

CURRENT ADT (1990)	= 5,180
DESIGN YEAR ADT (2000)	= 10,392
D. H. V. (2000)	= 1,039
D	= 50 %
T	= 13.4 %
DESIGN SPEED	= 55 M.P.H.
LEGAL SPEED	= 55 M.P.H.
FUNCTIONAL CLASSIFICATION	= PRINCIPAL ARTERIAL (RURAL)
DESIGN EXCEPTIONS	APPROVAL DATE
SHOULDER WIDTH	3-23-90
BRIDGE PARAPET/CURB CONFIGURATION	3-23-90

F-31(18)

LIMITED ACCESS

This improvement is especially designed for through traffic and has been declared a limited access highway or freeway by action of the Director in accordance with the provisions of Section 5511.02 of the Revised Code of Ohio.

COUNTY LINE-----
TOWNSHIP LINE-----
SECTION LINE-----
CORPORATION LINE OR
FENCE (EXISTING) —X—X— (PROPOSED) —X—X—
CENTERLINE 2 3
TREES & STUMPS (TO BE REMOVED)
UTILITY POLES: TELEPHONE POWER LIGHT
LIMITED ACCESS (ONLY) ----- L/A -----
RIGHT OF WAY (ONLY) ----- R/W -----
LIMITED ACCESS & RIGHT OF WAY ----- L/A & R/W -----
EXISTING RIGHT OF WAY ----- R/W -----
PROPERTY LINE (IN EXISTING FENCE) —X— X—
RAILROAD OR
GUARDRAIL (EXISTING) (PROPOSED)

TITLE SHEET	1
SCHEMATIC	2-4
TYPICAL SECTIONS	5-8
CALCULATIONS	9-24
GENERAL NOTES	25-28
TRAFFIC MAINTENANCE PLAN	29-38
GENERAL SUMMARY	39-41
PLAN SHEETS	42-53
MISCELLANEOUS DETAILS	54-74
PAVEMENT REPAIR	75-86
TRAFFIC CONTROL PLAN	87-92
STRUCTURES, 20' SPAN & OVER	93-115

SHEET NO. 103 IS OMITTED

```

BEGIN PROJECT = STA. 796+50.00
SUSPEND PROJECT = STA. 908+99.56
RESUME PROJECT = STA. 911+12.44
SUSPEND PROJECT = STA. 1206+92.95
RESUME PROJECT = STA. 1209+25.05
END PROJECT = STA. 1334+03.75 BK. = STA. 0+00.00 AH.
LENGTH OF PROJECT = STA. 53,308.77 LIN.FT.

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ADDITIONS AND DEDUCTIONS:

STA. 1013+25.70 BK.	= STA. 1011+67.06 AH.	+158.64 LIN.FT.
STA. 1168+68.19 BK.	= STA. 1168+75.64 AH.	- 7.45 LIN.FT.
STA. 1280+62.94 BK.	= STA. 1280+72.73 AH.	- 9.79 LIN.FT.
STA. 1298+78.92 BK.	= STA. 1298+80.75 AH.	- 1.83 LIN.FT.
STA. 1329+83.81 BK.	= STA. 1329+98.24 AH.	- 14.43 LIN.FT.
TOTAL		= +125.14 LIN.FT.

NET LENGTH OF PROJECT = 53,433.91 LIN.FT. OR 10.120 MILE

ADD FOR WORK:		
STA. 794+52.00 TO STA. 796+50.00	=	198.00'
STA. 0+00.00 AH. TO STA. 3+67.29	=	367.29'
TOTAL	=	<u>565.29'</u>

NET LENGTH OF WORK = 53,999.20 LIN.FT. OR 10.227 MILE

PLAN PREPARED BY:
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT II
NEW PHILADELPHIA

UNDERGROUND UTILITIES

**2 WORKING DAYS
BEFORE YOU DIG**

CALL **800-362-2764** (TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE

**NON-MEMBERS
MUST BE CALLED DIRECTLY**

LOCATION MAP

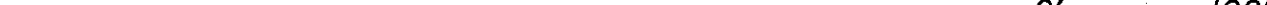
SCALE IN MILES

SCALE

PORTION TO BE IMPROVED _____

STATE & FEDERAL ROUTES _____

OTHER ROADS _____

PLAN 

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS

BP-2	1-11-85	F-2	5- 1-76	GR-6A	2- 5-82	TC-41.20	3-26-79	MT-98.12	8-25-8
BP-3	12- 6-76	F-3	5- 1-76	GR-4A	1-30-84	TC-42.20	3-26-79	MT-98.13	8-25-8
BP-4	10- 1-87	F-5	5- 1-76	I-2	12-18-84	TC-61.10	4- 5-82	MT-98.14	8-25-8
BP-5	10- 1-87	F-6	5- 1-76			TC-72.20	2-26-82	MT-98.15	8-25-8
BP-7	10- 1-87			MC-4	7-26-76	TC-65.10	2-26-82	MT-99.10	11-14-8
BP-11	1-30-84	GR-1	1-11-85	MC-6	1-30-84	TC-65.11	4- 5-82	MT-99.20	4-29-8
BP-13	1-23-90	GR-2B	2- 5-82	MC-9A	1-11-85	TC-65.13	5-21-81	MT-96.10	9- 9-8
		GR-3	10-25-90	MC-10	5- 1-76			MT-96.20	9- 9-8
CB-8	11-10-83	GR-3A	2-5-82	MC-11	8- 1-78	MT-95.30	10-10-88	MT-96.25	9- 9-8
		GR-4	2- 5-82			MT-97.10	4-29-88	AS-1-81	11-27-8
		GR-6	2- 5-82	TC-35.10	8-29-84	MT-97.11	10- 4-89		

1989 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.

I hereby approve these plans and declare that the making of this improvement will not require the closing to traffic of the highway and that provisions for the maintenance and safety of traffic will be as set forth on the plans and estimates.

APPROVED William P. McKenna
DATE 7/18/90 DISTRICT DEPUTY DIRECTOR OF TRANSPORTATION

APPROVED C. D. Hanfilanni
DATE 10-1-90 ENGINEER, BUREAU OF BRIDGES AND
STRUCTURAL DESIGN

APPROVED Chadon J. Stitt
DATE 10/21/90 DEPUTY DIRECTOR, PLANNING AND DESIGN

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.

APPROVED Bernard B. Hurst
DATE 10/29/90 DIRECTOR, DEPARTMENT OF TRANSPORTATION

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED

DIVISION ADMINISTRATOR

OHIO

FHWA REGION 5

	FEDERAL PROJECT
--	--------------------



REVISÉ 1-3-91

SCALE IN FEET

0 400 800

HAS-22-15.03



THE PROJECT CONSISTS OF FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT OF THE FAILED PAVEMENT JOINTS, CRACKS AND BROKEN SLABS, INSTALLING SHALLOW UNDERDRAINS, PLANING 1/4" OF THE EXISTING ASPHALT CONCRETE SURFACE COURSE OFF OF THE MAINLINE PAVEMENT AND RAMPS, PLACING 1/4" OF ASPHALT CONCRETE SURFACE COURSE ON THE MAINLINE PAVEMENT AND RAMPS, RECONSTRUCTING THE RIGHT OF WAY FENCE AND APPLYING NEW PAVEMENT MARKINGS. THE DECKS OF BRIDGE NO'S. HAS-22-1725, HAS-22-1738 L&R, HAS-22-1738 F, AND HAS-22-2362 L&R WILL BE PATCHED AND SEALED, THE DECKS OF BRIDGE NO'S. HAS-22-1749 L&R, HAS-22-1753 L&R AND HAS-22-2126 WILL BE OVERLAYED WITH MICRO-SILICA CONCRETE, THE PIERS OF BRIDGE NO. HAS-22-2188 WILL BE SEALED AND THE DECK OF BRIDGE NO. HAS-22-2460 L WILL BE REMOVED AND REPLACED WITH A NEW DECK.

P.I. STA. 804+35.24
 $\Delta = 5^{\circ}50'$ LT.

$$\text{SUPERELEVATION} = 0.032 \text{ FT/FT}$$

BEGIN WORK
STA. 794+52.00

F-31(18)

BEGIN PROJECT
STA. 796+50.00
S.L.M. 15.03

BRIDGE NO.
HAS-22-1664
(NO WORK)

$$\frac{\text{STA. 882+00.00 U.S. 22}}{\text{STA. 505+00.00 U.S. 250}}$$

P.I. STA. 976+83.35
 $\Delta = 40^{\circ}33'30''$ LT.
 $D_c = 2^{\circ}00'$
 $T_s = 1209.02'$
 $L_c = 1727.92'$
 $R = 2864.79'$
 $L_s = 300'$
 $E_s = 190.99'$
 $L.T. = 200.03'$
 $S.T. = 100.03'$
 $\theta_s = 3^{\circ}00'$

$$\text{SUPERELEVATION} = 0.064 \text{ FT/FT}$$

F-31(18)

SUSPEND PROJECT
STA. 908+99.56
S.L.M. 17.17

F-31(18)
RESUME PROJECT
STA. 911+12.44
S.L.M. 17.21

$$\frac{\text{STA. 927+09.53 U.S. 22 =}}{\text{STA. 125+00.00 S.R. 9}}$$

BRIDGE NO.
HAS-22-1749
L & R

BRIDGE NO.
HAS-22-1738

BRIDGE NO.
HAS-22-1753
L & R

BRIDGE NO.
HAS-22-1738
L & R

BRIDGE NO.
HAS-22-1725

BRIDGE NO.
HAS-250-1912
NO WORK

P.I. STA. 937+50.00
 $\Delta = 5^{\circ}42'$ RT.
 $D = 0^{\circ}30'$
 $T = 570.47'$
 $L = 1140.00'$
 $R = 11,459.16'$

SUPERELEVATION = 0.016 FT/FT

P.I. STA. 890+20.38
 $\Delta = 21^{\circ}41'$ RT.
 $D_c = 2^{\circ}00'$
 $T_s = 698.89'$
 $L_s = 583.33'$
 $R = 5729.58'$
 $L_c = 784.17'$
 $E_s = 53.39'$
 $L.T. = 200.03'$
 $S.T. = 100.03'$
 $\theta_s = 3^{\circ}00'$

SUPERELEVATION = 0.064 FT/FT

BRIDGE NO.
HAS-22-1717
L & R
(NO WORK)

HA221502 VI

SCHF M A T I C

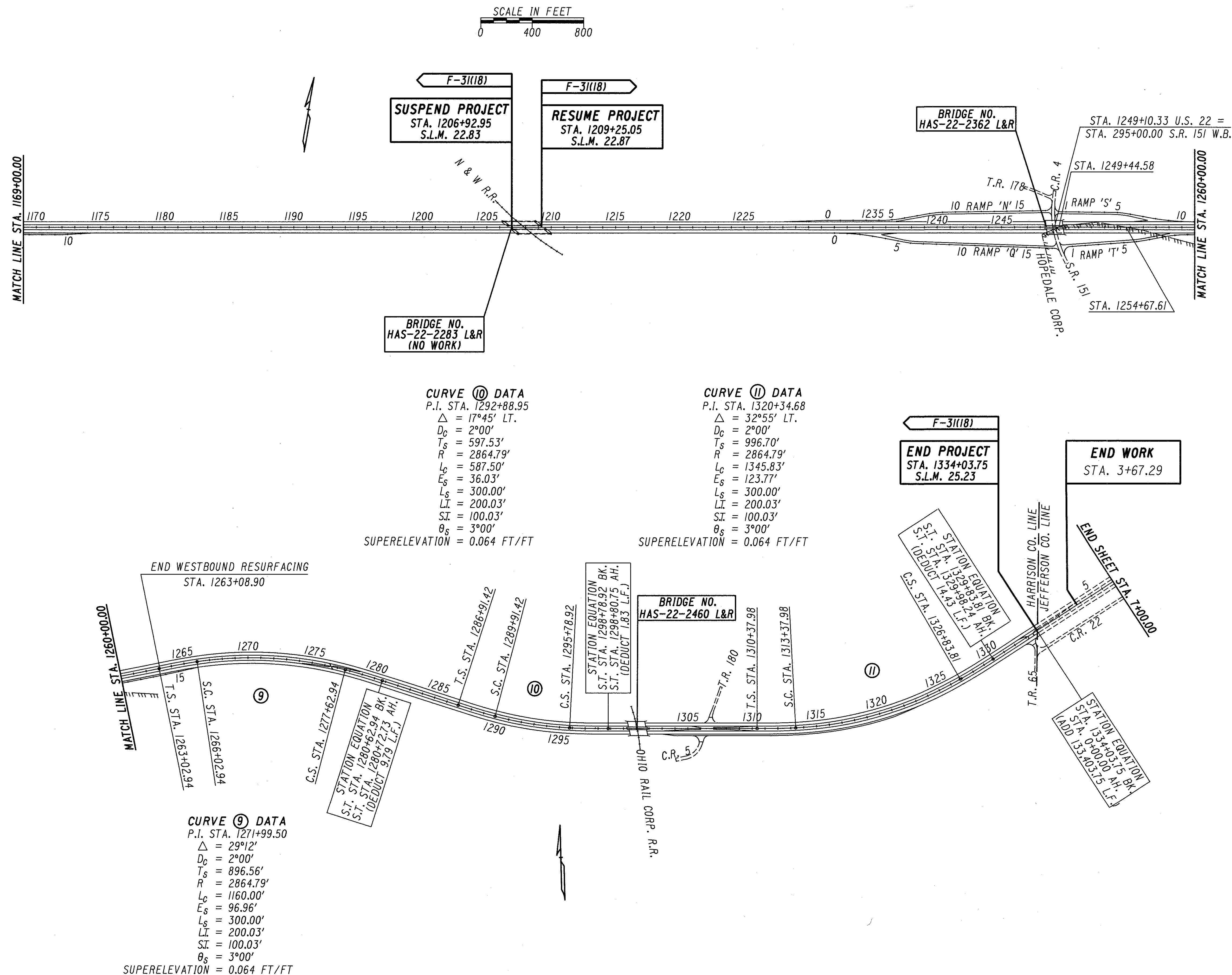
SCHEMATIC

FHWA REGION	STATE	PROJECT	
5	OHIO		

HAS-22-15.03

4

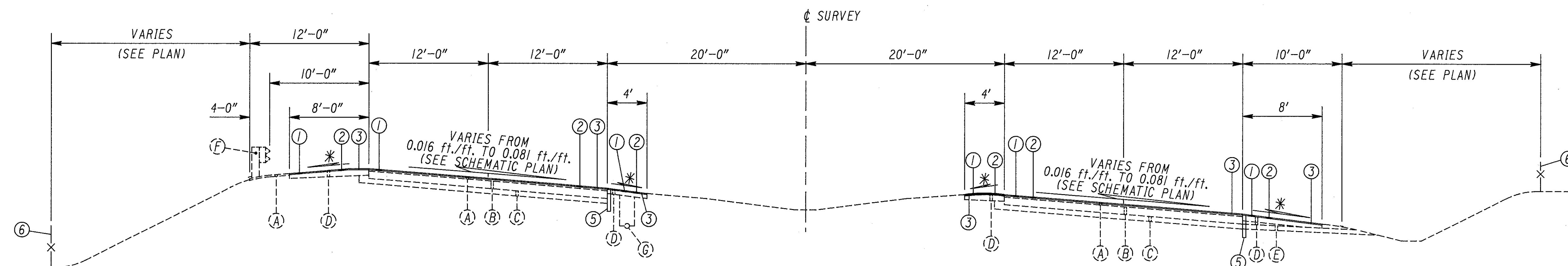
115



TYPICAL SECTIONS

TYPE 446

SCALE IN FEET
0 3 6 12



PROPOSED LEGEND

- ① ITEM 446 - 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, AC-20
- ② ITEM 254 - PAVEMENT PLANING, BITUMINOUS (1 1/4" NOMINAL THICKNESS)
- ③ ITEM 407 - TACK COAT
- ④ ITEM SPECIAL - SEALED JOINT BETWEEN RIGID PAVEMENT AND PAVED SHOULDER (SEE NOTE IN PROPOSAL)
- ⑤ ITEM 605 - SHALLOW UNDERDRAINS, AS PER PLAN (SEE SHEET NO. 28)
- ⑥ ITEM 607 - FENCE, TYPE 47
- ⑦ ITEM 606 - GUARDRAIL, TYPE 5, AS PER PLAN (SEE SHEET NO. 25)
- ⑧ ITEM 301 - BITUMINOUS AGGREGATE BASE, AC-20
- ⑨ ITEM 304 - AGGREGATE BASE, AS PER PLAN (SEE SHEET NO. 25)
- ⑩ ITEM 310 - SUBBASE, TYPE II, AS PER PLAN (SEE SHEET NO. 25)
- ⑪ ITEM 408 - BITUMINOUS PRIME COAT @ 0.40 GAL./S.Y.
- ⑫ ITEM 404 - 2" ASPHALT CONCRETE (UNDER GUARDRAIL)
- ⑬ ITEM SPECIAL - HERBICIDE APPLICATION UNDER ASPHALT (SEE NOTE ON SHEET NO. 27)
- ⑭ ITEM 659 - SEEDING AND MULCHING & WATER
- ⑮ ITEM 448 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, AC-20
- ⑯ ITEM 203 - SUBGRADE COMPACTION
- ⑰ ITEM 203 - LINEAR GRADING (SEE SHEET NO. 25)
- ⑱ ITEM SPECIAL - GRINDING CONCRETE PAVEMENT (SEE NOTE IN PROPOSAL)

SUPERELEVATED SECTION

STA. 801+43.32 TO STA. 807+75.00	=	631.68 L.F.
STA. 883+25.00 TO STA. 897+00.00	=	1,375.00 L.F.
STA. 931+50.00 TO STA. 943+50.00	=	1,200.00 L.F.
STA. 965+00.00 TO STA. 987+75.00	=	2,275.00 L.F.
STA. 992+75.00 TO STA. 1009+91.08	=	1,716.08 L.F.
STA. 1150+50.00 TO STA. 1168+68.19 BK.	=	1,818.19 L.F.
TOTAL	=	9,015.95 L.F.

STATION EQUATIONS

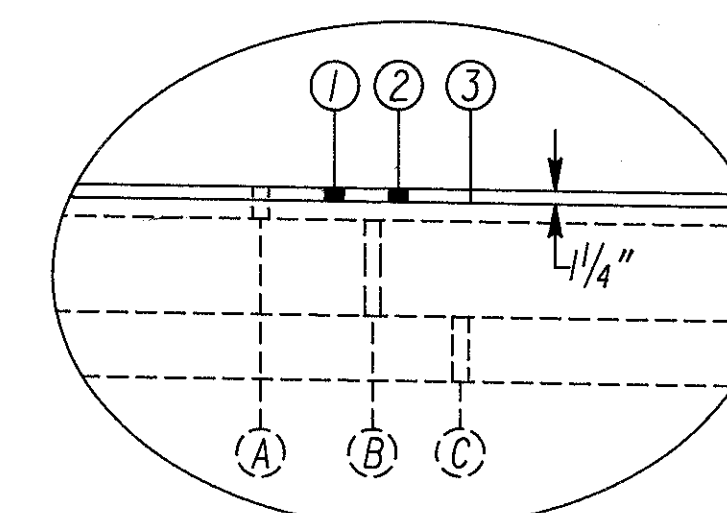
STA. 1168+68.19 BK. = STA. 1168+75.64 AH. (DEDUCT 7.45')
STA. 1280+62.94 BK. = STA. 1280+72.73 AH. (DEDUCT 9.79')

FOR DITCH CLEANOUT DETAILS, SEE SHEET NO. 63
*FOR SHOULDER SLOPE DETAILS, SEE SHEET NO. 8

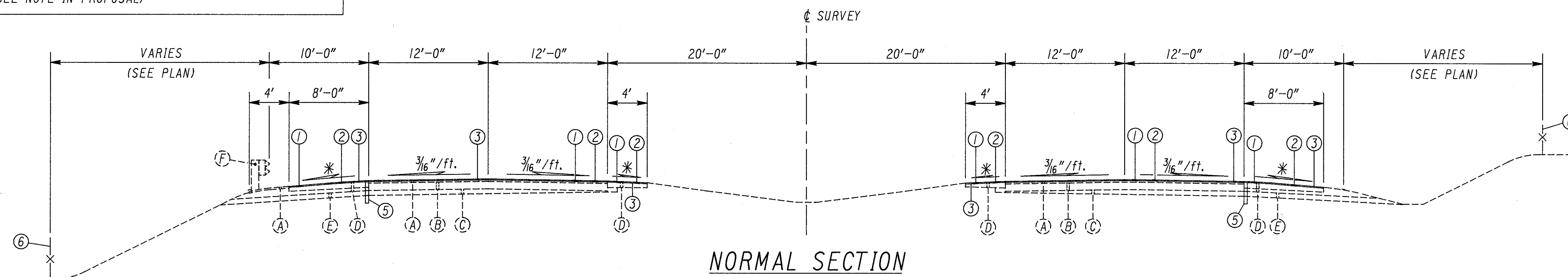
NOTE: ALL PAVEMENT SLOPES SHOWN ARE THE SAME AS EXISTING.

EXISTING LEGEND

- Ⓐ-- EXISTING ASPHALT CONCRETE
- Ⓑ-- EXISTING 9" REINFORCED CONCRETE
- Ⓒ-- EXISTING SUBBASE
- Ⓓ-- EXISTING BITUMINOUS AGGREGATE BASE
- Ⓔ-- EXISTING AGGREGATE DRAINS
- Ⓕ-- EXISTING GUARDRAIL
- Ⓖ-- EXISTING 6" PIPE UNDERDRAIN (TO REMAIN AND FUNCTION)
- Ⓗ-- EXISTING CURB
- Ⓘ-- EXISTING CONCRETE MEDIAN



RESURFACING DETAIL



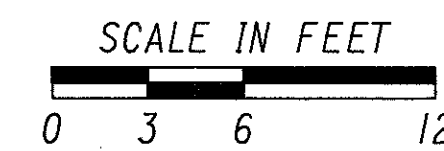
NORMAL SECTION

STA. 807+75.00 TO STA. 883+25.00	=	7,550.00 L.F.
STA. 897+00.00 TO STA. 908+74.56	=	1,174.56 L.F.
STA. 908+74.56 TO STA. 911+37.44	=	BR. NO. HAS-22-1717 L&R AND APPROACH SLABS
STA. 911+37.44 TO STA. 920+37.22	=	899.78 L.F.
STA. 920+37.22 TO STA. 922+18.78	=	BR. NO. HAS-22-1738 L&R AND APPROACH SLABS
STA. 922+18.78 TO STA. 926+15.89	=	397.11 L.F.
STA. 926+15.89 TO STA. 928+03.17	=	BR. NO. HAS-22-1749 L&R AND APPROACH SLABS
STA. 928+03.17 TO STA. 928+34.61	=	31.44 L.F.
STA. 928+34.61 TO STA. 929+79.39	=	BR. NO. HAS-22-1753 L&R AND APPROACH SLABS
STA. 929+79.39 TO STA. 931+50.00	=	170.61 L.F.

STA. 943+50.00 TO STA. 965+00.00	=	2,150.00 L.F.
STA. 987+75.00 TO STA. 992+75.00	=	500.00 L.F.
STA. 1135+00.00 TO STA. 1150+50.00	=	1,550.00 L.F.
STA. 1168+75.64 AH. TO STA. 1206+67.95	=	3,792.31 L.F.
STA. 1206+67.95 TO STA. 1209+50.05	=	BR. NO. HAS-22-2283 L&R AND APPROACH SLABS
STA. 1209+50.05 TO STA. 1248+22.47	=	3,872.42 L.F.
STA. 1248+22.47 TO STA. 1250+03.03	=	BR. NO. HAS-22-2362 L&R AND APPROACH SLABS
STA. 1250+03.03 TO STA. 1262+03.90	=	1,200.87 L.F.
TOTAL	=	23,289.10 L.F.

TYPICAL SECTIONS

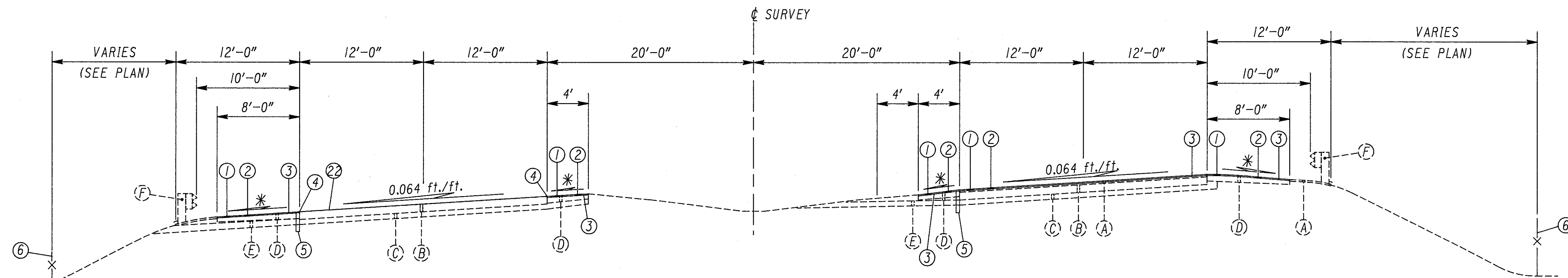
TYPE 446



FHWA REGION	STATE	PROJECT
5	OHIO	

HA-22-15.03

6
115



SUPERELEVATED SECTION

STA. 1262+03.90 TO STA. 1280+62.94 BK.	=	1,859.04 L.F.
STA. 1280+72.73 AH. TO STA. 1280+75.00	=	2.27 L.F.
STA. 1287+00.00 TO STA. 1298+75.00	=	1,175.00 L.F.
STA. 1310+50.00 TO STA. 1329+83.81 BK.	=	1,933.81 L.F.
STA. 1329+98.24 AH. TO STA. 1330+00.00	=	1.76 L.F.
TOTAL	=	4,971.88 L.F.

STATION EQUATIONS

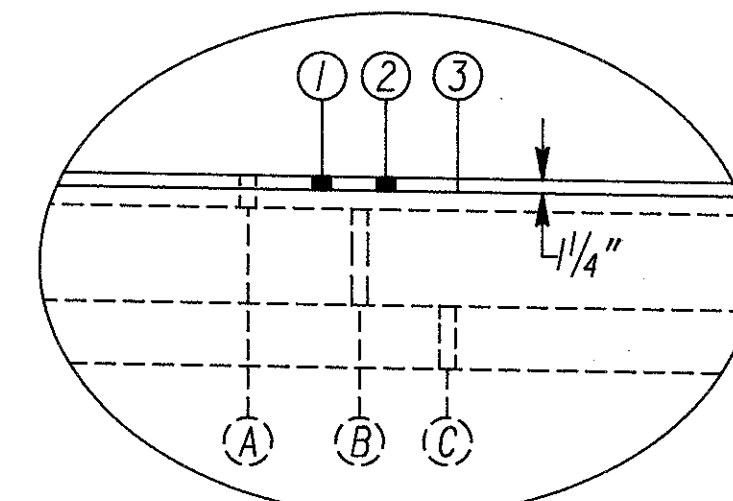
STA. 1280+62.94 BK.	=	STA. 1280+72.73 AH. (DEDUCT 9.79')
STA. 1298+78.92 BK.	=	STA. 1298+80.75 AH. (DEDUCT 1.83')
STA. 1329+83.81 BK.	=	STA. 1329+98.24 AH. (DEDUCT 14.43')

FOR LEGEND, SEE SHEET NO. 5

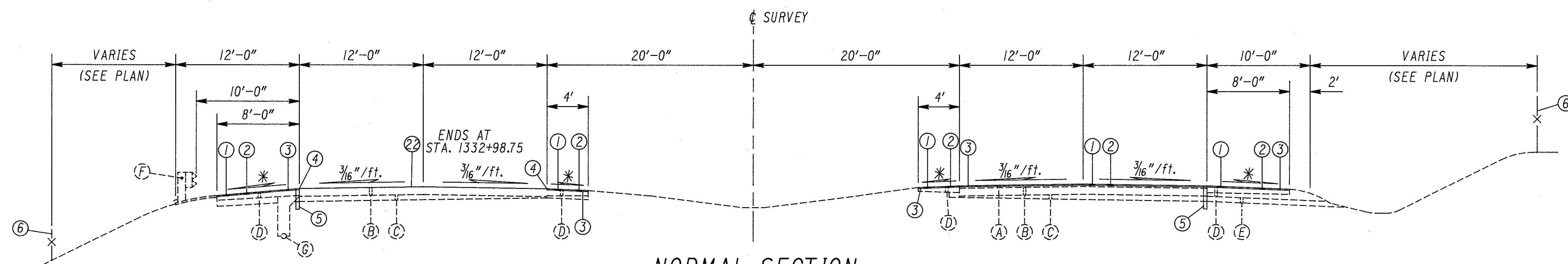
FOR DITCH CLEANOUT DETAILS, SEE SHEET NO. 63

*FOR SHOULDER SLOPE DETAILS, SEE SHEET NO. 8

NOTE: ALL PAVEMENT SLOPES SHOWN ARE THE SAME AS EXISTING.



RESURFACING DETAIL



NORMAL SECTION

STA. 1280+75.00 TO STA. 1287+00.00	=	625.00 L.F.
STA. 1298+75.00 TO STA. 1298+78.92 BK.	=	3.92 L.F.
STA. 1298+80.75 AH. TO STA. 1300+16.70	=	135.95 L.F.
STA. 1300+16.70 TO STA. 1302+01.30	=	BR. NO. HAS-22-2460 L&R L.F. AND APPROACH SLABS
STA. 1302+01.30 TO STA. 1310+50.00	=	848.70 L.F.
STA. 1330+00.00 TO STA. 1334+03.75	=	403.75 L.F.
TOTAL	=	2,017.32 L.F.

FOR LEGEND, SEE SHEET NO. 5

LEFT AND RIGHT SIDE CONFIGURATION ON RAMPS IS REFERENCED TO THE DIRECTION OF TRAVEL.

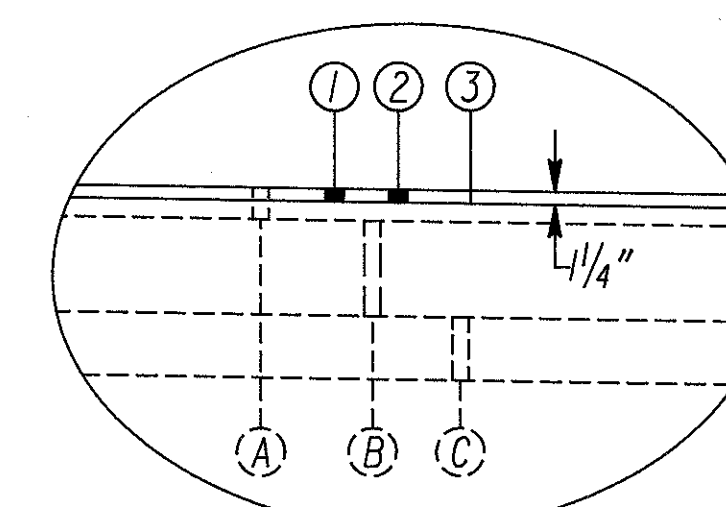
FOR RAMP SHOULDER WIDENING AND ASPHALT PAVING UNDER GUARDRAIL DETAILS, SEE SHEET NO. 8

*FOR SHOULDER SLOPE DETAILS, SEE SHEET NO. 8

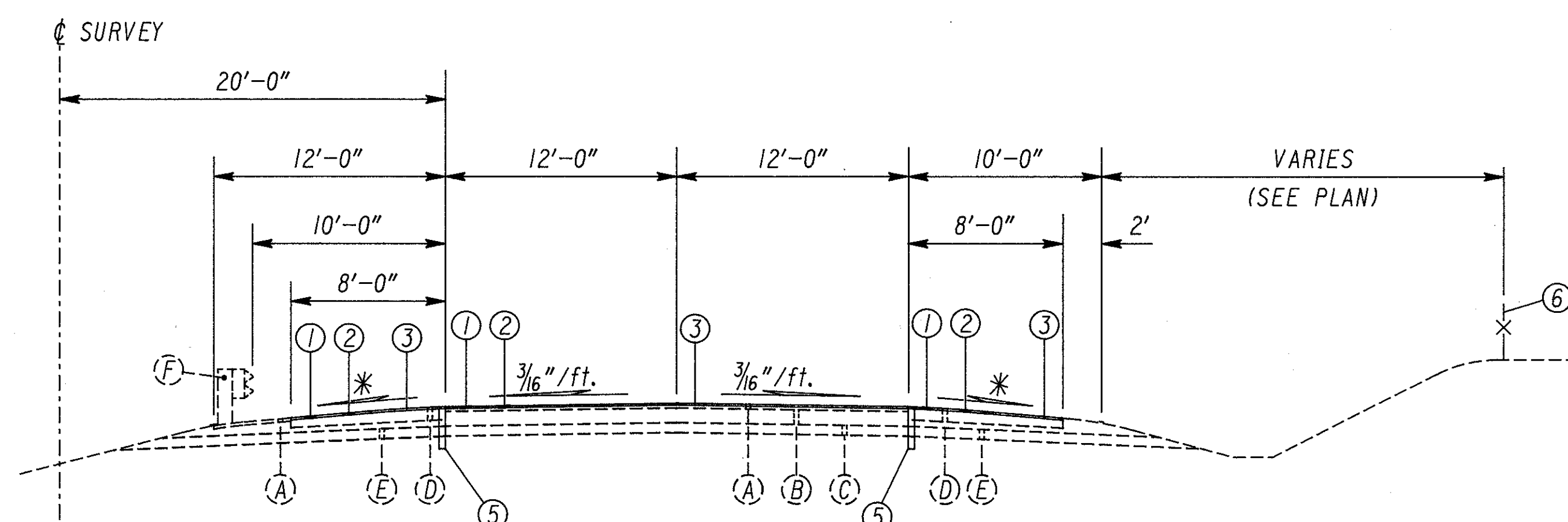
NOTE: ALL PAVEMENT SLOPES SHOWN ARE THE SAME AS EXISTING.

TYPICAL SECTIONS TYPE 446

SCALE IN FEET
0 3 6 12

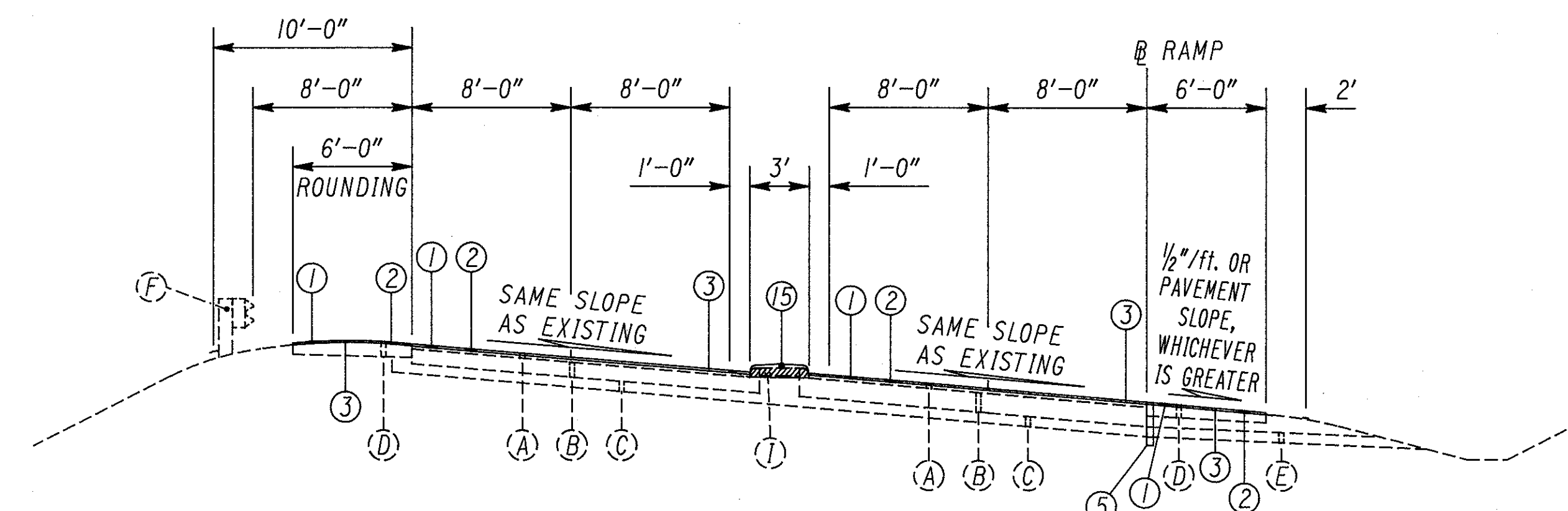


RESURFACING DETAIL



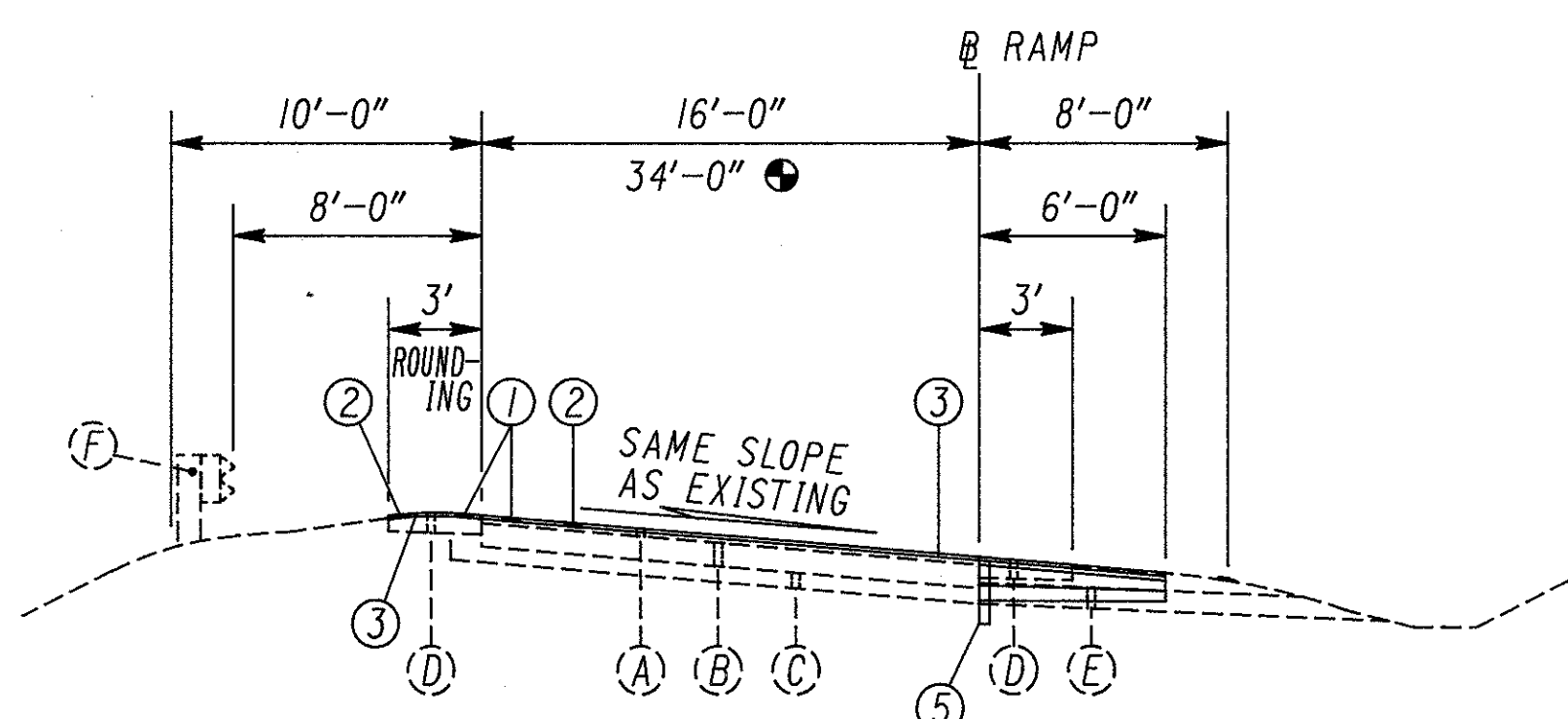
NORMAL SECTION

STA. 796+50.00 TO STA. 801+00.00 = 450.00 L.F.
STA. 1010+00.00 TO STA. 1119+00.00 = 10,900.00 L.F.
STA. 1130+25.00 TO STA. 1135+00.00 = 475.00 L.F.
TOTAL = 11,825.00 L.F.



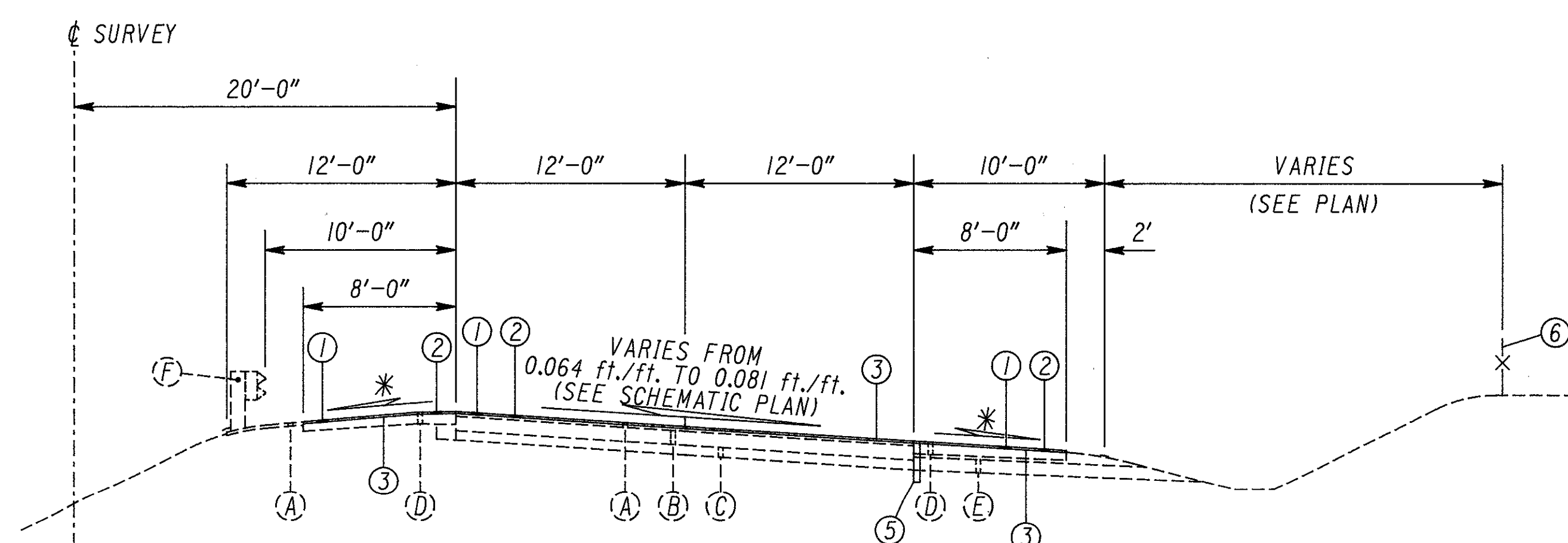
TWO-WAY RAMPS

U.S. 250 INTERCHANGE
RAMP D STA. 0+00.00 TO STA. 4+24.00 = 424.00 L.F.
S.R. 9 INTERCHANGE
RAMP E STA. 0+12.00 TO STA. 6+82.09 = 670.09 L.F.
RAMP G STA. 9+95.00 TO STA. 14+72.72 = 477.72 L.F.
RAMP G STA. 14+72.72 TO STA. 15+97.28 = BR. NO HAS-250-1912 AND APPROACH SLABS
RAMP G STA. 15+97.28 TO STA. 17+88.82 = 191.54 L.F.
TOTAL = 1,339.35 L.F.
S.R. 151 WEST INTERCHANGE
RAMP K STA. 6+82.18 TO STA. 13+10.71 = 628.53 L.F.



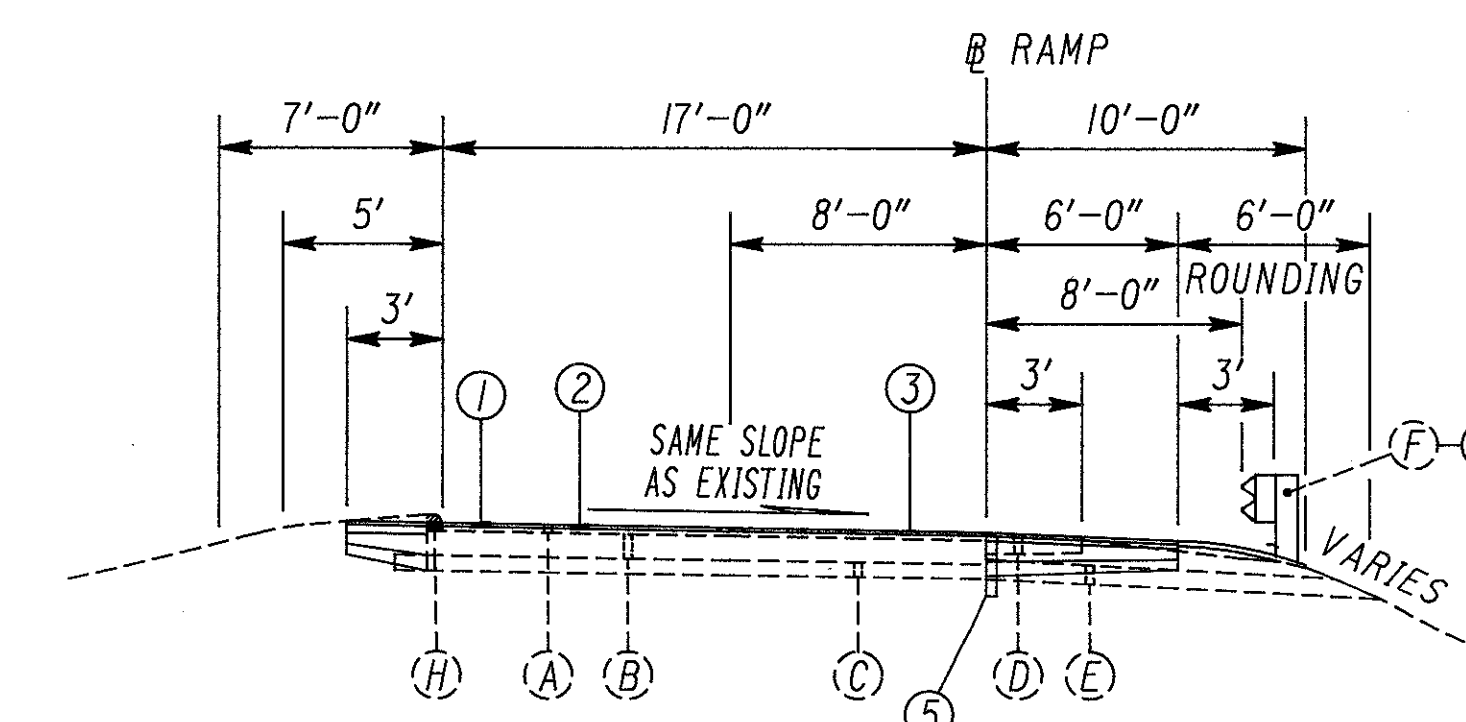
STANDARD RAMPS

U.S. 250 INTERCHANGE
RAMP A STA. 0+12.21 TO STA. 6+59.49 = 647.28 L.F.
RAMP B STA. 3+43.07 TO STA. 8+00.00 = 456.93 L.F.
RAMP B STA. 8+00.00 TO STA. 12+54.21 = 454.21 L.F.
RAMP C STA. 3+54.30 TO STA. 9+60.88 = 606.58 L.F.
TOTAL = 2,165.00 L.F.
S.R. 9 INTERCHANGE
RAMP F STA. 2+43.72 TO STA. 3+50.76 = 107.04 L.F.
RAMP F STA. 3+50.76 TO STA. 5+32.58 = 181.82 L.F.
RAMP F STA. 5+32.58 TO STA. 9+30.28 = 397.70 L.F.
RAMP H STA. 0+00.00 TO STA. 5+30.05 = 530.05 L.F.
TOTAL = 1,034.79 L.F.
S.R. 151 WEST INTERCHANGE
RAMP J STA. 0+00.00 TO STA. 6+46.81 = 646.81 L.F.
RAMP K STA. 1+75.00 TO STA. 6+82.18 = 507.18 L.F.
RAMP L STA. 3+17.35 TO STA. 7+56.12 = 438.77 L.F.
RAMP M STA. 0+12.77 TO STA. 6+15.02 = 602.25 L.F.
TOTAL = 2,195.01 L.F.
S.R. 151 EAST INTERCHANGE
RAMP N STA. 5+18.17 TO STA. 17+45.68 = 1,227.51 L.F.
RAMP Q STA. 3+58.59 TO STA. 17+49.39 = 1,390.80 L.F.
RAMP S STA. 0+12.03 TO STA. 7+44.38 = 732.35 L.F.
RAMP T STA. 0+13.01 TO STA. 8+80.23 = 867.22 L.F.
TOTAL = 4,217.88 L.F.



SUPERELEVATED SECTION

STA. 801+00.00 TO STA. 801+43.32 = 43.32 L.F.
STA. 1009+91.08 TO STA. 1010+00.00 = 8.92 L.F.
STA. 1119+00.00 TO STA. 1123+46.57 = 446.57 L.F.
STA. 1123+46.57 TO STA. 1125+45.50 = BR. NO. HAS-22-2126 AND APPROACH SLABS
STA. 1125+45.50 TO STA. 1130+25.00 = 479.50 L.F.
TOTAL = 978.31 L.F.

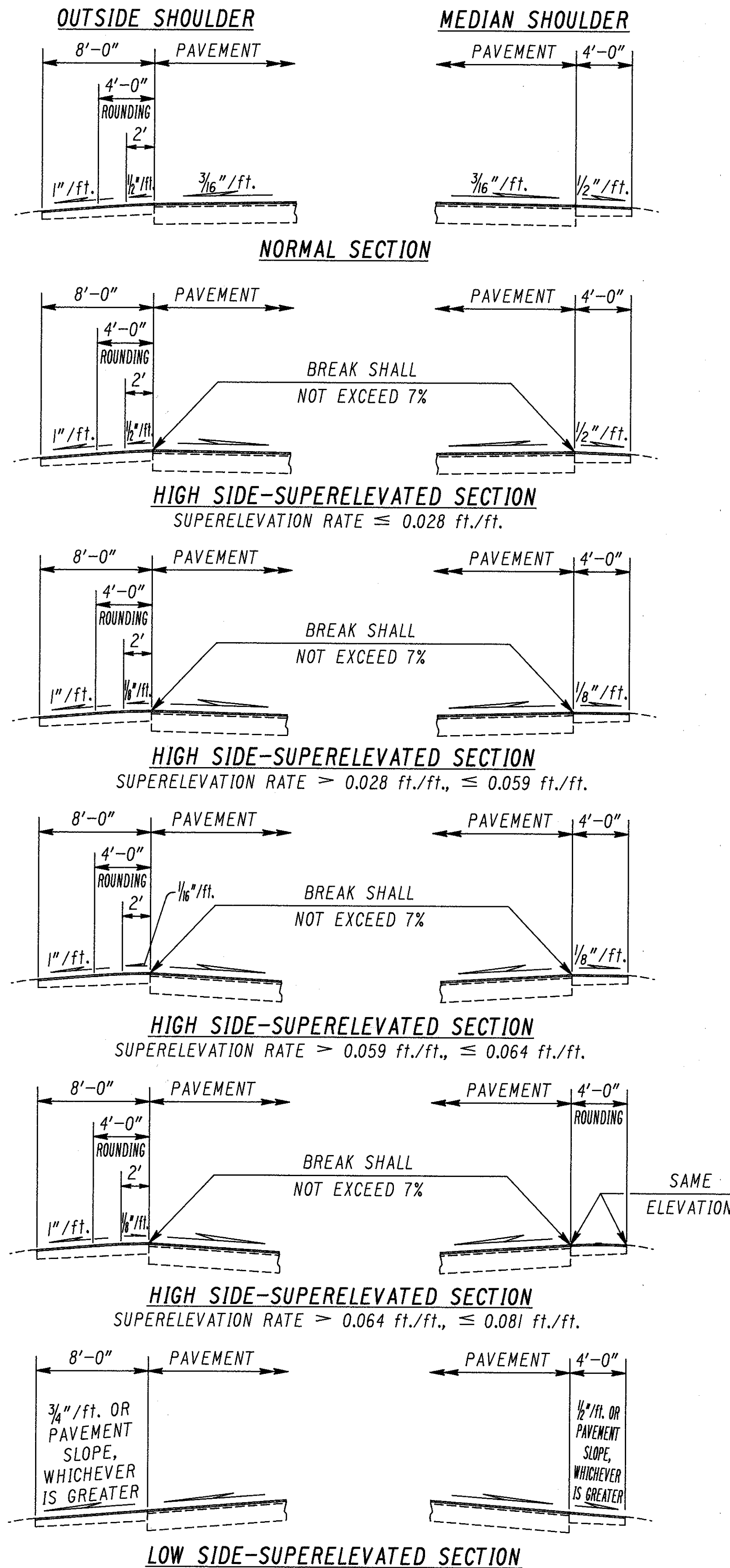


RAMPS WITH CURB

U.S. 250 INTERCHANGE
RAMP D STA. 4+24.00 TO STA. 9+18.89 = 494.89 L.F.
S.R. 9 INTERCHANGE
RAMP E STA. 6+82.09 TO STA. 11+98.69 = 516.60 L.F.
RAMP G STA. 5+69.09 TO STA. 9+95.00 = 425.91 L.F.
TOTAL = 942.51 L.F.

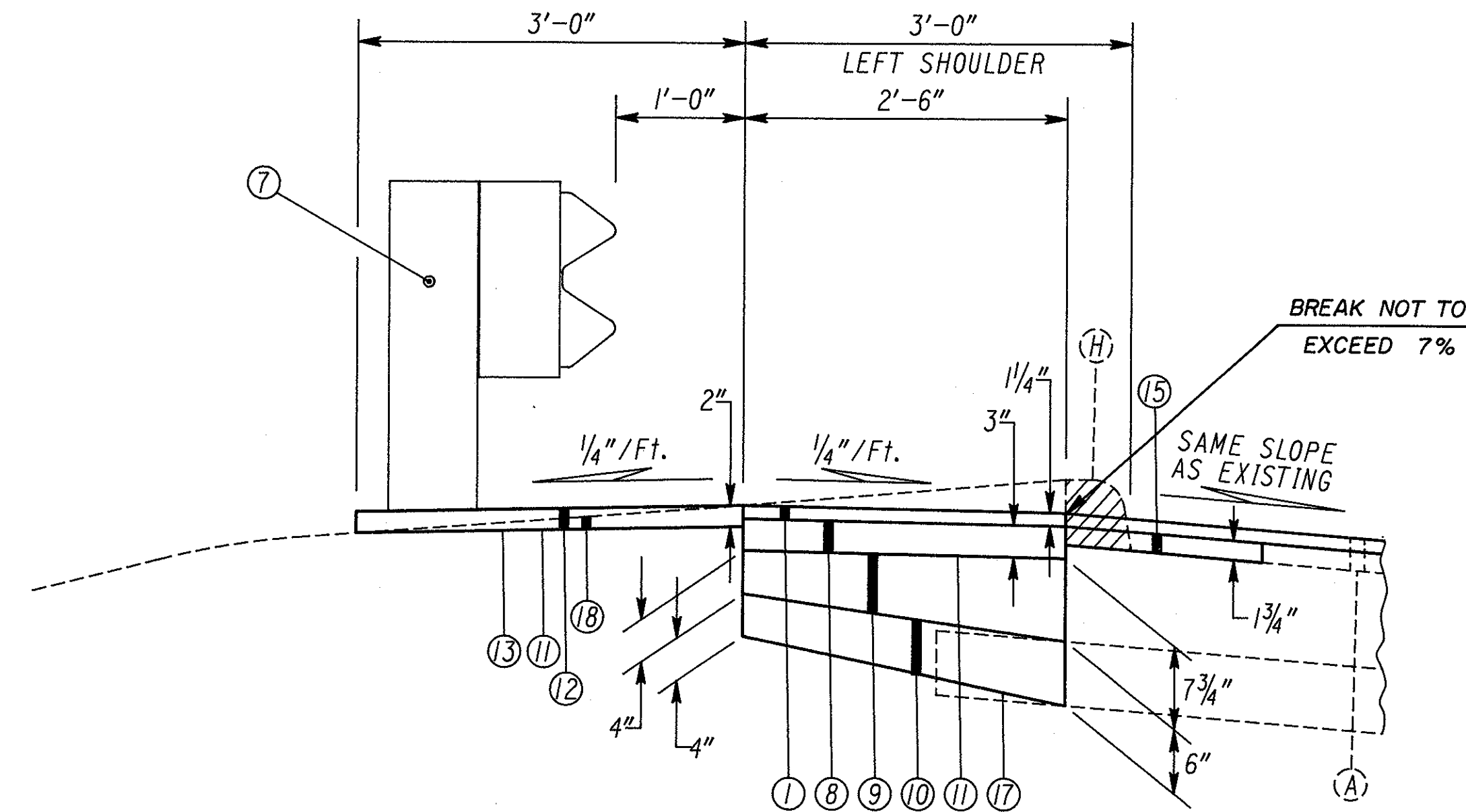
SHOULDER SLOPE DETAILS

NOTE: ALL SHOULDER SLOPES SHOWN ARE THE SAME AS EXISTING.



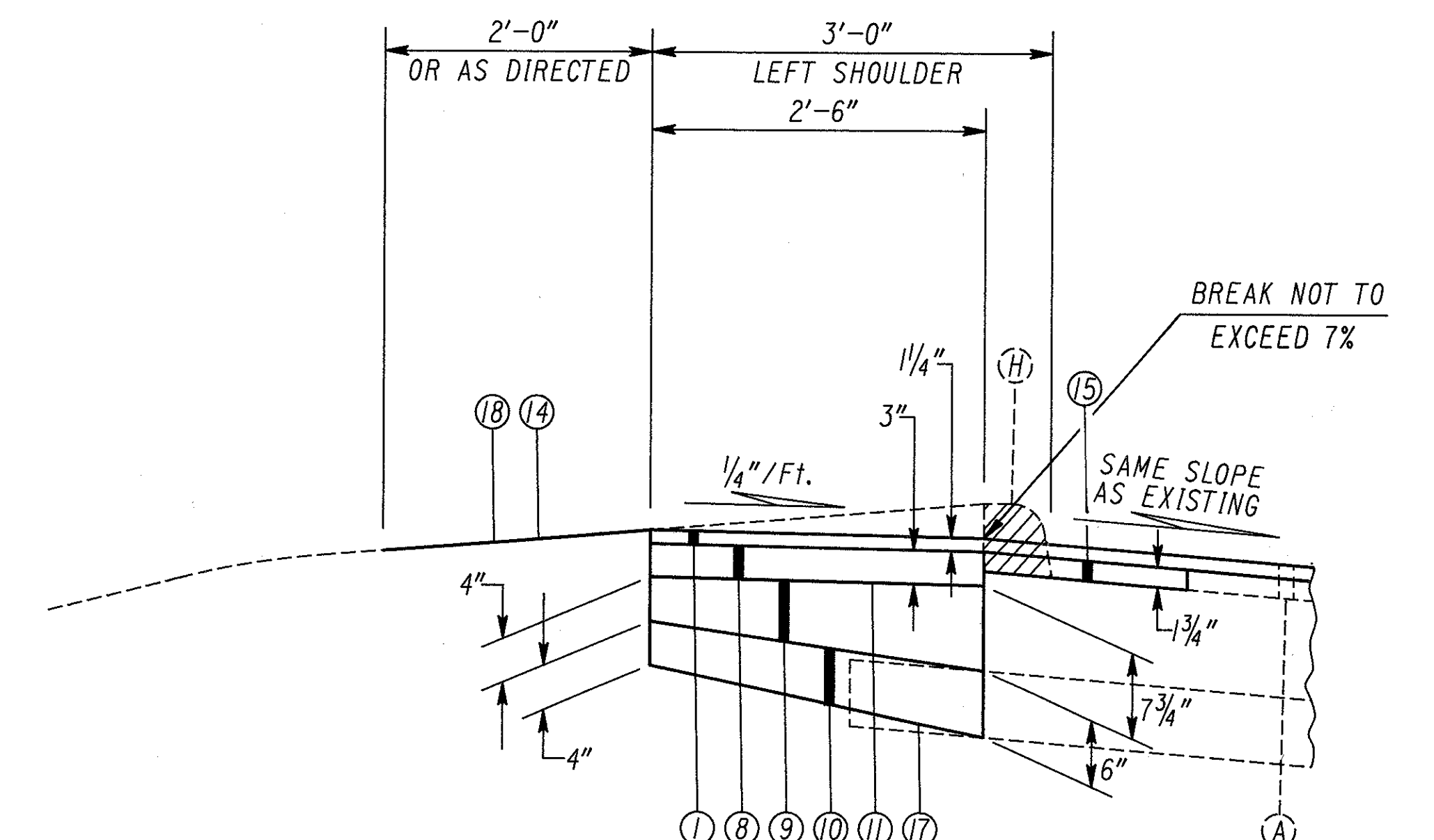
TYPICAL SECTIONS TYPE 446

SCALE IN FEET
0 3 6 12



U.S. 250 INTERCHANGE

RAMP D STA. 4+86.20 TO 8+18.89 = 332.69 L.F.

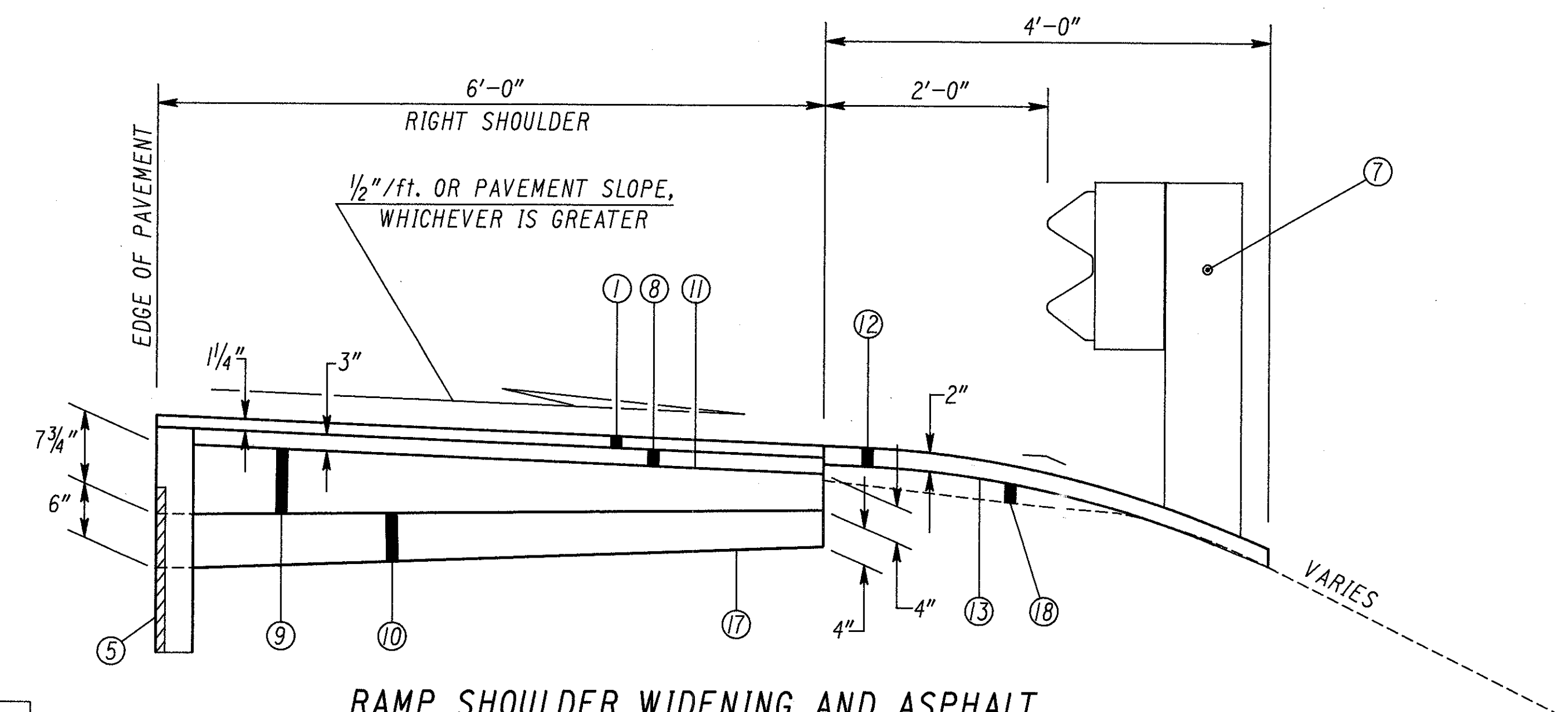


S.R. 9 INTERCHANGE

RAMP E STA. 7+33.40 TO 10+98.69 = 365.29 L.F.
RAMP G STA. 6+69.09 TO 9+21.11 = 252.02 L.F.
TOTAL = 617.31 L.F.

RAMP SHOULDER CONSTRUCTION AT RAMPS WITH CURB

SEE SHEET NO. 20 FOR QUANTITIES
1"=1'



RAMP SHOULDER WIDENING AND ASPHALT PAVING UNDER GUARDRAIL DETAIL

NOTE: THE RAMP SHOULDER WIDENING SHALL BE COMPLETED PRIOR TO INSTALLING THE SHALLOW UNDERDRAINS.
SEE SHEET NO. 20 FOR QUANTITIES

FOR LEGEND, SEE SHEET NO. 5

NOTE: ALL PAVEMENT SLOPES SHOWN ARE THE SAME AS EXISTING.

U.S. 22 EASTBOUND PAVEMENT RESURFACING QUANTITIES

QUANTITIES			FHWA REGION	STATE	PROJECT	9 115
Calc.	SNG	Chkd.	RDA	5	OHIO	
Date: 9-7-89		Date: 1-12-90				

HAS-22-15.03

LOCATION	STATION		LENGTH	WIDTH	AREA	254	407	446		THICKNESS	ASPHALT CONCRETE SURFACE COURSE TYPE I			REMARKS
						PAVEMENT PLANING, BITUMINOUS	TACK COAT @ 0.075 GAL./S.Y.							
	FROM	TO	LIN.FT.	LIN.FT.	SQ.YD.	SQ. YD.	GAL.			INCH	CU. YD.			
	796+50.00	801+43.32	493.32	24	1315.5	1315.5	98.7			1.25	45.7			
	801+43.32	807+89.02	645.70	32.5 avg.	2331.7	2331.7	174.9			1.25	81.0			
	807+89.02	835+00.00	2710.98	24	7229.3	7229.3	542.2			1.25	251.0			
	835+00.00	836+00.00	100.00	30 avg.	333.3	333.3	25.0			1.25	11.6			
	836+00.00	837+52.15	152.15	36	608.6	608.6	45.6			1.25	21.1			
	837+52.15	867+00.00	2947.85	24	7860.9	7860.9	589.6			1.25	272.9			
	867+00.00	868+00.00	100.00	30 avg.	333.3	333.3	25.0			1.25	11.6			
	868+00.00	870+57.66	257.66	36	1030.6	1030.6	77.3			1.25	35.8			
	870+57.66	871+60.46	102.80	45.5 avg.	519.7	519.7	39.0			1.25	18.0			
	871+60.46	872+86.46	126.00	29.25 avg.	409.5	409.5	30.7			1.25	14.2			
	872+86.46	877+28.16	441.70	24	1177.9	1177.9	88.3			1.25	40.9			
	877+28.16	877+84.01	55.85	39.25 avg.	243.6	243.6	18.3			1.25	8.5			
	877+84.01	882+00.00	415.99	36	1664.0	1664.0	124.8			1.25	57.8			
	882+00.00	884+25.00	225.00	30 avg.	750.0	750.0	56.3			1.25	26.0			
	884+25.00	909+39.91	2514.91	24	6706.4	6706.4	503.0			1.25	232.9			
BRIDGE NO. HAS-22-1717	911+25.79	920+54.52	928.83	24	2476.9	2476.9	185.8			1.25	86.0			
BRIDGE NO. HAS-22-1738	921+86.08	925+75.00	388.92	30 avg.	1296.4	1296.4	97.2			1.25	45.0			
BRIDGE NO. HAS-22-1749	925+75.00	926+47.26	72.26	36	289.0	289.0	21.7			1.25	10.0			
	927+67.14	928+53.23	86.09	36	344.4	344.4	25.8			1.25	12.0			
BRIDGE NO. HAS-22-1753	929+48.02	931+50.00	201.98	45.5 avg.	1021.1	1021.1	76.6			1.25	35.5			
	931+50.00	932+50.00	100.00	30 avg.	333.3	333.3	25.0			1.25	11.6			
	932+50.00	936+33.00	383.00	24	1021.3	1021.3	76.6			1.25	35.5			
	936+33.00	936+88.00	55.00	45.5 avg.	278.1	278.1	20.9			1.25	9.7			
	936+88.00	937+75.00	87.00	36	348.0	348.0	26.1			1.25	12.1			
	937+75.00	999+49.00	6174.00	24	16464.0	16464.0	1234.8			1.25	571.7			
	999+49.00	1001+98.57	249.57	23	637.8	637.8	47.8			1.25	22.1			
	1001+98.57	1008+69.38	670.81	24.5 avg.	1826.1	1826.1	137.0			1.25	63.4			
	1008+69.38	1123+71.57	11502.19	24	30672.5	30672.5	2300.4			1.25	1065.0			
BRIDGE NO. HAS-22-2126	1125+20.50	1136+24.00	1103.50	24	2942.7	2942.7	220.7			1.25	102.2			
	1136+24.00	1138+50.00	226.00	32 avg.	803.6	803.6	60.3			1.25	27.9			
	1138+50.00	1158+04.62	1954.62	24	5212.3	5212.3	390.9			1.25	181.0			
	1158+04.62	1159+04.62	100.00	30 avg.	333.3	333.3	25.0			1.25	11.6			
	1159+04.62	1161+25.00	220.38	36	881.5	881.5	66.1			1.25	30.6			
	1161+25.00	1162+36.24	111.24	47.25	584.0	584.0	43.8			1.25	20.3			
	1162+36.24	1163+62.24	126.00	31 avg.	434.0	434.0	32.6			1.25	15.1			
	1163+62.24	1168+49.88	487.64	24	1300.4	1300.4	97.5			1.25	45.2			
	1168+49.88	1169+13.24	63.36	39.25 avg.	276.3	276.3	20.7			1.25	9.6			
	1169+13.24	1172+00.00	286.76	36	1147.0	1147.0	86.0			1.25	39.8			
	1172+00.00	1174+25.00	225.00	30 avg.	750.0	750.0	56.3			1.25	26.0			
	1174+25.00	1207+19.81	3294.81	24	8786.2	8786.2	659.0			1.25	305.1			
BRIDGE NO. HAS-22-2283	1209+44.81	1232+00.00	2255.19	24	6013.8	6013.8	451.0			1.25	208.8			
	1232+00.00	1234+25.00	225.00	30 avg.	750.0	750.0	56.3			1.25	26.0			
	1234+25.00	1235+60.85	135.85	45.5 avg.	686.8	686.8	51.5			1.25	23.8			
	1235+60.85	1236+86.85	126.00	29.25 avg.	409.5	409.5	30.7			1.25	14.2			
	1236+86.85	1248+51.47	1164.62	24	3105.7	3105.7	232.9			1.25	107.8			
BRIDGE NO. HAS-22-2362	1249+82.03	1258+25.00	842.97	24	2247.9	2247.9	168.6			1.25	78.1			
	1258+25.00	1259+35.65	110.65	39.25 avg.	482.6	482.6	36.2			1.25	16.8			
	1259+35.65	1263+25.00	389.35	36	1557.4	1557.4	116.8			1.25	54.1			
	1263+25.00	1266+75.00	350.00	30 avg.	1166.7	1166.7	87.5			1.25	40.5			
	1266+75.00	1300+48.74	3373.74	24	8996.6	8996.6	674.7			1.25	312.4			
BRIDGE NO. HAS-22-2460	1301+80.78	1303+00.00	119.22	24	317.9	317.9	23.8			1.25	11.0			
	1303+00.00	1304+00.00	100.00	32.7 avg.	363.3	363.3	27.2			1.25	12.6			
	1304+00.00	1305+25.00	125.00	44.7 avg.	620.8	620.8	46.6			1.25	21.6			
	1305+25.00	1334+03.75	2878.75	24	7676.7	7676.7	575.8			1.25	266.6			
TOTALS - CARRIED TO SHEET NO. 16.						147,370.2	11,052.9				5117.3			

U.S. 22 EASTBOUND SHOULDER RESURFACING QUANTITIES

QUANTITIES				FHWA REGION	STATE	PROJECT	
Calc.	SHG	Chkd.	RDA	5	OHIO		
Date:	9-7-89	Date:	1-11-90				

HAS-22-15.03

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115

LOCATION	STATION		LENGTH	WIDTH	AREA		254	407	446		THICKNESS	ASPHALT CONCRETE SURFACE COURSE TYPE I			REMARKS
							PAVEMENT PLANING, BITUMINOUS	TACK COAT @ 0.075 GAL./S.Y.							
	FROM	TO	LIN.FT.	LIN.FT.	SQ.YD.		SQ. YD.	GAL.				INCH			
	796+50.00	807+89.02	1139.02	8	1012.5	RT	1012.5	75.9			1.25	35.2			
	796+50.00	807+89.02	1139.02	8	1012.5	LT	1012.5	75.9			1.25	35.2			
	807+89.02	835+00.00	2710.98	8	2409.8	RT	2409.8	180.7			1.25	83.7			
	835+00.00	836+00.00	100.00	7 avg.	77.8	RT	77.8	5.8			1.25	2.7			
	836+00.00	837+87.00	187.00	6	124.7	RT	124.7	9.4			1.25	4.3			
	838+65.00	867+00.00	2835.00	8	2520.0	RT	2520.0	189.0			1.25	87.5			
	867+00.00	868+00.00	100.00	7 avg.	77.8	RT	77.8	5.8			1.25	2.7			
	868+00.00	871+60.46	360.46	6	240.3	RT	240.3	18.0			1.25	8.3			
	872+32.46	877+00.00	467.54	8	415.6	RT	415.6	31.2			1.25	14.4			
	877+00.00	877+28.16	28.16	6 avg.	18.8	RT	18.8	1.4			1.25	0.7			
	877+28.16	882+00.00	471.84	6	314.6	RT	314.6	23.6			1.25	10.9			
	882+00.00	884+25.00	225.00	7 avg.	175.0	RT	175.0	13.1			1.25	6.1			
	884+25.00	909+39.91	2514.91	8	2235.5	RT	2235.5	167.7			1.25	77.6			
BRIDGE NO. HAS-22-1717	911+25.79	920+76.73	950.94	8	845.3	RT	845.3	63.4			1.25	29.4			
BRIDGE NO. HAS-22-1738	922+08.29	926+10.86	402.57	8	357.8	RT	357.8	26.8			1.25	12.4			
BRIDGE NO. HAS-22-1749	927+48.09	928+42.27	94.18	8	83.7	RT	83.7	6.3			1.25	2.9			
BRIDGE NO. HAS-22-1753	929+37.05	931+50.00	212.05	8	188.5	RT	188.5	14.1			1.25	6.5			
	932+21.45	935+76.00	354.55	8	315.2	RT	315.2	23.6			1.25	10.9			
	935+76.00	936+31.77	55.77	14 avg.	86.8	RT	86.8	6.5			1.25	3.0			
	936+31.77	973+85.00	3753.23	8	3336.2	RT	3336.2	250.2			1.25	115.8			
	974+50.00	1018+79.00	4429.00	8	3936.9	RT	3936.9	295.3			1.25	136.7			
	1019+46.00	1085+63.00	6617.00	8	5881.8	RT	5881.8	441.1			1.25	204.2			
	1086+20.00	1123+71.57	3751.57	8	3334.7	RT	3334.7	250.1			1.25	115.8			
BRIDGE NO. HAS-22-2126	1125+20.50	1132+90.00	769.50	8	684.0	RT	684.0	51.3			1.25	23.8			
	1133+50.00	1162+36.24	2886.24	8	2565.5	RT	2565.5	192.4			1.25	89.1			
	1163+23.00	1168+00.00	477.00	8	424.0	RT	424.0	31.8			1.25	14.7			
	1168+00.00	1168+49.88	49.88	14 avg.	77.6	RT	77.6	5.8			1.25	2.7			
	1168+49.88	1207+52.78	3902.90	8	3469.2	RT	3469.2	260.2			1.25	120.5			
BRIDGE NO. HAS-22-2283	1209+85.74	1235+60.85	2575.11	8	2289.0	RT	2289.0	171.7			1.25	79.5			
	1236+38.85	1248+55.01	1216.16	8	1081.0	RT	1081.0	81.1			1.25	37.5			
BRIDGE NO. HAS-22-2362	1249+85.57	1257+00.00	714.43	8	635.0	RT	635.0	47.6			1.25	22.0			
	1257+00.00	1258+25.00	125.00	14 avg.	194.4	RT	194.4	14.6			1.25	6.8			
	1258+25.00	1300+41.70	4216.70	8	3748.2	RT	3748.2	281.1			1.25	130.1			
	BRIDGE NO. HAS-22-2460	1301+76.30	1305+55.00	378.70	8	336.6	RT	336.6	25.2			1.25	11.7		
	1306+45.00	1332+80.00	2635.00	8	2342.2	RT	2342.2	175.7			1.25	81.3			
	1333+60.00	1334+03.75	43.75	8	38.9	RT	38.9	2.9			1.25	1.4			
	809+90.00	837+69.00	2779.00	4	1235.1	LT	1235.1	92.6			1.25	42.9			
	838+20.00	909+39.91	7119.91	4	3164.4	LT	3164.4	237.3			1.25	109.9			
BRIDGE NO. HAS-22-1717	911+25.79	920+67.55	941.76	4	418.6	LT	418.6	31.4			1.25	14.5			
BRIDGE NO. HAS-22-1738	921+99.11	926+51.92	452.81	4	201.2	LT	201.2	15.1			1.25	7.0			
BRIDGE NO. HAS-22-1749	927+67.09	928+53.24	86.15	4	38.3	LT	38.3	2.9			1.25	1.3			
BRIDGE NO. HAS-22-1753	929+48.02	973+17.50	4369.48	4	1942.0	LT	1942.0	145.7			1.25	67.4			
	974+53.00	998+00.00	2347.00	4	1043.1	LT	1043.1	78.2			1.25	36.2			
	1138+50.00	1139+25.00	75	6 avg.	50.0	LT	50.0	3.8			1.25	1.7			
	1139+25.00	1207+14.93	6789.93	4	3017.7	LT	3017.7	226.3			1.25	104.8			
BRIDGE NO. HAS-22-2283	1209+47.89	1248+50.24	3902.35	4	1734.4	LT	1734.4	130.1			1.25	60.2			
BRIDGE NO. HAS-22-2362	1249+80.80	1300+38.99	5058.19	4	2248.1	LT	2248.1	168.6			1.25	78.1			
BRIDGE NO. HAS-22-2460	1301+71.03	1305+93.62	422.59	4	187.8	LT	187.8	14.1			1.25	6.5			
	1307+18.00	1333+10.65	2592.65	4	1152.3	LT	1152.3	86.4			1.25	40.0			
	1333+72.94	1334+03.75	30.81	4	13.7	LT	13.7	1.0			1.25	0.5			
TOTALS - CARRIED TO SHEET NO. 16.							63,334.1	4,749.8				2199.0			

U.S. 22 WESTBOUND PAVEMENT RESURFACING QUANTITIES

QUANTITIES				FHWA REGION	STATE	PROJECT	
Calc.	TDM	Chkd.	RDA	5	OHIO		
Date: 10-23-89		Date: 1-11-90					



HAS-22-15.03

LOCATION	STATION		LENGTH	WIDTH	AREA	254	407	446		202	SPECIAL	REMARKS	
						PAVEMENT PLANING, BITUMINOUS	TACK COAT @ 0.075 GAL./S.Y.			THICKNESS	ASPHALT CONCRETE SURFACE COURSE TYPE I		WEARING COURSE REMOVED
	FROM	TO	LIN.FT.	LIN.FT.	SQ.YD.	SQ. YD.	GAL.			INCH	CU. YD.		SQ. YD.
	807+89.02	814+64.19	675.17	19 avg.	1425.4	1425.4	106.9			1.25	49.5		
	814+64.19	868+50.00	5385.81	24	14362.2	14362.2	1077.2			1.25	498.7		
	868+50.00	870+25.00	175.00	30 avg.	583.3	583.3	43.7			1.25	20.3		
	870+25.00	873+85.00	360.00	36	1440.0	1440.0	108.0			1.25	50.0		
	873+85.00	874+20.81	35.81	39.25avg.	156.2	156.2	11.7			1.25	5.4		
	874+20.81	888+07.42	1386.61	24	3697.6	3697.6	277.3			1.25	128.4		
	888+07.42	889+33.42	126.00	29.25avg.	409.5	409.5	30.7			1.25	14.2		
	889+33.42	893+75.00	441.58	47 avg.	2306.0	2306.0	173.0			1.25	80.1		
	893+75.00	894+75.00	100.00	30 avg.	333.3	333.3	25.0			1.25	11.6		
	894+75.00	908+59.21	1384.21	24	3691.2	3691.2	276.8			1.25	128.2		
BRIDGE NO. HAS-22-1717													
	910+99.09	914+25.00	325.91	24	869.1	869.1	65.2			1.25	30.2		
	914+25.00	916+50.00	225.00	30 avg.	750.0	750.0	56.3			1.25	26.0		
	916+50.00	918+25.00	175.00	36	700.0	700.0	52.5			1.25	24.3		
	918+25.00	918+96.08	71.08	39.25avg.	310.0	310.0	23.3			1.25	10.8		
	918+96.08	920+54.52	158.44	24	422.5	422.5	31.7			1.25	14.7		
BRIDGE NO. HAS-22-1738													
	921+86.08	924+07.19	221.11	24	589.6	589.6	44.2			1.25	20.5		
	924+07.19	925+33.19	126.00	29.25avg.	409.5	409.5	30.7			1.25	14.2		
	925+33.19	926+50.09	116.90	47 avg.	610.5	610.5	45.8			1.25	21.2		
BRIDGE NO. HAS-22-1749													
BRIDGE NO. HAS-22-1753													
	927+87.37	928+68.81	81.44	36	325.8	325.8	24.4			1.25	11.3		
	929+63.59	930+00.00	36.41	36	145.6	145.6	10.9			1.25	5.1		
	930+00.00	931+00.00	100.00	30 avg.	333.3	333.3	25.0			1.25	11.6		
	931+00.00	1001+50.00	7050.00	24	18800.0	18800.0	1410.0			1.25	652.8		
	1001+50.00	1001+98.57	48.57	23	124.1	124.1	9.3			1.25	4.3		
	1138+50.00	1146+10.39	760.39	19 avg.	1605.3	1605.3	120.4			1.25	55.7		
	1146+10.39	1153+75.00	764.61	24	2039.0	2039.0	152.9			1.25	70.8		
	1153+75.00	1156+00.00	225.00	30 avg.	750.0	750.0	56.3			1.25	26.0		
	1156+00.00	1157+70.51	170.51	39.25avg.	743.6	743.6	55.8			1.25	25.8		
	1157+70.51	1162+50.48	479.97	24	1279.9	1279.9	96.0			1.25	44.4		
	1162+50.48	1163+76.48	126.00	29.25avg.	409.5	409.5	30.7			1.25	14.2		
	1163+76.48	1167+92.55	416.07	47 avg.	2172.8	2172.8	163.0			1.25	75.4		
	1167+92.55	1169+00.00	107.45	30 avg.	358.2	358.2	26.9			1.25	12.4		
	1169+00.00	1206+61.20	3761.20	24	10029.9	10029.9	752.2			1.25	348.3		
BRIDGE NO. HAS-22-2283													
	1208+93.30	1228+00.00	1906.70	24	5084.5	5084.5	381.3			1.25	176.6		
	1228+00.00	1231+50.00	350.00	30 avg.	1166.7	1166.7	87.5			1.25	40.5		
	1231+50.00	1235+57.53	407.53	36	1630.1	1630.1	122.3			1.25	56.6		
	1235+57.53	1236+69.60	112.07	39.25avg.	488.7	488.7	36.7			1.25	17.0		
	1236+69.60	1248+43.47	1173.87	24	3130.3	3130.3	234.8			1.25	108.7		
BRIDGE NO. HAS-22-2362													
	1249+74.03	1255+13.15	539.12	24	1437.7	1437.7	107.8			1.25	49.9		
	1255+13.15	1256+39.15	126.00	29.25avg.	409.5	409.5	30.7			1.25	14.2		
	1256+39.15	1260+00.00	360.85	41 avg.	1643.9	1643.9	123.3			1.25	57.1		
	1260+00.00	1262+03.90	203.90	24	543.7	543.7	40.8			1.25	18.9		
FEATHER	1262+03.90	1262+65.15	61.25	24	163.3	163.3	12.2			1.25	5.7		
	1262+65.15	1263+08.90	43.75	24	116.7	-----	8.8			0.63avg	2.0	116.7	
	1263+08.90	1300+35.89	3726.99	24	9938.6								9938.6
BRIDGE NO. HAS-22-2460													
	1301+67.93	1307+02.23	534.30	24	1424.8								1424.8
	1307+02.23	1308+02.23	100.00	36	400.0								400.0
	1308+02.23	1310+50.23	248.00	30 avg.	826.7								826.7
	1310+50.23	1332+37.93	2187.70	24	5833.9								5833.9
	1332+37.93	1332+98.75	60.82	30 avg.	202.7								202.7

U.S. 22 WESTBOUND SHOULDER RESURFACING QUANTITIES

QUANTITIES			FHWA REGION	STATE	PROJECT	
Calc. SHG	Chkd. RDA		5	OHIO		
Date: 9-7-89	Date: 1-12-90					



HAS-22-15.03

* LENGTH x 73 LBS. ÷ 100 L.F.

LOCATION	STATION		LENGTH	WIDTH	AREA		254	407	446		THICKNESS	ASPHALT CONCRETE SURFACE COURSE TYPE I	SPECIAL	REMARKS
							PAVEMENT PLANING, BITUMINOUS	TACK COAT @ 0.075 GAL./S.Y.					JOINT SEALING BETWEEN RIGID PAVEMENT AND FLEXIBLE SHOULDER *	
	FROM	TO	LIN.FT.	LIN.FT.	SQ.YD.		SQ. YD.	GAL.			INCH	CU. YD.	LBS.	
BRIDGE NO. HAS-22-1717	807+89.02	874+20.81	6631.79	8	5894.9	LT	5894.9	442.1			1.25	204.7		
	874+20.81	875+00.00	79.19	14 avg.	123.2	LT	123.2	9.2			1.25	4.3		
	875+00.00	888+70.23	1370.23	8	1218.0	LT	1218.0	91.4			1.25	42.3		
	889+33.42	908+59.21	1925.79	8	1711.8	LT	1711.8	128.4			1.25	59.4		
BRIDGE NO. HAS-22-1738	911+99.09	918+96.00	696.91	8	619.5	LT	619.5	46.5			1.25	21.5		
	918+96.00	919+50.00	54.00	14 avg.	84.0	LT	84.0	6.3			1.25	2.9		
	919+50.00	920+47.70	97.70	8	86.8	LT	86.8	6.5			1.25	3.0		
BRIDGE NO. HAS-22-1749	921+79.27	925+33.19	353.92	8	314.6	LT	314.6	23.6			1.25	10.9		
	925+33.19	925+88.42	55.23	14 avg.	85.9	LT	85.9	6.4			1.25	3.0		
	925+88.42	926+70.92	82.50	8	73.3	LT	73.3	5.5			1.25	2.5		
BRIDGE NO. HAS-22-1753	928+08.15	928+76.95	68.80	8	61.2	LT	61.2	4.6			1.25	2.1		
BRIDGE NO. HAS-22-2126	929+71.73	973+60.00	4388.27	8	3900.7	LT	3900.7	292.6			1.25	135.4		
	974+50.00	1019+48.00	4498.00	8	3998.2	LT	3998.2	299.9			1.25	138.8		
	1020+00.00	1085+70.00	6570.00	8	5840.0	LT	5840.0	438.0			1.25	202.8		
	1086+23.00	1117+48.00	3125.00	8	2777.8	LT	2777.8	208.3			1.25	96.5		
	1118+15.00	1123+78.52	563.52	8	500.9	LT	500.9	37.6			1.25	17.4		
BRIDGE NO. HAS-22-2283	1125+27.45	1133+02.00	774.55	8	688.5	LT	688.5	51.6			1.25	23.9		
	1133+50.00	1157+70.51	2420.51	8	2151.6	LT	2151.6	161.4			1.25	74.7		
	1157+70.51	1158+50.00	79.49	14 avg.	123.7	LT	123.7	9.3			1.25	4.3		
	1158+50.00	1163+14.23	464.23	8	412.6	LT	412.6	30.9			1.25	14.3		
	1163+76.48	1206+33.12	4256.64	8	3783.7	LT	3783.7	283.8			1.25	131.4		
BRIDGE NO. HAS-22-2362	1208+66.08	1236+69.60	2803.52	8	2492.0	LT	2492.0	186.9			1.25	86.5		
	1236+69.60	1237+50.00	80.40	14 avg.	125.1	LT	125.1	9.4			1.25	4.3		
	1237+50.00	1248+39.93	1089.93	8	968.8	LT	968.8	72.7			1.25	33.6		
BRIDGE NO. HAS-22-2460	1249+70.49	1255+61.15	590.66	8	525.0	LT	525.0	39.4			1.25	18.2		
	1256+39.15	1262+03.90	564.75	8	502.0	LT	502.0	37.7			1.25	17.4		
BRIDGE NO. HAS-22-1717	814+64.19	837+19.00	2254.81	4	1002.1	RT	1002.1	75.2			1.25	34.8		
	838+40.00	908+70.96	7030.96	4	3124.9	RT	3124.9	234.4			1.25	108.5		
BRIDGE NO. HAS-22-1738	911+10.84	920+56.90	946.06	4	420.5	RT	420.5	31.5			1.25	14.6		
BRIDGE NO. HAS-22-1749	921+88.45	926+51.92	463.47	4	206.0	RT	206.0	15.5			1.25	7.2		
BRIDGE NO. HAS-22-1753	927+89.15	928+65.98	76.83	4	34.2	RT	34.2	2.6			1.25	1.2		
BRIDGE NO. HAS-22-2283	929+60.76	973+70.00	4409.24	4	1959.7	RT	1959.7	147.0			1.25	68.0		
	974+99.00	998+00.00	2301.00	4	1022.7	RT	1022.7	76.7			1.25	35.5		
	1145+15.00	1206+70.97	6155.97	4	2736.0	RT	2736.0	205.2			1.25	95.0		
BRIDGE NO. HAS-22-2362	1209+03.93	1248+44.70	3940.77	4	1751.5	RT	1751.5	131.4			1.25	60.8		
BRIDGE NO. HAS-22-2460	1249+75.76	1263+08.90	1333.14	4	592.5	RT	592.5	44.4			1.25	20.6		
	1263+08.90	1300+32.12	3723.22	8	3309.5	LT	3309.5	248.2			1.25	114.9	2718.0	
	1301+64.16	1306+36.36	472.20	8	419.7	LT	419.7	31.5			1.25	14.6	344.7	
	1307+14.05	1332+98.75	2584.70	8	2297.5	LT	2297.5	172.3			1.25	79.8	1886.8	
	1263+08.90	1300+38.99	3730.09	4	1657.8	RT	1657.8	124.3			1.25	57.6	2723.0	
	1301+71.03	1305+20.43	349.40	4	155.3	RT	155.3	11.6			1.25	5.4	255.1	
	1307+20.00	1332+98.75	2578.75	4	1146.1	RT	1146.1	86.0			1.25	39.8	1882.5	
TOTALS - CARRIED TO SHEET NO. 16.							60,899.8	4567.8				2114.4	9,810.1	

U.S. 22 RAMP RESURFACING QUANTITIES

QUANTITIES				FHWA REGION	STATE	PROJECT	13 115
Calc.	TDN	Chkd.	RDA	5	OHIO		
Date: 10-25-89							
Date: 1-12-90							
HAS-22-15.03							

LOCATION	STATION		LENGTH	WIDTH	AREA	254	407	446		202	REMARKS	
						PAVEMENT PLANING, BITUMINOUS	TACK COAT @ 0.075 GAL./S.Y.			THICKNESS		ASPHALT CONCRETE SURFACE COURSE TYPE I
	FROM	TO	LIN.FT.	LIN.FT.	SQ.YD.							
