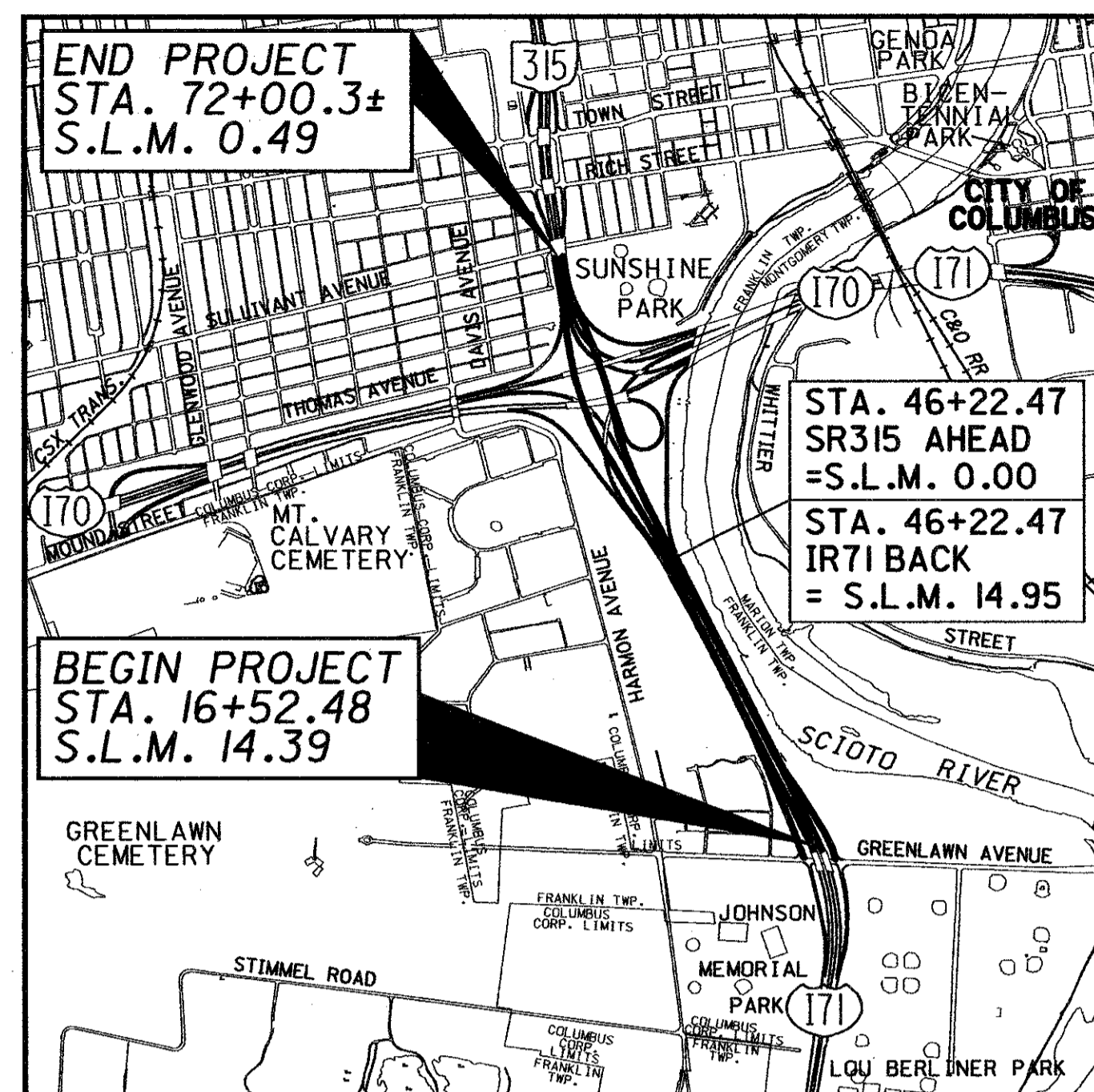


STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

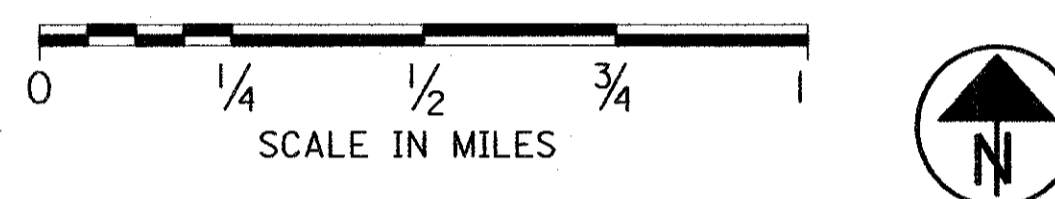
**FRA-IR71-14.39**  
**FRA-315-0.00**

CITY OF COLUMBUS  
FRANKLIN COUNTY



LOCATION MAP

LATITUDE: N 39° 56' 45" LONGITUDE: E 83° 00' 50"



PORTION TO BE IMPROVED \_\_\_\_\_  
STATE & FEDERAL ROUTES \_\_\_\_\_  
OTHER ROADS \_\_\_\_\_

DESIGN DESIGNATION

CURRENT DAY ADT (2000) \_\_\_\_\_ 123,950  
DESIGN YEAR ADT (2020) \_\_\_\_\_ 148,800  
DESIGN HOURLY VOLUME (2021) \_\_\_\_\_  
DIRECTIONAL DISTRIBUTION \_\_\_\_\_ 50 %  
TRUCKS (24 HOUR B&C) \_\_\_\_\_ 9 %  
DESIGN SPEED \_\_\_\_\_ 60 M.P.H.  
LEGAL SPEED \_\_\_\_\_ 55 M.P.H.  
DESIGN FUNCTIONAL CLASSIFICATION - IR71 - URBAN INTERSTATE  
- SR315 - URBAN EXPRESSWAY

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PROJECT DESCRIPTION

PROPOSED CONSTRUCTION INCLUDES FULL DEPTH RECONSTRUCTION OF 0.48 MILES OF FOUR LANE DIVIDED URBAN EXPRESSWAY AND THE MILL AND FILL OF 0.56 MILES OF URBAN INTERSTATE. MILL AND FILL OPERATIONS INCLUDE EXIT AND ENTRANCE RAMP TO GREENLAWN AVENUE.

1997 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

PRIMA FACIE SPEED LIMIT

UNDER AUTHORITY OF SECTION 4511.21, DIVISION (I) OF THE REVISED CODE OF OHIO, THE REVISED PRIMA FACIE SPEED LIMITS AS INDICATED HEREIN ARE DETERMINED TO BE REASONABLE AND SAFE, AND ARE HEREBY ESTABLISHED FOR THE DURATION OF THIS PROJECT. THE PRIMA FACIE SPEED LIMIT OR LIMITS HEREBY ESTABLISHED SHALL BECOME EFFECTIVE WHEN APPROPRIATE SIGNS GIVING NOTICE THEREOF ARE ERECTED.

DESIGN EXCEPTIONS - S.R. 315	APPROVAL DATE	SHEET No's
SHOULDER WIDTH	05/17/01	17-18
STOPPING SIGHT DISTANCE	05/17/01	36, 42-44
HORIZONTAL CLEARANCE	05/17/01	9
VERTICAL CLEARANCE	05/17/01	42-43
SUPERELEVATION	05/17/01	5

STANDARD CONSTRUCTION DRAWINGS

STANDARD CONSTRUCTION DRAWINGS										SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS	
TC-65.10M	11/01/95	BP-1.1	07/28/00	GR-1.1M	10/21/97	RM-4.3M	10/21/97	CB-2.1M	07/12/95	806	09/09/97	
TC-65.11M	11/01/95	BP-1.2	07/28/00	GR-1.2M	01/03/96	RM-4.4M	10/21/97	CB-2.2M	07/12/95	863	10/12/99	
TC-65.12M	11/01/95	BP-2.1	07/28/00	GR-1.3M	11/30/94	RM-4.5M	10/21/97	CB-2.3M	07/12/95	906	05/05/98	
TC-71.10M	09/01/93	BP-2.2	07/28/00	GR-2.1M	04/14/98					908	03/28/00	
TC-72.20M	09/01/93	BP-2.3	07/28/00	GR-3.1M	10/21/97					1082	11/01/00	
		BP-3.1	07/28/00	GR-3.5M	10/21/97			I-1.2M	09/06/95			
		BP-6.1	07/28/00	GR-4.1M	11/30/94							
		BP-8.1	07/28/00	GR-4.2M	10/21/97							
		BP-9.1	07/28/00	GR-4.3M	10/21/97							
				GR-4.4M	11/30/94							
				GR-5.1M	04/21/95							
				GR-5.2M	11/30/94							
				GR-5.3M	11/30/94							

PLAN PREPARED BY:  
**ms consultants, inc.**  
CONSULTING ENGINEERS & PLANNERS  
2221 SCHROCK ROAD, COLUMBUS, OHIO

ENGINEER'S SEAL  
ROADWAY \_\_\_\_\_  
STRUCTURE \_\_\_\_\_  
  
*Larry J. Shannon*  
5-16-02

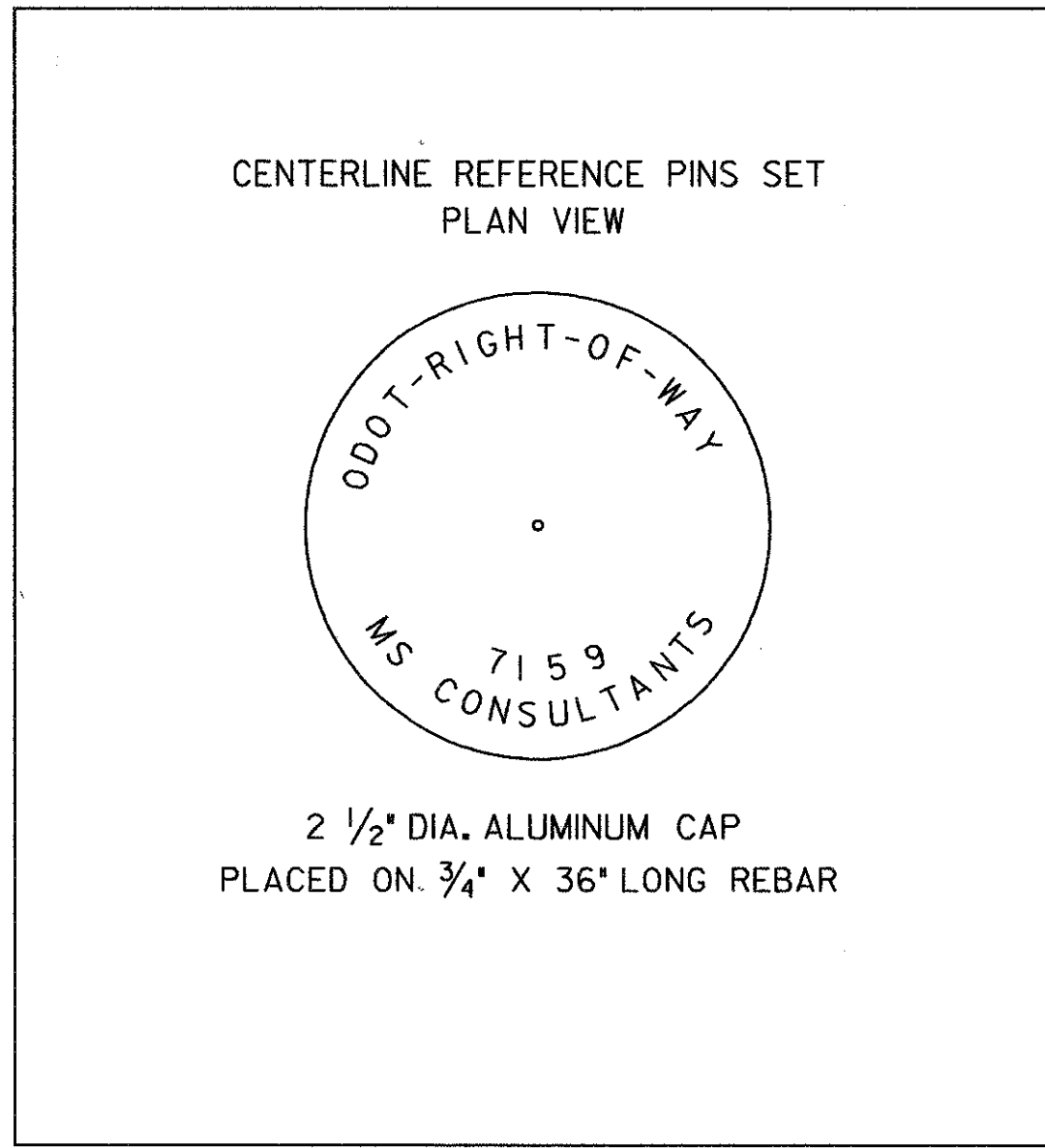
**UNDERGROUND UTILITIES**  
TWO WORKING DAYS  
BEFORE YOU DIG  
CALL 1-800-362-2764 (TOLL FREE)  
OHIO UTILITIES PROTECTION SERVICE  
NON-MEMBERS  
MUST BE CALLED DIRECTLY

FEDERAL PROJECT NO. **TE21-G000(217)**  
PID NO. **20681**  
CONSTRUCTION PROJECT NO. **3009 (00)**  
RAILROAD INVOLVEMENT **NONE**  
**FRA-IR71-14.39**  
**FRA-315-0.00**  
1  
89

## FRA-171-14.39, FRA-315-0.00

VMS NOS. 1393 & 422  
 VIRGINIA MILITARY DISTRICT  
 CITY OF COLUMBUS  
 FRANKLIN COUNTY, OHIO

PROJECT CONTROL MONUMENTS - CENTERLINE REFERENCE PINS SET STATE PLANE COORDINATES - OH SOUTH ZONE (PROJECT GRID FACTOR = 1.000093619)			
PT.	STATION	OFFSET	TYPE
	NORTHING	EASTING	
10	A-44+00.00	60.00' RT.	3/4" REBAR
709557.3073	1855764.3330	W/ AL. CAP	
11	B-44+00.00	95.00' LT.	3/4" REBAR
618922.5148	1855575.4783	W/ AL. CAP	
12	B-46+76.07	100.00' LT.	3/4" REBAR
709527.2490	1855536.6443	W/ AL. CAP	
13	B-46+76.07	40.00' LT.	3/4" REBAR
709554.3614	1855590.1695	W/ AL. CAP	
14	A-49+05.22	50.00' RT.	3/4" REBAR
709825.0695	1855617.4949	W/ AL. CAP	
15	A-49+05.22	100.00' RT.	3/4" REBAR
709847.6627	1855662.0993	W/ AL. CAP	
16	A-52+05.22	50.00' RT.	3/4" REBAR
710092.6768	1855487.7398	W/ AL. CAP	
17	A-52+05.22	50.00' LT.	3/4" REBAR
710052.1128	1855396.3365	W/ AL. CAP	
18	B-52+40.07	30.00' RT.	3/4" REBAR
710078.3484	1855371.9698	W/ AL. CAP	
19	B-52+40.07	50.00' LT.	3/4" REBAR
710035.3604	1855304.5010	W/ AL. CAP	
20	B-53+10.40	30.00' LT.	3/4" REBAR
710143.0348	1855342.6120	W/ AL. CAP	
21	B-53+10.40	50.00' RT.	3/4" REBAR
710100.0469	1855275.1432	W/ AL. CAP	
22	A-54+72.72	30.00' LT.	3/4" REBAR
710312.2586	1855316.9205	W/ AL. CAP	
23	A-54+72.72	50.00' RT.	3/4" REBAR
710337.4965	1855392.8352	W/ AL. CAP	
24	B-56+10.40	80.00' LT.	3/4" REBAR
710340.8903	1855082.3649	W/ AL. CAP	
25	B-56+10.40	40.00' LT.	3/4" REBAR
710340.8903	1855082.3649	W/ AL. CAP	
26	A-57+72.72	30.00' LT.	3/4" REBAR
710601.2903	1855231.2204	W/ AL. CAP	
27	A-57+72.72	50.00' RT.	3/4" REBAR
710622.6872	1855308.3059	W/ AL. CAP	
28	A-60+91.49	30.00' LT.	3/4" REBAR
710908.4328	18551459654	W/ AL. CAP	
29	A-60+91.49	50.00' RT.	3/4" REBAR
710929.8298	1855223.0508	W/ AL. CAP	
30	B-62+54.28	10.00' RT.	3/4" REBAR
710980.4620	1854936.1186	W/ AL. CAP	
31	B-62+54.28	40.00' LT.	3/4" REBAR
710969.5068	1854887.3335	W/ AL. CAP	
32	A-64+41.49	60.00' RT.	3/4" REBAR
710272.6920	1855120.2696	W/ AL. CAP	



PROJECT CONTROL MONUMENTS - MONUMENTATION FOUND STATE PLANE COORDINATES - OH SOUTH ZONE (PROJECT GRID FACTOR = 1.000093619)					
PT.	STATION	OFFSET	TYPE	ELEVATION	
50.	B-17+31.66	16.54' LT.	CONC. MON. W/ IP	726.00	
706927.0156	1856917.3070				
124	A-21+30.29	27.29' RT.	IP W/ AL. CAP	719.71	
707339.3325	1856851.1312				
51	B-35+00.00	65.51' LT.	CONC. MON. W/ IP	718.22	
708493.6490	1856098.8513				
121	A-35+64.93	43.89' RT.	IP W/ AL. CAP	723.08	
708626.6563	1856217.6680				
52	B-36+12.07	4.11' RT.	CONC. MON. W/ IP	719.84	
708625.1072	1856110.3069				
53	B-41+00.06	71.73' LT.	CONC. MON. W/ IP	717.13	
709026.2363	1855822.1125				
120	A-44+15.31	35.36' RT.	PK W/ SHINER	720.14	
709381.4129	1855825.8032				
119	A-44+43.94	43.88' RT.	IP W/ AL. CAP	720.63	
709410.8046	1855820.4675				
54	B-46+75.83	101.68' LT.	CONC. MON. W/ IP	712.91	
709526.2819	1855825.2558				
55	B-46+76.04	90.00' RT.	CONC. MON. W/ IP	720.53	
A-46+76.00	33.30' RT.				
709613.0396	1855706.1730				
56	B-52+39.74	39.31' LT.	CONC. MON. W/ IP	708.68	
710040.8238	1855313.6931				
113	A-55+55.33	30.42' RT.	IP W/ AL. CAP	703.94	
710409.3305	1855349.2647				
57	B-59+01.53	310.56' LT.	CONC. MON. W/ IP	737.61	
710527.6922	1854740.7753				
58	B-59+19.90	276.07' LT.	CONC. MON. W/ IP	740.96	
710559.5018	1854765.4141				
127	A-58+73.99	64.08' RT.	IPF DST. CAP	705.04	
710724.0268	1855294.7846				
72	B-66+66.07	78.71' LT.	CONC. MON. W/ IP	717.83	
711371.7711	1854778.3991				
59	C-488+13.76	4.34' LT.	CONC. MON. W/ IP	736.96	
710723.1084	1854232.7739				
64	D-489+04.86	34.91' RT.	CONC. MON. W/ IP	738.76	
C-488+97.82	68.79' LT.				
710792.7404	1854313.1640				
71	D-489+72.30	78.69' LT.	CONC. MON. W/ IP	738.01	
710918.3977	1854353.9296				
63	D-489+72.53	44.24' RT.	CONC. MON. W/ IP	738.94	
710798.5424	1854381.2200				
60	C-490+43.02	91.53' RT.	CONC. MON. W/ IP	738.00	
710638.7793	1854464.7914				
61	C-490+43.12	2.48' LT.	CONC. MON. W/ IP	741.91	
710732.7434	1854462.0587				
59	C-490+57.95	81.89' RT.	CONC. MON. W/ IP	738.43	
710637.3671	1854479.7540				
62	C-490+74.33	11.73' LT.	CONC. MON. W/ IP	742.66	
710731.4350	1854493.3281				
107	D-493+92.87	40.10' LT.	IP W/ AL. CAP	746.92	
710980.0247	1854769.6813				
74	D-504+04.27	9.04' RT.	CONC. MON. W/ IP	738.47	
711229.0055	1855749.5781				
73	D-504+08.44	76.41' LT.	CONC. MON. W/ IP	735.14	
711310.9777	1855725.0992				

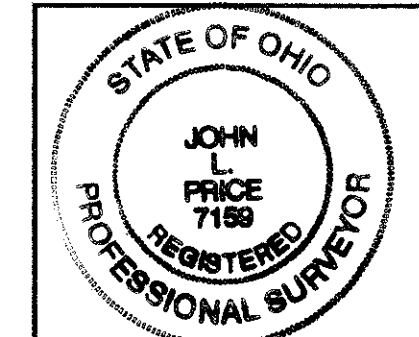
THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN DATUM OF 1988 (NAVD 88).

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF TRANSPORTATION IN 2001 BY ms consultants, inc.

THE ESTABLISHMENT OF CENTERLINE REFERENCE PINS AND THE LOCATION OF EXISTING MONUMENTATION FOUND AS SHOWN ON THIS PLAN AS OF THIS DATE WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION.

BY *John L. Price* SURVEYOR'S NAME JOHN L. PRICE  
 SURVEYOR NO. 7159 DATE 5/16/02

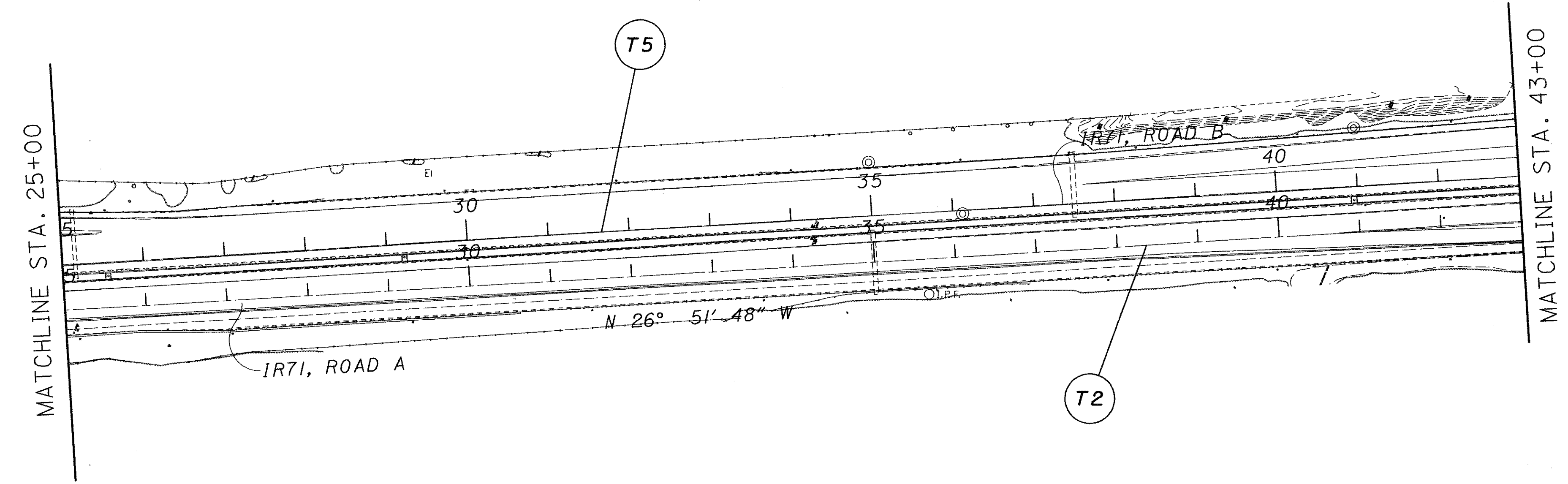
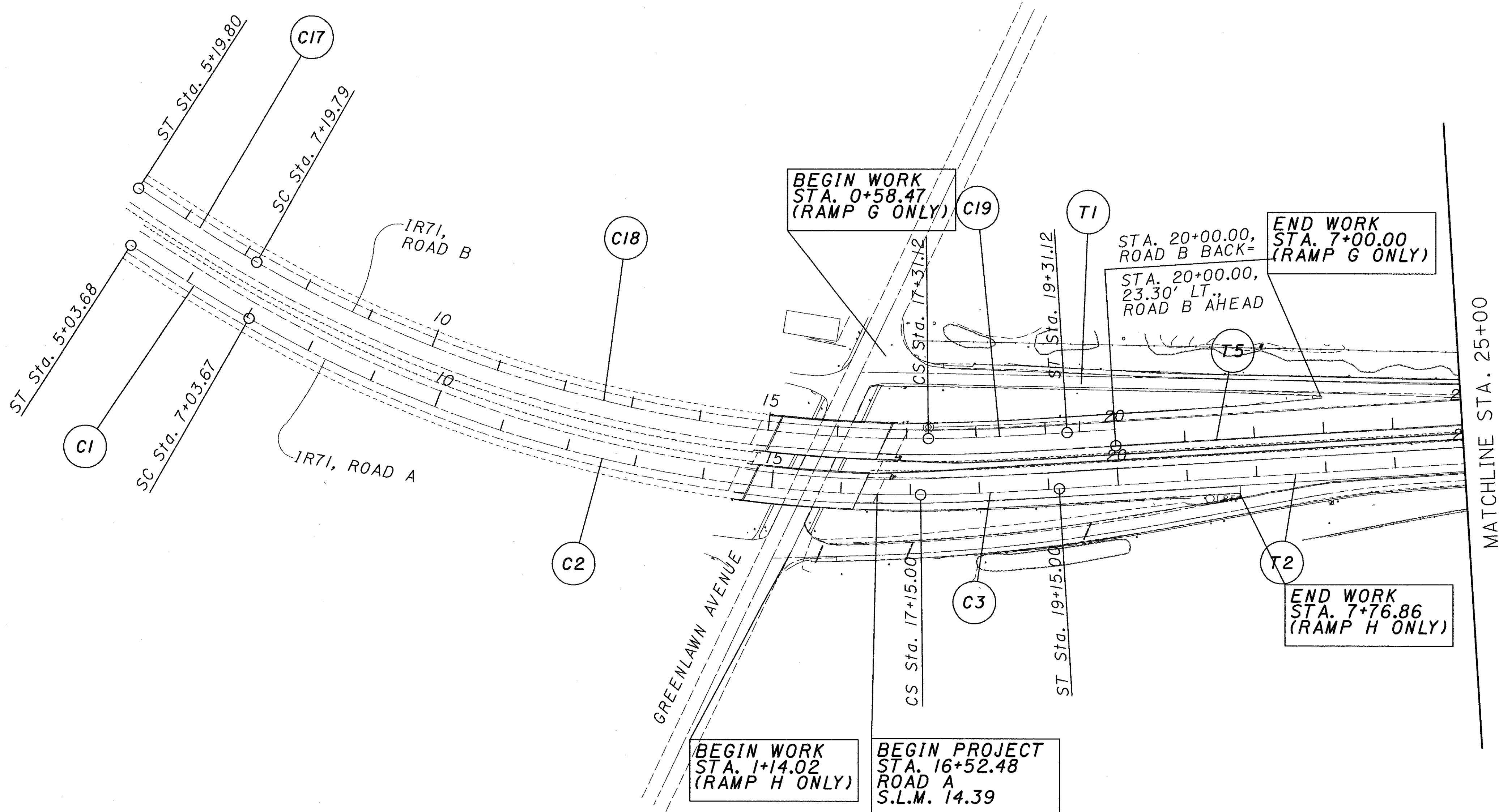
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 RECORDED \_\_\_\_\_, 20\_\_\_\_  
 BOOK \_\_\_\_\_ PAGE \_\_\_\_\_  
 COUNTY RECORDER



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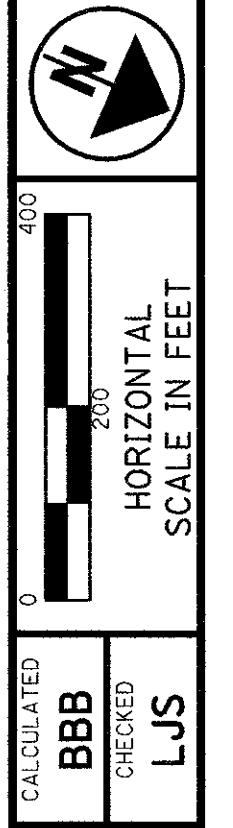
PID NO. 20681  
 R/W DESIGNER JLP  
 R/W REVIEWER JPY  
 CENTERLINE PLAT  
 FRA-171-14.39, FRA-315-0.00  
 2/89

DATE: 05/16/02 10:26:58 AM  
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**MONUMENT LEGEND**

- ◻ EXISTING R/W MONUMENT BOX
- ◻ PROPOSED R/W MONUMENT BOX
- ⊙ EXISTING CONCRETE MONUMENT
- PROPOSED CONCRETE MONUMENT
- ⊗ RAILROAD SPIKE FOUND
- ⊗ RAILROAD SPIKE SET
- I.R.F. IRON PIN FOUND
- ⊙ I.R.F. IRON PIN FOUND W/ ID CAP
- I.R.S. IRON PIN SET W/ ID CAP
- ⊙ R.F. IRON PIPE FOUND
- ⊙ R.S. IRON PIPE SET
- ⊙ R.K.F. P.K. NAIL FOUND
- R.K.S. P.K. NAIL SET



**SCHEMATIC PLAN**

FRA-171-14.39,  
 FRA-315-0.00



HORIZONTAL SCALE IN FEET

CALCULATED  
BBB  
CHECKED  
LJS

### MONUMENT LEGEND

- ◻ EXISTING R/W MONUMENT BOX
- ◻ PROPOSED R/W MONUMENT BOX
- ⊙ EXISTING CONCRETE MONUMENT
- PROPOSED CONCRETE MONUMENT
- ⊙ RAILROAD SPIKE FOUND
- RAILROAD SPIKE SET
- I.P.F. IRON PIN FOUND
- ⊙ I.P.F. IRON PIN FOUND W/ ID CAP
- I.P.S. IRON PIN SET W/ ID CAP
- ⊙ I.P.F. IRON PIPE FOUND
- I.P.S. IRON PIPE SET
- ⊙ P.K.F. P.K. NAIL FOUND
- P.K.S. P.K. NAIL SET

END RESURFACING STA. 44+00.00 ROAD B  
BEGIN FULL DEPTH RECONSTRUCTION STA. 44+00.00 ROAD B

END WORK STA. 537+75.00 (RAMP DB ONLY)

END WORK STA. 490+48.70 (RAMP AC ONLY)

END WORK STA. 54+08.32 (RAMP AD ONLY)

END WORK STA. 73+00.00 (RAMP BD ONLY)

BEGIN WORK STA. 66+43.04 (RAMP BC ONLY)

BEGIN WORK STA. 70+19.97 (RAMP BD ONLY)

END WORK STA. 71+01.74 (RAMP BC ONLY)

END WORK STA. 72+36.61 ROAD B

BEGIN WORK STA. 486+98.22 (RAMP AC ONLY)

STA. 46+22.47, IRTI BACK S.L.M. 14.95 = STA. 46+22.47, SR315 AHEAD S.L.M. 0.00

END RESURFACING STA. 46+30.00 ROAD A

BEGIN FULL DEPTH RECONSTRUCTION STA. 46+30.00 ROAD A

BEGIN WORK STA. 49+96.85 (RAMP AD ONLY)

Bridge No. FRA-70-1305S

Ex. Bridge No. FRA-70-1311L

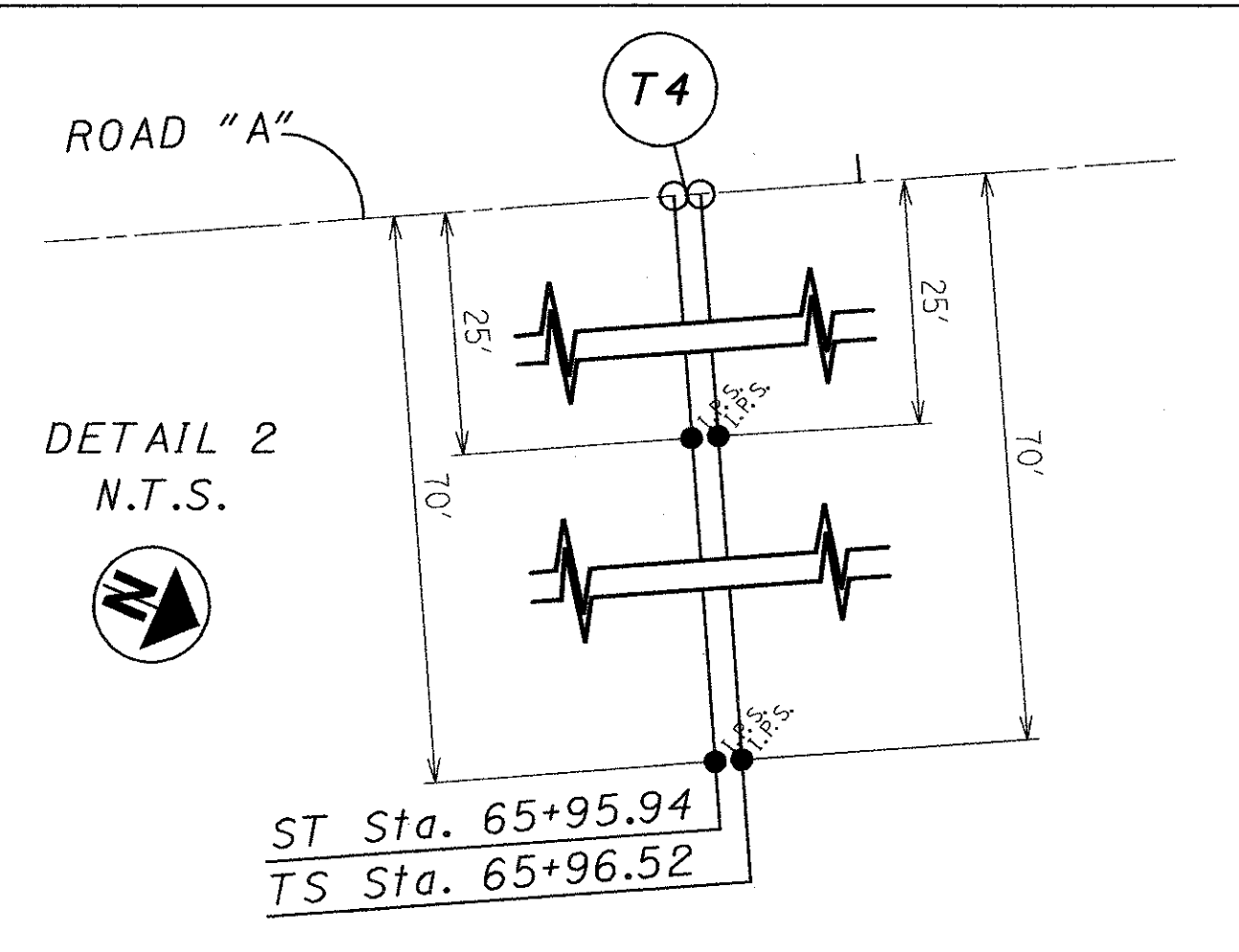
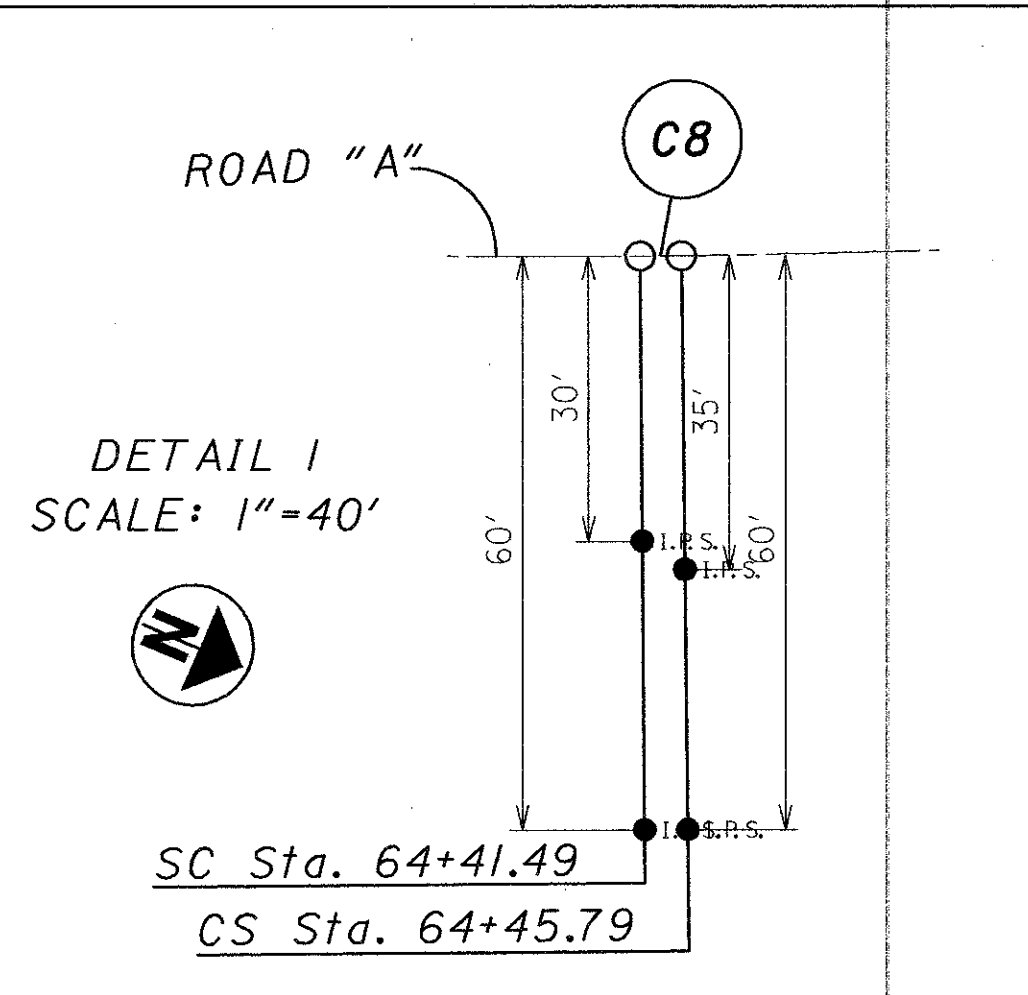
BEGIN WORK STA. 14+06.42 (RAMP DJ ONLY)

BEGIN WORK STA. 527+41.23 (RAMP DA ONLY)

END WORK STA. 19+03.77 (RAMP DJ ONLY)

END WORK STA. 530+18.14 (RAMP DA ONLY)

END PROJECT STA. 72+00.3± ROAD A S.L.M. 0.49



DATE: 05/16/02  
FILENAME: T:\DRAWING\06\06326\306\schmatic\vest\_100scdgn

### SCHEMATIC PLAN

FRA-171-14.39,  
FRA-315-0.00

# ALIGNMENT DATA

C1

PI Sta 6+37.03  
 fs = 2° 59' 59.46"  
 Ls = 199.99'  
 Rc = 1,909.86'  
 Dc = 3° 00' 00.00"  
 Ys = 3.49'  
 Xs = 199.94'  
 P = 0.87  
 K = 99.99'  
 LT = 133.35'  
 ST = 66.68'  
 TS Sta 5+03.68  
 SC Sta 7+03.67

C2

P.I. Sta = 12+21.49  
 D = 30° 20' 24" (LT)  
 Dc = 3° 00' 00"  
 R = 1,909.86'  
 T = 517.82'  
 L = 1,011.33'  
 E = 68.95'  
 MAX = 0.068

C3

PI Sta 17+81.69  
 fs = 3° 00' 00.00"  
 Ls = 200.00'  
 Rc = 1,909.86'  
 Dc = 3° 00' 00.00"  
 Ys = 3.49'  
 Xs = 199.95'  
 P = 0.87  
 K = 99.99'  
 LT = 133.35'  
 ST = 66.68'  
 CS Sta 17+15.00  
 ST STA 19+15.00

C4

PI Sta 51+05.25  
 fs = 3° 00' 00.00"  
 Ls = 300.00'  
 Rc = 2,864.79'  
 Dc = 2° 00' 00.00"  
 Ys = 5.23'  
 Xs = 299.92'  
 P = 1.31  
 K = 149.99'  
 LT = 200.03'  
 ST = 100.03'  
 TS Sta 49+05.22  
 SC Sta 52+05.22

C5

P.I. Sta = 53+39.07  
 D = 5° 21' 00" (RT)  
 Dc = 2° 00' 00"  
 R = 2,864.79'  
 T = 133.85'  
 L = 267.50'  
 E = 3.13'  
 MAX = 0.045

C6

PI Sta 55+72.75  
 fs = 3° 00' 00.00"  
 Ls = 300.00'  
 Rc = 2,864.79'  
 Dc = 2° 00' 00.00"  
 Ys = 5.23'  
 Xs = 299.92'  
 P = 1.31  
 K = 149.99'  
 LT = 200.03'  
 ST = 100.03'  
 CS Sta 54+72.72  
 ST Sta 57+72.72

C7

PI Sta 63+25.08  
 fs = 8° 13' 30.00"  
 Ls = 350.00'  
 Rc = 1,219.06'  
 Dc = 4° 42' 00.00"  
 Ys = 16.72'  
 Xs = 349.28'  
 P = 4.18  
 K = 174.88'  
 LT = 233.59'  
 ST = 116.90'  
 TS Sta 60+91.49  
 SC Sta 64+41.49

C8

P.I. Sta = 64+43.64  
 D = 0° 12' 07" (LT)  
 \*Dc = 4° 42' 00" (NDC Dc = 4° 15' MAX.)  
 R = 1,219.06'  
 T = 2.15'  
 L = 4.30'  
 E = 0.00'  
 MAX = 0.083

C9

PI Sta 64+95.86  
 fs = 3° 31' 42.69"  
 \*Ls = 150.15'  
 (NDC Ls = 221' MIN.)  
 Rc = 1,219.06'  
 Dc = 4° 42' 00.00"  
 Ys = 3.08'  
 Xs = 150.09'  
 P = 0.77  
 K = 75.07'  
 LT = 100.12'  
 ST = 50.07'  
 CS STA 64+45.79  
 ST STA 65+95.94  
 \*RATE OF TRANS. = 1:185  
 (NDC = 1:222)

C10

PI Sta 67+30.00  
 fs = 5° 00' 12.59"  
 Ls = 200.14'  
 Rc = 1,145.92'  
 Dc = 4° 59' 59.99"  
 Ys = 5.82'  
 Xs = 199.99'  
 P = 1.46  
 K = 100.04'  
 LT = 133.48'  
 ST = 66.76'  
 TS Sta 65+96.67  
 SC Sta 67+96.67

C11

P.I. Sta = 68+82.41  
 D = 8° 33' 32" (RT)  
 \*Dc = 5° 00' 00"  
 (NDC Dc = 4° 15' MAX)  
 R = 1,145.92'  
 T = 85.75'  
 L = 171.18'  
 E = 3.20'  
 MAX = 0.060

C12

PI Sta 70+34.56  
 fs = 5° 00' 00.89"  
 Ls = 200.01'  
 Rc = 1,145.92'  
 Dc = 4° 59' 59.99"  
 Ys = 5.82'  
 Xs = 199.86'  
 P = 1.45  
 K = 99.98'  
 LT = 133.39'  
 ST = 66.72'  
 CS Sta 69+67.85  
 ST Sta 71+67.85

C13

P.I. Sta = 49+58.30  
 D = 5° 38' 24" (LT)  
 Dc = 1° 00' 00"  
 R = 5,729.58'  
 T = 282.23'  
 L = 564.00'  
 E = 6.95'  
 MAX = 0.027

C14

PI Sta 55+10.45  
 fs = 3° 45' 00.00"  
 Ls = 300.00'  
 Rc = 2,291.83'  
 Dc = 2° 30' 00.00"  
 Ys = 6.54'  
 Xs = 299.87'  
 P = 1.64  
 K = 149.98'  
 LT = 200.04'  
 ST = 100.04'  
 TS Sta 53+10.40  
 SC Sta 56+10.40

C15

P.I. Sta = 59+34.48  
 D = 16° 05' 49" (RT)  
 Dc = 2° 30' 00"  
 R = 2,291.83'  
 T = 324.07'  
 L = 643.88'  
 E = 22.80'  
 MAX = 0.051

C16

PI Sta 63+54.32  
 fs = 3° 45' 00.00"  
 Ls = 300.00'  
 Rc = 2,291.83'  
 Dc = 2° 30' 00.00"  
 Ys = 6.54'  
 Xs = 299.87'  
 P = 1.64  
 K = 149.98'  
 LT = 200.04'  
 ST = 100.04'  
 CS Sta 62+54.28  
 ST Sta 65+54.28

C17

PI Sta 6+53.15  
 fs = 2° 59' 59.46"  
 Ls = 199.99'  
 Rc = 1,909.86'  
 Dc = 3° 00' 00.00"  
 Ys = 3.49'  
 Xs = 199.94'  
 P = 0.87  
 K = 99.99'  
 LT = 133.35'  
 ST = 66.68'  
 TS Sta 5+19.80  
 SC Sta 7+19.79

C18

P.I. Sta = 12+37.61  
 D = 30° 20' 24" (LT)  
 Dc = 3° 00' 00"  
 R = 1,909.86'  
 T = 517.82'  
 L = 1,011.33'  
 E = 68.95'  
 MAX = 0.068

C19

PI Sta 17+97.81  
 fs = 3° 00' 00.00"  
 Ls = 200.00'  
 Rc = 1,909.86'  
 Dc = 3° 00' 00.00"  
 Ys = 3.49'  
 Xs = 199.95'  
 P = 0.87  
 K = 99.99'  
 LT = 133.35'  
 ST = 66.68'  
 CS Sta 17+31.12  
 ST Sta 19+31.12

T1

STA. = 19+31.12  
 STA. = 20+00.00  
 L = 68.88'  
 BRG. = N 26° 51' 48" W

T2

STA. = 19+15.00  
 STA. = 49+05.22  
 L = 2,990.22'  
 BRG. = N 26° 51' 48" W

T3

STA. = 57+72.72  
 STA. = 60+91.49  
 L = 318.77'  
 BRG. = N 15° 30' 18" W

T4

STA. = 65+95.94  
 STA. = 65+96.67  
 L = 0.73'  
 BRG. = N 27° 27' 55" W

T5

STA. = 20+00.00  
 STA. = 46+76.07  
 L = 2,676.07'  
 BRG. = N 26° 51' 48" W

T6

STA. = 52+40.07  
 STA. = 53+10.40  
 L = 70.33'  
 BRG. = N 32° 30' 12" W

T7

STA. = 65+54.28  
 STA. = 72+07.96  
 L = 653.68'  
 BRG. = N 08° 54' 23" W

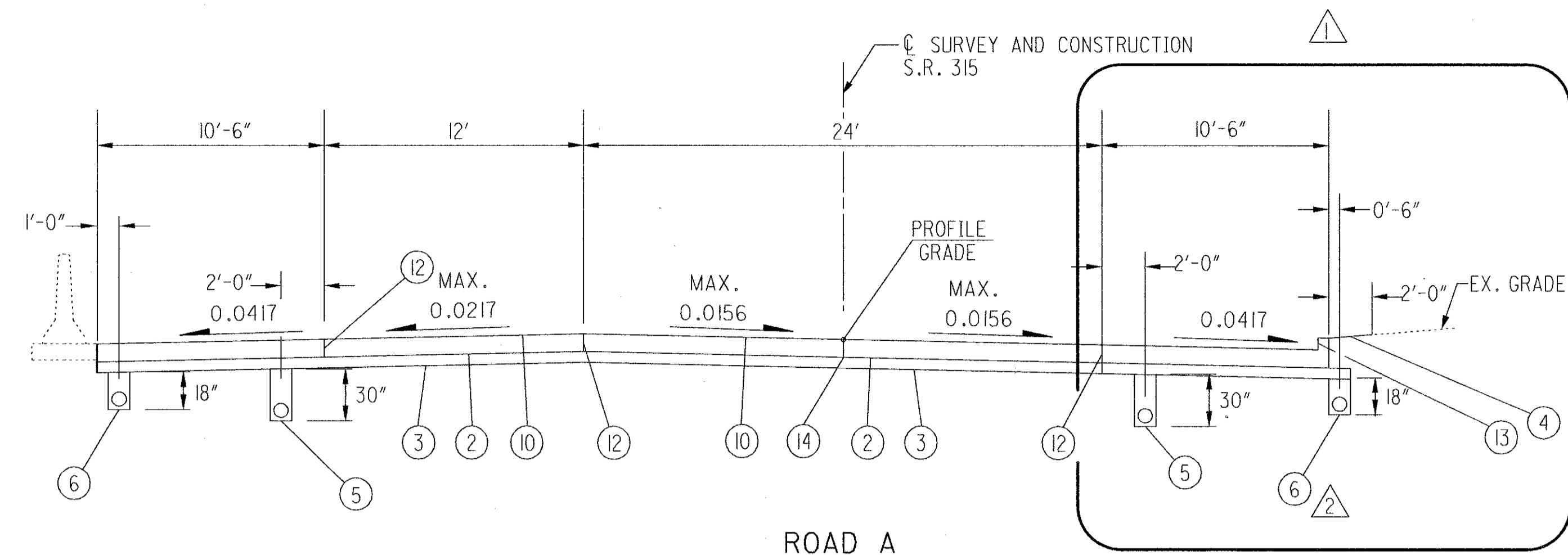
SCHEMATIC PLAN

FRA-171-14.39,  
FRA-315-0.00

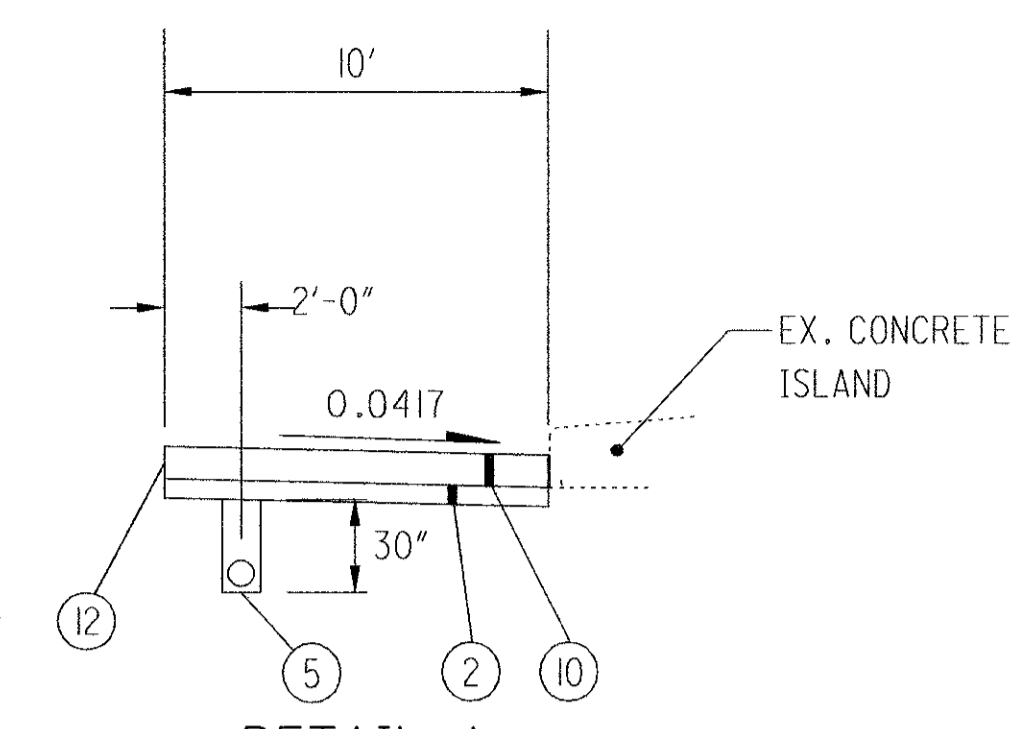
\* DESIGN EXCEPTION

5  
89

NOTE: SEE PAVEMENT DETAILS ON SHEET 47



**ROAD A  
SUPERELEVATED SECTION**  
SECTION APPLIES:  
STA. 46+30.00 TO STA.47+00.00 = 70.00 LIN. FT.

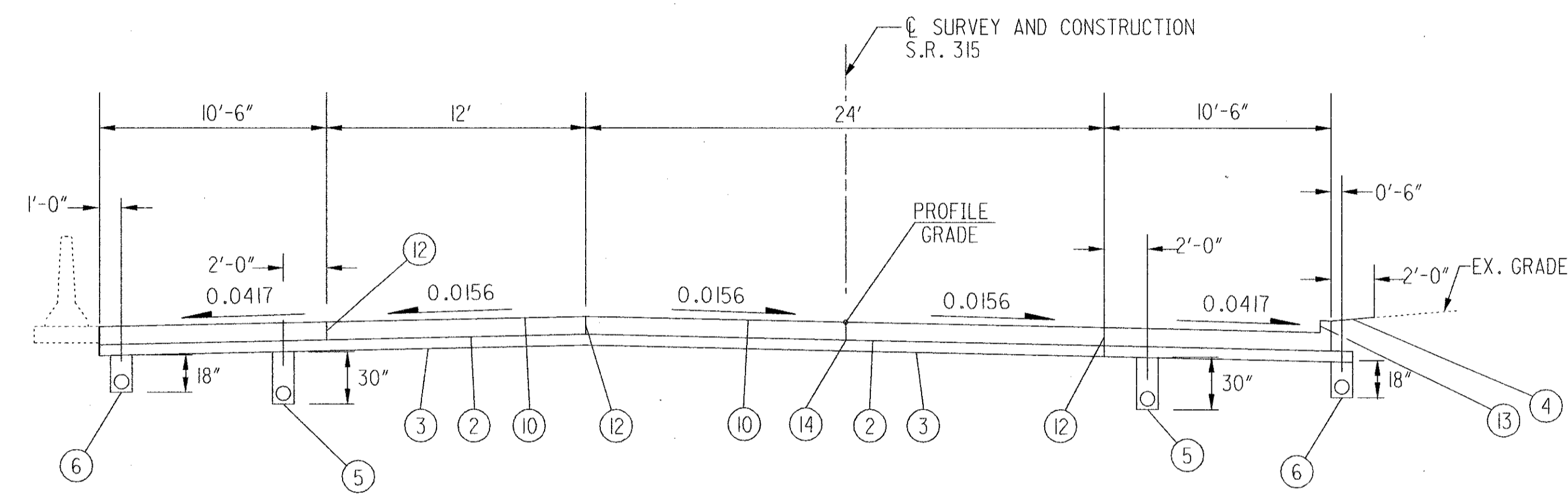


**DETAIL A  
SHOULDER RIGHT**  
SECTION APPLIES:  
STA. 46+30.00 TO STA.46+52.35

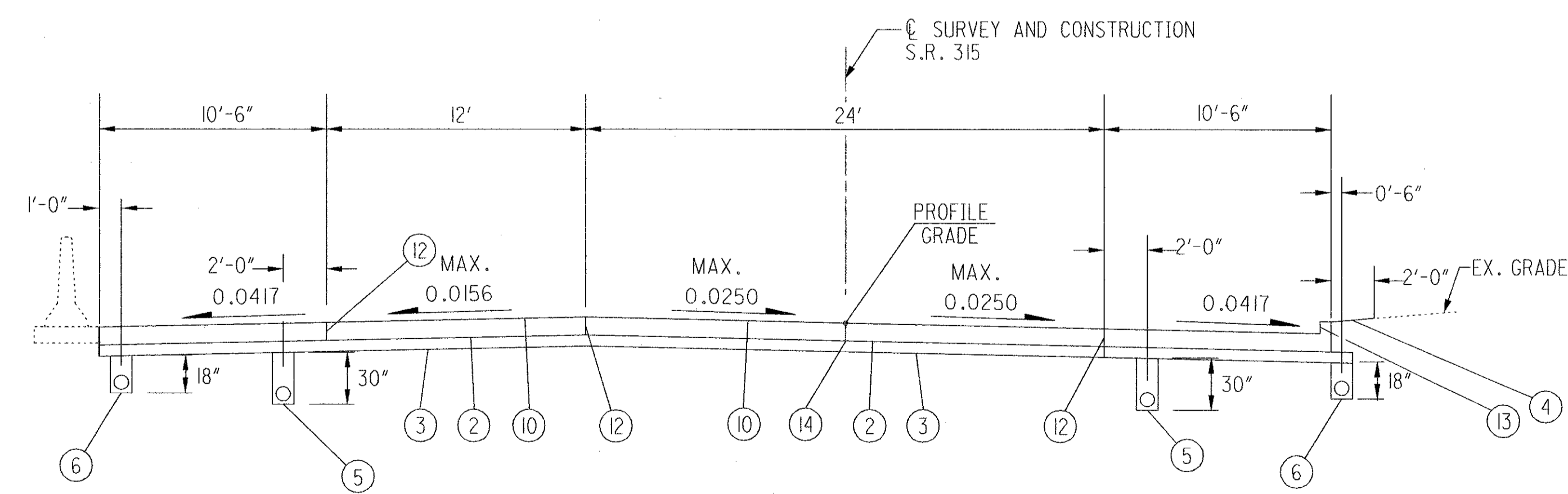
ROAD A

▲ SEE DETAIL A

▲ BEGIN PROPOSED UNDERDRAIN, STA. 46+53.00, 23' RT.



**ROAD A  
NORMAL SECTION**  
SECTION APPLIES:  
STA. 47+00.00 TO STA.48+75.00 = 175.00 LIN. FT.



**ROAD A  
SUPERELEVATED SECTION**  
SECTION APPLIES:  
STA. 48+75.00 TO STA.50+00.00 = 125.00 LIN. FT.

**LEGEND**

- ① -
- ② ITEM 304 6" AGGREGATE BASE
- ③ ITEM 203 SUBGRADE COMPACTION
- ④ ITEM 659 SEEDING AND MULCHING
- ⑤ ITEM 605 4" PIPE UNDERDRAIN (30" DEPTH)
- ⑥ ITEM 605 4" PIPE UNDERDRAIN (18" DEPTH)
- ⑦ ITEM 606 GUARDRAIL, TYPE 5
- ⑧ -
- ⑨ -
- ⑩ ITEM 451 10" REINFORCED CONCRETE PAVEMENT
- ⑪ ITEM 605 4" PIPE UNDERDRAIN (UNCLASSIFIED)
- ⑫ STANDARD LONGITUDINAL JOINT
- ⑬ INTEGRAL CURB TYPE 2-A
- ⑭ UNTIED LONGITUDINAL JOINT

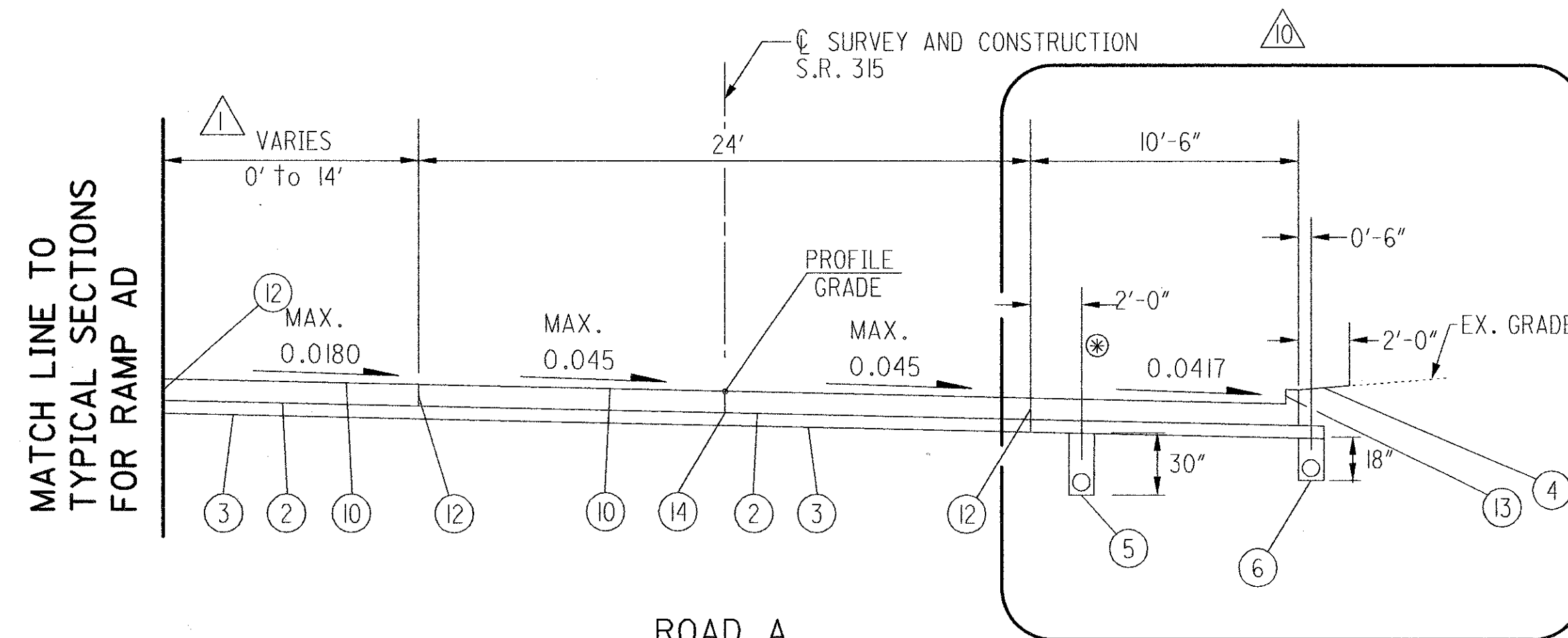
**PROPOSED TYPICAL SECTIONS  
SR 315 - ROAD A**

**FRA-IR71-14.39,  
FRA-315-0.00**

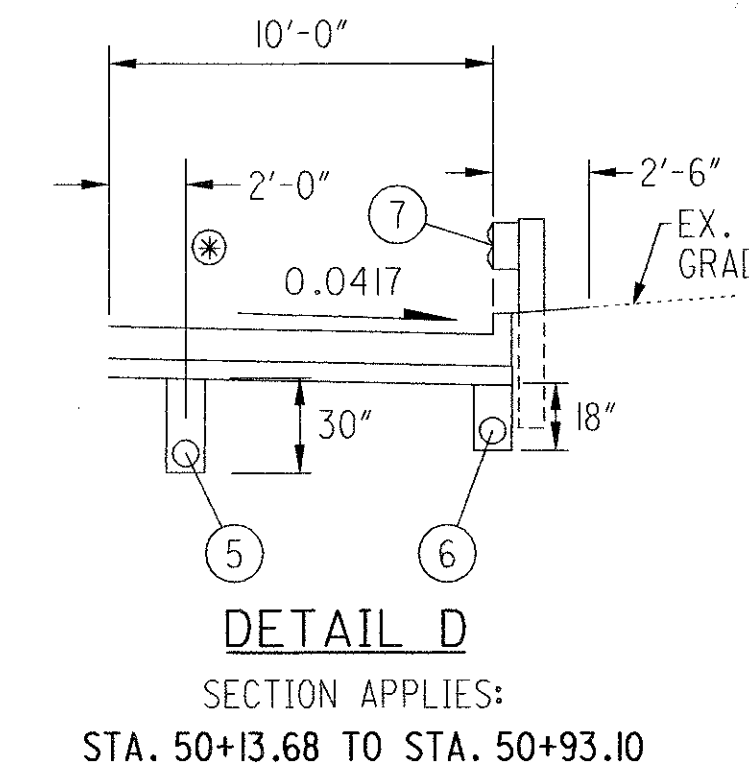
DATE: 05/15/2002 08:28:48 PM  
FILENAME: T:\DRAWING\050525\306\pav\road.dgn

NOTE: SEE PAVEMENT DETAILS ON SHEETS 47, 48, & 49

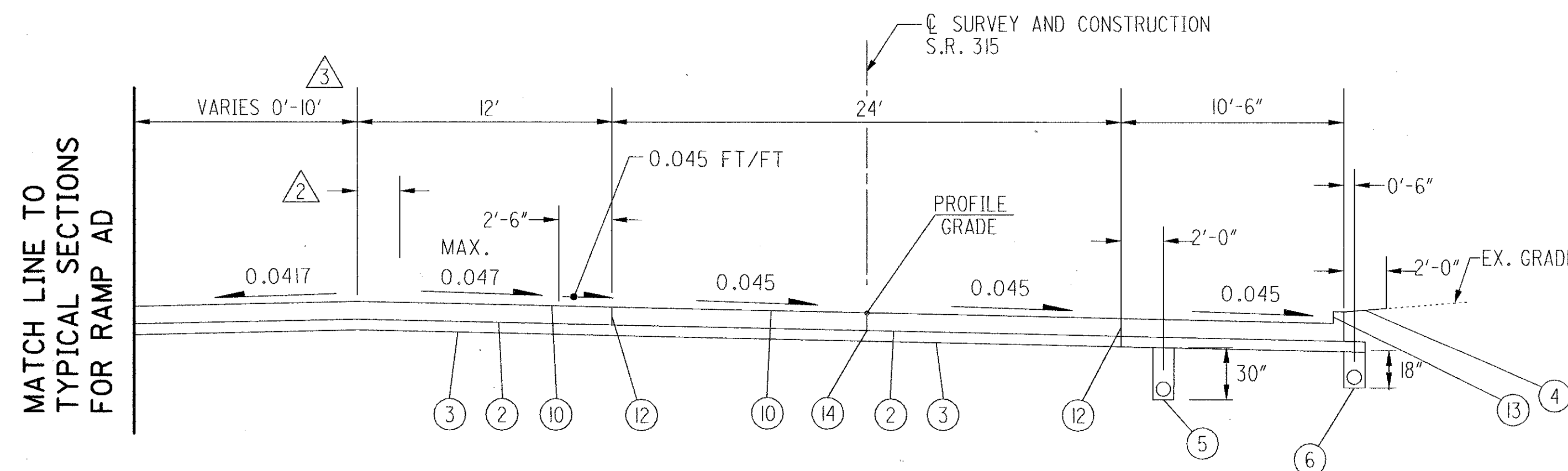
⊗ 0.0417 OR RATE OF PAVEMENT SUPERELEVATION, WHICHEVER IS GREATER



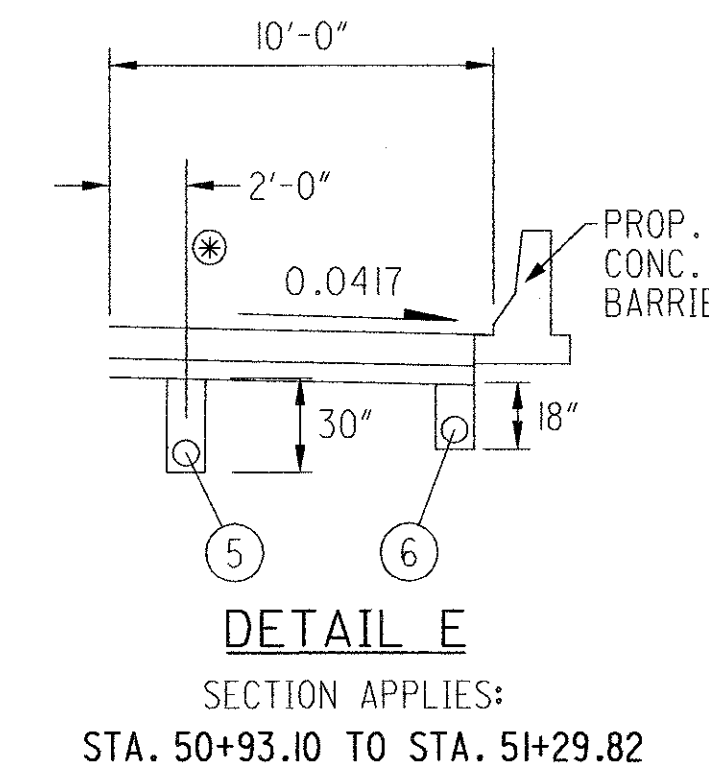
**ROAD A  
SUPERELEVATED SECTION**  
SECTION APPLIES:  
STA. 50+00.00 TO STA. 53+18.40 = 318.40 LIN. FT.



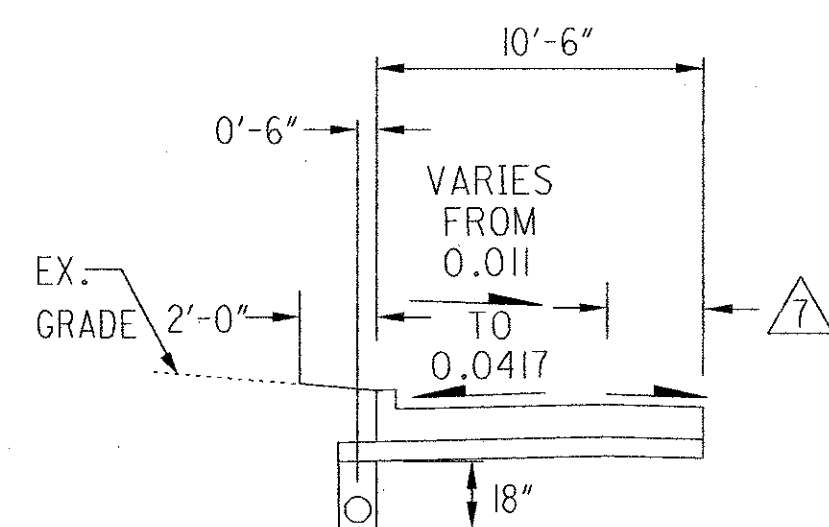
**DETAIL D**  
SECTION APPLIES:  
STA. 50+13.68 TO STA. 50+93.10



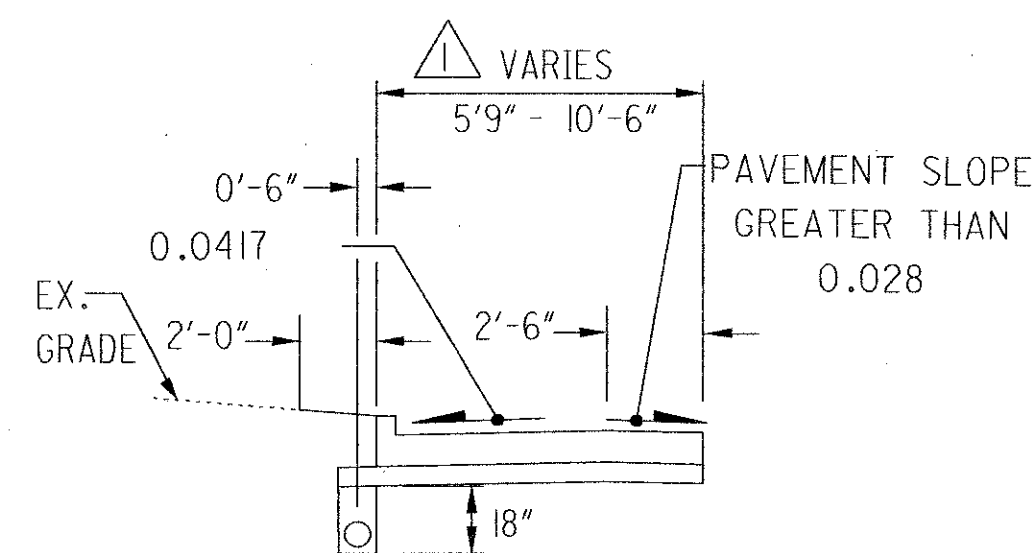
**ROAD A  
SUPERELEVATED SECTION**  
SECTION APPLIES:  
STA. 53+18.40 TO STA. 54+08.81 = 90.41 LIN. FT.



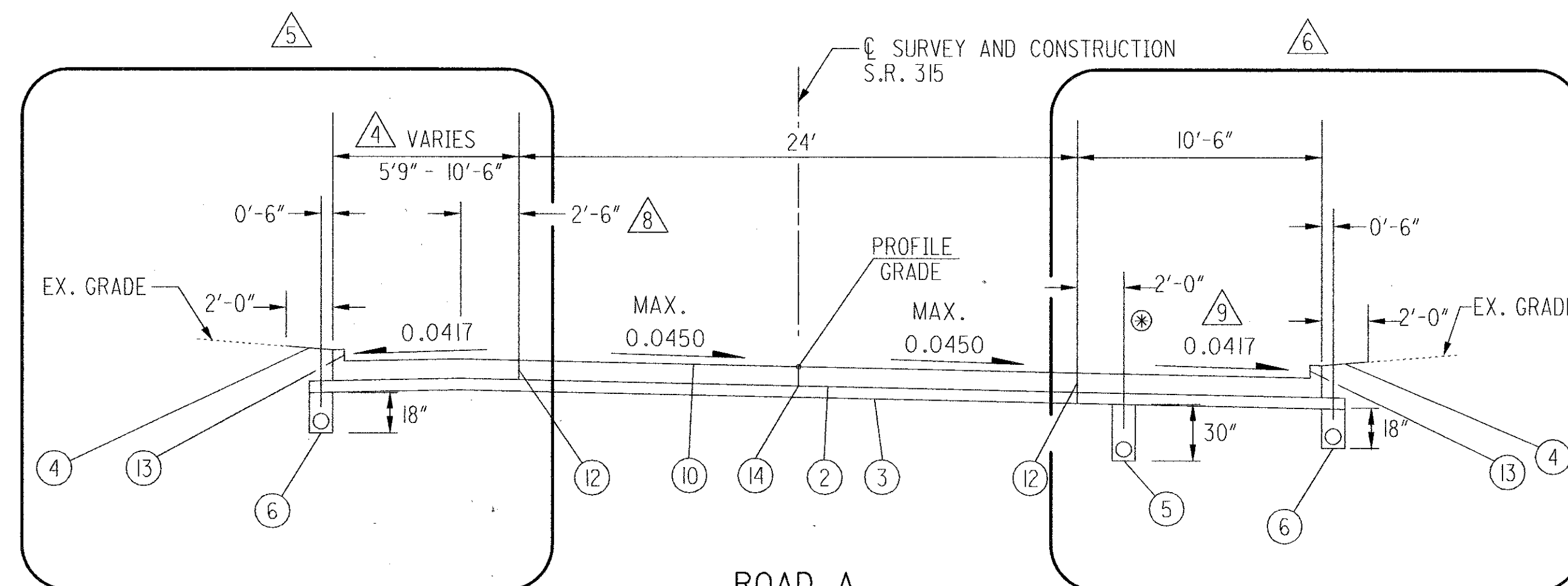
**DETAIL E**  
SECTION APPLIES:  
STA. 50+93.10 TO STA. 51+29.82



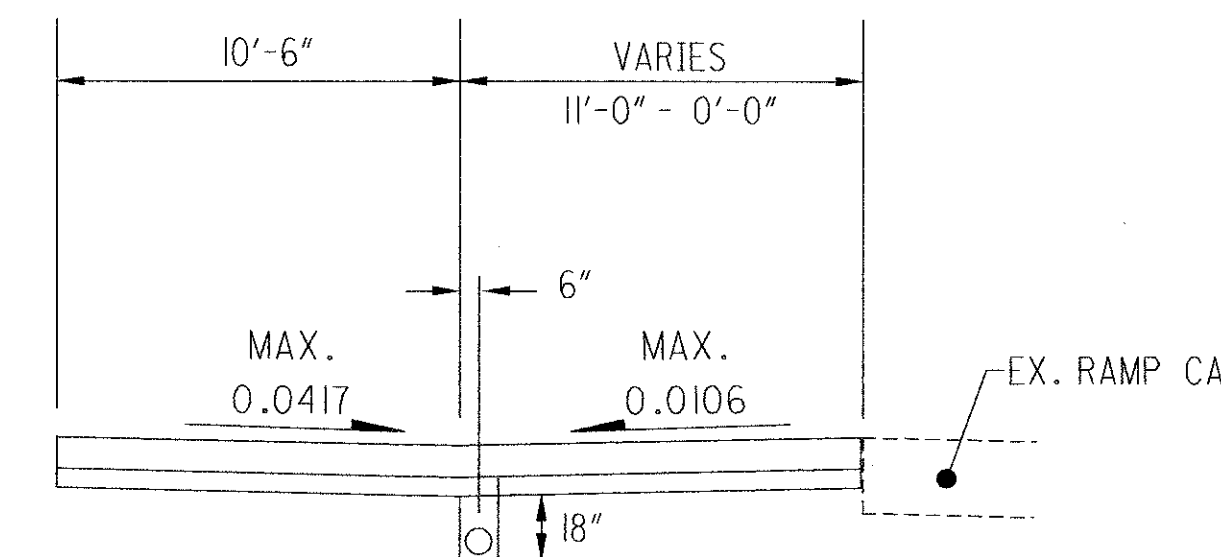
**DETAIL C**  
SECTION APPLIES:  
STA. 54+08.81 TO STA. 55+08.76



**DETAIL A**  
SECTION APPLIES:  
STA. 55+85.53 TO STA. 56+68.64



**ROAD A  
SUPERELEVATED SECTION**  
SECTION APPLIES:  
STA. 54+08.81 TO STA. 56+68.64 = 259.83 LIN. FT.



**DETAIL B**  
SECTION APPLIES:  
STA. 55+49.64 TO STA. 56+68.01

**ROAD A**

- ⚠ TAPER BEGINS STA. 51+82.46
- ⚠ EDGE OF PAVEMENT, RAMP AD VARIES 2'-0" TO 0', STA. 53+18.40 TO STA. 53+26.35
- ⚠ BEGINNING STA. 53+36.13
- ⚠ CONSTANT WIDTH 10'-6" STA. 54+08.81 TO STA. 55+08.76; CONSTANT WIDTH 5'-9" STA. 56+58.80 TO STA. 56+68.64
- ⚠ SEE DETAIL "A" AND DETAIL "C"
- ⚠ SEE DETAIL "B"
- ⚠ WHEN THE GRADE BREAK EXCEEDS 7%, OFFSET 2'-6" SHOULDER CROWN TRANSITION.
- ⚠ STA. 55+75.00 TO STA. 56+00.00 = 2'-6" to 0'-0"
- ⚠ STA. 55+72.72 TO STA. 55+00.00, TRANSITION SHOULDER SLOPE BACK TO 0.0417 FT/FT
- ⚠ SEE DETAIL "D" AND DETAIL "E"

**LEGEND**

- ① -
- ② ITEM 304 6" AGGREGATE BASE
- ③ ITEM 203 SUBGRADE COMPACTION
- ④ ITEM 659 SEEDING AND MULCHING
- ⑤ ITEM 605 4" PIPE UNDERDRAIN (30" DEPTH)
- ⑥ ITEM 605 4" PIPE UNDERDRAIN (18" DEPTH)
- ⑦ ITEM 606 GUARDRAIL, TYPE 5
- ⑧ -
- ⑨ -
- ⑩ ITEM 451 10" REINFORCED CONCRETE PAVEMENT
- ⑪ ITEM 605 4" PIPE UNDERDRAIN (UNCLASSIFIED)
- ⑫ STANDARD LONGITUDINAL JOINT
- ⑬ INTEGRAL CURB TYPE 2-A
- ⑭ UNTIED LONGITUDINAL JOINT

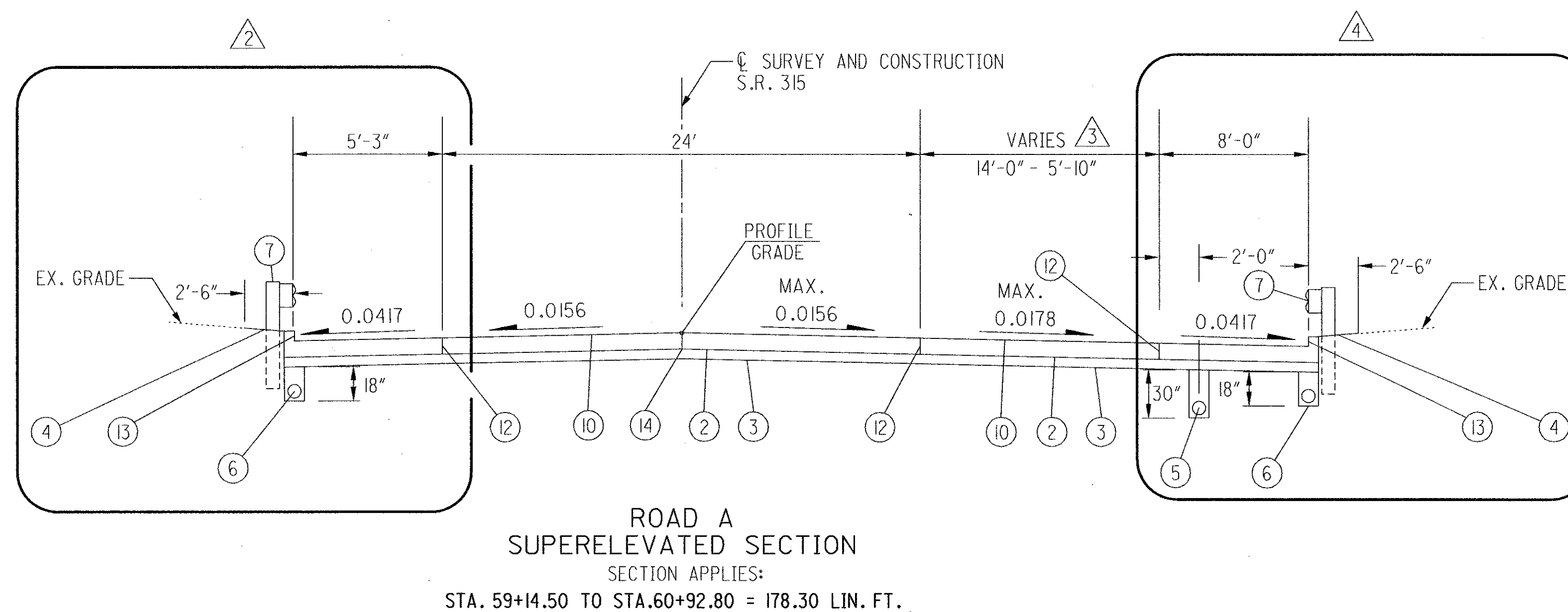
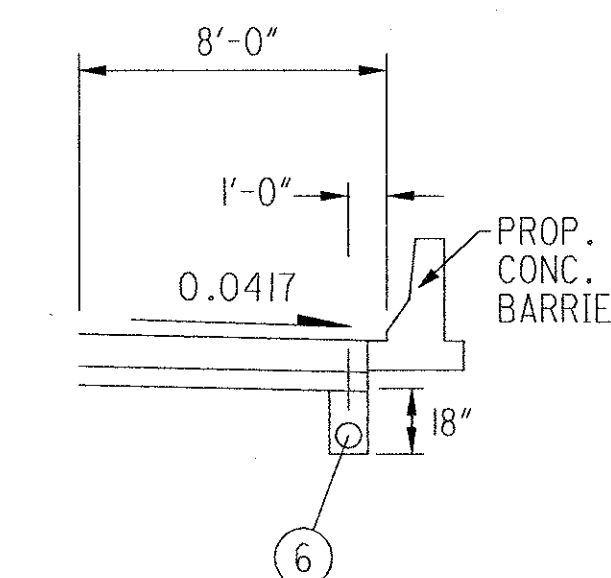
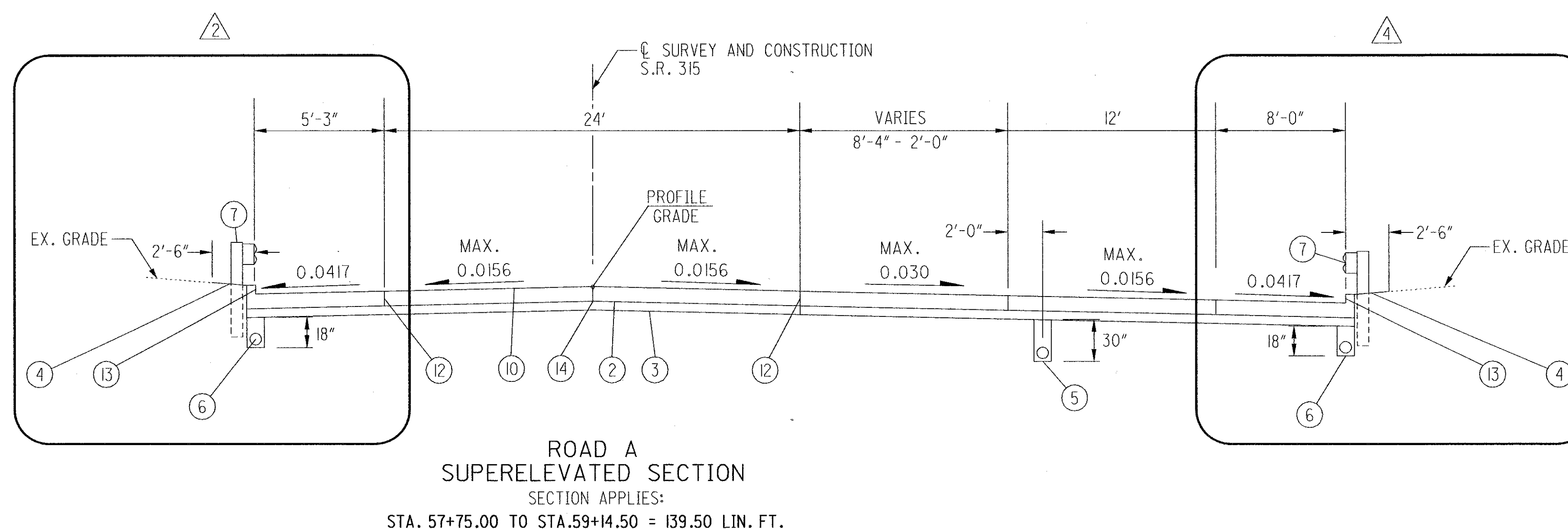
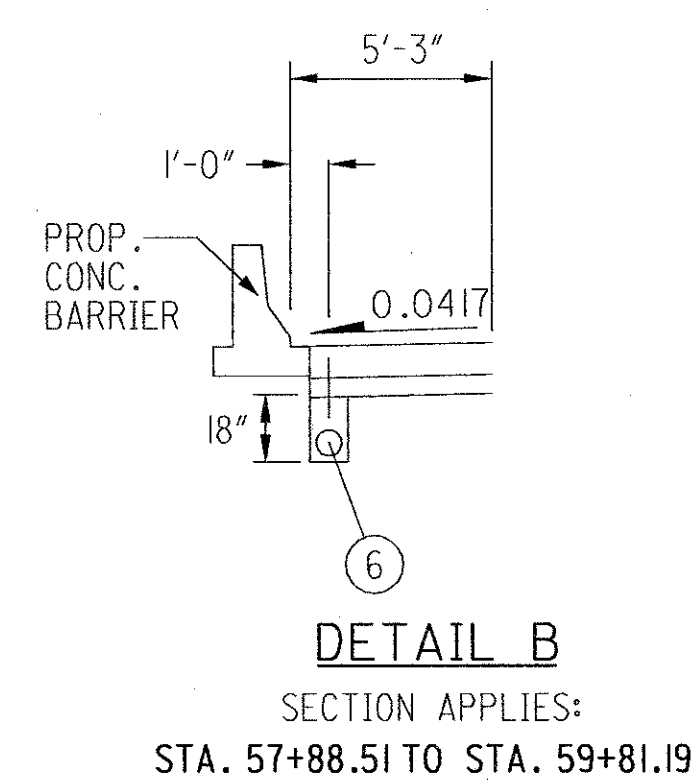
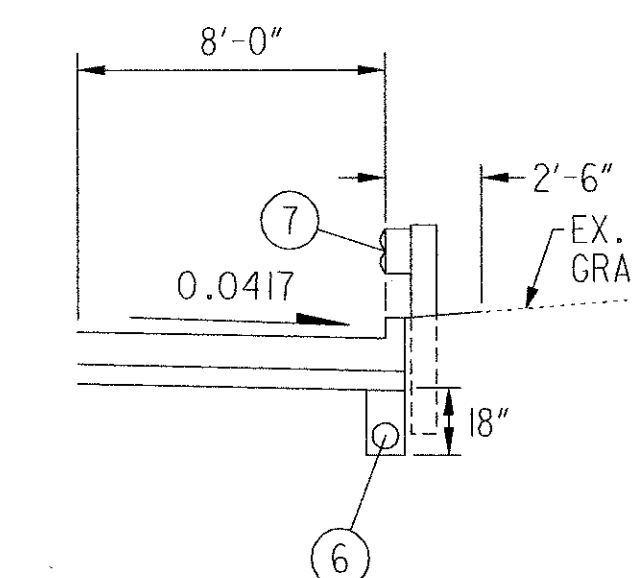
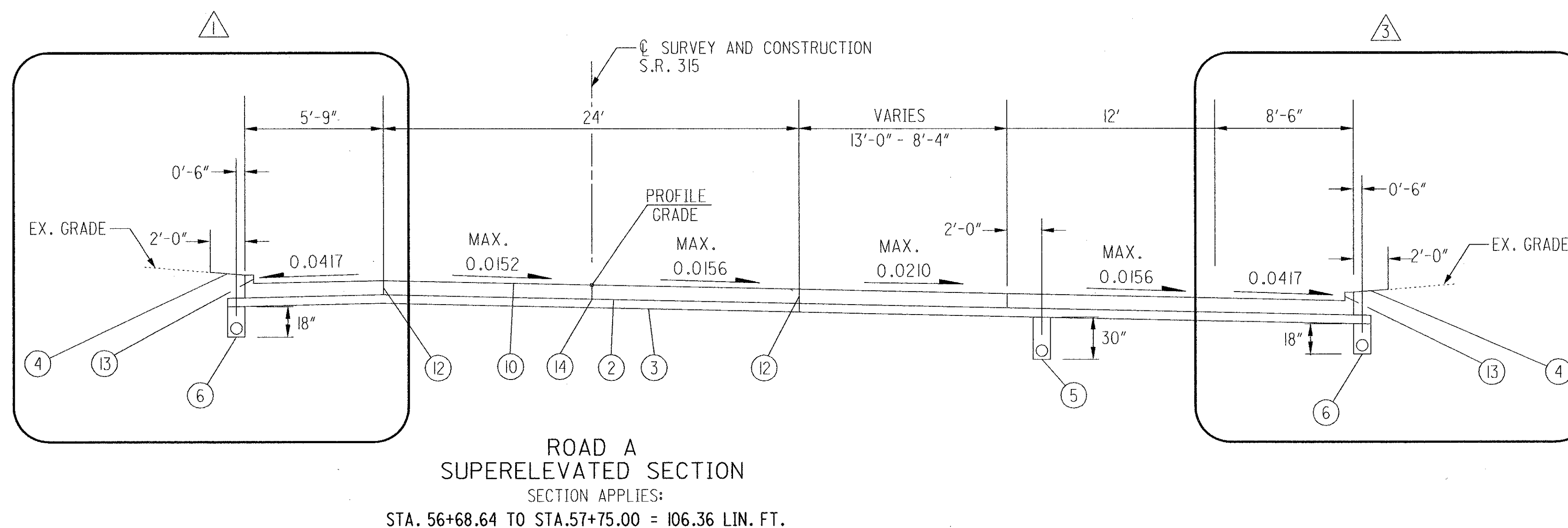
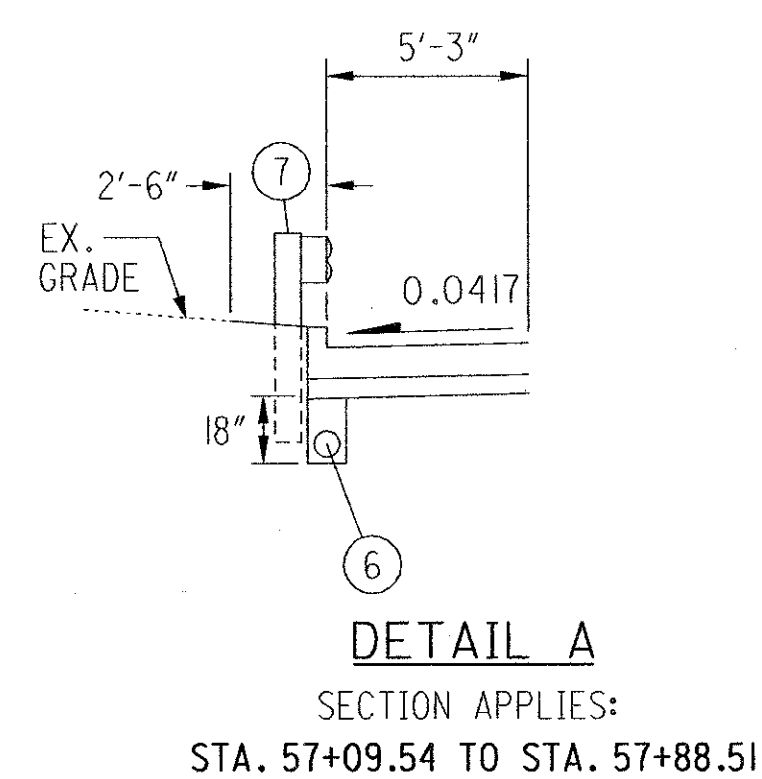
**PROPOSED TYPICAL SECTIONS  
SR 315 - ROAD A**

**FRA-IR71-14.39,  
FRA-315-0.00**

NOTE: SEE PAVEMENT DETAILS ON SHEETS 49 & 50

**ROAD A**

- △ SEE DETAIL "A"
- △ SEE DETAIL "B"
- △ SEE DETAIL "C"
- △ SEE DETAIL "D"

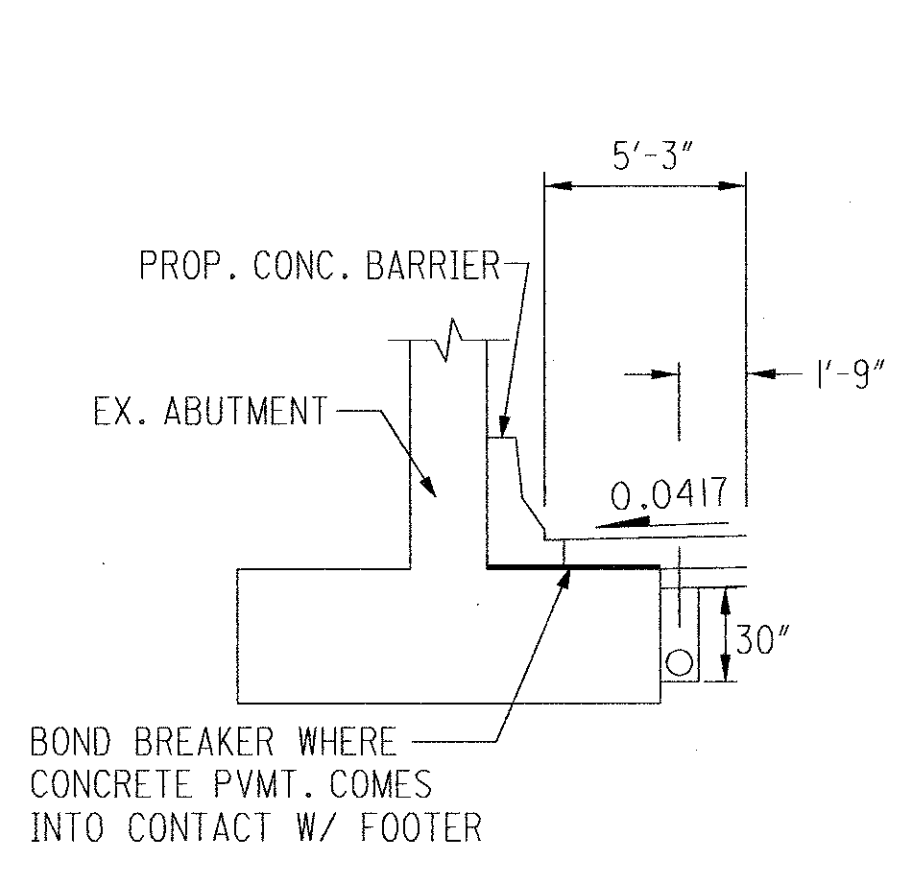


- LEGEND**
- ① -
  - ② ITEM 304 6" AGGREGATE BASE
  - ③ ITEM 203 SUBGRADE COMPACTION
  - ④ ITEM 659 SEEDING AND MULCHING
  - ⑤ ITEM 605 4" PIPE UNDERDRAIN (30" DEPTH)
  - ⑥ ITEM 605 4" PIPE UNDERDRAIN (18" DEPTH)
  - ⑦ ITEM 606 GUARDRAIL, TYPE 5
  - ⑧ -
  - ⑨ -
  - ⑩ ITEM 451 10" REINFORCED CONCRETE PAVEMENT
  - ⑪ ITEM 605 4" PIPE UNDERDRAIN (UNCLASSIFIED)
  - ⑫ STANDARD LONGITUDINAL JOINT
  - ⑬ INTEGRAL CURB TYPE 2-A
  - ⑭ UNTIED LONGITUDINAL JOINT

