLACE MAY BE MOUNTED ON THE BARRIER WITH A SADDLE TYPE BRACKET. IF THE BRACKET ALLOWS THE SIGN PANEL TO BE TURNED PARALLEL TO THE ROADWAY, THE SIGN MAY REMAIN IN PLACE WHEN NOT APPLICABLE, BUT LAYING THE SIGN PANEL DOWN IN A HORIZONTAL POSITION IS NOT PERMITTED.
14. TRAFFIC CONES SHALL BE AT LEAST 28 INCHES IN HEIGHT. HOWEVER, THE MINIMUM SIZE SHALL BE 36 INCHES WHEN THEY ARE USED ON FREEWAYS AND EXPRESSWAYS, OR DURING NIGHT TIME WORKING HOURS. THEY SHOULD ALSO BE 36 INCHES WHEN USED ON OTHER HIGH SPEED ROADWAYS (45 MPH OR MORE) WITH AN ADT OF 6,000 OR MORE.
15. TYPE 1 BARRICADES AND VERTICAL PANELS SHALL NOT BE USED ON FREEWAYS, EXPRESSWAYS, OR OTHER HIGH SPEED ROADWAYS (45 MPH OR MORE).
16. WHEN TWO-WAY TRAFFIC IS PLACED ON ONE ROADWAY OF A NORMALLY DIVIDED HIGHWAY, OPPOSING TRAFFIC SHALL BE SEPARATED EITHER WITH CONCRETE BARRIER (TEMPORARY), OR WITH CHANNELIZING DEVICES APPROVED FOR THIS APPLICATION, THROUGHOUT THE LENGTH OF TWO-WAY OPERATION. THE TRANSITION ZONES SHALL HAVE CONCRETE BARRIER (TEMPORARY). THE BARRIER SHALL BE TIED TO AN EXISTING STRUCTURE OR GUARD RAIL, FLARED OR EXTENDED TO MEET CLEAR ZONE REQUIREMENTS, OR FITTED WITH AN IMPACT ATTENUATION DEVICE.

17. CHANNELIZING DEVICE SPACING, IN FEET, SHALL BE AS FOLLOWS:
  - a. FOR TAPERS AND TRANSITIONS, SPACING EQUALS THE NUMERICAL VALUE OF THE SPEED LIMIT.  
(e.g. 45 MPH = 45 FEET)
  - b. FOR TANGENTS ALONG THE BUFFER SPACE OR WORK AREA, SPACING MAY NOT BE GREATER THAN TWO TIMES THE SPEED LIMIT. (e.g. 50 MPH = 50 FEET TO 100 FEET MAXIMUM)
18. FOR DETAILS ON BARRICADES, CONCRETE BARRIER (TEMPORARY), VERTICAL PANELS, AND FLASHING BEACON (PORTABLE), SEE THE APPLICABLE STANDARD PLANS.
19. FLOOD LIGHTS SHALL BE USED TO ILLUMINATE FLAGGER STATIONS DURING THE HOURS OF DARKNESS UNLESS OTHERWISE APPROVED. A TYPICAL LIGHT SHOULD PROVIDE THE FOLLOWING: A FULLY DIRECTIONAL SWIVEL MOUNT QUARTZ LIGHT SOURCE (500 WATT MINIMUM), SELF-SUPPORTING STAND WITH VARIABLE LIGHT HEIGHT FROM OF MINIMUM OF EIGHT FEET ABOVE THE ROADWAY, AND A POWER SOURCE. IT SHALL ILLUMINATE THE STATION AREA AND A FLAGGER ESCAPE PATH, BUT SHALL NOT PRESENT ANY GLARE TO TRAFFIC.
20. IF WORK ON THE ROADWAY IS FOR AN EXTENDED PERIOD, INAPPLICABLE PAVEMENT MARKINGS ARE TO BE REMOVED, AND FULL COMPLIANCE PAVEMENT MARKINGS ARE TO BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE SPECIFICATIONS, (PAVEMENT MARKING - GENERAL), AND/OR AS DETAILED ON THE PLANS.  
  
FOR ADDITIONAL PAVEMENT MARKING DETAILS, SEE STANDARD PLAN "TYPICAL PAVEMENT MARKINGS".
21. BUFFER SPACE IS OPTIONAL. NEED MUST BE DETERMINED ON A PROJECT OR SITE SPECIFIC BASIS AS DIRECTED BY THE ENGINEER. WHEN A BUFFER SPACE IS USED, DIMENSIONS AND/OR DEVICES USED ARE TO BE INCORPORATED IN THE TRAFFIC CONTROL PLAN (TCP) OR THE CONTRACTOR'S METHOD OF HANDLING TRAFFIC (MHT).
22. ADDITIONAL VMS SIGNAGE SHOULD BE CONSIDERED AT LEAST A MILE IN ADVANCE OF THE SIGNING SHOWN IN THE DETAIL FOR ANY LANE CLOSURES ON INTERSTATE AND OTHER HIGH SPEED FACILITIES ESPECIALLY WHEN THE LEVEL OF SERVICE IS SIGNIFICANTLY REDUCED AS A RESULT OF CONSTRUCTION. THE LEGENDS SHOULD BE CHANGED TO ADVISE MOTORISTS OF UPCOMING TRAFFIC CONDITIONS AND TO ALERT THEM OF UPCOMING LANE USAGE.  
  
ADDITIONAL ADVANCE WARNING SIGNAGE IS ENCOURAGED IN ALL CASES WHERE TRAFFIC VOLUMES AND SPEEDS ARE HIGH AND/OR WHERE THERE ARE INFREQUENT EXITS. ADDITIONAL SIGNAGE IS ALSO ENCOURAGED IN LOCATIONS WHERE DRIVERS' LINE OF SIGHT TO ADVANCE WARNING SIGNS IS OBSTRUCTED.
23. RAISED PAVEMENT MARKERS MAY BE USED TO SUPPLEMENT TEMPORARY STRIPING DURING NON-SNOW PERIODS. THEIR USE IS ENCOURAGED ON HIGHER SPEED FACILITIES WHEN TRAFFIC IS BEING DIVERTED FROM ITS USUAL COURSE.
24. THE TYPICAL CASES DEPICTED IN THIS STANDARD REFLECT THE MINIMUM REQUIREMENTS, UNLESS AS OTHERWISE DIRECTED BY THE PROJECT PLANS AND SPECIFICATIONS, AND/OR THE PROJECT ENGINEER.

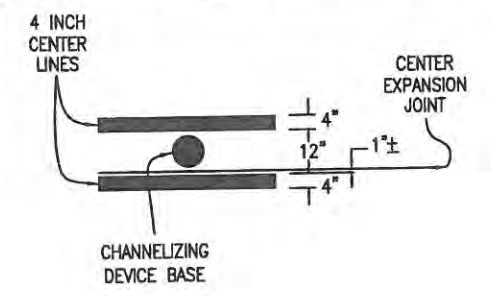
<b>Computer File Information</b>		<b>Sheet Revisions</b>		Colorado Department of Transportation  4201 East Arkansas Avenue Denver, Colorado 80222 Phone: (303) 757-9543 Fax: (303) 757-9820 <b>Staff Traffic Branch</b>	<b>TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION</b>	<b>STANDARD PLAN NO.</b>
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**LEGEND**

- CHANNELIZING DEVICE: FOR TYPE OF DEVICE TO BE USED, SEE SCHEDULE OF TRAFFIC CONTROL DEVICES INCLUDED IN THE PLANS.
- TYPE III BARRICADE
- CONCRETE BARRIER (TEMPORARY)
- FLAGGER
- ← DIRECTION OF TRAVEL
- ▨ WORK AREA
- L TRANSITION TAPER LENGTH:
  - L = MINIMUM LENGTH OF TAPER
  - SPEED 45 MPH OR MORE:  $L = S \times W$
  - SPEED 40 MPH OR LESS:  $L = \frac{WS^2}{60}$
  - S = NUMERICAL VALUE OF SPEED LIMIT OR 85 PERCENTILE SPEED
  - W = WIDTH OF OFFSET
- ▨ ADVANCE WARNING FLASHING OR SEQUENCING ARROW PANEL
- A = 100' (URBAN LOW SPEED)  
350' (URBAN HIGH SPEED)  
500' (RURAL)  
1,000' (EXPRESSWAY / FREEWAY)
- CZ CLEAR ZONE (SEE GENERAL NOTE 16).
- ▲ THESE DEVICES ARE OPTIONAL THEIR NEED SHALL BE DETERMINED BY DETOUR DESIGN AND/OR SCOPE OF CONSTRUCTION ACTIVITY, AND ARE REQUIRED WHEN THEY ARE INCLUDED IN THE SCHEDULE OF CONSTRUCTION CONTROL DEVICES.
- VARIABLE BUFFER SPACE (SEE GENERAL NOTE 21).
- ▨ IMPACT ATTENUATOR AS DETAILED ON THE PLANS
- ☀ FLASHING BEACON

**TYPICAL 2-WAY ZONE STRIPING**



**CASE NO. 1**  
**TYPICAL APPLICATION**  
**CLOSURE OF ONE ROADWAY 4-LANE DIVIDED HIGHWAY**

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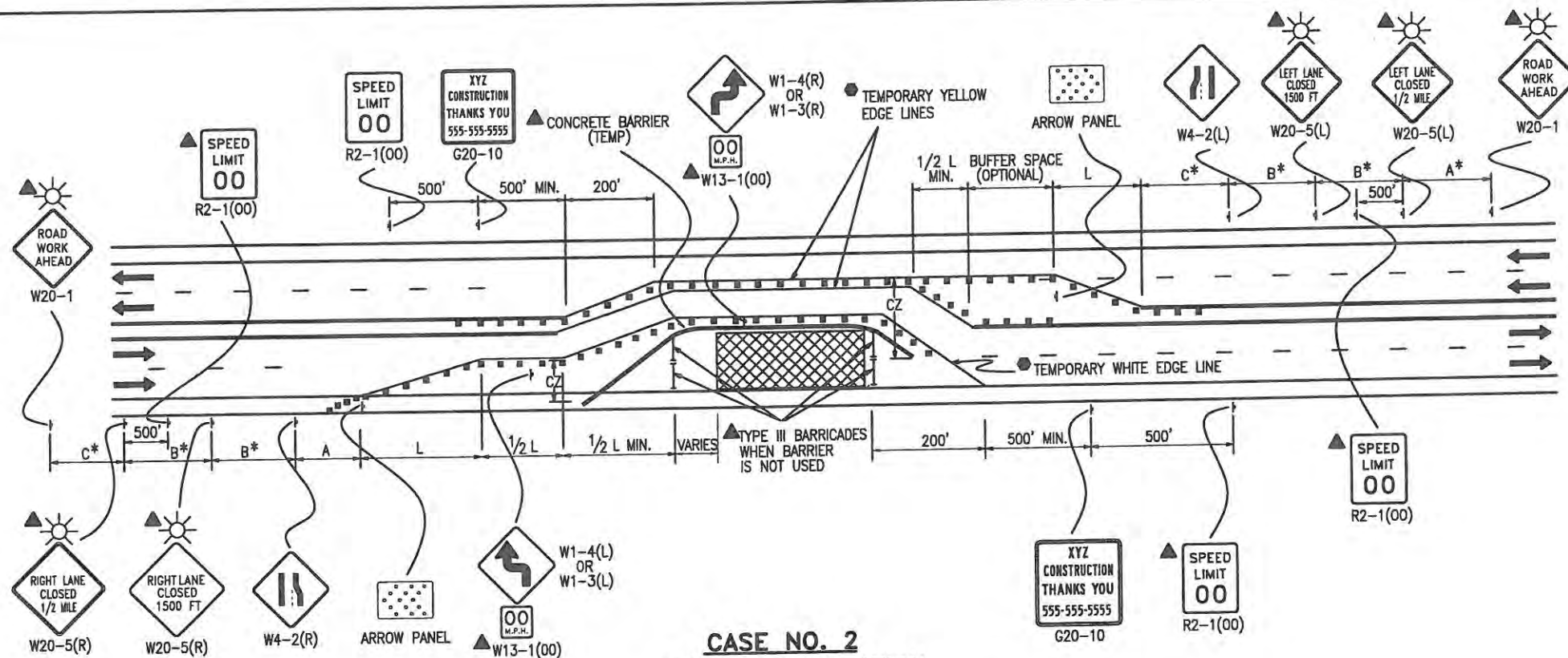
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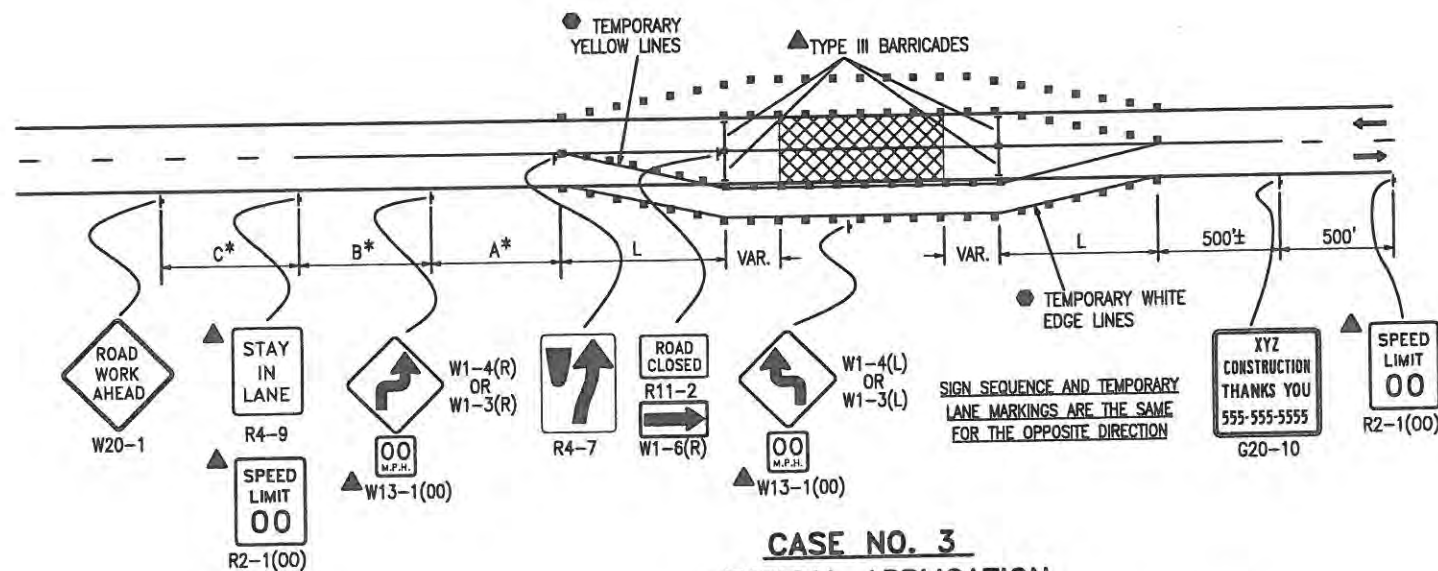
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**CASE NO. 2**  
**TYPICAL APPLICATION**  
**CLOSURE OF HALF OF 4-LANE HIGHWAY, NOT PHYSICALLY DIVIDED**



**CASE NO. 3**  
**TYPICAL APPLICATION**  
**ROAD CLOSURE, USE OF ADJACENT SHOULDERS**

- LEGEND**
- CHANNELIZING DEVICE: FOR TYPE OF DEVICE TO BE USED, SEE THE SCHEDULE OF CONSTRUCTION TRAFFIC CONTROL DEVICES INCLUDED IN THE PLANS.
  - TYPE III BARRICADE
  - CONCRETE BARRIER (TEMPORARY)
  - FLAGGER
  - ← DIRECTION OF TRAVEL
  - ▨ WORK AREA
  - L TRANSITION TAPER LENGTH:  
 L = MINIMUM LENGTH OF TAPER  
 SPEED 45 MPH OR MORE:  $L = S \times W$   
 SPEED 40 MPH OR LESS:  $L = \frac{WS^2}{60}$   
 S = NUMERICAL VALUE OF SPEED LIMIT OR 85 PERCENTILE SPEED  
 W = WIDTH OF OFFSET  
 SHOULDER TAPER = 1/3 L
  - ▨ ADVANCE WARNING FLASHING OR SEQUENCING ARROW PANEL
  - A = 100' (URBAN LOW SPEED)  
 350' (URBAN HIGH SPEED)  
 500' (RURAL)  
 1,000' (EXPRESSWAY / FREEWAY)
  - CZ CLEAR ZONE (SEE GENERAL NOTE 16).
  - ▲ THESE DEVICES ARE OPTIONAL THEIR NEED SHALL BE DETERMINED BY DETOUR DESIGN AND/OR SCOPE OF CONSTRUCTION ACTIVITY, AND ARE REQUIRED WHEN THEY ARE INCLUDED IN THE SCHEDULE OF CONSTRUCTION CONTROL DEVICES.
  - VARIES BUFFER SPACE (SEE GENERAL NOTE 21).
  - REQUIRED WHEN WORK OCCUPIES THE LOCATION FOR MORE THAN 3 DAYS.
  - ☀ FLASHING BEACON
- \*KEY TO ADVANCE SIGNING DISTANCES**
- | ROAD TYPE          | DISTANCE BETWEEN SIGNS |      |      |
|--------------------|------------------------|------|------|
|                    | A                      | B    | C    |
| URBAN (<=40 MPH)   | 100                    | 100  | 100  |
| URBAN (>=45 MPH)   | 350                    | 350  | 350  |
| RURAL              | 500                    | 500  | 500  |
| EXPRESSWAY/FREEWAY | 1000                   | 1500 | 2640 |

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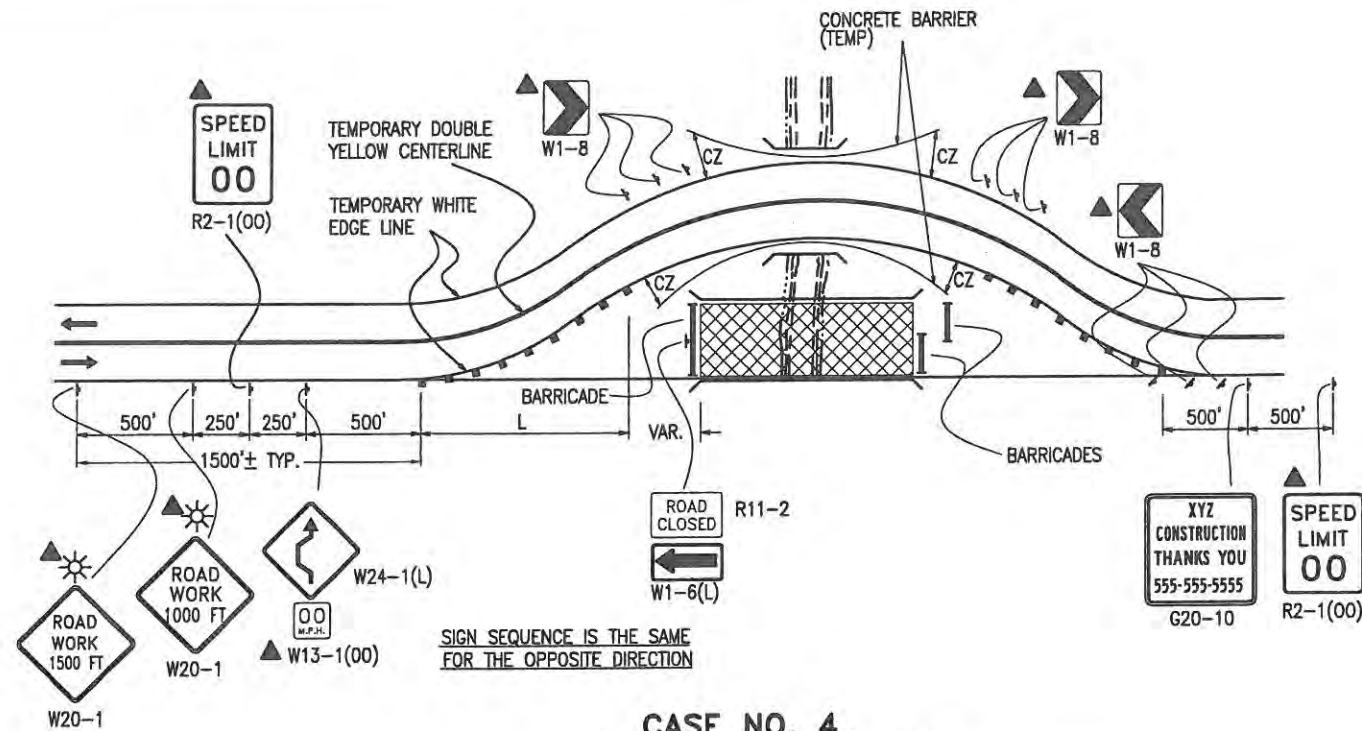
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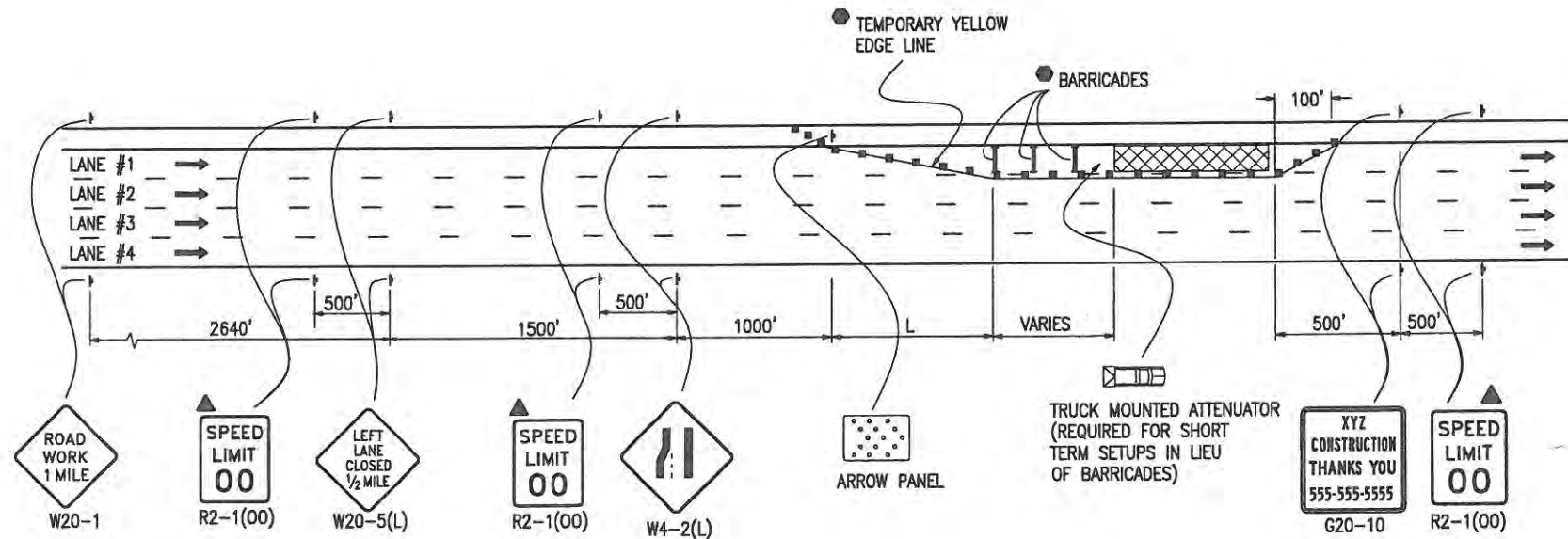
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**CASE NO. 4**  
**TYPICAL APPLICATION**  
**ROAD CLOSURE, BYPASS DETOUR PROVIDED**

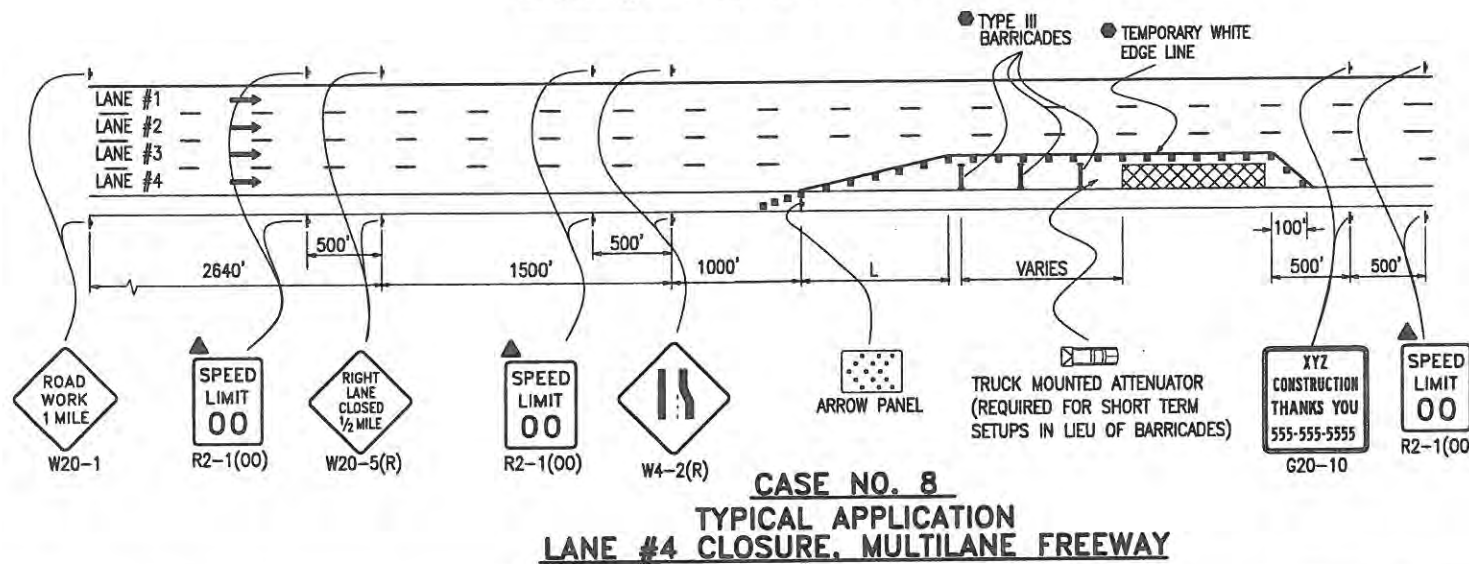
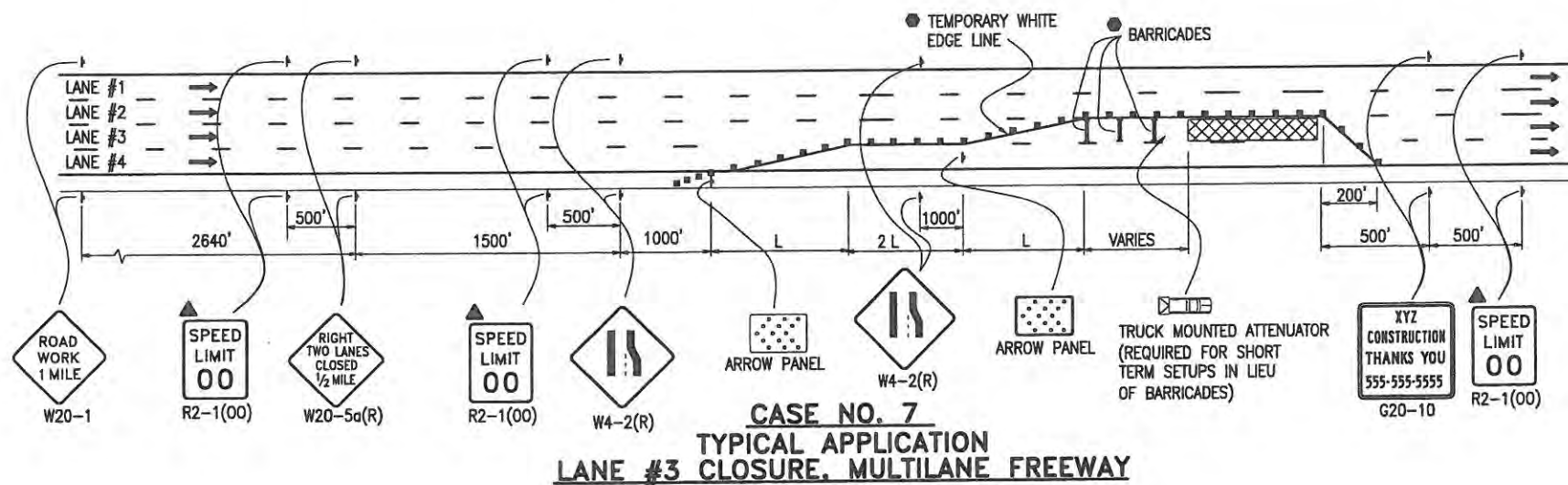
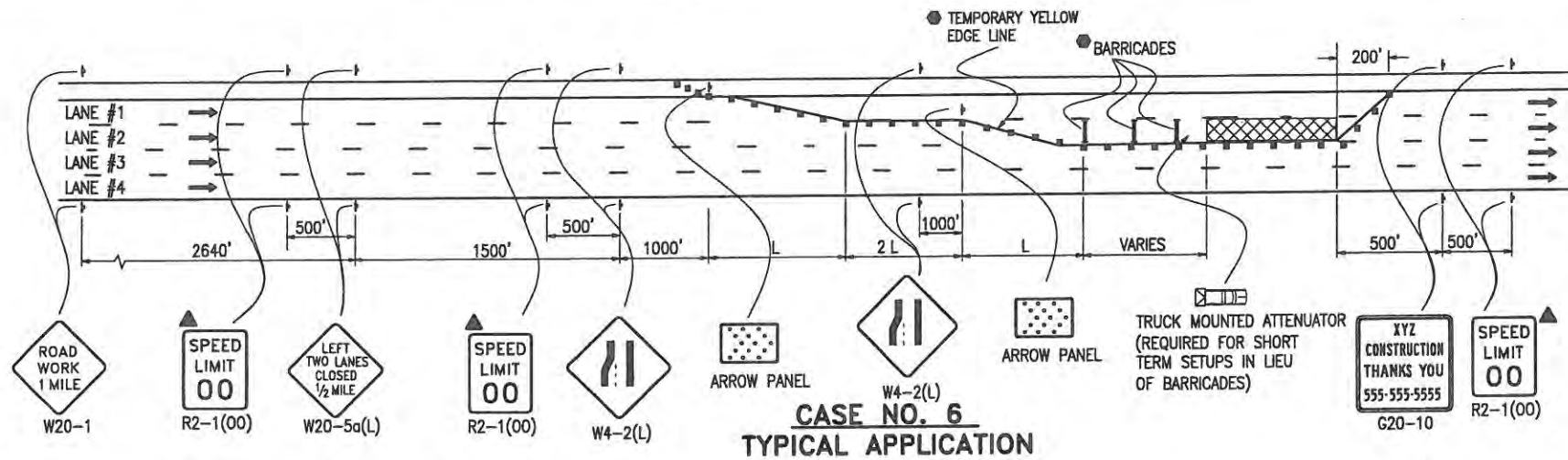


**CASE NO. 5**  
**TYPICAL APPLICATION**  
**LANE #1 CLOSURE, MULTILANE FREEWAY**

- LEGEND**
- CHANNELIZING DEVICE: FOR TYPE OF DEVICE TO BE USED, SEE THE SCHEDULE OF CONSTRUCTION TRAFFIC CONTROL DEVICES INCLUDED IN THE PLANS.
  - TYPE III BARRICADE
  - CONCRETE BARRIER (TEMPORARY)
  - FLAGGER
  - ← DIRECTION OF TRAVEL
  - ▨ WORK AREA
- L TRANSITION TAPER LENGTH:**
- L = MINIMUM LENGTH OF TAPER
  - SPEED 45 MPH OR MORE:  $L = S \times W$
  - SPEED 40 MPH OR LESS:  $L = \frac{WS^2}{60}$
  - S = NUMERICAL VALUE OF SPEED LIMIT OR 85 PERCENTILE SPEED
  - W = WIDTH OF OFFSET
  - SHOULDER TAPER =  $\frac{1}{3} L$
- ▨ ADVANCE WARNING FLASHING OR SEQUENCING ARROW PANEL
  - CZ CLEAR ZONE (SEE GENERAL NOTE 16).
  - ▲ THESE DEVICES ARE OPTIONAL. THEIR NEED SHALL BE DETERMINED BY DETOUR DESIGN AND/OR SCOPE OF CONSTRUCTION ACTIVITY, AND ARE REQUIRED WHEN THEY ARE INCLUDED IN THE SCHEDULE OF CONSTRUCTION CONTROL DEVICES.
  - VARIES BUFFER SPACE (SEE GENERAL NOTE 21).
  - REQUIRED WHEN WORK OCCUPIES THE LOCATION FOR MORE THAN 3 DAYS.
  - ▨ TRUCK MOUNTED ATTENUATOR
  - ☀ FLASHING BEACON