	U.S. 250 INTERCHANGE											
RAMP 'C'	3+54.30	4+29.66	75.36	19 avg.	159.1	159.1	11.9			1.25	5.5	
	4+29.66	4+39.66	10.00	16.75avg.	18.6	18.6	1.4			1.25	0.6	
	4+39.66	8+94.88	455.22	16	809.3	809.3	60.7			1.25	28.1	
	8+94.88	9+60.88	66.00	17	124.7	124.7	9.4			1.25	4.3	
RAMP 'D'	506+32.53 1/2%	509+42.96 1/2%	310.43	27 avg.	931.3	931.3	69.8			1.25	32.3	
	0+00.00	2+21.73	221.73	33.5 avg.	825.3	825.3	61.9			1.25	28.7	
	2+21.73	4+24.00	205.91	34	777.9	777.9	58.3			1.25	27.0	ADJUSTED ARC LENGTH
	4+24.00	8+18.89	402.00	17	759.4	759.4	57.0			1.25	26.4	ADJUSTED ARC LENGTH
	8+18.89	9+18.89	100.82	16 avg.	179.2	179.2	13.4			1.25	6.2	ADJUSTED ARC LENGTH
RAMP 'B'	3+43.07	4+43.07	100.00	16 avg.	177.8	177.8	13.3			1.25	6.2	
	4+43.07	4+53.07	10.00	16.75avg.	18.6	18.6	1.4			1.25	0.6	
	4+53.07	7+75.00	321.93	16	572.3	572.3	42.9			1.25	19.9	
	7+75.00	8+00.00	25.00	25 avg.	69.4	69.4	5.2			1.25	2.4	
	8+00.00	11+71.61	371.61	34	1403.9	1403.9	105.3			1.25	48.7	
INTERSECTION RAMP 'B' W/U.S. 250	AREAS FROM SHEET NO. 56.					146	146	11.0		1.25	5.1	
INTERSECTION RAMP 'A' W/U.S. 250	AREAS FROM SHEET NO. 56.					355	---	26.6		0.63 avg.	6.2	355
						165	---	12.4		0.63 avg.	2.9	165
RAMP 'A'	0+60.50	5+49.49	488.99	16	869.3	869.3	65.2			1.25	2.2	
	5+49.49	5+59.49	10.00	16.75avg.	18.6	18.6	1.4			1.25	0.6	
	5+59.49	6+59.49	100.00	19 avg.	211.1	211.1	15.8			1.25	7.3	
RAMP 'F'	S.R. 9 INTERCHANGE											
	2+43.72	3+50.76	107.04	16.9 avg.	201.0	201.0	15.1			1.25	7.0	
	3+50.76	3+75.76	25.00	19.33	53.7	53.7	4.0			1.25	1.9	
	BRIDGE RAMP 'F'											
	5+07.58	8+20.28	312.70	16	555.9	555.9	41.7			1.25	19.3	
INTERSECTION RAMP 'E' W/S.R. 9	8+20.28	8+30.28	10.00	16.5 avg.	18.4	18.4	1.4			1.25	0.6	
	8+30.28	9+30.28	100.00	17	188.9	188.9	14.2			1.25	6.6	
	AREAS FROM SHEET NO.					239	---	17.9		0.63 avg.	4.2	239
						100	100	7.5		1.25	3.5	
						666.1	666.1	50.0		1.25	23.1	
RAMP 'E'	0+56.10	2+32.43	176.33	34	666.1	666.1	50.0			1.25	23.1	
	2+32.43	6+82.09	476.43	34	1799.8	1799.8	135.0			1.25	62.5	ADJUSTED ARC LENGTH
	6+82.09	10+98.69	429.00	17	810.3	810.3	60.8			1.25	28.1	ADJUSTED ARC LENGTH
	10+98.69	11+98.69	103.23	19 avg.	217.9	217.9	16.3			1.25	7.6	ADJUSTED ARC LENGTH
RAMP 'G'	5+69.09	6+69.09	104.15	19 avg.	219.9	219.9	16.5			1.25	7.6	ADJUSTED ARC LENGTH
	6+69.09	9+95.00	338.35	17	639.1	639.1	47.9			1.25	22.2	ADJUSTED ARC LENGTH
	9+95.00	13+23.80	353.91	34	1337.0	1337.0	100.3			1.25	46.4	ADJUSTED ARC LENGTH
	13+23.80	14+97.72	173.92	34	657.0	657.0	49.3			1.25	22.8	
	BRIDGE RAMP 'G'											
INTERSECTION RAMP 'G' W/S.R. 9	15+72.28	16+79.20	106.92	34	403.9	403.9	30.3			1.25	14.0	
	AREAS FROM SHEET NO. 61.					355	---	26.6		0.63 avg.	6.2	355
RAMP 'H'	0+00.00	0+78.00	78.00	17	147.3	147.3	11.1			1.25	5.1	
	0+78.00	3+48.49	270.50	16	480.9	480.9	36.1			1.25	16.7	
	3+48.49	3+58.49	10.00	16.5 avg.	18.4	18.6	1.4			1.25	0.6	
	3+58.49	5+30.05	177.55	16 avg.	315.6	315.6	23.7			1.25	11.0	ADJUSTED ARC LENGTH
TOTALS - CARRIED TO SHEET NO. 16.						17,423.9	1,390.5			624.3	1,114	

U.S. 22 RAMP RESURFACING QUANTITIES

QUANTITIES			
Calc.	TBM	Chkd.	ADA
Date:	10-25-89	Date:	1-11-90

FHWA REGION	STATE	PROJECT
5	OHIO	

HAS-22-15.03



LOCATION	STATION		LENGTH	WIDTH	AREA		254	407	446		202		REMARKS
	FROM	TO					PAVEMENT PLANING, BITUMINOUS SQ. YD.	TACK COAT @ 0.075 GAL./SQ. YD.	THICKNESS INCH	ASPHALT CONCRETE SURFACE COURSE TYPE I CU. YD.			
	S.R. 151 WEST INTERCHANGE												
RAMP 'A' SHOULDERS	1+75.00	2+74.29	102.76	16 avg.	182.7	RT	182.7	13.7	1.25	6.3			ADJUSTED ARC LENGTH
	2+74.29	2+84.29	10.00	16.75 avg.	19.3	LT	19.3	1.4	1.25	0.7			ADJUSTED ARC LENGTH
RAMP 'K'	2+84.29	5+90.00	316.38	16	562.5	RT	562.5	42.2	1.25	19.5			ADJUSTED ARC LENGTH
RAMP 'B' SHOULDERS	5+90.00	6+00.00	10.00	16.5 avg.	19.0	LT	19.0	1.4	1.25	0.7			ADJUSTED ARC LENGTH
	6+00.00	6+82.18	85.23	17	161.0	LT	161.0	12.1	1.25	5.6			ADJUSTED ARC LENGTH
	6+82.18	10+62.57	411.10	34	1553.0	LT	1553.0	116.5	1.25	53.9			ADJUSTED ARC LENGTH
	10+62.57	12+60.71	198.14	34	770.5	LT	770.5	57.8	1.25	26.8			
INTERSECTION RAMP 'K' W/S.R. 151	4 AREAS FROM SHEET NO. 506.58							20.6	0.63 avg.	4.8	274		
	0+00.00	0+62.00	62.00	17	117.1	RT	117.1	8.8	1.25	3.5			
RAMP 'J'	0+62.00	5+37.24	475.24	16	844.9	RT	844.9	63.4	1.25	29.3			
	5+37.24	5+47.24	10.00	16.75 avg.	18.6	LT	18.6	1.4	1.25	0.6			
	5+47.24	6+46.81	103.37	17.5	201.0	LT	201.0	15.1	1.25	7.0			ADJUSTED ARC LENGTH
RAMP 'D' SHOULDERS	3+47.35	4+17.35	104.15	19 avg.	219.9	RT	219.9	16.5	1.25	7.6			ADJUSTED ARC LENGTH
RAMP 'L'	4+17.35	4+27.35	10.00	16.75 avg.	19.3	LT	19.3	1.4	1.25	0.7			ADJUSTED ARC LENGTH
	4+27.35	6+65.00	245.95	16	437.2	LT	437.2	32.8	1.25	15.2			ADJUSTED ARC LENGTH
	6+65.00	6+75.00	10.00	16.75 avg.	19.3	LT	19.3	1.4	1.25	0.7			ADJUSTED ARC LENGTH
	6+75.00	7+16.12	42.69	17.5	83.0	LT	83.0	6.2	1.25	2.9			ADJUSTED ARC LENGTH
INTERSECTION RAMP 'L' W/S.R. 151	4 AREAS FROM SHEET NO. 59.55							8.3	0.63 avg.	1.9	110		
	0+56.10	10+98.69	1029.94	6	621.2	RT	621.2	15.9	0.63 avg.	3.7	212		
INTERSECTION RAMP 'M' W/S.R. 151	10 AREAS FROM SHEET NO. 100.00							7.4	1.25	2.6			ADJUSTED ARC LENGTH
	0+82.05	10+92.05	10.00	16.75 avg.	18.6	LT	18.6	1.4	1.25	0.6			ADJUSTED ARC LENGTH
RAMP 'M'	0+92.05	4+63.68	371.63	16	660.7	RT	660.7	49.6	1.25	22.9			
	4+63.68	4+73.68	10.00	16.75 avg.	18.6	LT	18.6	1.4	1.25	0.6			
RAMP 'E' SHOULDERS	4+73.68	6+15.02	146.27	16 avg.	260.0	LT	260.0	19.5	1.25	9.0			ADJUSTED ARC LENGTH
	S.R. 151 EAST INTERCHANGE												
RAMP 'N'	5+18.17	6+18.17	100.00	16 avg.	177.8	LT	177.8	13.3	1.25	6.2			
RAMP 'H' SHOULDERS	6+18.17	6+28.17	10.00	16.75 avg.	18.6	LT	18.6	1.4	1.25	0.6			
	6+28.17	16+98.30	1070.13	16	1902.5	RT	1902.5	142.7	1.25	66.1			ADJUSTED ARC LENGTH
RAMP 'N' INTERSECTION S.R. 151	6 AREAS FROM SHEET NO. 59.36							13.6	0.63 avg.	3.2	181		ADJUSTED ARC LENGTH
	3+58.89	4+58.89	100.00	19 avg.	211.1	RT	211.1	15.8	1.25	7.3			
RAMP 'M' SHOULDERS	4+58.89	4+68.89	10.00	16.75 avg.	18.6	LT	18.6	1.4	1.25	0.6			
	4+68.89	17+00.20	1231.3	16	2189.0	RT	2189.0	164.2	1.25	76.0			ADJUSTED ARC LENGTH
RAMP 'Q' INTERSECTION S.R. 151	15 AREAS FROM SHEET NO. 59.6							12.1	0.63 avg.	2.8	161		
	0+62.00	5+47.24	485.24	3	155.7	RT	155.7	4.1	1.25	1.9			
RAMP 'S' INTERSECTION S.R. 151	0 AREAS FROM SHEET NO. 59.31							10.6	0.63 avg.	2.5	141		
	0+52.00	6+34.38	582.40	16	1035.4	LT	1035.4	77.7	1.25	36.0			ADJUSTED ARC LENGTH
RAMP 'S'	6+34.38	6+44.38	10.00	16.75 avg.	18.6	LT	18.6	1.4	1.25	0.6			
RAMP 'K' SHOULDERS	6+44.38	7+44.38	100.00	19 avg.	211.1	LT	211.1	15.8	1.25	7.3			ADJUSTED ARC LENGTH
RAMP 'T' INTERSECTION S.R. 151	6 AREAS FROM SHEET NO. 59.22							22.2	0.63 avg.	5.2	296		ADJUSTED ARC LENGTH
	0+83.90	7+70.23	686.33	16	1220.1	RT	1220.1	97.5	1.25	42.4			ADJUSTED ARC LENGTH
RAMP 'M' SHOULDERS	7+70.23	7+80.23	10.00	16.75 avg.	18.6	LT	18.6	1.4	1.25	0.6			ADJUSTED ARC LENGTH
	7+80.23	8+80.23	100.00	16 avg.	177.8	LT	177.8	13.3	1.25	6.2			
	0+82.05	4+73.68	391.63	3	150.3	LT	150.3	9.8	1.25	4.1			ADJUSTED ARC LENGTH
RAMP 'M' SHOULDERS	0+82.05	5+75.02	491.12	6	327.4	RT	327.4	23.3	1.25	11.4			
	5+75.02	6+15.02	40.00	7 avg.	31.1	RT	31.1	2.3	1.25	1.1			
	6+18.17	16+98.30	1080.13	3	360.0	RT	360.0	27.0	1.25	12.5			
RAMP 'N' SHOULDERS	5+18.17	5+58.17	40.00	7 avg.	31.1	LT	31.1	2.3	1.25	1.1			
	5+58.17	16+98.30	1140.13	6	760.0	LT	760.0	56.4	1.25	26.4			
	3+58.89	4+58.89	100.00	7 avg.	77.8	RT	77.8	2.7	1.25	2.7			
RAMP 'Q' SHOULDERS	4+58.89	17+00.20	1241.31	6	827.5	RT	827.5	28.7	1.25	28.7			
	4+58.89	17+00.20	1241.31	3	413.8	LT	413.8	14.4	1.25	14.4			
	0+52.00	6+44.38	592.38	6	394.9	LT	394.9	13.7	1.25	13.7			
RAMP 'S' SHOULDERS	6+44.38	7+44.38	100.00	7 avg.	77.8	LT	77.8	2.7	1.25	2.7			
	0+52.00	6+44.38	592.38	3	197.3	RT	197.3	14.8	1.25	6.9			
	0+83.90	7+80.23	686.33	3	232.1	LT	232.1	17.4	1.25	8.7			
RAMP 'T' SHOULDERS	0+83.90	8+40.23	756.33	6	504.2	RT	504.2	17.5	1.25	17.5			
	8+40.23	8+80.23	40.00	7 avg.	31.1	RT	31.1	2.3	1.25	1.1			
TOTALS - CARRIED TO SHEET NO. 16.							13,786.4	1,137.3		502.6	1,375		

U.S. 22 RAMP SHOULDER RESURFACING QUANTITIES

QUANTITIES				FHWA REGION	STATE	PROJECT	
Calc.	TDM	Chkd.	RDA	5	OHIO		
Dates: 10-27-89		Dates: 1-16-90					

HAS-22-15.03



LOCATION	STATION		LENGTH	WIDTH	AREA		254	407	446		THICKNESS	ASPHALT CONCRETE SURFACE COURSE TYPE I			REMARKS
							PAVEMENT PLANING, BITUMINOUS	TACK COAT @ 0.075 GAL./S.Y.							
	FROM	TO	LIN.FT.	LIN.FT.	SQ.YD.		SQ. YD.	GAL.			INCH	CU. YD.			
RAMP 'A' SHOULDERS	0+6.50	5+59.49	552.99	3	184.3	RT	184.3	13.8			1.25	6.4			
	0+6.50	5+59.49	552.99	6	368.7	LT					1.25	12.8			
	5+59.49	6+59.49	100.00	7 avg.	77.8	LT					1.25	2.7			
RAMP 'B' SHOULDERS	4+43.07	11+71.61	728.54	3	242.8	RT	242.8	18.2			1.25	8.4			
	3+43.07	3+83.07	40.00	7 avg.	31.1	LT	31.1	2.3			1.25	1.1			
	3+83.07	7+25.00	341.93	6	228.0	LT					1.25	7.9			
RAMP 'C' SHOULDERS	8+15.00	11+71.61	356.61	6	237.7	LT					1.25	8.3			
	3+54.30	4+54.30	100.00	7 avg.	77.8	RT					1.25	2.7			
	4+54.30	9+60.88	506.58	6	337.7	RT					1.25	11.7			
RAMP 'D' SHOULDERS	4+29.66	8+56.40	426.74	3	142.2	LT	142.2	10.7			1.25	4.9			
	506+32.53	509+42.96	310.43	6	207.0	RT	207.0	15.5			1.25	7.2			
	0+00.00	2+21.73	221.73	6	147.8	RT	147.8	11.1			1.25	5.1			
	2+21.73	4+24.00	202.27	6	134.8	RT	134.8	10.1			1.25	4.7			
	4+24.00	8+78.89	454.89	6	303.3	RT					1.25	10.5			
	8+78.89	9+18.89	40.00	7 avg.	31.1	RT	31.1	2.3			1.25	1.1			
	506+32.53	507+23.00	90.47	6	60.3	LT	60.3	4.5			1.25	2.1			
	507+93.00	509+42.96	149.96	6	100.0	LT	100.00	7.5			1.25	3.5			
	0+00.00	2+21.73	221.73	6	147.8	LT	147.8	11.1			1.25	5.1			
	2+21.73	4+24.00	202.89	6	135.3	LT	135.3	10.1			1.25	4.7			ADJUSTED ARC LENGTH
RAMP 'E' SHOULDERS	4+86.20	8+18.89	359.55	3	119.9	LT					1.25	4.2			ADJUSTED ARC LENGTH
	0+56.10	10+98.69	1029.94	6	686.6	RT					1.25	23.8			ADJUSTED ARC LENGTH
	10+98.69	11+98.69	100.00	7 avg.	77.8	RT					1.25	2.7			
RAMP 'F' SHOULDERS	7+33.40	10+98.69	388.29	3	129.4	LT					1.25	4.5			ADJUSTED ARC LENGTH
	0+56.10	6+82.09	704.47	6	469.6	RT					1.25	16.3			ADJUSTED ARC LENGTH
	5+07.58	9+30.28	422.70	3	140.9	RT	140.9	10.6			1.25	4.9			
RAMP 'H' SHOULDERS	2+43.72	2+83.72	40.00	7 avg.	31.1	LT	31.1	2.3			1.25	1.1			
	2+83.72	3+75.76	92.04	6	61.4	LT					1.25	2.1			
	5+07.58	9+30.28	422.70	6	281.8	LT					1.25	9.8			
RAMP 'G' SHOULDERS	0+78.00	3+58.49	280.49	6	187.0	LT					1.25	6.5			
	0+00.00	4+90.05	490.05	6	326.7	RT					1.25	11.3			
	4+90.05	5+30.05	40.00	7 avg.	31.1	RT	31.1	2.3			1.25	1.1			ADJUSTED ARC LENGTH
RAMP 'J' SHOULDERS	6+69.09	9+21.11	272.36	3	90.8	LT					1.25	3.2			ADJUSTED ARC LENGTH
	9+95.00	14+97.72	560.11	6	373.4	RT					1.25	13.0			
	15+72.28	17+44.44	172.16	6	114.8	RT					1.25	4.0			
RAMP 'K' SHOULDERS	5+69.09	6+69.09	100.00	7 avg.	77.8	RT					1.25	2.7			
	6+69.09	14+97.72	818.75	6	545.8	RT					1.25	19.0			ADJUSTED ARC LENGTH
	15+72.28	17+44.44	172.16	6	114.8	RT					1.25	4.0			
RAMP 'L' SHOULDERS	0+62.00	5+47.24	485.24	3	161.7	RT	161.7	12.1			1.25	5.6			
	0+00.00	5+46.81	546.81	6	364.5	LT					1.25	12.7			
	5+46.81	6+46.81	100.00	7 avg.	77.8	LT					1.25	2.7			
RAMP 'M' SHOULDERS	2+74.29	6+00.00	353.03	3	117.7	RT	117.7	8.8			1.25	4.1			ADJUSTED ARC LENGTH
	1+75.00	2+15.00	40.00	7 avg.	31.1	LT	31.1	2.3			1.25	1.1			
	2+15.00	12+60.71	1034.79	6	689.9	LT					1.25	24.0			ADJUSTED ARC LENGTH
RAMP 'N' SHOULDERS	6+82.18	12+60.71	644.92	6	429.9	RT					1.25	14.9			ADJUSTED ARC LENGTH
	4+17.35	6+75.00	277.32	3	92.4	RT	92.4	6.9			1.25	3.2			ADJUSTED ARC LENGTH
	3+17.35	4+17.35	100.00	7 avg.	77.8	LT					1.25	2.7			
RAMP 'O' SHOULDERS	4+17.35	7+16.12	293.55	6	195.7	LT					1.25	6.8			ADJUSTED ARC LENGTH
	0+82.05	4+73.68	391.63	3	130.5	LT	130.5	9.8			1.25	4.5			
	0+82.05	5+75.02	491.12	6	327.4	RT					1.25	11.4			ADJUSTED ARC LENGTH
RAMP 'P' SHOULDERS	5+75.02	6+15.02	40.00	7 avg.	31.1	RT	31.1	2.3			1.25	1.1			
	6+18.17	16+98.30	1080.13	3	360.0	RT	360.0	27.0			1.25	12.5			
	5+18.17	5+58.17	40.00	7 avg.	31.1	LT	31.1	2.3			1.25	1.1			
RAMP 'Q' SHOULDERS	5+58.17	16+98.30	1140.13	6	760.0	LT					1.25	26.4			
	3+58.89	4+58.89	100.00	7 avg.	77.8	RT					1.25	2.7			
	4+58.89	17+00.20	1241.31	6	827.5	RT					1.25	28.7			
RAMP 'R' SHOULDERS	4+58.89	17+00.20	1241.31	3	413.8	LT	413.8	31.0			1.25	14.4			
	0+52.00	6+44.38	592.38	6	394.9	LT					1.25	13.7			
	6+44.38	7+44.38	100.00	7 avg.	77.8	LT					1.25	2.7			
RAMP 'S' SHOULDERS	0+52.00	6+44.38	592.38	3	197.5	RT	197.5	14.8			1.25	6.9			
	0+83.90	7+80.23	696.33	3	232.1	LT	232.1	17.4			1.25	8.1			
	0+83.90	8+40.23	756.33	6	504.2	RT					1.25	17.5			
RAMP 'T' SHOULDERS	8+40.23	8+80.23	40.00	7 avg.	31.1	RT	31.1	2.3			1.25	1.1			
TOTALS - CARRIED TO SHEET NO. 16.							3597.7	269.4				475.7			

QUANTITIES			
Calc.	TDM	Chkd.	RDA
Dates: 10-26-89		Dates: 1-16-90	

FHWA REGION	STATE	PROJECT	
5	OHIO		

HAS-22-15.03

RESURFACING SUMMARY

RESURFACING CALCULATIONS

* Mainline is Referenced to the Direction of Centerline Stationing.

Ramps are Referenced to the Direction of Travel.

UNDERDRAIN QUANTITIES

(SEE DETAILS AND NOTES ON SHEET NO. 28.)

QUANTITIES				FHWA REGION	STATE	PROJECT	
Calc.	SHG	Chkd.	RSK	5	OHIO		
Date:	6-11-90	Date:	6-13-90				

HAS-22-15.03

17
115

Station		Lane or Ramp	Side *	605	Special	603	Outlet Fittings			Outlet Station	Bends & Branches		Comments
				Shallow Under-drain, As Per Plan	Precast Reinforced Concrete Outlet	6" Conduit Type F, 707.17 Non-Perforated, ASTM 3034 SDR 35, or SS 931	Tee	Stand-ard	End Cap		90° Bend	45° Wye	
				Lin.Ft.	Each	Lin.Ft.	Each	Each	Each		Each	Each	
798+00	815+00	EASTBOUND	Rt.	1700	1	14		1		798+00	1		
815+00	820+00		Rt.	500	1	12	1			815+00			
820+00	825+00		Rt.	500	1	12	1			820+00			
825+00	830+00		Rt.	500	1	12	1			825+00			
830+00	835+00		Rt.	500	1	12	1		1	830+00			
839+00	852+75		Rt.	1375	1	15		1	1	839+00	1		
853+00	858+00		Rt.	500	1	12	1		1	858+00			
858+00	863+00		Rt.	500	1	12	1			863+00			
863+00	867+00		Rt.	400	1	13		1		867+00	1		
873+00	876+00		Rt.	300	1	14		1	1	876+00	1		
877+84	890+00	EASTBOUND	Rt.	1216	1	12	1			877+84	1		Run Continued At Ramp D Sta. 9+72
890+00	905+00		Rt.	1500	1	12	1			890+00			
905+00	909+00		Rt.	400	1	12			1	905+00			
911+60	916+00		Rt.	440	1	12		1	1	911+60	1		
916+50	920+40		Rt.	390	1	13		1	1	920+40	1		
922+25	924+75		Rt.	250	1	13		1	1		1		
932+50	935+00		Rt.	250	1	14		1	1	935+00	1		
937+75	945+00		Rt.	725	1	12		1		945+00	1		Run Continued From Ramp H Sta. 6+70
945+50	951+55		Rt.	605	1	12		1		945+50	1		
951+55	960+00		Rt.	845	1	14	1			951+55			
960+00	965+00	EASTBOUND	Rt.	500	1	12	1		1	960+00			
988+00	992+00		Rt.	400	1	12	1		1	992+00			
962+18	972+75		Lt.	1057		20		1	1	962+18	1		
978+25	987+50		Lt.	925		20		1	1	987+50	1	1	
992+00	1003+00		Rt.	1100	1	18	1			1003+00			
1003+00	1008+00		Rt.	500	1	15	1			1008+00			
1008+00	1013+26BK		Rt.	526	1	15	1			1012+72BK	1		Sag Outlet
1011+67AH	1018+50		Rt.	683					1				
1024+00	1029+00		Rt.	500	1	15		1		1024+00	1		
1029+00	1032+00		Rt.	300	1	15	1			1029+00			
1032+00	1039+00	EASTBOUND	Rt.	700	1	15	1		1	1032+00			
1039+75	1045+00		Rt.	525	1	15	1		1	1045+00			
1045+00	1051+00		Rt.	600	1	15	1			1051+00			
1051+00	1056+00		Rt.	500	1	15	1			1056+00			
1056+00	1061+50		Rt.	550	1	15	1			1061+50			
1061+50	1066+50		Rt.	500	1	15	1			1066+50			
1066+50	1071+50		Rt.	500	1	15	1			1071+50			
1071+50	1082+50		Rt.	1100	1	15	1			1082+50			
1082+50	1085+00		Rt.	250	1			1		1085+00	1		
1087+00	1099+75		Rt.	1275	1	15		1	1	1087+00	1		
1105+00	1119+00	EASTBOUND	Rt.	1400	1	15		1		1105+00	1		
1133+75	1138+50		Rt.	475	1	15		1	1	1138+50	1		

Station		Lane or Ramp	Side *	605	Special	603	Outlet Fittings			Outlet Station		Bends & Branches		Comments	
				Shallow Under-drain, As Per Plan	Precast Reinforced Concrete Outlet	6" Conduit Type F, 707.17 Non-Perforated, ASTM 3034 SDR 35, or SS 931	Tee	Standard	End Cap			90° Bend	45° Wye		
				Lin.Ft.	Each	Lin.Ft.	Each	Each	Each			Each	Each		
From	To			Rt.	850	1	15		1		1145+50		1		
1145+50	1154+00			Rt.	505	1	14	1			1154+00				Run Continued From Ramp L Sta. 0+00
1163+50	1168+00			Rt.	450	1	16		1	1	1163+50		1		
1172+50	1178+00			Rt.	550	1	15	1		1	1178+00				
1178+00	1183+00			Rt.	500	1	15	1			1183+00				
1183+00	1188+00			Rt.	500	1	15	1			1188+00				
1188+00	1193+50			Rt.	550	1	15	1			1193+50				
1193+50	1198+25			Rt.	475	1	15		1		1198+25		1		
1198+75	1204+00			Rt.	525	1	15		1		1198+75		1		
1204+00	1207+00			Rt.	300	1	15	1		1	1204+00				
1210+10	1213+50			Rt.	340	1	15		1		1210+10		1		
1213+50	1225+35			Rt.	1185	1	18	1			1213+50				
1225+35	1230+00			Rt.	465	1	15	1		1	1225+35				
1230+00	1234+00			Rt.	400	1	15	1		1	1230+00				
1236+00	1241+00			Rt.	500	1	15	1		1	1241+00				
1241+00	1248+25			Rt.	725	1	14		1		1248+25		1		
1251+50	1258+00			Rt.	650	1	14		1	1	1251+50		1		
1263+25	1268+50			Rt.	525	1	12	1		1	1263+25				Run Continued at Ramp T Sta. 13+79
1269+00	1281+00			Rt.	1200	1	14	1		1	1281+00				
1281+00	1287+00			Rt.	600	1	13		1		1287+00		1		
1302+10	1305+30			Rt.	320	1	15		1	1	1302+10		1		
1306+75	1310+50			Rt.	375	1	15		1	1	1306+75		1		
1287+00	1297+40			Lt.	1040		20		1	1	1297+40		1		
1309+38	1319+25			Lt.	987		16		1	1	1309+38		1		
1319+50	1330+00			Lt.	1050		20		1	1	1330+00		1		

QUANTITIES CARRIED TO SHEET No. 19

* Mainline is Referenced to the Direction of Centerline Stationing.

Ramps are Referenced to the Direction of Travel.

UNDERDRAIN QUANTITIES

(SEE DETAILS AND NOTES ON SHEET NO. 28.)

QUANTITIES				FHWA REGION	STATE	PROJECT	
Calc.	SHG	Chkd.	RSK	5	OHIO		
Date:	6-11-90	Date:	6-13-90				

HAS-22-15.03

18
115

Station		Lane or Ramp	Side *	605	Special	603	Outlet Fittings			Outlet Station	Bends & Branches		Comments
				Shallow Under-drain, As Per Plan	Precast Reinforced Concrete Outlet	6" Conduit Type F, 707.17 Non-Perforated, ASTM 3034 SDR 35, or SS 931	Tee	Standard	End Cap		90° Bend	45° Wye	
From	To												
797+00	811+00	Lt.		1400	1	14		1		797+00	1		
811+00	814+00	Lt.		390	1	14	1			811+00			
814+90	827+00	Lt.		1210	1	13	1			815+00			
827+00	832+00	Lt.		500	1	13	1			827+00			
832+00	837+00	Lt.		500	1	14	1			832+00			
837+00	852+75	Lt.		1575	1	12	1		1	837+00			
853+00	858+00	Lt.		500	1	12	1		1	858+00			
858+00	863+00	Lt.		500	1	12	1			863+00			
863+00	870+75	Lt.		775	1	14							Run Continued at Ramp B Sta. 0+00
874+50	876+50	Lt.		200	1	13		1	1	876+50	1		
876+75	881+50	Lt.		475	1	13		1		876+75	1		
881+50	883+50	Lt.		200	1	14	1		1	881+50			
899+10	904+00	Lt.		490	1	13		1		899+10	1		
904+00	908+25	Lt.		425		13	1		1	904+00			
911+10	916+00	Lt.		490		18		1	1	911+10	1		
930+00	935+00	Lt.		500	1	12	1		1	935+00			
935+00	940+00	Lt.		500	1	12	1			940+00			
940+00	945+00	Lt.		500	1	12		1		945+00	1		
945+25	951+40	Lt.		615	1	12		1		945+25	1		
951+40	960+00	Lt.		860		13	1			951+40			
960+00	965+00	Lt.		500	1	13	1			960+00			
965+00	970+00	Lt.		500	1	13	1			965+00			
970+00	973+25	Lt.		325	1	13	1		1	970+00			
978+50	983+00	Lt.		450	1	13	1		1	983+00			
983+00	988+00	Lt.		500	1	13	1			988+00			
988+00	993+00	Lt.		500	1	13		1		993+00	1		
809+93	815+25	Rt.		532		9		1	1	809+93	1		
883+15	890+00	Rt.		685		20		1		883+15	1		
890+00	897+00	Rt.		700		20	1		1	890+00			
931+50	939+95	Rt.		845		20	1		1	939+95			
939+95	945+05	Rt.		510		20		1		945+05	1		
991+25	997+88	Rt.		663		10		1	1	997+88	1		
1008+75	1013+26BK	Lt.		451	1	15	1		1	1012+72BK			Sag Outlet
1011+67AH	1019+00	Lt.		733					1				
1024+00	1029+00	Lt.		500	1	15		1		1024+00	1		
1029+00	1033+00	Lt.		400	1	15	1			1029+00			
1033+00	1039+00	Lt.		600	1	15	1		1	1033+00			
1039+75	1045+00	Lt.		525	1	15	1		1	1045+00			
1045+00	1051+00	Lt.		600	1	15	1			1051+00			
1051+00	1056+00	Lt.		500	1	15	1			1056+00			
1056+00	1061+50	Lt.		550	1	15	1			1061+50			
1061+50	1066+50	Lt.		500	1	15	1			1066+50			
1066+50	1071+50	Lt.		500	1	15	1			1071+50			
1071+50	1082+50	Lt.		1100	1	15	1			1082+50			
1082+50	1085+00	Lt.		250	1	15		1		1085+00	1		
1087+00	1099+75	Lt.		1275	1	15		1	1	1087+00	1		
1105+00	1117+20	Lt.		1220	1	15		1	1	1105+00	1		

Station		Lane or Ramp	Side *	605	Special	603	Outlet Fittings			Outlet Station		Bends & Branches		Comments
				Shallow Under-drain, As Per Plan	Precast Reinforced Concrete Outlet	6" Conduit Type F, 707-17 Non-Perforated, ASTM 3034 SDR 35, or SS 931	Tee	Standard	End Cap			90° Bend	45° Wye	
				Lin.Ft.	Each	Lin.Ft.	Each	Each	Each			Each	Each	
From	To		Lt.	510	1	15		1	1	1183+30		1		
1118+30	1123+40		Lt.	700		20		1	1	1125+50		1	Outlet Into Catch Basin	
1125+50	1132+50		Lt.	500	1	15		1	1	1139+00		1		
1134+00	1139+00		Lt.	800	1	15		1		1146+50		1		
1146+50	1154+50		Lt.	150	1	15	1			1154+50			Run Continued From Ramp K Sta. 0+00	
1154+50	1156+00		Lt.	407					1				Run Continued At Ramp J Sta. 10+68	
1167+93	1172+00		Lt.	650	1	13	1		1	1179+00				
1172+50	1179+00		Lt.	500	1	15	1			1184+00				
1179+00	1184+00		Lt.	350	1	12	1			1187+50				
1184+00	1187+50		Lt.	1075	1	15		1		1198+25		1		
1187+50	1198+25		Lt.	725	1	15		1	1	1198+75		1		
1198+75	1206+00		Lt.	500	1	15		1		1209+00		1		
1209+00	1214+00		Lt.	1193	1	15	1			1214+00				
1214+00	1225+93		Lt.	557	1	15	1			1225+93			Run Continued From Ramp N Sta. 0+00	
1225+93	1231+50		Lt.	500	1	15	1		1	1242+00				
1237+00	1242+00		Lt.	600	1	14		1		1248+00		1		
1242+00	1248+00		Lt.	600	1	15	1		2	1251+00			Sag Outlet	
1250+00	1256+00		Lt.	800	1	13	1		1	1288+50				
1280+50	1288+50		Lt.	450	1	12	1			1293+00				
1288+50	1293+00		Lt.	700	1	12	1		1	1297+75			Sag Outlet	
1293+00	1300+00		Lt.	395	1	12		1	1	1302+15		1		
1302+15	1306+10		Lt.	1258		23		1	1	1306+90		1	Outlet Into Catch Basin	
1306+90	1319+25		Lt.	1428	1	18	1		2	1330+75			Sag Outlet	
1319+75	1334+03		Rt.	1820		20	1		1	1145+33		1	Sag Outlet	
1140+30	1158+50		Rt.	1050		20	1		1	1158+50				
1158+50	1169+00		Rt.	900		20		1	1	1259+50		1		
1259+50	1268+50		Rt.	700		20	1		1	1276+00				
1269+00	1276+00		Rt.	1000		20		1		1286+00		1		
1276+00	1286+00													

QUANTITIES CARRIED TO SHEET No. 19

Ramps are Referenced to the Direction of Travel.

(SEE DETAILS AND NOTES ON SHEET NO. 28.)

HAS-22-15.03

QUANTITIES CARRIED ON THIS SHEET

CARRIED TO GENERAL SUMMARY

FOR RAMP SHOULDER CONSTRUCTION AND WIDENING DETAILS,
SEE SHEET No. 8

* REFERENCED TO DIRECTION OF TRAVEL

QUANTITIES			
Calc.	SHG	Chkd.	RSK
Date:	3-22-89	Date:	6-13-90

FHWA REGION	STATE	PROJECT	
5	OHIO		



HAS-22-15.03

RAMP SHOULDER CONSTRUCTION AND WIDENING QUANTITIES															
LOCATION	RAMP	STATION		SIDE *	LENGTH	WIDTH	AREA	203		203	301	304	310	408	
								DEPTH	EXCAVATION	SUBGRADE COMPACTION	3" BITUMINOUS AGGREGATE BASE AC-20	5.875" AVG. AGGREGATE BASE, AS PER PLAN	5" AVG. SUBBASE, TYPE II, AS PER PLAN	BITUMINOUS PRIME COAT AT 0.40 GAL./S. Y.	
		FROM	TO		LIN. FT.	FEET	SQ. YD.	INCH	CU. YD.	SQ. YD.	CU. YD.	CU. YD.	CU. YD.	GAL.	
U.S. 250 INTERCHANGE	A	6+59.49	5+59.49	RT.	100.00	7 AVG.	77.8	13.75	29.7	77.8	6.5	12.7	10.8	31.1	
		5+59.49	0+60.50	RT.	488.99	6	326.0	13.75	124.5	326.0	27.2	53.2	45.3	130.4	
		0+60.50	501+99.44 U.S. 250	RT.	65.05	6	43.4	13.75	16.6	43.4	3.6	7.1	6.0	17.4	
	B	3+83.07	7+35.00	RT.	351.93	6	234.6	13.75	89.6	234.6	19.6	38.3	32.6	93.8	
		8+25.00	12+23.57	RT.	398.57	6	265.7	13.75	101.5	265.7	22.1	43.4	36.9	106.3	
		12+23.57	502+13.47 U.S. 250	RT.	51.68	6	34.5	13.75	13.2	34.5	2.9	5.6	4.8	13.8	
		8+00.00	11+71.61	LT.	371.61	6	247.7	13.75	94.6	247.7	20.6	40.4	34.4	99.1	
		11+71.61	503+47.55 U.S. 250	LT.	75.55	6	50.4	13.75	19.3	50.4	4.2	8.2	7.0	20.2	
	C	3+54.30	4+54.30	RT.	100.00	7 AVG.	77.8	13.75	29.7	77.8	6.5	12.7	10.8	31.1	
		4+54.30	9+60.88	RT.	506.58	6	337.7	13.75	129.0	337.7	28.1	55.1	46.9	135.1	
		8+56.40	8+94.88	LT.	38.48	3	12.8	15.25	5.4	--	1.1	2.1	1.8	5.1	
	D	8+78.89	4+24.00	RT.	454.89	6	303.3	13.75	115.8	303.3	25.3	49.5	42.1	121.3	
4+86.20		8+18.89	LT.	359.55	2.5	99.9	16.75	46.5	--	8.3	16.3	13.9	40.0		
S.R. 9 INTERCHANGE	E	11+98.69	10+98.69	RT.	100.00	7 AVG.	77.8	13.75	29.7	77.8	6.5	12.7	10.8	31.1	
		10+98.69	0+53.50	RT.	1045.19	6	696.8	13.75	266.1	696.8	58.1	113.7	96.8	278.7	
		0+53.50	119+74.50 S.R. 9	RT.	59.20	6	39.5	13.75	15.1	39.5	3.3	6.4	5.5	15.8	
		6+82.09	0+56.10	RT.	625.99	6	417.3	13.75	159.4	417.3	34.8	68.1	58.0	166.9	
		0+56.10	118+51.50 S.R. 9	RT.	69.56	6	46.4	13.75	17.7	46.4	3.9	7.6	6.4	18.6	
	F	7+33.40	10+98.69	LT.	388.29	2.5	107.9	16.75	50.2	--	9.0	17.6	15.0	43.2	
		2+83.72	3+75.76	RT.	92.04	6	61.4	13.75	23.5	61.4	5.1	10.0	8.5	24.6	
		5+07.58	9+30.28	RT.	422.70	6	281.8	13.75	107.6	281.8	23.5	46.0	39.1	112.7	
	G	5+69.09	6+69.09	RT.	100.00	7 AVG.	77.8	13.75	29.7	77.8	6.5	12.7	10.8	31.1	
		6+69.09	14+97.72	RT.	828.63	6	552.4	13.75	211.0	552.4	46.0	90.1	76.7	221.0	
		15+72.28	17+44.44	RT.	172.16	6	114.8	13.75	43.8	114.8	9.6	18.7	15.9	45.9	
		17+44.44	127+72.82 S.R. 9	RT.	61.86	6	41.2	13.75	15.7	41.2	3.4	6.7	5.7	16.5	
		9+95.00	14+97.72	RT.	502.72	6	335.1	13.75	128.0	335.1	27.9	54.7	46.5	134.0	
		15+72.28	17+47.69	RT.	175.41	6	116.9	13.75	44.6	116.9	9.7	19.1	16.2	46.8	
		17+47.69	128+99.27 S.R. 9	RT.	68.90	6	45.9	13.75	17.5	45.9	3.8	7.5	6.4	18.4	
	H	6+69.09	9+21.11	LT.	272.36	2.5	75.7	16.75	35.2	--	6.3	12.4	10.5	30.3	
		0+00.00	4+90.05	RT.	490.05	6	326.7	13.75	124.8	326.7	27.2	53.3	45.4	130.7	
		0+78.00	1+10.00	LT.	32.00	3	10.7	15.25	4.5	--	0.9	1.7	1.5	4.3	
S.R. 151 (WEST) INTERCHANGE	J	6+46.81	5+46.81	RT.	100.00	7 AVG.	77.8	13.75	29.7	77.8	6.5	12.7	10.8	31.1	
		5+46.81	0+00.00	RT.	546.81	6	364.5	13.75	139.2	364.5	30.4	59.5	50.6	145.8	
		0+94.00	0+62.00	LT.	32.00	3	10.7	15.25	4.5	--	0.9	1.7	1.5	4.3	
	K	2+15.00	12+60.71	RT.	1045.71	6	697.1	13.75	266.3	697.1	58.1	113.8	96.8	278.8	
		12+60.71	251+89.01 S.R. 151	RT.	73.55	6	49.0	13.75	18.7	49.0	4.1	8.0	6.8	19.6	
		6+82.18	12+70.70	RT.	588.52	6	392.3	13.75	149.8	392.3	32.7	64.0	54.5	156.9	
		12+70.70	250+62.00 S.R. 151	RT.	57.91	6	38.6	13.75	14.7	38.6	3.2	6.3	5.4	15.4	
	L	3+17.35	4+17.35	RT.	100.00	7 AVG.	77.8	13.75	29.7	77.8	6.5	12.7	10.8	31.1	
		4+17.35	7+16.12	RT.	298.77	6	199.2	13.75	76.1	199.2	16.6	32.5	27.7	79.7	
		7+7+16.12	262+08.38 S.R. 151	RT.	58.12	6	38.7	13.75	14.8	38.7	3.2	6.3	5.4	15.5	
	M	5+75.02	0+82.05	RT.	492.97	6	328.6	13.75	125.5	328.6	27.4	53.6	45.6	131.4	
		0+82.05	263+55.18	RT.	90.23	6	60.2	13.75	23.0	60.2	5.0	9.8	8.4	24.1	
S.R. 151 (EAST) INTERCHANGE	N	5+58.17	16+98.30	RT.	1140.13	6	760.1	13.75	290.3	760.1	63.3	124.0	105.6	304.0	
		16+98.30	293+18.40 C.R. 4	RT.	70.50	6	47.0	13.75	18.0	47.0	3.9	7.7	6.5	18.8	
	Q	3+58.89	4+58.89	RT.	100.00	7 AVG.	77.8	13.75	29.7	77.8	6.5	12.7	10.8	31.1	
		4+58.89	17+24.00	RT.	1265.11	6	843.4	13.75	322.1	843.4	70.3	137.6	117.1	337.4	
		17+24.00	296+91.50 S.R. 151	RT.	42.37	6	28.2	13.75	10.8	28.2	2.4	4.6	3.9	11.3	
	S	7+44.38	6+44.38	RT.	100.00	7 AVG.	77.8	13.75	29.7	77.8	6.5	12.7	10.8	31.1	
		6+44.38	0+52.00	RT.	592.38	6	394.9	13.75	150.8	394.9	32.9	64.4	54.8	158.0	
		0+52.00	293+34.00 C.R. 4	RT.	60.13	6	40.1	13.75	15.3	40.1	3.3	6.5	5.6	16.0	
	T	8+40.23	0+83.90	RT.	756.33	6	504.2	13.75	192.6	504.2	42.0	82.3	70.0	201.7	
		0+83.90	297+36.30 S.R. 151	RT.	90.43	6	60.3	13.75	23.0	60.3	5.0	9.8	8.4	24.1	
	TOTALS- CARRIED TO GENERAL SUMMARY									4113.8	10388.3	891.8	1746.8	1486.8	4282.5

FENCE SUMMARY

QUANTITIES			
Calc.	JAS	Chkd.	RDA
Date:	4 -8 -88	Date:	5 -8 -88

FHWA REGION	STATE	PROJECT
5	OHIO	

21
115

HAS-22-15.03

REF. NO.	PLAN SHEET NO.	202	601	607																		625			
		FENCE REMOVED	ROCK CHANNEL PROT. TYPE B	FENCE TYPE 47				POST ASSEMBLY			LINE POST	FENCE TERMINAL				ABUTMENT CONNCT'N.	CROSSING						GROUND ROD		
								I	C	E	L	TA	TB				TE	A	C1	C2				C3	C4
LIN. FT.	CU. YD.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH	EACH	EACH	EACH	EACH				EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH			
1-F	42	1732	5	1732			4	1	1								1								
2-F	42	522	5	522				2	1			1					1								
3-F	42	1375	5	1403			3	3				1					1								
1-F	43	704	5	1025			2		1								1								
3-F	43	1689	5	2589			4		1								1					1			
4-F	43	2618	10	4609			10		1								1	1				2			
5-F	43	2094	5	3214			5	2	1								1					1			
4-F	44	667		667			1		1																
5-F	44	1434	5	1434			2	2	1									1							
6-F	44	334		387			1		2																
7-F	44	1913	5	2000			3	1	1	1								1			1				
8-F	44	1282		1694			3		1	1															
7-F	45	922	5	1020			2	2								1		1							
8-F	45	565		726				1								1									
9-F	45			55												2									
10-F	45	329		339				3								2						1			
11-F	45			26												2									
12-F	45	112		170				1								2									
13-F	45	838		937					4							2									
14-F	45	793		736			1	2								2									
15-F	45			41												2									
16-F	45			27												2									
17-F	45	1246		1340			4	2	1							1									
18-F	45			118												2									
19-F	45			27												2									
20-F	45	346		551				3								2									
21-F	45			30												2									
22-F	45	593		739				3	1							1									
23-F	45	199		219				2	1							1									
24-F	45	372		435				4								2									
25-F	45			30												2									
26-F	45	160		130				2								2									
27-F	45			27												2									
28-F	45	786		810				3								1									
29-F	45	436		487			1	4								2									
30-F	45			27												2									
31-F	45	415		457			1	1								1									
28-F	46	2624	5	4108			8	1	1	2								2							
31-F	46	2776	5	3919			7		1	3								1							
32-F	46	775		1534			3	2	1																
33-F	46	1458	5	1642			2	1	1									1							
32-F	47	2420	10	2464			6	1		1		1						2							
33-F	47	2509	5	2509			5	6				1						1							
TOTALS		37.038	85	46.956			78	59	19	8		4			43	8	10		1			5			

QUANTITIES CARRIED TO SHEET NO. 22.

FENCE LEGEND

- (I) — INTERMEDIATE ANCHOR POST ASSEMBLY
- (C) — CORNER POST ASSEMBLY
- (E) — END POST ASSEMBLY
- (L) — CONCRETE ENCASED WOOD POST OR STEEL LINE POST
- (TA) — FENCE TERMINAL, TYPE A
- (TB) — FENCE TERMINAL, TYPE B
- (TE) — FENCE TERMINAL, TYPE E
- (A) — ABUTMENT CONNECTION
- (C1) — CROSSING, TYPE 1
- (C2) — CROSSING, TYPE 2
- (C3) — CROSSING, TYPE 3
- (C4) — CROSSING, TYPE 4
-  — ROCK CHANNEL PROTECTION, TYPE B WITH FILTER
-  — GROUND ROD

FOR FENCE DETAILS SEE STANDARD DRAWINGS
F-2, F-3, F-5, AND F-6.

FENCE SUMMARY

QUANTITIES			
Calc.	JAS	Chkd.	RDA
Date:	4 -8 -88	Date:	5 -8 -88

FHWA REGION	STATE	PROJECT
5	OHIO	

22
115

HAS-22-15.03

REF. NO.	PLAN SHEET NO.	202	601	607																		625				
		FENCE REMOVED	ROCK CHANNEL PROT. TYPE B	FENCE TYPE 47				POST ASSEMBLY			LINE POST	FENCE TERMINAL				ABUTMENT CONNCT'N.	CROSSING						GROUND ROD			
								(I)	(C)	(E)		(L)	(TA)	(TB)				(TE)	(A)	(C1)				(C2)	(C3)	(C4)
LIN. FT.	CU. YD.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH	EACH	EACH	EACH	EACH			EACH	EACH	EACH	EACH	EACH	EACH			EACH				
34-F	47	266	5	870			2	/	/	/		/					/					/				
35-F	47	298	5	682			/	/	/			/					/									
36-F	47	1,848	10	2,625			9		/								2									
37-F	47	1,706		2,755			6	/	/								2					/				
36-F	48	1,500	10	2,026			4	/				/					2					/				
37-F	48	1,150	5	1,992			4	2				/					2					/				
38-F	48	1,407	10	1,918			5	3				2					2					/				
39-F	48	1,143	5	2,080			4	2				2					/			2		/				
40-F	48	1,042		1,670			5	/	/			/							/							
41-F	48	1,250		1,570			2	3	/			/							/							
42-F	48	375	5	525				/				/					/			/						
43-F	48	65	5	590			/	/				/					/									
42-F	49	565	5	1,455			2	2			/						/					/				
43-F	49	960		962			2		/								/					/				
44-F	49	375		375				3				/			/					/						
45-F	49	866		866			/	/	/						/											
46-F	49	910		910			2	/	/	/					/							/				
47-F	49	418		850			3	/	/						/							/				
48-F	49	422		422			/		/																	
49-F	49	100		412			/	/	/																	
48-F	50	2,470	20	2,780			4	2	/					/			4					/				
49-F	50	1,690	10	2,125			4	/	/					/			2					/				
50-F	50	58		90				/	2					/												
51-F	50	1,840	10	2,130			2	3	/					/			/	/								
51-F	51	150		150			/		/																	
52-F	51	1300	10	3021			8	3	/	/	/					/	2									
53-F	51	800	15	2716			7		/	2	/						2	/								
54-F	51	132	15	1,230			3	2			/				/	/	2									
55-F	51			446				3		/	/				/				/							
56-F	51	43		43											2											
57-F	51	43		43											2											
58-F	51	590		1,845			3	3	/						/				/			/				
59-F	51	390	10	2,450			4	2							/	/	/					/				
60-F	51			180					/																	
59-F	52	660	5	1,858			5		/							/			/			/				
60-F	52	500	10	1,928			5		/								2					/				
61-F	52	2550	15	3,655			8	/	/								3									
62-F	52	3006	10	3,406			9	/	/	/							2									
61-F	53	820	25	1,656			3	2									5					/				
62-F	53	1640	10	1,751			4	2							/		2		/			/				
63-F	53			21											2											
64-F	53			21											2											
65-F	53	490	5	602			/	/	/	/					/		/					/				
66-F	53	350		411			/	/	/						/		/					/				
67-F	53	2,977	5	2,977			9	/	/								/									
68-F	53	1370	10	2,695			5		2								/	/				/				
69-F	53	408		408			2		/	/																

QUANTITIES CARRIED TO GENERAL SUMMARY

FENCE LEGEND

- (I) — INTERMEDIATE ANCHOR POST ASSEMBLY
- (C) — CORNER POST ASSEMBLY
- (E) — END POST ASSEMBLY
- (L) — CONCRETE ENCASED WOOD POST OR STEEL LINE POST
- (TA) — FENCE TERMINAL, TYPE A
- (TB) — FENCE TERMINAL, TYPE B
- (TE) — FENCE TERMINAL, TYPE E
- (A) — ABUTMENT CONNECTION
- (C1) — CROSSING, TYPE 1
- (C2) — CROSSING, TYPE 2
- (C3) — CROSSING, TYPE 3
- (C4) — CROSSING, TYPE 4
-  — ROCK CHANNEL PROTECTION, TYPE B WITH FILTER
-  — GROUND ROD

FOR FENCE DETAILS SEE STANDARD DRAWINGS
F-2, F-3, F-5, AND F-6.

● INCLUDES 37.5 L.F. OF 14'R CURVED GUARDRAIL
† INCLUDES 50 L.F. OF 40'R CURVED GUARDRAIL AND 25 L.F. OF 5'R CURVED GUARDRAIL AS PER GR-6A
● INCLUDES 25 L.F. OF 40'R CURVED GUARDRAIL AND 12.5 L.F. OF 5'R CURVED GUARDRAIL AS PER GR-6A

*100% STATE

* BARRIER DESIGN

GUARDRAIL SUMMARY

QUANTITIES			
Calc.	DCH	Chkd.	SHG
Date: 3-28-90		Date: 6-13-90	

FHWA REGION	STATE	PROJECT	
5	OHIO		

HAS-22-15.03

23
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* BARRIER DESIGN

REF. NO.	PLAN SHEET NO.	STATION (±)		SIDE	202			606								COMMENTS
					GUARDRAIL REMOVED	GUARDRAIL REMOVED, BARRIER DESIGN	ANCHOR ASSEMBLY POST REMOVED	GUARDRAIL, TYPE 5	GUARDRAIL, TYPE 5, AS PER PLAN	GUARDRAIL, BARRIER DESIGN, TYPE 5	ANCHOR ASSEMBLY, TYPE			BRIDGE TERMINAL ASSEMBLY, TYPE		
		A	A*								T	F	AT	AA		
		FROM	TO		LIN.FT.	LIN.FT.	EACH	LIN.FT.	LIN.FT.	LIN.FT.	EA.	EA.	EA.	EA.	EA.	EA.
1	43	831+13.50	831+38.50	LT			I									
2	43	823+89.00	824+ 26.50	RT	37.5											
		823+51.50	824+ 26.50					50			I					EXTEND 37.5'
3	43	838+50.00	838+75.00	LT			I									
4	43	856+50.00	856+75.00	RT	25											
		855+75.00	856+ 75.00					75			I					EXTEND 75'
5	43	868+25.00	868+ 50.00	LT			I									
6	43	868+75.00	869+ 00.00	CL			I									
7	44	873+87.50	874+ 12.50	RT			I									
8	44	8+10 'C'	8+ 47 'D'	LT	377.5			50●	312.5				3			SEE DETAIL ON SHEET NO. 72
9	44	6+62.50 'C'	4+ 22.65 'D'		300				275		I					RAMP 'C'
10	44	4+ 24.00	8+ 90.30	RT	450				450							RAMP 'D'
		881+04	882+ 37.00	RT	133											
		881+04.00	881+ 29.00					25							I	
12	44	880+50.00	883+ 00.00	CL	400	50										SEE DETAIL ON SHEET NO. 71
		881+ 22.00	882+ 78.00					325†								
13	44	881+50.00	882+ 90.00	LT	140										I	
		882+65.00	882+ 90.00					25								
14	44	904+69.40	904+ 94.40	RT	25											
		903+94.40	904+ 94.40					75			I					EXTEND 75'
15	45	906+73.40	906+ 98.40	CL			I									
		912+76.00	913+ 58.00		82											
16	45	912+76.00	912+ 94.75	LT				18.75							I	
		913+33.00	913+ 58.00					25								
17	45	912+14.00	914+ 52.00	CL	425	25										SEE DETAIL ON SHEET NO. 71
		912+14.00	913+ 85.00					350●								
18	45	912+56.40	913+ 64.40	RT	108											
		912+56.40	912+ 81.40					25							I	
19	45	93+53.50	93+ 91.00	RT	* 37.5											T.R. 211
		92+66.00	94+03.50					* 100			*I			*I		
20	45	93+53.50	93+ 91.00	LT	* 37.5											T.R. 211
		92+66.00	94+03.50					* 100			*I			*I		
21	45	96+09.00	96+ 46.50	LT	* 37.5											T.R. 211
		95+96.50	97+34.00					* 100			*I			*I		
22	45	96+09.00	96+ 46.50	RT	* 37.5											T.R. 211
		95+96.50	97+34.00					* 100			*I			*I		
23	45	918+17.30	918+ 42.30	CL			I				*I			*I		
24	45	919+17.80	919+ 42.80	RT	25											
		918+67.80	919+ 42.80					50			I					EXTEND 50'
25	45	2+80.50	3+68.00	RT	87.5				75				I			RAMP 'F'—CONNECT TO EXIST. BR. TERM. AS
26	45	5+22 'F'	6+78 'E'	RT	412.5				412.5							RAMP 'F'—CONNECT TO EXIST. BR. TERM.
27	45	923+14.60	923+39.60	LT			I									
28	45	6+77.80	12+04.64	RT	512.5				512.5							RAMP 'E'
29	45	931+89.50	932+14.50	CL			I									
30	46	938+20.00	938+45.00	RT			I									
31	45	15+86.10	17+23.60	RT	137.5											RAMP 'G'
32	46	959+35.30	959+60.30	RT			I									
33	46	967+26.00	967+51.00	LT	25											
		967+26.00	967+63.50					12.5			I					EXTEND 12.5'
34	46	977+91.00	978+16.00	RT			I									
35	46	984+85.00	985+10.00	LT			I									
36	47	993+25.00	993+50.00	LT			I									
37	47	1001+12.50	1001+37.50	LT			I									
		1017+73.00	1017+ 98.00				I									
38	47	1002+01.00	1002+ 26.00	RT			I									
		1016+68.00	1016+ 93.00				I									
39	47	1023+03.30	1023+ 28.30	RT			I									
		1033+22.00	1033+ 47.00				I									
40	47	1023+75.00	1024+00.00	LT			I									
		1033+50.00	1033+75.00				I									
41	47,48	1038+77.50	1039+02.50	RT			I									
		1047+77.50	1048+02.50				I									
42	47,48	1038+90.00	1039+15.00	LT			I									
		1048+02.50	1048+27.50				I									
43	48	1050+75.00	1051+00.00	LT			I									
		1056+50.00	1056+75.00				I									

REF. NO.	PLAN SHEET NO.	STATION (±)		SIDE	202			606							COMMENTS			
					GUARDRAIL REMOVED	GUARDRAIL REMOVED, BARRIER DESIGN	ANCHOR ASSEMBLY POST REMOVED	GUARDRAIL, TYPE 5	GUARDRAIL, TYPE 5, AS PER PLAN	GUARDRAIL, BARRIER DESIGN, TYPE 5	ANCHOR ASSEMBLY, TYPE			BRIDGE TERMINAL ASSEMBLY, TYPE				
		FROM	TO								LIN.FT.	LIN.FT.	EACH	LIN.FT.		LIN.FT.	LIN.FT.	A EA.
44	48	1051+03.00	1051+28.00	RT	25			50				I						EXTEND 50'
		1050+53.00	1051+28.00															
		1057+03.00	1057+28.00				I											
45	48	1060+73.00	1060+98.00	LT			I											
		1072+73.00	1072+98.00				I											
46	48	1060+91.25	1061+16.25	RT			I											
		1072+72.50	1072+97.50				I											
47	48	1081+34.50	1081+59.50	LT			I											
48	48	1081+47.00	1081+72.00	RT	25			50				I						EXTEND 50'
		1080+97.00	1081+72.00															
49	48	1087+19.00	1087+44.00		RT			I										
50	48	1087+82.00	1088+07.00	LT			I											
51	48	1099+59.00	1099+84.00	RT			I											
		1105+21.50	1105+46.20				I											
		1099+88.50	1100+13.50				I											
52	48	1106+13.50	1106+38.50	LT	25			25				I						EXTEND 25'
		1106+13.50	1106+63.50															
53	49	1117+30.00	1117+55.00	RT	25			12.5				I						EXTEND 12.5'
		1117+17.50	1117+55.00															
54	49	1126+34.30	1126+59.30	RT			I											
55	49	1126+54.40	1126+79.40	LT			I											
56	49,50	1136+89.00	1137+14.00	RT	25			12.5				I						EXTEND 12.5'
		1136+76.50	1137+14.00															
		1138+89.00	1139+14.00					I										
57	49,50	1137+19.00	1137+44.00	LT			I											
		1139+19.00	1139+45.00					I										
58	50	1144+84.50	1145+09.50	RT	25			25				I						EXTEND 25'
		1144+59.50	1145+09.50															
59	50	1152+81.00	1153+06.00	RT			I											
60	50	1155+75.00	1156+77.00	LT	102			18.75										
		1155+75.00	1154+93.75						25								I	
		1156+52.00	1156+17.00															
61	50	1155+31.00	1158+31.00	C	500	50		350#										SEE DETAIL ON SHEET NO. 72
		1155+92.00	1157+62.00															
62	50	1156+78.00	1157+80.00	RT	102			25									I	
		1156+78.00	1157+03.00						18.75									
		1157+61.75	1157+80.00													I		
63	50	1+50.00	1+75.00	RT			I											RAMP 'K'
64	50	0+98.00	6+48.00	RT	550			537.5					I					RAMP 'J'
65	50	3+16.50	3+79.00	RT	62.5			50					I					RAMP 'L'
66	50	1+20.50	2+33.00	RT	112.5			75				I	I					RAMP 'M'
67	50	8+75.00	9+00.00	RT			I											RAMP 'J'
68	51	7+79.83	8+04.83	RT			I											RAMP 'M'
69	51	1172+84.50	1173+09.50	LT			I											
70	51	1177+22.50	1177+47.50	RT			I											
71	51	1185+44.50	1185+69.50	LT			I											
72	51	1195+93.20	1196+18.20	RT			I											
74	51	1204+57.80	1204+82.80	C			I											
76	51	1211+42.00	1211+67.00	C			I											
77	51	1214+48.80	1214+73.80	LT			I											
79	51	1225+58.00	1225+83.00	RT			I											
80	52	1231+00.00	1231+25.00	LT			I											
81	52	1238+56.60	1238+81.60	RT			I											
82	52	1246+00.00	1246+25.00	C			I											
83	52	14+24.50	16+99.50	RT	275			262.5					I					RAMP 'N'
84	52	15+88.50	17+26.00	RT	137.5			112.5				I						RAMP 'Q'
85	52	1252+00.50	1252+25.50	C			I											
86	52	1254+94.00	1255+19.00	LT			I											
TOTALS QUANTITIES CARRIED TO SHEET NO. 23					5,844.5	125	61	2,493.75	2,700		18	8		4	3	6		

GUARDRAIL SUMMARY

* BARRIER DESIGN

QUANTITIES				FHWA REGION	STATE	PROJECT	
Calc.	DCH	Chkd.	SHG	5	OHIO		
Date:	3-28-90	Date:	6-13-90	HAS-22-15.03			



REF. NO.	PLAN SHEET NO.	STATION (±)		S I D E	202		606								COMMENTS		
					GUARDRAIL REMOVED	GUARDRAIL REMOVED, BARRIER DESIGN	ANCHOR ASSEMBLY POST REMOVED	GUARDRAIL, TYPE 5	GUARDRAIL, TYPE 5, AS PER PLAN	GUARDRAIL, BARRIER DESIGN, TYPE 5	ANCHOR ASSEMBLY, TYPE			BRIDGE TERMINAL ASSEMBLY, TYPE			
		FROM	TO		LIN.FT.	LIN.FT.	EACH	LIN.FT.	LIN.FT.	LIN.FT.	A EA.	A* EA.	T EA.			F EA.	AT EA.
87	52	1258+25.00	1258+50.00	LT			I										
88	52	1258+25.00	1258+50.00	C			I										
89	52	1258+90.00	1259+15.00	RT			I										
90	52	1263+50.00	1263+75.00	LT			I										
91	52	1279+96.00	1280+46.00	RT	50				50		I						EXTEND 25'
		1279+71.00	1280+46.00														
92	52	1283+15.00	1283+40.00	LT			I										
93	53	1290+87.50	1291+12.50	RT			I										
94	53	1300+11.55	1300+30.30	LT	18.75			18.75							I		
95	53	1299+20.00	1299+45.00	C			I										
96	53	1300+15.20	1300+40.20	RT	25			25								I	
97	53	1301+72.70	1302+97.70	C	87.5	37.5		87.5		12.5	I					I	SEE STD. DWG. GR-6
98	53	1301+63.40	1301+88.40	LT	25			25								I	
		1303+59.00	1303+84.00				I										
100	53	1322+53.00	1322+78.00	RT			I										
107	46	948 21.60	948 46.60				I										
108	44	833+50.00	883+75.00	LT			I										
109	45	914+18.20	914+43.20	LT			I										
110	44	6+62.50	6+87.50	LT			I										RAMP 'C'
111	45	6+36.00	6+61.00	LT			I										RAMP 'F'
112	45	16+52.50	17+27.50	RT	75												RAMP 'G'; SEE
		16+52.50	16+77.50								I						SHEET NO. 62
113	45	12+49.20	12+74.20	LT			I										RAMP 'G'
TOTALS					281.25	37.5	15	206.25		12.5	2	1				1	3
TOTALS FROM SHEET NO. 23					5,844.5	125	61	2,493.75	2,700		18		8		4	3	6
TOTALS CARRIED TO GENERAL SUMMARY					6125.75	162.5	76	2,700	2,700	12.5	20	1	8		4	4	9

GENERAL NOTES

FHWA REGION	STATE	PROJECT	
5	OHIO		

HAS-22-15.03

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FIELD OFFICE

The Contractor shall provide a suitable field office having a minimum of 800 sq. ft. of floor space. Payment shall be at a lump sum price bid for Item 619, Field Office.

UNDERGROUND UTILITIES

The locations of underground utilities shown on the plans are as obtained from the owners of the utility as required by Section 153.64 of the Ohio Revised Code.

UTILITY OWNERSHIP

The following utilities and owners are located within the work limits of the project:

GTE Telephone Operations-North Area 715 Commercial Parkway Dover, Ohio 44622 Ph. (216) 364-0363	Western Reserve Telephone Co. P.O. Box 5 Fairview, Ohio 43736 Ph. (614) 758-5818
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Columbia Gas of Ohio 216 Highland Ave. Cambridge, Ohio 43725 Ph. (614) 432-8226	Hopedale Village Water Works Twp. Rd. 180 Hopedale, Ohio 43976 Ph. (614) 937-2455
--	--

CONTINGENCY QUANTITIES

The Contractor shall not order materials or perform work listed in the General Summary for Items designed by plan note to be used "As Directed By The Engineer" unless authorized by the Engineer. The actual work locations and quantities used at the Engineer's discretion shall be made a matter of record by incorporation into the final change order governing completion of this project.

ALIGNMENT AND PROFILE

The work proposed by this project is for the resurfacing of the existing pavement. The alignment, profile and superelevation rates of the existing pavement will not be changed except for the profile correction shown on sheet no. 55.

PREVIOUS CONSTRUCTION PLANS

The following construction plans are available for reference by contacting the District 11 office in New Philadelphia, Ohio:

HAS-22-15.09	Original Construction Plan (1959)
HAS/JEFF-22-18.97/0.00	Original Construction Plan (1960)
HAS-22-(15.03-18.91)	Safety Upgrading Plan (1978)
HAS-22-20.07	Safety Upgrading Plan (1980)

ITEM 304 - AGGREGATE BASE, AS PER PLAN

ITEM 310 - SUBBASE, TYPE II, AS PER PLAN

Materials furnished for these items shall exclude all slag except granulated slag or crushed air-cooled blast furnace slag.

ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN

Work under this Item shall be within the areas 2 feet on each side of the new fence limits within the limits of the Right of Way and shall consist of the following:

1. The removal of all trees, stumps, and brush to ground level.
2. The removal of all litter.
3. Mowing of all vegetation to a height of between 3" and 5".
4. Treatment of the removal area with the following herbicides within 24 hours after vegetation is cut: 1 gallon Dow "Tordon K" combined with 2 quarts

ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN (CONT'D.)

2,4 D-amine or an approved equal in sufficient water to make 50 gallons of total spray mix per acre. An estimated area of 10.4 acres is to be treated with the herbicide.

The Contractor shall be licensed by the Ohio Department of Agriculture as a commercial applicator and all persons involved in the actual herbicide spraying shall be licensed as commercial operators in the appropriate category.

The following is an estimate of the number of trees to be removed:

Size	No. of Trees
18"	800
30"	50

The above estimate is approximate and the State of Ohio reserves the right to order the removal of additional trees or stumps outside of the limits of Construction but within the Right of Way and/or Easement lines.

Payment for the above, including the removal of additional trees or stumps, shall be included in the lump sum bid for Clearing and Grubbing, As Per Plan.

ITEM 203 - LINEAR GRADING

This work shall include all excavation and embankment required to grade beyond paved shoulders as shown in the details on sheet no's. 8 & 63. Vegetation, material buildup or excavated material on the shoulder or within the linear grading limits shall be removed and disposed of by the Contractor or wasted over fill slopes at the direction of the Engineer. Linear grading widths shown on the plans represent minimum requirements and the Engineer may increase these widths as determined by his analysis of project conditions at no additional cost to the State. The method of measurement shall be considered as one station per 100 linear feet measured separately for each directional roadway and for each side of ramps.

Payment for this work will be as follows:

1. Item 203 - Linear Grading, Method 1 - This item shall apply where an outside portion of the mainline shoulder is to be reconstructed as shown on sheet no. 63 and any other areas designated by the Engineer where a drop-off occurs at the edge of the mainline shoulders.
2. Item 203 - Linear Grading, Method 2 - This item shall apply to the ramp shoulder areas with guardrail and asphalt paving under guardrail and shall include the removal of all turf and vegetation prior to placing the embankment material.
3. Item 203 - Linear Grading, Method 3 - This item shall apply to the ramp shoulder areas where existing curb is to be removed and new shoulder is to be constructed.

Item 617 - Compacted aggregate shall be used for Method 1 and shall be placed and compacted as per Section 617.05 to the dimensions shown on the detail on sheet no. 63.

Embankment material as per Item 203 shall be used for Methods 2 & 3 and shall be compacted as directed by the Engineer and seeded only as shown on the Typical Sections and in accordance with the specifications for Item 659 - Seeding and Mulching.

Payment for the above except for Items 617 and 659 shall be included in the unit price bid per Station for the appropriate linear grading item.

ITEM 203 - LINEAR GRADING, DITCH CLEANOUT

This Item shall consist of reconstructing the ditch, rock fall bench and backslope in accordance with the dimensions shown on sheet no. 63 and shall include all excavation and embankment necessary to do so.

The Engineer shall determine the need for this Item at each location during construction and shall non-perform this work in any areas where it is not necessary.

The method of measurement shall be considered as one station per 100 linear feet measured seperately for each directional roadway or ramp.

Payment for the above work, including excavation and embankment, shall be included in the unit price bid per Station for Item 203 - Linear Grading, Ditch Cleanout.

ITEM 407 - TACK COAT

The rate of application of 407 Tack Coat shall be subject to adjustment, as directed by the Engineer. Plan quantities indicate an average application rate of 0.075 gallons per square yard of tack coat for estimating purposes only.

LOCATION OF GUARDRAIL

The locations of guardrail runs, as shown in these plans, are subject to adjustment prior to final acceptance. The Engineer shall be satisfied that all installations will afford maximum protection for traffic.

GUARDRAIL REPLACEMENT

No hazard shall be left unprotected except for actual time necessary to remove existing guardrail, grade, pave (where required) and install new guardrail including anchor assemblies. The total length of guardrail operations shall not exceed 4000 linear feet for each directional roadway. A run of guardrail is not considered complete until the anchor assemblies are installed and attached. If a guardrail run cannot be removed in its entirety due to the length restriction, that run shall not be removed until advancement of guardrail operations. The removal of guardrail shall at all times be at the direction of the Engineer. No guardrail shall be removed until replacement material is on site, ready for installation. Failure to comply with this requirement shall be deemed sufficient cause to order work suspended on this project until such time that the Engineer is assured of said compliance.

CONNECTIONS BETWEEN EXISTING AND PROPOSED GUARDRAIL

When it is necessary to splice proposed guardrail to existing guardrail, only the existing guardrail shall be cut, drilled or punched. The connection shall be made using a "beam rail splice" as shown in Standard Drawing GR-1. Payment shall be included in the unit price bid for the respective guardrail item.

GUARDRAIL, TYPE 5, AS PER PLAN

This work shall consist of constructing the Type 5 Guardrail as per Standard Drawing GR-2B and shall include boring thru the 404 Asphalt Concrete for a depth of (6) inches, backfilling with 404 and compaction at each post location.

ASPHALT PAVING UNDER GUARDRAIL

A 4'-0" width adjacent to the existing paved shoulder where new guardrail is 8'-0" from the right edge of ramp pavement shall be paved with a two (2) inch compacted course of Item 404 - Asphalt Concrete as shown on the Typical Sections.

Prior to placing this material, an approved herbicide shall be applied at the rate recommended by the manufacturer:

Item 408 Bituminous Prime Coat shall be applied at the rate of 4 gal. per 100 sq. yd. prior to placing the 404 Asphalt Concrete.

After the 404 Asphalt Concrete has been placed and compacted, holes for guardrail posts shall then be bored through the 404 and the post installed. The disturbed area around each post shall then be backfilled with 404 and compacted flush with the surrounding surface. Any excess 404 or other debris shall be removed and disposed of by the Contractor at the direction of the Engineer.

Payment for all of the above described resurfacing shall be included in Item 404 - Asphalt Concrete (Under Guardrail) with the following exceptions:

Payment for guardrail shall be paid for at the unit price bid of Lin. Ft. for Item 606 - Guardrail, Type 5, As Per Plan, payment for herbicide shall be paid for at the unit price bid of Sq. Yd. for Item Special - Herbicide Application Under Asphalt. Payment for the Prime Coat shall be paid for at the unit price bid of 100 Sq. Yd. for Item 408 Bituminous Prime Coat.

GENERAL NOTES

ANCHOR ASSEMBLY POST REMOVED

Existing anchor assemblies that are to remain in place shall have the exposed portion of the intermediate post and spacers (located 12'-6" from the concrete anchor) removed flush with the top of the existing concrete encasement so as to conform with Standard Drawing GR-4. For locations see sheet no's. 23 & 24.

The cost of the above work shall be included in the contract unit price bid of Each for Item 202 - Anchor Assembly Post Removed.

GUARDRAIL POSTS, WOOD, AS PER PLAN

This item shall consist of installing new guardrail posts midway between existing guardrail posts at overhead sign supports. The additional posts shall be placed from 25'-0" in advance of the support to 12'-6" past the support. The additional post bolt holes shall be made in the existing rail element by punching, cutting or drilling as outlined in Section 606.05.

The following locations require additional guardrail posts:

Overhead Sign Support Location	Side	No. of Additional Guardrail Posts Needed
E.B. Sta. 870+00	median	8
E.B. Sta. 870+00	outside	8
W.B. Sta. 926+40	outside	8
W.B. Sta. 1257+25	median	8
Total =		32

Payment to perform this work, including making the additional holes in the existing rail element, spacer blocks and related hardware, will be made at the contract unit price bid of Each for Item 606 - Guardrail Posts, Wood, As Per Plan and shall include the cost of all labor, materials, equipment and incidentals necessary to complete the work.

The following quantity has been carried to the General Summary for the purpose of providing additional guardrail posts as specified above:

Item 606 - Guardrail Posts, Wood, As Per Plan - - - - - 32 Each

RAISED PAVEMENT MARKERS REMOVED

Existing raised pavement markers (R.P.M.'s) on this project shall be removed in the following manner:

- 1) Concrete Section, Westbound lanes, Sta. 1262+03.90 to Sta. 1332+98.75: The existing R.P.M.'s shall be removed by heating and carefully lifting out or any other approved method which will prevent damage to the surrounding concrete pavement. The depressions left by the removal of the castings shall be left unfilled.

Payment to perform this work will be made at the contract price bid of Each for Item 202 - Raised Pavement Markers Removed for Storage, As Per Plan.

- 2) Remaining Project: The existing R.P.M.'s shall be removed as per Section 202.071.

The following quantities have been carried to the General Summary for the purpose of removing existing R.P.M.'s.:

Item 202 - Raised Pavement Markers Removed for Storage - - - - - 680 Ea.

Item 202 - RAised Pavement Markers Removed for Storage, As Per Plan - - - - - 90 Ea.

SAME SEASON COMPLETION OF SURFACE COURSE

Any length of resurfacing work started in a construction season shall have the surface course placed that same season. In addition, any pavement which has been planed shall not be permitted to remain unsurfaced through the winter.

FENCE GROUNDING

Any Right of Way fence crossing under overhead electric power lines or transmission lines shall be grounded in accordance with Standard Drawing HL-50.11.

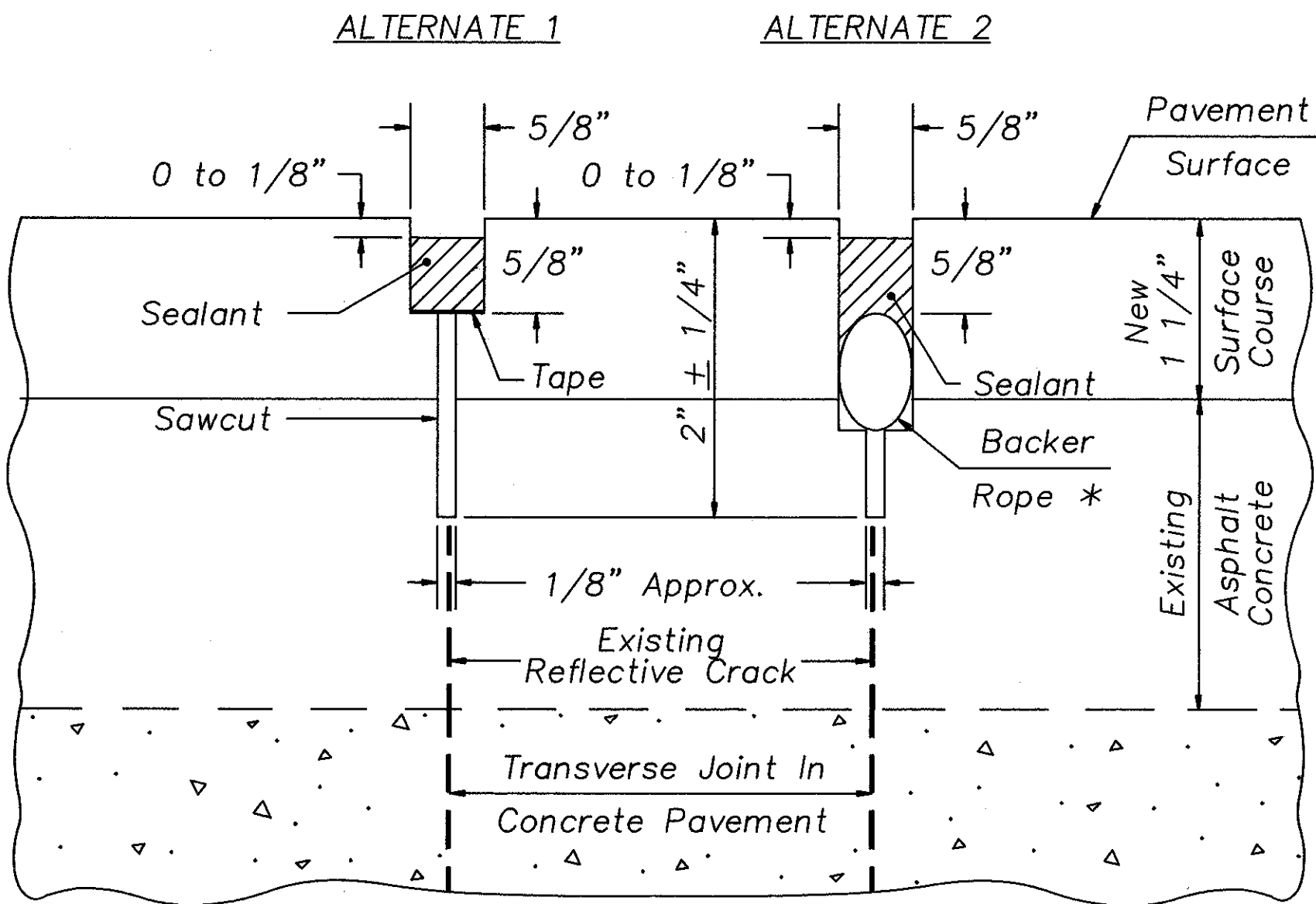
Ground rods shall be used as directed by the Engineer. For locations and quantities see sheet no's. 21 & 22.

JOINT SEALERS

All references to 705.01 or 705.02, appearing on Standard Drawings or on the plans, shall be considered to read 705.04.

ITEM SPECIAL - SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS, 705.04

(See Note In Proposal). This Item of work shall be performed in accordance with the Proposal Note and the detail shown herein. Estimated quantities for this Item of work have been provided in the General Summary based upon calculations on sheet no.'s 75 & 76. If Alternate 1 is used, all saw cuts shall be made with one pass of the saw. The joints shall be sawed within 48 hours after completion of each day's run of surface course.



* Minimum diameter shall be one nominal size larger than the sawed joint.

DETAIL FOR TRANSVERSE JOINT IN NEW ASPHALT CONCRETE OVERLAY

PAVEMENT REPAIR IN THE CONCRETE SECTION

The following requirements shall apply only to the concrete section, Sta. 1262+03.90 to Sta. 1332+98.75 in the westbound lanes:

All joint sealant reservoirs for full depth repairs shall be constructed and sealed as per the details and requirements of Supplemental Specification 801. The transverse and longitudinal joints shall be sawed or formed to conform to the dimensions shown for Class III and Class V, respectively, in lieu of those shown in Standard Drawing BP-13.

Joints at the full depth repairs shall be sealed and existing transverse and longitudinal joints shall be resealed after pavement grinding operations have been completed.

All costs associated with constructing and sealing transverse and longitudinal joints in full depth repairs, to be in accordance with Supplemental Specification 801, shall be included in the cost of the 803 full depth pavement repair item.

PAVEMENT REPAIR LOCATIONS

The pavement repair locations shown on sheet no's. 80-86 are referenced to the field locations of the existing county log mile markers.

EXAMINATION OF PROJECT

The existing thickness shown in the Typical Sections and Feather Details on sheet no. 54 are nominal only and may vary.

It shall be the Contractor's responsibility to examine the project site and verify the actual pavement thickness prior to submitting his bid proposal as per Section 102.05 of the Construction and Materials Specifications.

The Contractor shall provide his own traffic control in accordance with all requirements of OMUTCD and shall notify the District Operations Engineer at least five working days in advance of setting up traffic control for the purpose of examining the pavement as stated above.

SEEDING

Quantities for seeding are calculated for the soil areas from ditch cleanout, shoulder construction, median catch basin replacement and median guardrail removal.

MEDIAN CATCH BASIN REPLACEMENT

The existing median 2-2-A catch basins are a safety hazard and shall be removed and replaced with new No. 8 catch basins, without aprons, as shown on sheet no. 73.

The depths of the new basins have been obtained from the original construction plans and shall be considered tentative and approximate. The new catch basin depths shall be based on actual dimensions which have been verified by the Contractor in the field.

Upon removal of the existing paved gutter, the area shall be graded to the original flowline and blended in with the existing side slopes, leaving a neat appearance. Item 670 - Ditch Erosion Protection shall then be placed in the ditch for the length of the bare soil.

The existing earth dikes at catch basins on a continuous grade shall be reconstructed to conform to the dimensions shown in Standard Drawing CB-8.

When all grading operations are completed, the entire area shall be seeded in accordance with Item 659.

Payment for all of the above, unless separately itemized in the plan, shall be included in the price bid of Each for Item 604 - Catch Basin, No. 8, Without Apron.

GENERAL NOTES

CENTERLINE REFERENCE MONUMENTS

The District has set tacked hubs at the following stations for the purpose of providing centerline control during right of way fence reconstruction:

POT Sta. 797+43.32	CS Sta. 985+02.25	ST Sta. 1168+68.19 BK =
PC Sta. 801+43.32	ST Sta. 988+02.25	Sta. 1168+75.64 AH
POC Sta. 804+34.99	TS Sta. 992+52.75	POT Sta. 1173+75.64
PT Sta. 807+26.65	SC Sta. 995+52.75	POT Sta. 1178+75.64
POT Sta. 812+26.65	POC Sta. 1001+21.92	POT Sta. 1183+75.64
POT Sta. 817+26.65	CS Sta. 1006+91.08	POT Sta. 1188+75.64
POT Sta. 822+26.65	ST Sta. 1009+91.08	POT Sta. 1193+75.64
POT Sta. 827+26.65	POT Sta. 1014+91.08	POT Sta. 1198+75.64
POT Sta. 832+26.65	POT Sta. 1019+91.08	POT Sta. 1203+75.64
POT Sta. 837+26.65	POT Sta. 1024+91.08	POT Sta. 1208+75.64
POT Sta. 842+26.65	POT Sta. 1029+91.08	POT Sta. 1213+75.64
POT Sta. 848+21.49	POT Sta. 1034+91.08	POT Sta. 1218+02.94
POT Sta. 853+21.49	POT Sta. 1035+51.63	POT Sta. 1223+02.94
POT Sta. 858+21.49	POT Sta. 1040+51.63	POT Sta. 1228+02.94
POT Sta. 863+21.49	POT Sta. 1045+51.63	POT Sta. 1233+02.94
POT Sta. 868+21.49	POT Sta. 1050+51.63	POT Sta. 1238+02.94
POT Sta. 873+21.49	POT Sta. 1055+51.63	POT Sta. 1243+02.94
POT Sta. 878+21.49	PC Sta. 1060+51.63	POT Sta. 1248+02.94
TS Sta. 883+21.49	POC Sta. 1065+51.63	POT Sta. 1253+02.94
SC Sta. 886+21.49	POC Sta. 1070+51.63	POT Sta. 1258+02.94
POC Sta. 890+13.58	POC Sta. 1075+51.63	TS Sta. 1263+02.94
CS Sta. 894+05.86	POC Sta. 1081+61.63	SC Sta. 1266+02.94
ST Sta. 897+05.66	POC Sta. 1087+71.63	POC Sta. 1271+82.94
ST Sta. 902+05.66	POC Sta. 1092+71.63	CS Sta. 1277+62.94
ST Sta. 912+05.66	POC Sta. 1097+71.63	ST Sta. 1280+62.94 BK =
ST Sta. 916+79.53	PT Sta. 1102+71.63	Sta. 1280+72.73 AH
ST Sta. 921+79.53	POT Sta. 1107+71.63	TS Sta. 1286+91.42
ST Sta. 926+79.53	POT Sta. 1113+88.19	SC Sta. 1289+91.42
PC Sta. 931+79.53	TS Sta. 1118+88.19	CS Sta. 1295+78.92
POC Sta. 937+49.53	SC Sta. 1122+88.19	ST Sta. 1298+78.92 BK =
PT Sta. 943+19.53	CS Sta. 1126+11.52	Sta. 1298+80.75 AH
POT Sta. 948+19.53	ST Sta. 1130+11.52	POT Sta. 1304+80.75
POT Sta. 953+19.53	POT Sta. 1135+11.52	TS Sta. 1310+37.98
POT Sta. 959+74.33	POT Sta. 1138+54.86	SC Sta. 1313+37.98
TS Sta. 964+74.33	POT Sta. 1145+54.86	POC Sta. 1318+37.98
SC Sta. 967+74.33	TS Sta. 1150+54.86	POC Sta. 1321+83.81
POC Sta. 972+74.33	SC Sta. 1154+54.86	CS Sta. 1326+83.81
POC Sta. 980+02.25	POC Sta. 1159+64.03	TS Sta. 1329+83.81 BK =
	CS Sta. 1164+68.19	Sta. 1329+98.24 AH

CURB REMOVED, AS PER PLAN

Existing Type 2-A curbs shall be removed flush with the surface of the existing concrete pavement by horizontally sawing or otherwise cutting, in a manner that does not spall or damage the concrete pavement.

For locations and quantities, see sheet no's. 64-66 & 70.

Payment to perform this work will be made at the unit price bid of Lin. Ft. for Item 202 Curb Removed, As Per Plan and shall include the cost of all labor, materials, equipment and incidentals necessary to complete the work.

CONCRETE MEDIAN REMOVED, AS PER PLAN

Existing concrete median removed under this item shall include any excavation or embankment required to grade the median flush with the surface of the existing concrete pavement after the Type 2-A curbs are removed.

For locations and quantities see, sheet no's. 64-66 & 70.

Payment to perform this work, including excavation and embankment, will be made at the unit price bid of Sq. Yd. for Item 202 - Concrete Median Removed, As Per Plan and shall include the cost of all labor, materials, equipment and incidentals necessary to complete the work.

PIPE
ITEM SPECIAL - (CONDUIT) CLEANOUT

Existing conduits at the locations shown on sheet no. 73 shall be cleaned out as directed by the Engineer.

This work shall consist of the removal of all foreign matter from the inside of the existing conduit in a manner acceptable to the Engineer. The removed material shall be disposed of in accordance with Section 203.05.

Payment to perform this work will be made at the unit price bid per the actual number of linear feet of existing conduit cleaned out and shall include the cost of all labor, equipment, materials and incidentals necessary to complete the work.

MEDIAN GUARDRAIL REMOVAL

The area disturbed by removing median guardrail runs, reference no's. 12-GR, 17-GR and 61-GR, shall be restored to a neat appearance and seeded in accordance with Item 659.

The following quantity has been carried to sheet no. 63 for the purpose of seeding the median where guardrail is removed:

Item 659 - Seeding & Mulching ----- 700 S.Y.

CONCRETE BARRIER, TYPE D, AS PER PLAN

This item shall consist of constructing Type D concrete barrier as per Standard Drawing MC-9 with the following exceptions:

The concrete barrier shall be steel reinforced, the base portion shall extend to the edge of the shoulder and the barrier shape shall be transitioned to accommodate the bridge terminal assemblies as per Standard Drawing GR-3.

For details and quantities, see sheet no. 74.

Payment for all of the above will be made at the unit price bid of Lin. Ft. for Item 622 - Concrete Barrier, Type D, As Per Plan and shall include the cost of all labor, equipment, materials and incidentals necessary to complete the work.

ITEM SPECIAL - HERBICIDE APPLICATION UNDER ASPHALT

The application of a herbicide such as Treflan E.C. ^{spike} or approved equal shall be made only when the final grade is established after additions of any base aggregate. All plant material such as rhizomes, roots or other vegetative plant material shall be removed prior to placement of base material. Paving should follow herbicide applications as soon as possible. The Contractor shall be properly licensed to apply herbicides and adhere strictly to label instructions of any herbicide approved for this use.

Payment for all labor and material required to apply this herbicide shall be included in the price per square yard bid for Item Special, Herbicide Application Under Asphalt.

ITEM 604 - INLET, NO. 2-6, 2-8, AND 2-10, AS PER PLAN

All reinforcing steel listed in the steel list on Standard Construction Drawing I-2 shall be epoxy-coated in accordance with 509.10 of the CMS.

All costs of this coating shall be included in the cost of the appropriate inlet item.

TRAFFIC CONTROL STANDARD CONSTRUCTION DRAWINGS

References to Supplemental Specifications 857, 858, 861, 957, 958 and 961 on the Traffic Control Standard Construction Drawings in these plans shall be considered to read as respective references to Items 630, 631, 633, 730, 731 and 733.

CONNECTION TO EXISTING PIPE

Where the plans are provided for proposed conduit to be connected to, or to cross either over or under an existing sewer, it shall be the responsibility of the Contractor to locate the existing pipe both as to line and grade before he starts to lay the proposed conduit.

Payment for all operations described above shall be included in the unit price bid for the pertinent 603 Conduit Items.