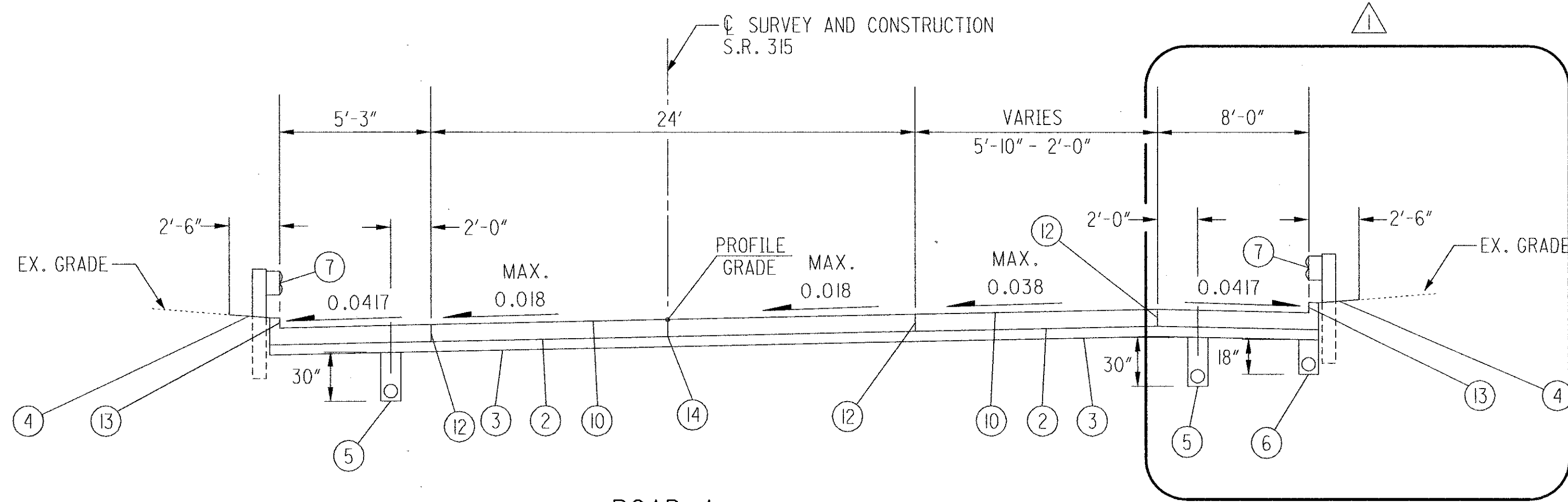
**PROPOSED TYPICAL SECTIONS  
SR 315 - ROAD A**

**FRA-IR71-14.39,  
FRA-315-0.00**

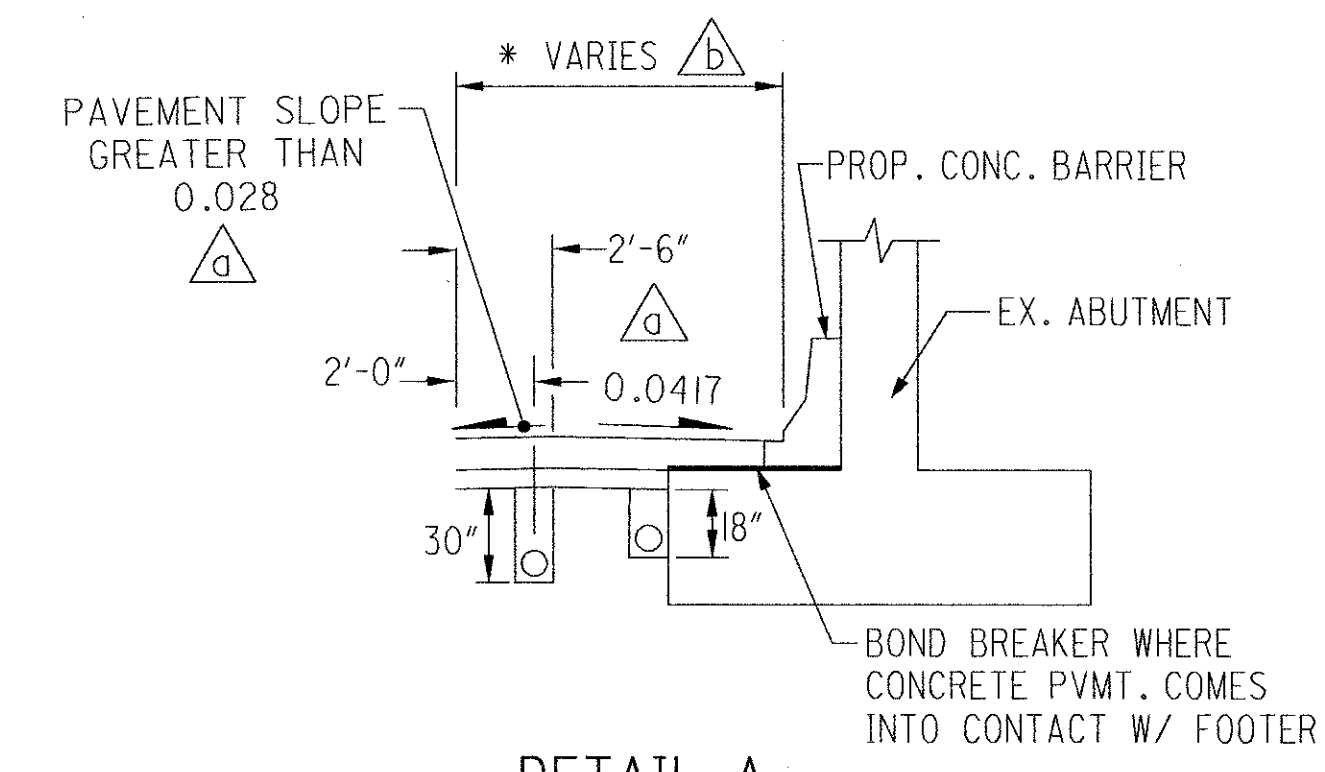




**DETAIL B**  
SECTION APPLIES:  
STA. 62+44.02 TO STA. 64+25.00



**ROAD A  
SUPERELEVATED SECTION**  
SECTION APPLIES:  
STA. 60+92.80 TO STA. 61+84.97 = 92.17 LIN. FT.



**DETAIL A**  
SECTION APPLIES:  
STA. 61+56.83 TO STA. 64+03.11

NOTE: SEE PAVEMENT DETAILS ON SHEETS 50 & 51

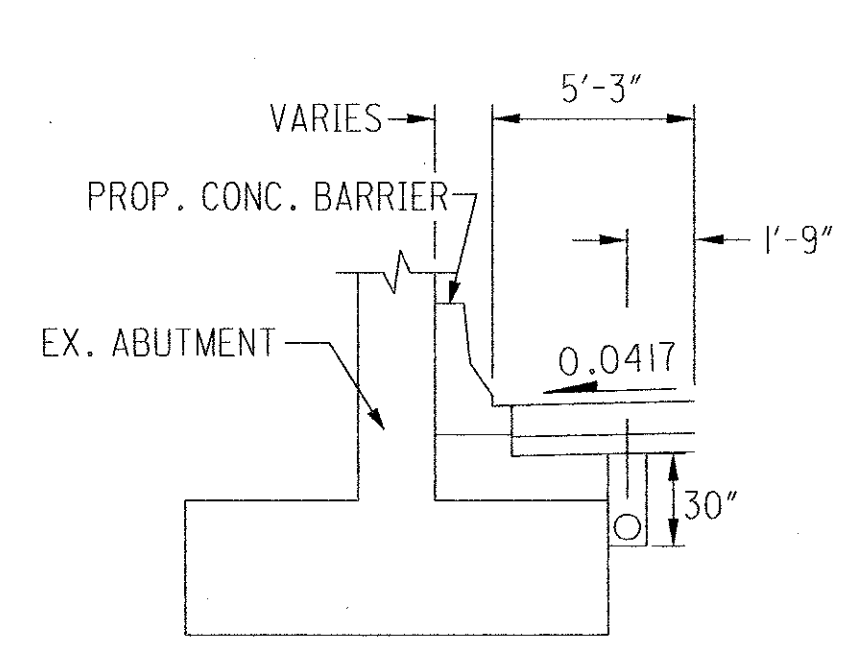
- \* DESIGN EXCEPTION  
(NDC = 10'-0" MIN.)
- ⊗ 0.0417 OR RATE OF PAVEMENT SUPERELEVATION,  
WHICHEVER IS GREATER

**ROAD A**

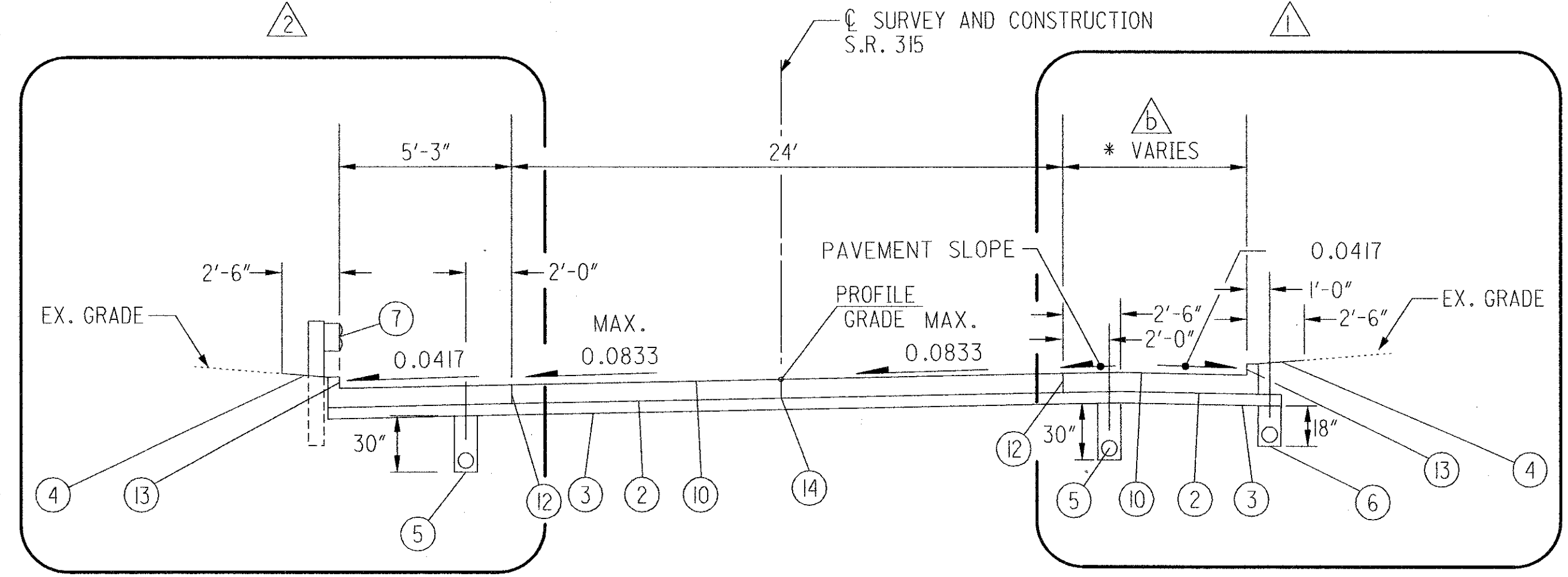
- △1 SEE DETAIL "A"
- △2 SEE DETAIL "B" AND DETAIL "C"
- △3 STA. 65+70.00 TO STA. 65+95.00, TRANSITION  
OUT OF CROWN SHOULDER  
2'-6" TO 0'-0"
- △4 SEE DETAIL "C"
- △5 STA. 61+75.00 TO STA. 62+00.00
- △6 STA. 61+56.83 TO STA. 61+84.97 = 8'-0" TO 8'-9"  
STA. 61+84.97 TO STA. 62+13.96 = 10'-9" TO 10'-0"  
STA. 62+13.96 TO STA. 62+69.91 = 10'-0" TO 9'-4" \*  
STA. 62+69.91 TO STA. 63+35.60 = 9'-4" TO 10'-8" \*  
STA. 63+35.60 TO STA. 63+74.00 = 10'-8" TO 10'-3"  
STA. 63+74.00 TO STA. 64+03.00 = 10'-3" TO 10'-0"

**LEGEND**

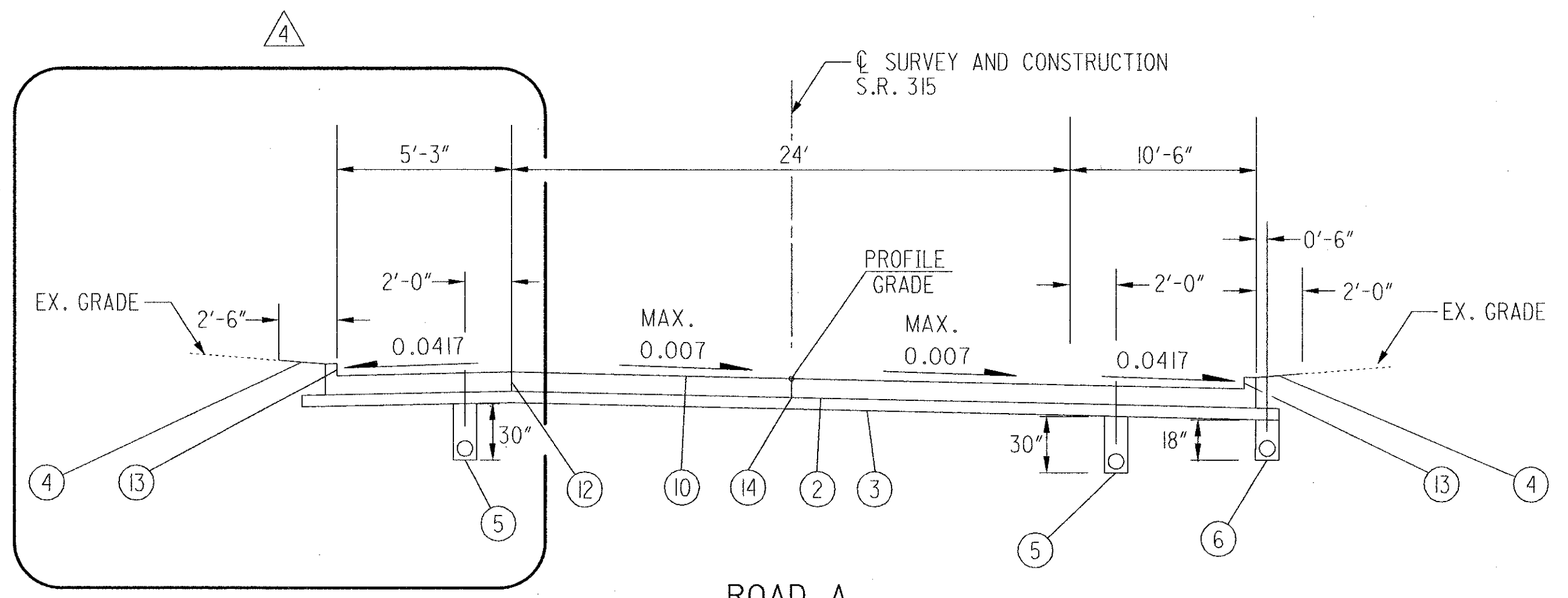
- ① -
- ② ITEM 304 6" AGGREGATE BASE
- ③ ITEM 203 SUBGRADE COMPACTION
- ④ ITEM 659 SEEDING AND MULCHING
- ⑤ ITEM 605 4" PIPE UNDERDRAIN (30" DEPTH)
- ⑥ ITEM 605 4" PIPE UNDERDRAIN (18" DEPTH)
- ⑦ ITEM 606 GUARDRAIL, TYPE 5
- ⑧ -
- ⑨ -
- ⑩ ITEM 451 10" REINFORCED CONCRETE PAVEMENT
- ⑪ ITEM 605 4" PIPE UNDERDRAIN (UNCLASSIFIED)
- ⑫ STANDARD LONGITUDINAL JOINT
- ⑬ INTEGRAL CURB TYPE 2-A
- ⑭ UNTIED LONGITUDINAL JOINT



**DETAIL C**  
SECTION APPLIES:  
STA. 64+25.00 TO STA. 66+65.68

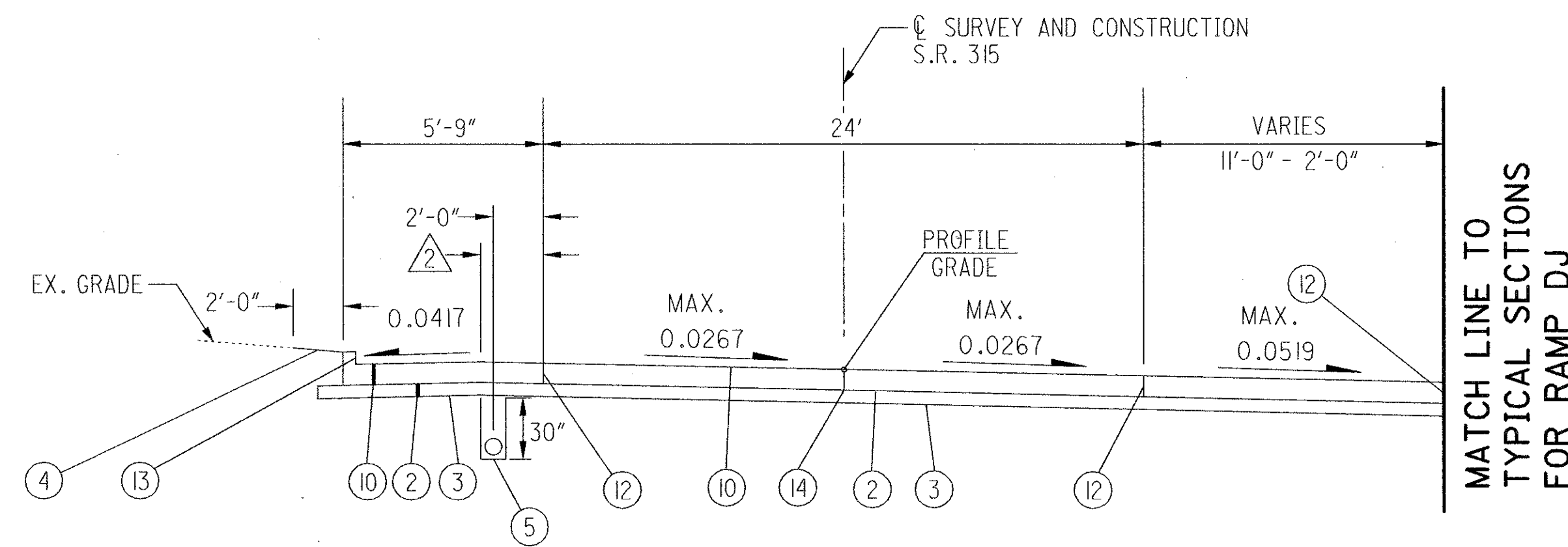


**ROAD A  
SUPERELEVATED SECTION**  
SECTION APPLIES:  
STA. 61+84.97 TO STA. 66+56.25 = 471.28 LIN. FT.



**ROAD A  
SUPERELEVATED SECTION**  
SECTION APPLIES:  
STA. 66+56.25 TO STA. 66+64.13 = 7.88 LIN. FT.

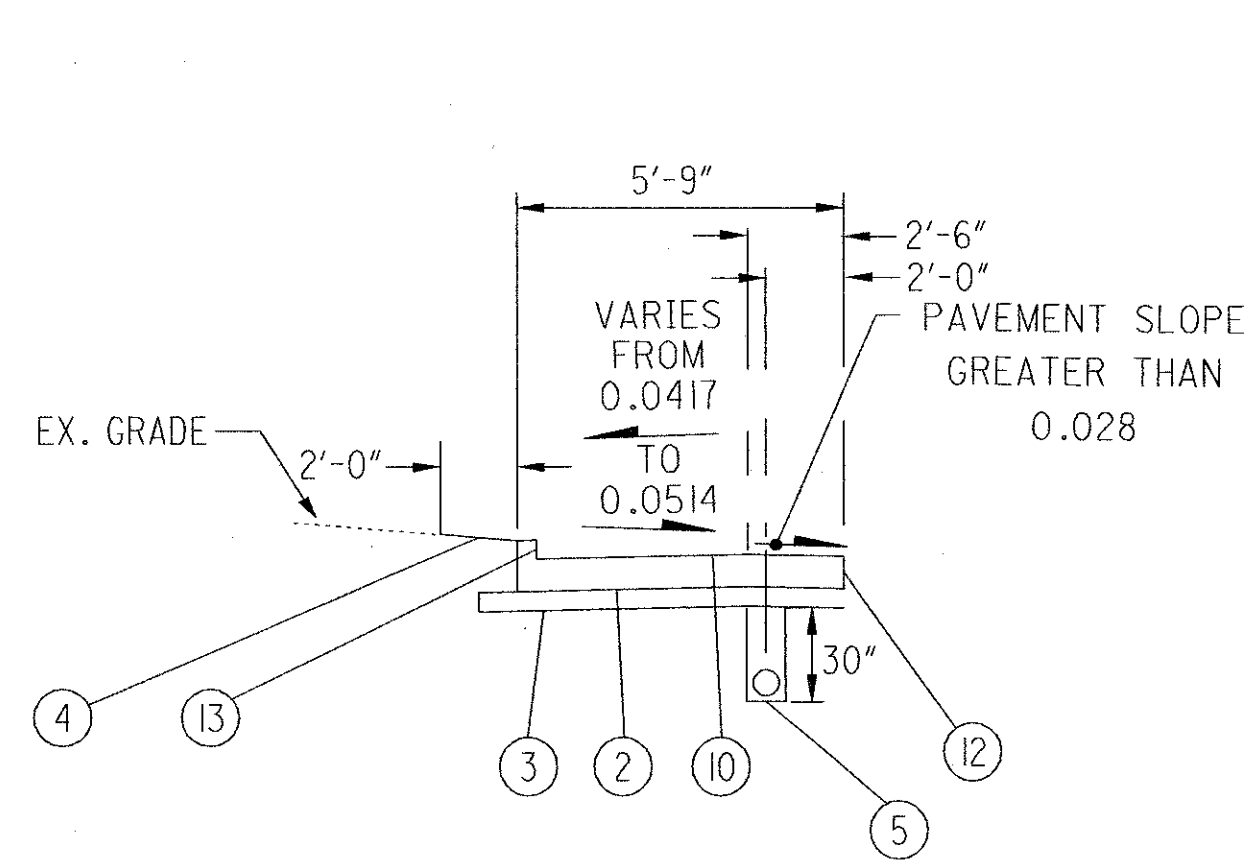
NOTE: SEE PAVEMENT DETAILS ON SHEET 51



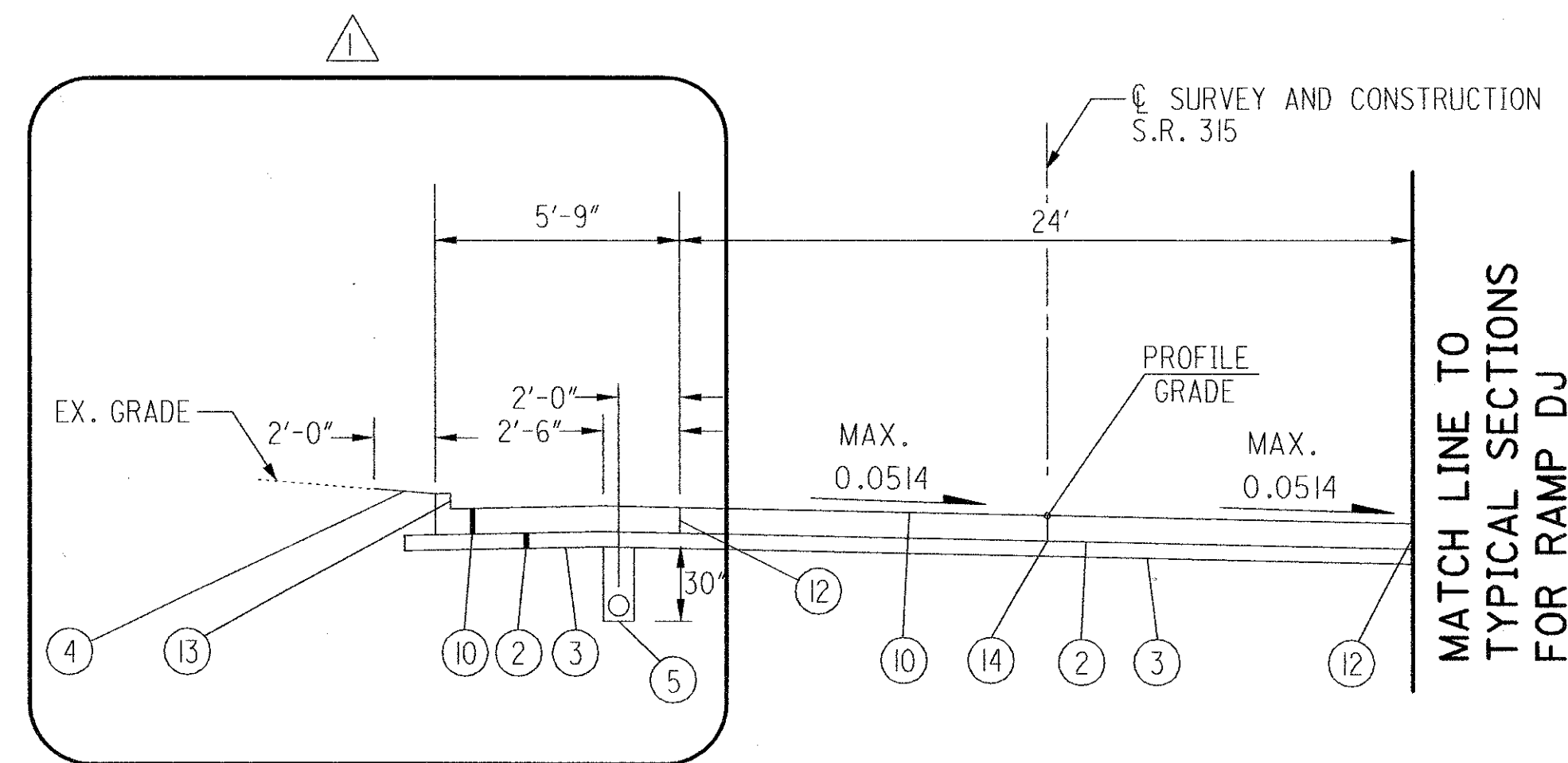
**ROAD A  
SUPERELEVATED SECTION**  
SECTION APPLIES:  
STA. 66+64.13 TO STA.67+29.30 = 65.17 LIN. FT.

**ROAD A**

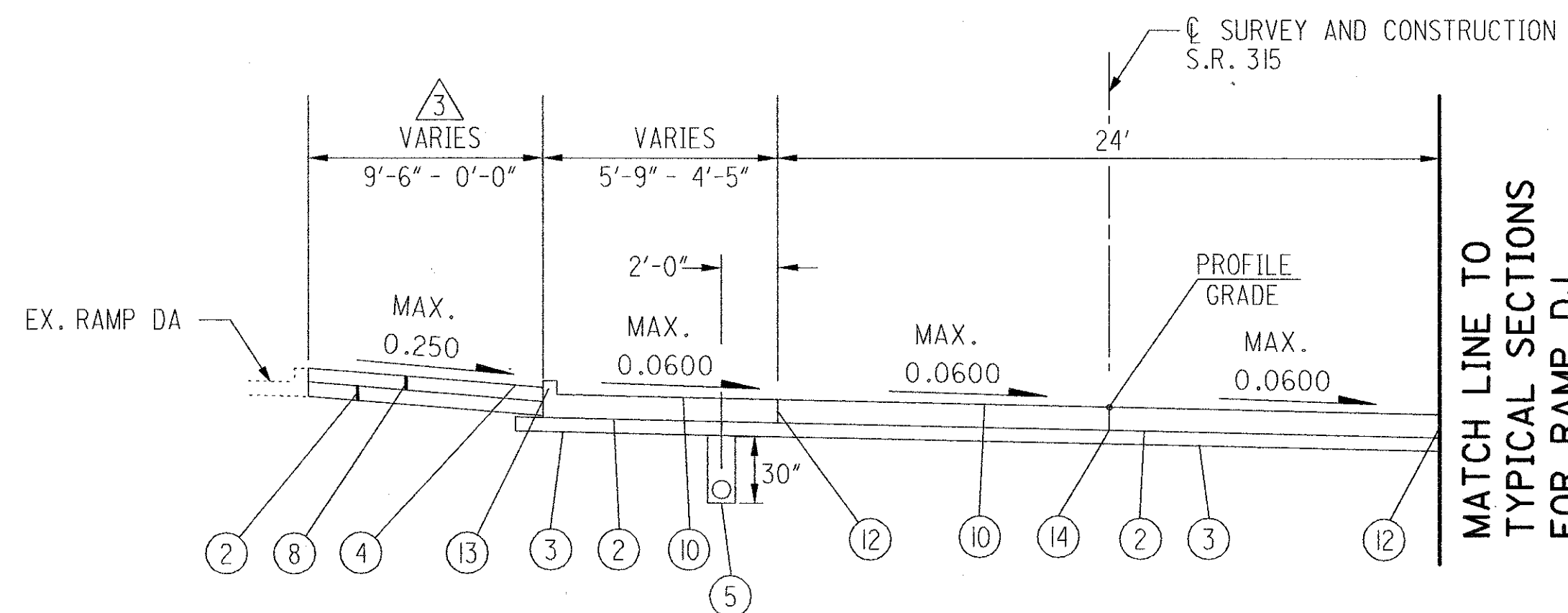
- ① SEE DETAIL "A"
- ② CROWN SHOULDER TRANSITION  
STA. 67+00.00 TO 67+25.00 = 0'-0" to 2'-6"  
STA. 67+25.00 TO 67+29.30 = 2'-6"
- ③ STA. 67+92.00 TO 68+74.14 = 5'-9"  
STA. 68+74.14 TO 68+92.88 = 5'-9" to 4'-5"



**DETAIL A**  
SECTION APPLIES:  
STA. 66+63.14 TO STA. 66+64.13



**ROAD A  
SUPERELEVATED SECTION**  
SECTION APPLIES:  
STA. 67+29.30 TO STA.67+92.00 = 62.7 LIN. FT.



**ROAD A  
SUPERELEVATED SECTION**  
SECTION APPLIES:  
STA. 67+92.00 TO STA.68+92.88 = 100.88 LIN. FT.

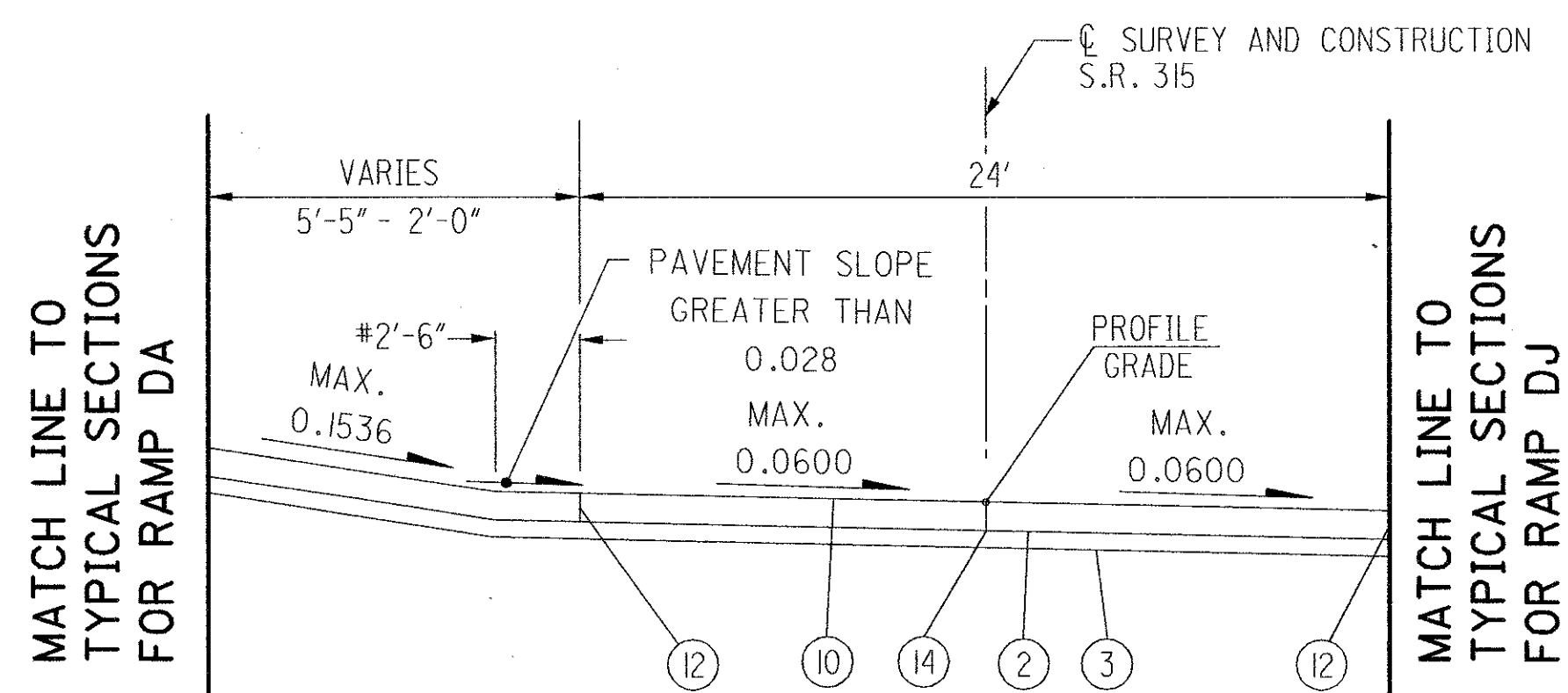
**LEGEND**

- ① -
- ② ITEM 304 6" AGGREGATE BASE
- ③ ITEM 203 SUBGRADE COMPACTION
- ④ ITEM 659 SEEDING AND MULCHING
- ⑤ ITEM 605 4" PIPE UNDERDRAIN (30" DEPTH)
- ⑥ ITEM 605 4" PIPE UNDERDRAIN (18" DEPTH)
- ⑦ ITEM 606 GUARDRAIL, TYPE 5
- ⑧ ITEM 601 6" CONCRETE TRAFFIC ISLAND
- ⑨ -
- ⑩ ITEM 451 10" REINFORCED CONCRETE PAVEMENT
- ⑪ ITEM 605 4" PIPE UNDERDRAIN (UNCLASSIFIED)
- ⑫ STANDARD LONGITUDINAL JOINT
- ⑬ INTEGRAL CURB TYPE 2-A
- ⑭ UNTIED LONGITUDINAL JOINT

**PROPOSED TYPICAL SECTIONS  
SR 315 - ROAD A**

**FRA-IR71-14.39,  
FRA-315-0.00**

NOTE: SEE PAVEMENT DETAILS ON SHEETS 51 & 52

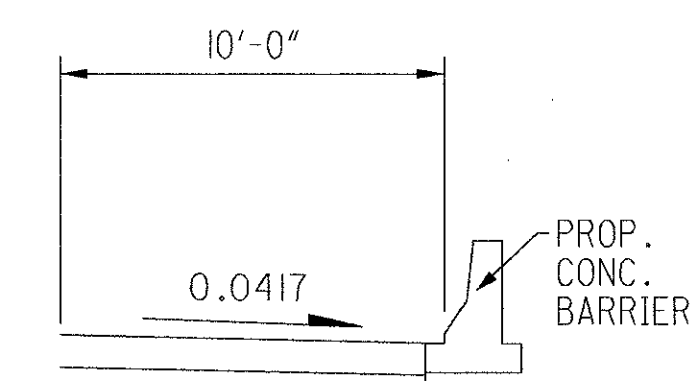


\* 2'-6" TAPERS TO WIDTH OF 2'-0" FOR SECTION WIDTHS LESS THAN 5'-0"

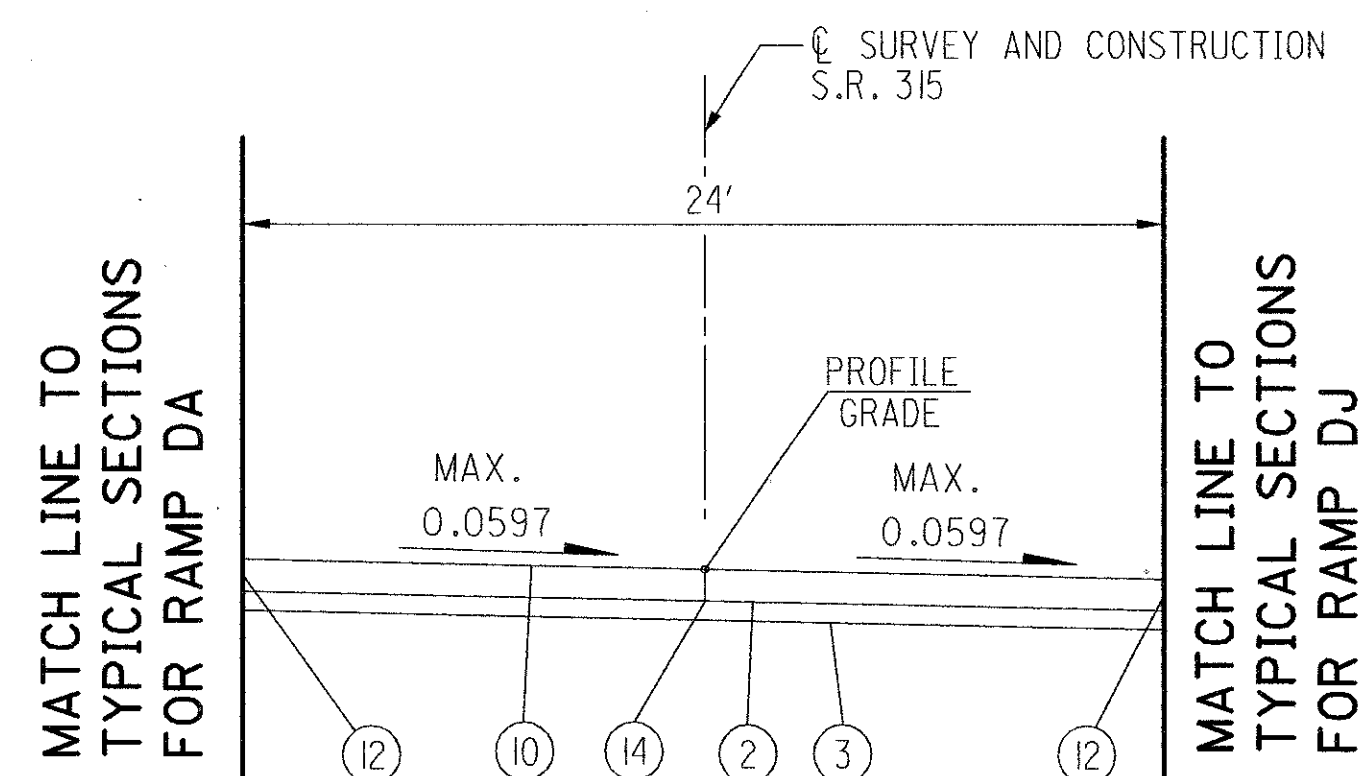
ROAD A  
SUPERELEVATED SECTION  
SECTION APPLIES:  
STA. 68+92.88 TO STA.69+29.71 = 36.83 LIN. FT.

ROAD A

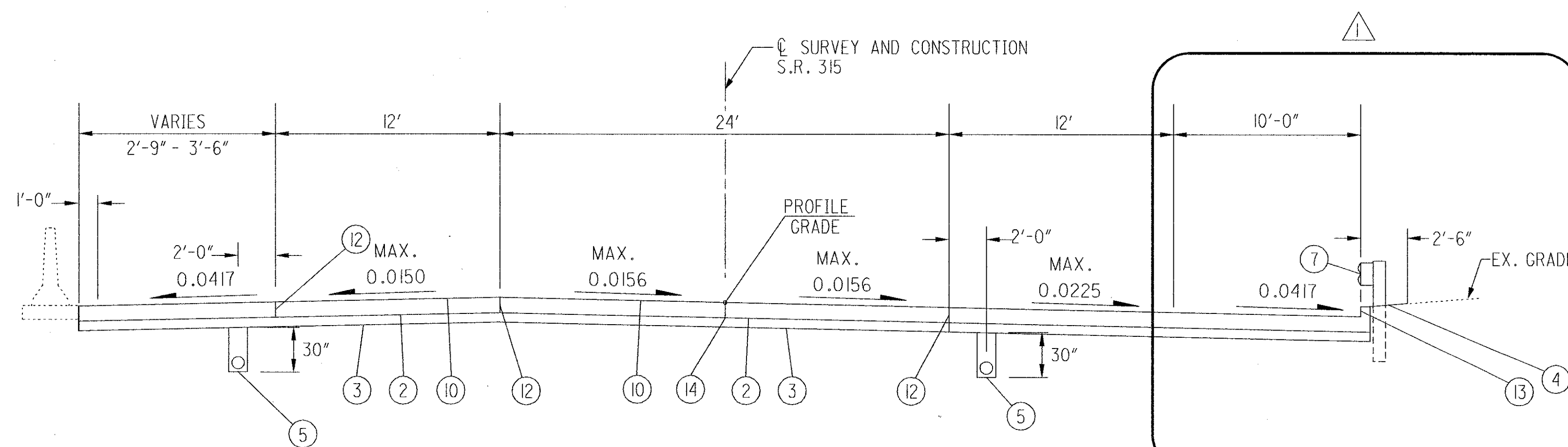
▲ SEE DETAIL "A"



DETAIL A  
SECTION APPLIES:  
STA. 71+91.12 TO STA. 72+14.24



ROAD A  
SUPERELEVATED SECTION  
SECTION APPLIES:  
STA. 69+29.71 TO STA.71+67.85 = 238.14 LIN. FT.



ROAD A  
SUPERELEVATED SECTION  
SECTION APPLIES:  
STA. 71+67.85 TO STA.72+00.12 = 32.27 LIN. FT.

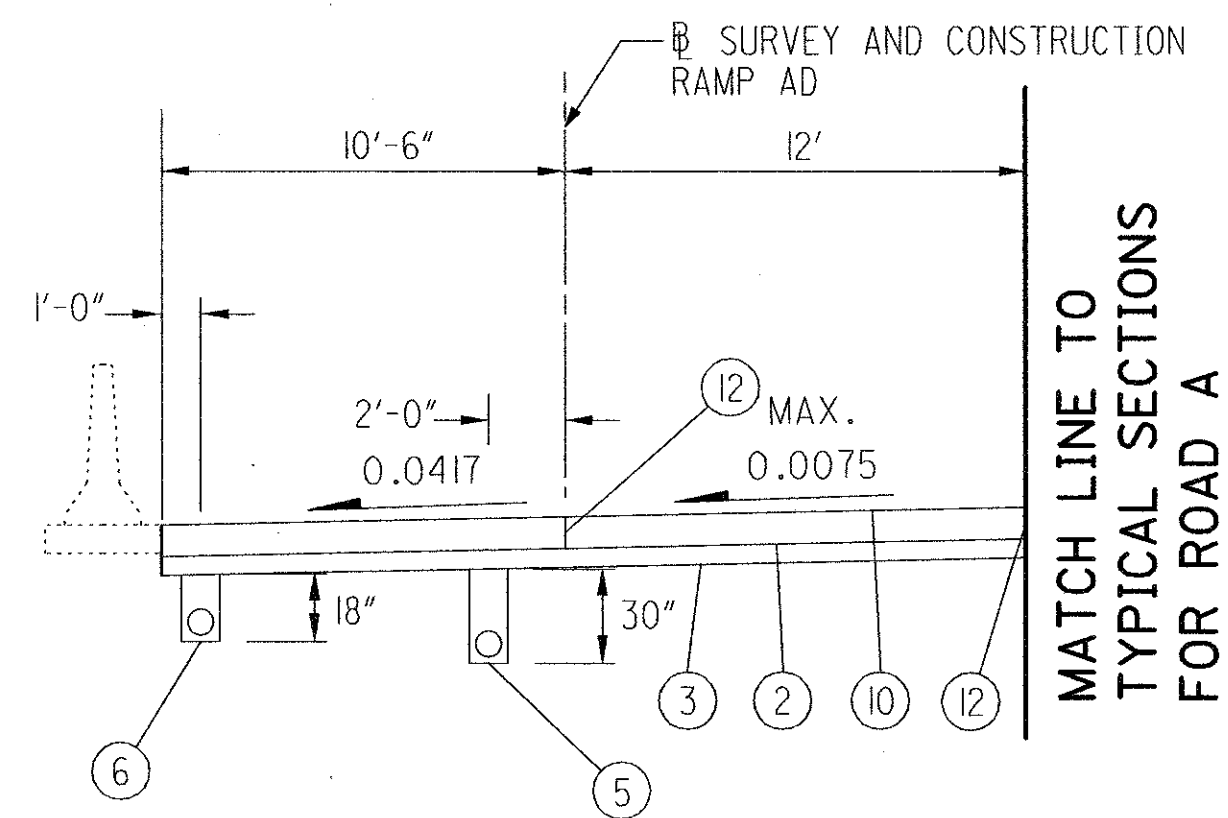
LEGEND

- ① -
- ② ITEM 304 6" AGGREGATE BASE
- ③ ITEM 203 SUBGRADE COMPACTION
- ④ ITEM 659 SEEDING AND MULCHING
- ⑤ ITEM 605 4" PIPE UNDERDRAIN (30" DEPTH)
- ⑥ ITEM 605 4" PIPE UNDERDRAIN (18" DEPTH)
- ⑦ ITEM 606 GUARDRAIL, TYPE 5
- ⑧ ITEM 601 6" CONCRETE TRAFFIC ISLAND
- ⑨ -
- ⑩ ITEM 451 10" REINFORCED CONCRETE PAVEMENT
- ⑪ ITEM 605 4" PIPE UNDERDRAIN (UNCLASSIFIED)
- ⑫ STANDARD LONGITUDINAL JOINT
- ⑬ INTEGRAL CURB TYPE 2-A
- ⑭ UNTIED LONGITUDINAL JOINT

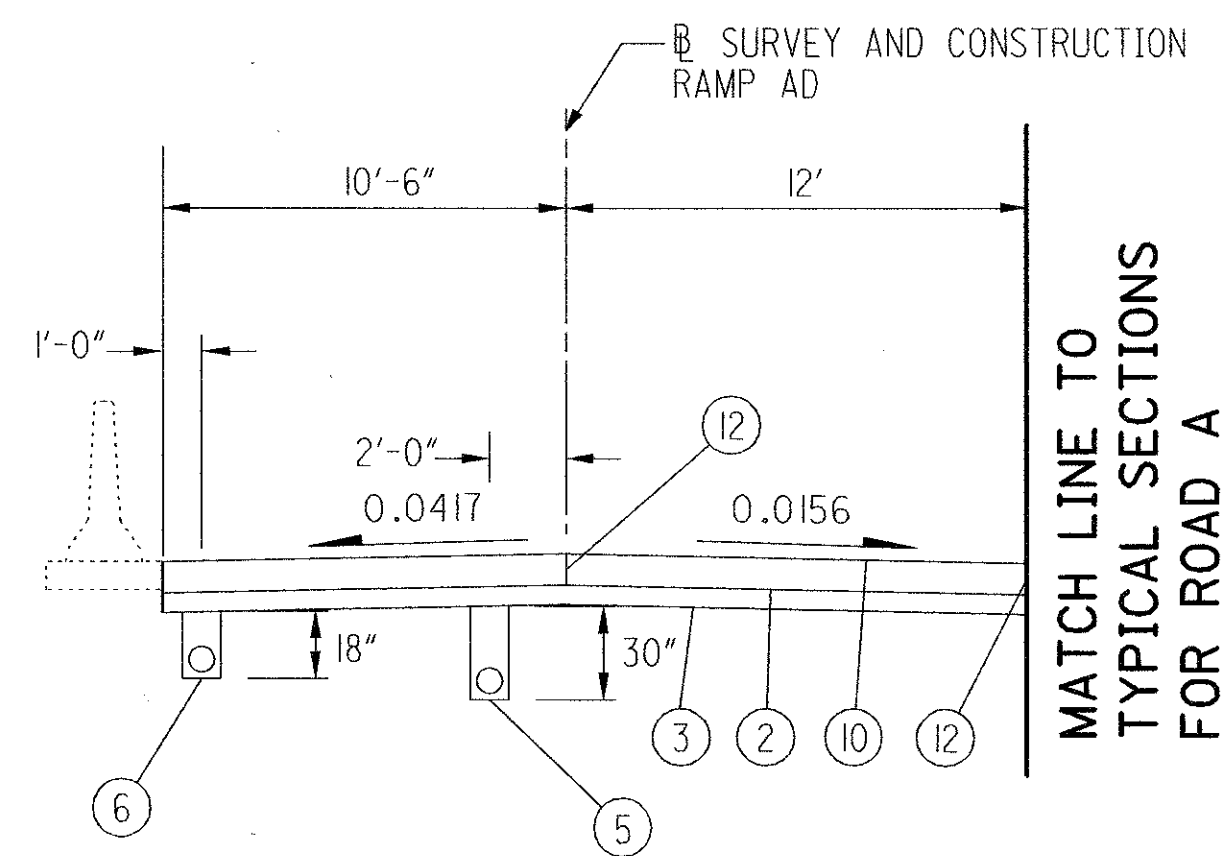
PROPOSED TYPICAL SECTIONS  
SR 315 - ROAD A

FRA-IR71-14.39,  
FRA-315-0.00

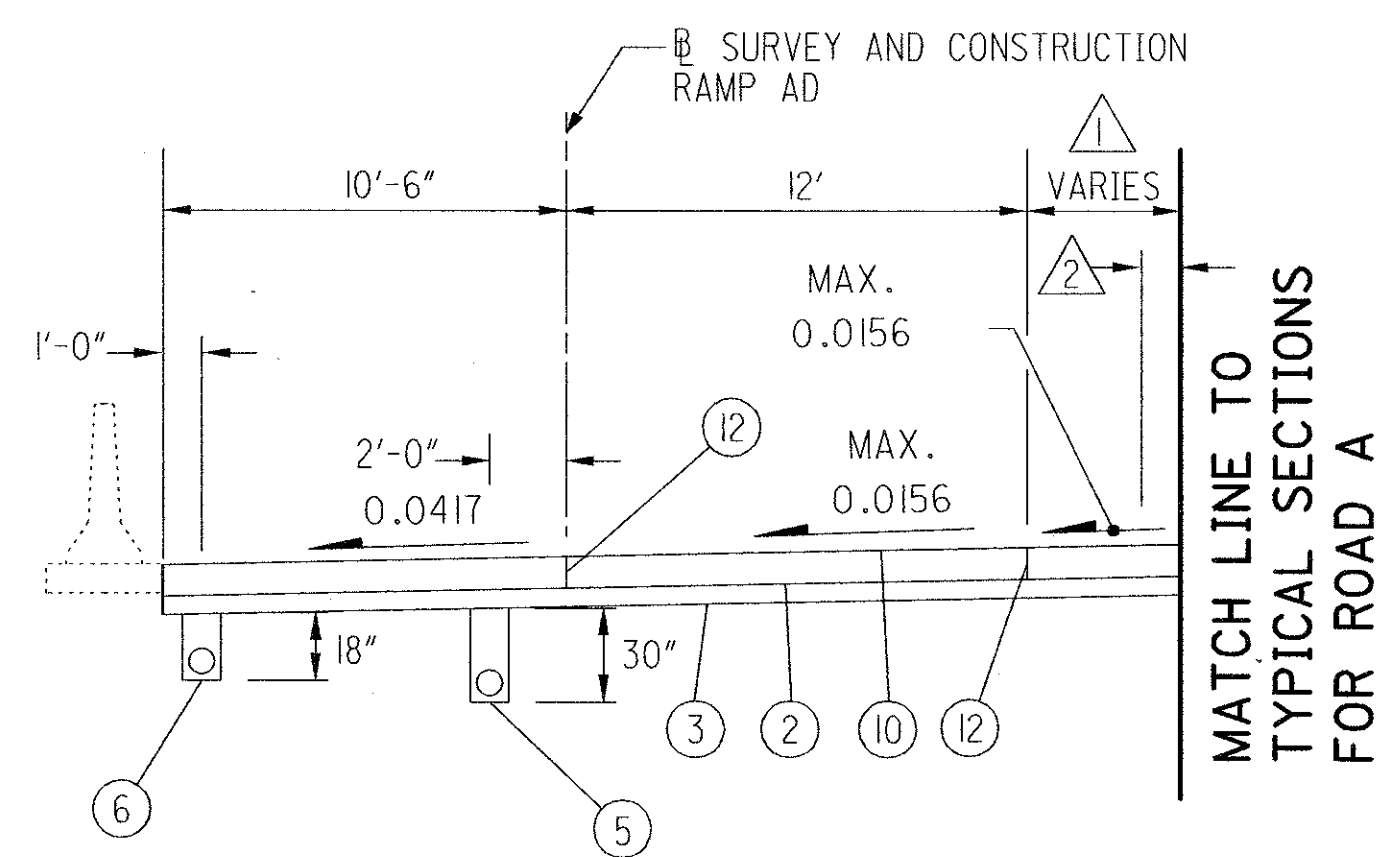
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RAMP AD  
 SUPERELEVATED SECTION  
 SECTION APPLIES:  
 STA. 49+96.85 TO STA. 50+66.67 = 69.82 LIN. FT.



RAMP AD  
 SUPERELEVATED SECTION  
 SECTION APPLIES:  
 STA. 50+66.67 TO STA. 53+04.88 = 238.21 LIN. FT.



RAMP AD  
 SUPERELEVATED SECTION  
 SECTION APPLIES:  
 STA. 53+04.88 TO STA. 54+08.32 = 103.44 LIN. FT.

NOTE: SEE PAVEMENT DETAILS ON SHEETS 47 & 48

RAMP AD

△ STA. 53+04.08 TO STA. 53+34.45 = 2'-0" to 4'-0"  
 STA. 53+34.45 TO STA. 54+08.32 = 4'-0"

△ EDGE OF CONSTRUCTION, ROAD A  
 VARIES 2'-0" TO 0'-0", STA. 53+16.44  
 TO STA. 53+34.45

LEGEND

- ① -
- ② ITEM 304 6" AGGREGATE BASE
- ③ ITEM 203 SUBGRADE COMPACTION
- ④ ITEM 659 SEEDING AND MULCHING
- ⑤ ITEM 605 4" PIPE UNDERDRAIN (30" DEPTH)
- ⑥ ITEM 605 4" PIPE UNDERDRAIN (18" DEPTH)
- ⑦ ITEM 606 GUARDRAIL, TYPE 5
- ⑧ -
- ⑨ -
- ⑩ ITEM 451 10" REINFORCED CONCRETE PAVEMENT
- ⑪ ITEM 605 4" PIPE UNDERDRAIN (UNCLASSIFIED)
- ⑫ STANDARD LONGITUDINAL JOINT
- ⑬ INTEGRAL CURB TYPE 2-A
- ⑭ UNTIED LONGITUDINAL JOINT

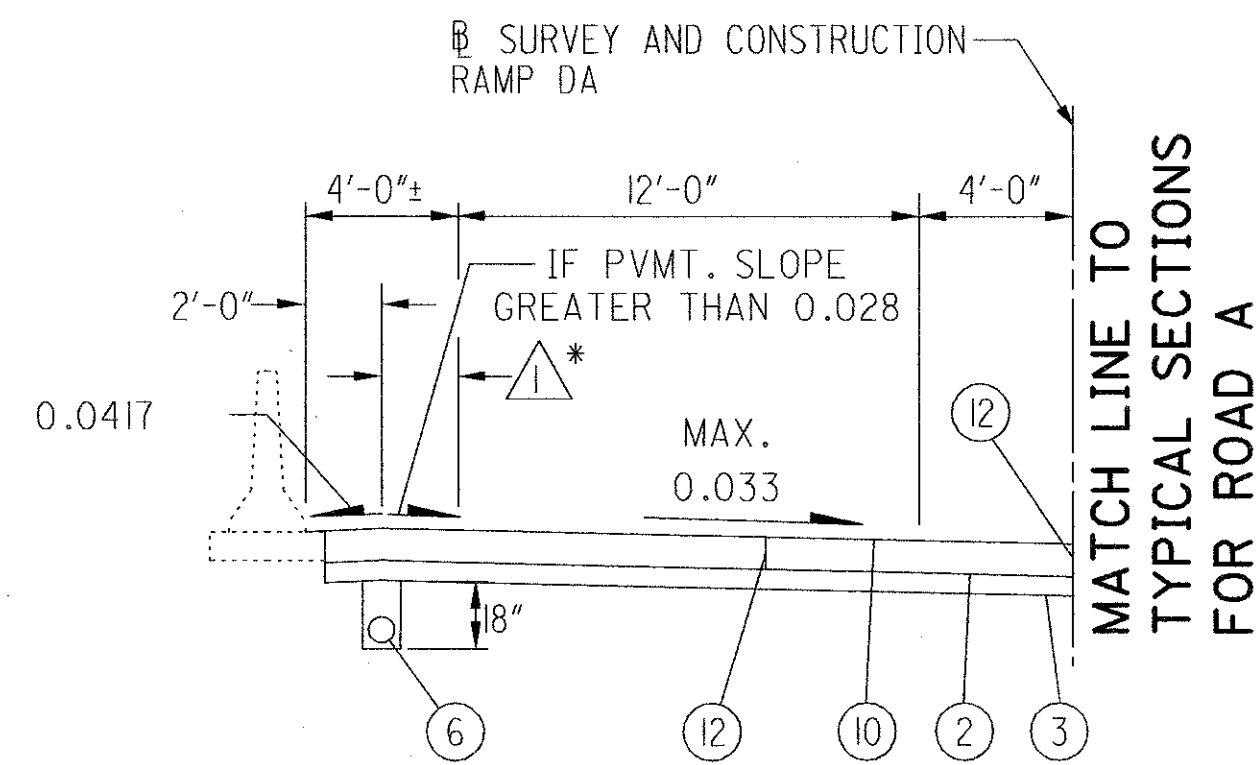
CALCULATED  
 BBB  
 CHECKED  
 LJS  
  
**PROPOSED TYPICAL SECTIONS**  
**SR 315 - RAMP AD**

**FRA - IR71-14.39,**  
**FRA - 315-0.00**

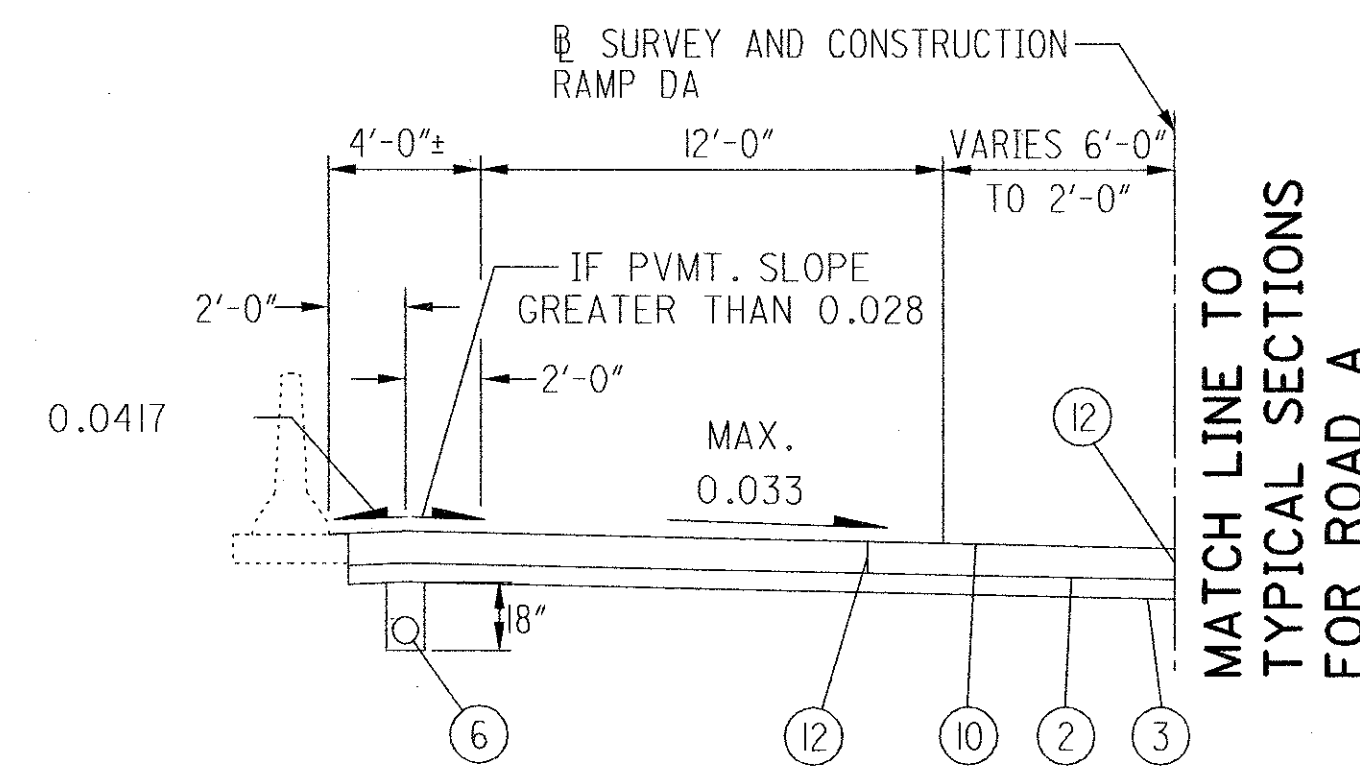
NOTE: SEE PAVEMENT DETAILS ON SHEETS 51 & 52

**RAMP DA**

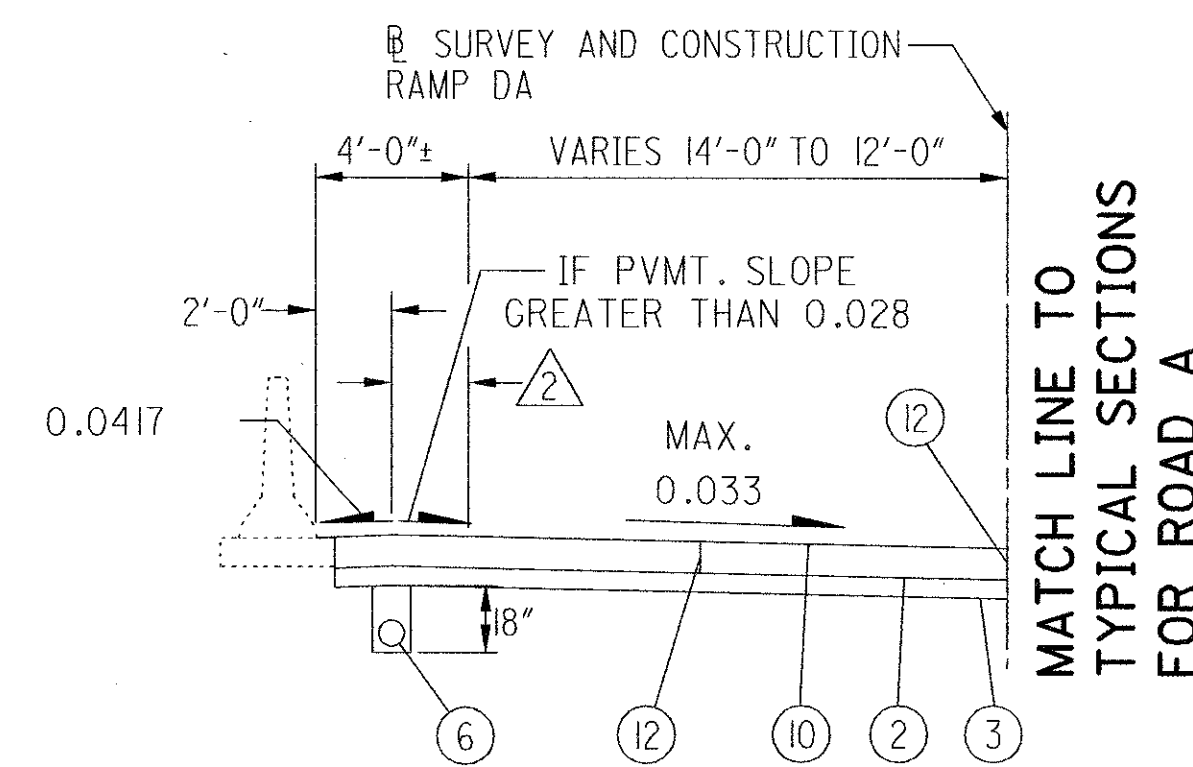
- ① 2'-0" CROWN SHOULDER TRANSITION TO BEGIN AT STA. 527+66.23
- ② CROWN SHOULDER TRANSITION  
STA. 528+48.58 to STA. 529+25.21 = 2'-0"  
STA. 529+25.21 to STA. 529+50.21 = 2'-0" to 0'-0"
- \* STA. 527+41.23 TO STA. 527+66.23 EXISTING SHOULDER SLOPE TO TRANSITION TO PROPOSED



RAMP DA  
SUPERELEVATED SECTION  
SECTION APPLIES:  
STA. 527+41.23 TO STA. 527+78.63 = 37.40 LIN. FT.



RAMP DA  
SUPERELEVATED SECTION  
SECTION APPLIES:  
STA. 527+78.63 TO STA. 528+48.58 = 69.95 LIN. FT.



RAMP DA  
SUPERELEVATED SECTION  
SECTION APPLIES:  
STA. 528+48.58 TO STA. 530+18.14 = 169.56 LIN. FT.

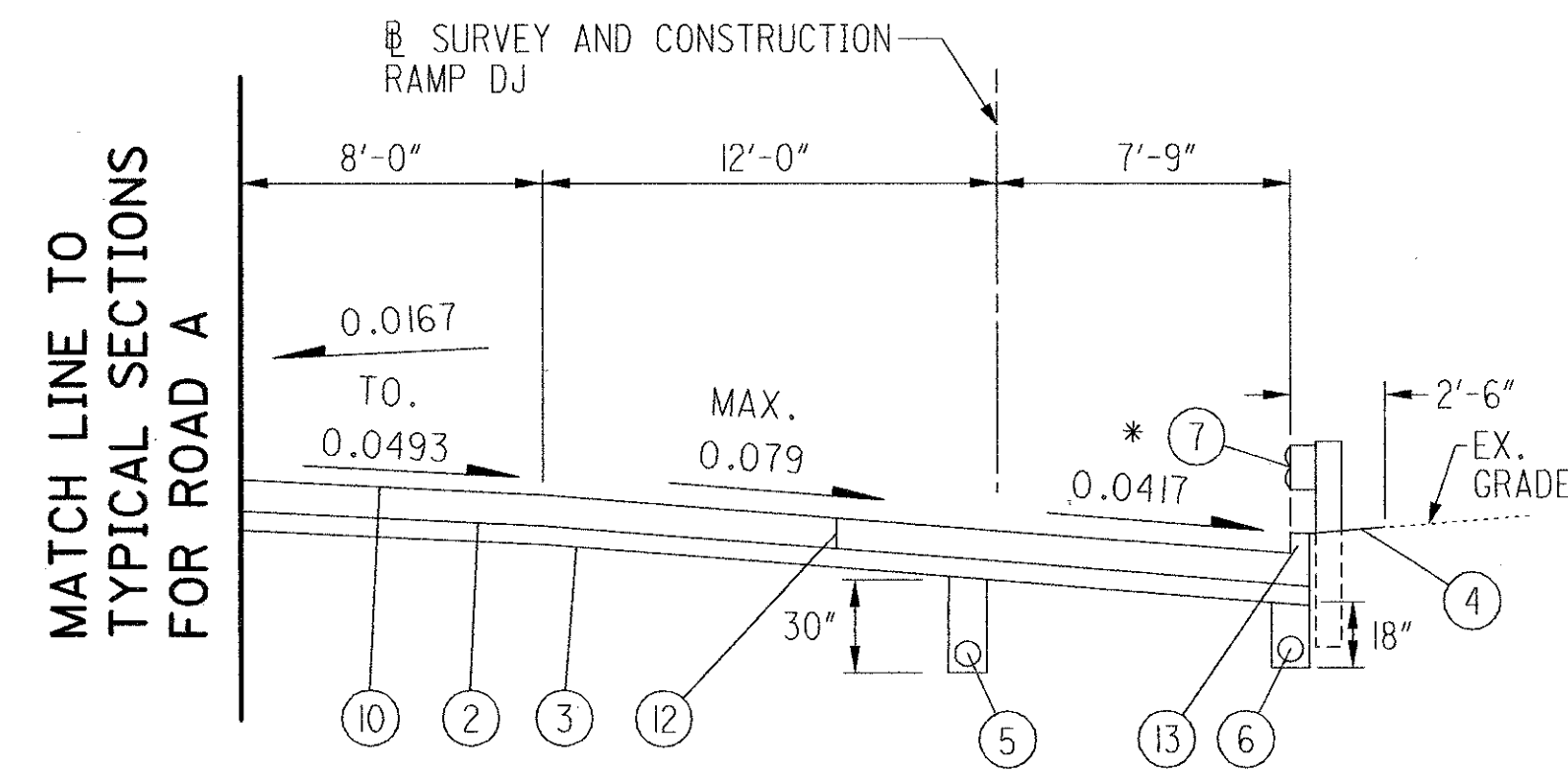
LEGEND

- ① -
- ② ITEM 304 6" AGGREGATE BASE
- ③ ITEM 203 SUBGRADE COMPACTION
- ④ ITEM 659 SEEDING AND MULCHING
- ⑤ ITEM 605 4" PIPE UNDERDRAIN (30" DEPTH)
- ⑥ ITEM 605 4" PIPE UNDERDRAIN (18" DEPTH)
- ⑦ ITEM 606 GUARDRAIL, TYPE 5
- ⑧ -
- ⑨ -
- ⑩ ITEM 451 10" REINFORCED CONCRETE PAVEMENT
- ⑪ ITEM 605 4" PIPE UNDERDRAIN (UNCLASSIFIED)
- ⑫ STANDARD LONGITUDINAL JOINT
- ⑬ INTEGRAL CURB TYPE 2-A
- ⑭ UNTIED LONGITUDINAL JOINT

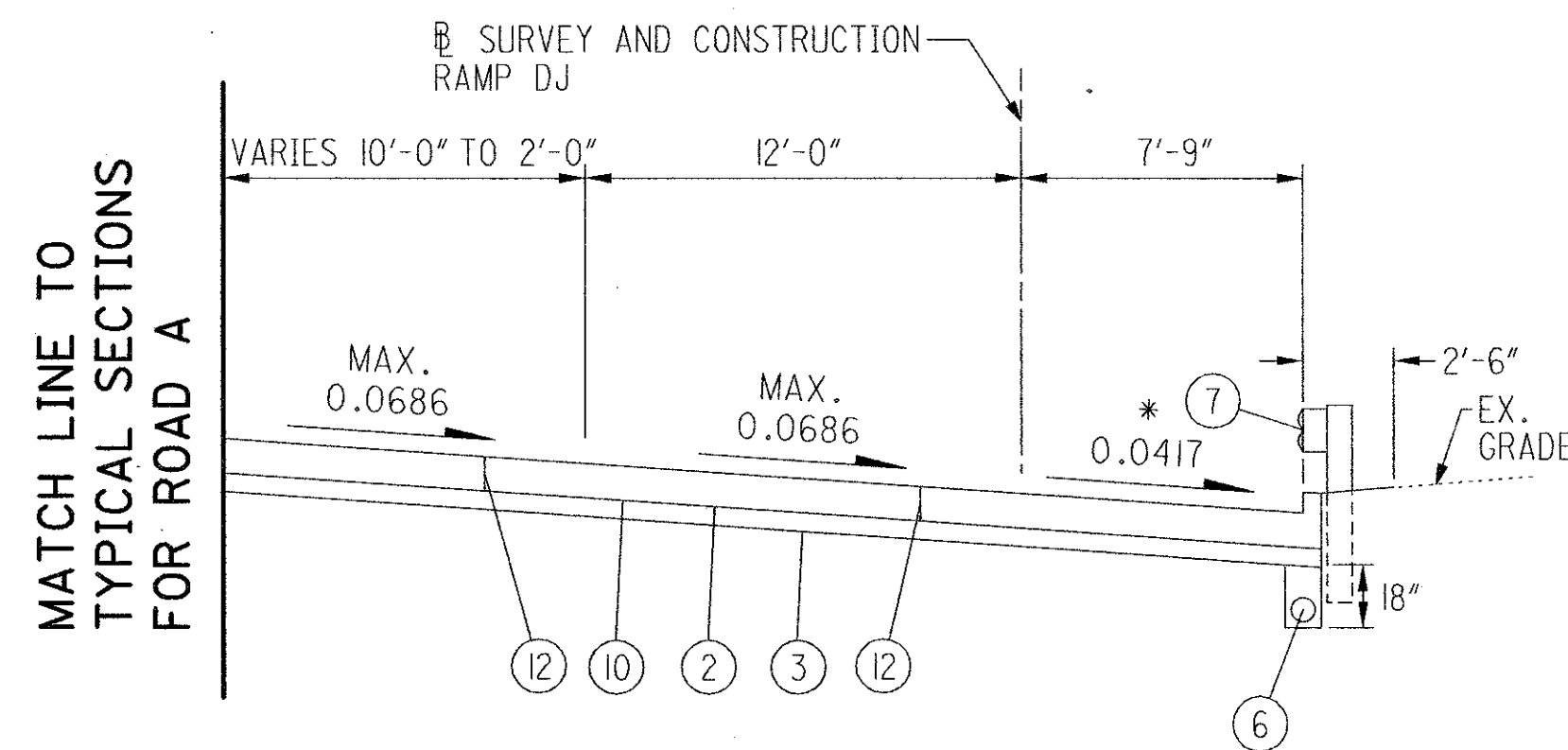
PROPOSED TYPICAL SECTIONS  
SR 315 - RAMP DA

FRA - IR71-14.39,  
FRA - 315-0.00

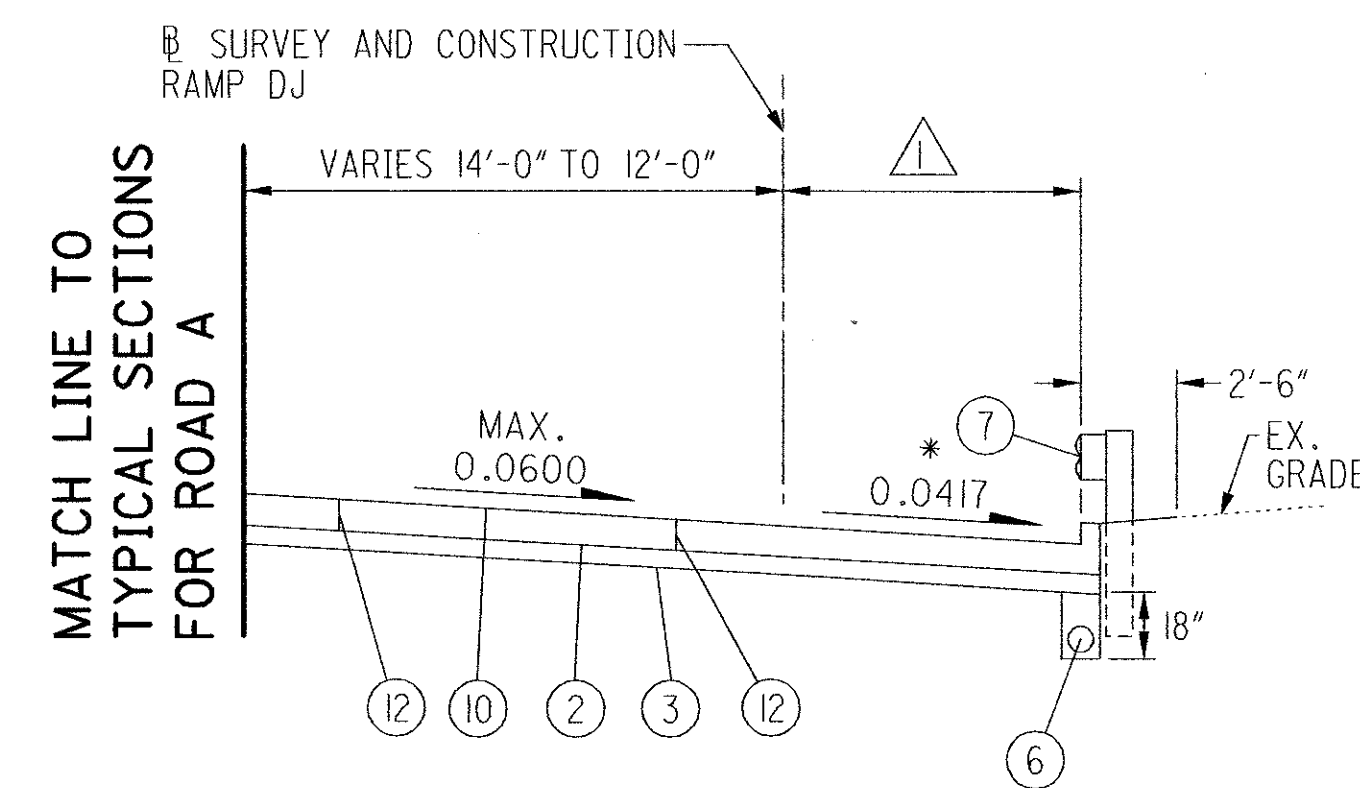
NOTE: SEE PAVEMENT DETAILS ON SHEETS 51 & 52



RAMP DJ  
SUPERELEVATED SECTION  
SECTION APPLIES:  
STA. 14+06.42 TO STA. 14+67.43 = 61.01 LIN. FT.



RAMP DJ  
SUPERELEVATED SECTION  
SECTION APPLIES:  
STA. 14+67.43 TO STA. 15+75.17 = 107.74 LIN. FT.



RAMP DJ  
SUPERELEVATED SECTION  
SECTION APPLIES:  
STA. 15+75.17 TO STA. 19+03.77 = 328.60 LIN. FT.

RAMP DJ

△ STA. 15+75.17 TO STA. 15+96.45 = 7'-9"  
STA. 15+96.45 TO STA. 530+18.14 = 7'-9" TO 10'-6"

\* 0.0417 OR RATE OF SUPER  
WHICH EVER IS GREATER

LEGEND

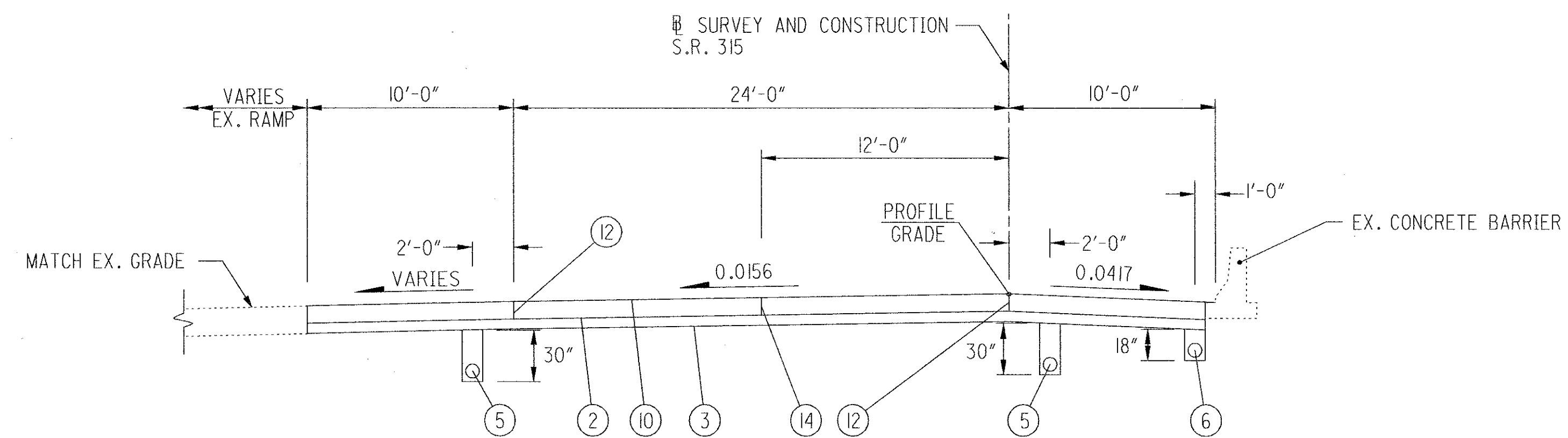
- ① -
- ② ITEM 304 6" AGGREGATE BASE
- ③ ITEM 203 SUBGRADE COMPACTION
- ④ ITEM 659 SEEDING AND MULCHING
- ⑤ ITEM 605 4" PIPE UNDERDRAIN (30" DEPTH)
- ⑥ ITEM 605 4" PIPE UNDERDRAIN (18" DEPTH)
- ⑦ ITEM 606 GUARDRAIL, TYPE 5
- ⑧ -
- ⑨ -
- ⑩ ITEM 451 10" REINFORCED CONCRETE PAVEMENT
- ⑪ ITEM 605 4" PIPE UNDERDRAIN (UNCLASSIFIED)
- ⑫ STANDARD LONGITUDINAL JOINT
- ⑬ INTEGRAL CURB TYPE 2-A
- ⑭ UNTIED LONGITUDINAL JOINT

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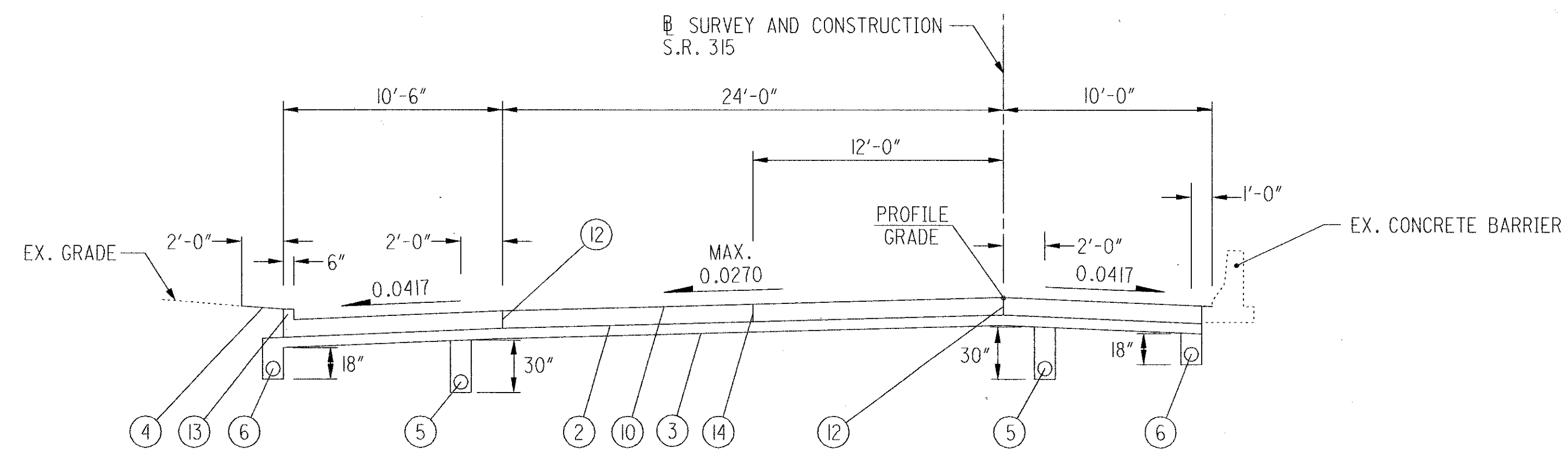
PROPOSED TYPICAL SECTIONS  
SR 315 - RAMP DJ

FRA-IR71-14.39,  
FRA-315-0.00

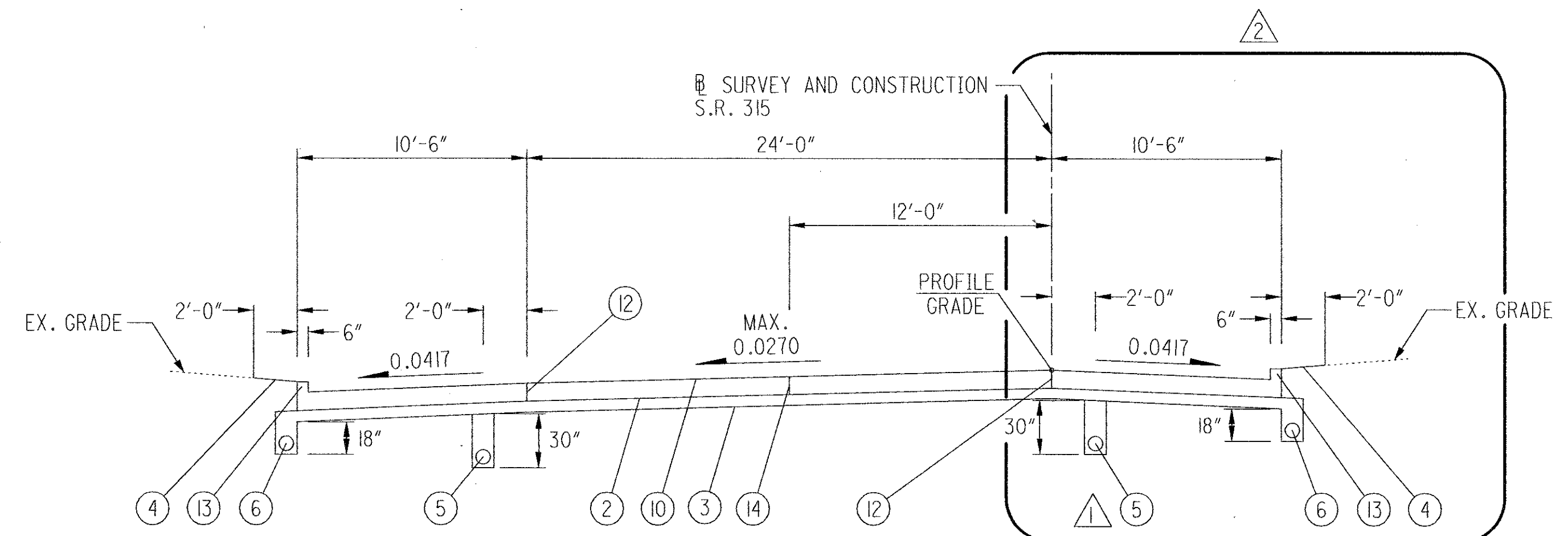
CALCULATED  
BBB  
CHECKED  
LJS



**ROAD B  
NORMAL SECTION**  
SECTION APPLIES:  
STA. 44+00.00 TO STA. 46+44.59 = 244.59 LIN. FT.



**ROAD B  
SUPERELEVATED SECTION**  
SECTION APPLIES:  
STA. 46+44.59 TO STA. 51+00.00 = 455.41 LIN. FT.

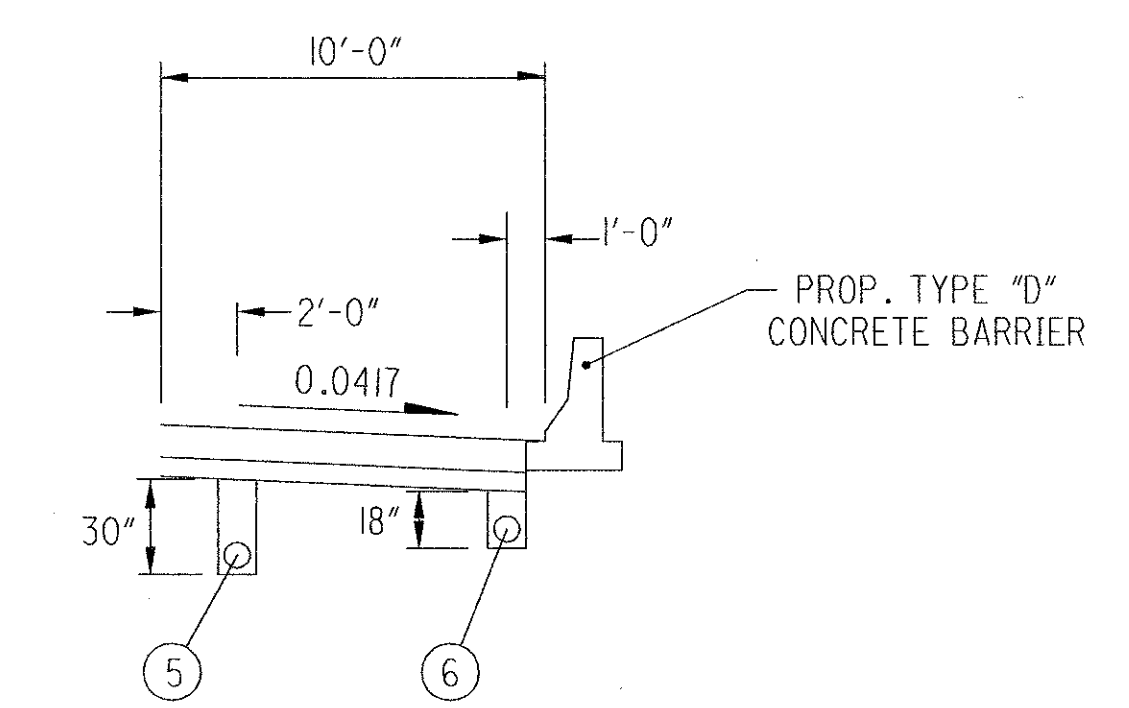


**ROAD B  
SUPERELEVATED SECTION**  
SECTION APPLIES:  
STA. 51+00.00 TO STA. 53+10.33 = 210.33 LIN. FT.

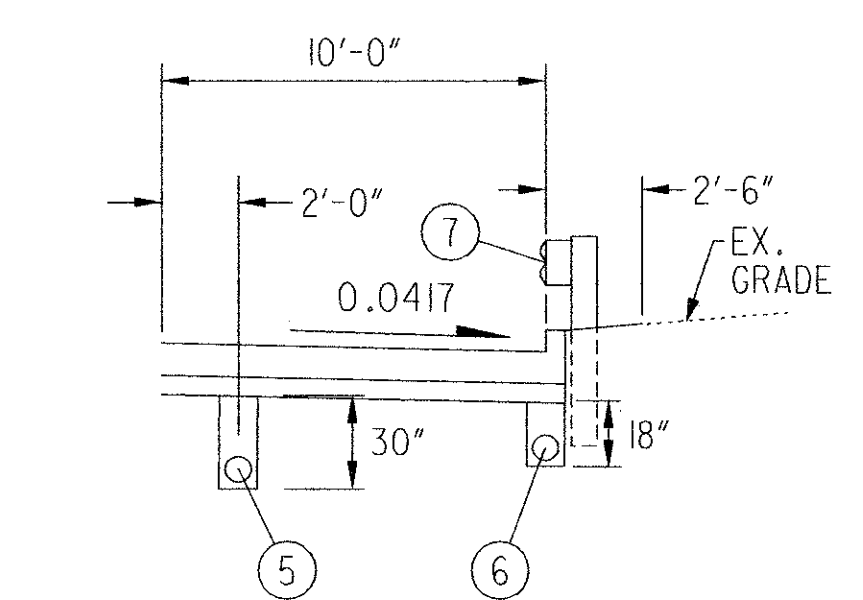
NOTE: SEE PAVEMENT DETAILS ON SHEET 46, 47, & 48

**ROAD B**

- △ END UNDERDRAIN AT STA. 53+00.00
- △ SEE DETAIL "A" AND DETAIL "B"



**DETAIL A**  
SECTION APPLIES:  
STA. 51+00.00 TO STA. 51+19.68



**DETAIL B**  
SECTION APPLIES:  
STA. 51+19.68 TO STA. 52+11.30

**LEGEND**

- ① -
- ② ITEM 304 6" AGGREGATE BASE
- ③ ITEM 203 SUBGRADE COMPACTION
- ④ ITEM 659 SEEDING AND MULCHING
- ⑤ ITEM 605 4" PIPE UNDERDRAIN (30" DEPTH)
- ⑥ ITEM 605 4" PIPE UNDERDRAIN (18" DEPTH)
- ⑦ ITEM 606 GUARDRAIL, TYPE 5
- ⑧ -
- ⑨ -
- ⑩ ITEM 451 10" REINFORCED CONCRETE PAVEMENT
- ⑪ ITEM 605 4" PIPE UNDERDRAIN (UNCLASSIFIED)
- ⑫ STANDARD LONGITUDINAL JOINT
- ⑬ INTEGRAL CURB TYPE 2-A
- ⑭ UNTIED LONGITUDINAL JOINT

**PROPOSED TYPICAL SECTIONS  
SR 315 - ROAD B**

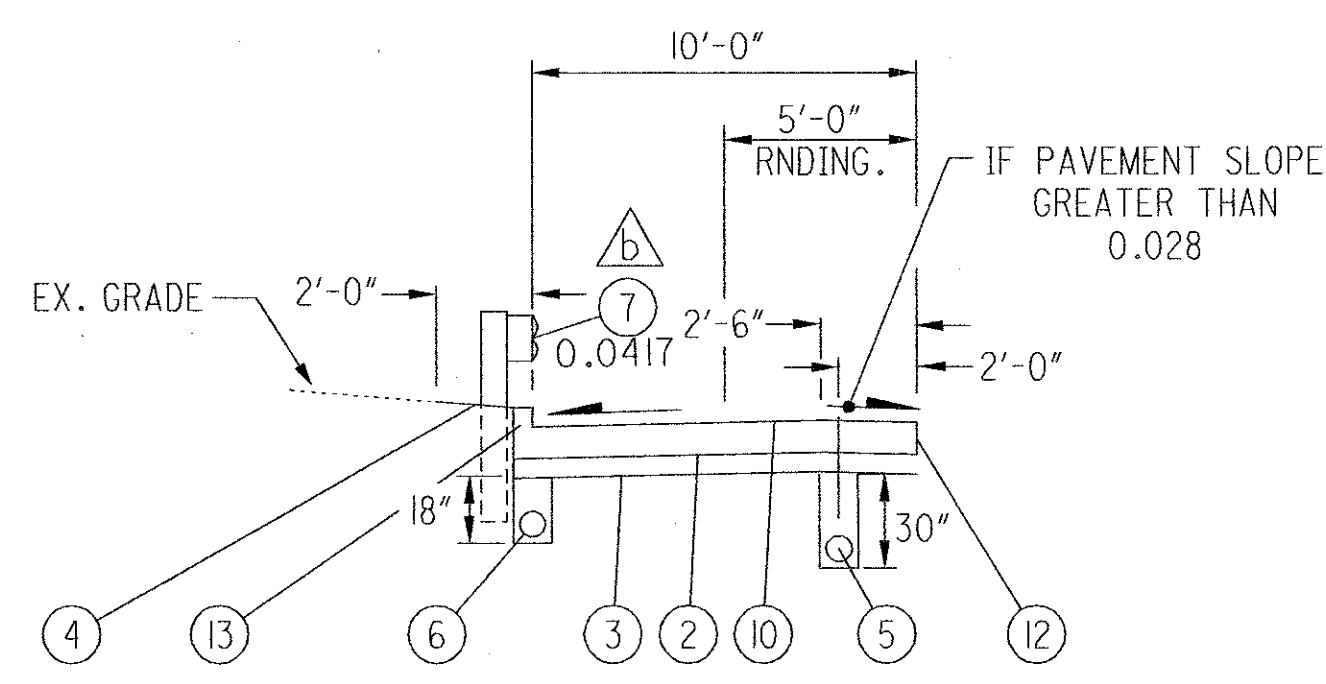
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FRA-315-0.00**

CALCULATED  
BBB  
CHECKED  
LUS

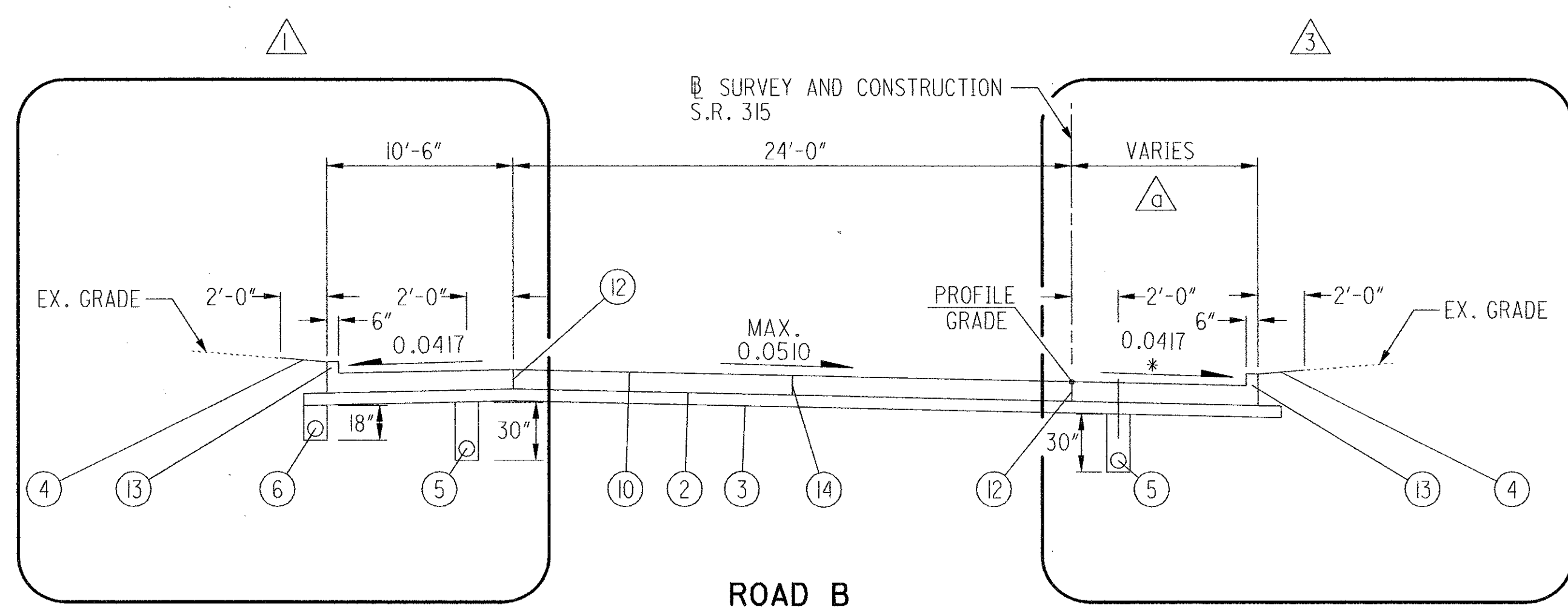
NOTE: SEE PAVEMENT DETAILS ON SHEET 48, 49, 50, & 51

**ROAD B**

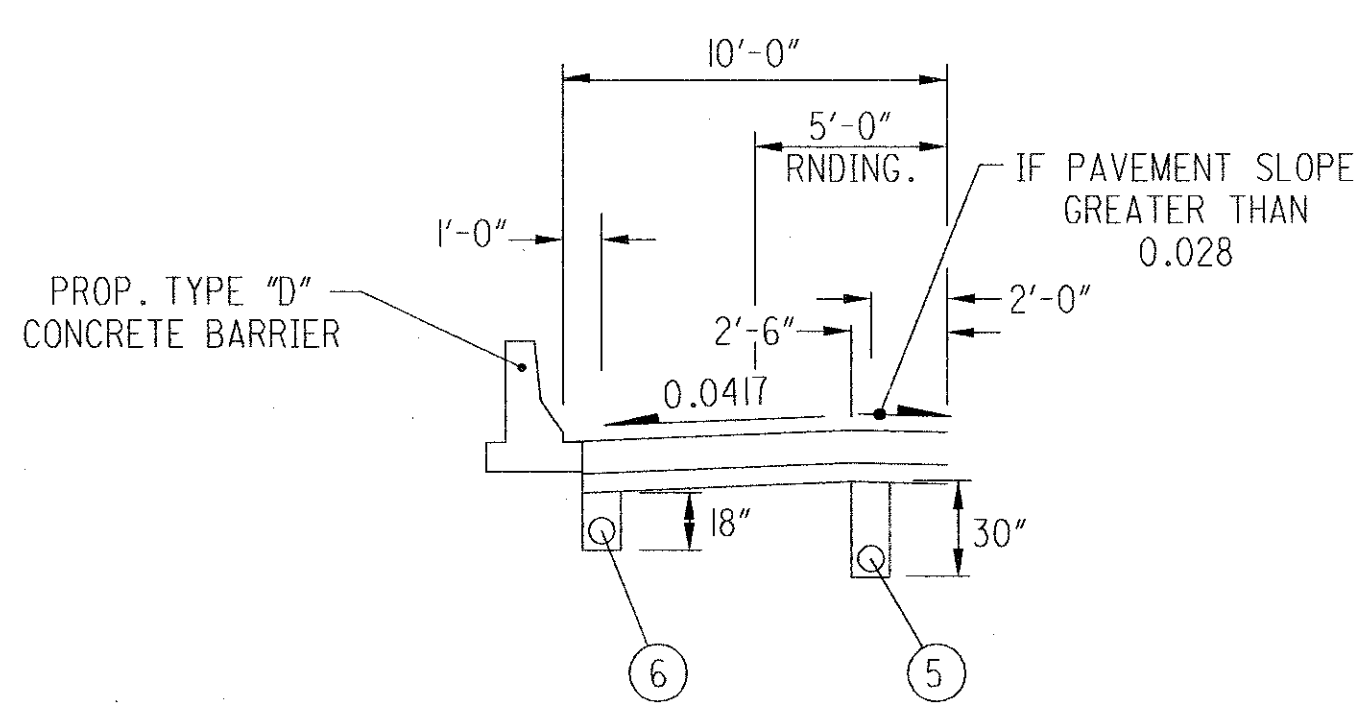
- \* OR RATE OF SUPER IF GREATER
- △ SEE DETAIL "A" AND DETAIL "B"
- △ SEE DETAIL "C" AND DETAIL "D"
- △ STA. 53+10.33 TO STA. 53+74.98 = 10'-6"
- △ STA. 53+74.98 TO STA. 55+17.52 = 10'-6" TO 5'-9"
- △ STA. 55+17.52 TO STA. 64+94.23 = 5'-9"
- △ STA. 64+94.23 TO STA. 65+54.21 = 5'-9" TO 7'-3"
- △ GUARDRAIL  
STA. 55+71.57 TO STA. 57+12.97  
STA. 60+56.26 TO STA. 64+35.30



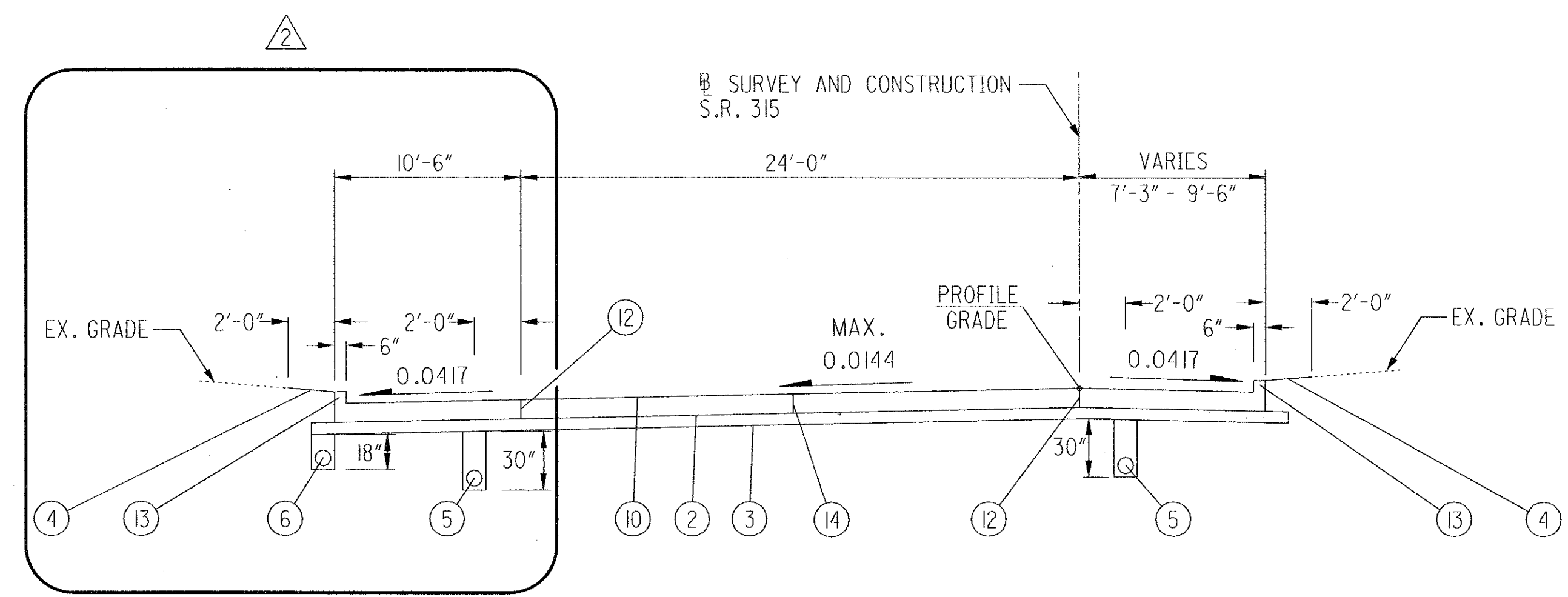
**DETAIL A**  
SECTION APPLIES:  
STA. 54+75.00 TO STA. 64+14.60



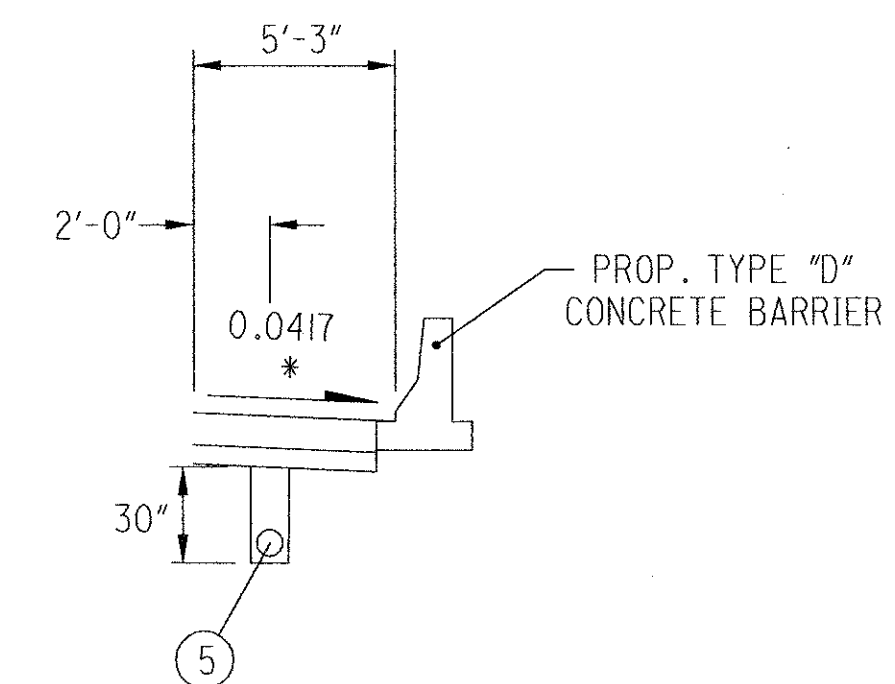
**ROAD B SUPERELEVATED SECTION**  
SECTION APPLIES:  
STA. 53+10.33 TO STA. 65+54.21 = 1243.88 LIN. FT.