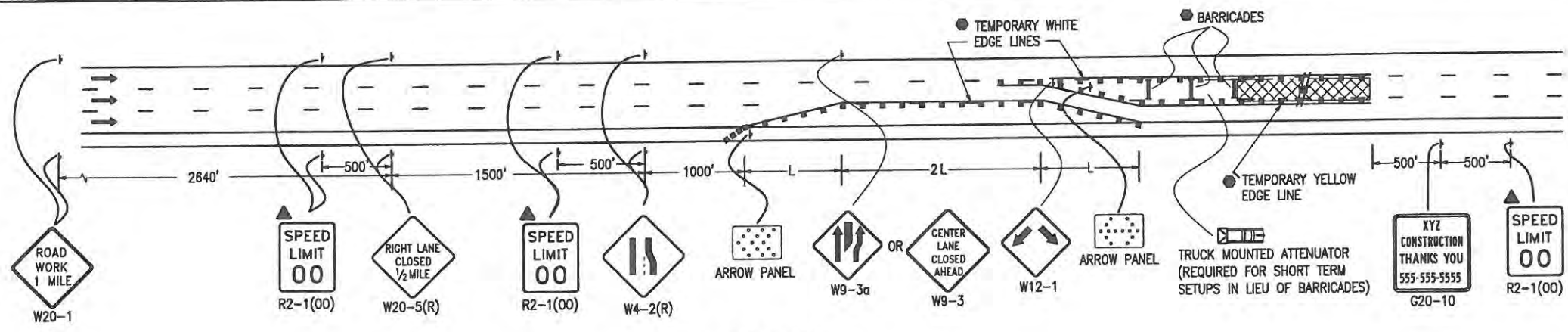
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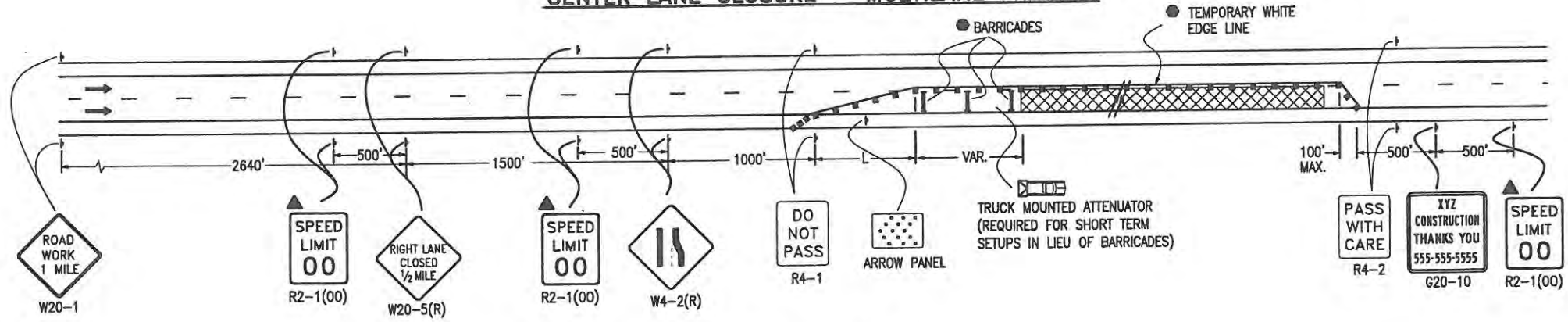


- LEGEND**
- CHANNELIZING DEVICE: FOR TYPE OF DEVICE TO BE USED, SEE THE SCHEDULE OF CONSTRUCTION TRAFFIC CONTROL DEVICES INCLUDED IN THE PLANS.
  - TYPE III BARRICADE
  - CONCRETE BARRIER (TEMPORARY)
  - FLAGGER
  - ← DIRECTION OF TRAVEL
  - ▨ WORK AREA
  - L TRANSITION TAPER LENGTH:  
L = MINIMUM LENGTH OF TAPER  
SPEED 45 MPH OR MORE:  $L = S \times W$   
SPEED 40 MPH OR LESS:  $L = \frac{WS^2}{60}$   
S = NUMERICAL VALUE OF SPEED LIMIT OR 85 PERCENTILE SPEED  
W = WIDTH OF OFFSET  
SHOULDER TAPER = 1/3 L
  - ▨ ADVANCE WARNING FLASHING OR SEQUENCING ARROW PANEL
  - CZ CLEAR ZONE (SEE GENERAL NOTE 16).
  - ▲ THESE DEVICES ARE OPTIONAL THEIR NEED SHALL BE DETERMINED BY DETOUR DESIGN AND/OR SCOPE OF CONSTRUCTION ACTIVITY, AND ARE REQUIRED WHEN THEY ARE INCLUDED IN THE SCHEDULE OF CONSTRUCTION CONTROL DEVICES.
  - VARIES BUFFER SPACE (SEE GENERAL NOTE 21).
  - REQUIRED WHEN WORK OCCUPIES THE LOCATION FOR MORE THAN 3 DAYS.
  - ▨ TRUCK MOUNTED ATTENUATOR

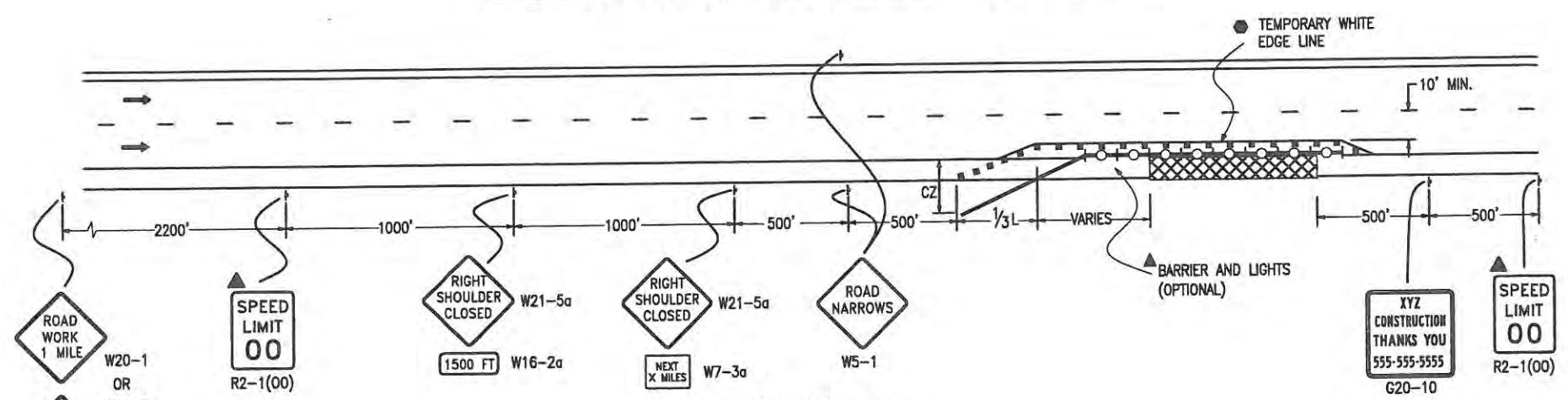
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**CASE NO. 9**  
**TYPICAL APPLICATION**  
**CENTER LANE CLOSURE - MULTILANE FREEWAY**



**CASE NO. 10**  
**TYPICAL APPLICATION**  
**ONE LANE CLOSED - FOUR-LANE DIVIDED HIGHWAY**



**CASE NO. 11**  
**TYPICAL APPLICATION**  
**SHOULDER WORK - (FREEWAY/EXPRESSWAY)**

- LEGEND**
- CHANNELIZING DEVICE: FOR TYPE OF DEVICE TO BE USED, SEE THE SCHEDULE OF CONSTRUCTION TRAFFIC CONTROL DEVICES INCLUDED IN THE PLANS.
  - TYPE III BARRICADE
  - CONCRETE BARRIER (TEMPORARY)
  - FLAGGER
  - ← DIRECTION OF TRAVEL
  - ▨ WORK AREA
- L TRANSITION TAPER LENGTH:**  
 L = MINIMUM LENGTH OF TAPER  
 SPEED 45 MPH OR MORE:  $L = S \times W$   
 SPEED 40 MPH OR LESS:  $L = \frac{WS^2}{60}$   
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 W = WIDTH OF OFFSET  
 SHOULDER TAPER = 1/3 L
- ▨ ADVANCE WARNING FLASHING OR SEQUENCING ARROW PANEL
  - CZ CLEAR ZONE (SEE GENERAL NOTE 16).
  - ▲ THESE DEVICES ARE OPTIONAL THEIR NEED SHALL BE DETERMINED BY DETOUR DESIGN AND/OR SCOPE OF CONSTRUCTION ACTIVITY, AND ARE REQUIRED WHEN THEY ARE INCLUDED IN THE SCHEDULE OF CONSTRUCTION CONTROL DEVICES.
  - VARIES BUFFER SPACE (SEE GENERAL NOTE 21).
  - REQUIRED WHEN WORK OCCUPIES THE LOCATION FOR MORE THAN 3 DAYS.
  - ▨ TRUCK MOUNTED ATTENUATOR
  - CONCRETE BARRIER (TEMPORARY) WITH LIGHTS

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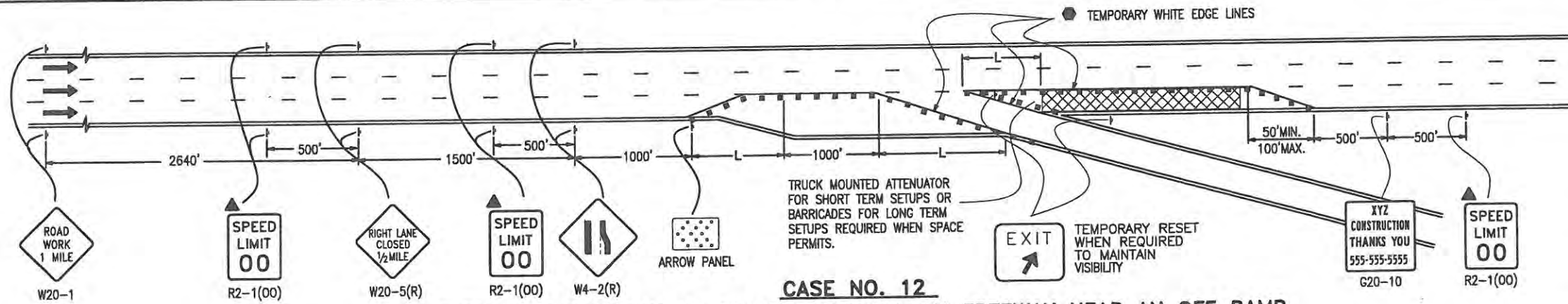
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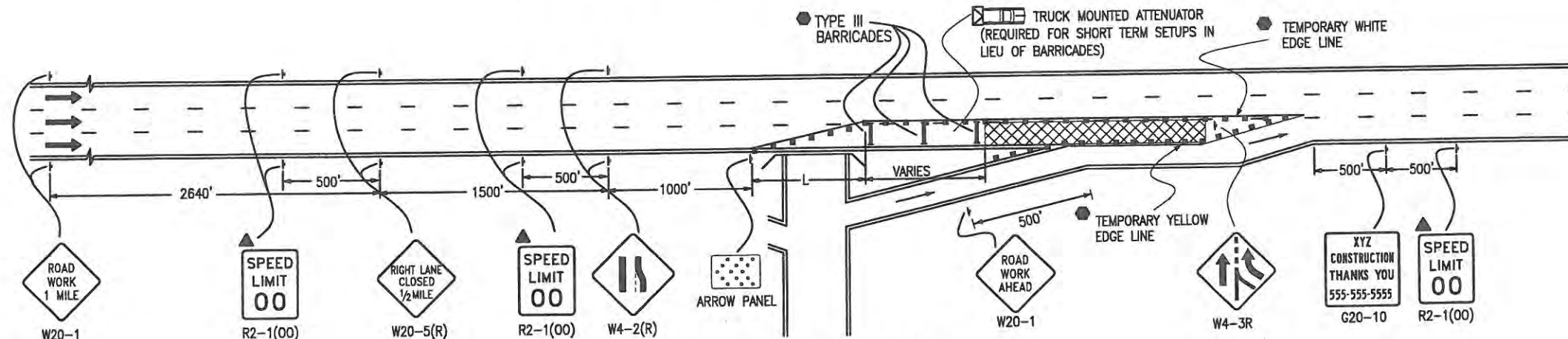
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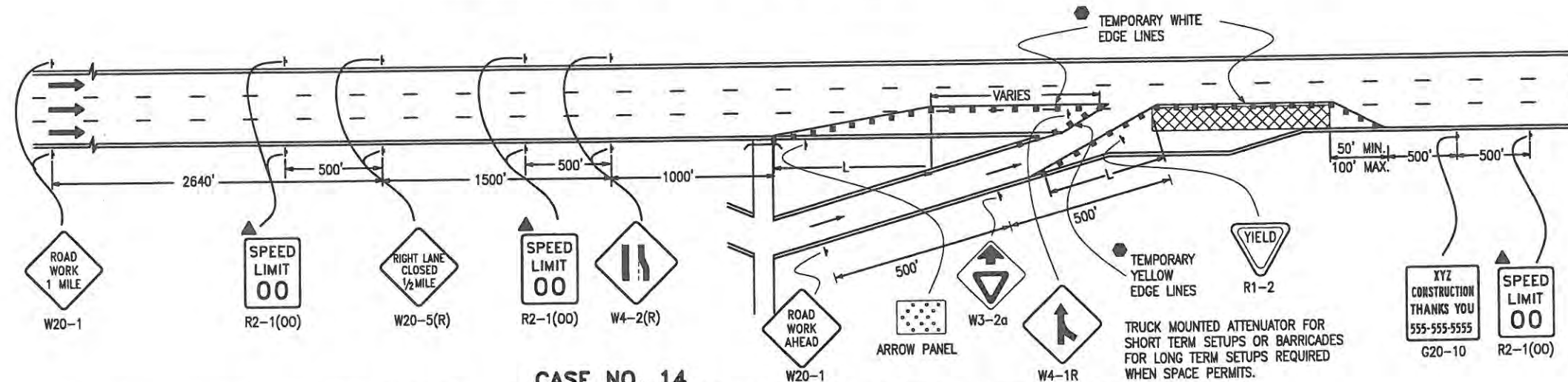




**CASE NO. 12**  
**TYPICAL APPLICATION OF TRAFFIC CONTROL ON FREEWAY NEAR AN OFF RAMP**



**CASE NO. 13**  
**TYPICAL APPLICATION OF TRAFFIC CONTROL ON FREEWAY BEFORE AN ON RAMP**



**CASE NO. 14**  
**TYPICAL APPLICATION OF TRAFFIC CONTROL ON FREEWAY ALLOWING ACCESS FROM ON RAMP**

- LEGEND**
- CHANNELIZING DEVICE: FOR TYPE OF DEVICE TO BE USED, SEE THE SCHEDULE OF CONSTRUCTION TRAFFIC CONTROL DEVICES INCLUDED IN THE PLANS.
  - TYPE III BARRICADE
  - CONCRETE BARRIER (TEMPORARY)
  - FLAGGER
  - ← DIRECTION OF TRAVEL
  - ▨ WORK AREA
  - L TRANSITION TAPER LENGTH:
    - L = MINIMUM LENGTH OF TAPER
    - SPEED 45 MPH OR MORE:  $L = S \times W$
    - SPEED 40 MPH OR LESS:  $L = \frac{WS^2}{60}$
    - S = NUMERICAL VALUE OF SPEED LIMIT OR 85 PERCENTILE SPEED
    - W = WIDTH OF OFFSET
    - SHOULDER TAPER = 1/3 L
  - ▨ ADVANCE WARNING FLASHING OR SEQUENCING ARROW PANEL
  - CZ CLEAR ZONE (SEE GENERAL NOTE 16).
  - ▲ THESE DEVICES ARE OPTIONAL. THEIR NEED SHALL BE DETERMINED BY DETOUR DESIGN AND/OR SCOPE OF CONSTRUCTION ACTIVITY, AND ARE REQUIRED WHEN THEY ARE INCLUDED IN THE SCHEDULE OF CONSTRUCTION CONTROL DEVICES.
  - VARIES BUFFER SPACE (SEE GENERAL NOTE 21).
  - REQUIRED WHEN WORK OCCUPIES THE LOCATION FOR MORE THAN 3 DAYS.
  - ▨ TRUCK MOUNTED ATTENUATOR

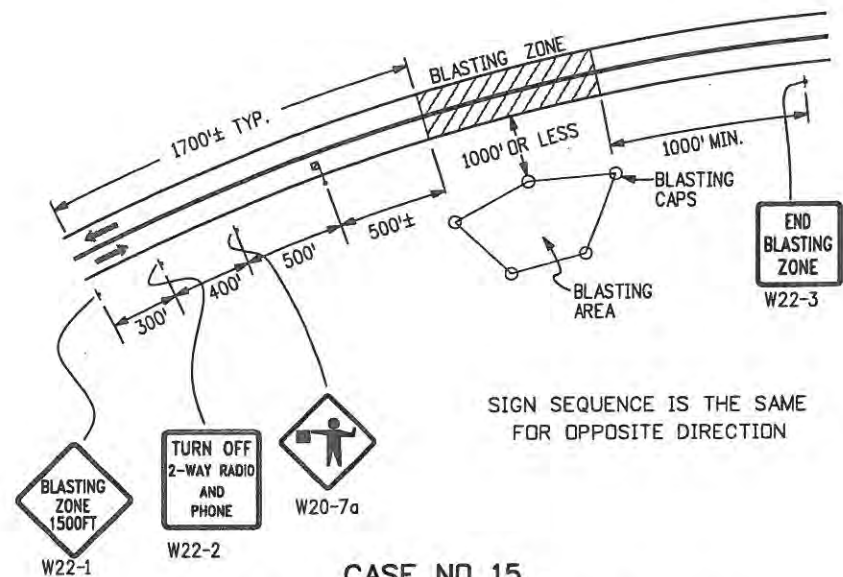
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Sheet Revisions	
Date:	Comments

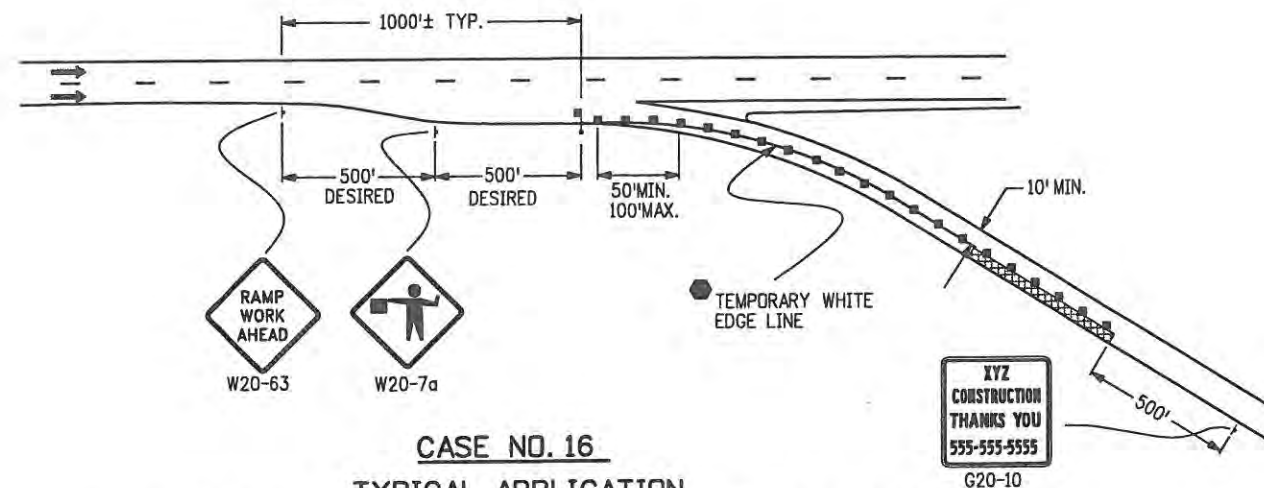
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 4201 East Arkansas Avenue  
 Denver, Colorado 80222  
 Phone: (303) 757-9543  
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 Staff Traffic Branch

**TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION**  
 Issued By: Traffic Engineering Unit July 4, 2006

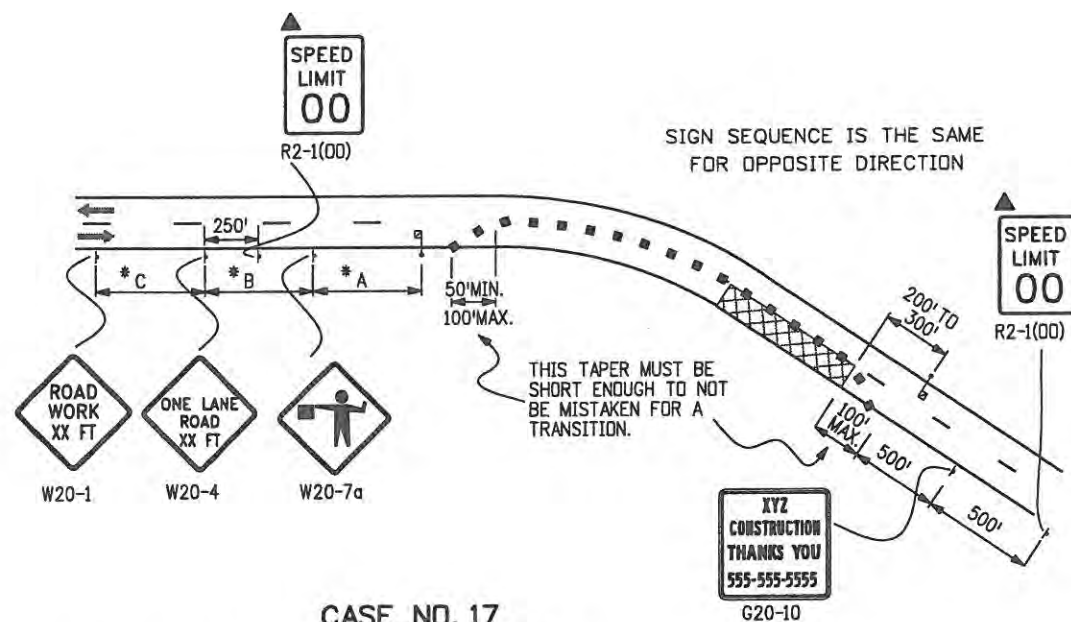
**STANDARD PLAN NO.**  
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**CASE NO. 15**  
TYPICAL APPLICATION - FOR BLASTING



**CASE NO. 16**  
TYPICAL APPLICATION  
RAMP CONSTRUCTION WHERE PARTIAL RAMP IS CLOSED



**CASE NO. 17**  
TYPICAL APPLICATION  
LANE CLOSURE, 2-LANE HIGHWAY, AT CURVE

**LEGEND**

- CHANNELIZING DEVICE: FOR TYPE OF DEVICE TO BE USED, SEE THE SCHEDULE OF CONSTRUCTION TRAFFIC CONTROL DEVICES INCLUDED IN THE PLANS.
  - TYPE III BARRICADE
  - CONCRETE BARRIER (TEMPORARY)
  - FLAGGER
  - ← DIRECTION OF TRAVEL
  - ▨ WORK AREA
  - ▲ ADVANCE WARNING FLASHING OR SEQUENCING ARROW PANEL
  - CZ CLEAR ZONE (SEE GENERAL NOTE 16).
  - ▲ THESE DEVICES ARE OPTIONAL. THEIR NEED SHALL BE DETERMINED BY DETOUR DESIGN AND/OR SCOPE OF CONSTRUCTION ACTIVITY, AND ARE REQUIRED WHEN THEY ARE INCLUDED IN THE SCHEDULE OF CONSTRUCTION CONTROL DEVICES.
  - VARIES BUFFER SPACE (SEE GENERAL NOTE 21).
  - REQUIRED WHEN WORK OCCUPIES THE LOCATION FOR MORE THAN 3 DAYS.
- \* KEY TO ADVANCE SIGNING DISTANCES**
- | ROAD TYPE          | DISTANCE BETWEEN SIGNS |      |      |
|--------------------|------------------------|------|------|
|                    | A                      | B    | C    |
| URBAN (<= 40 MPH)  | 100                    | 100  | 100  |
| URBAN (>= 45 MPH)  | 350                    | 350  | 350  |
| RURAL              | 500                    | 500  | 500  |
| EXPRESSWAY/FREEWAY | 1000                   | 1500 | 2640 |
- L TRANSITION TAPER LENGTH:**  
 L = MINIMUM LENGTH OF TAPER  
 SPEED 45 MPH OR MORE:  $L = S \times W$   
 SPEED 40 MPH OR LESS:  $L = \frac{WS^2}{60}$   
 S = NUMERICAL VALUE OF SPEED LIMIT OR 85 PERCENTILE SPEED  
 W = WIDTH OF OFFSET  
 SHOULDER TAPER = 1/3 L

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Sheet Revisions	
Date:	Comments
03/05/07	W20-1 & W20-4 SIGNS REVISED
(R-1)	
(R-X)	
(R-X)	
(R-X)	

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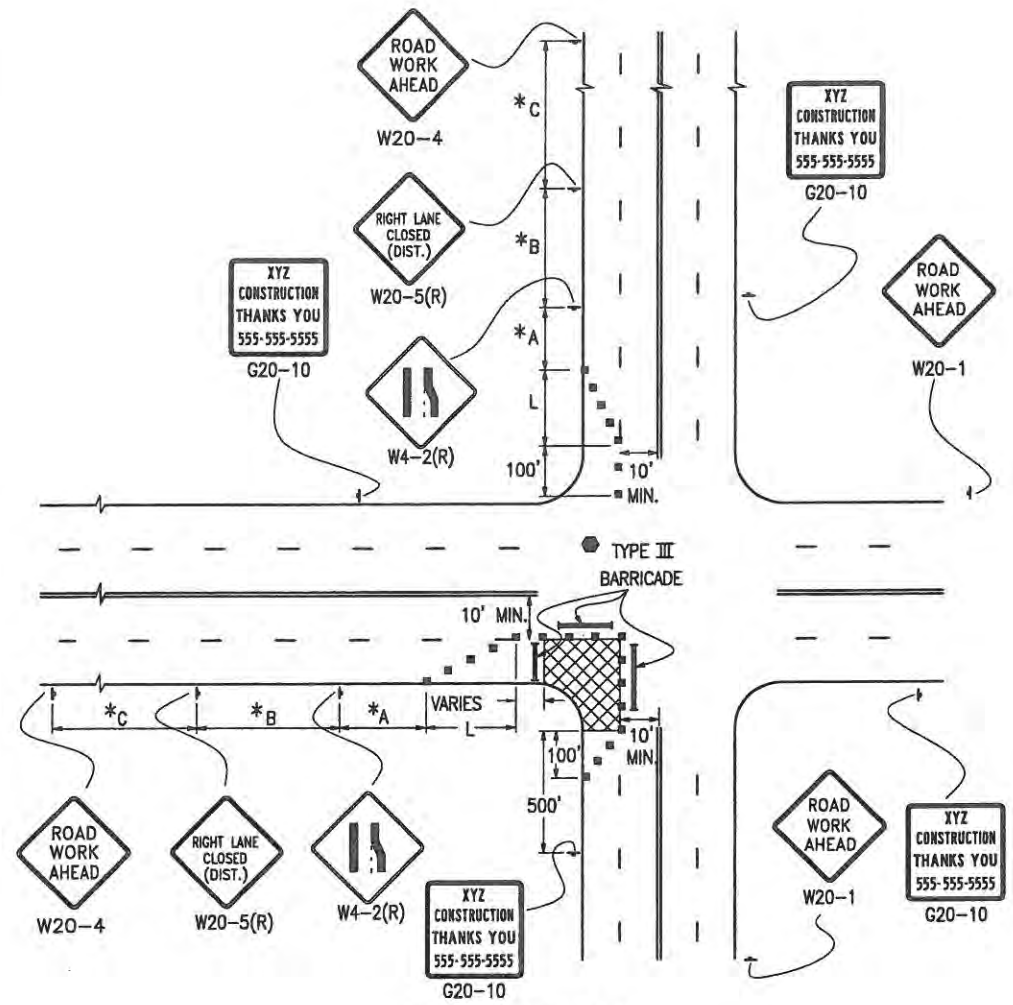
**TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION**

Issued By: Traffic Engineering Unit March 5, 2007

**STANDARD PLAN NO.**  
S-630-1

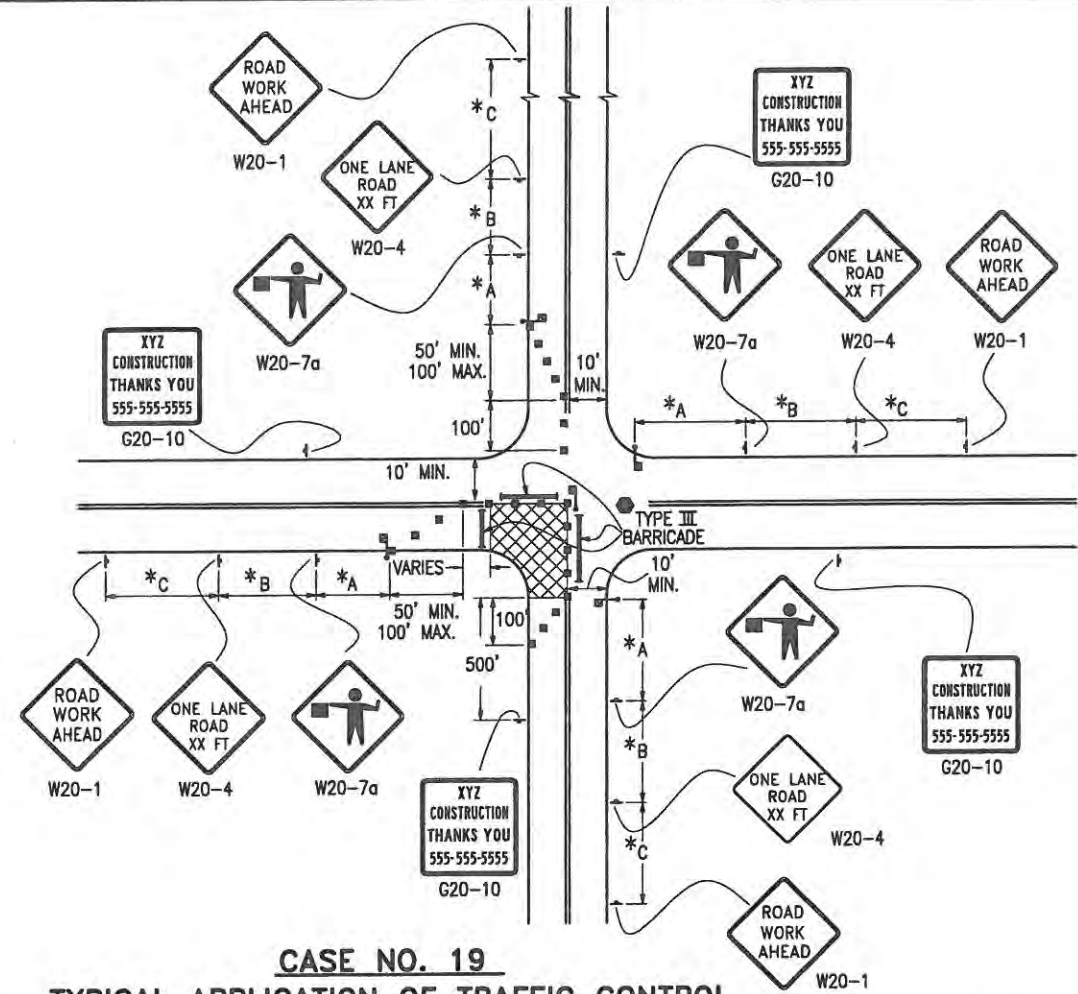
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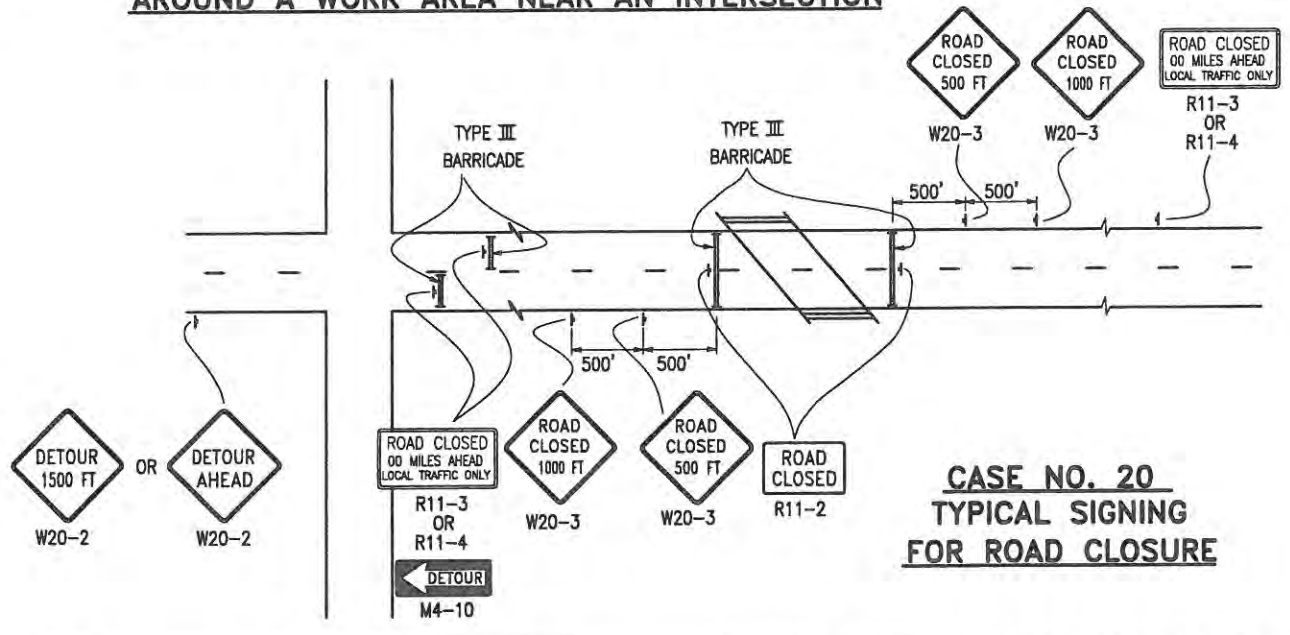


**CASE NO. 18**  
**TYPICAL APPLICATION**  
**OF TRAFFIC CONTROL AROUND A WORK AREA**  
**NEAR AN INTERSECTION, ONE LANE CLOSED**

**NOTE:**  
 SIGN PLACEMENT SHOWN ON CASES 18  
 AND 19 TYPIFIES RURAL APPLICATIONS.  
 URBAN APPLICATIONS REQUIRE THE  
 SIGNS TO BE PLACED WITHIN ONE, OR  
 PERHAPS TWO, BLOCKS.