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

The following estimated quantities are to be used as directed by the Engineer, for temporary erosion and sediment control measures:

207 Straw And Hay Bales - - - - - 100 Each

APPROACH SLAB REMOVAL & CONSTRUCTION

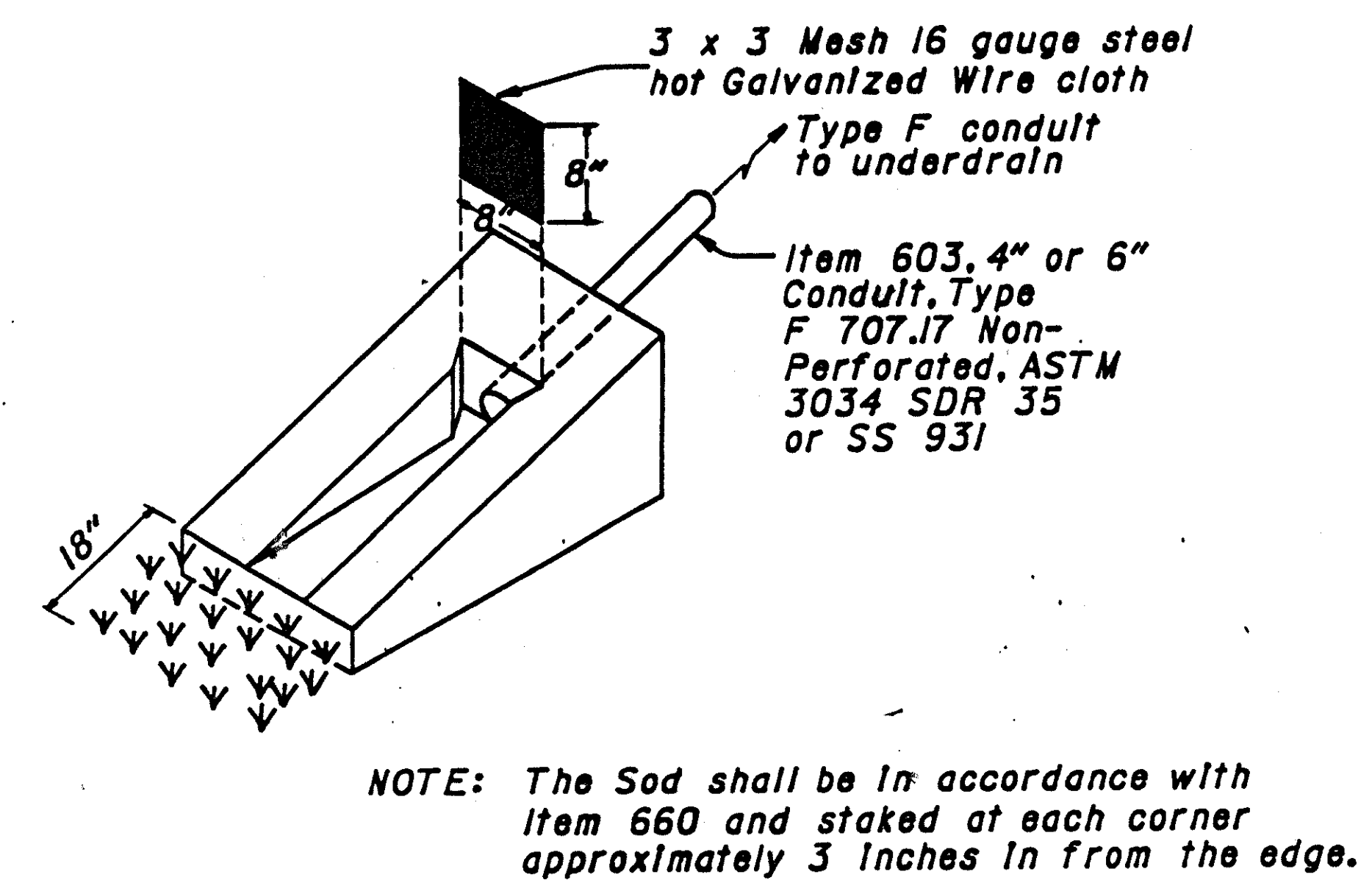
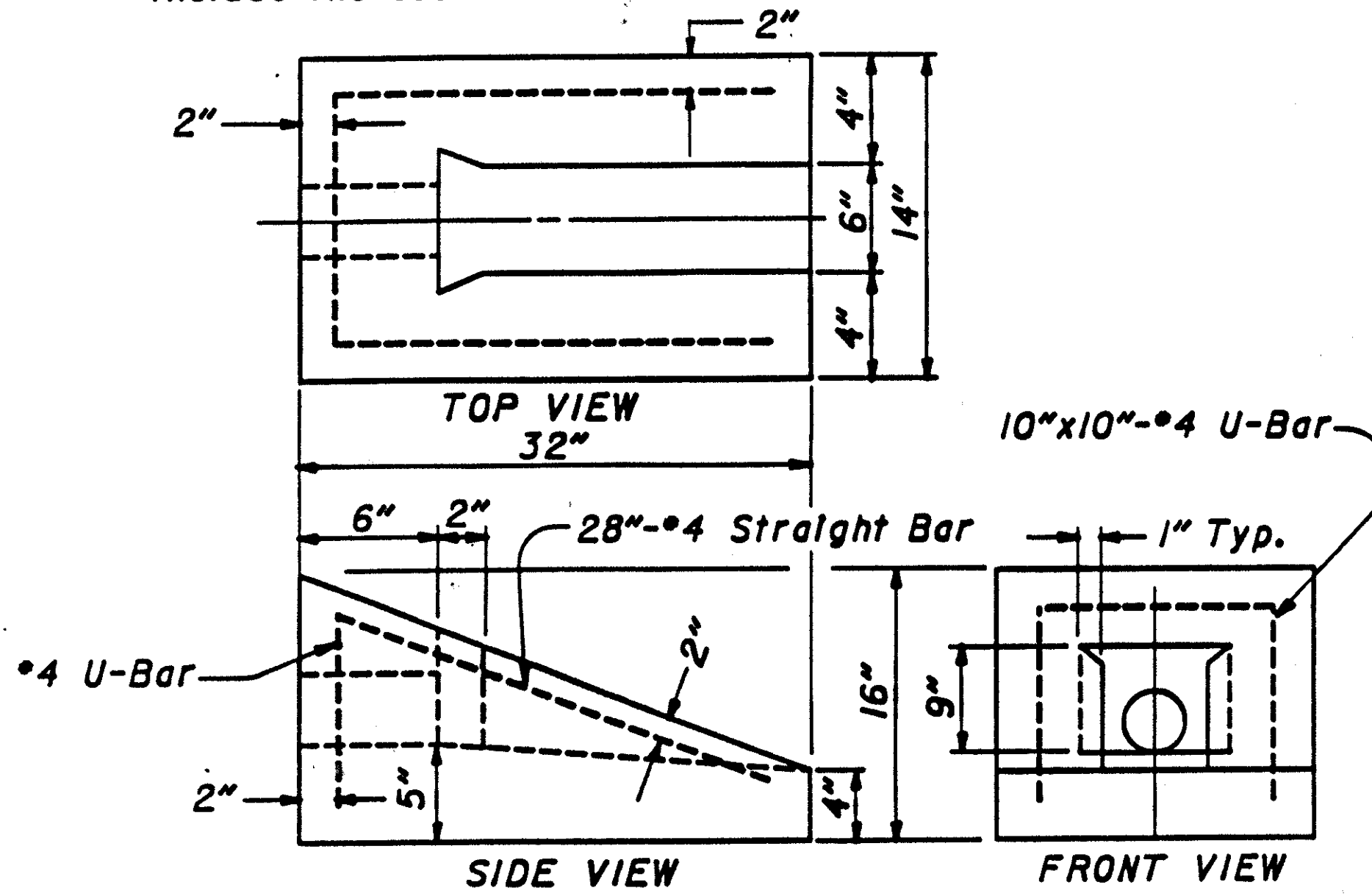
The existing rear and forward approach slabs at bridge no. HAS-22-2460 L shall be removed in conjunction with the deck replacement. New approach slabs shall be constructed as shown in the details on sheet no. 113.

The following quantities have been carried to the General Summary for the purpose of removing the existing approach slabs and constructing new approach slabs at bridge no. HAS-22-2460 L:

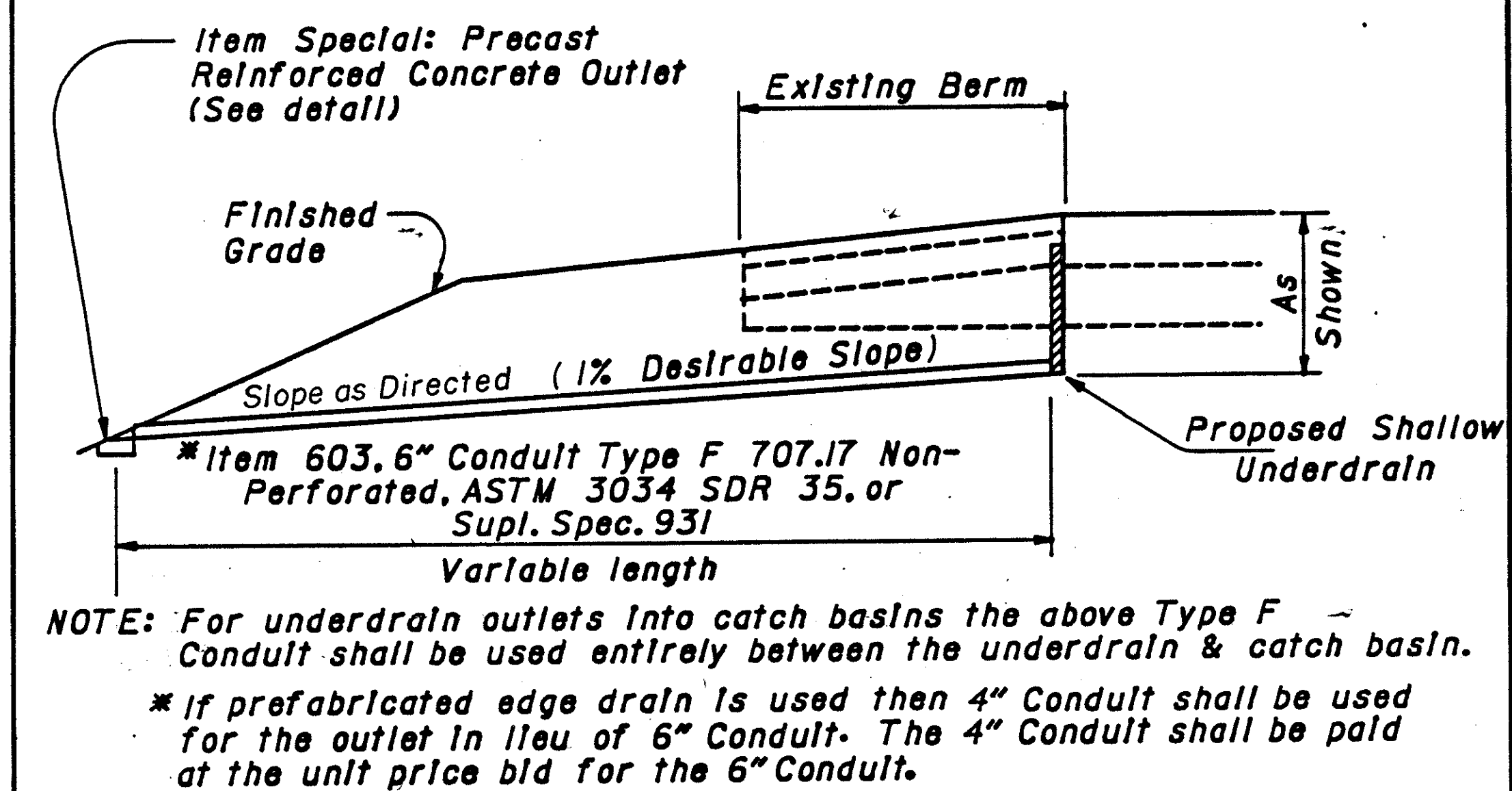
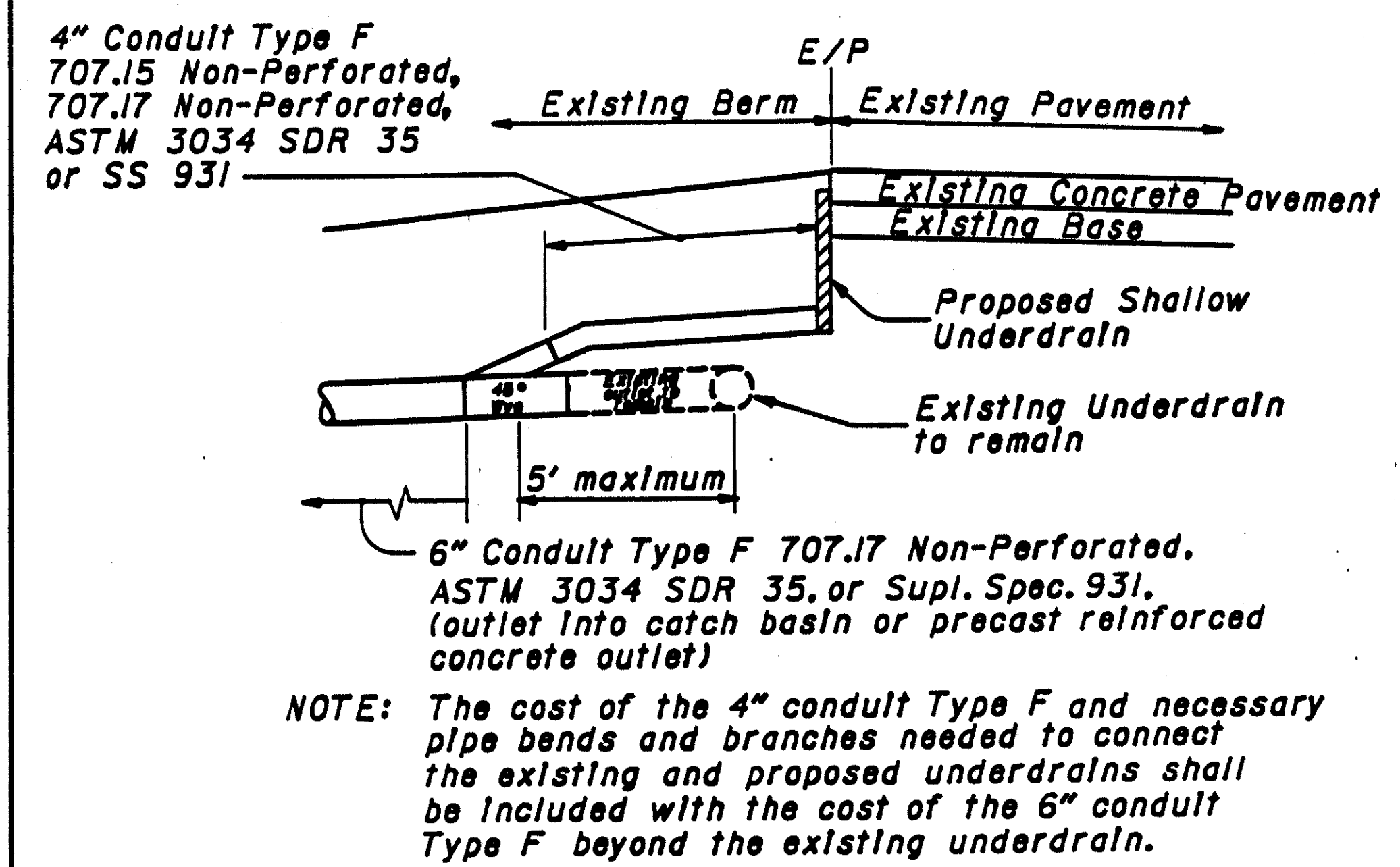
Item 202 - Approach Slab Removed - - - - - 134 S.Y.
Item 611 - Reinforced Concrete Approach Slab (T=15") - - 217 S.Y.

ITEM SPECIAL - PRECAST REINFORCED CONCRETE OUTLET

The Concrete outlet shall meet the requirements of Item 604 in the Construction & Materials Specifications. Payment shall be made on an Each basis. Payment shall include the cost of the Sod & Wire Cloth.



OUTLET DETAILS



HAS-22-15.03

DESCRIPTION: The Item shall consist of furnishing and installing a pipe underdrain system or prefabricated edge drain system in accordance with the specifications, details as shown on the plans, and as directed by the Engineer.

MATERIALS: The underdrain shall be a pipe underdrain system per Item 605 or a prefabricated edge drain system meeting the following requirements. The prefabricated edge drain shall consist of a polymeric core with a minimum thickness of one inch wrapped in fabric meeting 712.09 Type A. The drain shall be flexible, rectangular in shape and of hollow construction. The core material shall be resistant to petroleum based chemicals, natural occurring soil chemicals, and road de-icing agents.

The core shall provide a minimum of 100 square inches unobstructed (one side only) drainage area per foot of width. Side walls of the core shall provide at least 5% open area to permit unobstructed flow through the filter and wall to the core.

The prefabricated edge drain shall have a minimum compressive strength of 6000 pounds per square foot with a maximum 20% compression in a parallel plate compression test (ASTM-D 695). The minimum (single side) core flow capacity shall be 10 gallons per minute per foot of width for a 0.1 gradient at 10 pounds per square inch bladder load per ASTM D 4716

In lieu of the above requirements the following products are acceptable pre-fabricated edge drains:

- Hydraway Drain by Monsanto Company
- PDS 30 by Prodrain Systems
- Strip Drain 100 by Contech Construction Products, Inc.

CONSTRUCTION: The prefabricated edge drain shall be installed in a trench as shown on the plans and in accordance with the manufacturer's recommendations. The trench shall be backfilled with the excavated trench material placed in two (2) layers and each layer compacted to a density of not less than 90% of the maximum dry weight density. The first layer of the backfill material shall be placed simultaneously with the trenching operation to hold the edge drain flush against the trench wall.

The prefabricated edge drain shall be spliced as required prior to placement in the trench, using material furnished by the manufacturer and in accordance with the manufacturer's directions. All material required for the splices will be supplied by the manufacturer, but any equipment required shall be furnished by the Contractor.

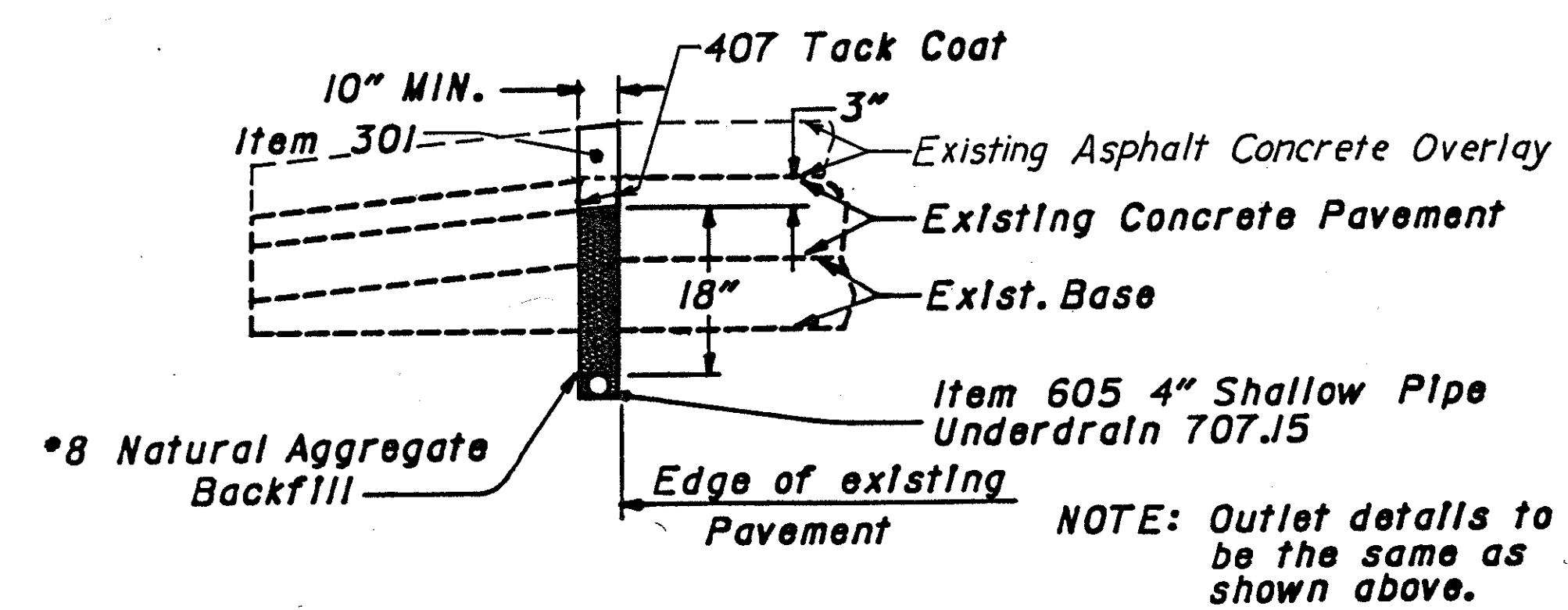
The underdrain outlets shall be placed in accordance with Item 603 as directed by the Engineer, using outlet fittings. The manufacturer shall supply outlet fittings which will make the transition between the prefabricated edge drain and the outlet pipe. Fittings shall be installed as recommended by the manufacturer.

The outlets for the underdrain system shall be constructed as soon as possible after placement of the underdrain. The outlets on crack & seat projects shall be in place and functional prior to cracking and seating the existing pavement.

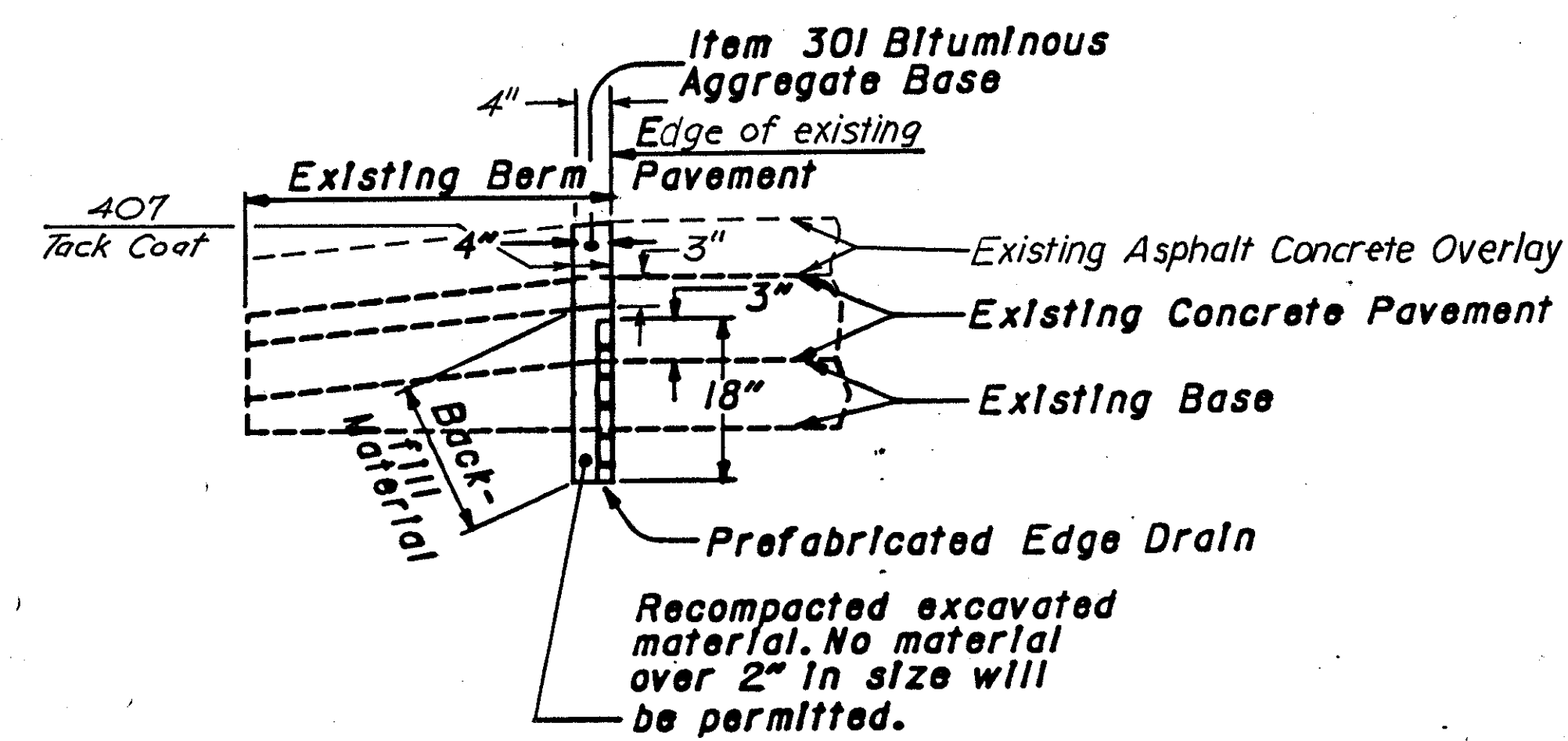
METHOD OF MEASUREMENT: Completed and accepted underdrains will be measured by the linear foot in place.

BASIS OF PAYMENT: Work completed and accepted under this Item and measured will be paid for at the contract unit price bid per linear foot for Item 605 - Shallow Underdrain, as per plan. Which price shall be full compensation for excavation and backfill; for furnishing materials, including material for splices; outlet fittings and Item 301; for all labor, tools equipment, and incidentals necessary to complete the work.

PIPE UNDERDRAIN SYSTEM



PREFABRICATED EDGE DRAIN SYSTEM



ITEM 605-SHALLOW UNDERDRAIN, AS PER PLAN

GENERAL NOTES

FHWA REGION	STATE	PROJECT	
5	OHIO		

HAS-22-15.03

29

115

MAINTAINING TRAFFIC

MAINLINE (4-LANE PORTION)

At least one lane of traffic shall be maintained in each direction at all times. The length of restricted traffic lanes shall be kept to a minimum consistent with the specification requirements for the protection of work items which necessitate the restriction. The limits and duration of lane closures shall be subject to the approval of the Engineer.

Construction work shall be permitted on only one side of the directional roadway at a time and any open pavement trench shall be adequately maintained and protected with barricades, drums or vertical panels. Under no circumstances shall the Contractor be permitted to have work zones that alternately close both the passing lane and the travel lane unless the distance between the lane restrictions exceeds two (2) miles.

Full depth rigid pavement removal and rigid replacement for crack and/or joint repairs shall be performed in only one directional roadway at a time and the total length of this operation shall not exceed 15,000 feet at any given time. (These restrictions shall not apply to full depth pavement sawing operation).

Class MS concrete as per Supplemental Specification 905 shall be used for all mainline full depth pavement repairs. Class FS concrete may be used at the direction of the Engineer if the Contractor becomes restricted by time to have all lanes open to traffic due to a major legal holiday as defined below.

MAINLINE (2-LANE PORTION)

One lane of traffic shall be maintained at all times by means of flaggers controlling one-way, alternating traffic for daytime operations. The length and duration of the lane closure shall be kept to a minimum and shall at all times be subject to the direction of the engineer. Both lanes shall be open to traffic at night.

Placement of the concrete portion of all full depth pavement repairs shall be stopped at noon. The concrete shall then be allowed to cure for five (5) hours before placement of the 301 material to complete the repair. All pavement repairs which have been lifted out shall have the concrete poured and the 301 material placed that same day. All pavement repairs which have been sawed but not lifted out shall be completed the following day. No pavement repairs shall be sawed and left unrepaired over the weekend. The Contractor may, at his option, omit the joint sealer prior to placing the 301 material.

Type FS concrete as per Supplemental Specification 905 shall be used for all full depth rigid pavement repairs in the 2-lane portion.

TEMPORARY MEDIAN CROSSOVERS

Two-lane, two-way operation (TLTWO) shall be maintained on a directional roadway by use of temporary median crossovers, during reconstruction of bridge no. HAS-22-2460 L, as follows:

1. Construct the temporary roads and pavement as shown in the details on sheet no. 38. Immediately upon completion, the crossover ramps shall be adequately barricaded, in a manner acceptable to the Engineer, to prevent use by the traveling public.
2. Erect temporary signs and warning lights, install temporary concrete barrier, temporary raised pavement markers, apply temporary edge lines and place apply temporary edge lines and place drums as shown on sheet no's. 33-36.
3. Open the crossovers to traffic. Maintain traffic using TLTWO for the duration of the construction work described in step 4.
4. Reconstruct bridge no. HAS-22-2460 L as shown on sheet no's. 109-115
5. Upon completion of the work described in step 4, the Contractor shall
a). remove temporary signs, warning lights, temporary concrete barrier, temporary raised pavement markers, temporary edge lines and drums. b). barricade the crossover ramps as described in step 1 c). restore the mainline pavement markings and d). open all lanes to traffic.

TEMPORARY MEDIAN CROSSOVERS (CONTINUED)

6. Remove all temporary roads and pavement and complete all remaining project construction.

The Contractor shall not perform any work that necessitates a lane closure in the vicinity of the TLTWO unless the distance between the end of the TLTWO and the lane restriction exceeds two (2) miles.

In addition to the requirements of Item 614 and sheet no's. 29-38, a uniformed special duty Law Enforcement Officer (L.E.O.) and an official Patrol Car with emergency flashers operating shall be provided in the following situations:

1. During the initial set-up and tear down periods of lane closures and channelization of directional traffic into a reduced number of lanes.
2. When the beginning point of a lane closure is shifted substantially.
3. During the advance preparation and closure sequence where complete blockage of the traffic is required.

L.E.O.'s shall not be used where the Ohio Manual of Uniform Traffic Control Devices intends that flaggers be used. L.E.O.'s may be used for other purposes within the project; however, such usage is at the option of the Contractor and payment for such usage shall be included in the lump sum bid for Item 614 - Maintaining Traffic.

The following quantity has been included in the Maintenance of Traffic General Summary for the purpose of using a L.E.O. with Patrol Car as specified above:

Item Special - L.E.O. with Patrol Car ----- 40 Hours

INTERCHANGE RAMP

Ramp traffic shall be maintained by use of portions of the existing and/or resurfaced pavement and existing or widened shoulders.

Ramp traffic may be stopped by means of flaggers for intermittent periods not to exceed ten (10) minutes during ramp pavement repair operations.

However, in no case shall traffic be permitted to form a queue which extends beyond the limits of the ramp onto the speed change lane, mainline or crossroad pavement. The limits and duration of any traffic stoppage shall at all times be subject to the direction of the Engineer.

Class FS concrete as per Supplemental Specification 905 shall be used for all ramp full depth pavement repairs.

SPEED CHANGE LANES

Speed change lane traffic shall be maintained at all times by use of portions of the existing and/or resurfaced pavement and existing shoulders.

Class FS concrete as per Supplemental Specification 905 shall be used for all speed change lane full depth pavement repairs.

AT-GRADE INTERSECTIONS

Full access shall be maintained at all times to any at-grade intersection, including the corresponding median crossover.

BRIDGES

One lane of traffic shall be maintained on bridge no. HAS-22-2126 during bridge deck rehabilitation by means of signalized alternating one-way traffic as per Standard Drawings MT-96.10, MT-96.20 and MT-96.25. The initial signal cycle length shall be set at 80 seconds.

Two-lane, two-way operation shall be maintained on bridge no. HAS-22-2460 R during bridge deck replacement of bridge no. HAS-22-2460 L as detailed on sheet no's. 109 thru 115.

Traffic shall be maintained on all remaining bridges as per Standard Drawing MT-95.30.

Two lanes of traffic shall not be permitted across a directional roadway bridge on which only one lane of rehabilitation has been completed.

CONTRACTOR'S EQUIPMENT - OPERATION AND STORAGE

The Contractor's equipment shall be operated in the direction of traffic. A qualified Flagger shall be employed where the Contractor's equipment must merge with the traffic stream. The Contractor's equipment shall be equipped with at least one (1) amber flashing light. Pavers, rollers and other equipment may be parked in areas along the highway when pavement repair or paving operations are scheduled to continue within the next workday; otherwise the equipment shall be stored at a storage area, the location of which shall have prior approval of the Engineer. When parking along the highway, the equipment shall be parked either thirty (30) feet from the outside edge of pavement or six (6) feet behind guardrail with a minimum of 125 feet of guardrail preceding the equipment. All other equipment, including private vehicles, shall be stored at the approved Contractor's storage area.

The Contractor shall designate an individual, other than the Superintendent and subject to the approval of the Engineer, to continuously inspect all traffic control devices whenever construction work is being performed within the work limits of the project. The designated individual shall also inspect all traffic control devices at the end of each work day. The designated individual shall also be available on an around-the-clock basis to repair and/or replace damaged or missing traffic control devices. Payment for the Traffic Control Inspector shall be included in the lump sum price bid for Item 614 - Maintaining Traffic.

GENERAL

All work and traffic control devices shall be in accordance with Item 614 and other applicable portions of the Construction and Materials Specifications as well as in accordance with Part 7 of the Ohio Manual of Uniform Traffic Control Devices.

Traffic shall be maintained as specified by use of the existing and/or resurfaced pavement and shoulders.

Full depth sawing repairs must not remain uncompleted through the winter with traffic on the sawed joints. If the Contractor cannot complete the repair before winter, the pavement shall not be sawed.

If the project is shut down for winter and the permanent pavement markings have not been applied, then Class I Temporary Edge Lines and Lane Lines shall be applied to each directional roadway and ramp for the length of the project.

The limits and duration of the use of the temporary roadways shall be held to an absolute minimum and in all cases shall be subject to the approval of the Engineer.

Payment for all of the above, unless separately itemized in the plan, shall be included in the lump sum price bid for Item 614 - Maintaining Traffic.

PORTABLE CONCRETE BARRIER

Where "Portable Concrete Barrier" Appears in the plans shall be considered to read "Temporary Concrete Barrier."

622 TEMPORARY CONCRETE BARRIER (TCB)

Supplementing 622.08. The method of measurement for TCB shall include the total of each individual placement of TCB required by the plans without regard to whether the same specific section of TCB could be re-used again on the project.

ITEM 622 – TEMPORARY CONCRETE BARRIER, TYPE A-50, AS PER PLAN

This work shall consist of the furnishing, installation, maintenance and subsequent removal of a 50 inch Temporary Concrete Barrier as detailed on this sheet at the locations shown on sheet no's. 37 & 38.

Pin and loop type Temporary Concrete Barrier, Type A-32 with an 18 inch minimum height glare screen may be used at the option of the Contractor.

The Temporary Concrete Barrier, Type A-32 shall be constructed using one (1) of the following systems or an approved equal:

CARSONITE MODULAR GLARE SCREEN
CARSONITE INTERNATIONAL
2900 Lockheed Way
Carson City, Nevada 89701
702-883-5104 or 800-648-7974

FORWARD GLARE SCREEN
PROVEN PRODUCTS, INC.
7560 S.W. Laview Drive
Portland, Oregon 97219
503-244-9185

SYRO GLAREFOIL
SYRO STEEL COMPANY
1170 N. State Street
Girard, Ohio 44420
216-545-4373

Paddle or intermittent type glare screen shall be designed using a 20 degree cut-off angle based on tangent alignment. That spacing shall be used throughout the barrier length without regard to the barrier curvature.

The glare screen system attached to the 32 inch Temporary Concrete Barrier shall be securely fastened using the hardware and procedures specified by the manufacturer.

Payment to perform this work will be made at the unit price bid of Lin. Ft. for Item 622 – Temporary Concrete Barrier, Type A-50, As Per Plan, and shall include the cost of all labor, material and equipment necessary to complete the work.

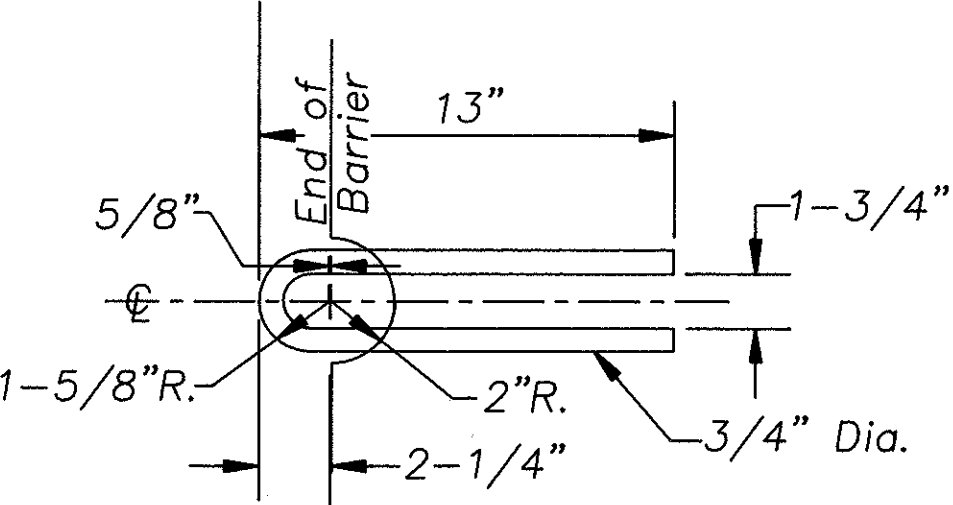
TEMPORARY CONCRETE BARRIER NOTES

CONNECTING PIN and steel rod connector shall meet the requirements of 711.01 and be galvanized after fabrication per 711.02.

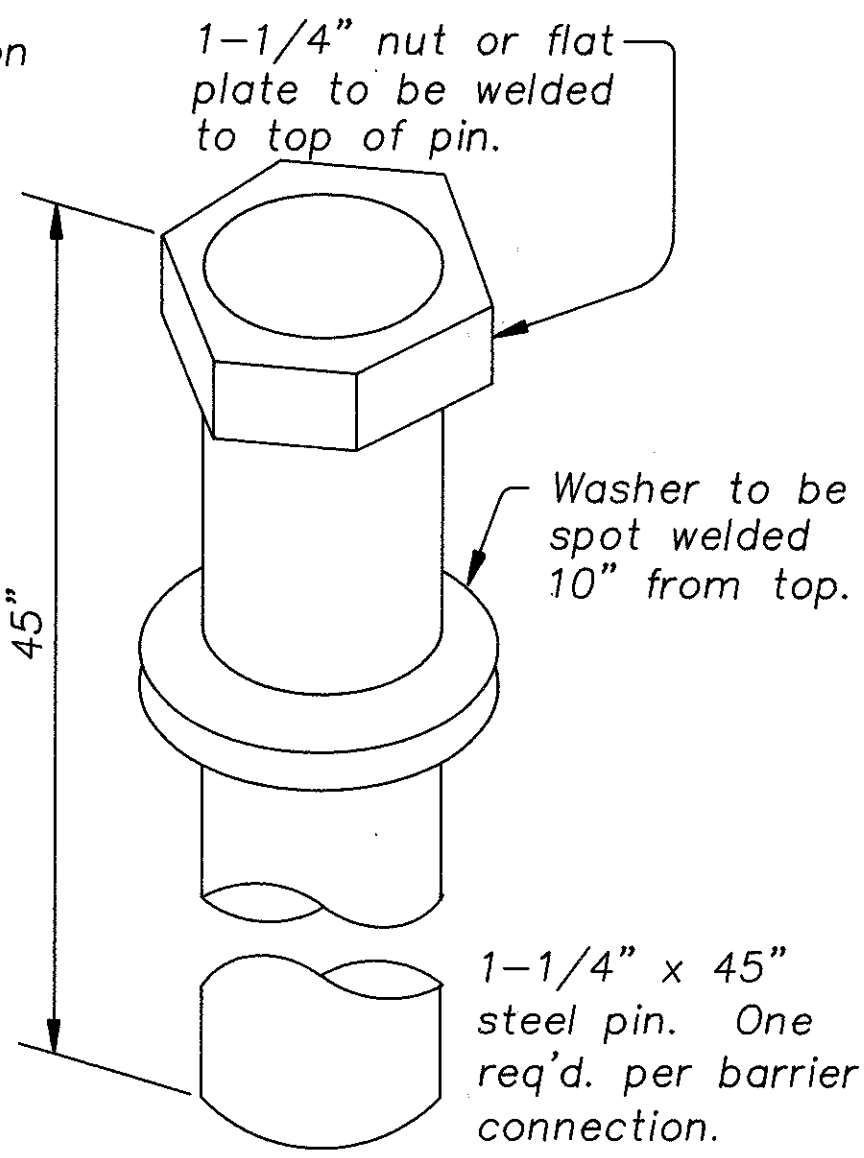
HANDLING DEVICES may be used in lieu of the lifting slot for moving the barrier. They may be of any design sufficient to handle the weight of the section being lifted.

LEGEND

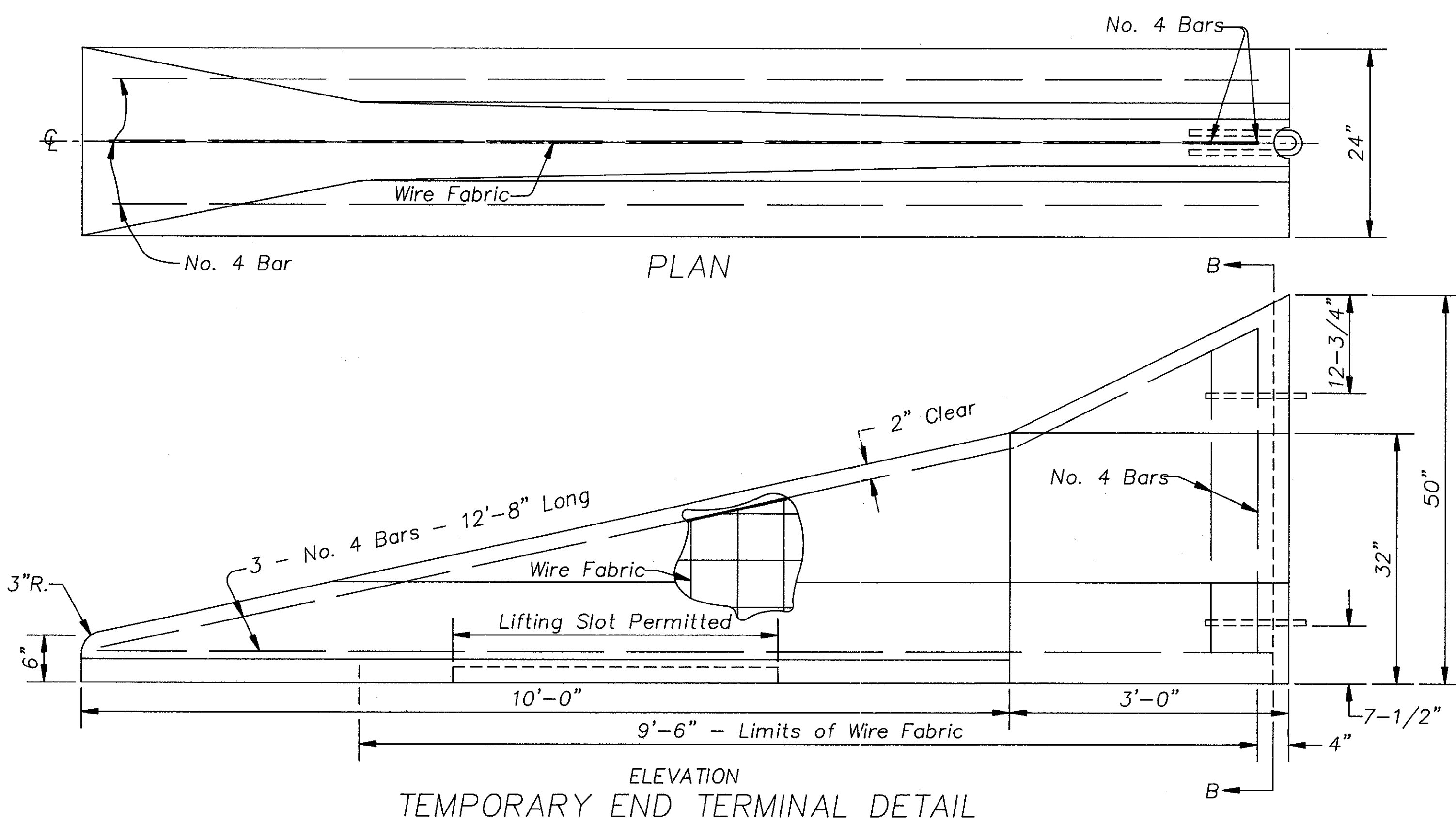
- ① 1" Radius or 3/4" Chamfer, all top and end corners.
- ② Permissible 10" Radius.
- ③ Permissible 1" Radius.



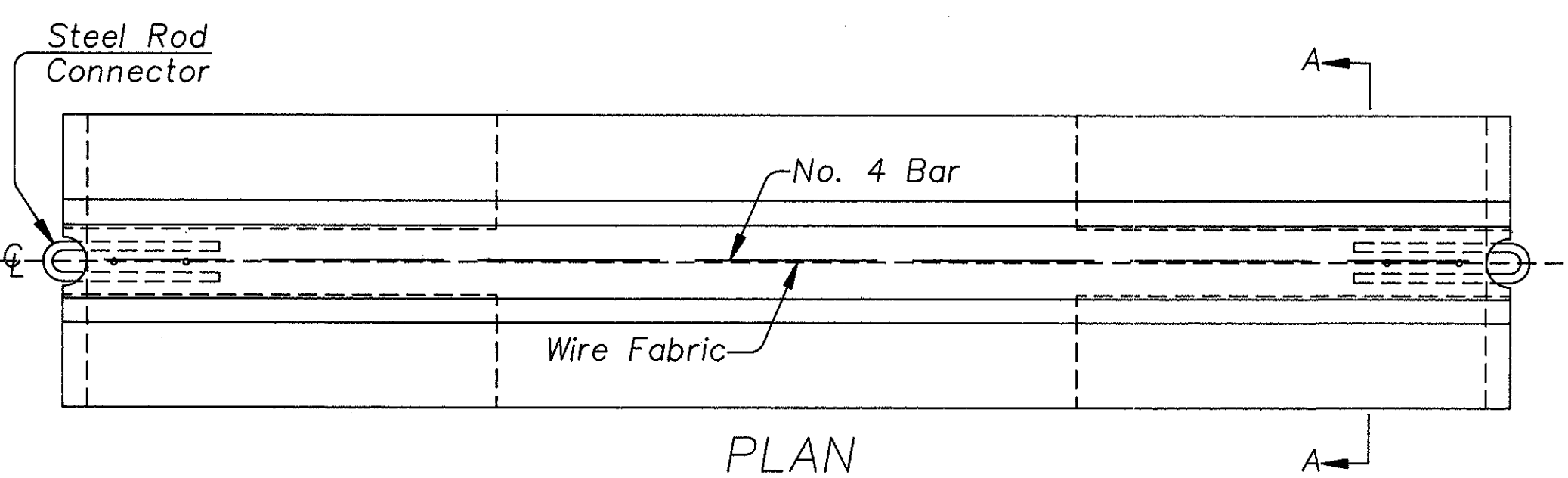
3/4" STEEL ROD CONNECTOR



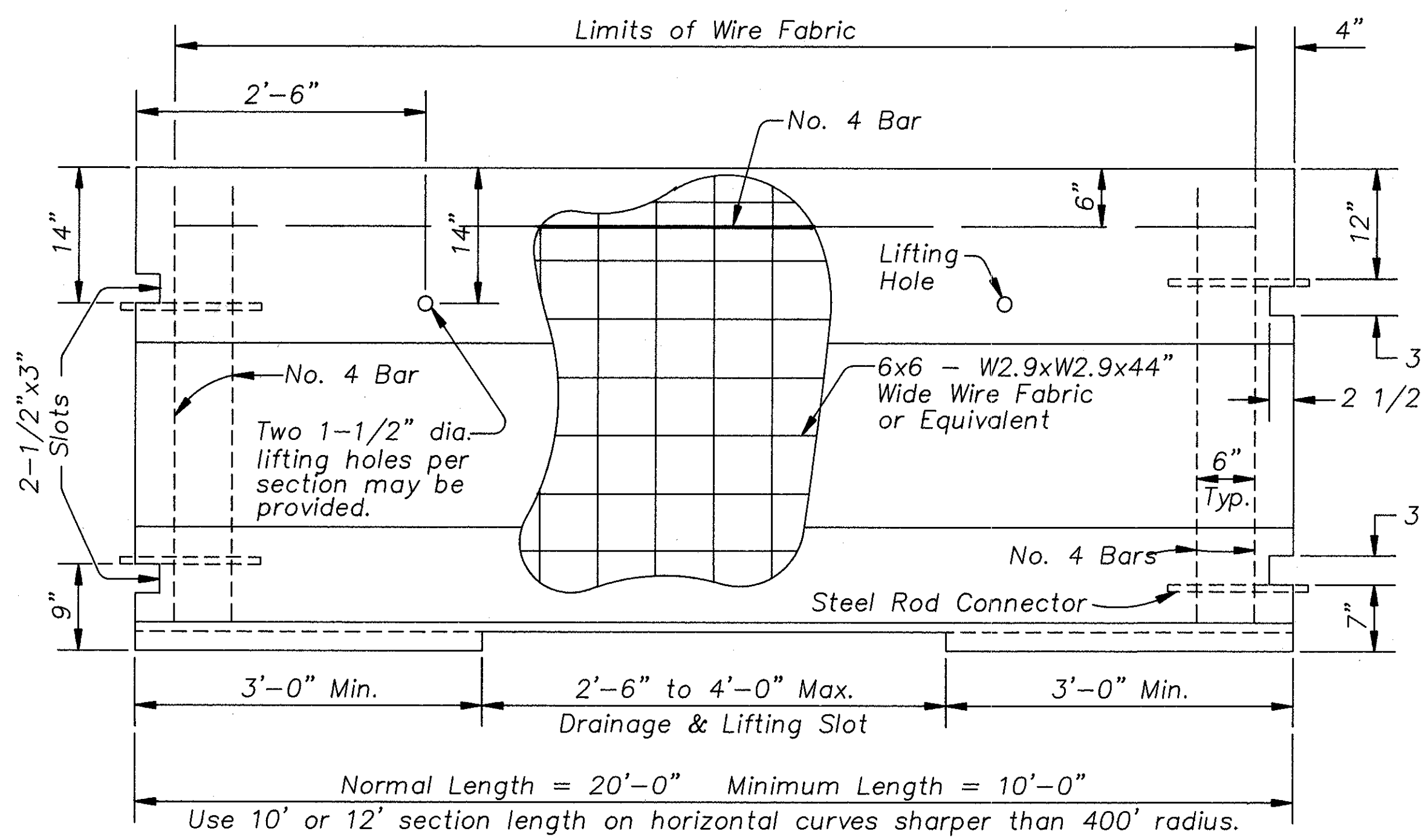
CONNECTING PIN



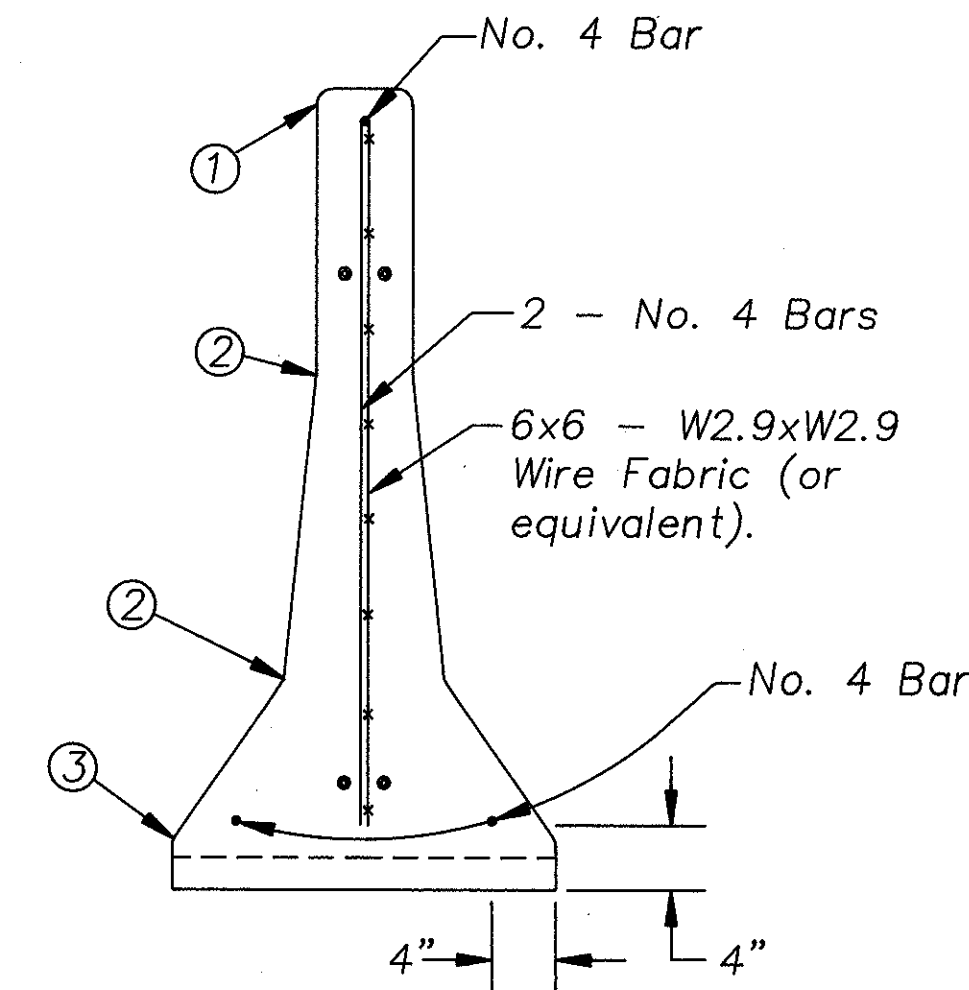
TEMPORARY END TERMINAL DETAIL



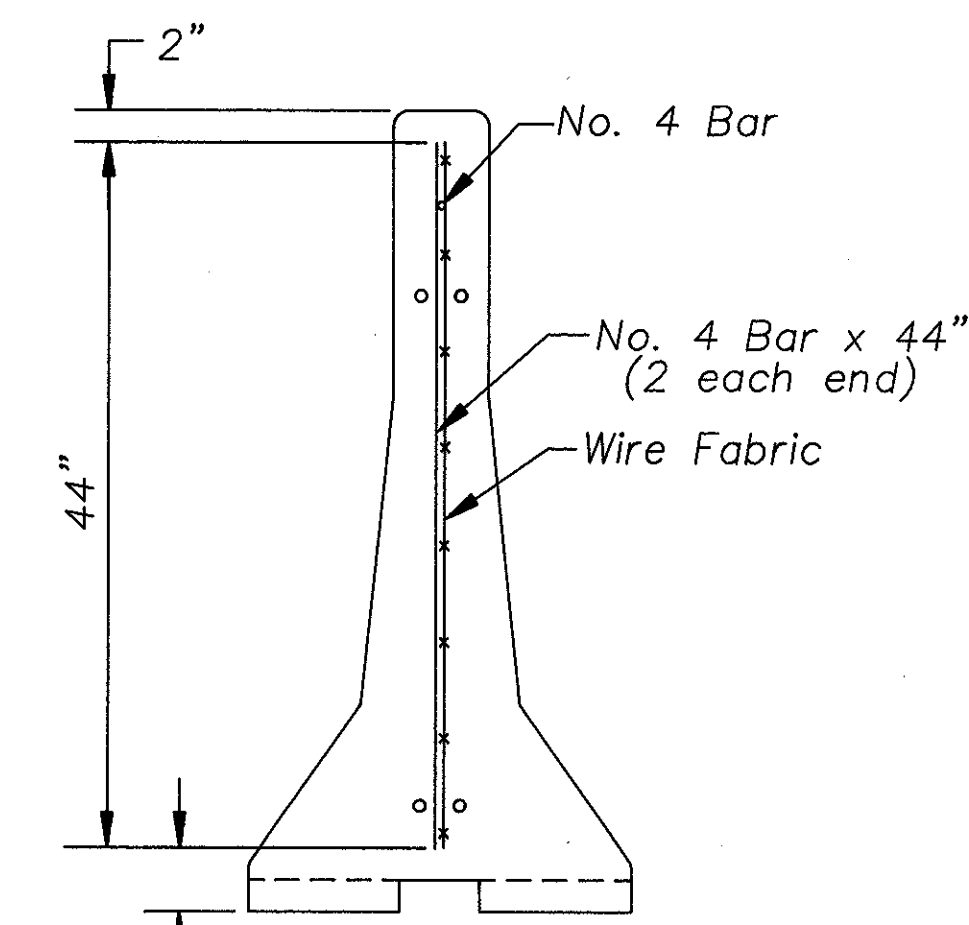
PLAN



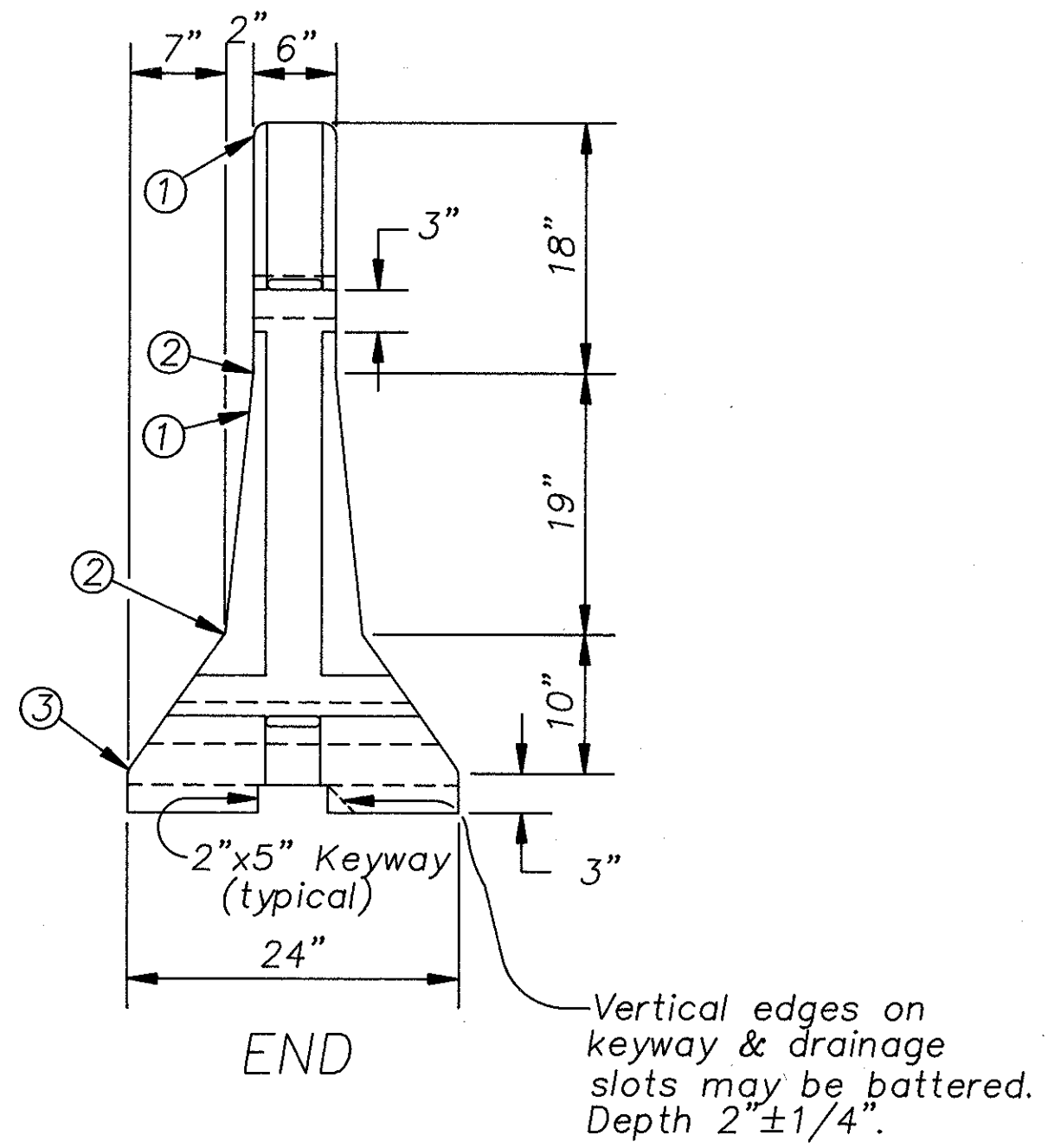
BARRIER DETAIL
Pin and Loop Design



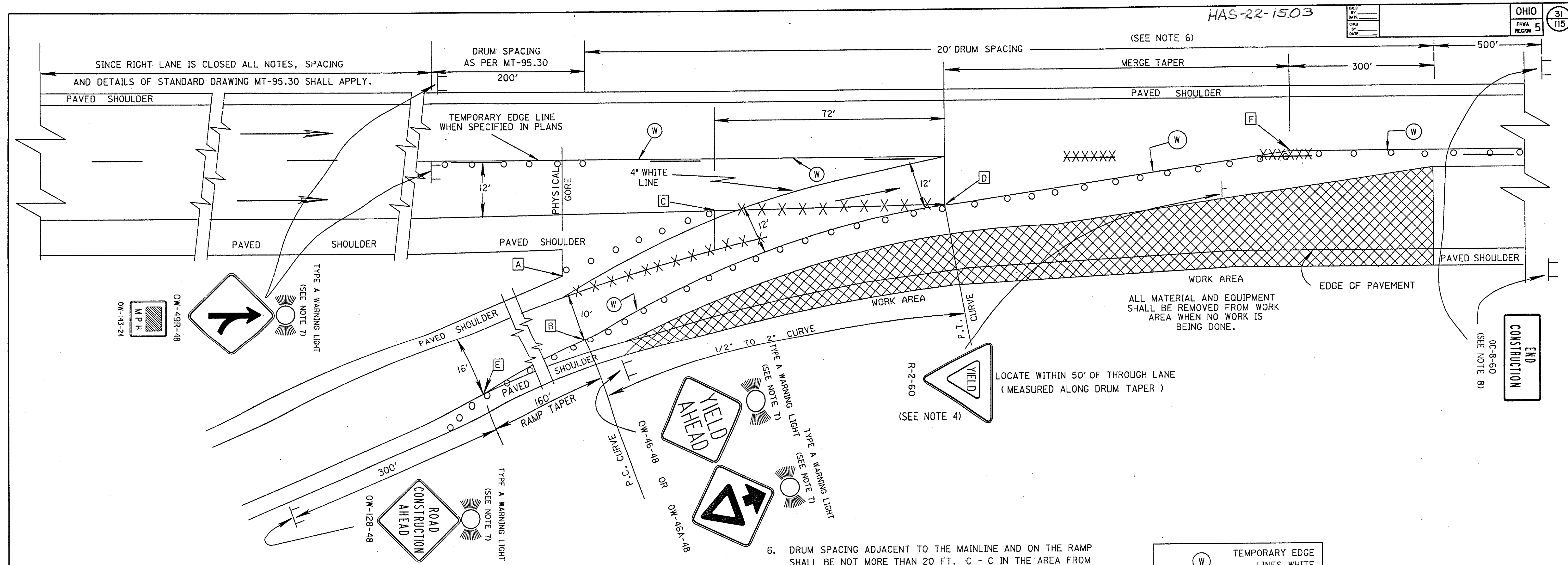
SECTION B-B



SECTION A-A



END



GENERAL NOTES

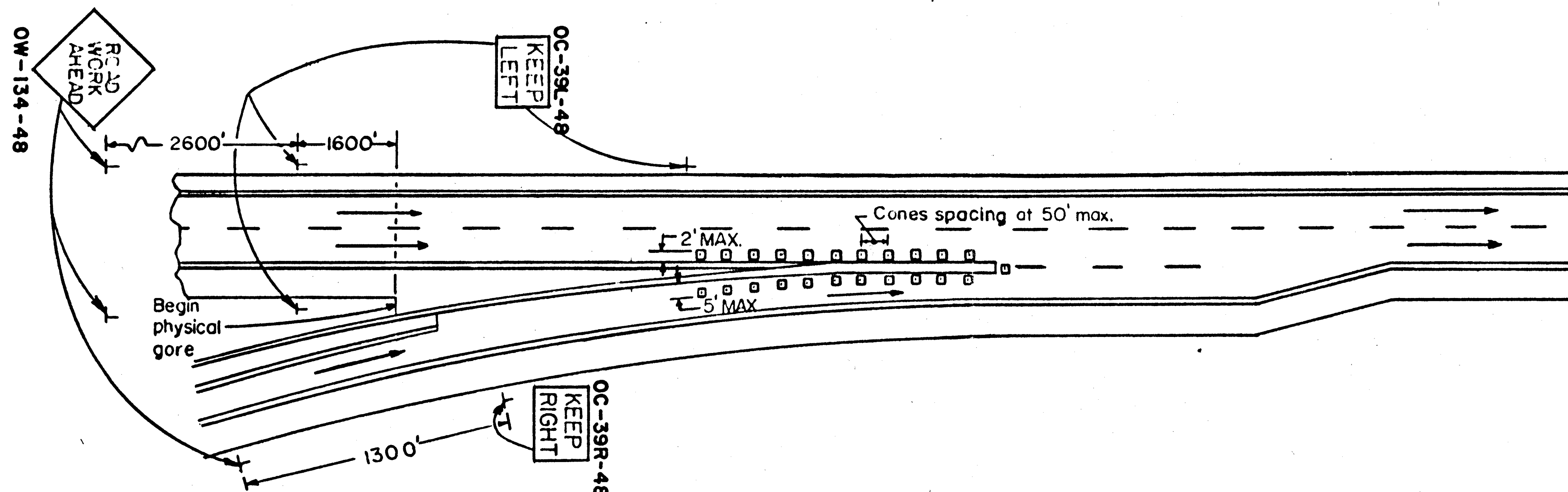
- THIS WORK AREA TRAFFIC CONTROL APPLICATION SHALL BE EMPLOYED WHEN: (1) THE LATERAL CLEARANCE BETWEEN CHANNELIZING DEVICES AT THE RIGHT EDGE OF THE WORK AREA AND THE EDGE OF PAVEMENT IS LESS THAN 10 FT. (12 FT. IF THE SHOULDER PAVEMENT IS USED) AS SHOWN ON DRAWING MT-98.15, AND (2) THE REQUIRED RAMP TAPERS AND CURVES CAN BE PROVIDED AS SHOWN. IN THE EVENT THE WORK ZONE CONDITION WOULD PERMIT THE USE OF EITHER MT-98.15 OR MT-98.16, MT-98.16 SHALL BE USED. THIS TRAFFIC CONTROL MEASURE SHALL NOT BE PLACED IN EFFECT UNTIL IMMEDIATELY BEFORE THE CONTRACTOR IS FULLY PREPARED TO PERFORM THE WORK ON THE RAMP OR LANE ADJACENT TO IT. ONCE THIS MEASURE IS PLACED INTO EFFECT THE CONTRACTOR SHALL EXPEDITIOUSLY PURSUE THE WORK (WORKING CONTINUOUSLY WITH FULL CREW IN THE RAMP AREA ON ALL NORMAL WORKING DAYS) UNTIL IT IS COMPLETED AND SHALL IMMEDIATELY OPEN THE AREA TO NORMAL TRAFFIC OR, AS A MINIMUM, REVERT TO THE METHODS SHOWN ON MT-98.15. IT IS THE INTENT THAT THE LONGEST MERGING TAPER LENGTH POSSIBLE SHALL BE CHOSEN, COMMENSURATE WITH THE REQUIREMENTS OF CONSTRUCTION.
- THE RAMP TAPER SHALL DESIRABLY BE LOCATED TO PROVIDE A 10' MINIMUM PATH BETWEEN DRUMS AND THE PAVED SHOULDER IN THE GORE. THE RAMP TRAFFIC MAY BE PLACED ON THE PAVED GORE AS SHOWN ABOVE ONLY IF (1) THE TRAFFIC WILL USE THE PAVED SHOULDER PAVEMENT LESS THAN ONE DAY AND THE SHOULDER PAVEMENT IS IN GOOD CONDITION AND IS LEVEL AND SMOOTH OR (2) IF THE SHOULDER PAVEMENT IS ADEQUATELY STRENGTHENED, LEVELED AND SMOOTHED TO CARRY THE ANTICIPATED LOAD. A MINIMUM OF 3 DRUMS SHALL BE USED IN THE RAMP SHOULDER TAPER.
- RAMP SIGNS SHALL BE DUAL MOUNTED ON MULTI-LANE RAMP. WHEN THE RAMP IS NOT LONG ENOUGH TO ALLOW PLACEMENT AS SPECIFIED ABOVE, THE SIGNS MAY BE SPACED PROPORTIONATELY WITHIN THE SPACE AVAILABLE AS DETERMINED BY THE ENGINEER (A 200 FOOT MINIMUM SPACING MUST BE MAINTAINED).
- IT WILL BE NECESSARY TO MOVE THE LOCATION OF ANY EXISTING YIELD CONDITION. IN THESE CASES, THE PERMANENT R-2 SIGN INSTALLATION SHALL BE COVERED AND THE TEMPORARY INSTALLATION SHALL BE MOUNTED APPROPRIATELY. IF THE REQUIRED DISTANCES (RAMP TAPER, CURVE AND MERGE TAPER) CANNOT BE OBTAINED, THE ENGINEER MAY APPROVE SLIGHTLY LOWER VALUES FOR A SHORT TIME, IN WHICH CASE THE YIELD SIGN SHALL BE REMOVED AND A 36" STOP SIGN PLACED APPROPRIATELY TO BE VISIBLE TO RAMP TRAFFIC BUT NOT BE OBTRUSIVE TO MAINLINE TRAFFIC.
- IF THE CONSTRUCTION OPERATION REQUIRES THE LANE CLOSURE FOR MORE THAN ONE DAY THEN THE EXISTING CONFLICTING PAVEMENT MARKINGS AND REFLECTORS FROM THE RAISED PAVEMENT MARKERS (RPM'S) SHALL BE REMOVED AND THE APPROPRIATE COLOR TEMPORARY EDGE LINES SHALL BE APPLIED ALONG THE TAPER. TEMPORARY EDGE LINES WHICH WOULD CONFLICT WITH FINAL TRAFFIC LANES SHALL BE REMOVABLE (947.03 TYPE-C) TAPE UNLESS THE AREA WILL BE RESURFACED IN THE NEXT WORK PHASE. AFTER COMPLETION OF THE WORK, TEMPORARY MARKINGS SHALL BE REMOVED IN ACCORDANCE WITH 621.134 AND THE ORIGINAL MARKINGS AND RAISED PAVEMENT MARKERS REFLECTORS SHALL BE RESTORED.
- DRUM SPACING ADJACENT TO THE MAINLINE AND ON THE RAMP SHALL BE NOT MORE THAN 20 FT. C - C IN THE AREA FROM THE PHYSICAL GORE TO 300 FT. BEYOND THE MERGE TAPER. CONES HAVING A MINIMUM HEIGHT OF 28 INCHES MAY BE SUBSTITUTED FOR DRUMS FOR DAYTIME LANE CLOSURES. PROVISIONS SHALL BE MADE TO SAFELY STABILIZE THE CONES TO PREVENT THEM FROM BLOWING OVER. IF THIS CANNOT BE ACHIEVED, DRUMS SHALL BE USED. TYPE C STEADY BURNING WARNING LIGHTS SHALL BE ERECTED ON EACH DRUM FOR NIGHT LANE CLOSURE.
- TYPE A FLASHING WARNING LIGHTS ARE REQUIRED ON THE ROAD CONSTRUCTION AHEAD (OW-128-48), MERGE (OW-49R-48), AND THE YIELD AHEAD (OW-46-48) SIGNS WHEN NIGHT LANE CLOSURE IS NECESSARY.
- THE OC-8 SIGNS ARE ONLY REQUIRED FOR LANE CLOSURES OF MORE THAN ONE DAY AND MAY BE OMITTED IF THEY FALL WITHIN THE LIMITS OF A CONSTRUCTION PROJECT.
- FROM THE END OF THE GORE AREA GRADED SHOULDER (POINT A), LOCATE THE PC OF THE CURVE BY MEASURING PERPENDICULAR TO THE RAMP CENTERLINE 10' OF RAMP PAVEMENT, NOT INCLUDING PAVED SHOULDER WIDTH (POINT B). FROM THE END OF THE GORE AREA PAVED SHOULDER (POINT C), LOCATE THE PT OF THE CURVE BY MEASURING 72' FROM POINT C ALONG THE EDGE OF PAVEMENT EXTENDED (POINT D).
- PLACEMENT OF DRUMS SHALL BEGIN AT (POINT E) 160' UP THE RAMP FROM THE PREVIOUSLY LOCATED PC (POINT B) AND AT THE RIGHT EDGE OF RAMP PAVEMENT. FROM THIS POINT A DRUM TAPER SHALL BE PLACED TO THE PC (POINT B) AND THEN ALONG A CURVE AS SHOWN TO THE PT (POINT D) WHERE A 48:1 (MIN.) MERGE TAPER SHALL MEET MAINLINE TRAFFIC CONTROL (POINT F).

(W)	TEMPORARY EDGE LINES WHITE
(A)	LAYOUT POINTS
XXXXXXXXXX	MARKINGS REMOVED

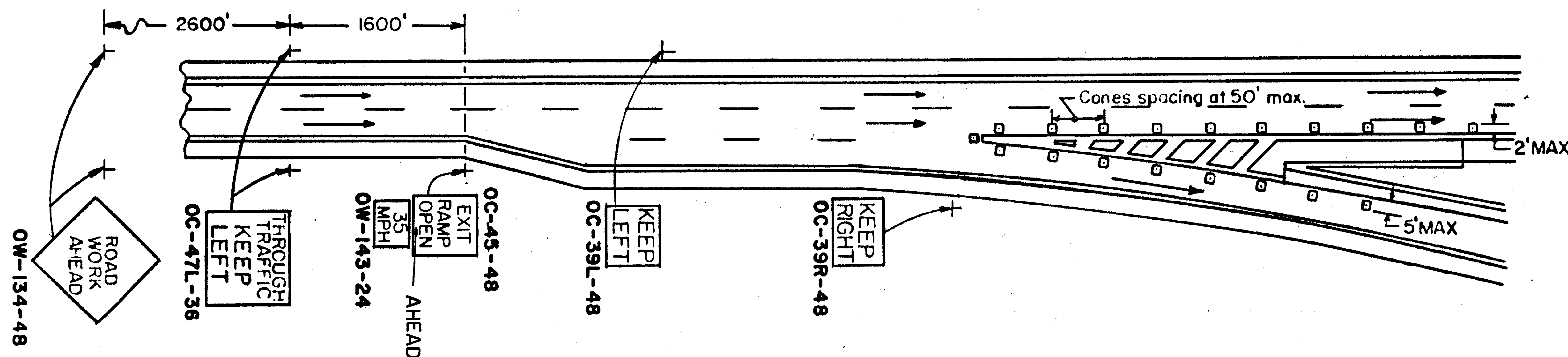
PRELIMINARY
PREPARED BY
TECHNICAL SUPPORT SECTION
ALF H. HANSEN P.E.
WALTER C. CHADWICK D.S.

REVISED BY:	DATE:
209816	DATE
LANE CLOSURE AT ENTRANCE RAMP PLAN B	04/03/90
PLAN INSERT SHEET	

ENTRANCE GORE TRAFFIC CONTROL



EXIT GORE TRAFFIC CONTROL



GENERAL NOTES

- WHERE THE ONLY WORK IN THE GORE AREA CONSISTS OF APPLICATION OF EDGELINE MARKINGS WITH FAST DRY PAVEMENT MARKING MATERIALS, THE TRAFFIC CONTROL FOR "EDGELINE PAVEMENT MARKING OPERATIONS" SHOULD BE EMPLOYED.
- WHERE THE WORK IN THE GORE AREA REQUIRES MORE POSITIVE TRAFFIC CONTROL OR OVERNIGHT WORK AREA PROTECTION, THE TRAFFIC CONTROL FOR "LANE CLOSURE AT THE ENTRANCE RAMP" OR "LANE CLOSURE AT EXIT GORE" SHOULD BE EMPLOYED.
- 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.
- AT AN ISOLATED ENTRANCE GORE AREA, A FLASHING ARROW PANEL CONFORMING TO REQUIREMENTS IN TC-35.10 MAY BE SUBSTITUTED FOR THE ADVANCE OC-39-48 SIGNS.
- AT AN INTERCHANGE WHERE BOTH EXITS AND ENTRANCES ARE MARKED WITH TRAFFIC CONTROL IN PLACE AT THE SAME TIME, THE OW-134-48 SIGN ON THE ENTRANCE RAMP IS NOT REQUIRED.
- FOR NIGHT CLOSURES, EACH OF THE FIRST TWO SIGNS IN THE SEQUENCE (ROAD WORK AHEAD AND THROUGH TRAFFIC KEEP LEFT) IS REQUIRED TO BE SUPPLEMENTED BY A TYPE A FLASHING BARRICADE WARNING LIGHT.

OHIO DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL FOR
WORK IN GORE AREAS

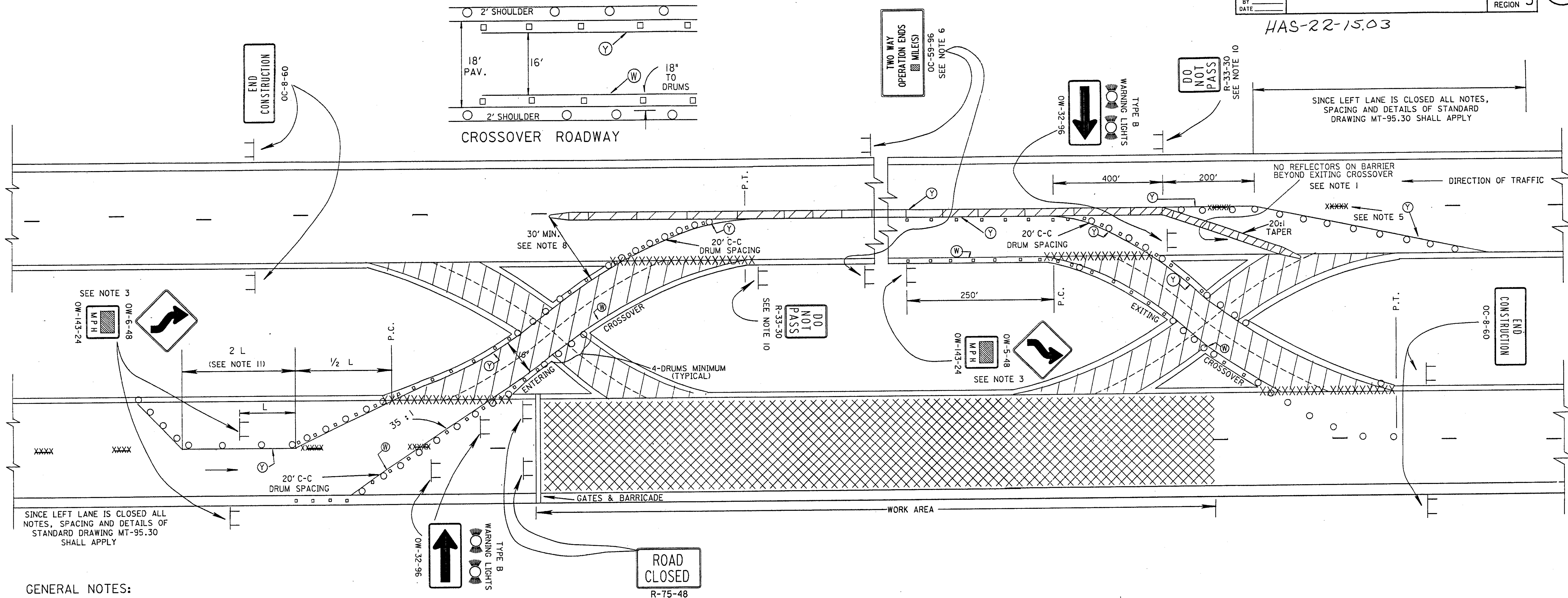
DATE

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DR.

CK.

HAS-22-15.03



GENERAL NOTES:

- TEMPORARY BARRIER REFLECTORS (YELLOW) SHALL BE MOUNTED ON THE PORTABLE CONCRETE BARRIER AT A MAXIMUM OF 50 FT. SPACING, (25' SPACING ON CURVES OF 5° OR SHARPER). NO REFLECTORS OR OTHER CHANNELIZING DEVICES SHALL BE PERMITTED ON THE FACE OF THE PCB FACING THE EXITING CROSSOVER, FROM THE PC TO END OF BARRIER.
- THE SPACING BETWEEN PROPOSED SIGNS SHOULD BE ADJUSTED NOT TO CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS. IF SHOULDER IS USED AS A LANE, SET BACK ALL SIGNS TO 6' BEYOND THE SHOULDER.
- THE ADVISORY SPEED SIGN (OW-143) SHALL BE USED WHEN SPECIFIED. THE ADVISORY SPEED SHALL BE AS CALLED FOR IN THE PLANS.
- DRUMS SHALL BE SPACED AT 40' C-C UNLESS OTHERWISE SHOWN. TYPE C STEADY BURNING WARNING LIGHTS SHALL BE ERECTED ON EACH DRUM FOR NIGHT LANE CLOSURES.
- THE EDGE LINES ADJACENT TO THE BARRIER MAY USE PAINT ONLY IF THEY WILL BE DESTROYED OR SURFACED OVER IN THE NEXT STAGE OF WORK. THEY SHALL BE INSTALLED WITH REMOVABLE TAPE IF ON THE FINAL SURFACE. IN ORDER TO CHANGE THE COLOR OF THE EDGE LINE NEXT TO THE MEDIAN, IT MAY BE HEAVILY PAINTED OVER (WITH SUBSEQUENT OVER PAINTING IF NECESSARY DURING THE LIFE OF THE WORK STAGE TO MAINTAIN DAY AND NIGHT COLOR) EXCEPT THAT THIS PROCEDURE WILL NOT BE PERMITTED FOR A LINE ON THE FINAL SURFACE.
- THE EXISTING CONFLICTING PAVEMENT MARKINGS AND REFLECTORS FROM THE RAISED PAVEMENT MARKERS SHALL BE REMOVED AND THE APPROPRIATE COLOR TEMPORARY EDGE LINES SHALL BE APPLIED. THE RIGHT EDGE LINE IN THE TWO WAY TRAFFIC SECTION SHALL BE WHITE. ALL PAVEMENT MARKINGS WHICH WILL CROSS NORMAL TRAFFIC LANES SHALL BE INSTALLED USING REMOVABLE (947.03, TYPE C) TAPE, UNLESS THE AREA WILL BE RESURFACED PRIOR TO IMPLEMENTING THE NEXT TRAFFIC STAGE. AFTER COMPLETION OF THE WORK, TEMPORARY MARKINGS SHALL BE REMOVED IN ACCORDANCE WITH 621.134 AND THE ORIGINAL MARKINGS AND RAISED PAVEMENT MARKER REFLECTORS SHALL BE RESTORED.
- THE OC-59 SIGNS SHALL BE PLACED APPROXIMATELY 1 MILE APART ON WORK AREAS OVER 3 MILES.
- THE PORTABLE CONCRETE BARRIER (PCB) NEAR THE EXITING CROSSOVER, SHALL EXTEND STRAIGHT ON THE PERMANENT ROADWAY TO 400 FT. BEYOND THE PC OF THE CROSSOVER AND THEN TAPER AT 20:1 ACROSS THE TRAFFIC LANE AND PAVED SHOULDER ENDING WITH A TAPERED END SECTION AT THE EDGE OF SHOULDER.
- PCB NEAR THE ENTERING CROSSOVER SHALL EXTEND TO A POINT 30 FT. FROM THE EDGE OF THE CROSSOVER ROADWAY.
- PCB SHALL BE 50" HIGH OR FITTED WITH GLARE SHIELDS WITHIN THE FOLLOWING LIMITS: (1) NEAR THE ENTERING CROSSOVER FROM THE BEGINNING OF BARRIER TO 300' BEYOND THE P.T. AND (2) FROM 200' IN ADVANCE OF P.C. TO THE END OF BARRIER NEAR THE EXITING CROSSOVER.
- "DO NOT PASS" (R-33) SIGNS ARE TO BE INSTALLED AT 1500 FT. INTERVALS IN BOTH DIRECTIONS BEGINNING AT THE LOCATION SHOWN FOR THE FIRST SIGN TO THE END OF PCB.
- DISTANCE L SHALL BE BASED UPON THE SPEED LIMIT IMPOSED THROUGH THE REMAINDER OF THE WORK ZONE (SEE DRAWING MT-95.30 FOR VALUES OF L).

LEGEND	
XXXXX	PAVEMENT MARKING REMOVED
O	DRUM
TEMPORARY PAVEMENT MARKINGS	
(W)	WHITE EDGE LINE
(Y)	YELLOW EDGE LINE
□	TEMP. RAISED PAVT. MARKER (TRPM)
▬▬▬▬	PCB
▨▨▨▨	PCB (50" HIGH OR WITH GLARESHIELD)

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE C & M SPECIFICATIONS AS WELL AS IN ACCORDANCE WITH PART 7 OF OMUTCD. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS TO PROVIDE THIS METHOD OF TRAFFIC CONTROL SHALL BE INCIDENTAL TO THE LUMP SUM BID FOR 614 MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

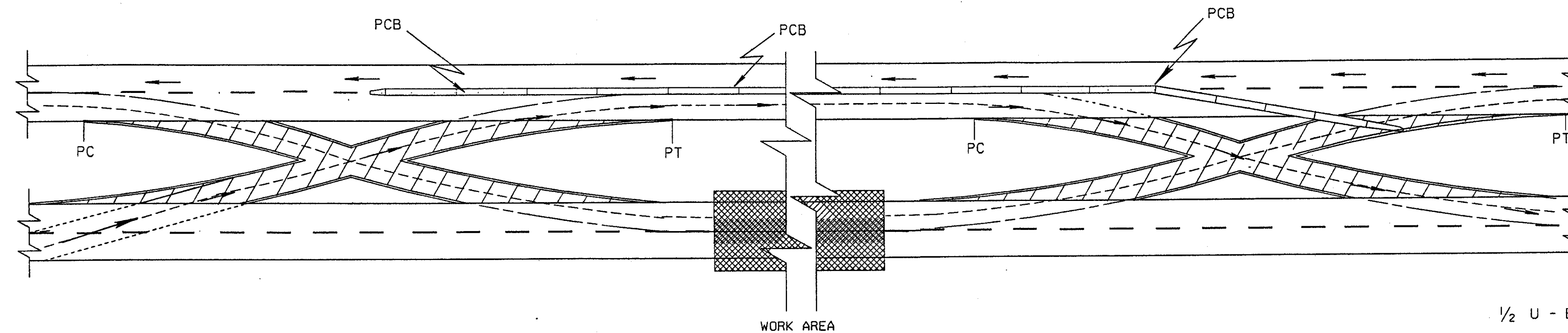
295.70	DATE 10/06/89
TWO-LANE, TWO-WAY OPERATION FOR USE ON FOUR LANE DIVIDED ROADWAYS PORTABLE CONCRETE BARRIER - PCB	
PLAN INSERT SHEET	

HAS22-15.03

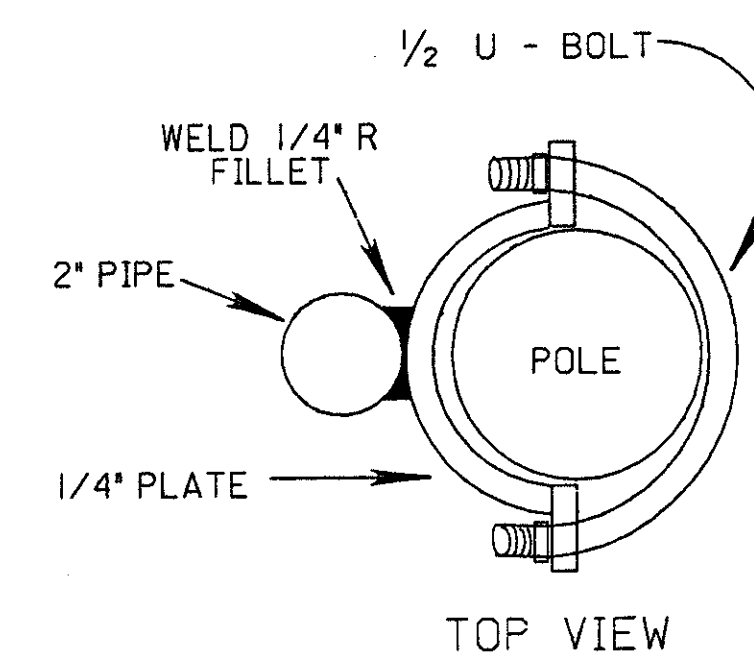
NOTES

1. ALL LIGHTING EQUIPMENT USED IN THIS INSTALLATION, SUCH AS LIGHTING CABLE, OR LUMINAIRES SHALL BE IN CONFORMANCE WITH SPECIFICATION ITEMS 625 AND 713. HOWEVER, THE PERFORMANCE TEST OF 625.22E AND THE WORKING DRAWING REQUIREMENTS OF 625.04 ARE WAIVED. USED EQUIPMENT IS ACCEPTABLE.
2. LIGHTING POLES NOT LOCATED BEHIND EXISTING GUARDRAIL SHALL BE SET BACK 40 FT. FROM EDGE OF THE NEAREST TRAFFIC LANE (INCLUDING ANY SHOULDER OR TEMPORARY PAVEMENT USED AS A TRAFFIC LANE). WHERE LOCAL CONDITIONS PREVENT THE 40 FT. SET BACK, IT MAY BE REDUCED TO 30 FT. WITH THE APPROVAL OF THE ENGINEER. WHEN LOCATED BEHIND EXISTING GUARDRAIL, LIGHT POLES SHALL BE A MINIMUM OF 3.0' CLEAR FROM BACK OF GUARDRAIL POST TO FACE OF POLE.
3. A PHOTOCELL SHALL TURN ON THE LIGHTING SYSTEM WHEN AMBIENT ILLUMINATION IS BELOW 3 FOOT CANDLE.
4. ALL OVERHEAD WIRING SHALL BE #4 AWG MINIMUM. DOWN GUY ANCHORS SHALL BE PROVIDED AT BOTH ENDS OF OVERHEAD SPANS. ALL WIRING CROSSING THE ROADWAY SHALL HAVE A MINIMUM CLEARANCE OF 20 FT.
5. LIGHTING UNITS WILL BE SPACED AT 330' INTERVALS. THE FIRST 330' SPACE CENTERED ON THE P.R.C. AND ADDITIONAL 330' SPACES AND PAIRS OF LIGHTS WILL BE ADDED IN EACH DIRECTION TO 100' BEYOND THE P.C. OR P.T.
6. THE WORK SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS ELECTRICAL ENERGY AND PAYMENT OF FEES NECESSARY TO ARRANGE AND INSTALL THE ELECTRICAL SERVICE, AND TO ERECT, MAINTAIN, OPERATE AND SUBSEQUENTLY REMOVE THE LIGHTING FOR EACH 614 TEMPORARY CROSSOVER LIGHTING SYSTEM* FOR A PAIR OF CROSSOVER RAMPS. CONTINUOUS LIGHTING, IF REQUIRED, WILL BE INCLUDED IN THE ADJACENT CROSSOVER LIGHTING SYSTEMS.