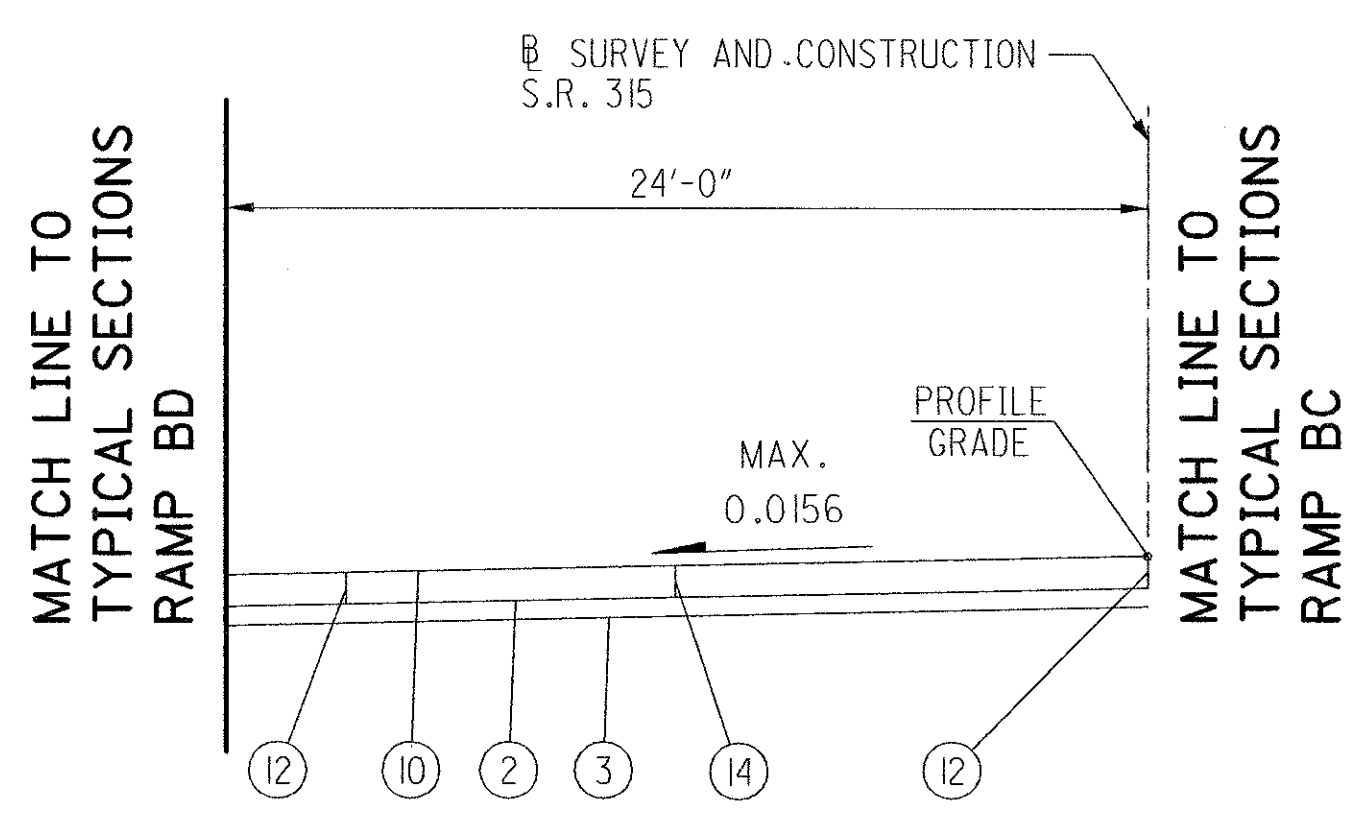
**DETAIL B**  
SECTION APPLIES:  
STA. 53+24.97 TO STA. 55+71.57  
STA. 59+70.07 TO STA. 60+56.28



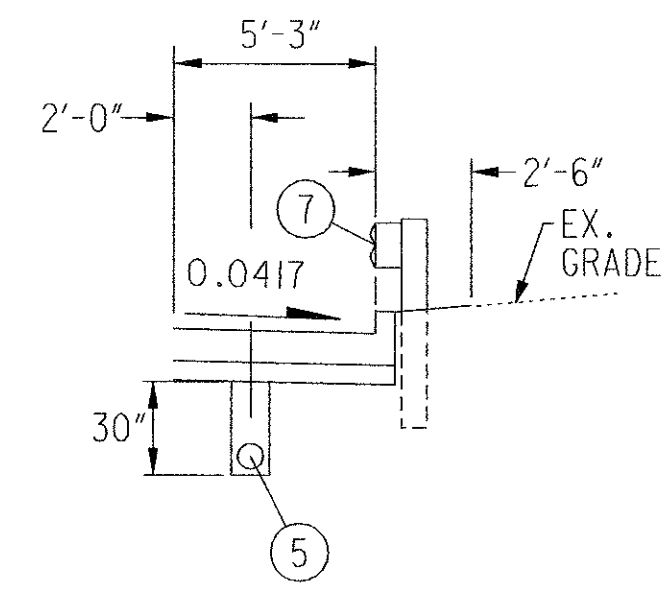
**ROAD B SUPERELEVATED SECTION**  
SECTION APPLIES:  
STA. 65+54.21 TO STA. 66+52.69 = 98.48 LIN. FT.



**DETAIL C**  
SECTION APPLIES:  
STA. 55+55.54 TO STA. 56+46.41  
STA. 59+12.91 TO STA. 60+09.37



**ROAD B NORMAL SECTION**  
SECTION APPLIES:  
STA. 66+52.69 TO STA. 69+38.72 = 286.03 LIN. FT.



**DETAIL D**  
SECTION APPLIES:  
STA. 56+46.42 TO STA. 57+25.42  
STA. 60+09.39 TO STA. 65+38.49

**LEGEND**

- ① -
- ② ITEM 304 6" AGGREGATE BASE
- ③ ITEM 203 SUBGRADE COMPACTION
- ④ ITEM 659 SEEDING AND MULCHING
- ⑤ ITEM 605 4" PIPE UNDERDRAIN (30" DEPTH)
- ⑥ ITEM 605 4" PIPE UNDERDRAIN (18" DEPTH)
- ⑦ ITEM 606 GUARDRAIL, TYPE 5
- ⑧ -
- ⑨ -
- ⑩ ITEM 451 10" REINFORCED CONCRETE PAVEMENT
- ⑪ ITEM 605 4" PIPE UNDERDRAIN (UNCLASSIFIED)
- ⑫ STANDARD LONGITUDINAL JOINT
- ⑬ INTEGRAL CURB TYPE 2-A
- ⑭ UNTIED LONGITUDINAL JOINT

**PROPOSED TYPICAL SECTIONS  
SR 315 - ROAD B**

**FRA-IR71-14.39,  
FRA-315-0.00**

DATE: 05/15/2002 08:56:06 PM  
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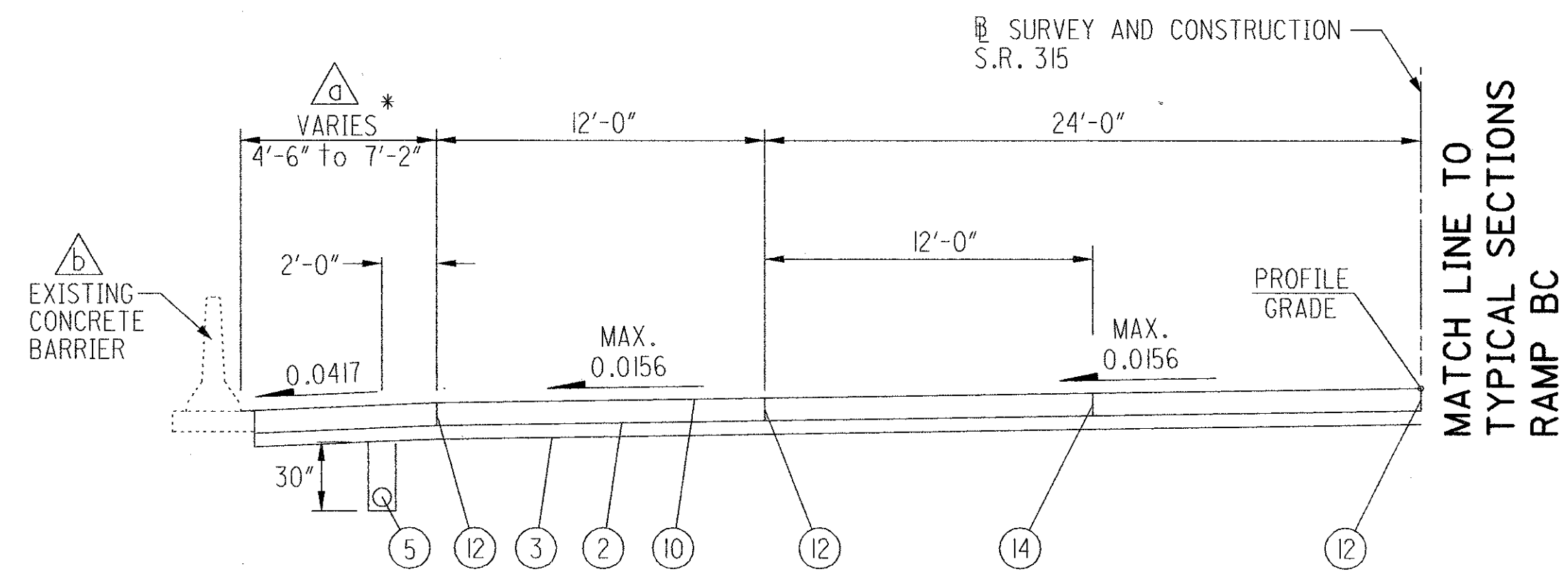
NOTE: SEE PAVEMENT DETAILS ON SHEET 51 & 52

**ROAD B**

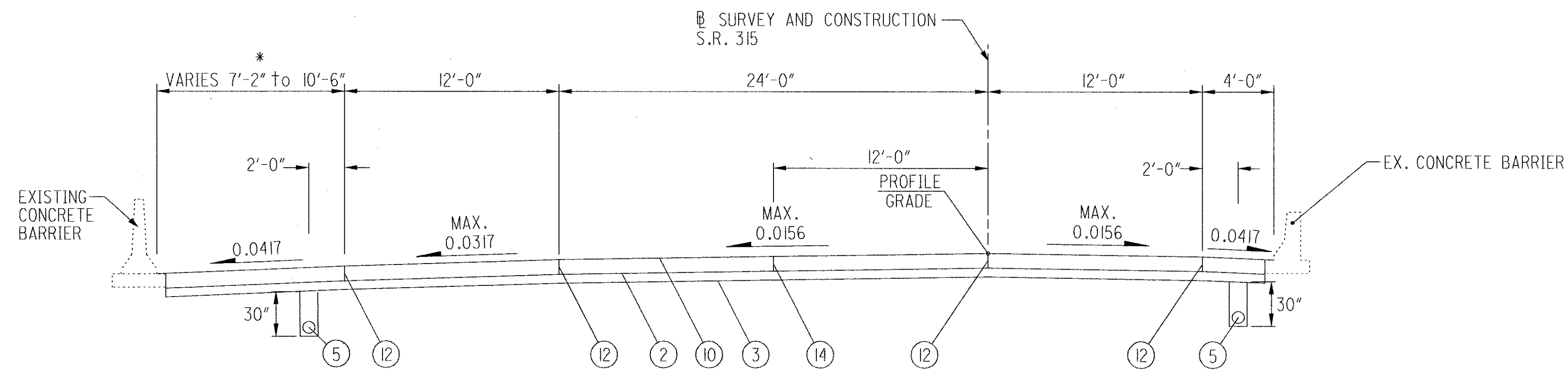
△ STA. 69+38.72 to STA. 70+49.98 = 4'-6"  
 STA. 70+49.98 to STA. 71+16.14 = 4'-6" to 7'-2"

△ REPLACE EXISTING CONCRETE BARRIER  
 STA. 69+38.72 to STA. 69+55.62

\* DESIGN EXCEPTION  
 (NDC = 10'-0")



**ROAD B  
 NORMAL SECTION**  
 SECTION APPLIES:  
 STA. STA. 69+38.72 TO STA. 71+16.14 = 177.42 LIN. FT.



**ROAD B  
 NORMAL SECTION**  
 SECTION APPLIES:  
 STA. 71+16.14 TO STA. 72+36.61 = 120.47 LIN. FT.

**LEGEND**

- ① -
- ② ITEM 304 6" AGGREGATE BASE
- ③ ITEM 203 SUBGRADE COMPACTION
- ④ ITEM 659 SEEDING AND MULCHING
- ⑤ ITEM 605 4" PIPE UNDERDRAIN (30" DEPTH)
- ⑥ ITEM 605 4" PIPE UNDERDRAIN (18" DEPTH)
- ⑦ ITEM 606 GUARDRAIL, TYPE 5
- ⑧ -
- ⑨ -
- ⑩ ITEM 451 10" REINFORCED CONCRETE PAVEMENT
- ⑪ ITEM 605 4" PIPE UNDERDRAIN (UNCLASSIFIED)
- ⑫ STANDARD LONGITUDINAL JOINT
- ⑬ INTEGRAL CURB TYPE 2-A
- ⑭ UNTIED LONGITUDINAL JOINT

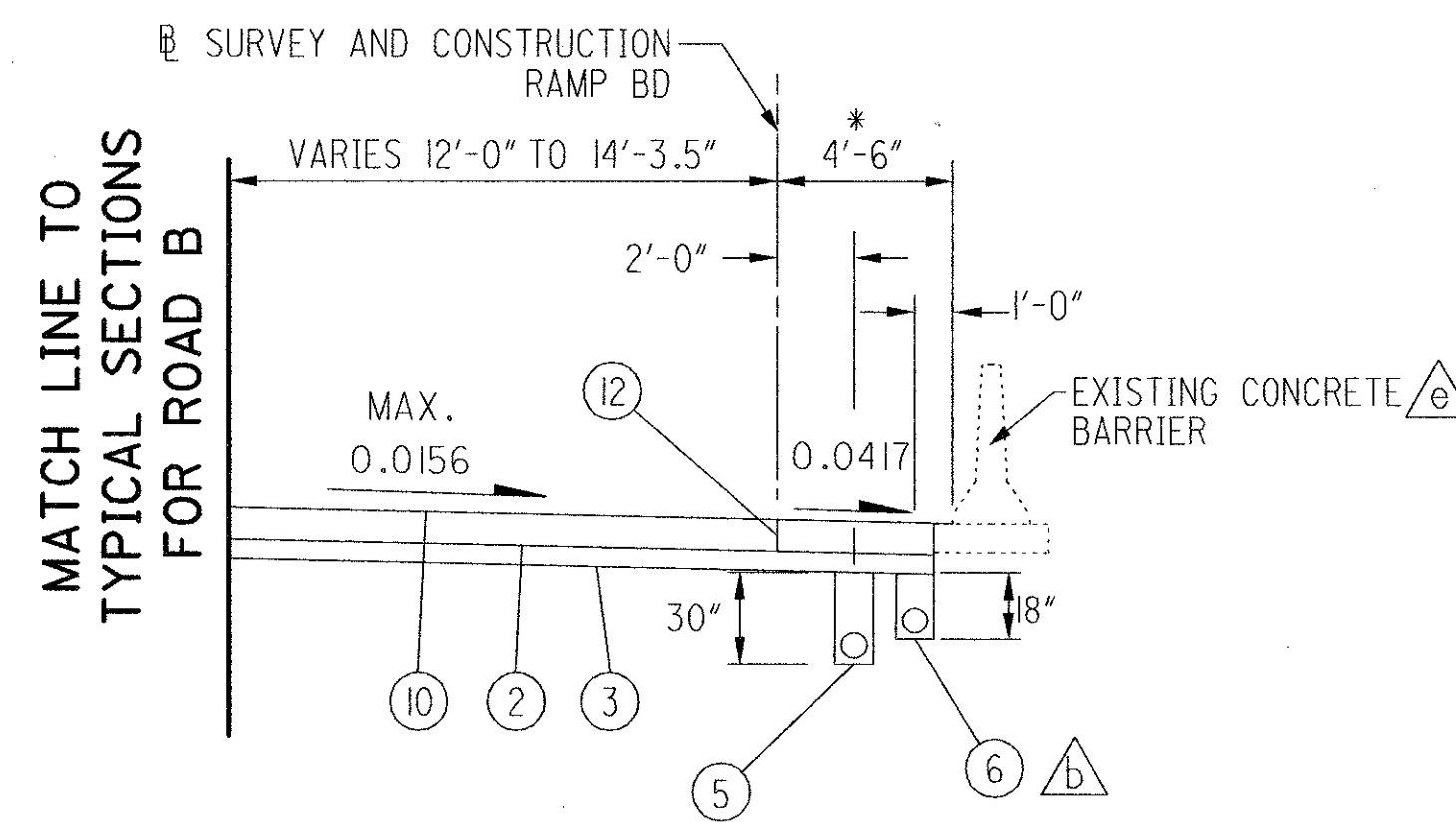
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 LJS

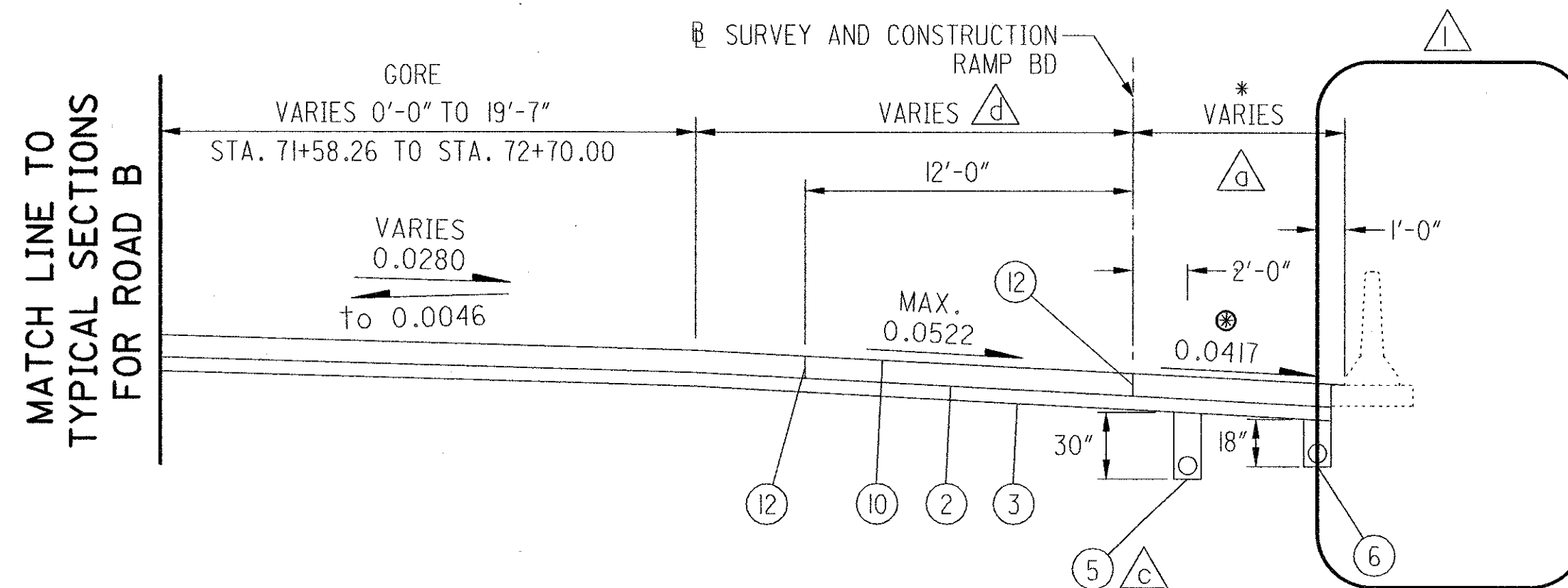
NOTE: SEE PAVEMENT DETAILS ON SHEET 51

**RAMP BD**

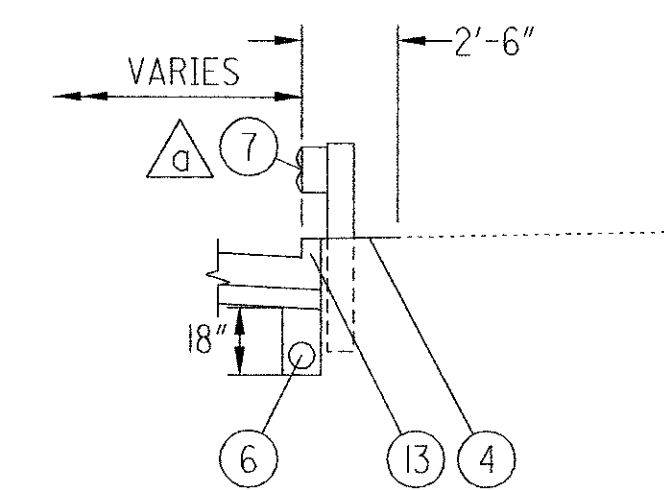
- \* DESIGN EXCEPTION (NDC = 8'-0")
- ⊕ OR RATE OF SUPER IF GREATER
- △ STA. 70+19.97 to STA. 71+71.56 = 4'-6"  
 STA. 71+71.56 to STA. 72+70.00 = 4'-6" to 7'-9"
- △ BEGIN UNDERDRAIN AT STA. 70+32.00
- △ END UNDERDRAIN STA. 71+13.08
- △ STA. 71+35.00 to STA. 71+58.26 = 14'-3.5" to 16'-0"  
 STA. 71+58.26 to STA. 72+70.00 = 16'-0"
- △ SEE DETAIL "A"
- △ REPLACE EXISTING CONCRETE BARRIER  
 STA. 70+19.97 TO STA. 70+33.08  
 STA. 70+33.15 TO STA. 70+53.17



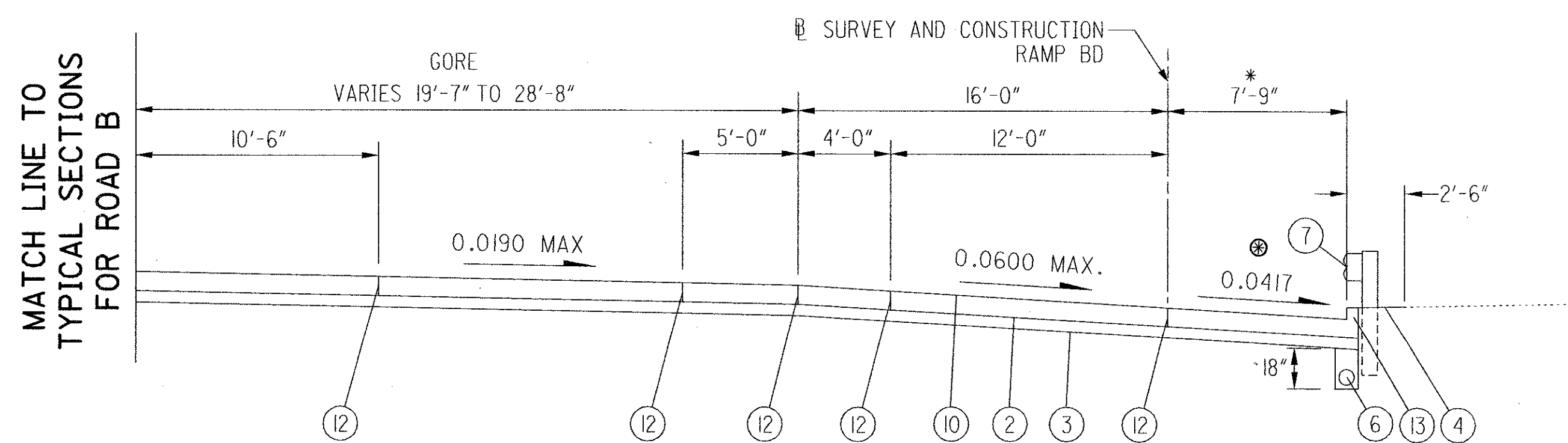
**RAMP BD  
 NORMAL SECTION**  
 SECTION APPLIES:  
 STA. 70+19.97 TO STA. 71+35.00 = 115.03 LIN. FT.



**RAMP BD  
 SUPERELEVATED SECTION**  
 SECTION APPLIES:  
 STA. 71+35.00 TO STA. 72+70.00 = 135.00 LIN. FT.



**DETAIL A**  
 SECTION APPLIES:  
 STA. 72+00.00 TO STA. 72+70.00



**RAMP BD  
 SUPERELEVATED SECTION**  
 SECTION APPLIES:  
 STA. 72+70.00 TO STA. 73+00.00 = 30.00 LIN. FT.

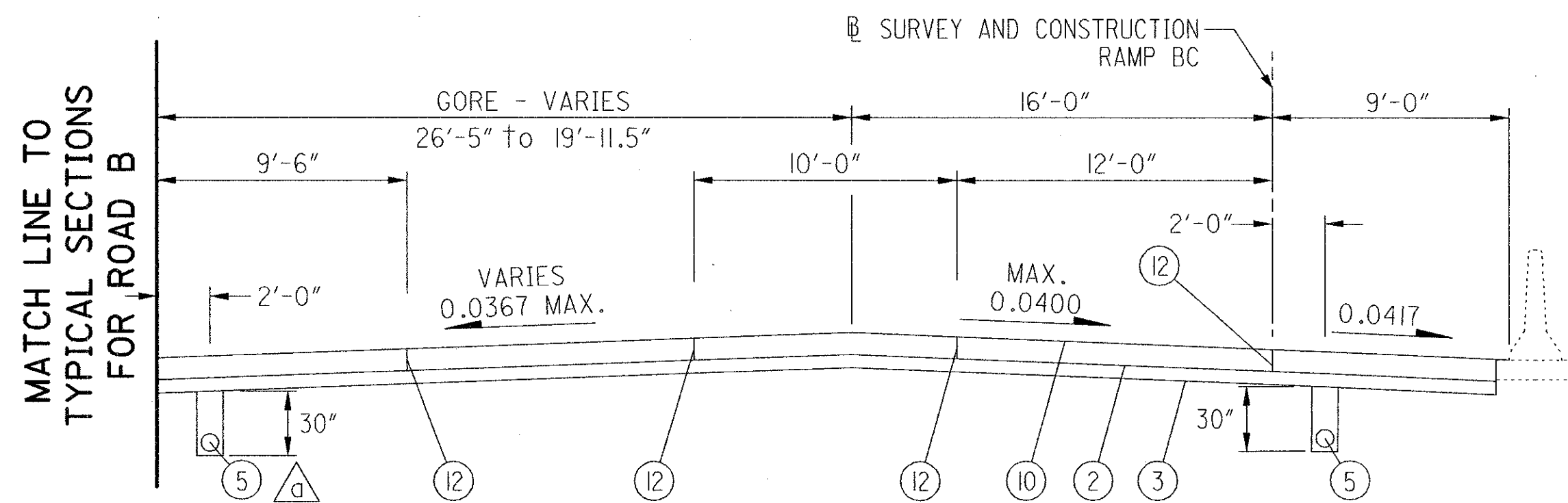
**LEGEND**

- ① -
- ② ITEM 304 6" AGGREGATE BASE
- ③ ITEM 203 SUBGRADE COMPACTION
- ④ ITEM 659 SEEDING AND MULCHING
- ⑤ ITEM 605 4" PIPE UNDERDRAIN (30" DEPTH)
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- ⑬ INTEGRAL CURB TYPE 2-A
- ⑭ UNTIED LONGITUDINAL JOINT

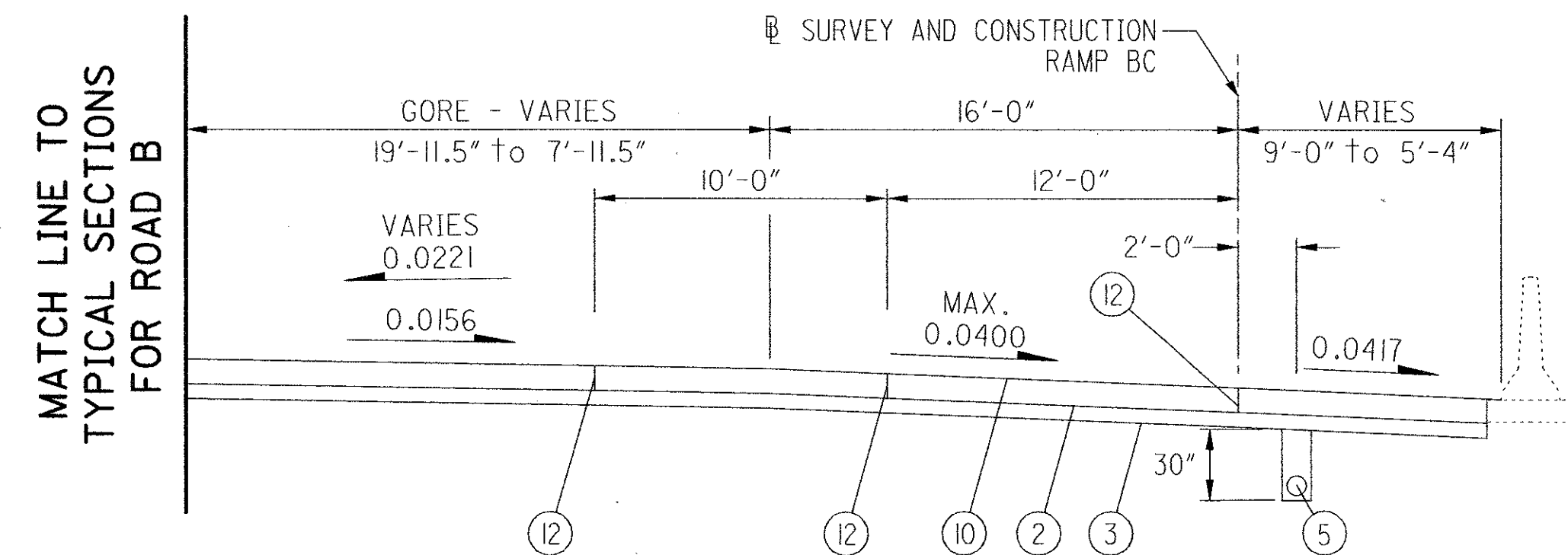
NOTE: GORE MEASUREMENTS ARE PERPENDICULAR TO ROAD B.

**PROPOSED TYPICAL SECTIONS  
 SR 315 - RAMP BD**

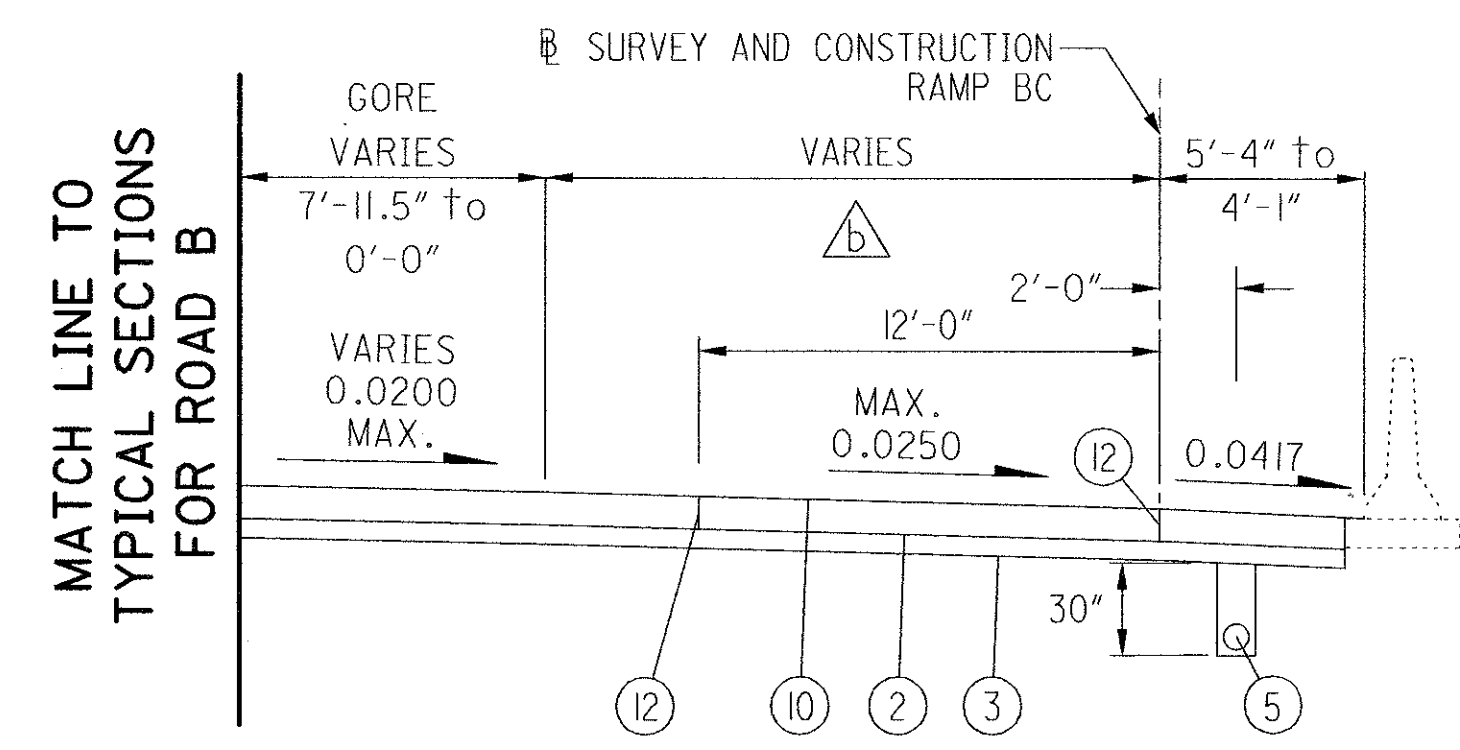
**FRA-IR71-14.39,  
 FRA-315-0.00**



**RAMP BC  
SUPERELEVATED SECTION**  
SECTION APPLIES:  
STA. 66+40.99 TO STA. 66+81.50 = 40.51 LIN. FT.



**RAMP BC  
SUPERELEVATED SECTION**  
SECTION APPLIES:  
STA. 66+81.50 TO STA. 68+00.00 = 118.50 LIN. FT.



**RAMP BC  
SUPERELEVATED SECTION**  
SECTION APPLIES:  
STA. 68+00.00 TO STA. 71+01.74 = 301.74 LIN. FT.

**RAMP BC**

- △ END UNDERDRAIN AT STA. 66+95.00
- △ STA. 68+00.00 TO STA. 69+27.26 = 16'-0"
- △ STA. 69+27.26 TO STA. 71+01.74 = 16'-0" TO 12'-0"

**LEGEND**

- ① -
- ② ITEM 304 6" AGGREGATE BASE
- ③ ITEM 203 SUBGRADE COMPACTION
- ④ ITEM 659 SEEDING AND MULCHING
- ⑤ ITEM 605 4" PIPE UNDERDRAIN (30" DEPTH)
- ⑥ ITEM 605 4" PIPE UNDERDRAIN (18" DEPTH)
- ⑦ ITEM 606 GUARDRAIL, TYPE 5
- ⑧ -
- ⑨ -
- ⑩ ITEM 451 10" REINFORCED CONCRETE PAVEMENT
- ⑪ ITEM 605 4" PIPE UNDERDRAIN (UNCLASSIFIED)
- ⑫ STANDARD LONGITUDINAL JOINT
- ⑬ INTEGRAL CURB TYPE 2-A
- ⑭ UNTIED LONGITUDINAL JOINT

NOTE: GORE MEASUREMENTS ARE PERPENDICULAR TO ROAD B.

**PROPOSED TYPICAL SECTIONS  
SR 315 - RAMP BC**

**FRA-IR71-14.39,  
FRA-315-0.00**

PROFILE AND ALIGNMENT  
(RESURFACING)

THE PROPOSED PAVEMENT RESURFACING FROM STA. 16+52.48 TO STA. 46+30.00, ROAD A, AND STA. 16+95.89 TO STA. 44+00.00, ROAD B, SHALL FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. PREVIOUS CONSTRUCTION PLANS, LISTED BELOW SHOWING THE ORIGINAL ALIGNMENT AND PROFILE, ARE AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 6 OFFICE, 400 EAST WILLIAM STREET, DELAWARE, OHIO. THE PROPOSED ASPHALT CONCRETE OVERLAY SHALL HAVE A UNIFORM THICKNESS OF 1.5 INCHES AND SHALL BE APPLIED AFTER A MAXIMUM OF 1.5 INCHES OF SURFACE BITUMINOUS MATERIAL HAS BEEN REMOVED. SEE TYPICAL SECTIONS FOR DETAILS.

REFERENCE PROJECTS:

PROJECT NO. I-609(9), ALSO KNOWN AS  
FRA-62-12.56/FRA-3-13.70  
PROJECT NO. I-70-3(39)96, ALSO KNOWN AS  
FRA-70-12.31S

CALCULATED  
BBB  
CHECKED  
LJS

GENERAL NOTES

FRA-171-14.39,  
FRA-315-0.00

20  
89





DATE: 05/15/2002 04:16:22 PM  
 FILENAME: T:\DRAWING\06\06226\306\superelev\SUPERVSS.dgn

PT DESCR	STATION													ROADWAY "A"		RIGHT SIDE							
		ELEV	CORR	SLOPE	WIDTH	ELEV	CORR	SLOPE	WIDTH	ELEV	CORR	SLOPE	WIDTH	ELEV	CORR	SLOPE	WIDTH	SLOPE	CORR	ELEV			
	68+25.00													717.39	0.71	0.0592	12.00	<b>68+25.00</b>	716.68	12.00	-0.0592	-0.71	715.97
	68+50.00	ROAD DA - ADD LANE				ROAD DA - DROP LANE				GORE BETWEEN DA AND A				718.18	0.72	0.0600	12.00	<b>68+50.00</b>	717.46	12.00	-0.0600	-0.72	716.74
	68+75.00													718.88	0.72	0.0600	12.00	<b>68+75.00</b>	718.16	12.00	-0.0600	-0.72	717.44
Nose, DA	68+93.26	720.66	0.36	0.0300	12.00	720.30	0.12	0.0300	4.00	720.18	0.83	0.1536	5.43	719.35	0.72	0.0600	12.00	<b>68+93.26</b>	718.63	12.00	-0.0600	-0.72	717.91
	69+00.00	720.70	0.38	0.0320	12.00	720.32	0.13	0.0320	4.00	720.19	0.68	0.1448	4.72	719.51	0.72	0.0600	12.00	<b>69+00.00</b>	718.79	12.00	-0.0600	-0.72	718.07
	69+25.00	720.81	0.38	0.0320	12.00	720.43	0.13	0.0320	4.00	720.30	0.25	0.1036	2.40	720.05	0.72	0.0600	12.00	<b>69+25.00</b>	719.33	12.00	-0.0600	-0.72	718.61
	69+29.80	720.86	0.38	0.0320	12.00	720.48	0.13	0.0320	4.00	720.35	0.20	0.1015	2.00	720.15	0.72	0.0600	12.00	<b>69+29.80</b>	719.43	12.00	-0.0600	-0.72	718.71
	69+50.00	721.06	0.38	0.0320	12.00					720.68	0.18	0.0404	4.51	720.50	0.70	0.0583	12.00	<b>69+50.00</b>	719.80	12.00	-0.0583	-0.70	719.10
CS	69+68.05		0.38	0.0320	12.00						0.00	0.0320		720.77	0.68	0.0567	12.00	<b>69+68.05</b>	720.09	12.00	-0.0567	-0.68	719.41
	69+75.00	721.34	0.38	0.0320	12.00					720.95	0.10	0.0320	3.10	720.86	0.67	0.0558	12.00	<b>69+75.00</b>	720.19	12.00	-0.0558	-0.67	719.52
	69+99.00	721.54	0.38	0.0320	12.00					721.16	0.06	0.0320	2.00	721.09	0.61	0.0507	12.00	<b>69+99.00</b>	720.48	12.00	-0.0558	-0.67	719.81
	70+00.00	721.55	0.45	0.0320	13.97									721.10	0.60	0.0504	12.00	<b>70+00.00</b>	720.50	12.00	-0.0504	-0.60	719.89
	70+10.00	721.23	0.15	0.0106	14.20									721.08	0.44	0.0367	12.00	<b>70+10.00</b>	720.64	12.00	-0.0400	-0.48	720.16
	70+12.50		0.00	0.0320										721.18	0.56	0.0467	12.00	<b>70+12.50</b>	720.62	12.00	-0.0467	-0.56	720.06
	70+25.00	721.68	0.42	0.0320	13.23									721.25	0.51	0.0429	12.00	<b>70+25.00</b>	720.74	12.00	-0.0429	-0.51	720.23
	70+50.00	721.81	0.41	0.0320	12.76									721.40	0.42	0.0354	12.00	<b>70+50.00</b>	720.98	12.00	-0.0354	-0.42	720.56
	70+60.00	721.49	0.05	0.0039	12.80									721.44	0.26	0.0217	12.00	<b>70+60.00</b>	721.18	12.00	-0.0333	-0.40	720.78
	70+75.00	721.90	0.35	0.0279	12.49									721.55	0.33	0.0279	12.00	<b>70+75.00</b>	721.22	12.00	-0.0279	-0.33	720.89
	71+00.00	721.95	0.25	0.0204	12.23									721.70	0.24	0.0204	12.00	<b>71+00.00</b>	721.46	12.00	-0.0204	-0.24	721.22
	71+09.00	721.71	-0.04	-0.0033	12.00									721.75	0.12	0.0100	12.00	<b>71+09.00</b>	721.63	12.00	-0.0283	-0.34	721.29
Rem Cr	71+16.05		0.00	0.0146										721.80	0.19	0.0156	12.00	<b>71+16.05</b>	721.61	12.00	-0.0156	-0.19	721.43
	71+25.00	722.02	0.14	0.0114	12.06									721.89	0.19	0.0156	12.00	<b>71+25.00</b>	721.70	12.00	-0.0156	-0.19	721.51
	71+50.00	722.16	0.03	0.0024	12.01									722.13	0.19	0.0156	12.00	<b>71+50.00</b>	721.94	12.00	-0.0156	-0.19	721.75
	71+61.10	722.13	-0.08	-0.0067	12.00									722.21	0.11	0.0092	12.00	<b>71+61.10</b>	722.10	12.00	-0.0217	-0.26	721.84
ST	71+68.05	722.25	-0.05	-0.0041	12.00									722.30	0.19	0.0156	12.00	<b>71+68.05</b>	722.11	12.00	-0.0156	-0.19	721.93
	71+75.00	722.29	-0.08	-0.0066	12.00									722.37	0.19	0.0156	12.00	<b>71+75.00</b>	722.18	12.00	-0.0156	-0.19	721.99
	72+00.00	722.42	-0.19	-0.0156	12.00									722.61	0.19	0.0156	12.00	<b>72+00.00</b>	722.42	12.00	-0.0156	-0.19	722.23
App Sl	72+00.40	722.45	-0.18	-0.0150	12.00									722.63	0.20	0.0167	12.00	<b>72+00.40</b>	722.43	12.00	-0.0150	-0.18	722.25
Bridge	72+26.80	722.58	-0.15	-0.0125	12.00									722.73	0.15	0.0125	12.00	<b>72+26.80</b>	722.58	12.00	-0.0156	-0.19	722.39

CALCULATED ESP	CHECKED TJH	ROADWAY "A" SUPERELEVATION TABLE
		FRA-IR71-14.39 FRA-315-0.00
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LEFT SIDE				ROADWAY "A"		RIGHT SIDE																PT DESCR	STATION
ELEV	CORR	SLOPE	WIDTH	STATION	PROF GR	WIDTH	SLOPE	CORR	ELEV	WIDTH	SLOPE	CORR	ELEV	WIDTH	SLOPE	CORR	ELEV	WIDTH	SLOPE	CORR	ELEV		
717.39	0.71	0.0592	12.00	<b>68+25.00</b>	716.68	12.00	-0.0592	-0.71	715.97					2.72	-0.0600	-0.16	715.81	12.00	-0.0600	-0.72	715.09		68+25.00
718.18	0.72	0.0600	12.00	<b>68+50.00</b>	717.46	12.00	-0.0600	-0.72	716.74									13.65	-0.0600	-0.82	715.92		68+50.00
718.88	0.72	0.0600	12.00	<b>68+75.00</b>	718.16	12.00	-0.0600	-0.72	717.44									12.88	-0.0600	-0.77	716.67		68+75.00
719.35	0.72	0.0600	12.00	<b>68+93.26</b>	718.63	12.00	-0.0600	-0.72	717.91													Nose, DA	68+93.26
719.51	0.72	0.0600	12.00	<b>69+00.00</b>	718.79	12.00	-0.0600	-0.72	718.07									12.41	-0.0600	-0.74	717.32		69+00.00
720.05	0.72	0.0600	12.00	<b>69+25.00</b>	719.33	12.00	-0.0600	-0.72	718.61									12.17	-0.0600	-0.73	717.88		69+25.00
720.15	0.72	0.0600	12.00	<b>69+29.80</b>	719.43	12.00	-0.0600	-0.72	718.71									12.17	-0.0600	-0.73	717.98		69+29.80
720.50	0.70	0.0583	12.00	<b>69+50.00</b>	719.80	12.00	-0.0583	-0.70	719.10									12.03	-0.0583	-0.70	718.40		69+50.00
720.77	0.68	0.0567	12.00	<b>69+68.05</b>	720.09	12.00	-0.0567	-0.68	719.41													CS	69+68.05
720.86	0.67	0.0558	12.00	<b>69+75.00</b>	720.19	12.00	-0.0558	-0.67	719.52									12.00	-0.0558	-0.67	718.85		69+75.00
721.09	0.61	0.0507	12.00	<b>69+99.00</b>	720.48	12.00	-0.0558	-0.67	719.81									12.00	-0.0558	-0.67	719.14		69+99.00
721.10	0.60	0.0504	12.00	<b>70+00.00</b>	720.50	12.00	-0.0504	-0.60	719.89									12.00	-0.0504	-0.60	719.29		70+00.00
721.08	0.44	0.0367	12.00	<b>70+10.00</b>	720.64	12.00	-0.0400	-0.48	720.16									12.00	-0.0517	-0.62	719.54		70+10.00
721.18	0.56	0.0467	12.00	<b>70+12.50</b>	720.62	12.00	-0.0467	-0.56	720.06									12.00	-0.0467	-0.56	719.50		70+12.50
721.25	0.51	0.0429	12.00	<b>70+25.00</b>	720.74	12.00	-0.0429	-0.51	720.23									12.00	-0.0429	-0.51	719.71		70+25.00
721.40	0.42	0.0354	12.00	<b>70+50.00</b>	720.98	12.00	-0.0354	-0.42	720.56									12.00	-0.0354	-0.42	720.13		70+50.00
721.44	0.26	0.0217	12.00	<b>70+60.00</b>	721.18	12.00	-0.0333	-0.40	720.78									12.00	-0.0367	-0.44	720.34		70+60.00
721.55	0.33	0.0279	12.00	<b>70+75.00</b>	721.22	12.00	-0.0279	-0.33	720.89									12.00	-0.0279	-0.33	720.55		70+75.00
721.70	0.24	0.0204	12.00	<b>71+00.00</b>	721.46	12.00	-0.0204	-0.24	721.22									12.00	-0.0204	-0.24	720.97		71+00.00
721.75	0.12	0.0100	12.00	<b>71+09.00</b>	721.63	12.00	-0.0283	-0.34	721.29									12.00	-0.0267	-0.32	720.97		71+09.00
721.80	0.19	0.0156	12.00	<b>71+16.05</b>	721.61	12.00	-0.0156	-0.19	721.43									12.00	-0.0156	-0.19	721.24	Rem Cr	71+16.05
721.89	0.19	0.0156	12.00	<b>71+25.00</b>	721.70	12.00	-0.0156	-0.19	721.51									12.00	-0.0156	-0.19	721.33		71+25.00
722.13	0.19	0.0156	12.00	<b>71+50.00</b>	721.94	12.00	-0.0156	-0.19	721.75									12.00	-0.0156	-0.19	721.57		71+50.00
722.21	0.11	0.0092	12.00	<b>71+61.10</b>	722.10	12.00	-0.0217	-0.26	721.84									12.00	-0.0208	-0.25	721.59		71+61.10
722.30	0.19	0.0156	12.00	<b>71+68.05</b>	722.11	12.00	-0.0156	-0.19	721.93									12.00	-0.0183	-0.22	721.71	ST	71+68.05
722.37	0.19	0.0156	12.00	<b>71+75.00</b>	722.18	12.00	-0.0156	-0.19	721.99									12.00	-0.0192	-0.23	721.76		71+75.00
722.61	0.19	0.0156	12.00	<b>72+00.00</b>	722.42	12.00	-0.0156	-0.19	722.23									12.00	-0.0225	-0.27	721.96		72+00.00
722.63	0.20	0.0167	12.00	<b>72+00.40</b>	722.43	12.00	-0.0150	-0.18	722.25									12.00	-0.0225	-0.27	721.98	App Sl	72+00.40
722.73	0.15	0.0125	12.00	<b>72+26.80</b>	722.58	12.00	-0.0156	-0.19	722.39									12.00	-0.0267	-0.32	722.07	Bridge	72+26.80

CALCULATED ESP	CHECKED TJH
ROADWAY "A" SUPERELEVATION TABLE	
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ROADWAY "B"		ROAD BD-ADD LANE				GORE BETWEEN BD & B				ROADWAY B-2 LANES					GORE BETWEEN B & BC				ROAD BC-ADD LANE					
PT DESCR	STATION	ELEV	CORR	SLOPE	WIDTH	ELEV	CORR	SLOPE	WIDTH	ELEV	CORR	SLOPE	WIDTH	STATION	PROF GR.	WIDTH	SLOPE	CORR	ELEV	WIDTH	SLOPE	CORR	ELEV	
	68+25.00	720.03	-0.22	-0.0156	14.17					720.25	-0.37	-0.0156	24.00	<b>68+25.00</b>	720.63	7.06	-0.0156	-0.11	720.51	16.00	-0.0250	-0.40	720.11	
	68+50.00	720.16	-0.20	-0.0156	13.03					720.36	-0.37	-0.0156	24.00	<b>68+50.00</b>	720.74	5.23	-0.0200	-0.10	720.63	16.00	-0.0200	-0.32	720.31	
	68+75.00	720.28	-0.19	-0.0156	12.37					720.47	-0.37	-0.0156	24.00	<b>68+75.00</b>	720.85	3.58	-0.0156	-0.06	720.79	16.00	-0.0156	-0.25	720.54	
	69+00.00	720.39	-0.19	-0.0156	12.08					720.58	-0.37	-0.0156	24.00	<b>69+00.00</b>	720.96	2.10	-0.0156	-0.03	720.92	16.00	-0.0156	-0.25	720.67	
	69+25.00	720.50	-0.19	-0.0156	12.00					720.69	-0.37	-0.0156	24.00	<b>69+25.00</b>	721.07					16.79	-0.0156	-0.26	720.80	
TS, BD	69+38.66	720.56	-0.19	-0.0156	12.00					720.75	-0.37	-0.0156	24.00	<b>69+38.66</b>	721.13									
	69+50.00	720.61	-0.19	-0.0156	12.00					720.80	-0.37	-0.0156	24.00	<b>69+50.00</b>	721.18					15.62	-0.0156	-0.24	720.93	
	69+75.00	720.72	-0.19	-0.0156	12.00					720.91	-0.37	-0.0156	24.00	<b>69+75.00</b>	721.29					14.61	-0.0156	-0.23	721.06	
	70+00.00	720.83	-0.19	-0.0156	12.00					721.02	-0.37	-0.0156	24.00	<b>70+00.00</b>	721.40					13.77	-0.0156	-0.21	721.18	
	70+25.00	720.95	-0.19	-0.0156	12.00					721.14	-0.37	-0.0156	24.00	<b>70+25.00</b>	721.52					13.09	-0.0156	-0.20	721.31	
	70+50.00	721.07	-0.19	-0.0156	12.00					721.26	-0.37	-0.0156	24.00	<b>70+50.00</b>	721.63					12.58	-0.0156	-0.20	721.43	
	70+54.20		-0.19	-0.0156	12.00					721.09	-0.50	-0.0208	24.00	<b>70+54.20</b>	721.59									
	70+75.00	721.18	-0.19	-0.0156	12.00					721.37	-0.37	-0.0156	24.00	<b>70+75.00</b>	721.75					12.22	-0.0156	-0.19	721.55	
	71+00.00	721.30	-0.19	-0.0156	12.00					721.49	-0.37	-0.0156	24.00	<b>71+00.00</b>	721.86					12.03	-0.0156	-0.19	721.67	
	71+00.30	721.23	-0.16	-0.0133	12.00					721.39	-0.30	-0.0125	24.00	<b>71+00.30</b>	721.69					12.00	-0.0108	-0.13	721.56	
	71+25.00	721.41	-0.19	-0.0156	12.00					721.60	-0.37	-0.0156	24.00	<b>71+25.00</b>	721.98					12.00	-0.0156	-0.19	721.79	
	71+50.00	721.53	-0.19	-0.0156	12.00					721.72	-0.37	-0.0156	24.00	<b>71+50.00</b>	722.09					12.00	-0.0156	-0.19	721.90	
	71+53.70	721.45	-0.21	-0.0175	12.00					721.66	-0.16	-0.0067	24.00	<b>71+53.70</b>	721.82					12.00	-0.0008	-0.01	721.81	
	71+75.00	721.64	-0.19	-0.0156	12.00					721.83	-0.37	-0.0156	24.00	<b>71+75.00</b>	722.21					12.00	-0.0156	-0.19	722.02	
	72+00.00	721.68	-0.27	-0.0221	12.00					721.95	-0.37	-0.0156	24.00	<b>72+00.00</b>	722.32					12.00	-0.0120	-0.14	722.18	
	72+01.20	721.82	-0.15	-0.0125	12.00					721.97	-0.22	-0.0092	24.00	<b>72+01.20</b>	722.19					12.00	-0.0042	-0.05	722.14	
POT	72+07.89	721.71	-0.29	-0.0242	12.00					722.00	-0.36	-0.0150	24.00	<b>72+07.89</b>	722.36					12.00	-0.0111	-0.13	722.22	
	72+25.00	721.75	-0.34	-0.0286	12.00					722.10	-0.34	-0.0142	24.00	<b>72+25.00</b>	722.44					12.00	-0.0090	-0.11	722.33	
	72+36.90	721.78	-0.38	-0.0317	12.00					722.16	-0.33	-0.0138	24.00	<b>72+36.90</b>	722.49					12.00	-0.0058	-0.07	722.42	
App Sl	72+36.90	721.78	-0.38	-0.0317	12.00					722.16	-0.33	-0.0138	24.00	<b>72+36.90</b>	722.49					12.00	-0.0058	-0.07	722.42	
Bridge	72+63.20	721.97	-0.37	-0.0308	12.00					722.34	-0.35	-0.0146	24.00	<b>72+63.20</b>	722.69					12.00	-0.0108	-0.13	722.56	

CALCULATED  
ESP  
CHECKED  
TJH

ROADWAY "B" SUPERELEVATION TABLE

FRA-IR71-14.39  
FRA-315-0.00

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Roadway	From	To	Side		202 Guardrail Removed Lin Ft	622 Type D Conc Bar Lin Ft	605 4" SPUD Lin Ft	605 6" SPUD Lin Ft	605 4" Ty F Cond Lin Ft	605 6" Ty F Cond Lin Ft	605 4" Bends, Branches	605 6" Bends, Branches		
A	16+52.48	19+00.00	Lt. & Rt.		272.00									
A	19+00.00	31+00.00	Lt. & Rt.		319.10									
A	31+00.00	43+00.00	Lt. & Rt.		323.00	36.00								
A	43+00.00	46+30.00	Lt. & Rt.		0.00	36.00								
A	46+30.00	50+50.00	Lt. & Rt.		73.00	36.00	1,655.00							
A	50+50.00	55+50.00	Lt. & Rt.		385.79		1,571.00		20		2-45 Bends; 1-90 Bend; 1-Tee; 1-Wye			
A	55+50.00	60+50.00	Lt. & Rt.		458.35	285	1,425.00		23		2-45 Bends; 3-Wye			
A	60+50.00	65+50.00	Lt. & Rt.		326.00	555	1,387.00		17		3-45Bends; 1-Wye			
A	65+50.00	70+50.00	Lt. & Rt.		371.34	116	1,142.00	111.00	24	5	2-45 Bends; 1-Wye			
A	70+50.00	72+00.20	Lt. & Rt.		151.94	24	283.00	63.00						
B	16+95.89	19+00.00	Lt. & Rt.		207.00									
B	19+00.00	31+00.00	Lt. & Rt.		849.00									
B	31+00.00	43+00.00	Lt. & Rt.		934.00	36								
B	43+00.00	46+44.59	Lt. & Rt.		100.00									
B	46+44.59	50+50.00	Lt. & Rt.		0.00	95	1,598.00		5		1-45 Bend; 1-Wye			
B	50+50.00	55+50.00	Lt. & Rt.		235.00		1,706.00		23		2-45 Bends			
B	55+50.00	60+50.00	Lt. & Rt.		550.46	293	1,470.00		18		4-45 Bends; 2- Wye			
B	60+50.00	65+50.00	Lt. & Rt.		401.49	7	1,466.00		8	3	2-45 Bends; 1-Wye			
B	65+50.00	70+50.00	Lt. & Rt.		0.00	40	998.00	119.00			2-45 Bends	1-45 Bend		
B	70+50.00	72+36.82	Lt. & Rt.		0.00		178.00	120.00						
<b>TOTAL</b>					<b>7,950</b>	<b>1,559</b>	<b>14,879</b>	<b>413</b>	<b>138</b>	<b>8</b>				

**SUMMARY OF GUARDRAIL REMOVAL,  
BARRIER AND UNDERDRAIN QUANTITIES**

**FRA-IR71-14.39,  
FRA-315-0.00**

D:\Projects\2014\14-0000\14-0000.dwg

Ref. No.	Roadway	From	To	Side	Area Pvt & Shldr Sq Ft	609 Type 2A Curb Lin Ft	451 10" Reinf Conc SY	Area 304	304 6" Agg Base CY	203 Subgrade compact SY	202 Pavement Removed SY	202 Curb Removed Lin Ft
14-P	A	46+30.00	50+50.00	Lt & Rt	23,520.00	420.00	2,636.67	24,150.00	447.22	2,683.33	2,613.33	420.00
16-P	A	50+50.00	55+50.00	Lt & Rt	29,498.14	911.97	3,328.24	30,866.10	571.59	3,429.57	3,277.57	643.00
18-P	A	55+50.00	60+50.00	Lt & Rt	26,036.85	882.00	2,941.98	27,359.85	506.66	3,039.98	2,892.98	882.00
20-P	A	60+50.00	65+50.00	Lt & Rt	20,254.43	1,000.00	2,306.05	21,754.43	402.86	2,417.16	2,250.49	1,000.00
22-P	A	65+50.00	70+50.00	Lt & Rt	28,452.85	661.94	3,198.20	29,445.76	545.29	3,271.75	3,161.43	662.70
24-P	A	70+50.00	72+00.12	Lt & Rt	9,344.97	0.00	1,038.33	9,344.97	173.06	1,038.33	1,038.33	152.00
	A	Subtotals			137,107.24	3,875.91	15,449.47	142,921.11	2,646.69	15,880.12	15,234.14	3,759.70
15-P	B	44+40.00	50+50.00	Lt & Rt	17,838.04	405.41	2,004.53	18,446.16	341.60	2,049.57	1,982.00	405.41
17-P	B	50+50.00	55+50.00	Lt & Rt	21,507.19	950.00	2,442.47	22,932.19	424.67	2,548.02	2,389.69	950.00
19-P	B	55+50.00	60+50.00	Lt & Rt	19,625.00	1,000.00	2,236.11	21,125.00	391.20	2,347.22	2,180.56	1,000.00
21-P	B	60+50.00	65+50.00	Lt & Rt	19,661.80	1,000.00	2,240.20	21,161.80	391.89	2,351.31	2,184.64	1,000.00
23-P	B	65+50.00	70+50.00	Lt & Rt	34,723.89	656.87	3,894.70	35,709.20	661.28	3,967.69	3,858.21	394.40
25-P	B	70+50.00	72+36.82	Lt & Rt	11,141.13	0.00	1,237.90	11,141.13	206.32	1,237.90	1,237.90	0.00
	B	Subtotals			124,497.05	4,012.28	14,055.91	130,515.47	2,416.95	14,501.72	13,833.01	3,749.81

SUMMARY OF PAVEMENT QUANTITIES

FRA-IR71-14.39,  
FRA-315-0.00

DATE: 05/16/2002 08:53:31 AM  
 FILENAME: T:\DRAWING\06\06328\306-support\quantities\guardrail.dgn

REF. NO.	SHEET. NO.	ALIGNMENT	FROM STA TO STA	SIDE	606	606	606	606										
					GUARDRAIL, TYPE 5	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY, TYPE I	LIN FT	EACH	EACH	EACH						
1-GR	29, 30	ROAD "A"	16+50 TO 21+00	RT					437.5									
2-GR	29, 30	RAMP "H"	3+22 TO 6+22	RT					237.5	/	/							
3-GR	30	ROAD "A"	33+78 TO 34+66	RT					38	/								
4-GR	31	RAMP "AC"	488+00 TO 488+88	RT					38	/								
5-GR	31	ROAD "A"	50+18 TO 50+93	RT					25	/								
6-GR	35	ROAD "A"	57+70 TO 58+45	RT					25	/								
7-GR	35, 36	ROAD "A"	59+31 TO 61+56	RT					225									
8-GR	35	ROAD "A"	57+10 TO 57+97	LT					37.5	/								
9-GR	35, 36	ROAD "A"	59+80 TO 62+42	LT					262									
10-GR	37, 38	RAMP "DJ"	14+05 TO 19+30	RT					525									
11-GR	29, 30	ROAD "B"	16+95 TO 22+95	LT					550	/								
12-GR	29, 30	RAMP "G"	2+50 TO 12+37.5	LT					925	/	/							
13-GR	30	ROAD "B"	33+60 TO 37+47	LT					375		/							
14-GR	30, 31	ROAD "B"	37+87 TO 44+00	LT					613									
15-GR	31	ROAD "B"	51+20 TO 52+08	RT					37.5	/								
16-GR	35	ROAD "B"	56+46 TO 57+34	RT					37.5	/								
17-GR	35	ROAD "B"	55+74 TO 57+12	LT					88	/								
18-GR	35, 36	ROAD "B"	60+10 TO 65+47	RT					487	/								
19-GR	36	ROAD "B"	60+58 TO 64+46	LT					338	/								
20-GR	37	RAMP "BD"	73+00 TO 72+00	LT					50	/								
<b>TOTAL</b>									5352	14	4	19						

CALCULATED <small>BBB</small>	CHECKED <small>LUS</small>
SUMMARY OF GUARDRAIL QUANTITIES	
FRA-IR71-14.39 FRA-315-0.00	
27 89	



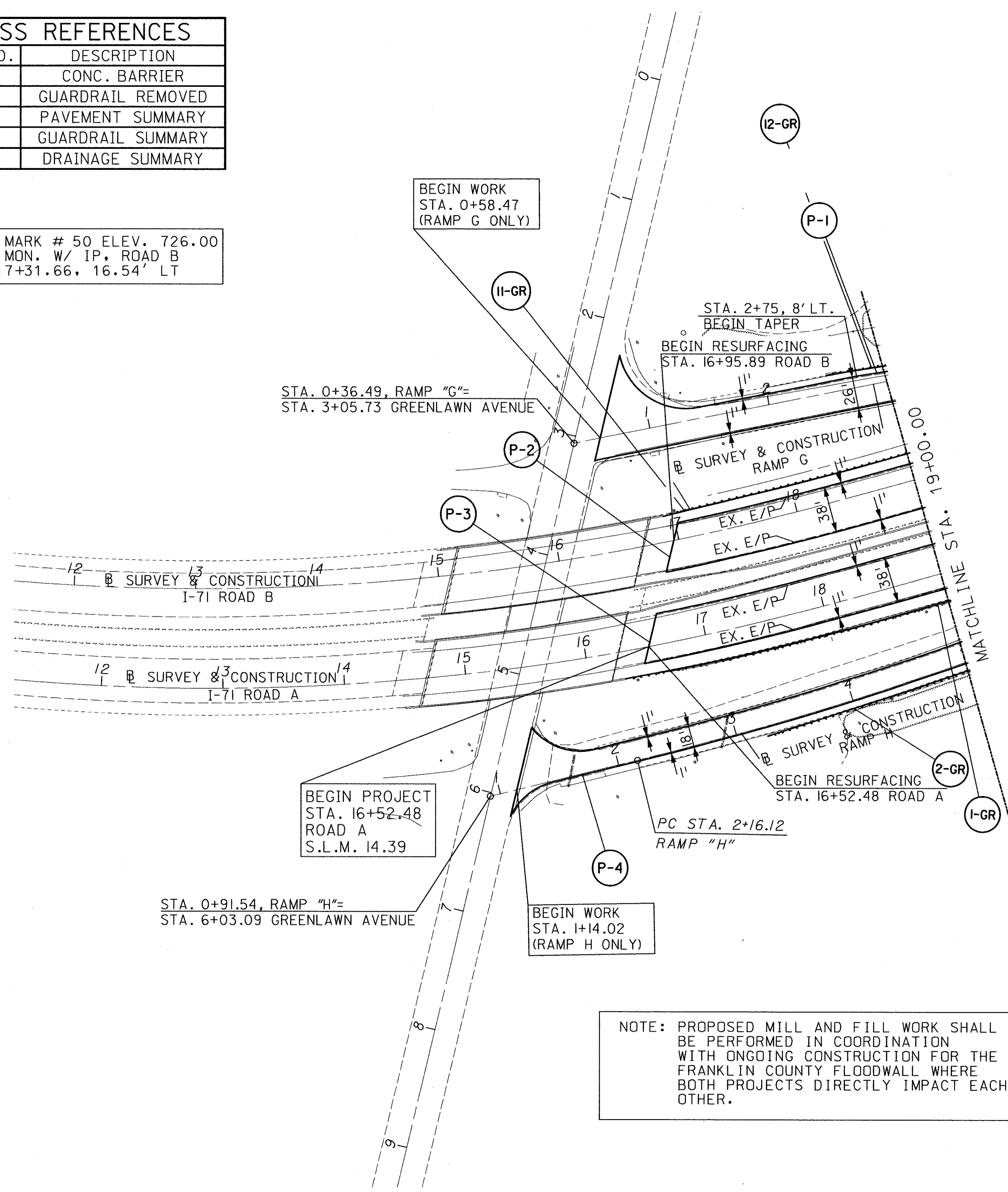
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REF. NO.	SHEET. NO.	ALIGNMENT	STATION	SIDE	603	604	604	604	604	604	604	604	604	604	604	604						
					15" CONDUIT TYPE B	CURB INLET NO. 3E	CURB INLET NO. 2-A-6	CURB INLET NO. 2-A-8	CURB INLET NO. 2-A-10	CURB INLET NO. 2-A-12	CATCH BASIN NO. 3	CATCH BASIN NO. 3A	CATCH BASIN NO. 5	CATCH BASIN NO. 6	MANHOLE RECONSTRUCTED TO GRADE	LIN FT	EACH	EACH	EACH	EACH	EACH	EACH
D-1	53	ROAD "B"	47+00	LT. CURB																		
D-2	54	ROAD "B"	53+00	LT. CURB																		
D-3	54	ROAD "B"	53+00	RT. CURB																		
D-4	54	ROAD "A"	53+00	RT. CURB																		
D-5	54	ROAD "A"	55+32	RT. CURB																		
D-6	55	ROAD "B"	58+50	LT. CURB																		
D-7	55	ROAD "B"	58+50	RT. CURB																		
D-8	55	ROAD "A"	56+60	RT. CURB																		
D-9	55	ROAD "A"	57+74	RT. CURB																		
D-10	55	ROAD "A"	60+45	RT. CURB																		
D-11	56	ROAD "B"	61+00	RT. CURB																		
D-12	56	ROAD "B"	61+00	LT. CURB																		
D-13	56	ROAD "A"	60+77	LT. CURB																		
D-14	56	ROAD "A"	61+12	LT. CURB																		
D-15	56	ROAD "A"	62+20	LT. CURB																		
D-16	56	ROAD "A"	60+75	RT. CURB																		
D-17	57	ROAD "DJ"	15+00	RT. CURB																		
D-18	57	ROAD "DJ"	16+65	RT. CURB																		
D-19	57	ROAD "BC"	66+50	LT. CURB																		
D-20	53	ROAD "B"	46+90	RT. CURB																		
D-21	53	ROAD "A"	47+10	LT. CURB																		
D-22	57	ROAD "B"	68+46	41' LT.	74																	
D-23	57	ROAD "B"	70+25	40' LT.	74																	
D-24	54	ROAD "B"	71+00	42' LT.																		
D-25	55	ROAD "A"	57+95	33' LT.																		
D-26	55	ROAD "A"	58+70	34' LT.																		
D-27	55	ROAD "A"	58+84	57' LT.																		
D-28	55	ROAD "B"	58+50	17' RT.																		
D-29	55	ROAD "B"	58+50	53' RT.																		
D-30	56	ROAD "B"	61+00	47' LT.																		
D-32	56	ROAD "B"	61+00	23' RT																		
D-33	56	ROAD "A"	60+75	45' RT																		
D-34	56	ROAD "A"	62+03	7' RT																		
D-35	56	ROAD "B"	64+00	23' RT																		
D-36	56	ROAD "B"	64+00	50' LT																		
D-37	57	ROAD "BD"	73+00	RT. CURB																		
D-38	57	ROAD "BD"	73+00	LT. CURB																		
D-39	57	ROAD "A"	65+50	LT. CURB																		
D-40	57	ROAD "DJ"	13+40	23' LT.	56																	
D-41	57	ROAD "DJ"	13+51	RT. CURB																		
D-42	57	ROAD "A"	68+40	46' RT.																		
D-43	57	ROAD "B"	68+89	RT. CURB																		
D-44	57	ROAD "B"	69+33	LT. CURB	94																	
D-45	55	ROAD "B"	57+50	RT. CURB	28																	
D-46	55	ROAD "B"	57+50	LT. CURB	40																	
D-47	55	ROAD "A"	56+50	RT. SHOULDER																		
D-48	53	ROAD "B"	47+00	14' RT.																		
D-49	54	ROAD "AD"	53+00	LT. CURB																		
D-50	55	ROAD "B"	60+54	125' RT.																		
<b>TOTAL</b>					366	3	11	3	1	2	8	4	8	3	6							

CALCULATED BBB	CHECKED LUS
<b>SUMMARY OF DRAINAGE QUANTITIES</b>	
<b>FRA-IR71-14.39</b>	
<b>FRA-315-0.00</b>	
28 89	

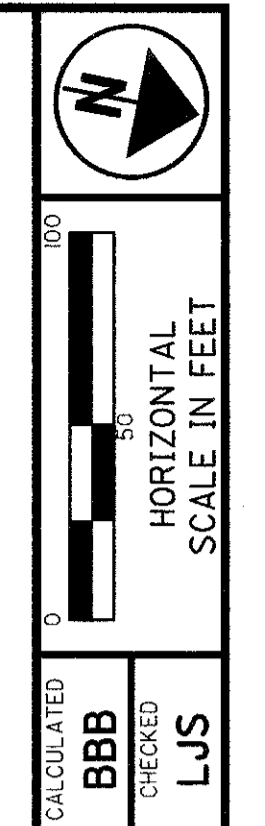
CROSS REFERENCES	
SHEET NO.	DESCRIPTION
25	CONC. BARRIER
25	GUARDRAIL REMOVED
26	PAVEMENT SUMMARY
27	GUARDRAIL SUMMARY
28	DRAINAGE SUMMARY

BENCH MARK # 50 ELEV. 726.00  
 CONC. MON. W/ IP, ROAD B  
 STA. 17+31.66, 16.54' LT



NOTE: PROPOSED MILL AND FILL WORK SHALL BE PERFORMED IN COORDINATION WITH ONGOING CONSTRUCTION FOR THE FRANKLIN COUNTY FLOODWALL WHERE BOTH PROJECTS DIRECTLY IMPACT EACH OTHER.

REF SHEET NO.	STATION TO STATION	PAVEMENT PLANING BITUMINOUS	TACK COAT	1-1/2" ASPHALT CONCRETE SURFACE COURSE TYPE 1H	SQ. YD.	GAL.	CU. YD.
P-1	STA. 0+58.47 TO STA. 2+98.75, RAMP G	862	65	36			
P-2	STA. 16+95.89 TO STA. 19+00.00, IR71, ROAD B	1045	79	44			
P-3	STA. 16+52.48 TO STA. 19+00.00, IR71, ROAD A	1031	78	43			
P-4	STA. 1+14.02 TO STA. 4+97.87, RAMP H	842	64	35			
P-5	STA. 2+98.75 TO STA. 7+00.00, RAMP G	870	66	37			
P-6	STA. 4+97.87 TO STA. 7+76.86, RAMP H	556	42	24			
P-7	STA. 19+00.00 TO STA. 31+00.00, IR71, ROAD B	6661	500	278			
P-8	STA. 19+00.00 TO STA. 31+00.00, IR71, ROAD A	6544	491	273			
P-9	STA. 31+00.00 TO STA. 43+00.00, IR71, ROAD B	7211	541	301			
P-10	STA. 31+00.00 TO STA. 43+00.00, IR71, ROAD A	6686	502	279			
P-11	STA. 43+00.00 TO STA. 44+00.00, IR71, ROAD B	723	55	31			
P-12	STA. 486+98.22 TO STA. 490+48.70, RAMP AC	1554	117	65			
P-13	STA. 43+00.00 TO STA. 46+30.00, IR71, ROAD A	591	45	25			
<b>TOTALS</b>		<b>35176</b>	<b>2645</b>	<b>1471</b>			

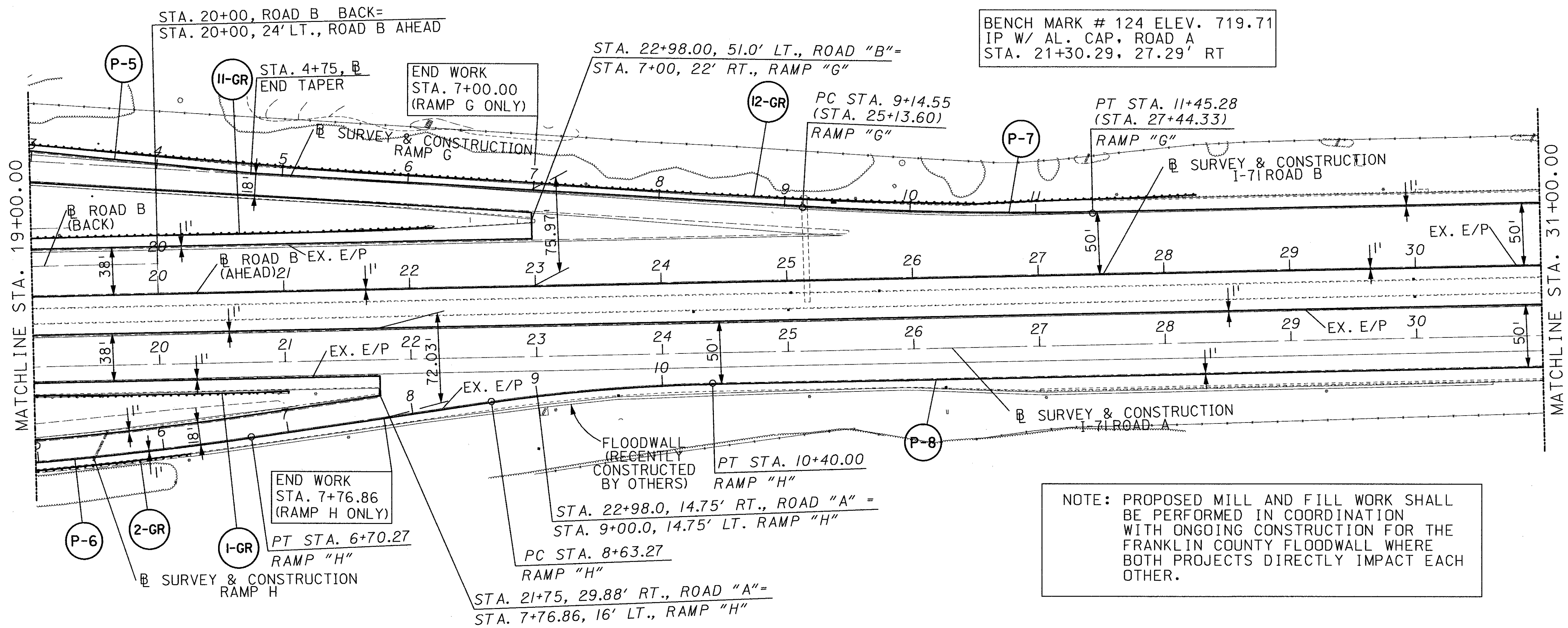


DATE: 08/26/2008 10:03 AM  
 PROJECT: I-71 FLOODWALL  
 DRAWING: I-71-14.39-000

FRA-171-14.39,  
 FRA-315-0.00

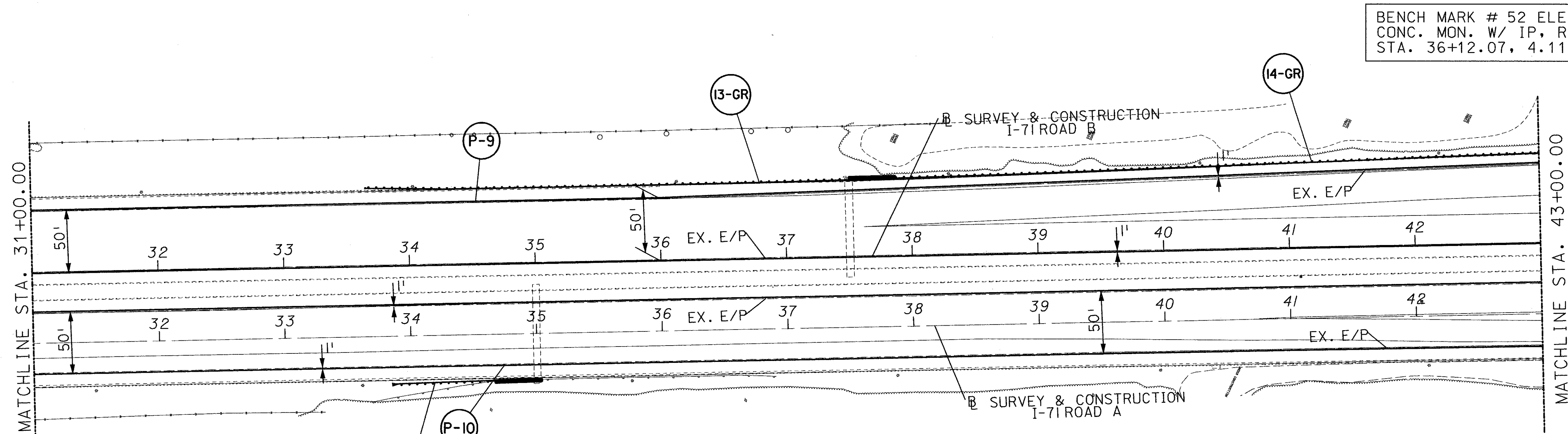
PLAN - IR71  
 STA. 16+62.75 TO STA. 19+00.00

CALCULATED  
 BBB  
 CHECKED  
 LJS



BENCH MARK # 124 ELEV. 719.71  
IP W/ AL. CAP., ROAD A  
STA. 21+30.29, 27.29' RT

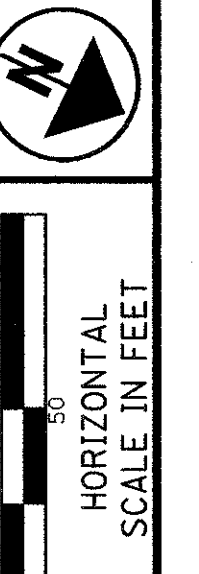
NOTE: PROPOSED MILL AND FILL WORK SHALL BE PERFORMED IN COORDINATION WITH ONGOING CONSTRUCTION FOR THE FRANKLIN COUNTY FLOODWALL WHERE BOTH PROJECTS DIRECTLY IMPACT EACH OTHER.



BENCH MARK # 52 ELEV. 719.84  
CONC. MON. W/ IP, ROAD B  
STA. 36+12.07, 4.11' RT

NOTE: PROPOSED MILL AND FILL WORK SHALL BE PERFORMED IN COORDINATION WITH ONGOING CONSTRUCTION FOR THE FRANKLIN COUNTY FLOODWALL WHERE BOTH PROJECTS DIRECTLY IMPACT EACH OTHER.

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
25	CONC. BARRIER
25	GUARDRAIL REMOVED
26	PAVEMENT SUMMARY
27	GUARDRAIL SUMMARY
28	DRAINAGE SUMMARY



SCALE IN FEET  
HORIZONTAL

PLAN - IR71  
STA. 19+00.00 TO STA. 43+00.00

FRA-171-14.39,  
FRA-315-0.00

30  
89

DATE: 05/14/2024 10:00 AM



HORIZONTAL SCALE IN FEET

CALCULATED  
BBB  
CHECKED  
LJS

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
25	CONC. BARRIER
25	GUARDRAIL REMOVED
26	PAVEMENT SUMMARY
27	GUARDRAIL SUMMARY
28	DRAINAGE SUMMARY
46 - 48	PAVEMENT DETAIL

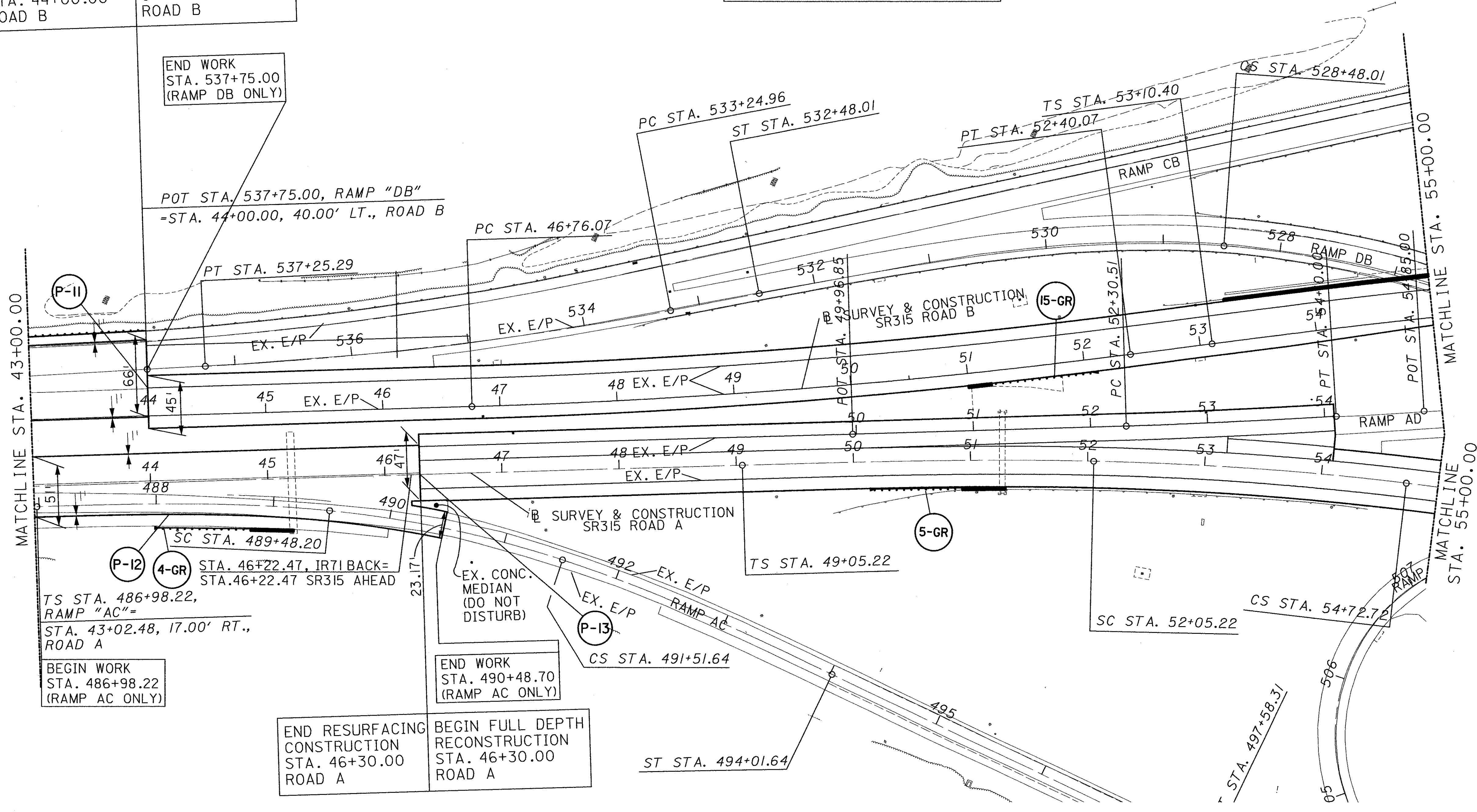
END RESURFACING CONSTRUCTION STA. 44+00.00 ROAD B  
 BEGIN FULL DEPTH RECONSTRUCTION STA. 44+00.00 ROAD B

BENCH MARK # 120 ELEV. 720.14  
 PK W/ SHINER, ROAD A  
 STA. 44+15.31, 35.36' RT

END WORK STA. 537+75.00 (RAMP DB ONLY)

MATCHLINE STA. 43+00.00

MATCHLINE STA. 55+00.00



TS STA. 486+98.22, RAMP "AC" = STA. 43+02.48, 17.00' RT., ROAD A

BEGIN WORK STA. 486+98.22 (RAMP AC ONLY)

END RESURFACING CONSTRUCTION STA. 46+30.00 ROAD A  
 BEGIN FULL DEPTH RECONSTRUCTION STA. 46+30.00 ROAD A

END WORK STA. 490+48.70 (RAMP AC ONLY)

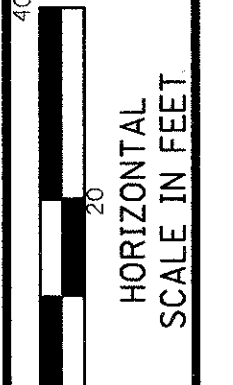
NOTE: PROPOSED MILL AND FILL WORK SHALL BE PERFORMED IN COORDINATION WITH ONGOING CONSTRUCTION FOR THE FRANKLIN COUNTY FLOODWALL WHERE BOTH PROJECTS DIRECTLY IMPACT EACH OTHER.