**CASE NO. 19**  
**TYPICAL APPLICATION OF TRAFFIC CONTROL**  
**AROUND A WORK AREA NEAR AN INTERSECTION**



**CASE NO. 20**  
**TYPICAL SIGNING**  
**FOR ROAD CLOSURE**

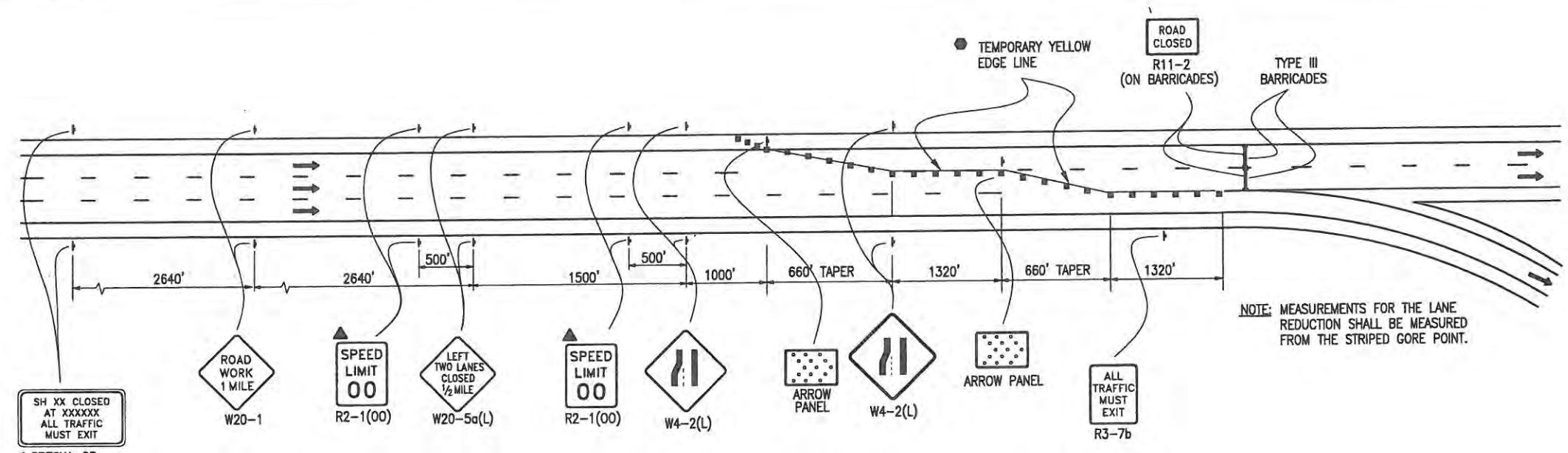
**LEGEND**

- CHANNELIZING DEVICE: FOR TYPE OF DEVICE TO BE USED, SEE THE SCHEDULE OF CONSTRUCTION TRAFFIC CONTROL DEVICES INCLUDED IN THE PLANS.
- TYPE III BARRICADE
- CONCRETE BARRIER (TEMPORARY)
- FLAGGER
- ← DIRECTION OF TRAVEL
- ▨ WORK AREA
- L TRANSITION TAPER LENGTH:  
 L = MINIMUM LENGTH OF TAPER  
 SPEED 45 MPH OR MORE:  $L = S \times W$   
 SPEED 40 MPH OR LESS:  $L = \frac{WS^2}{60}$   
 S = NUMERICAL VALUE OF SPEED LIMIT OR 85 PERCENTILE SPEED  
 W = WIDTH OF OFFSET  
 SHOULDER TAPER = 1/3 L
- ▨ ADVANCE WARNING FLASHING OR SEQUENCING ARROW PANEL
- CZ CLEAR ZONE (SEE GENERAL NOTE 16).
- ▲ THESE DEVICES ARE OPTIONAL THEIR NEED SHALL BE DETERMINED BY DETOUR DESIGN AND/OR SCOPE OF CONSTRUCTION ACTIVITY, AND ARE REQUIRED WHEN THEY ARE INCLUDED IN THE SCHEDULE OF CONSTRUCTION CONTROL DEVICES.
- VARIES BUFFER SPACE (SEE GENERAL NOTE 21).
- REQUIRED WHEN WORK OCCUPIES THE LOCATION FOR MORE THAN 3 DAYS.

**\* KEY TO ADVANCE SIGNING DISTANCES**

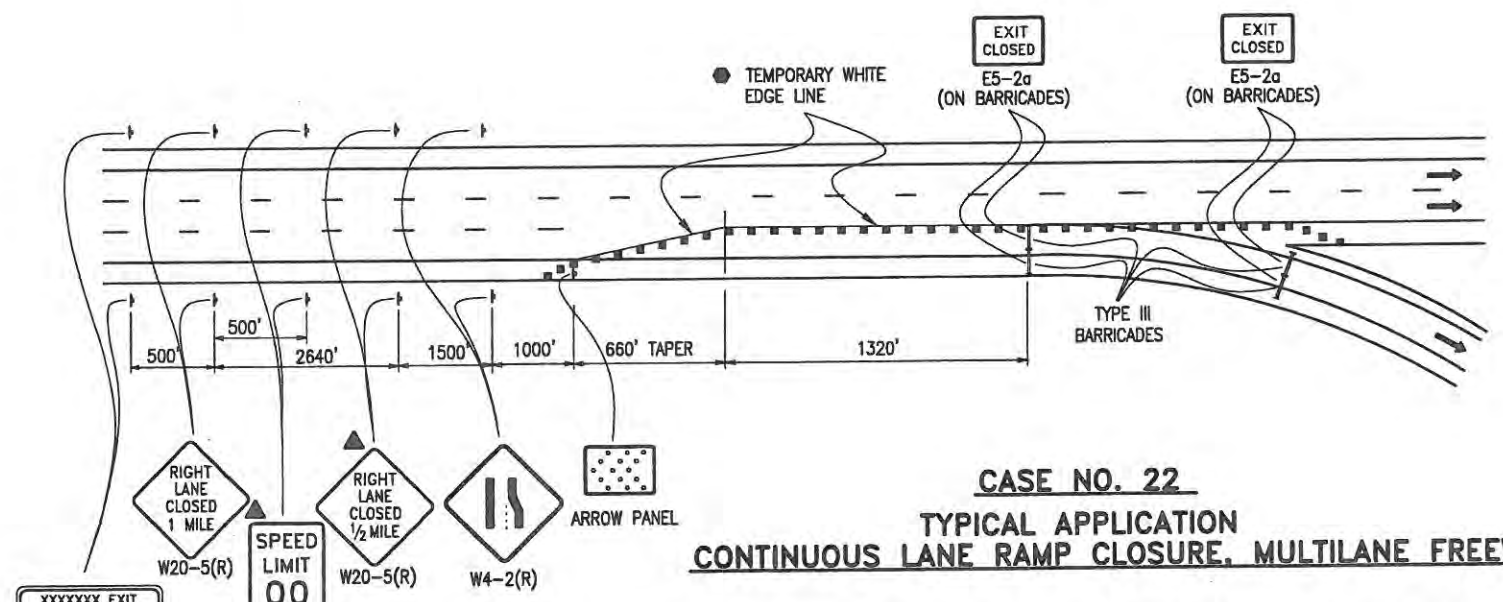
ROAD TYPE	DISTANCE BETWEEN SIGNS		
	A	B	C
URBAN (<=40 MPH)	100	100	100
URBAN (>=45 MPH)	350	350	350
RURAL	500	500	500
EXPRESSWAY/FREEWAY	1000	1500	2640

<b>Computer File Information</b> Creation Date: 07-04-06 Initials: KCM Last Modification Date: 07-04-06 Initials: JSW Full Path: www.dot.state.co.us/DesignSupport/ Drawing File Name: S-630-1 (9 of 12) CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	<b>Sheet Revisions</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Date:</th> <th>Comments</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	Date:	Comments							<b>Colorado Department of Transportation</b>  4201 East Arkansas Avenue Denver, Colorado 80222 Phone: (303) 757-9543 Fax: (303) 757-9820 <b>Staff Traffic Branch</b>	<b>TRAFFIC CONTROLS</b> <b>FOR HIGHWAY</b> <b>CONSTRUCTION</b> Issued By: Traffic Engineering Unit July 4, 2006
Date:	Comments										
			<b>STANDARD PLAN NO.</b> S-630-1 Sheet No. 9 of 12								

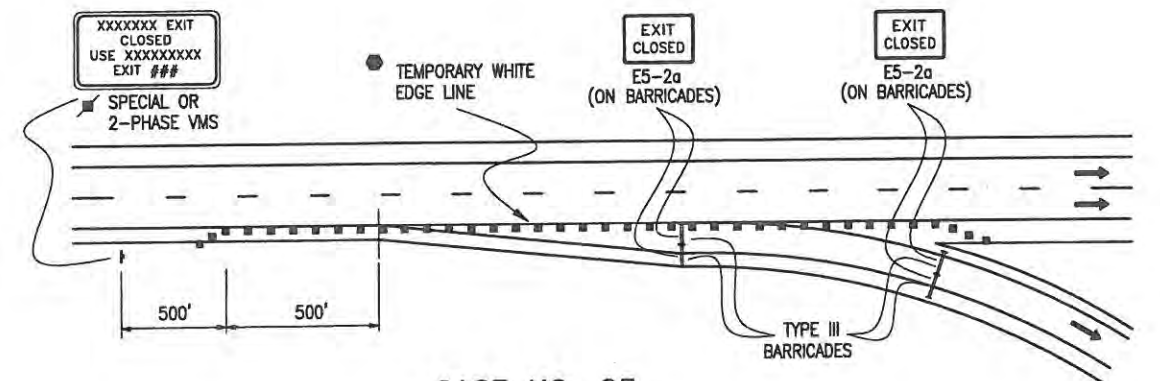


**CASE NO. 21**  
**TYPICAL APPLICATION**  
**FULL CLOSURE, MULTILANE FREEWAY**

- LEGEND**
- ▣ ADVANCE WARNING FLASHING OR SEQUENCING ARROW PANEL
  - ▲ THESE DEVICES ARE OPTIONAL. THEIR NEED WILL BE DETERMINED BY THE DESIGNER BASED ON DETOUR DESIGN AND/OR SCOPE OF THE CONSTRUCTION ACTIVITY, AND ARE REQUIRED WHEN THEY ARE INCLUDED IN THE PLANS.
  - REQUIRED WHEN WORK OCCUPIES THE LOCATION FOR MORE THAN 3 DAYS.
  - ▣ CHANNELIZING DEVICE: FOR TYPE OF DEVICE TO BE USED, SEE THE SCHEDULE OF CONSTRUCTION TRAFFIC CONTROL DEVICES INCLUDED IN THE PLANS.
  - TYPE III BARRICADE
  - ← DIRECTION OF TRAVEL
  - L **TRANSITION TAPER LENGTH:**  
 L = MINIMUM LENGTH OF TAPER  
 SPEED 45 MPH OR MORE:  $L = S \times W$   
 SPEED 40 MPH OR LESS:  $L = \frac{WS^2}{60}$   
 S = NUMERICAL VALUE OF SPEED LIMIT OR 85 PERCENTILE SPEED  
 W = WIDTH OF OFFSET  
 SHOULDER TAPER = 1/3 L
  - ▣ CLOSURE AND EXIT MESSAGES ON SIGN LEGEND(S) SHOULD BE MODIFIED TO FIT THE SITUATION.



**CASE NO. 22**  
**TYPICAL APPLICATION**  
**CONTINUOUS LANE RAMP CLOSURE, MULTILANE FREEWAY**

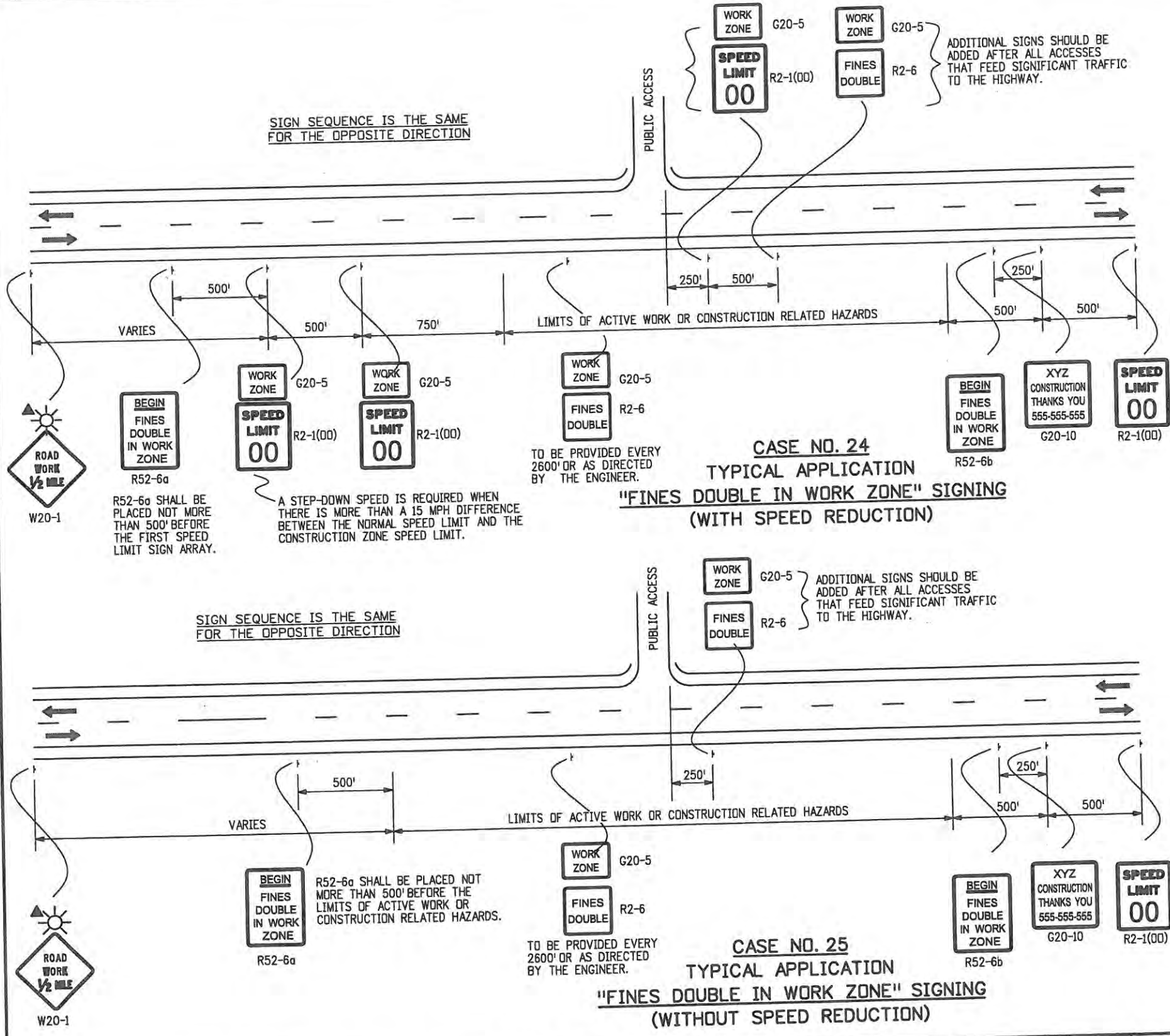


**CASE NO. 23**  
**TYPICAL APPLICATION**  
**SIMPLE RAMP CLOSURE, MULTILANE FREEWAY**

- NOTES:**
1. NOTICE OF EXIT CLOSURE SHALL ALSO BE GIVEN IN ADVANCE OF THE PREVIOUS EXIT TO PROVIDE MOTORISTS WITH THE OPTION TO EXIT AT THAT LOCATION.
  2. ADDITIONAL SIGNING TO REDIRECT DETOURED TRAFFIC SHALL BE PROVIDED FOR IN THE PROJECT'S METHOD OF HANDLING TRAFFIC.
  3. FOR LONG TERM SETUPS, A BLACK ON ORANGE "EXIT CLOSED" (E5-2a) PANEL SHALL BE MOUNTED DIAGONALLY ACROSS ALL EXISTING GUIDE SIGNS THAT PERTAIN TO THE CLOSED EXIT.

<b>Computer File Information</b> Creation Date: 07-04-06 Initials: KCM Last Modification Date: 07-04-06 Initials: JSW Full Path: www.dot.state.co.us/DesignSupport/ Drawing File Name: S-630-1 (10 of 12) CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English		<b>Sheet Revisions</b> <table border="1"> <thead> <tr> <th>Date:</th> <th>Comments</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>		Date:	Comments							<b>Colorado Department of Transportation</b>  4201 East Arkansas Avenue Denver, Colorado 80222 Phone: (303) 757-9543 Fax: (303) 757-9820 <b>Staff Traffic Branch</b>		<b>TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION</b> Issued By: Traffic Engineering Unit July 4, 2006		<b>STANDARD PLAN NO.</b> S-630-1 Sheet No. 10 of 12	
Date:	Comments																
		KCM/JSW															





**LEGEND**

- ← DIRECTION OF TRAVEL
- ▲ THESE DEVICES ARE OPTIONAL. THEIR NEED WILL BE DETERMINED BY THE DESIGNER BASED ON DETOUR DESIGN AND/OR SCOPE OF THE CONSTRUCTION ACTIVITY, AND ARE REQUIRED WHEN THEY ARE INCLUDED IN THE PLANS.
- ☀ FLASHING BEACON

**DOUBLE FINES NOTES:**

1. SIGNS SHALL NOT BE PLACED SOONER THAN FOUR HOURS BEFORE WORK IS TO BEGIN AND SHALL BE REMOVED AS SOON AS WORK ACTIVITIES ARE CONCLUDED, UNLESS POTENTIAL HAZARDS INTRODUCED AS A RESULT OF THE WORK ARE STILL PRESENT AT THE END OF THE WORK DAY. IF SIGNS ARE LEFT IN PLACE AFTER WORK ACTIVITIES, THE TRAFFIC CONTROL SUPERVISOR SHALL MAKE AN ENTRY IN THEIR DAILY DIARY THAT JUSTIFIES THEIR USE.
- "HAZARDS" INCLUDE BUT ARE NOT LIMITED TO:  
EDGE DROP OFFS  
EQUIPMENT, WORKERS OR NON-SHIELDED OBJECTS IN THE CLEAR ZONE  
ROUGH PAVEMENT  
MAJOR CHANGE IN ALIGNMENT  
REDUCED SHOULDER WIDTH  
TEMPORARY GUARD RAIL OR BARRIER  
LANE CLOSURE
2. "FINES DOUBLE" SIGNS SHALL ONLY BE PLACED WHERE WORKERS ARE PRESENT IN THE ROADWAY OR CLEAR ZONE OR ARE AT RISK, OR WHERE THERE ARE HAZARDS IN THE TRAVELWAY, SHOULDERS OR CLEAR ZONE.
3. "FINES DOUBLE" SHOULD BE PLACED SO THAT MOTORISTS IMMEDIATELY ASSOCIATE THE SIGNS WITH PRESENT WORK ACTIVITIES. IF THE ZONE OF WORK ACTIVITY MOVES, THE SIGNS SHOULD BE MOVED ACCORDINGLY.
4. SIGNING SHOWN IS REQUIRED TO ENFORCE DOUBLE FINES IN A WORK ZONE. ADDITIONAL SIGNING SHALL BE IN ACCORDANCE WITH THAT NORMALLY REQUIRED FOR THE PARTICULAR WORK ZONE. PLACEMENT OF "FINES DOUBLE" SIGNING MAY BE ADJUSTED AS NEEDED TO PROVIDE A MINIMUM 250' SPACING BETWEEN OTHER SIGNING REQUIRED FOR THE SPECIFIC WORK ZONE SETUP.

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Date	Comments												
07/31/08	R2-6 SIGNS REVISED												
				KCM/KEN									



**THESE SIGNING NOTES ARE INTENDED AS A QUICK REFERENCE FOR TYPICAL SIGN USE AND PLACEMENT IN CONSTRUCTION ZONES.**

- G20-1 "ROAD/WORK/NEXT XX MILES" - THIS SIGN SHALL BE ERECTED AT THE LIMITS OF ANY ROAD CONSTRUCTION OR MAINTENANCE PROJECT OF MORE THAN 2 MILES IN LENGTH WHERE TRAFFIC IS MAINTAINED THROUGH THE PROJECT.
- G20-10 THANK YOU SIGN - THIS SIGN SHOULD BE ERECTED APPROXIMATELY 500 FEET BEYOND THE END OF THE PROJECT.
- G20-4 "PILOT CAR/FOLLOW ME" - THIS SIGN SHALL BE MOUNTED IN A CONSPICUOUS POSITION ON THE REAR OF A VEHICLE USED FOR GUIDING ONE-WAY TRAFFIC THROUGH OR AROUND THE PROJECT.
- M4-9( ) "DETOUR/\*\*\*\*\*" - THIS SIGN IS USED FOR UNNUMBERED ROUTES; FOR USE IN EMERGENCY SITUATIONS; FOR PERIODS OF SHORT DURATION; OR WHERE, OVER RELATIVELY SHORT DISTANCES, IT IS NOT NECESSARY TO SHOW ROUTE MARKERS TO GUIDE TRAFFIC ALONG THE DETOUR AND BACK TO ITS AUTHORIZED ROUTE.
- M4-10( ) "DETOUR ARROW" - THIS SIGN SHOULD BE MOUNTED JUST BELOW THE ROAD CLOSED SIGN AT THE POINT WHERE THE DETOUR ROADWAY OR ROUTE HAS BEEN ESTABLISHED DUE TO THE CLOSURE OF THE STREET OR HIGHWAY TO THROUGH TRAFFIC.
- R2-1( ) "SPEED/LIMIT/XX" - THESE SIGNS ARE INTENDED TO REDUCE TRAFFIC SPEED IN ADVANCE OF THE DAILY WORK AREA WITHIN THE OVERALL PROJECT LIMITS.
- R2-1(XX) "SPEED/LIMIT/XX" - THIS SIGN IS INTENDED FOR USE 500 FEET PAST THE "THANK YOU" SIGN TO BRING TRAFFIC BACK TO ORIGINAL POSTED SPEED.
- R11-2 "ROAD/CLOSED" - THIS SIGN IS TO BE MOUNTED ON THE BARRICADE THAT IS PLACED BEFORE THE WORK ZONE ENTRANCE TO PROHIBIT TRAFFIC FROM ENTERING THE WORK ZONE.
- R11-3 "ROAD CLOSED/X MILES AHEAD/L.T.O." - THIS SIGN SHOULD BE PLACED WHERE THROUGH TRAFFIC MUST DETOUR TO AVOID THE CLOSURE OF THE ROAD SOME DISTANCE BEYOND, BUT WHERE THE ROAD IS OPEN TO LOCAL TRAFFIC UP TO THE POINT OF CLOSURE.
- R11-4 "ROAD CLOSED/TO/THRU TRAFFIC" FOR URBAN USE - THIS SIGN SHOULD BE PLACED WHERE THROUGH TRAFFIC MUST DETOUR TO AVOID THE CLOSURE OF THE ROAD SOME DISTANCE BEYOND, BUT WHERE THE ROAD IS OPEN TO LOCAL TRAFFIC UP TO THE POINT OF CLOSURE.
- W1-1( ) "TURN ARROW" - THIS SIGN IS INTENDED FOR USE WHERE ENGINEERING INVESTIGATIONS OF ROADWAY CONDITIONS SHOW THE RECOMMENDED SPEED ON THE TURN TO BE 30 MPH OR LESS. \*
- W1-2( ) "CURVE ARROW" - THIS SIGN IS INTENDED FOR USE WHERE ENGINEERING INVESTIGATIONS OF ROADWAY CONDITIONS SHOW THE RECOMMENDED SPEED ON THE CURVE TO BE IN THE RANGE BETWEEN 30 AND 60 MILES PER HOUR. \*
- W1-3( ) "REVERSE TURN ARROW" - THIS SIGN IS INTENDED FOR USE WHERE TWO TURNS OR THE CURVE AND A TURN IN OPPOSITE DIRECTIONS ARE SEPARATED BY A TANGENT OF LESS THAN 600 FEET. \*
- W1-4( ) "REVERSE CURVE ARROW" - THIS SIGN IS INTENDED FOR USE WHERE TWO CURVES IN OPPOSITE DIRECTIONS ARE SEPARATED BY A TANGENT OF LESS THAN 600 FEET. \*
- W1-6( ) "ARROW" - THIS SIGN SHOULD BE MOUNTED JUST BELOW THE ROAD CLOSED SIGN AT THE POINT WHERE THE DIVERSION HAS BEEN ESTABLISHED DUE TO THE LANE CLOSURE.
- W3-2 "YIELD AHEAD" - THIS SIGN IS INTENDED FOR USE AT THE APPROACH TO THE YIELD SIGN THAT IS NOT VISIBLE FOR A SUFFICIENT DISTANCE TO PERMIT THE DRIVER TO BRING HIS VEHICLE TO A STOP AT THE YIELD SIGN. \*
- W4-2 "LEFT (RIGHT) LANE TRANSITION SYMBOL" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF THE REDUCTION IN THE NUMBER OF TRAFFIC LANES IN THE DIRECTION OF TRAVEL ON THE MULTILANE HIGHWAY. \*
- W5-1 "ROAD NARROWS" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF THE TRANSITION ON THE ROAD WHERE THE PAVEMENT WIDTH IS REDUCED ABRUPTLY TO A WIDTH SUCH THAT TWO CARS CANNOT PASS WITHOUT REDUCING SPEED. \*
- W5-2a "NARROW BRIDGE SYMBOL" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF A BRIDGE OR CULVERT HAVING A CLEAR TWO-WAY ROADWAY WIDTH OF 16 TO 18 FEET OR ANY BRIDGE OR CULVERT HAVING A ROADWAY CLEARANCE LESS THAN THE WIDTH OF THE APPROACH PAVEMENT. \*
- W5-3 "ONE LANE/BRIDGE" - THIS SIGN SHOULD BE PLACED ON TWO-WAY ROADWAYS IN ADVANCE OF THE BRIDGES OR CULVERTS WHERE THE ROADWAY WIDTH IS LESS THAN 16 FEET (18 FEET FOR COMMERCIAL VEHICLES) OR WHEN THE ALIGNMENT IS POOR ON THE APPROACH TO THE STRUCTURE HAVING A CLEAR ROADWAY WIDTH OF 18 FEET OR LESS. \*
- W6-1 "DIVIDED HIGHWAY SYMBOL" - THIS SIGN SHOULD BE PLACED ON THE APPROACHES TO THE SECTION OF HIGHWAY WHERE OPPOSING FLOWS OF TRAFFIC ARE SEPARATED BY A PHYSICAL MEDIAN.
- W6-2 "DIVIDED HIGHWAY ENDS SYMBOL" - THIS SIGN SHOULD BE PLACED AT THE END OF THE SECTION OF PHYSICALLY DIVIDED HIGHWAY AS A WARNING OF TWO-WAY TRAFFIC AHEAD.

**TYPICAL CONSTRUCTION ZONE SIGNS**

- W6-3 "TWO-WAY TRAFFIC SYMBOL" - THIS SIGN IS INTENDED FOR USE TO GIVE WARNING OF TRANSITION FROM A SEPARATED ONE-WAY ROADWAY TO A TWO-WAY ROADWAY. \*
- W7-1 "HILL SYMBOL" - THIS SIGN SHOULD BE PLACED AT A POINT IN ADVANCE OF THE DOWNGRADE WHERE THE LENGTH, PERCENT OF GRADE, HORIZONTAL CURVATURE, OR OTHER PHYSICAL FEATURES REQUIRE SPECIAL CONSIDERATION ON THE PART OF DRIVERS. \*
- W8-1,W8-2 "BUMP"/"DIP" - THESE SIGNS ARE INTENDED FOR USE TO GIVE WARNING OF A SHARP RISE OR DEPRESSION IN THE PROFILE OF THE ROAD THAT IS SUFFICIENTLY ABRUPT TO AFFECT VEHICLE OPERATION OR CAUSE CONSIDERABLE DISCOMFORT TO PASSENGERS. \*
- W8-3a "PAVEMENT ENDS SYMBOL" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF A POINT WHERE THE PAVEMENT SURFACE CHANGES FROM A HARD-SURFACED PAVEMENT TO THE LOW-TYPE SURFACE OR EARTH ROAD. \*
- W8-4 "SOFT SHOULDER" - THIS SIGN IS INTENDED FOR USE TO WARN OF A SOFT SHOULDER CONDITION THAT COULD PRESENT A PROBLEM TO VEHICLES THAT MAY GET OFF THE PAVEMENT. \*
- W8-5 "SLIPPERY WHEN WET SYMBOL" - THIS SIGN SHOULD BE PLACED IN ADVANCE OF THE CONDITION WHERE THE HIGHWAY SURFACE IS SLIPPERY BEYOND WHAT IS ORDINARY WHEN WET. \*
- W8-8a "SHOULDER DROP-OFF" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF A SHOULDER DROP-OFF THAT EXCEEDS THREE INCHES IN HEIGHT. \*
- W8-11 "UNEVEN LANES" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF AN UNEVEN ADJACENT LANE SITUATION THAT EXCEEDS ONE INCH IN HEIGHT. \*
- W9-1( ) "LEFT (RIGHT) LANE ENDS" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF THE PAVEMENT WIDTH TRANSITION SIGN (W4-2).
- W9-2( ) "LANE ENDS/MERGE LEFT (RIGHT)" - THIS SIGN IS INTENDED FOR USE AS A SUPPLEMENT TO THE PAVEMENT WIDTH TRANSITION SIGN (W4-2).
- W9-3 OR W9-3a( ) "CENTER LANE CLOSED AHEAD" - THIS SIGN SHOULD BE USED IN ADVANCE OF THE POINT WHERE WORK OCCUPIES THE CENTER LANE AND TRAFFIC IS DIRECTED TO THE RIGHT OR LEFT OF THE WORK ZONE. \*
- W12-1 "DOUBLE ARROW SYMBOL" - THIS SIGN SHOULD BE PLACED AT THE POINT OF THE OBSTRUCTION IN THE ROADWAY, WHERE TRAFFIC IS PERMITTED TO PASS ON EITHER SIDE OF THE OBSTRUCTION.
- W12-2 "LOW CLEARANCE SYMBOL" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF AN OBSTRUCTION TO WARN VEHICLE OPERATORS OF CLEARANCES LESS THAN THE MAXIMUM VEHICLE HEIGHT PERMITTED PLUS 12 INCHES. \*
- W13-1( ) "ADVISORY SPEED PLAQUE" - THIS SIGN IS INTENDED TO SUPPLEMENT WARNING SIGNS ONLY AND SHALL NOT BE MOUNTED ALONE. IT IS USED TO INDICATE THE MAXIMUM RECOMMENDED SPEED FOR THE INDICATED CONDITION.
- W20-1 "ROAD/WORK/AHEAD" - THIS SIGN IS TO BE LOCATED IN ADVANCE OF THE INITIAL ACTIVITY OR DETOUR A DRIVER MAY ENCOUNTER, AND IS INTENDED TO BE USED AS A WARNING OF OBSTRUCTIONS OR RESTRICTIONS.
- W20-2 "DETOUR/(DIST.)" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF THE POINT AT WHICH TRAFFIC IS DIVERTED OVER A TEMPORARY ROADWAY OR ROUTE.
- W20-3 "ROAD/CLOSED/(DIST.)" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF A POINT AT WHICH A ROADWAY IS CLOSED TO ALL TRAFFIC OR TO ALL BUT LOCAL TRAFFIC.
- W20-4 "ONE LANE/ROAD/(DIST.)" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF A POINT WHERE TRAFFIC IN BOTH DIRECTIONS MUST USE A SINGLE LANE.
- W20-5( ) "XXX LANE/CLOSED/(DIST.)" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF A POINT WHERE ONE LANE OF A MULTIPLE-LANE ROADWAY IS CLOSED. IT SHOULD BE PROVIDED WITH INTERCHANGEABLE PLAQUES READING "RIGHT", "LEFT", AND "CENTER" AT NO ADDITIONAL COST TO THE PROJECT.
- W20-7a "FLAGGER SYMBOL" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF ANY POINT AT WHICH A FLAGGER HAS BEEN STATIONED TO CONTROL TRAFFIC THROUGH OR AROUND THE PROJECT. \*
- W20-52 "GROOVED/PAVEMENT/AHEAD" - THIS SIGN IS INTENDED TO BE USED IN ADVANCE OF A ROADWAY THAT HAS BEEN GROOVED AND/OR ROTO MILLED.
- W21-1a "WORKER SYMBOL" - THIS SIGN IS INTENDED FOR USE IN CONJUNCTION WITH MINOR MAINTENANCE AND PUBLIC UTILITY OPERATIONS FOR THE PROTECTION OF MEN WORKING IN OR NEAR THE ROADWAY.
- W21-2 "FRESH/OIL" - THIS SIGN IS INTENDED FOR USE WHERE RE-SURFACING OPERATIONS HAVE RENDERED THE SURFACE OF THE PAVEMENT TEMPORARILY WET, AND OBJECTIONABLE SPLASHING ON VEHICLES MAY OCCUR. \*
- W21-3 "ROAD/MACHINERY/AHEAD" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF THE AREAS WHERE HEAVY EQUIPMENT IS OPERATING IN OR ADJACENT TO THE ROADWAY. \*

- W21-4 "ROAD/WORK/(DIST.)" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF MAINTENANCE FOR MINOR RECONSTRUCTION OPERATIONS IN THE ROADWAY.
- W21-5 "SHOULDER/WORK" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF THE PROJECT INVOLVING THE SHOULDER, WHERE THE TRAVELED WAY REMAINS UNOBSTRUCTED.
- W21-6 "SURVEY/CREW" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF A POINT WHERE A SURVEYING CREW IS WORKING IN OR ADJACENT TO THE ROADWAY. \*
- W22-1 "BLASTING/ZONE/(DIST.)" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF ANY POINT OR WORK SITE WHERE THERE ARE EXPLOSIVES BEING USED. THE W22-2 AND W22-3 SIGNS MUST BE USED IN SEQUENCE WITH THIS SIGN.
- W22-2 "TURN OFF/2-WAY RADIOS/AND/CELLULAR/PHONES" - THIS SIGN IS TO BE USED IN SEQUENCE WITH THE W22-1 AND W22-3 SIGNS AND PLACED AT LEAST 1000 FEET FROM THE BEGINNING OF THE BLASTING ZONE.
- W22-3 "END/BLASTING/ZONE" - THIS SIGN IS TO BE USED TO DENOTE THE END OF THE RADIO INFLUENCE AREA AND SHALL BE PLACED A MINIMUM OF 1000 FEET FROM THE BLASTING ZONE, EITHER WITH OR PRECEDING THE END CONSTRUCTION SIGN.