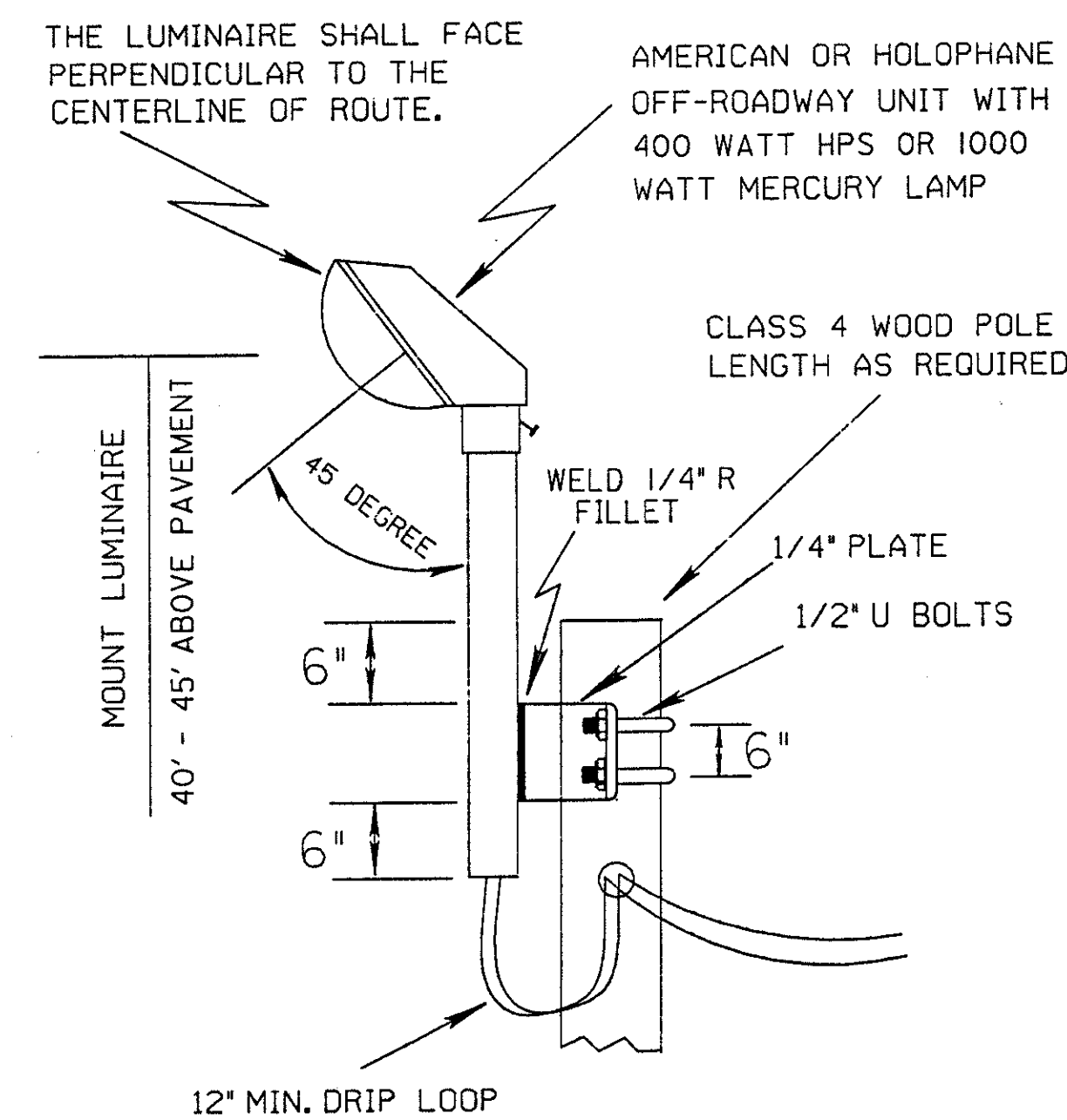
IF THE DISTANCE BETWEEN TWO ADJACENT CROSSOVER LIGHTING SYSTEMS IS LESS THAN 1500 FT. INSTALL ADDITIONAL UNITS AS REQUIRED TO ACHIEVE FULL LIGHTING BETWEEN CROSSOVERS



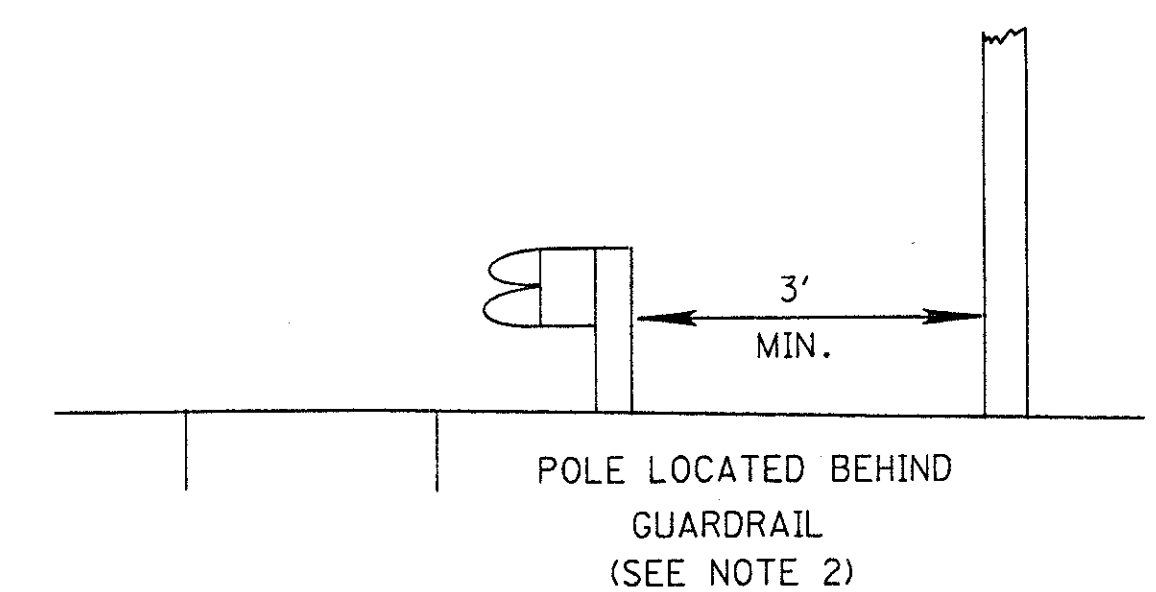
TEMPORARY PAVEMENT



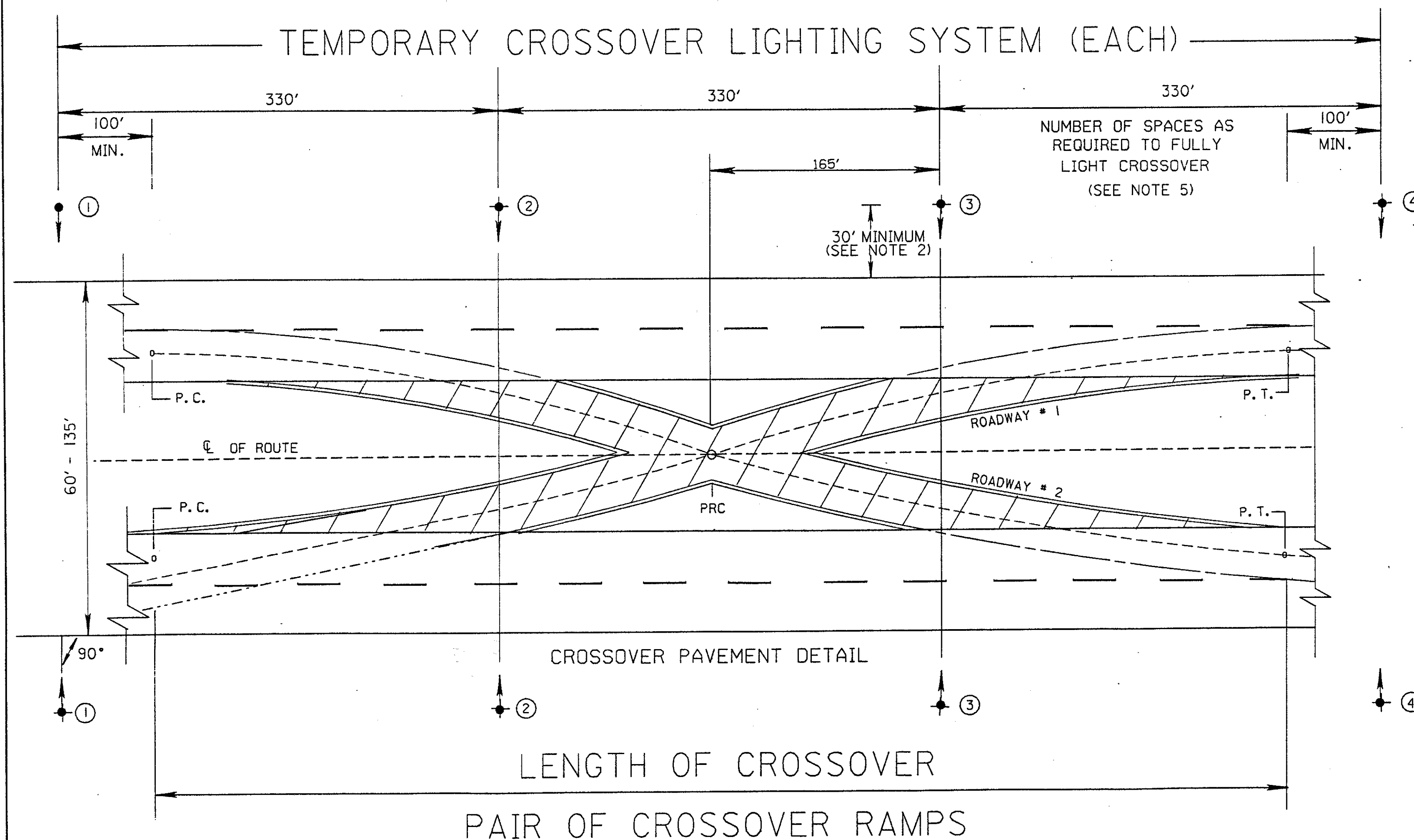
TOP VIEW



SIDE VIEW
MOUNTING DETAIL



POLE LOCATED BEHIND
GUARDRAIL
(SEE NOTE 2)



LENGTH OF CROSSOVER
PAIR OF CROSSOVER RAMPS

210000	DATE 10/17/89 10/20/89
TEMPORARY CROSSOVER LIGHTING SYSTEM	
PLAN INSERT SHEET	

614 TEMPORARY RAISED PAVEMENT MARKERS

HAS - 22 -15.03

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING, INSTALLING, MAINTAINING, AND SUBSEQUENTLY REMOVING TEMPORARY RAISED PAVEMENT MARKERS (TRPM'S). THE TRPM'S SHALL BE YELLOW OR WHITE, AS DESCRIBED IN THE PLAN.

MATERIAL

ALL UNITS SHALL BE OF SUFFICIENT STRENGTH AND PROPERLY SHAPED SO AS NOT TO BE DISLODGED OR BROKEN, OR THE REFLECTOR DISLODGED OR BROKEN, OR THE REFLECTOR DISLODGED OR DAMAGED BY IMPACTS FROM VEHICLES TIRES, INCLUDING THOSE OF HIGH PRESSURE TRUCK TIRES LOADED TO 4500 POUNDS.

RETROREFLECTORS SHALL BE PROVIDED IN ONE OR TWO DIRECTIONS ON EACH UNIT AS REQUIRED BY THE USAGE AND SHALL RETURN WHITE OR YELLOW LIGHT AS IS APPROPRIATED FOR THE APPLICATION.

THE REFLECTOR SHALL HAVE AN EFFECTIVE AREA OF 0.35 SQUARE INCH FOR TYPE A OR 3.0 SQUARE INCH FOR TYPE B. ITS BRIGHTNESS OR SPECIFIC INTENSITY (WHEN TESTED AT 0.2 DEGREE ANGLE OF OBSERVATION AND THE FOLLOWING ANGLES OF INCIDENCE) SHALL MEET OR EXCEED THE FOLLOWING:

SPECIFIC INTENSITY		
TYPE A		
INCIDENCE ANGLE (DEGREES)	WHITE	YELLOW
0	1.0	0.6
20	0.4	0.24
45	-	-
TYPE B		
	WHITE	YELLOW
0	3.0	1.8
20	1.2	0.72
45	0.3	0.2

ANGLE OF INCIDENCE FORMED BY A RAY FROM LIGHT SOURCE TO THE MARKER AND THE NORMAL TO THE LEADING EDGE OF THE MARKER FACE (ALSO HORIZONTAL ENTRANCE ANGLE).

ANGLE OF OBSERVATION FORMED BY A RAY FROM LIGHT SOURCE TO THE MARKER AND THE RETURNED RAY FROM THE MARKER TO THE MEASURING RECEPTOR.

SPECIFIC INTENSITY IS THE MEAN CANDLEPOWER OF THE REFLECTED LIGHT (AT GIVEN INCIDENCE AND DIVERGENCE ANGLES) FOR EACH FOOT-CANDLE AT THE REFLECTOR (ON A PLANE PERPENDICULAR TO THE INCIDENT LIGHT).

TYPE A UNITS ARE INTENDED TO PROVIDE HIGH VISIBILITY BOTH AT NIGHT AND DURING DAYLIGHT. THEIR DAY TIME VISIBILITY SHALL BE ASSURED BY SIZE, SHAPE AND COLOR AS FOLLOWS:

- 1) THE UNITS SHALL BE A HIGH VISIBILITY YELLOW OR WHITE COLOR WHICH WILL NOT DEGRADE SUBSTANTIALLY DUE TO TRAFFIC WEAR AND WHICH WILL MATCH THE COLOR OF THE REFLECTOR.
- 2) WHEN VIEWED FROM ABOVE, THE UNITS SHALL HAVE A VISIBLE AREA OF NOT LESS THAN 14 SQUARE INCHES.
- 3) WHEN VIEWED FROM THE FRONT, PARALLEL TO THE PAVEMENT, AS FROM APPROACHING TRAFFIC, THE UNIT SHALL HAVE A WIDTH OF APPROXIMATELY 4 INCHES AND A VISIBLE AREA OF NOT LESS THAN 1.5 SQUARE INCHES.

TYPE B UNITS ARE INTENDED TO PROVIDE HIGH VISIBILITY AT NIGHT BY RETRO-REFLECTING AUTOMOTIVE HEADLIGHT BACK TO THE DRIVER.

INSTALLATION: THEY SHALL BE ATTACHED TO CLEAN, DRY PAVEMENT BY A BUTYL ADHESIVE PAD, A BITUMINOUS ADHESIVE OR OTHER CONSTRUCTION GRADE ADHESIVES (SUCH AS FRANKLIN PANEL AND METAL ADHESIVE) SUITABLE TO ANCHOR THE UNIT UNDER THE ABOVE CONDITIONS. WHEN IT IS NECESSARY TO ATTACH UNITS TO NEW CONCRETE WITH CURING COMPOUND REMAINING, THE CURING COMPOUND MEMBRANE SHALL BE REMOVED BY SANDBLASTING OR OTHER MECHANICAL CLEANING METHOD. THEY SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

THE CONTRACTOR SHALL IMMEDIATELY REPLACE, AT HIS COST, ANY UNITS WHICH FAIL (BROKEN HOUSING, HOUSING WORN TO THE EXTENT THAT DAYTIME VISIBILITY IS SIGNIFICANTLY DIMINISHED OR OF AN UNACCEPTABLE COLOR, DETACHED OR BROKEN REFLECTOR, HOUSING DETACHED FROM ADHESIVE).

TRPM'S ARE LIKELY TO BE REMOVED BY SNOW PLOWING OPERATIONS, THUS THEY ARE NOT CONSIDERED SUITABLE FOR USE DURING THE PERIOD FROM OCTOBER 15 UNTIL APRIL 30. THE CONTRACTOR IS ADVISED TO SCHEDULE HIS WORK AND/OR THE USE OF THESE DEVICES TO AVOID THIS PERIOD. SHOULD THE CONTRACTOR CHOOSE TO USE TRPM'S DURING THIS PERIOD AND THEY ARE SUBSEQUENTLY REMOVED OR DESTROYED BY SNOW AND ICE CONTROL ACTIVITIES, THE CONTRACTOR SHALL IMMEDIATELY, AT HIS COST, PROVIDE A SUBSTITUTE TRAFFIC GUIDANCE SYSTEM EFFECTIVE DURING LIGHT AND DARK AND WHICH IS ACCEPTABLE TO THE ENGINEER.

THE UNITS SHALL BE PLACED ACCURATELY TO DEPICT STRAIGHT OR UNIFORMLY CURVING LINES. WHEN USED TO SUPPLEMENT TEMPORARY PAVEMENT MARKINGS, THEY MAY BE PLACED ON OR IMMEDIATELY ADJACENT TO THE PAVEMENT MARKING. LOCATIONS SHALL BE ADJUSTED UP TO ONE FOOT LONGITUDINALLY OR SIX INCHES Laterally TO AVOID PLACEMENT ON JOINTS, CRACKED OR DETERIORATED PAVEMENT. THEY SHALL NOT BE PLACED DIRECTLY ON PAVEMENT MARKINGS IF THIS WILL DETRACT FROM THEIR ABILITY TO REMAIN ATTACHED TO THE PAVEMENT.

APPLICATION

1) WHEN REQUIRED TO SUPPLEMENT PAVEMENT MARKING; THEY SHALL BE PLACED AS FOLLOWS:

LINE	TYPE	SPACING
EDGE LINE	A OR B	20' C/C
LANE LINE	A OR B	40' C/C*
CENTER LINE (SINGLE/BROKEN)	A OR B	40' C/C *
CENTER LINE (DOUBLE/SOLID)	A OR B	2 UNITS SIDE BY SIDE 4 INCHES APART 20' C/C
CHANNELIZING LINE (INCLUDES EXIT GORE NOSE)	A OR B	10' C/C

* CENTERED IN GAP

2) WHEN USED TO SIMULATE (REPLACE) PAVEMENT MARKING THEY SHALL BE PLACED AS FOLLOWS:

LINE	TYPE	SPACING
EDGE LINE	A	5' C/C
LANE LINE	A	4@3.33' C/C 30' GAP (40' CYCLE)
CENTER LINE (DOUBLE SOLID)	A	2 UNITS SIDE BY SIDE 5' C/C
CENTER LINE (SINGLE BROKEN)	A	4@3.33' C/C 30' GAP (40' CYCLE)
CHANNELIZING LINE (INCLUDES EXIT GORE NOSE)	A	5' C/C
EDGE LINE (TWO COLOR) (WHITE/YELLOW)	A	BACK TO BACK 5' C/C

YELLOW TRPM'S USED TO SEPARATE OPPOSITE FLOWS OF TRAFFIC (CENTER LINES) SHALL INCLUDE REFLECTIONS FOR BOTH DIRECTIONS. ALL OTHER YELLOW TRPM'S AND WHITE TRPM'S SHALL PROVIDE RETROREFLECTIVITY FOR ONE DIRECTION.

REMOVAL

REMOVAL SHALL BE ACCOMPLISHED IN A MANNER THAT LITTLE OR NONE OF THE ADHESIVE REMAINS ON THE PAVEMENT AND PERMANENT PAVEMENT SURFACES SHALL NOT BE SCARRED, BROKEN OR ROUGHENED SIGNIFICANTLY.

PAYMENT

BASIS OF PAYMENT SHALL BE AT THE CONTRACT UNIT PRICE PER EACH TRPM AND SHALL INCLUDE ALL LABOR, EQUIPMENT, HARDWARE AND INCIDENTALS REQUIRED TO PERFORM THE WORK. IT SHALL ALSO INCLUDE REPLACEMENT AT NO ADDITIONAL COST OF ALL TRPM'S WHICH, IN THE JUDGEMENT OF THE ENGINEER, FAIL FOR ANY REASON, EXCEPT DUE TO FAILURE OF THE PAVEMENT TO WHICH THEY ARE ATTACHED.

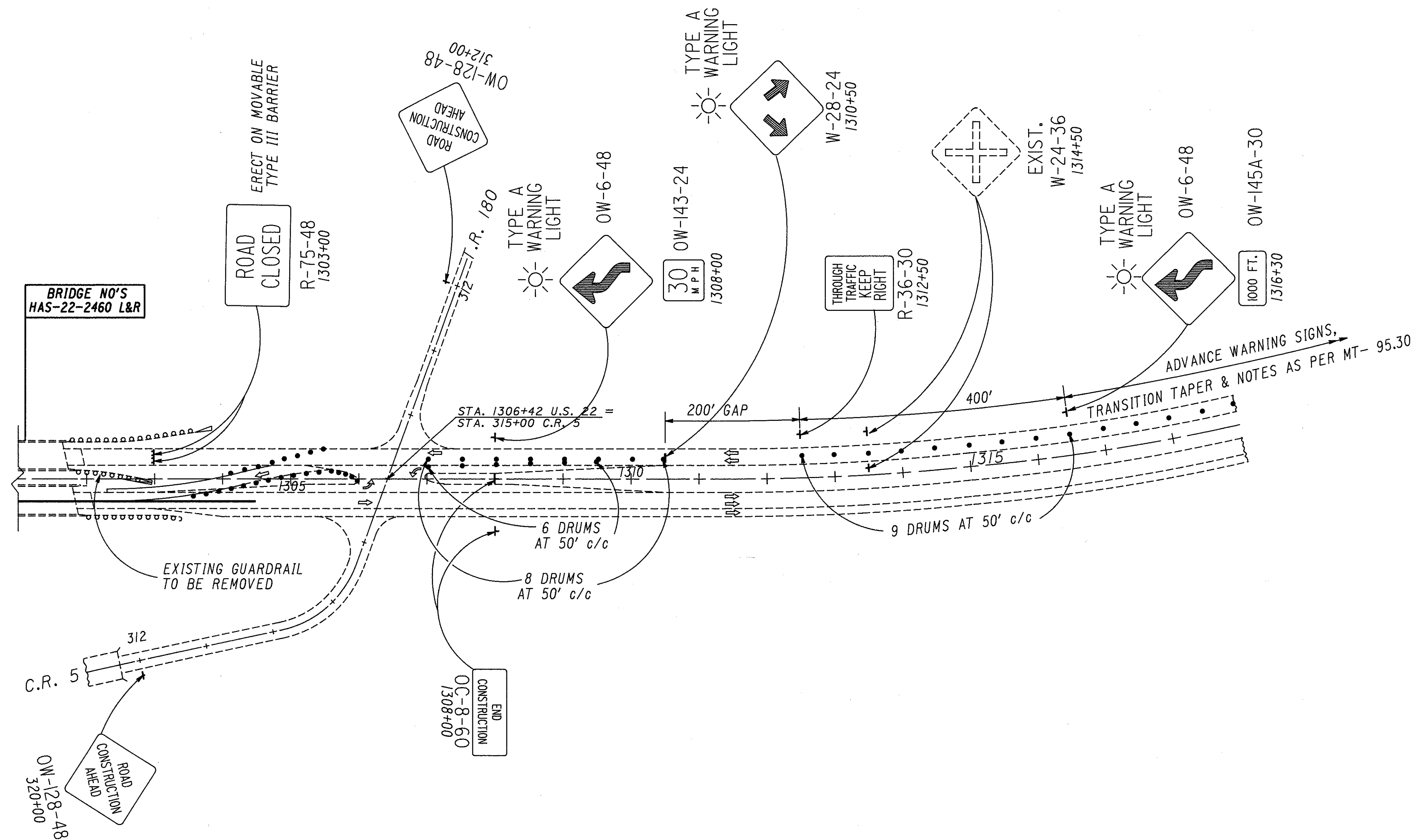
ITEM	UNIT	DESCRIPTION
614	EACH	TEMPORARY RAISED PAVEMENT MARKERS

FOR LOCATIONS & QUANTITIES,SEE SHEET NO. 37

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

614 TEMPORARY RAISED
PAVEMENT MARKERS

DESIGNED	DRAWN	CHECKED	DATE	REVISED
			5-12-87	



FOR ADDITIONAL CROSSOVER SIGNING & NOTES,
SEE SHEET NO. 33

FOR CROSSOVER DETAILS, SEE SHEET NO. 38

FOR QUANTITIES SEE SHEET NO. 37

WESTBOUND ADVANCE SIGNING

TEMPORARY CROSSOVER SIGNING PLAN

QUANTITIES			
CALC. BY: S.H.G.		CHK'D. BY: N.S.	
DATE: 2-28-90		DATE: 3- 2-90	

FHWA REGION	STATE	PROJECT	
5	OHIO		

37

115

HAS-22-15.03

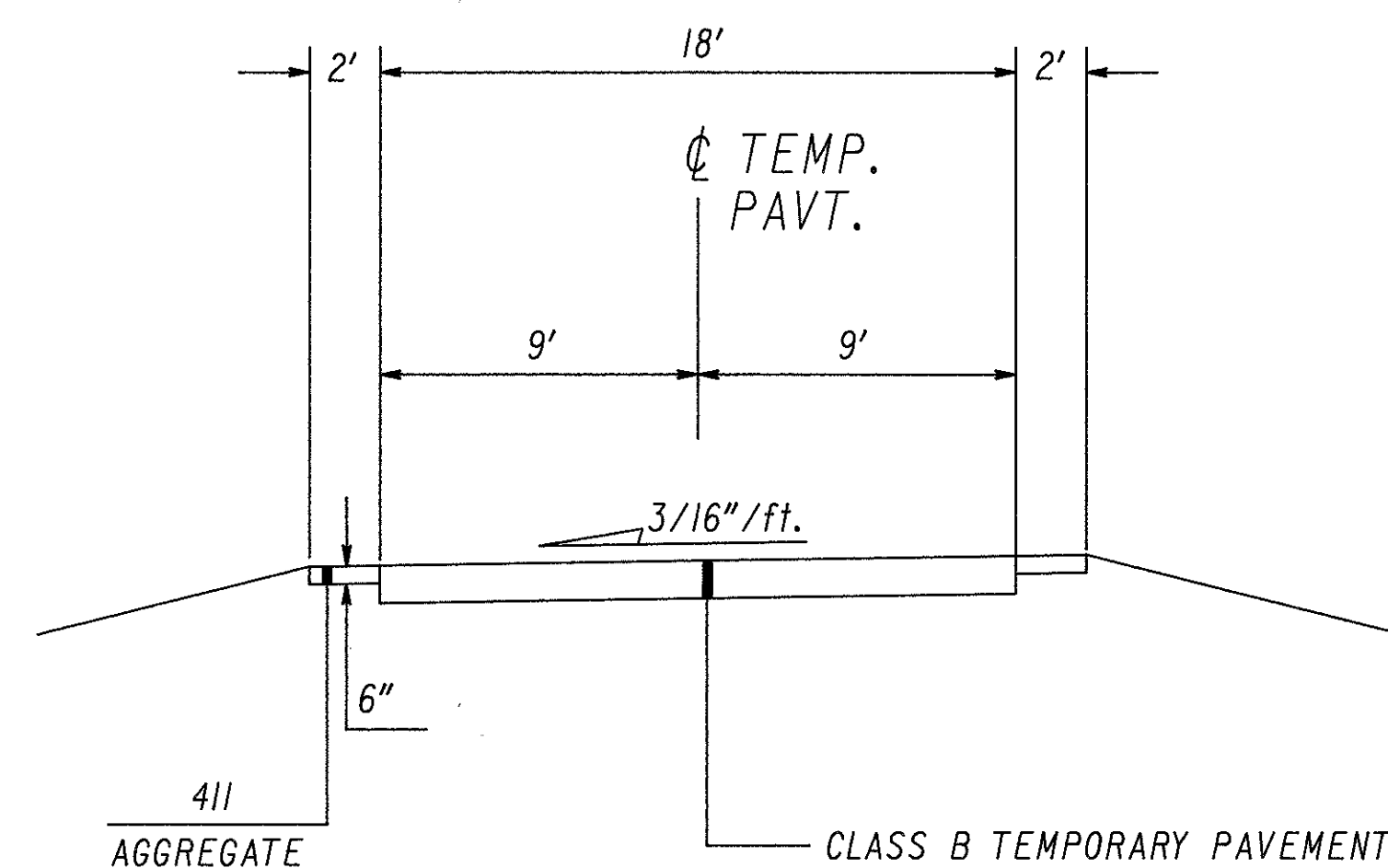
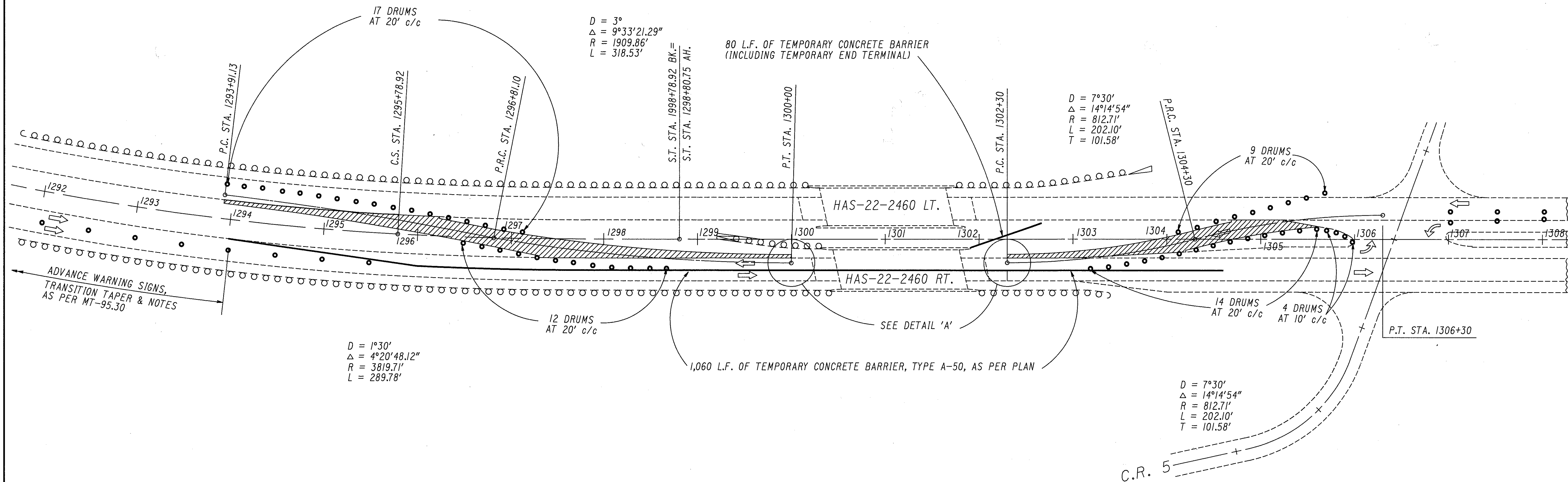
* LEFT AND RIGHT SIDE CONFIGURATION ON BR. NO. HAS-22-2126 IS REFERENCED TO THE CENTERLINE STATIONING ALONG THE CENTERLINE OF THE PAVEMENT. LEFT AND RIGHT SIDE CONFIGURATION FOR THE TWO-LANE, TWO-WAY OPERATION IS REFERENCED TO THE DIRECTION OF TRAVEL.

MAINTENANCE OF TRAFFIC QUANTITIES																					
DIRECTION	LOCATION	STATION		SIDE *	411	614										615	622		615		
					STABILIZED CRUSHED AGGREGATE	TEMPORARY CENTER LINES, CLASS I (DOUBLE SOLID YELLOW)	TEMPORARY EDGE LINES, CLASS I		TEMPORARY STOP LINES, CLASS I	TEMPORARY BARRIER REFLECTORS		TEMPORARY RAISED PAVEMENT MARKERS, TYPE A		TEMPORARY CROSSOVER LIGHTING SYSTEM	TEMPORARY PAVEMENT, CLASS B	TEMPORARY CONCRETE BARRIER	TEMPORARY CONCRETE BARRIER TYPE A-50, AS PER PLAN	TEMPORARY ROADS			
		CU. YD.	LIN.FT.				LIN.FT.	LIN.FT.		LIN.FT.	TYPE A	TYPE B	WHITE						YELLOW	WHITE	YELLOW
FROM	TO																				
Br. No. HAS-22-2126 (Bridge Deck Rehabilitation)																					
Eastbound	Right Half of Bridge Deck	1120 + 30	1121 + 80	C		150								18							
		1121 + 80		Rt.					12												
		1122 + 30	1123 + 30	Rt.			101														
		1123 + 30	1125 + 30	C								41	41								
		1121 + 80	1126 + 54	Lt.						4		3									
Westbound	Right Half of Bridge Deck	1121 + 80	1125 + 30	Lt.									71								
		1126 + 80		Lt.				12													
		1126 + 80	1128 + 30	C		150							18								
		1121 + 80	1126 + 80	Lt.								101									
		1126 + 54	1121 + 80	Lt.					7		3										
Eastbound	Left Half of Bridge Deck	1121 + 80	1126 + 80	Rt.								101									
		1121 + 80	1126 + 34	Rt.					7		3										
		1123 + 30	1125 + 30	C								41	41								
		1125 + 30	1126 + 30	Lt.			101														
		1123 + 30	1126 + 34	Rt.					4		3										
Westbound	Left Half of Bridge Deck	1123 + 30	1126 + 80	Rt.								71									
		Br. No. HAS-22-2126 Subtotals					300	202		24	14	8	6	6	284	260					
		Br. No. HAS-22-2460 L (Bridge Deck Replacement)																			
		Westbound	Left Half of Bridge Deck	1310 + 50	1307 + 00	Lt.				350						19					
				1310 + 50	1307 + 00	Rt.			350						19						
1306 + 30	1302 + 30			C	15											439					
1300 + 00	1293 + 91			C	27											771					
1305 + 70	1296 + 10			Rt.			975														
1306 + 00	1293 + 91			Lt.				1220													
1302 + 55	1299 + 45			Rt.					2		5										
1304 + 60	1300 + 00			Lt.								10									
1309 + 80	1307 + 40			Rt.									13								
1306 + 10	1304 + 10			Rt.									12								
1302 + 50	1296 + 10			Rt.									33								
1306 + 00	1296 + 50			Lt.										49							
1301 + 90	1302 + 65			Rt.													80				
Eastbound	Right Half of Bridge Deck	1288 + 60	1304 + 60	Lt.			1600														
		1296 + 00	1304 + 60	Lt.								18									
		1291 + 13	1303 + 40	Rt.					24		2										
		1294 + 00	1304 + 60	Lt.														1060			
Br. No. HAS-22-2460 L Subtotals					42		1325	3170		26		7	28	77	68	LUMP	1210	80	1060		
SUBTOTALS					42	300	1527	3170	24	40	8	13	34	361	328	LUMP	1210	80	1060		
TOTALS					42	0.06 Mi.	4697 0.89 Mi.		24	48		47		689		LUMP	1210	80	1060	LUMP	

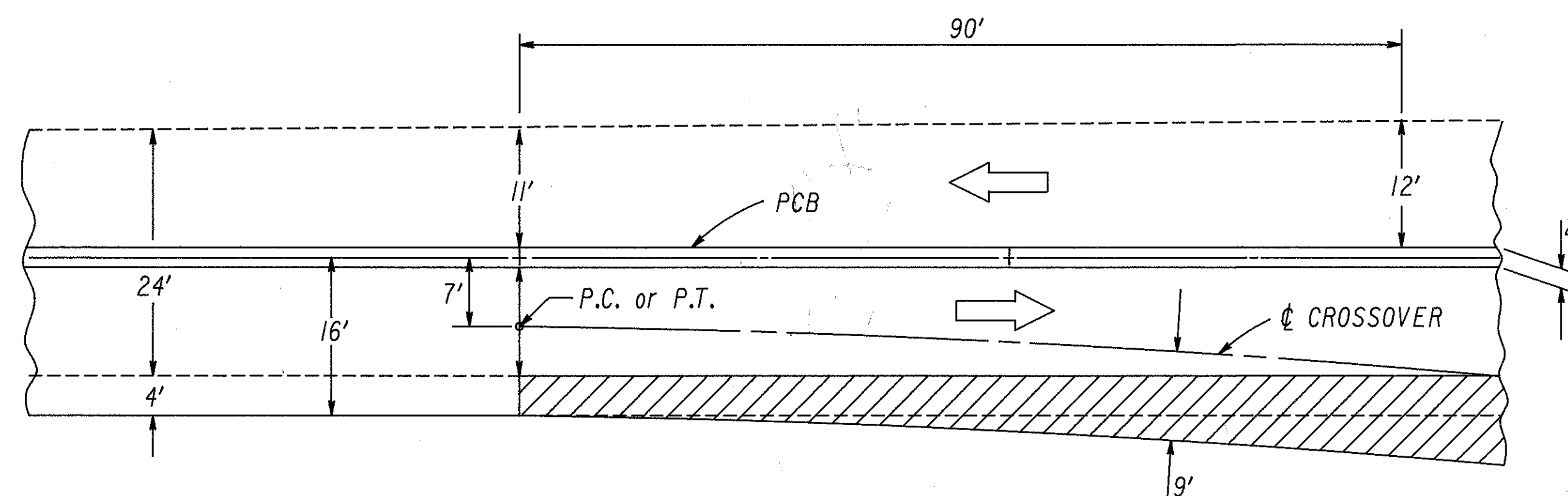
ADDITIONAL NOTES FOR MAINTENANCE OF TRAFFIC:

1. ALL TEMPORARY SIGN SUPPORTS SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER PRIOR TO ERECTION.
2. TRAFFIC CONTROL SHOWN ON SHEET NO'S. 33 THRU 36 ARE CONSIDERED AS MINIMUM TREATMENT. THE ENGINEER MAY REQUIRE ADDITIONAL TREATMENT IF WARRANTED BY TRAFFIC EXPERIENCE.
3. ALTHOUGH THE CROSSOVERS ARE TEMPORARY PAVEMENT, CARE COMPARABLE TO THAT GIVEN TO PERMANENT PAVEMENT SHALL BE EXERCISED DURING CONSTRUCTION OF THE CROSSOVERS. THE FINISHED PROFILE SHALL BE RELATIVELY SMOOTH, FREE OF HUMPS AND UNDULATIONS.
4. TEMPORARY EDGE LINES AND TEMPORARY RAISED PAVEMENT MARKERS (T.R.P.M.'S) SHALL FORM SMOOTH CURVES AND STRAIGHT LINES. TRANSITIONS FROM OR TO EXISTING EDGE LINES SHALL BE SMOOTH AND GRADUAL.
5. JOINTS BETWEEN TEMPORARY CONCRETE BARRIER (T.C.B.) SECTIONS ON THE TRAFFIC SIDE SHALL BE GROUTED OR SNUGLY SHIMMED. WHEN THE T.C.B. IS SET ON THE BRIDGE DECK, THE BRIDGE DECK SURFACE AREA ON WHICH THE T.C.B. WILL REST SHALL BE CLEARED OF ALL LOOSE SAND, GRAVEL, DIRT AND DEBRIS. ANY IRREGULARITIES IN THE BRIDGE DECK, UNLESS JUDGED BY THE ENGINEER TO BE INCONSEQUENTIAL, SHALL BE LEVELED WITH GROUT AND/OR ASPHALT. ASPHALT ROLL ROOFING SHALL BE PLACED ON THOSE BRIDGE DECK AREAS, AS JUDGED BY THE ENGINEER, THAT HAVE INSUFFICIENT ROUGHNESS TO PROVIDE FRICTION CONTACT BETWEEN THE BARRIER SEGMENT AND THE BRIDGE DECK.

HAS-22-15.03



TYPICAL SECTION
OF
TEMPORARY PAVEMENT



DETAIL A

END OF TWO WAY OPERATION SHOWN.
BEGINNING OF TWO WAY OPERATION OPPOSITE HAND.

GENERAL SUMMARY

HAS-22-15.03

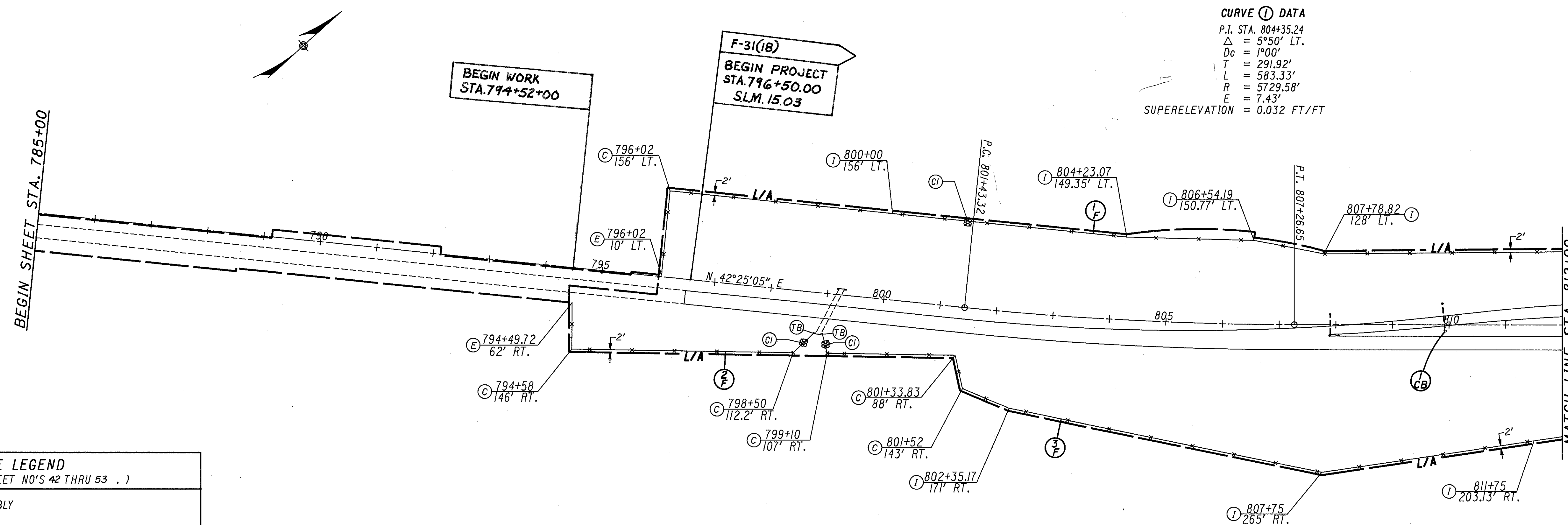
ITEM	SHEET NUMBER																* 100% STATE	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
	16	19	20	22	*24	24	25	26	27	62	63	64	65	66	70	73	76					
																						ROADWAY
201							LUMP											201	11001	LUMP		CLEARING AND GRUBBING, AS PER PLAN (SEE NOTE ON SHEET NO. 25)
202									134									202	22900	134	SQ. YD.	APPROACH SLAB REMOVED
202														133				202	23000	133	SQ. YD.	PAVEMENT REMOVED
202	3,473																	202	23500	3,473	SQ. YD.	WEARING COURSE REMOVED
202											770	665	6,023		137			202	32001	7,595	LIN. FT.	CURB REMOVED, AS PER PLAN (SEE NOTE ON SHEET NO. 27)
202											27		671		6			202	30601	704	SQ. YD.	CONCRETE MEDIAN REMOVED, AS PER PLAN (SEE NOTE ON SHEET NO.27)
202																400		202	32600	400	LIN. FT.	GUTTER REMOVED
202					150	5976											150	202	38000	6126	LIN. FT.	GUARDRAIL REMOVED
202						163												202	38300	163	LIN. FT.	GUARDRAIL REMOVED, BARRIER DESIGN
202						76												202	43000	76	EACH	ANCHOR ASSEMBLY POST REMOVED
202				77,981														202	75000	77,981	LIN. FT.	FENCE REMOVED
202															1			202	58500	1	EACH	CATCH BASIN ABANDONED
202									680									202	54100	680	EACH	RAISED PAVEMENT MARKERS REMOVED FOR STORAGE
202								90										202	54101	90	EACH	RAISED PAVEMENT MARKERS REMOVED FOR STORAGE, AS PER PLAN (SEE NOTE ON SHEET NO. 26)
203			4,114							42	244	235	203		42		330	203	12000	5,210	CU. YD.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
203			10,389									61						203	20000	61	CU. YD.	EMBANKMENT
203												383	157		62			203	50000	10,991	SQ. YD.	SUBGRADE COMPACTION
203											69							203	60200	69	STATION	LINEAR GRADING, METHOD 1
203											12							203	60204	12	STATION	LINEAR GRADING, METHOD 2
203											7							203	60300		STATION	LINEAR GRADING, METHOD 3
203											219							203	60408	219	STATION	LINEAR GRADING, (DITCH CLEANOUT)
606					400	2,300											400	606	13000	2,700	LIN. FT.	GUARDRAIL, TYPE 5
606						2,700												606	13001	2,700	LIN. FT.	GUARDRAIL, TYPE 5, AS PER PLAN (SEE NOTE ON SHEET NO. 25)
606						12.5												606	15500	12.5	LIN. FT.	GUARDRAIL, BARRIER DESIGN, TYPE 5
606								32										606	19501	32	EACH	GUARDRAIL POSTS, WOOD, AS PER PLAN (SEE NOTE ON SHEET NO. 26)
606					4	16											4	606	25000	20	EACH	ANCHOR ASSEMBLY, TYPE A
606						1												606	25500	1	EACH	ANCHOR ASSEMBLY, BARRIER DESIGN, TYPE A
606						8												606	26500	8	EACH	ANCHOR ASSEMBLY, TYPE T
606																		606	35000	9	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE AA
606						9												606	35100	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE AT
606					4	4											4	606	32500	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE F
607				113,149														607	15000	113,149	LIN. FT.	FENCE, TYPE 47
625				26														625	32000	26	EACH	GROUND ROD
																						EROSION CONTROL
207									100							280		207	70000	380	EACH	STRAW OR HAY BALES
601				335														601	32100	335	CU.YD.	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER
659											87							659	35000	87	M-GAL.	WATER
659											39,870							659	10000	39,870	SQ. YD.	SEEDING AND MULCHING
659											3.60							659	20000	3.60	TON	COMMERCIAL FERTILIZER
659											18.00							659	30000	18.00	TON	AGRICULTURAL LIMING
670																332		670	40000	332	SQ. YD.	DITCH EROSION PROTECTION
																						DRAINAGE
603																124		603	06100	124	LIN. FT.	15" CONDUIT, TYPE C
603																16		603	07600	16	LIN. FT.	18" CONDUIT, TYPE C
603																8		603	09100	8	LIN. FT.	21" CONDUIT, TYPE C
603																8		603	13600	8	LIN. FT.	30" CONDUIT, TYPE C
603				2,262														603	01500	2,262	LIN. FT.	6" CONDUIT TYPE F, 707.17 NON-PERFORATED ASTM 3034 SDR 35, OR SS 931
604											1							604	02000	1	EACH	CATCH BASIN, NO. 6
604																35		604	02804	35	EACH	CATCH BASIN, NO. 8, WITHOUT APRON
604														3				604	10901	3	EACH	INLET, NO. 2-6, AS PER PLAN (SEE NOTE ON SHEET NO. 27)
604														1				604	11301	1	EACH	INLET, NO. 2-8, AS PER PLAN (SEE NOTE ON SHEET NO. 27)
604														2				604	11701	2	EACH	INLET, NO. 2-10, AS PER PLAN (SEE NOTE ON SHEET NO. 27)
605			104,854															605	30001	104,854	LIN. FT.	SHALLOW UNDERDRAINS, AS PER PLAN (SEE NOTE ON SHEET NO. 28)
SPEC.			135															SPEC.	604 36600	135	EACH	PRECAST REINFORCED CONCRETE OUTLET (SEE NOTE ON SHEET NO. 28)
SPEC.																484		SPEC.	202 70100	484	LIN. FT.	PIPE CLEANOUT (SEE NOTE ON SHEET NO. 27)

[illegible]

QUANTITIES		FHWA REGION	STATE	PROJECT		
CALC. BY: <u>SHG</u>	CHK'D. BY: <u>RSK</u>					
DATE <u>3/29/90</u>	DATE <u>7/18/90</u>	5	OHIO			

[illegible]

GENERAL SUMMARY



FENCE LEGEND

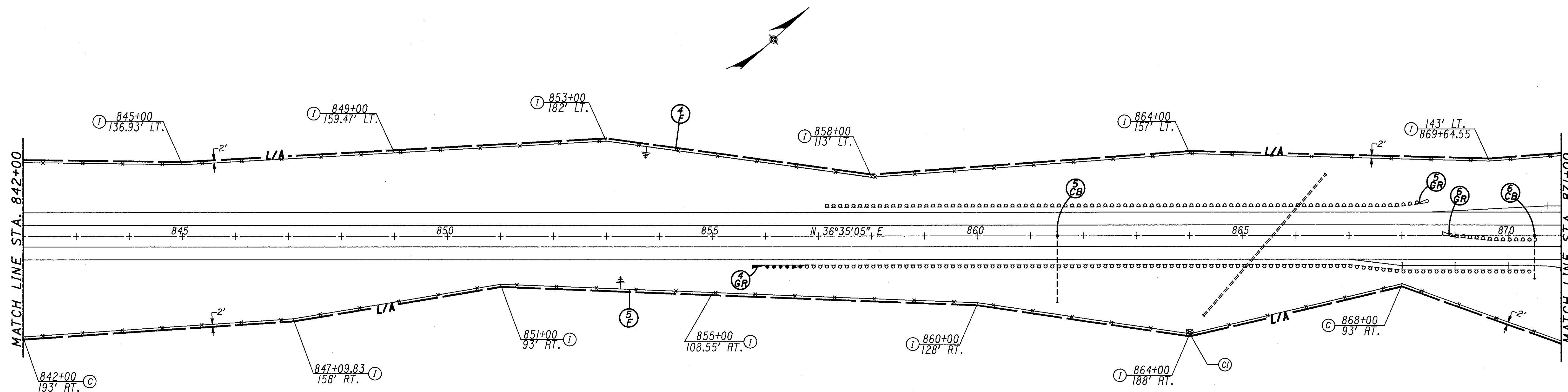
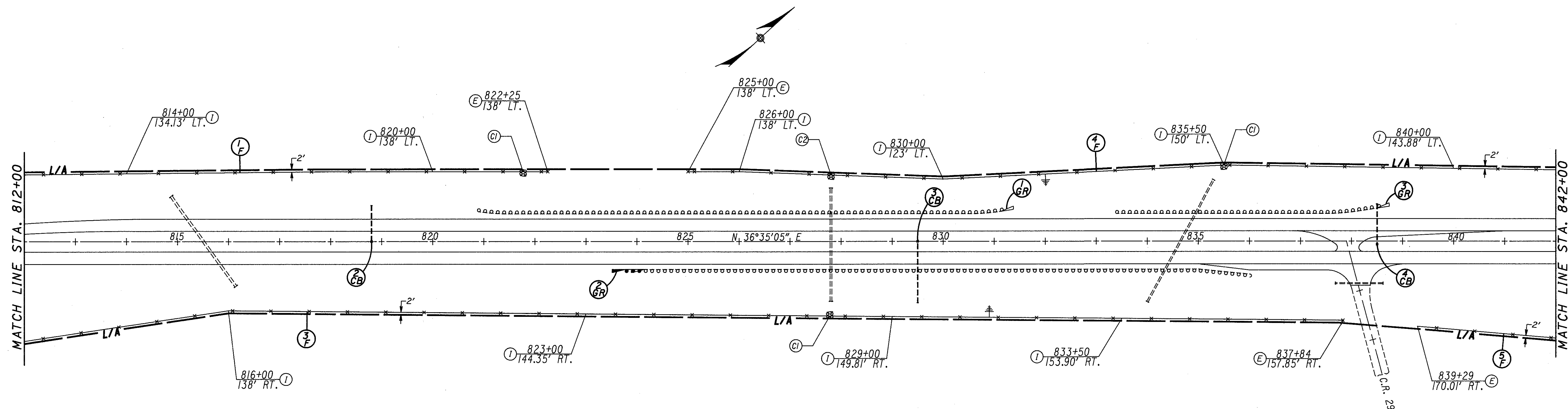
(APPLIES TO SHEET NO'S 42 THRU 53 .)

- (C) CORNER POST ASSEMBLY
- (E) END POST ASSEMBLY
- (I) INTERMEDIATE ANCHOR POST ASSEMBLY
- (L) WOOD POST OR CONCRETE ENCASED STEEL LINE POST
- (TA) FENCE TERMINAL (TYPE A)
- (TB) FENCE TERMINAL (TYPE B)
- (TD) FENCE TERMINAL (TYPE D)
- (TE) FENCE TERMINAL (TYPE E)
- (A) ABUTMENT CONNECTION
- (CI) CROSSING, TYPE 1
- (C2) CROSSING, TYPE 2
- (C3) CROSSING, TYPE 3
- (C4) CROSSING, TYPE 4
- (F) MAINTENANCE OPENING
- ↓ GROUND ROD
- ⊠ ROCK CHANNEL PROTECTION, TYPE B

NOTE: ALL OFFSETS SHOWN ARE TO THE FENCE

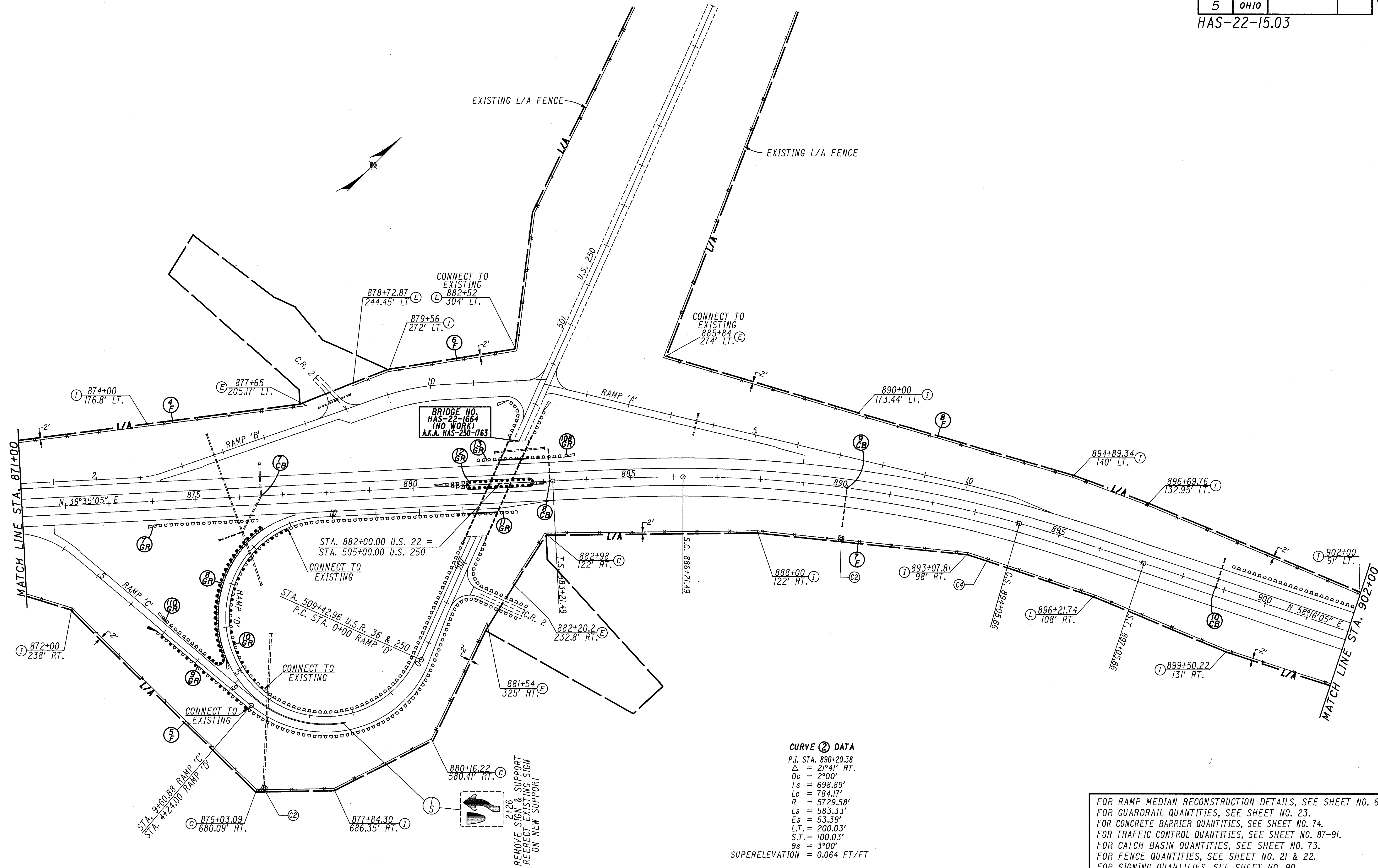
FOR MAINLINE MEDIAN SHOULDER CONSTRUCTION DETAILS, SEE SHEET NO. 64
 FOR TRAFFIC CONTROL QUANTITIES, SEE SHEET NO. 87-91.
 FOR CATCH BASIN QUANTITIES, SEE SHEET NO. 73.
 FOR FENCE QUANTITIES, SEE SHEET NO. 21 & 22.

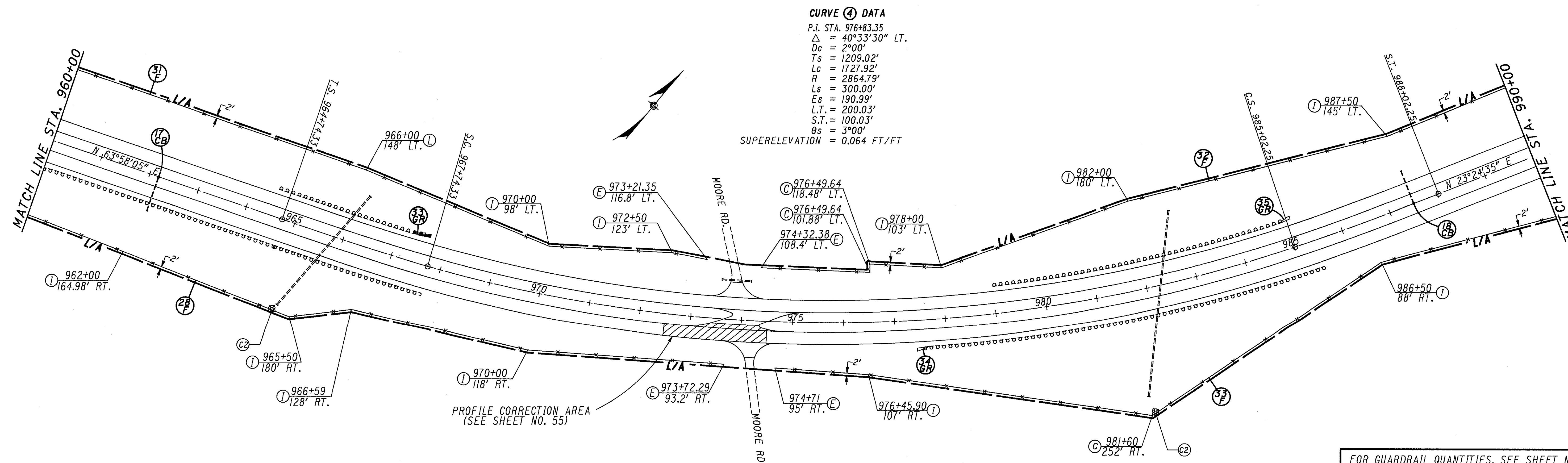
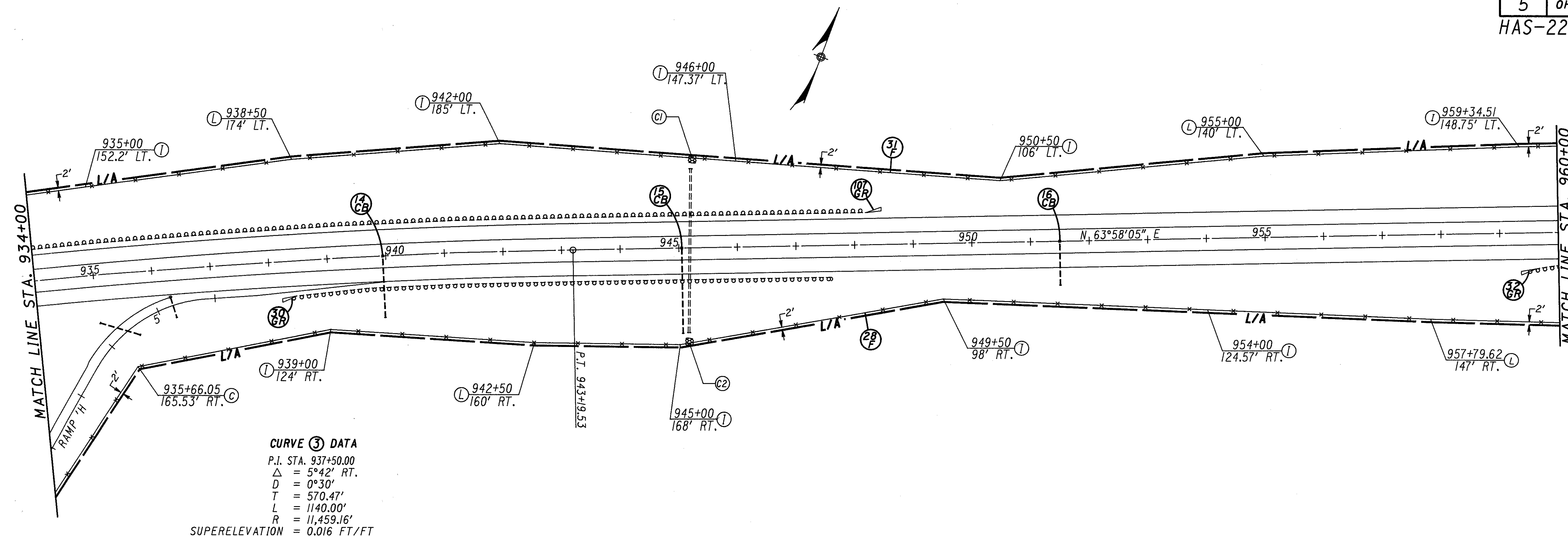
HAS-22-15.03



FOR MAINLINE MEDIAN SHOULDER CONSTRUCTION DETAILS, SEE SHEET NO. 64
 FOR GUARDRAIL QUANTITIES, SEE SHEET NO. 23.
 FOR TRAFFIC CONTROL QUANTITIES, SEE SHEET NO. 87-91.
 FOR CATCH BASIN QUANTITIES, SEE SHEET NO. 73.
 FOR FENCE QUANTITIES, SEE SHEET NO. 21 & 22.

STA. 812+00 TO STA. 871+00



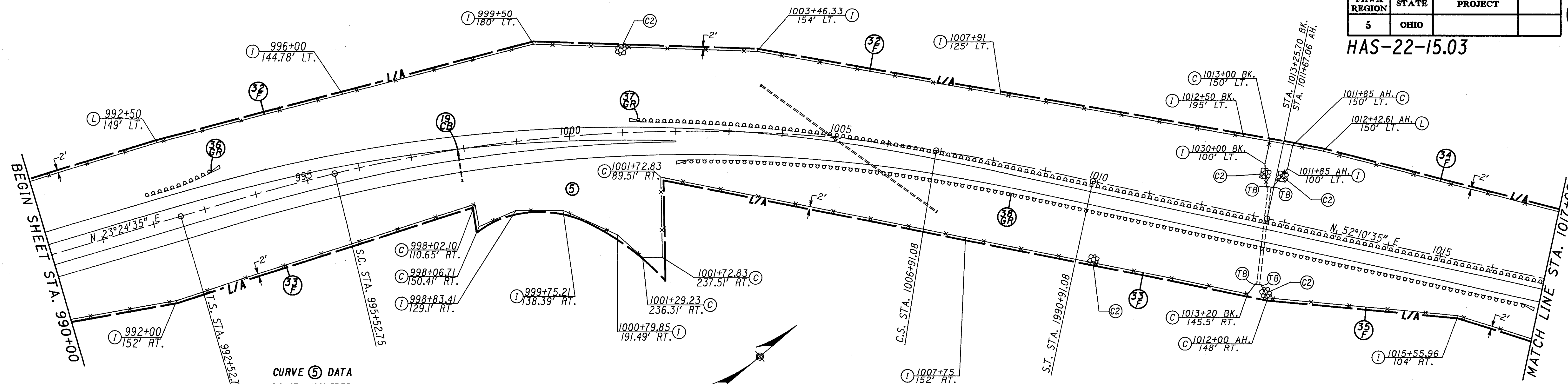


FOR GUARDRAIL QUANTITIES, SEE SHEET NO. 23 & 24.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEET NO. 87-91.
FOR CATCH BASIN QUANTITIES, SEE SHEET NO. 73.
FOR FENCE QUANTITIES, SEE SHEET NO. 21 & 22.

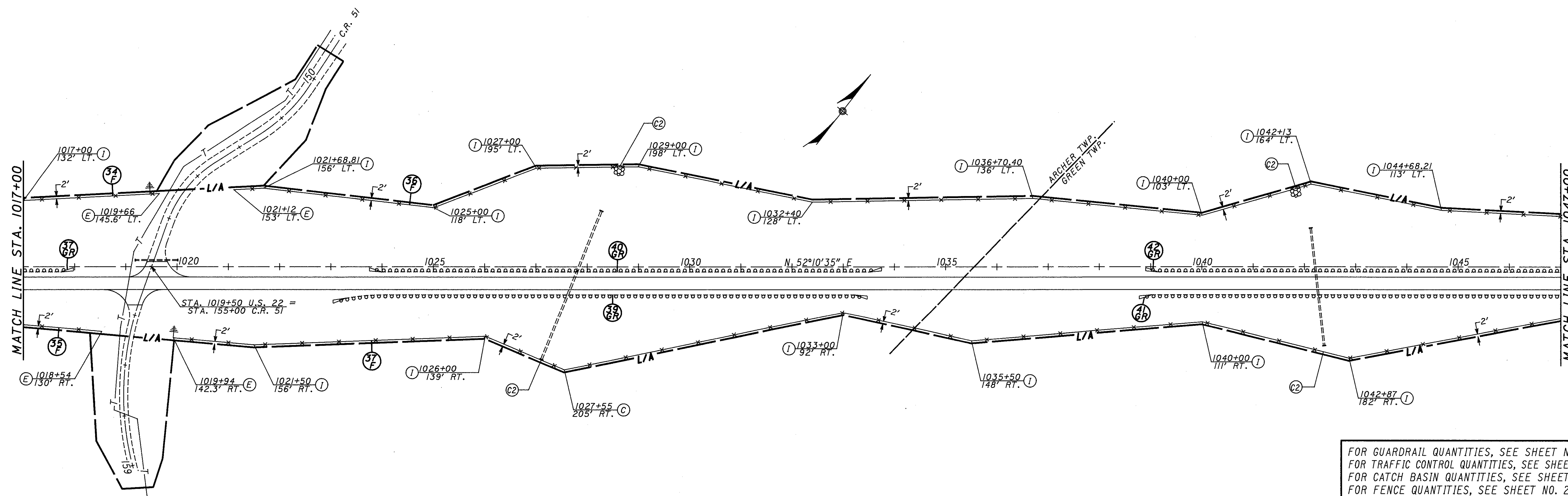
FHWA REGION	STATE	PROJECT
5	OHIO	

HAS-22-15.03

47
115

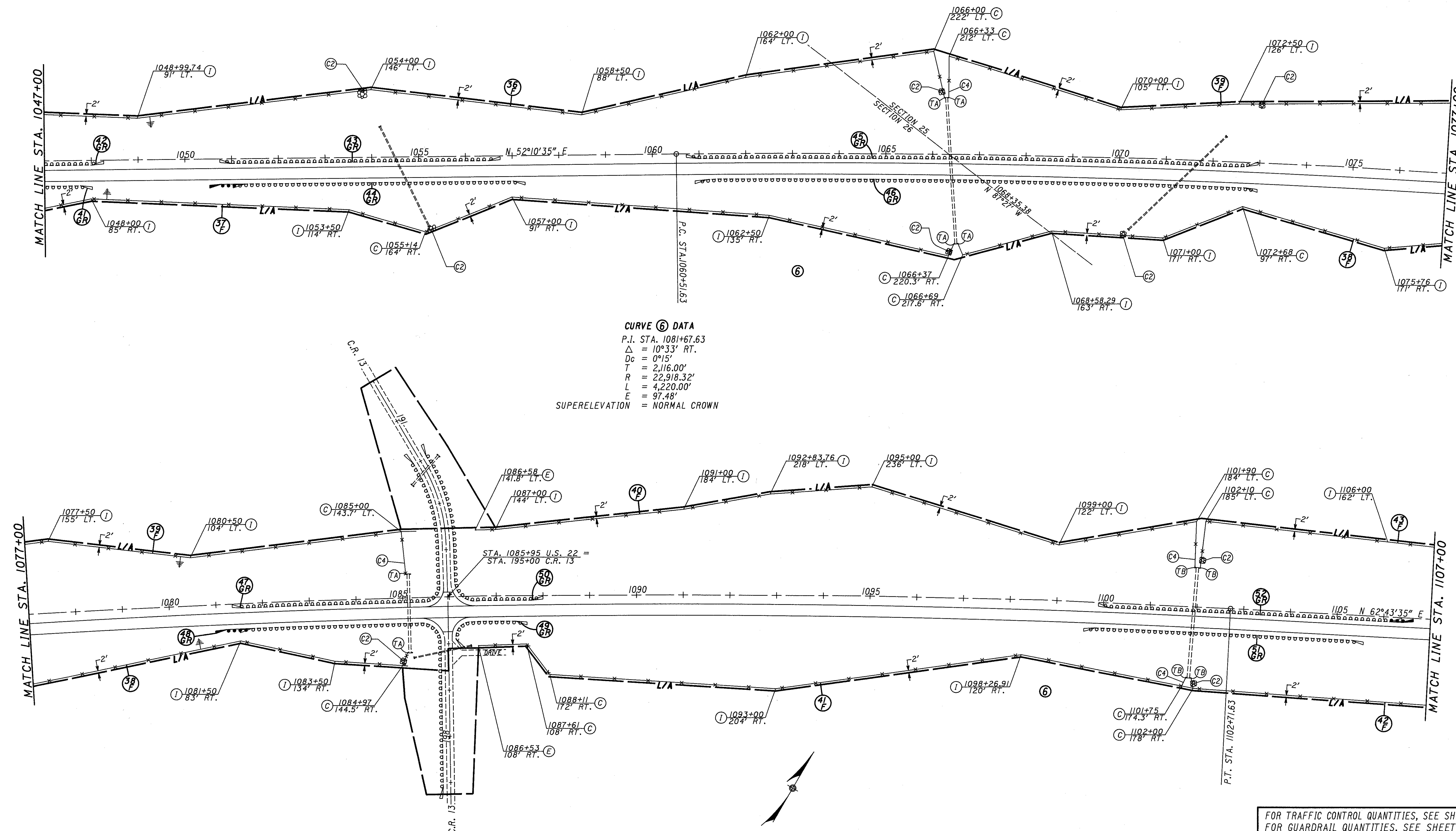


CURVE 5 DATA
P.I. STA. 1001+37.75
 $\Delta = 28^\circ 46' \text{ RT.}$
 $D_c = 2^\circ 00'$
 $L_s = 300.00'$
 $E_s = 94.06'$
 $R = 2864.79'$
 $L_c = 1138.33'$
 $T_s = 885.00'$
SUPERELEVATION = 0.064 FT/FT



FOR GUARDRAIL QUANTITIES, SEE SHEET NO. 23.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEET NO. 87-91.
FOR CATCH BASIN QUANTITIES, SEE SHEET NO. 73.
FOR FENCE QUANTITIES, SEE SHEET NO. 21 & 22.

STA. 990+00 TO STA. 1047+00

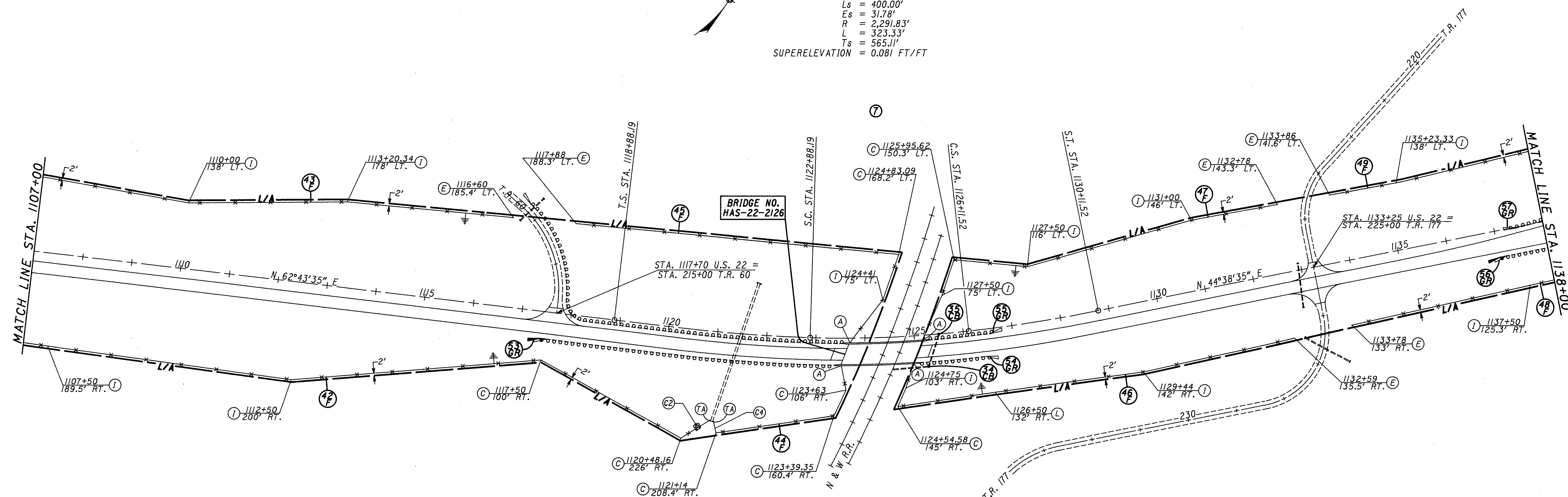


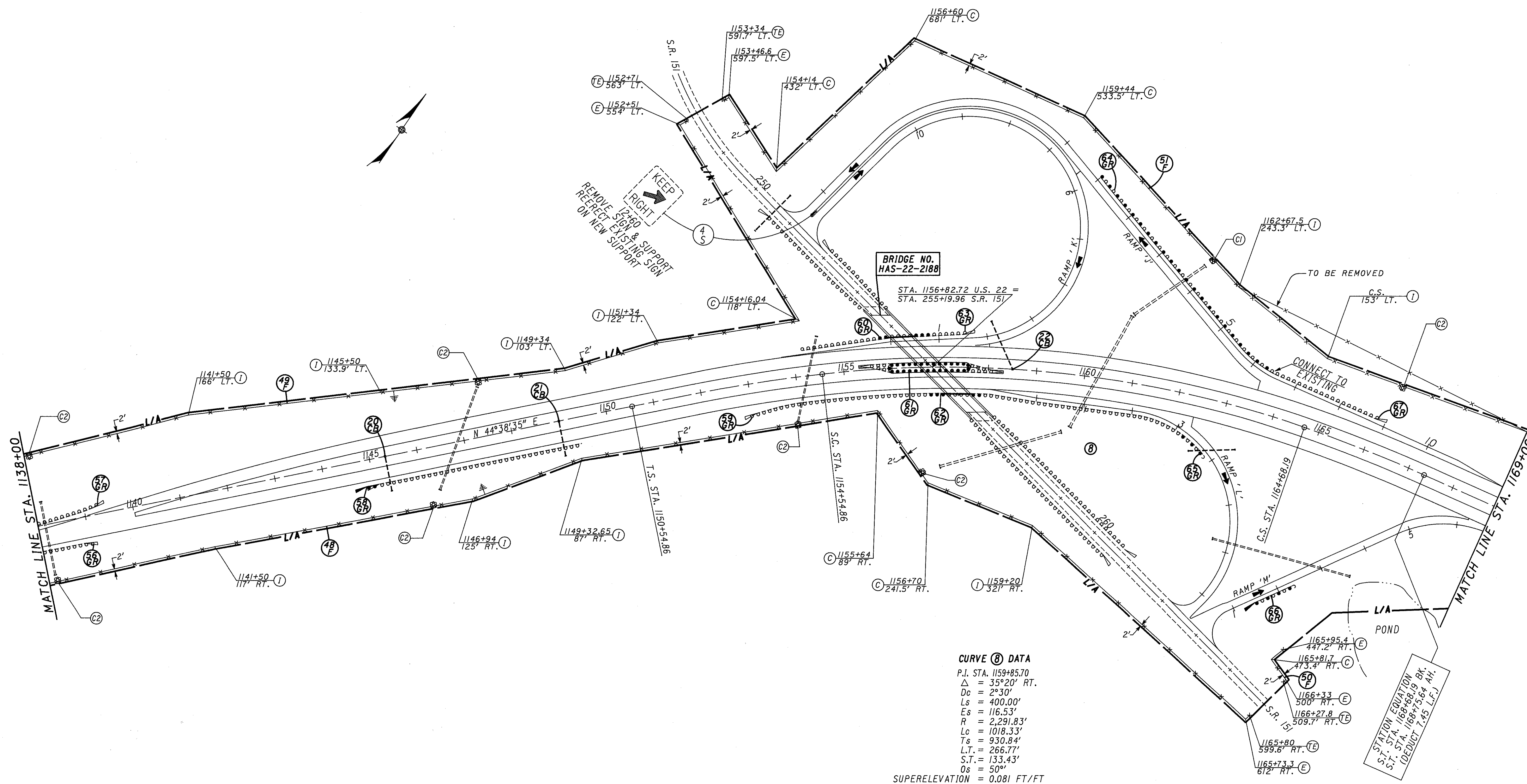
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEET NO. 87-91.
FOR GUARDRAIL QUANTITIES, SEE SHEET NO. 23.
FOR FENCE QUANTITIES, SEE SHEET NO. 21 & 22.

HAS-22-15.03

CURVE ⑦ DATA

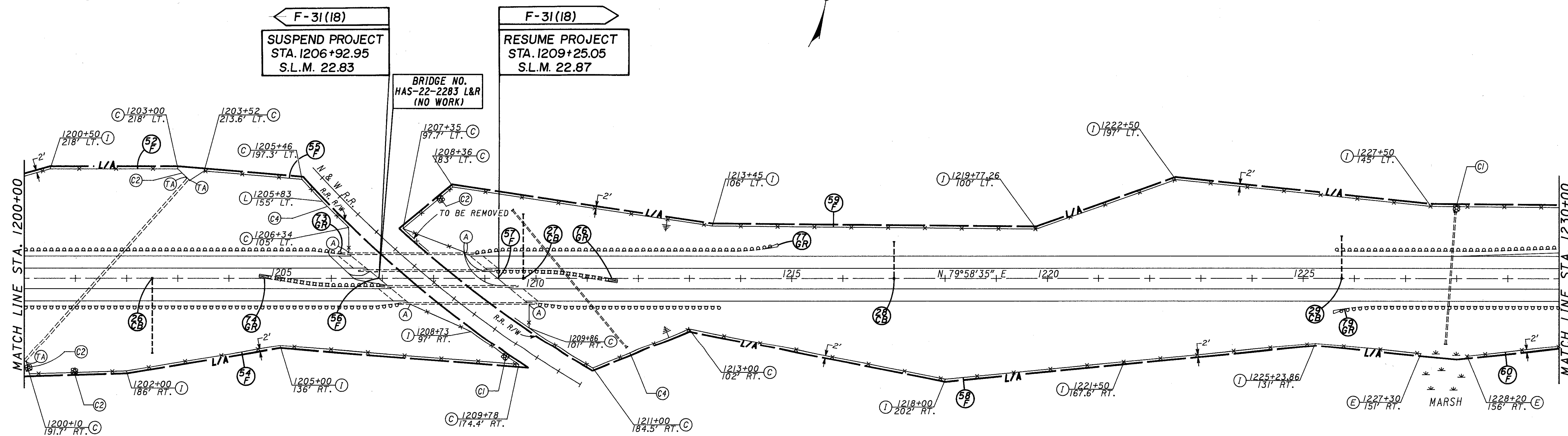
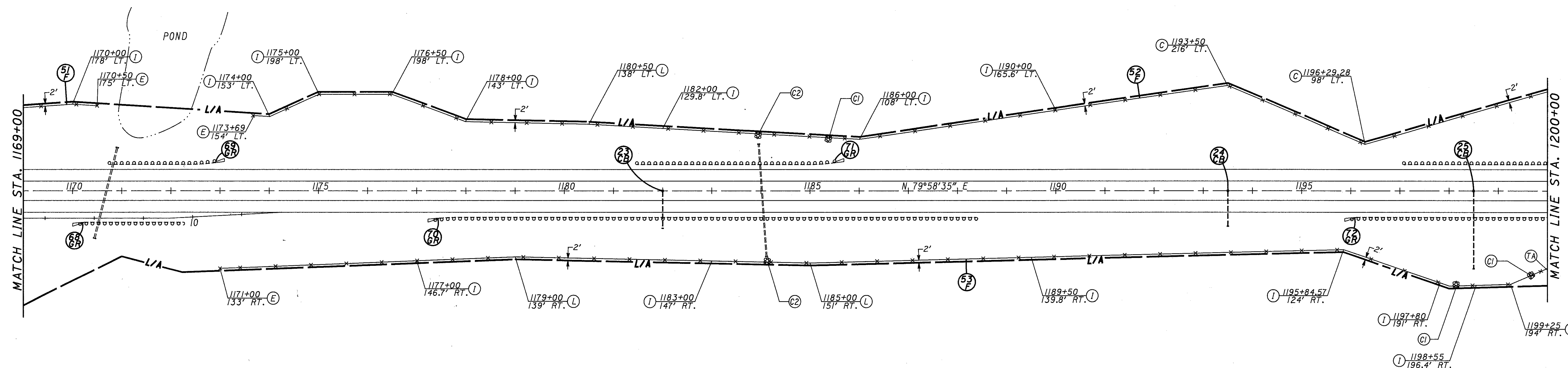
P.I. STA. 1124+53.30
 $\Delta = 18^{\circ}05'$ LT.
 $Dc = 2^{\circ}30'$
 $Ls = 400.00'$
 $Es = 31.78'$
 $R = 2,291.83'$
 $L = 323.33'$
 $Ts = 565.11'$
 SUPERELEVATION = 0.081 FT/FT





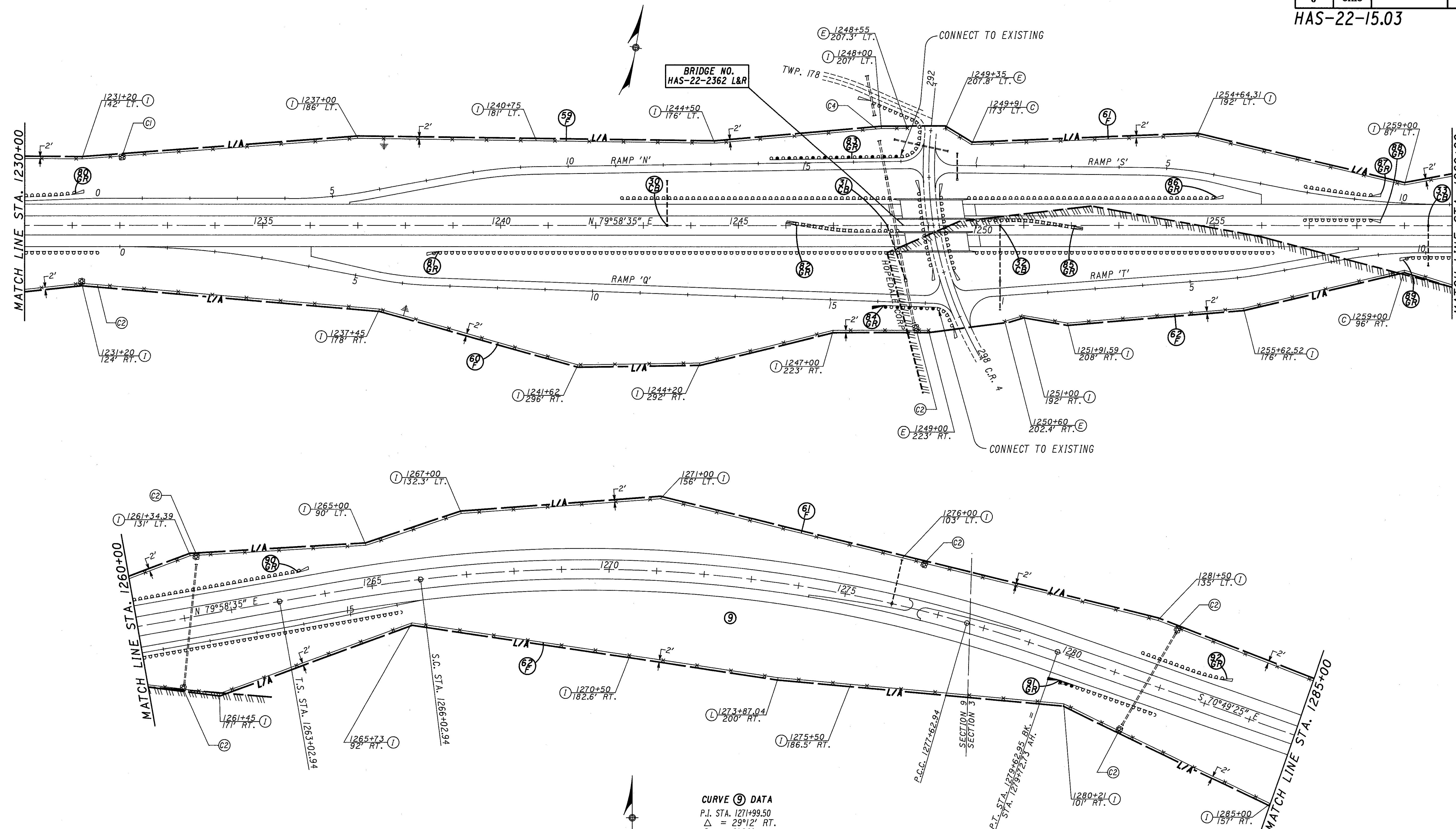
CURVE 8 DATA
P.I. STA. 1159+85.70
 $\Delta = 35^\circ 20' \text{ RT.}$
 $D_c = 2^\circ 30'$
 $L_s = 400.00'$
 $E_s = 116.53'$
 $R = 2,291.83'$
 $L_c = 1018.33'$
 $T_s = 930.84'$
 $L.T. = 266.77'$
 $S.T. = 133.43'$
 $O_s = 50'$
SUPERELEVATION = 0.081 FT/FT

FOR RAMP MEDIAN RECONSTRUCTION DETAILS,
SEE SHEET NO. 66-70.
FOR SIGNING QUANTITIES, SEE SHEET NO. 90.
FOR GUARDRAIL QUANTITIES, SEE SHEET NO. 23.
FOR CONCRETE BARRIER QUANTITIES, SEE SHEET NO. 74.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEET NO. 87-91.
FOR CATCH BASIN QUANTITIES, SEE SHEET NO. 73.
FOR FENCE QUANTITIES, SEE SHEET NO. 21 & 22.



FOR GUARDRAIL QUANTITIES, SEE SHEET NO. 23.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEET NO. 87-91.
FOR CATCH BASIN QUANTITIES, SEE SHEET NO. 73.
FOR FENCE QUANTITIES, SEE SHEET NO. 21 & 22.

HAS-22-15.03



CURVE 9 DATA

P.I. STA. 1271+99.50
 $\Delta = 29^{\circ}12'$ RT.
 $D_c = 2^{\circ}00'$
 $L_s = 300.00'$
 $E_s = 96.96'$
 $R = 2864.79'$
 $L_c = 1160.00'$
 $T_s = 896.56'$
 $L.T. = 200.03'$
 $S.T. = 100.03'$
 $\theta_s = 3^{\circ}00'$

SUPERELEVATION = 0.064 FT/FT

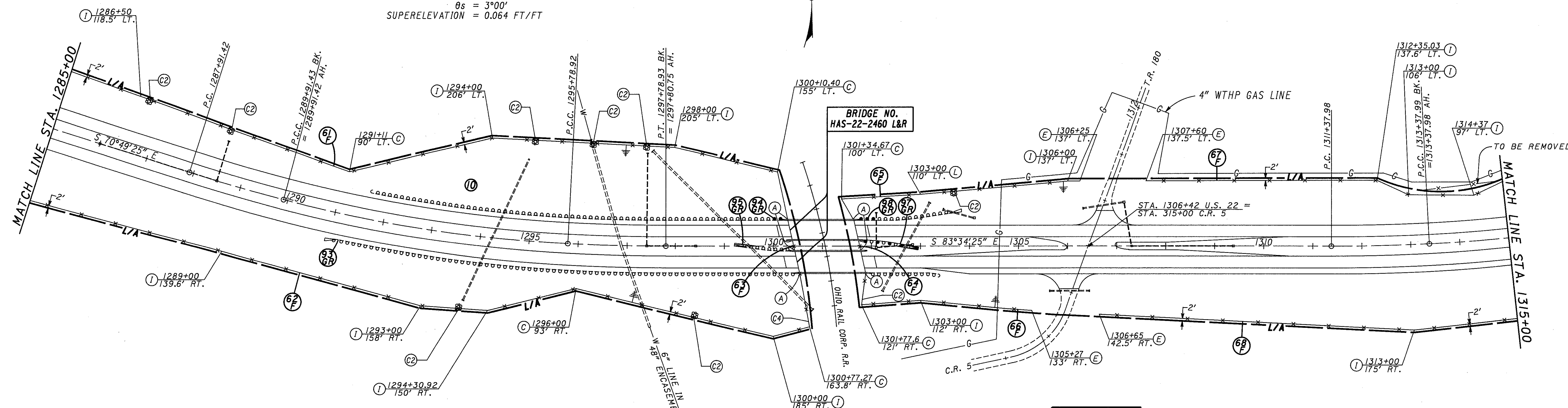
FOR GUARDRAIL QUANTITIES, SEE SHEET NO. 23 & 24.
 FOR CONCRETE BARRIER QUANTITIES, SEE SHEET NO. 74.
 FOR TRAFFIC CONTROL QUANTITIES, SEE SHEET NO. 87-91.
 FOR CATCH BASIN QUANTITIES, SEE SHEET NO. 73.
 FOR FENCE QUANTITIES, SEE SHEET NO. 21 & 22.

STA. 1230+00 TO STA. 1285+00

CURVE ⑩ DATA

P.I. STA. 1292+88.95
 $\Delta = 17^\circ 45'$ LT.
 $D_c = 2^\circ 00'$
 $L_s = 300.00'$
 $E_s = 36.03'$
 $R = 2864.79'$
 $L_c = 587.50'$
 $T_s = 597.53'$
 $L.T. = 200.03'$
 $S.T. = 100.03'$
 $\theta_s = 3^\circ 00'$

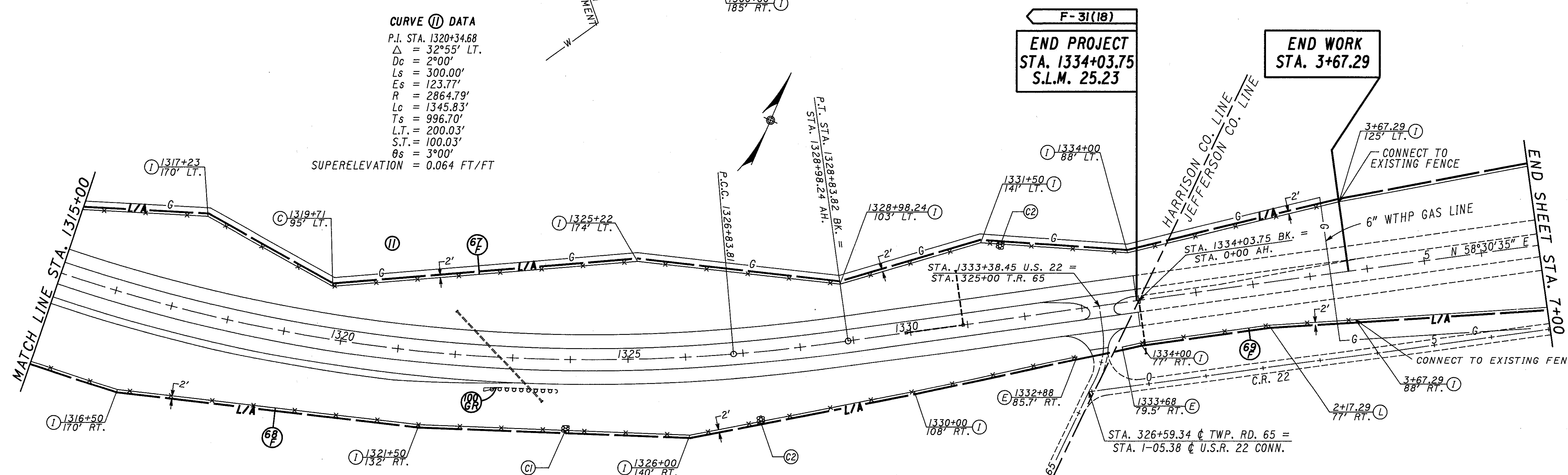
SUPERELEVATION = 0.064 FT/FT



CURVE ⑪ DATA

P.I. STA. 1320+34.68
 $\Delta = 32^\circ 55'$ LT.
 $D_c = 2^\circ 00'$
 $L_s = 300.00'$
 $E_s = 123.77'$
 $R = 2864.79'$
 $L_c = 1345.83'$
 $T_s = 996.70'$
 $L.T. = 200.03'$
 $S.T. = 100.03'$
 $\theta_s = 3^\circ 00'$

SUPERELEVATION = 0.064 FT/FT

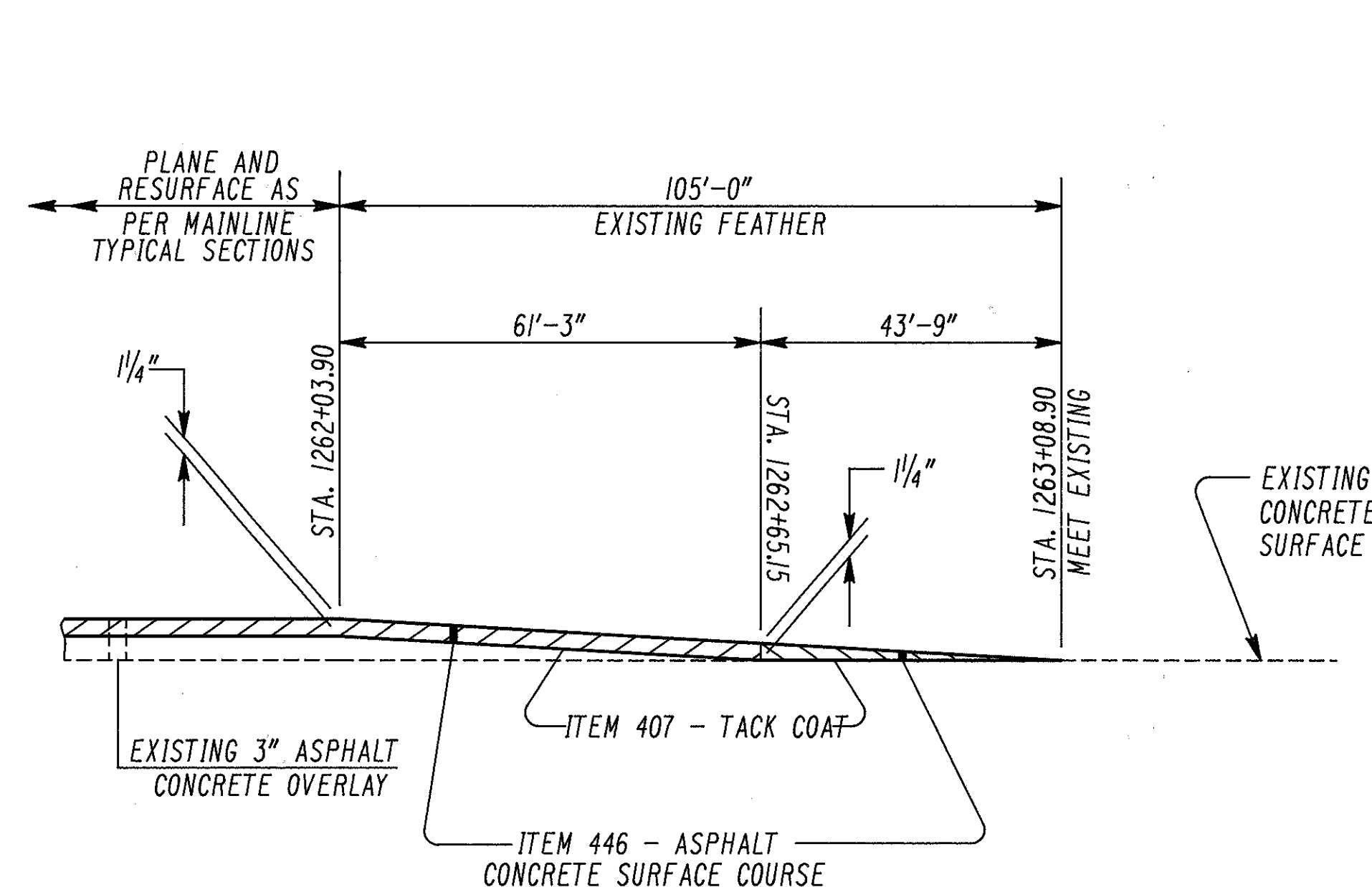


F-31(18)
END PROJECT
STA. 1334+03.75
S.L.M. 25.23

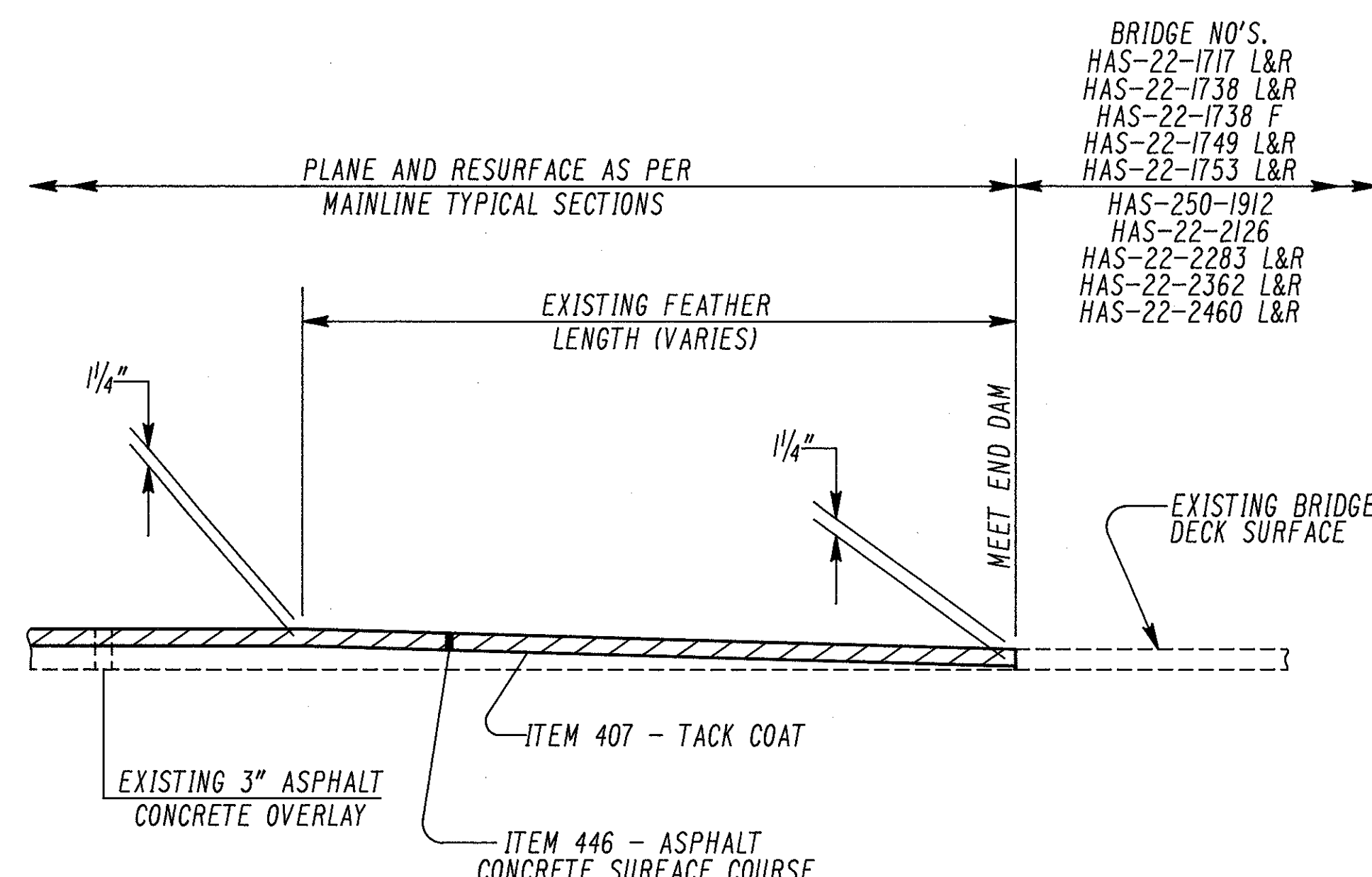
END WORK
STA. 3+67.29

FOR GUARDRAIL QUANTITIES, SEE SHEET NO. 24.