PLAN - IR71, SR315  
 STA. 43+00.00 TO STA. 55+00.00

FRA-171-14.39,  
 FRA-315-0.00



CROSS REFERENCES	
SHEET NO.	DESCRIPTION
25	CONC. BARRIER
25	GUARDRAIL REMOVED
26	PAVEMENT SUMMARY
27	GUARDRAIL SUMMARY
28	DRAINAGE SUMMARY
46	PAVEMENT DETAIL



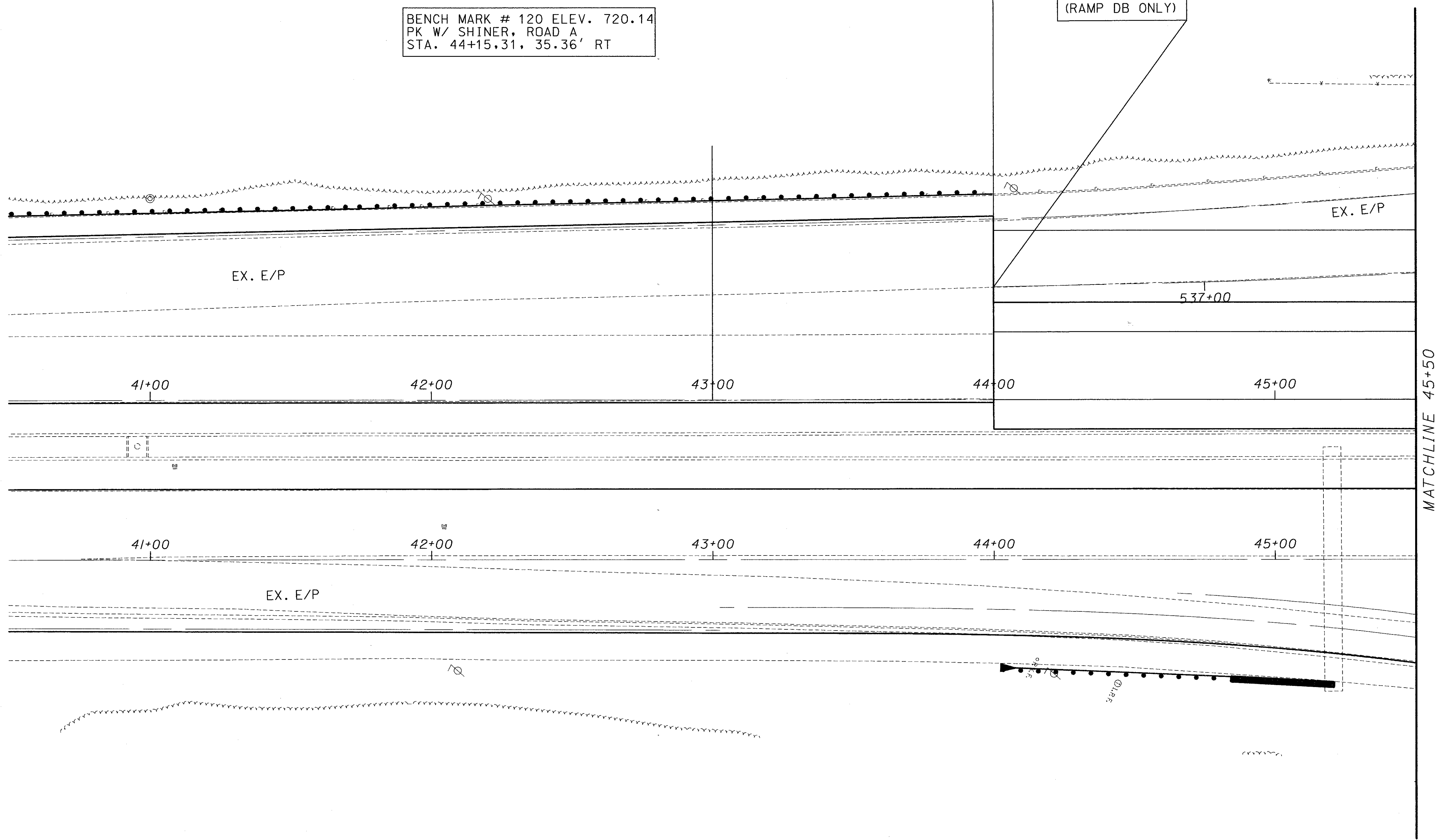
CALCULATED  
BBB  
CHECKED  
LJS

END RESURFACING  
CONSTRUCTION  
STA. 44+00.00  
ROAD B

BEGIN FULL DEPTH  
RECONSTRUCTION  
STA. 44+00.00  
ROAD B

END WORK  
STA. 537+75.00  
(RAMP DB ONLY)

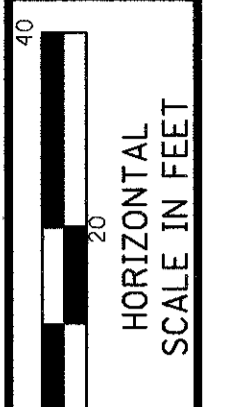
BENCH MARK # 120 ELEV. 720.14  
PK W/ SHINER, ROAD A  
STA. 44+15.31, 35.36' RT



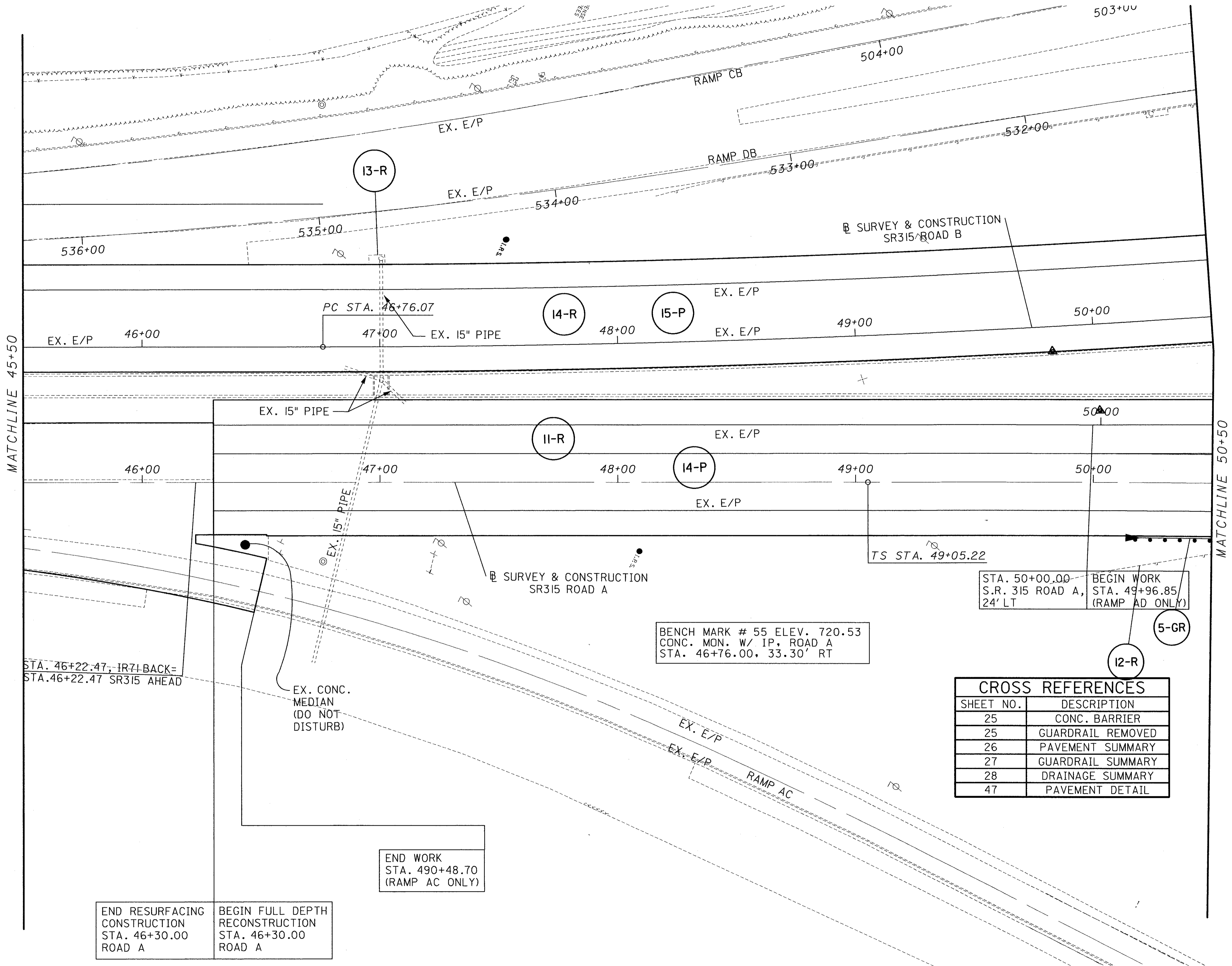
PLAN  
S.R. 315 - STA. 40+50.00 TO STA. 45+50.00

FRA-171-14.39,  
FRA-315-0.00 (A/B)

DATE: 07/16/2008 11:50:08 AM  
DRAWN BY: J. B. HARRIS  
CHECKED BY: J. B. HARRIS  
SCALE: AS SHOWN



CALCULATED  
BBB  
CHECKED  
LUS



MATCHLINE 45+50

MATCHLINE 50+50

STA. 46+22.47, IR71 BACK=  
STA. 46+22.47 SR315 AHEAD

EX. CONC.  
MEDIAN  
(DO NOT  
DISTURB)

END WORK  
STA. 490+48.70  
(RAMP AC ONLY)

END RESURFACING  
CONSTRUCTION  
STA. 46+30.00  
ROAD A

BEGIN FULL DEPTH  
RECONSTRUCTION  
STA. 46+30.00  
ROAD A

BENCH MARK # 55 ELEV. 720.53  
CONC. MON. W/ IP, ROAD A  
STA. 46+76.00, 33.30' RT

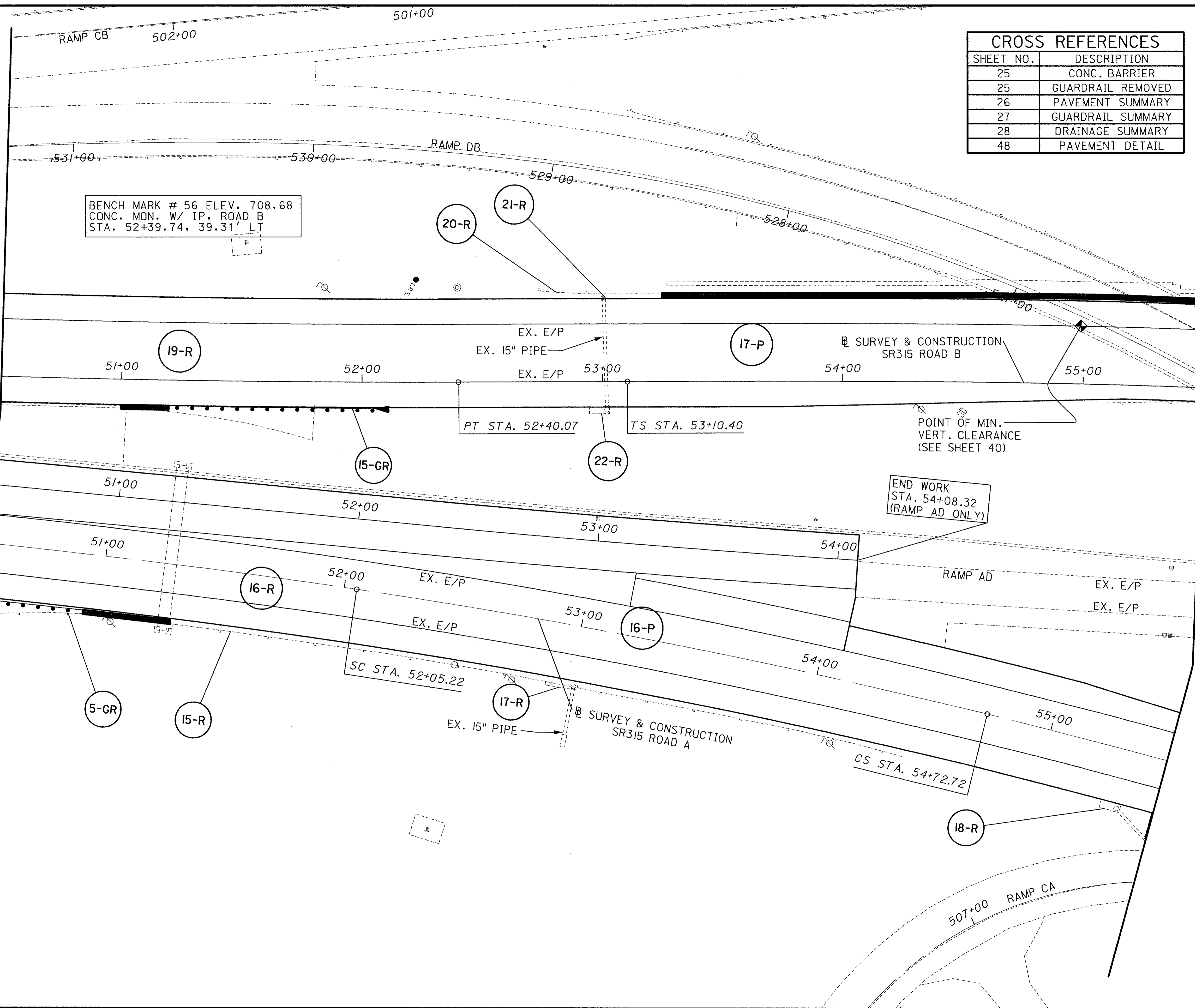
STA. 50+00.00 BEGIN WORK  
S.R. 315 ROAD A, STA. 49+96.85/  
24' LT (RAMP AD ONLY)

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
25	CONC. BARRIER
25	GUARDRAIL REMOVED
26	PAVEMENT SUMMARY
27	GUARDRAIL SUMMARY
28	DRAINAGE SUMMARY
47	PAVEMENT DETAIL

PLAN  
S.R. 315 - STA. 45+50.00 TO STA. 50+50.00

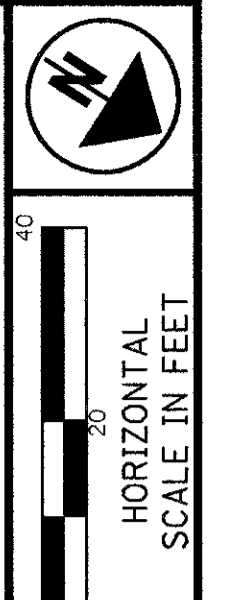
FRA-171-14.39,  
FRA-315-0.00 (A/B)

DATE: 07/16/2008 10:58 AM  
DRAWN BY: JZ  
CHECKED BY: JZ



BENCH MARK # 56 ELEV. 708.68  
 CONC. MON. W/ IP, ROAD B  
 STA. 52+39.74, 39.31 LT

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
25	CONC. BARRIER
25	GUARDRAIL REMOVED
26	PAVEMENT SUMMARY
27	GUARDRAIL SUMMARY
28	DRAINAGE SUMMARY
48	PAVEMENT DETAIL



CALCULATED  
 BBB  
 CHECKED  
 LUS

MATCHLINE 50+50

MATCHLINE 55+50

END WORK  
 STA. 54+08.32  
 (RAMP AD ONLY)

**PLAN**  
**S.R. 315 - STA. 50+50.00 TO STA. 55+50.00**

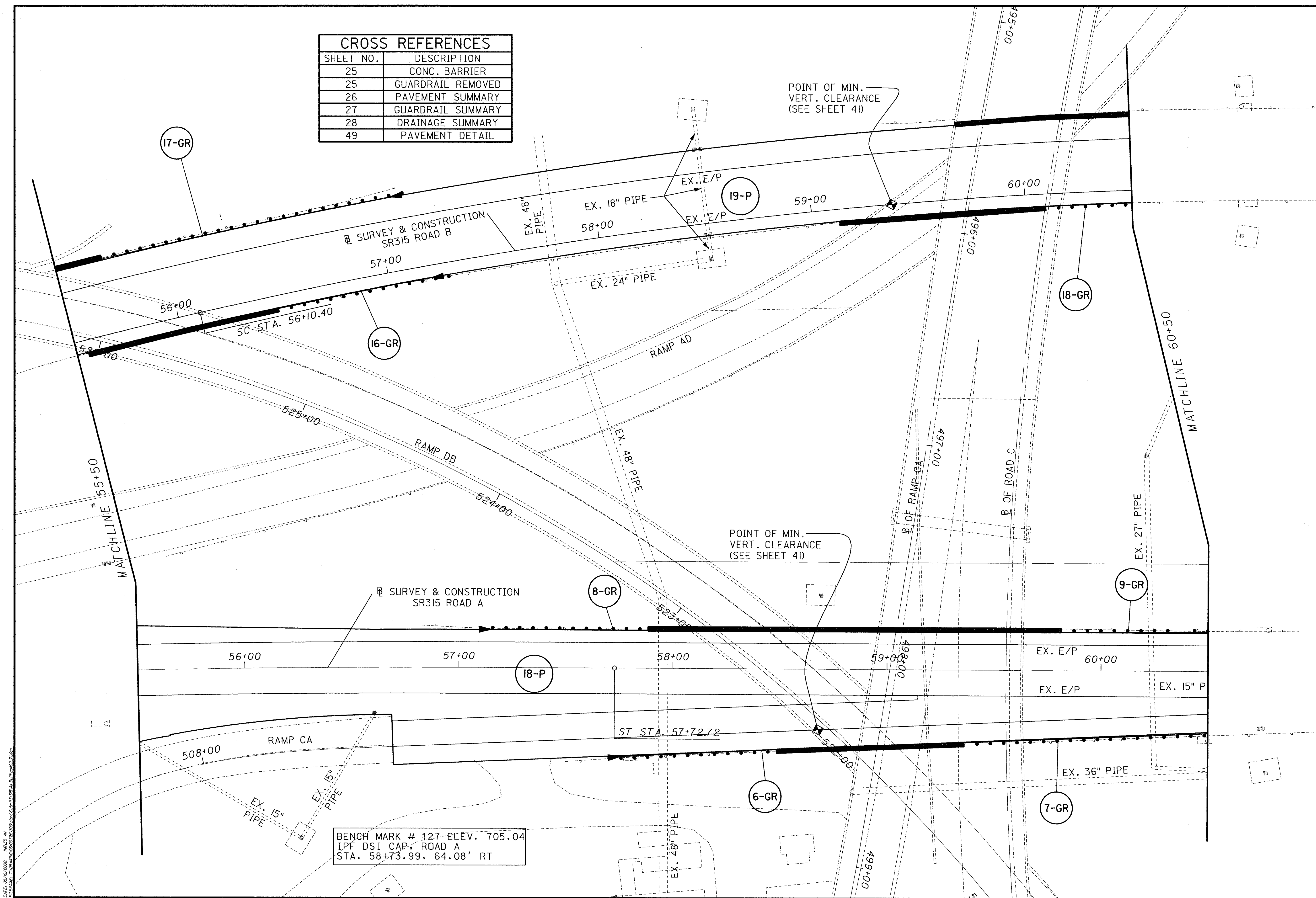
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**FRA-315-0.00 (A/B)**

34  
 89

DATE: 07/19/2006 10:54 AM  
 DRAWING: 171-14.39-000-000-A/B

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
25	CONC. BARRIER
25	GUARDRAIL REMOVED
26	PAVEMENT SUMMARY
27	GUARDRAIL SUMMARY
28	DRAINAGE SUMMARY
49	PAVEMENT DETAIL

CALCULATED  
BBB  
CHECKED  
LJS

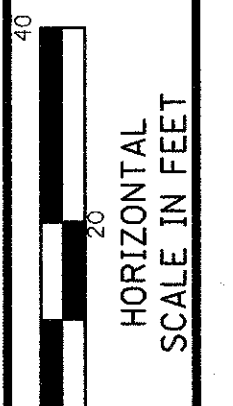
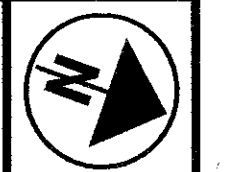


BENCH MARK # 127-ELEV. 705.04  
IPF DSI CAP, ROAD A  
STA. 58+73.99, 64.08' RT

PLAN  
S.R. 315 - STA. 55+50.00 TO STA. 60+50.00

FRA-171-14.39,  
FRA-315-0.00 (A/B)

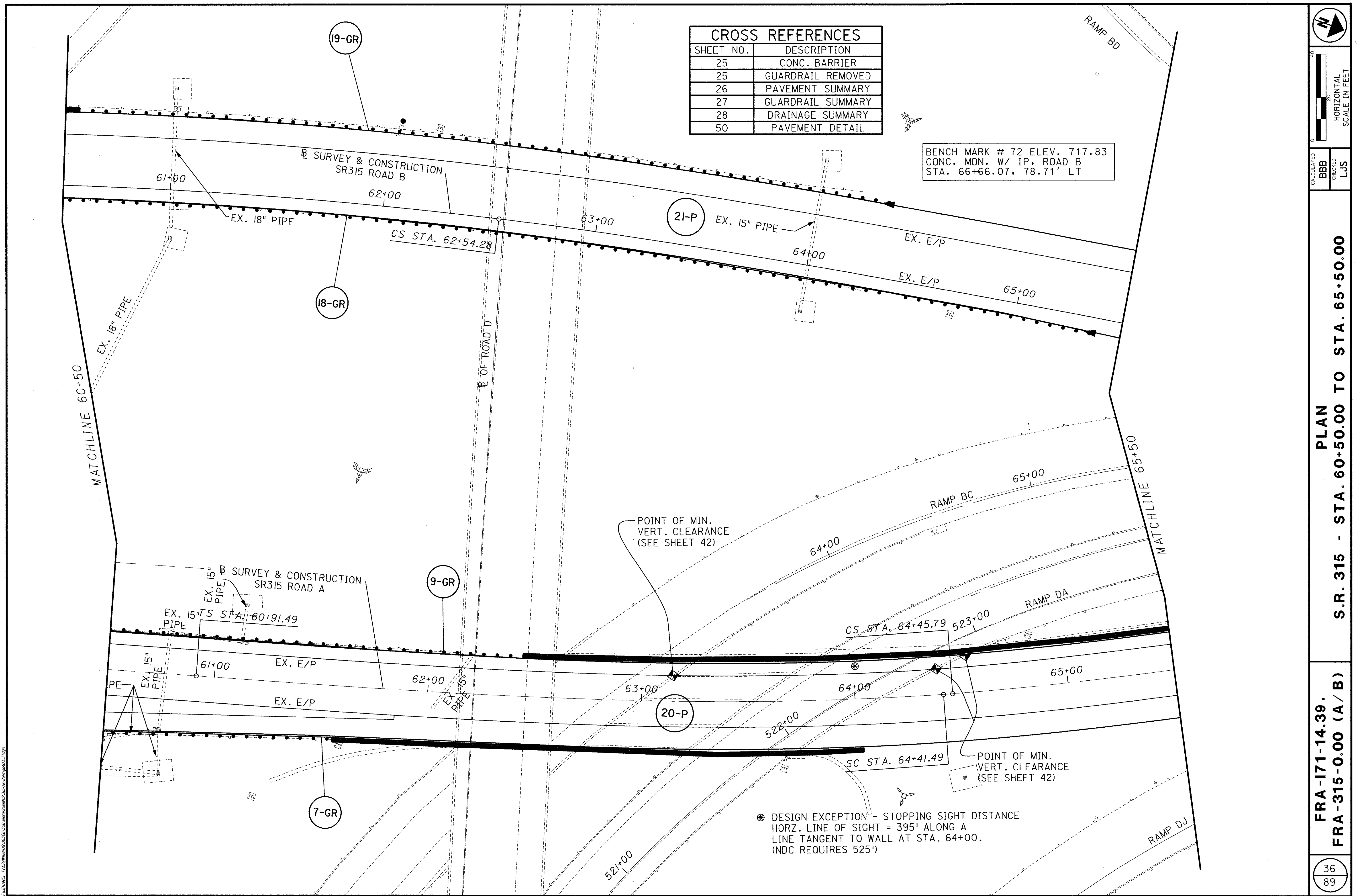




CALCULATED  
BBB  
CHECKED  
LJS

SHEET NO.	DESCRIPTION
25	CONC. BARRIER
25	GUARDRAIL REMOVED
26	PAVEMENT SUMMARY
27	GUARDRAIL SUMMARY
28	DRAINAGE SUMMARY
50	PAVEMENT DETAIL

BENCH MARK # 72 ELEV. 717.83  
CONC. MON. W/ IP, ROAD B  
STA. 66+66.07, 78.71' LT



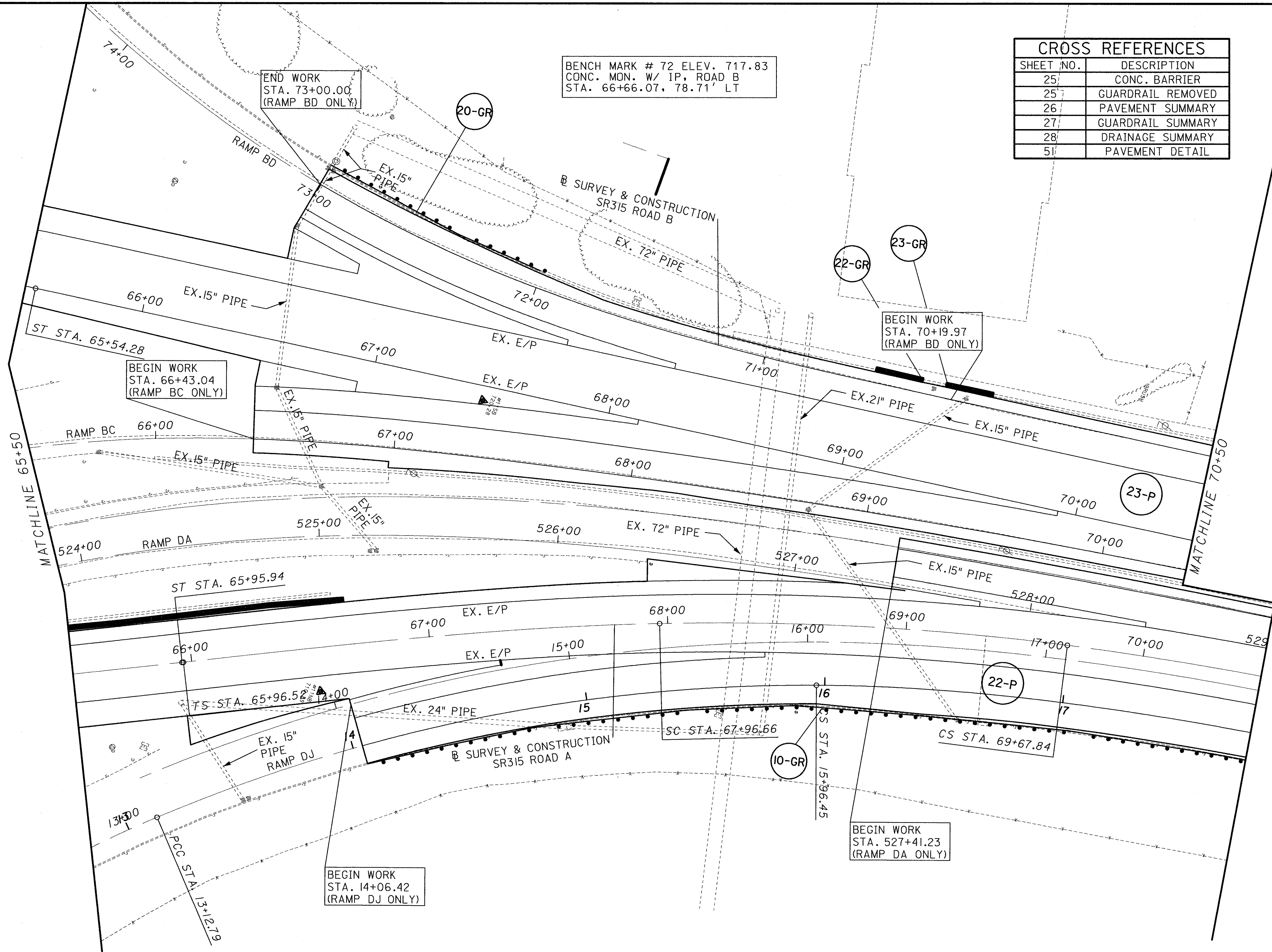
⊗ DESIGN EXCEPTION - STOPPING SIGHT DISTANCE  
HORZ. LINE OF SIGHT = 395' ALONG A  
LINE TANGENT TO WALL AT STA. 64+00.  
(NDC REQUIRES 525')

PLAN  
S.R. 315 - STA. 60+50.00 TO STA. 65+50.00

FRA-171-14.39,  
FRA-315-0.00 (A/B)

DATE: 07/16/2008 10:08 AM  
DRAWN: J. B. BROWN

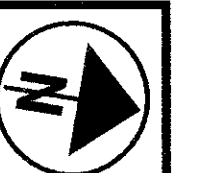
DATE: 05/16/2002 11:19:16 AM  
 FILENAME: T:\DRAWING\06\06326\306\p\pro\Submit\315\As-Built\sp404\_71.dgn



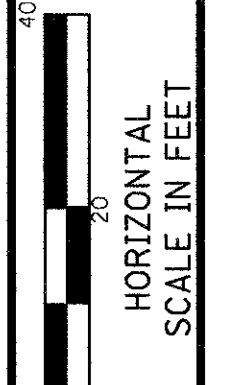
CROSS REFERENCES	
SHEET NO.	DESCRIPTION
25	CONC. BARRIER
25	GUARDRAIL REMOVED
26	PAVEMENT SUMMARY
27	GUARDRAIL SUMMARY
28	DRAINAGE SUMMARY
51	PAVEMENT DETAIL



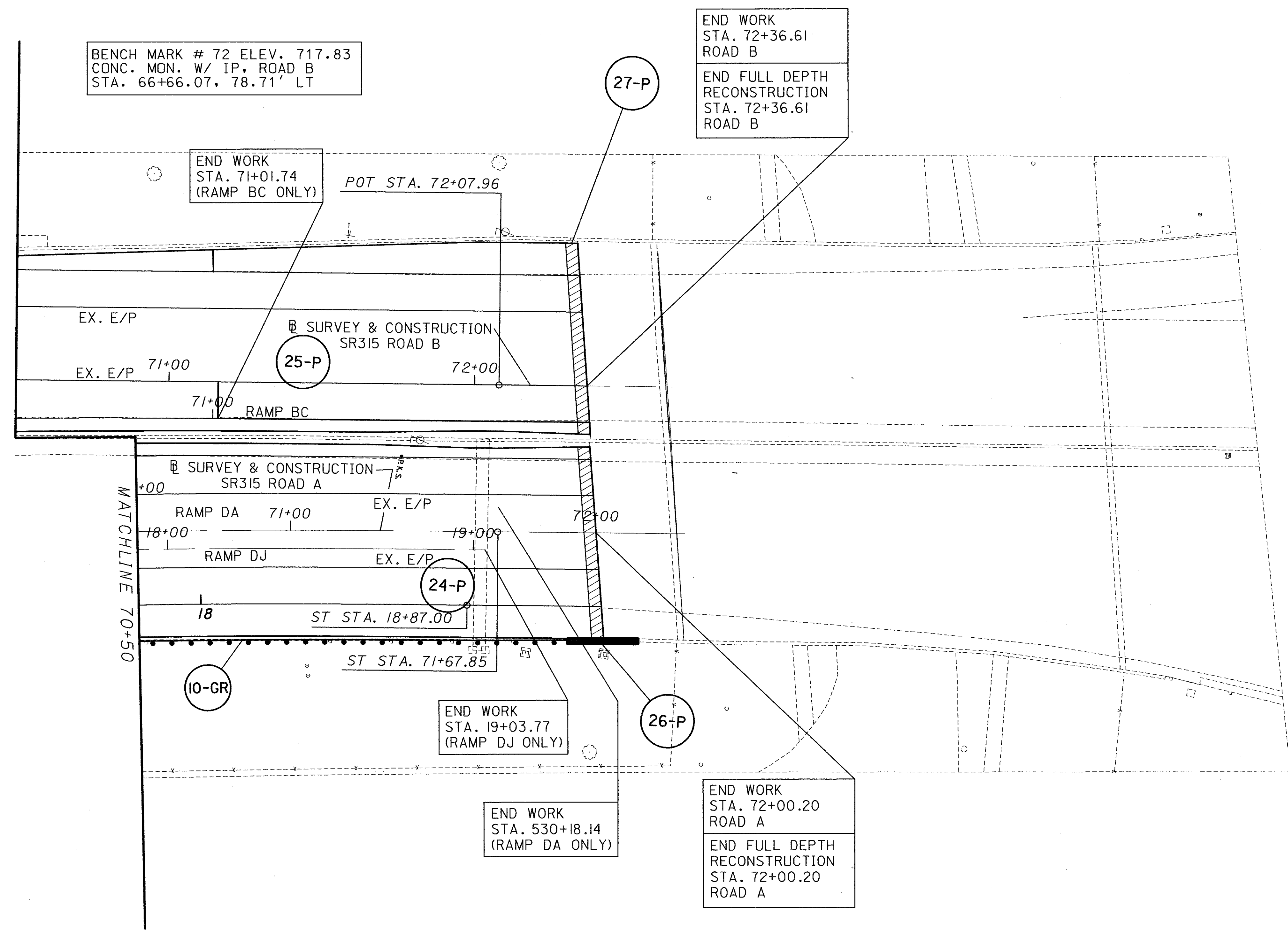
FRA-171-14.39,  
 FRA-315-0.00 (A/B)  
 PLAN  
 S.R. 315 - STA. 65+50.00 TO STA. 70+50.00



CROSS REFERENCES	
SHEET NO.	DESCRIPTION
25	CONC. BARRIER
25	GUARDRAIL REMOVED
26	PAVEMENT SUMMARY
27	GUARDRAIL SUMMARY
28	DRAINAGE SUMMARY
52	PAVEMENT DETAIL



CALCULATED  
BBB  
CHECKED  
LJS

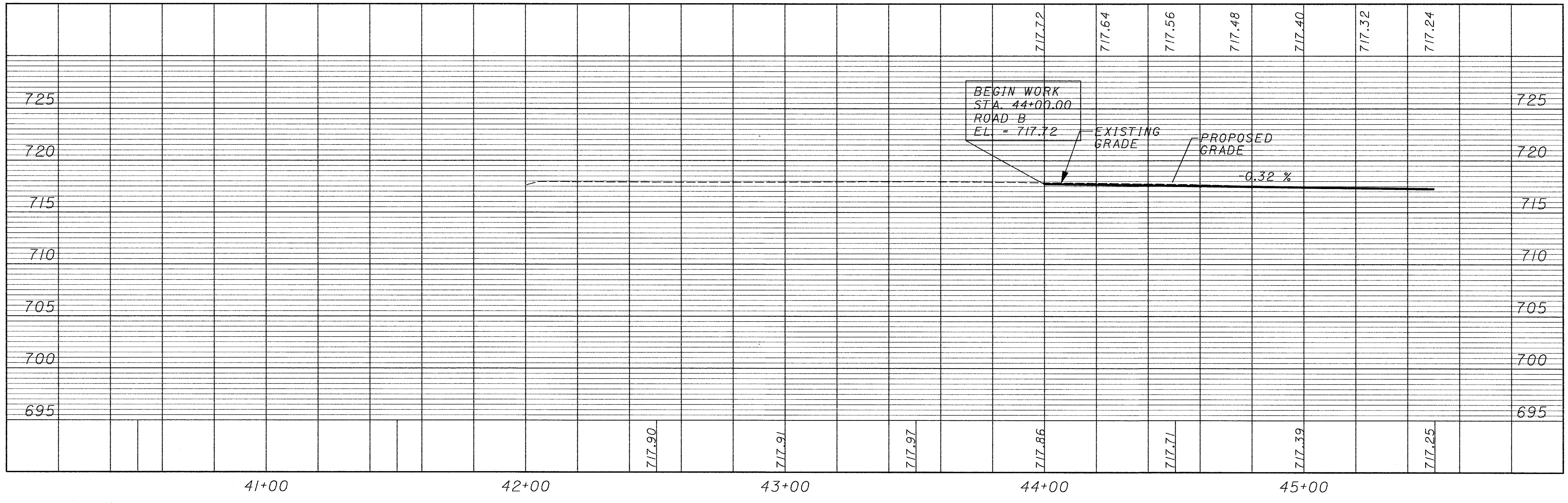


PLAN  
S.R. 315 - STA. 70+50.00 TO STA. 72+00.12

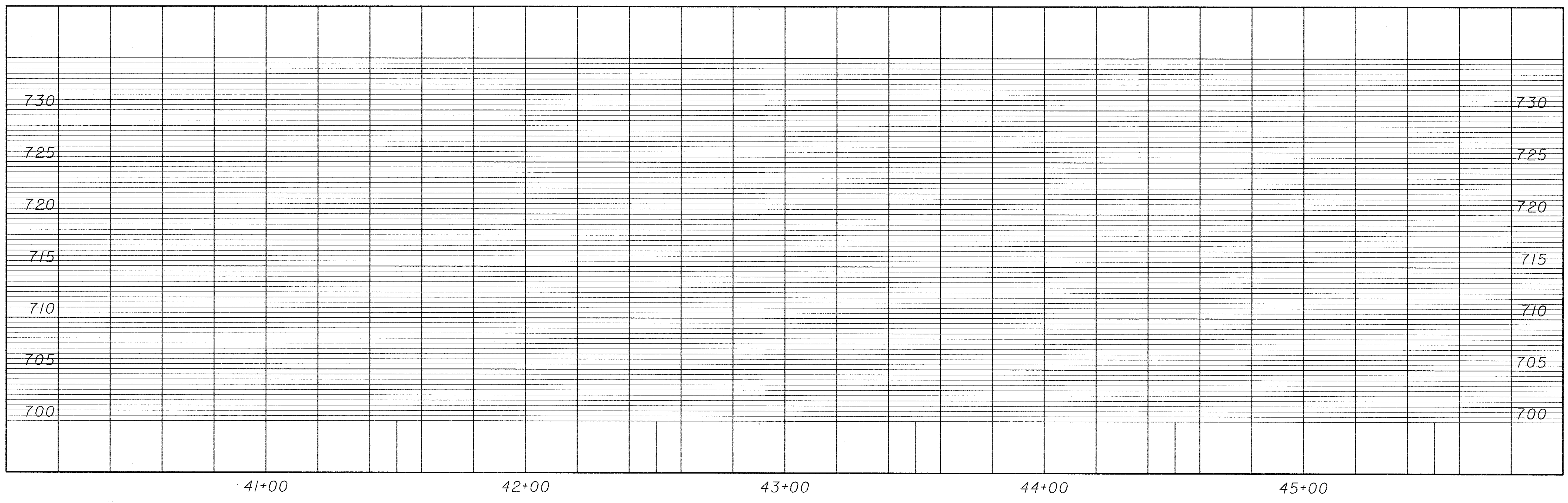
FRA-171-14.39,  
FRA-315-0.00 (A/B)

DATE: 07/14/2025 10:00:06 AM  
DRAWN BY: JLS  
CHECKED BY: LJS

### ROAD B



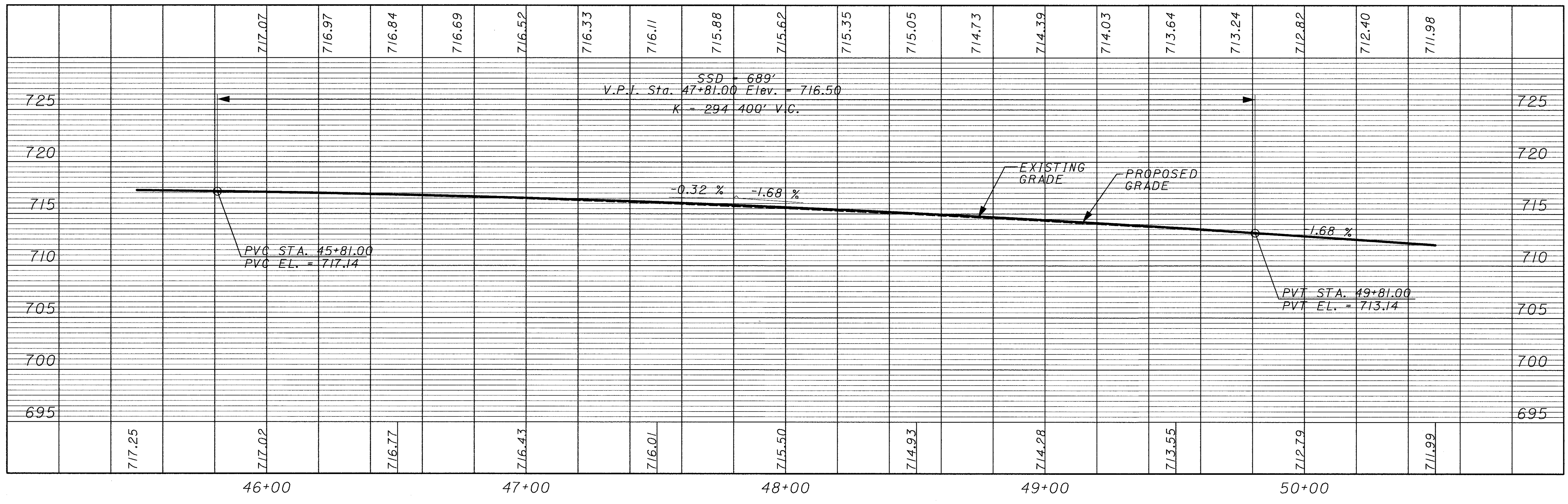
### ROAD A



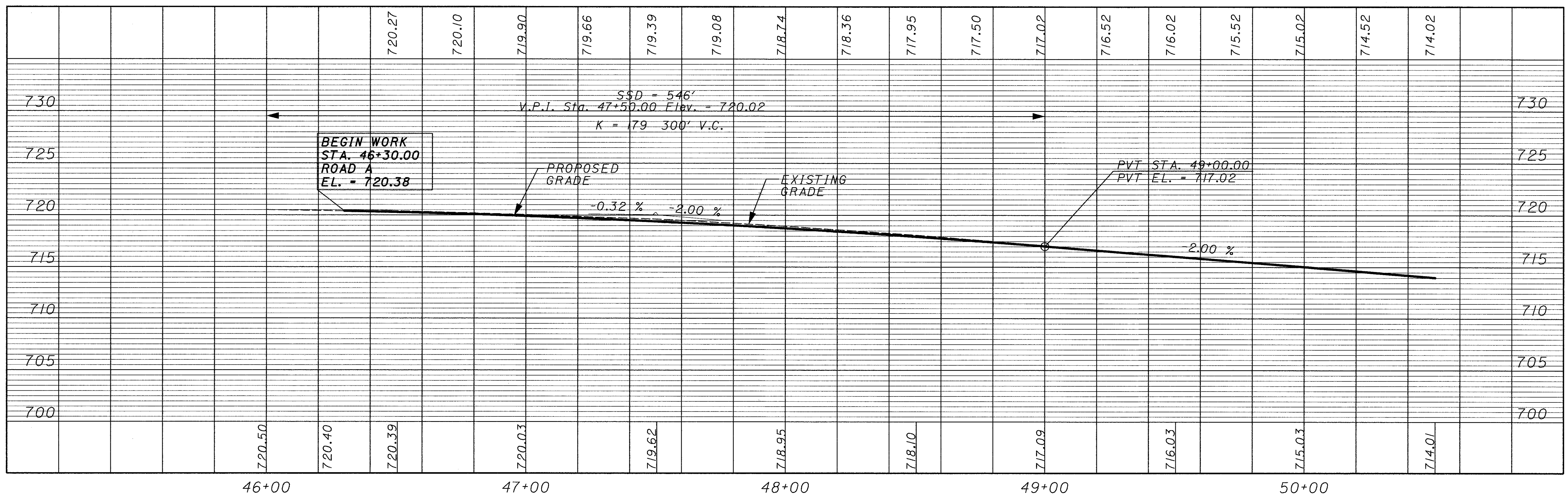
DATE: 05/15/2002 04:39:41 PM  
 FILENAME: T:\DRM\160506\26306\proj\road\sub\1315\As-Built\prf1.dgn

CALCULATED <b>BBB</b> CHECKED <b>LJS</b>	<b>PROFILES - ROAD A &amp; B</b> <b>STA. 40+50.00 TO STA. 45+50.00</b>
<b>FRA-IR71-14.39,</b> <b>FRA-315-0.00</b>	39 89

### ROAD B



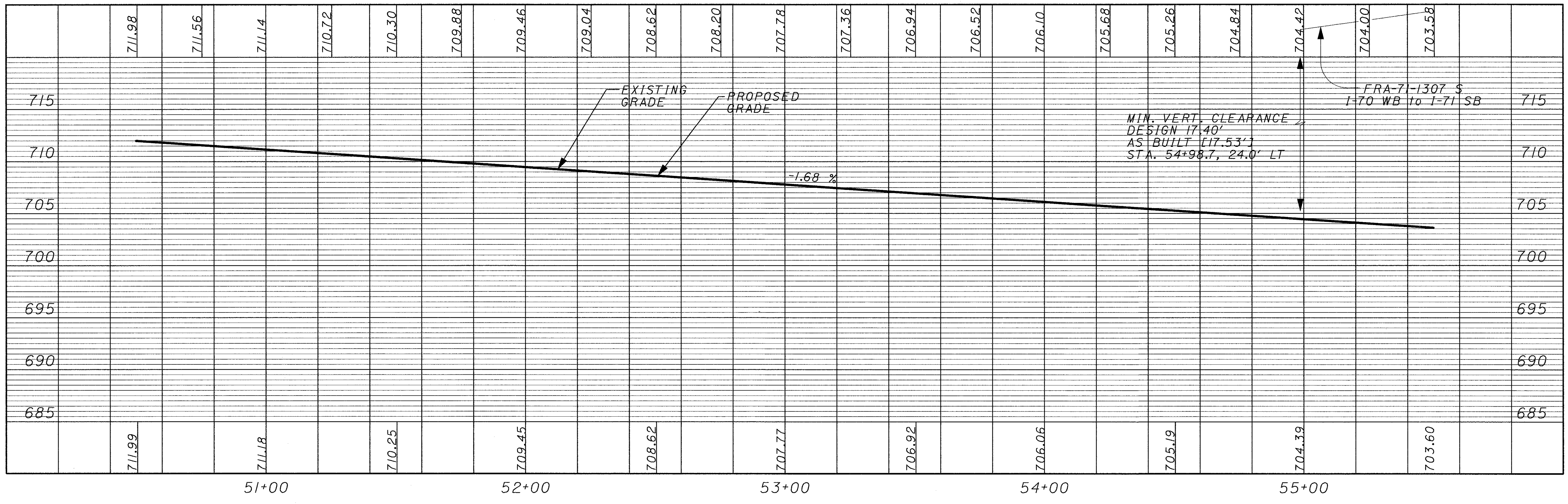
### ROAD A



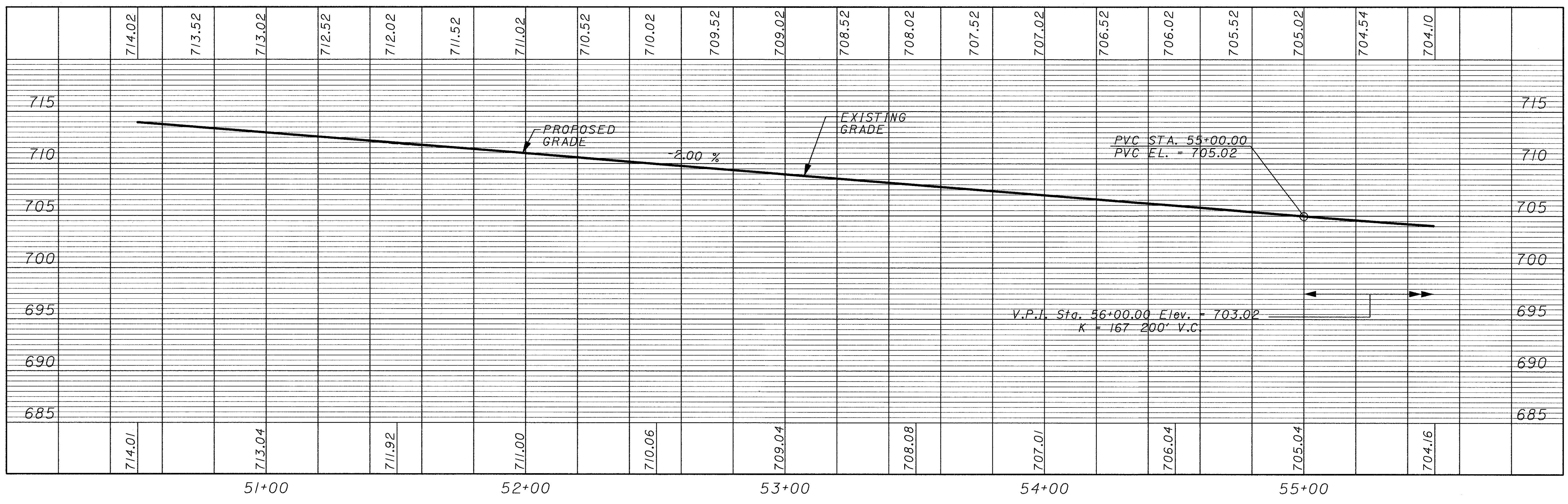
DATE: 05/16/2002 08:03:30 AM  
FILENAME: T:\OR\HW\050606326\306\proj\road\submit\315\As-Built\road\B.dgn

CALCULATED BBB CHECKED LJS	<b>PROFILES - ROAD A &amp; B</b> <b>STA. 45+50.00 TO STA. 50+50.00</b>
<b>FRA-IR71-14.39,</b> <b>FRA-315-0.00</b>	40 89

### ROAD B



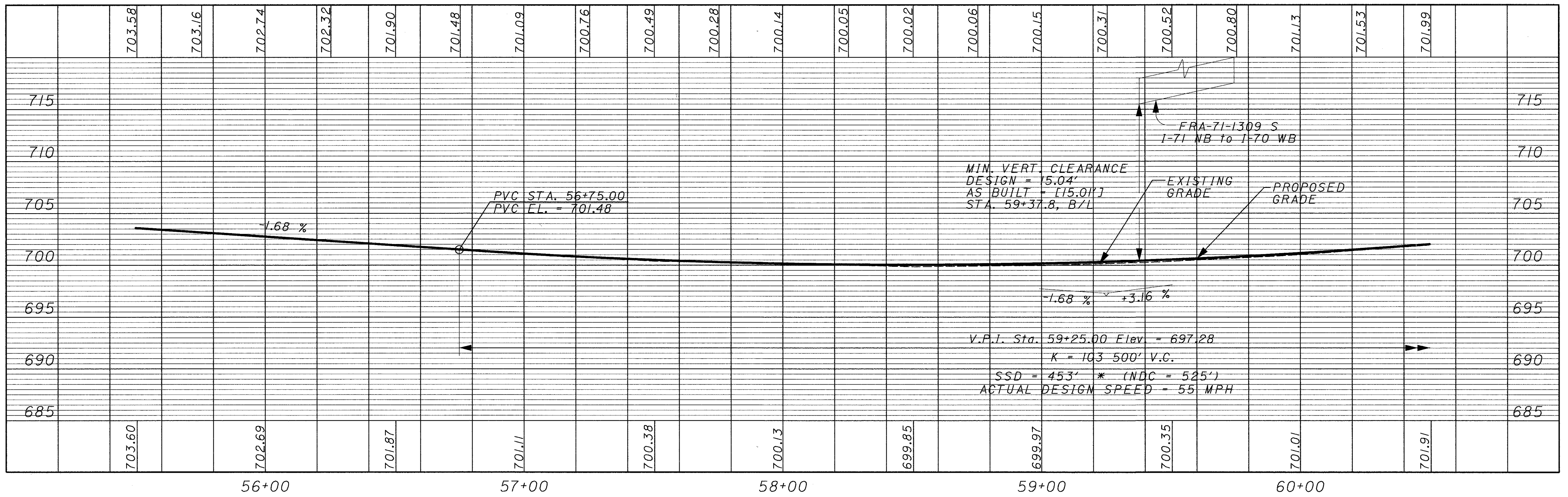
### ROAD A



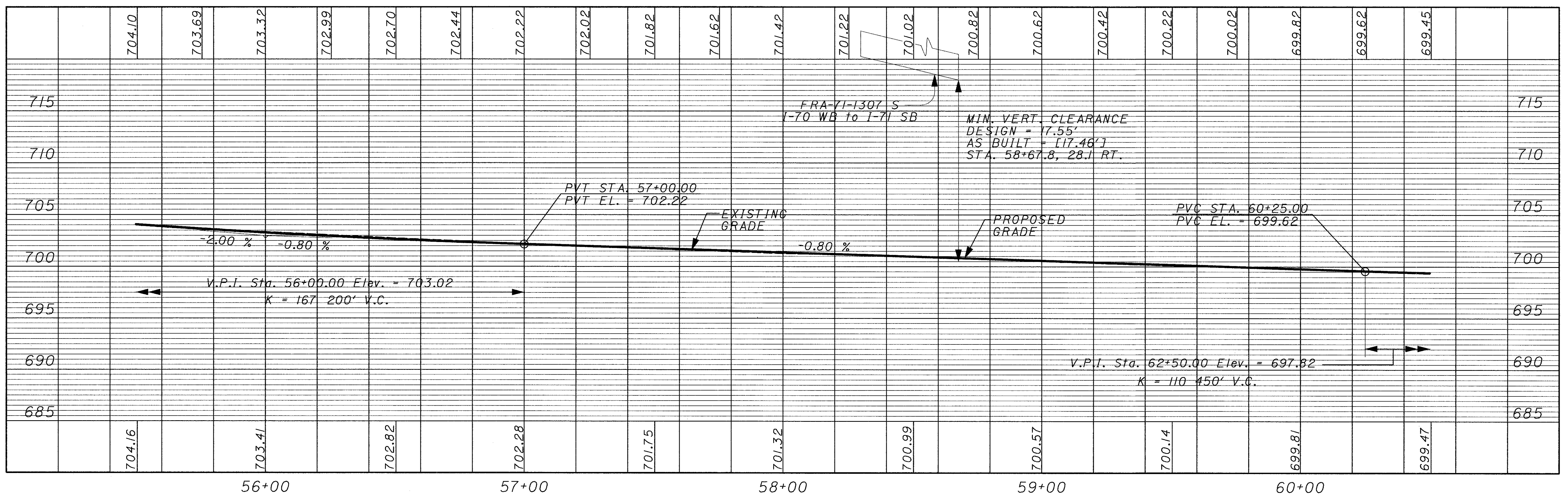
DATE: 05/16/2002 08:03:52 AM  
FILENAME: T:\DRAWING\05\06326\306\proj\3\315\as-Built\cor2.dgn

CALCULATED BBB CHECKED LJS	<b>PROFILES - ROAD A &amp; B</b> <b>STA. 50+50.00 TO STA. 55+50.00</b>
FRA-IR71-14.39, FRA-315-0.00	41 89

### ROAD B



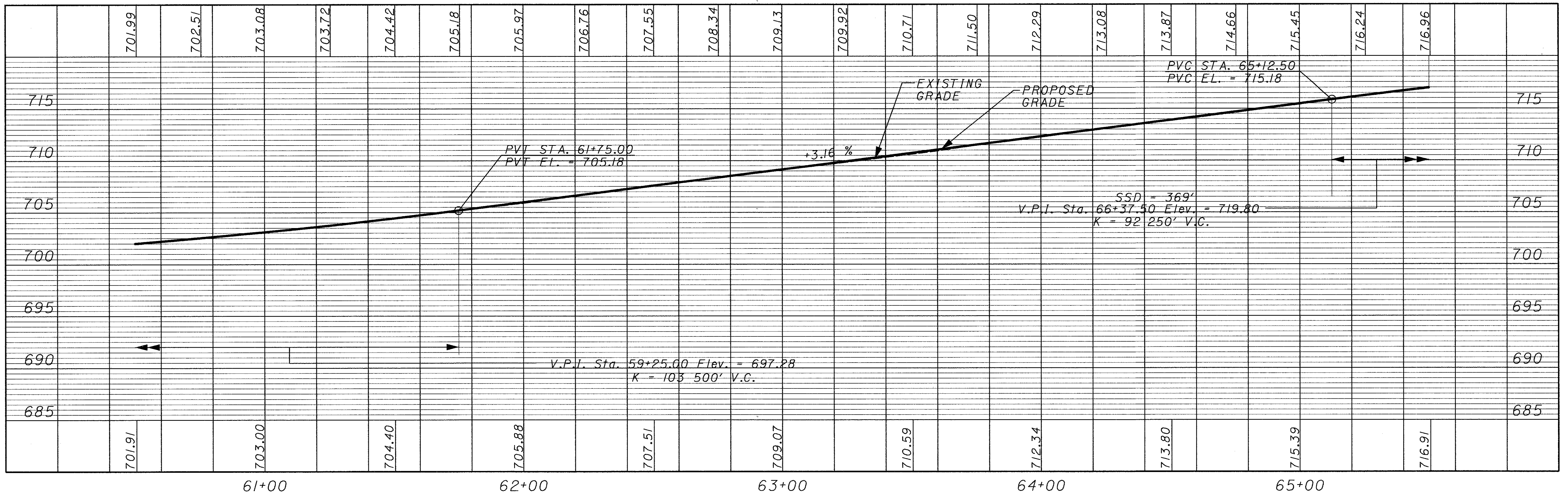
### ROAD A



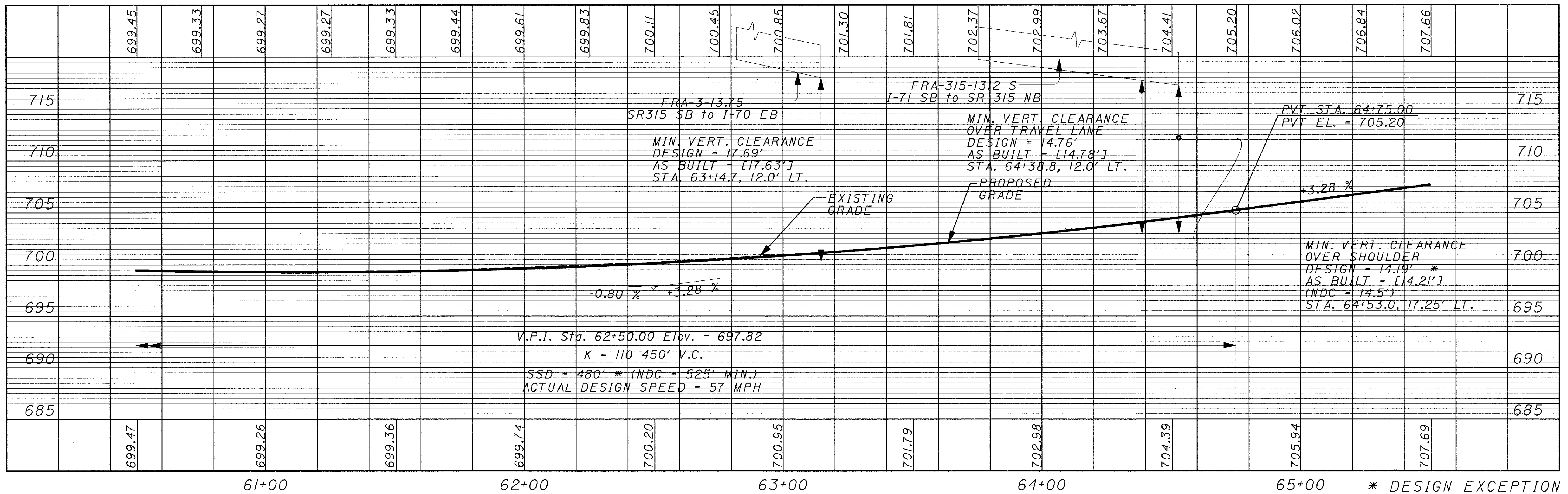
DATE: 05/16/2002 08:04:26 AM  
 FILENAME: T:\DRAWINGS\05\05326\306\proj\sub\m13\315\as-Built\prj3.dgn

CALCULATED <b>BBB</b> CHECKED <b>LJS</b>	<b>PROFILES - ROAD A &amp; B</b> <b>STA. 55+50.00 TO STA. 60+50.00</b>
<b>FRA-IR71-14.39,</b> <b>FRA-315-0.00</b>	42 89

### ROAD B



### ROAD A



DATE: 05/16/2002 08:04:55 AM  
FILENAME: T:\DRM\16050626\306\proj\road\315\As-Built\prof.dgn

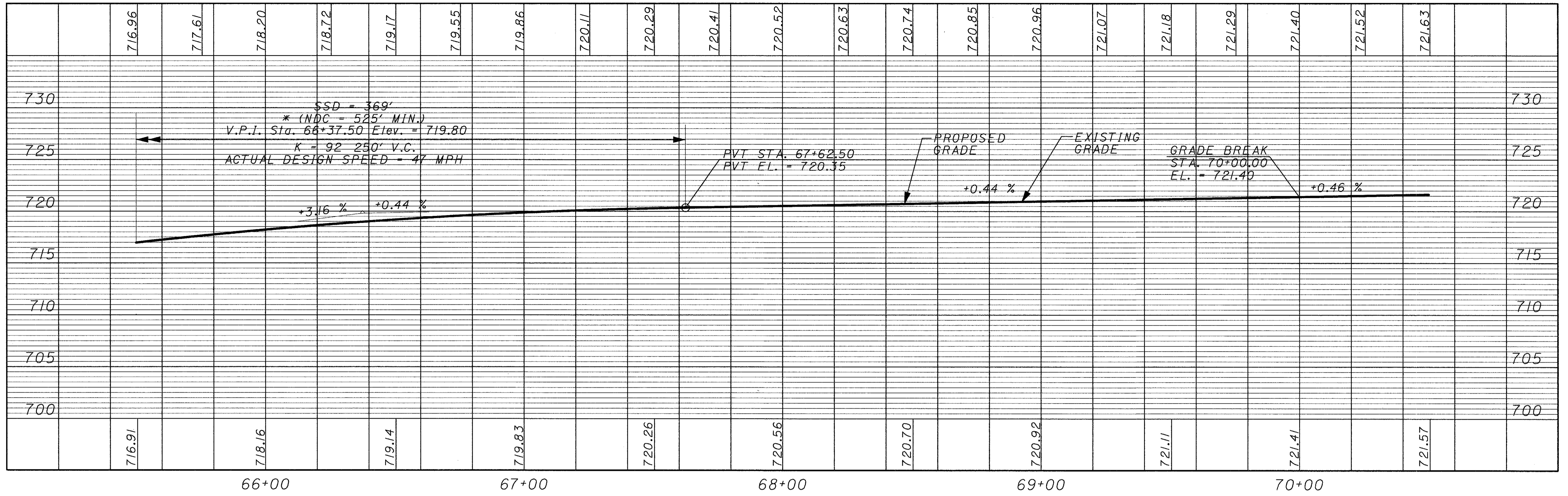
CALCULATED  
BBB  
CHECKED  
LJS

PROFILES - ROAD A & B  
STA. 60+50.00 TO STA. 65+50.00

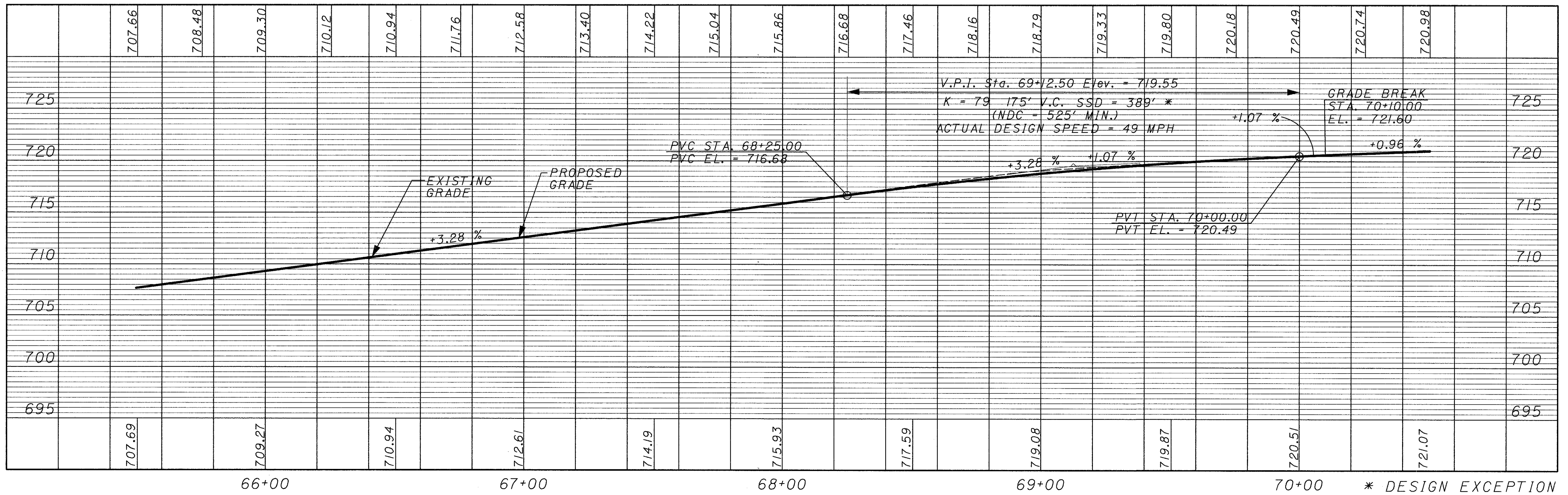
FRA-IR71-14.39,  
FRA-315-0.00



### ROAD B



### ROAD A



**PROFILES - ROAD A & B**  
**STA. 65+50.00 TO STA. 70+50.00**

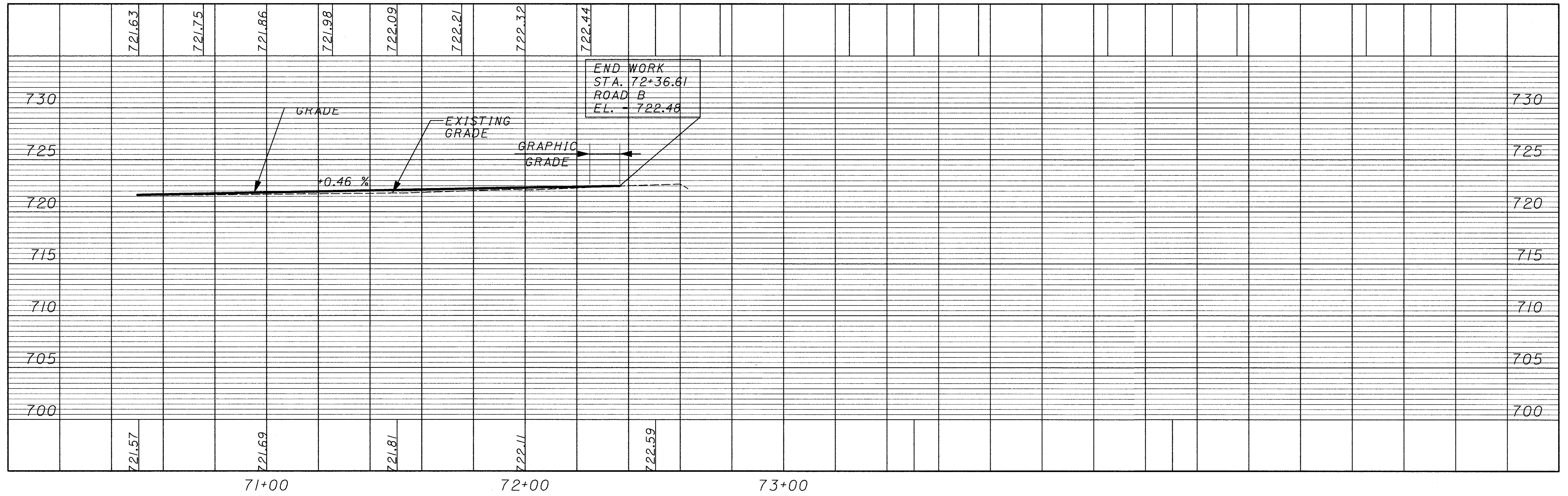
**FRA-IR71-14.39,**  
**FRA-315-0.00**

CALCULATED  
 BBB  
 CHECKED  
 LJS

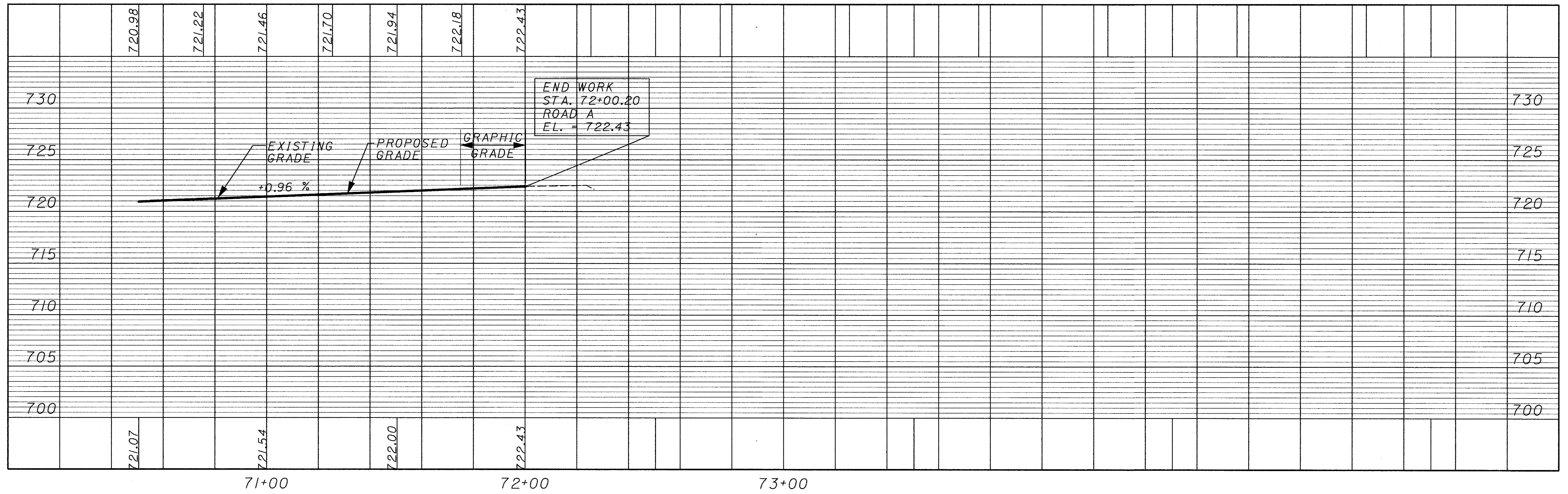
DATE: 05/15/2002 04:43:59 PM  
 FILENAME: T:\DRAWING\05\050329\306\p03\Submittal\315\As-Built\p03\5.dgn

\* DESIGN EXCEPTION

### ROAD B



### ROAD A

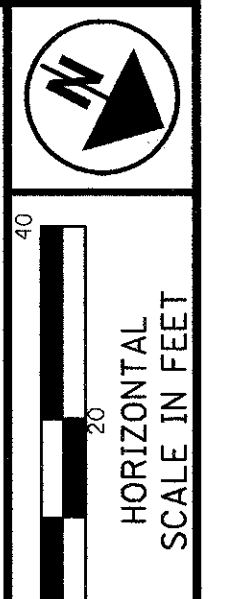


DATE: 05/15/2002 04:44:43 PM  
 FILENAME: T:\DRAWING\05\05\26\306\pro\Subm\315 As-Built\prof6.dgn

**PROFILES - ROAD A & B**  
**STA. 70+50.00 TO STA. 72+00.35**

**FRA-IR71-14.39,**  
**FRA-315-0.00**

CALCULATED  
 BBB  
 CHECKED  
 LJS

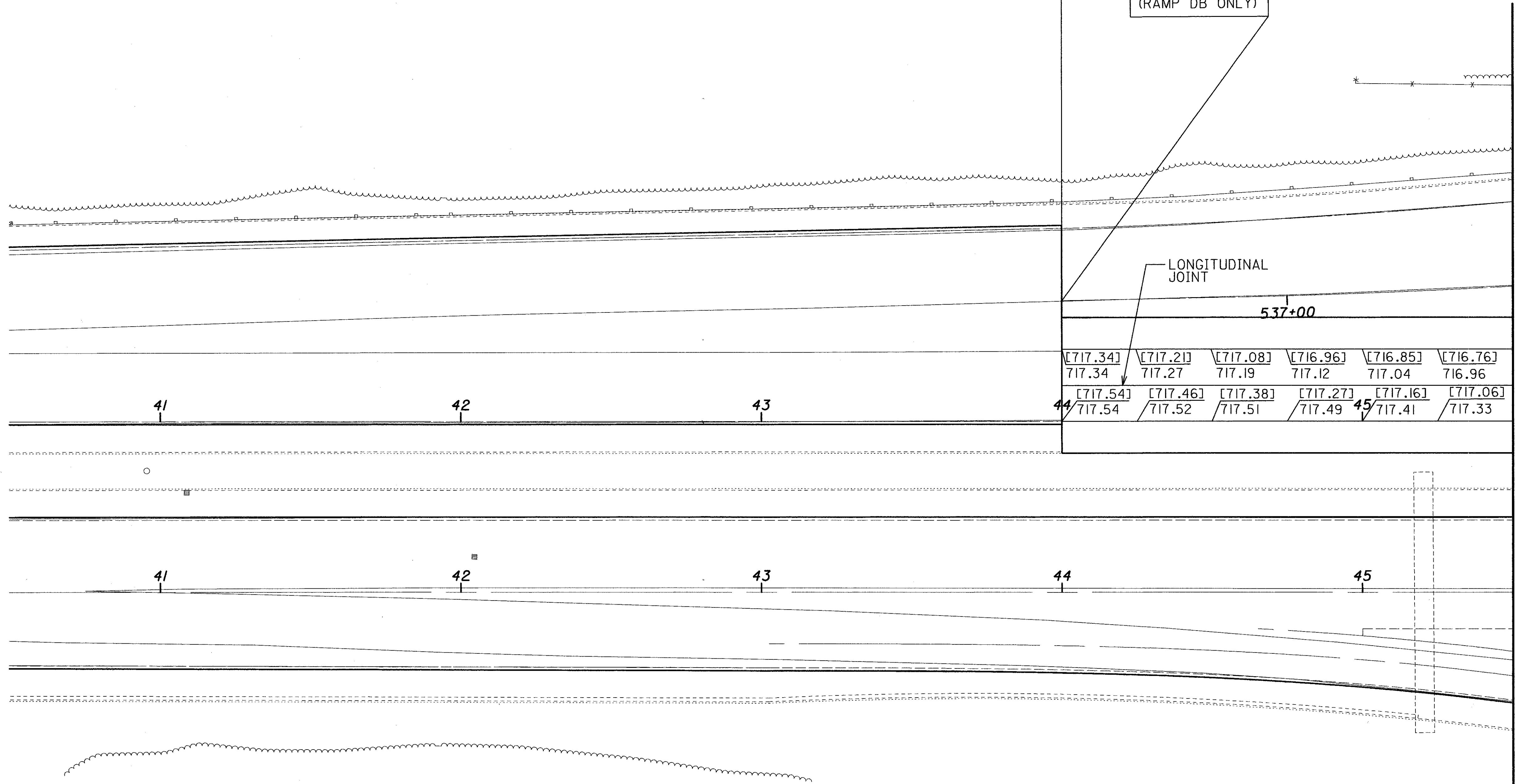


CALCULATED  
BBB  
CHECKED  
LUS

END RESURFACING  
CONSTRUCTION  
STA. 44+00.00  
ROAD B

BEGIN FULL DEPTH  
RECONSTRUCTION  
STA. 44+00.00  
ROAD B

END WORK  
STA. 537+75.00  
(RAMP DB ONLY)



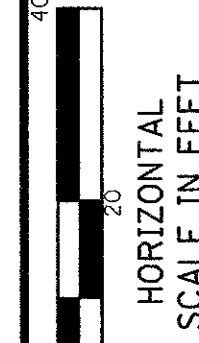
NOTE: (XXX.XX) EXISTING ELEVATION  
[XXX.XX] SURVEYED ELEVATION

PAVEMENT DETAILS  
S.R. 315 - STA. 40+50.00 TO STA. 45+50.00

FRA-171-14.39,  
FRA-315-0.00 (A/B)

46  
89

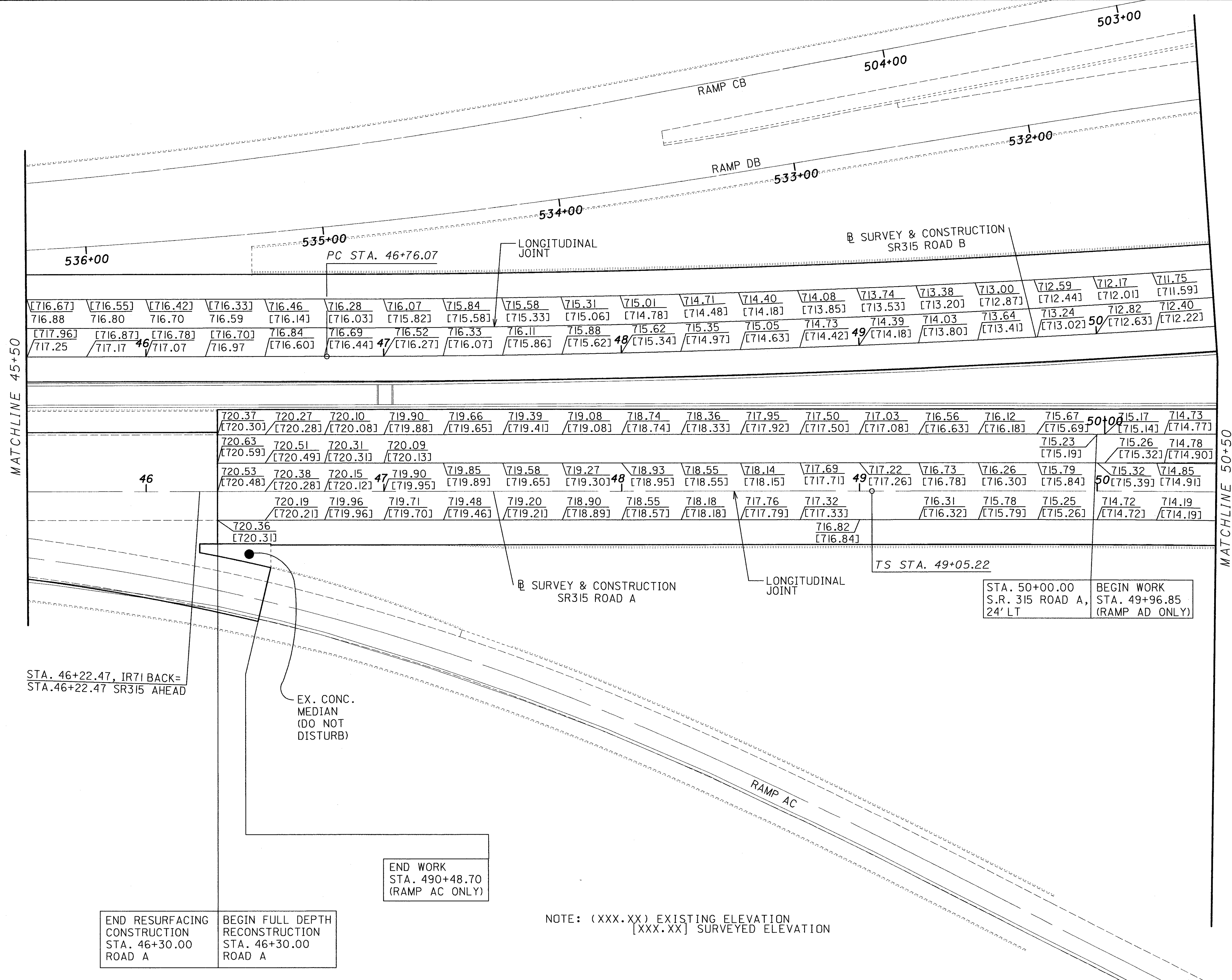
DATE: 07/16/2025 10:05:01 AM  
DRAWN BY: J. B. HARRIS, P.E.  
PROJECT: FRA-315-0.00 (A/B)



CALCULATED  
BBB  
CHECKED  
LJS

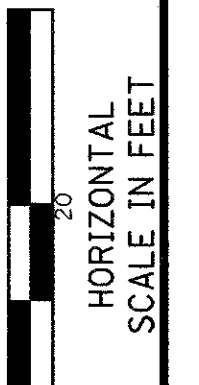
**PAVEMENT DETAILS**  
S.R. 315 - STA. 45+50.00 TO STA. 50+50.00

FRA-171-14.39,  
FRA-315-0.00 (A/B)



NOTE: (XXX.XX) EXISTING ELEVATION  
[XXX.XX] SURVEYED ELEVATION

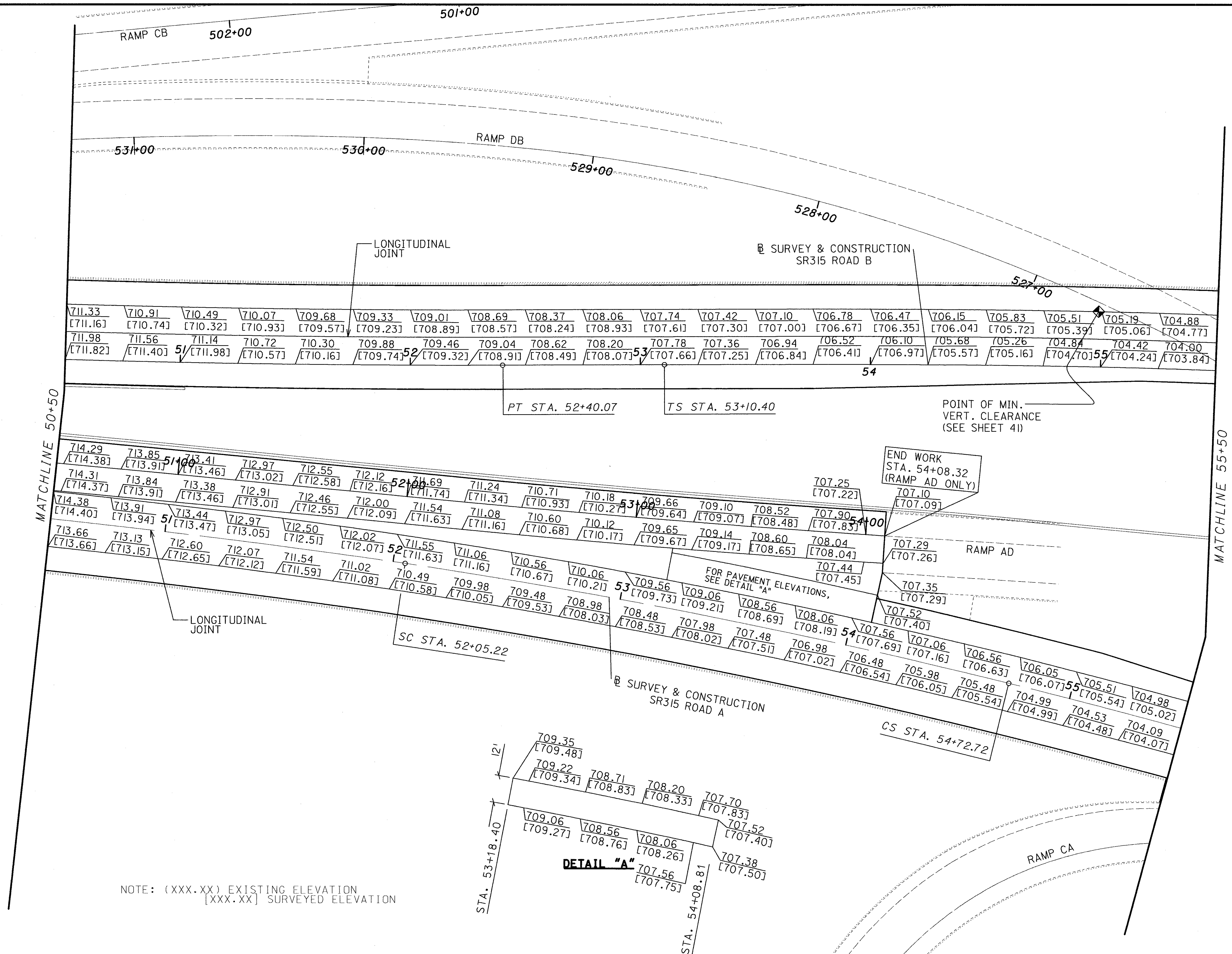
DATE: 05/16/2012 09:05 AM  
FILENAME: I:\DRAWINGS\2012\SR315\SR315\_45+50.DWG



CALCULATED  
BBB  
CHECKED  
LUS

**PAVEMENT DETAILS**  
**S.R. 315 - STA. 50+50.00 TO STA. 55+50.00**

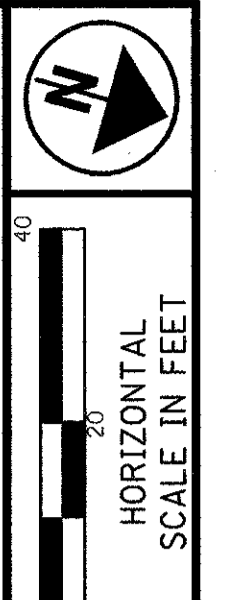
**FRA-171-14.39,**  
**FRA-315-0.00 (A/B)**



NOTE: (XXX.XX) EXISTING ELEVATION  
[XXX.XX] SURVEYED ELEVATION

**DETAIL "A"**

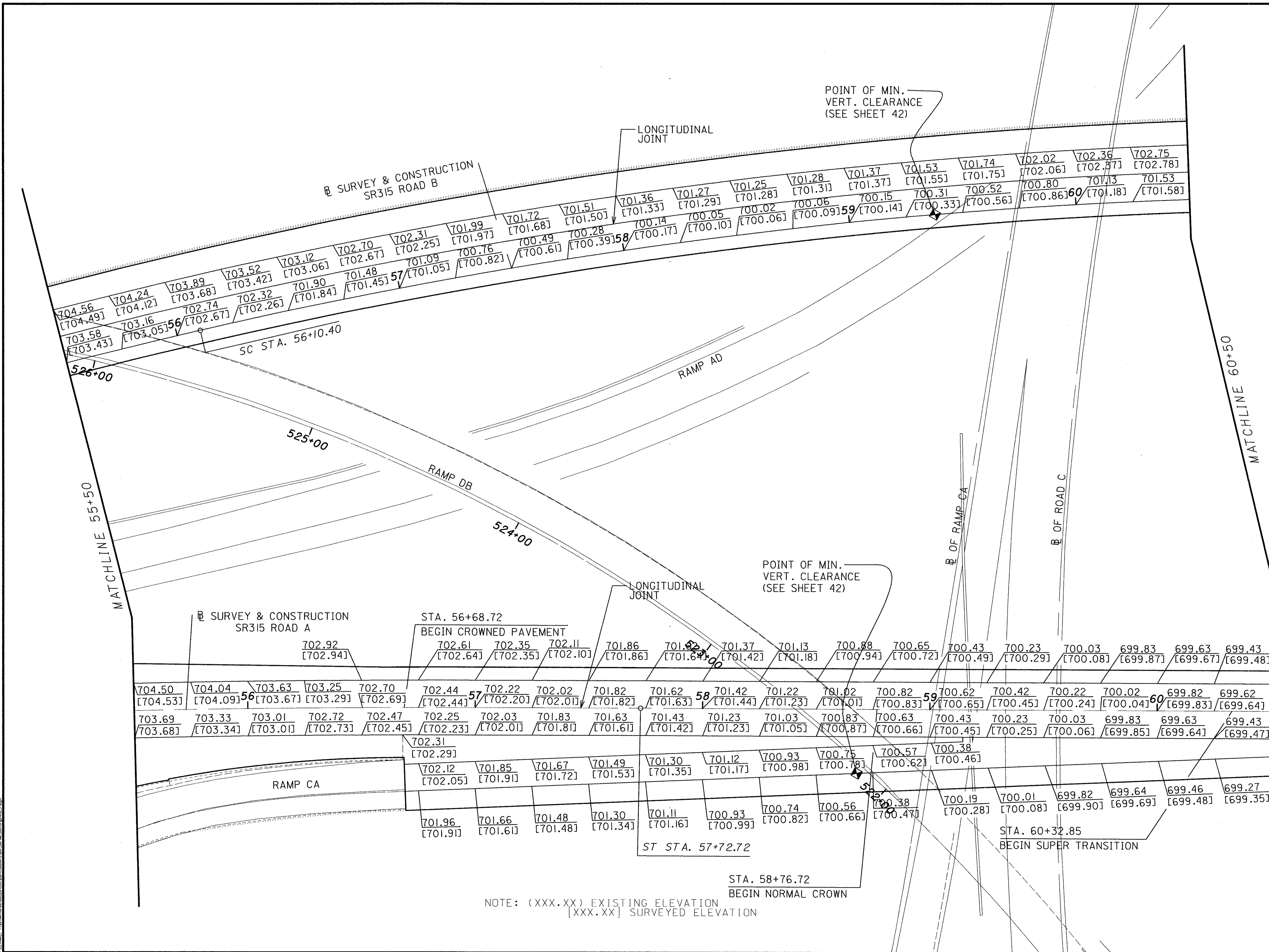
DATE: 05/19/2022 10:02:59 AM  
DRAWN BY: [unreadable]  
CHECKED BY: [unreadable]



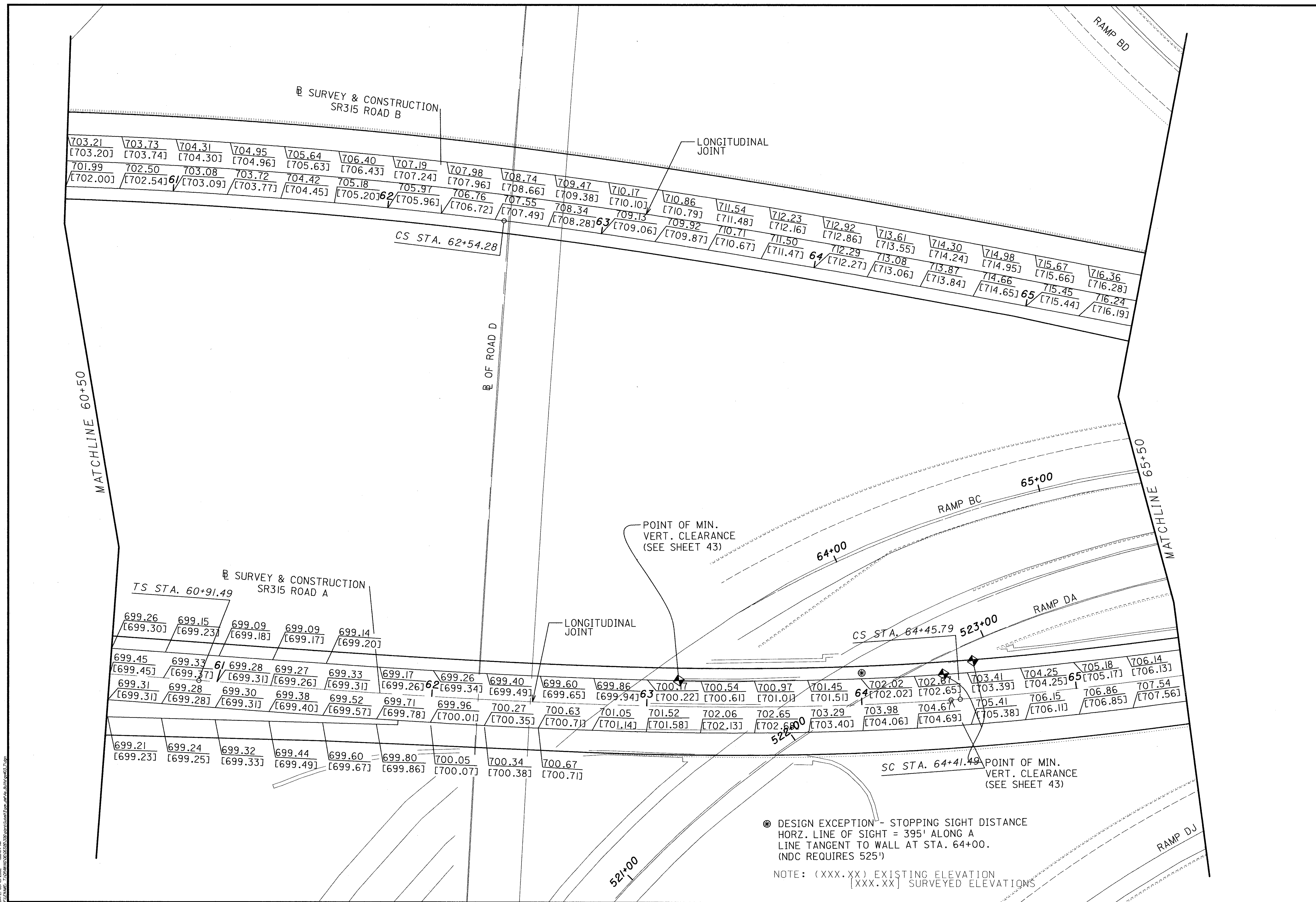
CALCULATED  
BBB  
CHECKED  
LUS

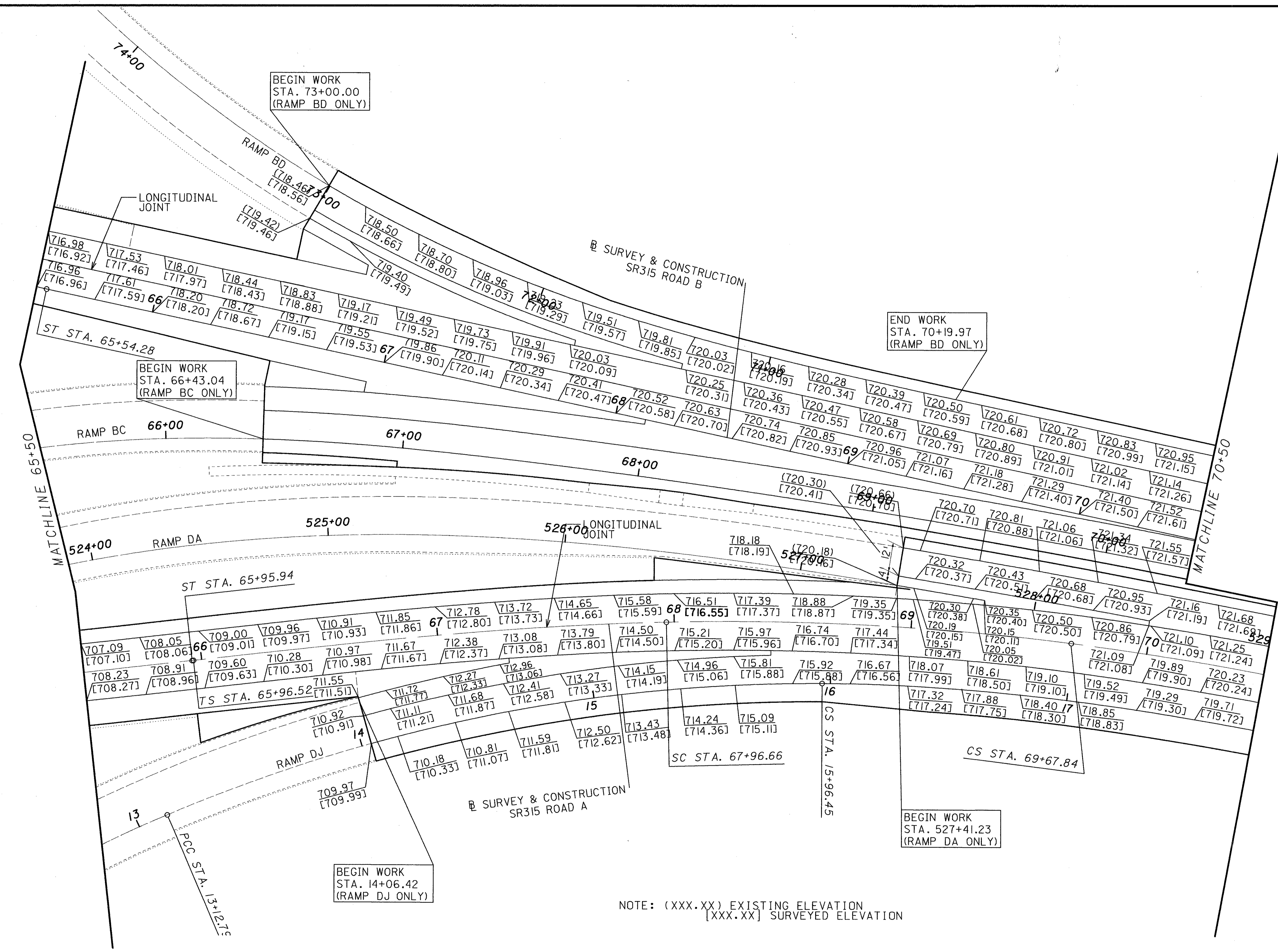
**PAVEMENT DETAILS**  
**S.R. 315 - STA. 55+50.00 TO STA. 60+50.00**

**FRA-171-14.39,**  
**FRA-315-0.00 (A/B)**



DATE: 05/16/2002 09:03 AM  
DRAWN BY: [unreadable]  
CHECKED BY: [unreadable]

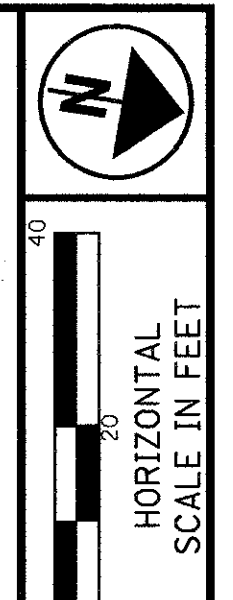




NOTE: (XXX.XX) EXISTING ELEVATION  
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DATE: 05/15/2002 10:00 AM  
 DRAWN BY: [unreadable]  
 CHECKED BY: [unreadable]