**ADVANCE PLACEMENT OF WARNING SIGNS**

POSTED OR 85TH PERCENTILE SPEED	ADVANCE PLACEMENT DISTANCE (FEET)								
	CONDITION A	CONDITION B: DECLARATION TO THE LISTED ADVISORY SPEED (MPH) FOR THE CONDITION							
		MPH							
		0	10	20	30	40	50	60	70
20	225	●	●	●	●	●	●	●	●
25	325	●	●	●	●	●	●	●	●
30	450	●	●	●	●	●	●	●	●
35	550	●	●	●	●	●	●	●	●
40	650	125	●	●	●	●	●	●	●
45	750	175	125	●	●	●	●	●	●
50	850	250	200	150	100	●	●	●	●
55	950	325	275	225	175	100	●	●	●
60	1100	400	350	300	250	175	●	●	●
65	1200	475	425	400	350	275	175	●	●
70	1250	550	525	500	425	350	250	150	●
75	1350	650	625	600	525	450	350	250	100

- + CONDITION A: SPEED REDUCTION AND LANE CHANGING IN HEAVY TRAFFIC. TYPICAL SIGNS ARE "MERGE" AND "RIGHT LANE ENDS".
- + + CONDITION B: TYPICAL CONDITIONS ARE THE WARNING OF A POTENTIAL STOP SITUATION AND LOCATIONS WHERE THE ROAD USER MUST DECREASE SPEED TO MANEUVER THROUGH THE WARNED CONDITION. TYPICAL SIGNS ARE "STOP AHEAD", "SIGNAL AHEAD", "YIELD AHEAD", "CURVE", "REVERSE CURVE", "TURN".
- NO SUGGESTED DISTANCES ARE PROVIDED AT THESE SPEEDS, AS THE PLACEMENT IS DEPENDENT ON SITE CONDITIONS AND OTHER SIGNING.

A SUPPLEMENTAL PLAQUE MAY BE USED WITH WARNING SIGNS SPECIFYING THE DISTANCE TO THE CONDITION IF THERE IS AN IN-BETWEEN INTERSECTION THAT MIGHT CONFUSE THE MOTORIST.

\* PLACEMENT SHOULD BE IN ACCORDANCE WITH WARNING SIGN PLACEMENT TABLE.

<b>Computer File Information</b>		<b>Sheet Revisions</b>		<b>Colorado Department of Transportation</b>		<b>TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION</b>		<b>STANDARD PLAN NO.</b>			
Creation Date: 07-04-06	Initials: KCM	Date:	Comments:		4201 East Arkansas Avenue Denver, Colorado 80222 Phone: (303) 757-9543 Fax: (303) 757-9820	<b>TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION</b>		S-630-1			
Last Modification Date: 07-04-06	Initials: JSW							Issued By: Traffic Engineering Unit July 4, 2006		Sheet No. 12 of 12	
Full Path: www.dot.state.co.us/DesignSupport/											
Drawing File Name: S-630-1 (12 of 12)						<b>Staff Traffic Branch</b>		<b>KCM/JSW</b>			
CAD Ver.: MicroStation V8	Scale: Not to Scale	Units: English									

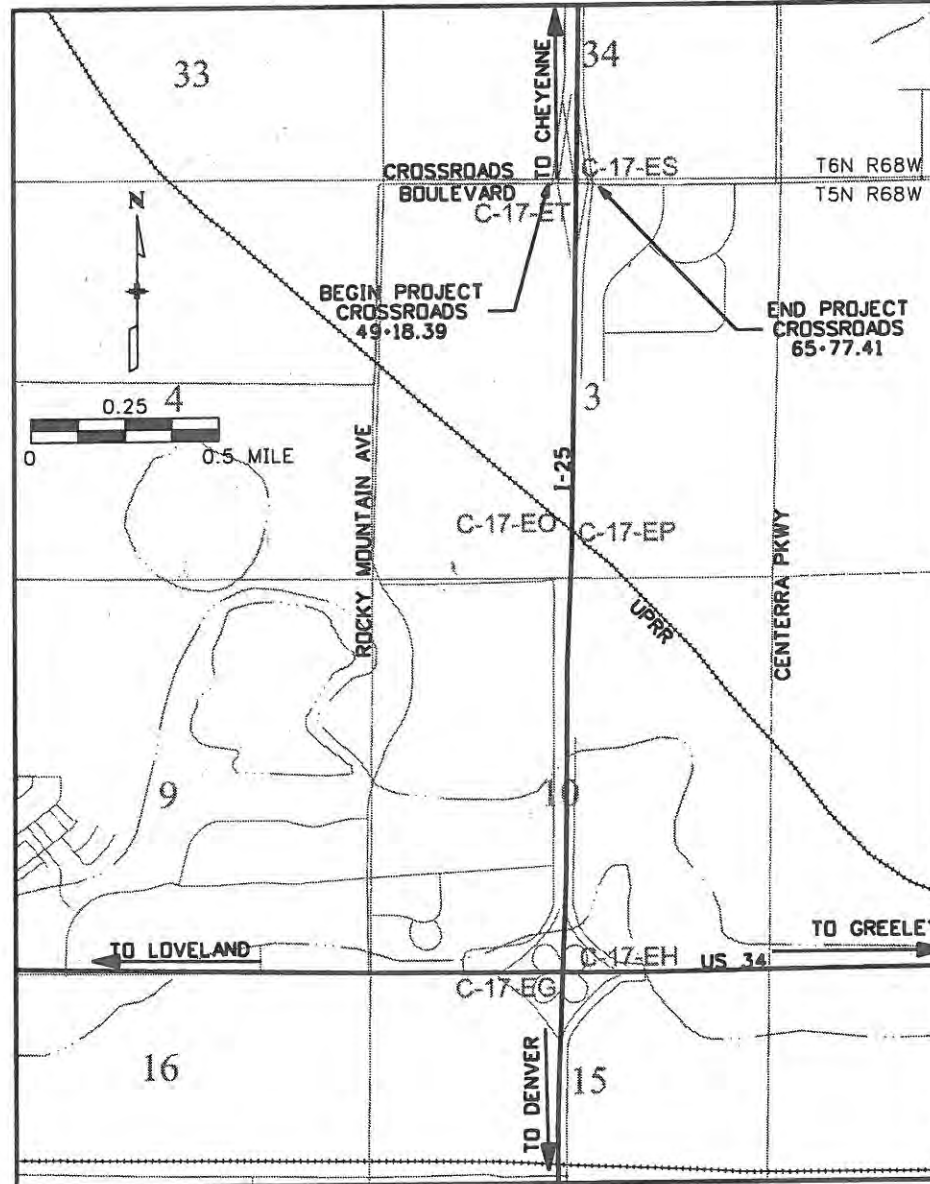


Oversight / NHS

FHWA REGION VIII OVERSIGHT?  NO  YES  
 NATIONAL HIGHWAY SYSTEM?  NO  YES

# CITY OF LOVELAND STATE OF COLORADO

## BID CROSS SECTIONS OF PROPOSED I-25 AND CROSSROADS BOULEVARD IMPROVEMENTS LARIMER COUNTY, COLORADO



PROJECT LOCATION MAP

SHEET NO.	INDEX OF SHEETS
1	TITLE SHEET
2-15	CROSS SECTIONS CROSSROADS BOULEVARD
16-19	CROSS SECTIONS SOUTHWEST RAMP
20-27	CROSS SECTIONS NORTHWEST RAMP
28-33	CROSS SECTIONS NORTHEAST RAMP
<del>34-39</del>	CROSS SECTIONS SOUTHEAST RAMP

34x~36x~39

**CITY OF LOVELAND**



500 E. THIRD STREET  
LOVELAND, CO 80537  
970-962-2000

**WILSON & COMPANY**  
Engineers & Architects

999 18th Street Suite 2600  
Denver, CO 80202  
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**Computer File Information**

Creation Date: 02/04/09 Initials: JBK  
 Last Modification Date: 5/8/2009 JBK  
 Full Path: 0610031800x-secTitleSheet.dgn  
 Drawing File Name: 0610031800x-secTitleSheet.dgn  
 CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English

**Sheet Revisions**

Date:	Comments	Init.

**Colorado Department of Transportation**

 Street Address  
1420 2nd St.  
Greeley, CO 80631  
Phone: 970-350-2128 FAX: 970-350-2128  
Region 4 **PJG**

**As Constructed**

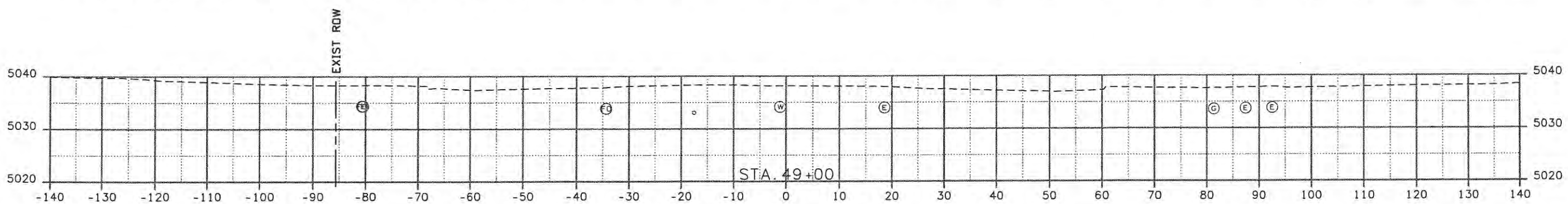
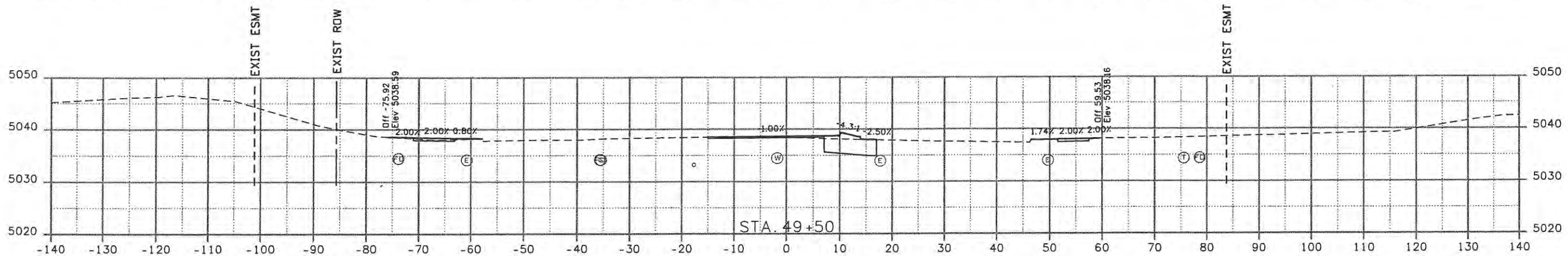
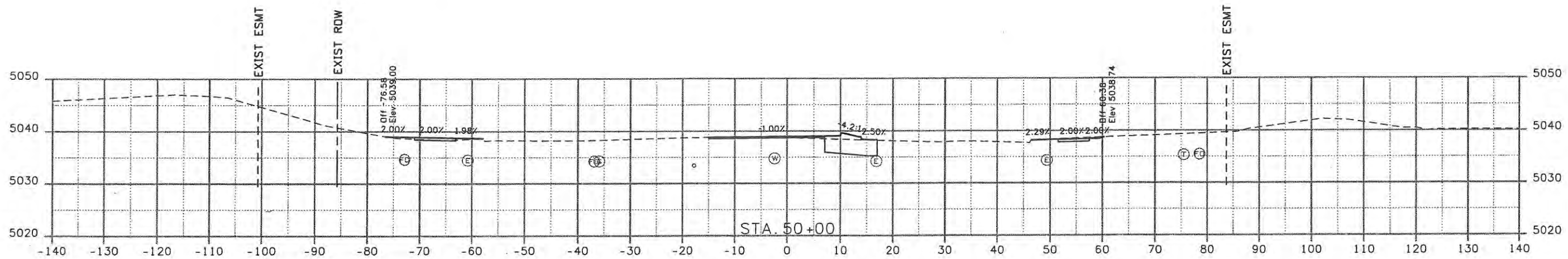
No Revisions:  
 Revised: 9/14/11  
 Void:

**Contract Information**

Contractor:  
 Resident Engineer:  
 Project Engineer:  
 PROJECT STARTED: / / ACCEPTED: / /  
 Comments:

**Project No./Code**

ES4 0253-207  
 17244  
 Sheet Number 1



Computer File Information	
Creation Date: 11/04/08	Initials: JBK
Print Date: 5/8/2009	Initials: JMB
File Name: 0610031800crossroads.dgn	
Horiz. Scale: 1:20	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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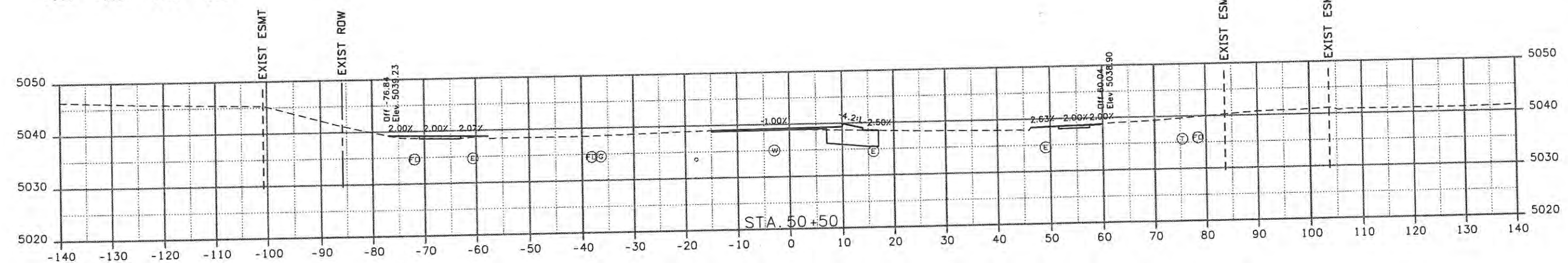
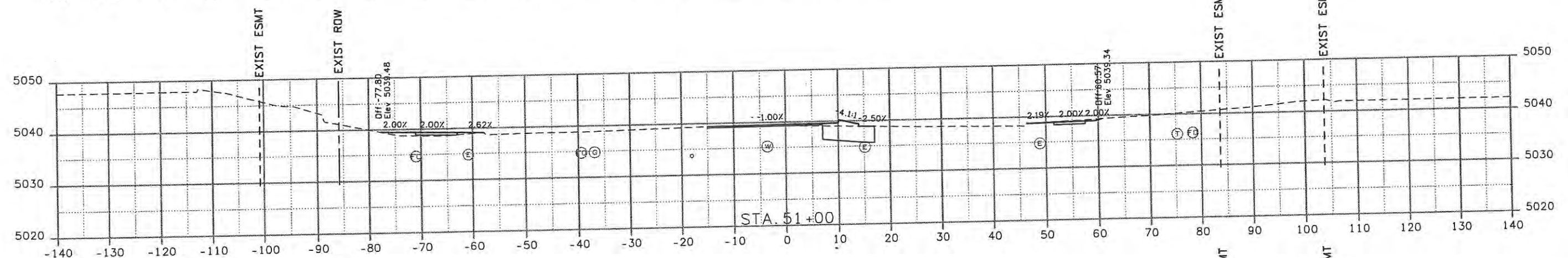
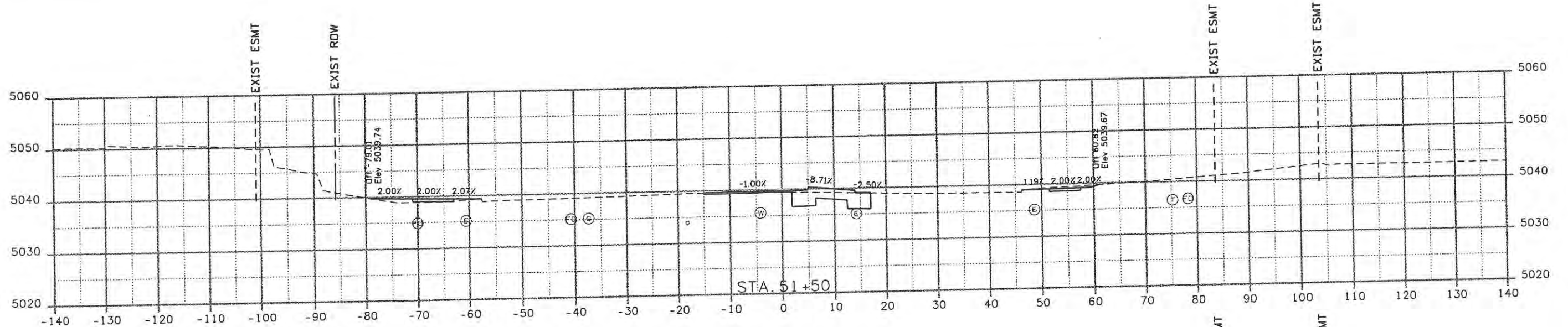
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Designer: JJW	Structure Numbers
Detailer: JMB	
Sheet Subset: XSEC	Subset Sheets: CXS1 of 14

Project No./Code	ES4 0253-207
	17244
Sheet Number	2

**WILSON & COMPANY**  
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 Fax: 303-297-2683





Computer File Information	
Creation Date: 11/04/08	Initials: JBK
Print Date: 5/8/2009	Initials: JMB
File Name: 0610031800crossroads.dgn	
Horiz. Scale: 1:20	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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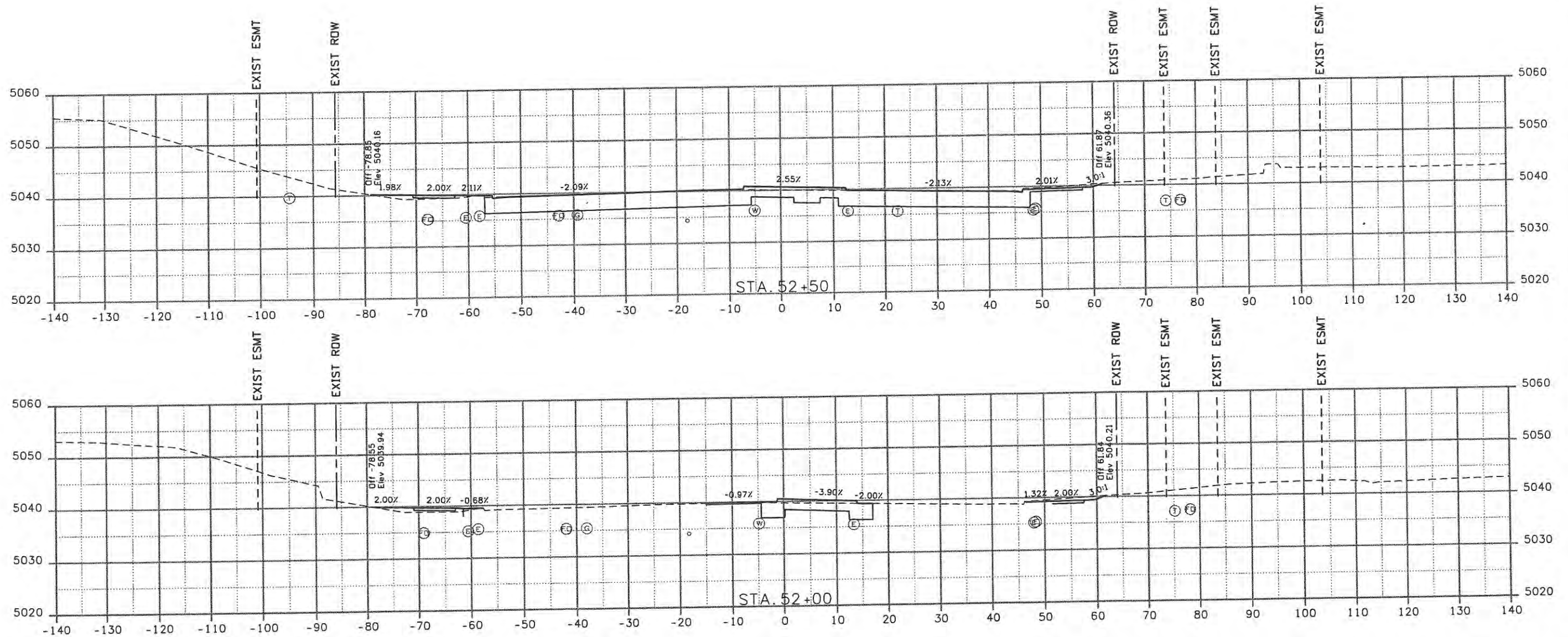



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No Revisions:	
Revised:	
Void:	9/14/11

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Detailer: JMB	
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Project No./Code	ES4 0253-207
	17244
Sheet Number	3



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Print Date: 5/8/2009	Initials: JMB
File Name: 0610031800crossroads.dgn	
Horiz. Scale: 1:20	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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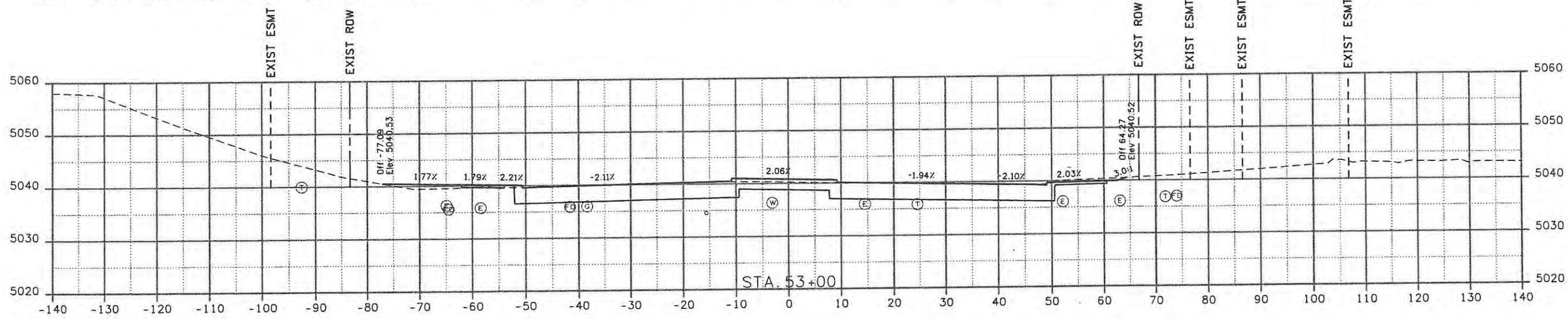
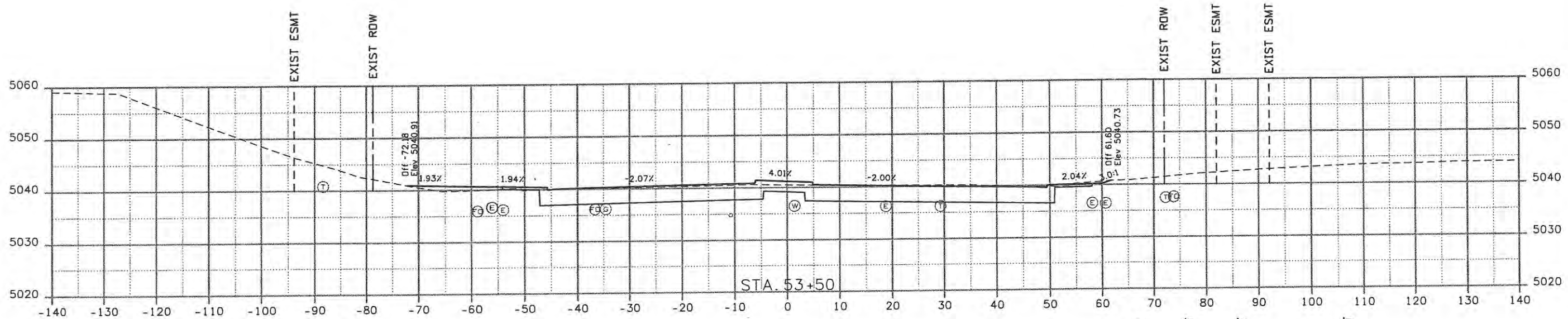
Colorado Department of Transportation

No Revisions:	
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Project No./Code	ES4 0253-207
	17244
Sheet Number	4





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Horiz. Scale: 1:20	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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970-962-2000



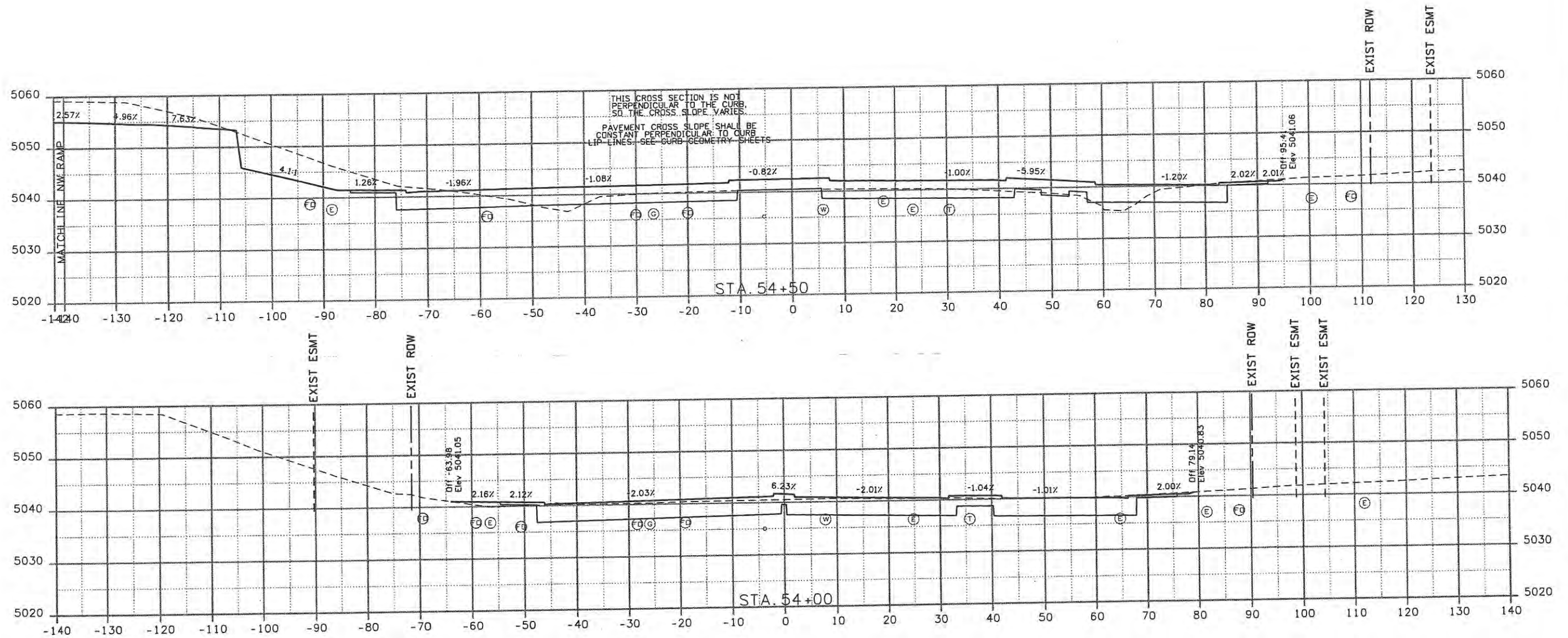

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of Transportation

No Revisions:	
Revised:	
Void:	9/14/11

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Project No./Code	ES4 0253-207
	17244
Sheet Number	5

989 16th Street Suite 2600 Phone: 303-297-2978  
 Denver, CO 80202 Fax: 303-297-2883  
**WILSON & COMPANY**  
 Engineers & Architects



Computer File Information	
Creation Date: 11/04/08	Initials: JBK
Print Date: 5/8/2009	Initials: JMB
File Name: 0610031800crossroads.dgn	
Horiz. Scale: 1:20	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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LOVELAND, CO 80537  
970-962-2000

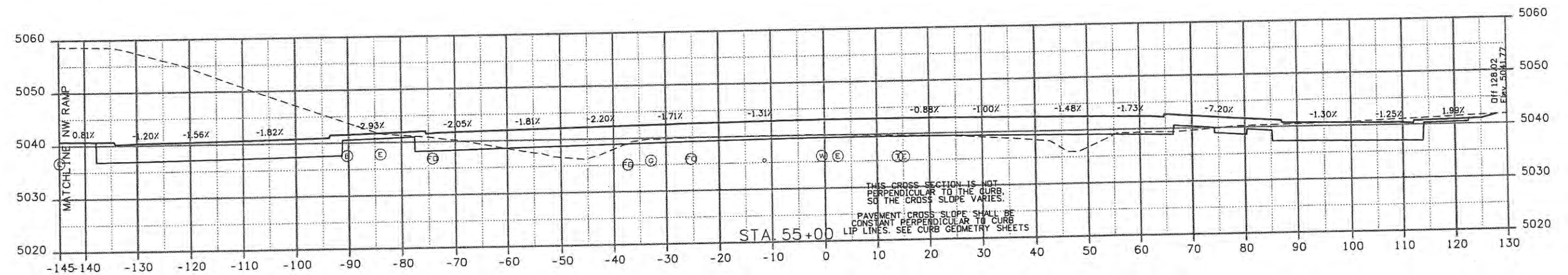
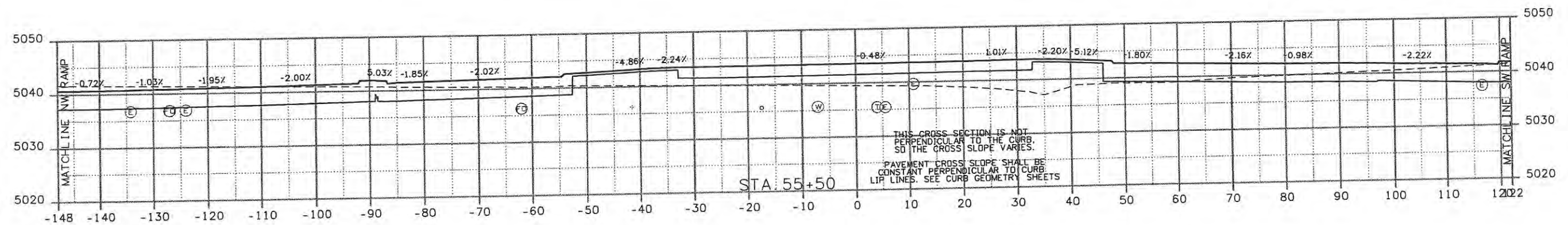
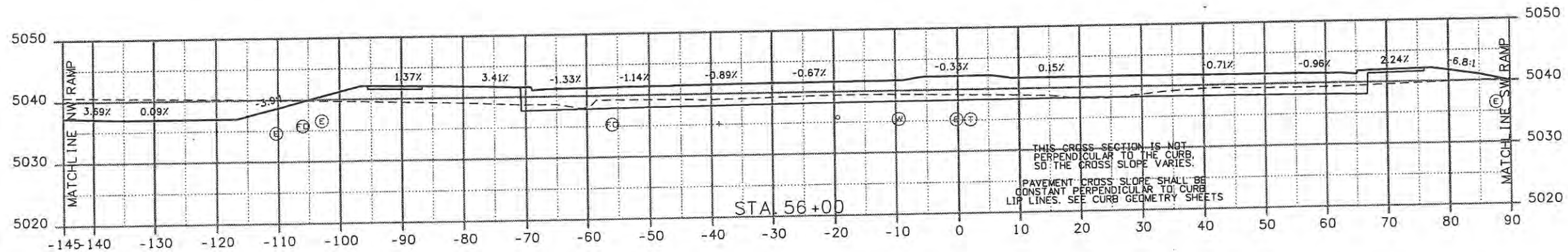
Colorado Department of Transportation