 FOR CONCRETE BARRIER QUANTITIES, SEE SHEET NO. 74.
 FOR TRAFFIC CONTROL QUANTITIES, SEE SHEET NO. 87-91.
 FOR CATCH BASIN QUANTITIES, SEE SHEET NO. 73.
 FOR FENCE QUANTITIES, SEE SHEET NO. 21 & 22.

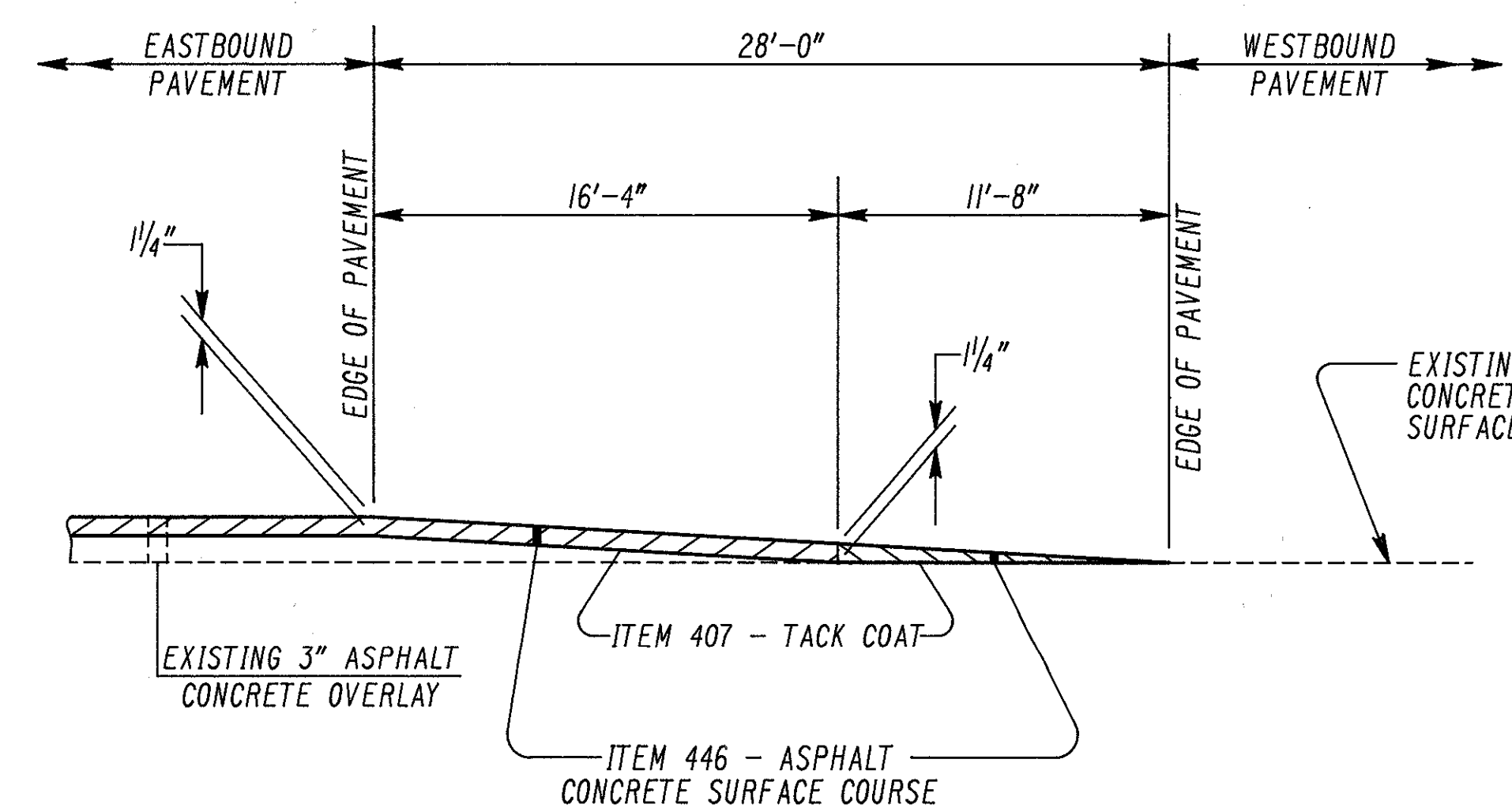
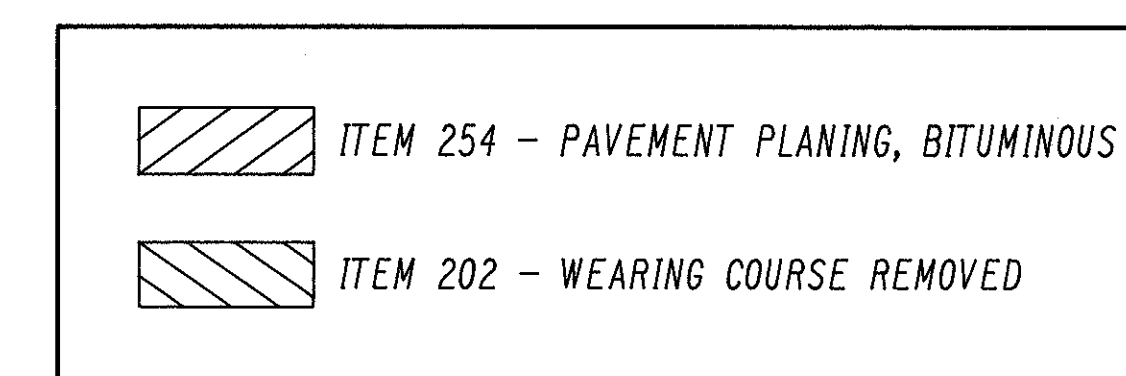
FEATHER DETAILS



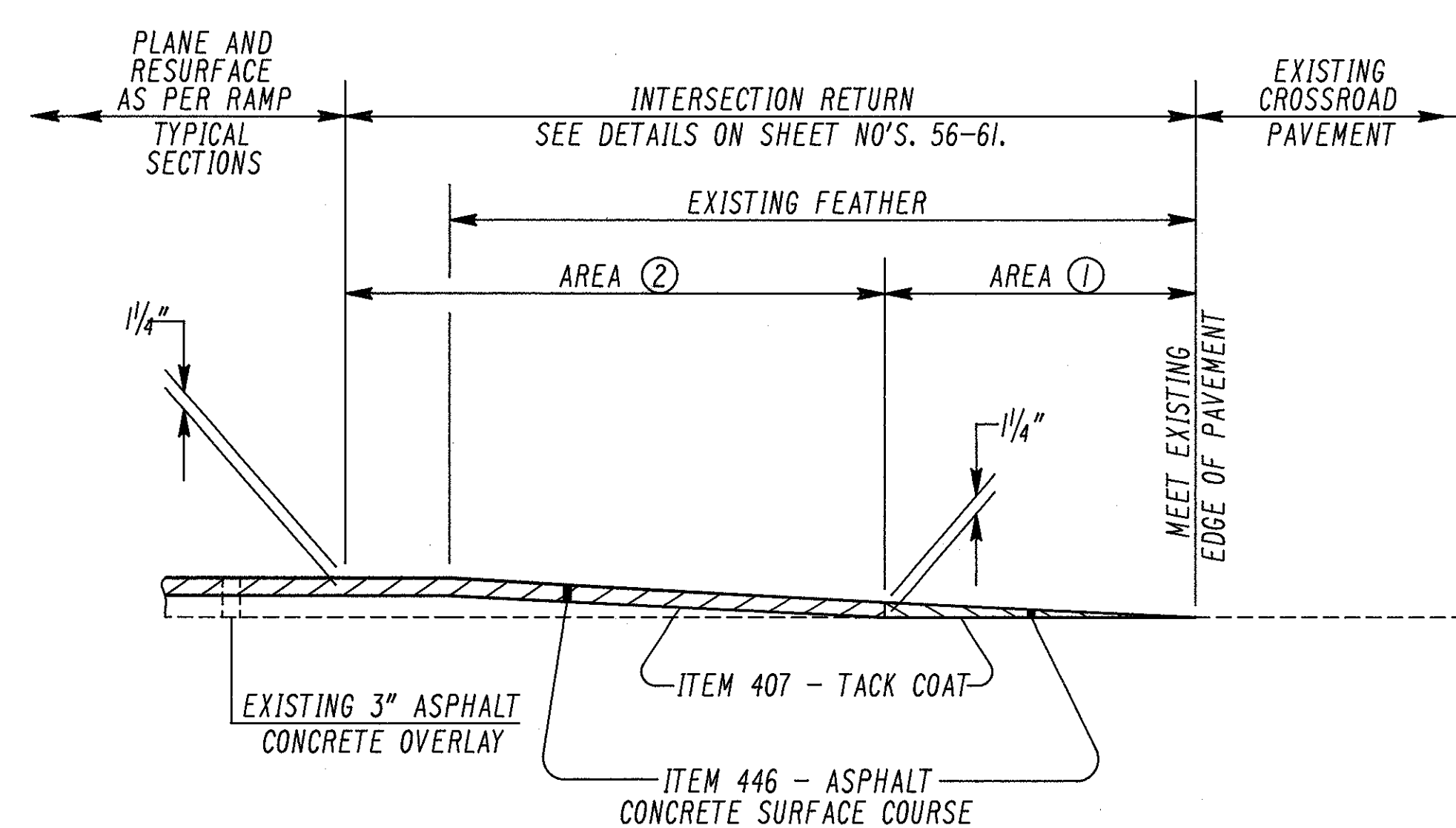
PAVEMENT TRANSITION AT EAST END OF RESURFACING
(WESTBOUND LANES ONLY)
(NOT TO SCALE)



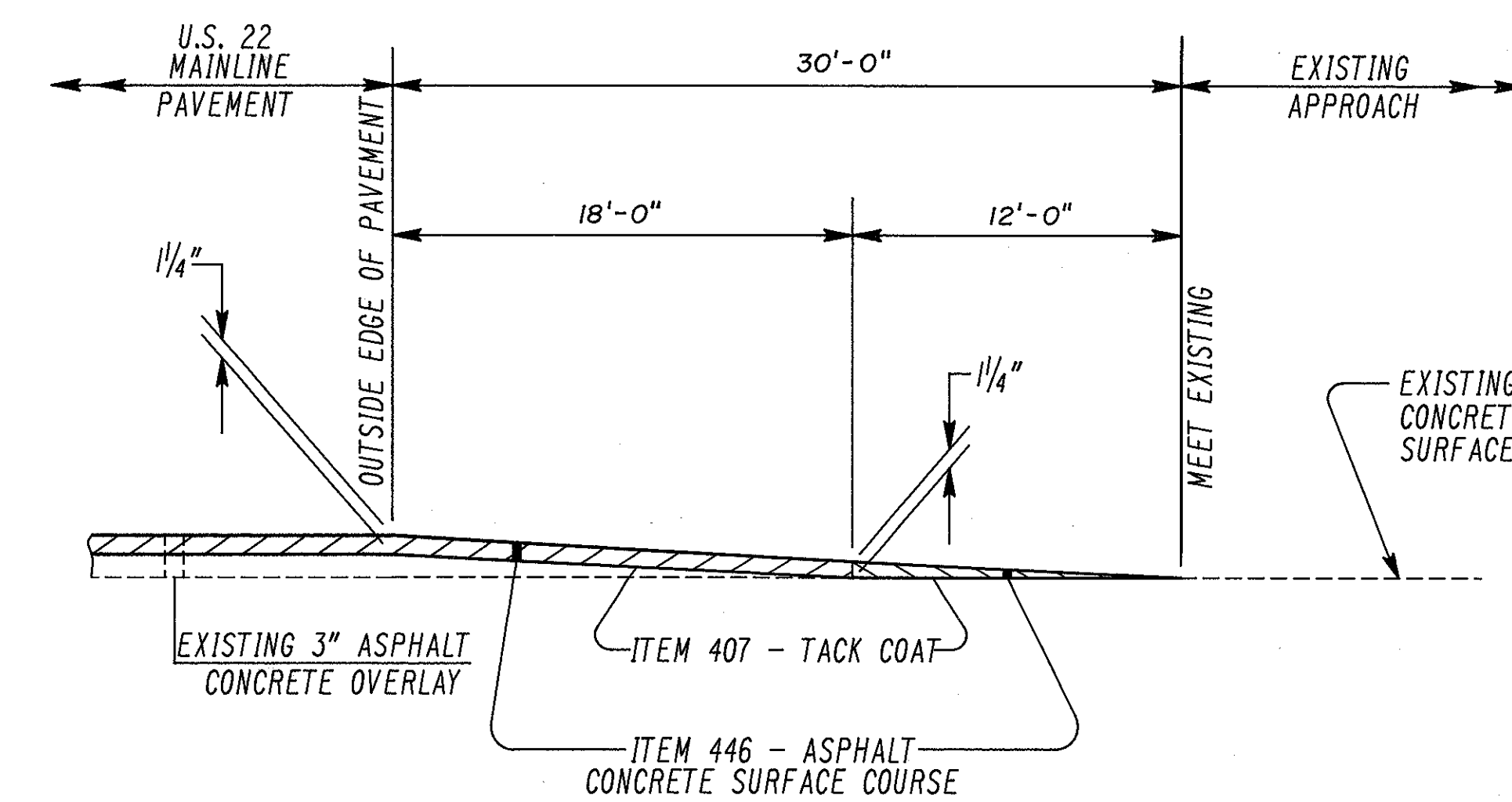
PAVEMENT TRANSITION AT STRUCTURES
(NOT TO SCALE)



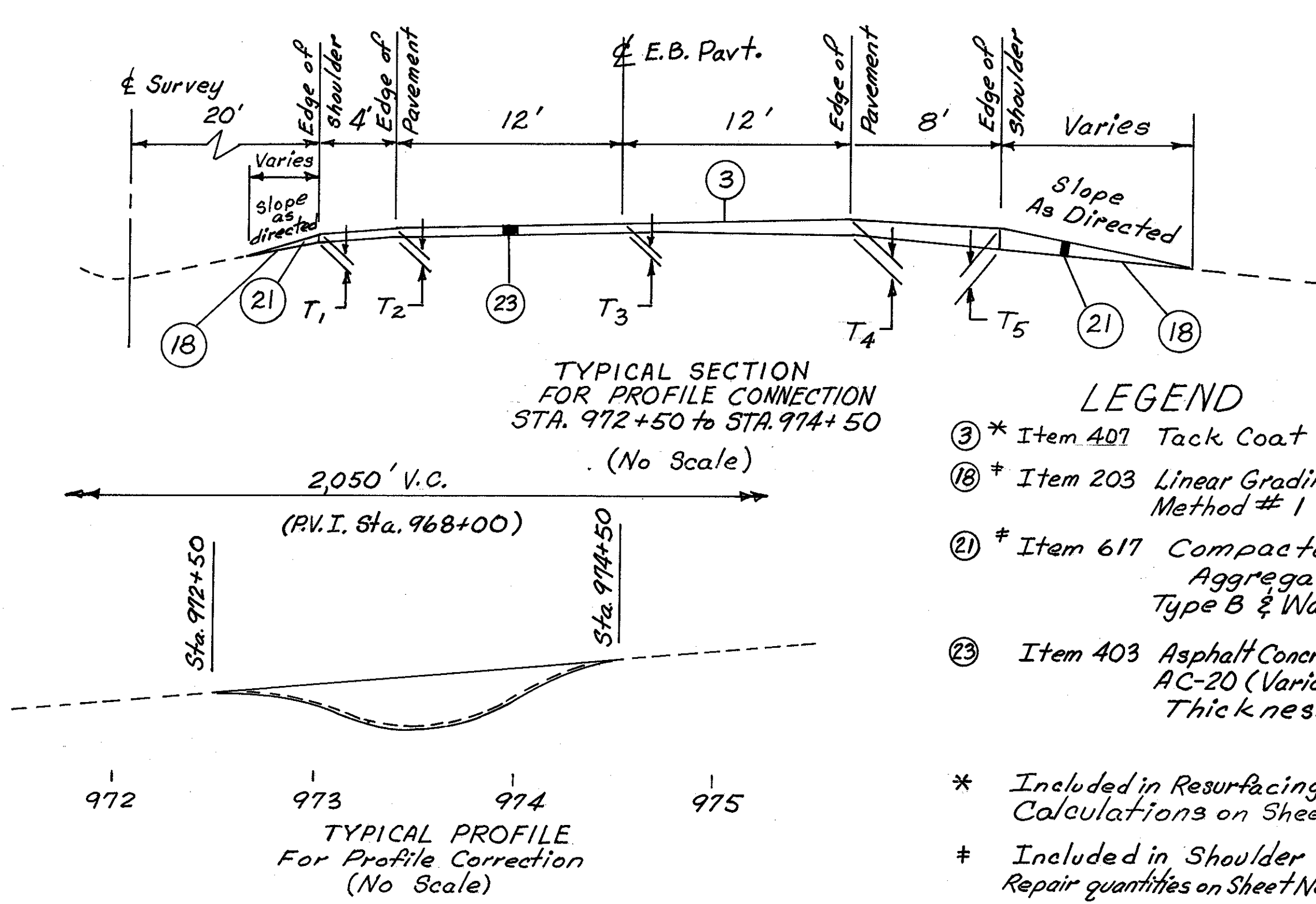
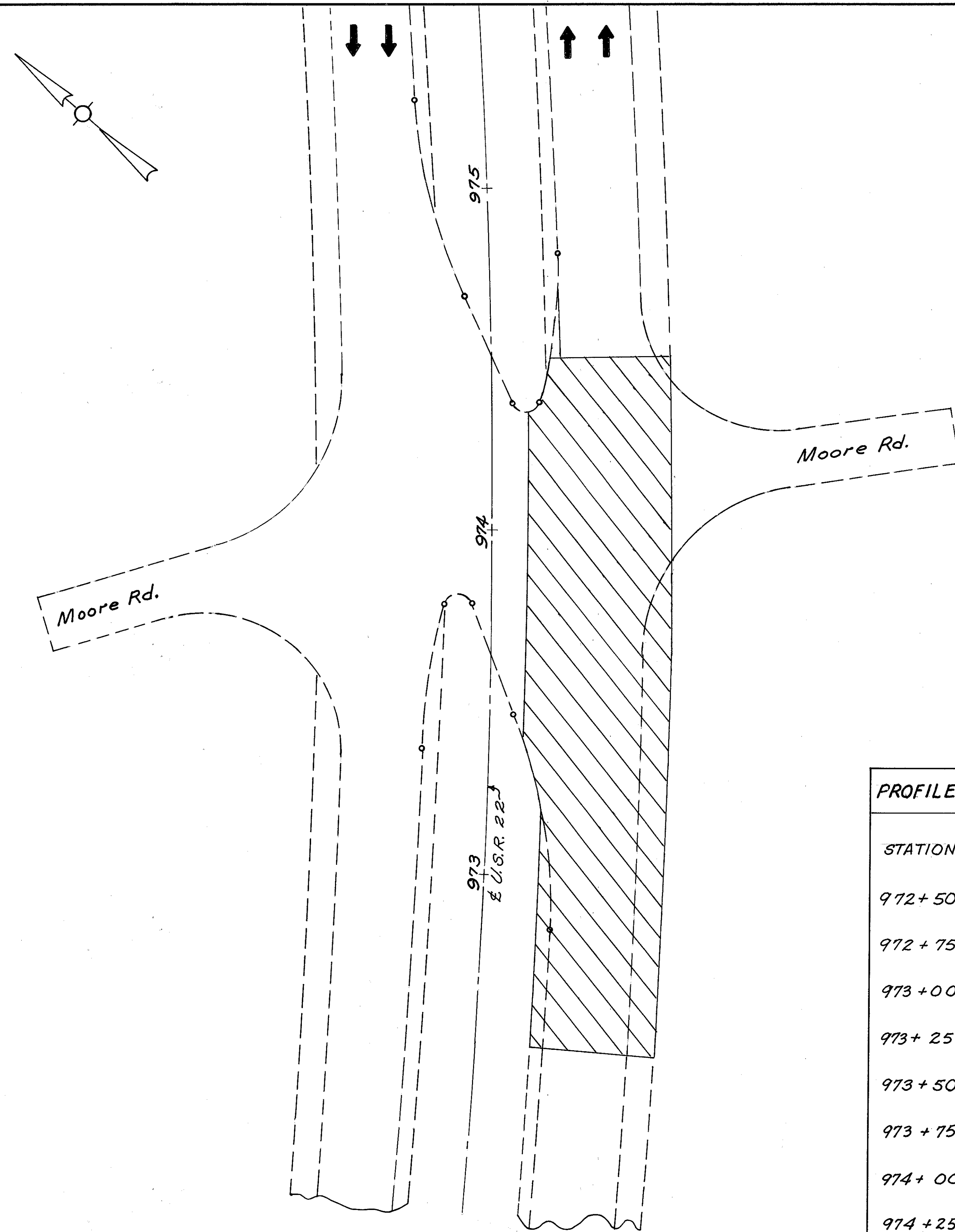
PAVEMENT TRANSITION AT APPROACH MEDIAN CROSS OVERS
STA. 1306+42.00
STA. 1333+38.45
(NOT TO SCALE)



PAVEMENT TRANSITION AT RAMP INTERSECTIONS
(NOT TO SCALE)



PAVEMENT TRANSITION AT APPROACH INTERSECTIONS
(NOT TO SCALE)



- LEGEND
- (3) * Item 401 Tack Coat
 - (18) * Item 203 Linear Grading Method # 1
 - (21) * Item 617 Compacted Aggregate, Type B & Water
 - (23) Item 403 Asphalt Concrete AC-20 (Variable Thickness)
- * Included in Resurfacing Calculations on Sheet No.'s 9 & 10.
- # Included in Shoulder Repair quantities on Sheet No. 63.
- ▨ Profile Correction Area

PROFILE CORRECTION TABLE					
STATION	T ₁	T ₂	T ₃	T ₄	T ₅
	Ft.	Ft.	Ft.	Ft.	Ft.
972+50	0	0	0	0	0
972+75	.02	.12	.05	.04	.34
973+00	.26	.45	.24	.21	.40
973+25	.77	.65	.47	.56	.94
973+50	.53	.37	.37	.51	.77
973+75	.16	.20	.20	.35	.53
974+00	.10	.08	.11	.22	.12
974+25	.01	0	.08	.08	0
974+50	0	0	0	0	0

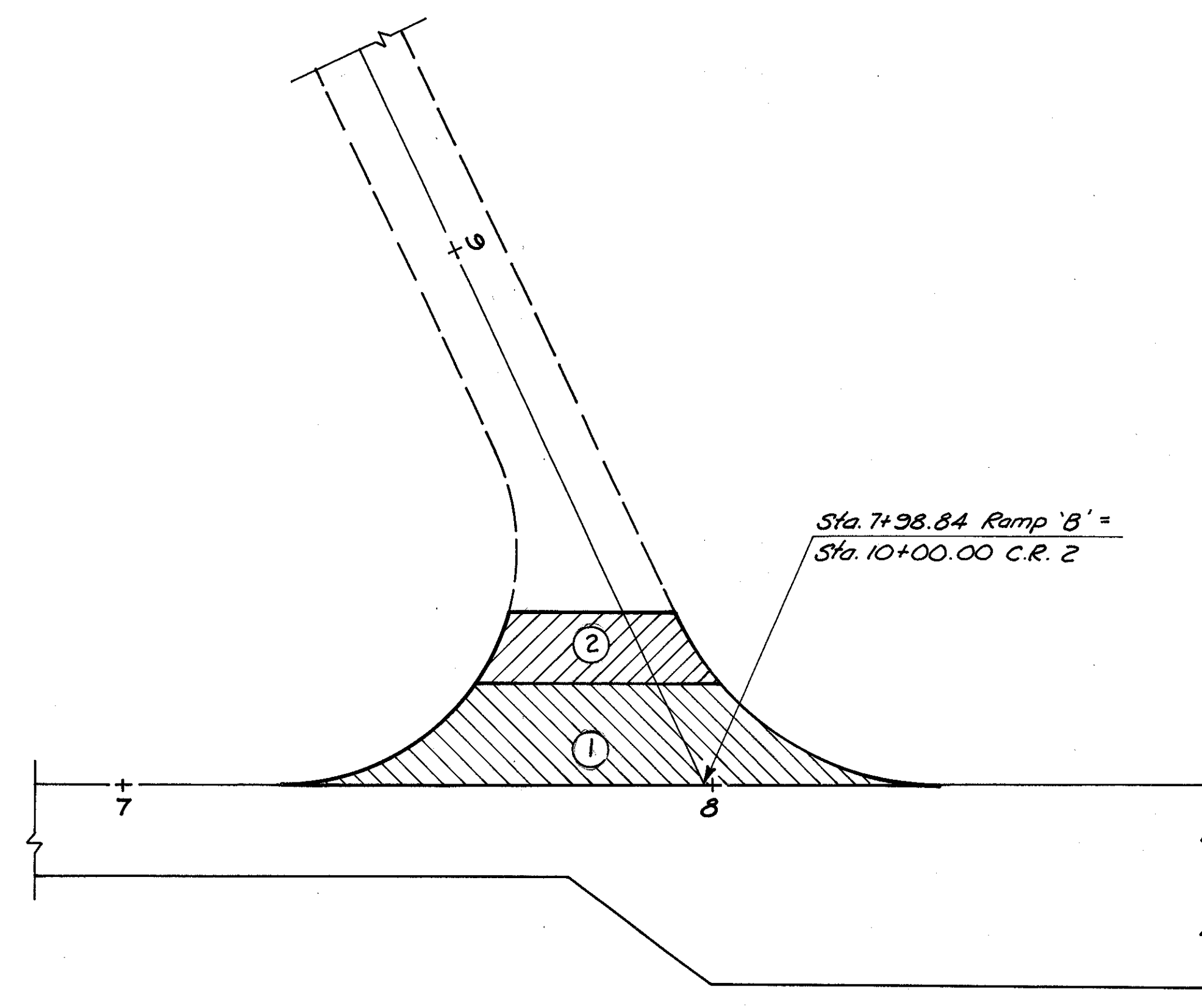
PROFILE CORRECTION

This work shall consist of correcting the existing US 22 profile as shown on this sheet by spreading and compacting the variable thickness 403 Asphalt Concrete at the locations and to the depths shown in the table, prior to pavement planing and resurfacing operations.

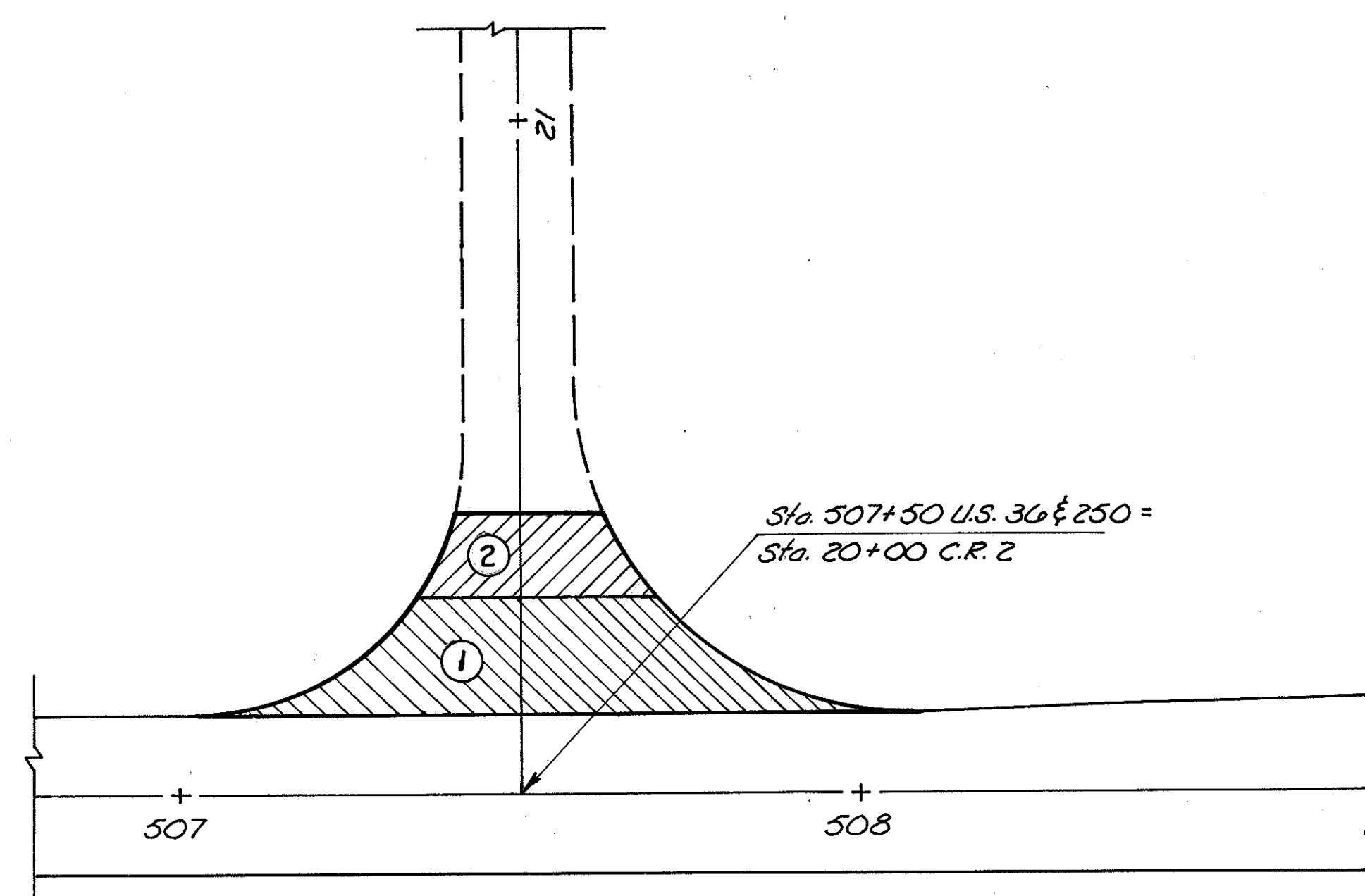
Any full depth pavement repairs from Sta. 972+50 to Sta. 975+50 shall be completed prior to the profile correction.

The following quantity has been included in the General Summary for the purpose of correcting the profile as described above:

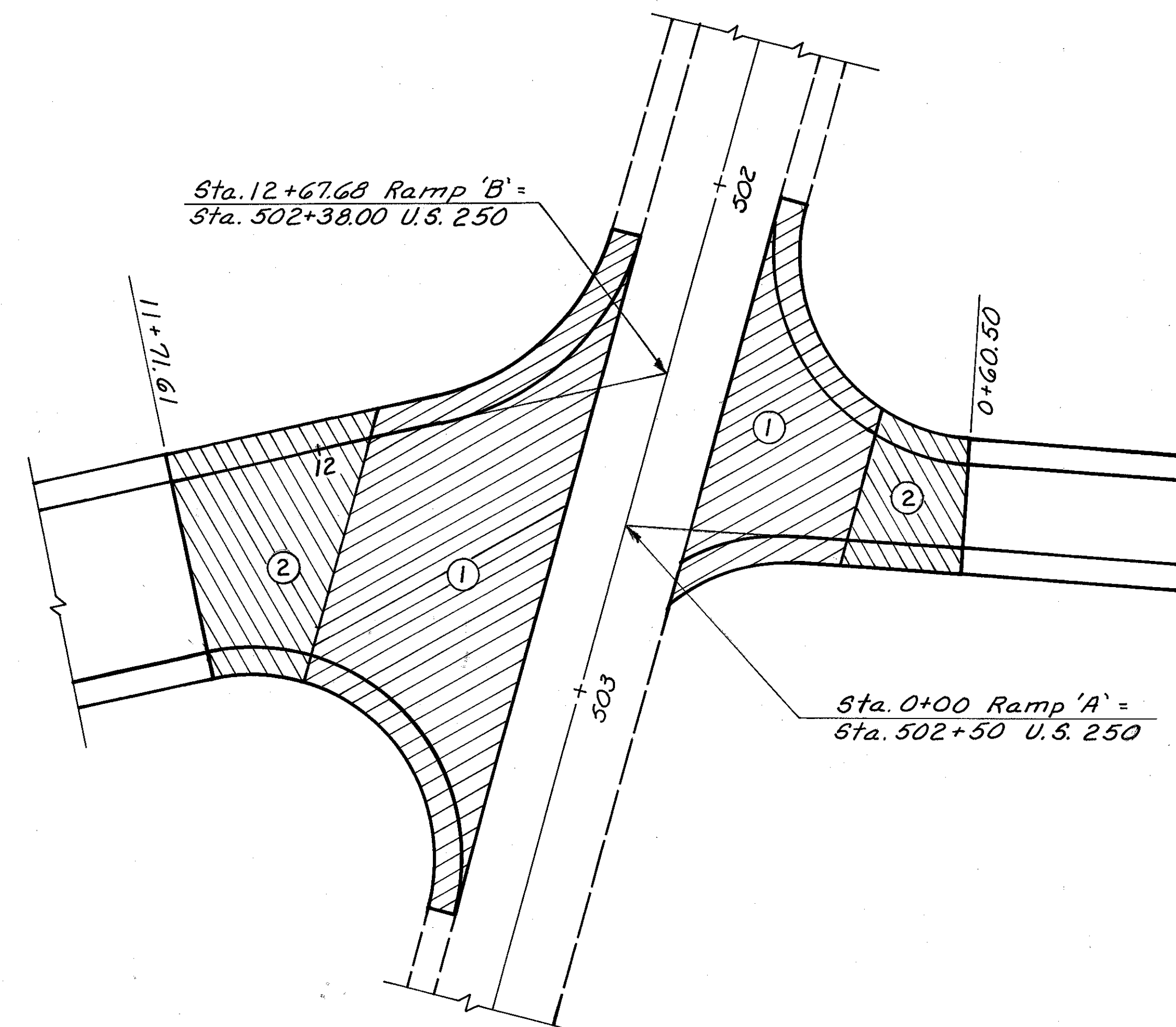
Item 403 - Asphalt Concrete, AC-20 -- 65 Cu. Yd.



INTERSECTION DETAIL
RAMP 'B' & C.R. 2 (NORTH)

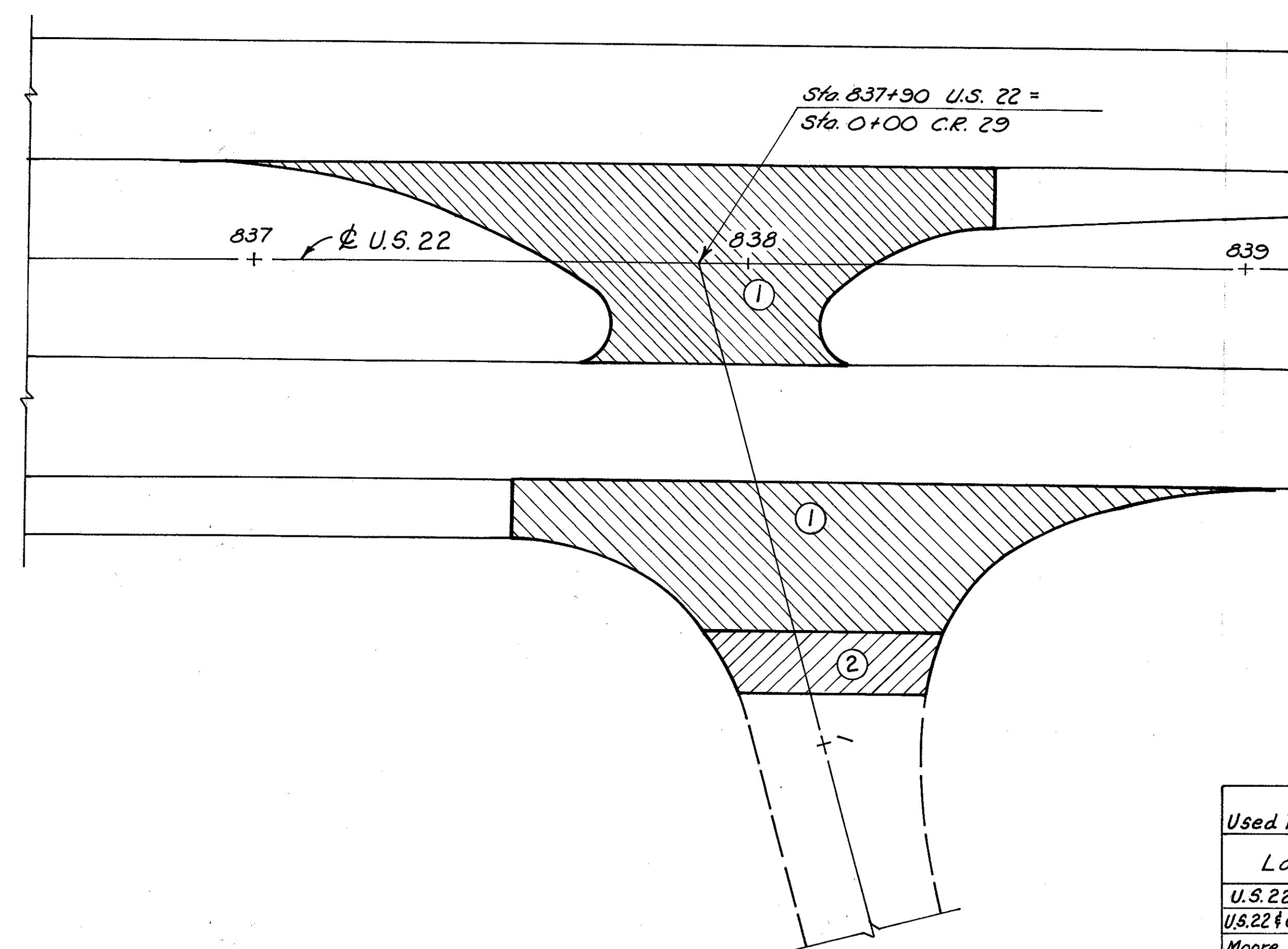


INTERSECTION DETAIL
U.S. 250 & C.R. 2 (SOUTH)



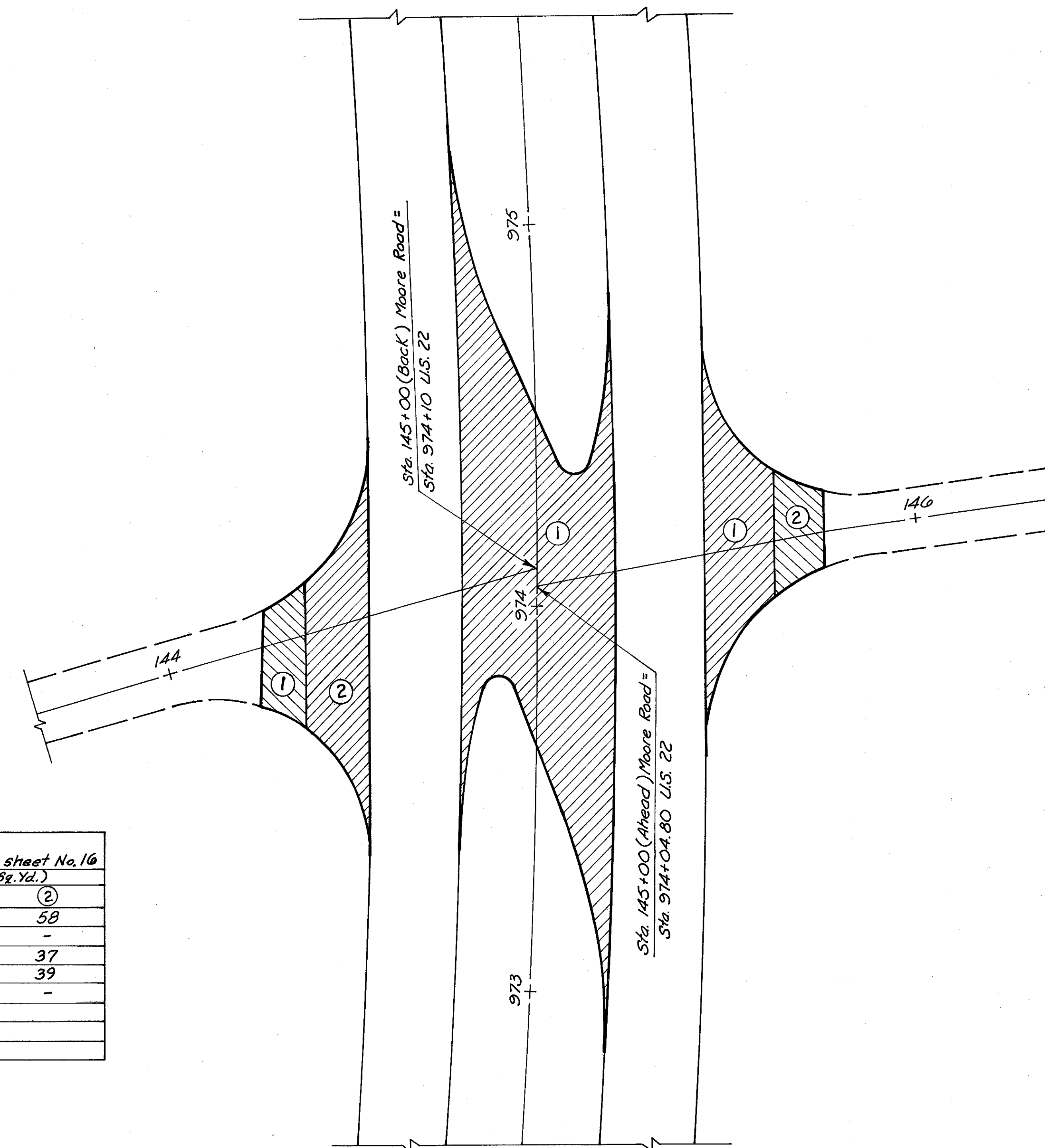
INTERSECTION DETAIL
U.S. 250 With RAMPS A & B

Planimetered Areas Used in Resurfacing Calculations on sheet No. 13		
Location	Area (Sq. Yd.)	
	①	②
Ramp 'B' & C.R. 2 (North)	97	37
U.S. 250 & C.R. 2 (South)	92	37
U.S. 250 & Ramp 'A'	165	62
U.S. 250 & Ramp 'B'	355	146

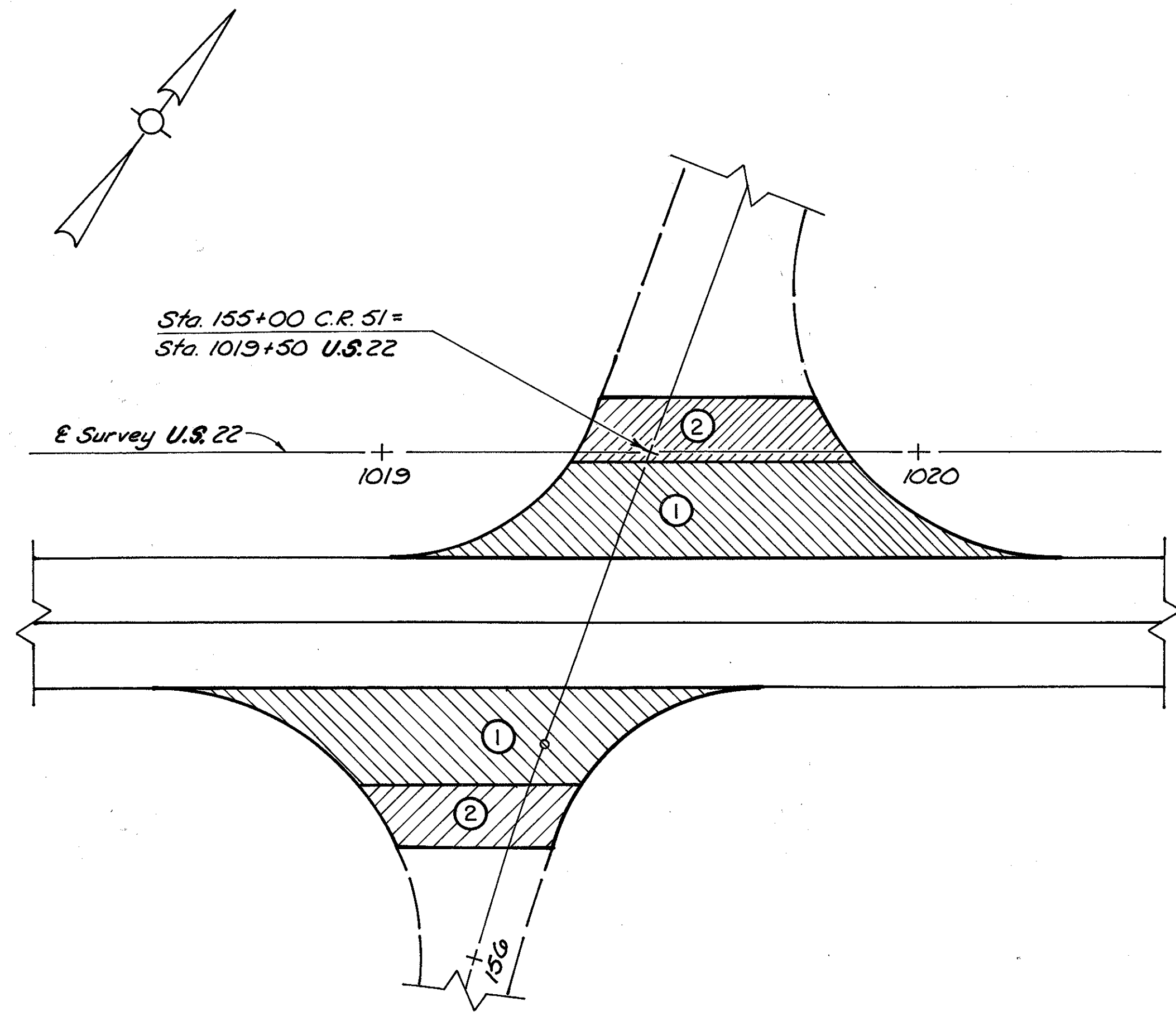


INTERSECTION DETAIL
U.S. 22 & C.R. 29

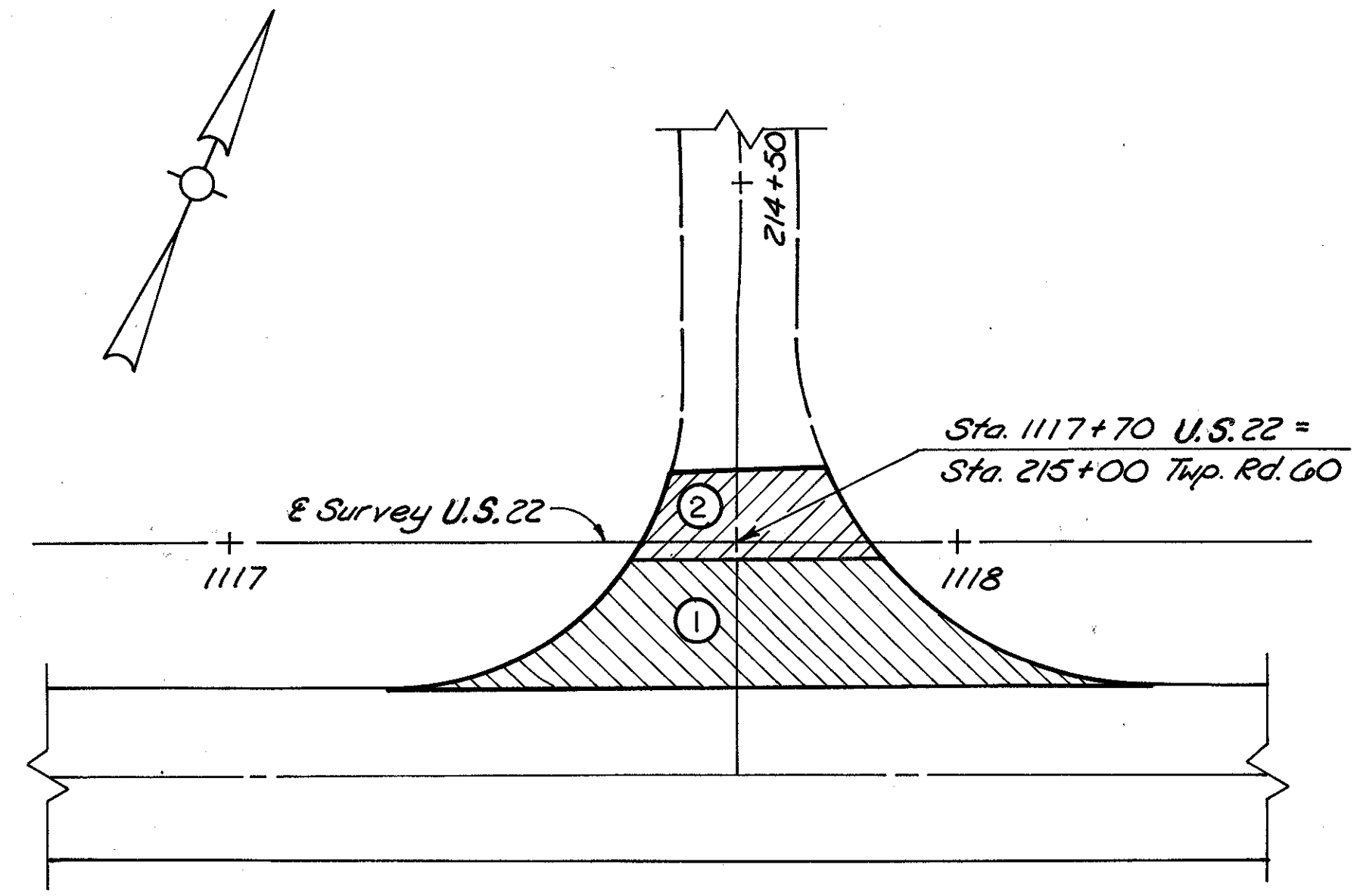
Planimetered Areas Used in Resurfacing Calculations on sheet No. 16		
Location	Area (Sq. Yd.)	
	(1)	(2)
U.S. 22 & C.R. 29	290	58
U.S. 22 & C.R. 29 Crossover	352	-
Moore Road (North)	114	37
Moore Road (South)	113	39
Moore Road Crossover	499	-



INTERSECTION DETAIL
U.S. 22 & MOORE ROAD

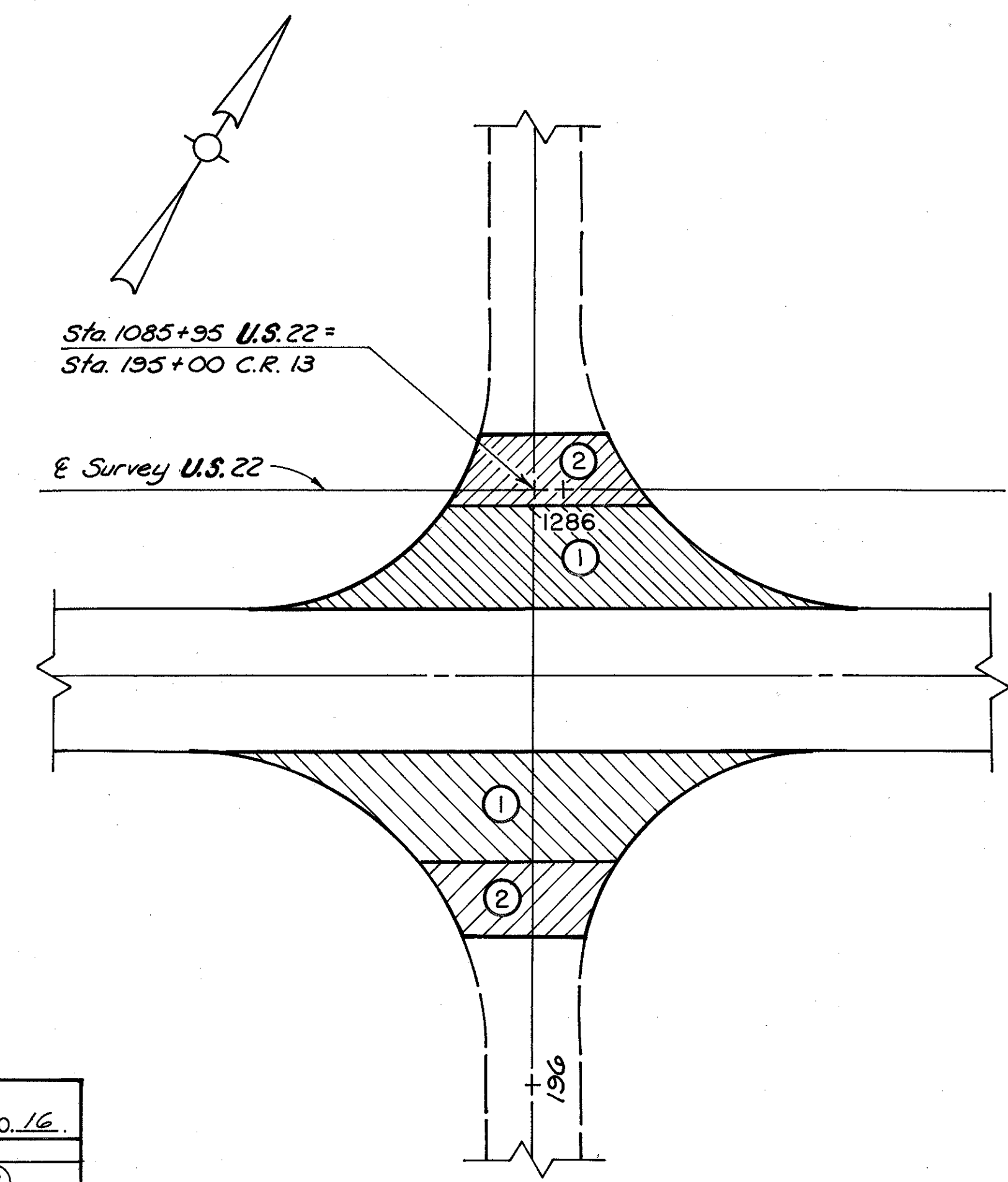


INTERSECTION DETAIL
U.S. 22 & C.R. 51

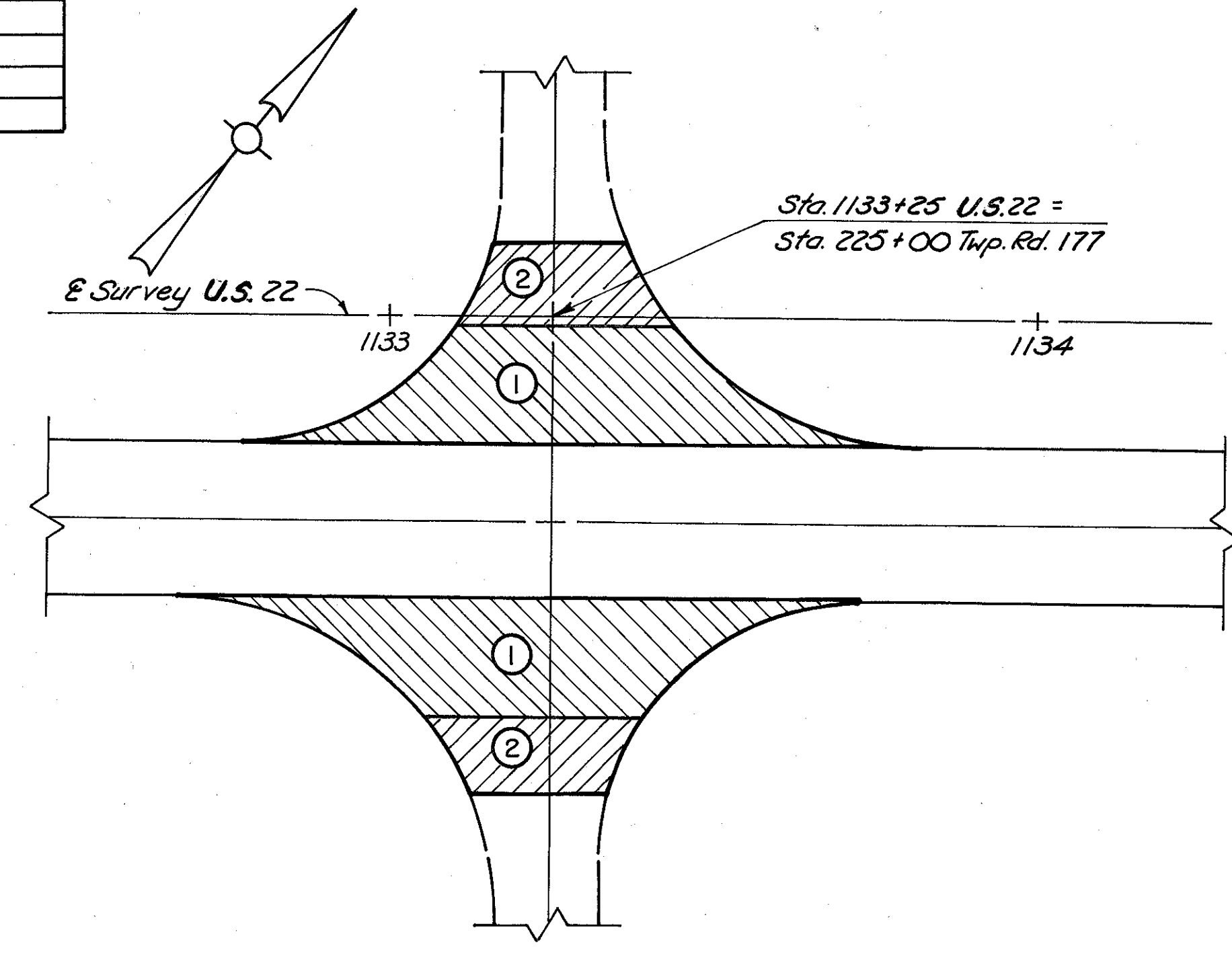


INTERSECTION DETAIL
U.S. 22 & Twp. Rd. 60

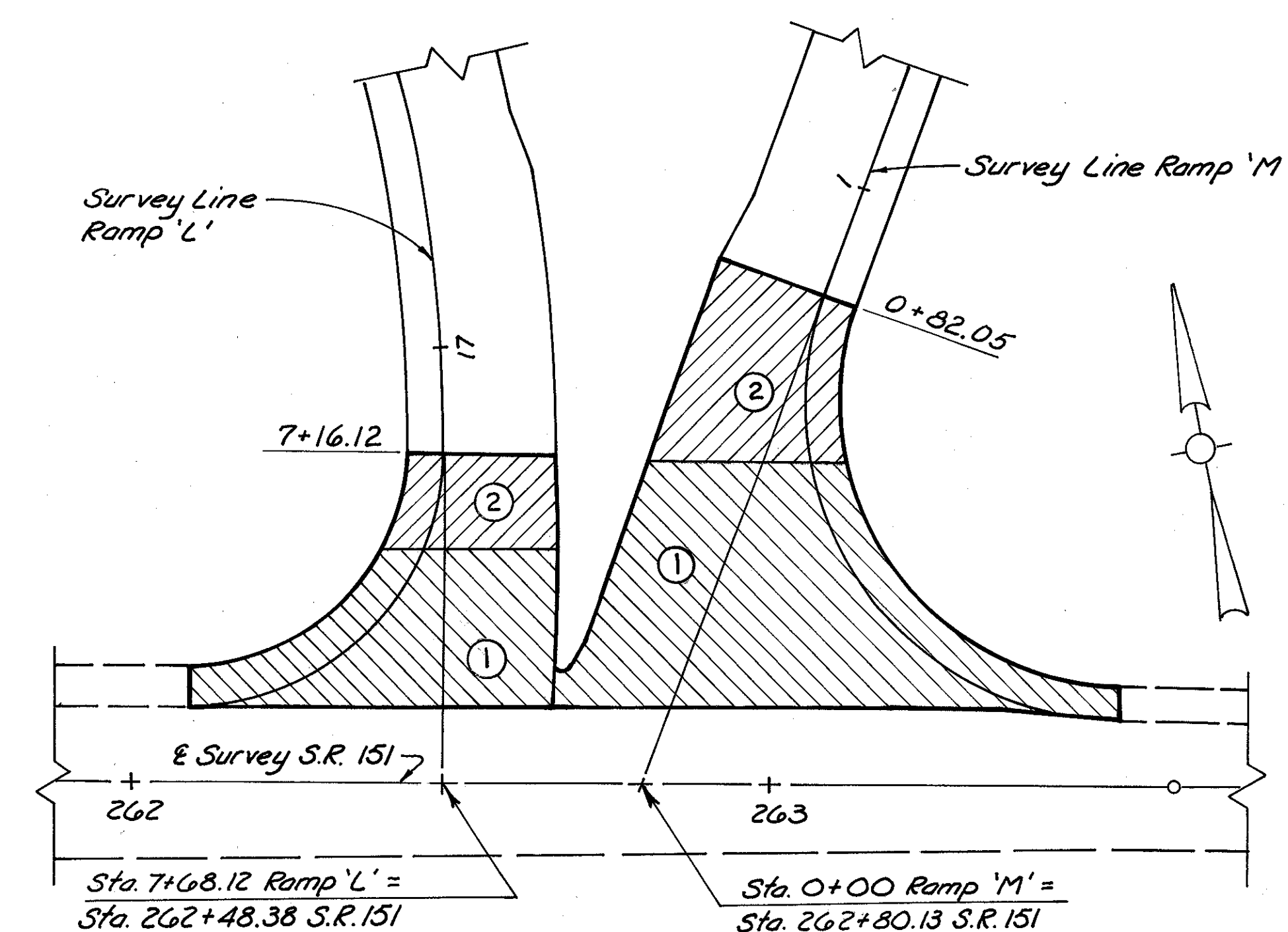
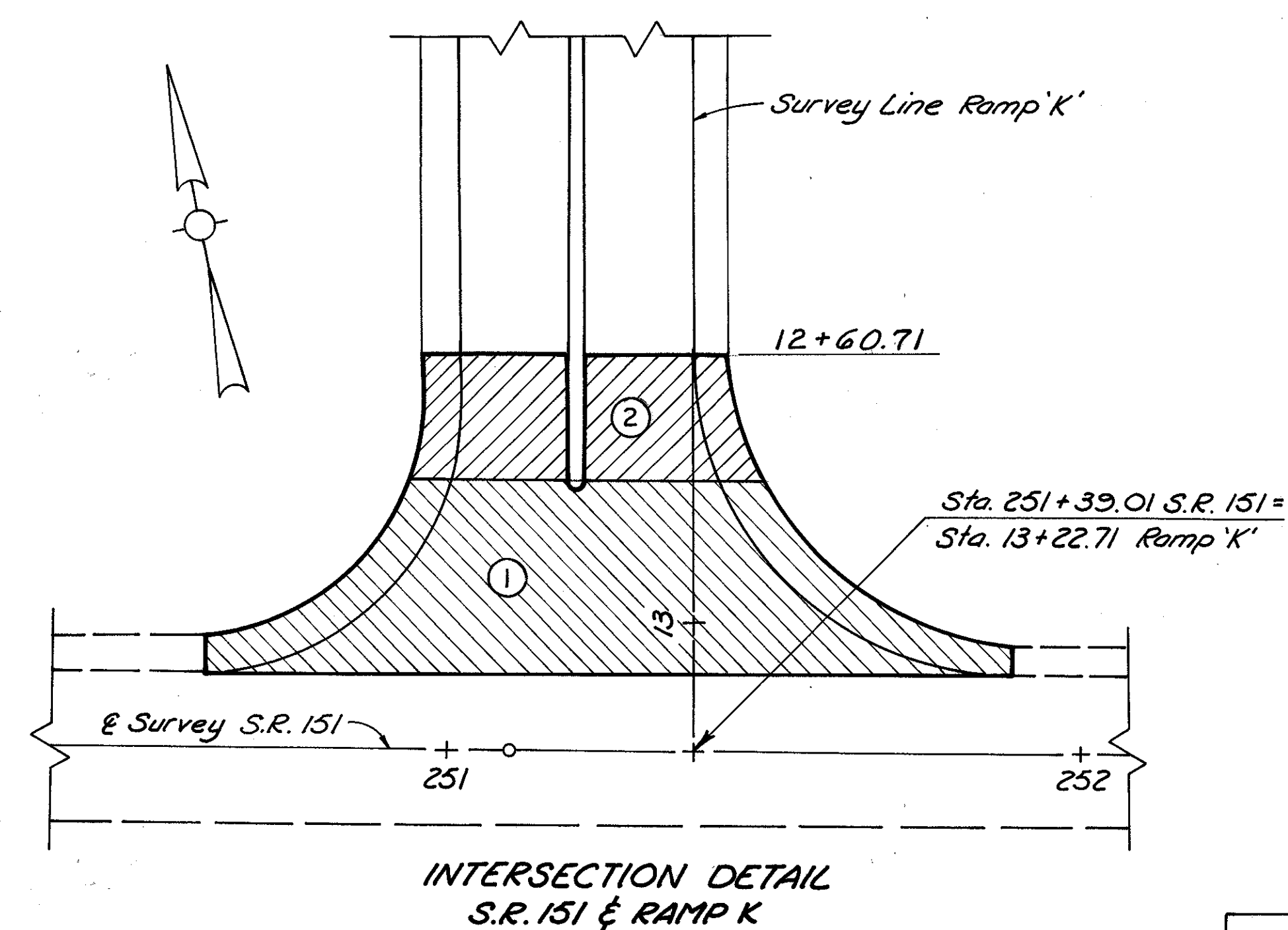
PLANIMETERED AREAS		
USED IN RESURFACING CALCULATIONS ON SHEET NO. 16.		
LOCATION	AREA (SQ. YD.)	
	①	②
C.R. 51 (NORTH)	157	62
C.R. 51 (SOUTH)	129	45
C.R. 13 (NORTH)	107	35
C.R. 13 (SOUTH)	113	37
TWP. RD. 60	110	39
TWP. RD. 177 (NORTH)	115	36
TWP. RD. 177 (SOUTH)	116	36



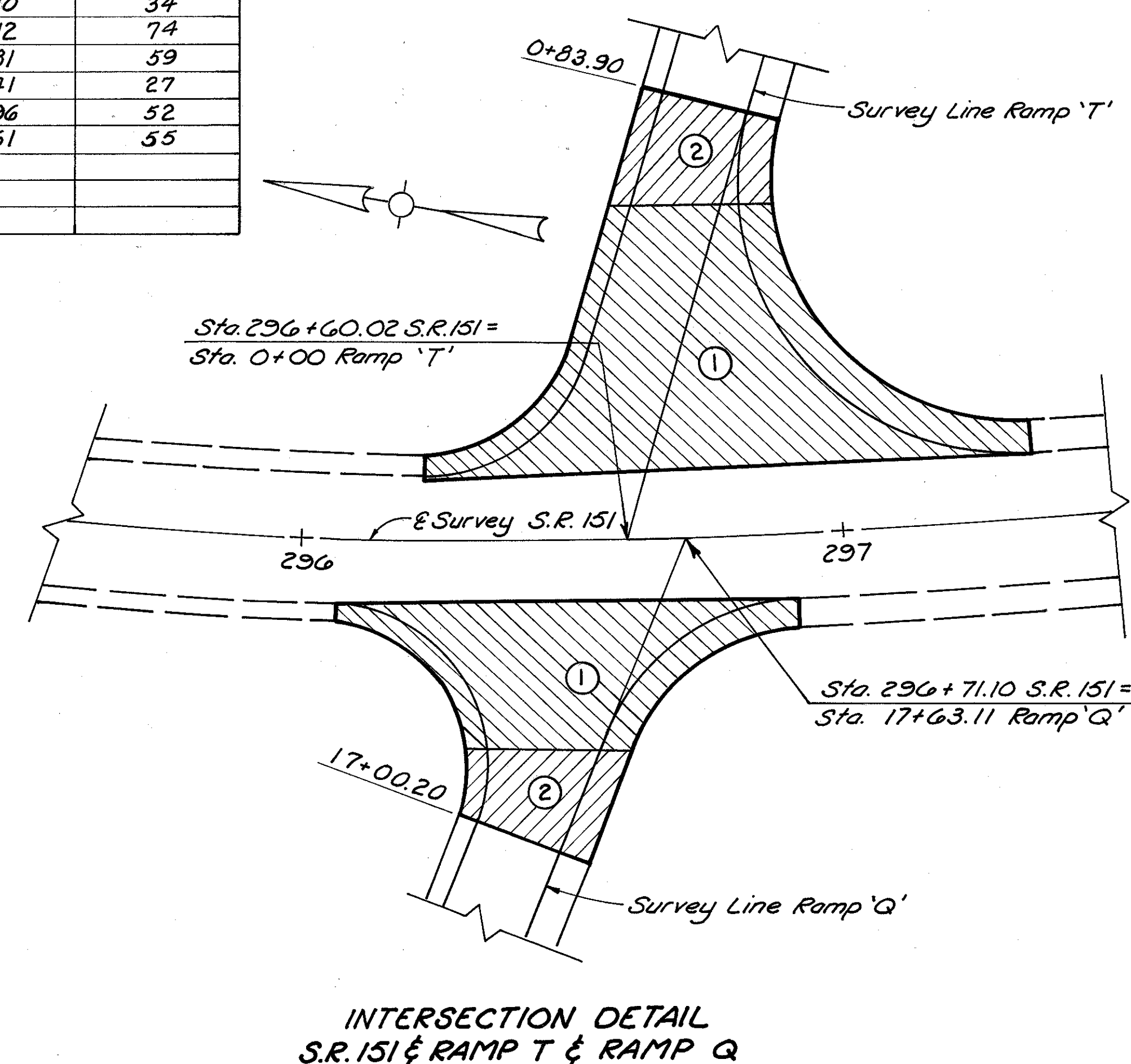
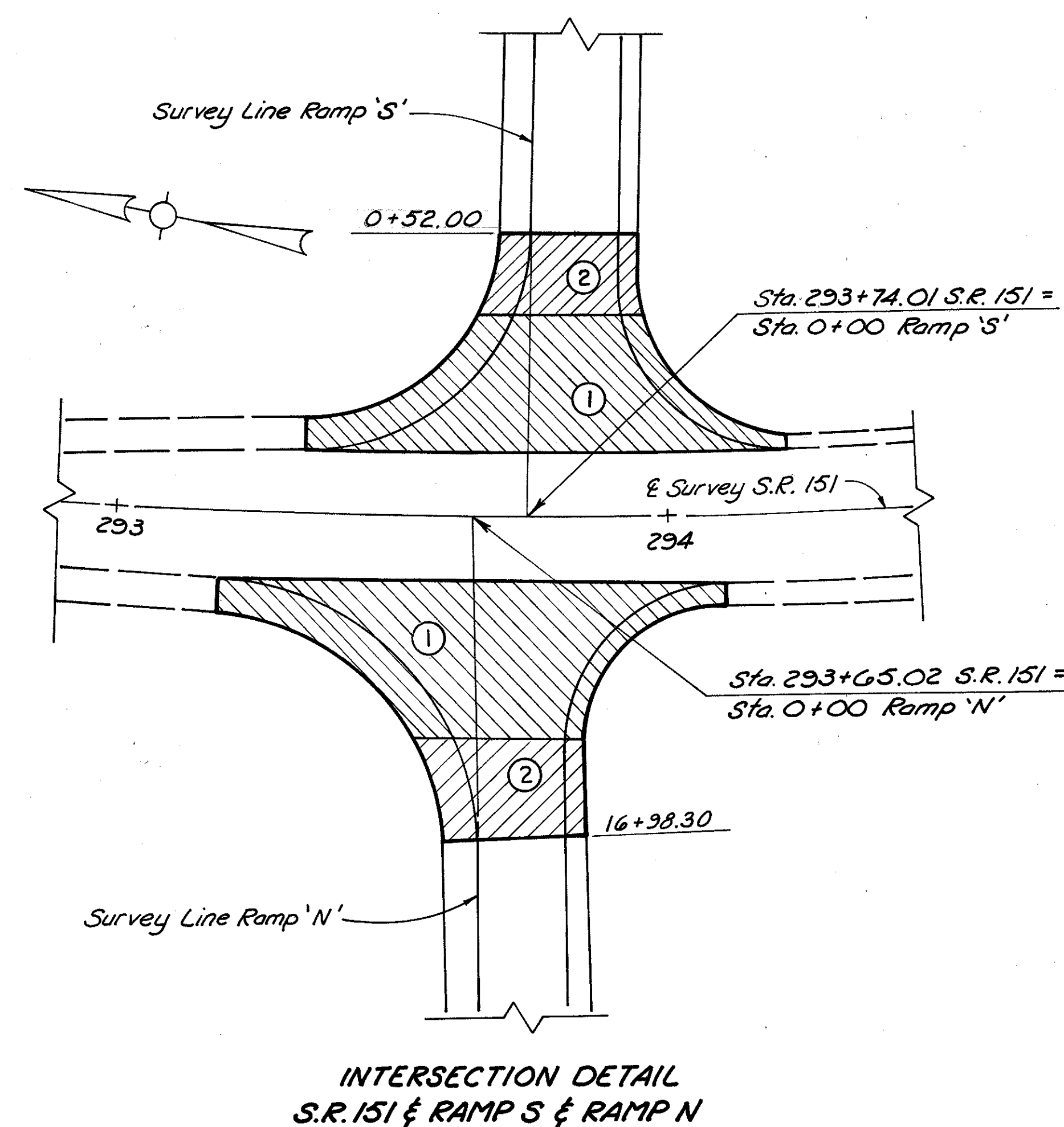
INTERSECTION DETAIL
U.S. 22 & C.R. 13

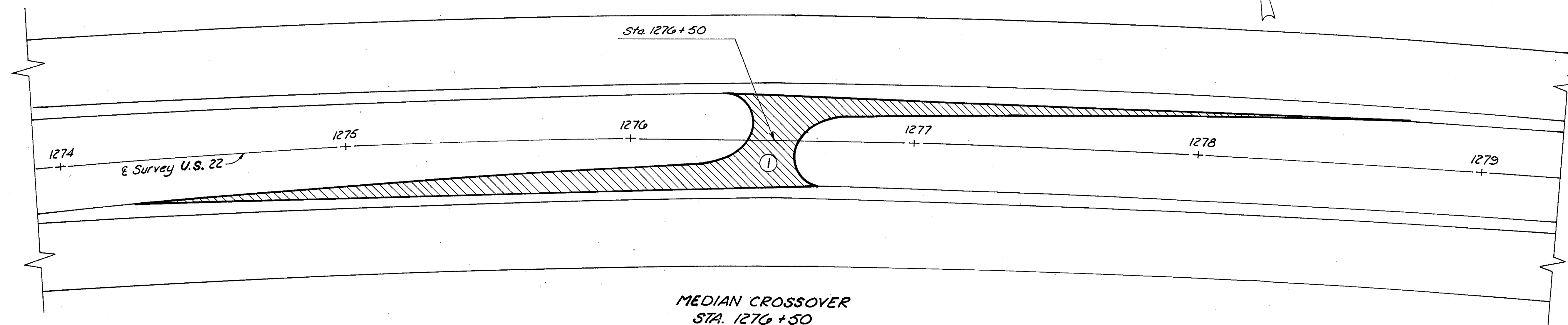


INTERSECTION DETAIL
U.S. 22 & Twp. Rd. 177

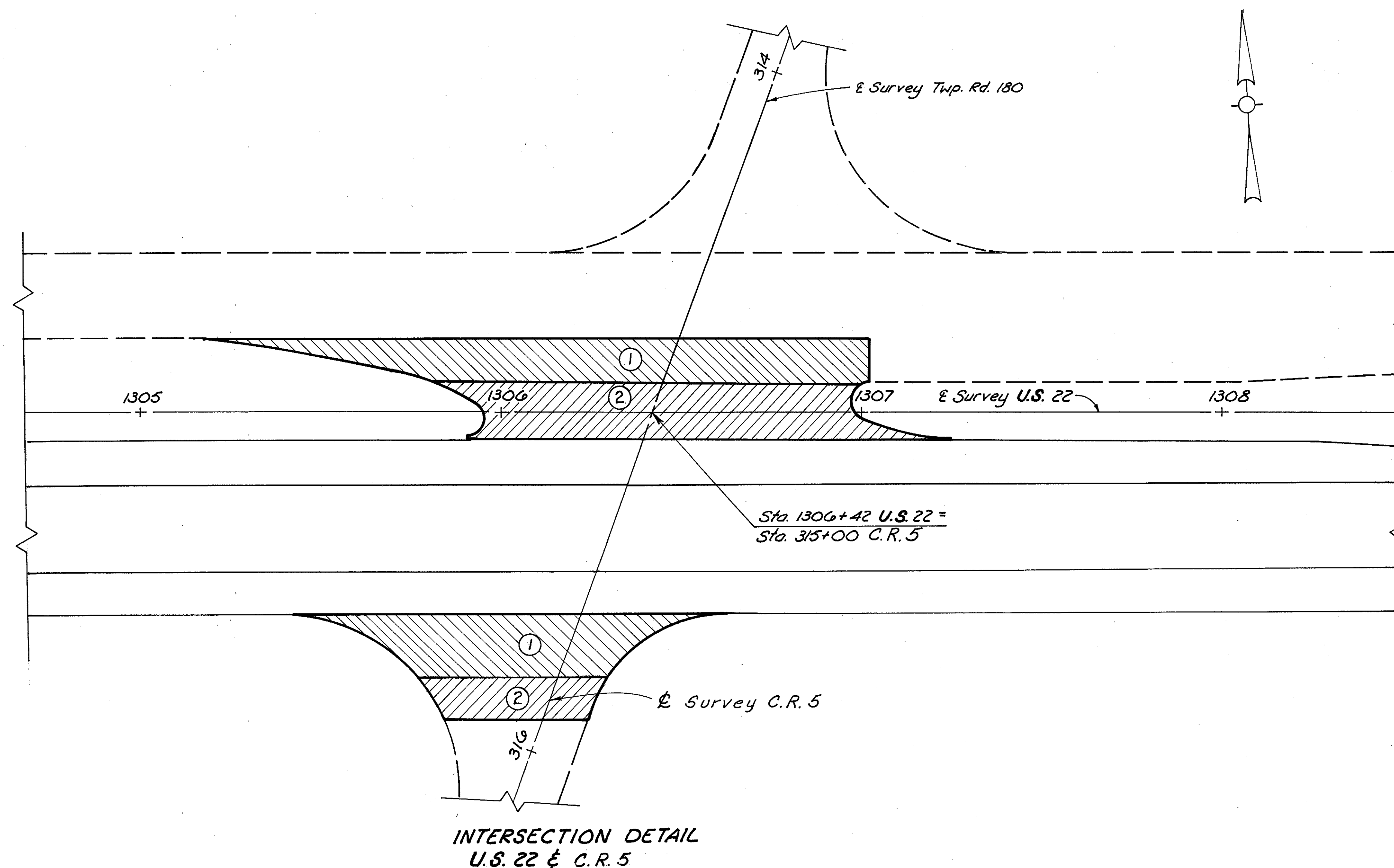


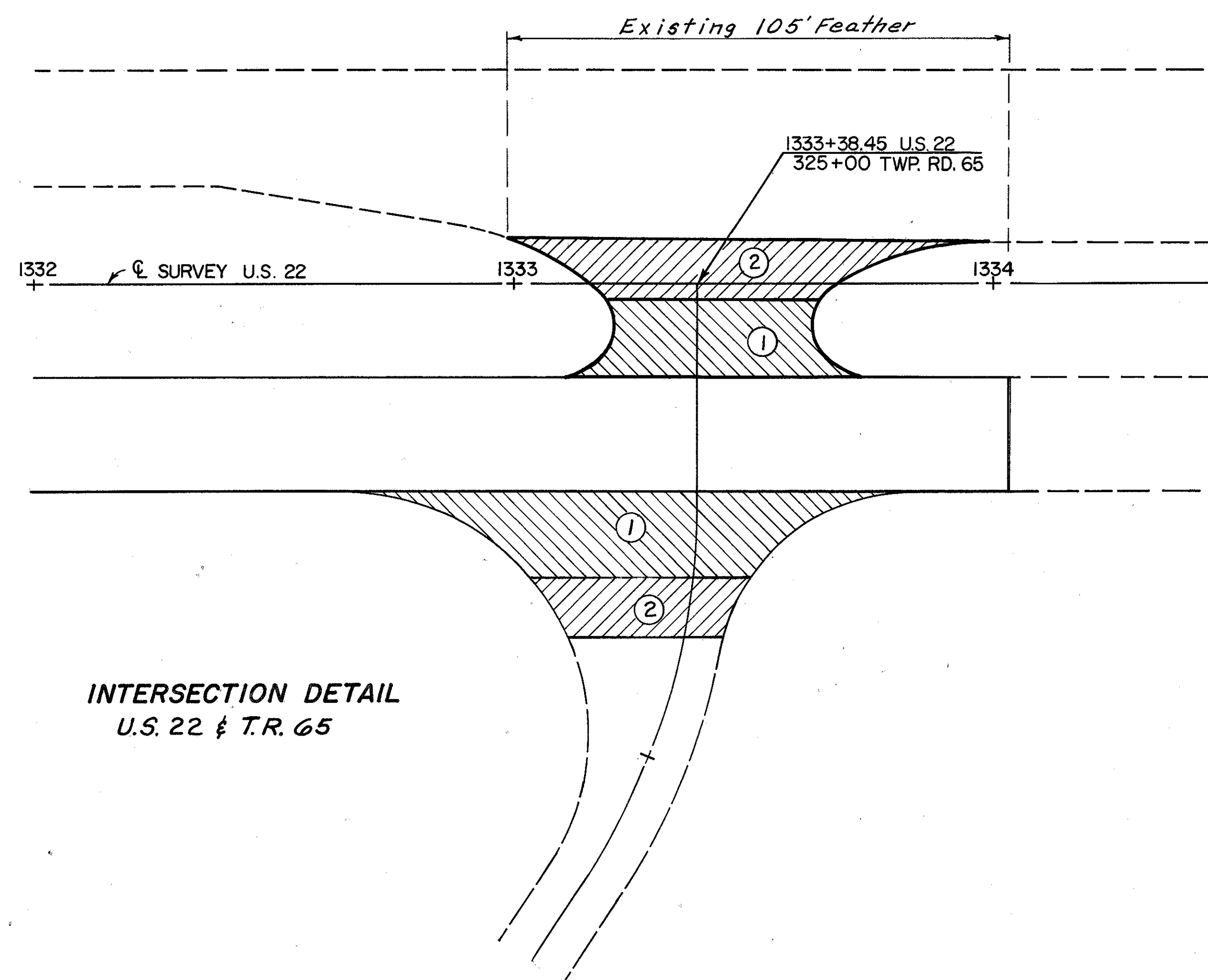
Planimetered Areas Used in Resurfacing Calculations on sheet 115.03/115.04		
Location	Area (Sq. Yd.)	
	①	②
S.R. 151 & Ramp 'K'	274	100
S.R. 151 & Ramp 'L'	110	34
S.R. 151 & Ramp 'M'	212	74
S.R. 151 & Ramp 'N'	181	59
S.R. 151 & Ramp 'S'	141	27
S.R. 151 & Ramp 'T'	296	52
S.R. 151 & Ramp 'Q'	161	55





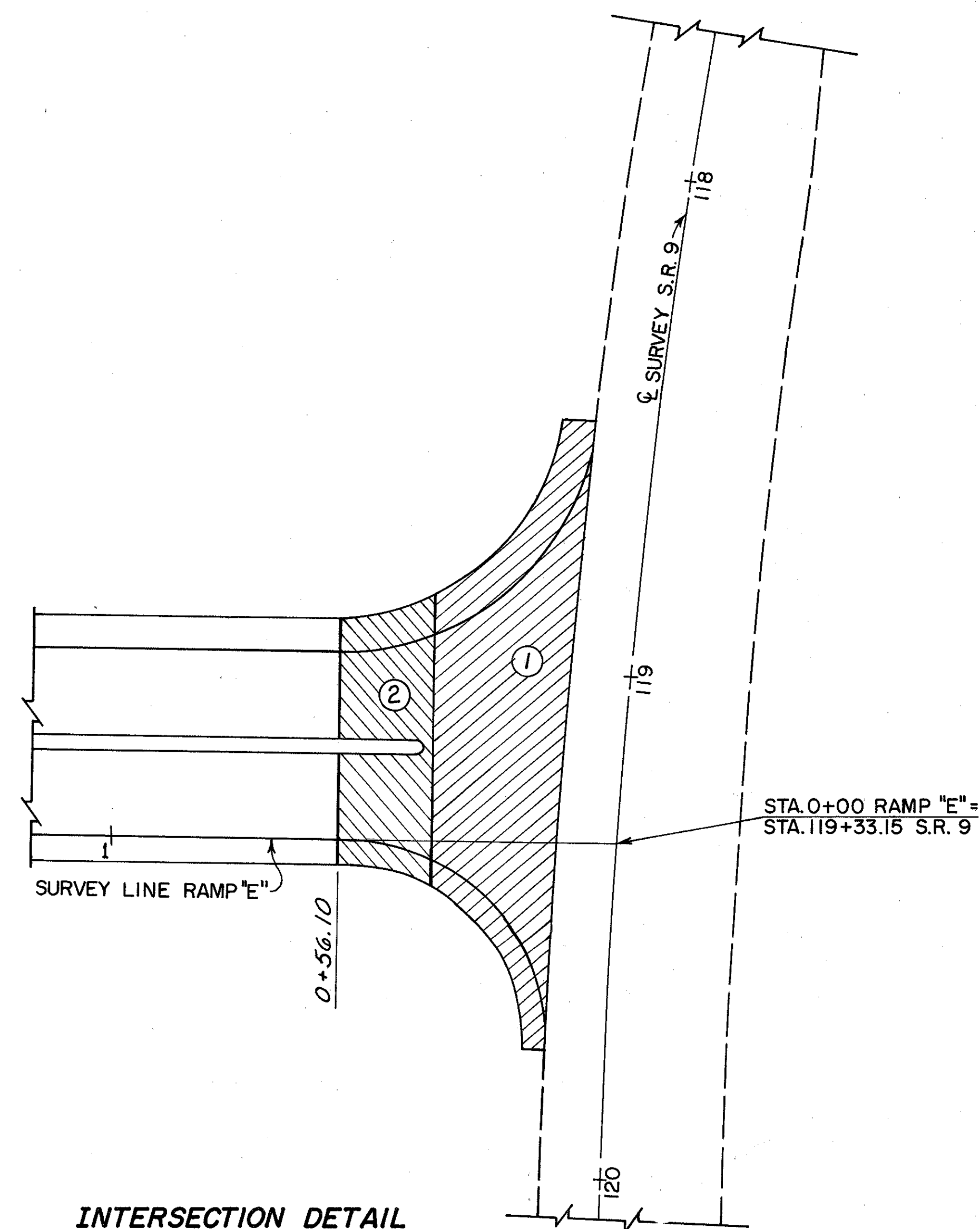
Planimetered Areas Used in Resurfacing Calculations on sheet No. 16		
Location	Area (Sq. Yd.)	