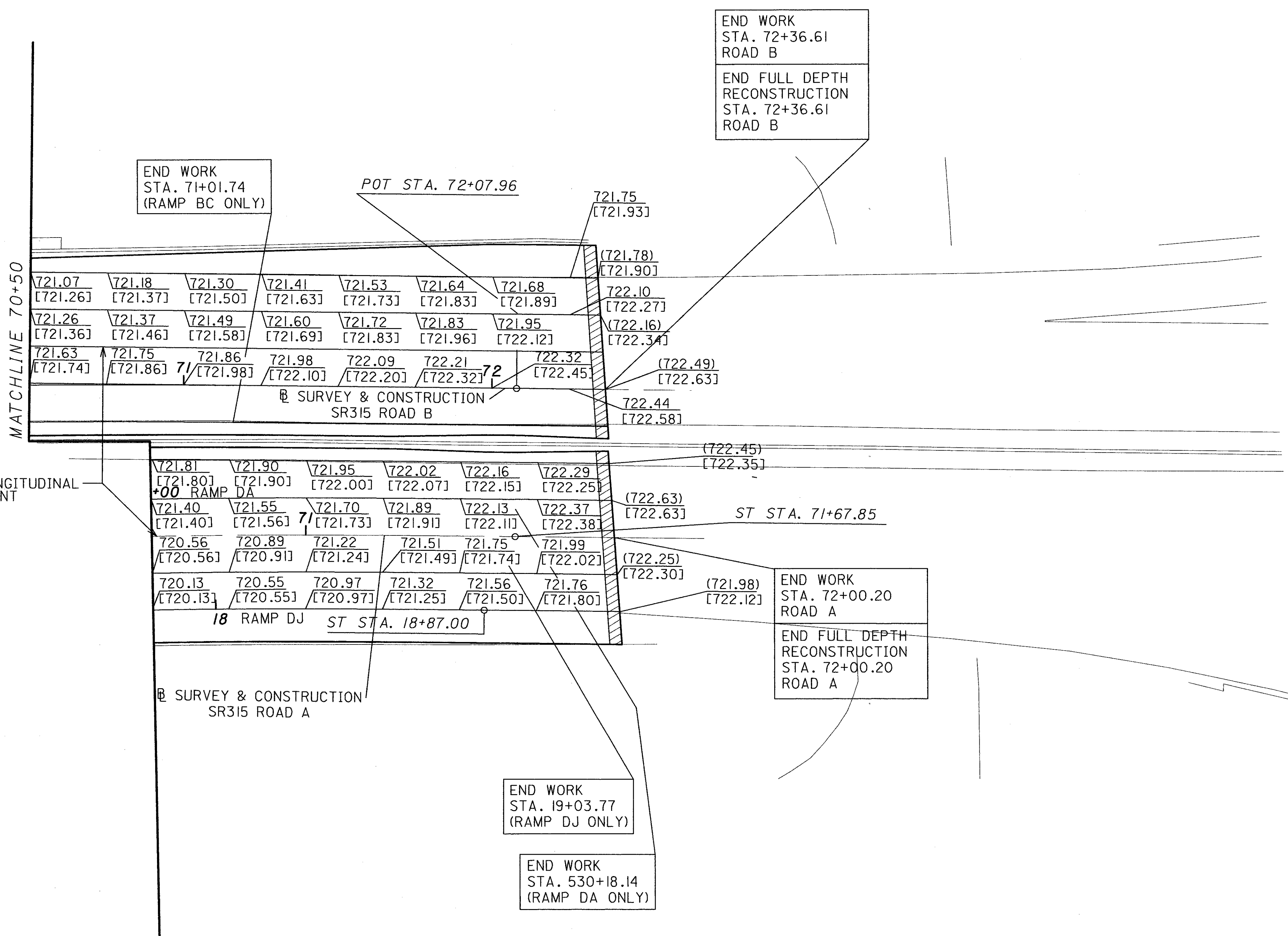




CALCULATED  
BBB  
CHECKED  
LJS

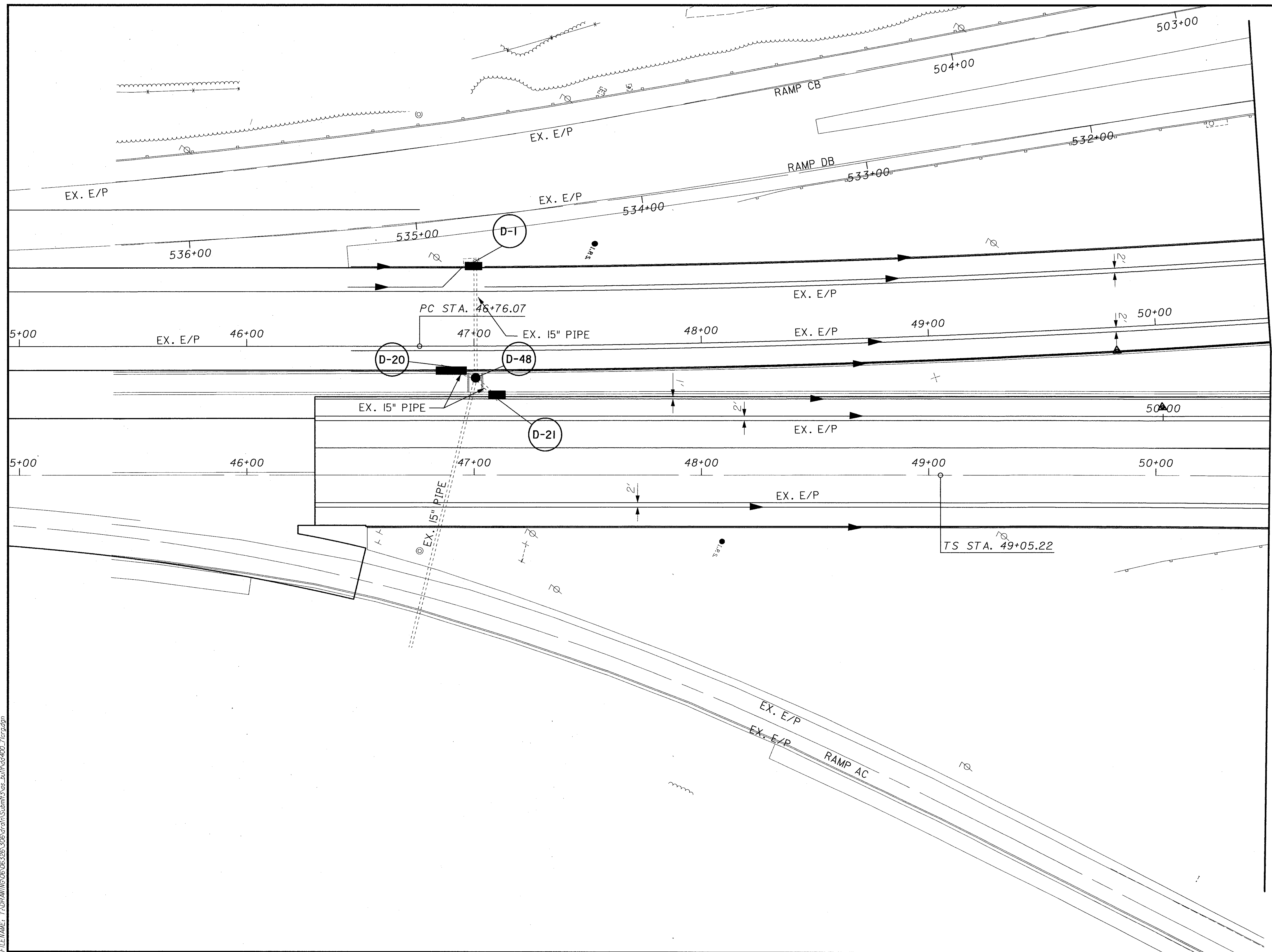
**PAVEMENT DETAILS**  
S.R. 315 - STA. 70+50.00 TO STA. 72+00.12

FRA-171-14.39,  
FRA-315-0.00 (A/B)



DATE: 05/06/2002 09:02 AM  
FILENAME: I:\WORKING\050525\SR315\SR315A\SR315A.DWG

DATE: 05/16/2002 08:31:51 AM  
 FILENAME: T:\DRAWING\06\06326\306\civil\Submit\306\_bull\400\_71ra.dgn



MATCHLINE 50+50

CALCULATED  
 BBB  
 CHECKED  
 LJS

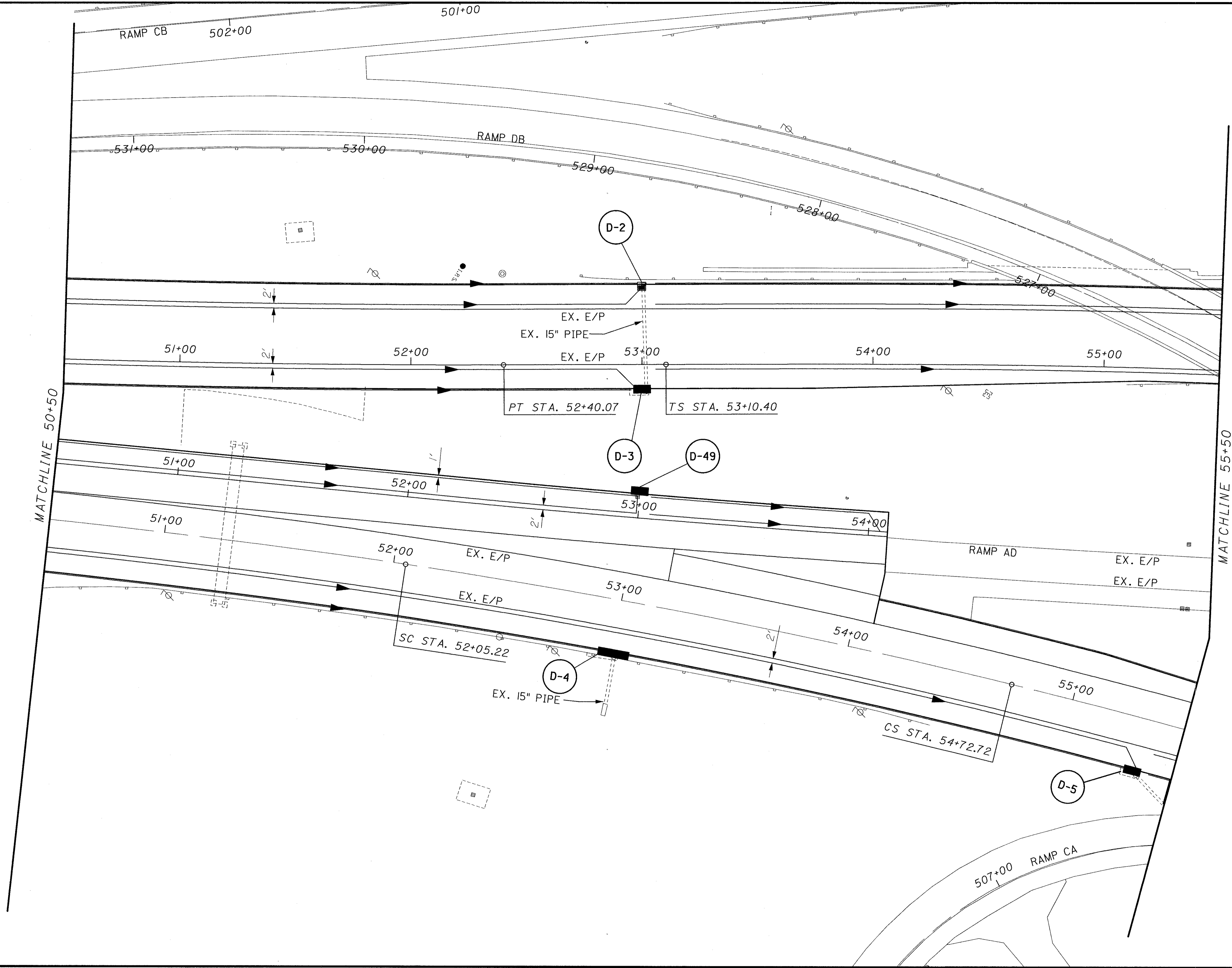
0 20 40  
 HORIZONTAL  
 SCALE IN FEET

N

**DRAINAGE DETAIL**  
 S.R. 315 - STA. 45+50.00 TO STA. 50+50.00

FRA-171-14.39,  
 FRA-315-0.00 (A/B)

DATE: 05/16/2002 08:33:06 AM  
FILENAME: T:\DRAWING\0506326306\drain\Submit3\as\_bullh\4d1\_71c.dgn



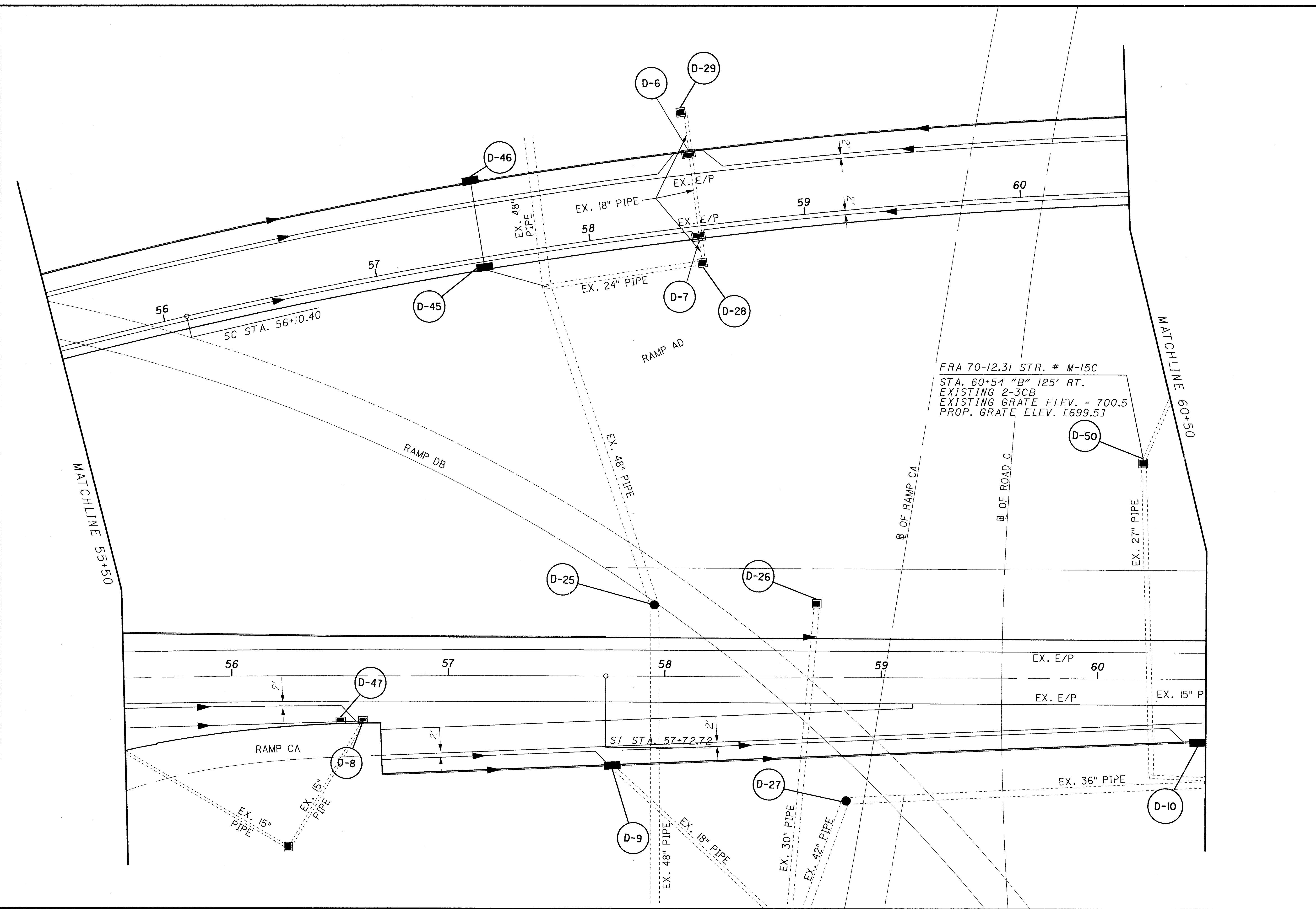
CALCULATED  
BBB  
CHECKED  
LJS

HORIZONTAL  
SCALE IN FEET

**DRAINAGE DETAIL**  
**S.R. 315 - STA. 50+50.00 TO STA. 55+50.00**

**FRA-171-14.39,**  
**FRA-315-0.00 (A/B)**

DATE: 05/16/2002 08:34:12 AM  
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CALCULATED  
 BBB  
 CHECKED  
 LJS

0 20 40  
 HORIZONTAL  
 SCALE IN FEET

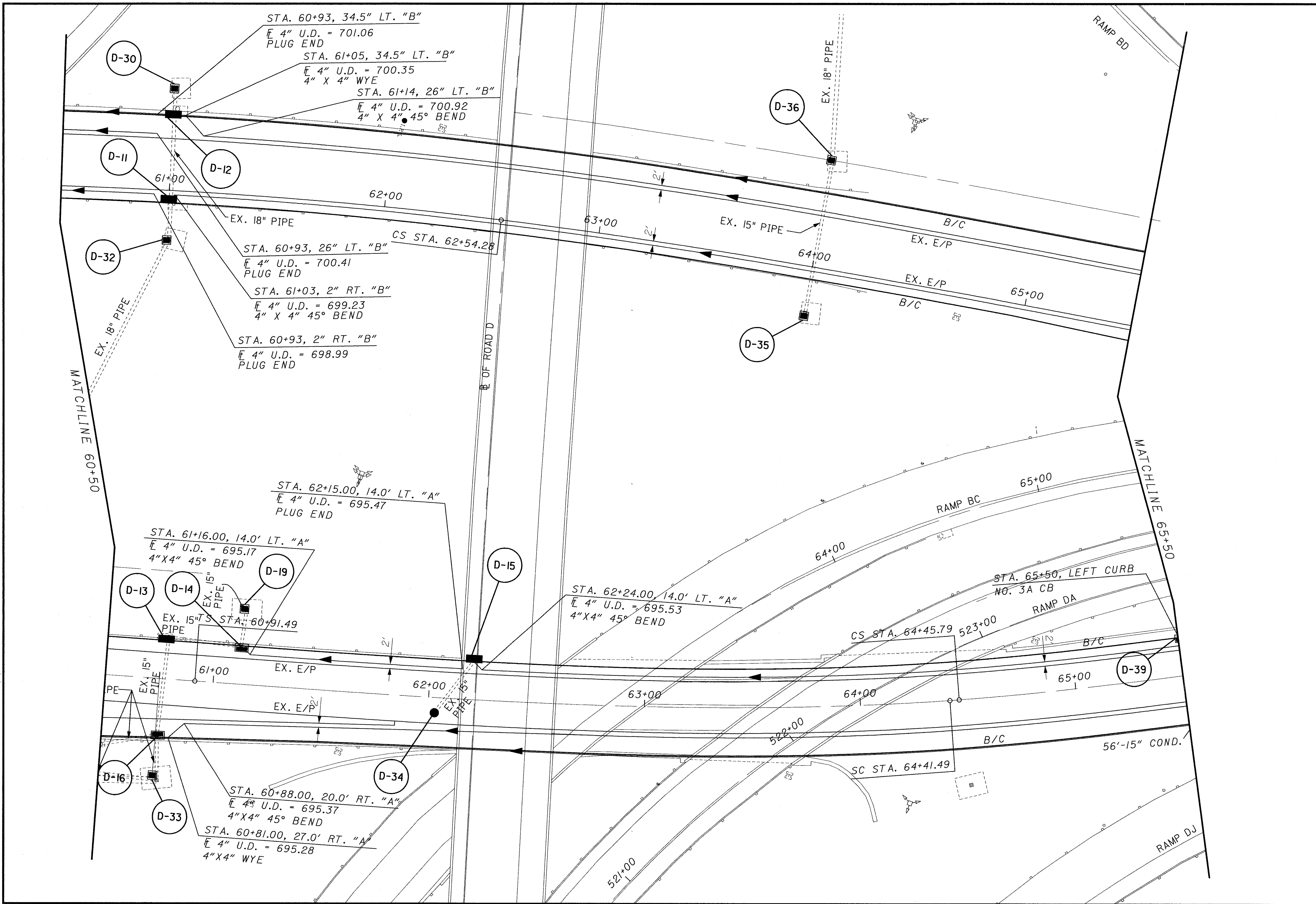
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**DRAINAGE DETAIL**  
**S.R. 315 - STA. 55+50.00 TO STA. 60+50.00**

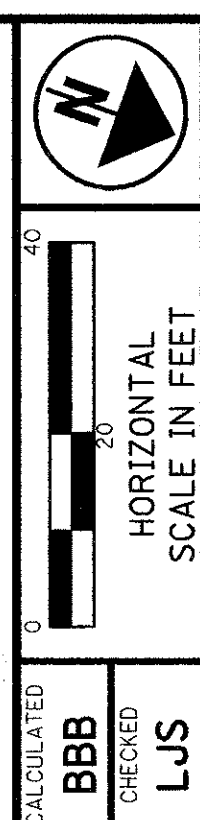
FRA-171-14.39,  
 FRA-315-0.00 (A/B)

55  
 89

DATE: 05/16/2002 08:35:11 AM  
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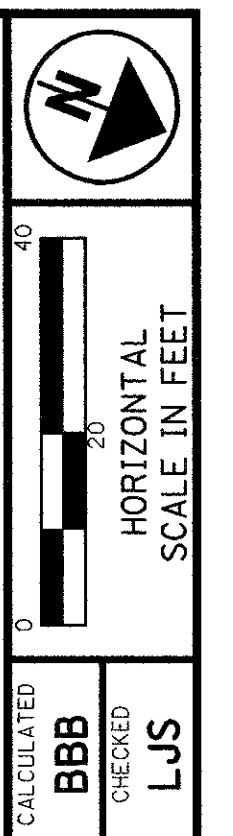
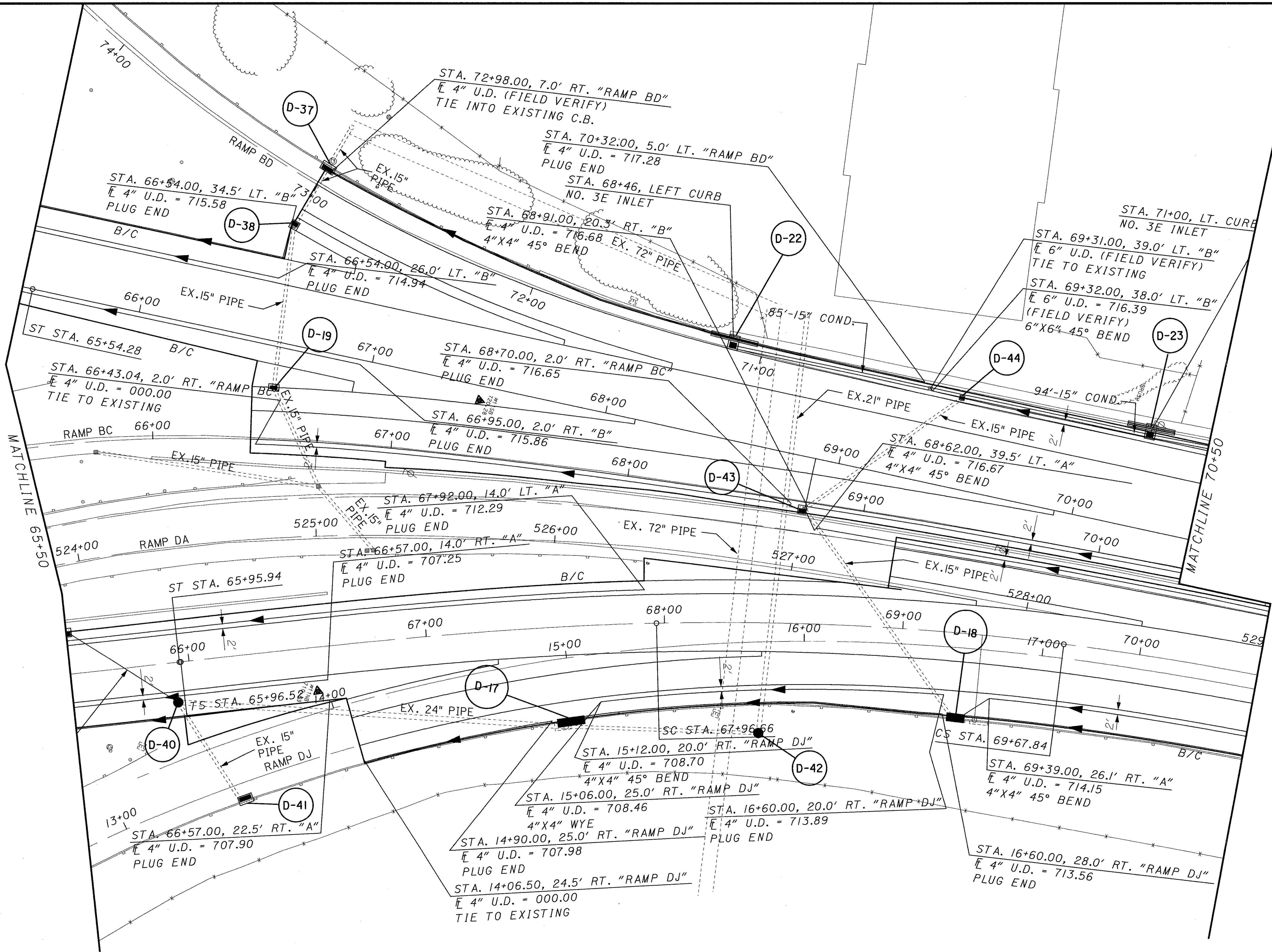
CALCULATED  
 CHECKED  
 LJS



**DRAINAGE DETAIL**  
**S.R. 315 - STA. 60+50.00 TO STA. 65+50.00**

**FRA -171-14.39,**  
**FRA -315-0.00 (A/B)**

DATE: 05/16/2002 09:36:06 AM  
FILENAME: T:\DRA\WINGS\06\06\326\306\dra\315\06\04\Z\06.dwg



CALCULATED: BBB  
CHECKED: LUS

**DRAINAGE DETAIL**  
**S.R. 315 - STA. 65+50.00 TO STA. 70+50.00**

FRA-171-14.39,  
FRA-315-0.00 (A/B)

57  
89

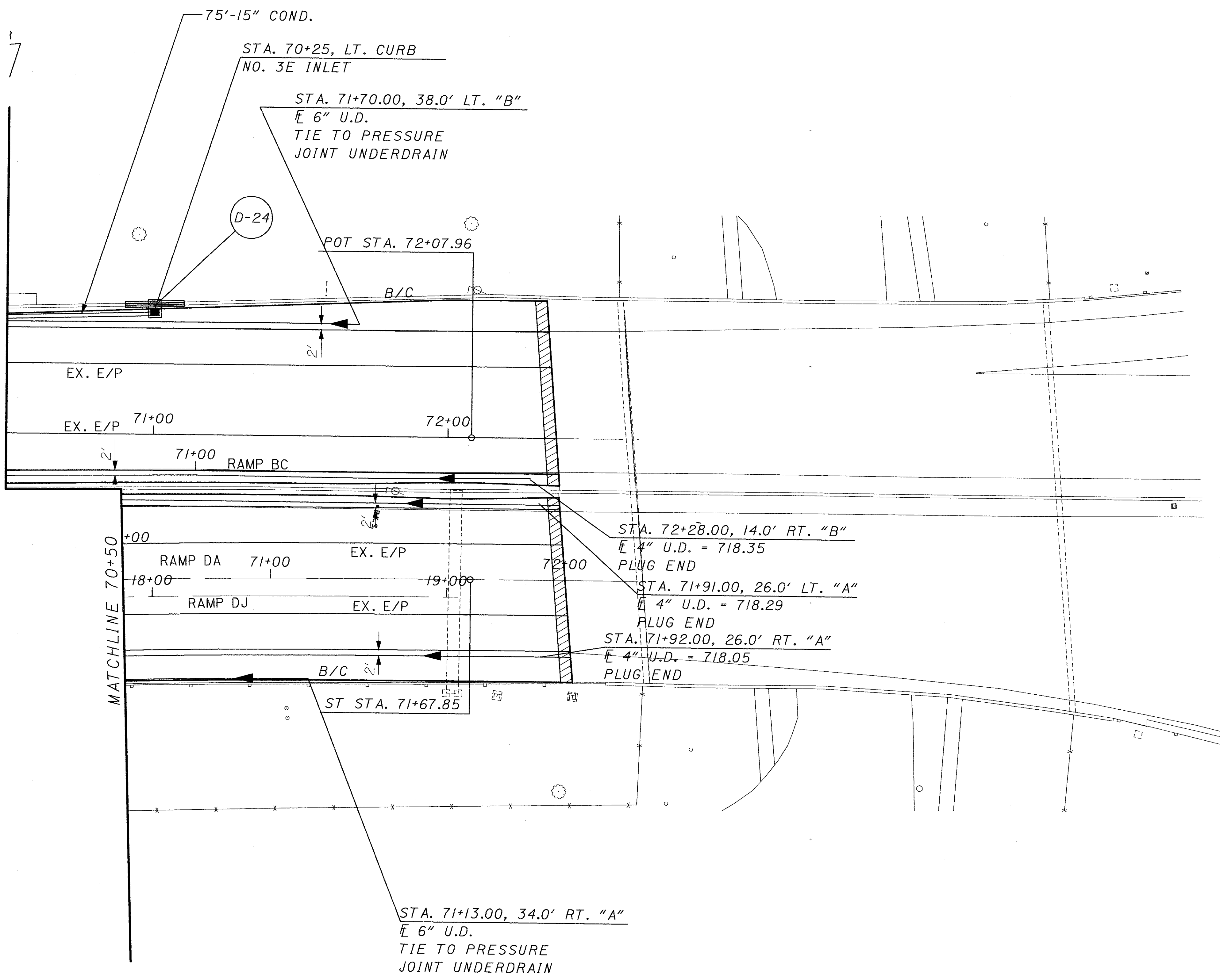
AS BUILT, REPLACED DRAINAGE STRUCTURES			
ROAD	STATION	SIDE	STRUCTURE
ROAD A	53+00.00	RT.	I-2A
ROAD A	55+32.00	RT.	I-2A
ROAD A	56+60.00	RT.	CB-6
ROAD A	57+74.00	RT.	I-2A
ROAD A	53+00.00	RT.	CB-3
ROAD A	60+45.00	RT.	I-2A
ROAD A	60+77.77	LT.	I-2A
ROAD A	61+12.00	LT.	CB-3
ROAD A	62+20.00	LT.	I-2A
ROAD A	67+55.00	RT.	I-2A
ROAD A	16+65.00	RT.	I-2A
ROAD B	47+00.00	LT.	I-2A
ROAD B	53+00.00	LT.	CB-3A
ROAD B	53+00.00	RT.	I-2A
ROAD B	58+50.00	LT.	CB-3
ROAD B	58+50.00	RT.	CB-3
ROAD B	61+00.00	LT.	I-2A
ROAD B	61+00.00	RT.	I-2A

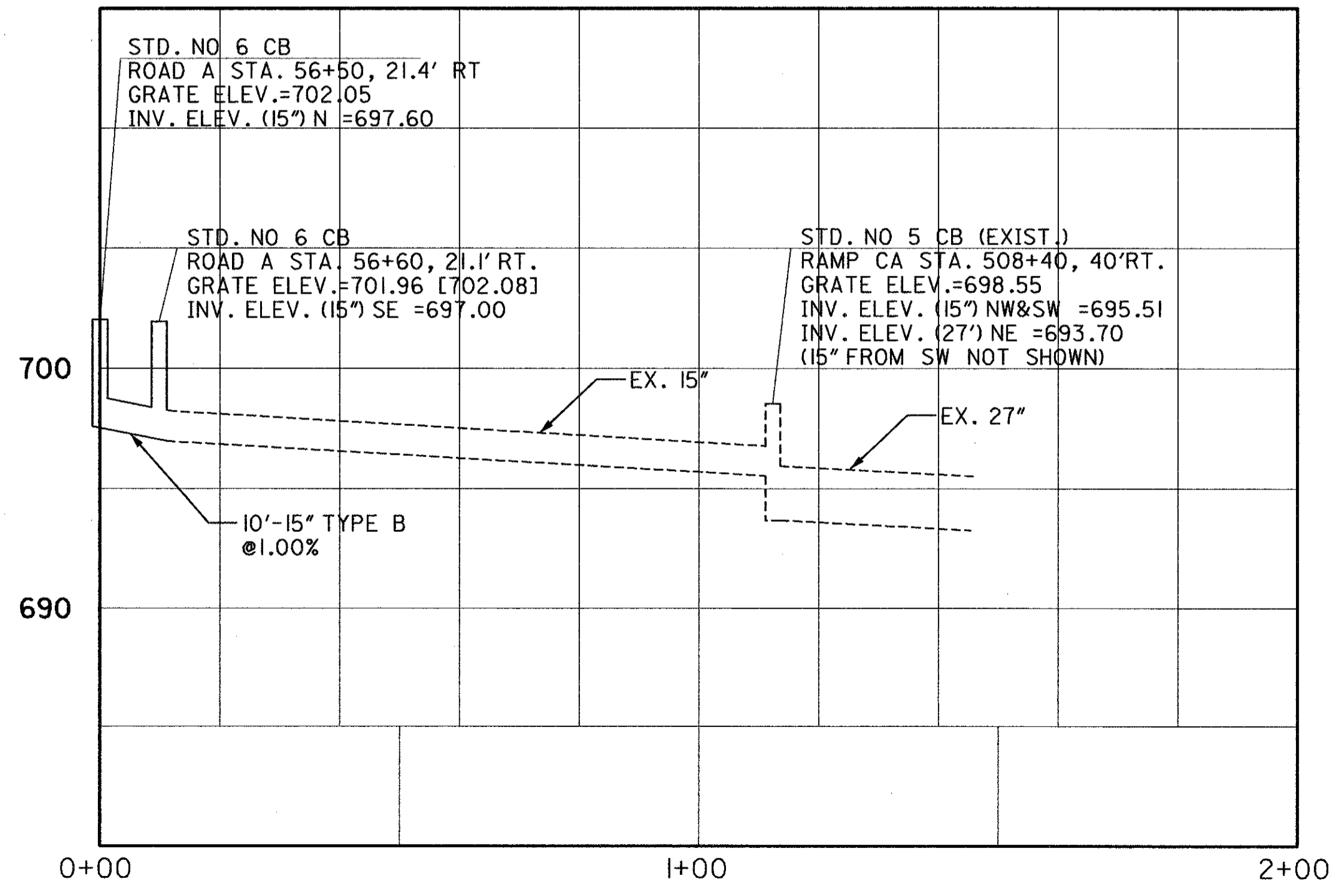
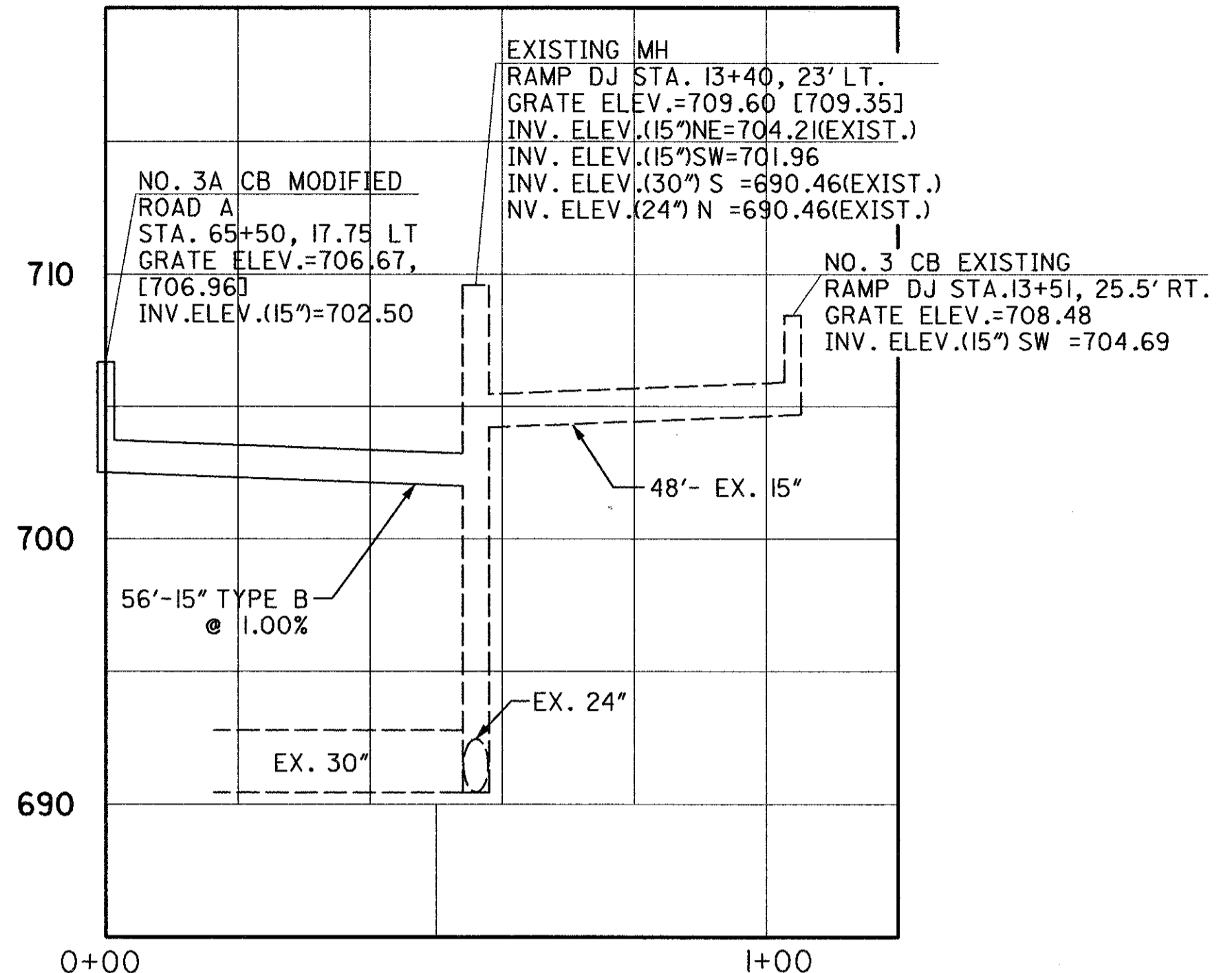
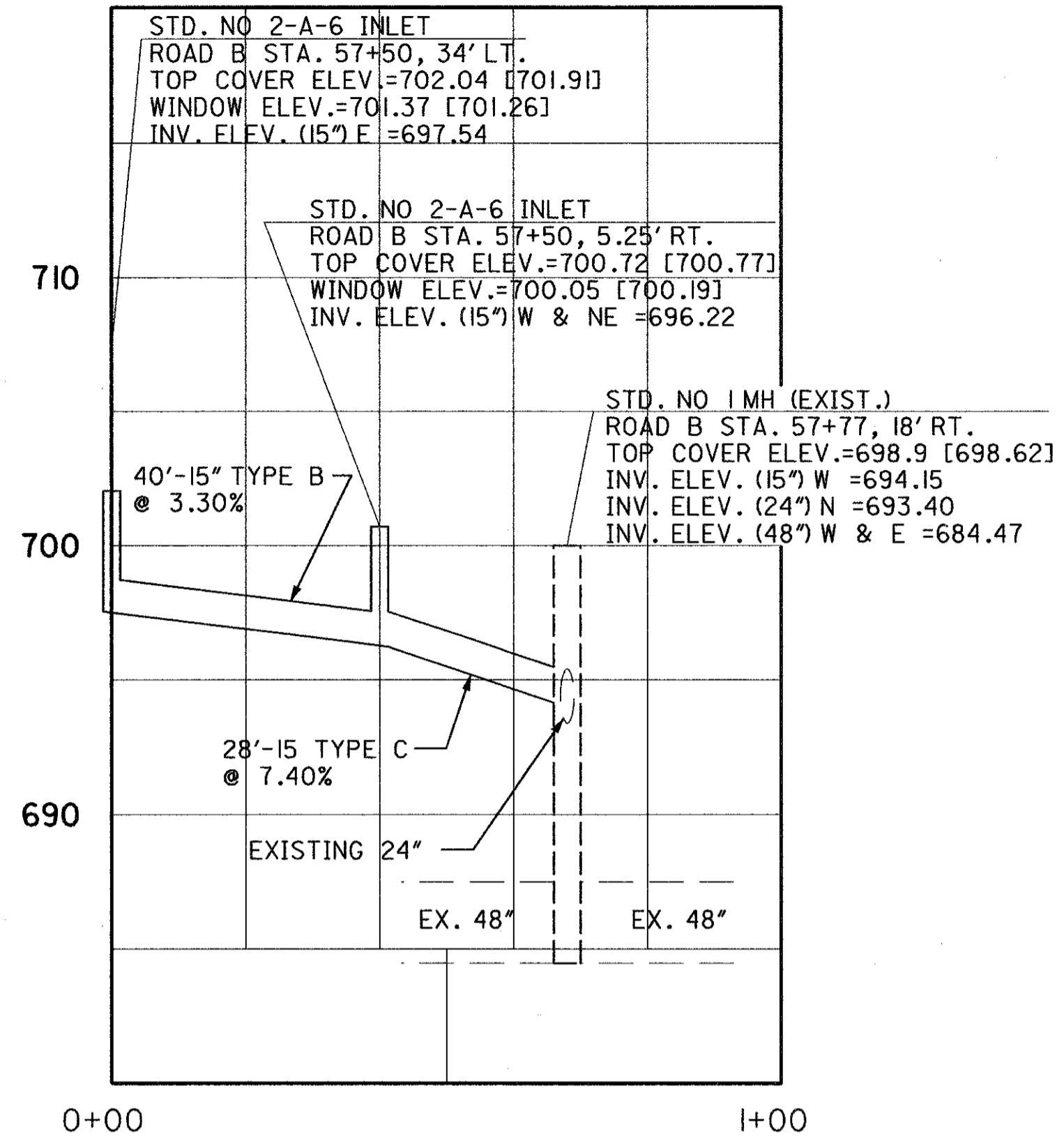
  
 CALCULATED: BBB
   
 CHECKED: LJS

**DRAINAGE DETAIL**  
**S.R. 315 - STA. 70+50.00 TO STA. 72+00.12**

**FRA-171-14.39,**  
**FRA-315-0.00 (A/B)**



DATE: 05/16/2002 08:07:08 AM  
 FILENAME: F:\DRAWING\315\315-000.dwg



0	20	40
HORIZONTAL SCALE IN FEET		
CALCULATED	DAS	CHECKED
		LJS

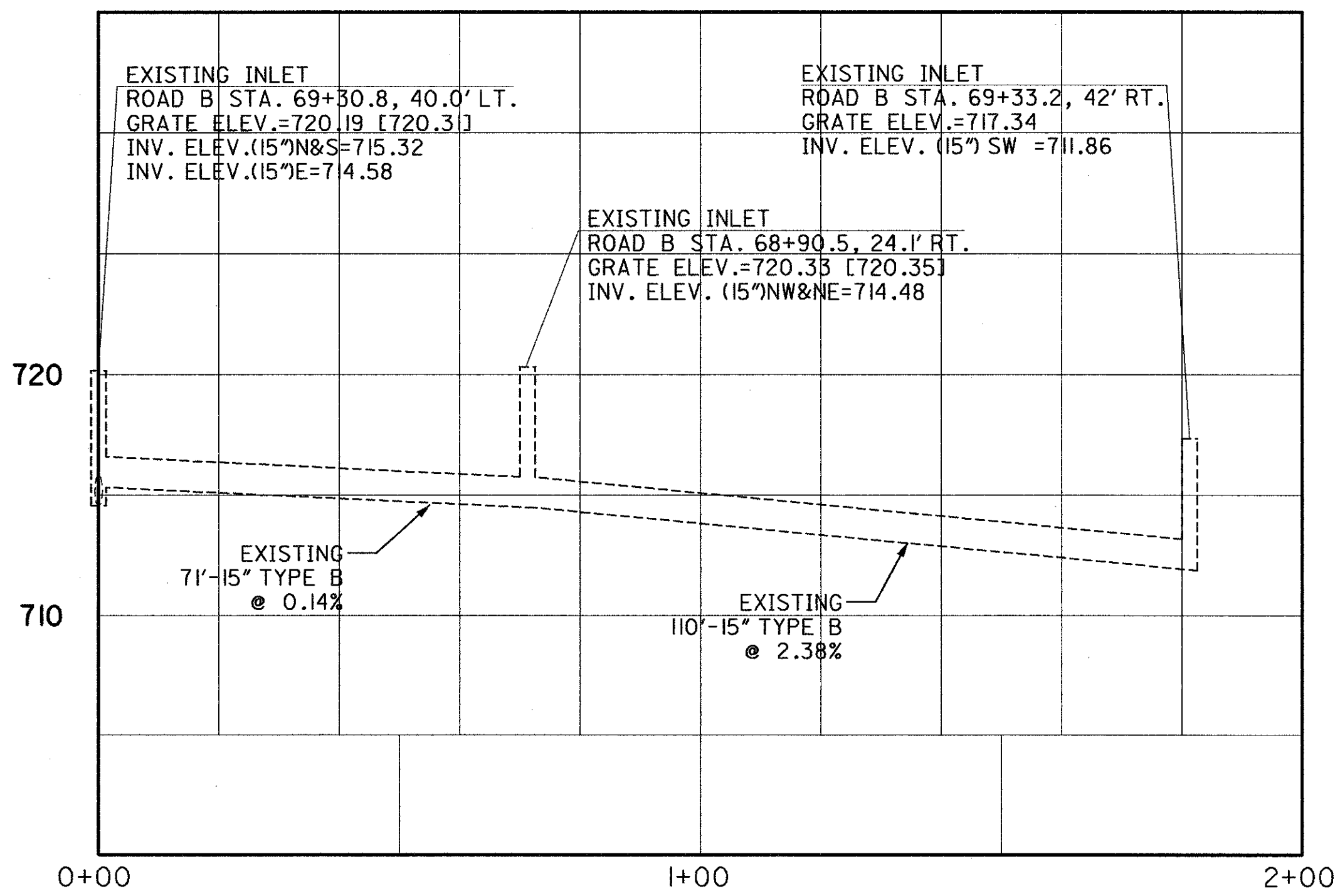
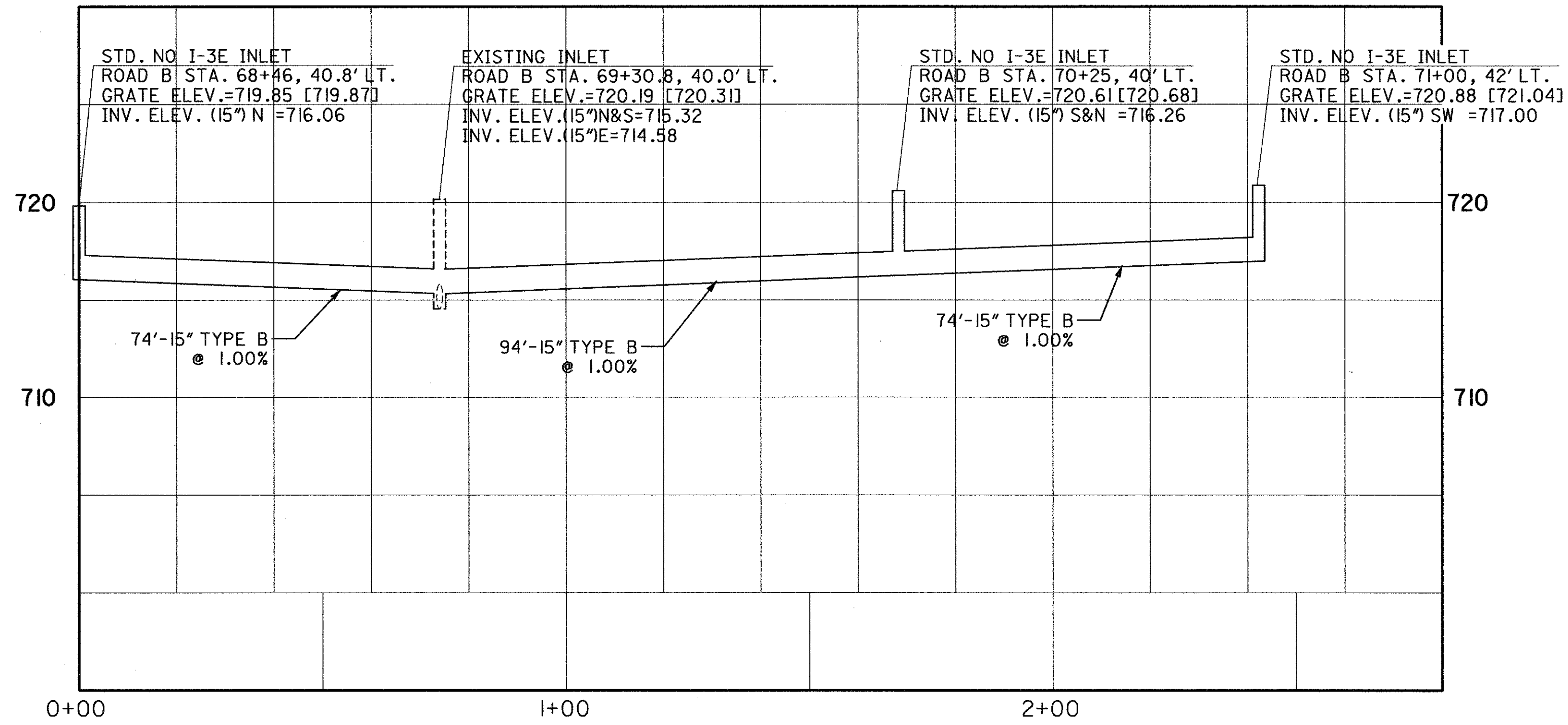
**STORM PROFILES**

**FRA-171-14.93,**  
**FRA-315-0.00 (A / B)**

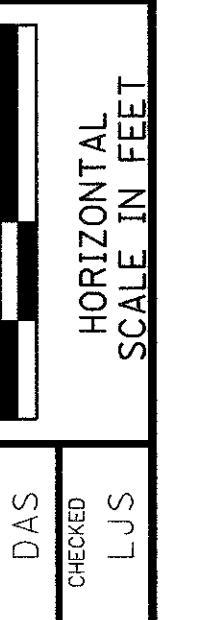
[XXX.XX] = SURVEYED ELEVATION

DATE: 05/16/2002 08:36:36 AM  
 FILENAME: T:\DRM\1106\0606326306\drain\Submit3\as\_bull\horof\1leadgn





[XXX.XX] = SURVEYED ELEVATION



CALCULATED	DAS
CHECKED	LJS

**STORM PROFILES**

**FRA-171-14.93,  
FRA-315-0.00 (A / B)**

DATE: 05/16/2002 08:38:57 AM  
FILENAME: T:\DRW\110506\06328306\drain\306.dwg

TOTAL FROM SHEET NUMBER

														65	74	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SHT. NO.	CALCULATED KVM	CHECKED GSC
																				SIGNING			
															210	630	03100	210	LIN. FT.	GROUND MOUNTED SUPPORT, NO. 3 POST			
															196	630	06400	196	LIN. FT.	GROUND MOUNTED SUPPORT, S4x7.7 BEAM			
															39	630	06500	39	LIN. FT.	GROUND MOUNTED SUPPORT, W6x9 BEAM			
															29	630	08100	29	LIN. FT.	ONE WAY SUPPORT, NO. 4 POST			
															14	630	09000	14	EACH	BREAKAWAY BEAM CONNECTIONS			
															14	630	09100	14	EACH	SURFACE PREPARATION EXISTING SUPPORT SECTION	68		
															14	630	09104	14	EACH	COATING, EPOXY PRIME COAT SUPPORT SECTION	68		
															14	630	09106	14	EACH	COATING, EPOXY INTERMEDIATE COAT SUPPORT SECTION	69		
															14	630	09108	14	EACH	COATING, URETHANE TOP COAT SUPPORT SECTION	69		
															57	630	75000	57	EACH	SIGN ATTACHMENT ASSEMBLY			
															32	630	75106	32	EACH	LUMINAIRE SUPPORT ASSEMBLY, TYPE TC-31.21			
															2	630	79500	2	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED			
															248.9	630	80102	248.9	SQ. FT.	SIGN, FLAT SHEET, TYPE G			
															2789	630	80204	2789	SQ. FT.	SIGN, EXTRU SHEET, TYPE G			
															16	630	84500	16	EACH	GROUND MOUNTED BEAM SUPPORT FOUNDATION			
															26	630	84900	26	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL			
															2	630	85400	2	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL			
															24	630	86002	24	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL			
															8	630	86102	8	EACH	REMOVAL OF GROUND MOUNTED BEAM SUPPORT AND DISPOSAL			
															1	630	86310	1	EACH	REMOVAL OF STRUCTURE MOUNTED SIGN AND DISPOSAL			
															15	630	87400	15	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL			
															7	631	84001	7	EACH	SIGN SERVICE, AS PER PLAN	69		
															15	631	84301	15	EACH	SIGN WIRED, AS PER PLAN	69		
															1	631	84401	1	EACH	SIGN WIRED, OVERPASS STRUCTURE MOUNTED, AS PER PLAN	69		
															24	631	87202	24	EACH	BALLAST, TYPE CMRI-175-480, INTEGRAL			
															6	631	87302	6	EACH	BALLAST, TYPE CMRI-250-480, INTEGRAL			
															24	631	89200	24	EACH	MERCURY VAPOR LUMINAIRE, TYPE TC-31.21, WITH 175 WATT LAMP			
															6	631	89300	6	EACH	MERCURY VAPOR LUMINAIRE, TYPE TC-31.21, WITH 250 WATT LAMP			
																				PAVEMENT MARKING			
															316	621	00200	316	EACH	RAISED PAVEMENT MARKER, INSTALLATION ONLY	61		
															4.652	644	00100	4.652	MILE	EDGE LINE			
															3.917	644	00200	3.917	MILE	LANE LINE			
															4566	644	00400	4566	LIN. FT.	CHANNELIZING LINE			
															31	644	00500	31	LIN. FT.	STOP LINE			
															264	644	00600	264	LIN. FT.	CROSSWALK LINE			
															1191	644	00700	1191	LIN. FT.	TRANSVERSE LINE			
															4	644	01300	4	EACH	LANE ARROW			
															1	644	01410	1	EACH	WORD ON PAVEMENT, 96"			

TRAFFIC CONTROL GENERAL SUMMARY

FRA-71-14.39,  
FRA-315-0.00

TOTAL FROM SHEET NUMBER

TOTAL FROM SHEET NUMBER															ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SHT. NO.	
															87						
															118	625	00500	118	EACH	LIGHTING CONNECTOR KIT, TYPE II	
															288	625	01500	288	EACH	CABLE SPLICING KIT	
															480	625	24320	480	LIN. FT.	1/2 INCH DUCT CABLE WITH THREE-#4 AWG 5000 VOLT CABLES	
															54	625	26260	54	EACH	LUMINAIRE, HIGH MAST TYPE V, 400W HPS.	
															1	625	27500	1	EACH	LUMINAIRE, UNDERPASS, 100W	
															460	625	29000	460	LIN. FT.	TRENCH	
															2	625	30700	2	EACH	PULL BOX, 713.08, 18 INCH	
															8	625	37101	8	EACH	SERVICE TO UNDERPASS LIGHTING, AS PER PLAN	77
															1	625	37100	1	EACH	SERVICE TO UNDERPASS LIGHTING	77
															3	625	98000	3	EACH	LIGHTING, MISC.: REVISE CONTROL CENTER	77
															87	625	98000	87	EACH	LIGHTING, MISC.: CLEAN, INSPECT, AND REPAIR LUMINAIRE	77
															70	625	98000	70	EACH	LIGHTING, MISC.: CLEAN, INSPECT, AND REPAIR PULL BOX	77
															3	625	98000	3	EACH	LIGHTING, MISC.: MODIFY LIGHT TOWER	
															21025	625	98100	21025	LIN. FT.	LIGHTING, MISC.: UPGRADE CIRCUIT FROM 2/C TO 3/C, #4 AWG, 5000 VOLT	77
															1275	625	98100	1275	LIN. FT.	LIGHTING, MISC.: UPGRADE CIRCUIT FROM 2/C TO 3/C, #2 AWG, 5000 VOLT	77

LIGHTING GENERAL SUMMARY

FRA-71-14.39,  
FRA-315-0.00

ITEM 621. RAISED PAVEMENT MARKER, INSTALLATION ONLY

THE DEPARTMENT WILL SUPPLY THE RPM CASTINGS WITH THE ONE WAY WHITE, YELLOW/YELLOW, WHITE/RED, AND YELLOW/RED RETRO-REFLECTORS INSTALLED IN THE CASTINGS FOR ITEM 621 RAISED PAVEMENT MARKER, INSTALLATION ONLY. THE CONTRACTOR SHALL FURNISH ALL OTHER MATERIAL AND LABOR TO COMPLETE THE ITEM.

THE CONTRACTOR WILL BE INFORMED AT THE PRE-CONSTRUCTION CONFERENCE AS TO THE LOCATION IN COLUMBUS OF THE DEPARTMENT SUPPLIED RPM MATERIALS. WHEN SPECIFIED, ADDITIONAL RPM MATERIALS WILL BE STORED WITHIN THE DISTRICT FOR USE ON THIS PROJECT. THE CONTRACTOR SHALL PICK UP DEPARTMENT SUPPLIED MATERIALS AT THE SPECIFIED LOCATION(S) FOR TRANSPORT TO THE WORK SITE OR TO THE CONTRACTOR'S STORAGE FACILITY. AN AUTHORIZATION FOR PICK-UP FORM IS GIVEN IN SUPPLEMENTAL SPECIFICATION I082 DATED JANUARY 11, 2000. THE CONTRACTOR SHALL NOTIFY THE DISTRICT AND/OR THE PARTIES LISTED ON THE AUTHORIZATION FORM IN WRITING AT LEAST 5 WORKING DAYS PRIOR TO THE PICK-UP OF DEPARTMENT SUPPLIED MATERIALS. THE MATERIALS SHALL BE STORED WITHOUT DAMAGE OR CONTAMINATION WITH FOREIGN MATTER. A DEDUCTION IN THE AMOUNT OF THE ACTUAL COST TO THE DEPARTMENT SHALL BE MADE FOR THE MATERIALS DAMAGED BY THE CONTRACTOR OR FOR CASTINGS RECEIVED BY THE CONTRACTOR WHICH WERE NOT INSTALLED OR WERE NOT RETURNED TO THE DEPARTMENT.

LOADING OF MATERIAL SUPPLIED BY THE DEPARTMENT AT THE RECYCLER'S WAREHOUSE SHALL BE DONE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION I082.

ALL CASTINGS SHALL BE PLACED THE SAME WORKING DAY THAT THE RPM SLOTS ARE CUT INTO THE PAVEMENT.

CONVERSION OF METRIC STANDARD DRAWINGS

THE METRIC STANDARD DRAWINGS REFERENCED IN THIS PLAN SHALL BE CONVERTED TO ENGLISH UNITS USING THE SI (METRIC) TO ENGLISH CONVERSION FACTORS PROVIDED IN SECTION I09.011 OF THE 1997 CONSTRUCTION AND MATERIALS SPECIFICATIONS. THE APPENDIX OF ASTM E 380 SHALL BE UTILIZED FOR ANY ADDITIONAL CONVERSION FACTORS REQUIRED. CONVERSIONS SHALL BE APPROPRIATELY PRECISE AND SHALL REFLECT STANDARD INDUSTRY ENGLISH VALUES WHERE SUITABLE.

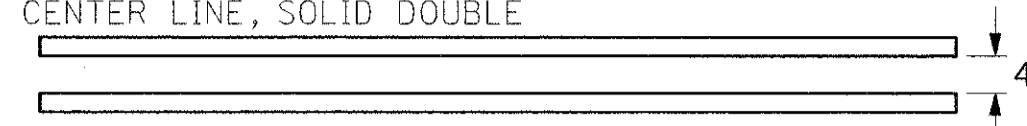

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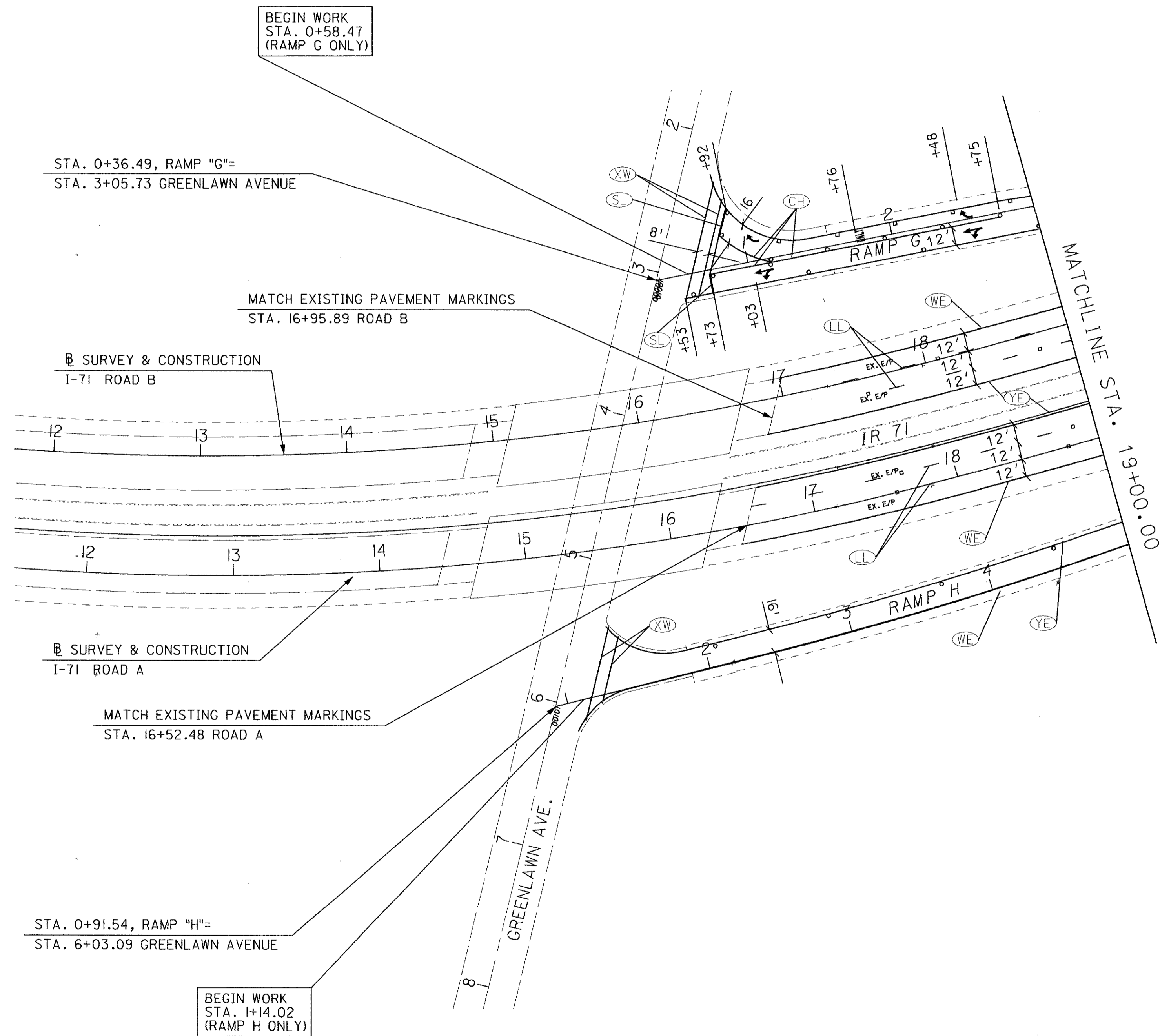
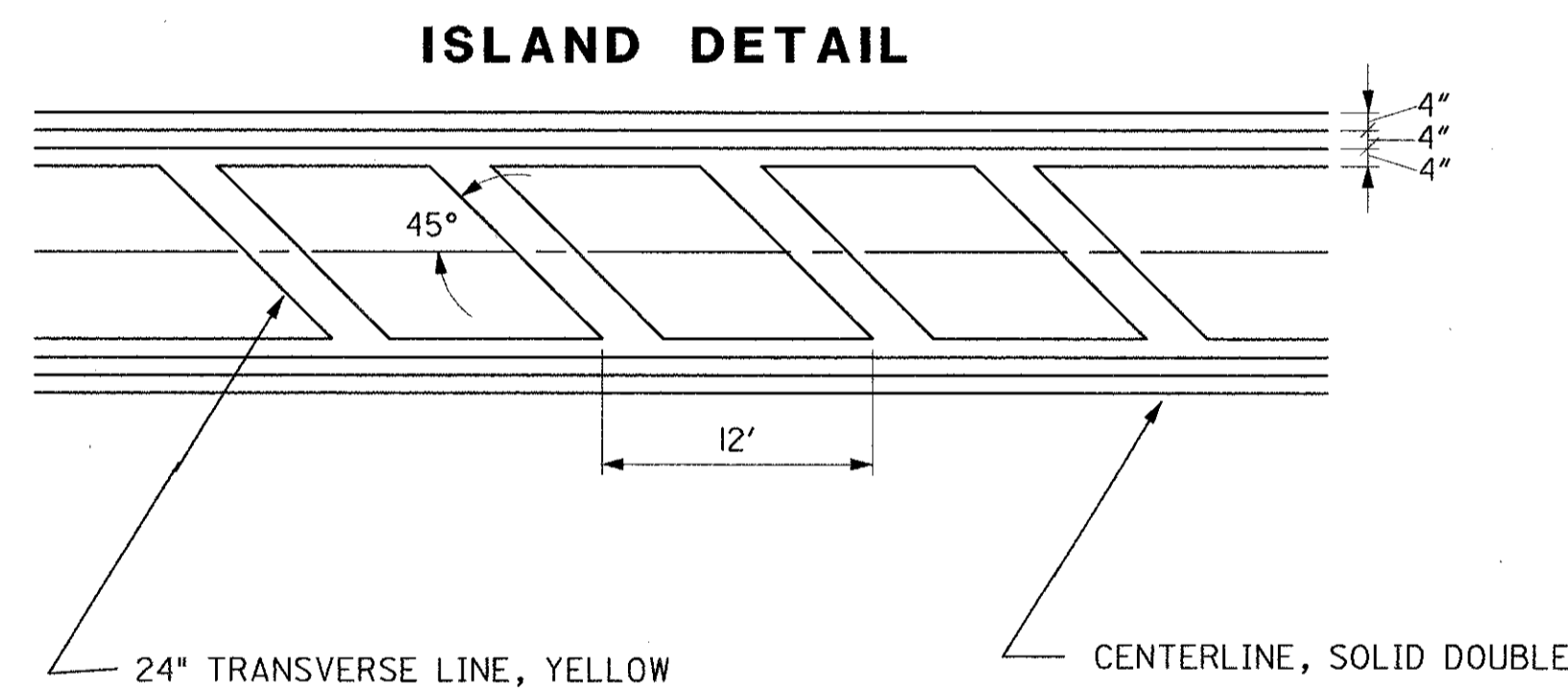
**PAVEMENT MARKING GENERAL NOTES**

**FRA-71-14.39**  
**FRA-315-0.00**

61  
89

ITEM	ODOT LINE SPECIFICATIONS
WE	EDGE LINE, WHITE
YE	EDGE LINE, YELLOW
LL	LANE LINE, 4"
WD	DOTTED LINE, 4" WHITE
YD	DOTTED LINE, 4" YELLOW
DY	CENTER LINE, SOLID DOUBLE 
BC	CENTER LINE, DASHED SINGLE
CL	CENTER LINE, DASHED & SOLID DOUBLE 
CH	CHANNELIZING LINE
SL	STOP LINE
XW	CROSSWALK LINE
WT	TRANSVERSE LINE, WHITE
YT	TRANSVERSE LINE, YELLOW
WI	ISLAND MARKING, WHITE
YI	ISLAND MARKING, YELLOW
A	LANE ARROW
W	WORD ON PAVEMENT, 72" ONLY
S	SCHOOL SYMBOL MARKING, 72"

RAISED PAVEMENT MARKER (RPM) LEGEND
□ RPM, WHITE, (ONE WAY)
○ RPM, WHITE/RED, (TWO WAY)
■ RPM, YELLOW, (ONE WAY)
● RPM, YELLOW/YELLOW, (TWO WAY)



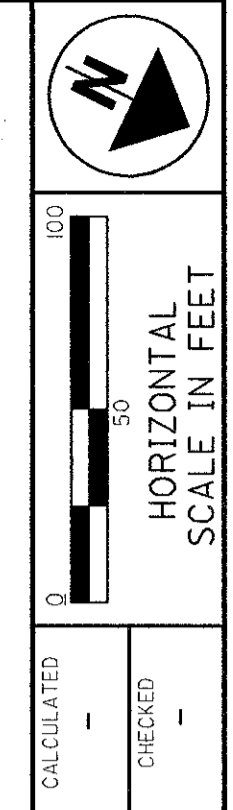
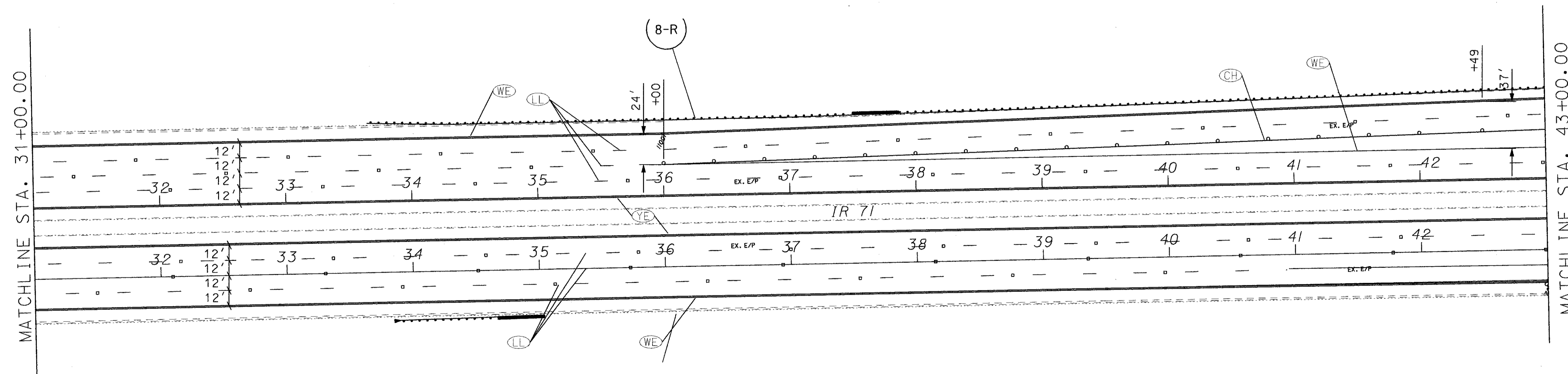
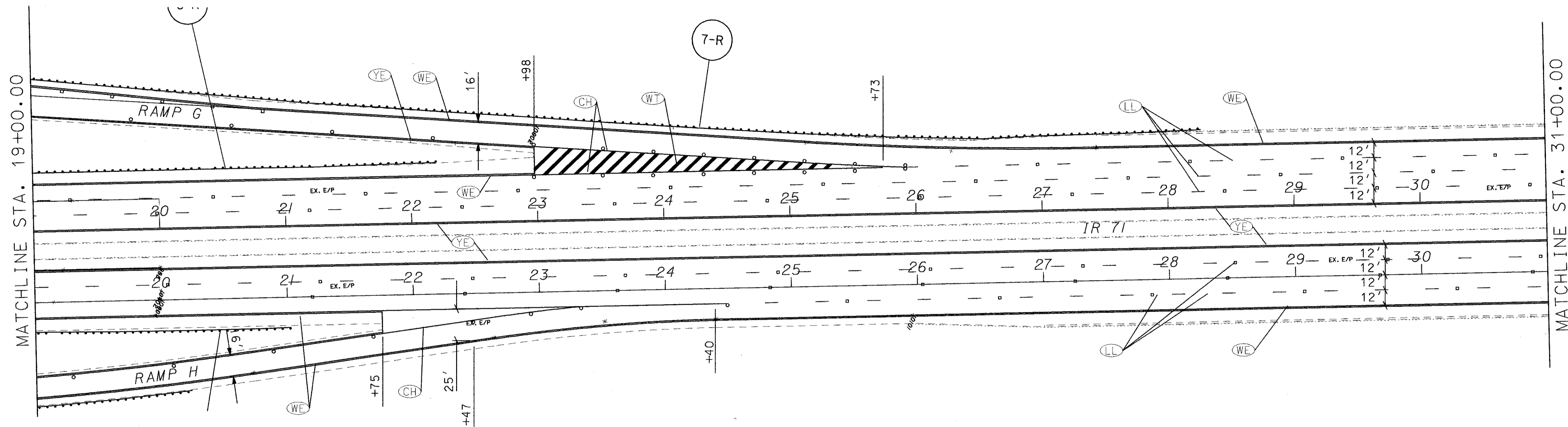
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**PAVEMENT MARKING PLAN**  
IR 71 STA. 16+62.75 TO STA. 19+00.00

FRA-171-14.39,  
FRA-315-0.00

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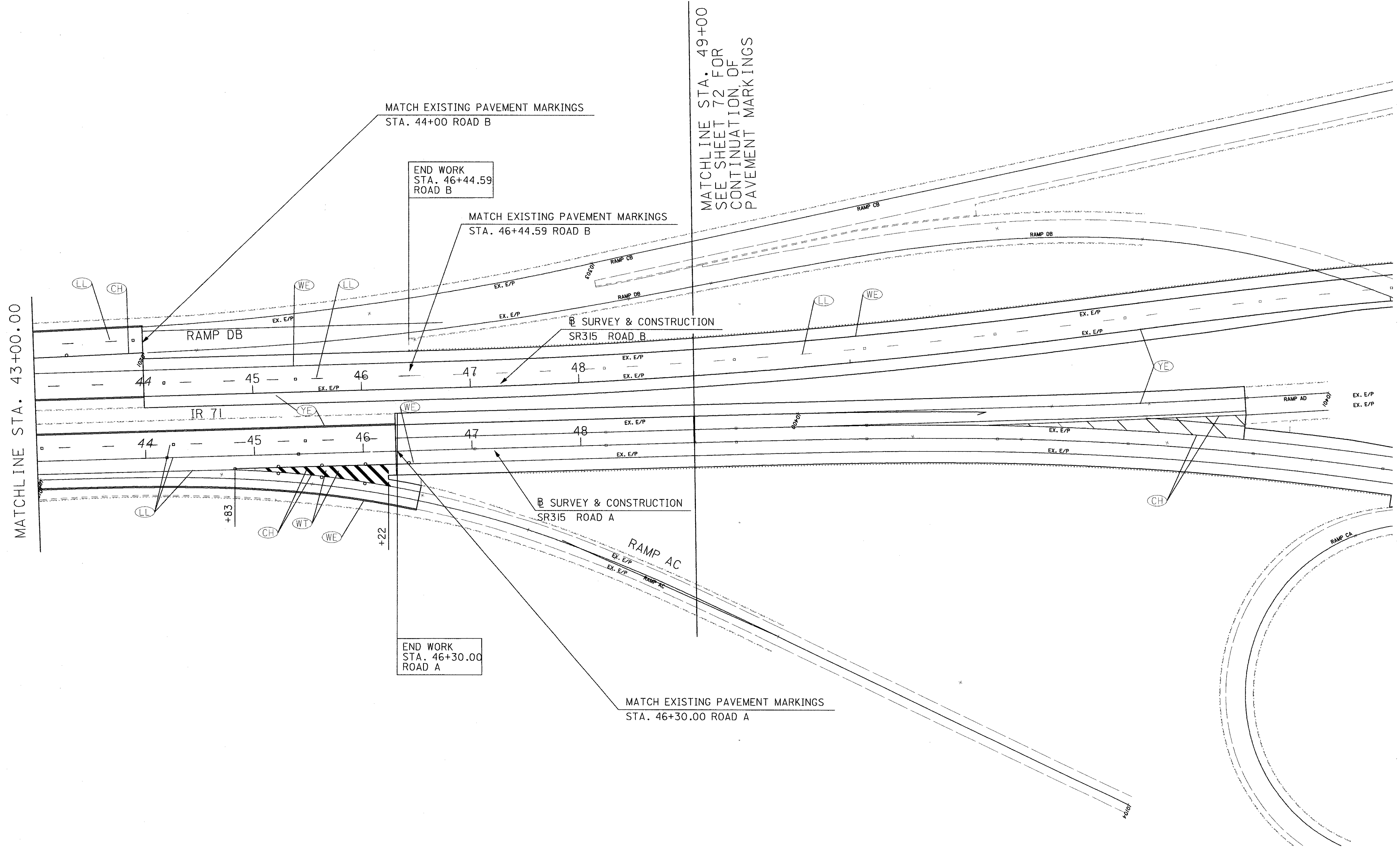
PAVEMENT MARKING PLAN  
 IR 71 STA. 19+00.00 TO STA. 43+00.00

FRA-171-14.39,  
 FRA-315-0.00

FOR PAVEMENT MARKING LEGEND  
 SEE SHEET 62

63  
 89

DATE: 05/14/02 02:55:44 PM  
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CALCULATED  
CHECKED

HORIZONTAL SCALE IN FEET

**FRA-171-14.39,  
FRA-315-0.00**

**IR71, SR315 STA. 43+00.00 TO STA. 46+52.35**

64  
89

**FOR PAVEMENT MARKING LEGEND  
SEE SHEET 62**

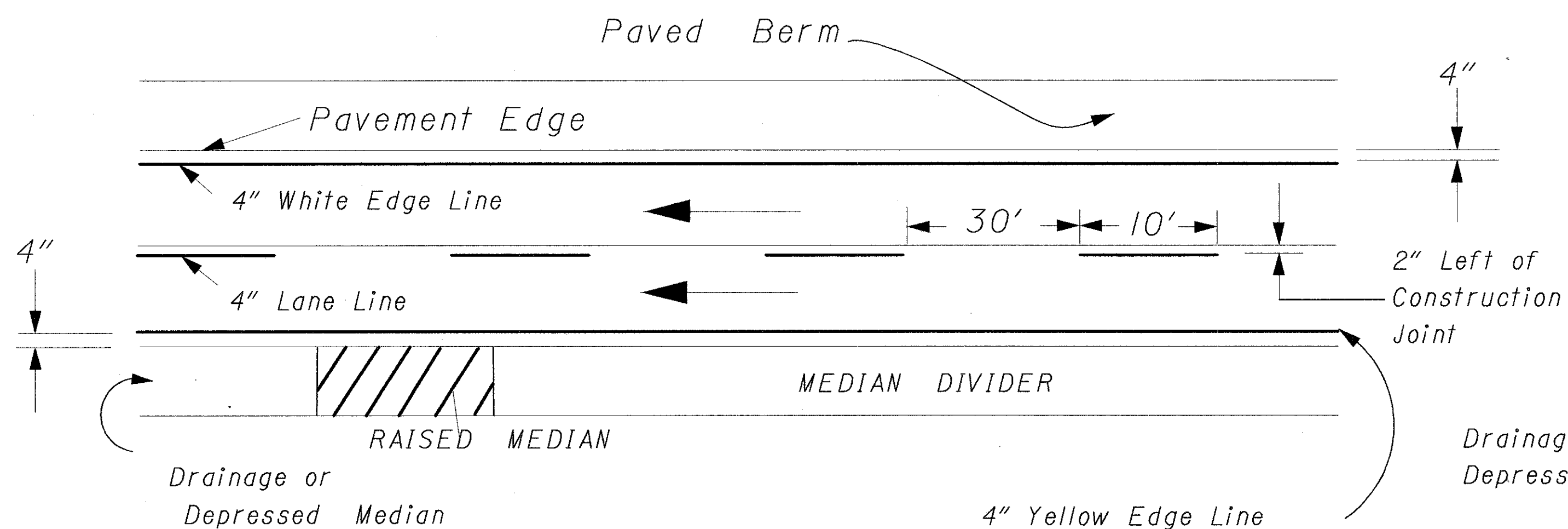
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SHEET NO.	COLUMN A		SIDE	644	644	644	644	644	644	644	644	644	644	621	621	621	
	FROM	TO		WE	YE	LL	CH	WT	YT	SL	XW	A	W	RAISED PAVEMENT MARKERS	RAISED PAVEMENT MARKERS	RAISED PAVEMENT MARKERS	
	L.F.	L.F.		L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	EA	EA.	W	W/R	Y/R	
	<b>RAMP G</b>																
62	0+53	2+75	LT/RT										90				
	0+61		LT/RT										70				
	0+73		RT														
	0+92		LT/RT					27							13		
	0+73	2+75	RT				202							6			
62	0+92	1+20	LT/RT				40							2			
	1+03		LT/RT									2					
	1+76		LT										1				
	1+48		LT/RT									2					
	0+75	2+98	RT														
	0+90	2+98	LT				223									3	
62	0+90	2+98	LT				208								6		
	<b>RAMP H</b>																
62	1+18		LT/RT									60					
	1+27											44					
	1+30	4+97	RT				367										
62	1+45	4+97	LT					352								4	
	<b>MAINLINE</b>																
62	16+46	19+00	RT				254										
	16+52	19+00	RT										2				
	16+57	19+00	RT										2				
62	16+63	19+00	RT					237									
	16+86	19+00										214					
	16+91	19+00											2				
	16+95	19+00											2				
62	17+02	19+00						198									
	<b>RAMP G</b>																
63	2+98	6+98	LT/RT	400	400									5		5	
	<b>RAMP H</b>																
63	4+97	7+75	LT/RT	278	278											4	
	<b>MAINLINE</b>																
63	19+00	31+00	RT	1200	1200	2400								20			
	21+75	24+40	RT									265		5			
	21+75	23+10	RT	135													
63	24+40	31+00	RT									660		5			
	19+00	31+00	LT	1200	1200	2400								20			
	22+98	25+73	LT									550	326	15			
63	25+73	31+00	LT											4			
	31+00	43+00	RT	1200	1200	3600								30			
	31+00	43+00	LT	1200	1200	2400								20			
	31+00	36+00	LT									500		4			
63	36+00	43+00	LT	700								700				17	
	<b>TOTAL COLUMN A</b>			7132	6712	13392	1784	326	-	31	264	4	1	-	111	56	16

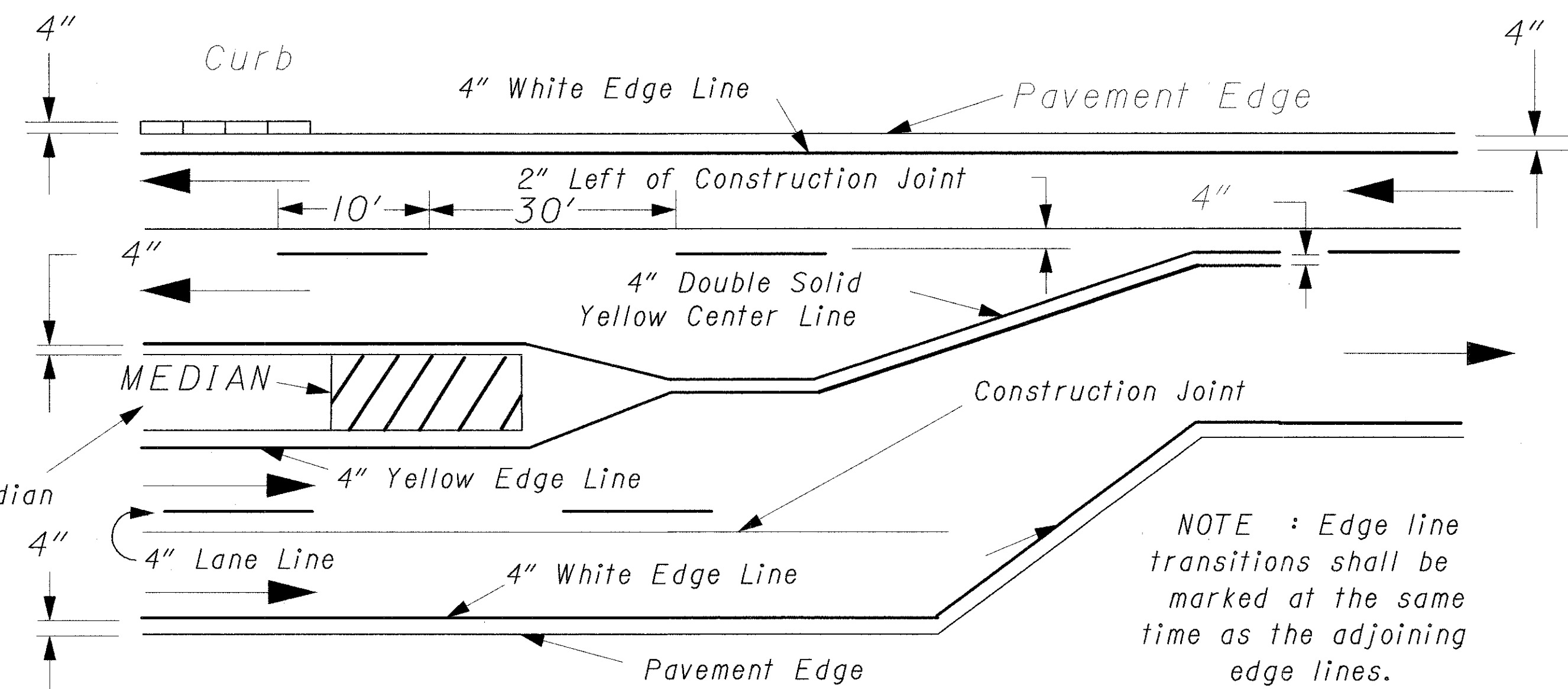
SHEET NO.	COLUMN B		SIDE	644	644	644	644	644	644	644	644	644	644	621	621	621	
	FROM	TO		WE	YE	LL	CH	WT	YT	SL	XW	A	W	RAISED PAVEMENT MARKERS	RAISED PAVEMENT MARKERS	RAISED PAVEMENT MARKERS	
	L.F.	L.F.		L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	EA	EA.	W	W/R	Y/R	
	<b>MAINLINE</b>																
64	43+00	67+75	RT	2153													
	43+00	72+00	RT		2578												
	43+00	72+00	RT			2578									22		
	43+00	51+73	RT			551									4		
	43+00	44+83	RT			183									1		
	44+83	46+22	RT				278	155								7	
	46+22	46+30	RT	8													
	43+00	44+00		100		100									1		
	43+00	72+37	LT	2593													
	43+00	72+37	LT		2593												
	43+00	72+37	LT			2593									22		
	51+73	54+09	RT				472	250								12	
72	55+50	58+30	RT				280									8	
72	56+68	58+30	RT	162													
72	58+30	59+60	RT			130									2		
73	66+43	69+55	LT				590	300								15	
	67+90	71+00	RT				572									16	
	68+02	72+37	LT			435									3		
	68+60	72+00	RT			340									2		
	69+55	72+37	LT			282									2		
73	71+00	72+00	RT			100											
	<b>RAMP BD</b>																
73	71+55	73+00	LT				296	160								8	
	<b>RAMP DJ</b>																
73	14+06	16+00	RT					194								7	
73	14+06	72+00	RT	530													
	<b>TOTAL COLUMN B</b>			5546	5171	7292	2782	865	-	-	-	-	-	-	59	73	1
	<b>FROM COLUMN A</b>			7132	6712	13392	1784	326	-	31	264	4	1	-	111	56	16
	<b>TOTAL (FT)/(EACH)</b>			12678	11883	20684	4566	1191	-	31	264	4	1	-	170	129	17
	<b>COMBINED TOTAL (FT)/(EACH)</b>			24561		20684	4566	1191	-	31	264	4	1	-			316
	<b>TOTAL (MILES)</b>			4.652		3.917											



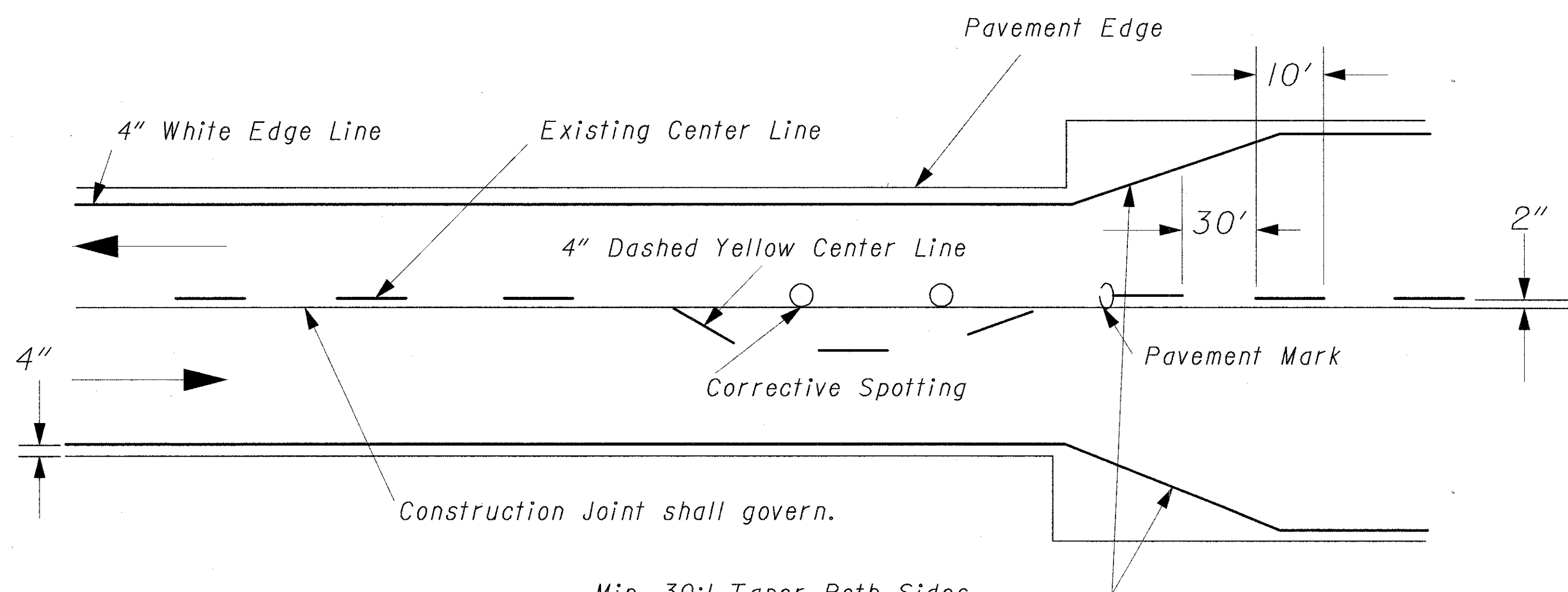
# FREEWAY & EXPRESSWAY MAINLINE MARKINGS



# MULTILANE DIVIDED & UNDIVIDED HIGHWAY MARKINGS



# TWO LANE MARKINGS



Min. 30:1 Taper Both Sides  
At all locations where pavement widths change by construction plans.

### NOTES :

1. The distance from the pavement edge to the nearside edge of the edgeline may be increased with the approval of the engineer in order to maintain uniform lane width.
2. See TC-72.20M for entrance and exit ramp markings.
3. The cycle length for dashed lines shall be 10 feet plus or minus 6". The minimum length of dash shall be sufficiently long to maintain a 3:1 ratio between length of gap and length of dash.

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PAVEMENT MARKING TYPICAL DETAILS

FRA-171-14.39,  
FRA-315-0.00

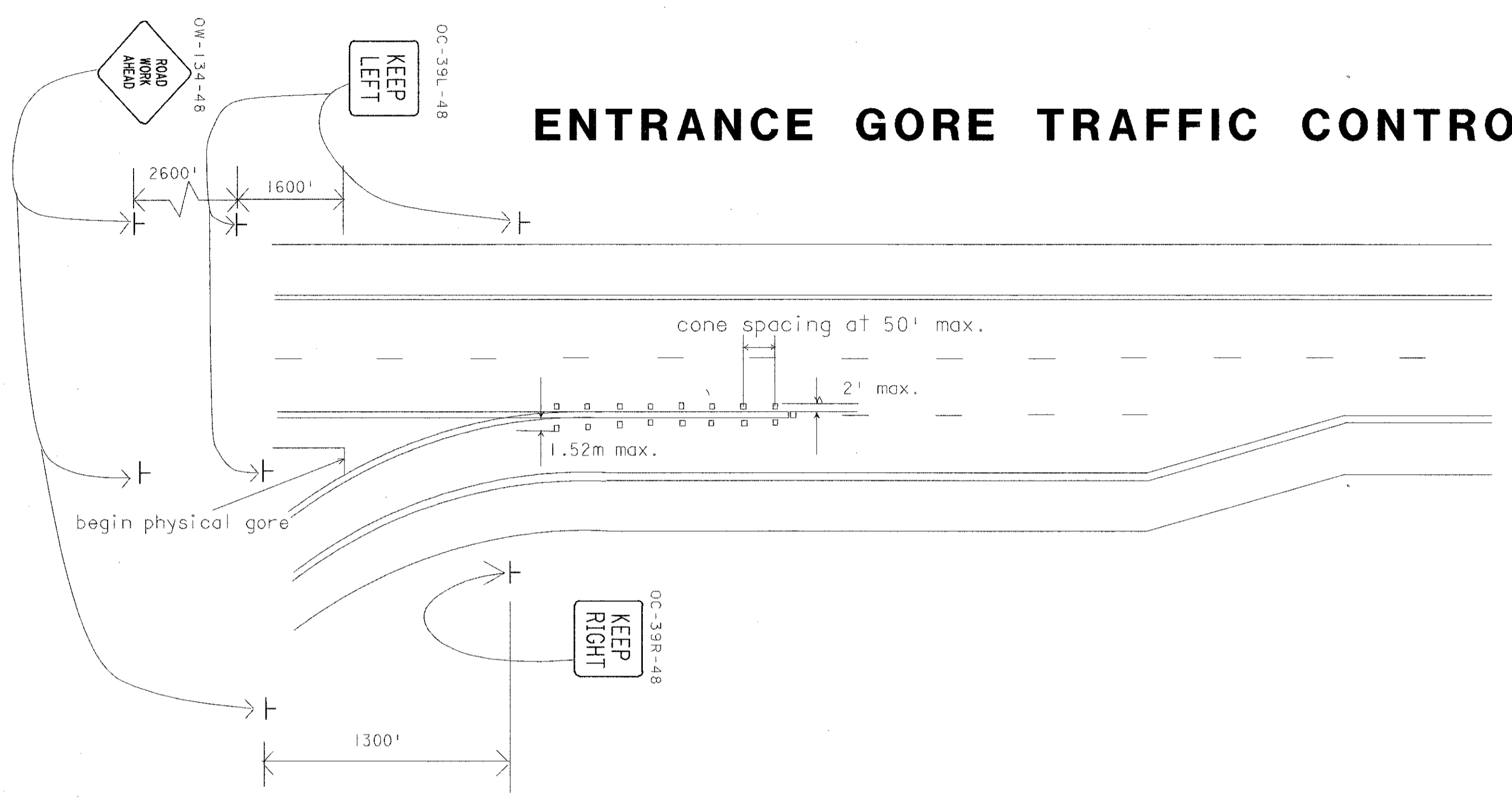
CALCULATED	-
CHECKED	-

PAVEMENT MARKING DETAILS  
TYPICAL

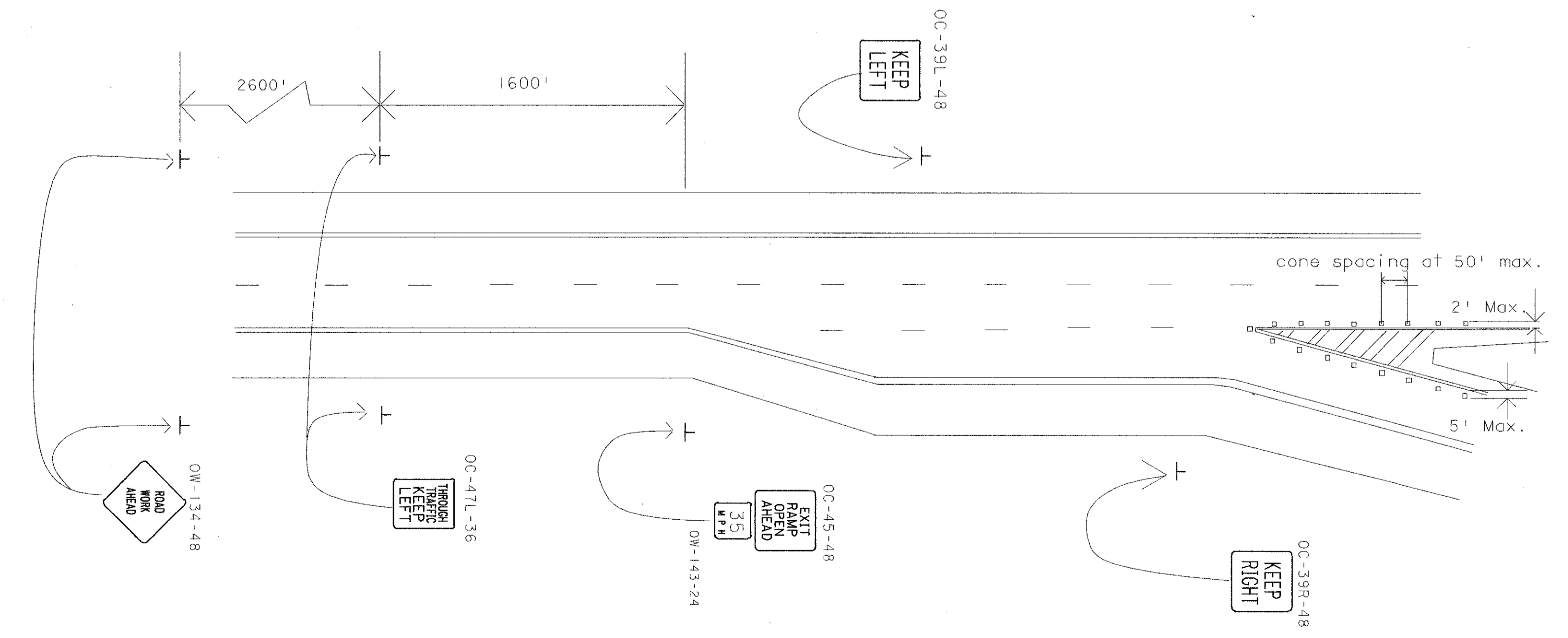
FRA-171-14.39,  
FRA-315-0.00

67  
89

### ENTRANCE GORE TRAFFIC CONTROL



### EXIT GORE TRAFFIC CONTROL



### GENERAL NOTES

1. The spacing between signs shown on this detail may be adjusted (increased or decreased) with the approval of the Engineer to position them no closer than 200 feet to existing signs which must remain in use.
2. At an isolated entrance gore area, a flashing arrow panel conforming to requirements in section 7G-8 of the OMUTCD and SCD MT-35.10 may be substituted for the advance OC-39 signs.
3. At an interchange where both exits and entrances are marked with traffic control in place at the same time, the OW-134 sign on the entrance ramp is not required.
4. Type A flashing warning lights are required on the OC-47L signs for all night closures.