No Revisions:	
Revised:	
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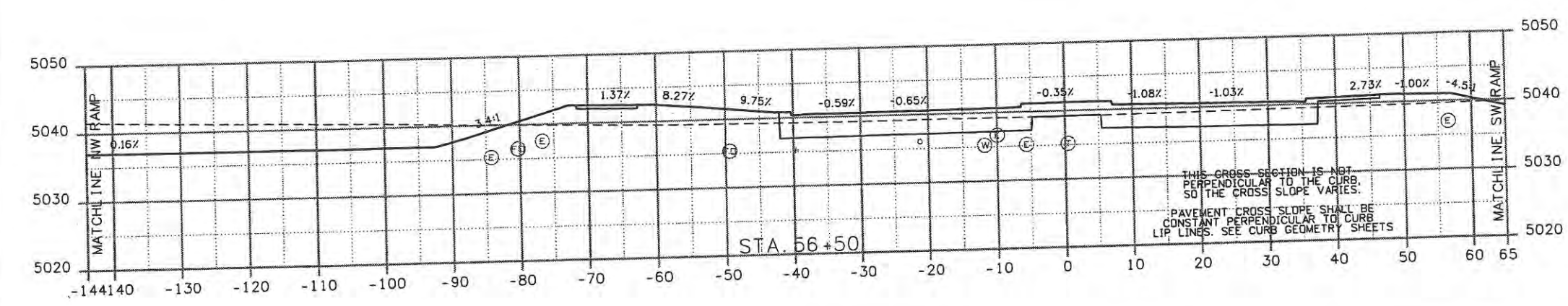
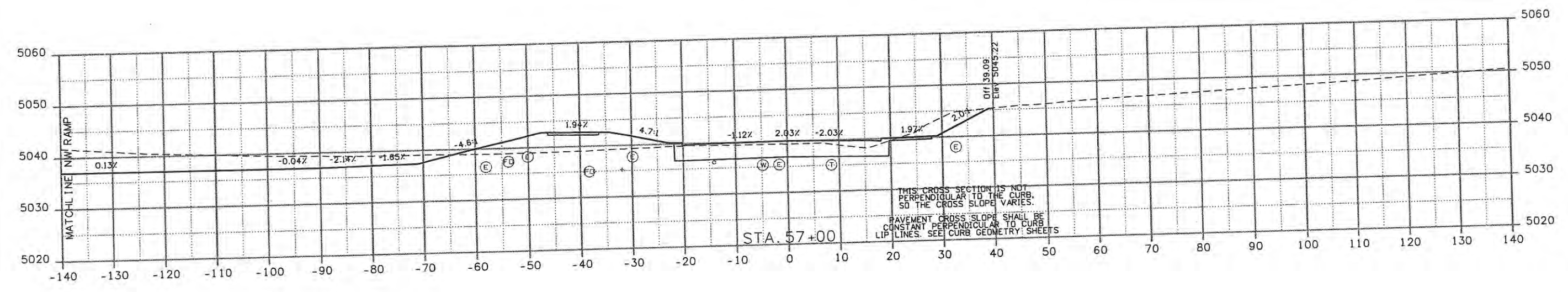
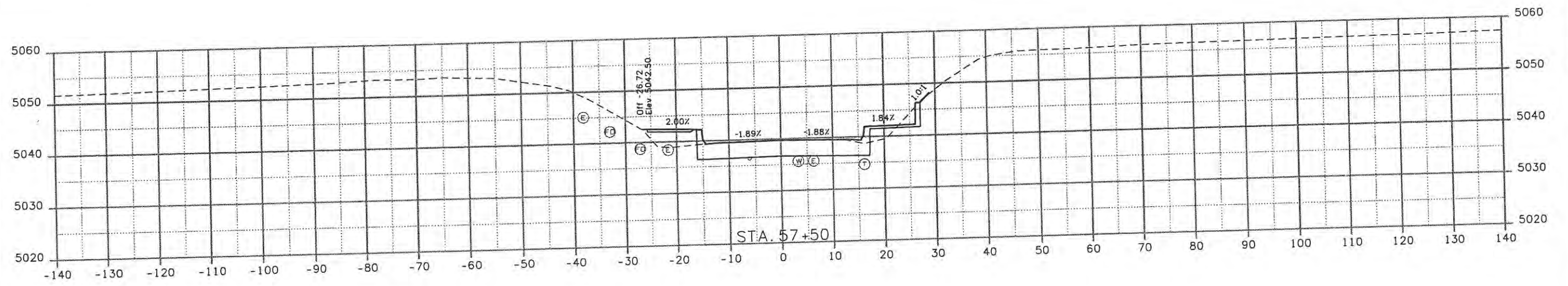
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	17244
Sheet Number	6





<b>Computer File Information</b>		<b>Sheet Revisions</b>		<b>CITY OF LOVELAND</b> 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 Colorado Department of Transportation	<b>CROSS SECTIONS CROSSROADS BLVD</b>		<b>Project No./Code</b> ES4 0253-207	
Creation Date: 11/04/08	Initials: JBK	Date:	Comments			Init.	No Revisions:	Designer: JJW	Structure Numbers
Print Date: 5/8/2009	Initials: JMB				Revised:	Detailer: JMB		Sheet Number	
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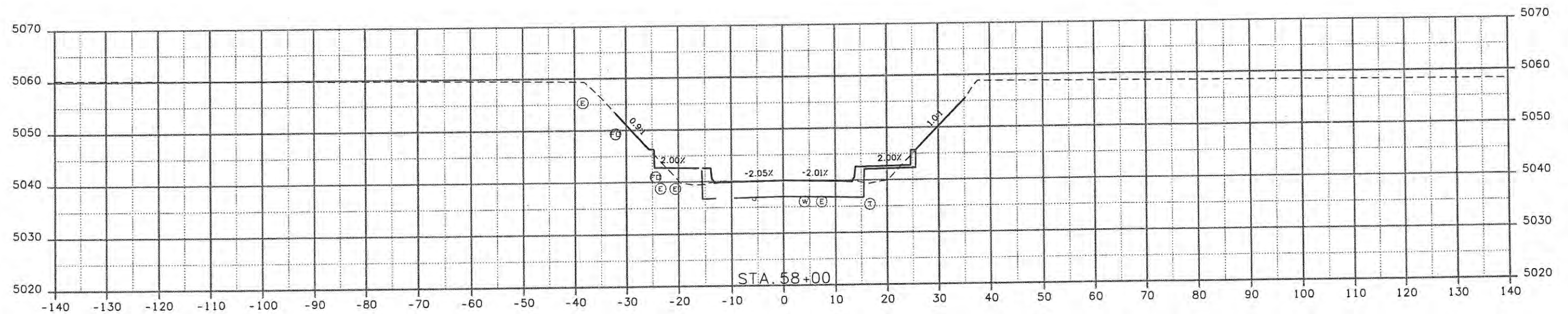
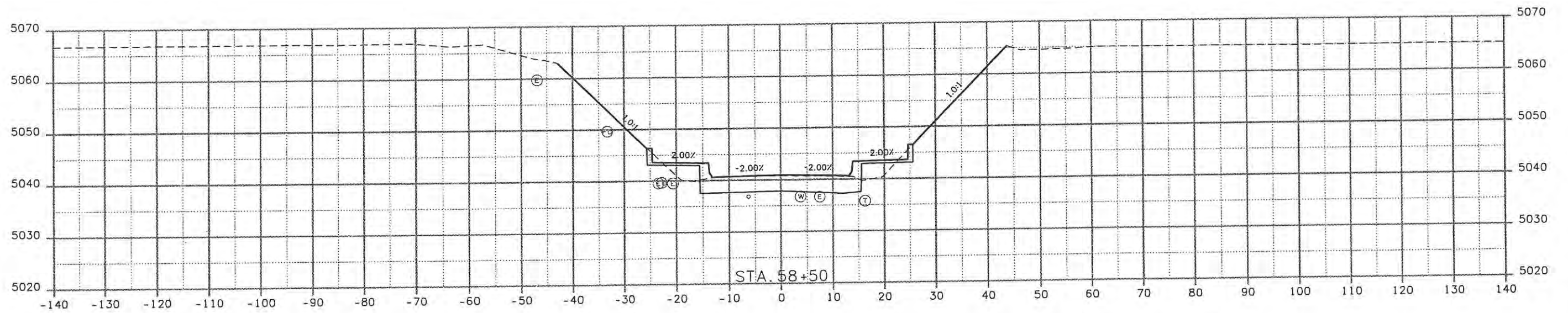
WILSON & COMPANY  
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<b>Computer File Information</b>		<b>Sheet Revisions</b>		<b>CITY OF LOVELAND</b> 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 Colorado Department of Transportation	<b>CROSS SECTIONS CROSSROADS BLVD</b>		<b>Project No./Code</b> ES4 0253-207	
Creation Date: 11/04/08	Initials: JBK	Date:	Comments:			Init.:	No Revisions:	Revised:	Void: 9/14/11
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Horiz. Scale: 1:20	Vert. Scale: As Noted								Sheet Number: 8

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Computer File Information	
Creation Date: 11/04/08	Initials: JBK
Print Date: 5/8/2009	Initials: JMB
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Horiz. Scale: 1:20	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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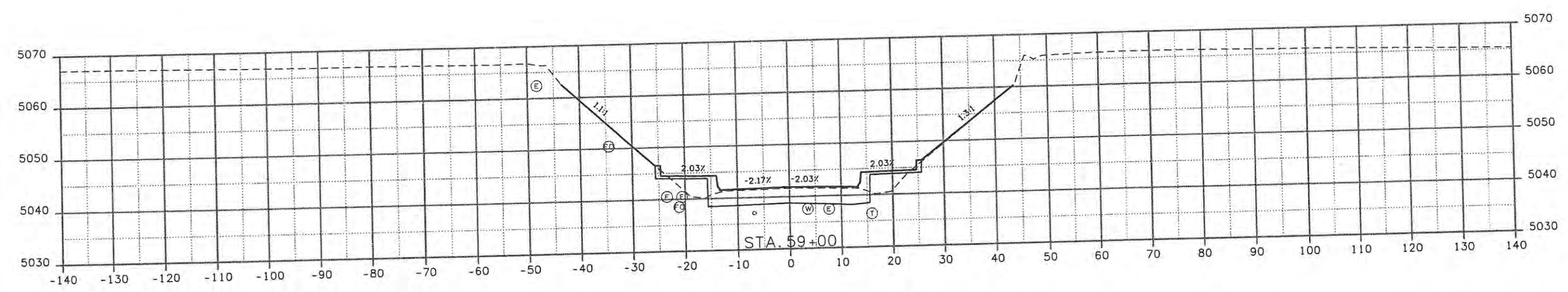
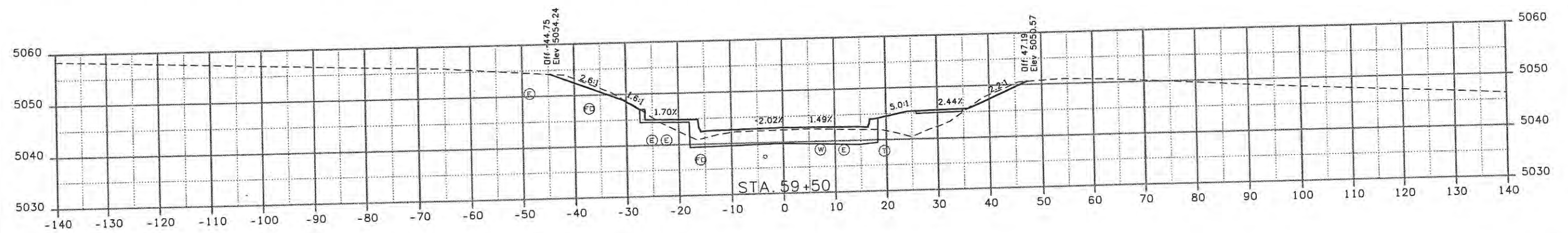
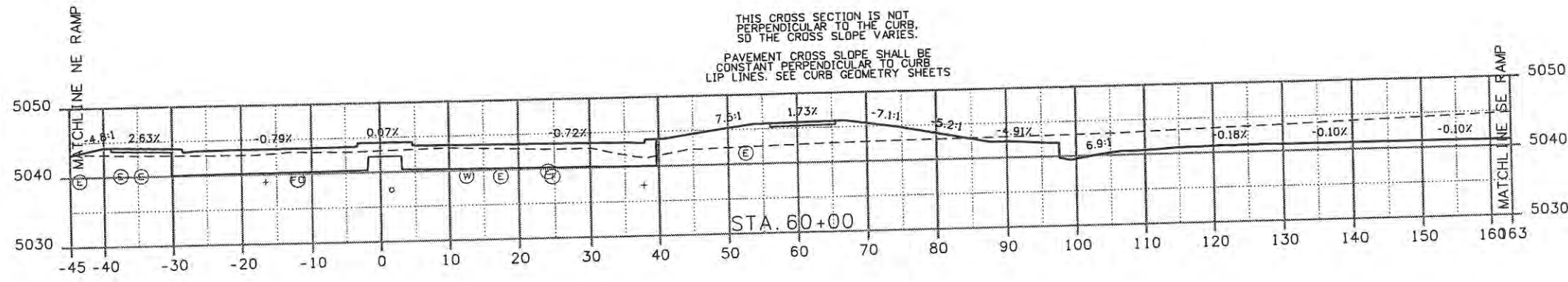
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Colorado Department of Transportation

No Revisions:	
Revised:	
Void:	9/14/11

CROSS SECTIONS CROSSROADS BLVD	
Designer: JJW	Structure Numbers
Detailer: JMB	
Sheet Subset: XSEC	Subset Sheets: CXS8 of 14

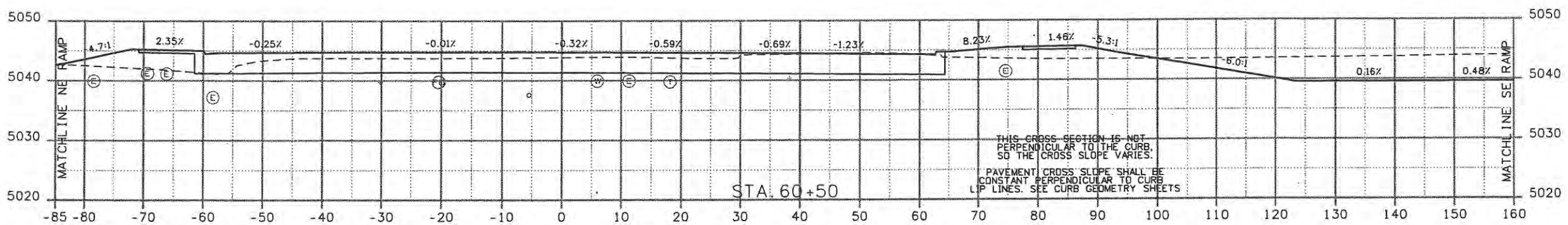
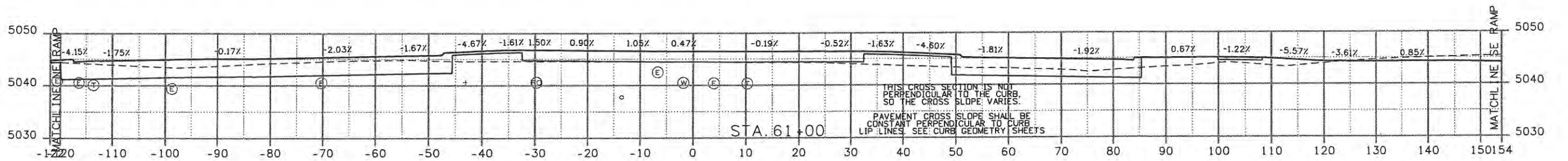
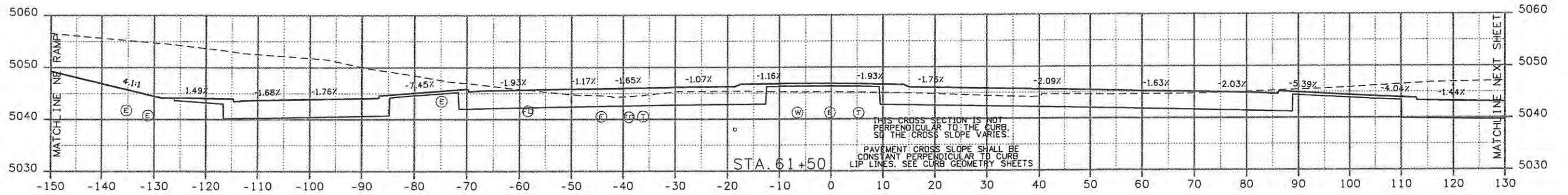
Project No./Code	ES4 0253-207
	17244
Sheet Number	9



<b>Computer File Information</b>		<b>Sheet Revisions</b>			<b>CITY OF LOVELAND</b> 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 <b>Colorado Department of Transportation</b>	<b>CROSS SECTIONS CROSSROADS BLVD</b>		<b>Project No./Code</b>	
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Print Date: 5/8/2009	Initials: JMB				Revised:	Detailer: JMB		17244		
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Horiz. Scale: 1:20	Vert. Scale: As Noted									

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THIS CROSS SECTION IS NOT PERPENDICULAR TO THE CURB, SO THE CROSS SLOPE VARIES.  
PAVEMENT CROSS SLOPE SHALL BE CONSTANT PERPENDICULAR TO CURB LIP LINES. SEE CURB GEOMETRY SHEETS

THIS CROSS SECTION IS NOT PERPENDICULAR TO THE CURB, SO THE CROSS SLOPE VARIES.  
PAVEMENT CROSS SLOPE SHALL BE CONSTANT PERPENDICULAR TO CURB LIP LINES. SEE CURB GEOMETRY SHEETS

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Print Date: 5/8/2009	Initials: JMB
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Sheet Revisions		
Date:	Comments	Init.

**CITY OF LOVELAND**

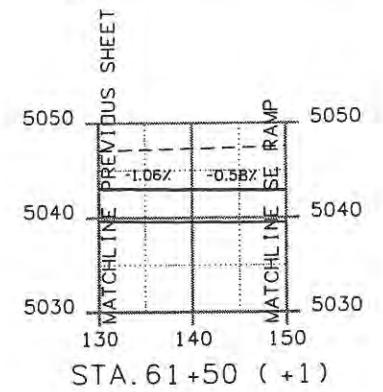
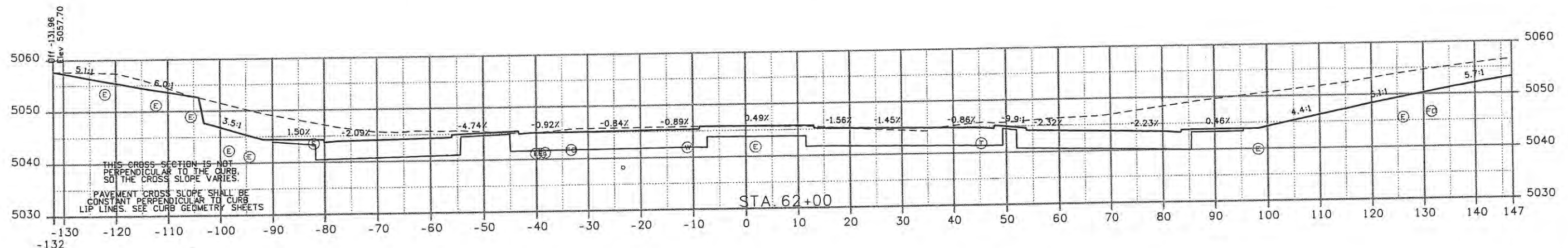
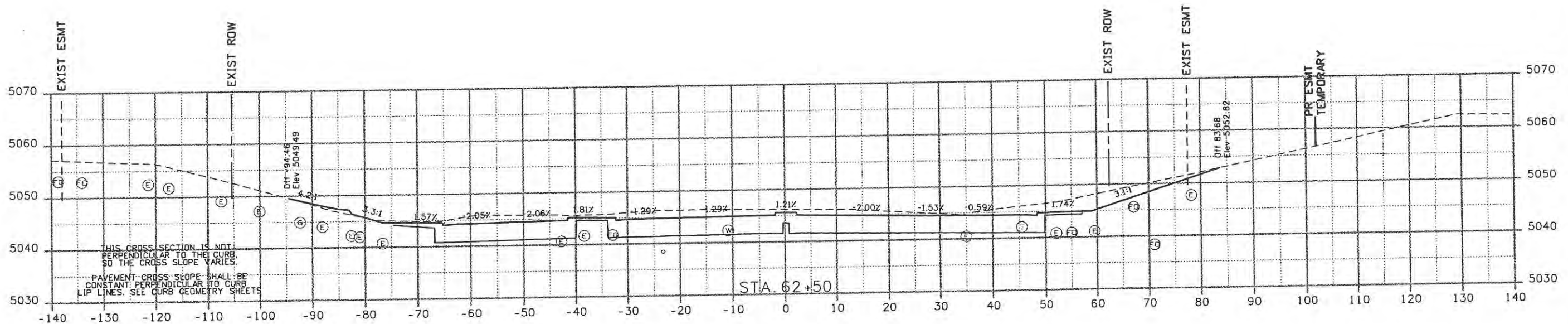
500 E. THIRD STREET  
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970-962-2000

Colorado Department of Transportation

No Revisions:
Revised:
Void: 7/14/11

CROSS SECTIONS CROSSROADS BLVD	
Designer: JJW	Structure Numbers
Detailer: JMB	Subset Sheets: CXS10 of 14
Sheet Subset: XSEC	

Project No./Code	ES4 0253-207
	17244
Sheet Number	11



Computer File Information	
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**CITY OF LOVELAND**  
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 970-962-2000

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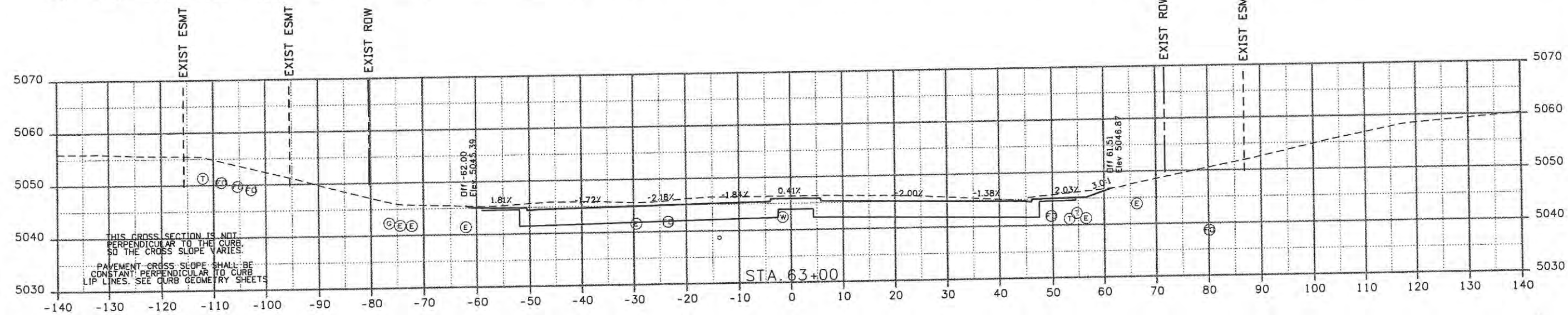
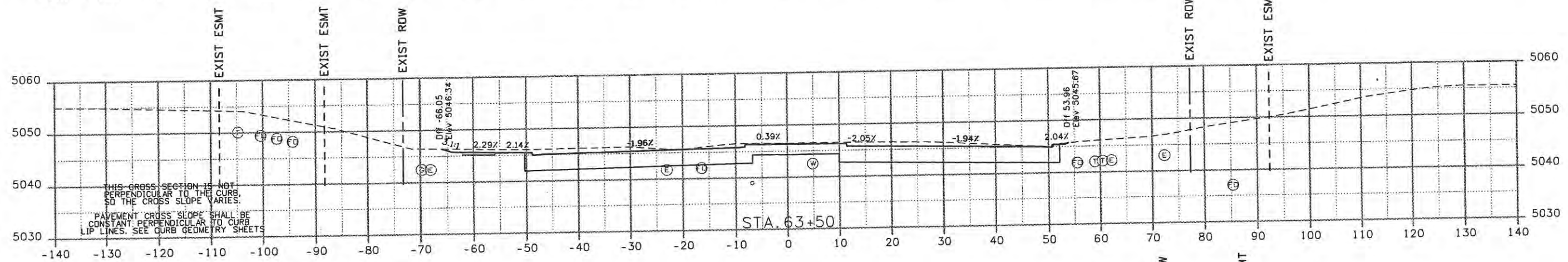
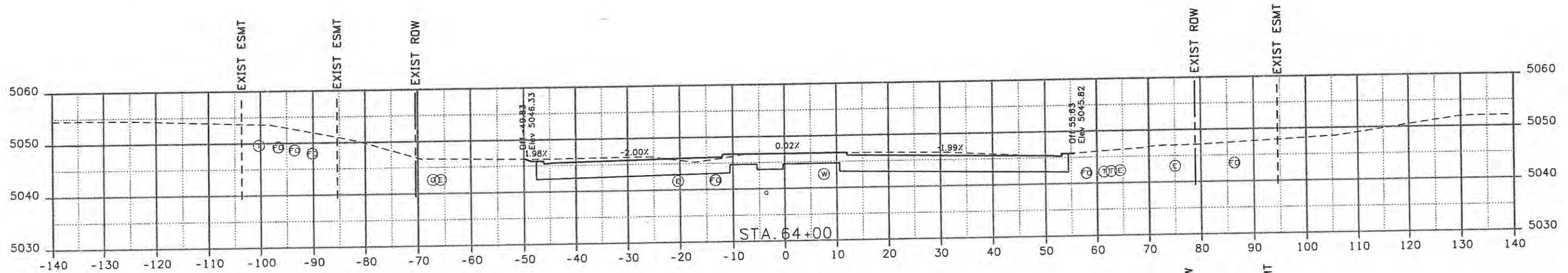
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CROSS SECTIONS CROSSROADS BLVD	
Designer: JJW	Structure Numbers
Detailer: JMB	
Sheet Subset: XSEC	Subset Sheets: CXS11 of 14

Project No./Code	ES4 0253-207
	17244
Sheet Number	12

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Print Date: 5/8/2009	Initials: JMB
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Horiz. Scale: 1:20	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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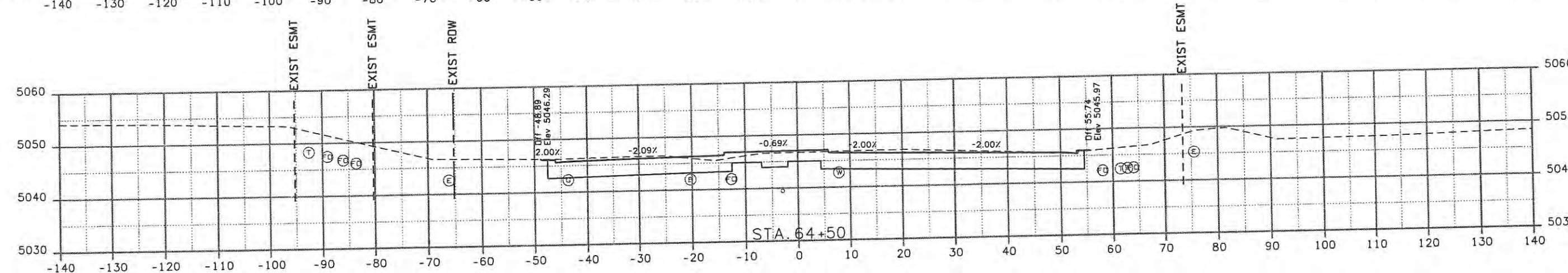
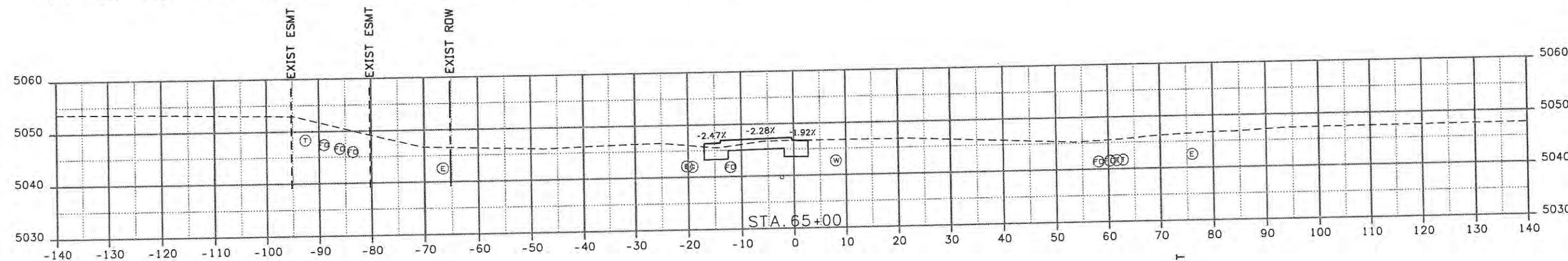
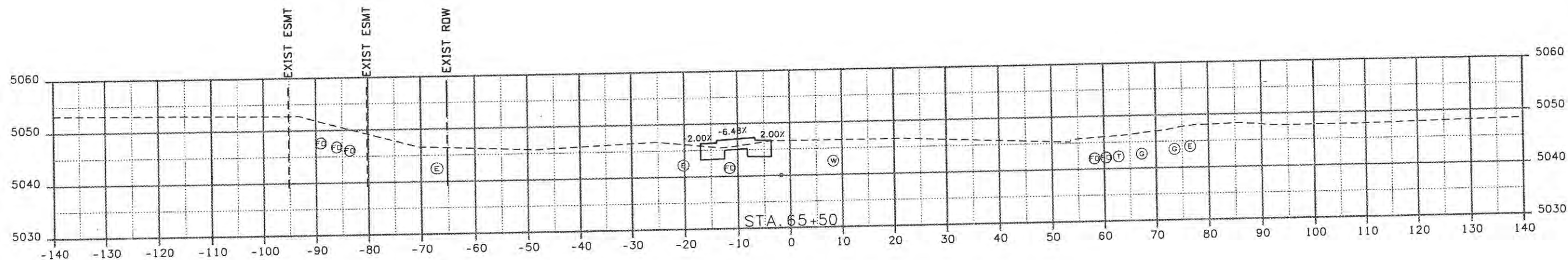
500 E. THIRD STREET  
LOVELAND, CO 80537  
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Revised:	
Void:	9/14/11