	①	②
Sta. 1276+50 Crossover	279	-
C.R. 5	147	59
C.R. 5 Crossover	210	194



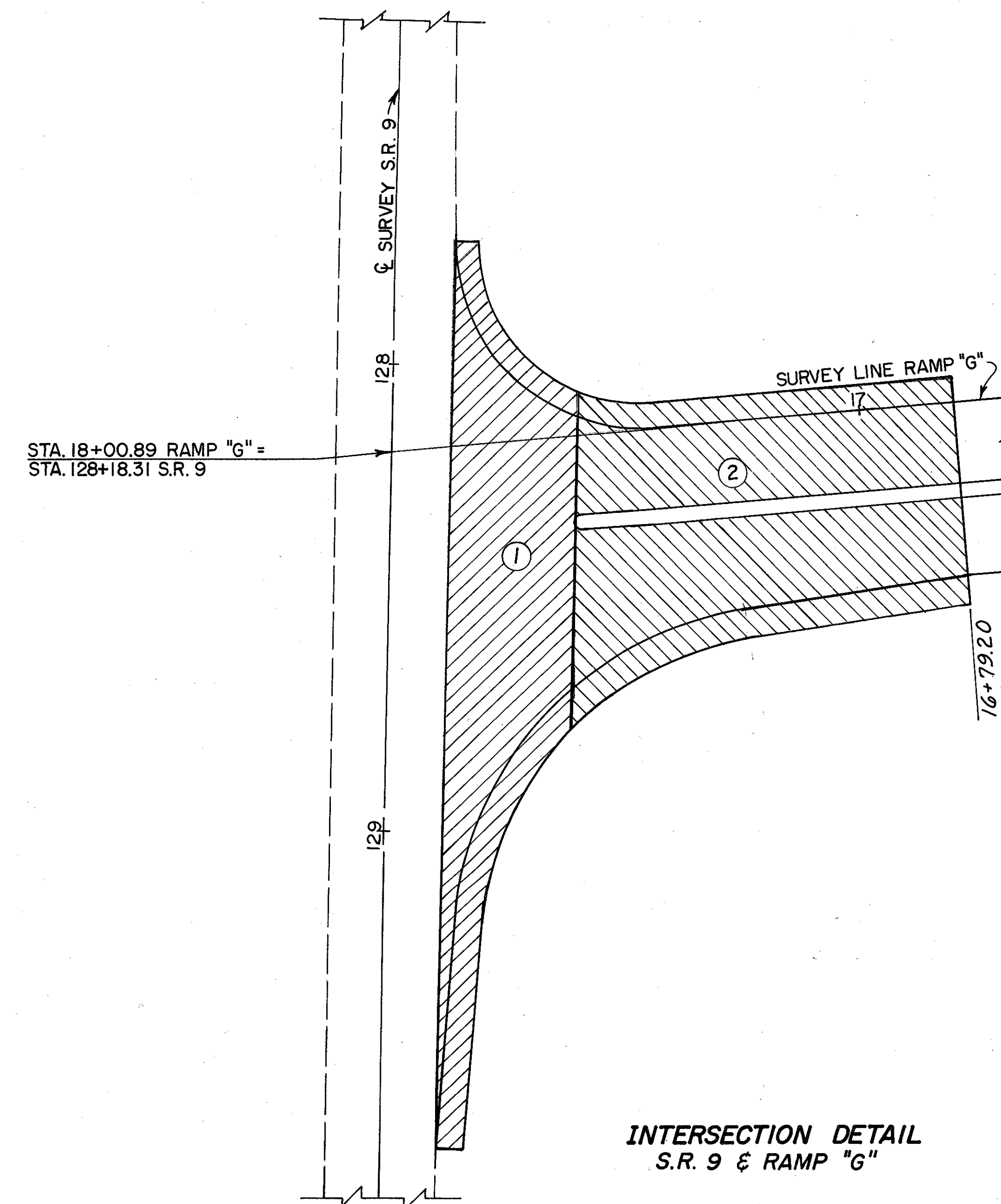


INTERSECTION DETAIL
U.S. 22 & T.R. 65

Planimetered Areas Used in Resurfacing Calculations on sheet Nos. 13 & 16		
Location	①	②
Twp. Rd. 65	122	42
Twp. Rd. 65 Crossover	86	74
S.R. 9 & Ramp 'E'	239	100
S.R. 9 & Ramp 'G'	255	459



INTERSECTION DETAIL
S.R. 9 & RAMP "E"



INTERSECTION DETAIL
S.R. 9 & RAMP "G"

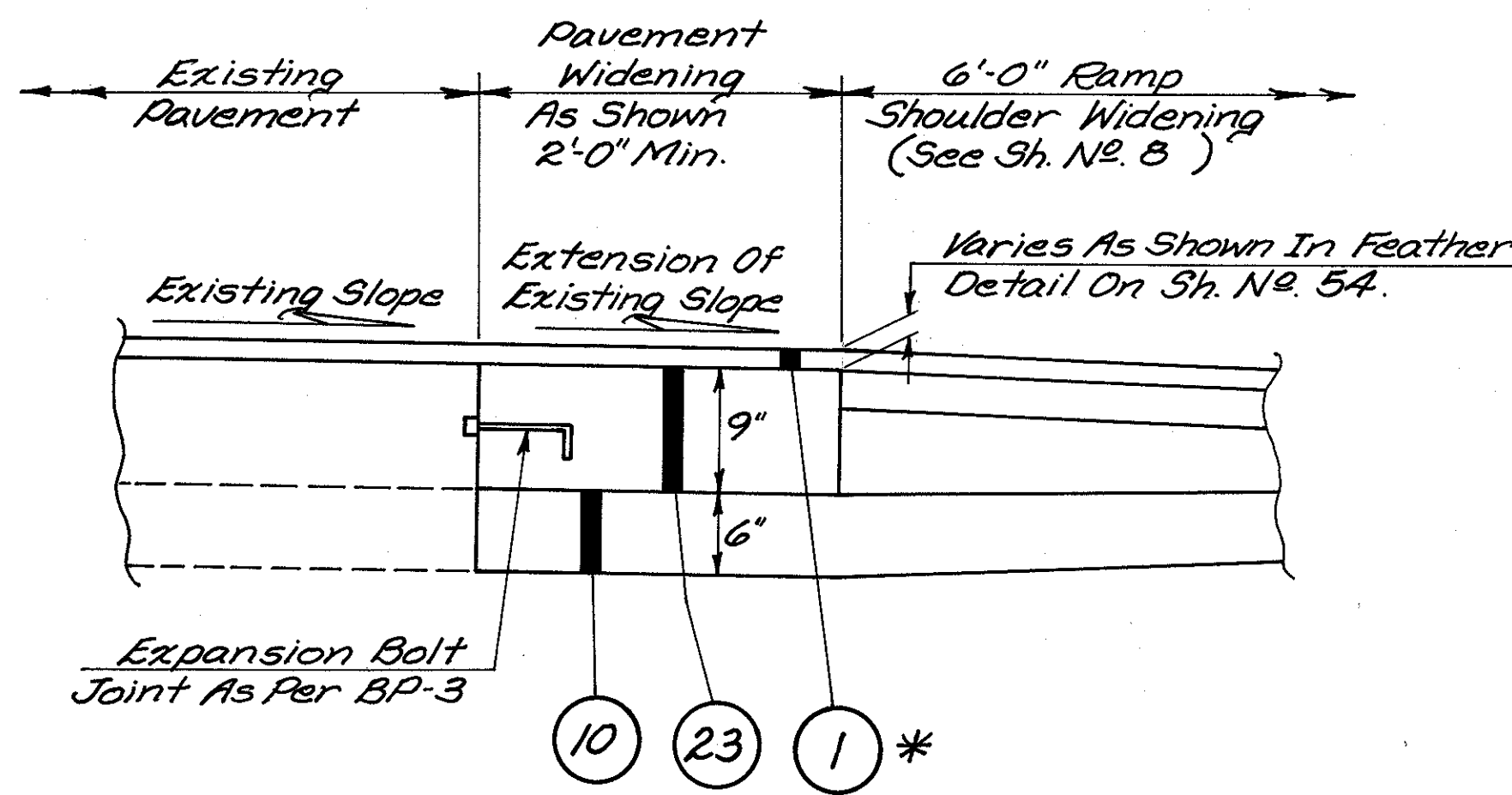
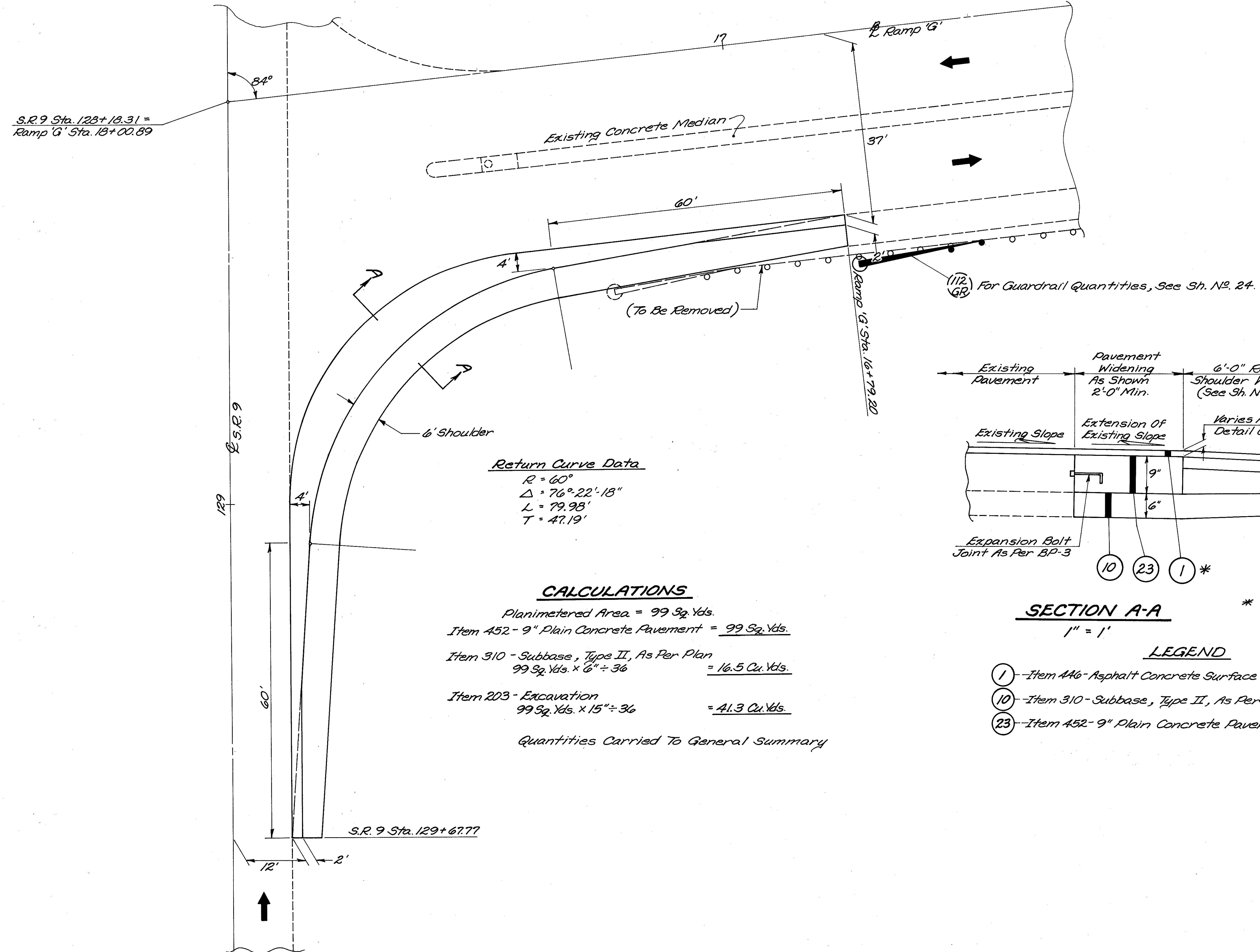
RAMP 'G' INTERSECTION WIDENING DETAIL

Calc. By SHG 3-26-90
Chd. By SAL 3-26-90

FHWA REGION	STATE	PROJECT
5	OHIO	

62
115

HAS-22-15.03



SECTION A-A

1" = 1'

* The Quantity For Item 1 Has Been Included In The Resurfacing Calculations On Sh. No's 13 And 15.

LEGEND

- 1 - Item 446 - Asphalt Concrete Surface Course, Type 1, AC-20
- 10 - Item 310 - Subbase, Type II, As Per Plan
- 23 - Item 452 - 9" Plain Concrete Pavement

SHOULDER REPAIR AND DITCH CLEANOUT DETAILS

QUANTITIES			
CALC. BY: R.R.K.	CHK'D. BY: S.H.G.		
DATE: 12-19-89	DATE: 3- 5-90		

FHWA REGION	STATE	PROJECT
5	OHIO	

HAS-22-15.03

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115

LINEAR GRADING, DITCH CLEANOUT			
STATION	LANE	LENGTH	203
			LINEAR GRADING DITCH CLEANOUT
FROM	TO	LIN.FT.	STA.
799+50	814+50	1500	15.00
913+60	921+35	775	7.75
949+90	952+90	300	3.00
996+35	1004+65	830	8.30
1021+95	1025+55	360	3.60
1035+70	1041+40	570	5.70
1075+65	1084+05	840	8.40
1090+00	1102+05	1205	12.05
1108+10	1120+00	1190	11.90
1195+90	1199+00	310	3.10
1213+60	1224+90	1130	11.30
1265+45	1279+80	1435	14.35
796+75	816+05	1930	19.30
909+65	913+70	405	4.05
947+20	950+30	310	3.10
956+15	959+85	370	3.70
1020+55	1022+80	225	2.25
1032+40	1037+40	500	5.00
1072+30	1080+40	810	8.10
1087+15	1099+05	1185	11.85
1105+50	1116+50	1100	11.00
1133+10	1136+50	340	3.40
1140+60	1145+50	490	4.90
1146+80	1151+25	445	4.45
1154+20	1157+85	365	3.65
1187+55	1196+95	940	9.40
1263+05	1275+20	1215	12.15
1322+70	1330+35	765	7.65
TOTAL - CARRIED TO GENERAL SUMMARY			218.40

LINEAR GRADING, METHOD 3			
STATION	RAMP	LENGTH	203
			LINEAR GRADING METHOD 3
FROM	TO	LIN.FT.	STA.
7 + 33.40	10 + 98.69	E	388.29
6 + 69.09	9 + 21.11	G	272.36
TOTAL - CARRIED TO GENERAL SUMMARY			6.60

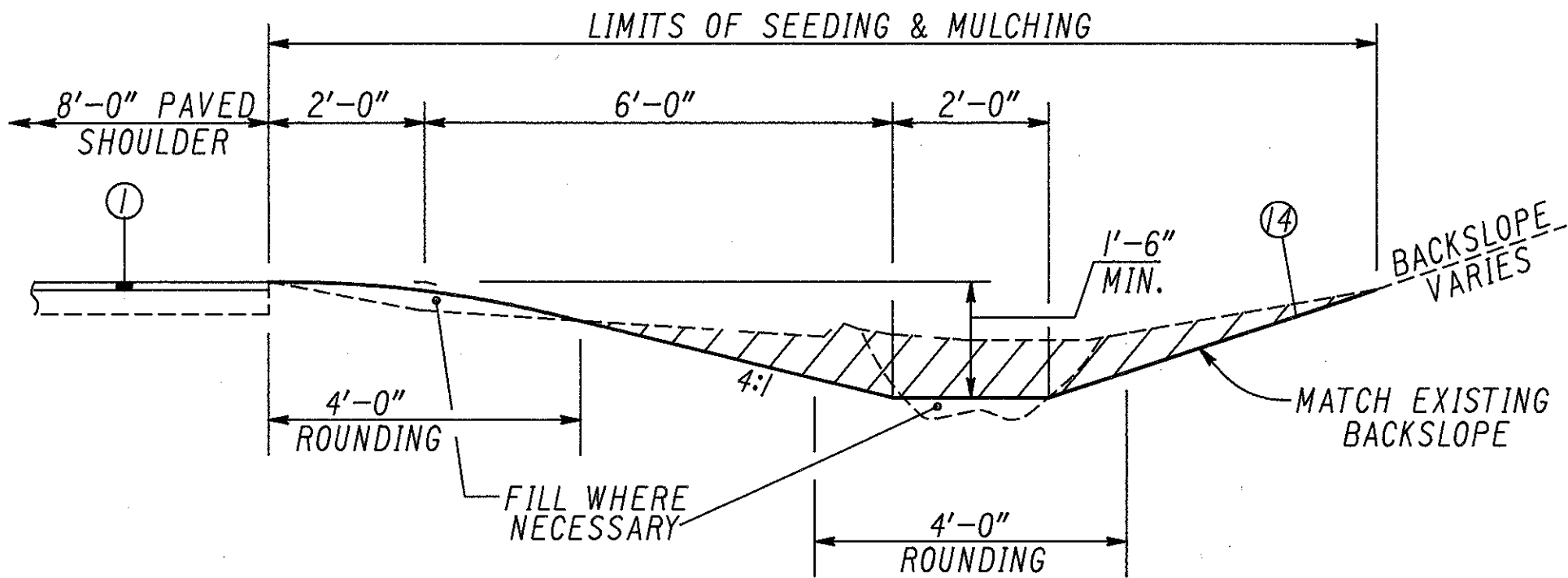
ITEM 659	
SEEDING & MULCHING	
MEDIAN GUARDRAIL REMOVED (FROM SHEET NO. 27)	700.0 S.Y.
LINEAR GRADING, METHOD #3 (FROM SHEET NO. 63)	
6.60 STA. x 100 L.F./STA. x 2' WIDTH ÷ 9 =	146.7 S.Y.
LINEAR GRADING, DITCH CLEANOUT (FROM SHEET NO. 63)	
218.40 STA. x 100 L.F./STA. x 15' AVG. WIDTH ÷ 9 =	36,400.0 S.Y.
MAINLINE MEDIAN RECONSTRUCTION (FROM SHEET NO. 64)	811.0 S.Y.
MAINLINE MEDIAN RECONSTRUCTION (FROM SHEET NO. 65)	365.0 S.Y.
RAMP MEDIAN RECONSTRUCTION (FROM SHEET NO. 66)	84.0 S.Y.
RAMP MEDIAN RECONSTRUCTION (FROM SHEET NO. 70)	112.0 S.Y.
CATCH BASIN REPLACEMENT (FROM SHEET NO. 73)	1,093.0 S.Y.
BEHIND CONCRETE BARRIER (FROM SHEET NO. 74)	
339 L.F. x 4' AVG. WIDTH ÷ 9 =	150.7 S.Y.
TOTAL =	39,862.4 S.Y.
USE:	39,870 S.Y.
COMMERCIAL FERTILIZER:	
(39,870 S.Y. x 9 x 20) ÷ (2000 x 1000) =	3.59 TON
USE:	3.60 TON
AGRICULTURAL LIMING:	
(39,870 S.Y. x 9 x 100) ÷ (2000 x 1000) =	17.94 TON
USE:	18.00 TON
WATER:	
(39,870 S.Y. x 120) ÷ (1000 x 1000) x 9 x 2 =	86.12 MGAL.
USE:	87 MGAL.
QUANTITIES CARRIED TO GENERAL SUMMARY.	

OUTSIDE SHOULDER REPAIR QUANTITIES								
STATION		LANE	LENGTH	WIDTH "W"	203	301	617	203
					EXCAVATION	BITUMINOUS AGGREGATE BASE, AC-20,	COMPACTED AGGREGATE, TYPE B	LINEAR GRADING METHOD #1
FROM	TO	EAST BOUND	LIN.FT.	FT.	CU.YD.	CU.YD.	CU.YD.	STATION
850+25	858+10		785	2	29.1	29.1	9.7	7.85
885+50	893+65		815	2	30.2	30.2	10.1	8.15
915+30	918+95		365	5	33.8	33.8	4.5	3.65
918+95	921+00		205	2	7.6	7.6	2.5	2.05
969+15	974+75		560	2	20.7	20.7	6.9	5.60
979+50	979+60		10	2	0.4	0.4	0.1	0.10
1021+75	1023+50		175	3	9.7	9.7	2.2	1.75
1028+10	1030+70		260	3	14.4	14.4	3.2	2.60
1035+15	1038+85		370	2	13.7	13.7	4.6	3.70
1041+75	1042+40		65	2	2.4	2.4	0.8	0.65
1044+15	1046+65		250	3	13.9	13.9	3.1	2.50
1047+10	1049+40		230	3	12.8	12.8	2.8	2.30
1059+20	1060+50		130	2	4.8	4.8	1.6	1.30
1175+00	1175+55		55	3	3.1	3.1	0.7	0.55
1176+15	1176+80		65	2	2.4	2.4	0.8	0.65
976+00	977+70		170	2	6.3	6.3	2.1	1.70
917+10	917+15		5	2	0.2	0.2	0.1	0.05
890+85	901+05		1020	2	37.8	37.8	12.6	10.20
972+50	973+50		E.B.	100	PROFILE CORRECTION (SEE			1.2
972+50	974+50	E.B.	200	AT MOORE'S ROAD SHEET)			2.5	2.00
QUANTITIES TO BE USED AS DIRECTED BY THE ENGINEER TO CORRECT ANY SHOULDER DROP-OFF CONDITION							12.3	10.00
TOTALS - CARRIED TO GENERAL SUMMARY					243.3	243.3	84.4	68.35

ITEM 617 - WATER:
84.4 C.Y. x 9 GAL./C.Y. ÷ 1000 = 0.8 MGAL. USE: 1.0 MGAL.

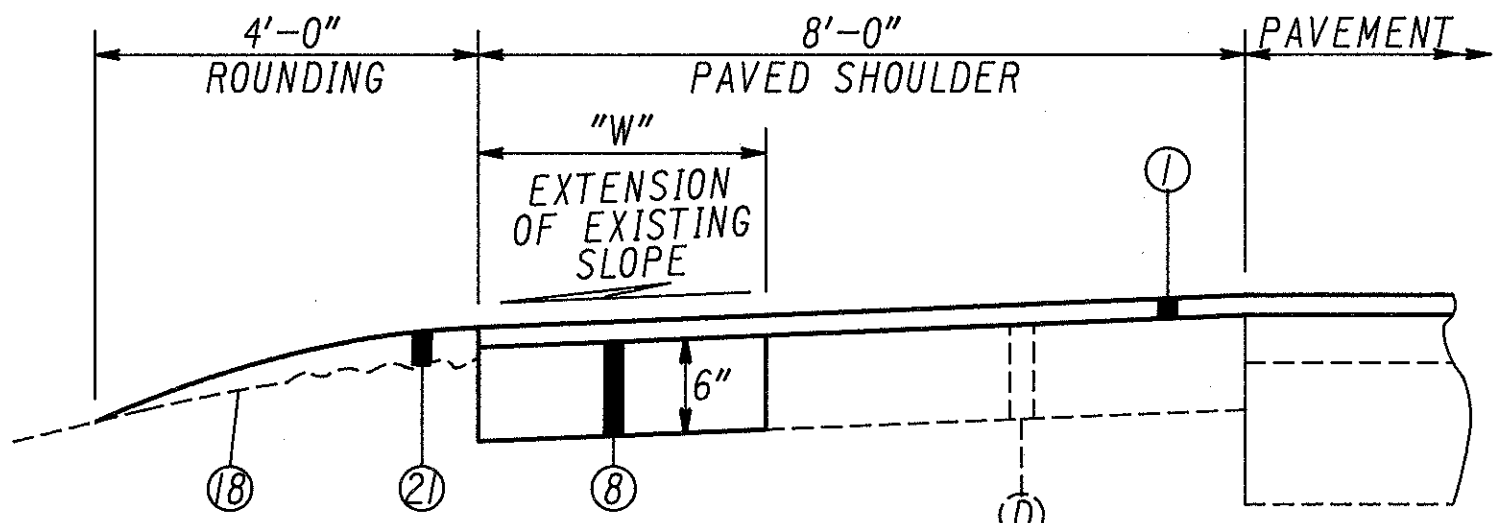
LEGEND

- ①-ITEM 446 - 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE I, AC-20
- ②-ITEM 301 - BITUMINOUS AGGREGATE BASE, AC-20
- ③-ITEM 659 - SEEDING & MULCHING AND WATER
- ④-ITEM 203 - LINEAR GRADING, METHOD #1
- ⑤-ITEM 617 - COMPACTED AGGREGATE, TYPE B
- ⑥--EXISTING BITUMINOUS AGGREGATE BASE



DITCH CLEANOUT DETAIL
(NO SCALE)

NOTE: THE DITCH CLEANOUT DETAIL IS INTENDED TO SHOW THE PROPOSED GROUND LINE ONLY. THE HATCHED AREA DOES NOT REPRESENT ACTUAL FIELD CONDITIONS AND SHALL NOT BE USED TO CALCULATE EXCAVATION VOLUME.



OUTSIDE SHOULDER REPAIR DETAIL
(NO SCALE)

NOTE: THE ASPHALT CONCRETE SURFACE COURSE IS INCLUDED IN THE SHOULDER RESURFACING CALCULATIONS ON SHEET NO'S. 10 & 12.

ASPHALT PAVING UNDER GUARDRAIL QUANTITIES							
(SEE SHEET NO. 8 FOR DETAIL)							
GUARDRAIL REF. NO.	STATIONS OF PAVING (±)		LENGTH	WIDTH	AREA	203	404
	FROM	TO				LINEAR GRADING METHOD 2	ASPHALT CONC. UNDER GUARDRAIL
8-GR	5+38.0 'D'	8+47.0 'D'	337.5	3	112.5	1.13	6.3
9-GR	6+62.5 'C'	4+22.6 'D'	300.0	4	133.3	1.33	7.4
10-GR	4+24.0 'D'	8+90.3 'D'	450.0	4	200.0	2.00	11.1
25-GR	2+80.5 'F'	3+68.0 'F'	87.5	4	38.9	0.39	2.2
26-GR	5+22.0 'F'	6+78.0 'E'	412.5	4	183.3	1.83	10.2
28-GR	6+77.8 'E'	12+04.6 'E'	512.5	4	227.8	2.28	12.7
64-GR	0+98.0 'J'	6+48.0 'J'	550.0	4	244.4	2.44	13.6
TOTALS - CARRIED TO GENERAL SUMMARY						11.40	63.5

BENCHMARK
Sta. 809+87.38' Lt.
Top of Concrete Pipe
Assumed Elev. 100.00

MAINLINE MEDIAN DETAILS

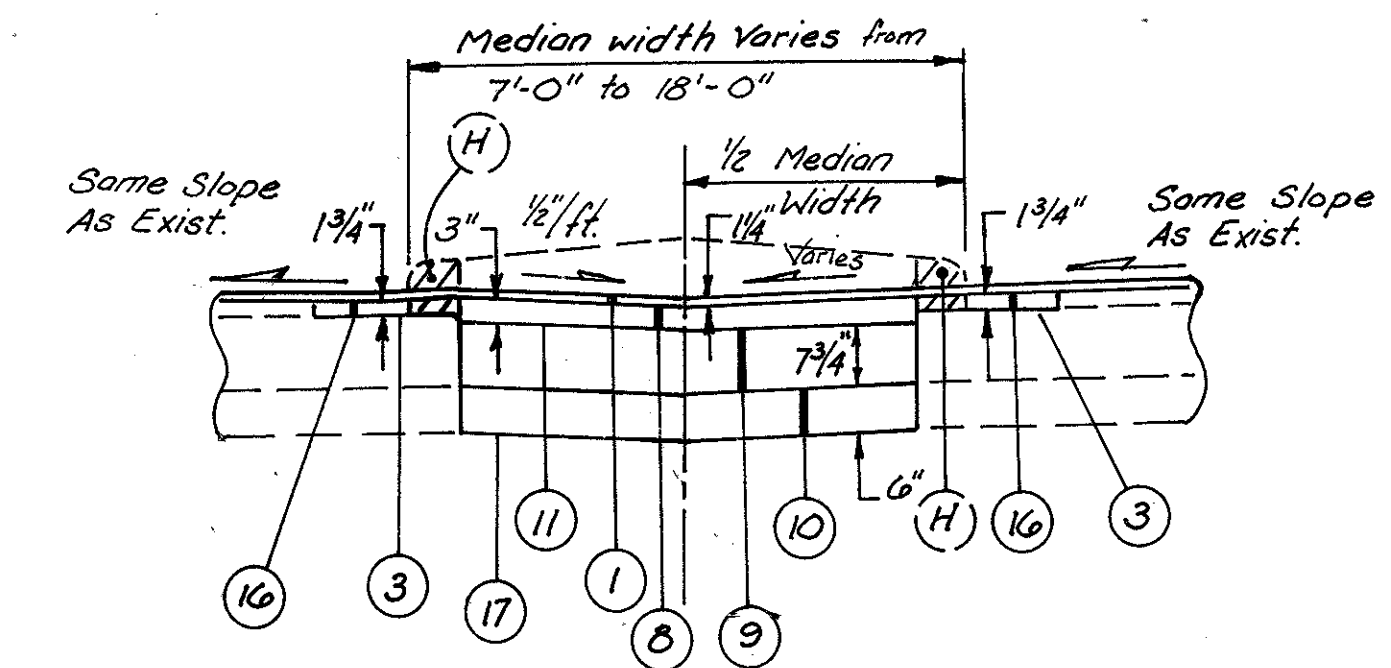
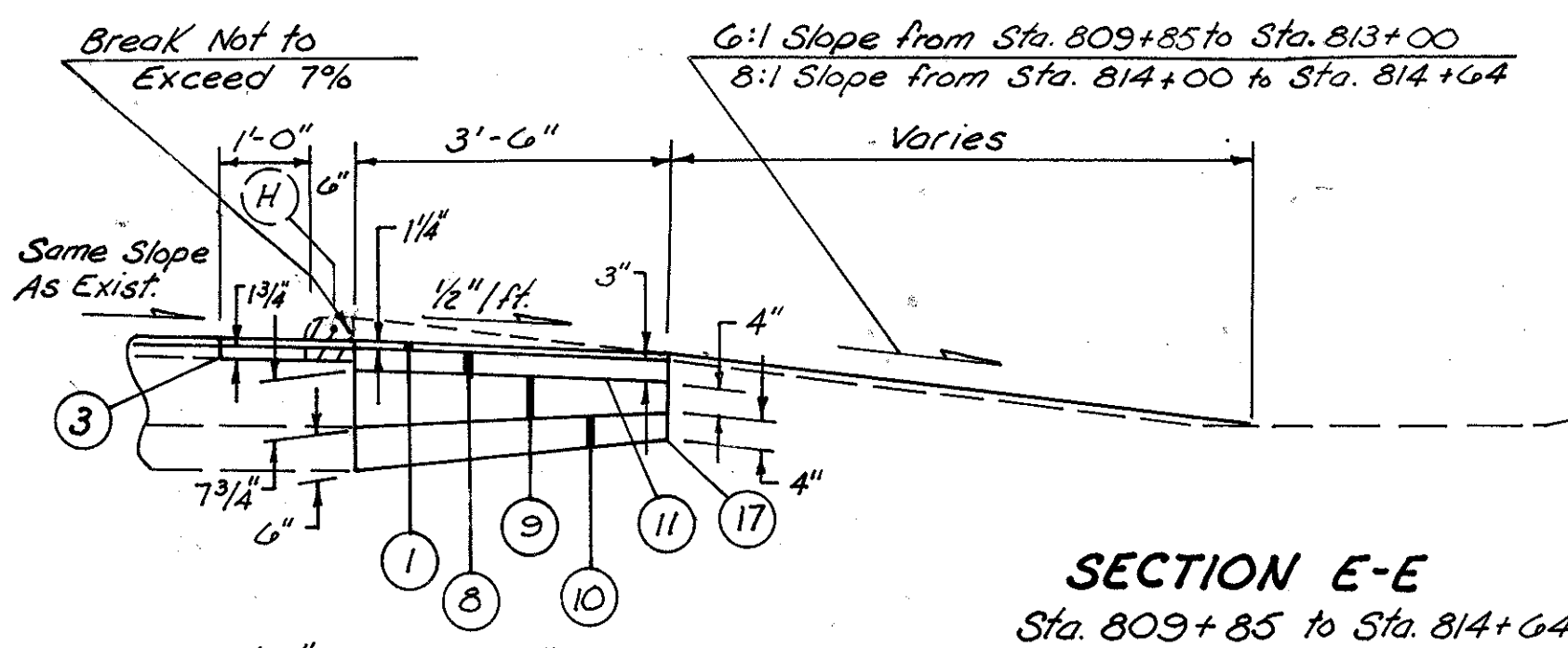
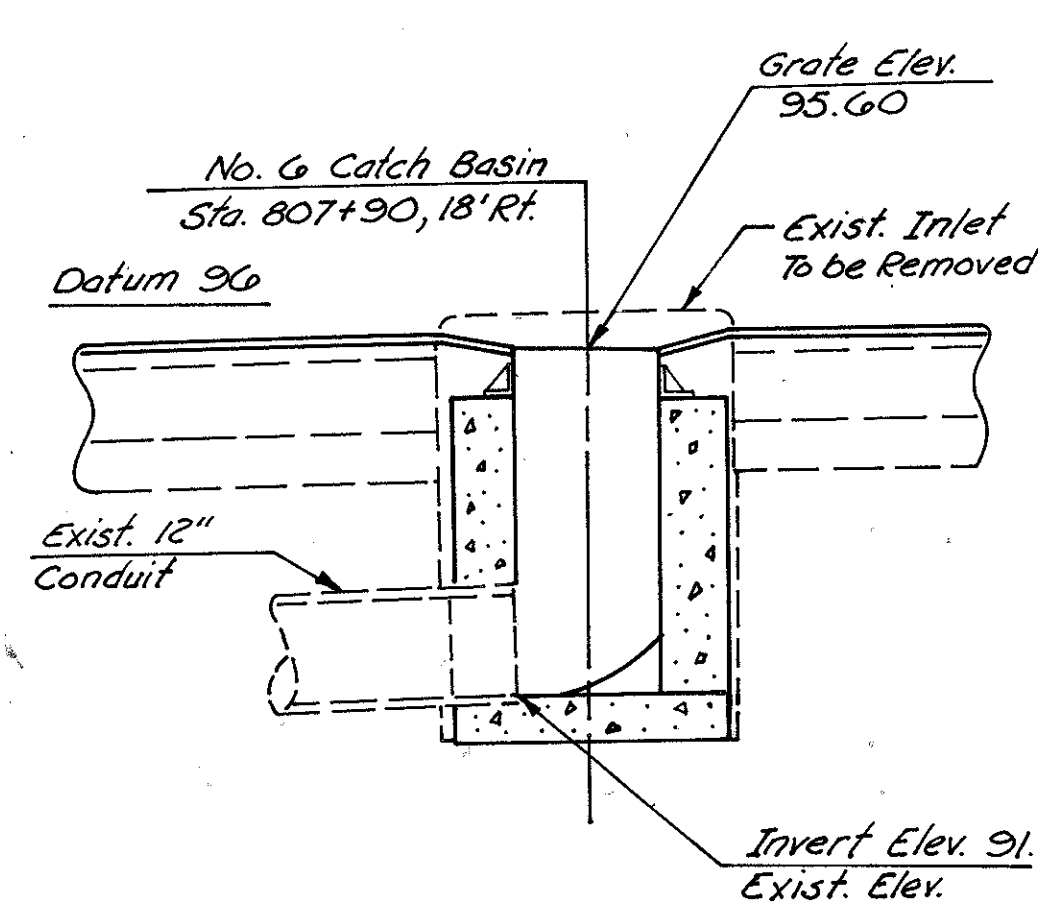
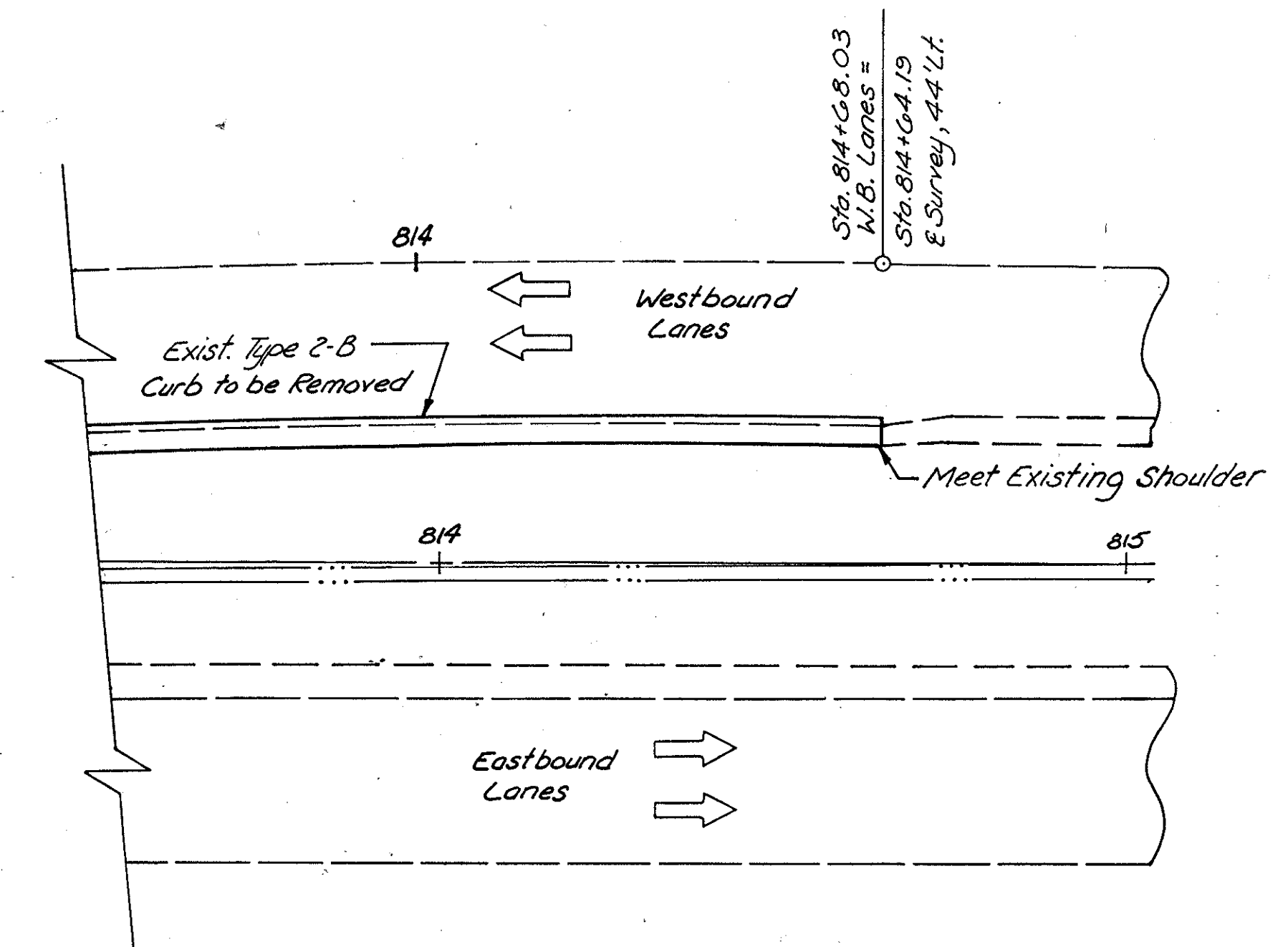
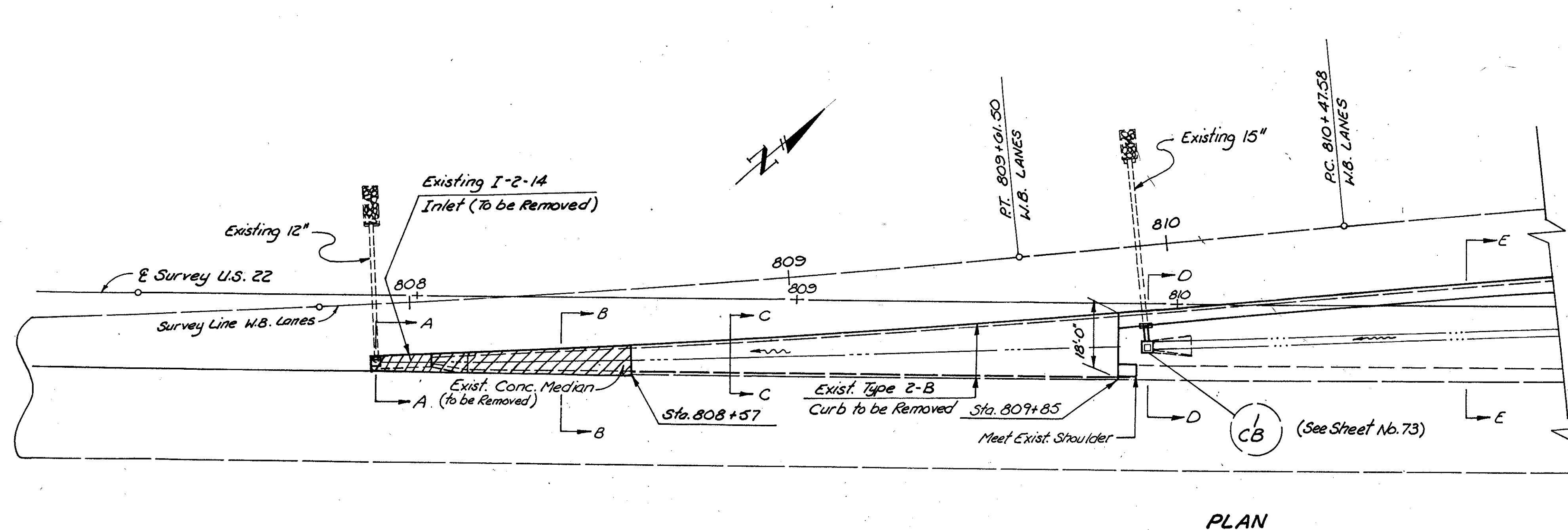
(No Scale)

QUANTITIES		
Calc. DCH	3-5-90	
Chkd. SHG	3-23-90	

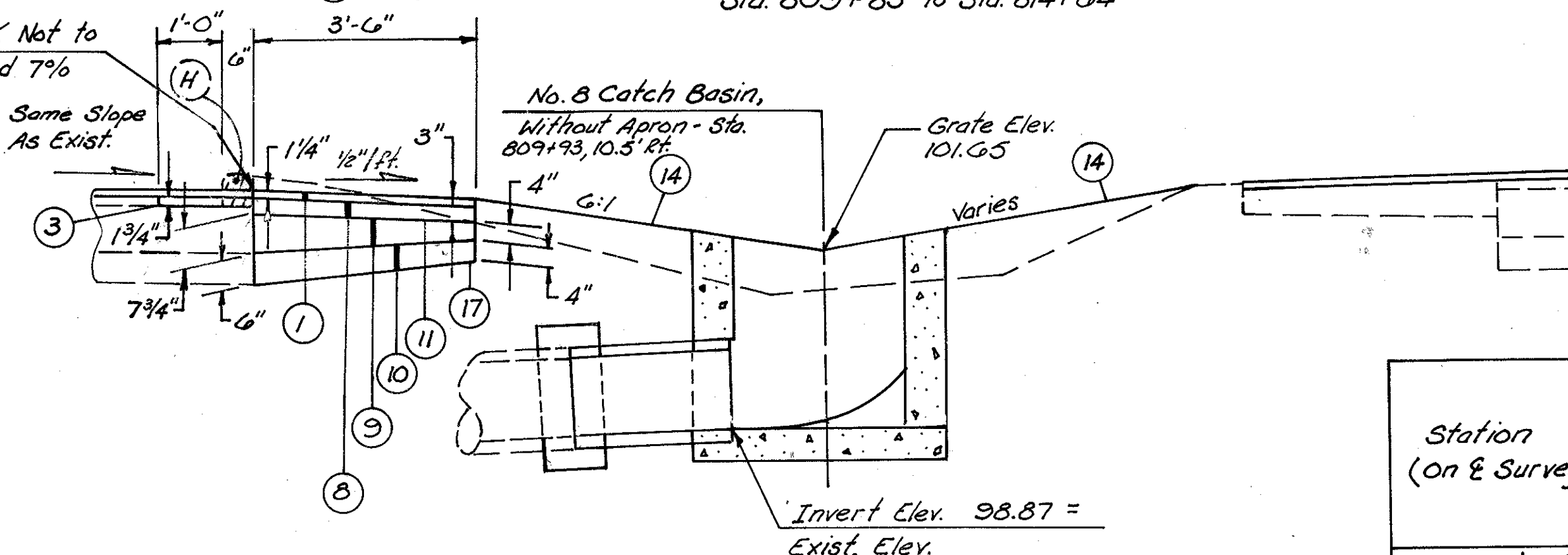
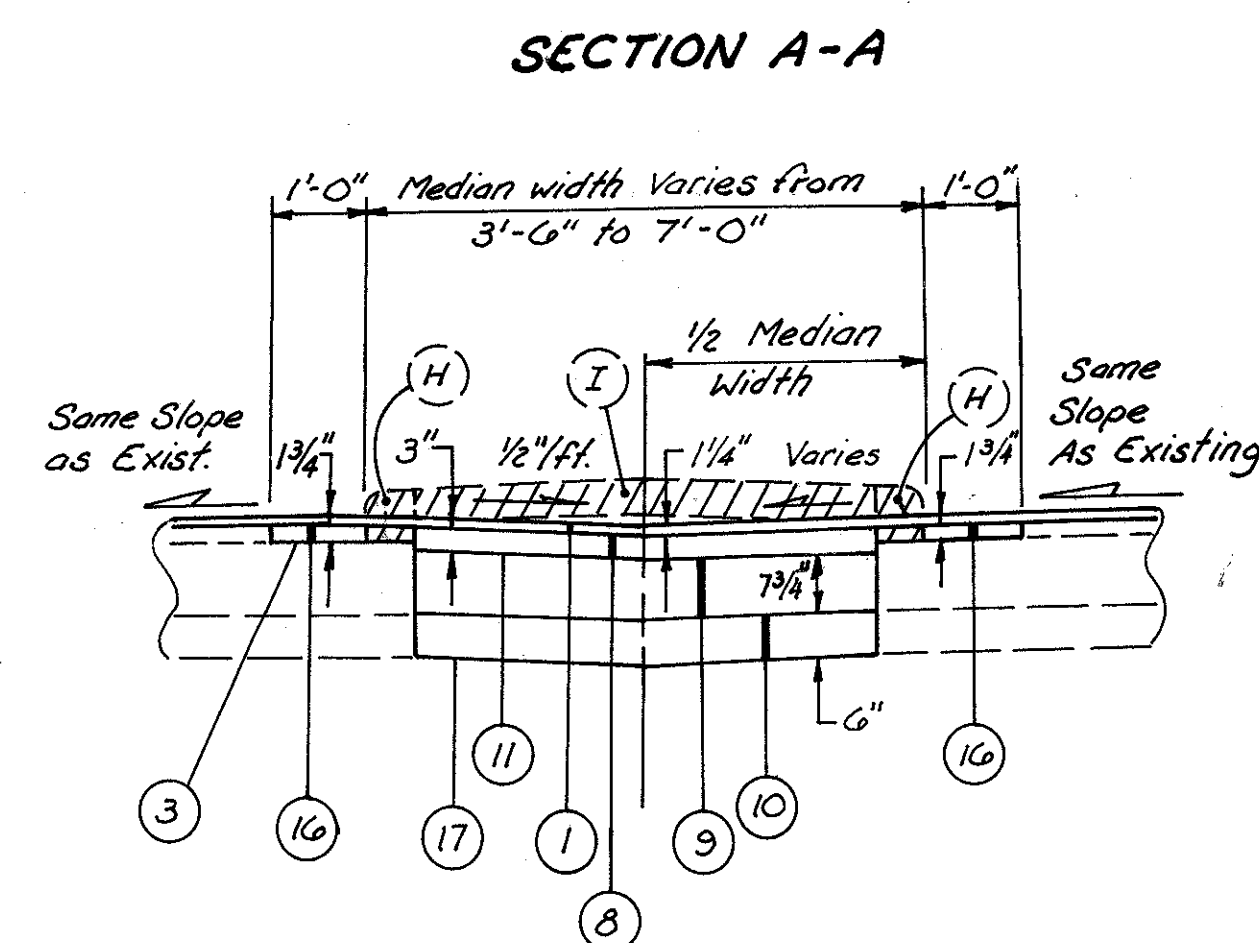
FHWA REGION	STATE	PROJECT
5	OHIO	

HAS-22-15.03

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For Details not shown, see Std. Drwg's. CB-6 & MC-11
For Legend, see sheet No. 65.
* To be used as directed by the Engineer to replace any asphalt concrete disturbed by the curb removal.



* to be used as directed by the Engineer to replace any asphalt concrete disturbed by the above work.

Station (on E Survey)		202		203		301	304	310	408	446	448	604	659		
		Curb Removed As Per Plan	Concrete Median Removed As Per Plan	Excavation	Embankment	Subgrade Compaction	Bituminous Aggregate Base, AC-20	Aggregate Base, As Per Plan	Subbase Type II, As Per Plan	Bituminous Prime Coat	Asphalt Concrete Surface Course, Type 1, AC-20	Asphalt Concrete Intermediate Course, Type 2, AC-20 *	Catch Basin No. 6 Depth	Seeding And Mulching	
From	To	Lin. Ft.	Sq. Ft.	C.Y.	C.Y.	S.Y.	Cu. Yd.	Cu. Yd.	Cu. Yd.	Gal.	Cu. Yd.	Cu. Yd.	Ea.	Ft.	S.Y.
807+89	808+04.33			3		3.6	0.3	0.6	0.5	1.4	0.2	0.2			
808+04.33	808+14.35	20	3.3	3		5.4	0.5	0.9	0.8	2.2	0.2	0.2			
808+14.35	808+57	85	23.7	14		21.8	1.8	3.6	3.0	8.7	0.9	0.7			
808+57	809+85	256		143		163.6	13.6	26.7	22.7	65.4	6.2	2.1			
809+85	814+64.19	409		72	61	188.3	15.7	30.7	26.2	74.7	7.5	3.3			811
807+90													1	369	
Subtotals to Sheet No. 63															811
TOTALS Carried to Gen. Summary		770	27	235	61	382.7	31.9	62.5	53.2	152.4	15.0	6.5	1	×	

BENCHMARK
Top of bolt at guardrail concrete
anchor Sta. 1139+45, 25'± Lt.
Assumed Elev. 200.00

MAINLINE MEDIAN DETAILS

(NO SCALE)

QUANTITIES				FHWA REGION	STATE	PROJECT	
Calc.	DCH	Chkd.	SHG	5	OHIO		
Date:	3-13-90	Date:	3-20-90	HAS-22-15.03			

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** TO BE USED AS DIRECTED BY THE ENGINEER TO REPLACE ANY ASPHALT CONCRETE DISTURBED BY THE CURB REMOVAL.

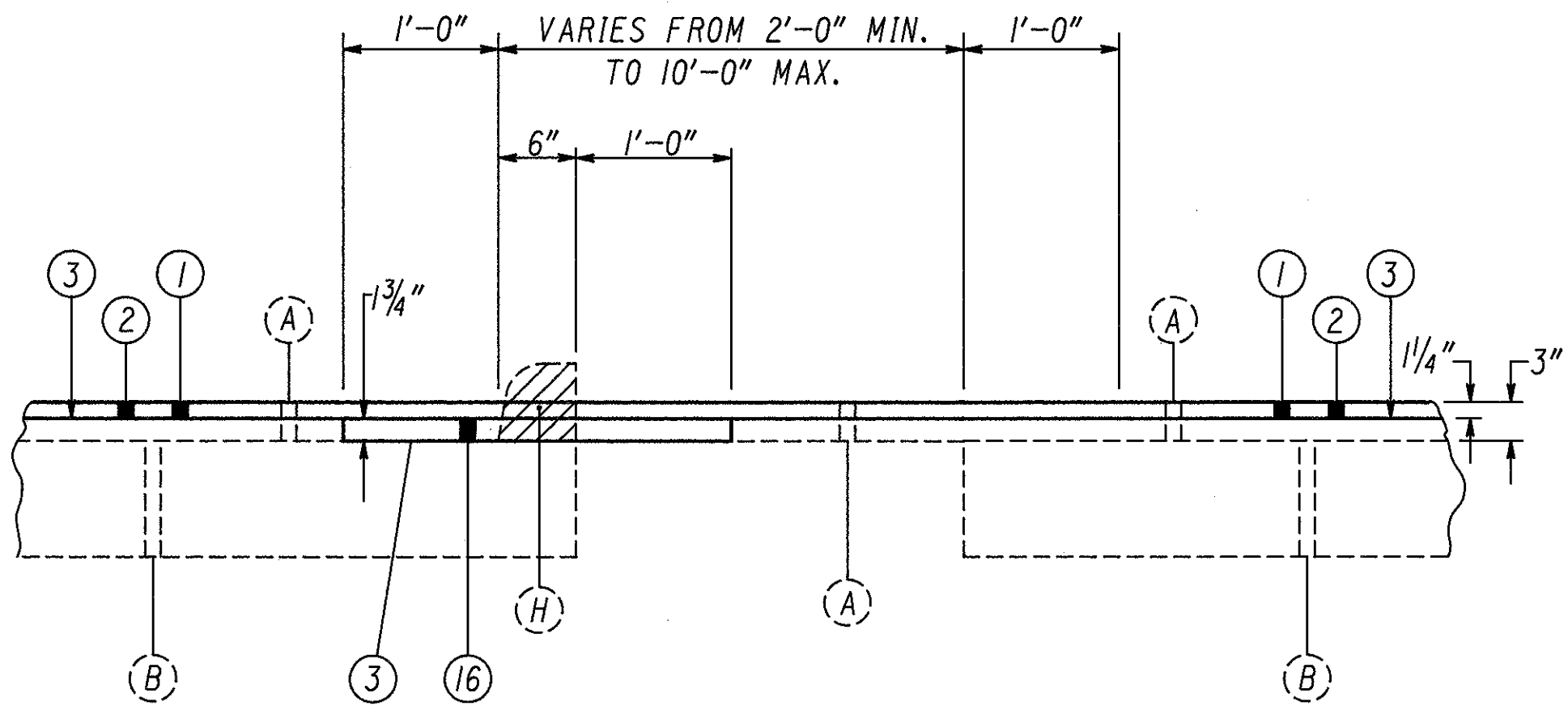
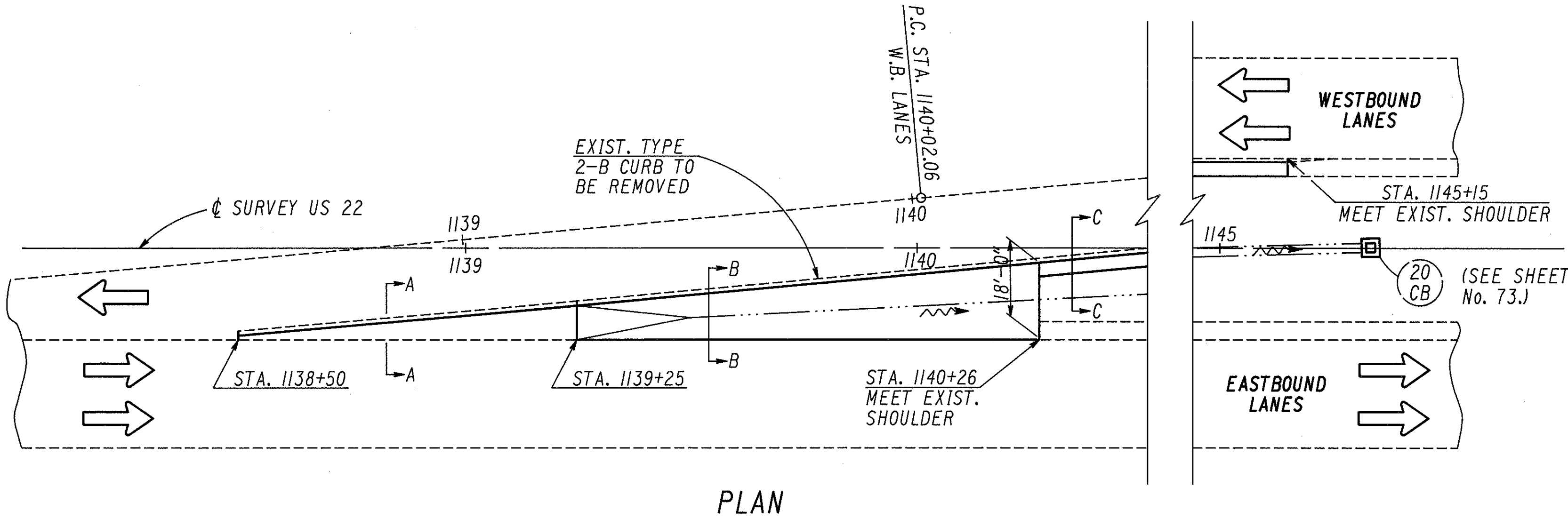
MAINLINE MEDIAN QUANTITIES											
STATION (ON & SURVEY)		202	203	301	304	310	408	446	448	659	
		CURB REMOVED, AS PER PLAN	EXCAVATION	SUBGRADE COMPACTION	BITUMINOUS AGGREGATE BASE, AC-20	AGGREGATE BASE, AS PER PLAN	SUBBASE, TYPE II, AS PER PLAN	BITUMINOUS PRIME COAT	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, AC-20	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, AC-20 **	SEEDING & MULCHING
FROM	TO	LIN.FT.	CU.YD.	SQ.YD.	CU.YD.	CU.YD.	CU.YD.	GAL.	CU.YD.	CU.YD.	SQ.YD.
1138+50	1139+25	75									
1139+25	1140+26	101	87	157.1	13.1	33.8	26.2	62.8	5.5	0.8	
1140+26	1145+15	489	116	--	15.8	31.0	26.4	76.1	7.5	4.0	365
SUBTOTALS TO SHEET No. 63											365
TOTALS		665	203	157.1	28.9	64.8	52.6	138.9	13.0	5.8	

CARRIED TO GENERAL SUMMARY

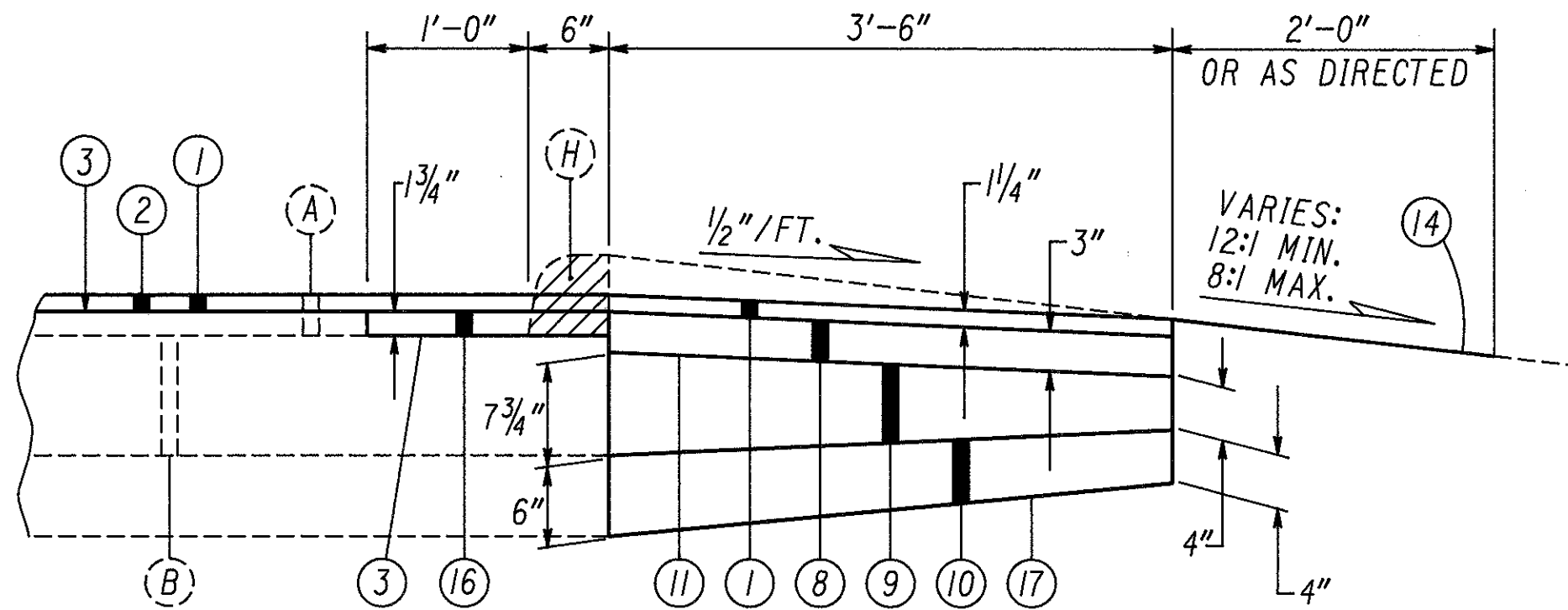
LEGEND

- ① ITEM 446 - 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, AC-20
- ② ITEM 254 - PAVEMENT PLANING, BITUMINOUS (1 1/4" NOMINAL DEPTH)
- ③ ITEM 407 - TACK COAT
- ⑧ ITEM 301 - BITUMINOUS AGGREGATE BASE
- ⑨ ITEM 304 - AGGREGATE BASE, AS PER PLAN
- ⑩ ITEM 310 - SUBBASE, TYPE II, AS PER PLAN
- ⑪ ITEM 408 - BITUMINOUS PRIME COAT
- ⑭ ITEM 659 - SEEDING & MULCHING AND WATER
- ⑯ ITEM 448 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, AC-20
- ⑰ ITEM 203 - SUBGRADE COMPACTION
- (A) EXISTING 3" ASPHALT CONCRETE PAVEMENT
- (B) EXISTING 9" REINFORCED CONCRETE PAVEMENT
- (H) EXISTING CURB
- (I) EXISTING CONCRETE MEDIAN

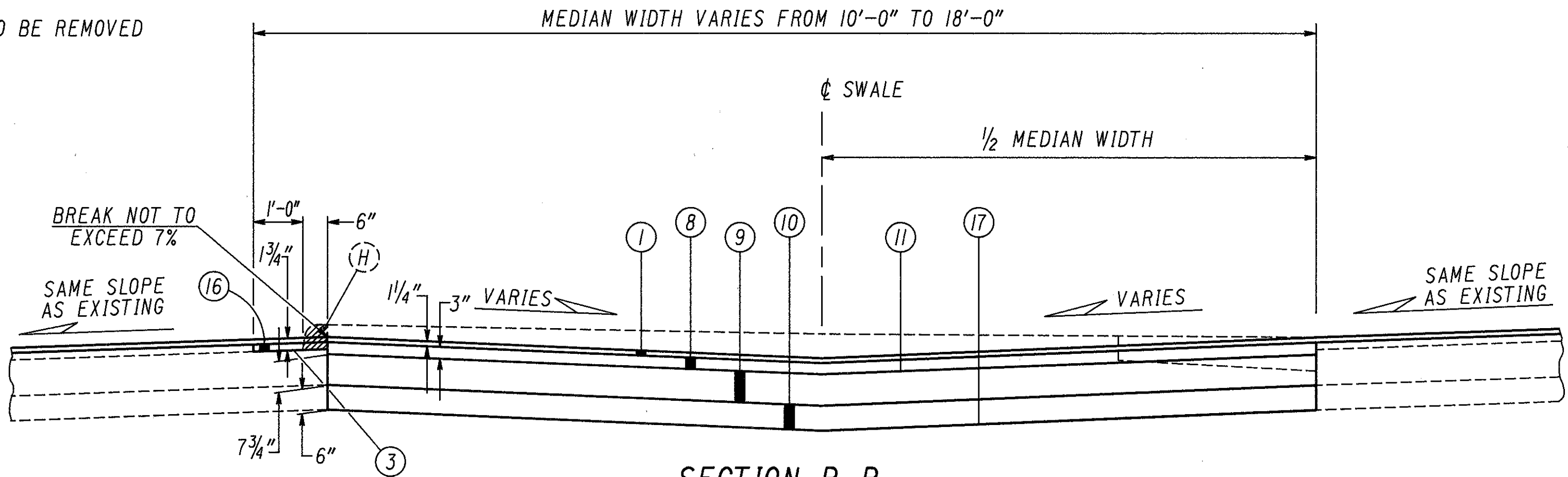
TO BE REMOVED



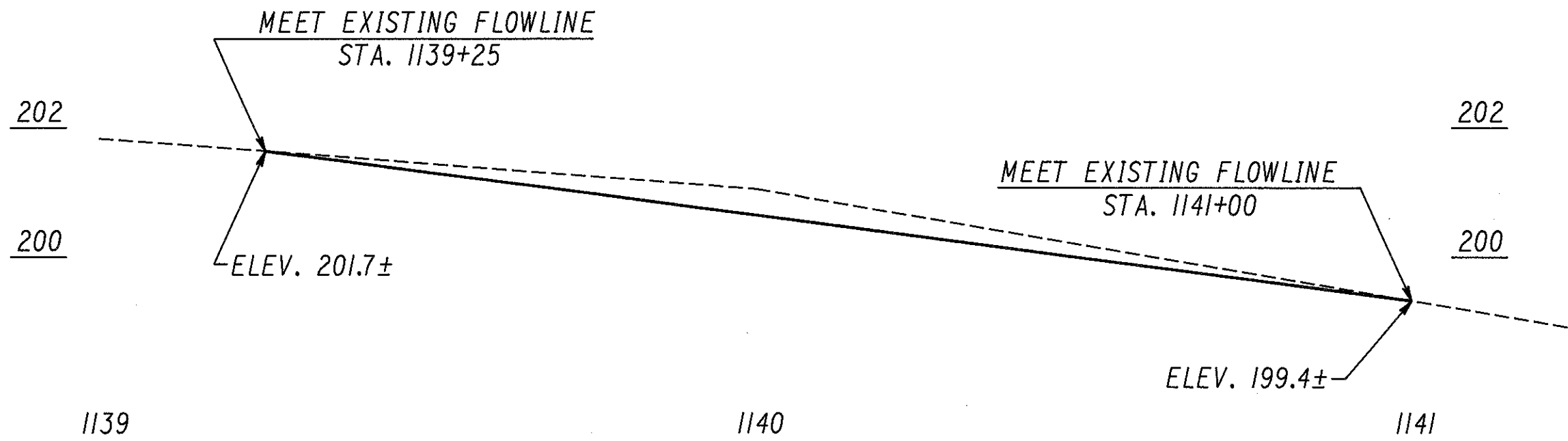
SECTION A-A
STA. 1138+50 TO STA. 1139+25



SECTION C-C
STA. 1140+26 TO STA. 1145+15



SECTION B-B
STA. 1139+25 TO STA. 1140+26



SWALE PROFILE
STA. 1139+25 TO STA. 1140+26

RAMP MEDIAN AND DRAINAGE QUANTITIES													
REF. No. (SEE SHEET No. 67)	STATION		SEE DETAIL	202			448	604			612	659	
				CURB REMOVED, AS PER PLAN	CONCRETE MEDIAN REMOVED, AS PER PLAN	PAVEMENT REMOVED	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, AC-20 **	INLET AS PER PLAN			CONCRETE MEDIAN	SEEDING AND MULCHING	
								No. 2-6	No. 2-8	No. 2-10			
	FROM	TO		LIN.FT.	SQ.YD.	SQ.YD.	CU.YD.	EA.	EA.	EA.	FT.	SQ.YD.	SQ.YD.
	U.S. 250 INTERCHANGE												
1-CM	2+21.73 D	4+24.00 D	A	437	48.6		2.4				72.8		
	4+24.00 D	4+86.20 D	B	133	48.0		0.7				56.0		
	8+94.88 C	8+56.40 C	E	16		48.0						31.0	
1-R	4+86.20 D	8+18.89 D	⊕	360			1.9						
	S.R. 9 INTERCHANGE												
2-CM	0+40.00 E	6+82.09 E	A	1341	149.0		7.2				223.5		
	6+82.09 E	7+33.40 E	B	108	26.0		0.6				32.0		
	8+30.28 F	8+76.28 F	F	46			0.2						
2-R	7+33.40 E	10+98.69 E	⊕	386			2.1						
1-I	0+43.67 E			-15	-1.6			1		4.26	-2.4		
2-I	1+21.83 E			-23	-2.5				1	6.84	-3.8		
3-I	3+05.00 E			-23	-2.5				1	4.10	-3.8		
3-R	6+69.09 G	9+21.11 G	⊕	272			1.5						
3-CM	0+78.00 H	1+10.00 H	G	16		51.0						37.0	
	9+21.11 G	9+95.00 G	B	158	70.0		0.9				79.0		
	9+95.00 G	14+69.80 G	A	1003	111.4		5.4				167.2		
	14+69.80 G	14+94.80 G	C	50	5.6		0.3				8.3		
	15+69.36	15+94.36 G	C	50	5.6		0.3				8.3		
	15+94.36	17+61.00 G	A	334	37.1		1.8				55.7		
4-I	14+86.63 G			-19	-2.1			1		3.91	-3.1		
5-I	16+76.70 G			-15	-1.6			1		3.70	-2.4		
6-I	17+45.00 G			-15	-1.6			1		3.88	-2.4		
	S.R. 151 INTERCHANGE												
4-CM	0+00.00 J	0+62.00 J	B	125	42.0		0.7				49.0		
	0+62.00 J	0+94.00 J	H	42		34.0	0.1					16.0	
	6+82.18 K	12+80.00 K	I	1256	139.6		6.8				209.3		
SUBTOTAL CARRIED TO SHEET No. 63												84.0	
TOTALS				6023	671.0	133	32.9	3	1	2	943.2		

CARRIED TO THE GENERAL SUMMARY

FOR RAMP SHOULDER CONSTRUCTION DETAILS, SEE SHEET No. 8.
FOR RAMP SHOULDER CONSTRUCTION QUANTITIES, SEE SHEET No. 20.

* MEASURED FROM WINDOW ELEVATION TO INVERT ELEVATION. THE WINDOW ELEVATION SHALL BE 2" BELOW THE TOP OF THE RESURFACING PAVEMENT.

** TO BE USED AS DIRECTED BY THE ENGINEER TO REPLACE ANY ASPHALT CONCRETE DISTRIBUTED BY THE CURB REMOVAL.

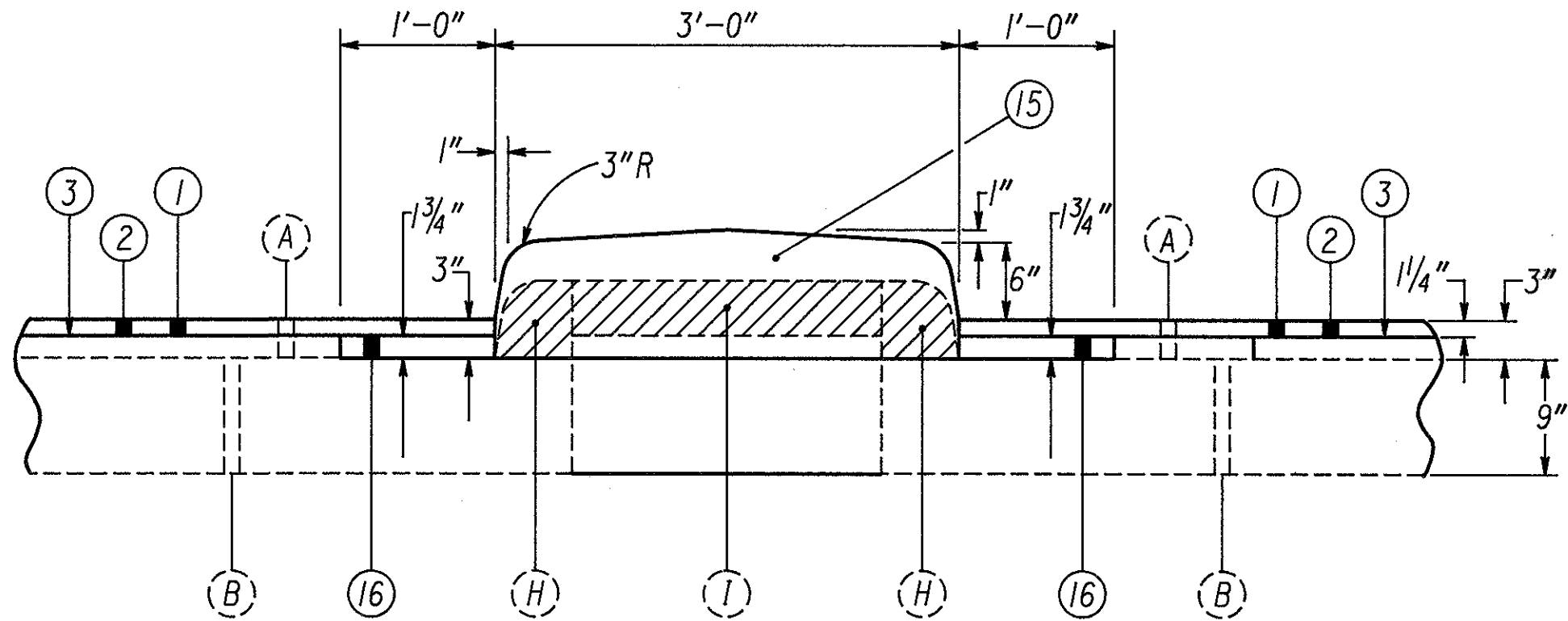
FOR DETAILS E,F,G, AND H
SEE SHEET No's. 68 & 69.

FOR DETAILS NOT SHOWN,
SEE STD. DWG'S. 1-2 AND MC-6.

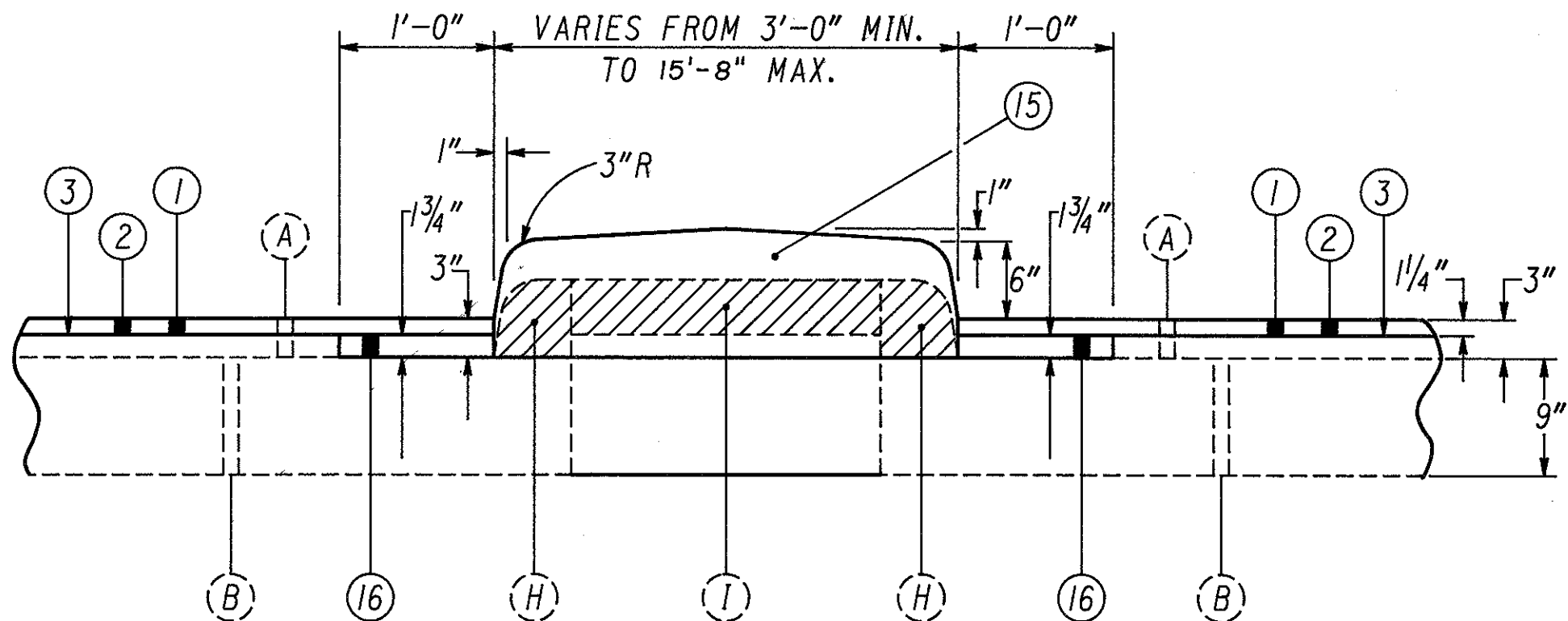
LEGEND

- 1 — ITEM 446 — 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, AC-20
- 2 — ITEM 254 — PAVEMENT PLANING, BITUMINOUS (1 1/4" NOMINAL DEPTH)
- 3 — ITEM 407 — TACK COAT
- 8 — ITEM 301 — BITUMINOUS AGGREGATE BASE
- 9 — ITEM 304 — AGGREGATE BASE, AS PER PLAN
- 10 — ITEM 310 — SUBBASE, TYPE II, AS PER PLAN
- 14 — ITEM 659 — SEEDING & MULCHING AND WATER
- 15 — ITEM 612 — CONCRETE MEDIAN
- 16 — ITEM 448 — ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, AC-20
- A — EXISTING 3" ASPHALT CONCRETE PAVEMENT
- B — EXISTING 9" REINFORCED CONCRETE PAVEMENT
- H — EXISTING CURB
- I — EXISTING CONCRETE MEDIAN

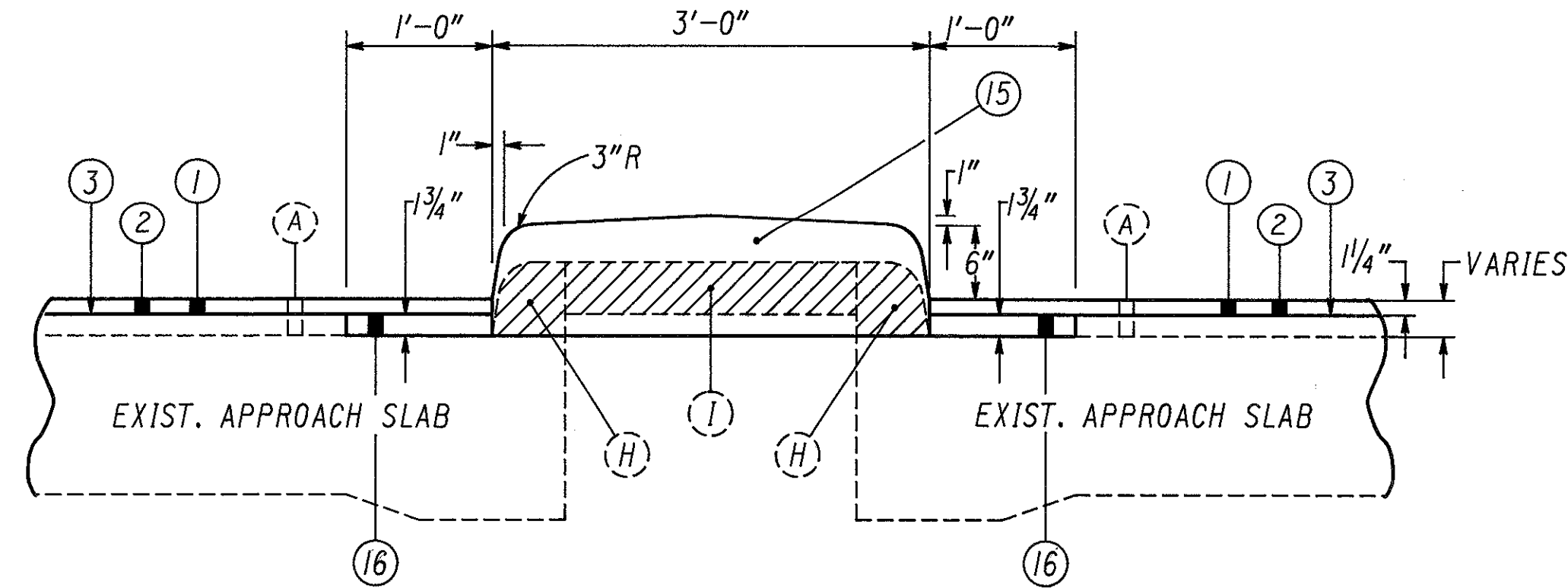
TO BE REMOVED



DETAIL 'A'

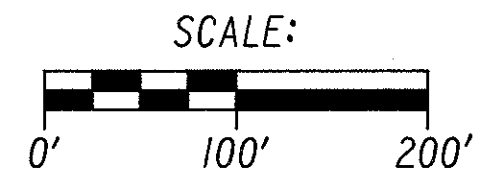


DETAIL 'B'

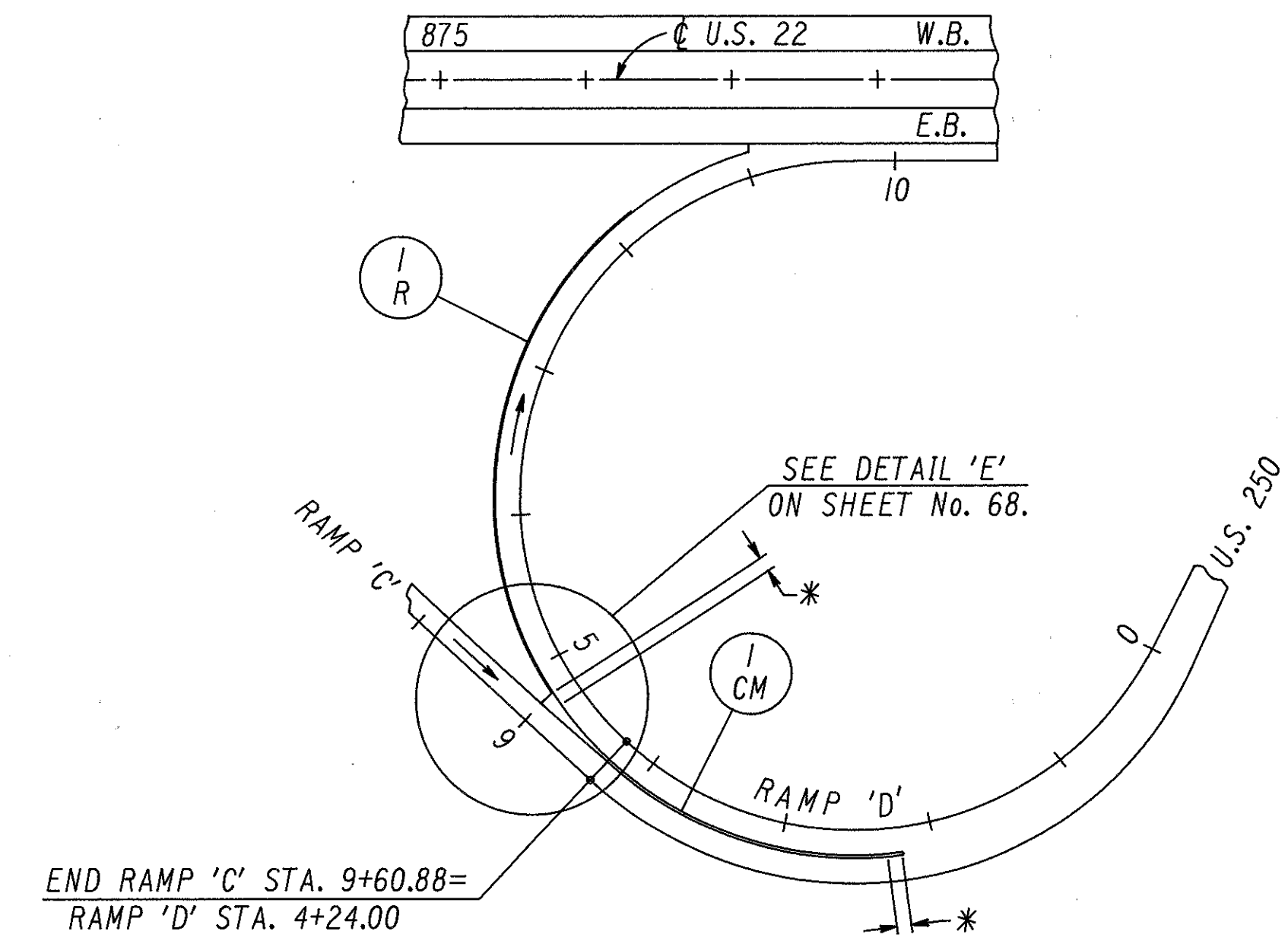


DETAIL 'C'

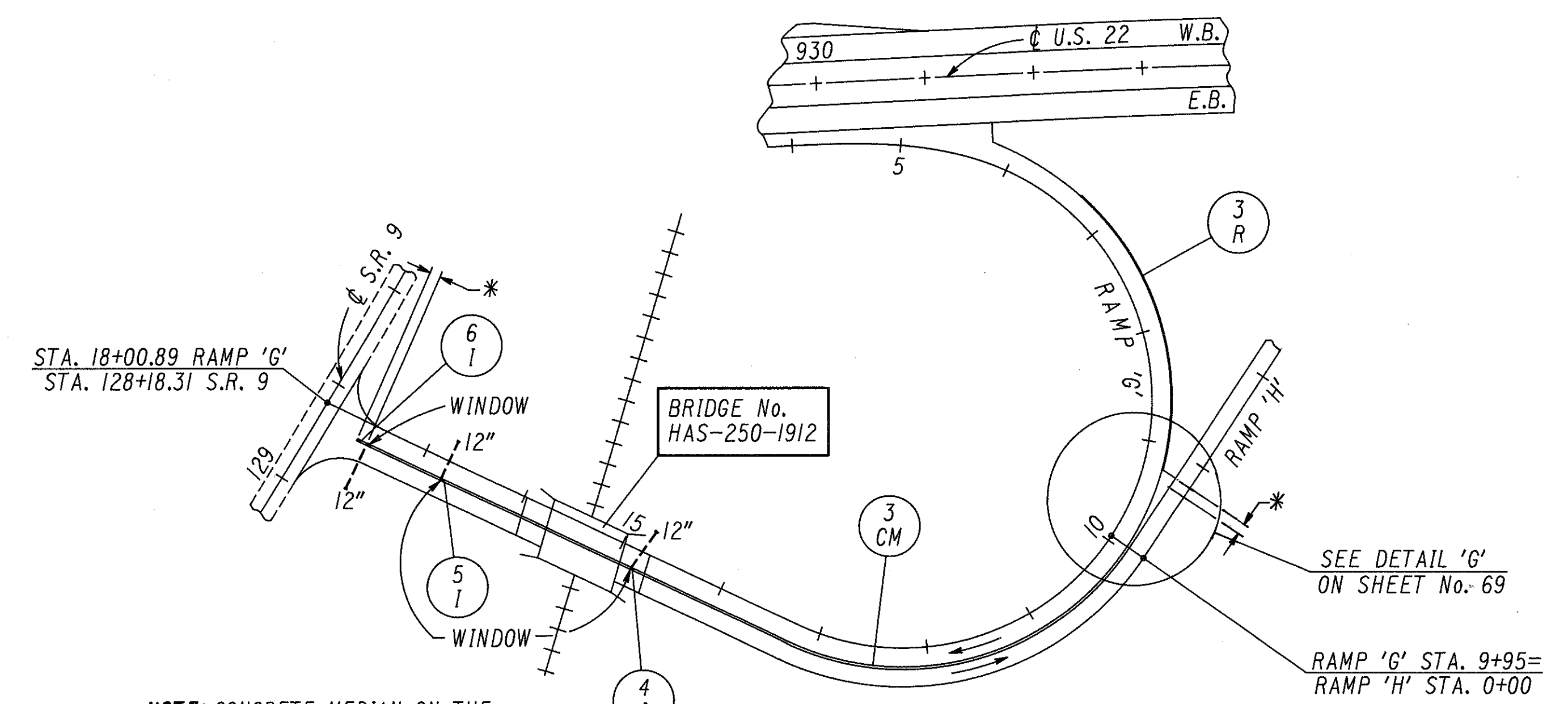
RAMP MEDIAN DETAILS



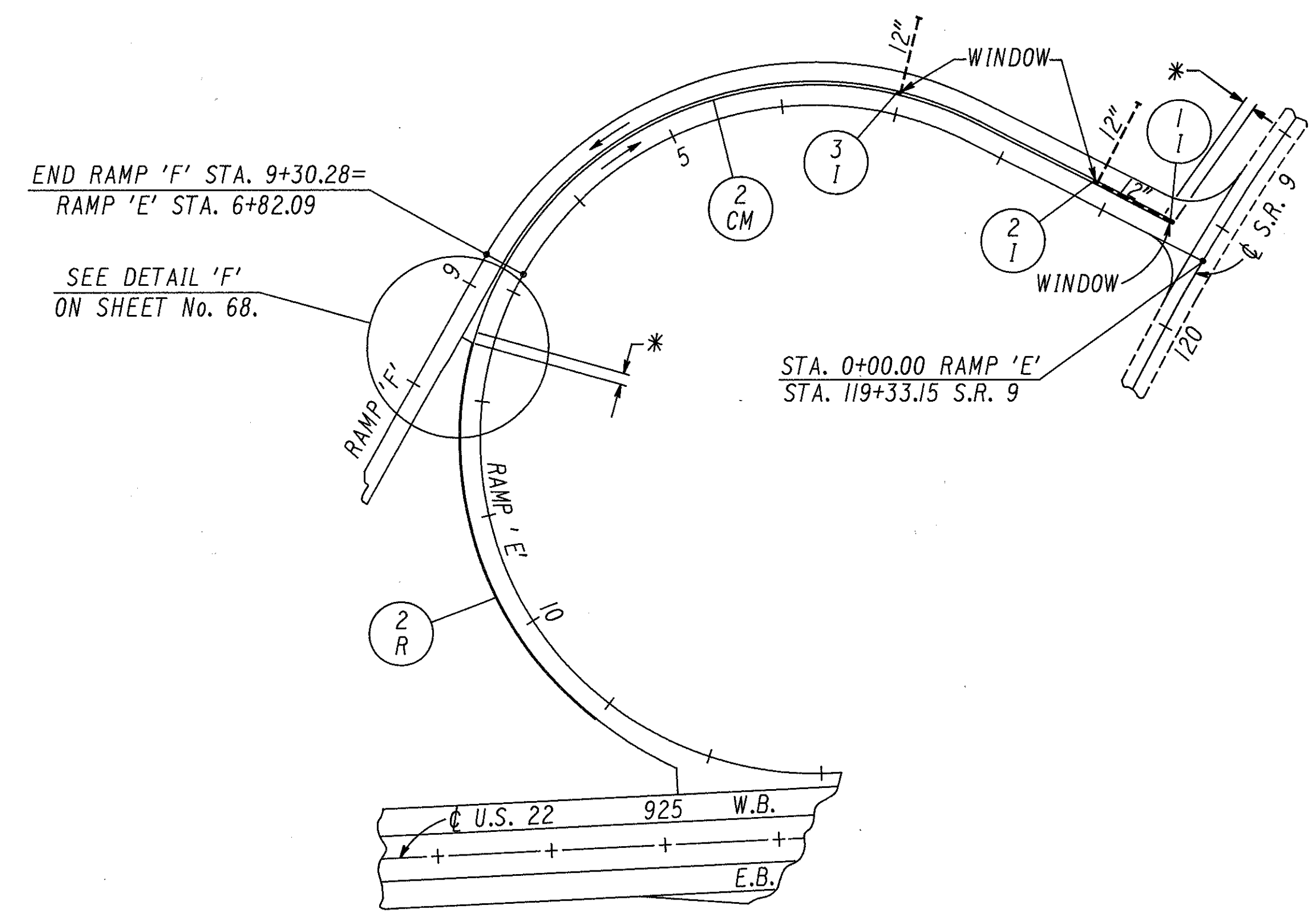
* TRANSITION MEDIAN HEIGHT FROM 6" TO 0" IN 10'



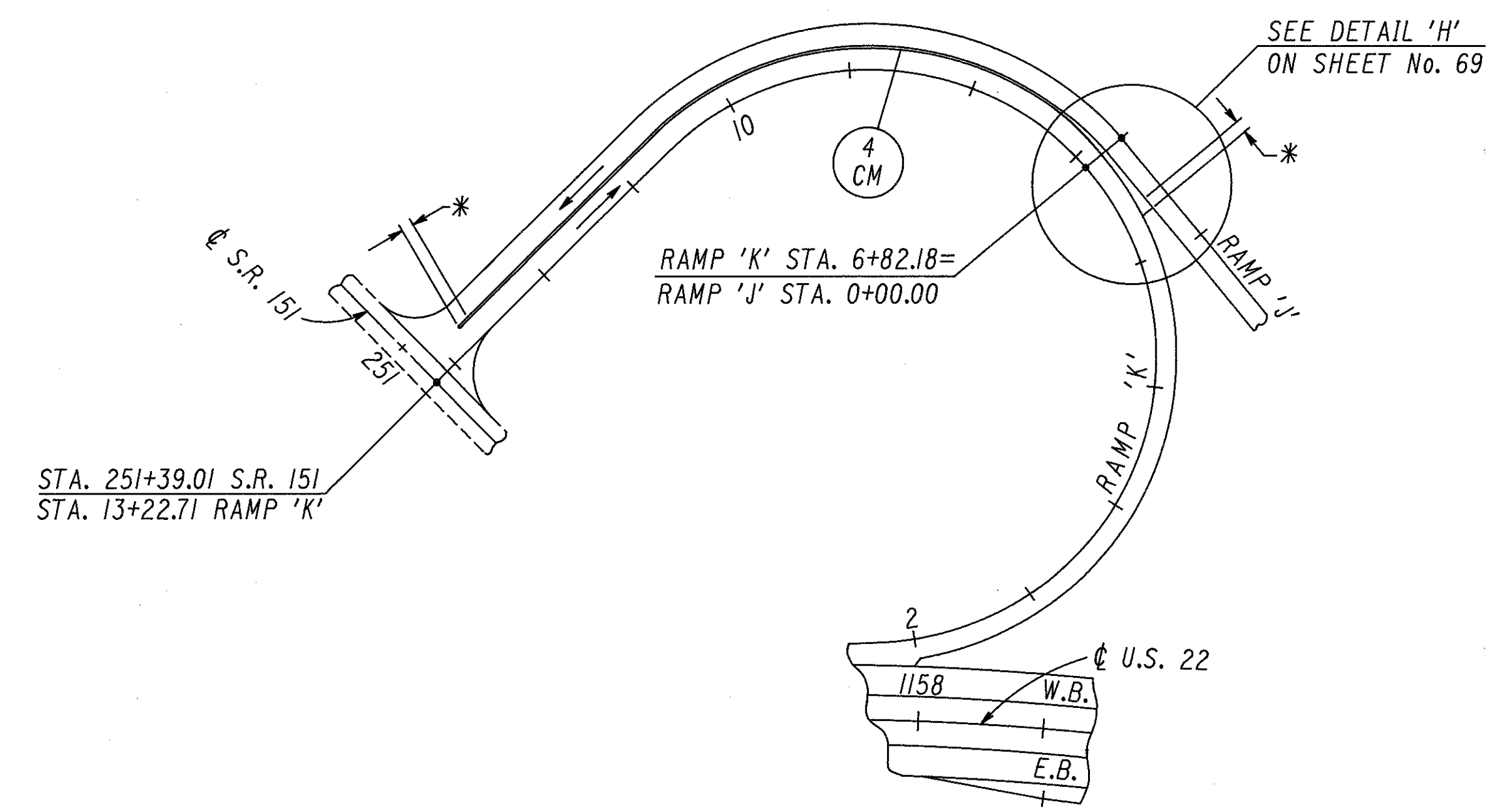
U.S. 250 INTERCHANGE



S.R. 9 INTERCHANGE

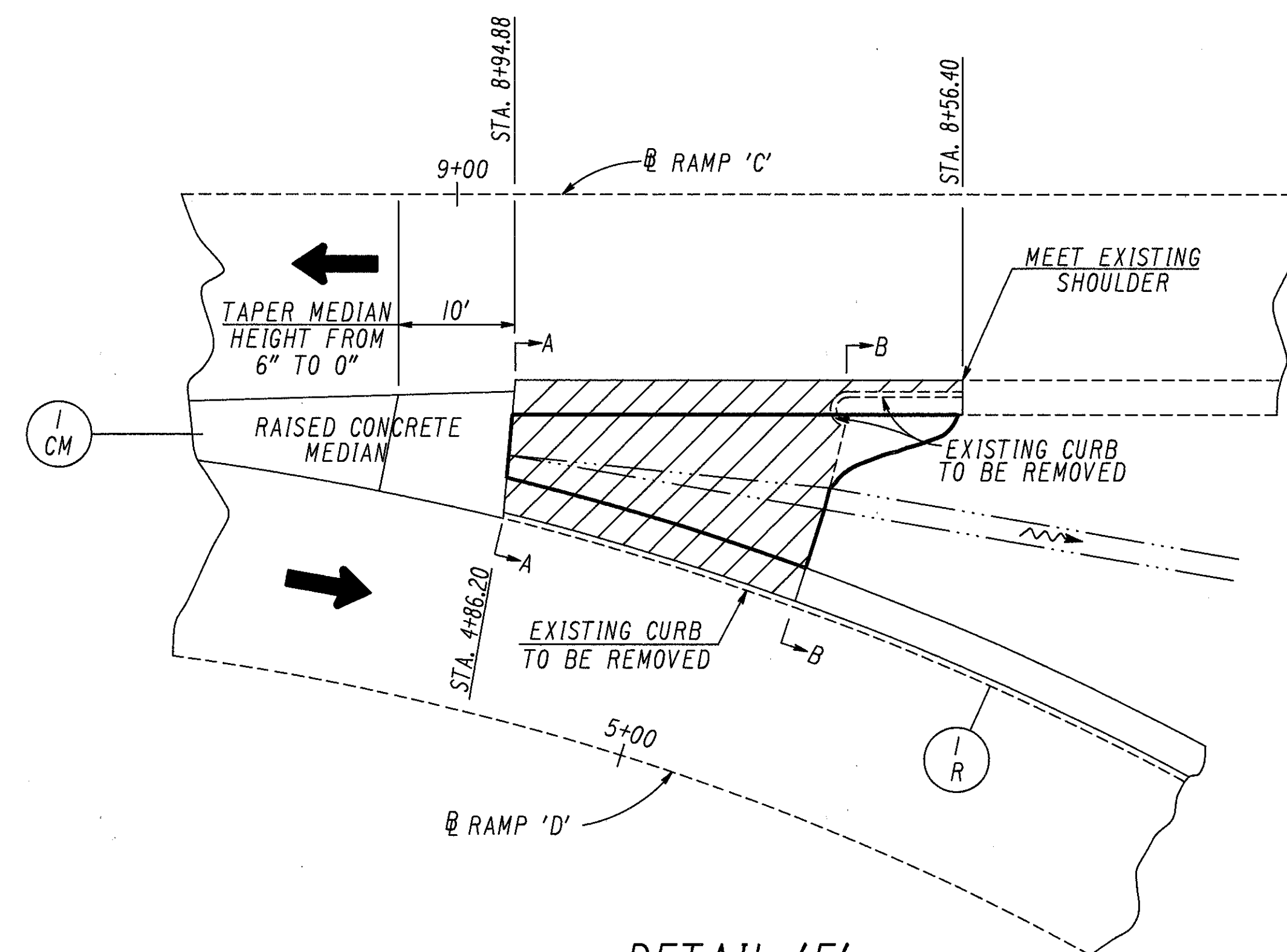
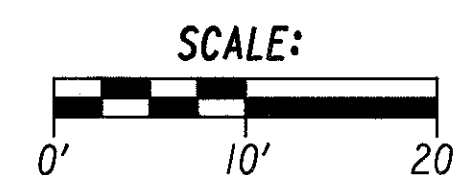


S.R. 9 INTERCHANGE



S.R. 151 WEST INTERCHANGE

MEDIAN DETAILS



DETAIL 'E'

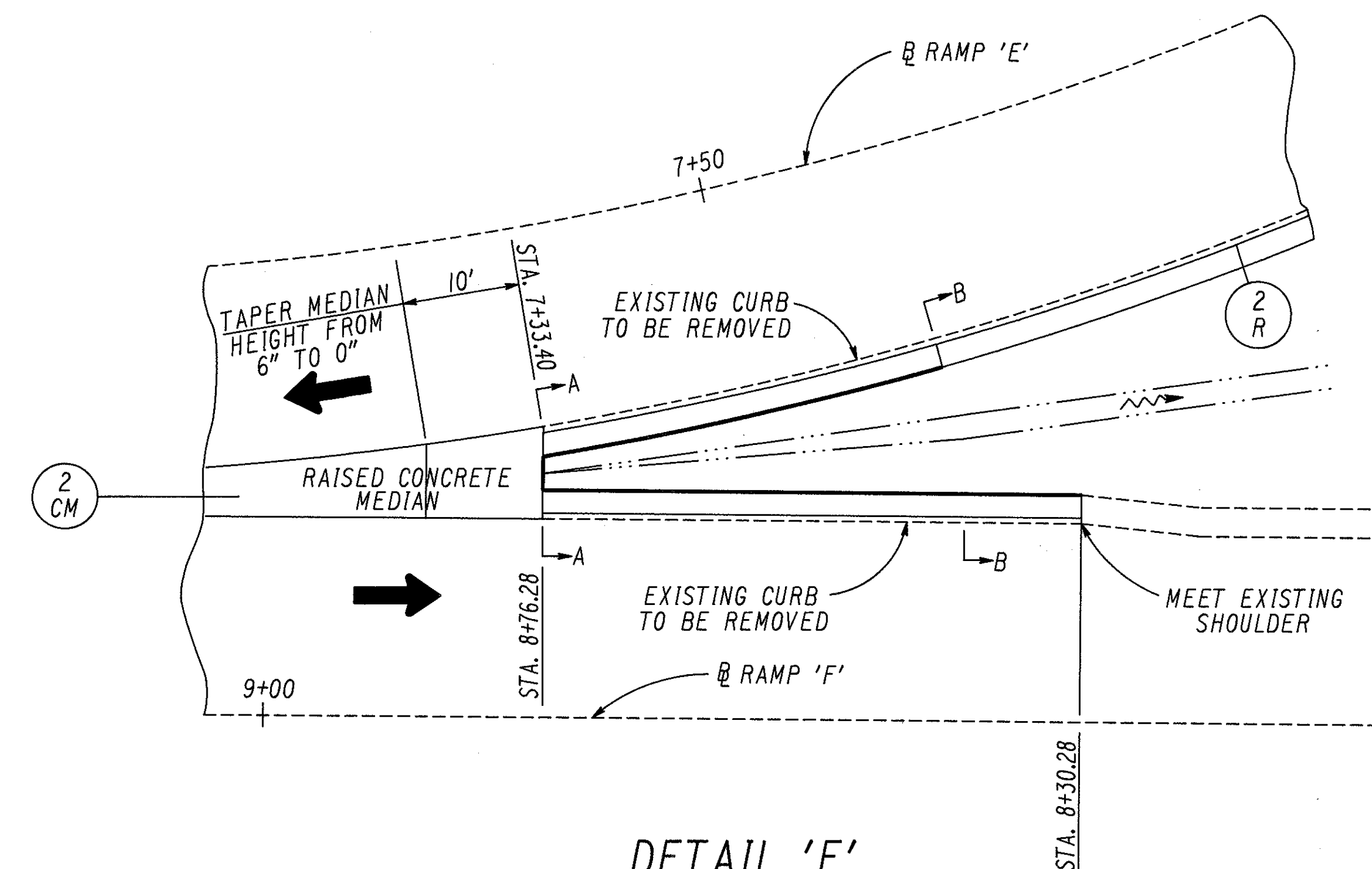
PAVEMENT
TO BE REMOVED

AREA
TO BE SEEDED

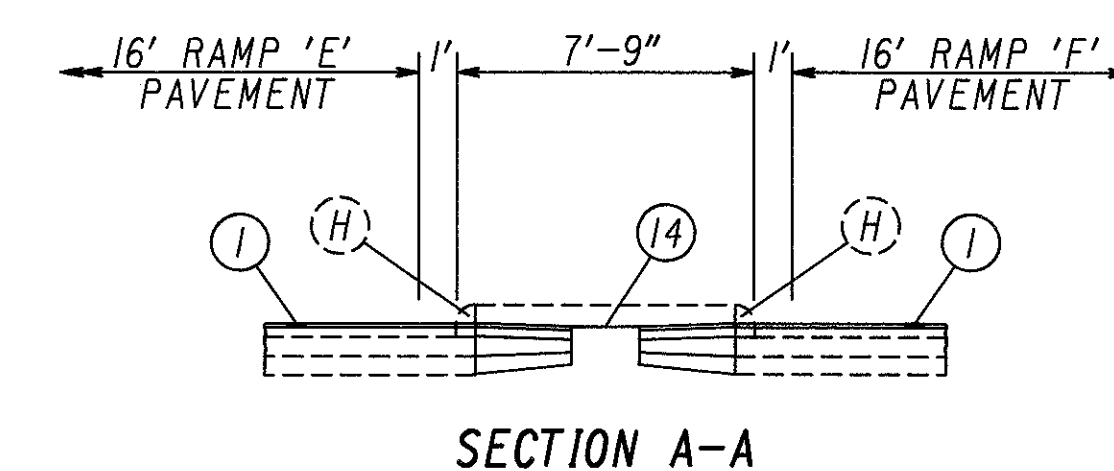
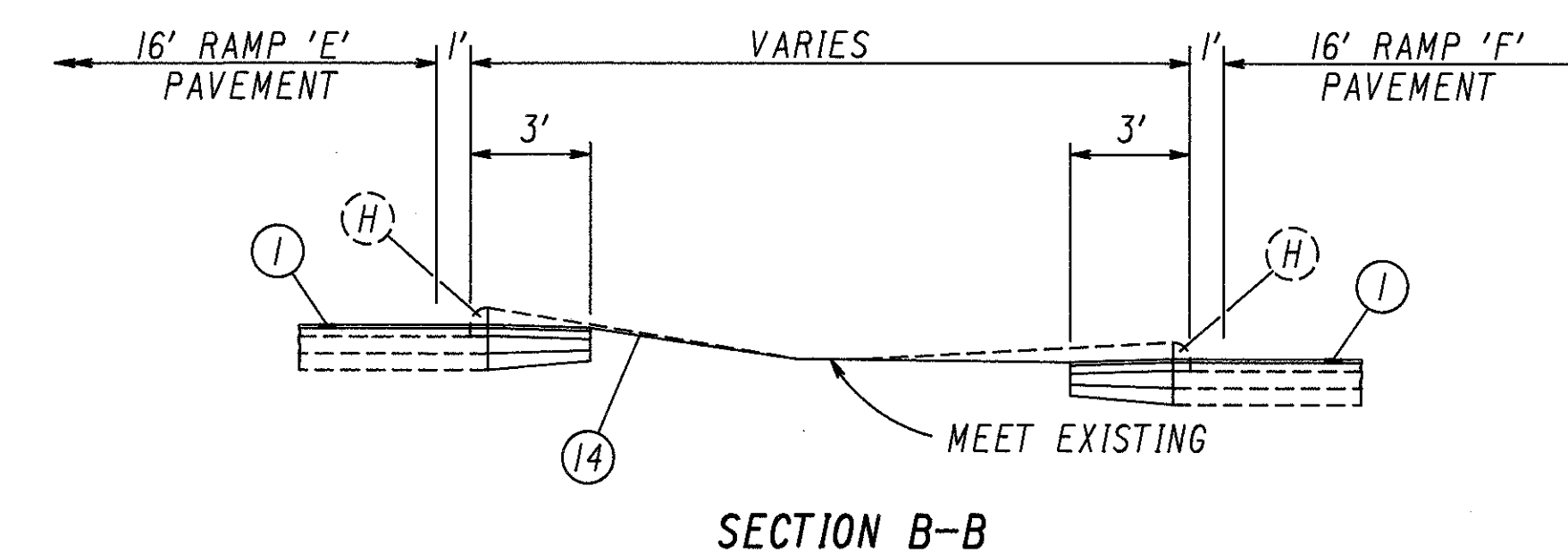
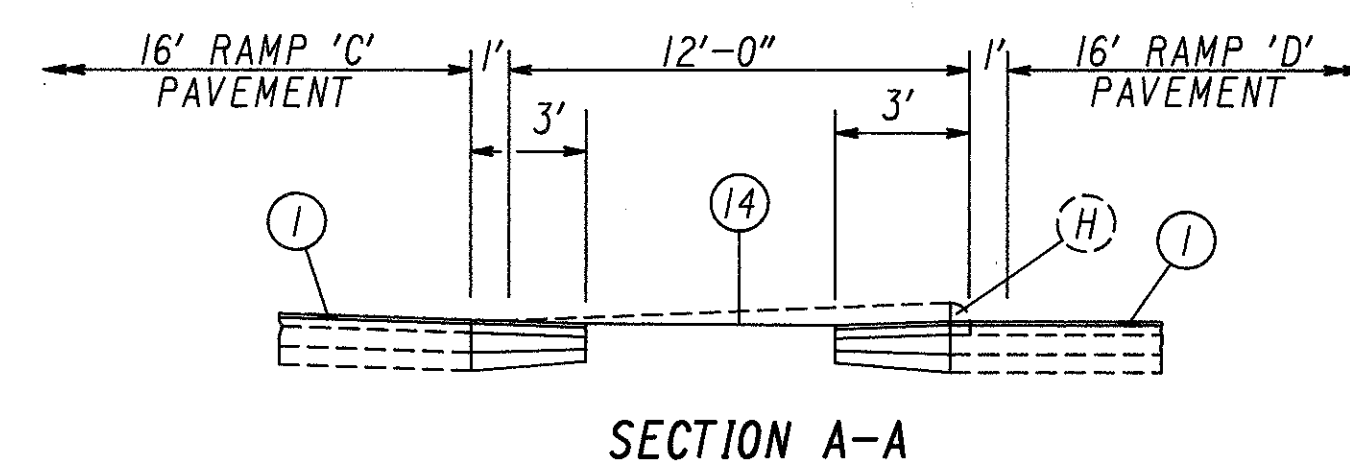
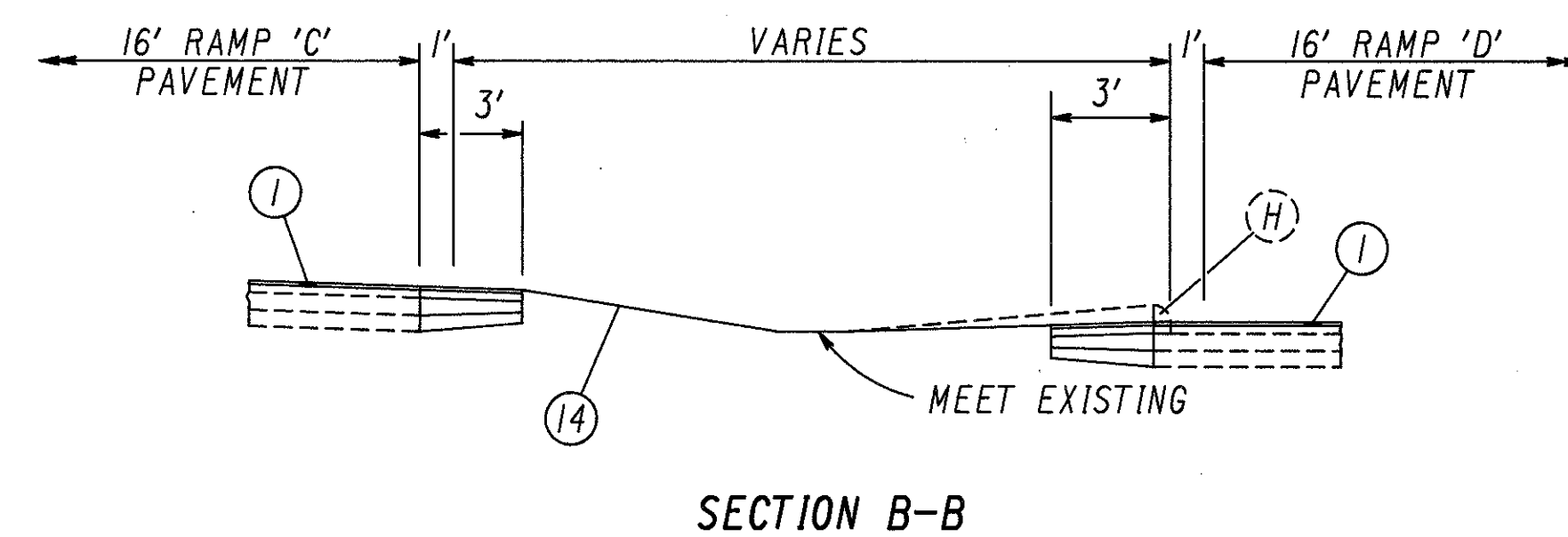
FOR QUANTITIES SEE SHEET No. 66.