PROTECTIVE COATING OF OVERHEAD  
SIGN SUPPORT SECTIONS

GENERAL

OVERHEAD SIGN SUPPORTS CAN BE SEPARATED INTO MAJOR SECTIONS SUCH AS END FRAMES, TRUSSES, VERTICAL POLES AND CANTILEVER ARMS. FOR THE IMPLEMENTATION OF THIS WORK ITEM IT WILL BE BENEFICIAL TO REFER TO THE MAJOR SECTIONS OF THE OVERHEAD SIGN SUPPORTS RATHER THAN THE WHOLE SUPPORT. MORE SPECIFIC INSTRUCTIONS AND FLEXIBILITY CAN BE GIVEN BASED UPON THE UNIT OF MEASURE AND PAYMENT PER MAJOR SUPPORT SECTION.

THE PROTECTIVE COATING OF OVERHEAD SIGN SUPPORT SECTIONS SHALL BE A FOUR PART PROCESS TO INCLUDE SURFACE PREPARATION FOLLOWED BY A THREE COAT PAINT SYSTEM. THIS THREE COAT SYSTEM SHALL CONSIST OF AN EPOXY PRIME COAT, AN EPOXY INTERMEDIATE COAT AND A URETHANE TOP COAT, WITH EACH COAT BEING A DIFFERENT COLOR. FOR AN EXPLANATION OF THE MATERIALS TO BE USED SEE NOTE ENTITLED "COATING SYSTEM." THE PURPOSE OF THIS COATING IS TO PROVIDE PROTECTION FOR NEW (UNWEATHERED) AND OLDER (WEATHERED) GALVANIZED STEEL SUPPORT SECTIONS FROM CORROSIVE ELEMENTS IN THE ATMOSPHERE. COATING AND SURFACE PREPARATION OF NEW GALVANIZED SUPPORT SECTIONS SHOULD BE DONE BY THE MANUFACTURER.

IN THE FIELD, THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO COMPLY WITH POLLUTION LAWS, RULES OR REGULATIONS OF FEDERAL, STATE OR LOCAL AGENCIES. THE COATING MATERIALS SPECIFIED FOR THE WORK CAN BE HAZARDOUS TO THE HEALTH OF THE APPLICATOR IF NOT APPLIED AS PER MANUFACTURER'S INSTRUCTION. THE CONTRACTOR SHALL FOLLOW THE DATA SHEET AND THE LABEL ON THE PAINT CONTAINERS. THESE PRECAUTIONS SHALL INCLUDE THE USE OF RESPIRATORS AND EYE AND SKIN PROTECTION AS SPECIFIED. THE CONTRACTOR SHALL ALSO INSURE THAT HIS PAINTING OPERATIONS AND LOCATIONS WILL NOT ENDANGER OR ADVERSELY AFFECT THE PUBLIC IN GENERAL.

THE PROPOSED CLEANING AND COATING OPERATIONS SHALL BE PERFORMED ONLY WHEN THE AMBIENT TEMPERATURE IS 50 DEGREES F OR ABOVE. PAINT SHALL NOT BE APPLIED DURING RAIN, FOG OR MIST, OR WHEN THE STEEL SURFACE TEMPERATURE IS LESS THAN 5 DEGREES F ABOVE THE DEW POINT. PAINT SHALL NOT BE APPLIED TO WET OR DAMP SURFACES OR ON FROSTED OR ICE-COATED SURFACES. PAINT SHALL NOT BE APPLIED WHEN THE RELATIVE HUMIDITY IS GREATER THAN 85%. ALL STEEL SURFACES OF TRUSSES AND END FRAMES INCLUDING THE WELDED AREAS, BALLAST ENCLOSURE MOUNTING BRACKET AND BASE PLATES ARE TO BE CLEANED AND COATED. BEFORE EACH COATING IS APPLIED, IT SHALL BE MIXED WITH AN APPROVED POWER MECHANICAL MIXER TO A UNIFORM CONSISTENCY WHICH SHALL BE MAINTAINED DURING ITS APPLICATION. EACH COAT SHALL BE APPLIED IN A WORKMANLIKE MANNER AS A CONTINUOUS FILM OF UNIFORM THICKNESS WHICH IS FREE OF HOLIDAYS, PORES, RUNS OR SAGS. ALL COATS SHALL BE APPLIED BY BRUSH. THINNING OF PAINT IS STRICTLY PROHIBITED. PAINT NOT CAPABLE OF BEING APPLIED AS SPECIFIED SHALL NOT BE USED. THE COATING SHALL PENETRATE ALL JOINTS AND CONNECTIONS. THE ENGINEER SHALL BE NOTIFIED 24 HOURS PRIOR TO ANY CLEANING OR COATING OPERATIONS SO THAT INSPECTION SERVICES CAN BE PROVIDED.

COATING SYSTEM

THE COATING SYSTEM SHALL CONSIST OF A POLYAMIDE-CURED EPOXY PRIME COAT, A POLYAMIDE-CURED INTERMEDIATE COAT AND AN ALIPHATIC POLYURETHANE TOP COAT. THE COATING MATERIALS USED SHALL BE THOSE AS LISTED FROM ONE OF THE FOLLOWING MANUFACTURERS:

1. AMERON  
210 NORTH BERRY STREET  
BREA, CALIFORNIA 92621  
LOCAL TELEPHONE CONTACT: (216) 896-3602  
PRIME COAT: AMERCOAT 71  
INTERMEDIATE COAT: AMERLOCK 400 (LIGHT GREY)  
TOP COAT: AMERCOAT 450 HS (MEDIUM GREY)
  2. THE GLIDDEN COMPANY  
16651 SPRAGUE ROAD  
STRONGSVILLE, OHIO 44136  
LOCAL TELEPHONE CONTACT: ( 216 ) 826 - 5528  
PRIME COAT: GLID - GUARD CORROSION  
RESISTANT HS EPOXY NO. 5465  
INTERMEDIATE COAT: GLID - GUARD CORROSION  
RESISTANT HS EPOXY NO. 5466  
TOP COAT: GLID - THANE II POLYURETHANE  
NO. 6200 SERIES
  3. PORTER PAINT CO.  
400 SOUTH 13TH STREET  
LOUISVILLE, KY. 40201  
LOCAL TELEPHONE CONTACT: (216) 562-6709  
PRIME COAT: PORTER PAINTS MCR 4300  
INTERMEDIATE COAT: PORTER PAINTS MCR 4300 (OFF-WHITE)  
TOP COAT: PORTER PAINTS HYTHANE
  4. POLY-CARB, INC.  
33095 BAINBRIDGE ROAD  
CLEVELAND, OHIO 44139  
LOCAL TELEPHONE CONTACT: (216) 248-1223  
PRIME COAT: MARK-60 ULTRAPOX  
INTERMEDIATE COAT: MARK-60 ULTRAPOX (LIGHT GREY)  
TOP COAT: MARK-73 ULTRAKOTE (MEDIUM GREY)
  5. SHERWIN WILLIAMS COMPANY  
761 BETA DRIVE  
MAYFIELD VILLAGE, OHIO 44143  
LOCAL TELEPHONE CONTACT: (216) 461-8287  
PRIME COAT: TILE-CLAD II HI-BILD PRIMER  
INTERMEDIATE COAT: HI-SOLIDS CATALYZED EPOXY (PURE WHITE)  
(SLATE GREY)  
TOP COAT: HI-BILD ALIPHATIC POLYURETHANE ENAMEL
- ALL THREE COATS OF THE SYSTEM SHALL BE MANUFACTURED BY THE SAME COMPANY TO INSURE COMPATIBILITY AMONG COATS.

630-SURFACE PREPARATION, EXISTING SUPPORT SECTIONS

EXISTING, WEATHERED GALVANIZED SUPPORT SECTIONS SHOULD HAVE THEIR SURFACE PREPARATION AS WELL AS THEIR PROTECTIVE COATING DONE UNDER CONDITIONS OF TEMPERATURE AND HUMIDITY WITHIN THE SAME RANGE AS SPECIFIED BY THE MANUFACTURER OF THE EPOXY-PRIME COAT MATERIAL TO BE USED IMMEDIATELY AFTER THIS CLEANING OPERATION. THE SUPPORT SECTIONS SHALL BE PREPARED FOR COATING BY SSPC-SPI (SOLVENT CLEANING) FOLLOWED BY SSPC-SP6 (COMMERCIAL BLAST CLEANING). BEFORE THE PREPARED SURFACE DEGRADES FROM THE PRESCRIBED STANDARDS, THE PRIME COAT SHALL BE APPLIED. IN EVERY CASE, THE SURFACE SHALL BE COATED WITH EPOXY PRIME COAT ON THE SAME DAY AS THE SURFACE PREPARATION. CAREFUL HANDLING AND STORAGE WILL BE REQUIRED TO PREVENT ANY SCRAPING, MARRING, OR OTHER DAMAGE TO THE PREPARED SURFACE. PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, HANDLING, TRANSPORTATION COSTS AND MATERIALS NECESSARY TO ACCOMPLISH THIS ITEM OF WORK PER MAJOR SUPPORT SECTION.

BASIS OF PAYMENT WILL BE AS FOLLOWS:

ITEM 630-SURFACE PREPARATION, EXISTING SUPPORT SECTIONS AT CONTRACT BID PRICE PER EACH MAJOR SUPPORT SECTION.

630-COATING, EPOXY-PRIME COAT, SUPPORT SECTIONS

THIS ITEM SHALL CONSIST OF THE APPLICATION OF ONE (1) COAT OF AN EPOXY PRIMER TO SUPPORT SECTIONS. THE TOTAL DRY FILM THICKNESS OF THIS COAT SHALL BE BETWEEN 1.5 TO 2.0 MILS. IF MORE THAN ONE PASS IS NECESSARY TO OBTAIN THE REQUIRED THICKNESS, THAT COST SHALL BE BORNE BY THE CONTRACTOR. THE COLOR OF THIS COAT SHALL BE NOTICEABLY DIFFERENT FROM THE BASE MATERIAL AND OTHER PROPOSED COATS. THIS COAT SHALL IN ALL CASES BE APPLIED OVER SURFACES THAT WERE PREPARED EARLIER THAT SAME DAY. THE THINNING OF THE EPOXY MATERIAL IS STRICTLY PROHIBITED. MATERIAL NOT CAPABLE OF BEING APPLIED AS SPECIFIED SHALL NOT BE USED. WHEN THE AVERAGE DRY FILM THICKNESS OF THIS COAT OVER THE ENTIRE SUPPORT SECTION IS LESS THAN THE SPECIFIED 1.5 TO 2.0 MILS BUT IS AT LEAST 1.25 MILS, THE CONTRACT BID PRICE FOR THIS ITEM SHALL BE REDUCED IN DIRECT PROPORTION TO THE PERCENT DEFICIENCY OF COATING UP TO 16-2/3%. IF THE DEFICIENCY OF COATING IS MORE THAN THAT 16-2/3% ( I.E., THE AVERAGE DRY FILM THICKNESS IS LESS THAN 1.25 MILS ) THE WORK FOR THIS ITEM SHALL BE CONSIDERED UNSATISFACTORY AND SHALL BE RECOATED AT THE FULL EXPENSE OF THE CONTRACTOR, INCLUDING ALL LABOR, EQUIPMENT AND MATERIAL.

THE EPOXY PRIME COAT CHOSEN BY THE CONTRACTOR SHALL BE ONE OF THE FOLLOWING TWO-COMPONENT COMPOSITIONS CONFORMING TO ITS LISTED PROPERTIES:

AMERCOAT 71:

% SOLIDS BY VOLUME: 47% ± 3%  
POT LIFE: 8 HRS. @ 77 DEGREES F.  
DRYING TIME: 4 HRS. @ 77 DEGREES F.

GLID-GUARD CORROSION RESISTANT HS EPOXY NO. 5465:

% SOLIDS BY VOLUME: 54% ± 2%  
POT LIFE: 4 HRS. @ 70 DEGREES F.  
DRYING TIME: 1-2 HRS. TO TOUCH, 7 HRS. TO RECOAT AT 70 DEGREES F., 50% RELATIVE HUMIDITY

VISCOSITY: 95 - 100 KU  
% SOLIDS BY WEIGHT: 71% ± 2%

MCR-4301 EPOXY PRIMER:

% SOLIDS BY VOLUME 48.0% ± 2%  
POT LIFE: 30 HRS. @ 50-60 DEGREES F.  
16 HRS. @ 80-100 DEGREES F.  
DRYING TIME: 4-6 HRS. @ 50-60 DEGREES F.

MARK-60 ULTRAPOX:

% SOLIDS BY VOLUME: 50% ± 5%  
% SOLIDS BY WEIGHT: 52% ± 5%  
POT LIFE: 6 HRS. @ 75 DEGREES F.  
DRYING TIME: 2-3 HRS. INITIAL SET @ 75 DEGREES F.  
VISCOSITY: 300-500 CPS @ 75 DEGREES F.

TILE-CLAD II HI-BILD PRIMER:

% SOLIDS BY VOLUME: 48% ± 2%  
% SOLIDS BY WEIGHT: 63% ± 2%  
POT LIFE: 8 HRS. @ 77 DEGREES F.  
DRYING TIME: 1 HR. TO TOUCH, 6 HRS. TO RECOAT @ 77 DEGREES F.

FOR NEW SUPPORT SECTIONS THE PRIME COAT SHOULD BE DONE AT THE MANUFACTURER OF THE SUPPORT SECTIONS. VERIFICATION BY THE MANUFACTURER OF THE COATING MATERIAL FOR THE PRIME COAT WILL BE REQUIRED. CAREFUL HANDLING AND STORAGE WILL BE REQUIRED TO PREVENT ANY SCRAPING, MARRING OR OTHER SURFACE DAMAGE TO THE PRIME COAT.

PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, HANDLING COSTS AND MATERIALS NECESSARY TO ACCOMPLISH THIS ITEM OF WORK. THIS PRIME COAT SHALL BE MANUFACTURED BY THE SAME COMPANY SUPPLYING THE INTERMEDIATE AND TOP COATS. A PROPERLY CALIBRATED DRY FILM THICKNESS INSTRUMENT WILL BE USED TO CHECK THE COATING.

BASIS OF PAYMENT WILL BE AS FOLLOWS:

ITEM 630-COATING, EPOXY PRIME COAT, SUPPORT SECTIONS AT CONTRACT BID PRICE PER EACH MAJOR SUPPORT SECTION.

CALCULATED  
CHECKED

SIGNING NOTES

FRA-71-14.39  
FRA-315-0.00

68  
89

630-COATING, EPOXY INTERMEDIATE COAT,  
SUPPORT SECTIONS

THIS ITEM SHALL CONSIST OF THE APPLICATION OF ONE (1) COAT OF EPOXY TO SUPPORT SECTIONS. THE TOTAL DRY FILM THICKNESS OF THIS COAT SHALL NOT BE LESS THAN SIX (6.0) MILS. IF MORE THAN ONE PASS IS NECESSARY TO OBTAIN THE REQUIRED THICKNESS, THAT COST SHALL BE BORNE BY THE CONTRACTOR. THINNING OF THE EPOXY MATERIAL IS STRICTLY PROHIBITED. MATERIAL NOT CAPABLE OF BEING APPLIED AS SPECIFIED SHALL NOT BE USED. THE COLOR OF THIS COAT SHALL BE LIGHT GREY. WHEN THE AVERAGE DRY FILM THICKNESS OF THIS COAT OVER THE ENTIRE SUPPORT SECTION IS LESS THAN THE SPECIFIED SIX (6.0) MILS, BUT IS AT LEAST (5.0) MILS, THE CONTRACT PRICE FOR THIS ITEM SHALL BE REDUCED IN DIRECT PROPORTION TO THE PERCENT DEFICIENCY OF COATING UP TO 16-2/3%. IF THE DEFICIENCY OF COATING IS MORE THAN 16-2/3%, (I.E. THE AVERAGE DRY FILM THICKNESS IS LESS THAN 5.0 MILS), THE WORK FOR THIS ITEM SHALL BE CONSIDERED UNSATISFACTORY AND SHALL BE RECOATED AT THE FULL EXPENSE OF THE CONTRACTOR, INCLUDING ALL LABOR, EQUIPMENT AND MATERIAL. THE EPOXY INTERMEDIATE COAT CHOSEN BY THE CONTRACTOR SHALL BE ONE OF THE FOLLOWING TWO-COMPONENT COMPOSITIONS CONFORMING TO ITS LISTED PROPERTIES :

AMERLOCK 400:  
% SOLIDS BY VOLUME: 83% ± 2%  
POT LIFE: 2-1/2 HRS. @ 70 DEGREES F.  
DRYING TIME: 20 HRS. @ 70 DEGREES F.

GLID-GUARD CORROSION RESISTANT HS EXPOXY  
NO. 5466:  
% SOLIDS BY VOLUME: 54% ± 2%  
POT LIFE: 4 HRS. @ 70 DEGREES F.  
DRYING TIME: 1 - 2 HRS. TO TOUCH 7 HRS.  
TO RECOAT AT 70 DEGREES F., 50%  
RELATIVE HUMIDITY

VISCOSITY: 95 - 100 KU  
% SOLIDS BY WEIGHT: 71% ± 2%

MCR 4361 HIGH BUILD EPOXY:  
% SOLIDS BY VOLUME: 49.4% ± 2%  
POT LIFE: 30 HRS. @ 50-60 DEGREES F.  
DRYING TIME: 16 HRS. @ 80-100 DEGREES F.  
1-2 HRS. @ 60-80 DEGREES F.

MARK-60 ULTRAPOX:  
% SOLIDS BY VOLUME: 50% ± 5%  
% SOLIDS BY WEIGHT: 52% ± 5%  
POT LIFE: 6 HRS. @ 75 DEGREES F.  
DRYING TIME: 2-3 HRS. INITIAL SET  
@ 75 DEGREES F.  
VISCOSITY: 300-500 CPS @ 75 DEGREES F.

HI-SOLIDS CATALYZED EPOXY:  
% SOLIDS BY VOLUME: 61% ± 2%  
% SOLIDS BY WEIGHT: 77% ± 2%  
POT LIFE: 5 HRS. @ 77 DEGREES F.  
DRYING TIME: 1 HR. TO TOUCH,  
4 HRS. TACK FREE,  
6 HRS. TO RECOAT @ 77  
DEGREES F. & 50% R.H.

AT LEAST 24 HOURS BUT NO MORE THAN THREE (3) DAYS SHALL ELAPSE AFTER THE APPLICATION OF THE EPOXY PRIME COAT AND BEFORE THE APPLICATION OF THE EPOXY INTERMEDIATE COAT. SURFACES SHALL IN ALL CASES BE CLEAN BEFORE THE INTERMEDIATE COAT IS APPLIED.

FOR NEW SUPPORT SECTIONS, THIS INTERMEDIATE COAT SHOULD BE DONE AT THE MANUFACTURER OF THE SUPPORT SECTIONS. VERIFICATION BY THE MANUFACTURER FOR THE INTERMEDIATE COAT WILL BE REQUIRED. CAREFUL HANDLING AND STORAGE WILL BE REQUIRED TO PREVENT ANY SCRAPING, MARRING OR OTHER SURFACE DAMAGE TO THE INTERMEDIATE COAT. PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, HANDLING COST AND MATERIAL NECESSARY TO ACCOMPLISH THIS ITEM OF WORK. THIS INTERMEDIATE COAT SHALL BE MANUFACTURED BY THE SAME COMPANY SUPPLYING THE PRIME AND TOP COATS. A PROPERLY CALIBRATED DRY FILM THICKNESS INSTRUMENT WILL BE USED TO CHECK THE COATING. BASIS OF PAYMENT WILL BE AS FOLLOWS:  
ITEM 630-COATING, EPOXY INTERMEDIATE COAT, SUPPORT SECTIONS  
AT CONTRACT BID PRICE PER EACH MAJOR SUPPORT SECTION.

630-COATING, URETHANE TOP COAT,  
SUPPORT SECTIONS

THIS ITEM SHALL CONSIST OF THE APPLICATION OF ONE (1) COAT OF URETHANE TO SUPPORT SECTIONS. THE TOTAL DRY FILM THICKNESS OF THIS COAT SHALL NOT BE LESS THAN ONE AND ONE-HALF (1.5) MILS. IF MORE THAN ONE PASS IS NECESSARY TO OBTAIN THE REQUIRED THICKNESS, THAT COST SHALL BE BORNE BY THE CONTRACTOR. THINNING OF THE URETHANE MATERIAL IS STRICTLY PROHIBITED. MATERIAL NOT CAPABLE OF BEING APPLIED AS SPECIFIED SHALL NOT BE USED. THE COLOR OF THIS COAT SHALL BE MEDIUM GREY. WHEN THE AVERAGE DRY FILM THICKNESS OF THIS COAT OVER THE ENTIRE SUPPORT SECTION IS LESS THAN THE SPECIFIED ONE AND ONE-HALF (1.5) MILS BUT IS AT LEAST ONE (1.0) MIL, THE CONTRACT PRICE FOR THIS ITEM SHALL BE REDUCED IN DIRECT PROPORTION TO THE PERCENT DEFICIENCY OF COATING UP TO 33-1/3%. IF THE DEFICIENCY OF COATING IS MORE THAN 33-1/3%, (I.E. THE AVERAGE DRY FILM THICKNESS IS LESS THAN 1.0 MIL), THE WORK FOR THIS ITEM SHALL CONSIDERED UNSATISFACTORY AND SHALL BE RECOATED AT THE FULL EXPENSE OF THE CONTRACTOR, INCLUDING ALL LABOR, EQUIPMENT AND MATERIAL. THE URETHANE TOP COAT CHOSEN BY THE CONTRACTOR SHALL BE ONE OF THE FOLLOWING MATERIALS CONFORMING TO ITS LISTED PROPERTIES:

AMERCOAT 450 HS:  
% SOLIDS BY VOLUME: 66% ± 3%  
POT LIFE: 4 HRS. @ 70 DEGREES F.  
DRYING TIME: 8 HRS. @ 70 DEGREES F  
DRY-THROUGH

GLID-THANE II POLYURETHANE NO. 6200:  
% SOLIDS BY VOLUME: 40.3% ± 2%  
POT LIFE: 8 HRS.  
DRYING TIME: 1 HR. TO TOUCH, 3 HRS. TO RECOAT  
AT 77 DEGREES F., 50% RELATIVE  
HUMIDITY  
% SOLIDS BY WEIGHT: 57.8% ± 2%

HYTHANE 4610 ALIPHATIC POLYURETHANE:  
% SOLIDS BY VOLUME: 43.4% ± 2%  
POT LIFE: 12 HRS. @ 75 DEGREES F.  
DRYING TIME: 3/4 HRS. TO TOUCH @ 75 DEGREES F.

MARK-73 ULTRAKOTE:  
% SOLIDS BY VOLUME: 51%  
POT LIFE: 5 1/2 HRS. @ 75 DEGREES F.  
DRYING TIME: 4-5 HRS. @ 75 DEGREES F.

TACK FREE  
VISCOSITY: 1000 - 1500 CPS @ 75 DEGREES F.  
% SOLIDS BY WEIGHT: 64%

HI-BILD ALIPHATIC POLYURETHANE ENAMEL:  
% SOLIDS BY VOLUME: 40% ± 2% (CATALYZED)  
% SOLIDS BY WEIGHT: 48% ± 2%  
POT LIFE: 6 HRS. @ 77 DEGREES F.  
DRYING TIME: 30 MIN. TO TOUCH,

4 HRS. TACK FREE,  
18 HRS. MINIMUM, 72 HRS.  
MAXIMUM TO RECOAT.

AT LEAST 24 HOURS BUT NO MORE THAN THREE (3) DAYS SHALL ELAPSE AFTER THE APPLICATION OF THE EPOXY INTERMEDIATE COAT AND BEFORE THE APPLICATION OF THE URETHANE TOP COAT. SURFACES SHALL IN ALL CASES BE CLEAN BEFORE THE TOP COAT IS APPLIED.

FOR NEW SUPPORT SECTIONS, THIS TOP COAT SHOULD BE DONE BY THE MANUFACTURER OF THE SUPPORT SECTIONS. VERIFICATION BY THE MANUFACTURER FOR THE TOP COAT WILL BE REQUIRED. CAREFUL HANDLING AND STORAGE WILL BE REQUIRED TO PREVENT ANY SCRAPING, MARRING OR OTHER SURFACE DAMAGE TO THE TOP COAT. PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, HANDLING COST AND MATERIALS NECESSARY TO ACCOMPLISH THIS ITEM OF WORK. THIS TOP COAT SHALL BE MANUFACTURED BY THE SAME COMPANY SUPPLYING THE PRIME AND INTERMEDIATE COATS. A PROPERLY CALIBRATED, DRY FILM THICKNESS INSTRUMENT WILL BE USED TO CHECK THE COATING. BASIS OF PAYMENT WILL BE AS FOLLOWS:

ITEM 630-COATING, URETHANE TOP COAT, SUPPORT SECTIONS  
AT CONTRACT BID PRICE PER EACH MAJOR SUPPORT SECTION.

PREQUALIFICATION

PRIOR TO USE, THE CONTRACTOR SHALL SUBMIT TO THE DIRECTOR COPIES OF THE MANUFACTURER'S CERTIFIED TEST DATA SHOWING THAT THE MATERIAL COMPLIES WITH THE REQUIREMENTS OF THIS SPECIFICATION. THE TEST DATA SHALL INCLUDE THE BRAND NAME OF THE PAINT, NAME OF MANUFACTURER, NUMBER OF THE LOT TESTED AND DATE OF MANUFACTURE. WHEN THE PAINT HAS BEEN APPROVED BY THE DIRECTOR, FURTHER PERFORMANCE TESTING BY THE MANUFACTURER WILL NOT BE REQUIRED UNLESS THE FORMULATION OR MANUFACTURING PROCESS HAS BEEN CHANGED, IN WHICH CASE NEW CERTIFIED TEST RESULTS WILL BE REQUIRED.

ACCEPTANCE

THE MANUFACTURER SHALL SUBMIT CERTIFIED TEST DATA IN ACCORDANCE WITH THE REQUIREMENTS OF THIS SPECIFICATION. THE STATE RESERVES THE RIGHT TO SAMPLE AND TEST DELIVERED LOTS FOR COMPLIANCE.

CONVERSION OF METRIC STANDARD DRAWING

THE METRIC STANDARD DRAWINGS REFERENCED IN THIS PLAN SHALL BE CONVERTED TO ENGLISH UNITS USING THE SI (METRIC) TO ENGLISH CONVERSION FACTORS PROVIDED IN SECTION 109.011 OF THE 1997 ODOT CONSTRUCTION AND MATERIAL SPECIFICATION. THE APPENDIX OF ASTM E 380 SHALL BE UTILIZED FOR ANY ADDITIONAL CONVERSION FACTORS REQUIRED. CONVERSIONS SHALL BE APPROPRIATELY PRECISE AND SHALL REFLECT STANDARD INDUSTRY ENGLISH VALUES WHERE SUITABLE.

LOGO SIGNS

OHIO LOGOS, INC. IS RESPONSIBLE FOR REMOVAL AND ERECTION OF LOGO SIGNS. THE CONTRACTOR SHALL CONTACT OHIO LOGOS (1-800-860-LOGO) AT LEAST 60 DAYS PRIOR TO THE DATE THAT ANY SIGNS MUST BE REMOVED OR ADJUSTED.

631 SIGN SERVICE, AS PER PLAN

THIS WORK SHALL BE IN ACCORDANCE WITH 631.06, WITH THE FOLLOWING EXCEPTIONS:

THE CONTRACTOR SHALL DISCONNECT THE EXISTING SIGN SERVICE CONDUCTORS FROM THE ADJACENT PULLBOX TO THE DISCONNECT SWITCH AND SHALL PULL IN THE NEW CONDUCTORS (5000 VOLT SECONDARY FEEDER CABLE, 3 CONDUCTORS, NO. 4 AWG) AND TERMINATE THEM.

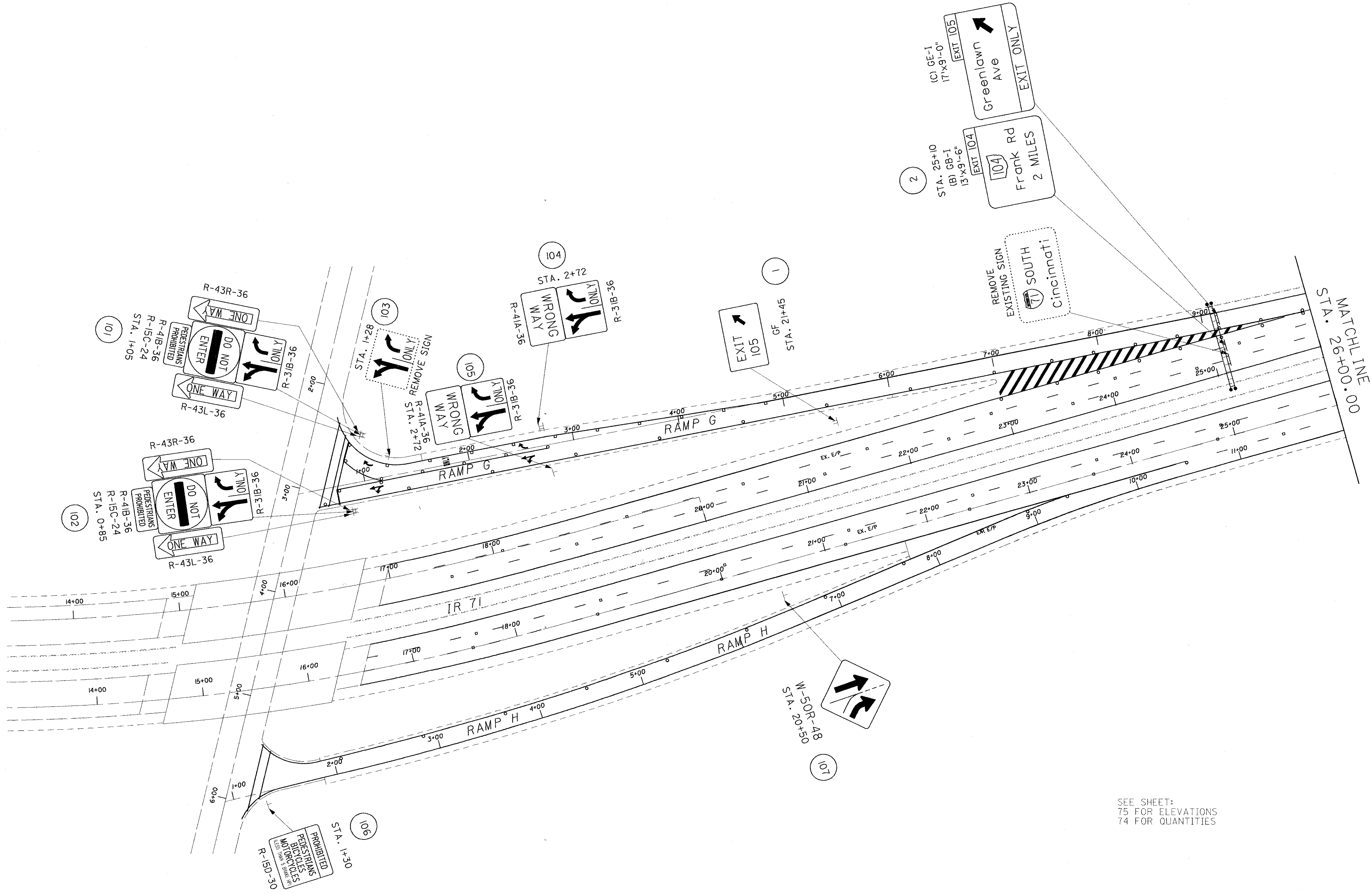
IN THE EVENT THE CONDUCTORS CANNOT BE PULLED IN WITHOUT DAMAGE, THE CONTRACTOR SHALL CLEAN, REPAIR OR REPLACE THE CONDUIT TO PROVIDE A RACEWAY IN COMPLIANCE WITH THE NATIONAL ELECTRIC CODE AND THEN INSTALL THE CONDUCTORS.

THE CONTRACTOR SHALL MODIFY THE DISCONNECT SWITCH TO PROPERLY TERMINATE THE NEW 480 VOLT, 3-WIRE SYSTEM AT THOSE LOCATIONS WHERE THE CIRCUITS ARE BEING CHANGED.

631 SIGN WIRED, AS PER PLAN - AND -  
631 SIGN WIRED, OVERPASS STRUCTURE MOUNTED, AS PER PLAN

THIS WORK SHALL BE IN ACCORDANCE WITH 631.07, WITH THE FOLLOWING EXCEPTIONS:

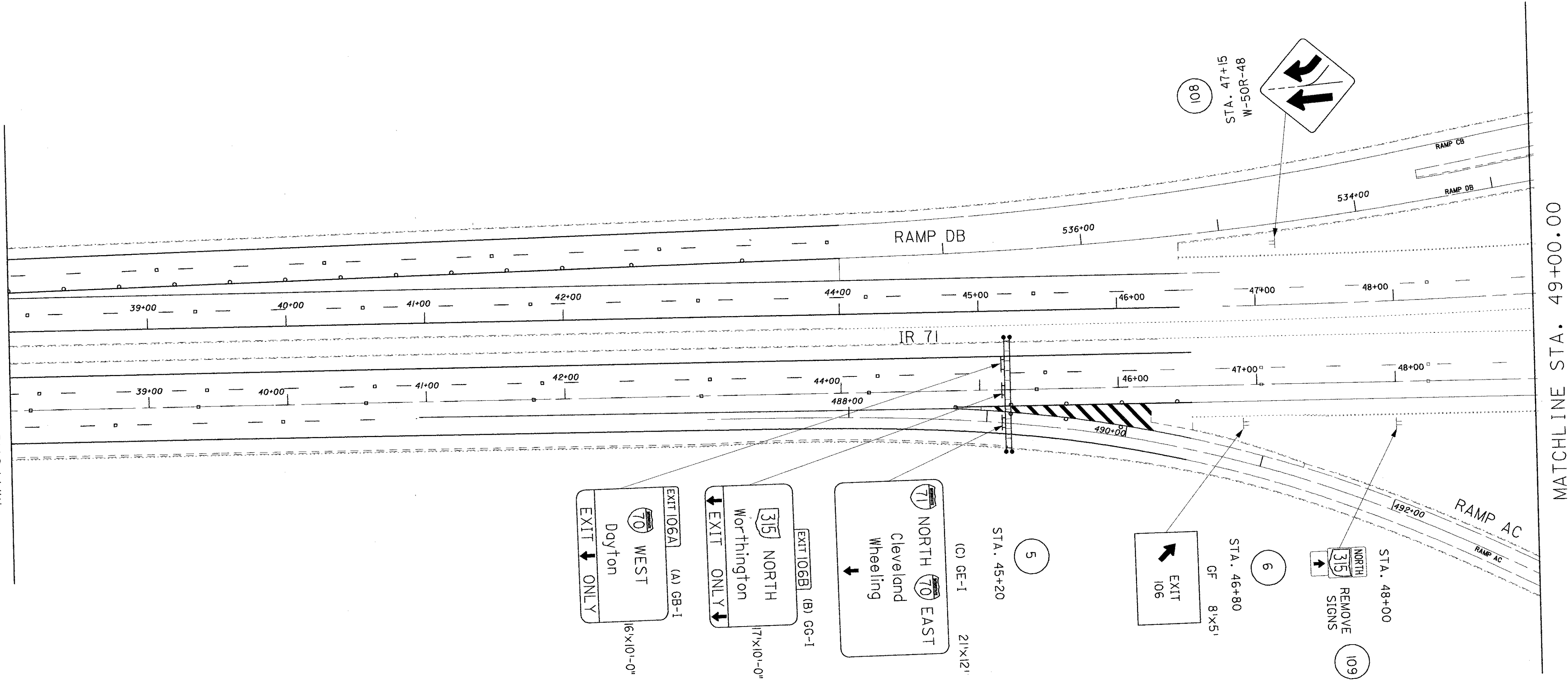
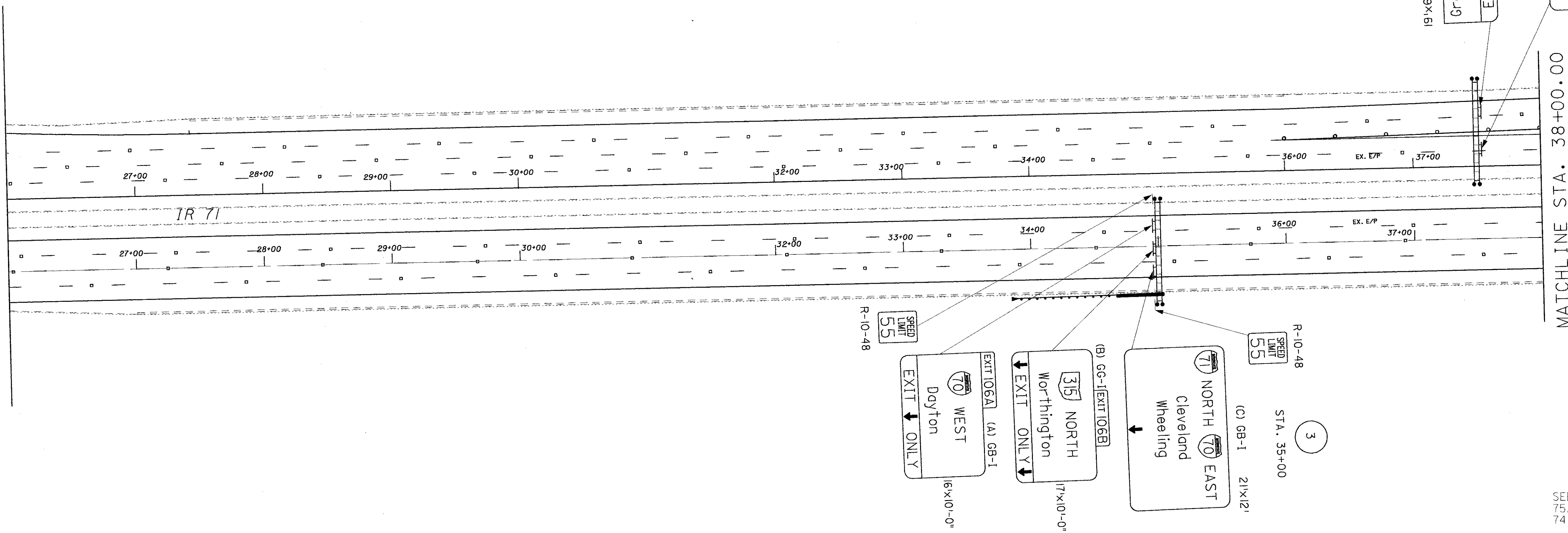
THE CONTRACTOR SHALL REMOVE THE EXISTING SIGN WIRING AND INSTALL NEW WIRING IN ACCORDANCE WITH 631.07, ALL CONDUIT, JUNCTION BOXES, FITTINGS, FLEXIBLE CONDUITS AND RELATED ITEMS SHALL BE INSPECTED AND CLEANED, REPAIRED OR REPLACED AS NECESSARY TO PROVIDE A CONDUCTOR RACEWAY WHICH CONFORMS TO THE NATIONAL ELECTRIC CODE.



SEE SHEET:  
75 FOR ELEVATIONS  
74 FOR QUANTITIES

MATCHLINE STA. 26+00.00

MATCHLINE STA. 38+00.00



SEE SHEET:  
 75/76 FOR ELEVATIONS  
 74 FOR QUANTITIES

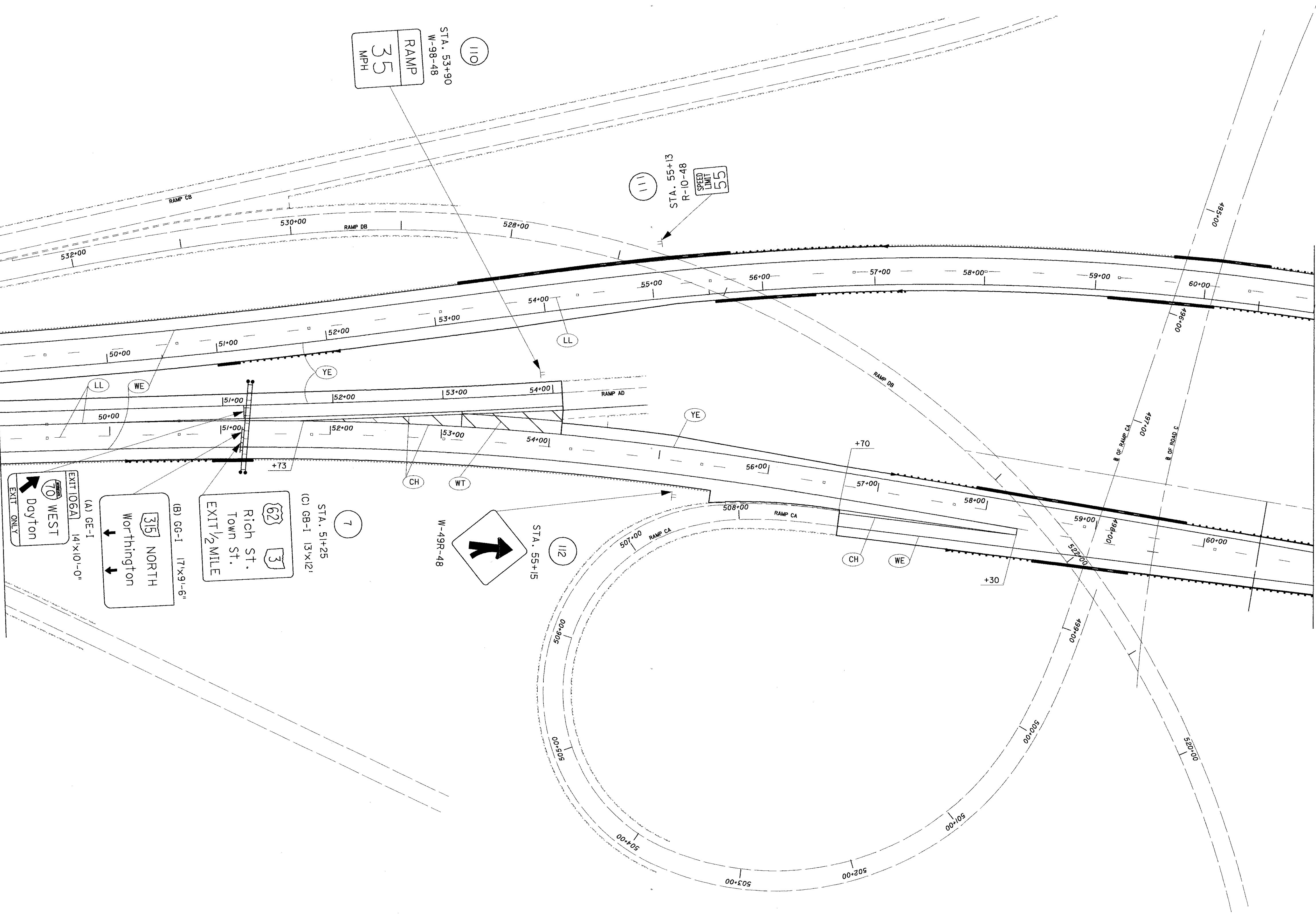
CALCULATED  
 CHECKED

0 50 100  
 HORIZONTAL  
 SCALE IN FEET

**SIGNING PLAN**  
 IR71 STA. 26+00.00 TO SR 315 STA. 49+00.00

FRA-71-14.39,  
 FRA-315-0.00

(FOR PAVEMENT MARKINGS SOUTH OF  
 STA. 49+00, SEE SHEET 64)  
 MATCHLINE STA. 49+00.00 SEE SHEET 71



MATCHLINE STA. 61+00.00

SEE SHEET:  
 76 FOR ELEVATIONS  
 74 FOR QUANTITIES  
 62 FOR PAVEMENT MARKING LEGEND

FRA-71-14.39,  
 FRA-315-0.00

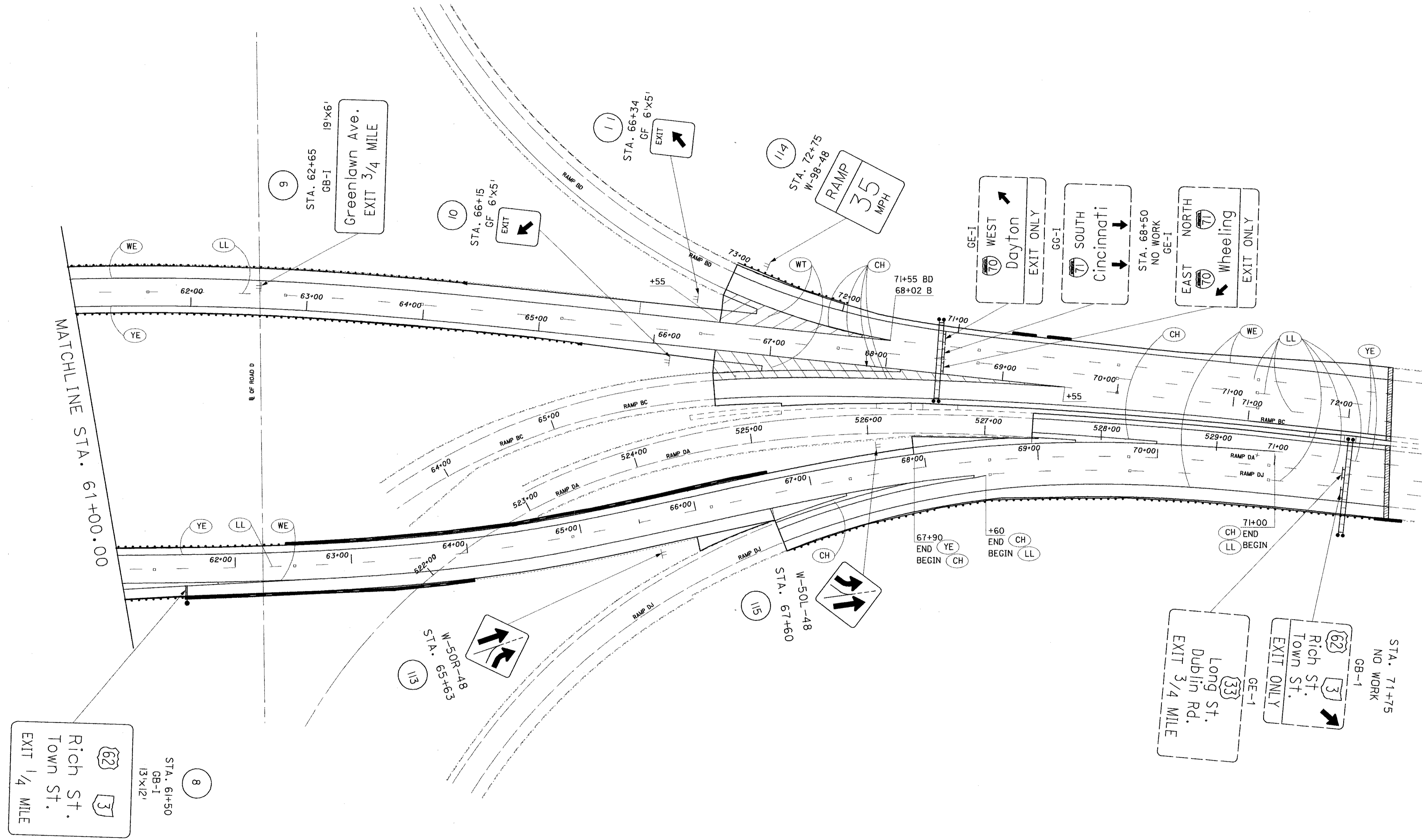
SIGNING PLAN  
 SR315 STA. 49+00.00 TO STA. 61+00.00

CALCULATED

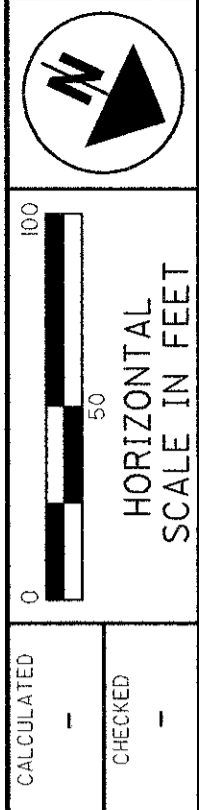
CHECKED

HORIZONTAL  
 SCALE IN FEET





SEE SHEET:  
 76 FOR ELEVATIONS  
 74 FOR QUANTITIES  
 62 FOR PAVEMENT MARKING LEGEND

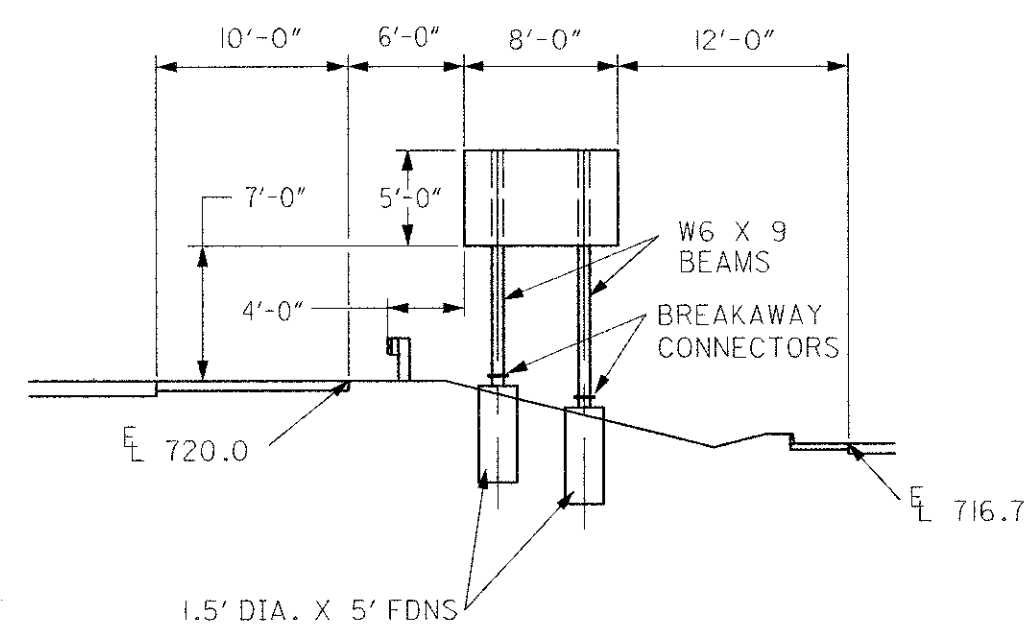


**SIGNING PLAN**  
**SR315 STA. 61+00.00 TO STA. 72+00.00**

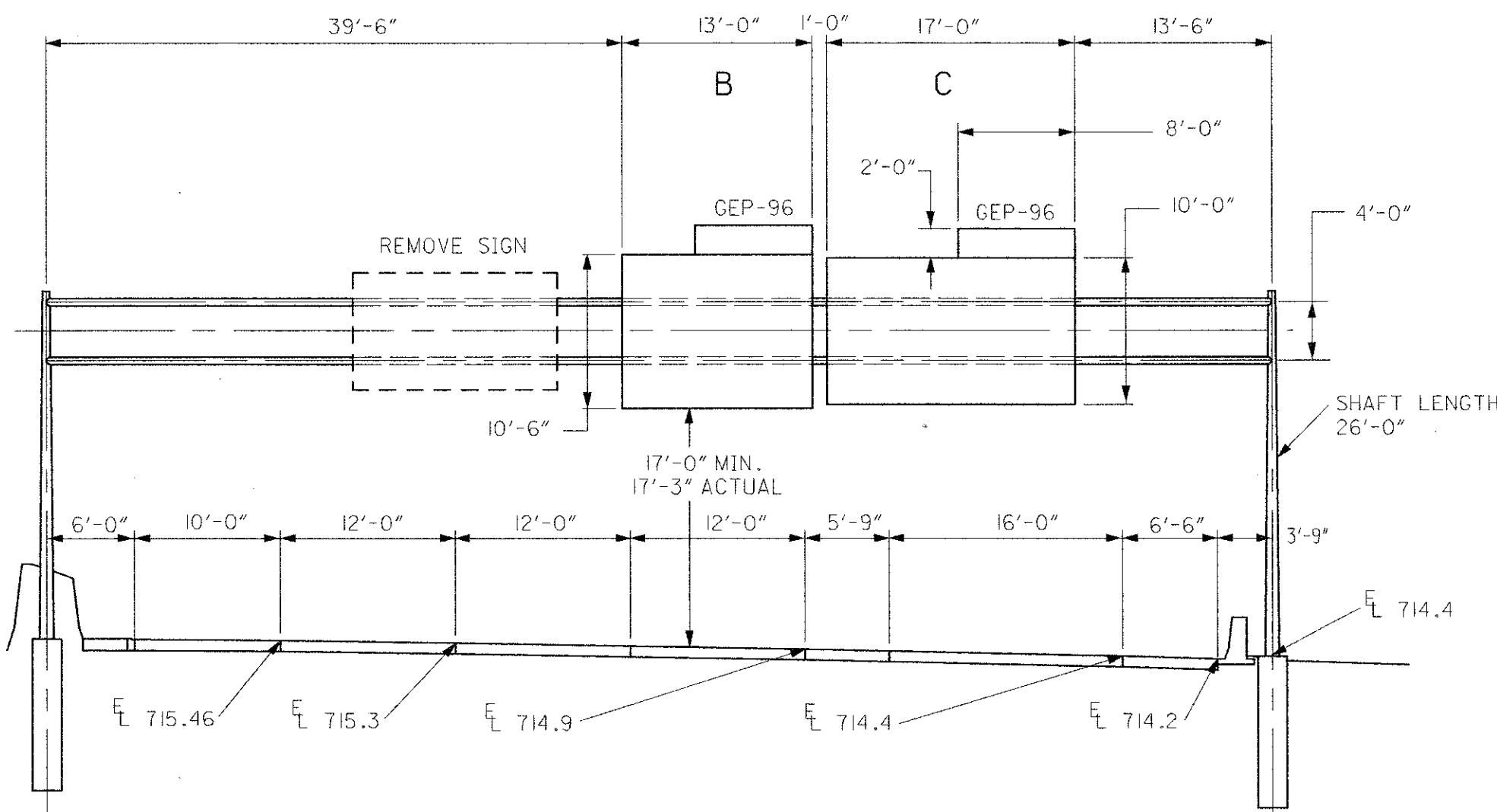
**FRA-71-14.39,**  
**FRA-315-0.00**





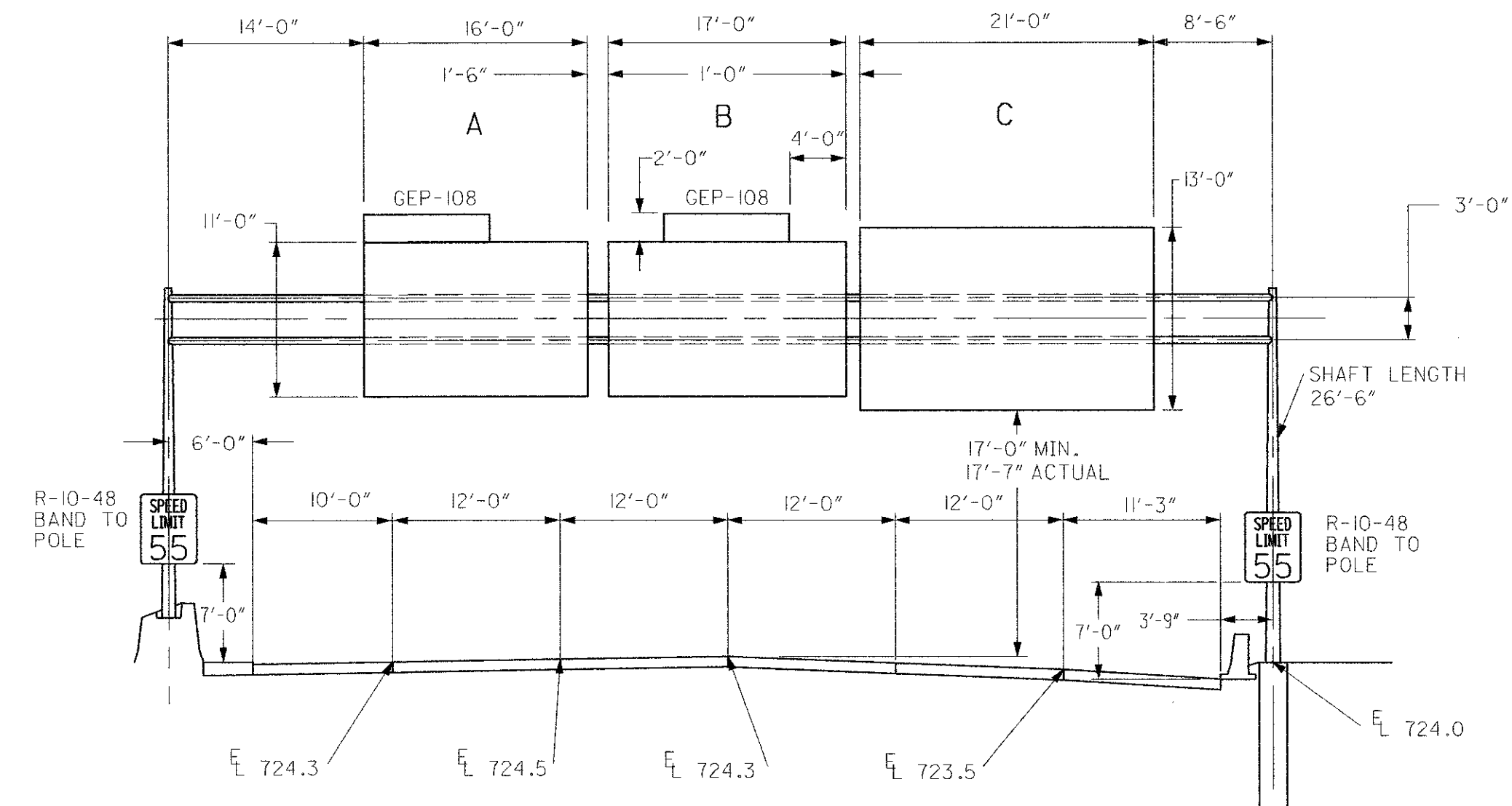


① STA. 21+45 LT. SB ROAD B



② STA. 25+10 LT. SB ROAD B

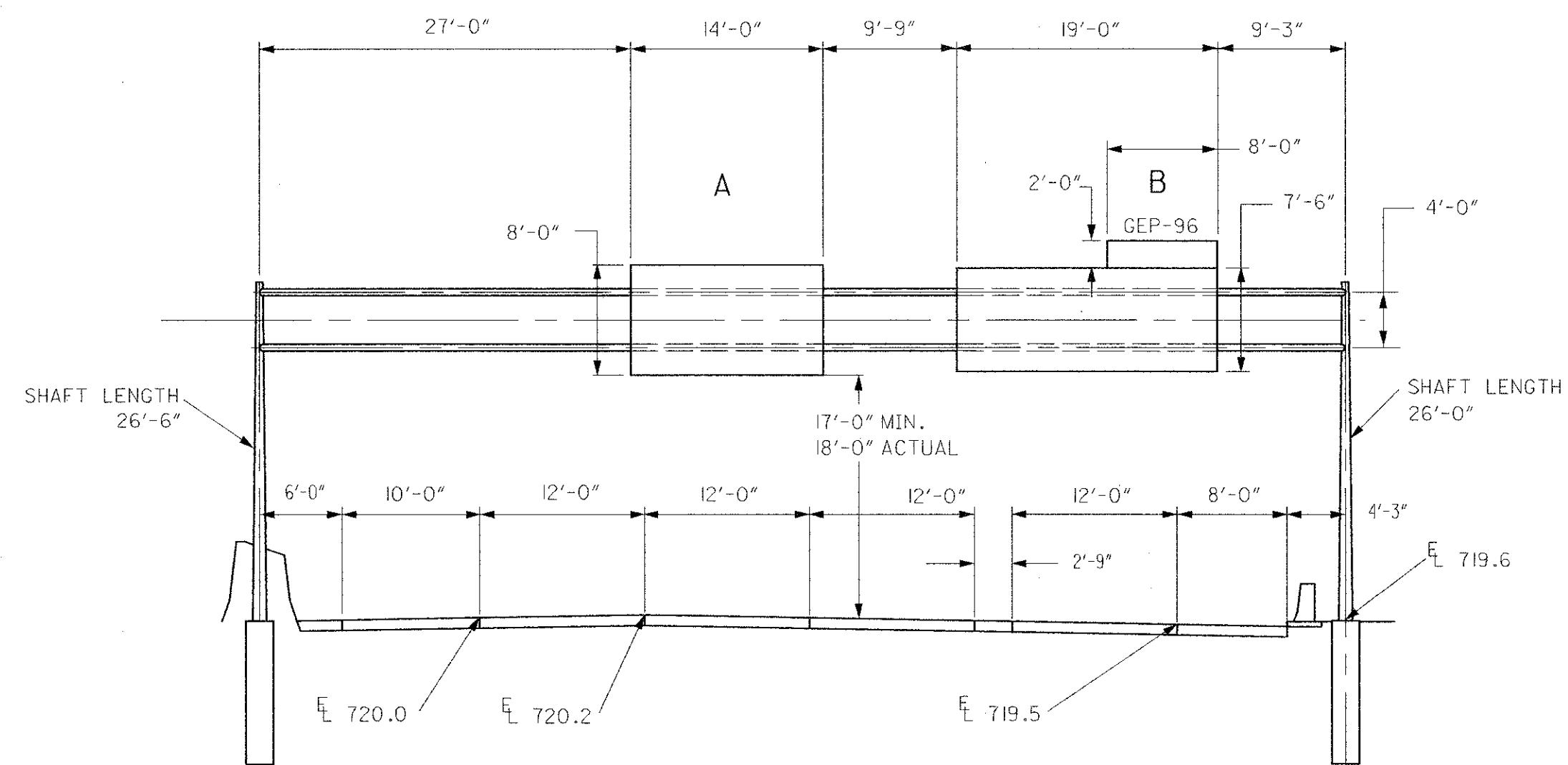
	B	C
SIGN ATTACHMENT ASSEMBLIES	3 @ 10'-6"	3 @ 9'-6"
LUMINAIRE SUPPORT ASSEMBLIES	2 @ 4'-3"	2 @ 4'-3"



③ STA. 35+00 RT. NB ROAD A

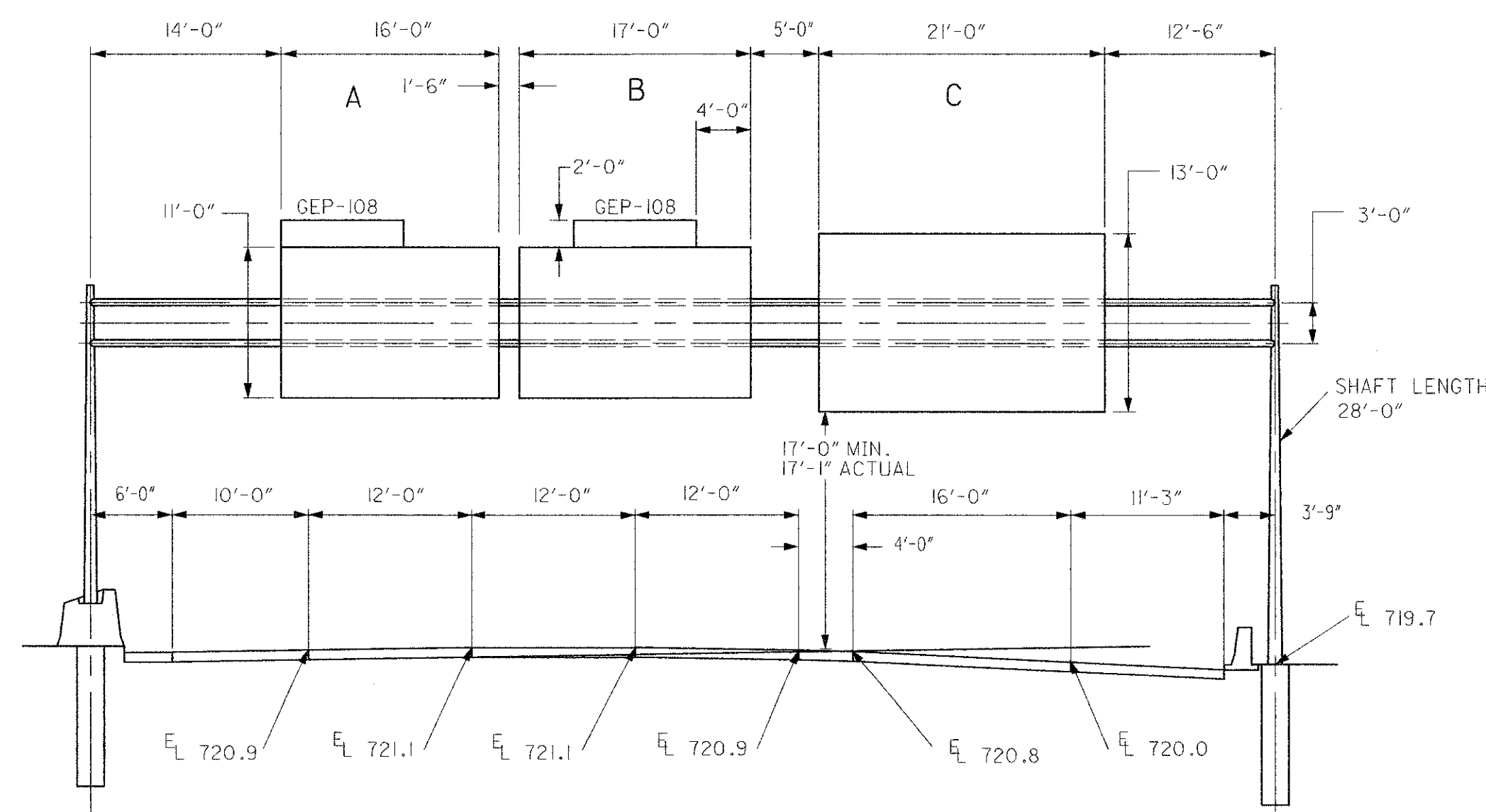
	A	B	C
SIGN ATTACHMENT ASSEMBLIES	3 @ 10'-6"	3 @ 10'-6"	7 @ 13'-0"
LUMINAIRE SUPPORT ASSEMBLIES	2 @ 4'-3"	2 @ 4'-3"	3 @ 5'-9"

PROVIDE ADDITIONAL INTERMEDIATE ATTACHMENT ASSEMBLIES FOR SIGN C.



④ STA. 37+50 LT. SB ROAD B

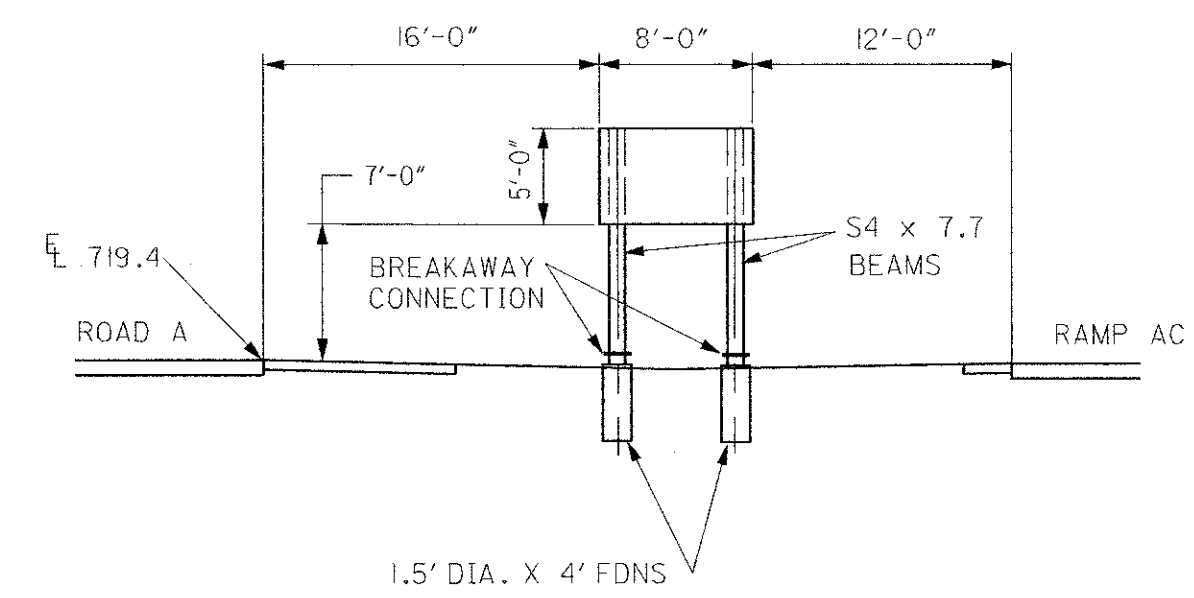
	A	B
SIGN ATTACHMENT ASSEMBLIES	3 @ 8'-0"	3 @ 7'-0"
LUMINAIRE SUPPORT ASSEMBLIES	2 @ 4'-3"	2 @ 3'-3"



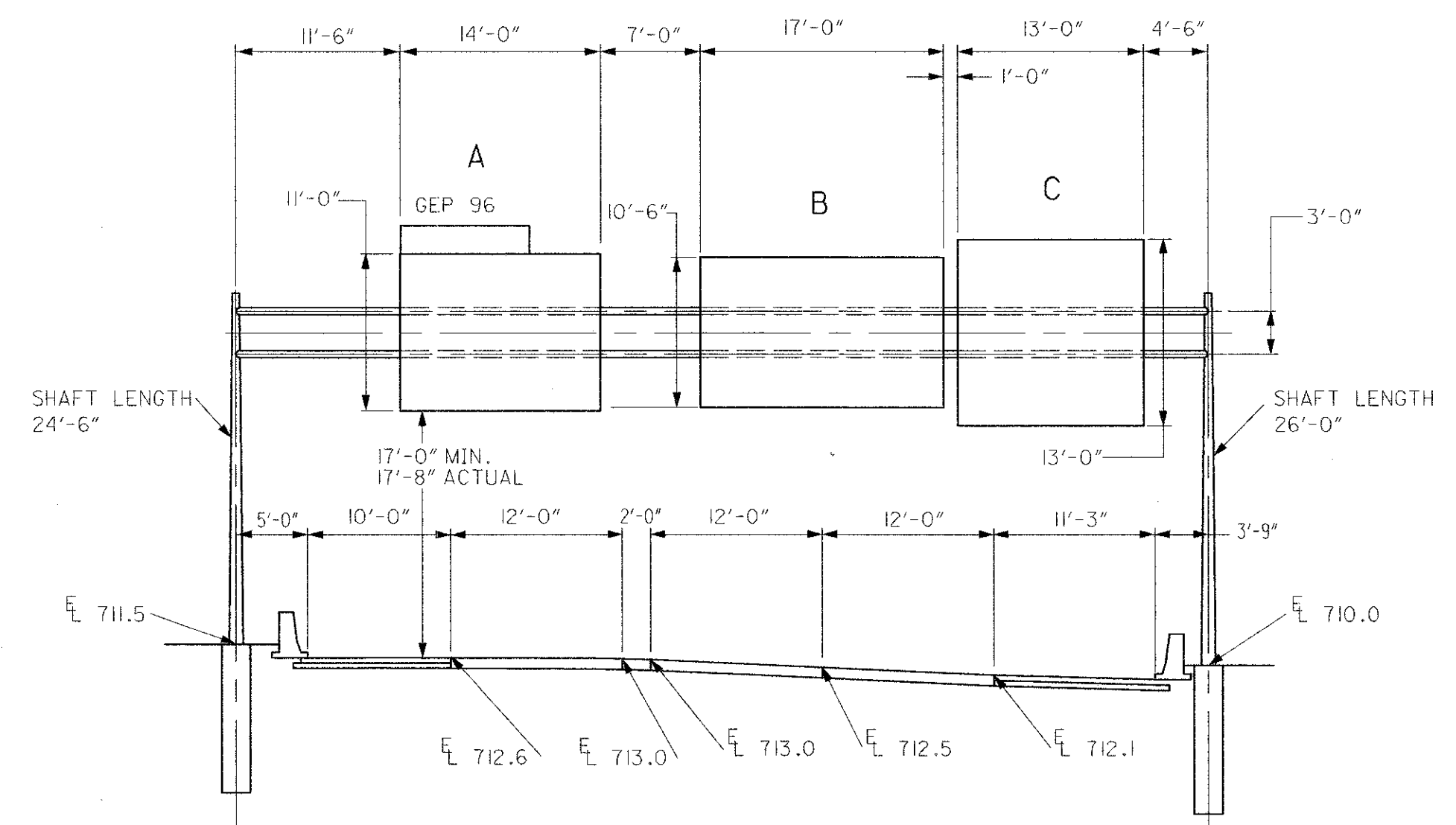
⑤ STA. 45+20 RT. NB ROAD A

	A	B	C
SIGN ATTACHMENT ASSEMBLIES	3 @ 10'-6"	3 @ 10'-6"	7 @ 13'-0"
LUMINAIRE SUPPORT ASSEMBLIES	2 @ 4'-3"	2 @ 4'-3"	3 @ 5'-9"

PROVIDE ADDITIONAL INTERMEDIATE ATTACHMENT ASSEMBLIES FOR SIGN C.



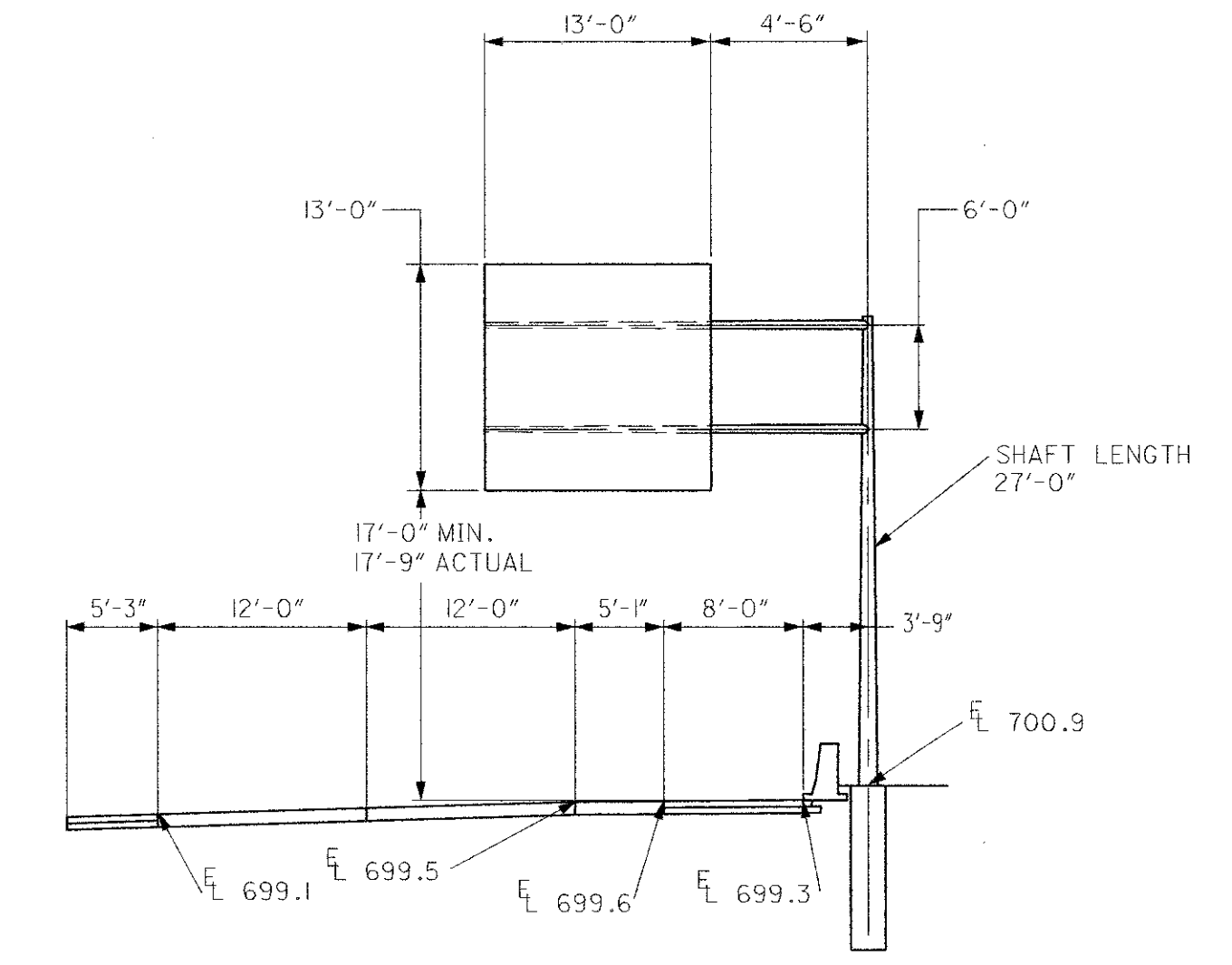
⑥ STA. 46+90 LT. NB ROAD A



⑦ STA. 51+25 RT. NB ROAD A

	A	B	C
SIGN ATTACHMENT ASSEMBLIES	3 @ 10'-0"	3 @ 10'-6"	5 @ 9'-6"
LUMINAIRE SUPPORT ASSEMBLIES	2 @ 4'-3"	2 @ 4'-3"	2 @ 4'-3"

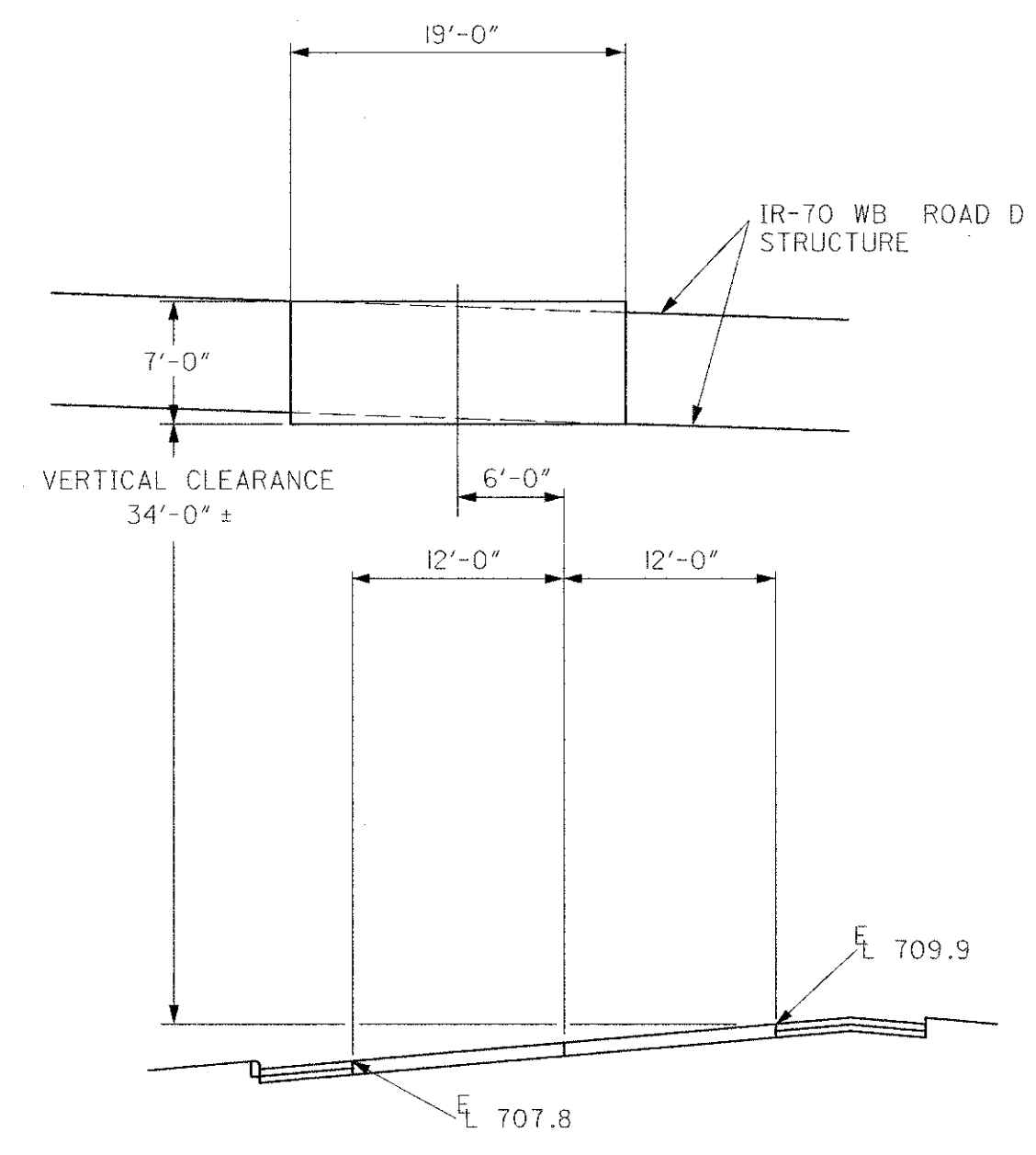
PROVIDE ADDITIONAL INTERMEDIATE ATTACHMENT ASSEMBLIES FOR SIGN C.



⑧ STA. 61+50 RT. NB ROAD A

	A
SIGN ATTACHMENT ASSEMBLIES	5 @ 9'-6"
LUMINAIRE SUPPORT ASSEMBLIES	2 @ 4'-3"

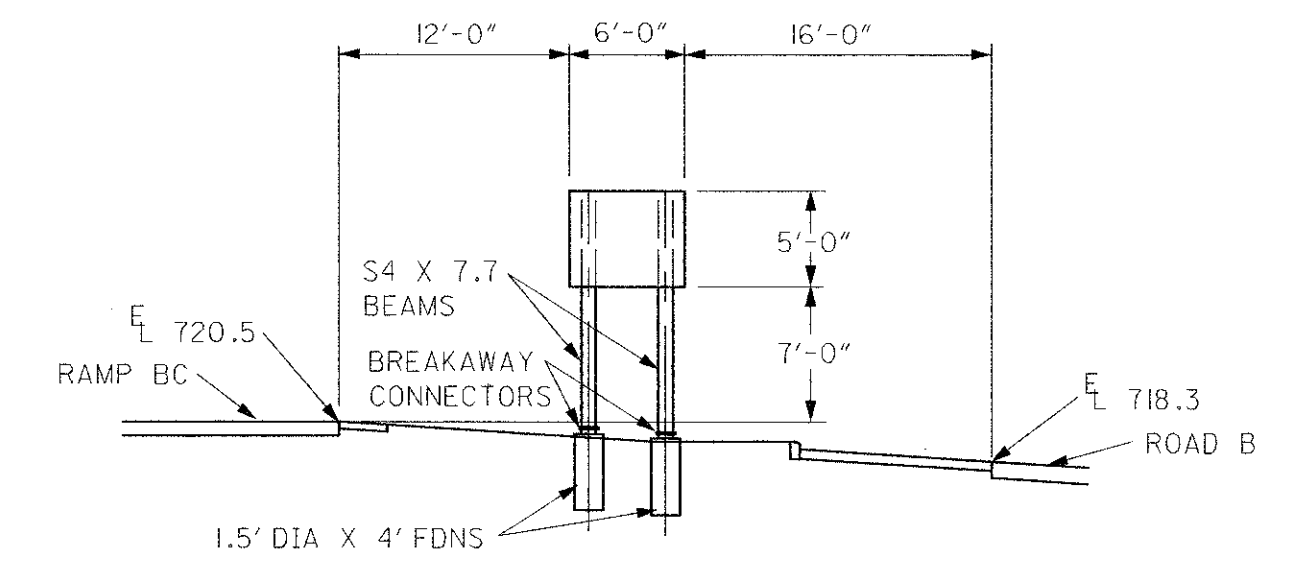
PROVIDE ADDITIONAL INTERMEDIATE ATTACHMENT ASSEMBLIES.



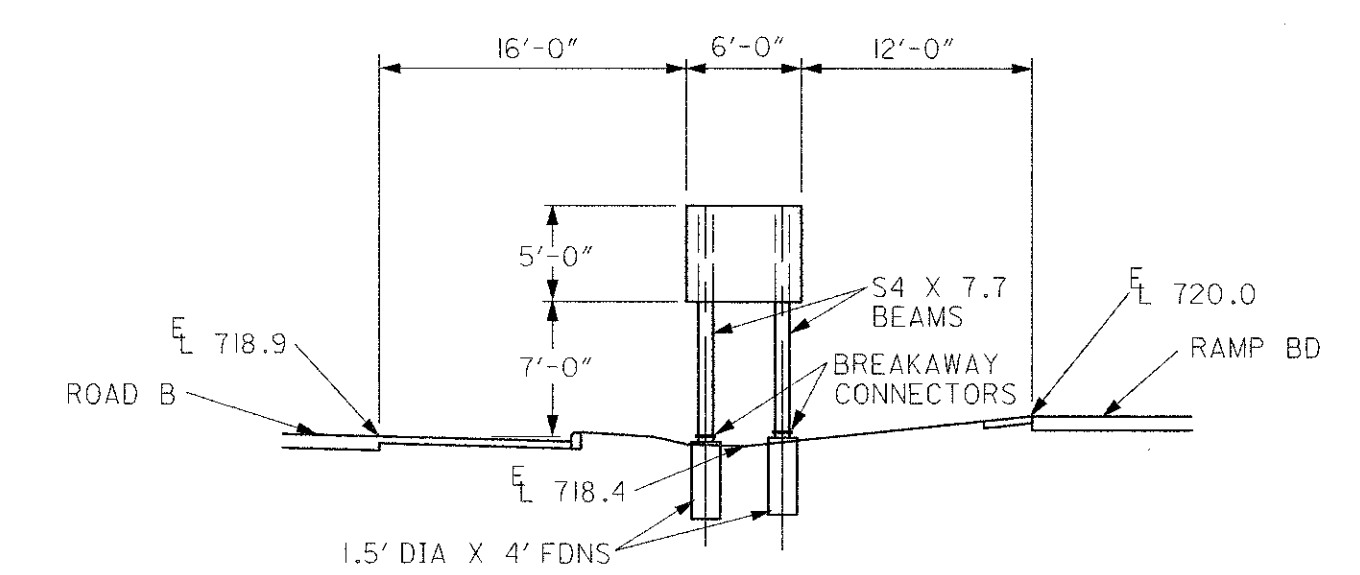
NOTE:  
THE CONTRACTOR MAY ADJUST THE 6'-0" LATERAL DIMENSION OF THE SIGN  $\bar{c}$  TO PAVEMENT  $\bar{c}$  SO THAT THE SIGN BRACKETS CLEAR THE INTERMEDIATE GIRDER STIFFENERS. ANY ADJUSTMENT SHOULD BE KEPT TO A MINIMUM.

⑨ ROAD D BRIDGE OVER ROAD B (BRIDGE MOUNTED)

	A
SIGN ATTACHMENT ASSEMBLIES	3 @ 7'-0"
LUMINAIRE SUPPORT ASSEMBLIES	2 @ 3'-3"



⑩ STA. 66+15 RT. SB ROAD B AND RAMP BC



⑪ STA. 66+34 LT. SB ROAD B AND RAMP BD

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THE DESCRIPTION OF THE WORK IS AS FOLLOWS:

EXISTING HIGH MAST LIGHTS WILL BE PROVIDED WITH NEW 400W HPS FIXTURES (INCREASE FROM 4 TO 6 FIXTURES AT 3 LOCATIONS). ALL OTHER EXISTING COMPONENTS WILL BE REUSED WITH THE EXCEPTION OF COMPONENTS FOUND TO BE DAMAGED WHICH SHALL BE REPAIRED OR REPLACED WITH SIMILAR COMPONENTS CONFORMING TO THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.

EXISTING UNDERDECK LUMINAIRES WITHIN THE INTERCHANGE OF I-71, I-70, SR 315 SHALL BE CLEANED AND INSPECTED. BROKEN OR DAMAGED PARTS SHALL BE REPLACED AND THE UNIT ADJUSTED AND RETURNED TO SERVICE WITH A NEW LAMP. THIS WORK IS LIMITED TO LUMINAIRES ON CIRCUITS B, C, D AND J.

EXISTING CONVENTIONAL LUMINAIRES ON CIRCUITS B, E, C, I AND J SHALL BE CLEANED AND INSPECTED. BROKEN OR DAMAGED PARTS SHALL BE REPLACED AND THE UNITS ADJUSTED AND RETURNED TO SERVICE WITH A NEW LAMP.

ALL UNUSED CONDUCTORS, CONDUITS OR APPARATUS WILL BE REMOVED.

**625 LIGHTING, MISCELLANEOUS: CLEAN, INSPECT AND REPAIR LUMINAIRES**

THE CONTRACTOR SHALL CLEAN THE LUMINAIRE AND REPLACE THE LAMP. ANY BROKEN, DAMAGED OR INOPERABLE PARTS SHALL BE REPAIRED OR REPLACED AS A PART OF THIS WORK. COVER SCREWS AND MOVING PARTS SHALL BE LUBRICATED. MIS-AIMED LUMINAIRES SHALL BE REALIGNED.

**625 LIGHTING, MISCELLANEOUS: UPGRADE CIRCUITS FROM 2/C TO 3/C (BY SIZE)**

THE CONTRACTOR SHALL CAREFULLY IDENTIFY EACH CABLE OF EACH CIRCUIT AND REMOVE CONNECTIONS. THE CABLES TO BE REMOVED SHALL BE LUBRICATED TO THE EXTENT POSSIBLE AND SHALL BE ATTACHED TO THE REPLACEMENT CABLES. THE OLD CABLES SHALL BE USED TO PULL IN THE REPLACEMENT CABLES FOR EACH RUN OF DUCT. IN THE EVENT THE EXISTING CABLES CANNOT BE MOVED IN THE EXISTING CONDUIT OR CABLE DUCT, THE CONTRACTOR SHALL REPLACE BOTH THE CABLES AND THE DUCT OR CONDUIT OF THAT PARTICULAR SECTION OF CIRCUIT. IN CASES WHERE MORE THAN ONE CIRCUIT OCCUPIES A COMMON CONDUIT, ALL CABLES IN THAT SEGMENT SHALL BE PULLED IN AT ONE TIME.

**625 LIGHTING, MISCELLANEOUS, CLEAN, INSPECT AND REPAIR PULLBOX**

THE CONTRACTOR SHALL INSPECT EACH PULLBOX ALONG THE MODIFIED CIRCUITS. EXISTING PULLBOXES NOT MEETING 713.08 AND ANY PULLBOX DAMAGED BEYOND REPAIR SHALL BE REPLACED WITH A NEW CONCRETE PULLBOX MEETING THE REQUIREMENTS OF 713.08 AND OF THE SAME NOMINAL SIZE. PULLBOXES SHALL BE CLEANED. EXISTING PULLBOX DRAINS SHALL BE CLEANED AND OPERABLE. MISSING OR BROKEN LIDS SHALL BE REPAIRED OR REPLACED AS NECESSARY. UNUSED OPENINGS WILL BE CLOSED.

**713.14 LAMPS**

HIGH PRESSURE SODIUM LAMPS SHALL BE GENERAL ELECTRIC "LUCALOX" PHILLIPS "CERAMALUX", SYLVANIA "LUMALUX", OR EQUAL APPROVED BY THE ENGINEER.

# LIGHTING NOTES

## ELECTRICAL TESTS

ALL NEWLY INSTALLED EQUIPMENT AND CABLES SHALL BE TESTED IN ACCORDANCE WITH 625.22. FAILURE OF ANY ITEM FURNISHED OR REBUILT BY THE CONTRACTOR SHALL REQUIRE THE CONTRACTOR TO REPLACE OR REBUILD THE ITEM IN ORDER TO PASS THE TEST.

## 625 LIGHTING, MISCELLANEOUS: REVISE CONTROL CENTER

THIS ITEM OF WORK SHALL INCLUDE REVISIONS TO ALL CIRCUITS AT THE CONTROL CENTER TO ACCOMMODATE THE PROPOSED 3-CONDUCTOR, 480 VOLT GROUNDED NEUTRAL SYSTEM. IT SHALL INCLUDE MODIFICATION OF THE CABINETS, ADDITION OF CONTACTORS AND FUSES AND ALL OTHER WORK NEEDED TO BRING THE CENTER INTO CONFORMANCE WITH THE NATIONAL ELECTRICAL CODE AND THE CONSTRUCTION AND MATERIAL SPECIFICATIONS. THIS ITEM SHALL ALSO INCLUDE COSTS OF THE POWER SUPPLY AGENCY TO ARRANGE FOR THE REQUIRED SERVICE. THE REQUIRED WORK AT EACH CONTROL CENTER IS AS FOLLOWS:

### CONTROL CENTER NO. 1

CIRCUIT A : CONVERT TO 3-WIRE 480 VOLT GROUNDED NEUTRAL SYSTEM; LOAD IS 8.9 AMPS

CIRCUIT B : CONVERT TO 3-WIRE, 480 VOLT GROUNDED NEUTRAL SYSTEM; LOAD IS 12.0 AMPS

CIRCUIT D : CONVERT TO 3-WIRE, 480 VOLT GROUNDED NEUTRAL SYSTEM; CALCULATED LOAD IS 12.0 AMPS

CIRCUIT E : CONVERT TO 3-WIRE, 480 VOLT GROUNDED NEUTRAL SYSTEM; CALCULATED LOAD IS 20.7 AMPS

CIRCUIT H : CONVERT TO 3-WIRE, 480 VOLT GROUNDED NEUTRAL SYSTEM; LOAD IS 21.2 AMPS

CONTROL CENTER NO. 2 NO WORK

### CONTROL CENTER NO. 3

REMOVE EXISTING LIGHTING CONTROL CENTER NO. 3 IN PUMP STATION ENCLOSURE.

CONSTRUCT NEW CONTROL CENTER NO. 3 AS SHOWN ON PLANS, INCLUDING: CONCRETE PAD, LIGHTING PANEL BRACKETS AND SUPPORTS, TRANSFORMERS WITH ENCLOSURES, CONTROL ENCLOSURES, METERS, PHOTOCCELL AND BOLLARDS FOR PROTECTION. THE CONTROL CENTER SHALL HAVE TWO PURPOSES: THE FIRST TO SUPPLY THE LIGHTING CIRCUIT AND THE SECOND, TO SUPPLY THE WEATHER STATION. IT SHALL BE FED BY A NEW UNDERGROUND CIRCUIT FROM AN EXISTING POWER POLE ABOUT 245 FT. TO THE EAST.

CIRCUIT C : CONVERT TO 3-WIRE, 480 VOLT GROUNDED NEUTRAL SYSTEM; CALCULATED LOAD IS 14.8 AMPS

CIRCUIT I : CONVERT TO 3-WIRE, 480 VOLT GROUNDED NEUTRAL SYSTEM; CALCULATED LOAD IS 29.6 AMPS

CIRCUIT J : CONVERT TO 3-WIRE, 480 VOLT GROUNDED NEUTRAL SYSTEM; CALCULATED LOAD IS 14.4 AMPS

## HIGH MAST LUMINAIRES

THE LUMINAIRE ARRAYS AND ASSOCIATED ILLUMINATION TEST AREAS SPECIFIED IN SECTION 713.21 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS ARE HEREBY WAIVED FOR THIS PROJECT. INSTEAD, LUMINAIRES FOR TOWER LIGHTING SHALL MEET THE FOLLOWING REQUIREMENTS.

SYMMETRIC, TYPE V, LUMINAIRES FOR TOWER LIGHTING MAY BE HOLOPHANE "HMST" TEST #36383, OR GENERAL ELECTRIC "HM" TEST #6312, OR COOPER "HAL" TEST #48381. ALL HIGH MAST LUMINAIRES PROVIDED SHALL BE OF THE SAME MANUFACTURER.

IN ADDITION, OTHER LUMINAIRES WILL BE CONSIDERED IF THE DESIGNED INTENSITY AND UNIFORMITY ARE PROVIDED USING THE DESIGNED POLE LOCATIONS AND THE DESIGNED NUMBER AND TYPE OF FIXTURE PER POLE.