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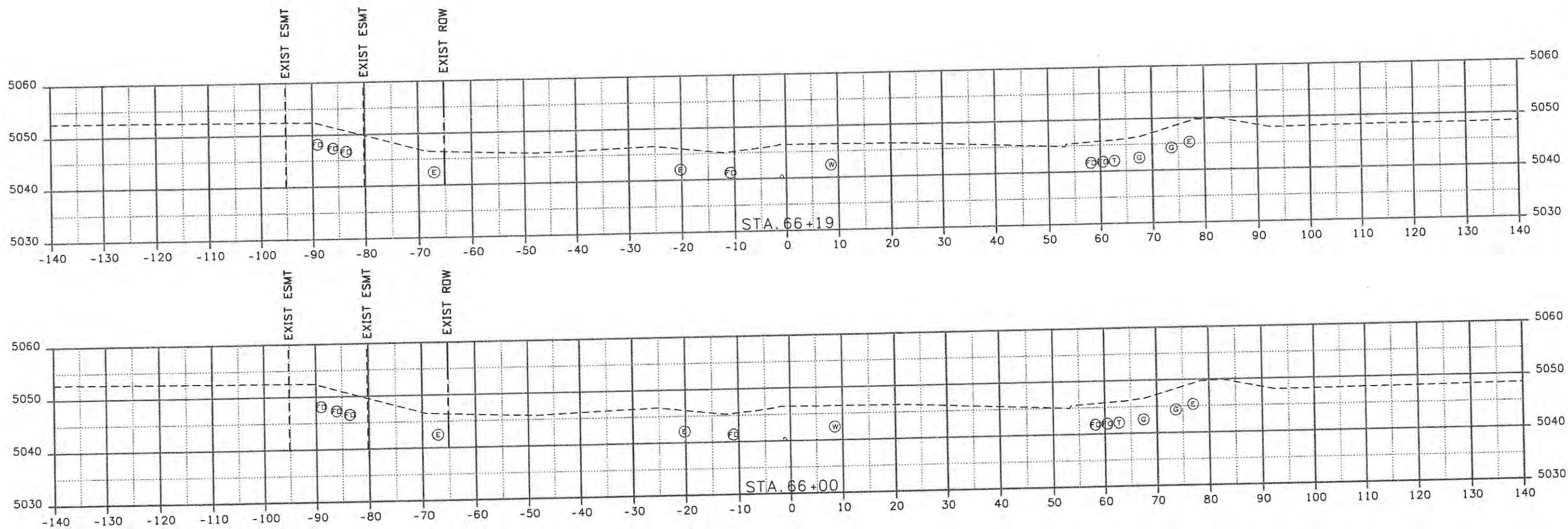
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<b>Computer File Information</b>		<b>Sheet Revisions</b>		<b>CITY OF LOVELAND</b> 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 <b>Colorado Department of Transportation</b>	<b>CROSS SECTIONS CROSSROADS BLVD</b>		<b>Project No./Code</b>	
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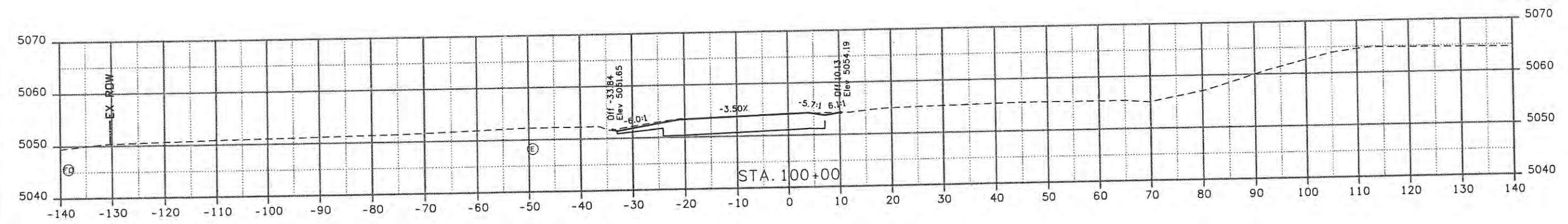
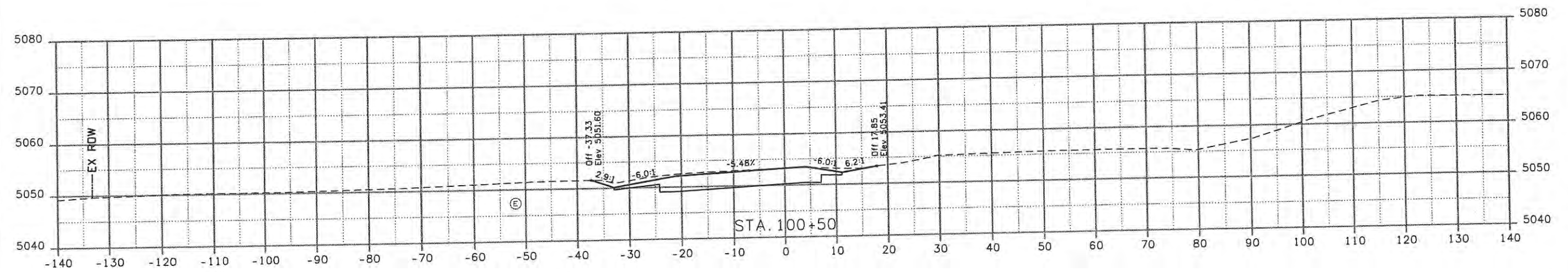
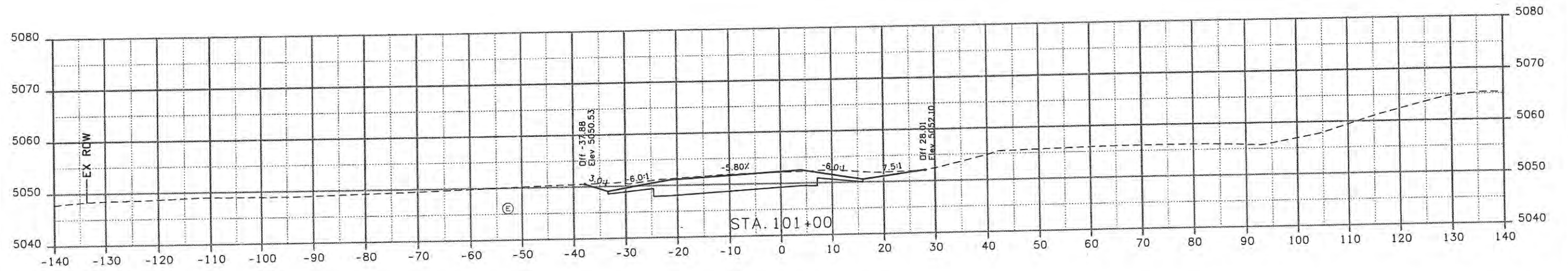
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<b>Computer File Information</b>		<b>Sheet Revisions</b>			<b>CITY OF LOVELAND</b> 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 <b>Colorado Department of Transportation</b>	<b>CROSS SECTIONS CROSSROADS BLVD</b>			<b>Project No./Code</b> ES4 0253-207	
Creation Date: 11/04/08	Initials: JBK	Date:	Comments:	Init.:			No Revisions:	Designer: JJW	Structure Numbers:	17244	
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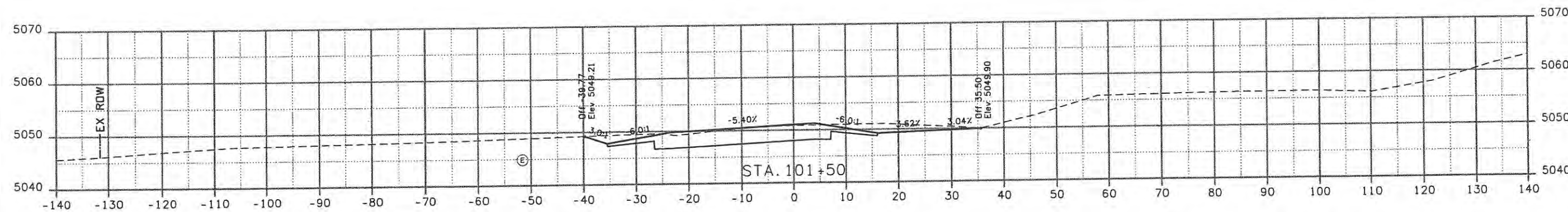
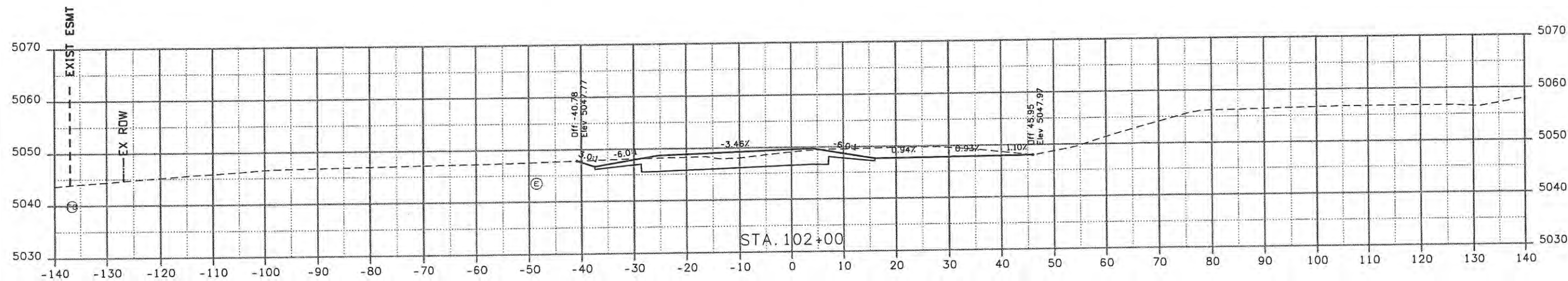
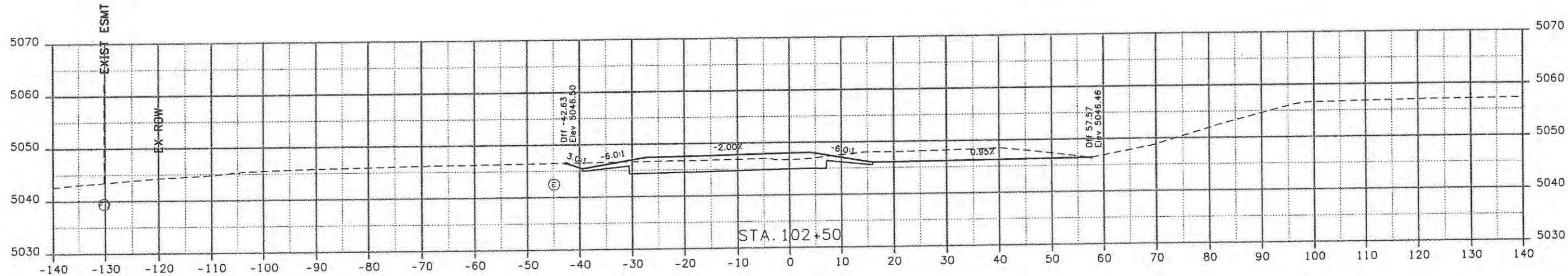
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<b>Computer File Information</b>		<b>Sheet Revisions</b>			<b>CITY OF LOVELAND</b> 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 <b>Colorado Department of Transportation</b>	<b>CROSS SECTIONS SOUTHWEST RAMP</b>		<b>Project No./Code</b> ES4 0253-207	
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Computer File Information	
Creation Date: 11/04/08	Initials: JBK
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Sheet Revisions		
Date:	Comments	Init.

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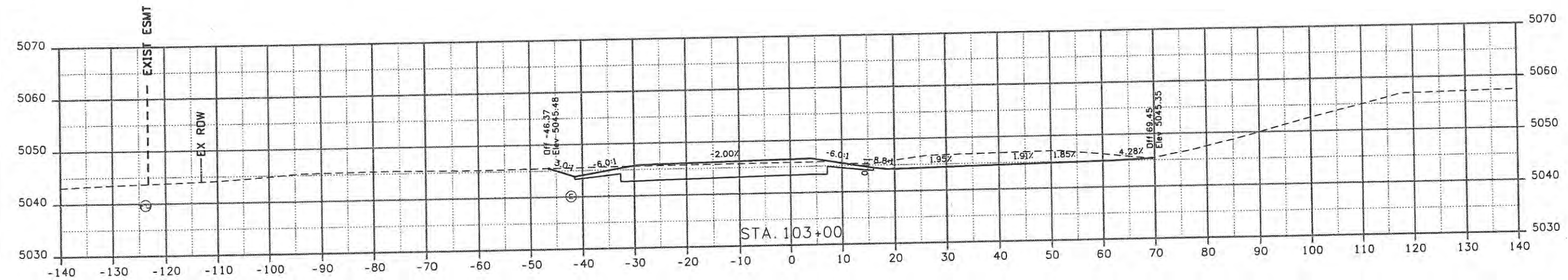
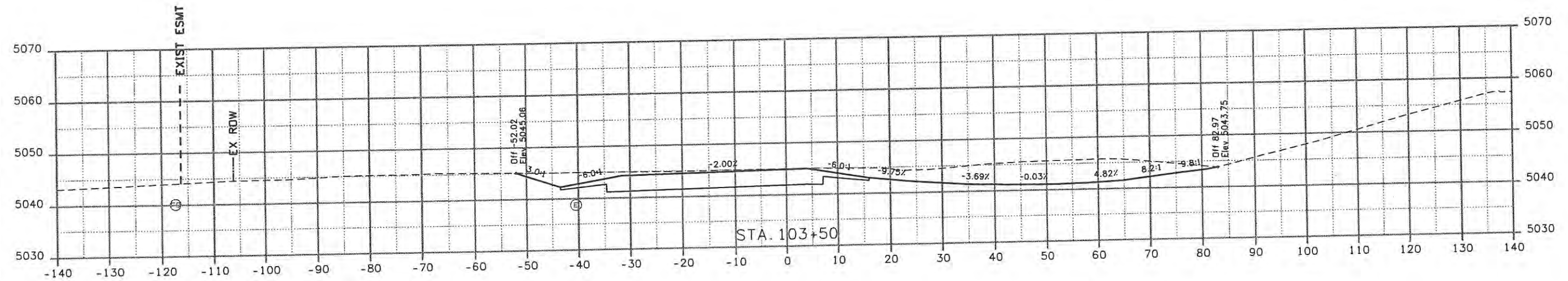
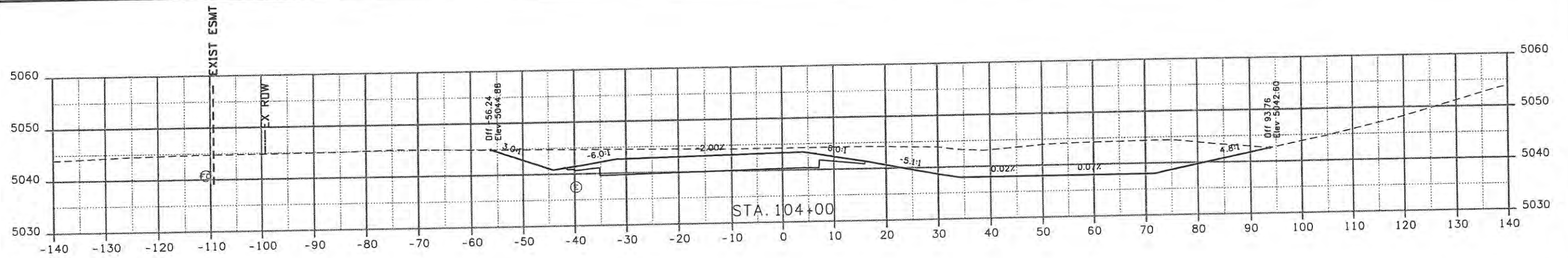
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CROSS SECTIONS SOUTHWEST RAMP	
Designer: JJW	Structure Numbers
Detailer: JBK	Subset Sheets: SWX2 of 4
Sheet Subset: XSEC	

Project No./Code	ES4 0253-207
Sheet Number	17

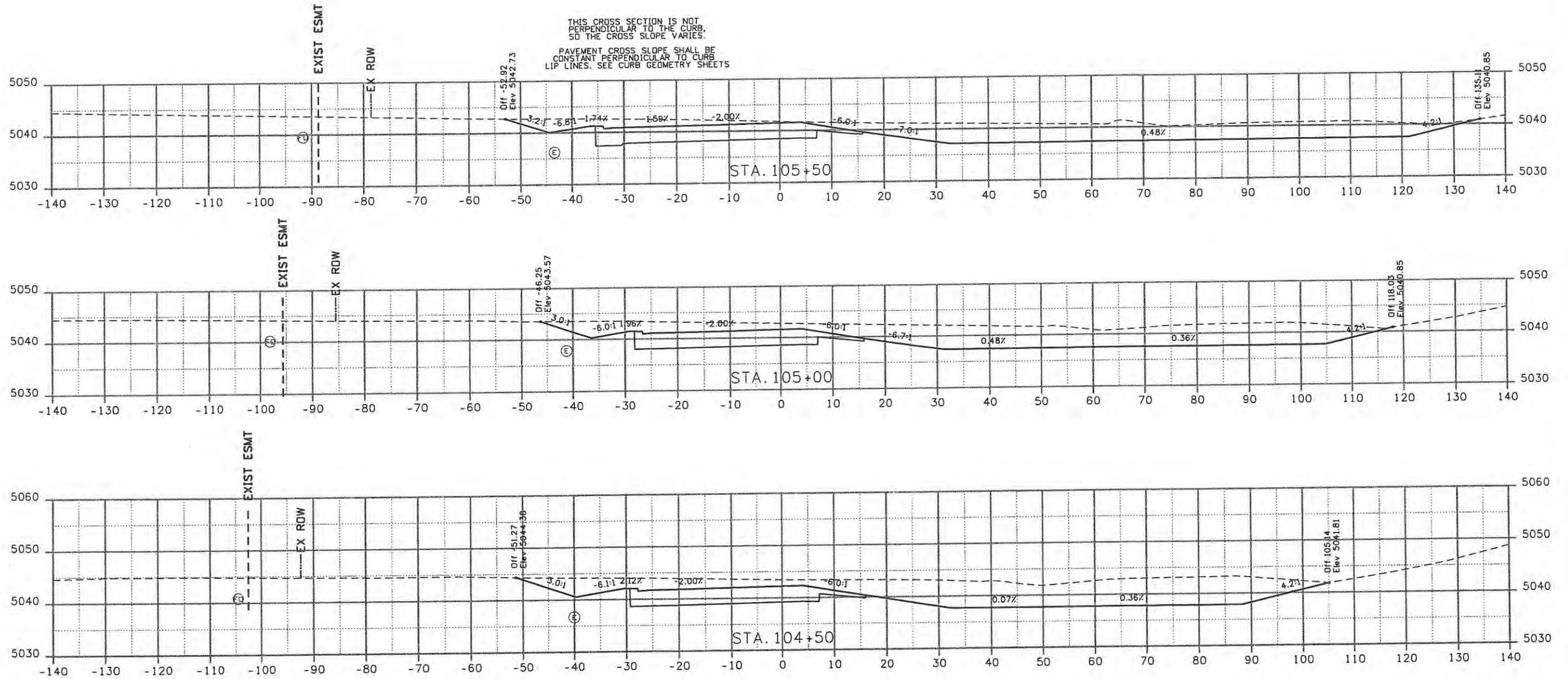
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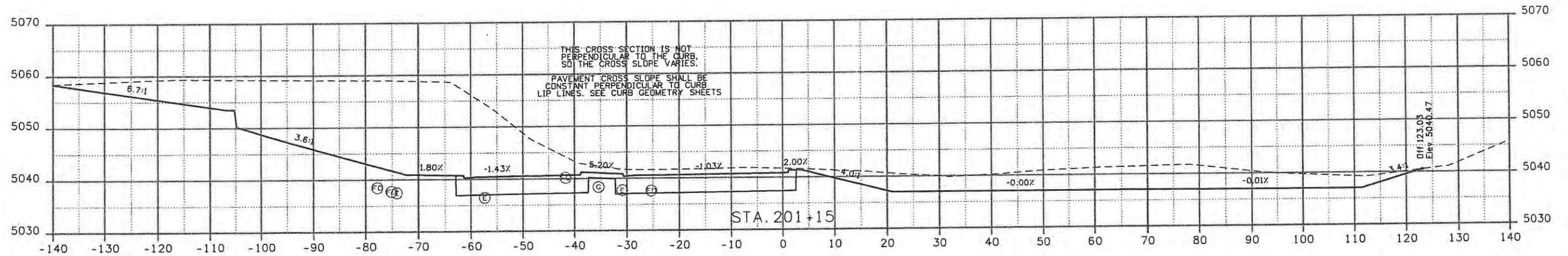
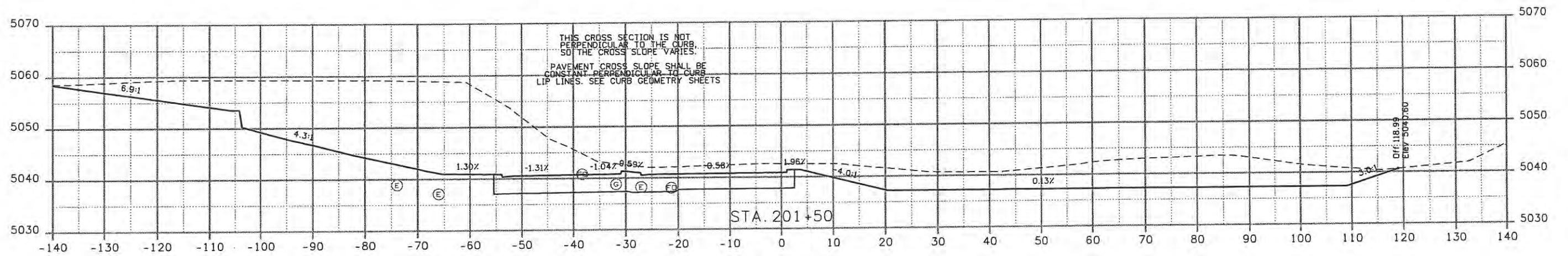
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Revised:	
Void:	9/14/11

CROSS SECTIONS SOUTHWEST RAMP	
Designer: JJW	Structure Numbers
Detailer: JBK	
Sheet Subset: XSEC	Subset Sheets: SWX4 of 4

Project No./Code	ES4 0253-207
	17244
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Computer File Information	
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Print Date: 5/8/2009	Initials: JBK
File Name: 0610031800_NW-ramp.dgn	
Horiz. Scale: 1:20	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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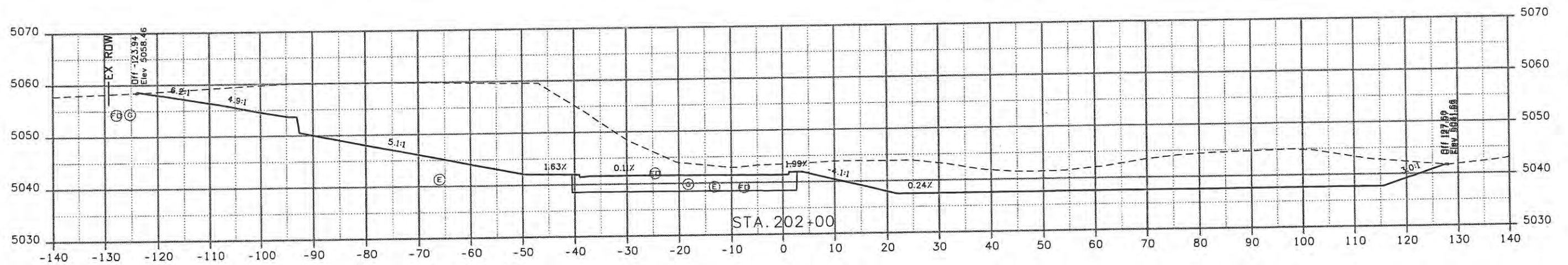
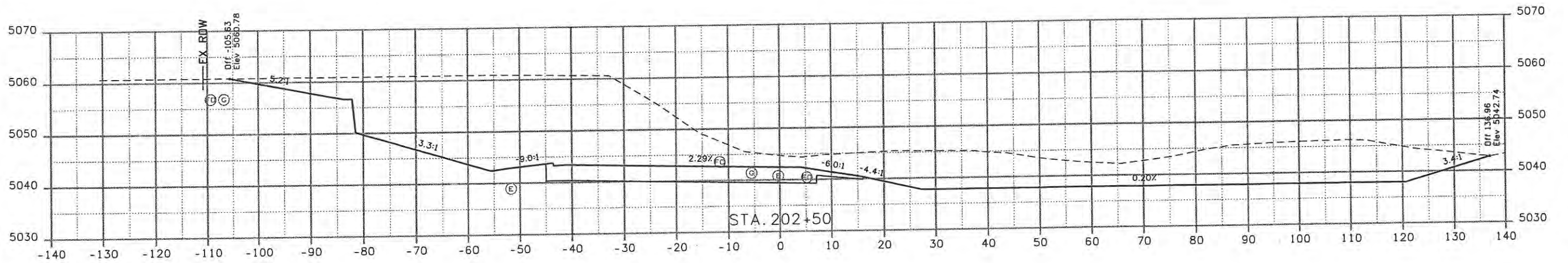


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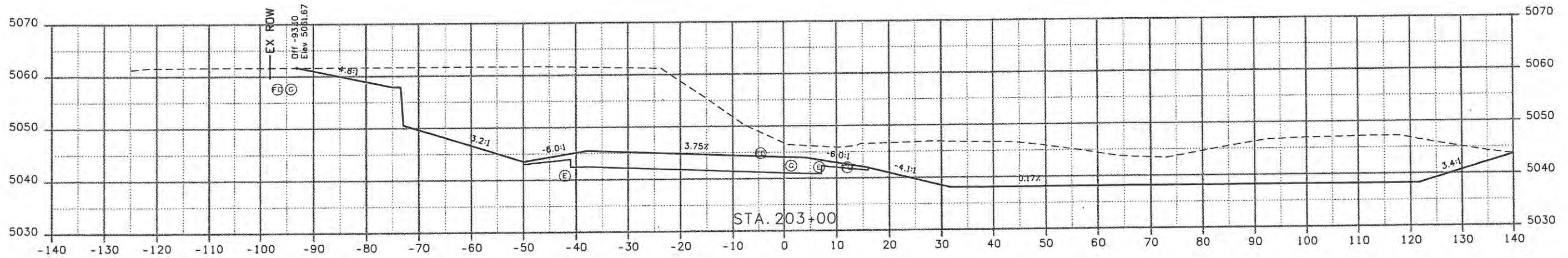
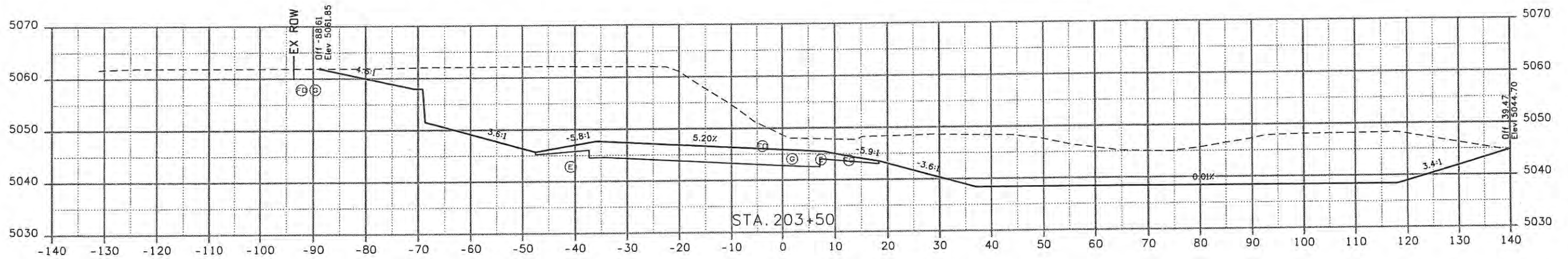
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<b>Computer File Information</b>		<b>Sheet Revisions</b>			<b>CITY OF LOVELAND</b> 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 <b>Colorado Department of Transportation</b>	<b>CROSS SECTIONS NORTHWEST RAMP</b>		<b>Project No./Code</b>	
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Computer File Information	
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Print Date: 5/8/2009	Initials: JBK
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Horiz. Scale: 1:20	Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

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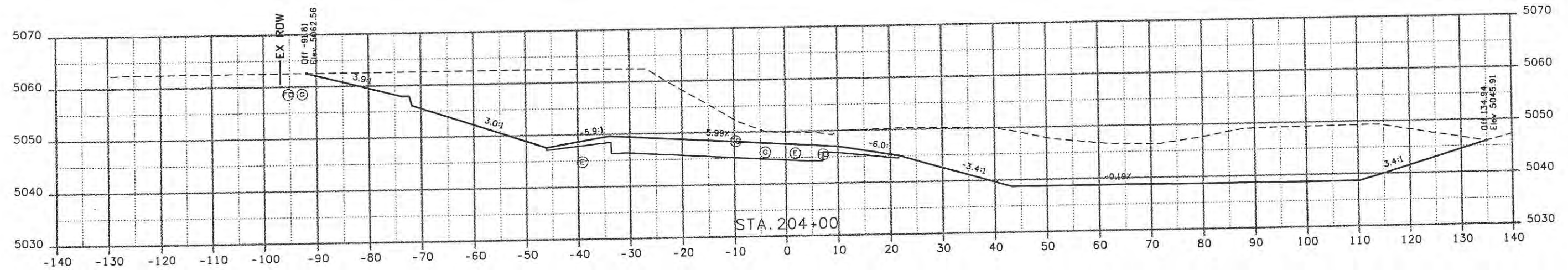
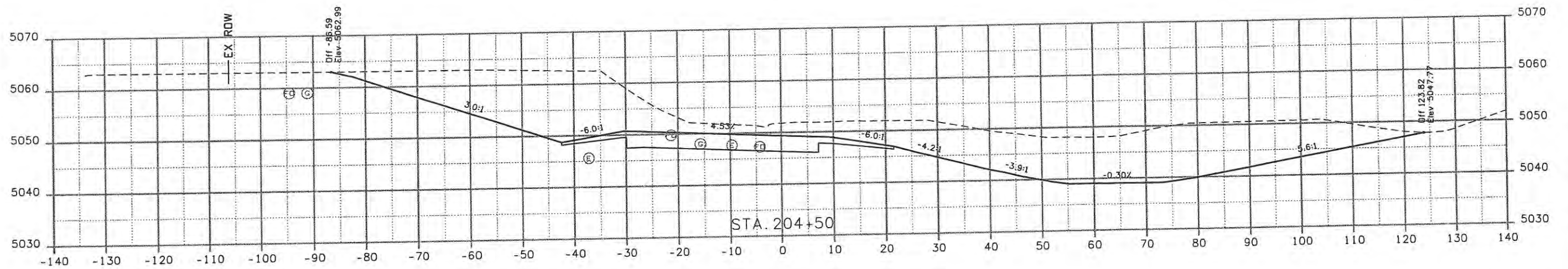
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Sheet Subset: XSEC	

Project No./Code
ES4 0253-207
17244
Sheet Number 22

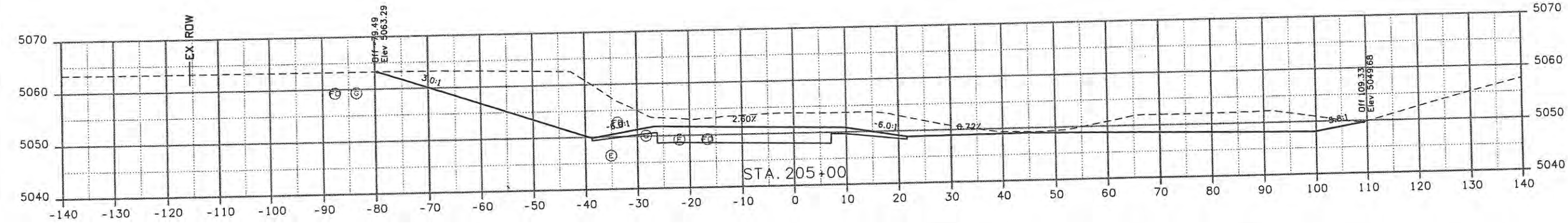
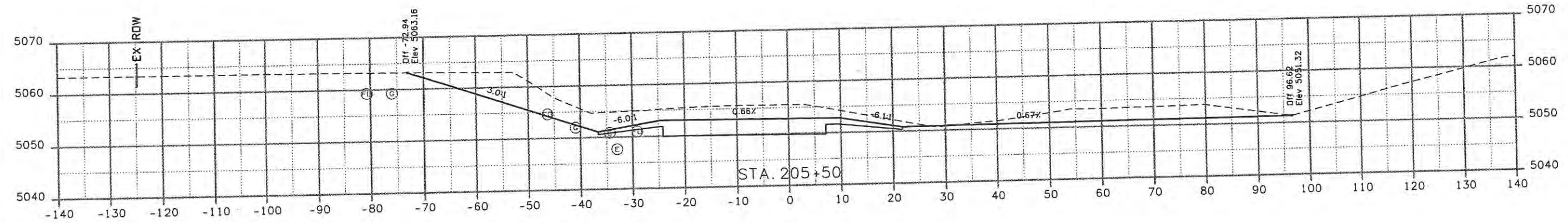
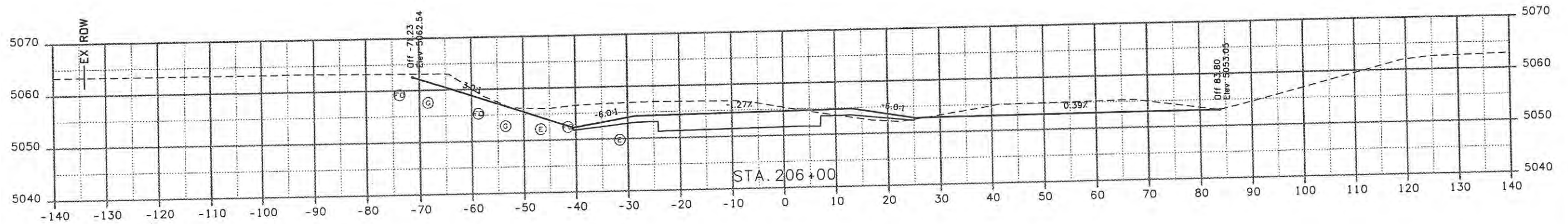
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<b>Computer File Information</b>		<b>Sheet Revisions</b>		<b>CITY OF LOVELAND</b> 500 E. THIRD STREET LOVELAND, CO 80537 970-962-2000	 <b>Colorado Department of Transportation</b>	<b>CROSS SECTIONS NORTHWEST RAMP</b>		<b>Project No./Code</b>	
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Horiz. Scale: 1:20	Vert. Scale: As Noted								

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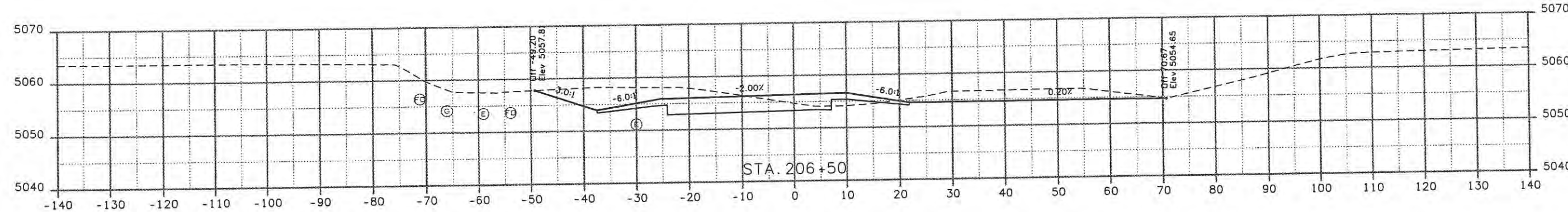
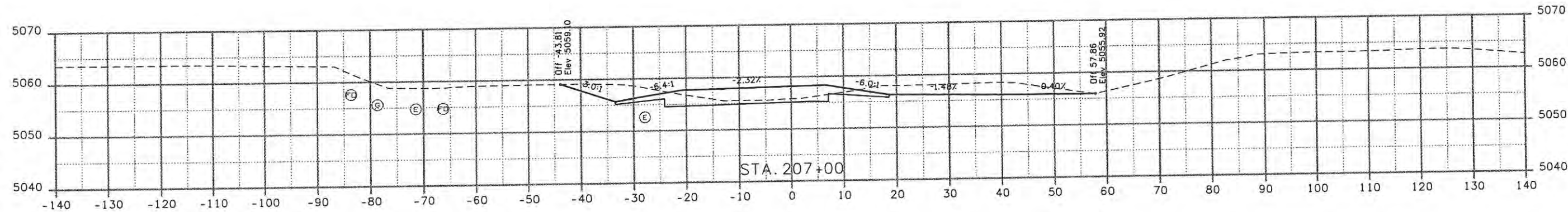
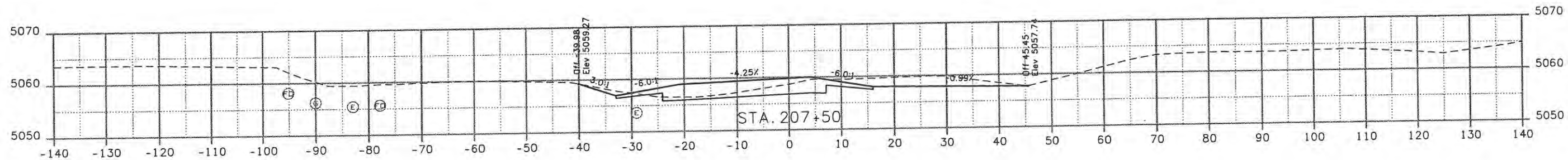
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Detailer: JBK	Subset Sheets: NWX5 of 8
Sheet Subset: XSEC	

Project No./Code	ES4 0253-207
Sheet Number	17244 / 24

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Computer File Information	
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Date:	Comments	Init.