FOR RAMP SHOULDER CONSTRUCTION
DETAILS, SEE SHEET No. 8.

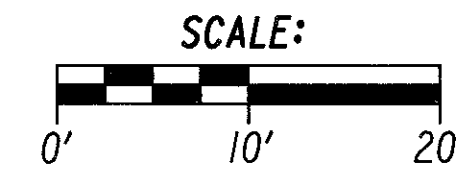
FOR RAMP SHOULDER CONSTRUCTION
QUANTITIES, SEE SHEET No. 20.



DETAIL 'F'



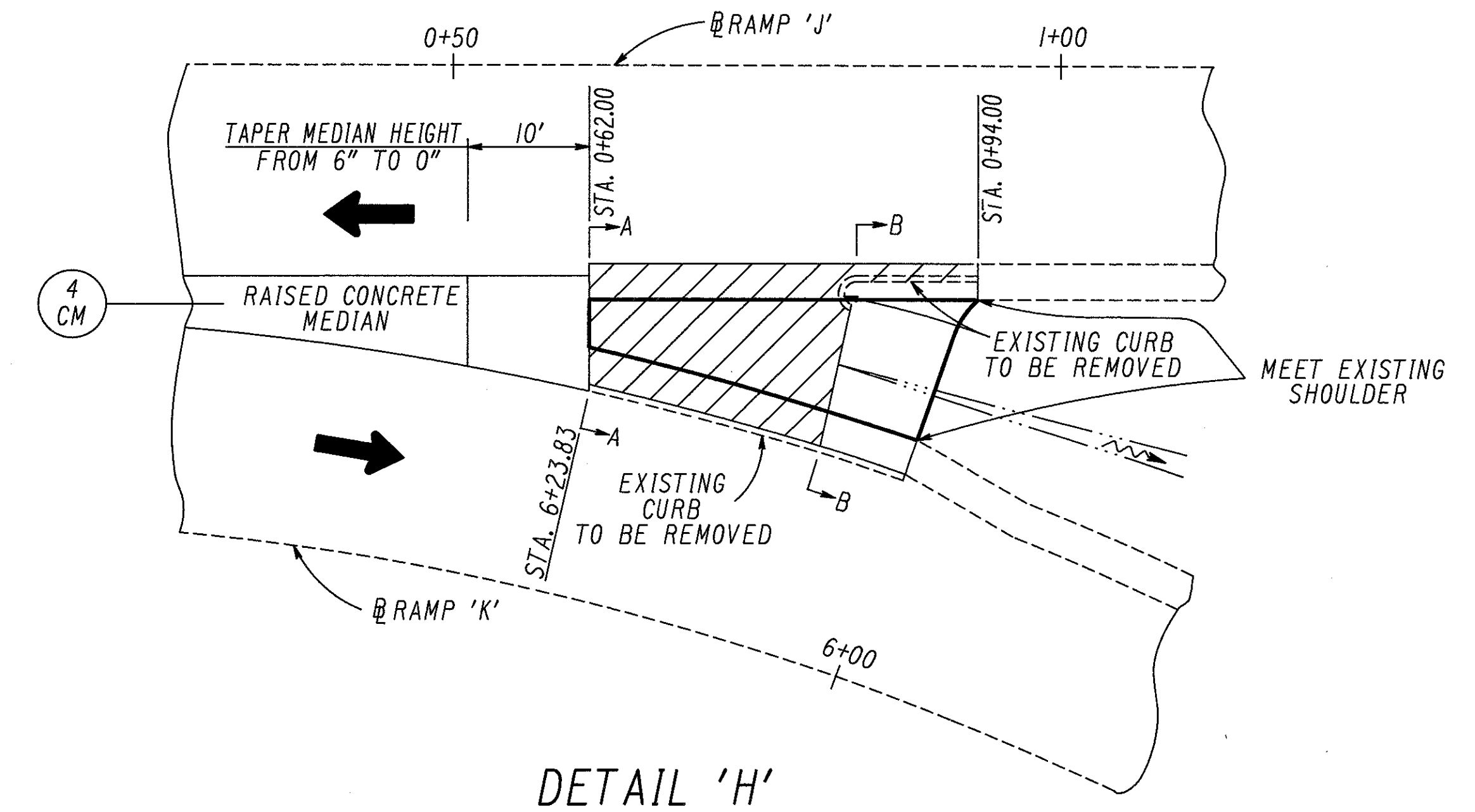
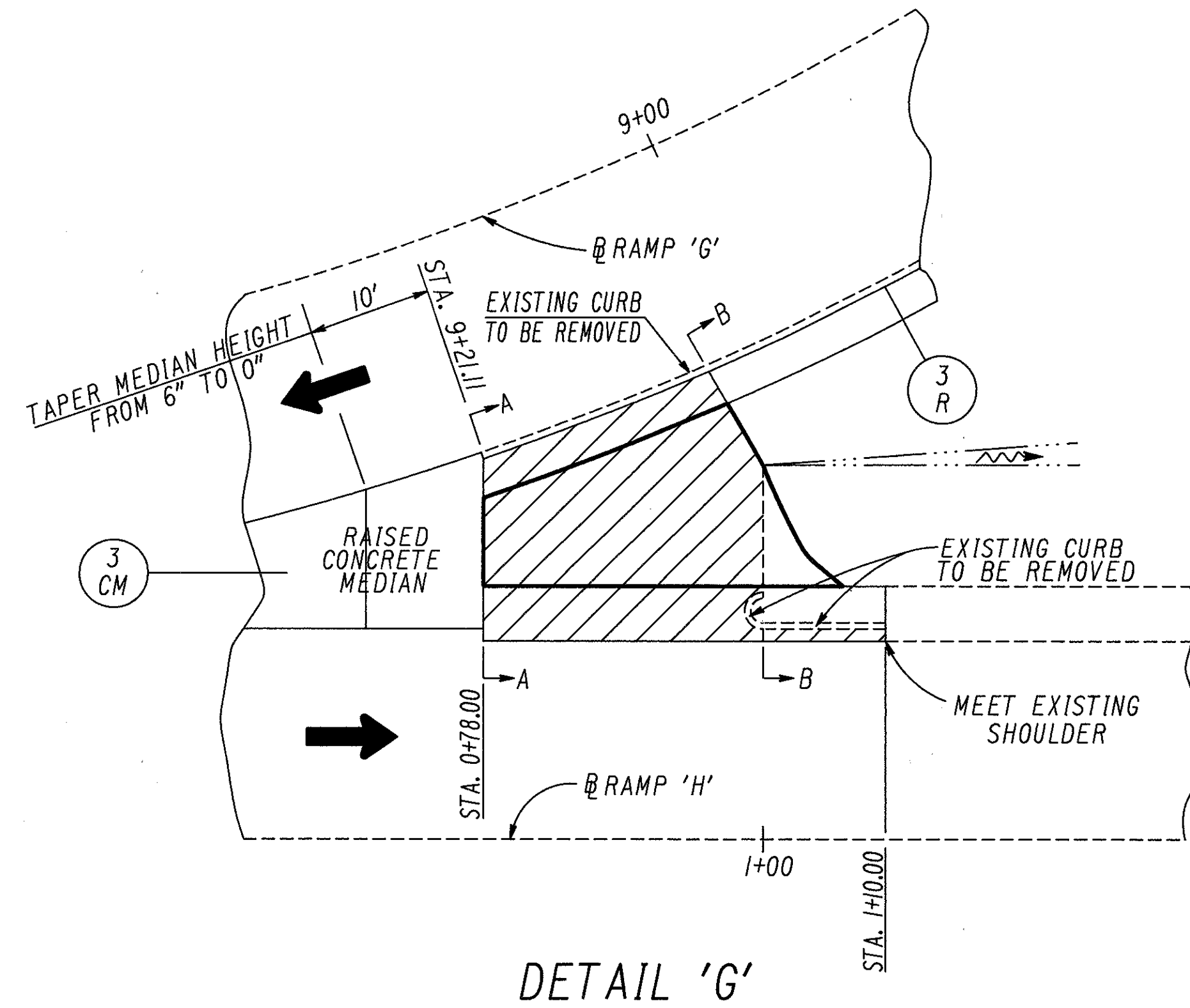
MEDIAN DETAILS



FHWA REGION	STATE	PROJECT	
5	OHIO		

HAS-22-15.03

69
115



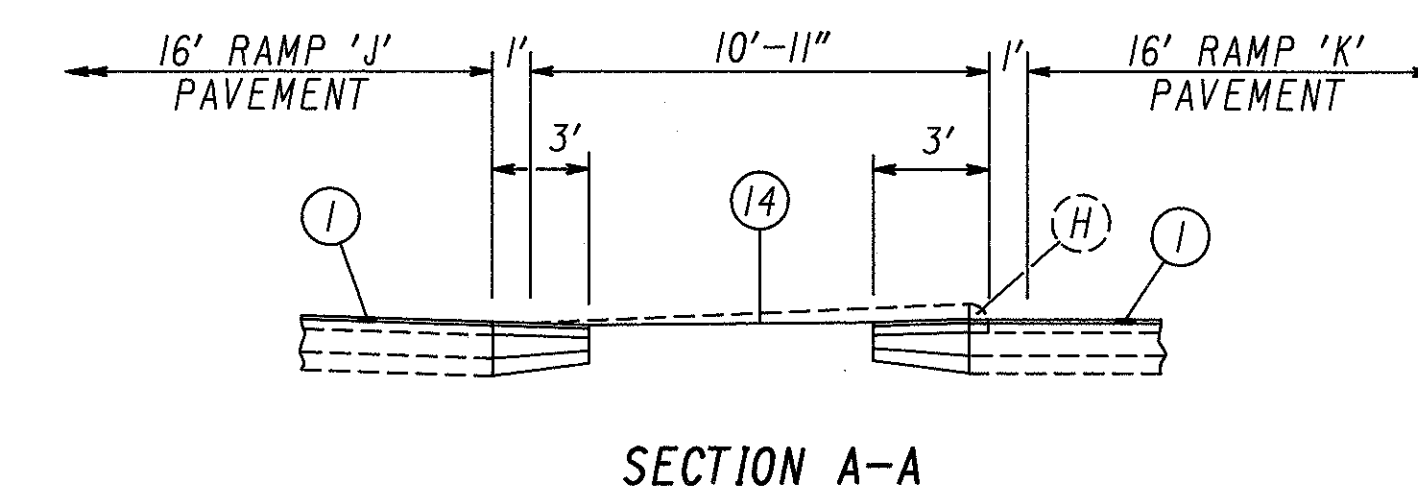
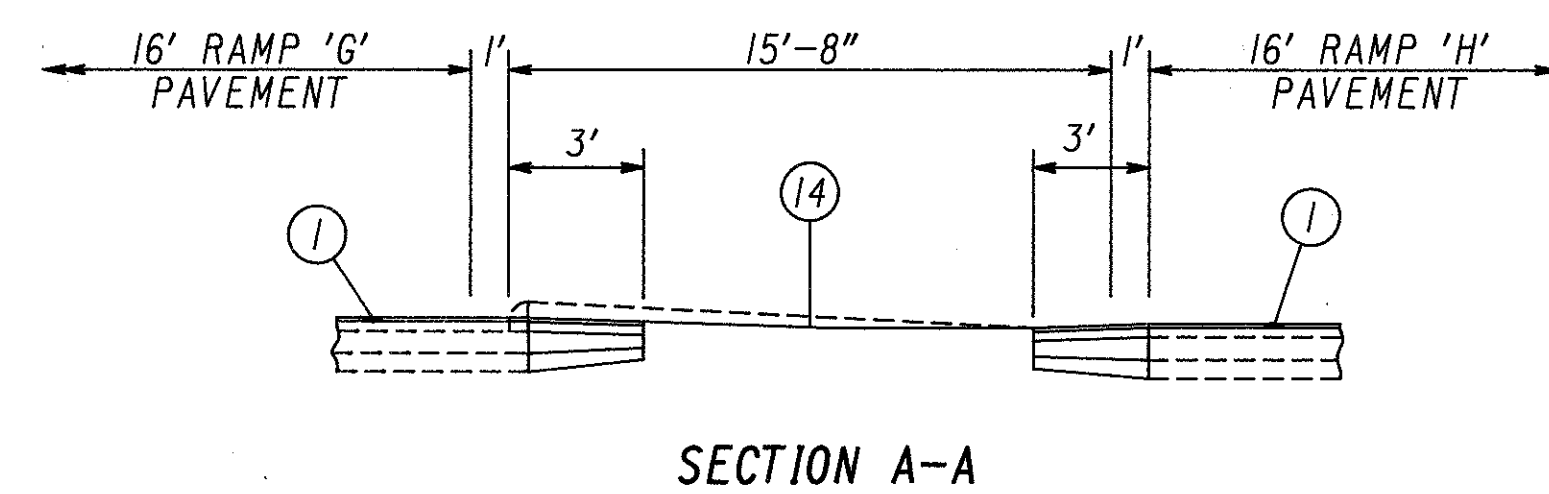
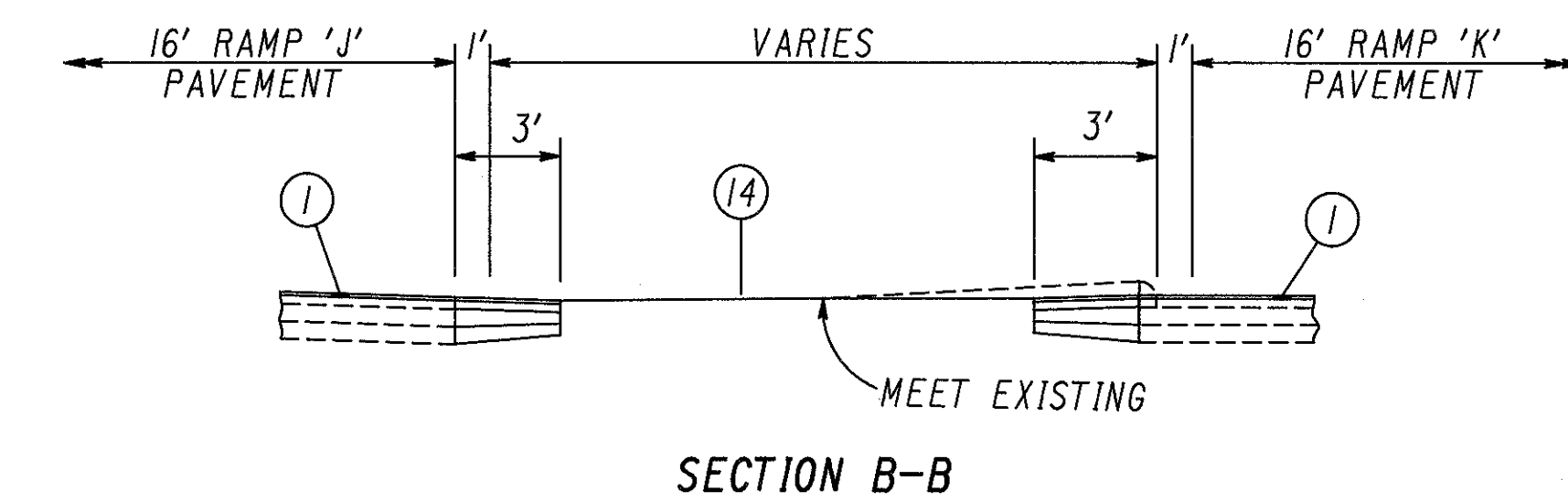
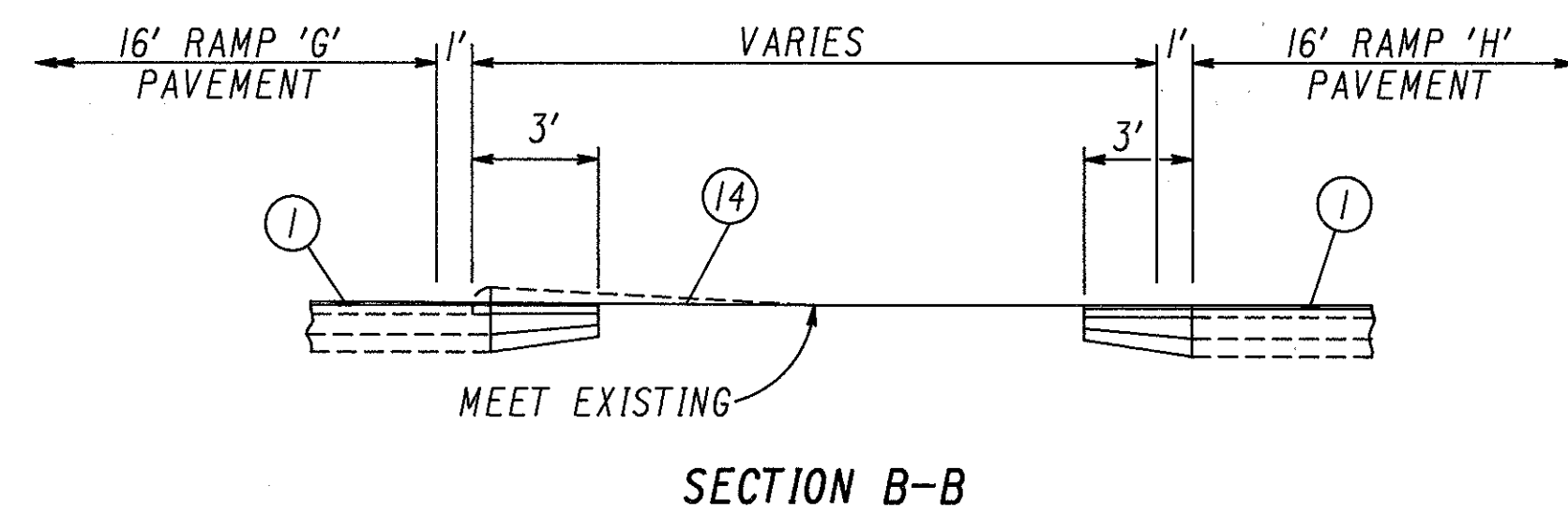
PAVEMENT TO BE REMOVED

AREA TO BE SEEDED

FOR QUANTITIES SEE SHEET No. 66.

FOR RAMP SHOULDER CONSTRUCTION DETAILS, SEE SHEET No. 8.

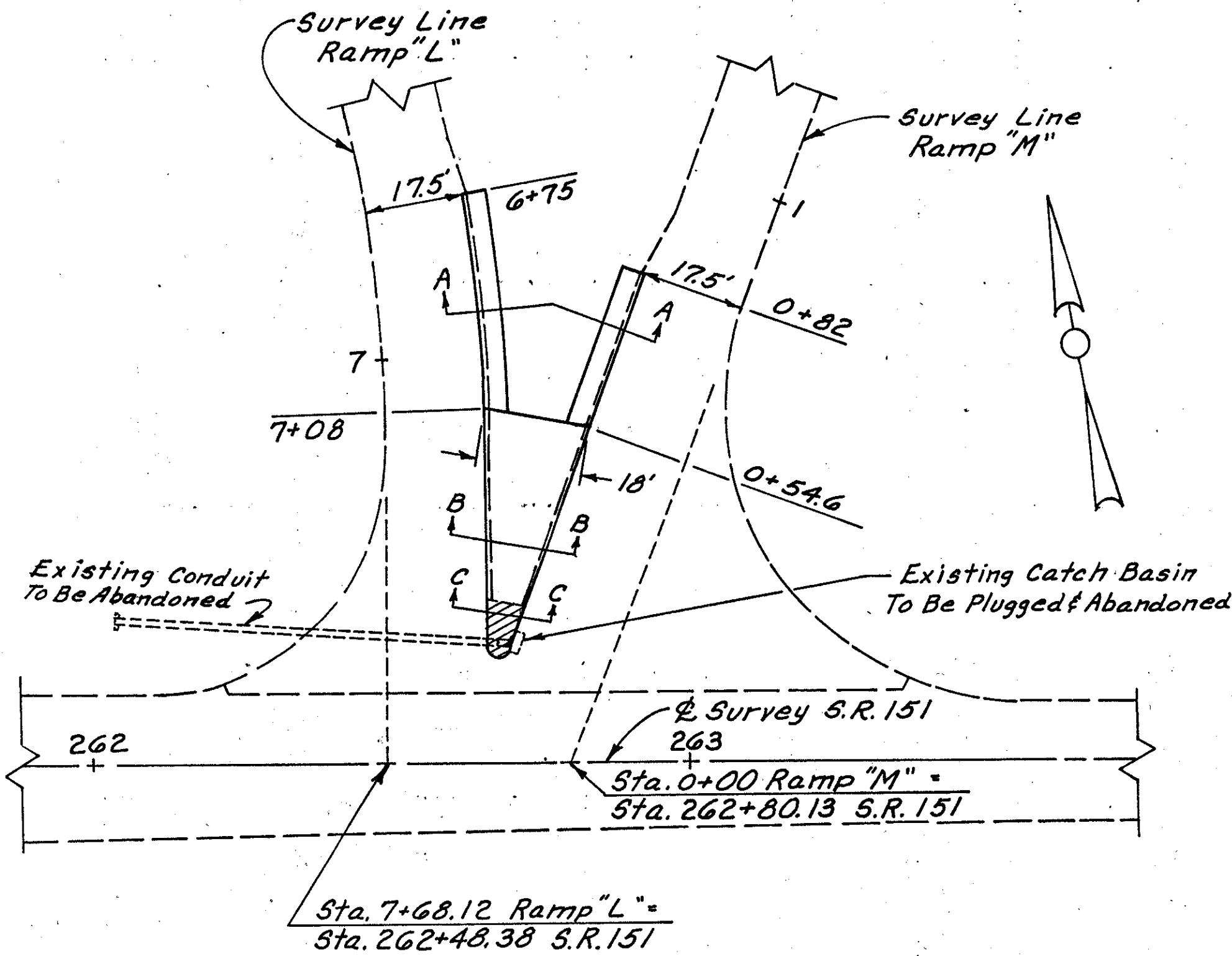
FOR RAMP SHOULDER CONSTRUCTION QUANTITIES, SEE SHEET No. 20.



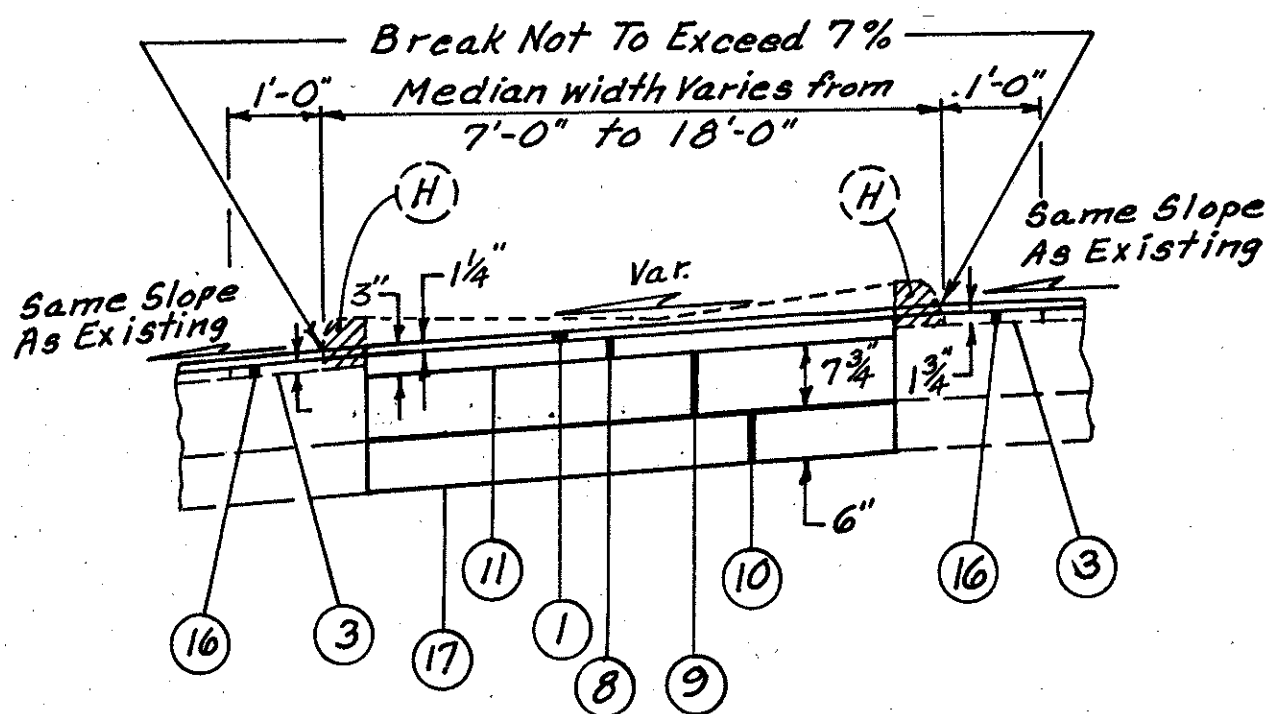
QUANTITIES	
Calc.	R.S.K. 7-12-90
Chkd.	S.H.G. 7-12-90

FHWA REGION	STATE	PROJECT
5	OHIO	

HAS-22-15.03

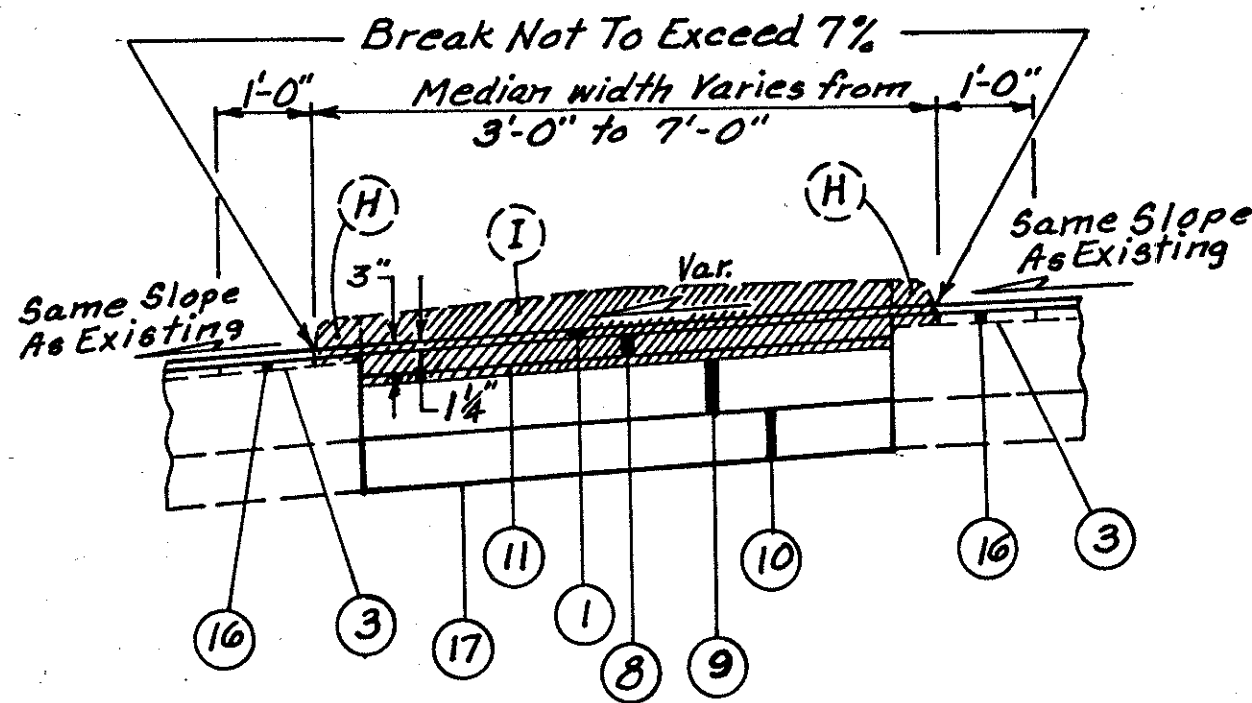


PLAN



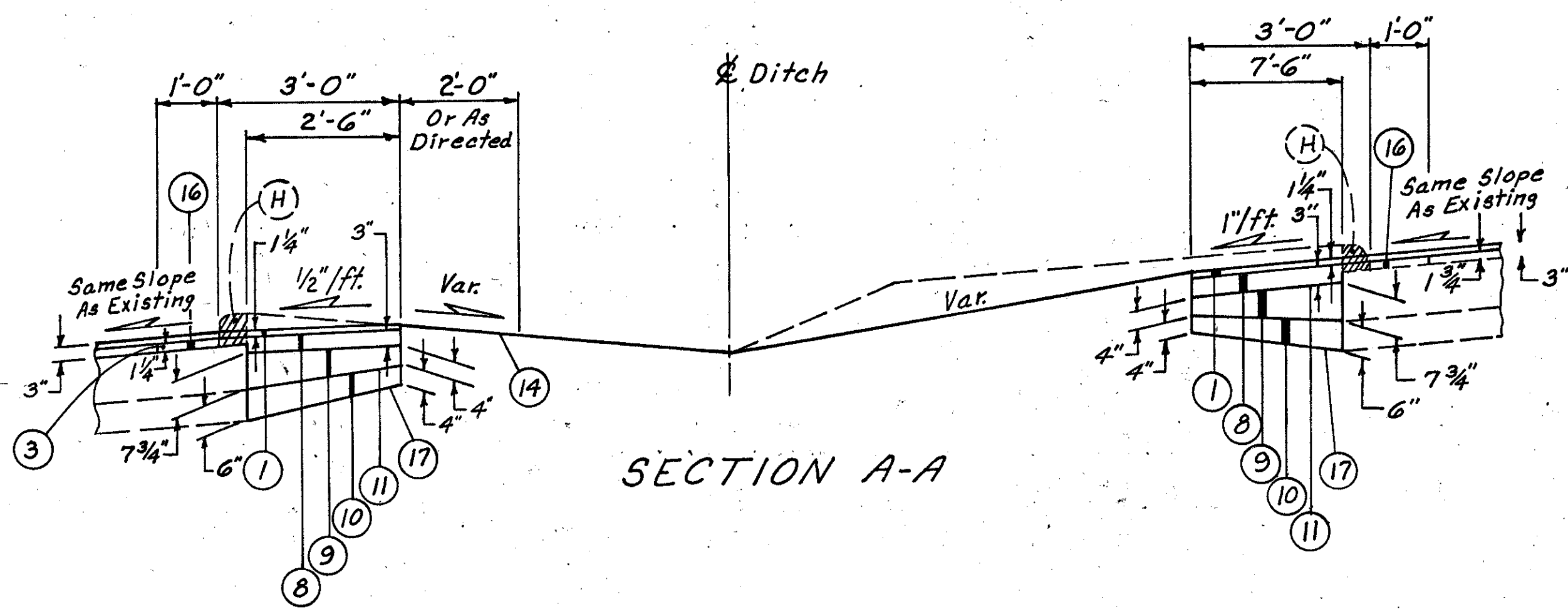
SECTION B-B

Sta. 7+08.0 to Sta. 7+39.6 Ramp "L"
Sta. 0+23.0 to Sta. 0+54.6 Ramp "M"



SECTION C-C

Sta. 7+39.6 to Sta. 7+50.2 Ramp "L"
Sta. 0+12.4 to Sta. 0+23.0 Ramp "M"



SECTION A-A

TYPICAL RAMP "L"
Sta. 6+75 to Sta. 7+08

TYPICAL RAMP "M"
Sta. 0+54.6 to Sta. 0+82

		202			203		301	304	310	408	446	448	659
		Curb Removed As Per Plan	Concrete Median Removed As Per Plan	Catch Basin Abandoned	Excavation	Subgrade Compaction	Bituminous Aggregate Base, AC-20	Aggregate Base, As Per Plan	Subbase Type II, As Per Plan	Bituminous Prime Coat	Asphalt Concrete Surface Course, Type I, AC-20	Asphalt Concrete Intermediate Course, Type II, AC-20	Seeding And Mulching
From	To	Lin. Ft.	Sq. Yd.	EACH	C.Y.	Sq. Yd.	Cu. Yd.	Cu. Yd.	Cu. Yd.	Gal.	Cu. Yd.	Cu. Yd.	Sq. Yd.
Ramp "L"													
6+75	7+08.0	33			4	92	0.8	1.5	1.3	3.7	0.4	0.3	62
7+08.0	7+39.6	32			14	202	1.7	4.3	3.4	8.1	0.8	0.3	
7+39.6	7+50.2		3.1		2	2.4	0.2	0.5	0.4	1.0	0.1	0.1	
Ramp "M"													
0+12.4	0+23.0	13	2.4	1	2	2.4	0.2	0.5	0.4	1.0	0.1	0.1	
0+23.0	0+54.6	32			14	202	1.7	4.3	3.4	8.1	0.8	0.3	
0+54.6	0+82	27			6	76	0.6	1.2	1.1	3.0	0.3	0.2	50
Subtotals to Sheet No. 63													
TOTALS Carried to Gen. Summary		137	5.5	1	42	62.0	5.2	12.3	10.0	24.9	2.5	1.3	

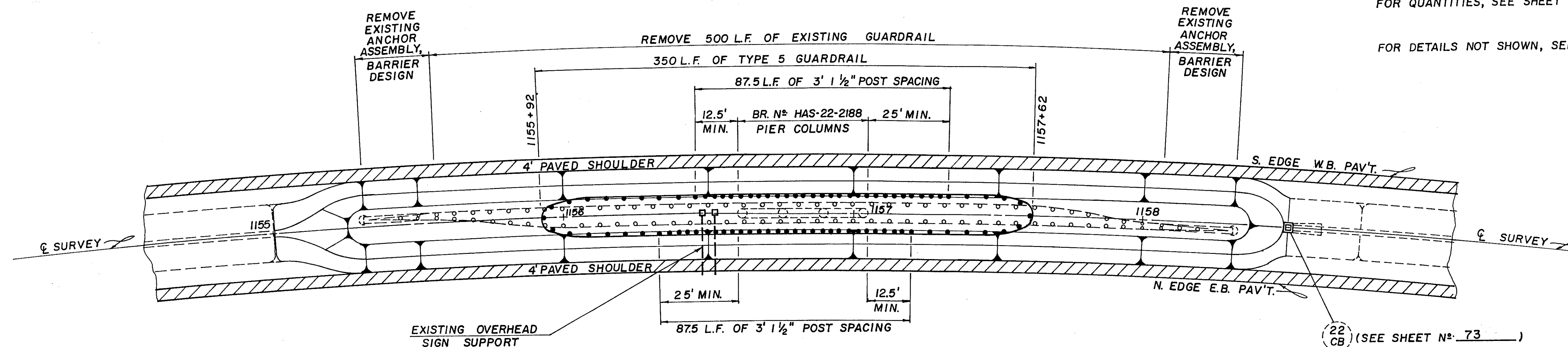
MEDIAN GUARDRAIL DETAIL AT BRIDGE N° HAS-22-2188

61
GR

NOTE:
GUARDRAIL WITH 3' 1 1/2" POST SPACING SHALL BE INCLUDED
IN THE UNIT PRICE BID OF TYPE 5 GUARDRAIL.

FOR QUANTITIES, SEE SHEET N° 23

FOR DETAILS NOT SHOWN, SEE STD. DWG'S. GR-3 AND GR-6A.

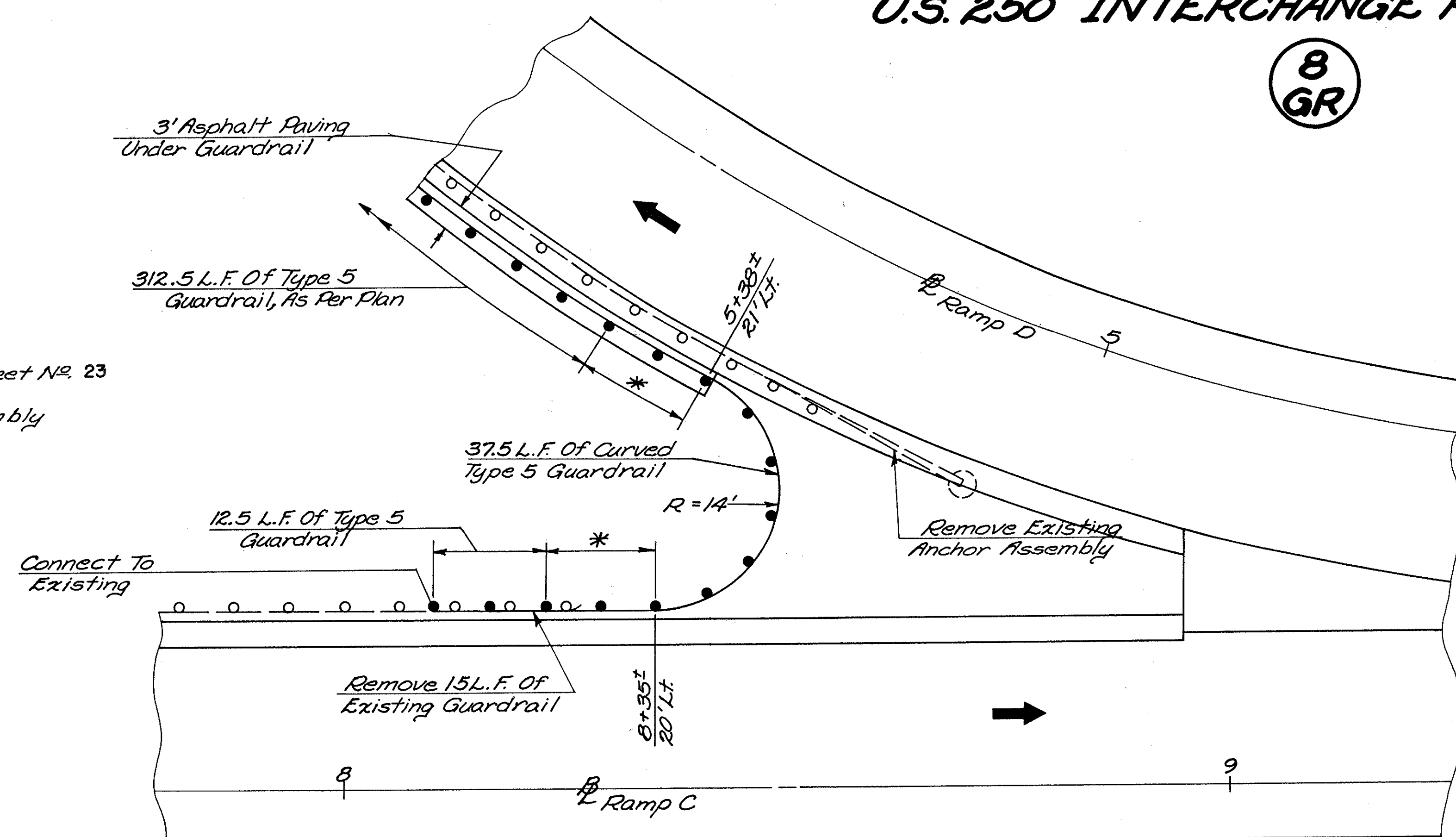


GUARDRAIL DETAIL U.S. 250 INTERCHANGE RAMP C & D

8
GR

For Quantities, See Sheet N° 23

* Type T Anchor Assembly



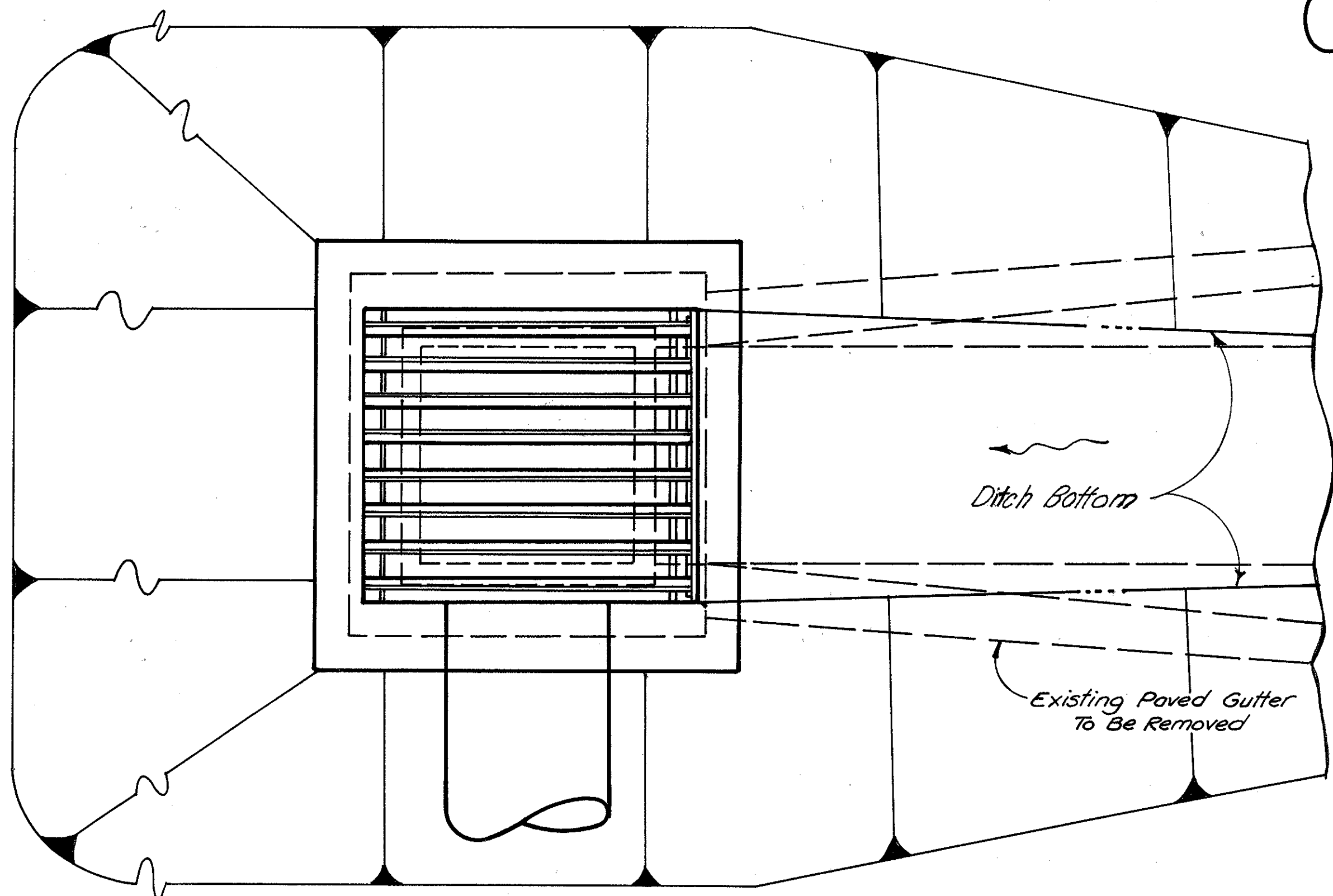
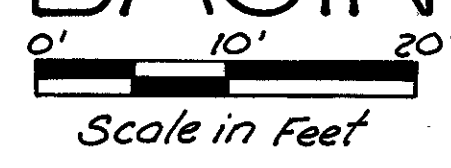
CATCH BASIN DETAILS

Calc: SHG 3-26-90
Chkd: RSK 7-18-90

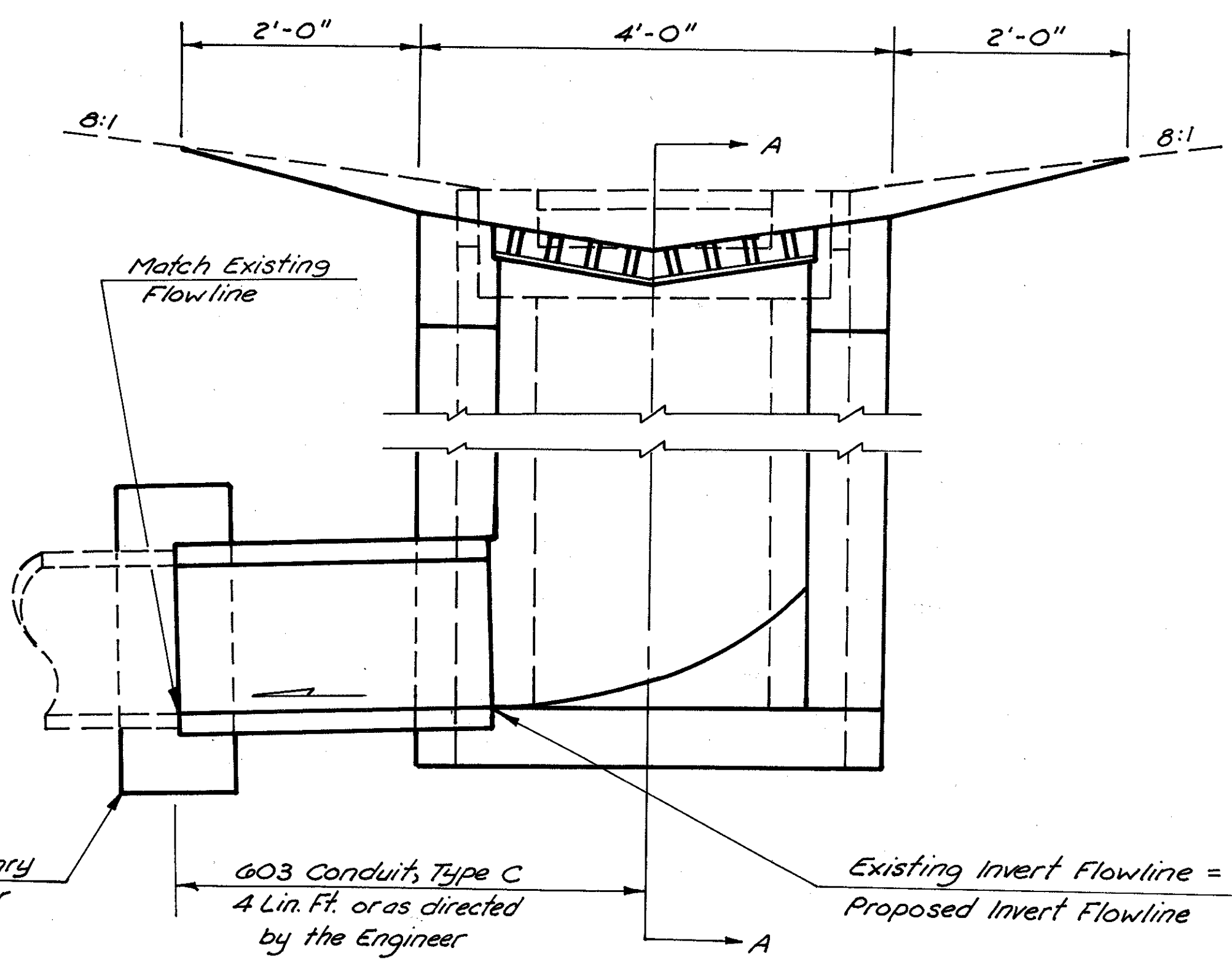
FHWA REGION	STATE	PROJECT
5	OHIO	

73
115

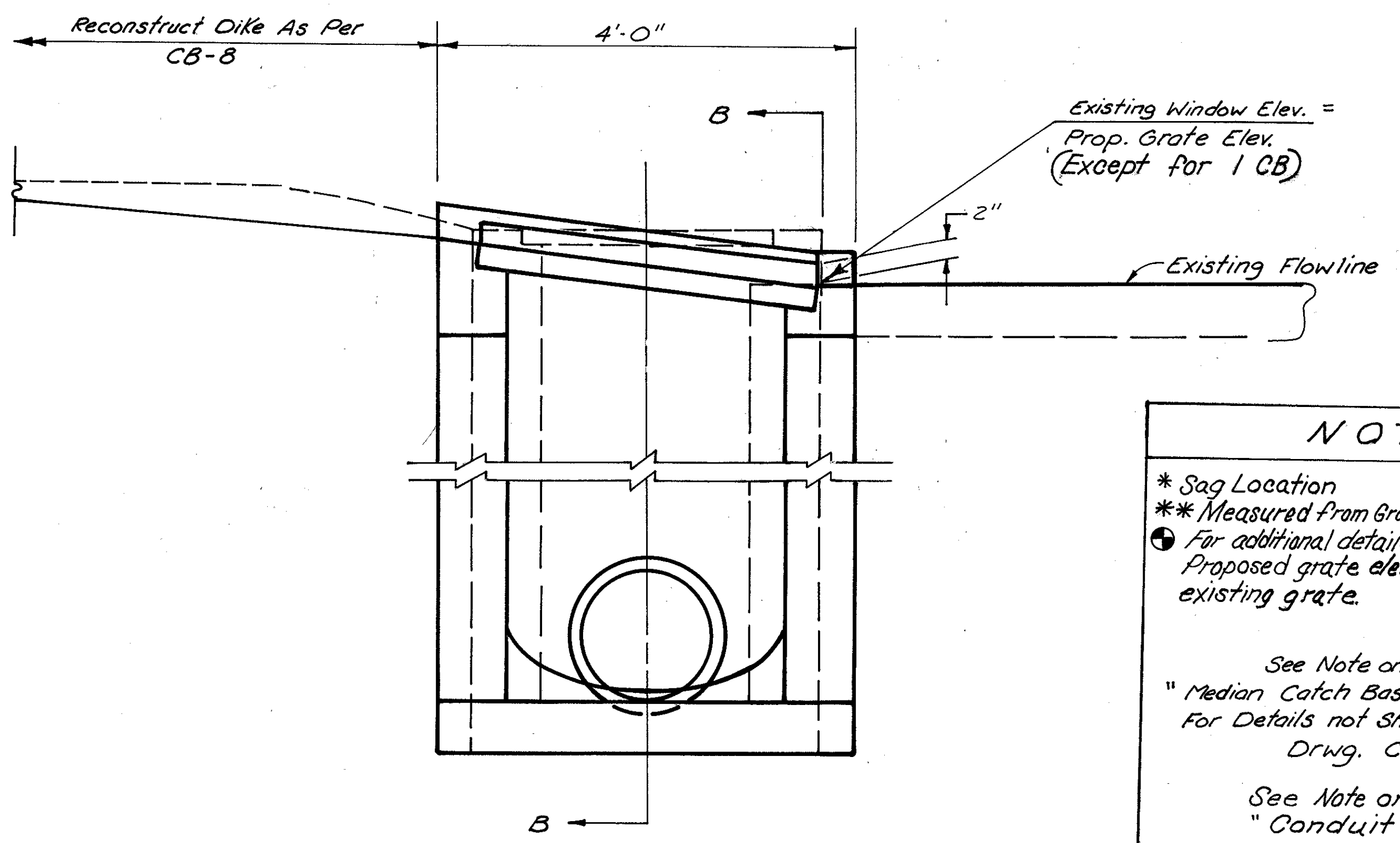
HAS-22-15.03



PLAN



SECTION B-B



SECTION A-A

NOTES

- * Sag Location
- ** Measured from Grate Elev. to invert Elev.
- For additional details, see sheet N° 64
- Proposed grate elev. is 1.23' higher than existing grate.

See Note on Sht. No. 26,
"Median Catch Basin Replacement"
For Details not Shown See Std.
Drwg. CB-8

See Note on Sheet N° 27
"Conduit Cleanout"

Plan Sht. No.	Reference No.	Median Catch Basin Location (SLM)	603				604		Spec. Pipe (Conduit) Cleanout	670 Ditch Erosion Protection	207 Straw or Hay Bales	659 Seeding and Mulching	202 Gutter Removed			
			Conduit, Type C				Depth * *	Catch Basin No. & Without Approach								
			15"	18"	21"	30"										
			L.F.	L.F.	L.F.	L.F.								Ft.	Ea.	Lin. Ft.
42	1-CB	15.318	4.0				2.78	1	48	8.3	8	31.4	10			
43	2-CB	15.487	4.0				2.55	1	70	8.3	8	31.4	10			
43	3-CB	15.690	4.0				2.60	1		8.3	8	31.4	10			
43	4-CB	15.860		4.0			2.50	1		8.3	8	31.4	10			
43	5-CB	16.296	4.0				2.50	1		8.3	8	31.4	10			
43	6-CB	16.466	4.0				2.50	1	80	8.3	8	31.4	10			
44	7-CB	16.581				8.0	9.29	1 *		16.6	8	30.2	20			
44	8-CB	16.707	4.0				2.60	1		8.3	8	31.4	10			
44	9-CB	16.837	4.0				2.50	1		8.3	8	31.4	10			
44	10-CB	17.009	4.0				2.50	1		8.3	8	31.4	10			
45	11-CB	17.246		4.0	4.0		4.26	1		8.3	8	31.4	10			
45	12-CB	17.412	8.0				12.03	1		8.3	8	31.4	10			
45	13-CB	17.521	4.0				3.16	1		8.3	8	31.4	10			
46	14-CB	17.784	4.0				2.84	1		8.3	8	31.4	10			
46	15-CB	17.880	4.0				2.57	1 *	148	16.6	8	30.2	20			
46	16-CB	18.003	4.0				2.74	1		8.3	8	31.4	10			
46	17-CB	18.205	4.0				2.60	1	70	8.3	8	31.4	10			
46	18-CB	18.689	4.0				2.50	1	68	8.3	8	31.4	10			
47	19-CB	18.885	4.0				3.00	1		8.3	8	31.4	10			
50	20-CB	21.710	4.0				2.98	1 *		16.6	8	30.2	20			
50	21-CB	21.781	4.0				2.50	1		8.3	8	31.4	10			
50	22-CB	21.960	4.0				2.50	1		8.3	8	31.4	10			
51	23-CB	22.402	4.0				2.85	1		8.3	8	31.4	10			
51	24-CB	22.621	4.0				2.70	1		8.3	8	31.4	10			
51	25-CB	22.716	4.0				2.50	1 *		16.6	8	30.2	20			
51	26-CB	22.794	4.0				2.50	1		8.3	8	31.4	10			
51	27-CB	23.931	4.0				2.50	1		8.3	8	31.4	10			
51	28-CB	23.067	4.0				2.50	1		8.3	8	31.4	10			
51	29-CB	23.233	4.0				2.50	1		8.3	8	31.4	10			
52	30-CB	23.569	4.0				3.75	1		8.3	8	31.4	10			
52	31-CB	23.628	4.0				3.00	1		8.3	8	31.4	10			
52	32-CB	23.652	4.0				2.30	1 *		16.6	8	30.2	20			
52	33-CB	23.824	4.0				2.30	1		8.3	8	31.4	10			
49	34-CB	21.290		4.0	4.0		8.70	1		8.3	8	31.4	10			
49	35-CB	21.300		4.0			4.39	1		8.3	8	31.4	10			
SUBTOTAL			Carried To Sheet No. 63									1093.0				
TOTAL			Carried To General Summary				124.0	16.0	8.0	8.0	35	484	332.0	280	1093.0	400

1) ITEM SPECIAL - SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS

(SEE NOTE IN PROPOSAL AND DETAIL ON SHEET NO. 26)
A) MAINLINE - 2 LANE SECTION (ONE 12' LANE IN EACH DIRECTION)
STA. 796+50 TO STA. 801+43.32 = +493.32 L.F.
STA. 1010+00 TO STA. 1135+00 = +1250.00 L.F.
ADD FOR STATION EQUATION
STA. 1013+25.70 BK = STA. 1011.67 AH = +158.64 L.F.
DEDUCT FOR BRIDGE AND APPROACH SLABS
HAS-22-2126 148.93' + (2 x 25') = -198.93 L.F.
TOTAL 12,953.03 L.F.

12,953.63 L.F. x 1 JOINT/60 L.F. = 216 JOINTS
ADD FOR POSSIBLE ADDITIONAL JOINTS
ESTIMATED ONE ADDITIONAL JOINT EVERY 3,000 L.F.
12,953.63 L.F. x 1 JOINT/3,000 L.F. = + 4 JOINTS
DEDUCT THOSE SPECIFIED FOR FULL DEPTH REPAIR ON
SHEET NO'S. 80 THRU 86 = -47 JOINTS
216 + 4 - 47 = 173 JOINTS OF 24' WIDTH

SAWING AND SEALING LENGTH/JOINT:
24' LANE WIDTH + 2 (8' SHOULDERS) = 40 L.F./JOINT

173 JOINTS x 40 L.F./JOINT = 6920 L.F.

B) MAINLINE 4 LANE SECTION (TWO 12' LANES IN THE SAME DIRECTION)
EASTBOUND

STA. 801+43.32 TO STA. 1010+00 = 20,856.68 L.F.
STA. 1135+00 TO STA. 1334+03.75 = 19,903.75 L.F.
DEDUCT FOR STATION EQUATIONS
STA. 1168+68.19 BK = STA. 1168+75.64 AH -7.45 L.F.
STA. 1280+62.94 BK = STA. 1280+72.73 AH -9.79 L.F.
STA. 1298+78.92 BK = STA. 1298+80.75 AH -1.83 L.F.
STA. 1329+83.81 BK = STA. 1329+98.24 AH -14.43 L.F.
DEDUCT FOR BRIDGES AND APPROACH SLABS
HAS-22-1717R 185.88 + (2 x 25) -235.88 L.F.
HAS-22-1738R 131.56 + (2 x 25) -181.56 L.F.
HAS-22-1749R 137.28 + (2 x 25) -187.28 L.F.
HAS-22-1753R 94.78 + (2 x 25) -144.78 L.F.
HAS-22-2283R 232.10 + (2 x 25) -282.10 L.F.
HAS-22-2362R 130.56 + (2 x 25) -180.56 L.F.
HAS-22-2460R 134.60 + (2 x 25) -184.60 L.F.
TOTAL = 39,330.17 L.F.

EASTBOUND
STA. 801+43.32 TO STA. 1010+00 20,856.68 L.F.
STA. 1135+00 TO STA. 1262+03.90 12,703.90 L.F.
DEDUCT FOR STATION EQUATION
STA. 1168+68.19 BK = STA. 1168+75.64 AH -7.45 L.F.
DEDUCT FOR BRIDGES AND APPROACH SLABS
HAS-22-1717L 239.88 + (2 x 25) -289.88 L.F.
HAS-22-1738L 131.56 + (2 x 25) -181.56 L.F.
HAS-22-1749L 137.28 + (2 x 25) -187.28 L.F.
HAS-22-1753L 94.78 + (2 x 25) -144.78 L.F.
HAS-22-2283L 232.10 + (2 x 25) -282.10 L.F.
HAS-22-2362L 130.56 + (2 x 25) -180.56 L.F.
TOTAL = 32,286.97 L.F.

TOTAL 4 LANE SECTION : 39,330.17 L.F. + 32,286.97 L.F. = 71,617.14 L.F.
(71,617.14 L.F. x 1 JOINT/60 L.F.) + 2 = 1196 JOINTS
ADD FOR POSSIBLE ADDITIONAL JOINTS FOR EVERY 3,000 L.F.
71,617.14 L.F. x 1 JOINT/3,000 L.F. = 24 JOINTS
DEDUCT THOSE SPECIFIED FOR FULL DEPTH REPAIR ON
SHEET NO'S. 80 THRU 86 = -185 JOINTS
TOTAL NO. OF 4 LANE TRANSVERSE JOINTS =
1196 + 24 - 185 = 1,035 JOINTS OF 24' WIDTH

SAWING AND SEALING LENGTH/JOINT:
24' LANE WIDTH + 4' INSIDE SHOULDER + 8' OUTSIDE SHOULDER = 36 L.F./JOINT
1035 JOINTS x 36 L.F./JOINT = 37,260 L.F.

C) RAMPS (16' WIDE)
RAMP "A" STA. 0+12.21 TO STA. 6+59.49 = 647.28 L.F.
RAMP "B" STA. 3+43.07 TO STA. 8+00.00 = 456.93 L.F.
RAMP "C" STA. 3+54.30 TO STA. 9+60.88 = 606.58 L.F.
RAMP "F" STA. 2+43.72 TO STA. 3+50.76 = 107.04 L.F.
RAMP "F" STA. 5+32.58 TO STA. 9+30.28 = 397.70 L.F.
RAMP "H" STA. 0+00.00 TO STA. 5+30.05 = 530.05 L.F.
RAMP "J" STA. 0+00.00 TO STA. 6+46.81 = 646.81 L.F.
RAMP "K" STA. 1+75.00 TO STA. 6+82.18 = 507.18 L.F.
RAMP "L" STA. 3+17.35 TO STA. 7+56.12 = 438.77 L.F.
RAMP "M" STA. 0+12.77 TO STA. 6+15.02 = 602.25 L.F.
RAMP "N" STA. 5+18.17 TO STA. 17+45.68 = 1,227.51 L.F.
RAMP "Q" STA. 3+58.59 TO STA. 17+49.39 = 1,390.80 L.F.
RAMP "S" STA. 0+12.03 TO STA. 7+44.38 = 732.35 L.F.
RAMP "T" STA. 0+13.01 TO STA. 8+80.23 = 867.22 L.F.
TOTAL = 9,158.47 L.F.

(9,158.47 L.F. x 1 JOINT/60 L.F.) + 13 = 166 JOINTS OF 16' WIDTH
DEDUCT THOSE SPECIFIED FOR FULL DEPTH REPAIR ON
SHEET NO'S. 80 THRU 86 -3 JOINTS
163 JOINTS

SAWING AND SEALING LENGTH/JOINT:
16' RAMP WIDTH + 3' INSIDE SHOULDER + 6' OUTSIDE SHOULDER = 25 L.F./JOINT
163 JOINTS x 25 L.F./JOINT = 4,075 L.F.

D) RAMPS (34' WIDE, 2 WAY)
RAMP "B" STA. 8+00.00 TO STA. 12+54.21 = 454.21 L.F.
454.21 L.F. x 1 JOINT/60 L.F. = 8 JOINTS OF 34' WIDTH

SAWING AND SEALING LENGTH/JOINT:
34' RAMP WIDTH + 2 (6' SHOULDERS) = 46 L.F./JOINT

8 JOINTS x 46 L.F./JOINT = 368 L.F.

E) RAMPS (17' WIDE, 2WAY-SEPARATED BY A RAISED CONCRETE MEDIAN)
RAMP "D" STA. 0+00.00 TO STA. 4+24.00 = 424.00 L.F.
RAMP "E" STA. 0+12.00 TO STA. 6+82.09 = 670.09 L.F.
RAMP "G" STA. 9+95.00 TO STA. 14+72.72 = 477.72 L.F.
RAMP "G" STA. 15+97.28 TO STA. 17+88.82 = 191.54 L.F.
RAMP "K" STA. 6+82.18 TO STA. 13+10.17 = 628.53 L.F.
TOTAL = 2,391.88 L.F.

(2,391.88 L.F. x 2 DIRECTIONS x 1 JOINT/60 L.F.) + 3 =
83 JOINTS OF 17.5' WIDTH
DEDUCT THOSE SPECIFIED FOR FULL DEPTH REPAIR ON
SHEET NO'S. 80 THRU 86 -9 JOINTS
74 JOINTS

SAWING AND SEALING LENGTH/JOINT:
17' RAMP WIDTH + 6' OUTSIDE SHOULDER = 23 L.F./JOINT

74 JOINTS x 23 L.F./JOINT = 1702 L.F.

F) RAMPS (17' WIDE WITH CURB)
RAMP "D" STA. 4+24.00 TO STA. 9+18.89 = 494.89 L.F.
RAMP "E" STA. 6+82.09 TO STA. 11+98.69 = 516.60 L.F.
RAMP "G" STA. 5+69.09 TO STA. 9+95.00 = 425.91 L.F.
TOTAL = 1,437.40 L.F.

1,437.40 L.F. x 1 JOINT/60 L.F. = 24 JOINTS

SAWING AND SEALING LENGTH/JOINT:
17' RAMP WIDTH + 6' OUTSIDE SHOULDER = 23 L.F./JOINT

24 JOINTS x 23 L.F./JOINT = 552 L.F.

G) SPEED CHANGE LANES (ACCELERATION)
RAMP "B" STA. 868+50.00 TO STA. 3+43.07 = 568.07 L.F.
RAMP "D" STA. 9+18.89 TO STA. 884+25.00 = 694.10 L.F.
RAMP "F" STA. 914+25.00 TO STA. 2+43.72 = 468.72 L.F.
RAMP "H" STA. 5+30.05 TO STA. 940+00.00 = 364.96 L.F.
RAMP "K" STA. 153+75.00 TO STA. 1+75.00 = 400.00 L.F.
RAMP "M" STA. 6+15.02 TO STA. 1174+25.00 = 564.81 L.F.
RAMP "N" STA. 1228+00.00 TO STA. 5+18.17 = 868.17 L.F.
RAMP "T" STA. 8+80.23 TO STA. 1266+75.00 = 848.48 L.F.
AT C.R.5 STA. 1303+00.00 TO STA. 1323+25.00 = 2,025.00 L.F.
TOTAL = 6,802.31 L.F.

6,802.31 L.F. x 1 JOINT/60 L.F. = 113 JOINT
DEDUCT THOSE SPECIFIED FOR FULL DEPTH REPAIR ON
SHEET NO'S. 80 THRU 86 -2 = 111 JOINTS OF 9.95 AVG. WIDTH

SAWING AND SEALING LENGTH/JOINT:
9.95 AVG. WIDTH + (8' OUTSIDE SHOULDER *) = 9.95 L.F./JOINT

111 JOINTS x 9.95 L.F./JOINT = 1,104 L.F.

* QUANTITY FOR SHOULDER HAS BEEN INCLUDED WITH MAINLINE QUANTITIES.

H) SPEED CHANGE LANES (DECELERATION)
RAMP "A" STA. 6+59.49 TO STA. 894+75.00 = 547.56 L.F.
RAMP "C" STA. 867+00.00 TO STA. 3+51.30 = 454.30 L.F.
RAMP "E" STA. 11+98.69 TO STA. 931+00.00 = 210.32 L.F.
RAMP "G" STA. 924+75.00 TO STA. 5+69.09 = 337.03 L.F.
RAMP "J" STA. 6+46.81 TO STA. 1169+00.00 = 529.00 L.F.
RAMP "L" STA. 1158+04.62 TO STA. 3+17.35 = 417.35 L.F.
RAMP "Q" STA. 0+00.00 TO STA. 3+58.59 = 358.59 L.F.
RAMP "S" STA. 7+44.38 TO STA. 11+03.27 = 358.89 L.F.
TOTAL = 3,213.04 L.F.

32/3.04 L.F. x 1 JOINT/60 L.F. = 54 JOINTS
DEDUCT THOSE SPECIFIED FOR FULL DEPTH REPAIR ON
SHEET NO'S. 80 THRU 86 -6 = 48 JOINTS OF 15.56 AVG. WIDTH

SAWING AND SEALING LENGTH/JOINT:
15.56' AVG. WIDTH + (8' OUTSIDE SHOULDER *) = 15.56 L.F./JOINT

48 JOINTS x 15.56 L.F./JOINT = 747 L.F.

TOTAL QUANTITY OF SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS:

A) MAINLINE (2 LANE SECTION) 6,920 L.F.
B) MAINLINE (4 LANE SECTION) 37,260 L.F.
C) RAMPS (16' WIDE) 4,075 L.F.
D) RAMPS (17' WIDE - 2 WAY) 368 L.F.
E) RAMPS (17' WIDE - 2 WAY) 1,702 L.F.
F) RAMPS (17' WIDE WITH CURB) 552 L.F.
G) SPEED CHANGE LANES (ACCELERATION) 1,104 L.F.
H) SPEED CHANGE LANES (DECELERATION) 747 L.F.
TOTAL = 52,728 L.F.

USE 52,730 L.F.
(CARRIED TO GENERAL SUMMARY)

2) ITEM 254 - PATCHING PLANED SURFACE
ESTIMATE THAT 25% OF THE MAINLINE JOINTS WILL REQUIRE
PATCHING AFTER PLANING:
PATCH AREA/JOINT: 24' JOINT x 2' WIDTH ÷ 9 = 5.33 S.Y./JOINT
1208 JOINTS x .25 x 5.33 S.Y./JOINT = 1,610 S.Y.
CARRIED TO GENERAL SUMMARY

3) ITEM 301 - BITUMINOUS AGGREGATE BASE, AC-20
QUANTITY OF FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT
FROM PAVEMENT REPAIR SUMMARY - 15,440 S.Y.
A) WEARING COURSE REPLACEMENT (PRIOR TO PAVEMENT PLANING):
15,440 S.Y. x 3" THICK x 1/36 = 1,286.7 C.Y.
B) SHOULDER RESTORATION:
15,440 S.Y. x 9 ÷ 12 L.F. = 11,580 L.F.
(11,580 L.F. x 12" WIDE x 13" DEEP x 1/144) x 1/27 = 464.6 C.Y.
TOTAL QUANTITY OF BITUMINOUS AGGREGATE BASE, AC-20
= 1,286.7 C.Y. + 464.6 C.Y. = 1,752 C.Y. USE 1,755 C.Y.
CARRIED TO THE GENERAL SUMMARY

4) SUBBASE/SUBGRADE FAILURES:
ESTIMATE THAT 10% OF THE MAINLINE TRANSVERSE JOINTS ARE PUMPING:
1,208 JOINTS x 0.10 = 121 JOINTS OF 24' WIDTH

REPAIR VOLUME/JOINT = 24' WIDE x 6' LONG x 0.5' DEEP x 1/27 = 2.7 C.Y./JOINT
121 JOINTS x 2.7 C.Y./JOINT = 327 C.Y. USE 330 C.Y.
ITEM 203 - EXCAVATION - - - - - 330 C.Y.
ITEM 304 - AGGREGATE BASE, AS PER PLAN - - - - 330 C.Y.
CARRIED TO THE GENERAL SUMMARY

5) ITEM SPECIAL - BONDED PATCHING OF RIGID PAVEMENTS, TYPE II
(SEE NOTE IN PROPOSAL; FOR USE WITHIN THE CONCRETE SECTION;
W.B. LANES STA. 1262+03.90 TO 1332+98.75
BY FIELD INSPECTION, ESTIMATE THAT 75 S.Y. OF THE RIGID PAVEMENT
REQUIRES BONDED PATCHING
ITEM SPECIAL - BONDED PATCHING OF RIGID PAVEMENT, TYPE II - - - 75 S.Y.
CARRIED TO THE GENERAL SUMMARY

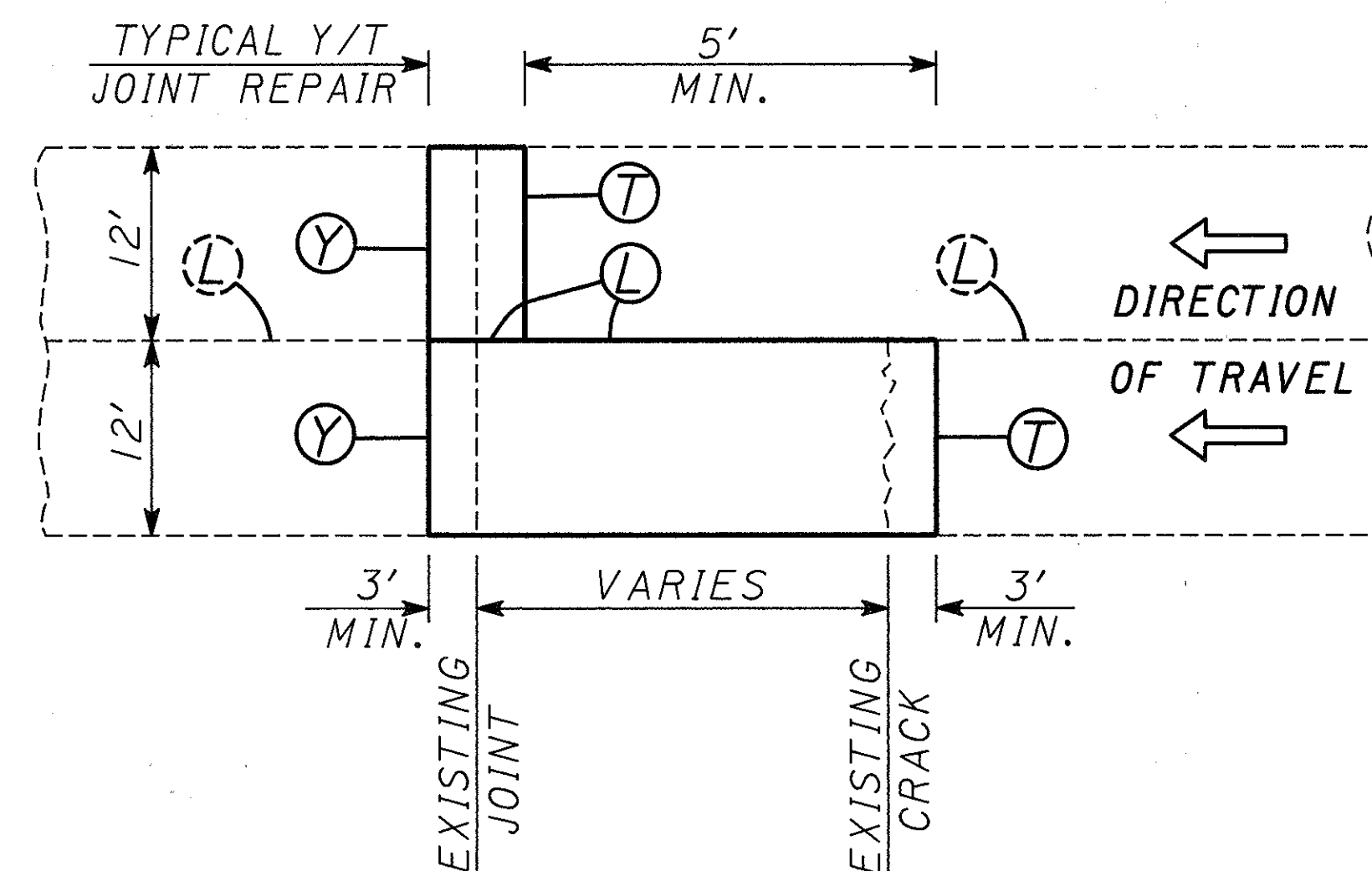
6) ITEM 801 - TRANSVERSE JOINT SEALING, CLASS III, SILICONE
CONCRETE SECTION; WESTBOUND LANES
STA. 1262+03.90 TO STA. 1332+98.75 = 7,094.85 L.F.
DEDUCT FOR STATION EQUATIONS
STA. 1280+62.94 BK = STA. 1280+72.73 AH -9.79 L.F.
STA. 1298+78.92 BK = STA. 1298+80.75 AH -1.83 L.F.
STA. 1329+83.81 BK = STA. 1329+98.24 AH -14.43 L.F.
DEDUCT FOR BRIDGE AND APPROACH SLABS
HAS-22-2460L 134.60 + (2 x 25) -184.60 L.F.
TOTAL = 6,884.20 L.F.
(6,884.20 L.F. x 1 JOINT/40 L.F.JV+I = 173 JOINTS
ADD FOR POSSIBLE ADDITIONAL JOINTS
ESTIMATE ONE ADDITIONAL JOINT EVERY 3,000 L.F.
6,884.20 L.F. x 1 JOINT/3,000 L.F. = 2 JOINTS
DEDUCT THOSE JOINTS LISTED FOR FULL DEPTH REPAIR ON SHEET NOS. 81 & 82 = 14 JOINTS
TOTAL NO. OF TRANSVERSE JOINTS
= (173 JOINTS + 2 JOINTS - 14 JOINTS) = 161 JOINTS OF 24' WIDTH

161 JOINTS x 24 L.F./JOINT = 3,864 L.F. USE 3,870 L.F.
CARRIED TO THE GENERAL SUMMARY

7) ITEM 801 - LONGITUDINAL JOINT SEALING, CLASS V, SILICONE
LONGITUDINAL JOINT IN CENTER OF 24' PAVEMENT:
TOTAL LENGTH OF THE CONCRETE SECTION (FROM #6) = 6,884.20 L.F.
ADDITIONAL LONGITUDINAL JOINTS:
INTERSECTION WITH T.R. 180 - STA. 1305+33 TO STA. 1310+12 = 479.00 L.F.
MEDIAN CROSSOVER - STA. 1332+52 TO STA. 1332+98.75 = 46.75 L.F.
TOTAL = 7,409.95 L.F.
USE 7,410 L.F.
CARRIED TO THE GENERAL SUMMARY

8) ITEM 812 - GROUT SUBSEALING OF EXISTING CONCRETE PAVEMENT
(FOR USE WITH THE CONCRETE SECTION)
NO. OF TRANSVERSE JOINTS NOT BEING REPAIRED (FROM #6) = 161 JOINTS
161 JOINTS x 3 HOLES/JOINT x 0.01 TONS OF CEMENT/HOLE = 4.8 TON USE 5 TON
ITEM 812 - PORTLAND CEMENT ----- 5 TON

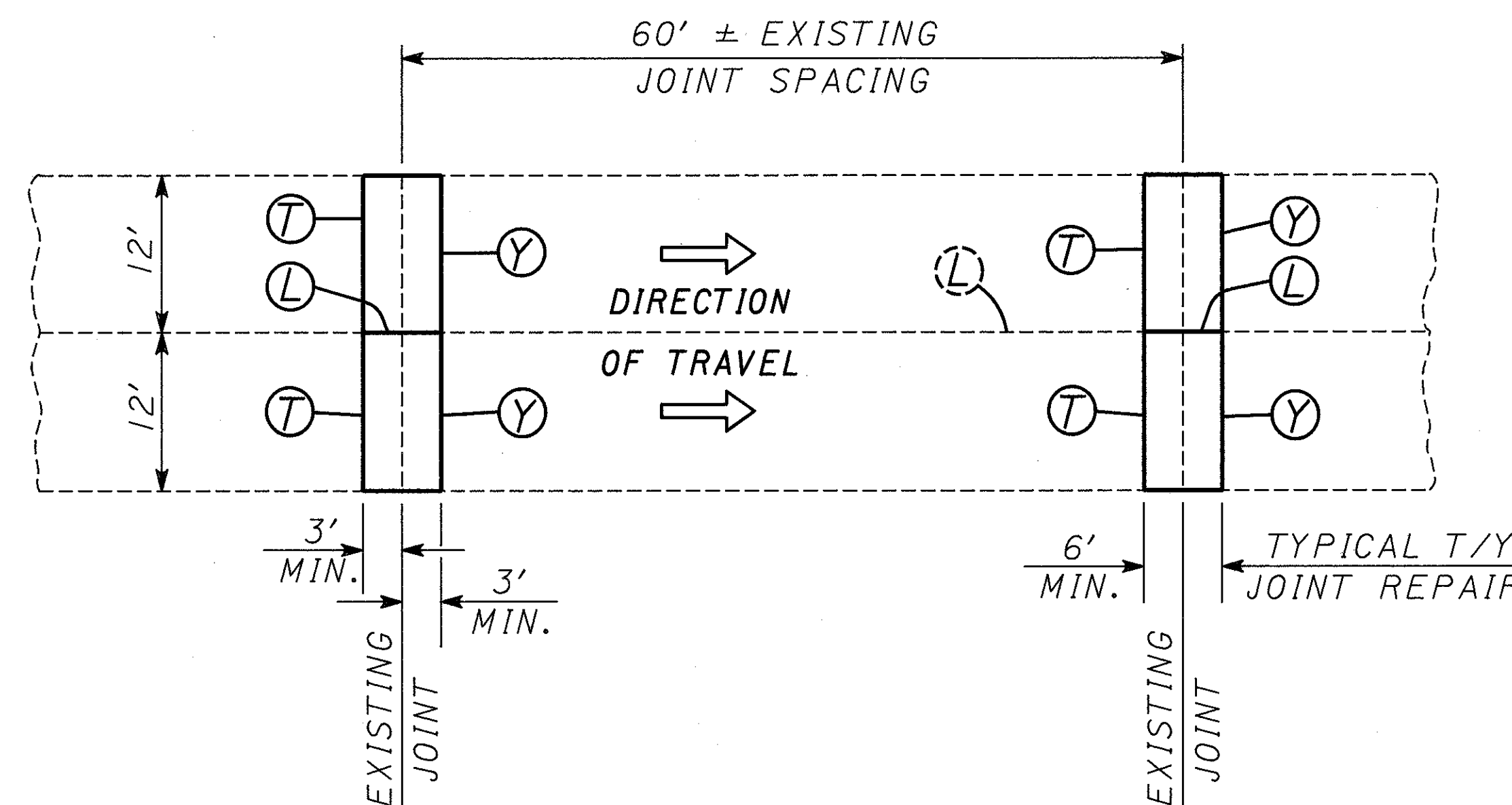
PAVEMENT REPAIR SUMMARY				
FROM SHEET NO.	803			SPECIAL
	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS MS	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS	FULL DEPTH PAVEMENT SAWING	SAWING & SEALING ASPHALT CONCRETE PAVEMENT JOINTS, 705.04
	SQ.YD.	SQ.YD.	LIN.FT.	LIN.FT.