## 625 SERVICE TO UNDERPASS LIGHTING, AS PER PLAN

THE CONTRACTOR SHALL REPLACE THE TWO CONDUCTORS LEADING TO THE UNDERPASS LUMINAIRES, FROM THE SPLICE TO DISTRIBUTION CABLE AT THE ADJACENT PULLBOX OR JUNCTION BOX, WITH NEW 3-CONDUCTOR # 10 AWG POLE AND BRACKET CABLE. BROKEN OR DISCONNECTED CONDUIT, OR CONDUIT AND FITTINGS THAT ARE NOT SECURELY ATTACHED, SHALL BE REPAIRED, REPLACED AND/OR FASTENED SECURELY.

## 625 LIGHTING, MISCELLANEOUS: MODIFY LIGHT TOWER

- ADD AND RESPACE LUMINAIRE MOUNTING ARMS ON LUMINAIRE RING AS REQUIRED.
- MODIFY AND REPLACE LUMINAIRE RING WIRING AS REQUIRED.
- WIRING LABELS AND POLE DECALS SHALL BE SERVICEABLE AND REFLECT THE COMPLETED CIRCUITRY.
- ANY BROKEN, DAMAGED OR INOPERABLE PARTS SHALL BE REPAIRED OR REPLACED AS A PART OF THIS WORK.

## PAYMENT

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM "SPECIAL - MISCELLANEOUS: LIGHTING".

## 625 SERVICE TO UNDERPASS LIGHTING

THIS ITEM SHALL INCLUDE ALL LABOR EQUIPMENT AND MATERIALS REQUIRED TO PROVIDE ELECTRICAL SERVICE TO A GROUP OF UNDERPASS LUMINAIRES, FROM AN ADJACENT PULLBOX. CONDUCTORS SHALL BE (3) NO. 10 AWG POLE AND BRACKET CABLE, WHICH SHALL BE ENCLOSED IN RIGID METAL CONDUIT AND FITTINGS IN ACCORDANCE WITH ITEM 713.04.

CALCULATED  
GSC-  
CHECKED

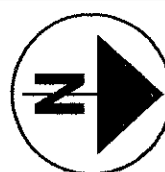
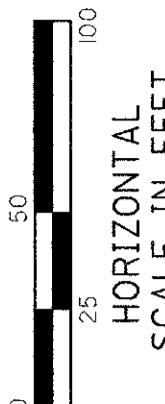
LIGHTING PLAN NOTES

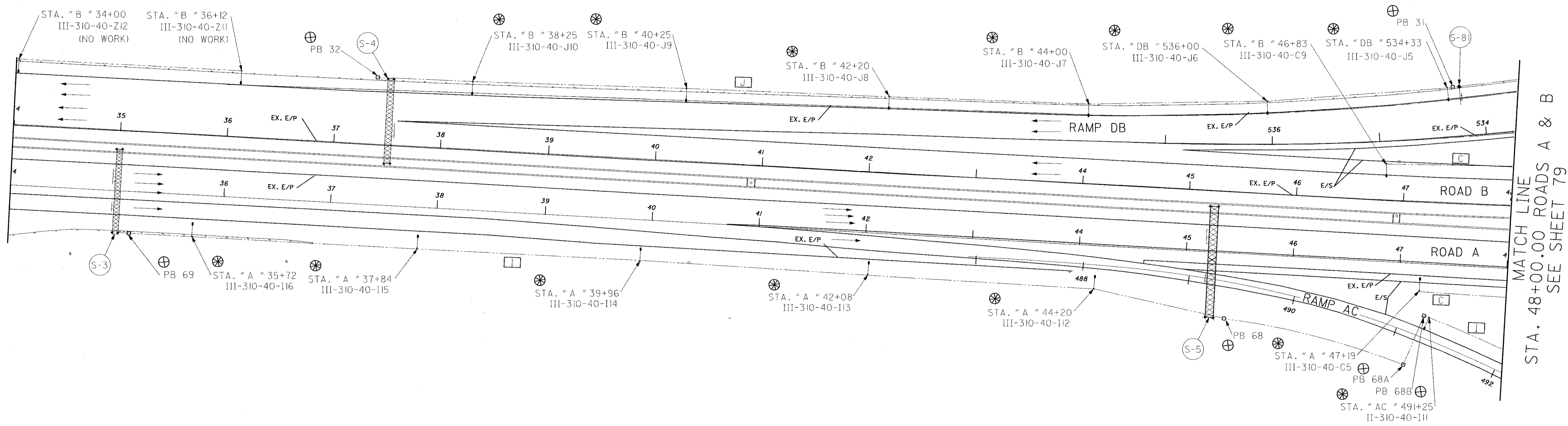
FRA - 71-14.39,  
FRA - 315-0.00

77  
89









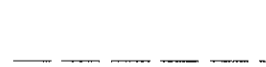


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 HORIZONTAL SCALE IN FEET  
 CALCULATED \_\_\_\_\_  
 CHECKED \_\_\_\_\_



**LEGEND**

-  CLEAN, INSPECT AND REPAIR LUMINAIRE
-  CLEAN, INSPECT AND REPAIR PULLBOX
-  CIRCUIT DESIGNATION
-  HIGHMAST TOWER (6 LUMINAIRES)
-  HIGHMAST TOWER (4 LUMINAIRES)
-  LUMINAIRE 200W
-  LUMINAIRE 310W
-  UNDERDECK LUMINAIRES & SERVICE
-  PROPOSED 3/C #4 AWG CABLE IN NEW CONDUIT OR DUCT
-  EXISTING CIRCUIT TO REMAIN
-  UPGRADE CIRCUIT CABLE FROM 2/C TO 3/C #4 AWG

MATCH LINE  
 STA. 48+00.00 ROADS A & B  
 SEE SHEET 79

**ROAD A & B BEGIN WORK TO STA. 48+00**

**FRA-71-14.39**  
**FRA-315-0.00**



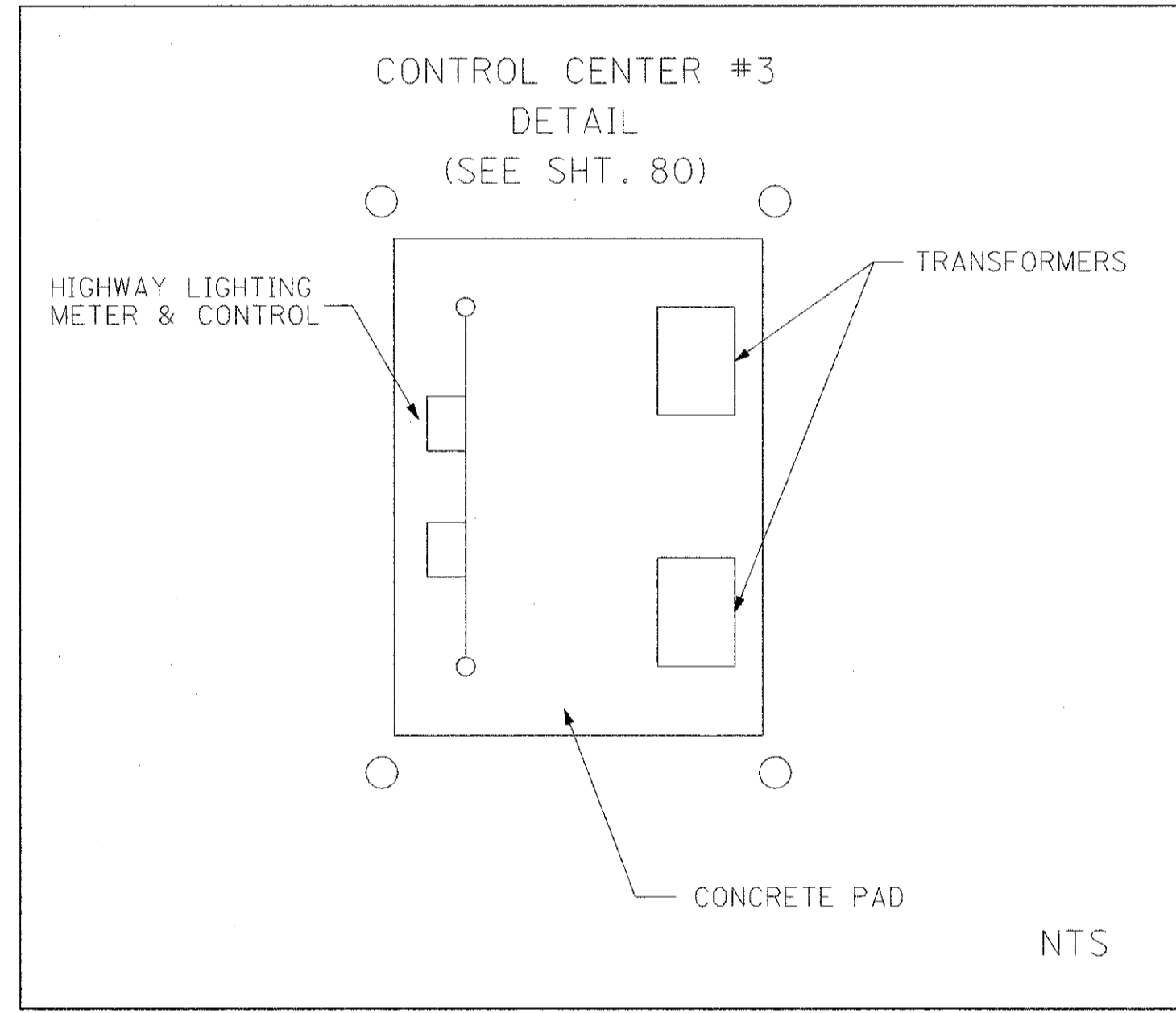
CALCULATED  
CHECKED

**LIGHTING PLAN**  
**ROAD A & B STA. 48+00 TO 57+00**

**FRA-71-14.39**  
**FRA-315-0.0**

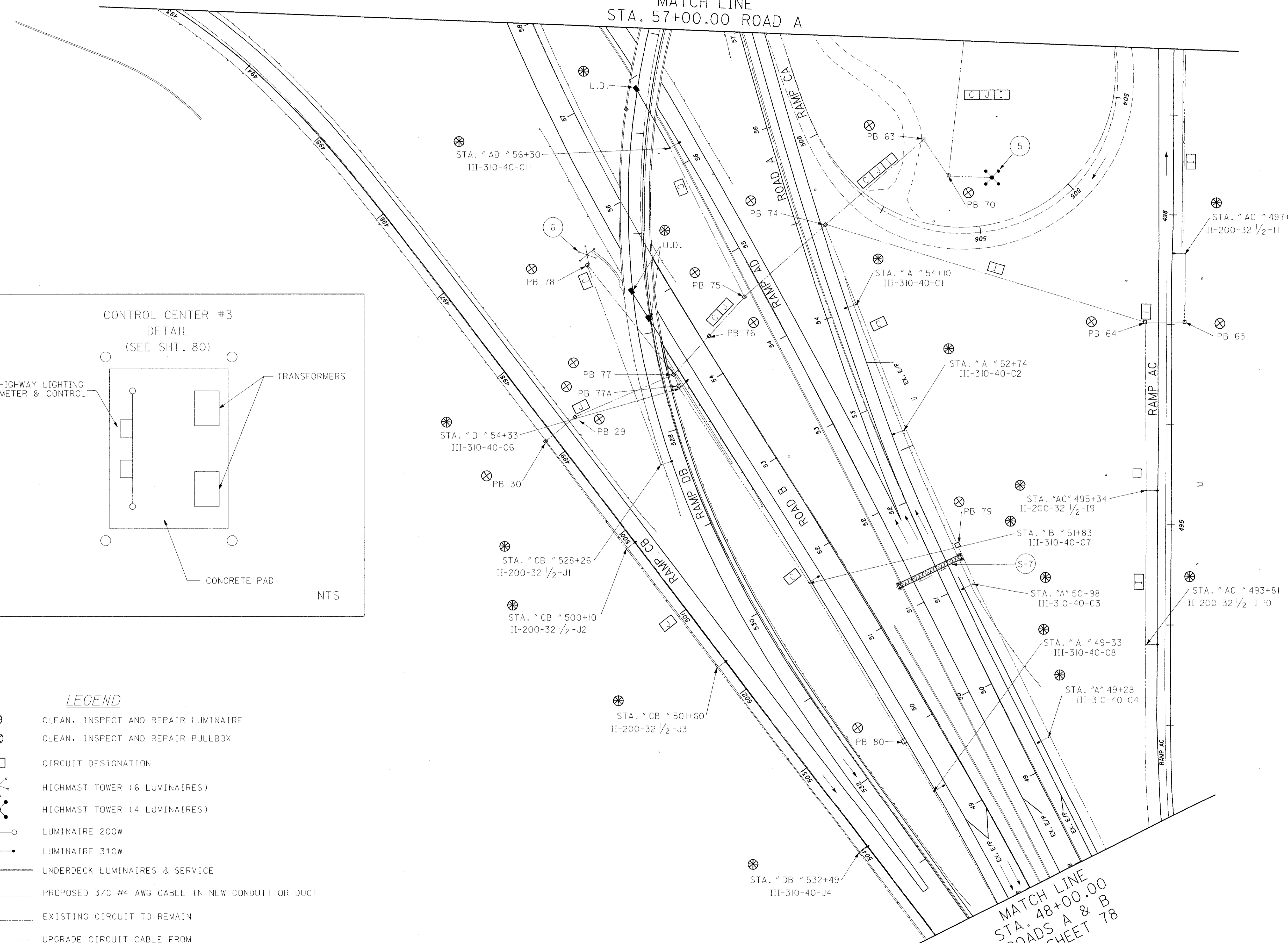
SEE SHEET 80  
MATCH LINE  
STA. 57+00.00 ROAD A

MATCH LINE  
STA. 48+00.00  
ROADS A & B  
SEE SHEET 78



**LEGEND**

- CLEAN, INSPECT AND REPAIR LUMINAIRE
- CLEAN, INSPECT AND REPAIR PULLBOX
- CIRCUIT DESIGNATION
- HIGHMAST TOWER (6 LUMINAIRES)
- HIGHMAST TOWER (4 LUMINAIRES)
- LUMINAIRE 200W
- LUMINAIRE 310W
- UNDERDECK LUMINAIRES & SERVICE
- PROPOSED 3/C #4 AWG CABLE IN NEW CONDUIT OR DUCT
- EXISTING CIRCUIT TO REMAIN
- UPGRADE CIRCUIT CABLE FROM 2/C TO 3/C #4 AWG

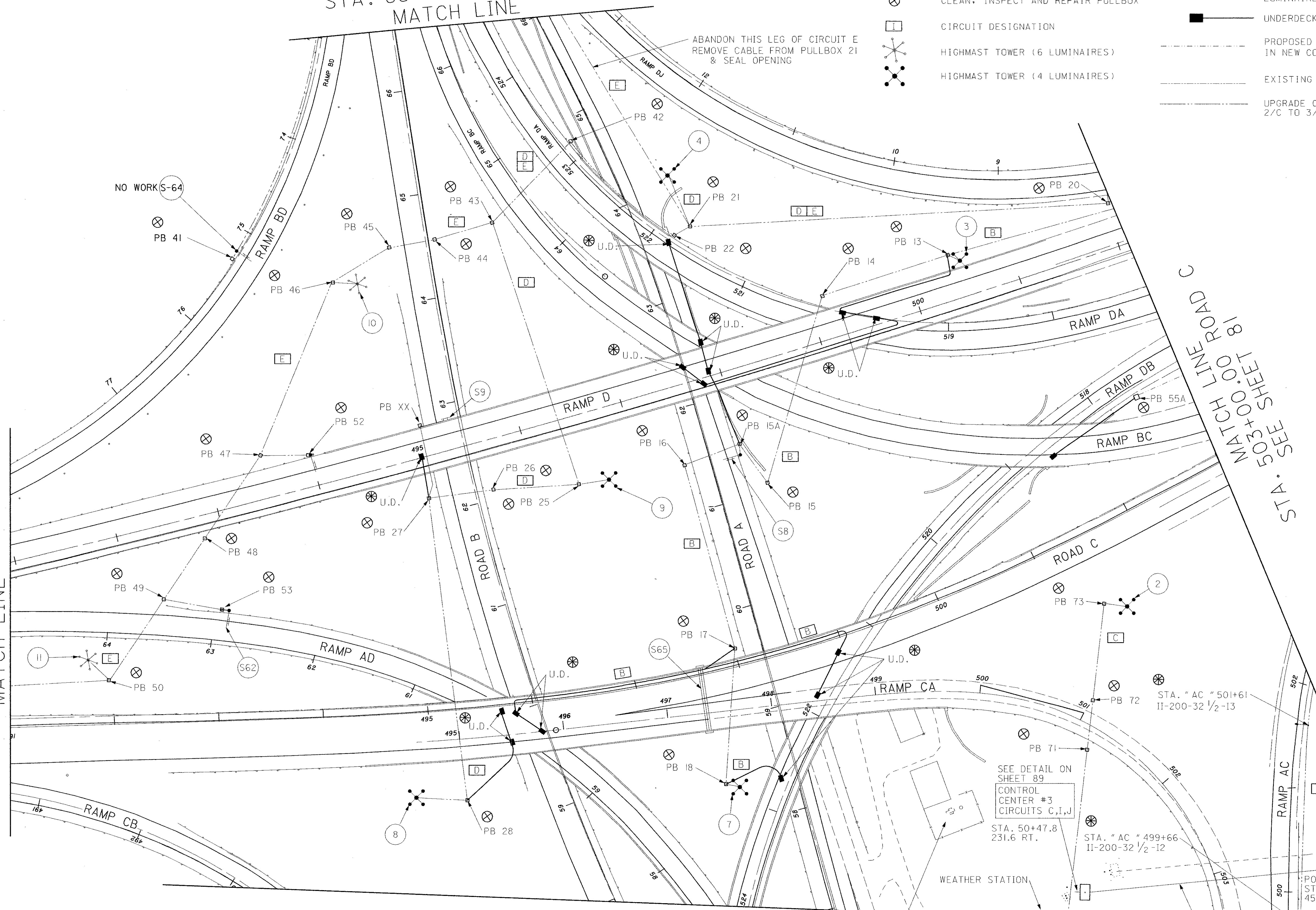


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DATE: 05/15/02 08:36:18 AM  
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SEE SHEET 84  
 STA. 491+00.00 ROAD C  
 MATCH LINE

SEE SHEET 85  
 STA. 66+00.00 ROAD A  
 MATCH LINE



MATCH LINE  
 STA. 57+00.00 ROAD A  
 SEE SHEET 79

**LEGEND**

- CLEAN, INSPECT AND REPAIR LUMINAIRE
- CLEAN, INSPECT AND REPAIR PULLBOX
- CIRCUIT DESIGNATION
- HIGHMAST TOWER (6 LUMINAIRES)
- HIGHMAST TOWER (4 LUMINAIRES)
- LUMINAIRE 200W
- LUMINAIRE 310W
- UNDERDECK LUMINAIRES & SERVICE
- PROPOSED 3/C #4 AWG CABLE IN NEW CONDUIT OR DUCT
- EXISTING CIRCUIT TO REMAIN
- UPGRADE CIRCUIT CABLE FROM 2/C TO 3/C #4 AWG

N

0 25 50 100  
 HORIZONTAL  
 SCALE IN FEET

CALCULATED  
 CHECKED

**FRA-71-14.39**  
**ROAD C STA. 491+00 TO 503+00**  
**ROAD A STA. 57+00 TO 66+00**

**FRA-71-14.39**  
**ROAD C STA. 491+00 TO 503+00**  
**ROAD A STA. 57+00 TO 66+00**

80  
 89

SEE DETAIL ON SHEET 89  
 CONTROL CENTER #3  
 CIRCUITS C,I,J  
 STA. 50+47.8  
 231.6 RT.

STA. "AC" 499+66  
 II-200-32 1/2-12

STA. "AC" 501+61  
 II-200-32 1/2-13

WEATHER STATION

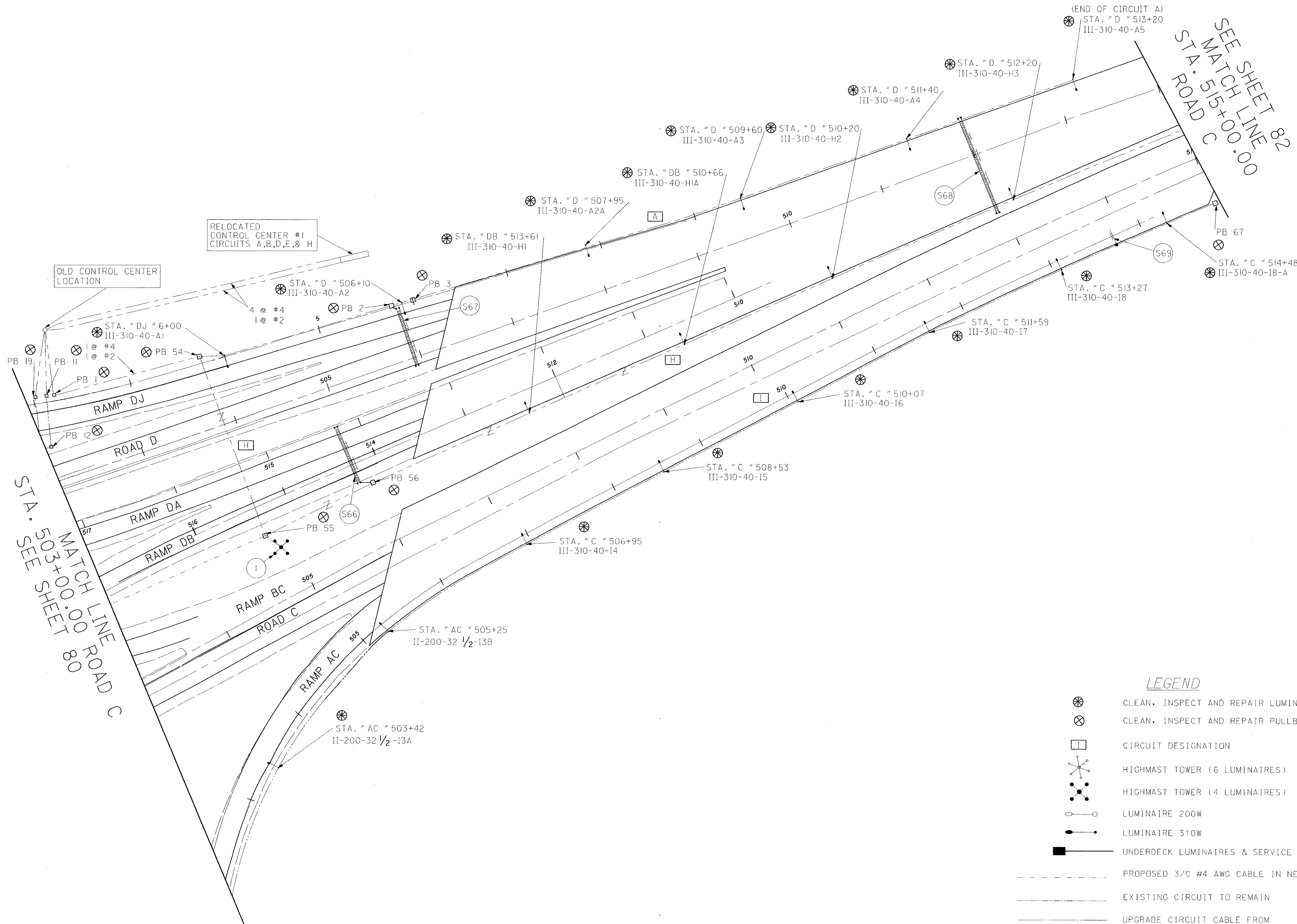
REMOVE EXISTING CONTROL CENTER COMPONENTS AND ABANDON CABLES

POWER DROP POLE  
 STA. 500+22  
 45° RT.

CONDUIT FOR SERVICE TO LIGHTING AND WEATHER STATION

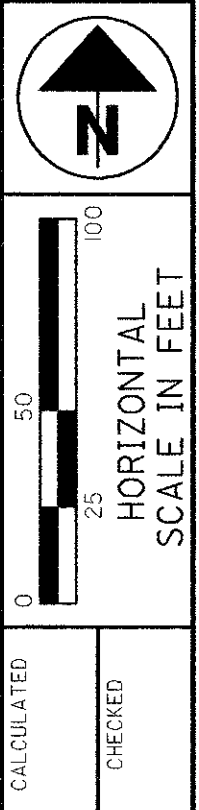
ABANDON THIS LEG OF CIRCUIT E  
 REMOVE CABLE FROM PULLBOX 21  
 & SEAL OPENING

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**LEGEND**

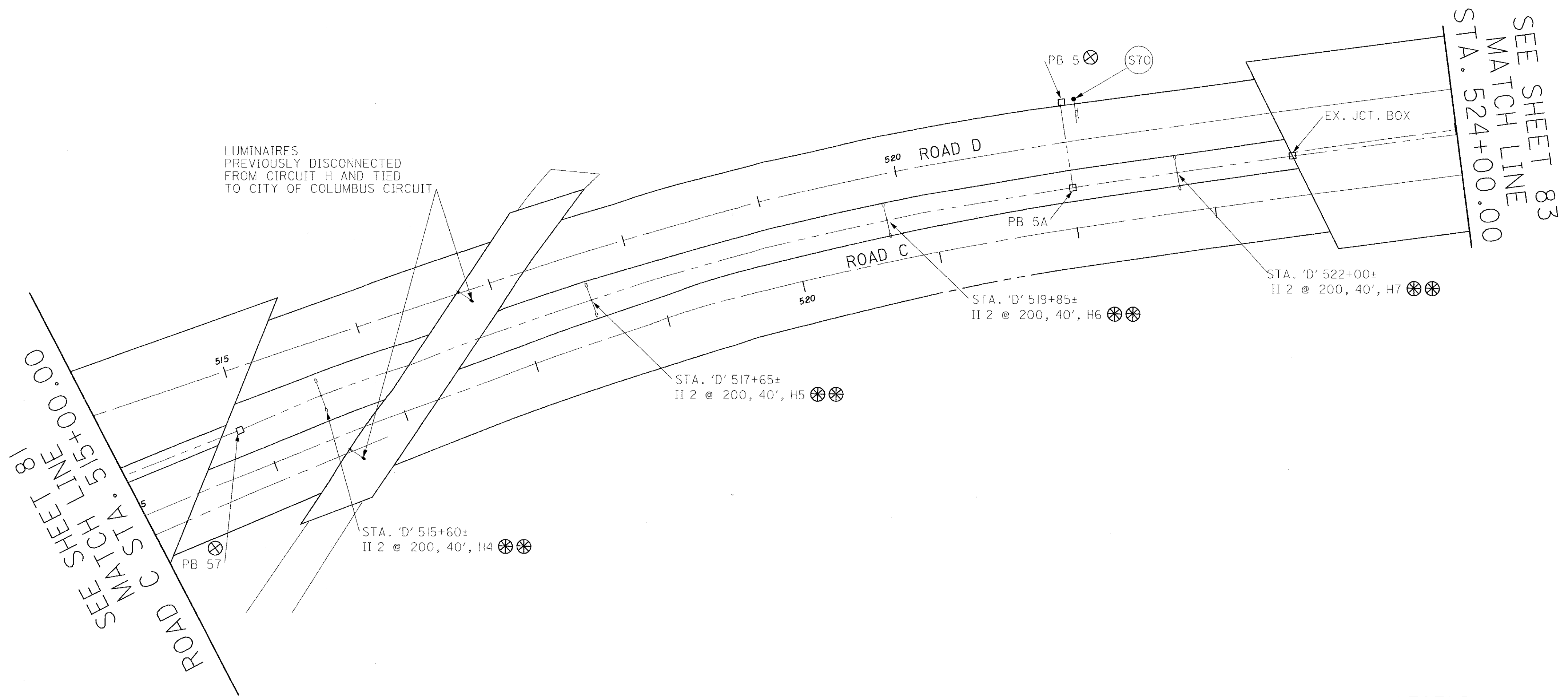
- CLEAN, INSPECT AND REPAIR LUMINAIRE
- CLEAN, INSPECT AND REPAIR PULLBOX
- CIRCUIT DESIGNATION
- HIGHMAST TOWER (6 LUMINAIRE)
- HIGHMAST TOWER (4 LUMINAIRE)
- LUMINAIRE 200W
- LUMINAIRE 310W
- UNDERDECK LUMINAIRE & SERVICE
- PROPOSED 3/C #4 AWG CABLE IN NEW CONDUIT OR DUCT
- EXISTING CIRCUIT TO REMAIN
- UPGRADE CIRCUIT CABLE FROM 2/C TO 3/C #4 AWG
- 2/C TO 3/C #2 AWG



LIGHTING PLAN  
 ROAD C STA. 503+00 TO ROAD C 514+00

FRA-71-14.39  
 FRA-315-0.0





**LEGEND**

- CLEAN, INSPECT AND REPAIR LUMINAIRE
- CLEAN, INSPECT AND REPAIR PULLBOX
- CIRCUIT DESIGNATION
- HIGHMAST TOWER (6 LUMINAIRE)
- HIGHMAST TOWER (4 LUMINAIRE)
- LUMINAIRE 200W
- LUMINAIRE 310W
- UNDERDECK LUMINAIRE & SERVICE
- PROPOSED 3/C #4 AWG CABLE IN NEW CONDUIT OR DUCT
- EXISTING CIRCUIT TO REMAIN
- UPGRADE CIRCUIT CABLE FROM 2/C TO 3/C #4 AWG
- TWIN LUMINAIRE 200W

CALCULATED  
 CHECKED

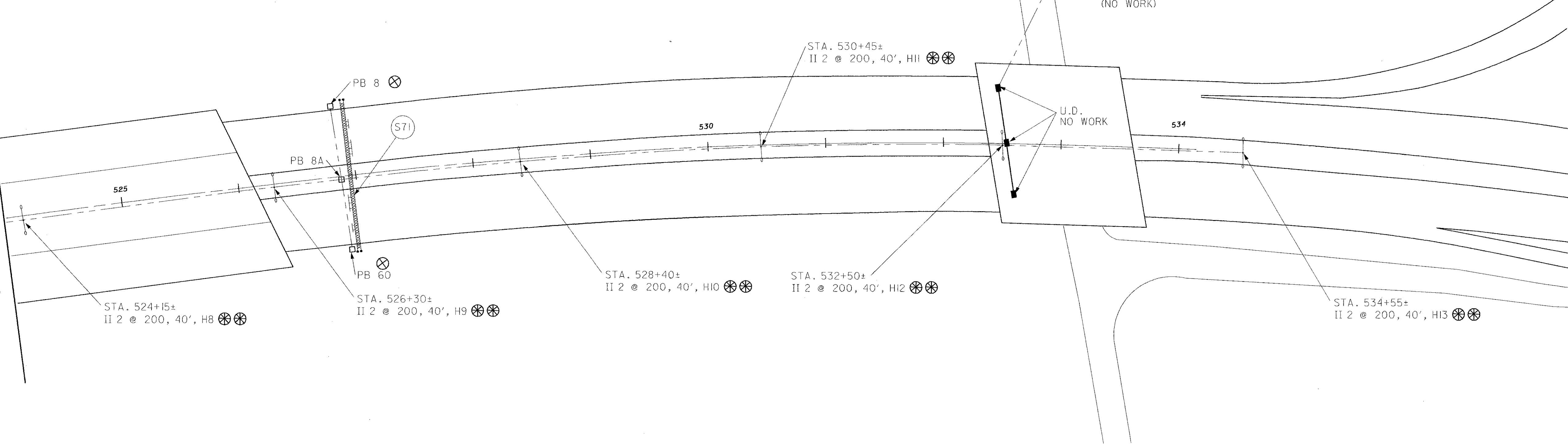
HORIZONTAL SCALE IN FEET

**LIGHTING PLAN**  
**ROAD C STA. 515+00 TO 524+00**

**FRA-71-14.39**  
**FRA-315-0.0**

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SEE SHEET 82  
 MATCH LINE  
 STA. 524+00.00



**LEGEND**

- CLEAN, INSPECT AND REPAIR LUMINAIRE
- CLEAN, INSPECT AND REPAIR PULLBOX
- CIRCUIT DESIGNATION
- HIGHMAST TOWER (6 LUMINAIRE)
- HIGHMAST TOWER (4 LUMINAIRE)
- LUMINAIRE 200W
- LUMINAIRE 310W
- UNDERDECK LUMINAIRE & SERVICE
- PROPOSED 3/C #4 AWG CABLE IN NEW CONDUIT OR DUCT
- EXISTING CIRCUIT TO REMAIN
- UPGRADE CIRCUIT CABLE FROM 2/C TO 3/C #4 AWG
- TWIN LUMINAIRE 200W









CALCULATED  
 CHECKED

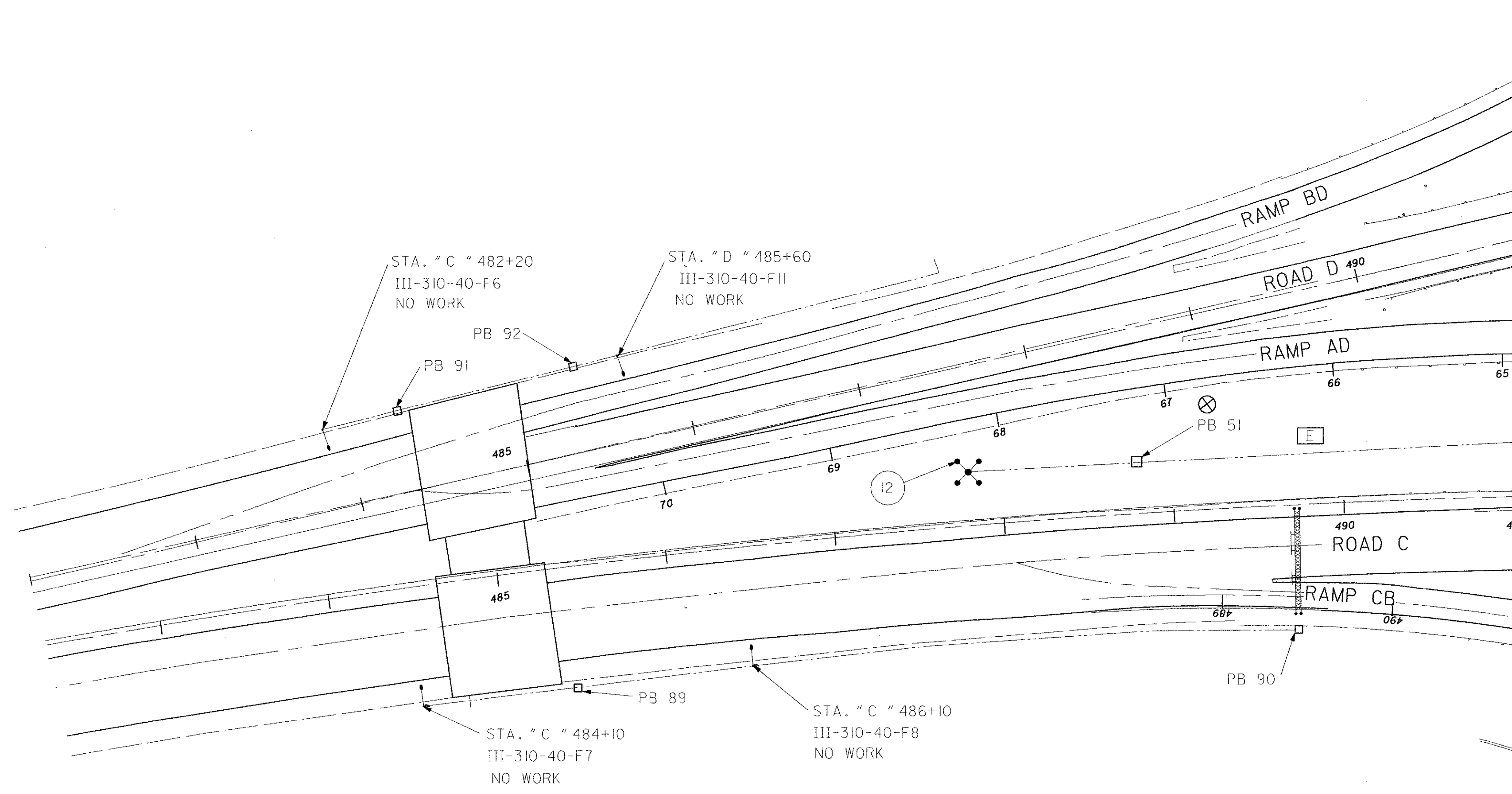
0 50 100  
 HORIZONTAL  
 SCALE IN FEET

**LIGHTING PLAN  
 ROAD C STA. 524+00 TO END**

**FRA-71-14.39  
 FRA-315-0.0**

**LEGEND**

-  CLEAN, INSPECT AND REPAIR LUMINAIRE
-  CLEAN, INSPECT AND REPAIR PULLBOX
-  CIRCUIT DESIGNATION
-  HIGHMAST TOWER (6 LUMINAIRES)
-  HIGHMAST TOWER (4 LUMINAIRES)
-  LUMINAIRE 200W
-  LUMINAIRE 310W
-  UNDERDECK LUMINAIRES & SERVICE
-  PROPOSED 3/C #4 AWG CABLE IN NEW CONDUIT OR DUCT
-  EXISTING CIRCUIT TO REMAIN
-  UPGRADE CIRCUIT CABLE FROM 2/C TO 3/C #4 AWG



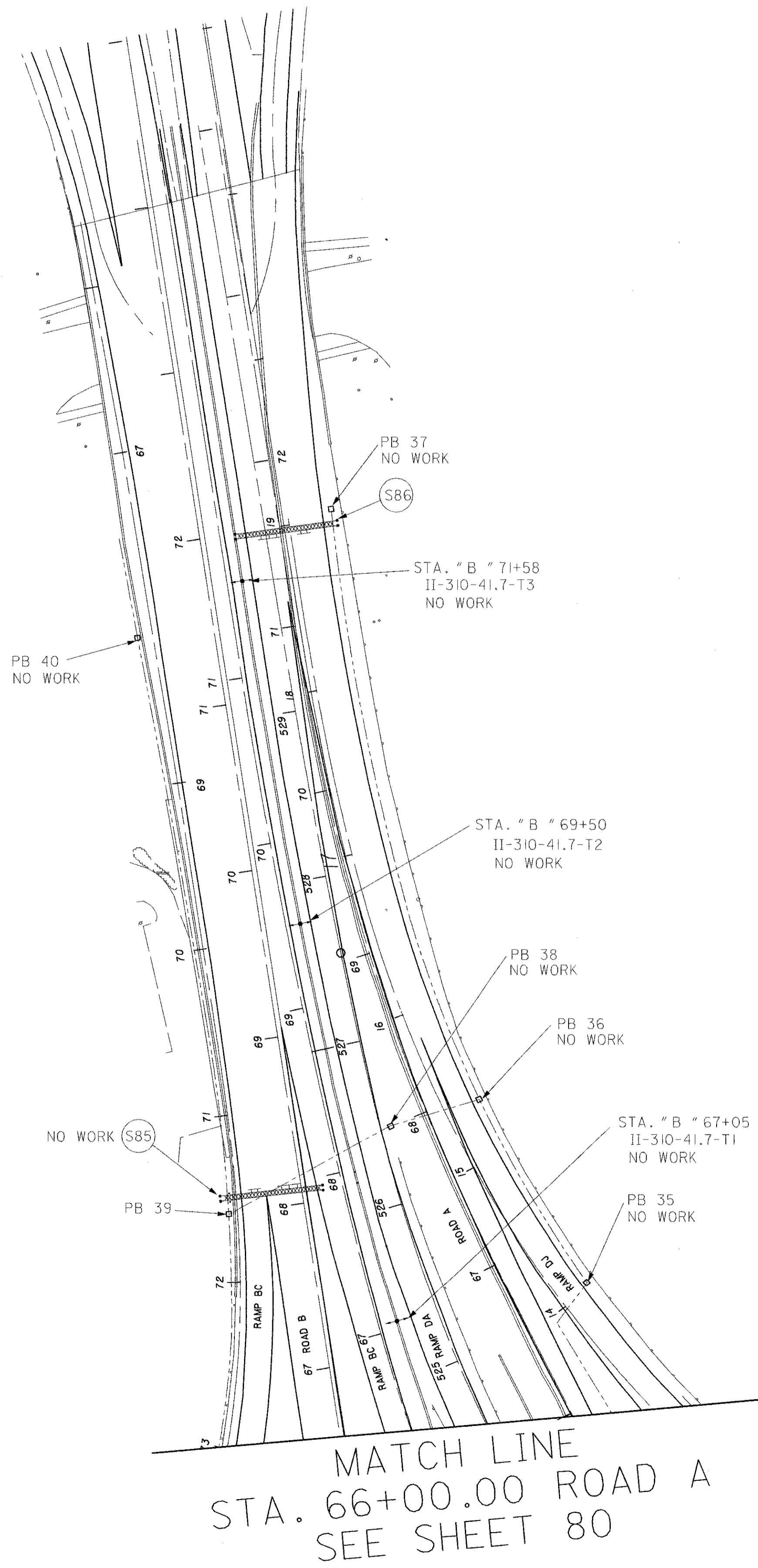
MATCH LINE  
 ROAD C STA. 491+00  
 SEE SHEET 80

CALCULATED  
 CHECKED

0 50 100  
 HORIZONTAL  
 SCALE IN FEET

**LIGHTING PLAN**  
**ROAD C STA. 491+00 TO END OF WORK**

**FRA-71-14.39**  
**FRA-315-0.0**



- LEGEND**
- CLEAN, INSPECT AND REPAIR LUMINAIRE
  - CLEAN, INSPECT AND REPAIR PULLBOX
  - CIRCUIT DESIGNATION
  - HIGHMAST TOWER (6 LUMINAIRES)
  - HIGHMAST TOWER (4 LUMINAIRES)
  - LUMINAIRE 200W
  - LUMINAIRE 310W
  - UNDERDECK LUMINAIRES & SERVICE
  - PROPOSED 3/C #4 AWG CABLE IN NEW CONDUIT OR DUCT
  - EXISTING CIRCUIT TO REMAIN
  - UPGRADE CIRCUIT CABLE FROM 2/C TO 3/C #4 AWG

CALCULATED  
 CHECKED

0 50 100  
 HORIZONTAL  
 SCALE IN FEET

**LIGHTING PLAN**  
**ROAD A STA. 66+00 TO EMD OF WORK**

**FRA-71-14.39**  
**FRA-315-0.0**

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CIRCUIT	PULLBOX, LIGHT POLE OR TOWER NUMBERS FOR REFERENCE NO.	SIDE	SHEET NO.	STATION TO STATION	625	625	625	625	625	625	625	625	625	625	625	625	625				
					CONNECTOR KIT TYPE II	CABLE SPLICING KIT	1-1/2 INCH DUCT CABLE W/3-#4 AWG	LUMINAIRE, HIGHMAST TYPE V, 400W HPS.	LUMINAIRE UNDERPASS 100W	TRENCH	SERVICE TO UNDERPASS LIGHTING AS PER PLAN	SERVICE TO UNDERPASS LIGHTING	LIGHTING MISC.: REVISE CONTROL CENTER	LIGHTING MISC.: CLEAN INSPECT & REPAIR LUMINAIRE	LIGHTING MISC.: CLEAN INSPECT & REPAIR PULLBOX	LIGHTING MISC.: UPGRADE CIRCUIT FROM 2/C TO 3/C #4 AWG 5000 VOLT	LIGHTING MISC.: UPGRADE CIRCUIT FROM 2/C TO 3/C #2 AWG 5000 VOLT	PULLBOX 713.08 18"	LIGHTING MISC.: MODIFY LIGHT TOWER		
					EA.	EA.	LF.	EA.	EA.	LF.	LUMP	EA.	EA.	EA.	EA.	L.F.	L.F.	EA.	EA.		
J	32-NORTH	LT.	78	37+40 B TO 533+72 DB	12	6								6	2	1140				1060	
I	69-NORTH	RT.	78	35+10 A TO 492+10 AC	12	12								6	4	1420				1335	
C	C9-NORTH	LT.	78	46+83 B TO 48+00 B	2									1		125				120	
C	C5-NORTH	RT.	78	47+24 A TO 48+00 A	2									1		85				80	
E	T12-50	LT.	83,80	487+50 D TO 491+60 C		6		10							2	460			1	440	
E	50-46	X'ING	80	491+60 C TO 75+00 BD		12		6							4	480			1	435	
E	49-53	RT.	80	63+50 AD TO 62+95 AD		3									1	70				60	
E	47-52	LT.	80	493+35 D TO 493+90 D		3									1	55				45	
E	46-43	X'ING	80	75+00 BD TO 64+70 BC		12									3	190				160	
D	T8-27	LT.	80	494+40 C TO 62+20 B		6		4							2	360				340	
D	28	LT.	80	60+00 AD TO UNDERDECK							1			2							
D	27	LT.	80	62+20 B TO UNDERDECK							1			1							
D	27-PBXX	LT.	80	62+20 B TO 62+80 B		3									1	80				70	
D	27-T9	X'ING	80	62+20 B TO 62+00 B		6		4							2	195				175	
D	25-43	RT.	80	62+10 B TO 64+70 BC												280				265	
DE	43-42	X'ING	80	64+70 BC TO 523+15 DA		6									1	240				110	
DE	42-22	RT.	80	523+15 DA TO 521+70 DA		6									1	300				140	
DE	22-20	LT.	80	521+70 DA TO 8+40 DJ		12		4							2	940				420	
B	T7-16	LT.	80	58+30 A TO 61+60 A		9		4							3	370				330	
B	18	RT.	80	522+85 DB TO UNDERDECK							1			1							
B	17	LT.	80	59+80 A TO UNDERDECK							1			4							
B	16-15	X'ING	80	61+60 A TO 61+20 A		6									2	120				100	
B	15A	RT.	80	61+60 A TO UNDERDECK							1			3							
B	15-14	X'ING	80	61+20 A TO 520+35 DA		3									1	190				180	
B	14-12	LT.	80,81	520+35 DA TO 502+10 D		6		4							2	335				310	
B	13	LT.	80	500+30 D TO UNDERDECK							1			4							
DE	20-19	X'ING	80,81	8+40 DJ TO 8+40 DJ		6									1	120				50	
B	12-11	X'ING	80,81	8+10 DJ TO 8+10 DJ		3									1	80				60	
BDE	CCI	RT.	81	8+20 DJ TO CONTROL CENTER									1								
ABDEH	CC 1	RT.	81	7+90± DJ TO 4+40± DJ		30							1		3	1560	390				
				TIE BACK TO RELOCATED CON. CENT. #1																380	
AH	CCI-1	RT.	81	CTRL CTR #1 TO 7+95 DJ		6									1	20	20			10	
AH	1-54-3	RT.	81	7+95 DJ TO 506+30 D	4	12								2	3	390	155			380	
A	3-A5	LT.	81	506+30 D TO 515+60 D	8	0								4		780				710	
H	54-T1	X-ING	81	6+20 DJ TO 515+20 DB		3		4							1					210	
H	55-55A	LT.	81,82	515+40 DB TO UNDER DECK		3	225		1	215										215	
H	55-56	LT.	81	515+40 DB TO 514+10 DB		3									1					120	
H	56-57	LT.	81,82	514+10 DB TO 515+85 C	8	3								4	1	680	360			990	
H	57-5A	C.L.	82	515+85 C TO 522+00 D	6	3								6	1	665				625	
H	5A-J. BOX	C.L.	82	522+00 D TO 522+85 D	2	3								2	1	180				160	
H	J. BOX-8A	C.L.	82,83	522+85 TO 526+90	4	3								4	1	440				410	
H	8A-HI3	C.L.	83	526+90 TO 534+55	8	-								8	-	805				765	
H	5A-5	LT.	82	522+00 D		3									1	70				60	
H	8A-8	LT.	83	526+90		3									1	70				60	
H	8A-60	RT.	83	526+90		3									1	70				60	
<b>TOTALS CARRIED TO SHEET #87</b>					68	204	225	40	1	215	6	1	2	59	52	13,365	1275	1	2		

**LIGHTING SUBSUMMARY**

**FRA-71-14.39  
FRA-315-0.00**

CALCULATED  
GSC  
CHECKED

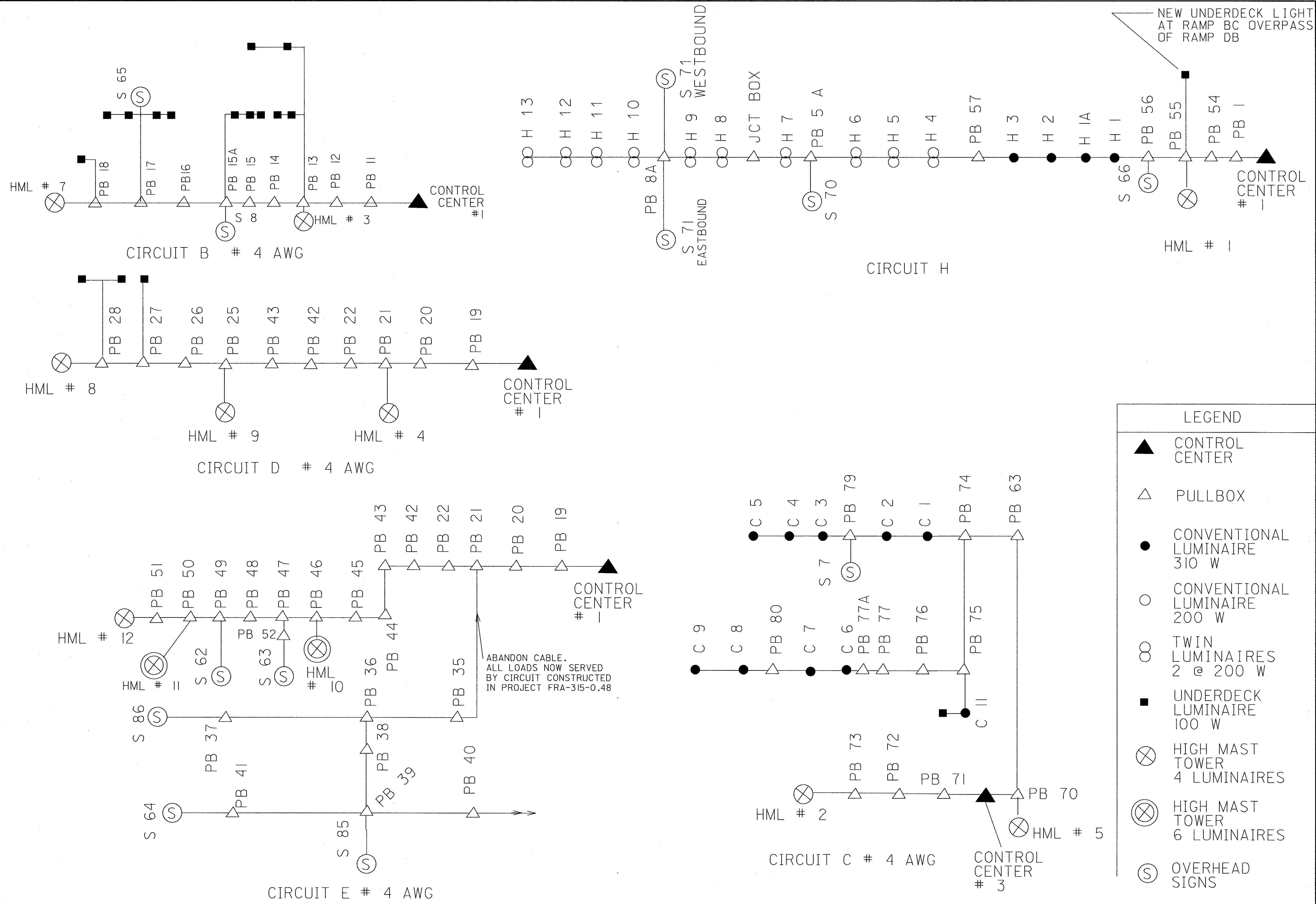
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CIRCUIT	PULLBOX, LIGHT POLE OR TOWER NUMBERS FOR REFERENCE NO.	SIDE	SHEET NO.	STATION TO STATION	625	625	625	625	625	625	625	625	625	625	625	625	625	625			
					CONNECTOR KIT TYPE II	CABLE SPLICING KIT	1-1/2 INCH DUCT CABLE W/3-#4 AWG	LUMINAIRE, HIGHMAST TYPE V, 400W HPS.	LUMINAIRE UNDERPASS 100W	TRENCH	SERVICE TO UNDERPASS LIGHTING AS PER PLAN	SERVICE TO UNDERPASS LIGHTING	LIGHTING MSC.: REVISE CONTROL CENTER	LIGHTING MSC.: CLEAN INSPECT & REPAIR LUMINAIRE	LIGHTING MSC.: CLEAN INSPECT & REPAIR PULLBOX	LIGHTING MSC.: UPGRADE CIRCUIT FROM 2/C TO 3/C #4 AWG 5000 VOLT	LIGHTING MSC.: UPGRADE CIRCUIT FROM 2/C TO 3/C #2 AWG 5000 VOLT	PULLBOX 713.08 18"	LIGHTING MSC.: MODIFY LIGHT TOWER		
					EA.	EA.	LF.	EA.	EA.	LF.	LUMP	EA.	EA.	EA.	EA.	L.F.	L.F.	EA.	EA.		
J	30-SOUTH	RT.	79	498+80 CB TO 534+72 DB	6	3								3	1	665					630
J	30-77	X'ING	79	498+80 CB TO 54+50 B		9									2	165					145
J	77-JI	LT.	79	54+50 B TO 528+26 DB	2	3		6						1	1	390				1	350
J	77	LT.	79	54+50 B TO UNDERDECK							1			2							
C	77-SOUTH	LT.	79	54+50 B TO 48+00 B	6	3								3	2	655					620
CJ	77-74	X'ING	79	54+50 B TO 54+90 A		21									3	530					235
J	75-NORTH	LT.	79	54+60 AD TO 56+30 AD	2									1		185					175
J	CII	LT.	79	56+30 AD TO UNDERDECK							1			1							70
C	74-SOUTH	RT.	79	54+90 A TO 48+00 A	8	3								4	1	740					685
I	74-65	X'ING	79	54+90 A TO 497+20 AC		6									2	395					380
I	64-SOUTH	LT.	79	497+20 AC TO 492+10 AC	4									2		525					505
I	65-67	RT.	79,81	497+20 AC TO 514+98 C	22	3								11	1	1905					1775
CIJ	74-63	X'ING	79	54+90 A TO 508+00 CA		9									1	420					130
CIJ	63-70	RT.	79	508+00 CA TO 506+80 CA		9									1	165					45
CIJ	70-CC3	RT.	79	506+80 CA TO 508+55 CA		9		8					1			595		1			170
C	CC3-73	RT.	80	508+55 CA TO 501+30 C		3									3	325					290
	CC3-PP	X'ING.	80	508+55 CA TO LOCATION OF POWER POLE OUTSIDE OF RAMP AC		3	255			245											245
<b>TOTALS THIS SHEET</b>					50	84	255	14	0	245	2	0	1	28	18	7660		1	1		
<b>TOTALS SHEET 86</b>					68	204	225	40	1	215	6	1	2	59	52	13,365	1275	1	2		
<b>TOTAL CARRIED TO GENERAL SUMMARY</b>					118	288	480	54	1	460	8	1	3	87	70	21,025	1275	2	3		

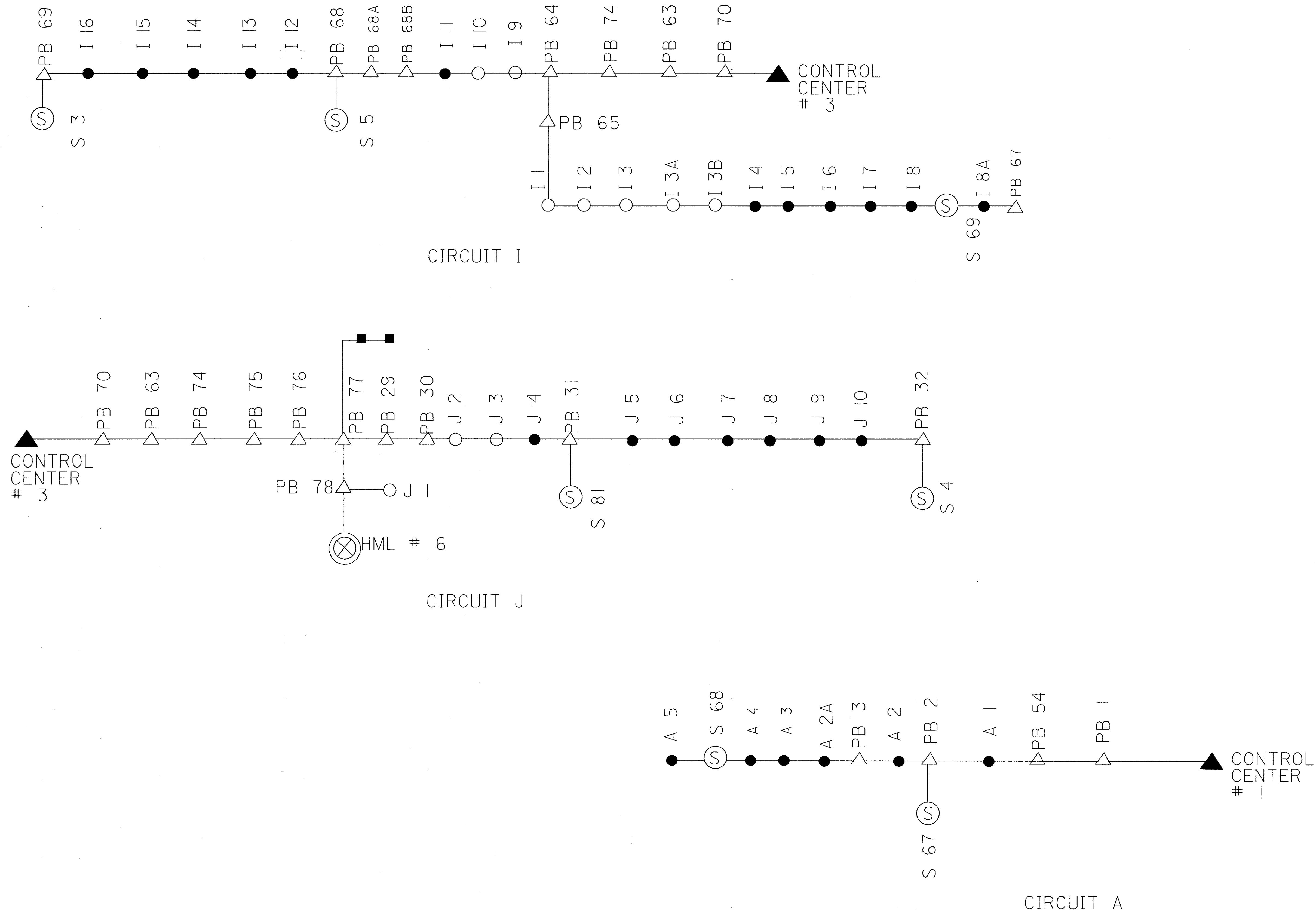
**LIGHTING SUBSUMMARY**

**FRA-71-14.39  
FRA-315-0.00**

CALCULATED  
GSC  
CHECKED



LEGEND	
▲	CONTROL CENTER
△	PULLBOX
●	CONVENTIONAL LUMINAIRE 310 W
○	CONVENTIONAL LUMINAIRE 200 W
⊖	TWIN LUMINAIRES 2 @ 200 W
■	UNDERDECK LUMINAIRE 100 W
⊗	HIGH MAST TOWER 4 LUMINAIRES
⊗	HIGH MAST TOWER 6 LUMINAIRES
⊙	OVERHEAD SIGNS



LEGEND	
	CONTROL CENTER
	PULLBOX
	CONVENTIONAL LUMINAIRE 310 W
	CONVENTIONAL LUMINAIRE 200 W
	UNDERDECK LUMINAIRE 100 W
	HIGH MAST TOWER 4 LUMINAIRES
	HIGH MAST TOWER 6 LUMINAIRES
	OVERHEAD SIGNS



# GENERAL NOTES - MAINTENANCE OF TRAFFIC

## GENERAL

ALL TEMPORARY CONSTRUCTION SIGNING SHALL BE ORANGE COLORED, UNLESS SPECIFIED OTHERWISE IN THE PLANS, DIAMOND GRADE FLORESCENT, TYPE H (NEW).

ALL SIGNS NOT SEPARATELY ITEMIZED FOR PAYMENT SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "ITEM 614-MAINTAINING TRAFFIC".

ALL EXISTING SIGNING REMOVED SHALL BE STORED ON SITE AND PICKED UP BY CITY OF COLUMBUS FORCES.

THE CONTRACTOR SHALL CONTACT THE CITY OF COLUMBUS, DIVISION OF TRAFFIC, (614-645-7393) A MINIMUM OF FIVE (5) DAYS PRIOR TO ANY WORK INVOLVING THE CLOSURE TO TRAFFIC OF ANY LANE OR SHOULDER.

### ITEM 614, MAINTENANCE OF TRAFFIC (GENERAL)

ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH ITEM 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR CONSTRUCTION AND MAINTENANCE OPERATIONS (CURRENT EDITION), COPIES OF WHICH ARE AVAILABLE FROM THE OHIO DEPARTMENT OF TRANSPORTATION, OFFICE OF TRAFFIC ENGINEERING, 1980 WEST BROAD STREET, COLUMBUS, OHIO 43215.

THE TRAFFIC ENGINEERING AND PARKING DIVISION CONSTRUCTION COORDINATOR (645-6269) AND THE COLUMBUS PAVING THE WAY PROGRAM (645-3970) SHALL BE NOTIFIED A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO STARTING WORK AND/OR PRIOR TO EACH PHASE OR MAJOR CHANGE IN TRAFFIC PATTERNS EITHER PERMANENT OR TEMPORARY WITHIN THE ROADWAY RIGHT-OF-WAY.

THE TRAFFIC ENGINEERING AND PARKING DIVISION SHALL LOCATE AND MARK ALL UNDERGROUND TRAFFIC CONTROL CABLES. THE DIVISION SYSTEM ENGINEER SHALL BE NOTIFIED (645-7790) AT LEAST 48 HOURS (6 WEEKS FOR SIGNAL REVISIONS AND/OR POLE RELOCATIONS) PRIOR TO THE BEGINNING OF ANY WORK WITHIN 300' OF THE SIGNALIZED INTERSECTION OF BROAD ST. AND S.R.-315 S-B RAMP OR WITHIN ANY POSTED AREA WHERE THE DIVISION HAS UNDERGROUND CABLE.

NO EXCAVATION SHALL BE MADE WITHIN FIVE FEET (5') OF ANY POLE THAT SUPPORTS TRAFFIC SIGNAL DISPLAYS OR SIGNS BY MAST ARM OR SIGNAL SPAN. EXCAVATION WITHIN EIGHT FEET (8') BUT MORE THAN FIVE FEET (5') SHALL REQUIRE ADDITIONAL SUPPORT (DOWN GUY, HEAD GUY, BASE GUY, ETC.). THE CONTRACTOR SHALL CONTACT THE DIVISION SYSTEM ENGINEER (614 645-7790) AT LEAST TWO (2) WORKING DAYS PRIOR TO SUCH EXCAVATION, SO THAT THE DIVISION MAY INSTALL SUCH SUPPORTS AT THE OWNER'S / CONTRACTING AGENCY'S EXPENSE.

ALL PERMANENT TRAFFIC CONTROLS NOT IN CONFLICT WITH THE TEMPORARY TRAFFIC CONTROLS SHALL BE MAINTAINED THROUGHOUT THIS PROJECT BY THE CONTRACTOR. PERMANENT TRAFFIC CONTROLS MAY BE TEMPORARILY RELOCATED, AS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL ASSUME ALL LIABILITY FOR MISSING, DAMAGED AND IMPROPERLY PLACED SIGNS.

THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, REMOVE ANY AND ALL CONFLICTING TRAFFIC CONTROLS, I.E. SIGNING, PAVEMENT MARKINGS, RAISED PAVEMENT MARKERS, ETC....

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER OR AS NOTED IN THE SCOPE OF SERVICE DOCUMENT. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC.

LANE CLOSURES OR RESTRICTIONS OVER SEGMENT OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED, WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

ANY WORK DONE BY THE TRAFFIC ENGINEERING AND PARKING DIVISION, INCLUDING INSTALLATION, RELOCATION, REMOVAL AND / OR REPLACEMENT OF PERMANENT TRAFFIC CONTROL DEVICES AS A RESULT OF WORK DONE BY THE CONTRACTOR OR AS A RESULT OF THE NEGLIGENCE OF THE CONTRACTOR SHALL BE AT THE EXPENSE OF THE CONTRACTOR.

THE CONFIGURATION OF THE PORTABLE CONCRETE BARRIER AND OTHER TEMPORARY AND PERMANENT TRAFFIC CONTROL THAT IS IN PLACE AT THE START OF THE PROJECT SHALL BE RESTORED UPON COMPLETION OF THE PROJECT.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

### SEQUENCE OF CONSTRUCTION - GENERAL

THIS PROJECT WILL BE CONSTRUCTED IN THREE PHASES WITH THE REQUIREMENTS AND LIMITATIONS AS INDICATED BELOW:

#### SR 315 ROAD A & B

THIS PHASE WILL REQUIRE THE COMPLETE CLOSURE OF S.R. 315 ROAD A & B. THESE ROADS MAY BE CLOSED FOR A MAXIMUM OF SIXTY (60) DAYS. THE SIXTY DAY PERIOD BEGINS WHEN EITHER ROAD IS FIRST CLOSED AND BOTH ROADS MUST BE OPEN TO THE TRAVELING PUBLIC AT THE CONCLUSION OF THE SIXTY DAY PERIOD.

DURING THIS CLOSURE WORK SHALL CONSIST OF PAVEMENT REMOVAL, PAVEMENT REHABILITATION, DRAINAGE WORK AND ALL OTHER WORK TO BE PERFORMED ON ROAD A & B. THE SOUTHERN PORTION OF ROAD A WILL NEED TO BE RECONSTRUCTED HALF-WIDTH IN ORDER TO MAINTAIN ACCESS TO RAMP AD AT ALL TIMES. THE GORE TO RAMP AD MAY NEED TO BE ADJUSTED TO ACCOMMODATE THIS HALF-WIDTH CONSTRUCTION. THE REMAINING PORTION OF ROAD A AND ALL OF ROAD A & B MUST BE OPEN WITHIN SIXTY DAYS OF CLOSURE.

LIQUIDATED DAMAGES WILL BE ASSESSED AT THE RATE OF \$5000 PER DAY FOR EACH DAY BEYOND THE 60 DAY PERIOD THAT EITHER ROAD REMAINS CLOSED. EXTENSIONS OF TIME SHALL NOT BE GRANTED FOR DELAYS IN MATERIAL DELIVERY UNLESS SUCH DELAYS ARE INDUSTRY-WIDE, FOR LABOR STRIKES UNLESS SUCH STRIKES ARE AREA-WIDE AND FOR WEATHER EXCEPT IN CASES OF SITE SPECIFIC FLOODING OR SITE SPECIFIC WIND OR TORNADO DAMAGES. THERE SHALL BE NO EXTENSION OF TIME GRANTED FOR OTHER WEATHER-RELATED CONDITIONS, INCLUDING BUT NOT LIMITED TO, INCLEMENT WEATHER.

#### IR 71

THE MILL AND FILL OPERATION OF IR 71 CAN BE COMPLETED AT ANY TIME SUBJECT TO:

1. THE CONDITIONS NOTED IN THE MAINTENANCE OF TRAFFIC SECTION OF THE SCOPE OF SERVICES.
2. THE MILL & FILL OPERATION ON I-71 NORTHBOUND CAN ONLY BE PERFORMED WHEN ROAD A IS OPEN.
3. WHILE ROAD B IS CLOSED, THE MILL AND FILL OPERATION ON THE INSIDE LANES OF I-71 SOUTHBOUND CAN BE COMPLETED WITHOUT AFFECTING SOUTHBOUND TRAFFIC.

#### REMAINING WORK ON I-71 & SR 315

ALL REMAINING WORK INCLUDING BUT NOT LIMITED TO PERMANENT SIGNING, LIGHTING IMPROVEMENTS AND ATR PLACEMENT.

### COORDINATION WITH THE COLUMBUS PAVING THE WAY PROGRAM (PTWP)

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES ON A WEEKLY BASIS. WHEN DETOURS ARE PLANNED, THE NOTIFICATION SHALL BE AT THE PRECONSTRUCTION MEETING OR 30 DAYS IN ADVANCE ONCE CONSTRUCTION HAS BEGUN. LANE AND RAMP CLOSURES FOR MORE THAN TWO WEEKS SHALL BE REPORTED AT LEAST TEN WORKING DAYS IN ADVANCE. LANE AND RAMP CLOSURES OF LESS THAN TWO (2) WEEKS DURATION AND MORE THAN TWO (2) DAYS SHALL BE REPORTED AT LEAST 3 WORKING DAYS IN ADVANCE. FOR SHORT TERM LANE AND RAMP CLOSURES (TWO (2) DAYS OR LESS) NOTIFICATION SHALL BE MADE AT LEAST ONE (1) WORKING DAY IN ADVANCE.

INFORMATION SHALL INCLUDE, BUT NOT BE LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT TRAFFIC AT PRESENT AND IN THE NEXT 30 DAYS. THE REPORT SHALL BE OF A FORMAT APPROVED BY THE PROJECT ENGINEER OR ONE SUPPLIED BY PTWP. THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL WHO WILL BE RESPONSIBLE TO PREPARE THIS REPORT AT THE PRECONSTRUCTION MEETING.

ANY UNFORESEEN IMPACT TO TRAFFIC SHALL BE REPORTED TO THE PROJECT ENGINEER AS SOON AS POSSIBLE.

THE PROJECT ENGINEER SHALL PROVIDE THIS INFORMATION TO THE PTWP PROGRAM. ALL CONSTRUCTION ACTIVITIES THAT INTERFERE WITH TRAFFIC SHALL BE REPORTED TO THE PTWP. THIS INFORMATION SHALL BE PROVIDED TO THE PROGRAM COORDINATOR AT (614) 645-3970, OR THE PROGRAM INFORMATION OFFICER AT (614) 645-6016 OR BY FAX AT (614) 645-5844.

# GENERAL NOTES – MAINTENANCE OF TRAFFIC

CALC. BY	FRANKLIN COUNTY	OHIO
DATE		2
CHKD. BY	ATTACHMENT H	FHWA REGION 5
DATE		10

## ITEM 614-LAW ENFORCEMENT OFFICER, WITH PATROL CAR.

IN ADDITION TO THE REQUIREMENTS OF 614 AND THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER AND OFFICIAL PATROL CAR WITH WORKING TOP MOUNTED EMERGENCY FLASHING LIGHTS SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED.

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

ONE L.E.O. WITH CRUISER PER DIRECTION DURING MILL-FILL OPERATIONS.

LAW ENFORCEMENT OFFICERS (L.E.O.'S) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEO'S ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE PROJECT ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE.

THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES

WITH: DEPUTY CHIEF, SERVICE DIVISION  
COLUMBUS POLICE DEPARTMENT  
COLUMBUS, OHIO 43215  
TELE: (614) 645-4795

## TEMPORARY WORK ZONE MARKINGS

THE COST OF REMOVING ALL CONFLICTING MARKINGS SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC, LUMP SUM, UNLESS SEPARATELY ITEMIZED THE PLAN.

## COVERING OF SIGNS

WHERE THE PLANS CALL FOR A PERMANENT SIGN TO BE COVERED, THE CONTRACTOR SHALL DO SO IN SUCH A MANNER AS TO AVOID DAMAGING THE PERMANENT SIGN WHEN THE COVER IS REMOVED. THE SIGN COVER SHALL BE A BLANK GREEN FLAT SIGN OF THE SAME MATERIAL AS THE EXISTING SIGN.

## ITEM SPECIAL, REPLACEMENT SIGN

FLAT SHEET SIGNS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT SIGNS SHALL BE NEW. OTHER MATERIALS MAY BE IN USED BUT GOOD CONDITION SUBJECT TO APPROVAL BY THE ENGINEER.

PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE CONTRACT PRICE PER SQUARE FOOT FOR ITEM SPECIAL, REPLACEMENT SIGN, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF DAMAGED SIGNS, HARDWARE AND SUPPORTS, AND PROVIDING THE NECESSARY REPLACEMENT HARDWARE, SUPPORTS, ETC.

## ITEM SPECIAL, REPLACEMENT DRUM

DRUMS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT DRUMS SHALL BE NEW.

## ITEM 622, PORTABLE CONCRETE BARRIER

IT IS ANTICIPATED THAT THE SAME BARRIER WILL BE USED IN VARIOUS PHASES OF CONSTRUCTION. MOVEMENT OF THE CONCRETE BARRIER BETWEEN PHASES SHALL BE ACCOMPLISHED IN ONE WORKING DAY. LAW ENFORCEMENT OFFICER, WITH PATROL CAR SHALL BE UTILIZED IN ADDITION TO STANDARD TRAFFIC CONTROL FOR LANE CLOSURE.

## ITEM 622, DELINEATION OF PORTABLE CONCRETE BARRIER

PORTABLE CONCRETE BARRIER (PCB) SHALL BE DELINEATED WITH REFLECTORS AND OBJECT MARKERS. STEADY BURN WARNING LIGHTS ARE NOT REQUIRED ON PCB.

### A. 32" PORTABLE CONCRETE BARRIER WITHOUT GLARE SCREEN

1. THREE REFLECTORS SHALL BE MOUNTED ON THE FACE OF THE PCB WITH THE TOP OF THE MIDDLE REFLECTOR APPROXIMATELY 26 INCHES ABOVE THE BASE AND AT A MAXIMUM SPACING OF 25 FEET. THE REFLECTOR SHALL BE: CUBE CORNER PRISM, REFLEXITE SHEETING, OR 3-M DIAMOND GRADE SHEETING. THE REFLECTOR SHALL HAVE A MINIMUM OF AREA OF 7.5 SQUARE INCHES WITH NO DIMENSION LESS THAN 2-INCHES. THEY SHALL BE YELLOW IF ON THE LEFT SIDE OF TRAFFIC AND WHITE ON THE RIGHT. WHEN ADJACENT TO A REVERSIBLE TRAFFIC DIRECTION LANE, YELLOW AND WHITE REFLECTORS SHALL BE PAIRED BACK-TO-BACK. (SEE DETAIL)

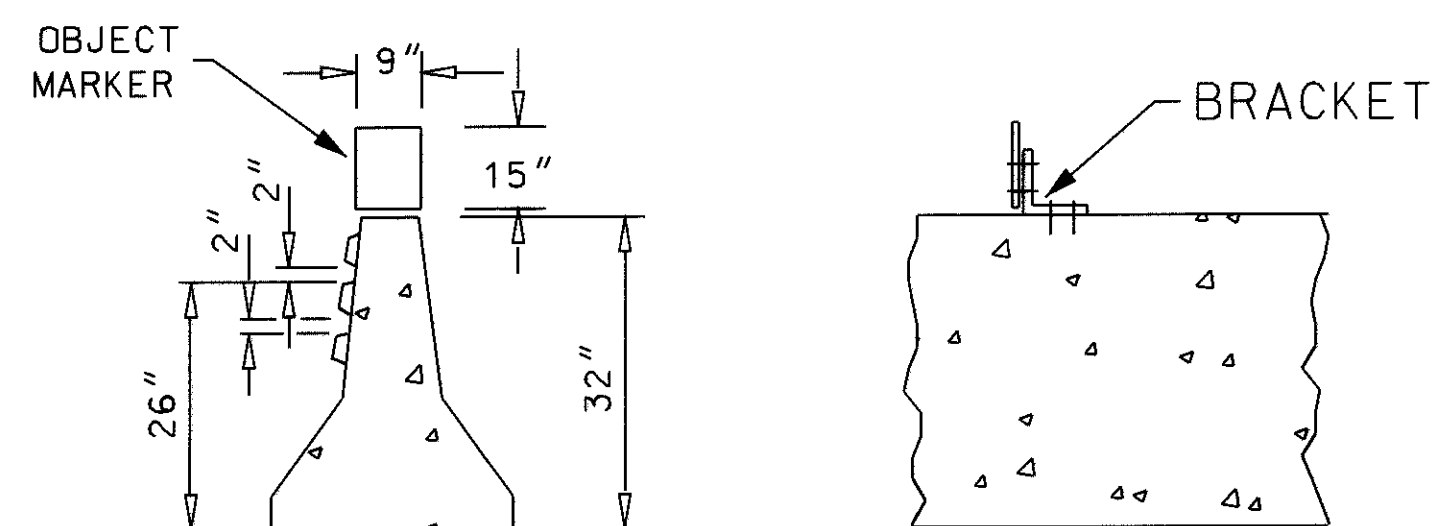
2. TOP MOUNTED OBJECT MARKERS (9" x 15") WITH ORANGE REFLECTIVE SHEETING, TYPE H (730.192) SHALL BE MOUNTED MIDWAY BETWEEN THE FACE MOUNTED REFLECTORS. WHEN ADJACENT TO A REVERSIBLE TRAFFIC DIRECTION LANE OR BETWEEN OPPOSING TRAFFIC FLOWS, THEY SHALL BE MOUNTED IN PAIRS FACING TRAFFIC FROM EACH DIRECTION. (SEE DETAIL)

### B. TAPERED END SECTIONS AND EXPOSED ENDS

1. OBJECT MARKERS (9" x 15") WITH ORANGE REFLECTIVE SHEETING, TYPE H, SHALL BE MOUNTED DIRECTLY ABOVE THE TOP SURFACE AT EACH END OF THE SECTION.

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE PAID FOR UNDER SEPARATE PAY ITEMS.

ITEM 614 - OBJECT MARKERS  
ITEM 614 BARRIER REFLECTOR, TYPE B



## ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGN, CLASS II, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND, WHEN NO LONGER NEEDED, REMOVE THE PORTABLE CHANGEABLE MESSAGE SIGNS(PCMS).

EACH SIGN SHALL BE TRAILER MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM TO DIM THE SIGN DURING DARKNESS AND A TAMPER AND VANDAL PROOF ENCLOSURE. THE SIGNS SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLE SHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE LOOP FROM A LOCAL UTILITY COMPANY.

THE LOCATIONS AND MESSAGES SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION AND PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR TO ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS WILL BE OFF, FACING AWAY FROM ALL TRAFFIC AND SHALL DISPLAY ONE OR MORE HIGH INTENSITY YELLOW REFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT AND THE CITY OF COLUMBUS, DIVISION OF TRAFFIC PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT AND TO REVISE SIGN MESSAGES, IF NECESSARY. THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC ALLOWING THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF 614.06 (C). THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC ACCRUED BY THE DEPARTMENT WILL BE DEDUCTED FROM MONIES DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS OWN CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24 HOURS PER DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE. THE REQUIREMENTS TO FURNISH, INSTALL, MAINTAIN AND REMOVE A PCMS UNIT ON THIS PROJECT SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES AS OUTLINED IN CMS 104.04.

THE CONTRACTOR SHALL PROVIDE THREE (3) PORTABLE, CHANGEABLE MESSAGE SIGNS (PCMS). EXACT LOCATIONS AND MESSAGES ARE, AS DIRECTED BY THE ENGINEER.

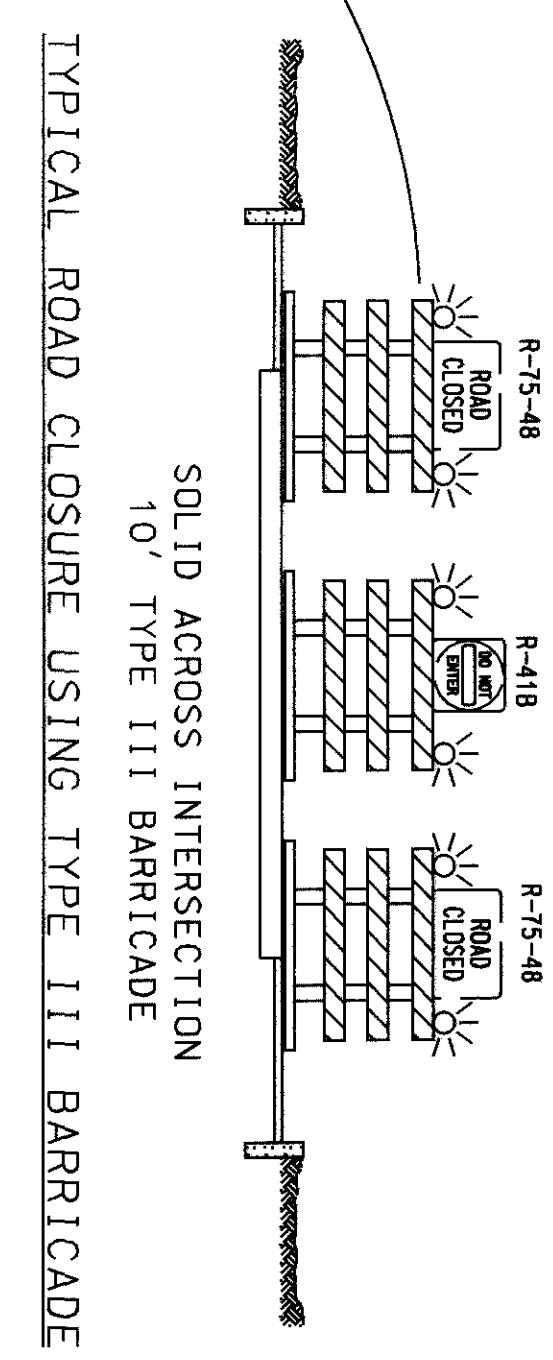
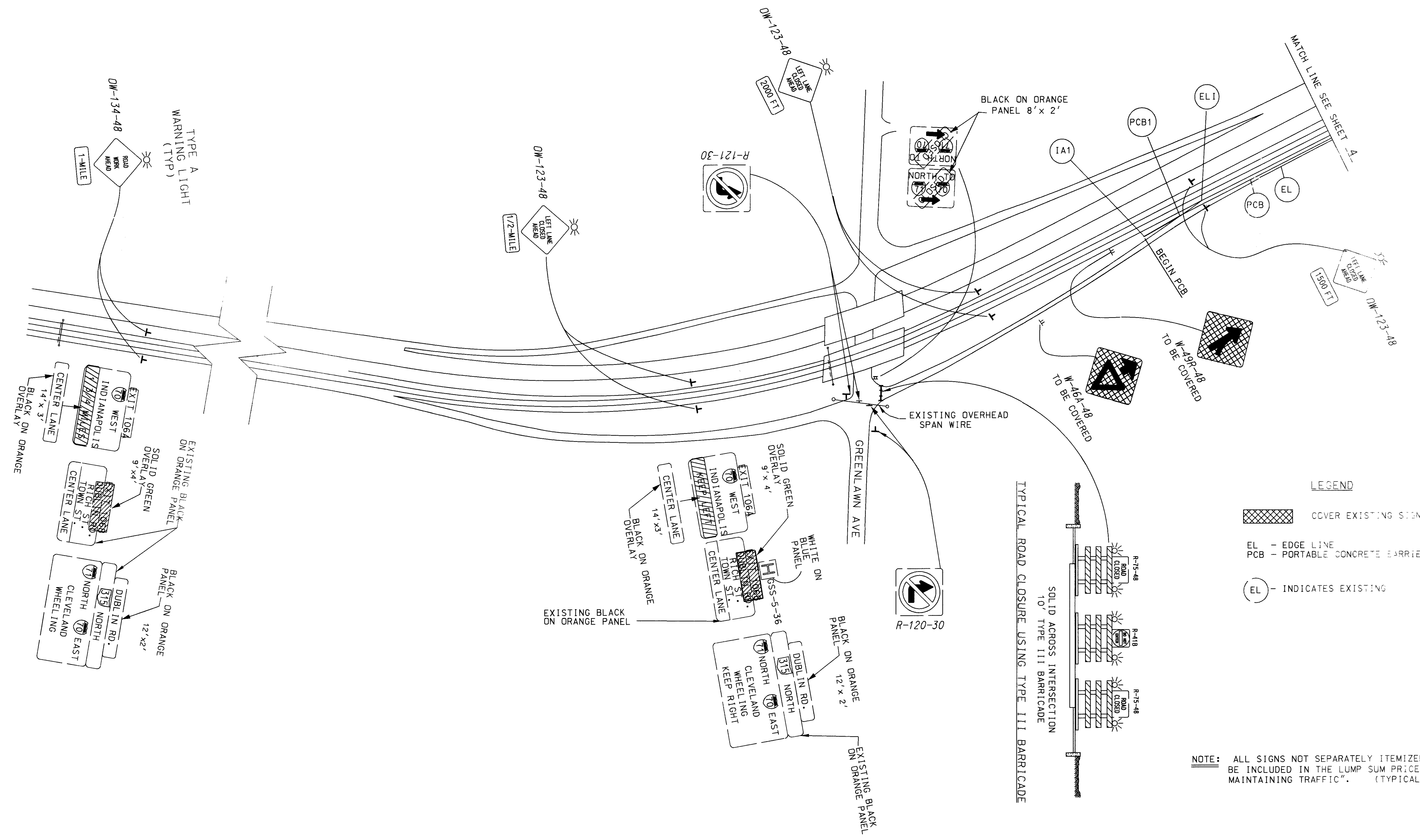
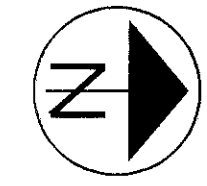
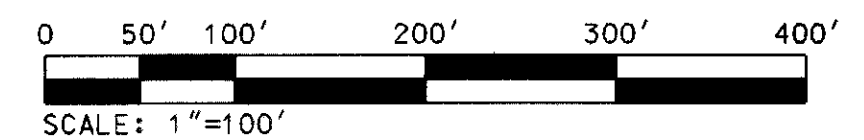
THESE PCMS ARE TO BE ERECTED AT LEAST TWO (2) WEEKS IN ADVANCE OF THE CLOSURE OF STATE ROUTE 315. THE PCMS SHALL REMAIN IN PLACE, AS DIRECTED BY THE ENGINEER. THESE PCMS SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS.

## ITEM 614 - TEMPORARY IMPACT ATTENUATOR (G.R.E.A.T. TYPE)

THIS WORK SHALL CONSIST OF FURNISHING IMPACT ATTENUATORS AS REQUIRED IN THE PLANS. THIS ITEM SHALL INCLUDE ALL RELATED HARDWARE, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER TO CONSTRUCT COMPLETE AND FUNCTIONAL G.R.E.A.T. IMPACT ATTENUATOR SYSTEMS. THE ATTENUATORS SHALL BE PLACED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND AT THE LOCATIONS SHOWN ON THE PLANS. THE IMPACT ATTENUATOR SHALL BE MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC., ONE EAST WACKER DRIVE, CHICAGO, ILLINOIS 60601; TELEPHONE (312) 497-6750.

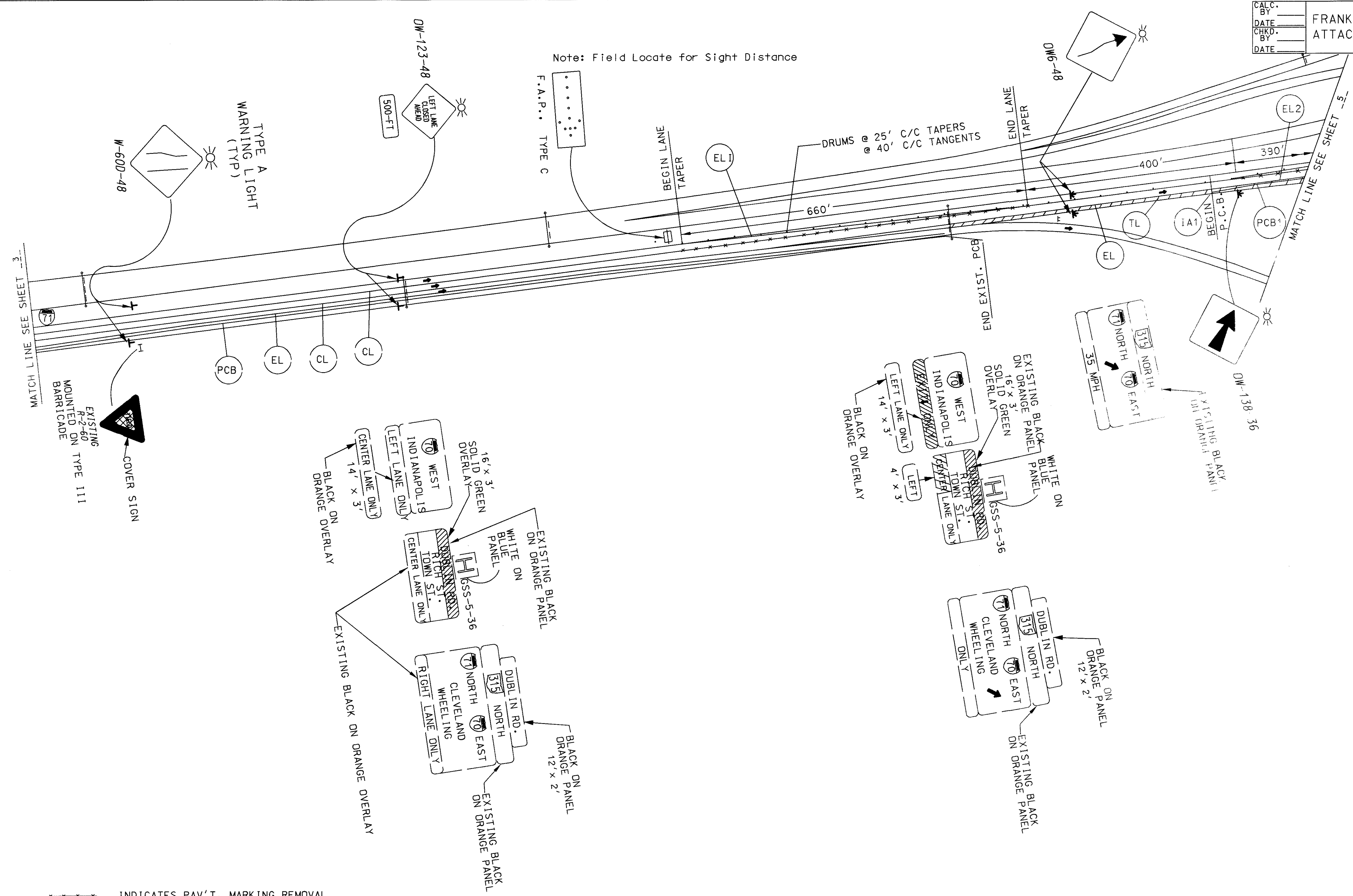
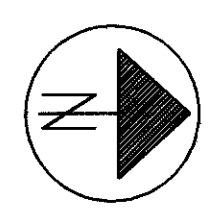
THE NOSE COVER OF THE ATTENUATOR SHALL MEET THE REQUIREMENTS OF STANDARD DRAWING MT-95.81.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTING, REPAIRING, AND OTHERWISE RESTORING THE IMPACT ATTENUATOR IN ACCORDANCE WITH THE MANUFACTURER'S MAINTENANCE INSTRUCTIONS WHILE IT IS IN USE ON THE PROJECT. SUCH REPAIRS SHALL BE PERFORMED WITHIN 24 HOURS OF THE INCIDENT WHICH CAUSED DAMAGE TO THE PROJECT IN ADDITION TO ANY EXTRA UNITS SUPPLIED FOR THIS PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING ALL NECESSARY MATERIALS, LABOR, AND EQUIPMENT REQUIRED TO PERFORM THE ABOVE DESCRIBED RESTORATION OF THE ATTENUATOR.