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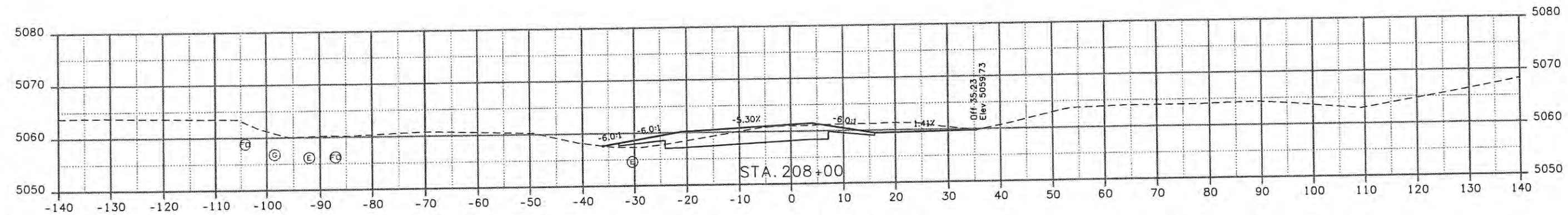
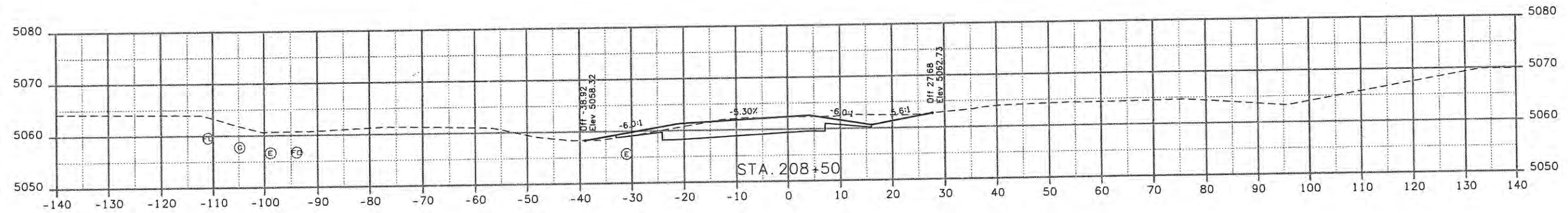
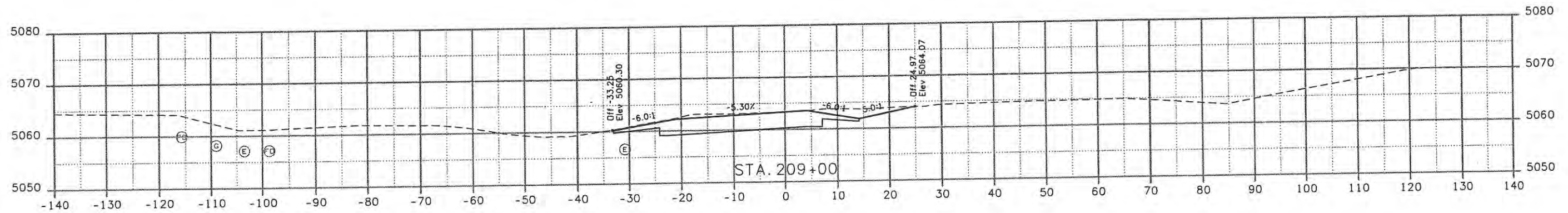
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No Revisions:
Revised:
Void: 9/14/11

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Sheet Subset: XSEC	Subset Sheets: NWX6 of 8

Project No./Code	ES4 0253-207
	17244
Sheet Number	25

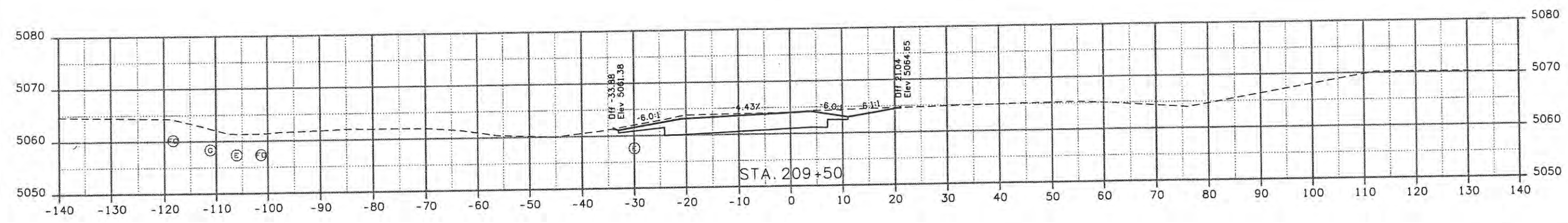
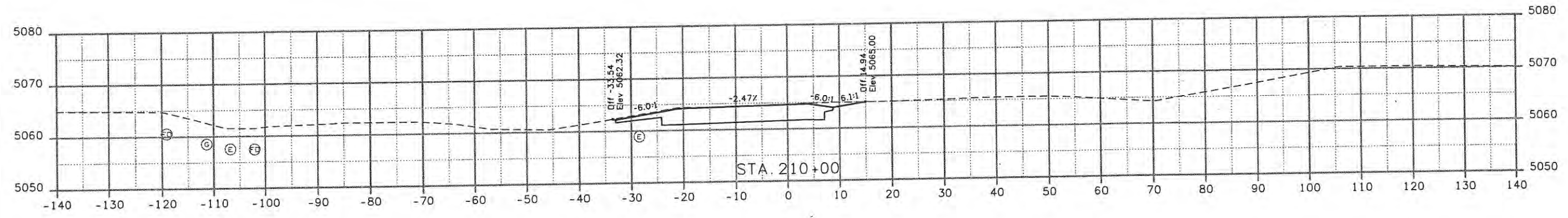
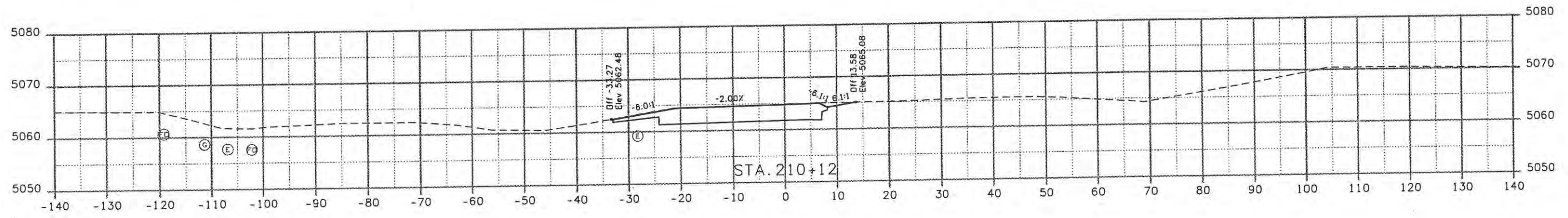
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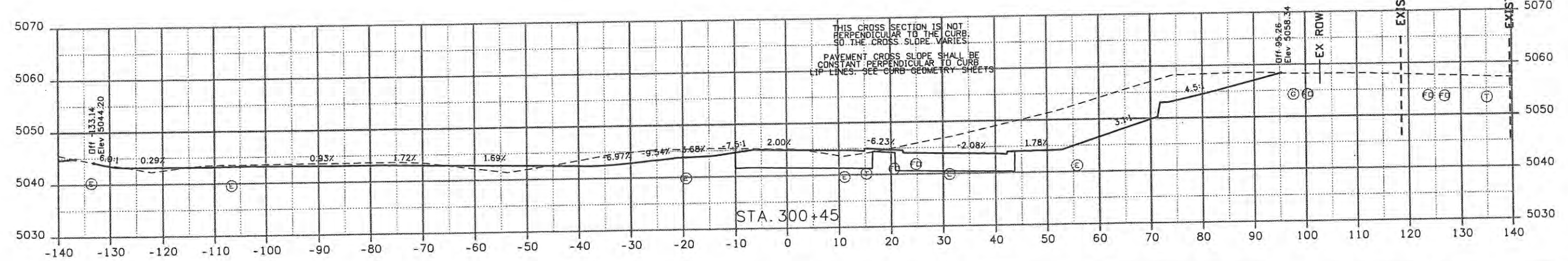
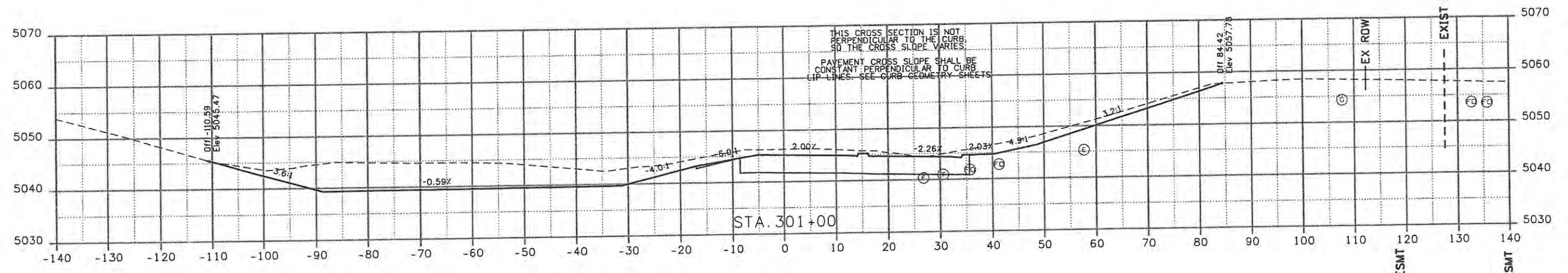
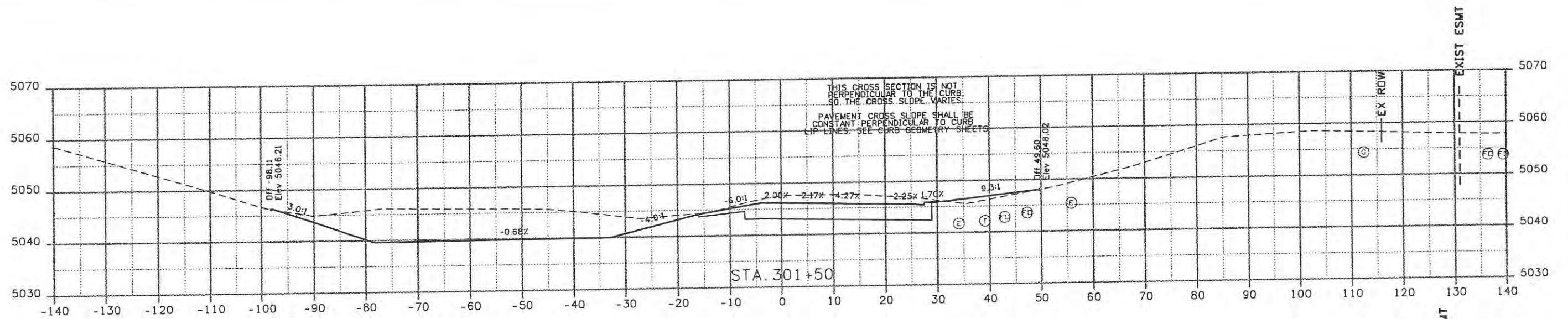




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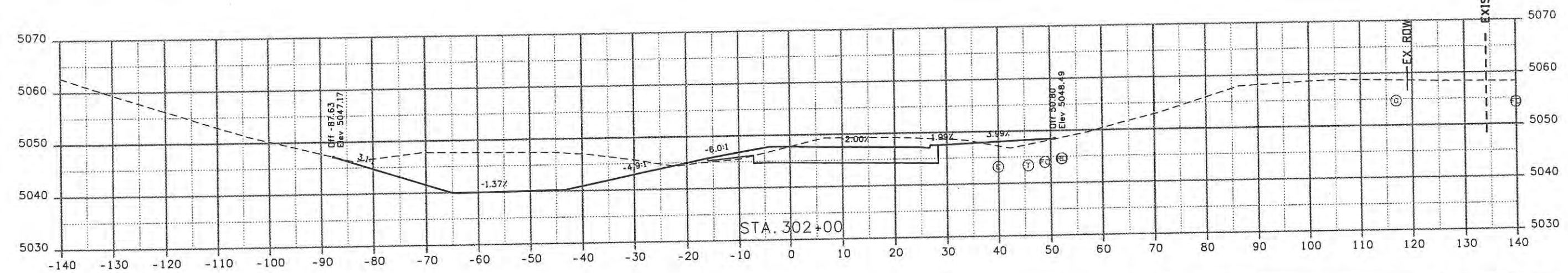
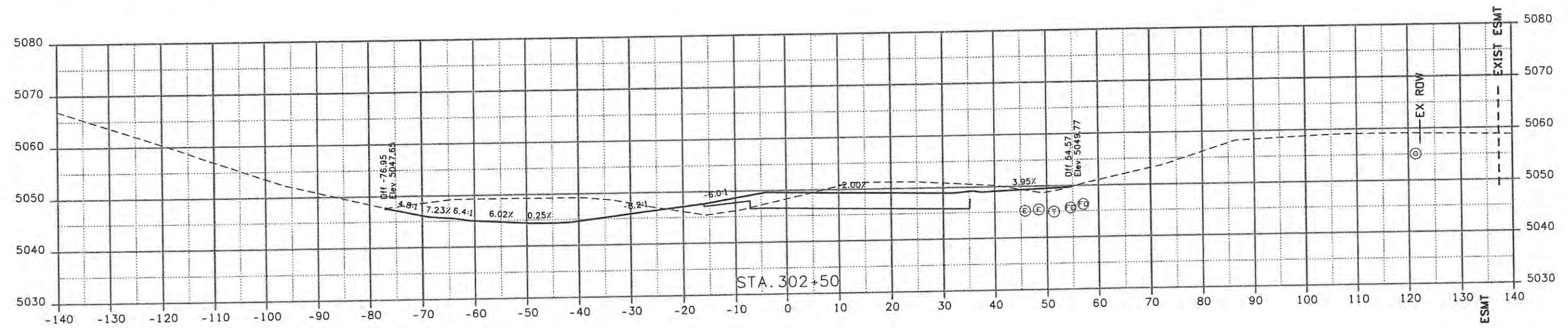
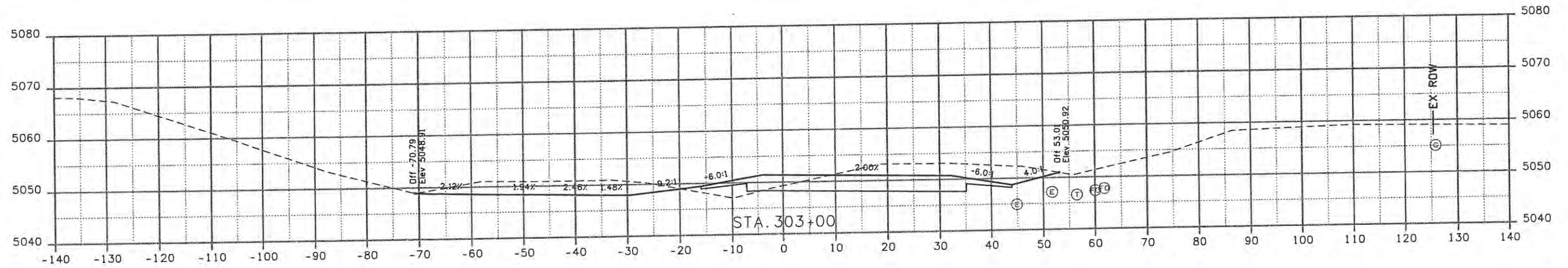
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No Revisions:	
Revised:	
Void:	9/14/11

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Detailer: JBK	
Sheet Subset: XSEC	Subset Sheets: NEX1 of 6

Project No./Code	ES4 0253-207
	17244
Sheet Number	28

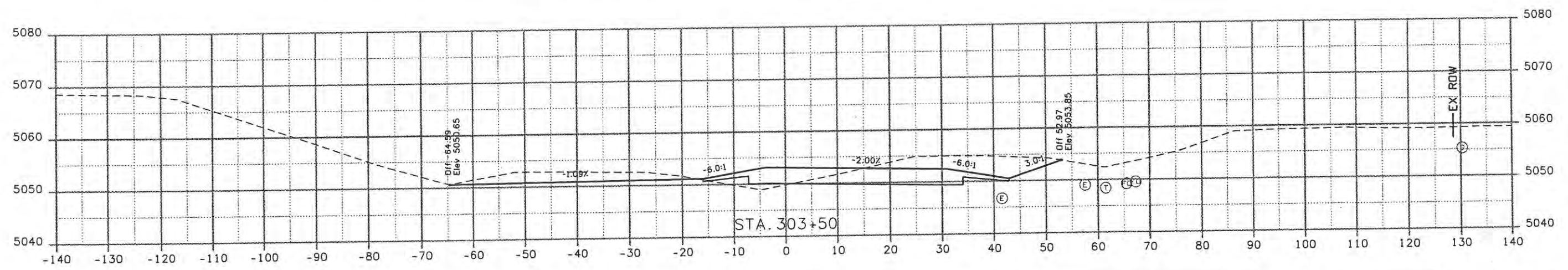
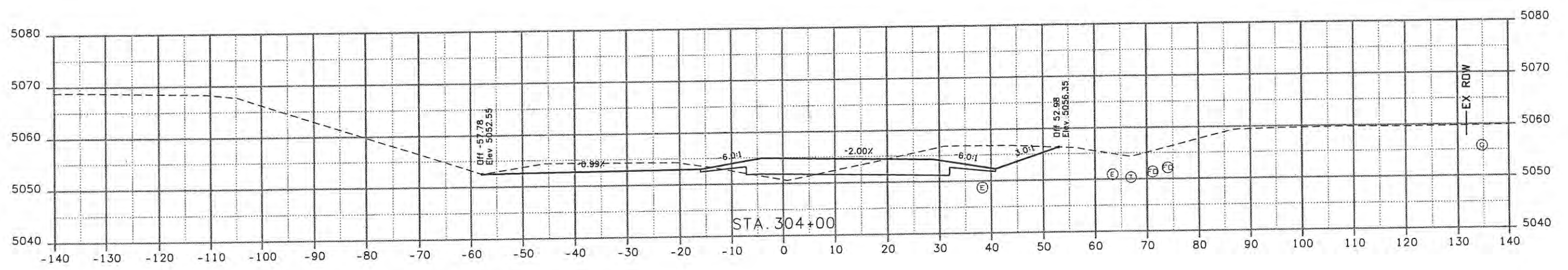
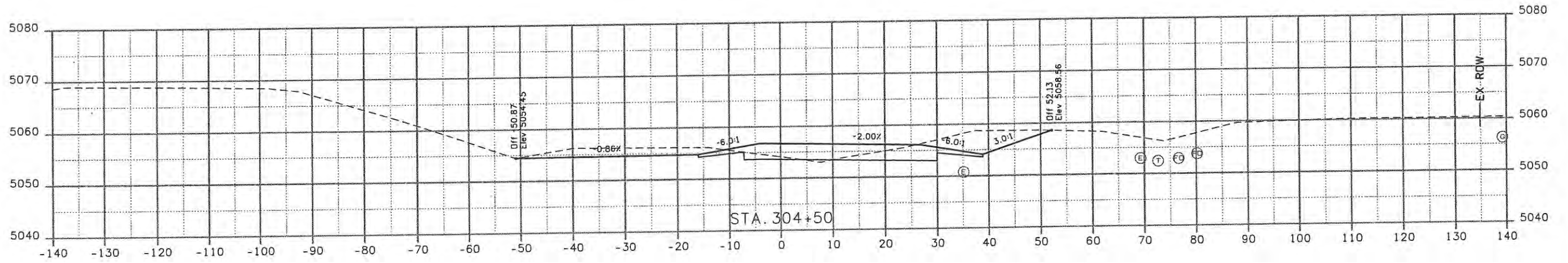




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Creation Date: 11/04/28	Initials: JBK	Date:	Comments			Init.	No Revisions:	Designer: JJW	Structure Numbers
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Date:	Comments	Init.

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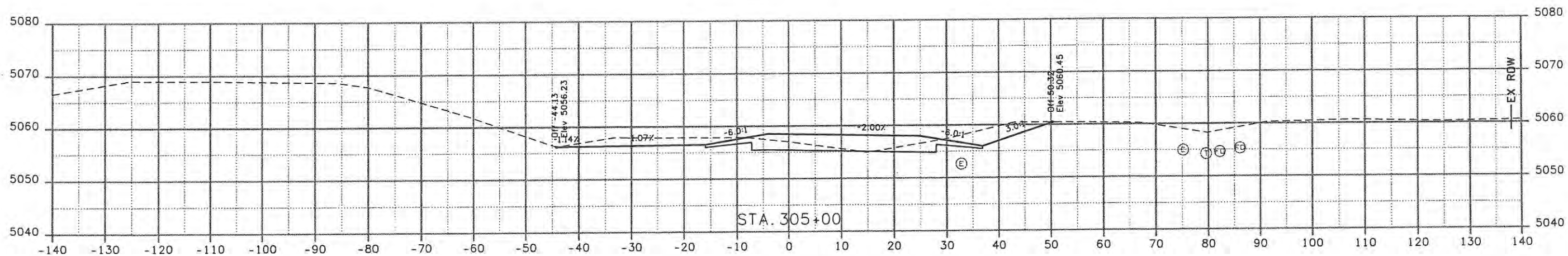
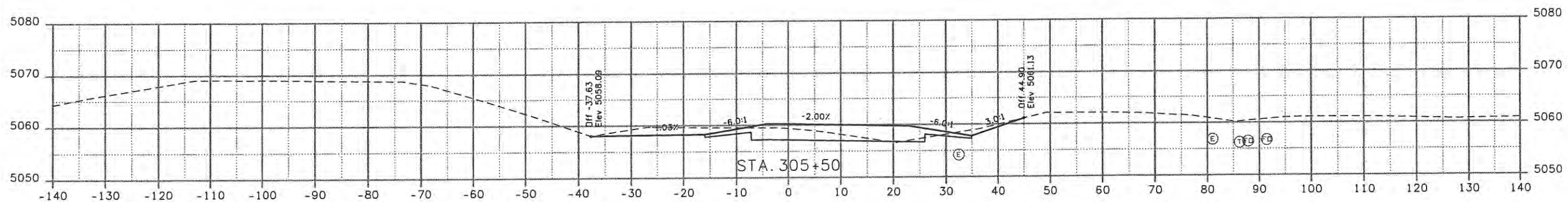
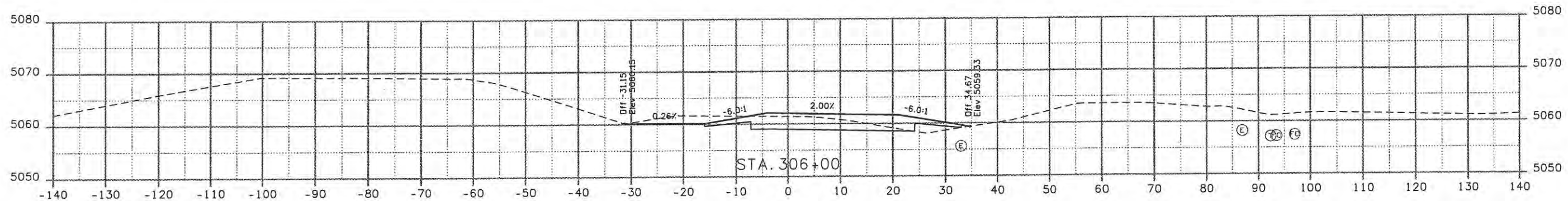
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Designer: JJW	Structure Numbers
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Date:	Comments	Init.

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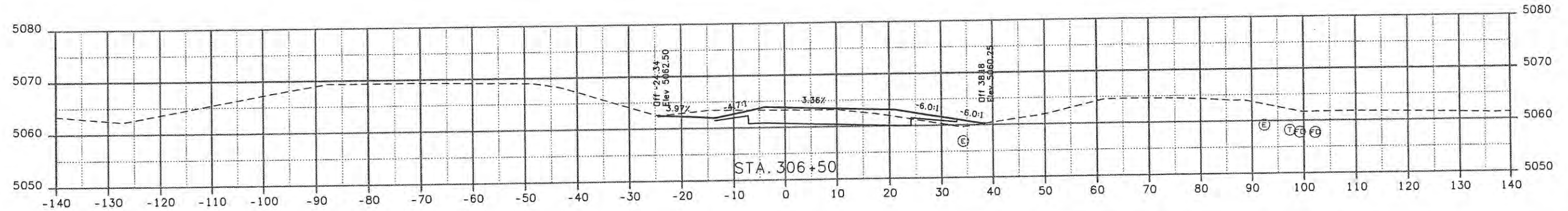
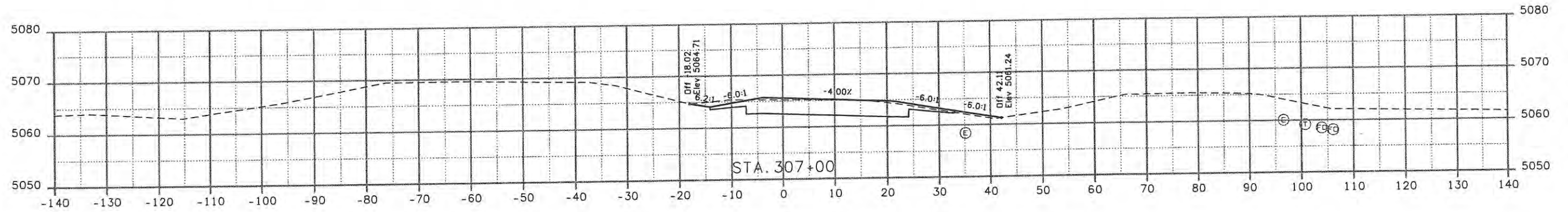
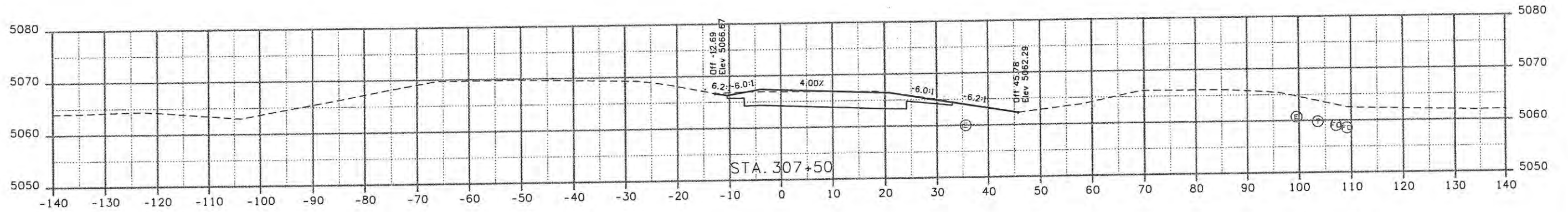
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Designer: JJW	Structure Numbers
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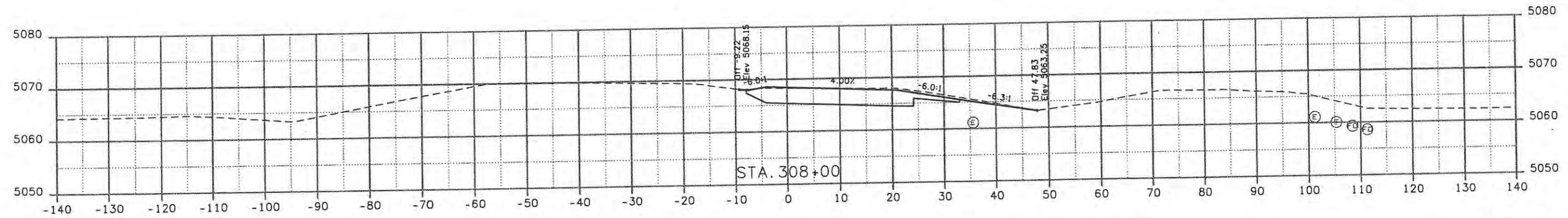
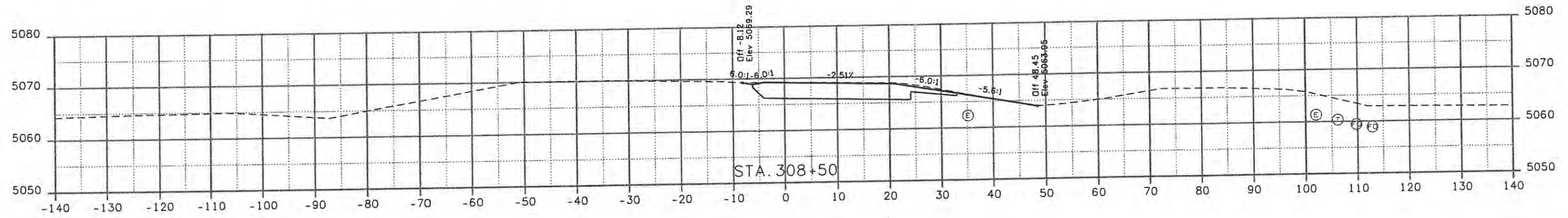
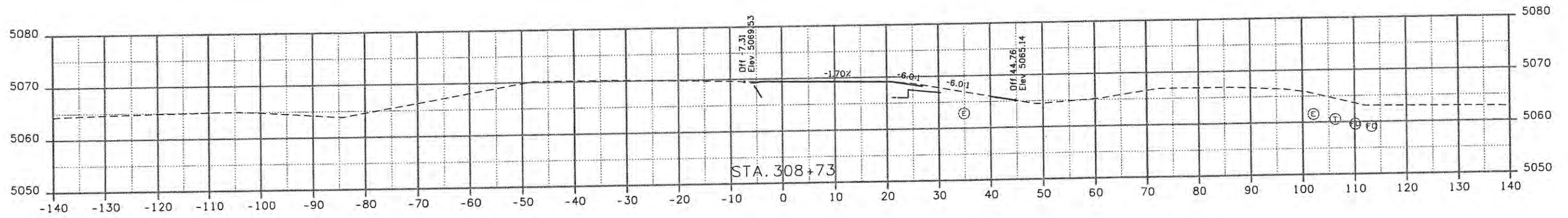
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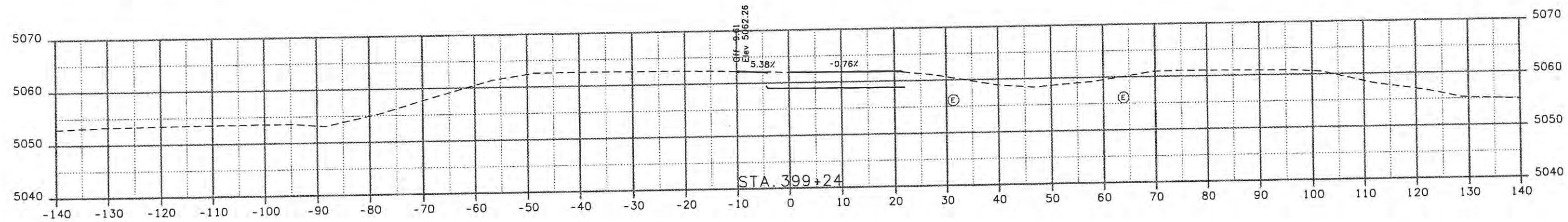
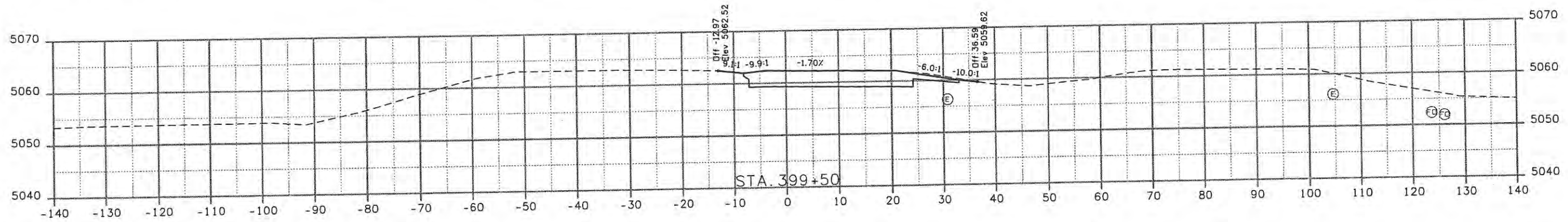
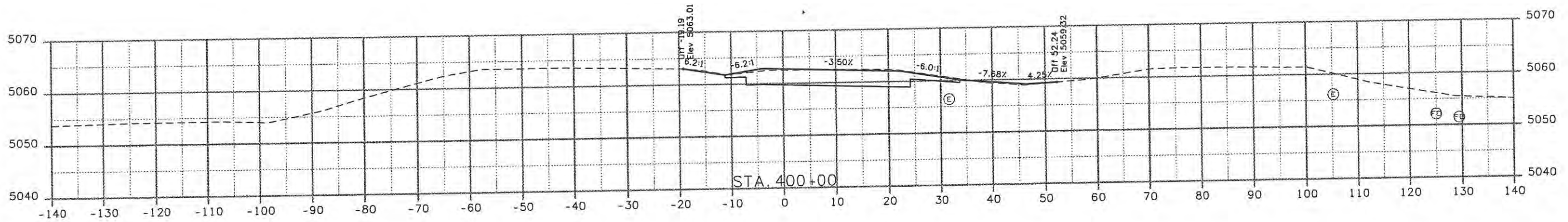