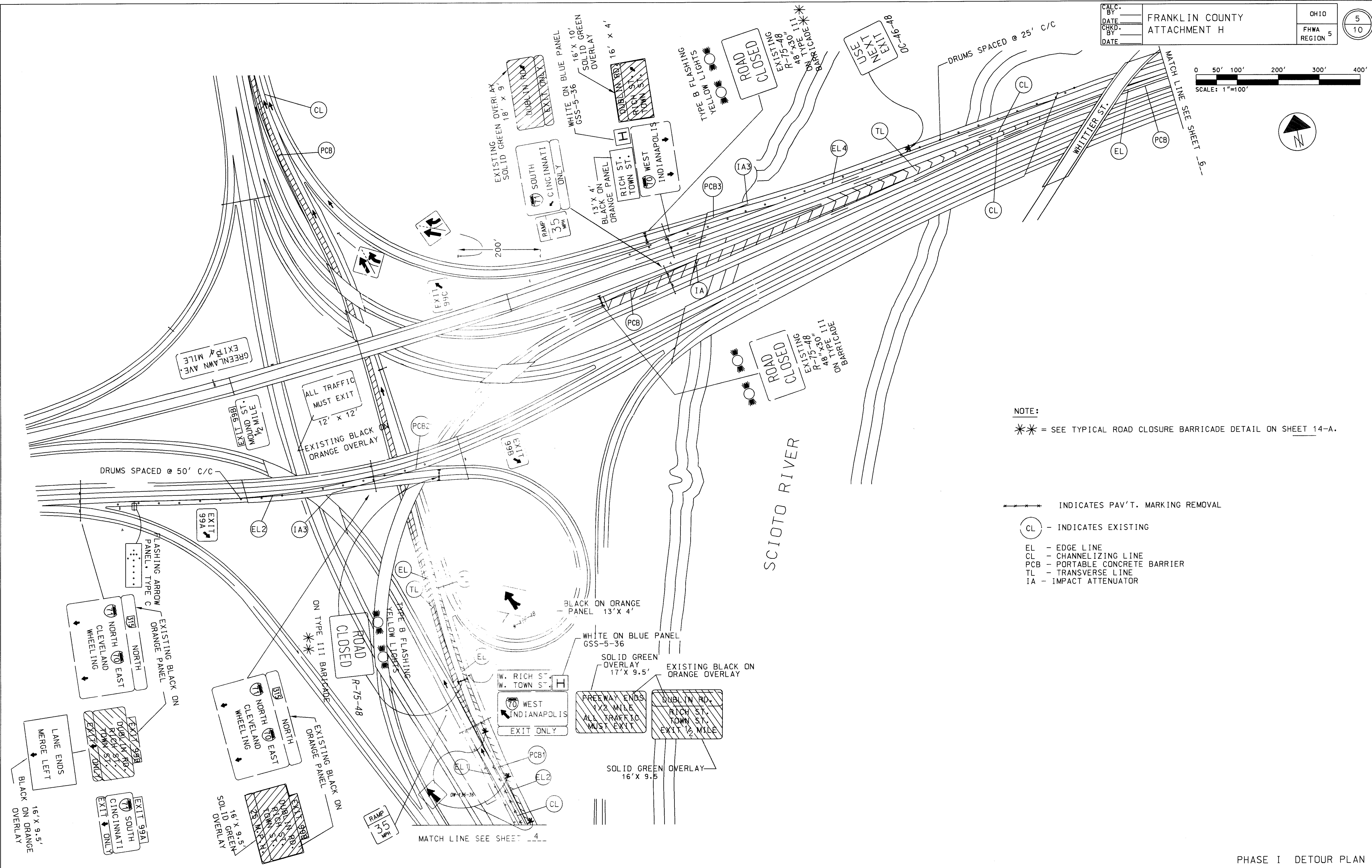
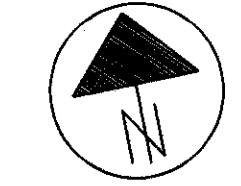


- LEGEND**
- COVER EXISTING SIGN
  - EL - EDGE LINE
  - PCB - PORTABLE CONCRETE BARRIER
  - INDICATES EXISTING

**NOTE:** ALL SIGNS NOT SEPARATELY ITEMIZED FOR PAYMENT SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "ITEM 614, MAINTAINING TRAFFIC". (TYPICAL ALL SHEETS)



- \*---\*---\*---\* INDICATES PAV'T. MARKING REMOVAL
- (CL) - INDICATES EXISTING
- EL - EDGE LINE
- CL - CHANNELIZING LINE
- PCB - PORTABLE CONCRETE BARRIER
- TL - TRANSVERSE LINE

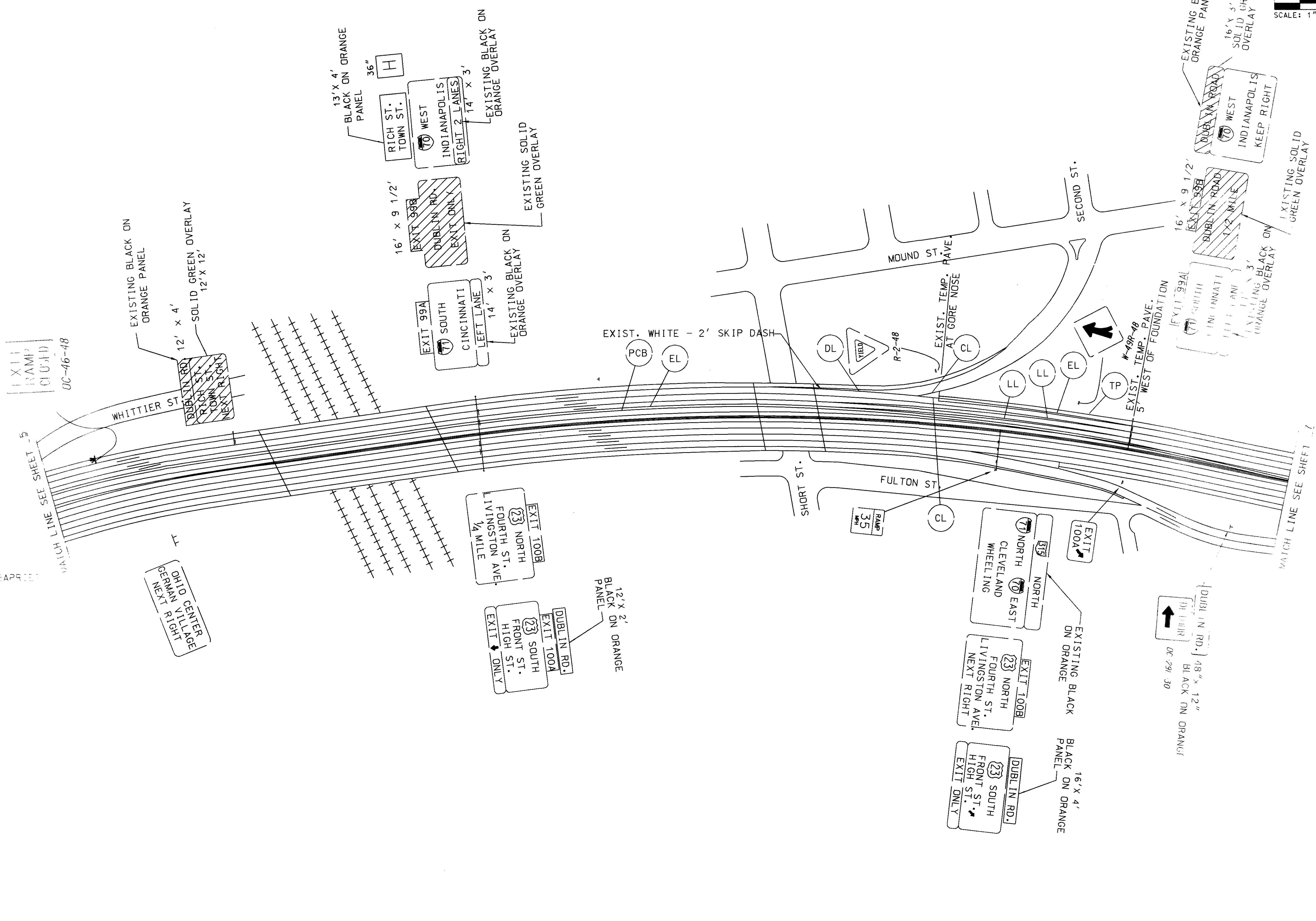


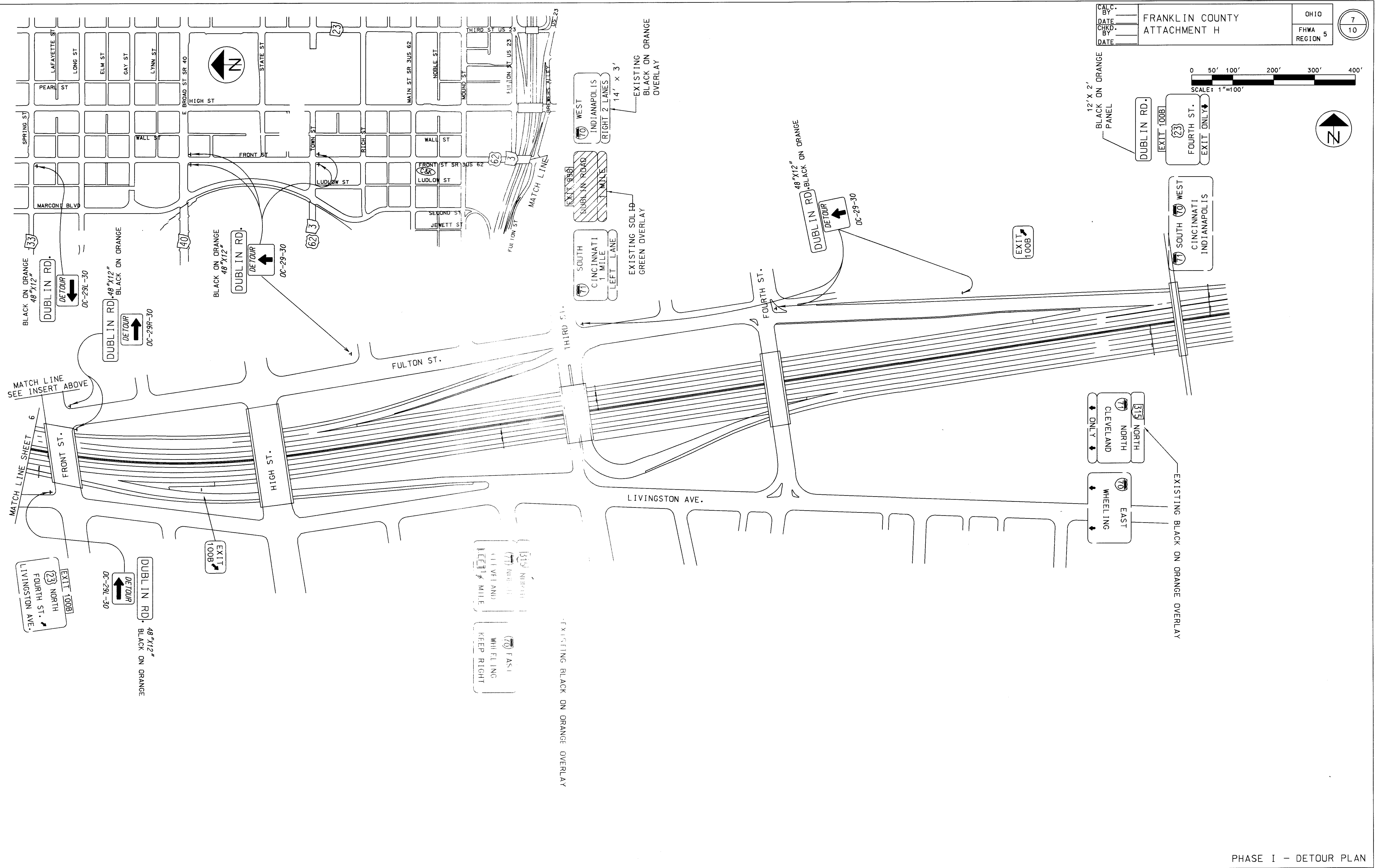
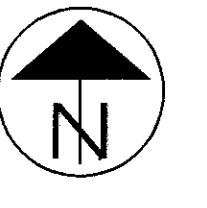
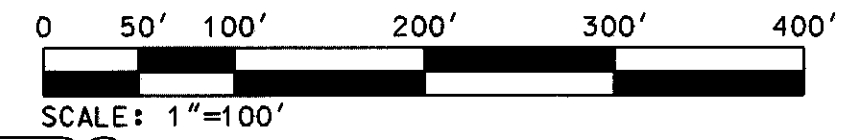
NOTE:  
 \* \* = SEE TYPICAL ROAD CLOSURE BARRICADE DETAIL ON SHEET 14-A.

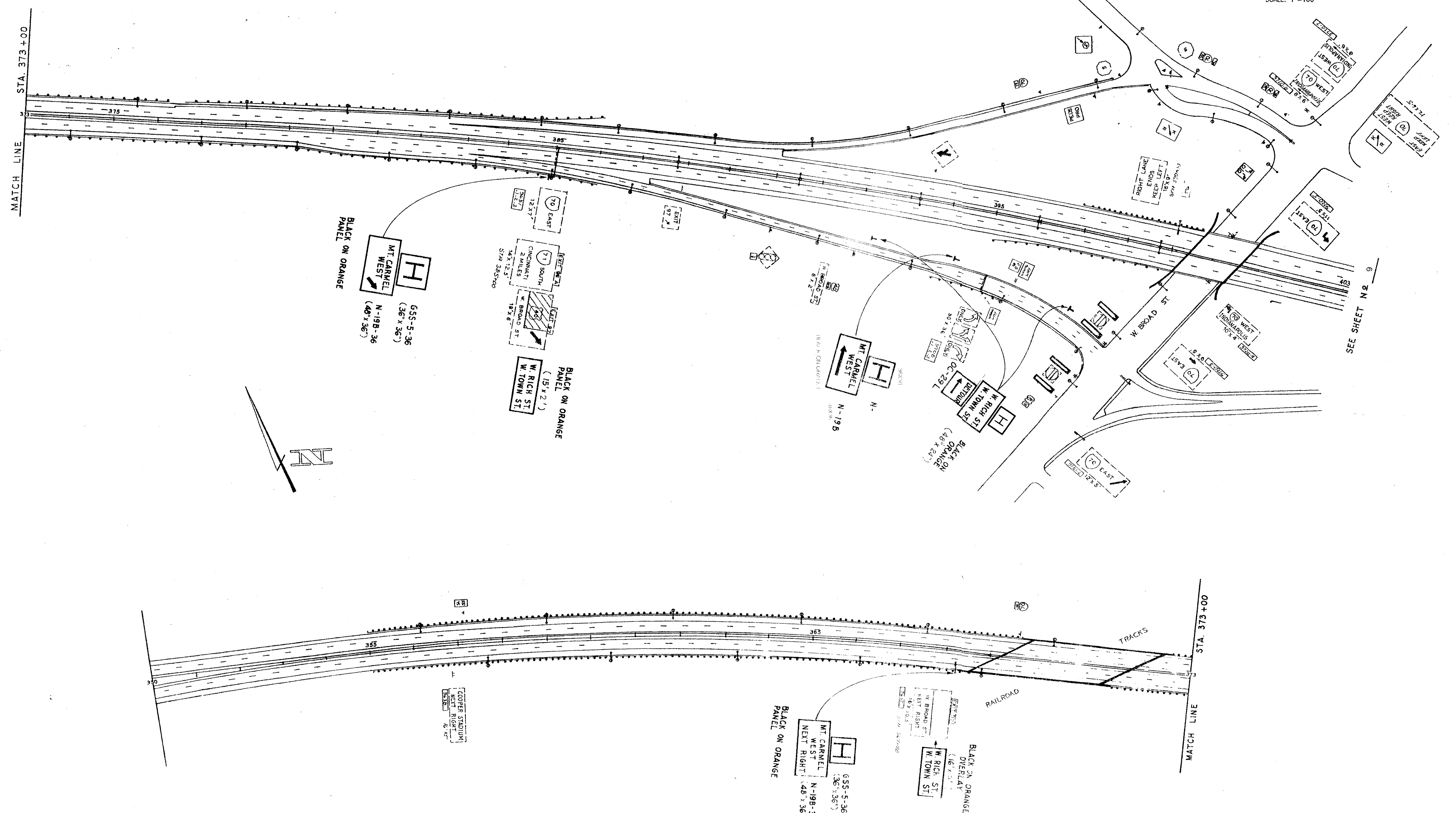
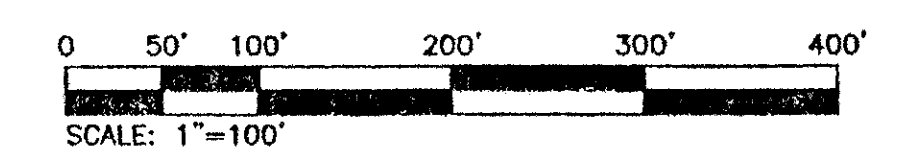
- INDICATES PAV'T. MARKING REMOVAL
- CL - INDICATES EXISTING
- EL - EDGE LINE
- CL - CHANNELIZING LINE
- PCB - PORTABLE CONCRETE BARRIER
- TL - TRANSVERSE LINE
- IA - IMPACT ATTENUATOR



- CL - INDICATES EXISTING
- DL - DOTTED LINE
- EL - EDGE LINE
- CL - CHANNEL LINE
- PCB - PORTABLE CONC. BARRIERS
- TL - TRANSVERSE LINE

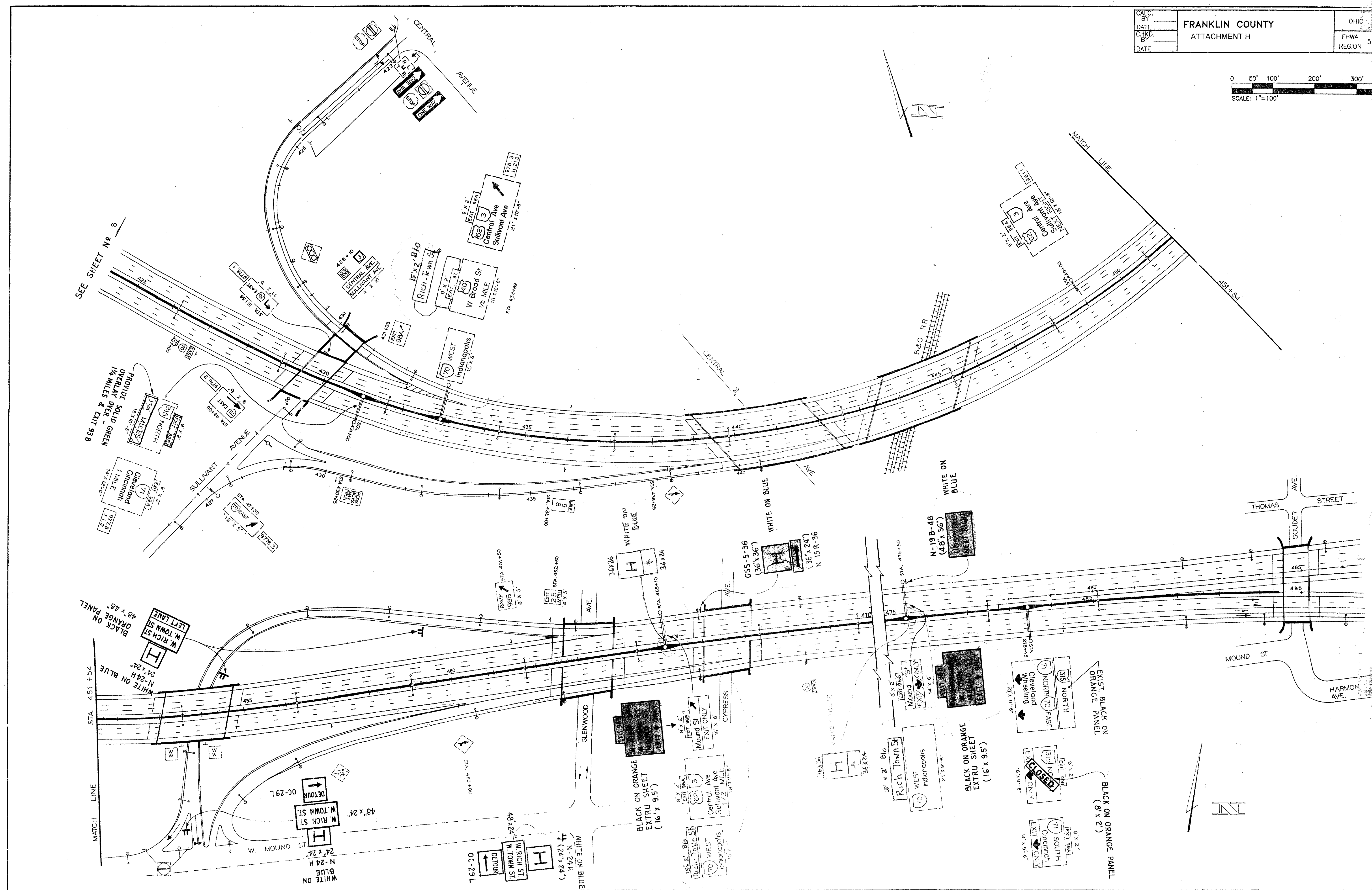
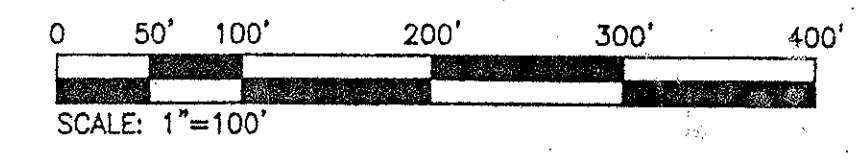






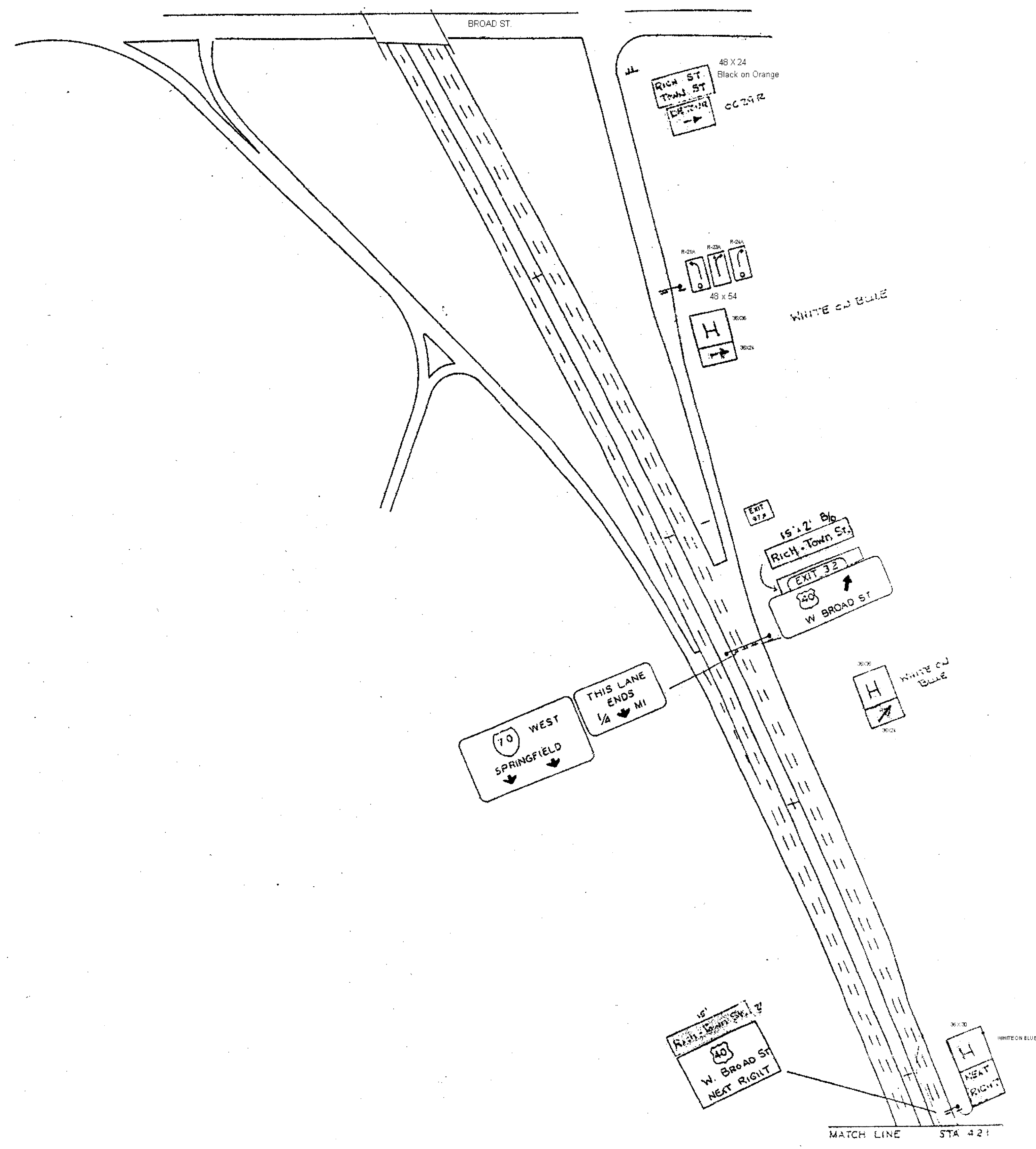
PHASE I - DETOUR PLAN

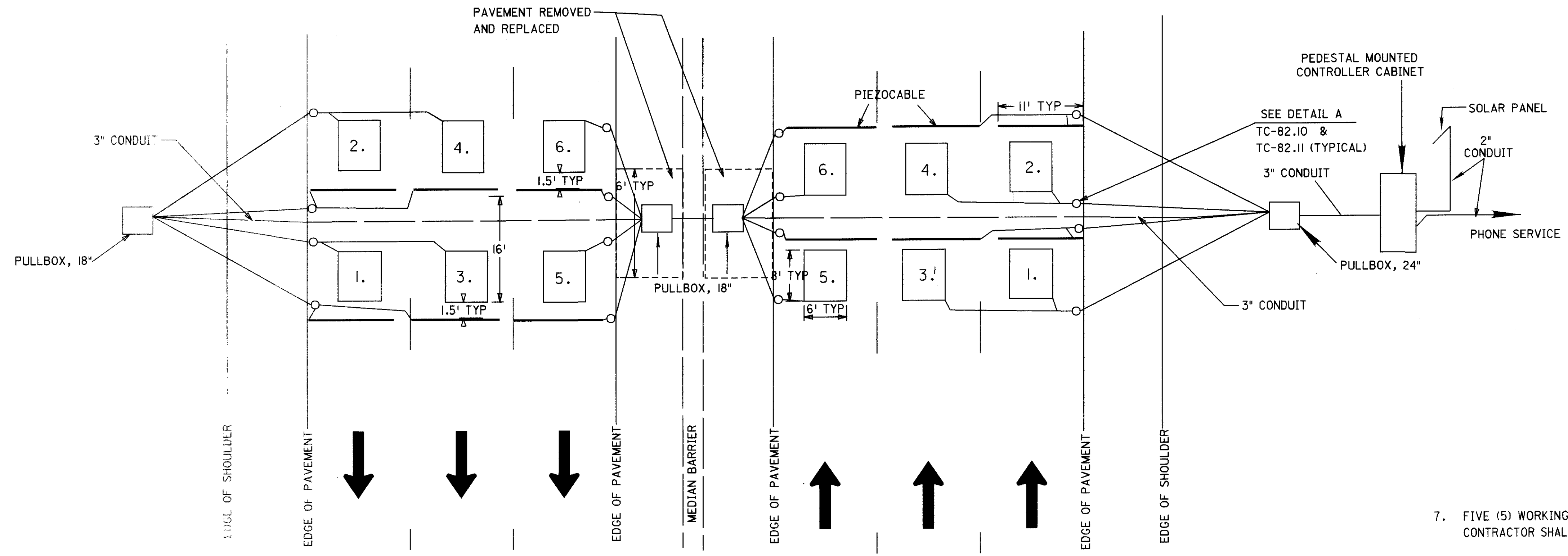




PHASE I - DETOUR PLAN

4  
N





NOTES  
(continued)

7. FIVE (5) WORKING DAYS PRIOR TO THE SCHEDULED INSTALLATION, THE CONTRACTOR SHALL CONTACT OFFICE OF TECH. SERVICES AT 4-466-3721.
8. ALL ITEMS SHALL CONFORM TO C&M SPECIFICATIONS 603.01, 632, 732, 633 AND 733, UNLESS OTHERWISE SPECIFIED.
9. LOOPS AND PIEZOCABLES SHALL BE CUT IN THE SURFACE ASPHALT COURSE. THEY SHALL NOT BE INSTALLED BETWEEN THE INTERMEDIATE AND SURFACE COURSES.
10. PIEZOCABLES SHALL BE INSTALLED WHEN THE TEMP. IS ABOVE 50 DEGREES FAHRENHEIT, OR SPECIAL PROVISION MADE TO ENSURE CURING OF EPOXY TAKES PLACE.
11. THE SOLAR PANEL SHALL BE INSTALLED WITH 2" RIGID CONDUIT MOUNTED IN CONCRETE BASE WITH PANEL BEING AT A MIN. HEIGHT ABOVE GROUND LEVEL OF 15'. SOLAR PANEL OUTPUT CABLE SHALL BE SECURED AND ROUTED TO THE INSIDE OF THE CABINET FOR CONNECTION TO TERMINAL BLOCK. SOLAR PANEL SHALL BE MOUNTED AT A 45° ANGLE FACING SOUTH.
12. SOLAR PANEL SHALL BE A SOLAREX MODEL VLY 72 (32 WATTS) OR AN APPROVED EQUAL WITH MOUNTING HARDWARE AND CABLES.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND TESTING THE PHONE DROP INSIDE OF THE CONTROLLER CABINET. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHARGES INCURRED PRIOR TO THE TRANSFER OF THE TELEPHONE ACCOUNT. THE CONTRACTOR SHALL COORDINATE WITH ODOT, TELECOMMUNICATIONS, MR. MIKE WOODS ( 614-466-4452 ) TO TRANSFER THE TELEPHONE ACCOUNT AND THE RESULTING RESPONSIBILITY FROM THE CONTRACTOR TO ODOT. PAYMENT WILL BE AT THE CONTRACT UNIT PRICE PER EACH ITEM 632 PHONE DROP AND SHALL INCLUDE ALL MATERIAL, LABOR, TOOLS, EQUIPMENT, INCIDENTALS AND PAYMENT OF ALL PHONE COMPANY FEES NECESSARY FOR EACH INSTALLATION, IN PLACE COMPLETE AND ACCEPTED.
14. ALL SENSORS ARE TO BE TESTED BY O.D.O.T. PERSONNEL AFTER THE INSTALLATION IS COMPLETE SO AS TO VERIFY THAT THE STATION IS UP AND OPERATING PROPERLY. IF THE ELECTRONIC EQUIPMENT DOES NOT PERFORM PROPERLY BECAUSE OF A POORLY INSTALLED SENSOR, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF THE FAULTY SENSOR, AS SOON AS POSSIBLE AT HIS OWN COST.
15. THE PULL BOX COVERS IN THE ASPHALT SHOULDER SHALL BE A HEAVY DUTY FRAME AND LID (NEENAH R-6686 OR APPROVED EQUAL). THIS ITEM SHALL INCLUDE ALL COSTS OF LABOR, MATERIALS AND EQUIPMENT NECESSARY TO INSTALL EACH ITEM 625 - PULL BOX, 713.08, 18 & 24 IN. AS PER PLAN

NOTES

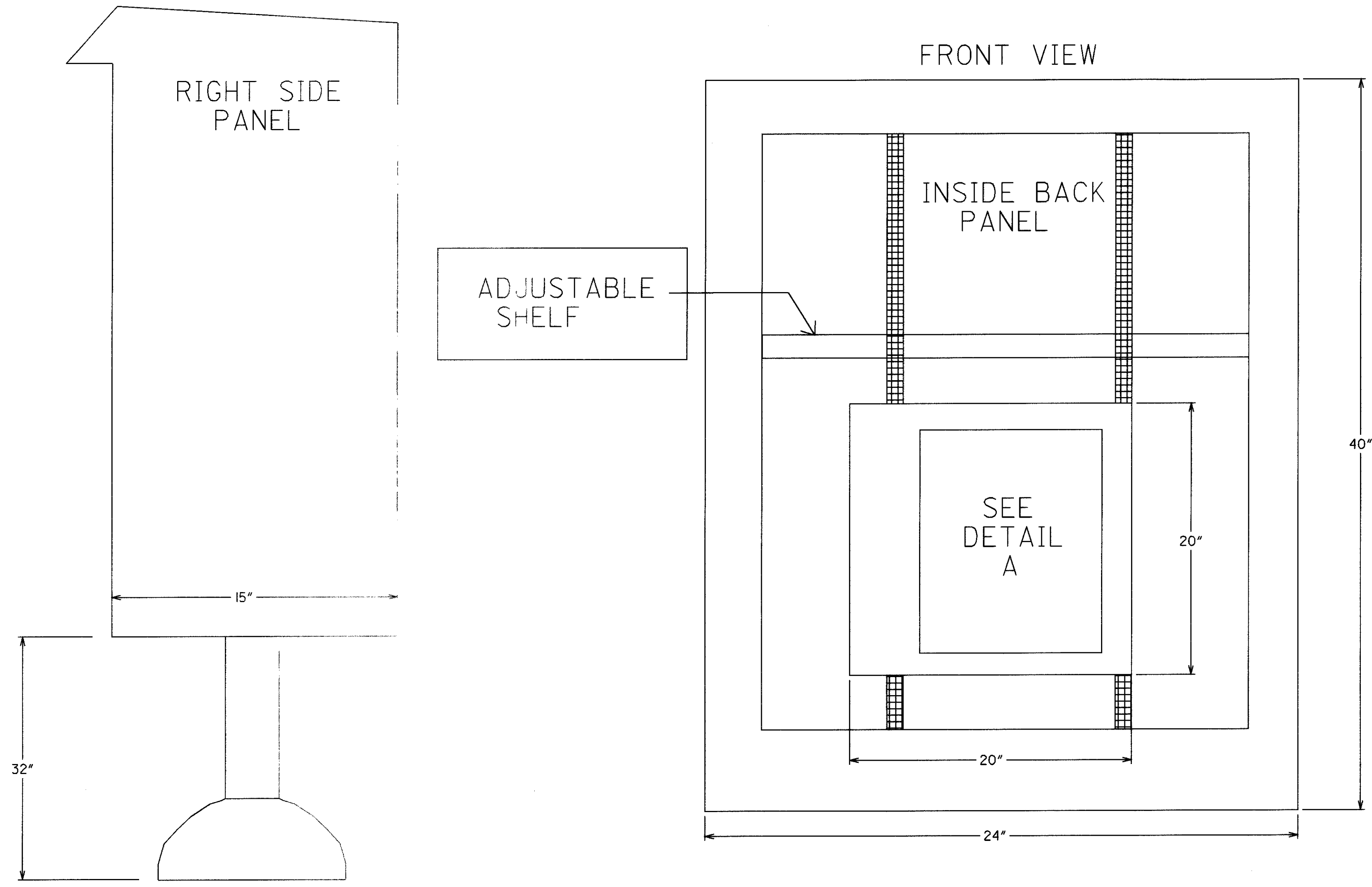
1. ALL LOOPS SHALL BE 6' X 8'. LOOPS SHALL BE SPACED 16' FROM LEADING EDGE TO LEADING EDGE. INSTALLATION OF LOOPS SHALL CONFORM TO TC-82.10 & TC-82.11 EXCEPT THAT LOOPS SHALL BE INSTALLED WITH FOUR (4) TURNS AND CUT AS PER SHEET -----.
2. THE PIEZOCABLE WIM SENSOR SHALL BE MADE BY MEASUREMENT SPECIALTIES ROADTRAX BRASS LINGUINI (BL) CLASS I AXLE SENSOR OR EQUIVALENT. THE 11 FOOT SENSOR SHALL BE CENTERED IN THE 12 FOOT LANE. PAYMENT WILL BE AT THE CONTRACT UNIT PRICE PER EACH ITEM SIGNALIZATION, MISC.: PIEZOCABLE AXLE SENSOR, CLASS I (11 FEET IN LENGTH) AND SHALL INCLUDE ALL MATERIAL, LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY FOR EACH INSTALLATION, IN PLACE COMPLETE AND ACCEPTED.
3. THE ALUMINUM CONTROLLER CABINET SHALL BE A PEDESTAL MOUNTED NEMA SIZE 3 AS SHOWN ON PLAN SHEET ---.
4. CABLE AND WIRE SHALL BE IDENTIFIED IN ACCORDANCE WITH 632.04. IDENTIFICATION SHALL INCLUDE THE DIRECTION OF TRAVEL (i.e., NB, WB) AND THE LOOP NUMBER AS SHOWN. EACH CABLE AND WIRE SHALL HAVE 5' COILED IN THE CONTROLLER CABINET FOR CONNECTION TO THE DATA COLLECTION SYSTEM.
5. ADJACENT LOOPS (TRANSVERSE AND LONGITUDINAL) SHALL BE INSTALLED IN OPPOSITE DIRECTIONS, i.e., LOOP 1 AND LOOP 4, CLOCKWISE LOOP 2 AND LOOP 3 COUNTERCLOCKWISE. EACH LOOP SHALL HAVE A SEPARATE LEAD-IN CABLE ROUTED TO THE CONTROLLER CABINET AND TAGGED.
6. REFERENCE IS MADE TO STANDARD DRAWING HL-30.11 FOR DETAILS OF DRAINING PULLBOXES. UNDERDRAINS FOR PULLBOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED APPROXIMATELY 20'. AN ESTIMATED QUANTITY OF 80' OF ITEM 603, 4" CONDUIT TYPE E IS INCLUDED IN THE GENERAL SUMMARY FOR THIS PURPOSE.

AUTOMATIC TRAFFIC RECORDER INSTALLATION  
6 LANE SECTION

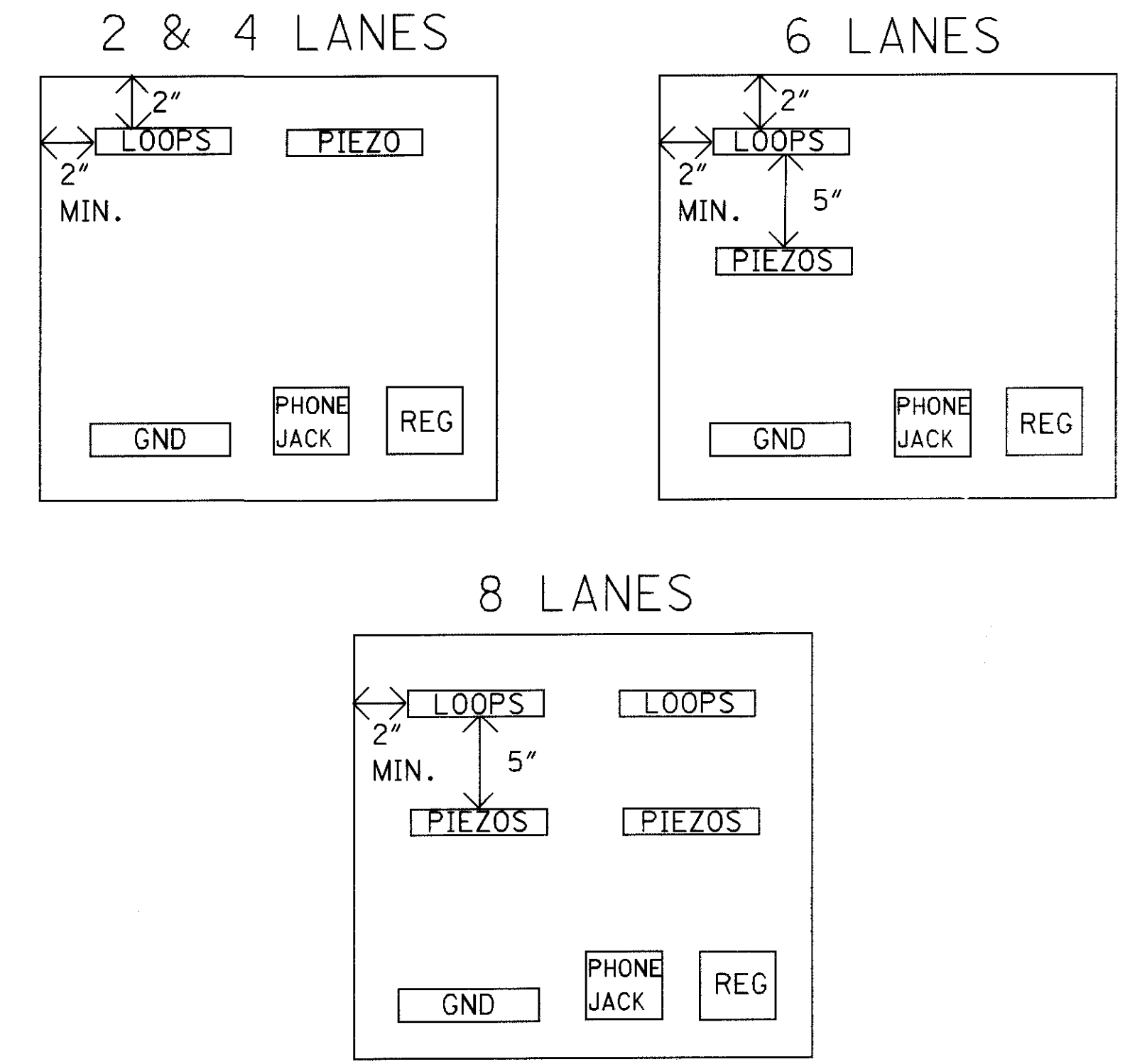
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
255	10100		SQ.YD.	PAVEMENT REMOVAL AND RIGID REPLACEMENT
255	20000		LIN.FT.	PAVEMENT SAWING
603	00400	80	LIN.FT.	4" CONDUIT, TYPE E
625	25100	192	LIN.FT.	CONDUIT, 1", 73.04
625	25400	15	LIN.FT.	CONDUIT, 2", 73.04
625	25500	150	LIN.FT.	CONDUIT, 3", 73.04
625	25900	150	LIN.FT.	CONDUIT, JACKED OR DRILLED, 3"
625	29000	100	LIN.FT.	TRENCH
625	30700	3	EACH	PULL BOX, 713.08, 18"
625	30706	1	EACH	PULL BOX, 713.08, 24"
625	32000	1	EACH	GROUND ROD
632	26501	12	EACH	DETECTOR LOOP, AS PER PLAN
632	63000	1	EACH	PHONE DROP
632	64020	1	EACH	PEDESTAL FOUNDATION
632	65200	1062	LIN.FT.	LOOP DETECTOR LEAD-IN CABLE
632	89800	1	EACH	PEDESTAL, 3' TRANSFORMER BASE
632	90400	12	EACH	SIGNALIZATION, MISC.: PIEZOCABLE AXLE SENSOR CLASS I (11' IN LENGTH)
632	90500	1062	LIN.FT.	SIGNALIZATION, MISC.: COAX CABLE (RG58 TYPE) LEAD-IN CABLE FOR PIEZOCABLE SENSOR
633	70000	1	EACH	CONTROLLER WORK PAD, 30 IN. BY 40 IN. BY 4 IN. DEEP
633	65001	1	EACH	CABINET AS PER PLAN, PREWIRED, PEDESTAL MOUNTED, NEMA SIZE 3
633	99000	1	EACH	CONTROLLER ITEM, MISC.: SOLAR PANEL

I:\user\j\james\gdn\atrr\dgn

CALCULATED  
DATE 01/23/99  
CHECKED  
05/11/99



DETAIL A  
DIFFERENT TERMINAL BLOCKS



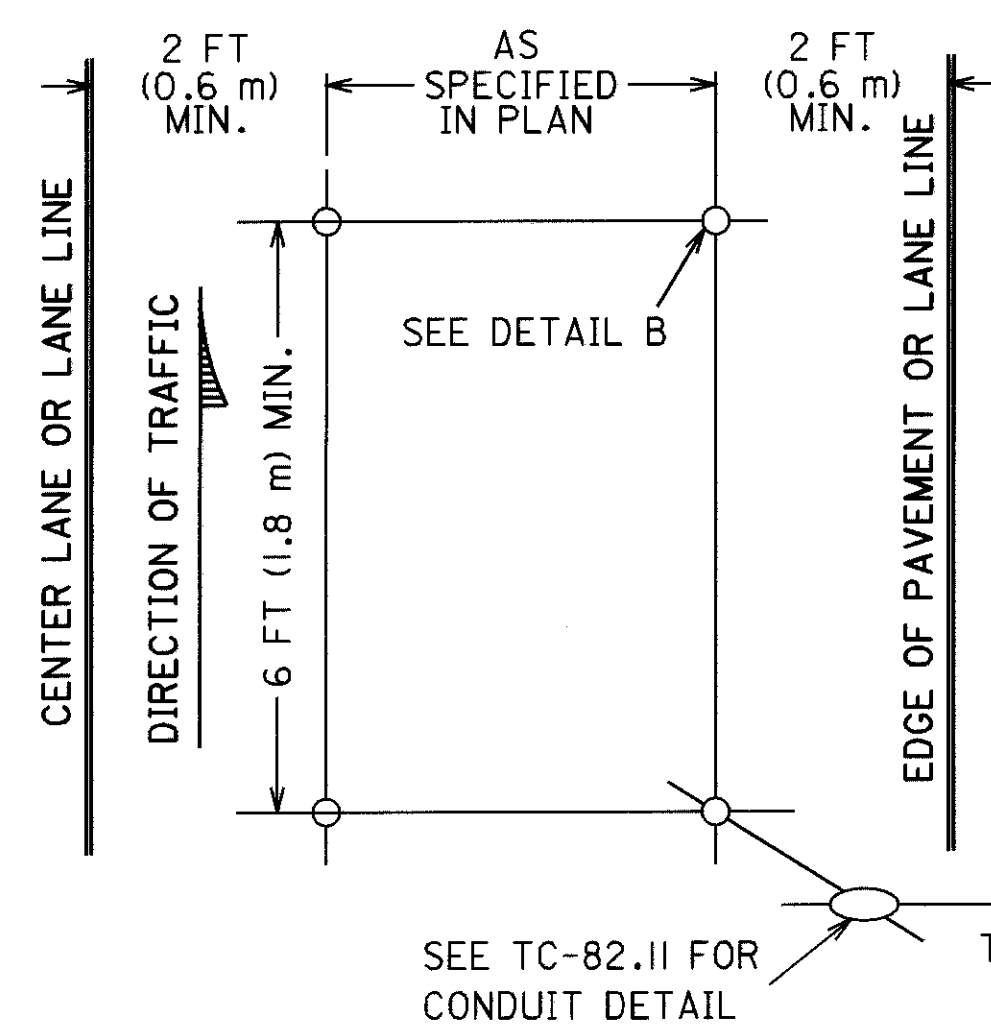
NEMA 411 3 CABINET DETAILS

NOTES

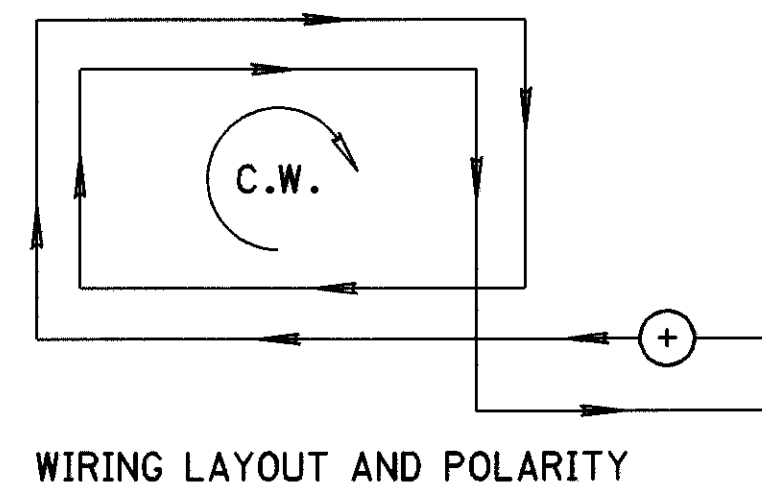
1. THE ALUMINUM CABINET SHALL BE A RECESSED MOUNTED ENCLOSURE SHOWN IN TABLE 7.3-1 OF THE NEMA STANDARD PUBLICATION No TS 2-1992. THE NOMINAL DIMENSIONS ARE: 24 INCHES WIDE BY 40 INCHES HIGH BY 5 INCHES DEEP. IT SHALL BE SHEET ALUMINUM AS DETAILED IN SECTION 7.2.2.1 OR CAST ALUMINUM DETAILED IN SECTION 7.2.2.2. IT SHALL ALSO CONFORM TO SECTIONS: 7.4, 7.5 EXCEPT FOR 7.6.7, 7.6 WITH ONE SHELF 7.7.3, 7.8.3 SIZE 5, 7.8.4. THE CABINET SHALL BE INSTALLED WITH INTERNAL COMPONENTS FOR THE WEIGH-IN-MOTION EQUIPMENT AS NECESSARY TO PROVIDE COMPLETE OPERATION OF THE WIM SYSTEM.
  - A. IT SHALL BE EQUIPPED WITH TWO ADJUSTABLE CHANNELS MOUNTED ON EACH OF THE THREE INTERIOR SIDES FOR THE PURPOSE OF MOUNTING TERMINAL STRIP PANELS AND SHELVING. PROVIDE THE CABINETS WITH ONE ADJUSTABLE SHELF WHICH WILL NOT SAG WHEN LOADED WITH THE WIM ELECTRONICS. DESIGN THE SHELVING TO ALLOW FOR THE PASSAGE OF AIR. PLACE NO EQUIPMENT ON THE BOTTOM OF THE CABINET.
  - B. MOUNT A GROUNDING STRIP TO THE TERMINAL STRIP PANEL IN THE CABINET WALL FOR CONNECTION OF ALL COMMON CONDUCTORS WITH THE STRIP GROUNDING TO THE GROUND ROD.
  - C. INSTALL THE HOUSING CABINET AS TO ALLOW ALL EQUIPMENT TO STAND IN AN UPRIGHT POSITION WITH ALL EQUIPMENT AND DEVICES CAPABLE OF BEING REMOVED BY PULLING STRAIGHT OUT AND NOT TURNING SIDEWAYS AND WITHOUT RELOCATING OR DISCONNECTING ONE DEVICE TO REMOVE ANOTHER DEVICE.
  - D. PROVIDE THAT ALL CONNECTIONS ARE MADE ON TERMINAL BLOCKS USING SOLDERED SPADE TYPE CONNECTORS. PROVIDE THAT ALL HOUSING CABINET WIRING AND TERMINALS ARE CLEARLY MARKED AND LABELED AS SHOWN ON THE CABINET WIRING DIAGRAM DETAILS. PROVIDE THAT WIRING IS LACED OR BOUND TOGETHER WITH SELF-LOCKING NYLON TIE-WRAPPS. MAKE A LOOP NUMBERING DIAGRAM WITH CORRESPONDING TERMINAL NUMBERS FOR EACH SITE AND STORE IN A PLASTIC WEATHER PROOF ENVELOP IN THE ENCLOSURE. PROVIDE A DUPLICATE DIAGRAM TO THE ODOT PROJECT INSPECTOR.
  - E. INSTALL ALL HOUSING CABINETS SO AS TO WITHSTAND ALL WEATHER CONDITIONS AND PREVENT THE INTRUSION OF REPTILES, RODENTS, AND INSECTS.
  - F. THE CABINET SHALL INCLUDE A VENT, BUT NO FAN.
  - G. MOUNTING FACILITIES SHALL INCLUDE ONE BACK PANEL WITH 5 HOLES (ALUMINUM).
  - H. TERMINAL STRIPS MOUNTED HORIZONTALLY ON BACK PANEL 2" FROM TOP AND SIDES EQUIDISTANTLY SPACED FOR 2 LANE APPLICATIONS. SOLAR PANEL AND GROUND BAR TO BE MOUNTED 2" FROM BOTTOM AND LEFT OF BACK PANEL FOR ALL APPLICATIONS. 4-6 LANE APPLICATIONS TO HAVE ONE ROW OF TWO TERMINAL STRIPS MOUNTED HORIZONTALLY 2" FROM TOP AND SIDES OF BACK PLATE AND ONE ROW OF TWO TERMINAL STRIPS MOUNTED 8" FROM TOP 2" FROM AND SIDES BACK PLATE EQUIDISTANTLY SPACED. 8 LANE APPLICATIONS TO HAVE TWO ROWS OF THREE TERMINAL BLOCKS W/ 1ST ROW 2" FROM TOP AND SIDES OF BACK PLATE AND SECOND ROW 8" FROM TOP AND 2" FROM SIDES OF BACK PLATE EQUIDISTANTLY SPACED.
  - I. LOCKS KEYED TO STATE MASTER.
2. THE CABINET SHALL BE ORIENTED SO THAT THE DOOR OPENS AWAY FROM THE ROADWAY, SO THAT THE FIELD TECHNICIAN CAN OBSERVE TRAFFIC WHILE WORKING ON THE SYSTEM.

TERMINAL BLOCK DETAILS

- 2 LNS - 4 LOOPS - BEAU TYPE 78008 TERMINAL STRIP OR EQUIVALENT
- 2 LNS - 4 LOOPS & 4 PIEZOS - BEAU TYPE 78008 TERMINAL STRIP OR EQUIVALENT x 2
- 4 LNS - 8 LOOPS - BEAU TYPE 78016 TERMINAL STRIP OR EQUIVALENT
- 4 LNS - 8 LOOPS & 8 PIEZOS - BEAU TYPE 78016 TERMINAL STRIP OR EQUIVALENT x 2
- 6 LNS - 12 LOOPS - BEAU TYPE 78024 TERMINAL STRIP OR EQUIVALENT
- 6 LNS - 12 LOOPS & 12 PIEZOS - BEAU TYPE 78024 TERMINAL STRIP OR EQUIVALENT x 2
- 8 LNS - 16 LOOPS - BEAU TYPE 78016 TERMINAL STRIP OR EQUIVALENT x 2
- 8 LNS - 16 LOOPS & 16 PIEZOS - BEAU TYPE 78016 TERMINAL STRIP OR EQUIVALENT x 4



LOOP CONSTRUCTION	
LOOP PERIMETER	NUMBER OF TURNS
LESS THAN 40 FT (12 m)	4
40 FT (12 m) TO 160 FT (49 m)	3
OVER 160 FT (49 m)	2



TYPICAL DETECTOR LOOP DETAILS

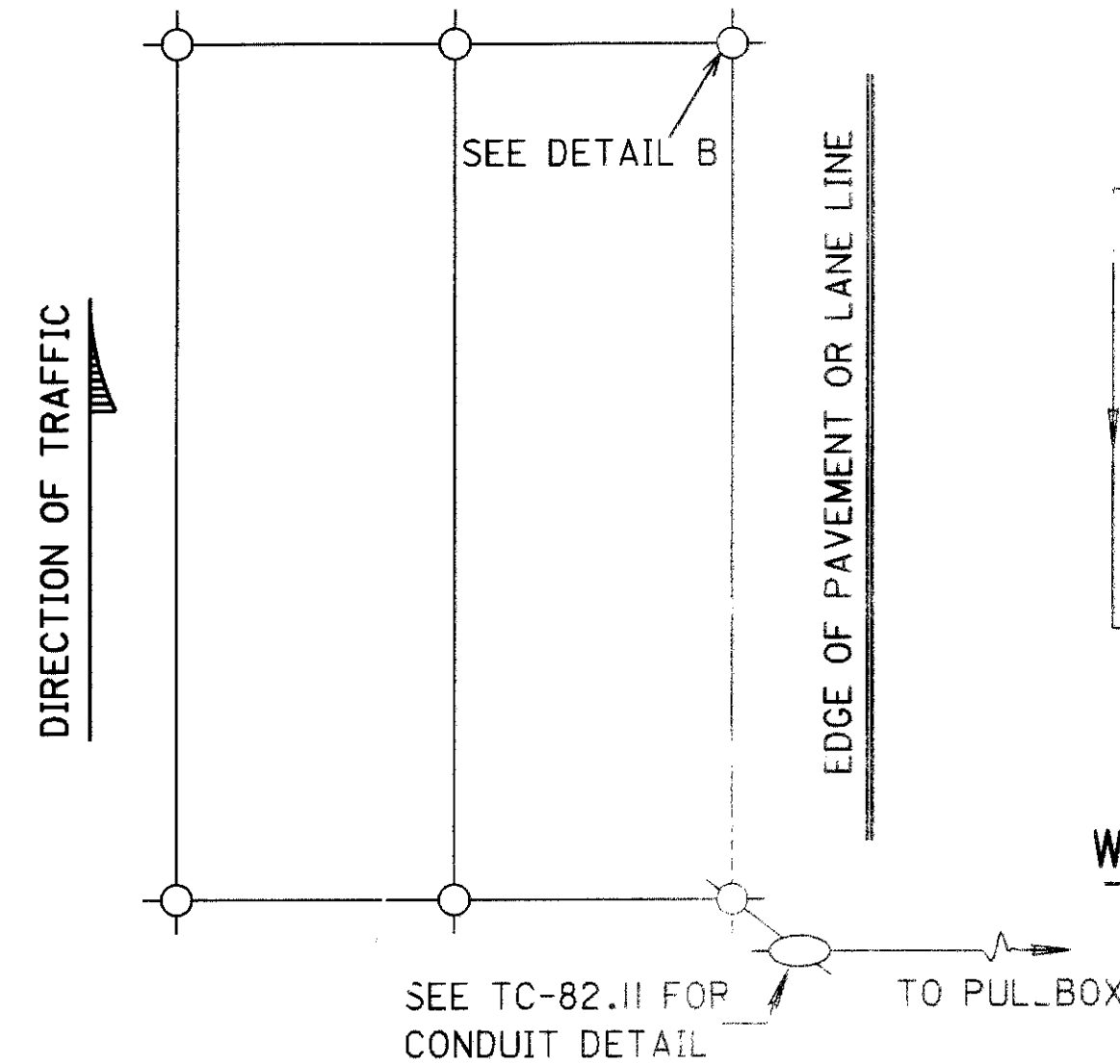
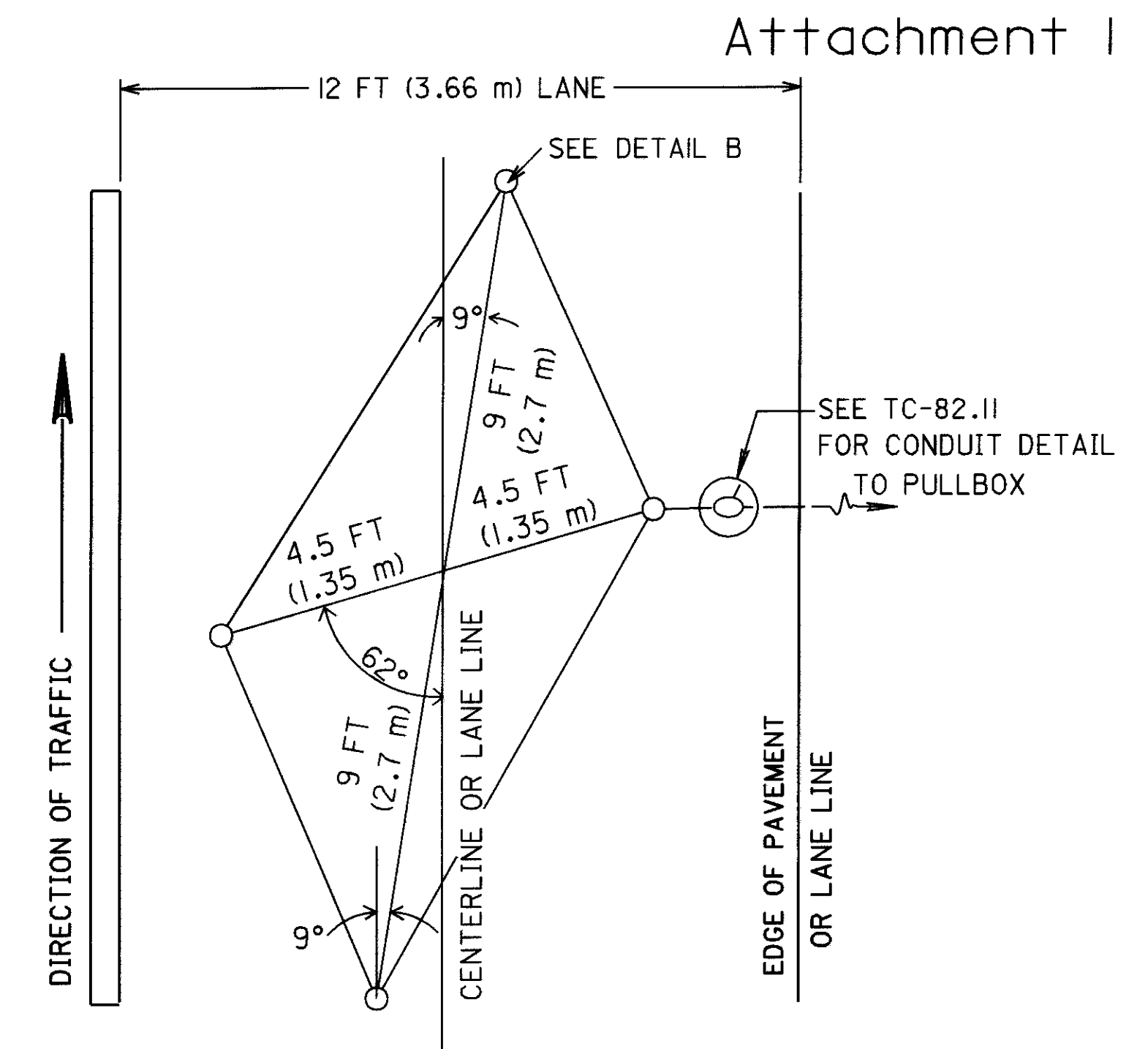
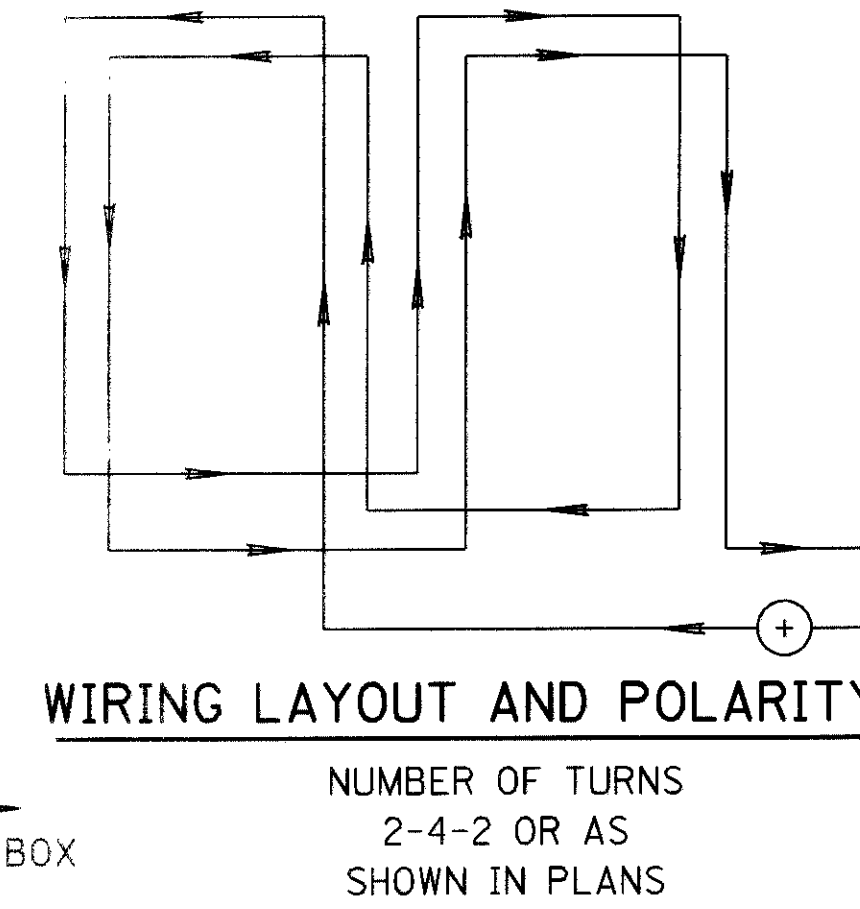
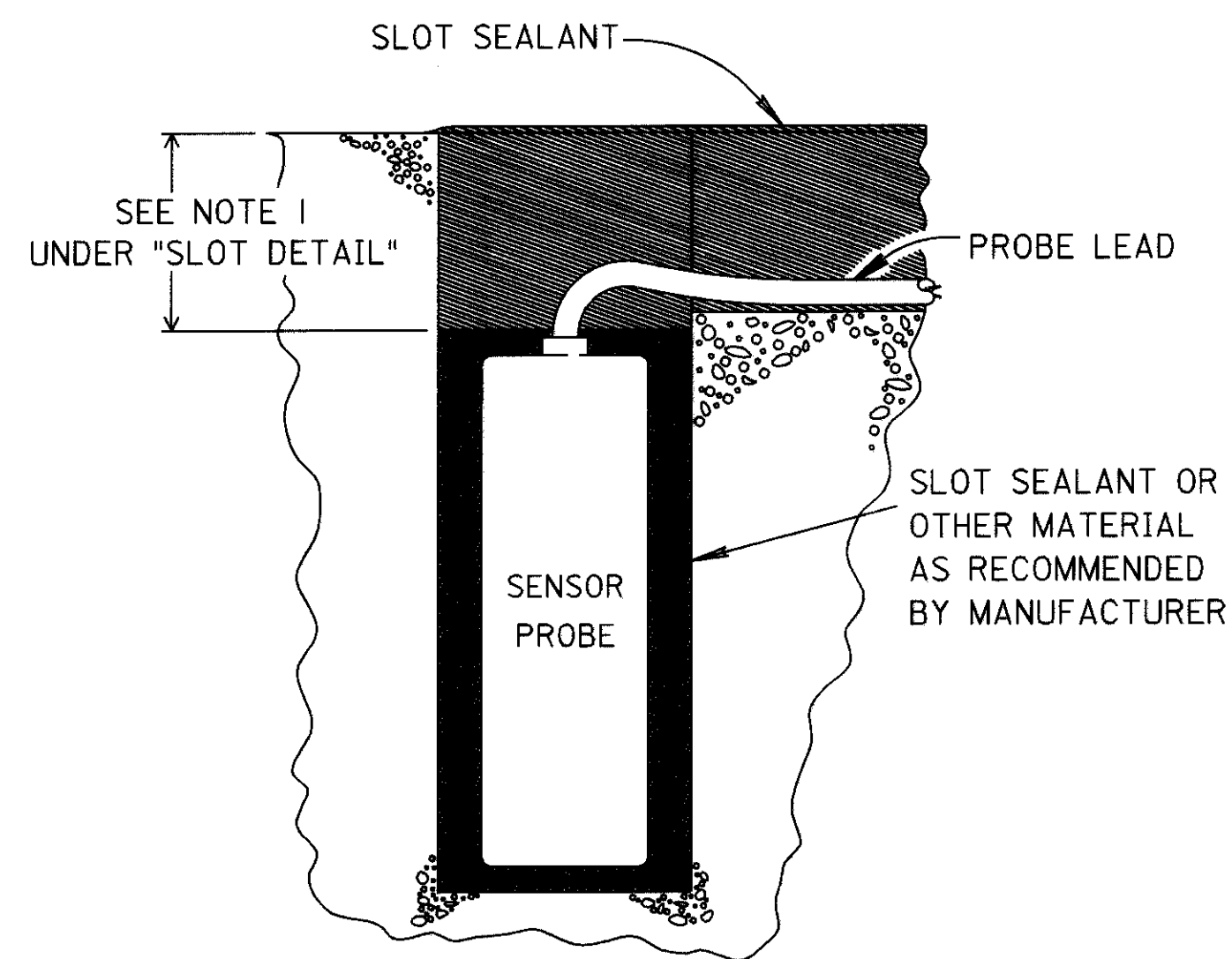


FIGURE 8 (QUADRUPOLE) LOOP DETAILS



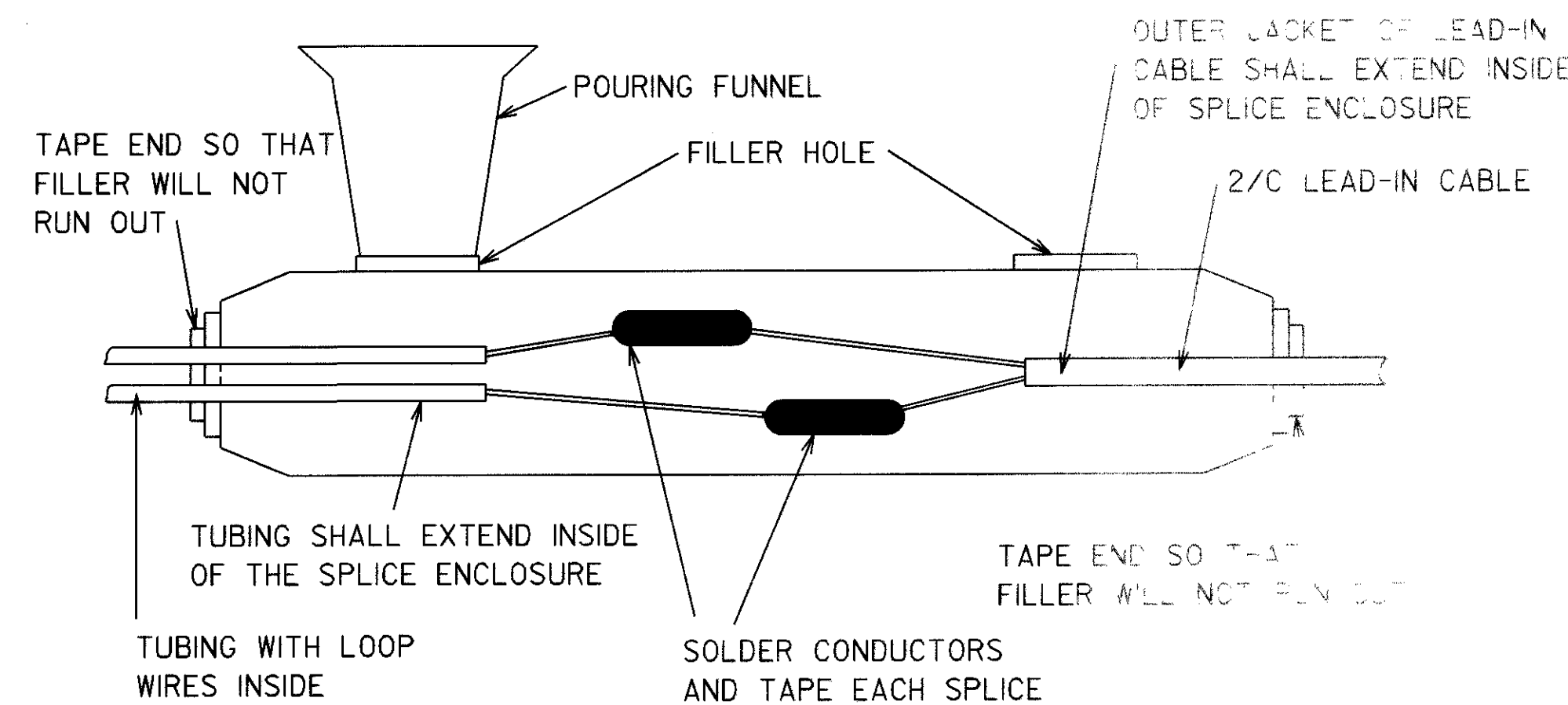
OTHER SIZES CAN BE DESIGNATED AS LONG AS THE ANGLES REMAIN THE SAME AS SHOWN AND THE DIMENSION RATIO REMAINS 2:1.

ANGULAR DESIGN DETECTION LOOP DETAIL



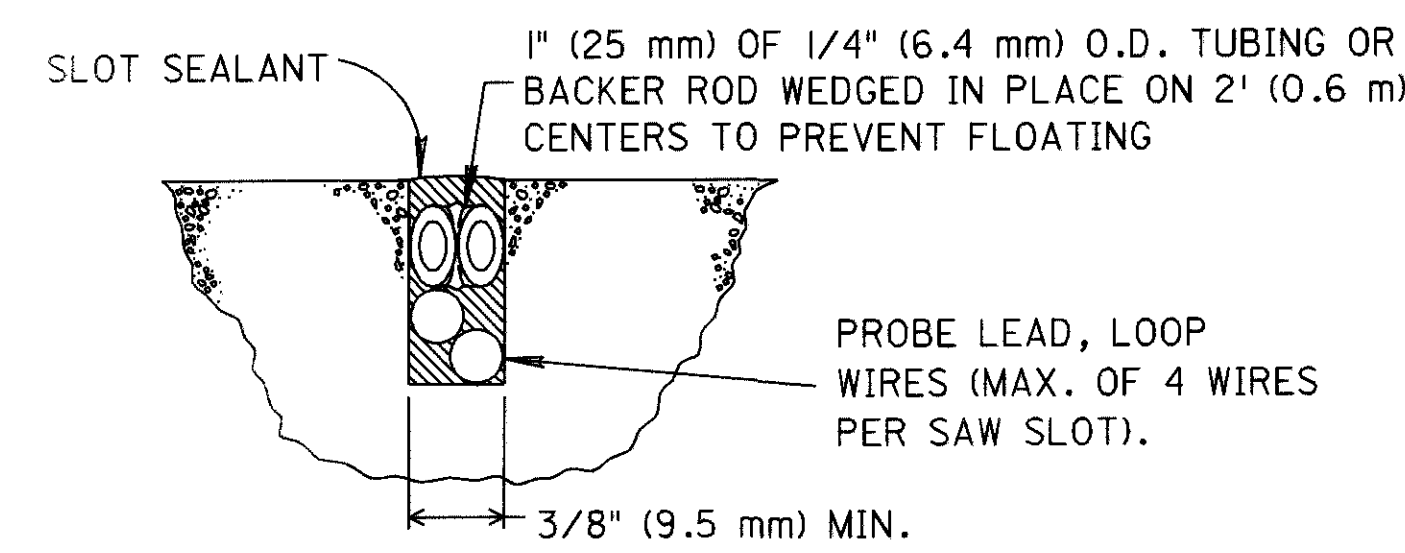
THE MAGNETOMETER HOLE SIZE SHALL BE APPROXIMATELY 3/4" (19 mm) LARGER THAN THE DETECTOR PROBE DIAMETER AND A DEPTH AS RECOMMENDED BY THE MANUFACTURER OR AS DIRECTED BY THE ENGINEER.

MAGNETOMETER SENSOR PROBE DETAIL



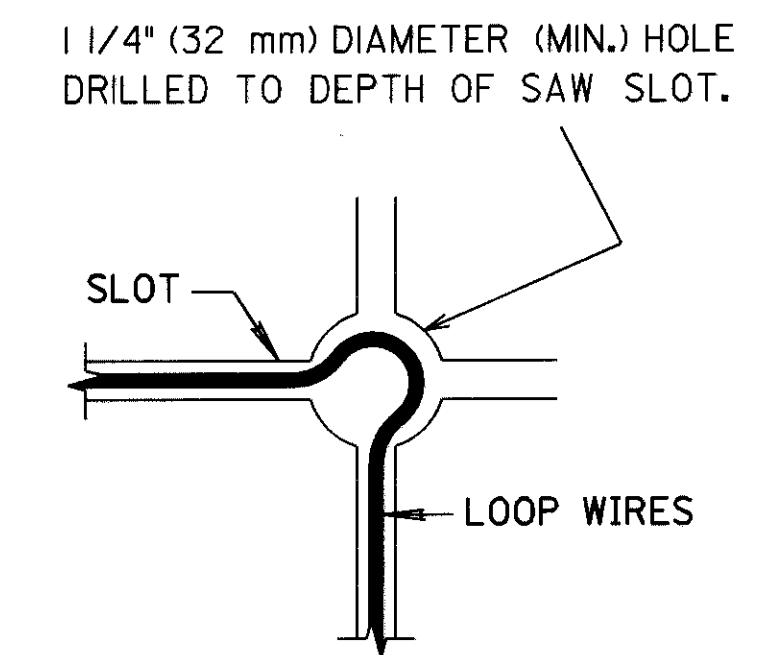
1. LOOP DETECTOR WIRE TO LEAD-IN CABLE SPLICES WITHIN THE ENCAPSULATED SPLICE ENCLOSURE SHALL BE SOLDERED.
2. IF A PULLBOX IS NOT SPECIFIED IN THE PLANS, THE WATERPROOF SPLICE ENCLOSURE SHALL BE LOCATED IN THE FIRST ENTERED POLE OR PEDESTAL, EXCEPT IF THE CONTROLLER CABINET IS MOUNTED ON THAT POLE OR PEDESTAL, IN WHICH CASE THE LOOP WIRES SHALL BE ROUTED DIRECTLY INTO THE CABINET WITHOUT SPLICING.
3. VISIBLE AIR BUBBLES (VOIDS) OF 1/4" (6 mm) OR GREATER MAY BE CAUSE FOR REJECTION OF THE SPLICE.

SPLICE ENCLOSURE DETAIL



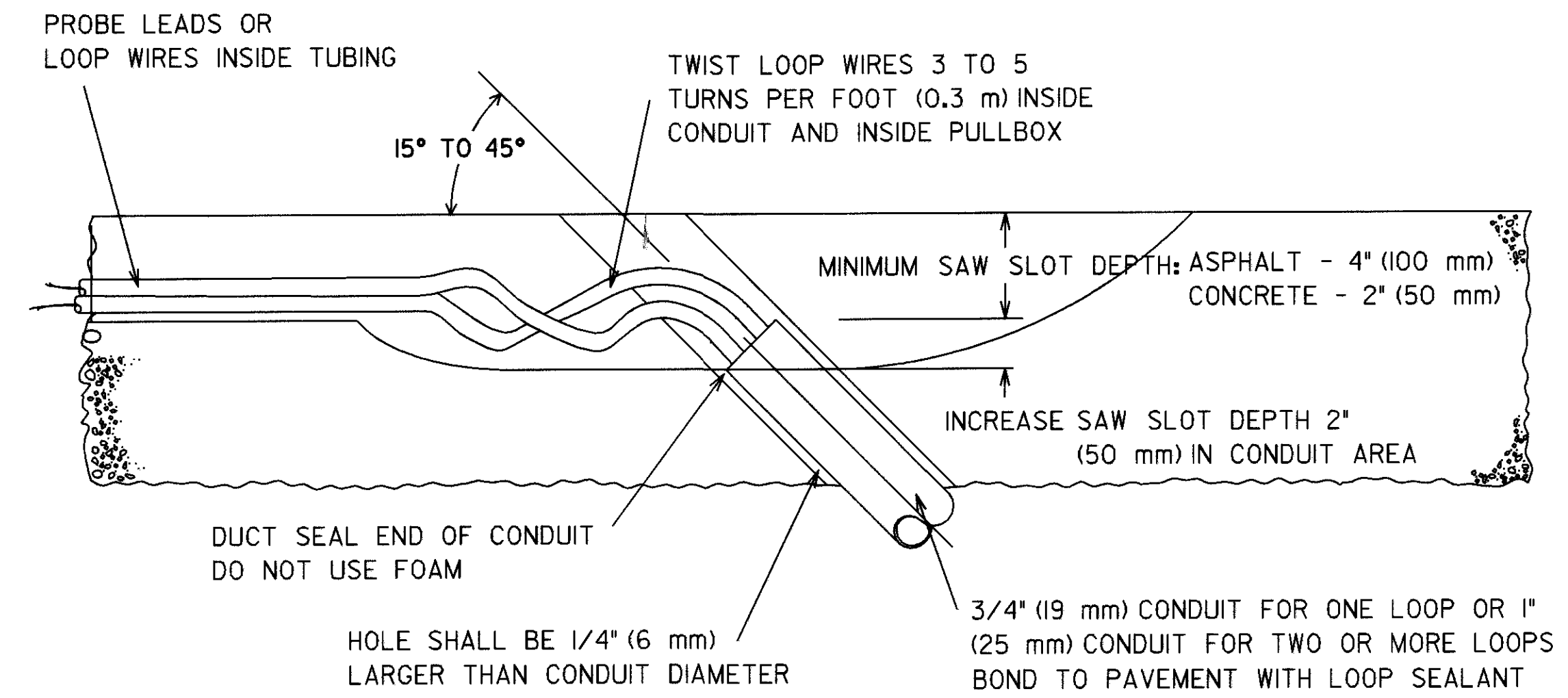
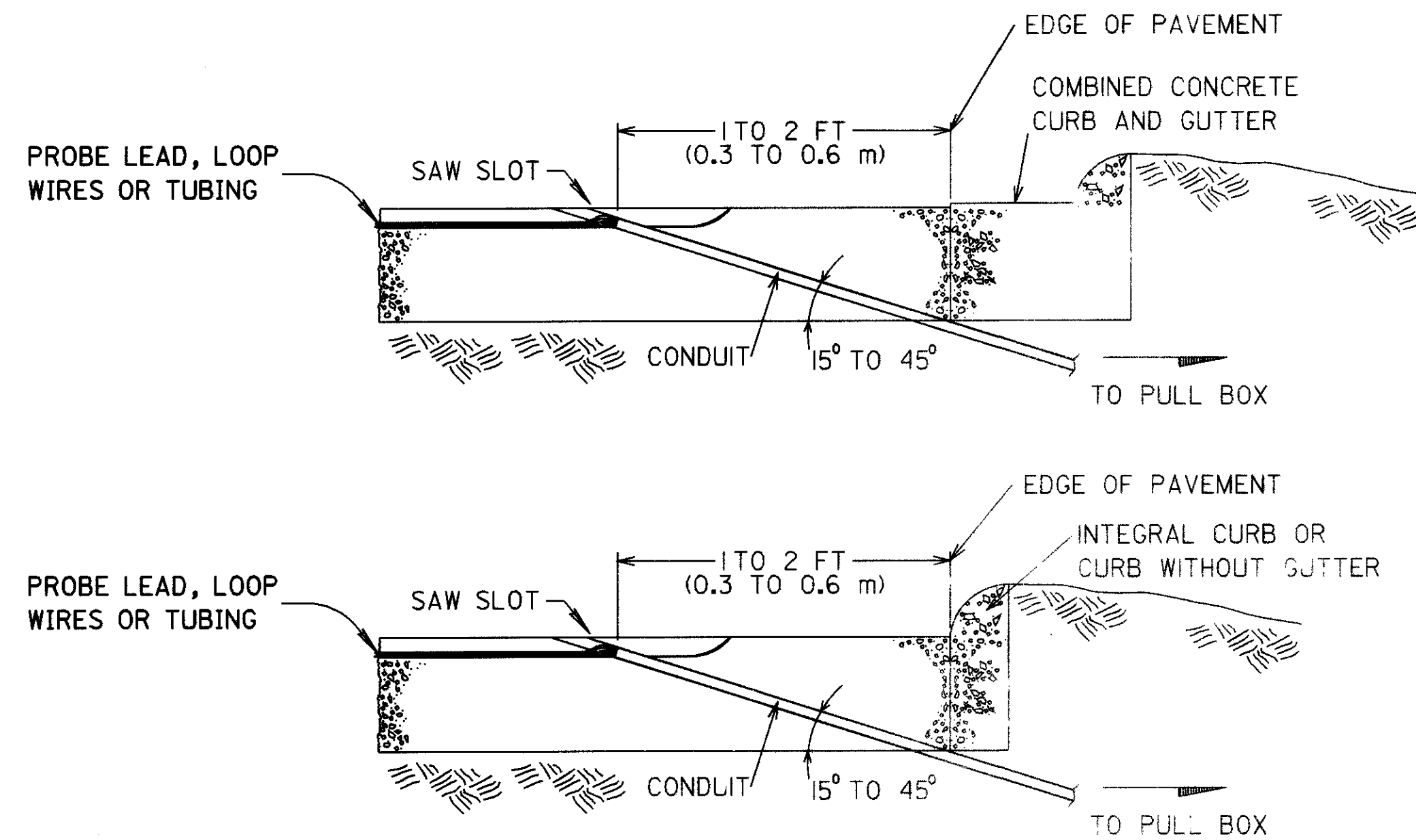
- MINIMUM SAW SLOT DEPTH: ASPHALT 4" (100 mm), CONCRETE 2" (50 mm)
- 1. LOOP DETECTOR WIRE IN TUBING SHALL BE AS SPECIFIED IN CMS TABLE 732.19.
- 3. LOOP DETECTOR SEALANT SHALL BE A PREQUALIFIED PRODUCT IN ACCORDANCE WITH SUPPLEMENT 1048.
- 4. SAW SLOTS AND PROBE HOLES SHALL BE THOROUGHLY CLEANED AND DRIED PRIOR TO INSTALLATION OF SEALANT.
- 5. WIRE INSTALLATIONS IN NEW ASPHALT MAY BE SAWED AND EMBEDDED WITH SEALANT IN A SUB-SURFACE COURSE WITH SUBSEQUENT COVERING BY THE SURFACE COURSE, IF SPECIFIED IN PLAN.

SLOT DETAIL

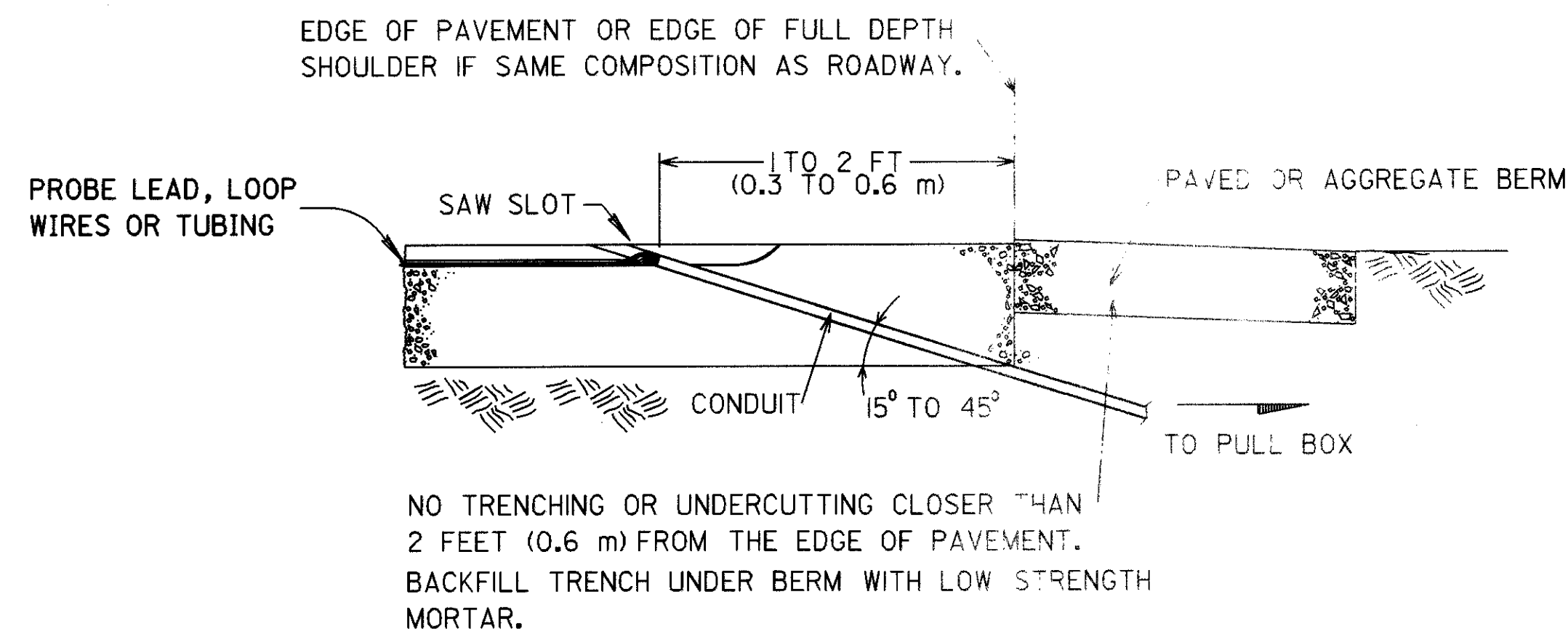


DETAIL B

OFFICE OF TECHNICAL SERVICES OHIO DEPARTMENT OF TRANSPORTATION	
TRAFFIC CONTROL	DATE 05/05/99
VEHICLE DETECTOR INSTALLATION DETAILS I	
ATR PLAN INSERT SHEET	TC-82.10 <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">3 4</span>

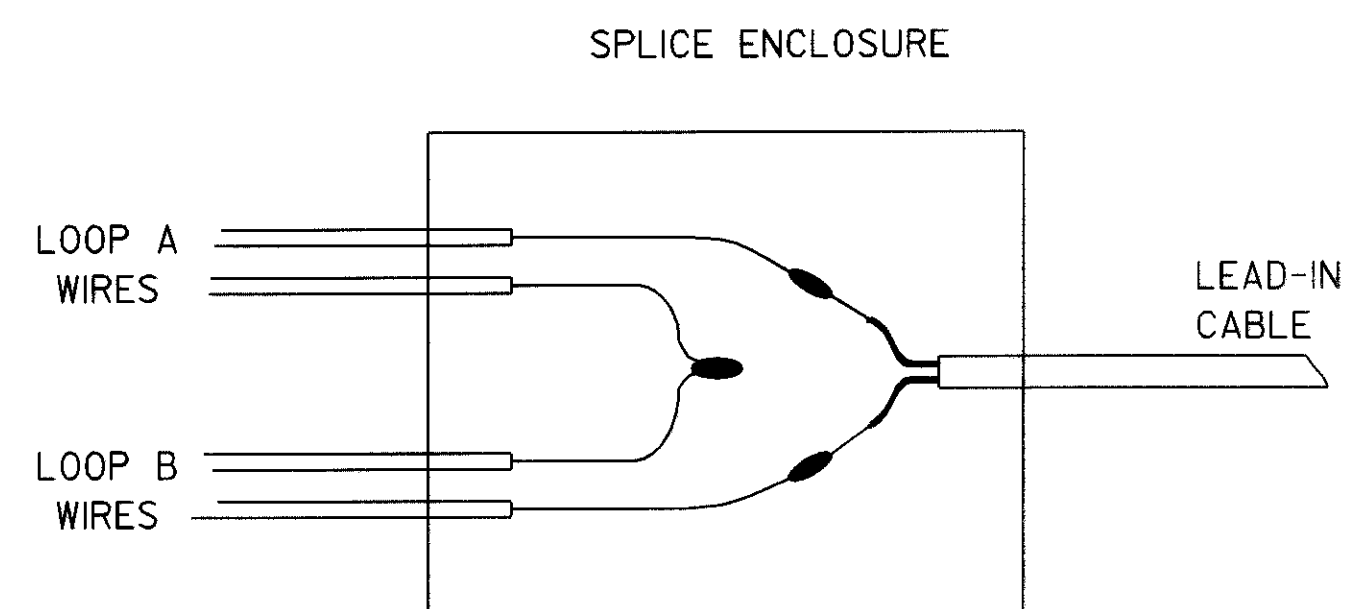


**CONDUIT DRILLED HOLE DETAIL**



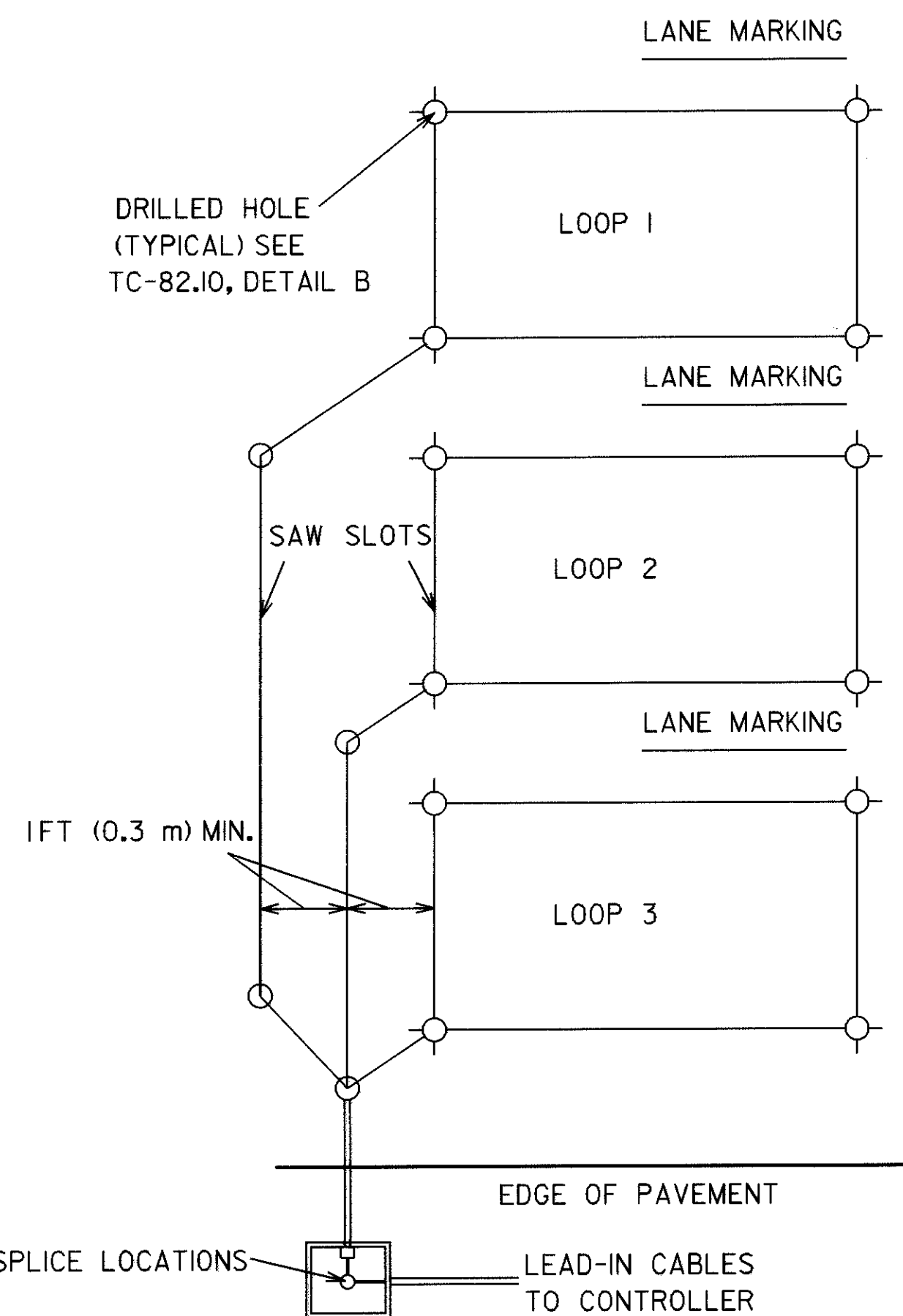
1. THE DRILLED HOLE SHALL BE LOCATED AS SHOWN ABOVE AND WITHIN THE FULL DEPTH PAVEMENT. IT SHALL NOT BE DRILLED OR CUT THROUGH THE PAVED BERM, CURB OR CURB AND GUTTER SECTION.
2. IN AREAS OF POOR PAVEMENT CONDITION, THE SAW SLOT DEPTH SHALL BE INCREASED TO INSURE ADEQUATE WIRE EMBEDMENT. ALL FIELD ADJUSTMENTS SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

**TYPICAL DRILLED HOLE LOCATIONS**



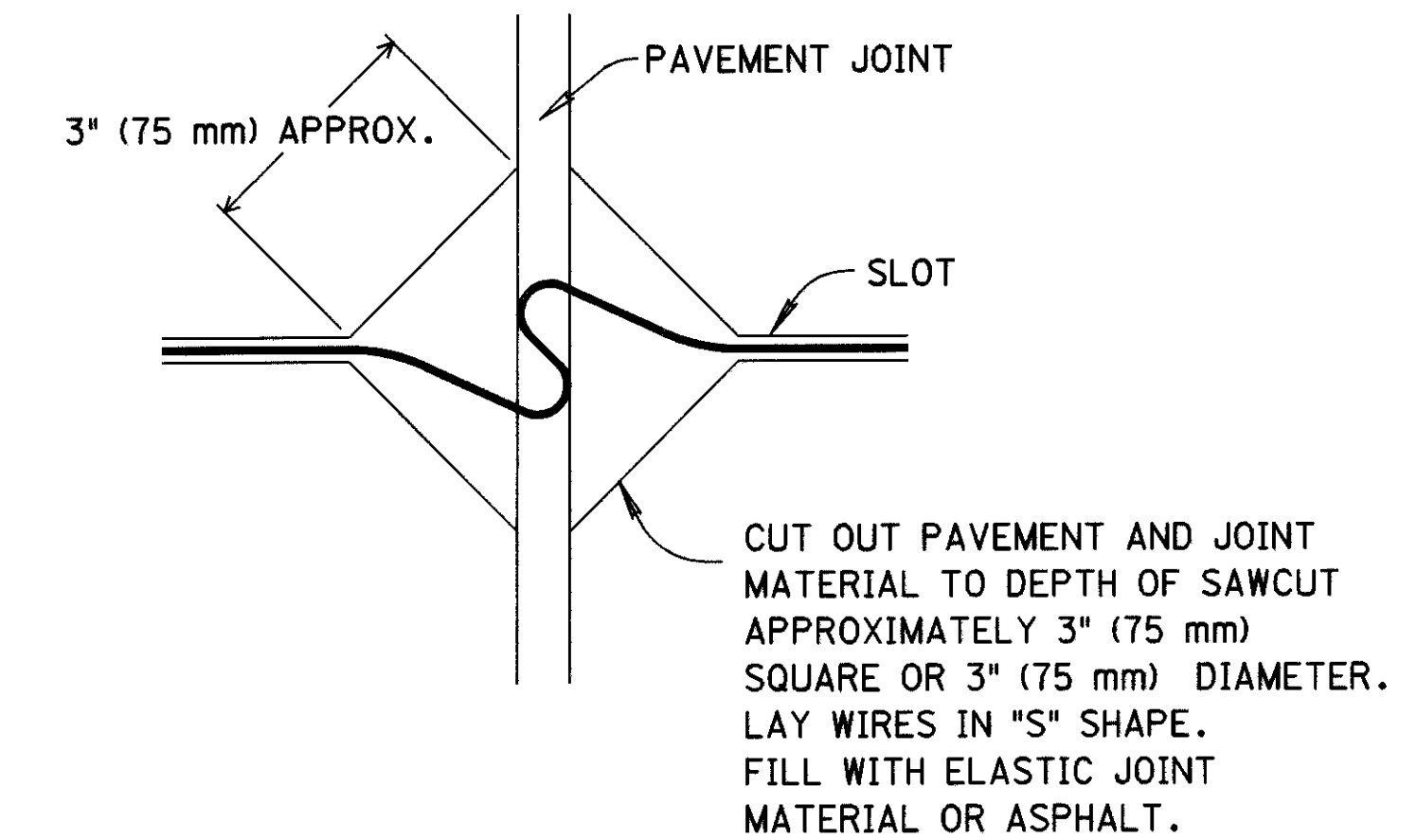
**SERIES CONNECTIONS**

1. WHERE MULTIPLE LOOPS USE A SINGLE LEAD-IN CABLE, SERIES CONNECTIONS SHALL BE USED.
2. A MAXIMUM OF 2 LOOPS (3 WIRE SPLICES) SHALL BE USED IN ANY ENCAPSULATED SPLICE KIT.



1. ONLY ONE SET OF LOOP WIRES SHALL BE RUN IN A SAW SLOT OVER TO THE CONDUIT HOLE LOCATION.
2. ALL ADJACENT SAW SLOTS SHALL HAVE A MINIMUM DISTANCE OF 1 FOOT (0.3 m) BETWEEN THEM. NO SAW SLOT SHALL BE LOCATED WITHIN 1 FOOT (0.3 m) OF A LONGITUDINAL OR TRANSVERSE JOINT IN P.C.C. PAVEMENTS IF THE SLOT IS PARALLEL TO THE JOINT.

**MULTIPLE LOOP LAYOUT**



**JOINT CROSSING DETAIL IN P.C.C. PAVEMENTS**

OFFICE OF TECHNICAL SERVICES OHIO DEPARTMENT OF TRANSPORTATION	
TRAFFIC CONTROL	DATE 05/05/99
VEHICLE DETECTOR INSTALLATION DETAILS II	
ATR PLAN INSERT SHEET	TC-82.11
	4 4

Attachment k



Ohio Department of Transportation  
Interoffice Communication  
Office of Environmental Services

To: Jack R. Marchbanks, District Deputy Director      Date: September 7, 1999  
Attention: Jeff White, District Environmental Coordinator  
From: Timothy M. Hill, Administrator, Environmental Services *Cheryl Ramo for:*  
Subject: FHWA Concurrence  
Project: FRA-315-A&B Connectors    PID 20681

Attached is the Federal Highway Administration's concurrence, dated August 26, 1999, in our determination that the subject project meets the definition contained in 40 CFR 1508.4, and based on past experience with similar actions, does not involve significant environmental impacts and will not require preparation of an Environmental Assessment or an Environmental Impact Statement. A copy of FHWA's concurrence should be attached to the environmental document. The project may be advanced through the Final Development Phase as soon as the necessary programming and authorization are obtained. Re-evaluation of the project's classification is required if the scope of the project or the degree of the environmental impacts change during further development. If you have any questions or concerns, please contact Roberta Dunlap, Environmental Specialist, at (614) 752-7468.

TMH:CAK:RLD  
Attachment

c: P. Stiffler - W. Pace, S.E. Region - File - reading file

SEP 09 1999

# Letter of Transmittal

Ohio Department of Transportation  
District 6  
400 East William Street  
Delaware, Ohio 43015-2199



Telephone: (740) 363-1251  
(800) 372-7714

FAX: (740) 363-6451

August 24, 1999

To: Roberta Dunlap  
ODOT Office of Environmental Services

Attachment J

Project: FRA-315-RD A/B      PID- 20681  
Re: Request for Environmental Clearance

TRANSMITTED TO YOU VIA:

U.S. Mail       Inter-Office Mail       Courier       Pick Up  
 FAX transmission, consisting of \_\_\_\_\_ page(s) including this sheet

PURSUANT TO:

Your Request       Letter  
 Processing of Project       Telephone Conversation  
 See Comments Below       Meeting

THE FOLLOWING:

Copy of Letter  
 Review Comments  
 Report  
 Example  
 Other: Completed Supplemental Project Information form, dated 8-24-99.

REASON:

Your Review and Comment / Approval       For Your File  
 Returned for Revision       For Your Use / Reference  
 Inter-Agency Coordination: with FHWA

COMMENTS:

This is pursuant to your e-mail to me of 8-19-99, about how this project might get cleared by FHWA as a CE Level 1.  
The project site was inspected today by ODOT environmental specialist Michael Pettegrew, as documented on the form. No issues were identified to suggest this should be a CE Level 2. Therefore, please submit this documentation to Scott McGuire at FHWA, for his signature on the last page of the SPI form. We hope for his approval by 8-31-99.

Attachment (4 pages)

Copy To: Project File      T.L. Allen \*  
Reading File      T.M. Lyden

By: *Jeffrey L. White*  
Jeffrey L. White  
Environmental Studies Coordinator