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Sheet Subset: XSEC	

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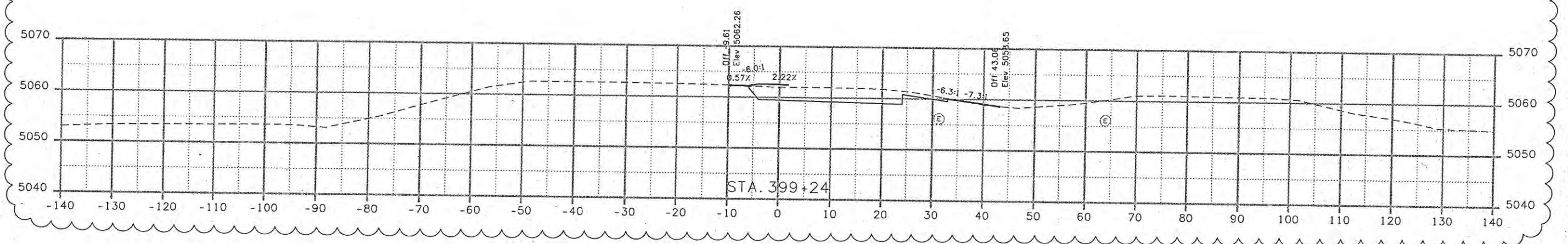
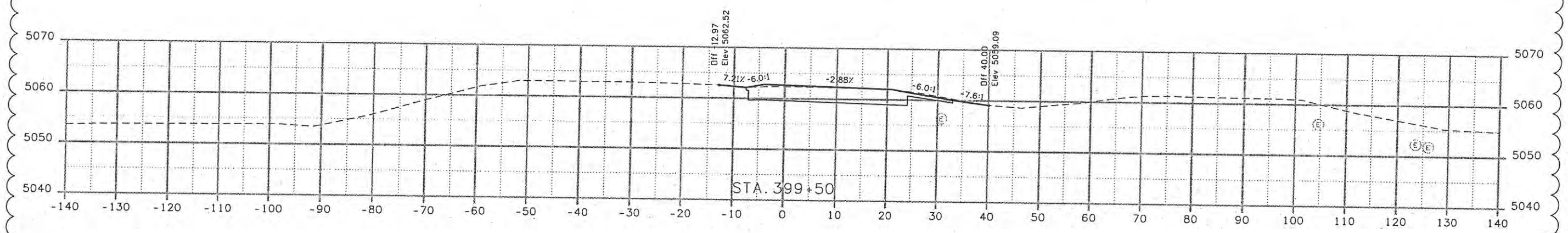
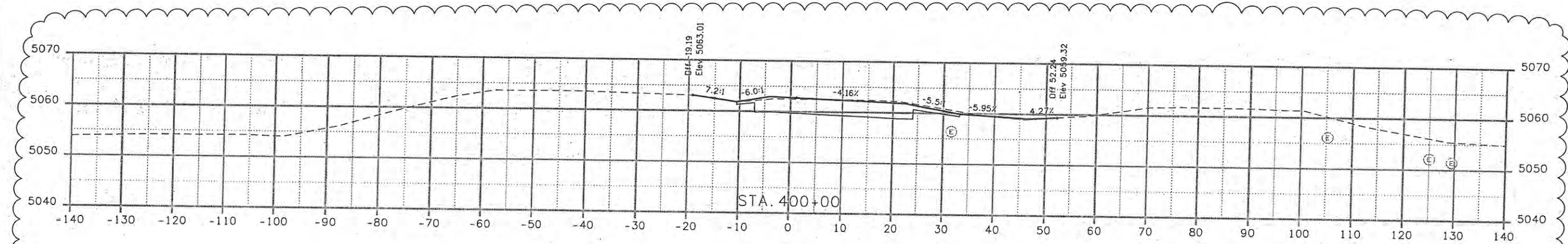


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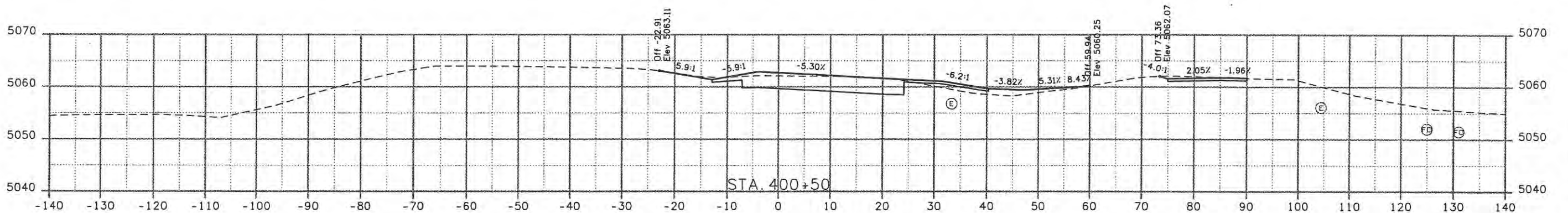
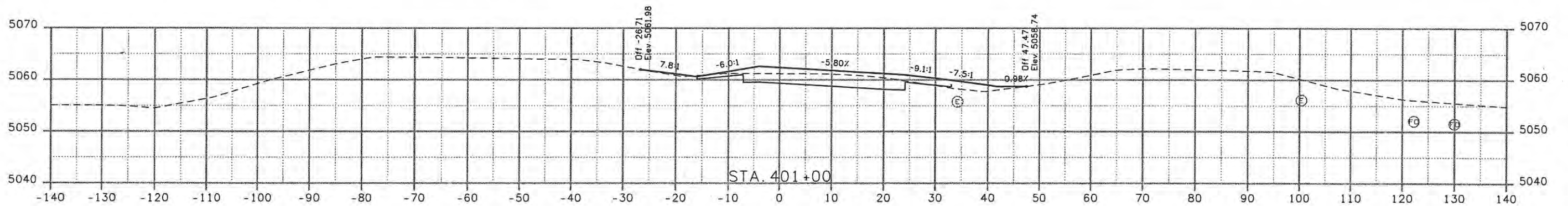
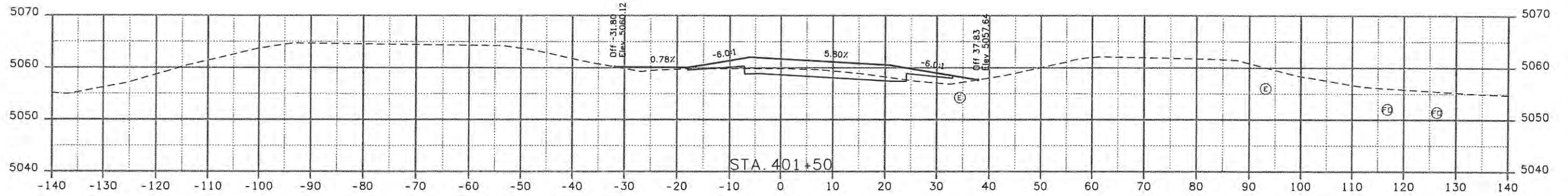
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No Revisions:	CROSS SECTIONS SOUTHEAST RAMP	
Revised:	Designer: JJW	Structure Numbers
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File Name: 0610031800_SEramp.dgn	
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Sheet Revisions		
Date:	Comments	Init.

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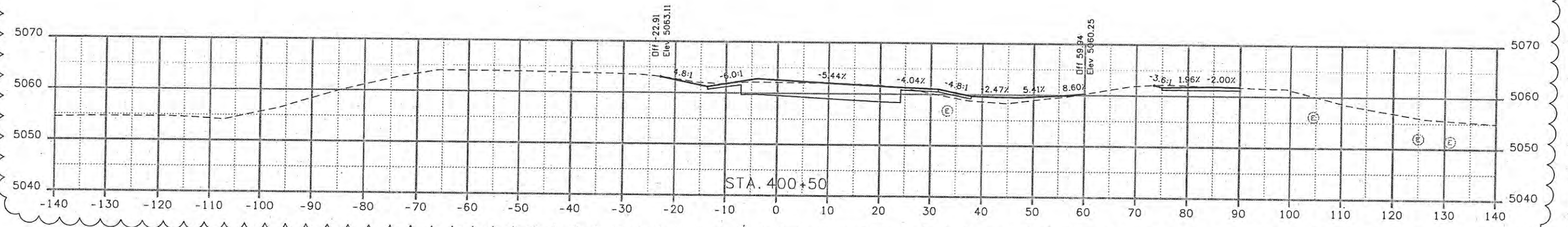
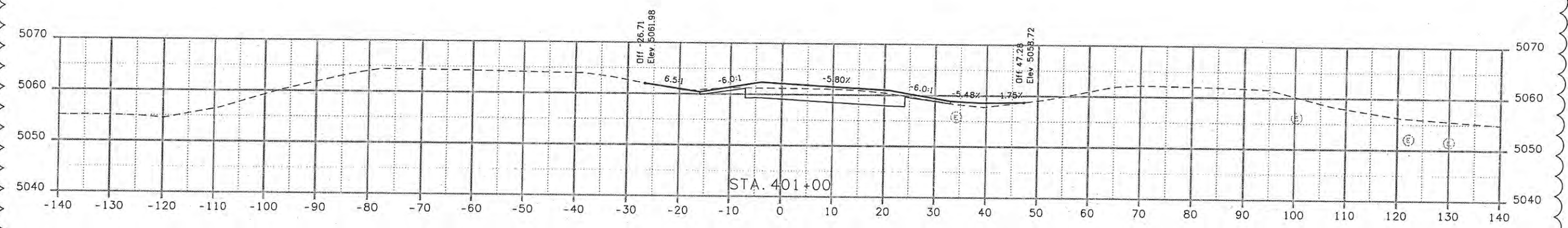
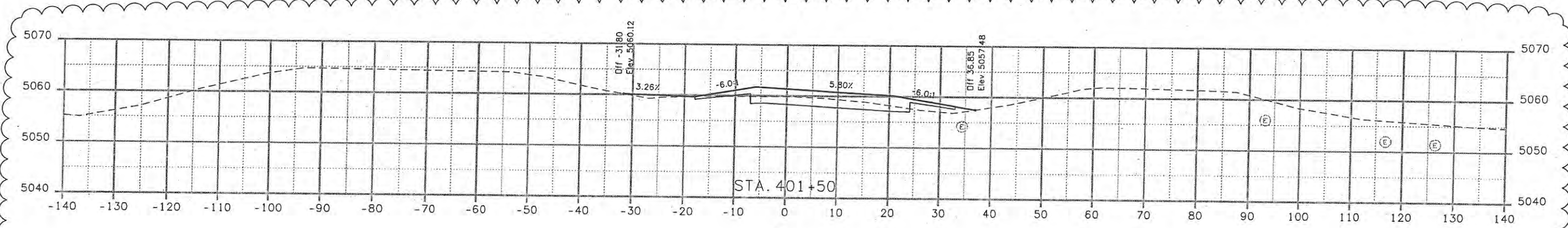
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Detailer: JBK	
Sheet Subset: XSEC	Subset Sheets: SE2 of 6

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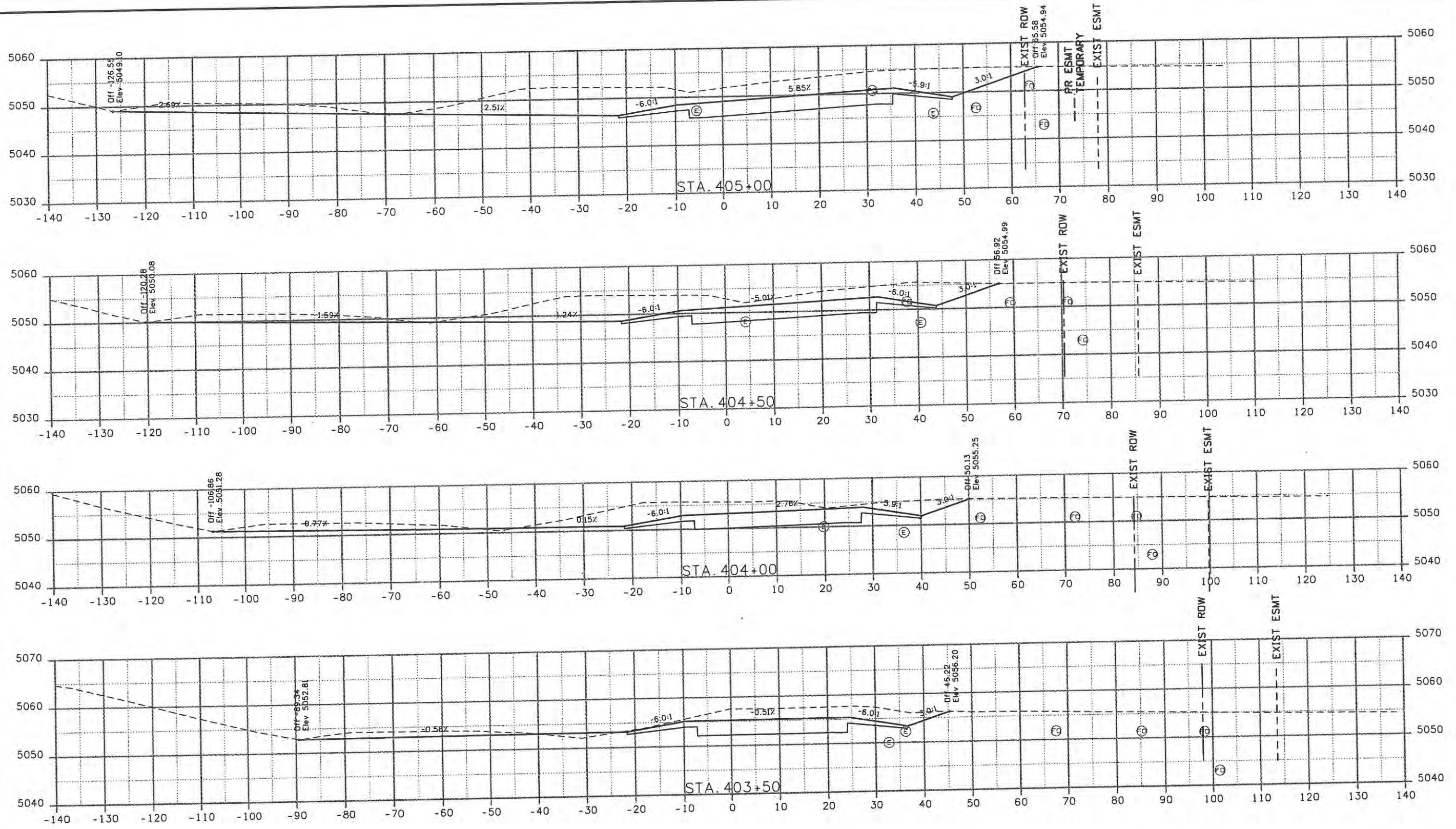
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Sheet Subset: XSEC	

Project No./Code	ES4 0253-207
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Sheet Number	35X

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Sheet Revisions		
Date:	Comments	Init.

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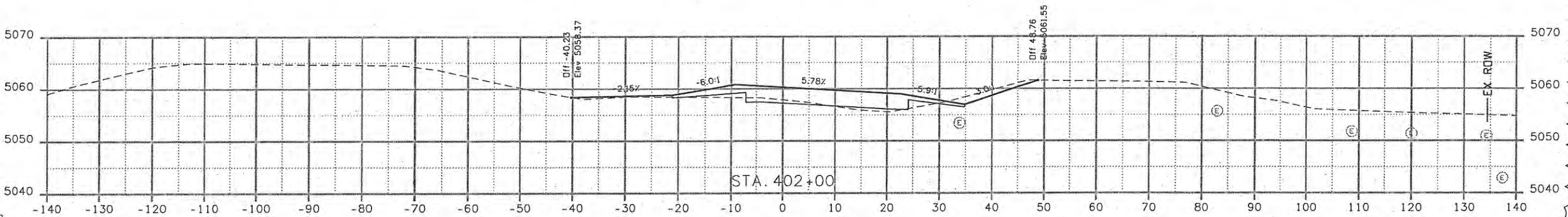
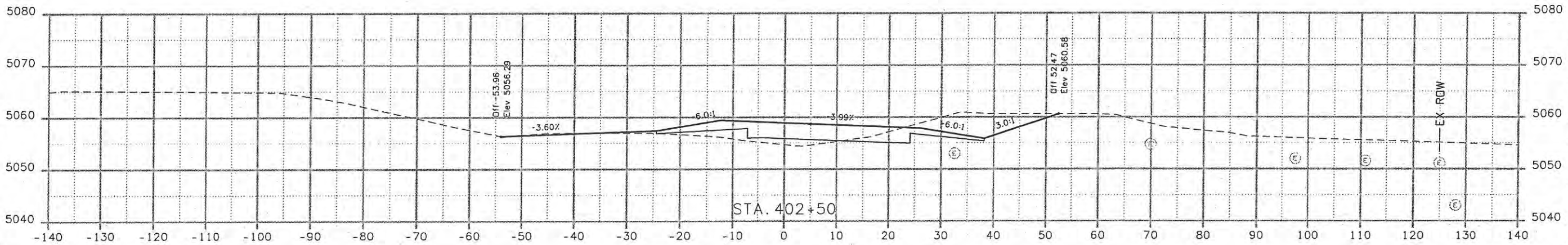
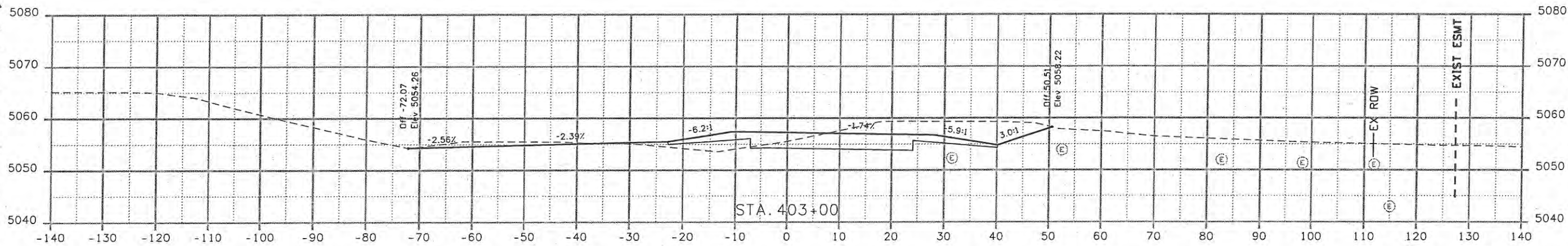
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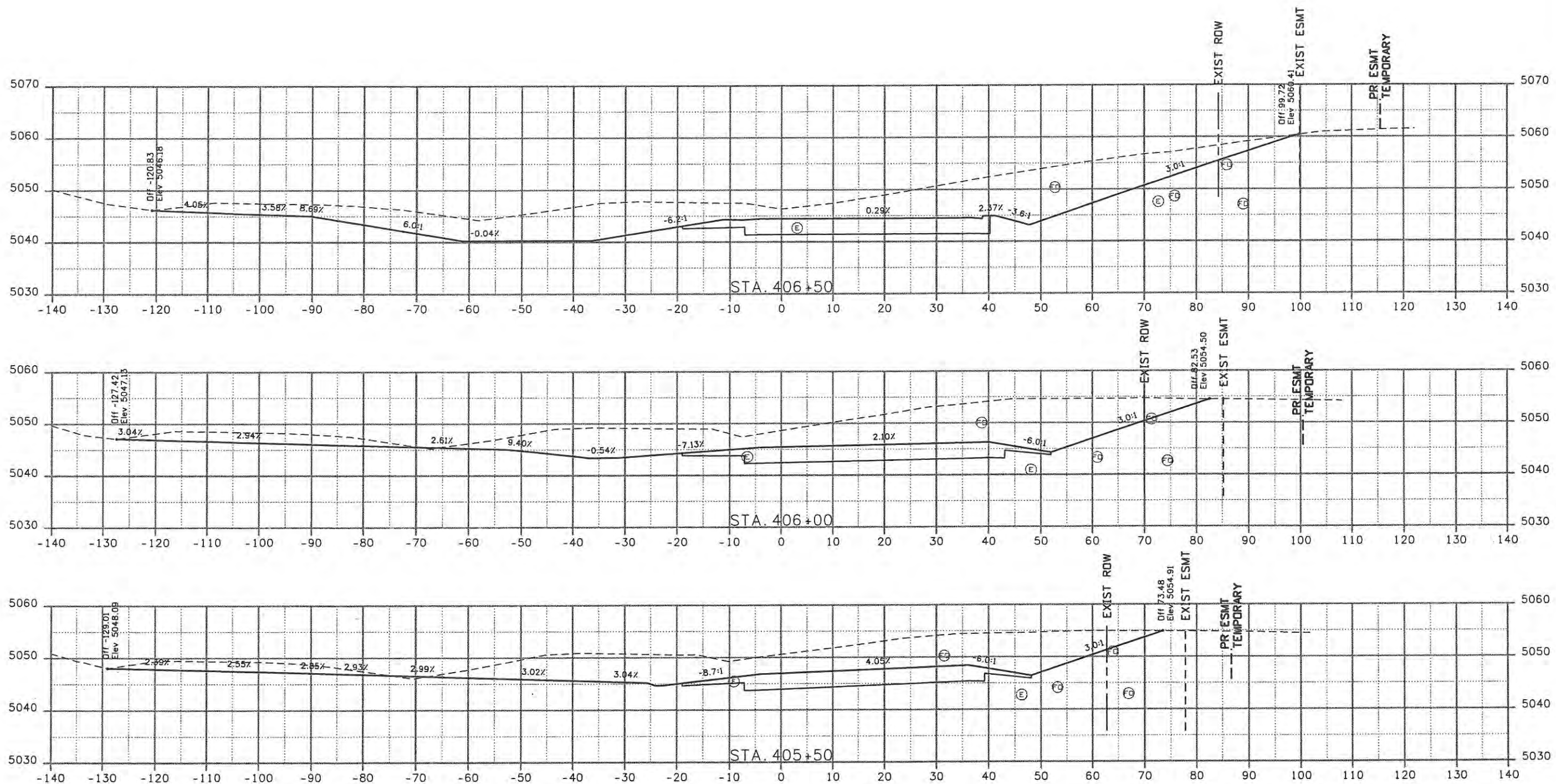
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Project No./Code	ES4 0253-207
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Computer File Information	
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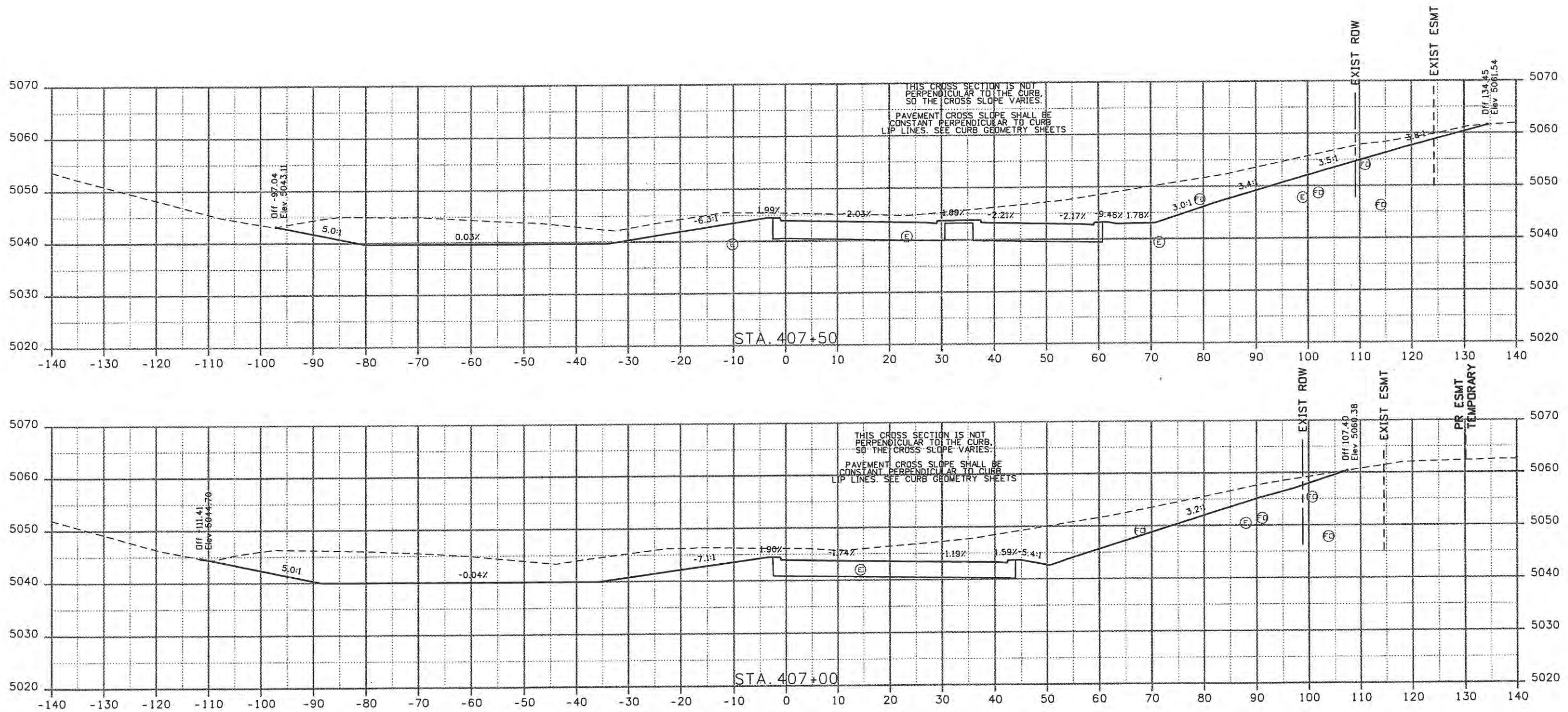
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Detailer: JBK	Subset Sheets: SE5 of 6
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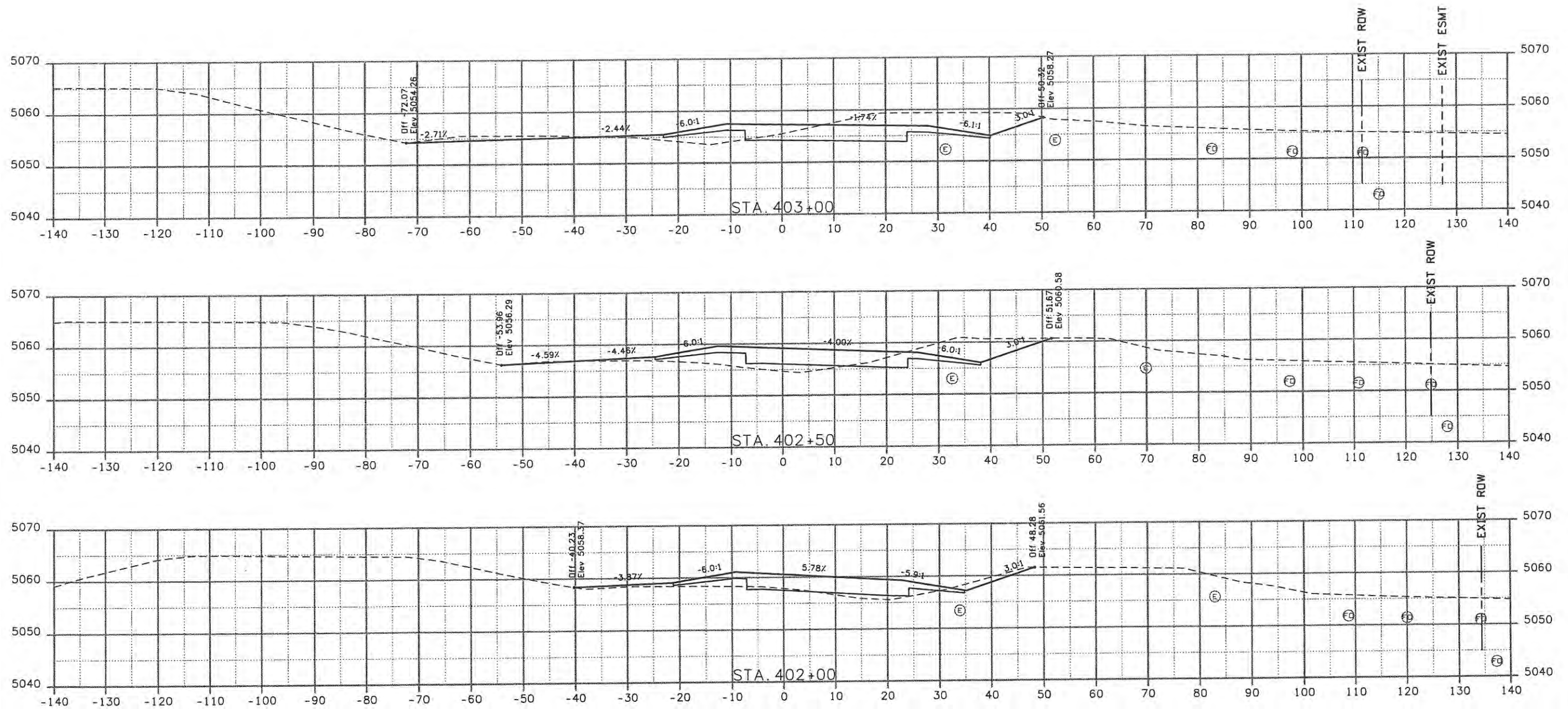
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Computer File Information	
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Project No./Code	ES4 0253-207
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