80	2843.2	130.6	6101	3348
81	1881.8	514.9	5465	3213
82	1253.0	-	3776	528
83	2146.9	-	5630	1844
84	1511.4	435.0	4868	3003
85	1628.3	369.0	5082	3098
86	72.0	635.3	2109	1352
SUB-TOTALS	11,336.6	2,084.8	33,031	16,386
A 15% INCREASE IS ADDED TO THE PAVEMENT REPAIR QUANTITIES TO PROVIDE FOR FURTHER DETERIORATION WHICH MAY OCCUR BETWEEN THE TIME OF INSPECTION AND THE TIME OF CONSTRUCTION :				
ITEM 803 - FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS MS : 11,336.6 S.Y. x 1.15 = 13,037.1 USE 13,040 S.Y.				
ITEM 803 - FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS : 2,084.8 S.Y. x 1.15 = 2,397.5 USE 2,400 S.Y.				
ITEM 803 - FULL DEPTH PAVEMENT SAWING 33,031 L.F. x 1.15 = 37,986 USE 38,000 L.F.				
ITEM SPECIAL - SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS, 705.05 16,386 L.F. x 1.15 = 18,844 USE 18,850 L.F.				
TOTALS	13,040	2,400	38,000	18,850



CRACK/JOINT REPAIR (TYPE T/Y)

(CRACK/JOINT REPAIR WITH A TYPICAL JOINT REPAIR IN ONE LANE ONLY)

NOTE: T/Y REPAIR MAY BE IN EITHER THE TRAVEL LANE OR THE PASSING LANE.



TYPICAL JOINT REPAIR (TYPE T/Y)

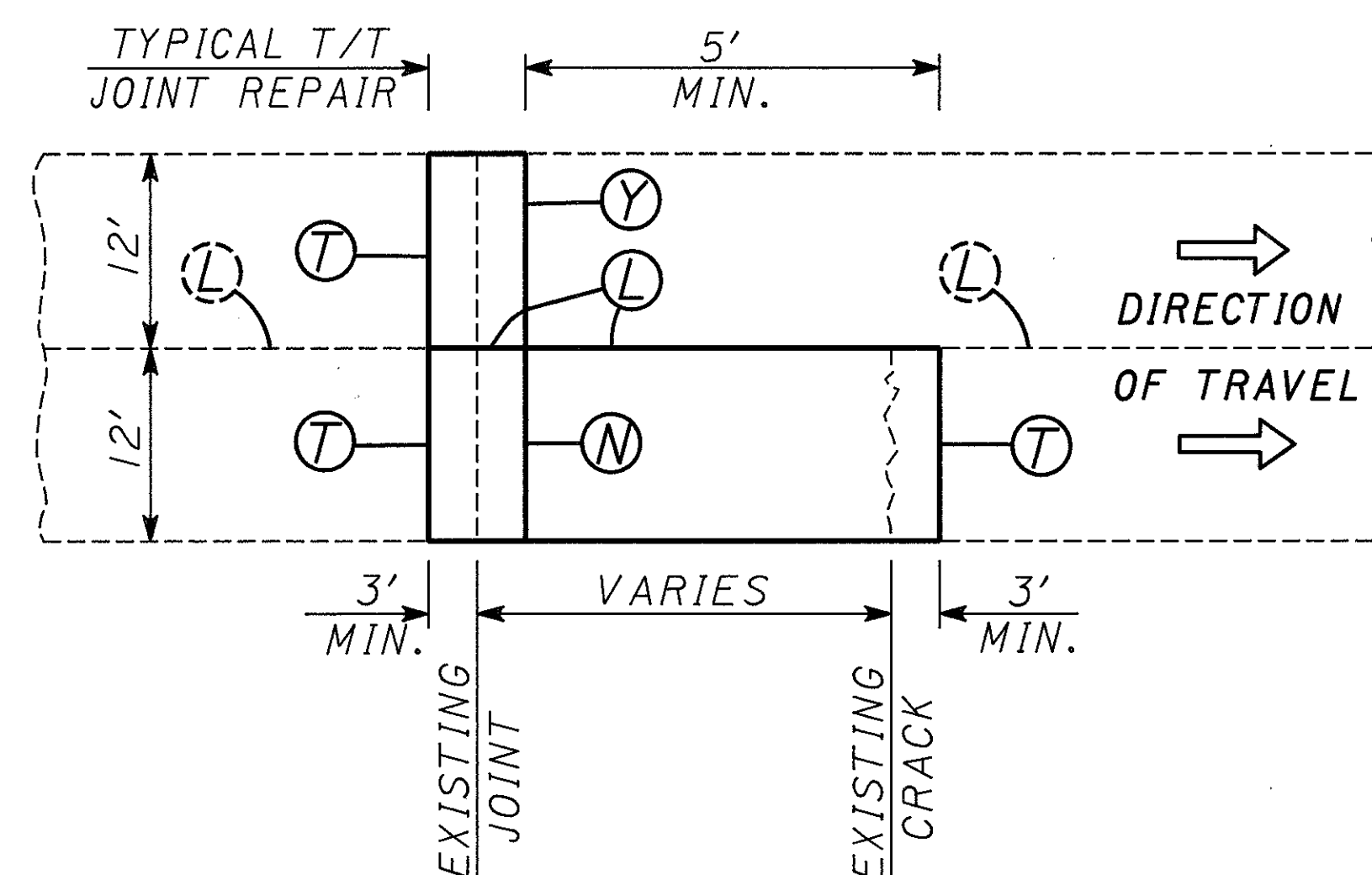
JOINT TYPE LEGEND

- Ⓨ — TYPE Y (CONTRACTION)
- Ⓣ — TYPE T (TIED)
- Ⓝ — TYPE N (CONTRACTION)
- Ⓛ — LONGITUDINAL JOINT
- Ⓛ — EXISTING LONGITUDINAL JOINT

FOR ADDITIONAL DETAILS SEE STANDARD DRAWING BP-13.
FOR LOCATIONS AND QUANTITIES SEE SHEET NO'S. 80 THRU 86.

SEE GENERAL NOTES "PAVEMENT REPAIR IN THE CONCRETE SECTION" AND "PAVEMENT REPAIR LOCATIONS" ON SHEET NO. 26

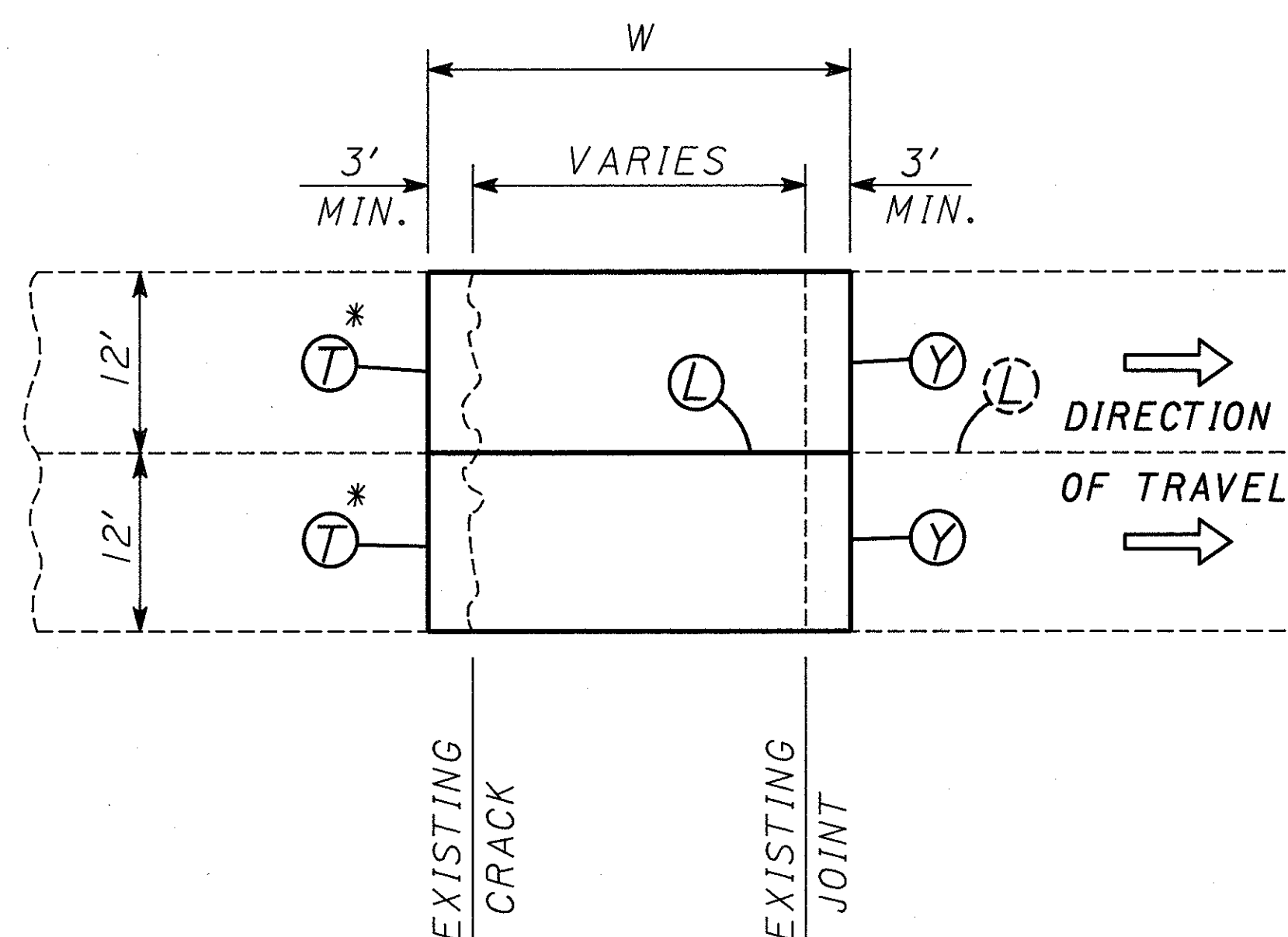
* IF THE PATCH LENGTH 'W' EXCEEDS 10 L.F., THEN THE Ⓣ JOINT SHALL BE REPLACED WITH A Ⓨ JOINT.



CRACK/JOINT REPAIR (TYPE T/N/T)

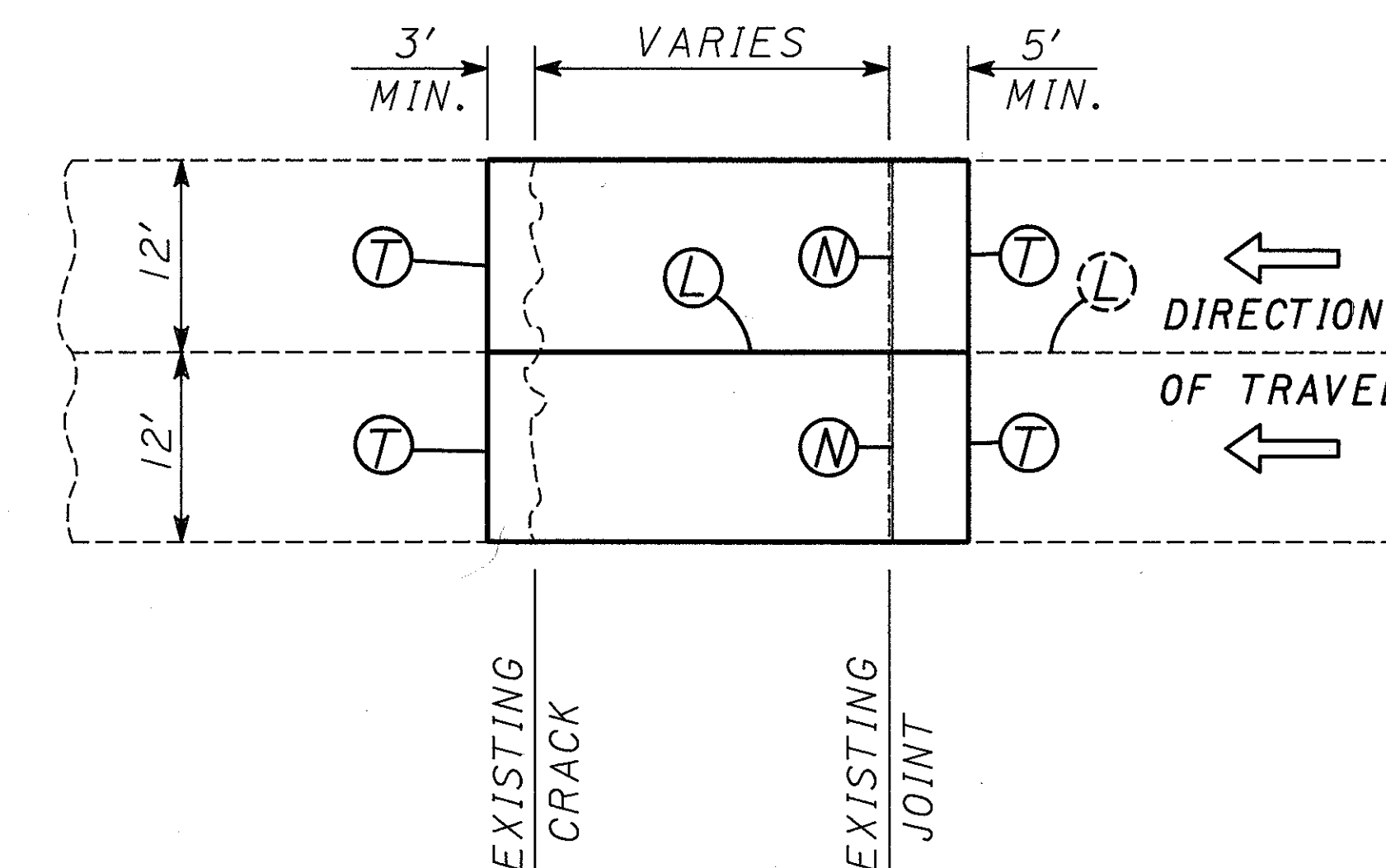
(CRACK/JOINT REPAIR WITH A TYPICAL JOINT REPAIR IN ONE LANE ONLY)

NOTE: T/N/T REPAIR MAY BE IN EITHER THE TRAVEL LANE OR THE PASSING LANE.



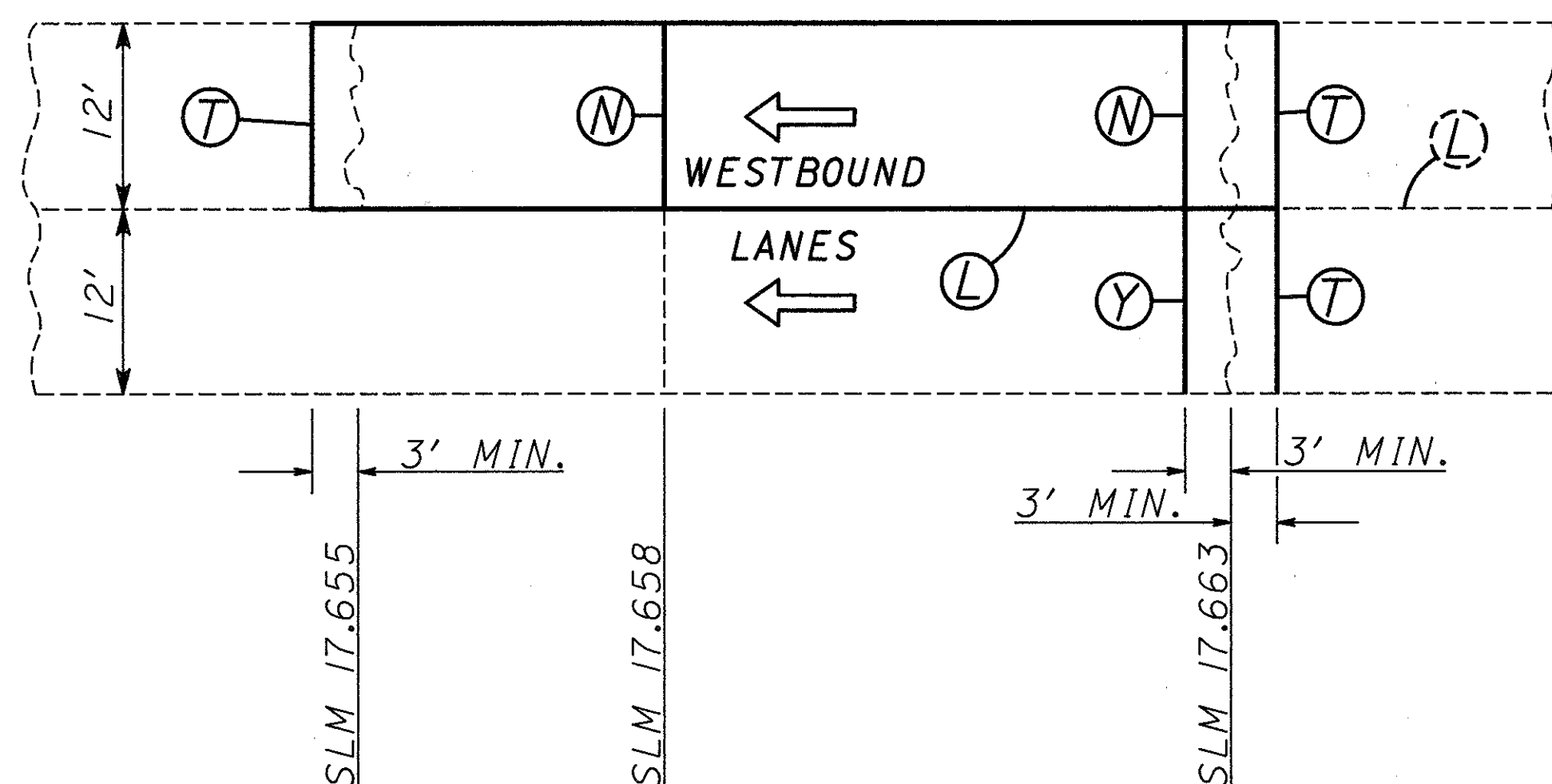
CRACK/JOINT REPAIR (TYPE T/Y)

(CRACK/JOINT REPAIR WITH A TYPICAL JOINT REPAIR IN BOTH LANES)

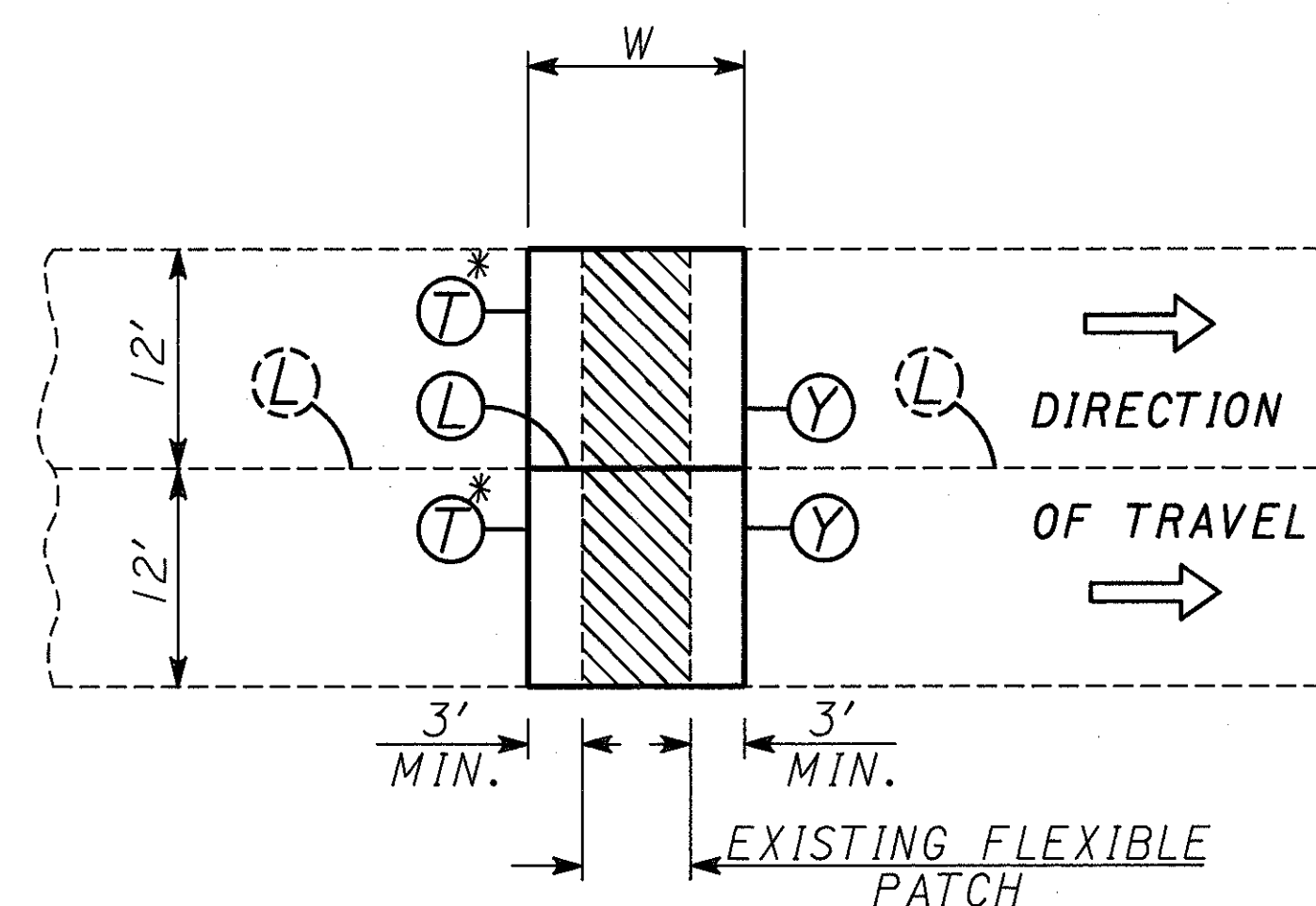


CRACK/JOINT REPAIR (TYPE T/N/T)

(CRACK/JOINT REPAIR WITH A TYPICAL JOINT REPAIR IN BOTH LANES)

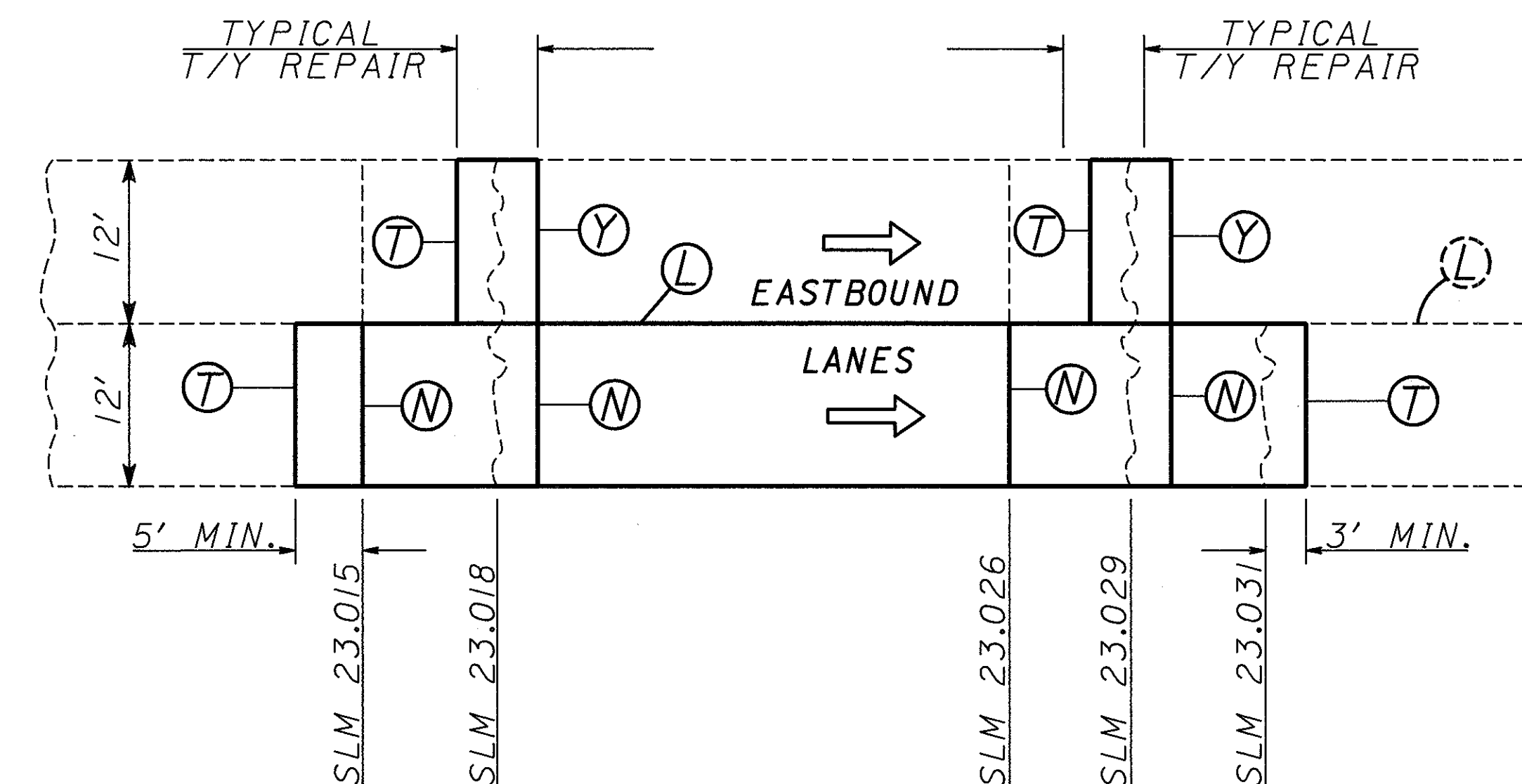


CRACK/JOINT REPAIR (TYPE T/N/T)



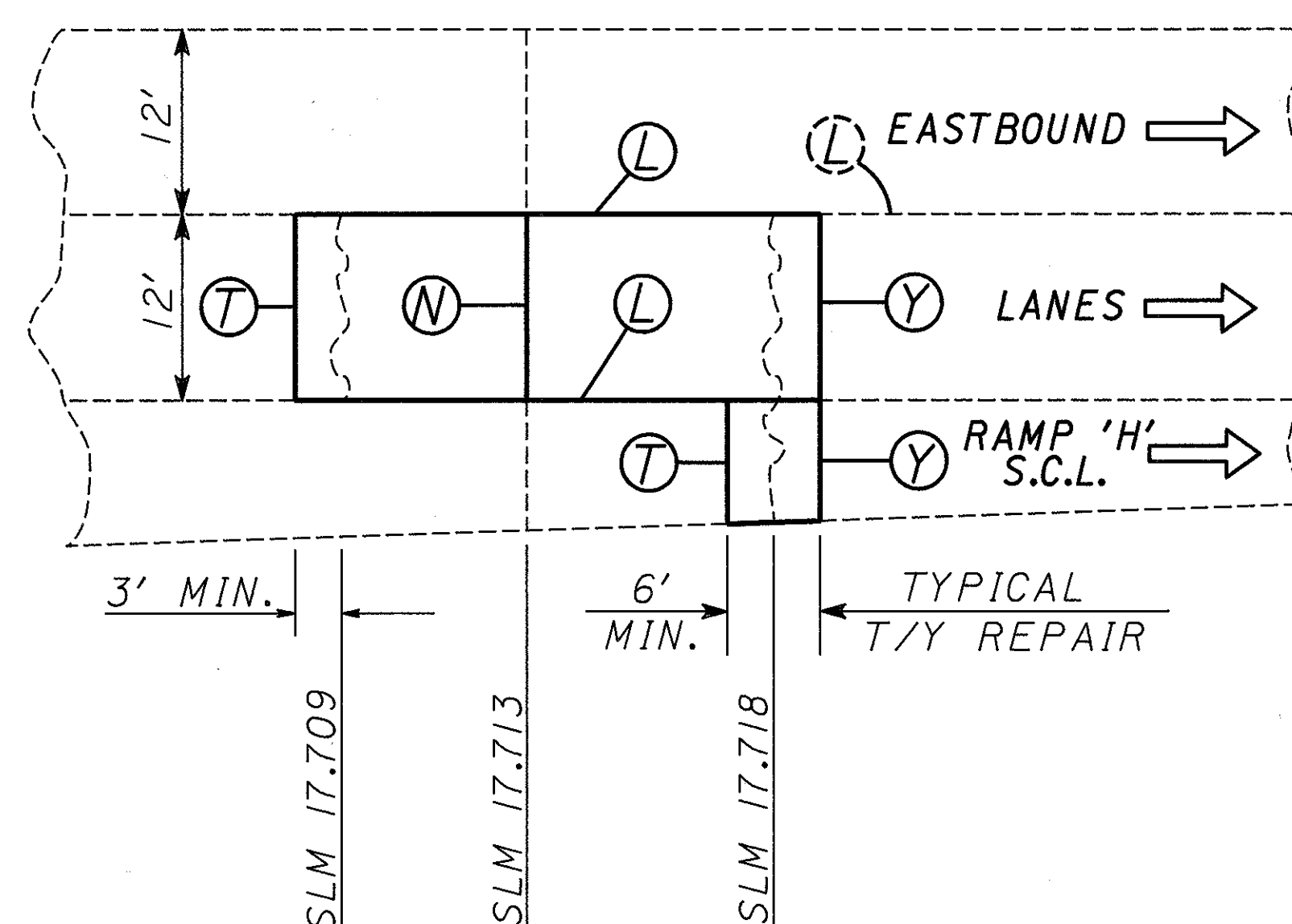
* IF THE PATCH LENGTH 'W' EXCEEDS 10 L.F., THEN THE (T) JOINT SHALL BE REPLACED WITH A (Y) JOINT.

JOINT REPAIR (TYPE T/Y)
(JOINT REPAIR WITH EXISTING FLEXIBLE PATCH IN BOTH LANES)

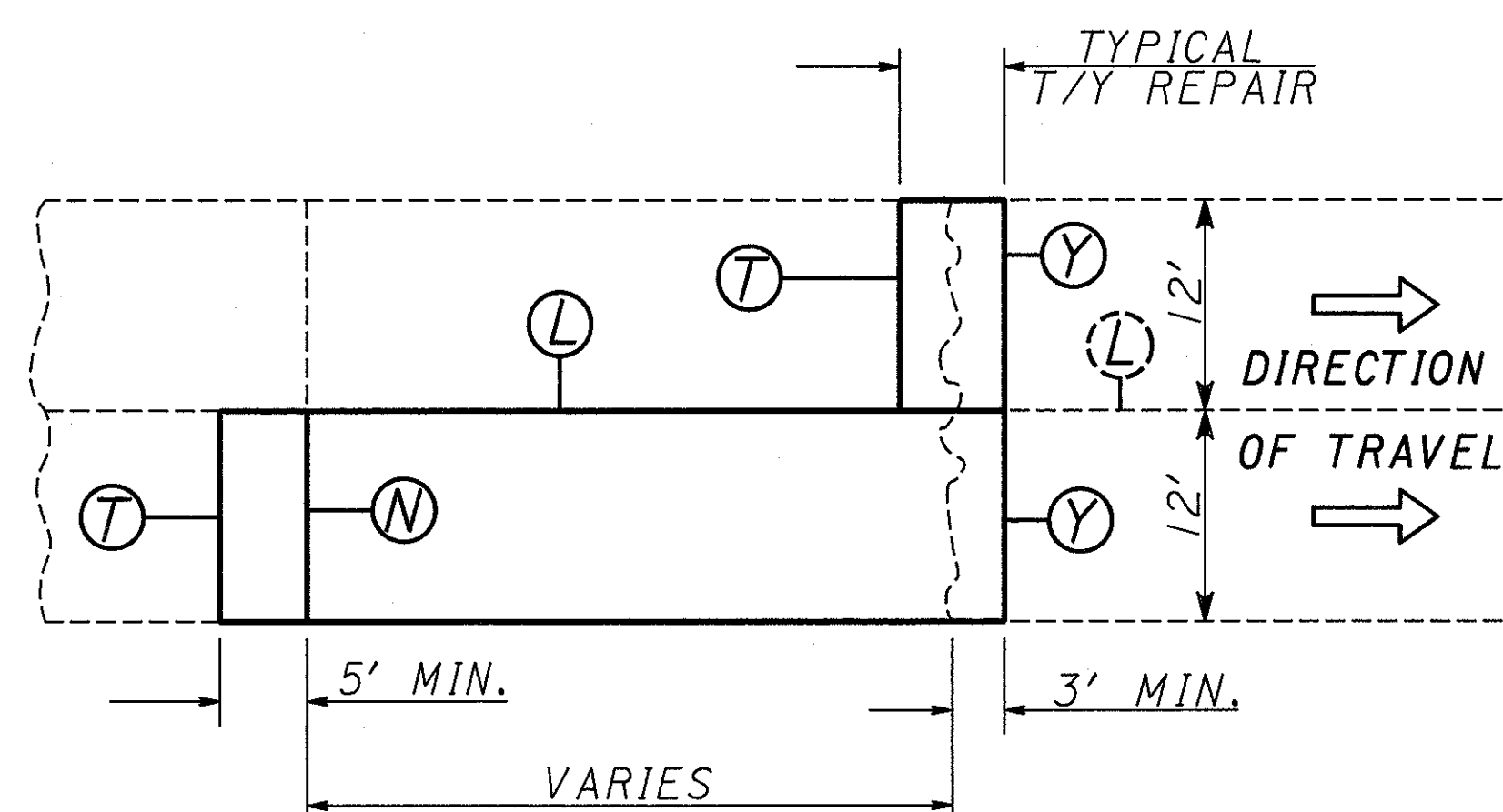


CRACK/JOINT REPAIR (TYPE T/N/T)

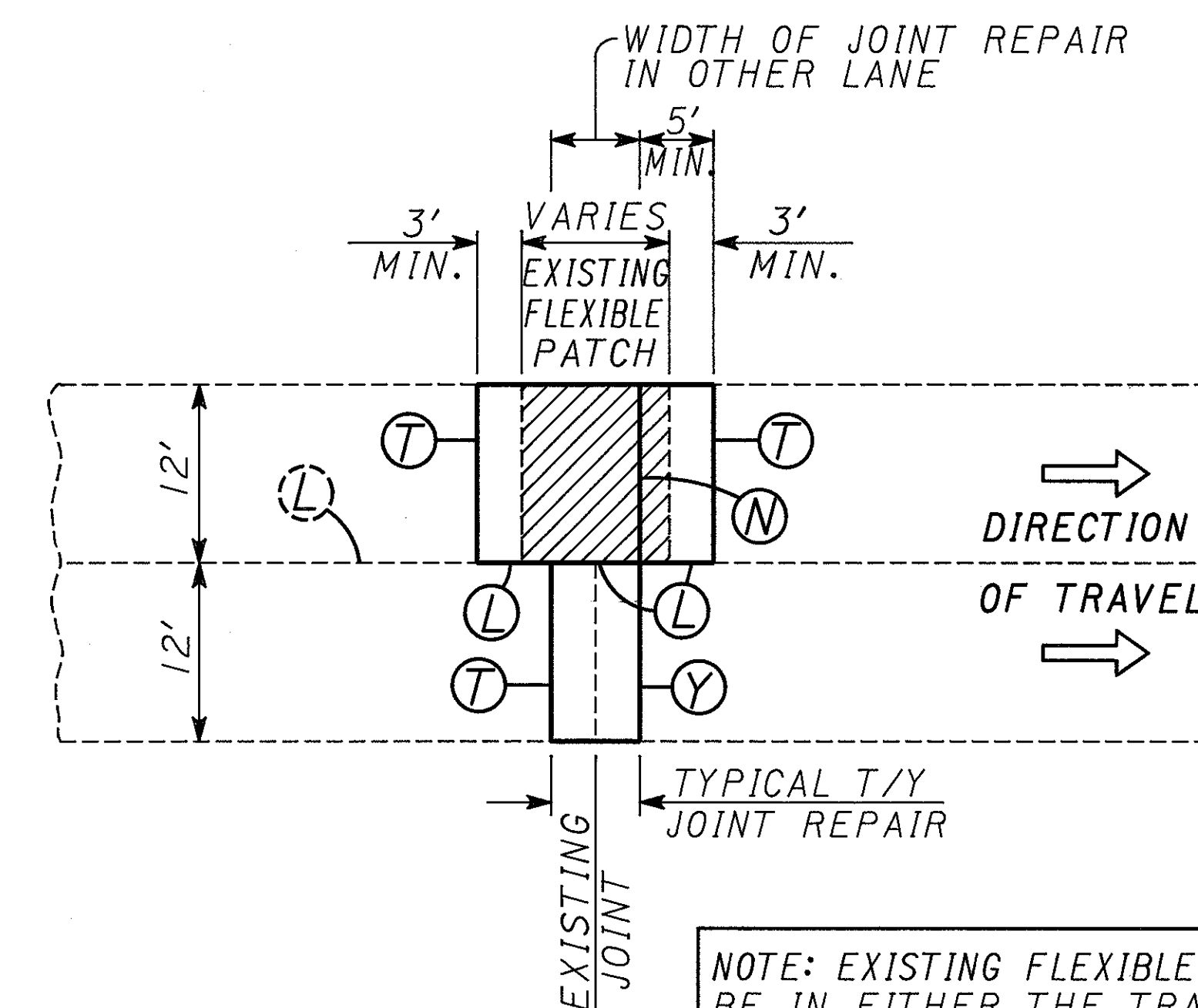
FOR LOCATIONS AND QUANTITIES
SEE SHEET NO'S. 80 THRU 86.



CRACK/JOINT REPAIR (TYPE T/N/Y)

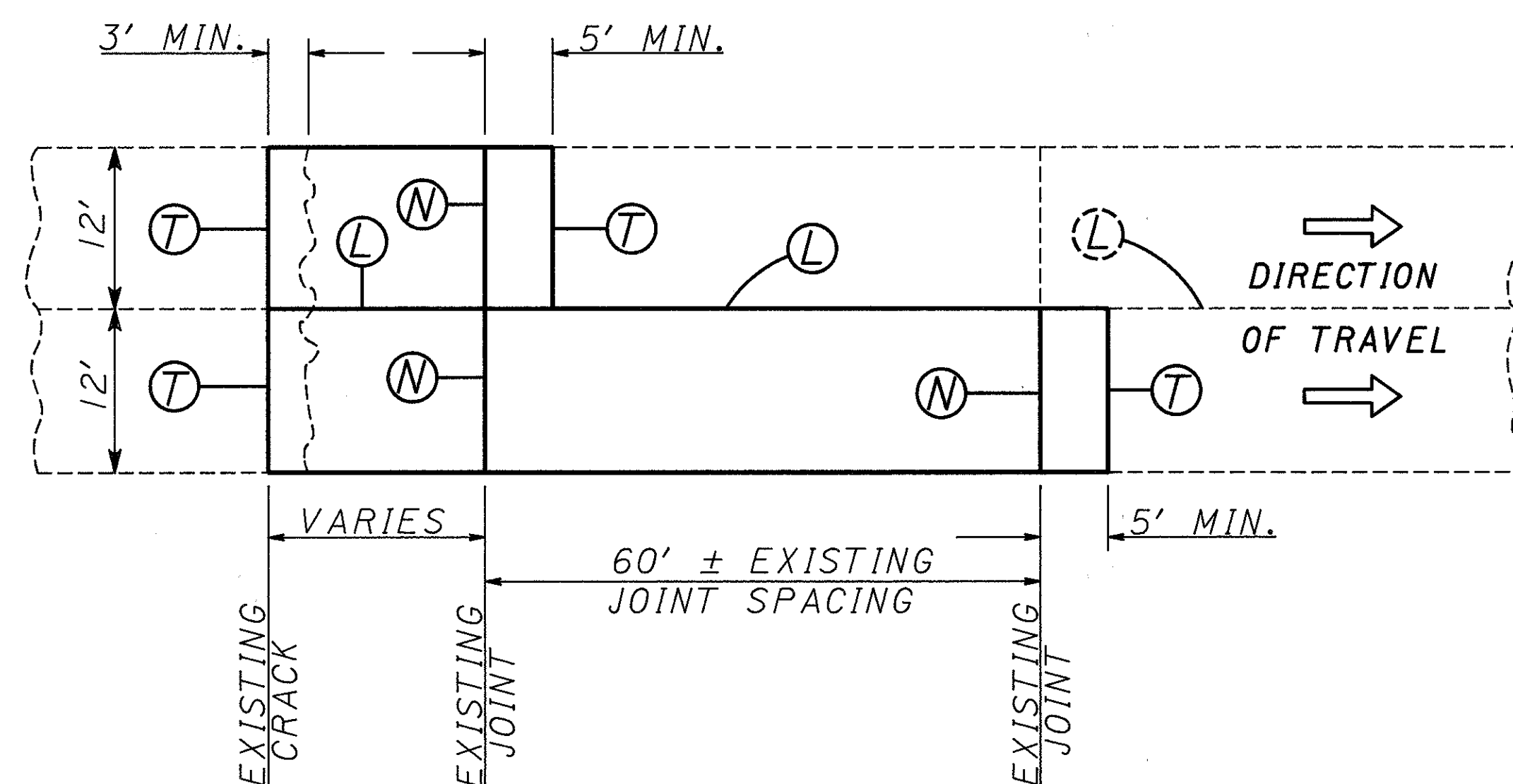


TYPICAL CRACK/JOINT REPAIR (TYPE T/N/T)
(CRACK/JOINT REPAIR WITH A TYPICAL CRACK REPAIR IN ONE LANE ONLY)

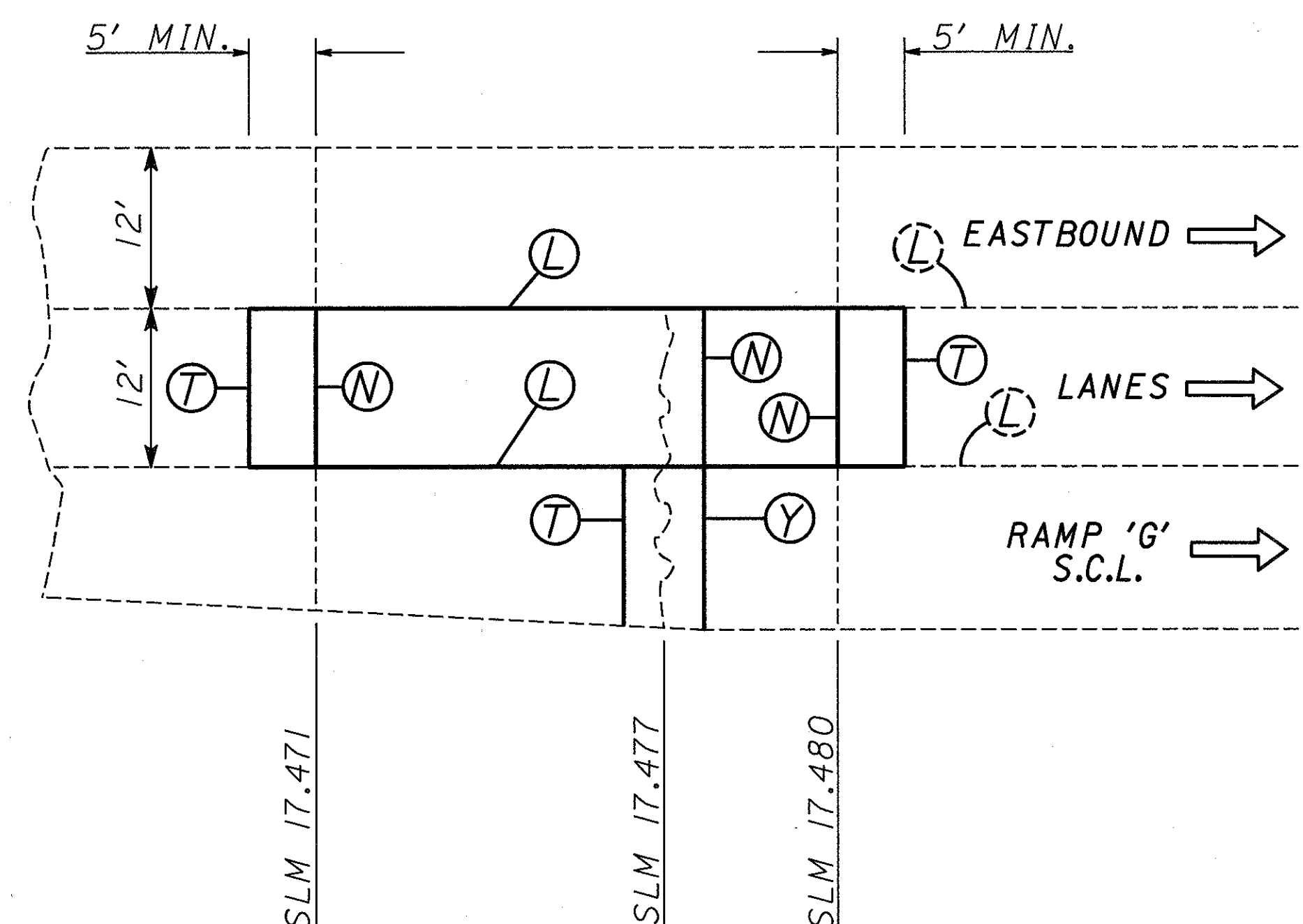


NOTE: EXISTING FLEXIBLE PATCH MAY
BE IN EITHER THE TRAVEL LANE
OR THE PASSING LANE.

TYPICAL JOINT REPAIR (TYPE T/N/T)
(JOINT REPAIR WITH EXISTING FLEXIBLE PATCH IN ONE LANE ONLY)

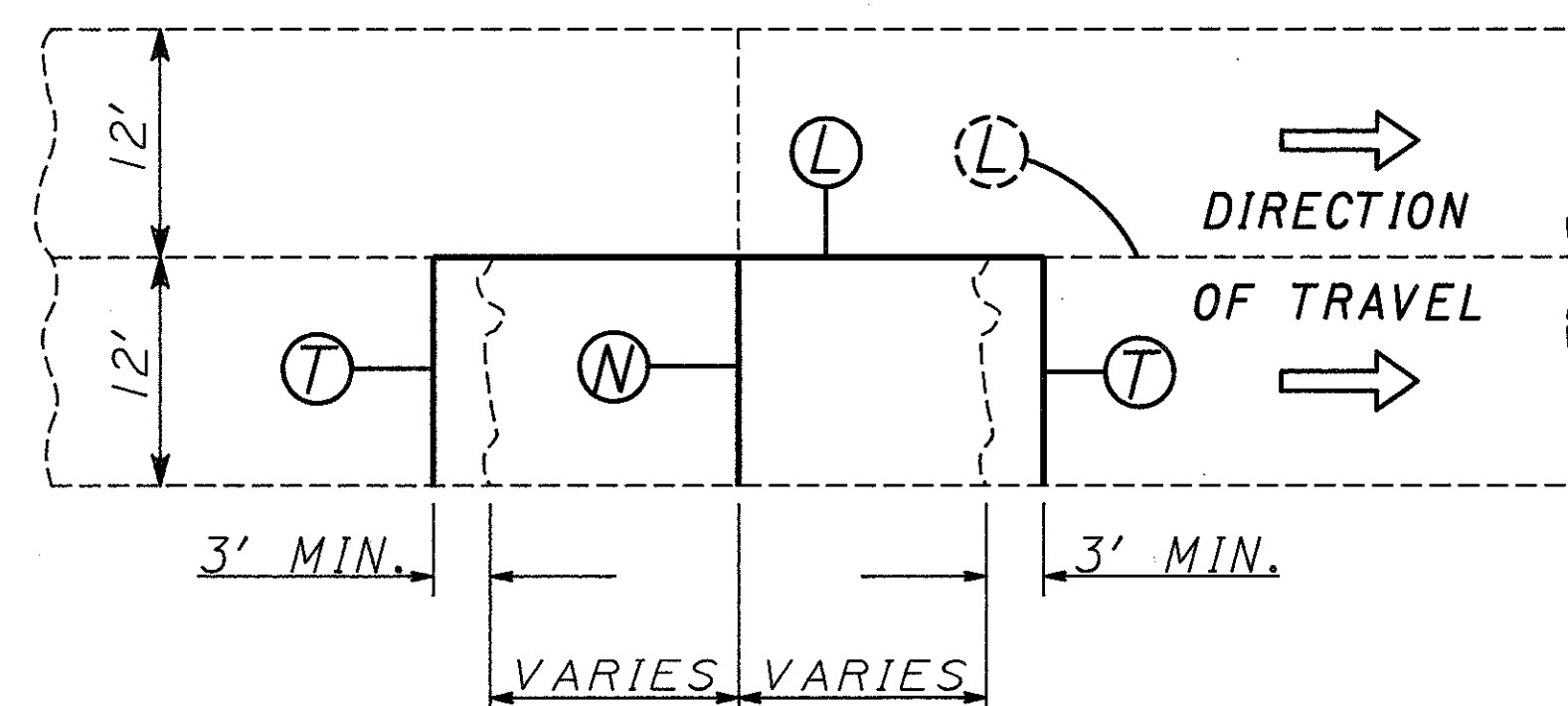


CRACK/JOINT REPAIR (TYPE T/N/T)

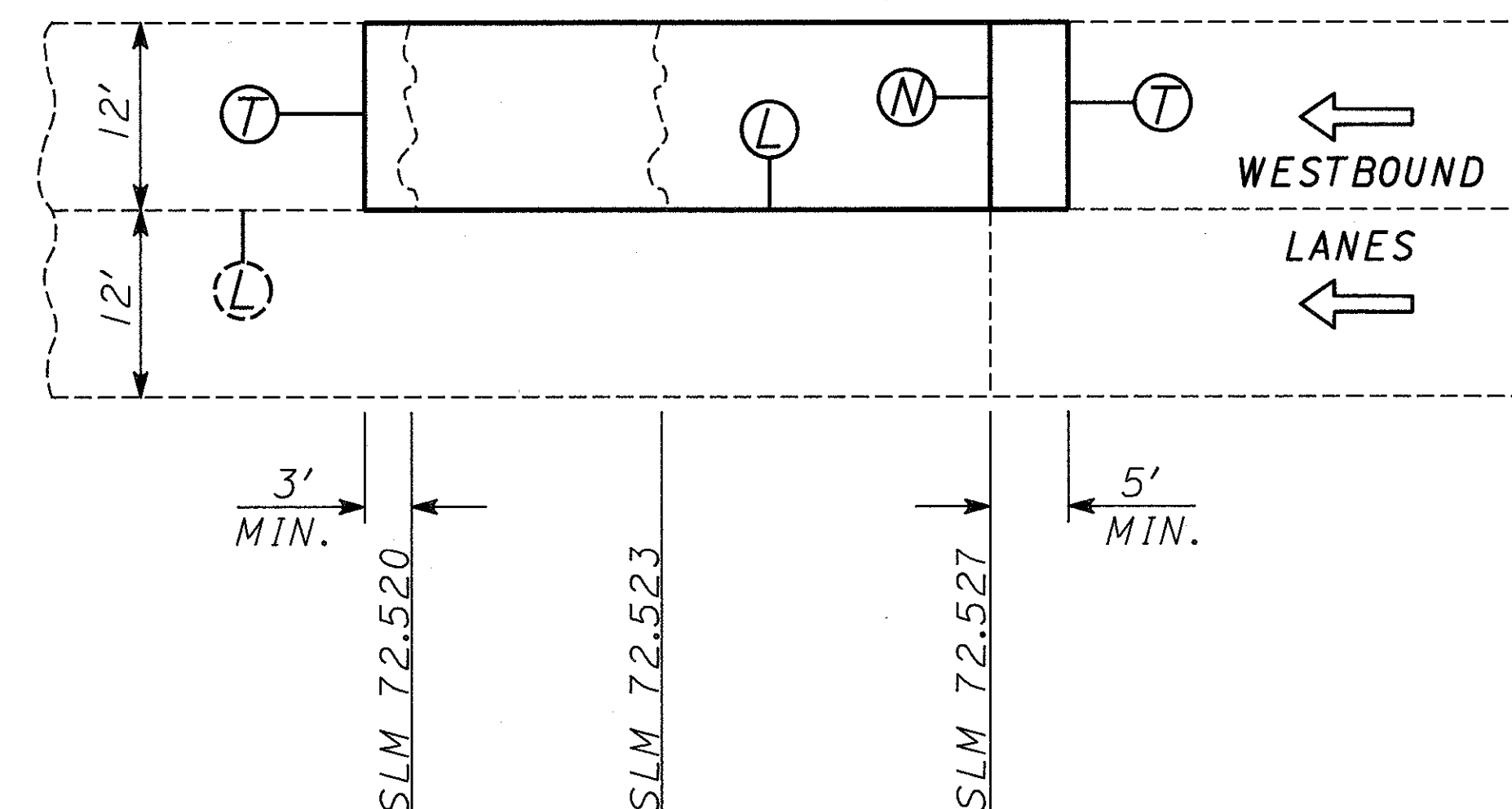


CRACK/JOINT REPAIR (TYPE T/N/T)

FOR LOCATIONS AND QUANTITIES
SEE SHEET NO'S. 80 THRU 86.



TYPICAL CRACK/JOINT REPAIR (TYPE T/N/T)



CRACK/JOINT REPAIR (TYPE T/N/T)

QUANTITIES		FHWA REGION	STATE	PROJECT	
Calc. RRR	Chkd. SHG	5	OHIO		
Date: 3-2-90	Date: 7-8-90	HAS-22-15.03			

HAS-22-15.03

PAVEMENT REPAIR

MAINLINE JOINT & CRACK REPAIR LOCATIONS



* QUANTITIES CARRIED TO SHEET NO. 76.

PAVEMENT REPAIR

HAS-22-15.03

PAVEMENT REPAIR

QUANTITIES		
Calc. RRK	Chkd. SHG	
Date: 3 -6 -90	Date: 7 -18 -90	

FHWA REGION	STATE	PROJECT	
5	OHIO		

HAS-22-15.03

HAS-22-15.03

* QUANTITIES CARRIED TO SHEET NO. 76.

PAVFMFNT RFPAIR

QUANTITIES		FHWA REGION	STATE	PROJECT		
Calc. <i>RRK</i>	Chkd. <i>SHG</i>	5	OHIO			
Date: 3 -7 -90	Date: 7 -18 -90	HAS-22-15.03				

HAS-22-15.03

* QUANTITIES CARRIED TO SHEET NO. 76.

PAVEMENT REPAIR

QUANTITIES		
Calc. <i>RRK</i>	Chkd. <i>SHG</i>	
Date: <i>3 -7 -90</i>	Date: <i>7 -18- 90</i>	

FHWA REGION	STATE	PROJECT	
5	OHIO		

HAS-22-15.03

HAS-22-15.03

* QUANTITIES CARRIED TO SHEET NO. 76.

PAVEMENT REPAIR

RAMP & SPEED CHANGE LANE JOINT & CRACK REPAIR LOCATIONS

86
115

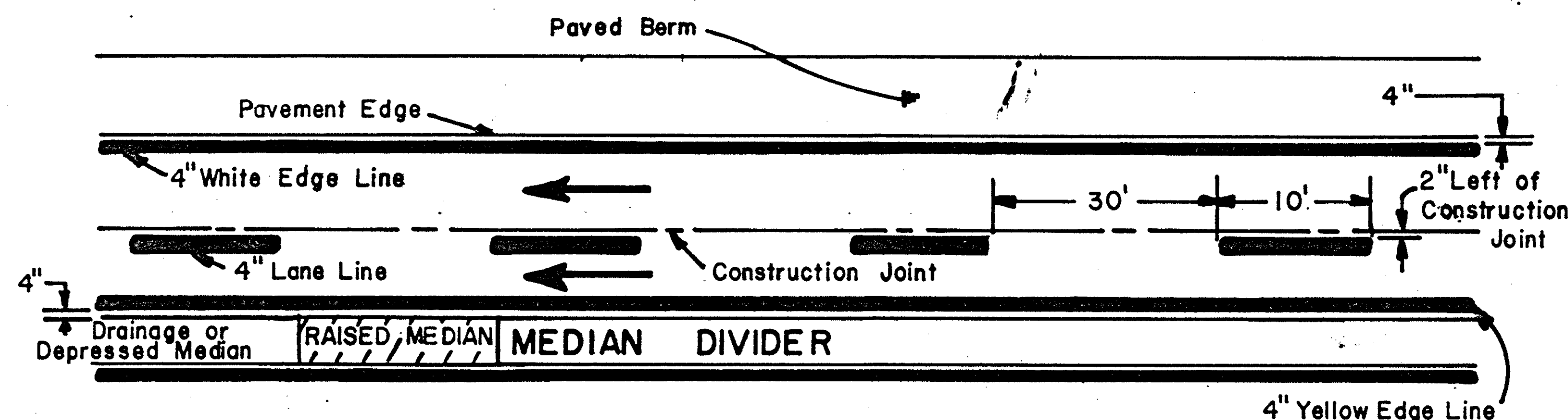
HAS-22-15.03

* QUANTITIES CARRIED TO SHEET NO. 76.

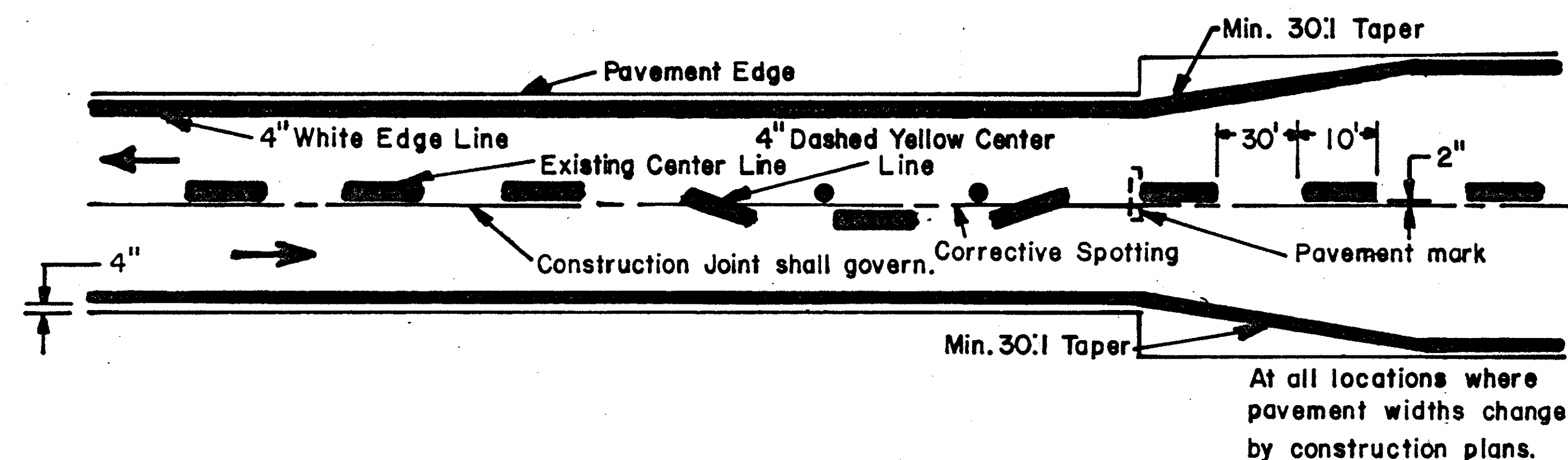
PAVEMENT REPAIR

PAVEMENT MARKING TYPICAL DETAILS

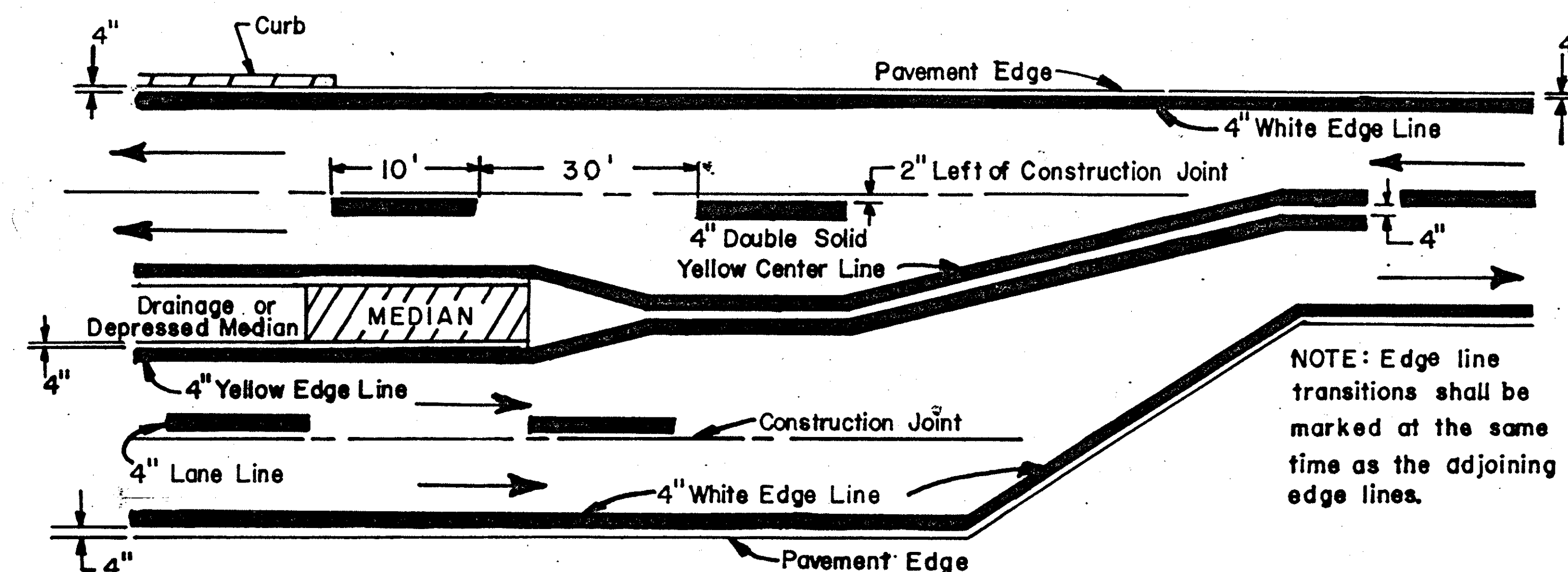
FREEWAY & EXPRESSWAY MAINLINE MARKINGS



TWO LANE MARKINGS



MULTILANE DIVIDED & UNDIVIDED HIGHWAY MARKINGS



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-72.20 FOR PAVEMENT MARKINGS ENTRANCE AND EXIT RAMP TERMINALS.
3. THE WIDTH OF LINE APPLIED SHALL BE THE WIDTH SPECIFIED PLUS OR MINUS 1/4".

FHWA REGION	STATE	PROJECT	
5	OHIO		

ITEM 621 ~ PAVEMENT MARKING

STATION		LANE OR RAMP	SIDE OF PAVEMENT	Edge Lines		Lane Lines	Center Lines				Channelizing Lines	Transverse Lines (White)	Stop Lines	STATION		LANE OR RAMP	SIDE OF PAVEMENT	Edge Lines		Lane Lines	Center Lines				Channelizing Lines	Transverse Lines (White)	Stop Lines
				White	Yellow		Double Solid	Single Dashed	Lt. Dashed Rt. Solid	Lt. Solid Rt. Dashed								White	Yellow		Double Solid	Single Dashed	Lt. Dashed Rt. Solid	Lt. Solid Rt. Dashed			
				Lin. Ft.	Lin. Ft.		Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.								Lin. Ft.	Lin. Ft.		Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.			
FROM	TO												FROM	TO													
796+50	807+26.16	TWO LANE SECTIONS	Ctr.			1,076.16							814+75	1002+00	WESTBOUND LANE	Ctr.		18,725.00									
1002+00	1013+25.7 BK		Ctr.			1,125.70							1146+10	1168+68.19BK		Ctr.		2,258.19									
1011+67.05 AH	1018+70		Ctr.			702.95							1168+75.64AH	1280+62.94BK		Ctr.		11,187.30									
1020+00	1024+50		Ctr.						450.00				1280+72.73AH	1298+78.92BK		Ctr.		1,806.19									
1024+50	1081+00		Ctr.				5,650.00						1298+80.75AH	1329+83.81BK		Ctr.		3,103.06									
1081+00	1085+55		Ctr.					455.00					1329+98.24AH	1334+07.71		Ctr.		409.47									
1086+30	1091+30		Ctr.						500.00				807+26.16	836+85		Rt.		2,958.84									
1091+30	1116+60		Ctr.					2,530.00					840+98	973+34		Rt.		13,236.00									
1116+60	1125+50		Ctr.						890.00				974+35	1002+00		Rt.		2,765.00									
1125+50	1138+50		Ctr.				1,300.00						1138+50	1168+68.19BK		Rt.		3,018.19									
796+50	807+26.16			Lt.-Rt.	2,152.32								1168+75.64AH	1280+62.94BK		Rt.		11,187.30									
1002+00	1013+25.7 BK			Lt.-Rt.	2,251.40								1280+72.73AH	1298+78.92BK		Rt.		1,806.19									
1011+67.05 AH	1018+57			Lt.-Rt.	1,379.90								1298+80.75AH	1305+85		Rt.		704.25									
1020+00	1085+60		Lt.-Rt.	13,120.00								1306+63	1329+83.81BK	Rt.		2,320.81											
1086+40	1132+85		Lt.-Rt.	9,290.00								1329+98.24AH	1334+07.71	Rt.		409.47											
807+26.16	1002+00	EASTBOUND LANE	Ctr.		19,473.84							807+26.16	874+21		Lt.	6,694.84											
807+26.16	837+64		Lt.		3,037.84							873+66	918+96		Lt.	4,530.00											
807+26.16	837+52		Rt.	3,025.84								918+30	973+24		Lt.	5,494.00											
838+22	973+82		Lt.		13,560.00							974+44	1002+00		Lt.	2,756.00											
839+06	877+84		Rt.	3,878.00								1138+50	1157+70		Lt.	1,920.00											
877+28	936+89		Rt.	5,961.00								1156+00	1168+68.19BK		Lt.	1,268.19											
936+32	973+64		Rt.	3,732.00								1168+75.64AH	1236+70		Lt.	6,794.36											
974+35	1002+00		Lt.		2,765.00							1235+57	1280+62.94BK		Lt.	4,505.94											
975+65	1002+00		Rt.	2,635.00								1280+72.73AH	1298+78.92BK		Lt.	1,806.19											
1138+50	1168+68.19 BK		Ctr.			3,018.19						1298+80.75AH	1305+85		Lt.	704.25											
1168+75.64 AH	1280+62.94 BK		Ctr.			11,187.30						1306+63	1329+83.81BK		Lt.	2,320.81											
1280+72.73 AH	1298+78.92 BK		Ctr.			1,806.19						1329+98.24AH	1334+07.71		Lt.	409.47											
1298+80.75 AH	1329+83.81 BK		Ctr.			3,103.06																					
1329+98.24 AH	1334+07.71		Ctr.			409.47																					
1304+00	1329+83.81 BK		Rt.			2,583.81																					
1329+98.24 AH	1334+07.71		Rt.			409.47																					
807+26.16	837+64		Lt.		3,037.84									C.R. 2 (NORTH)												38	
838+22	973+82		Lt.		13,560.00									C.R. 2 (SOUTH)												20	
974+35	1002+00		Lt.		2,765.00									C.R. 29	RT.											50	
807+26.16	837+52		Rt.	3,025.84										MOORE RD.	LT.											30	
839+06	877+84		Rt.	3,878.00										MOORE RD.	RT.											25	
877+28	936+89		Rt.	5,961.00										C.R. 51	LT.											18	
936+32	973+64		Rt.	3,732.00										C.R. 51	RT.											13	
975+65	1002+00		Rt.	2,635.00										C.R. 13	LT.											20	
1138+50	1168+68.19BK		Lt.		3,018.19									C.R. 13	RT.											20	
1168+75.64AH	1280+62.94BK		Lt.		11,187.30									T.R. 60	LT.											20	
1280+72.73AH	1298+78.82BK		Lt.		1,806.09									T.R. 177	LT.											20	
1298+80.75AH	1305+85		Lt.		704.25									T.R. 177	RT.											20	
1306+63	1329+83.81BK		Lt.		2,320.81									C.R. 5	RT.											16	
1329+98.24AH	1334+07.71		Lt.		409.47									T.R. 180	LT.											18	
1138+50	1168+68.19BK		Rt.	3,018.19										T.R. 65	RT.											16	
1168+75.64AH	1169+13		Rt.	37.36																							
1168+49	1168+68.19BK		Rt.	19.19																							
1168+75.64AH	1259+38	Rt.	9,062.36																								
1258+25	1280+62.94BK	Rt.	2,237.94																								
1280+72.73AH	1298+78.92BK	Rt.	1,806.19																								
1298+80.75AH	1305+85	Rt.	704.25																								
1306+63	1329+83.81BK	Rt.	2,320.81																								
1329+98.24AH	1333+10	Rt.	311.76																								
</																											

QUANTITIES			
Calc.	J.C.N.	Chk'd.	SHG
Date	3-23-90	Date	7-18-90

FHWA REGION	STATE	PROJECT
5	OHIO	

HAS-22-15.03

ITEM 621 ~ PAVEMENT MARKING														
STATION		LANE OR RAMP	SIDE OF PAVEMENT	Edge Lines		Lane Lines	Center Lines		Island Marking	Curb Marking	Channelizing Lines	Transverse Lines (White)	Stop Lines	
				White	White		Double Solid	Single Dashed						
FROM	TO			Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Sq. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	
U.S. 250 INTERCHANGE														
0+22		Ramp 'A'	Lt.-Rt.										35	
0+08	6+23		Rt.		616.43									
0+20	6+23		Lt.	632.93										
6+23	8+63		Rt.								483	305		
8+63	9+43		Rt.			80								
1+45	2+90	Ramp 'B'	Rt.			145								
2+90	3+43		Rt.								53			
3+43	8+00		Rt.		462.00									
3+43	7+27		Lt.	384.00										
8+39	12+65		Lt.	439.55										
8+39	12+12	Ramp 'C'	Ctr.				373							
12+12			Rt.										36	
1+49	2+98		Lt.			149								
2+98	3+69	Ramp 'D'	Lt.								146	89		
3+69	9+60.88		Lt.-Rt.	591.88	591.88									
8+56.40	9+60.88		Lt.							104.48				
0+00	2+21.73		Lt.-Rt.	443.46			221.73							
2+21.73	2+41.73		Lt.						60					
2+41.73	4+24	Ramp 'E'	Lt.							364.54				
2+21.73	9+19		Lt.-Rt.	697.00	697.00									
9+19	9+72		Lt.									53		
9+72	11+80		Lt.			208								
506+57.53	509+42.96		Lt.-Rt.	285.43			285.43							
506+57.53	507+02	US 250	Lt.	44.47										
508+08	509+42.96		Lt.	134.96										
S.R. 9 INTERCHANGE														
0+21		Ramp 'F'	Rt.										30	
0+21	11+83		Lt.	1,193.50	1,213.76									
0+21	6.82.09		Rt.		693.23									
0+12	6+82.09		Rt.	756.27										
0+40	0+60		Rt.						60					
0+60	6+82.09	Ramp 'G'	Rt.							1,245				
6+82.09	10+98.69		Rt.							417				
11+83	12+61		Rt.			200						161	101	
12+61	14+61		Rt.											
0+90	1+80		Rt.			90								
1+80	2+43	Ramp 'H'	Rt.								63			
2+43	9+30.28		Lt.-Rt.	687.28	700.27									
8+30.28	9+30.28		Rt.							100				
2+46	4+93		Lt.			247								
4+93	5+84		Lt.								188	108		
5+84	17+86	Ramp 'I'	Rt.	1,227.32										
5+84	17+79		Rt.		1,319.54									
6+69.09	9+95		Lt.							326				
9+95	17+61		Lt.							1,532				
9+95	17+79		Lt.		814.14									
9+95	17+99	Ramp 'J'	Lt.	879.08										
17+79			Lt.										33	
0+00	1+10		Lt.							110				
0+00	5+30		Lt.-Rt.	530.00	541.97									
5+30	5+84		Lt.									54		
5+84	6+29	Ramp 'K'	Lt.			45								

ITEM 621 ~ PAVEMENT MARKING														
STATION		LANE OR RAMP	SIDE OF PAVEMENT	Edge Lines		Lane Lines	Center Lines		Island Marking	Curb Marking	Channelizing Lines	Transverse Lines (White)	Stop Lines	
				White	White		Double Solid	Single Dashed						
FROM	TO			Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Sq. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	
S.R. 151 WEST INTERCHANGE														
0+00	0+94	Ramp 'J'	Ramp	Rt.						94				
0+00	6+26			Lt.-Rt.	626.00	626.00								
6+26	8+64			Rt.								482	266	
8+64	9+26			Rt.			102							
0+00	1+74			Rt.								174		
1+74	13+08			Lt.	1,165.25									
1+74	12+99			Rt.		1,187.03								
6+00	6+82.18			Rt.								83		
6+82.18	12+80			Rt.						60	1,157			
6+82.18	12+99			Lt.		651.68								
6+82.18	13+08	Rt.	712.53											
12+99		Rt.										30		
1+30	2+60	Ramp 'L'	Ramp	Lt.		130								
2+60	3+32			Lt.							152	96		
3+32	7+56			Rt.	446.95									
3+32	7+48			Lt.		442.73								
7+48				Lt.									33	
0+12	6+15.02	Ramp 'M'	Ramp	Lt.-Rt.	603.00	613.00								
6+15.02	6+68.07			Lt.							53			
6+68.07	8+13.07			Lt.			145							
S.R. 151 EAST INTERCHANGE														
2+03	4+07.53	Ramp 'N'	Ramp	Rt.		204								
4+07.53	5+18.17			Rt.							111			
5+18.17	17+45			Lt.-Rt.	1,256.00	1,244.00								
2+44	3+83	Ramp 'Q'	Ramp	Lt.						284	188			
3+83	17+50			Lt.-Rt.	1,388.00	1,374.00								
17+40				Lt.									40	
0+20		Ramp 'S'	Ramp	Rt.									40	
0+12	7+19			Lt.-Rt.	732.00	724.00								
7+19	8+58			Rt.							280	183		
0+12	8+80.23	Ramp 'T'	Ramp	Lt.-Rt.	893.00	890.00								
8+80.23	9+90.88			Lt.							111			
9+90.88	11+84.88			Lt.			194							

QUANTITIES			
Calc.	J.C.N.	Chk'd.	SHG
Date	3-28-90	Date	7-18-90

FHWA REGION	STATE	PROJECT	
5	OHIO		

HAS-22-15.03

90
115

TRAFFIC CONTROL QUANTITIES

SHEET NO.	REF. NO.	STATION	SIDE OF C	WORK REQUIRED	SIGN DIMENSION	SIGN CLEARANCE	SUPPORT LENGTHS			REMOVAL OF GROUND MOUNTED SIGN & REERECTION	REMOVAL OF GROUND MOUNTED POST SUPPORT & DISPOSAL	ITEM 630						
					INCHES	FEET						LT.	CNTR	RT.	EACH	EACH		
	1-S	2+26 Ramp D	Lt.	Rmv. Sign & Support & Reerect Sign on New Support		2.0		14.5		1	1						14.5	
	2-S	0+49 Ramp E	Rt.	Rmv. Sign & Support & Reerect Sign on New Support		2.0		13.5		1	1						13.5	
	3-S	17+47 Ramp G	Lt.	Rmv. Sign & Support & Reerect Sign on New Support		2.0		13.5		1	1						13.5	
	4-S	12+60 Ramp K	Rt.	Rmv. Sign & Support & Reerect Sign on New Support		2.0		13.5		1	1						13.5	
																</		

MAINTENANCE OF TRAFFIC

ITEM 614 ~ TEMPORARY PAVEMENT MARKING

STATION		LANE OR RAMP	NUMBER OF APPLI- CATIONS	Temporary Lane Lines, Class I	Temporary Edge Lines, Class I		Temporary Gore Markings, Class II	Temporary Center Lines, Class I	Work Zone Marking Sign
					White	Yellow			
FROM	TO			Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Each
796+50	807+26.16	Two	2		4,306			2,152	2
1002+00	1138+50		2		54,600			27,300	12
807+26.16	1002+00	Eastbound	2	38,948	38,948	38,948			6
1138+50	1168+68.19BK		2	6,037	6,037	6,037			2
1168+75.64AH	1280+62.94BK		2	22,375	22,375	22,375			2
1280+72.73AH	1298+78.92BK		2	3,613	3,613	3,613			2
1298+80.75AH	1329+83.81BK		2	6,207	6,207	6,207			2
1329+98.24AH	1334+07.71		2	819	819	819			
1304+00	1321+00		2	3,400					
807+26.16	1002+00		Westbound	2	38,948	38,948	38,948		
1138+50	1168+68.19BK	2		6,037	6,037	6,037			2
1168+75.64AH	1263+08.90	2		18,867	18,867	18,867			2
1263+08.90	1280+62.94BK	1		1,754	1,754	1,754			
1280+72.73AH	1298+78.92BK	1		1,806	1,806	1,806			2
1298+80.75AH	1329+83.81BK	1		3,103	3,103	3,103			2
1329+98.24AH	1334+07.71	1		410	410	410			
Ramp 'B'				2				400	
Ramp 'D'			2				400		2
Ramp 'F'			2				400		2
Ramp 'H'			2				400		2
Ramp 'K'			2				400		2
Ramp 'M'			2				400		2
Ramp 'N'			2				400		2
Ramp 'T'			2				400		2
TOTALS (Carried To General Summary)				152,324	207,834	148,926	3200	29,452	60
				28.85 Mi.	67.57 Miles			5.58 Mi.	

Item 614 88 Each Work Zone Speed Limit Sign.
See Proposal Note

STATION		LANE OR RAMP	SIDE	TYPE C		TYPE D	DELINEATOR SPACING	DELINEATOR REMOVED FOR DISPOSAL	
				FLEXIBLE POST MOUNTED	BRACKET MOUNTED	FLEXIBLE POST MOUNTED			
FROM	TO			EACH	EACH	EACH	FT.	EACH	
797+00	865+00	EASTBOUND	RT.	18			400	450	
867+00	871+00		RT.	3			200		
874+00	878+00		RT.	2			400		
880+00	884+00		RT.	3			200		
888+00	924+00		RT.	8	2		400		
926+00	940+00		RT.	7	1		200		
944+00	992+00		RT.	13			400		
994+00	998+00		RT.	3			200		
998+80	1010+00		RT.	15			80		
1012+00	1014+00		RT.	2			200		
1018+00	1158+00		RT.	35	1		400		
1160+00	1174+00		RT.	8			200		
1178+00	1230+00		RT.	13	1		400		
1232+00	1236+00		RT.	3			200		
1240+00	1332+00		RT.	21	3		400		
795+40	799+40		WESTBOUND	LT.	3				200
801+40	815+00	LT.		18			80		
817+00	821+00	LT.		3			200		
825+00	865+00	LT.		11			400		
867+00	873+00	LT.		4			200		
877+00	889+00	LT.		4			400		
897+00	895+00	LT.		3			200		
899+00	915+00	LT.		4	1		400		
915+00	931+00	LT.		6	3		200		
935+00	1127+00	LT.		48	1		400		
1129+00	1135+00	LT.		4			200		
1135+80	1147+00	LT.		15			80		
1151+00	1169+00	LT.		10			200		
1173+00	1229+00	LT.		14	1		400		
1231+00	1237+00	LT.		4			200		
1241+00	1253+00	LT.		3	1		400		
1255+00	1259+00	LT.		3			200		
1263+00	1331+00	LT.		17	1		400		
6+00	2+00	RAMP A		RT.	3				200
12+00	4+00	RAMP B		RT.	5				200
4+00	8+00	RAMP C		LT.			3		200
5+00	0+00	RAMP D		RT.	11				50
508+00	506+00	U.S. 250		RT.	2				200
506+50	508+50			RT.	2				200
0+00	5+00	RAMP D	RT.	11			50		
5+50	9+00		LT.			8	50		
12+00	8+00	RAMP E	LT.			9	50		
7+50	2+50		RT.	11			50		
1+50	0+50		RT.	2			100		
1+00	2+00		RT.	2			100		
2+50	6+50		RT.	9			50		
8+30	7+30		RT.	2			100		
6+60	3+80	RAMP F	LT.			5	70		
6+00	9+00		LT.	7			50		
9+50	13+00		RT.	8			50		
14+00	16+00	RAMP G	RT.	2			200		
16+00	14+00		RT.	2			200		
13+00	10+00		RT.	7			50		
1+00	3+00	RAMP H	LT.			3	100		
3+50	5+00		LT.			4	50		
6+00	2+00	RAMP J	LT.			3	200		
1+00	0+00		RT.	2			100		
7+32	10+32	RAMP K	RT.	7			50		
11+32	12+32		RT.	2			100		
12+62	11+62		RT.	2			100		
10+62	6+62		RT.	9			50		
6+12	2+12	RAMP L	LT.			9	50		
3+50	7+00		LT.			8	50		
0+50	2+50		LT.			2	200		
3+50	4+50	RAMP M	LT.			2	100		
5+00	5+50		LT.			2	50		
17+00	7+00	RAMP N	RT.	6			200		
3+60	5+20	RAMP Q	RT.	3			80		
7+20	15+20		RT.	5			200		
6+10	4+50	RAMP S	RT.	3					



ITEM 802 - BARRIER REFLECTORS						
S.L.M.		DIR.	SIDE	BARRIER REFLECTOR		COMMENTS
FROM	TO			TYPE A	TYPE B	
24.672	24.442	WB	RT.	12	1	INC. HAS-22-2460
24.653	24.609	WB	LT.	2	1	INC. HAS-22-2460
24.286	24.248	WB	RT.	3		
23.910	23.837	WB	RT.	4		
23.812	23.781	WB	RT.	3		
23.812	23.781	WB	LT.	3		
23.750	23.505	WB	RT.	7	1	INC. HAS-22-2362
23.692	23.617	WB	LT.	3	1	INC. HAS-22-2362
23.295	23.183	WB	RT.	6		
22.977	22.644	WB	RT.	15	3	INC. HAS-22-2283
22.921	22.828	WB	LT.	3	2	INC. HAS-22-2283
22.424	22.345	WB	RT.	4		
22.203	22.158	WB	RT.	3		
21.900	21.830	WB	RT.	4		
21.553	21.505	WB	RT.	3		
21.309	21.144	WB	RT.	7	2	INC. HAS-22-2126
20.921	20.797	WB	RT.	7		
20.575	20.542	WB	RT.	3		
20.529	20.441	WB	RT.	5		
20.294	20.051	WB	RT.	13		
19.979	19.865	WB	RT.	6		
19.818	19.640	WB	RT.	9		
19.542	19.353	WB	RT.	10		
19.247	18.900	WB	RT.	18		
18.748	18.719	WB	RT.	3		
18.590	18.475	WB	RT.	6		
18.261	18.203	WB	RT.	3		
17.900	17.508	WB	RT.	19	3	INC. HAS-22-1753 & HAS-22-1749
17.589	17.390	WB	LT.	8	4	INC. HAS-22-1755, HAS-22-1749 & HAS-22-1738
17.422	17.366	WB	RT.	2	2	INC. HAS-22-1738
17.252	16.965	WB	RT.	12	4	INC. HAS-22-1717
16.668	16.626	WB	RT.	3		
16.379	16.162	WB	RT.	12		
15.815	15.714	WB	RT.	6		
15.677	15.496	WB	RT.	10		
TOTALS				513	47	

HA221528 BLG

QUANTITIES			
Calc.	J.C.N.	Chk'd.	SHG
Date	6-20-90	Date	7-18-90

FHWA REGION	STATE	PROJECT	
5	OHIO		

HAS-22-15.03

ITEM 862 ~ RAISED PAVEMENT MARKERS									
STATION		LANE OR RAMP	SIDE OF PAV'T.	Length	Spacing	One Way		Two Way	
						White	Yellow	White/ Red	Yellow/ Yellow
From	To			Lin. Ft.	Feet	Each	Each	Each	Each
U.S. 22									
796+50	807+26.16	TWO LANE SECTIONS	Ctr.	1,076.16	40				28
1002+00	1013+25.7 B		Ctr.	1,125.70	40				29
1011+67.05 A	1018+70		Ctr.	702.95	40				19
1020+00	1085+55		Ctr.	6,555.00	40				165
1086+30	1138+50		Ctr.	5,220.00	40				132
807+26.16	1002+00	EASTBOUND LANE	Ctr.	19,473.84	80			245	
1138+50	1168+68.19 B		Ctr.	3,018.19	80			39	
1168+75.64 A	1280+62.94 B		Ctr.	11,187.30	80			141	
1280+12.73 A	1298+78.92 B		Ctr.	1,806.19	80			24	
1298+80.75 A	1329+83.81 B		Ctr.	3,103.06	80			40	
1329+98.24 A	1334+07.71	WESTBOUND LANE	Ctr.	409.47	80			6	
1304+00	1329+83.81 B		Rt.	2,583.81	80			33	
1329+98.24 A	1334+07.71		Rt.	409.47	80			6	
814+75	1002+00		Ctr.	18,725.00	80			235	
1146+10	1168+68.19 B		Ctr.	2,258.19	80			29	
1168+75.64 A	1280+62.94 B	RAMP 'A'	Ctr.	11,187.30	80			141	
1280+72.73 A	1298+78.92 B		Ctr.	1,806.19	80			24	
1298+80.75 A	1329+83.81 B		Ctr.	3,103.06	80			40	
1329+98.24 A	1334+07.71		Ctr.	409.47	80			6	
U.S. 250 INTERCHANGE									
5+43	6+23	RAMP 'B'	Rt.	80	40		2		
6+23	8+63		Rt.	241	20	13			
888+17	888+97		Lt.	80	40	2			
888+97	891+33		Rt.	242	20	13			
2+90	3+48		Rt.	58	40	2			
3+48	5+08	RAMP 'C'	Rt.	160	40		5		
874+07	875+79		Lt.	172	40	5			
871+02	871+73		Rt.	71	20	4			
871+73	872+53		Rt.	80	40	2			
2+98	3+69		Lt.	75	20	4			
3+69	4+49	RAMP 'D'	Lt.	80	40		2		
0+00	2+21.73		Ctr.	221.73	40				6
8+55	9+19		Lt.	64	40		2		
9+19	9+72		Lt.	53	40	2			
876+59	877+84		Rt.	125	40	4			
506+57.53	509+42.96		Ctr.	285.43	40				8
S.R. 9 INTERCHANGE									
11+05	11+83	RAMP 'E'	Rt.	80	40		2		
11+83	12+61		Rt.	83	20	5			
924+41	925+21		Lt.	80	40	2			
925+21	926+09		Lt.	78	20	5			
1+80	2+43		Rt.	63	40	2			
2+43	3+75	RAMP 'F'	Rt.	136	40		4		
918+30	920+30		Lt.	200	40	6			
4+93	5+84		Lt.	96	20	6			
5+84	6+64		Lt.	80	40		2		
930+69	931+61		Rt.	92	20	6			
931+61	932+41	RAMP 'G'	Rt.	80	40	2			
3+98	5+30		Lt.	140	40		4		
5+30	5+84		Lt.	54	40	2			
934+99	936+89		Rt.	190	40	5			

ITEM 862 ~ RAISED PAVEMENT MARKERS									
STATION		LANE OR RAMP	SIDE OF PAV'T.	Length	Spacing	One Way		Two Way	
						White	Yellow	White/ Red	Yellow/ Yellow
From	To			Lin. Ft.	Feet	Each	Each	Each	Each
S.R. 151 WEST INTERCHANGE									
5+46	6+26	RAMP ↑ 'J'	Rt.	80	40		2		
6+26	8+64		Rt.	242	20	13			
1162+96	1163+76		Lt.	80	40	2			
1163+76	1166+16		Lt.	240	20	13			
0+00	1+74	RAMP ↑ 'K'	Rt.	174	40	5			
1+74	3+25		Rt.	160	40		5		
1156+00	1159+35	RAMP ↑ 'L'	Lt.	335	40	9			
2+60	3+32		Lt.	78	20	5			
3+32	4+12		Lt.	80	40		2		
1161+76	1162+50		Rt.	74	20	5			
1162+50	1163+30	RAMP ↑ 'M'	Rt.	80	40		2		
4+85	6+15		Lt.	140	40		5		
6+15	6+68		Lt.	53	40	2			
1167+23	1169+13		Rt.	190	40	6			
S.R. 151 EAST INTERCHANGE									
4+08	5+19	RAMP ↑ 'N'	Rt.	111	40	4			
5+19	6+78		Rt.	160	40		5		
1235+57	1238+27		Lt.	270	40	8			
2+44	3+83	RAMP ↑ 'O'	Lt.	143	20	8			
3+83	4+63		Lt.	80	40		2		
1234+42	1235+83		Rt.	141	20	8			
1235+83	1236+63		Rt.	80	40	2			
6+39	7+19	RAMP ↑ 'P'	Rt.	80	40		2		
7+19	8+58		Rt.	140	20	8			
1255+35	1256+15		Lt.	80	40	2			
1256+15	1257+54		Lt.	139	20	8			
6+74	8+80	RAMP ↑ 'T'	Lt.	206	40		6		
8+80	9+91		Lt.	111	40	3			
1256+20	1259+38		Rt.	318	40	9			
TOTAL						212	54	1,009	387
						266		1,396	
						1,662			
(Carried To General Summary)									

HAS-22-15.03

BRIDGE NUMBERS

HAS-22	HAS-22-1717		HAS-22	HAS-22-1738		HAS-22	HAS-22-1749		HAS-22-1753			HAS-22	HAS-22	HAS-22-2362		HAS-22	BRIDGE SUMMARY				
1664	LEFT	RIGHT	1725	LEFT	RIGHT	1738F	LEFT	RIGHT	LEFT	RIGHT		2126	2188	LEFT	RIGHT	2460 L	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
-	-	-	-	-	-	-	758	758	523	523		690	-	-	-	-	202	23500	3252	Sq.Yd.	Wearing course removed
-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	Lump	202	11202	Lump	Lump	Portions of structure removed
-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	Lump	503	21300	Lump	Lump	Unclassified excavation
-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	48613	509	15800	48613	Lbs.	Epoxy coated reinforcing steel, Grade 60
-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	44	510	11100	44	Each	Dowel holes
-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	210	511	31508	210	Cu.Yd.	Class S concrete, Superstructure
-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	7	511	46000	7	Cu.Yd.	Class C concrete, Wingwalls
																					*
-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	84	516	13200	84	Sq.Ft.	1/2" Preformed expasion joint filler
-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	104	516	13600	104	Sq.Ft.	1" Preformed expasion joint filler
-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	36	512	51244400	36	Sq. Yd.	Type B Waterproofing
-	-	-	12	-	-	-	16	12	10	10		13	-	16	16	-	518	62100	105	Lin.Ft.	Scupper lengthening, as per plan
-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	17	518	21101	17	Cu.Yd.	Porous backfill, as per plan
-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	124	518	41100	124	Lin.Ft.	6" Helical perforated CSP, 707.01
-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	13	518	41200	13	Lin.Ft.	6" Helical nonperforated CSP, including specials, 701.01
-	-	-	-	-	-	-	-	-	-	-		132	-	-	-	-	* 519	11100	132	Sq.Ft.	Patching concrete structure
-	-	-	1	2	2	1	-	-	-	-		-	-	1	2	-	845	40200	9	Cu.Yd.	Latex modified concrete Overlay (Patching), As Per Plan
-	-	-	524	551	551	376	-	-	-	-		-	-	546	546	-	Special	51273000	3094	Sq.Yd.	Treating concrete bridge decks with HMWM Resin (See Proposal Note)
437	534	430	705	328	325	335	828	828	289	290		379	1041	290	290	255	Special	51267502	7589	Sq.Yd.	Sealing of concrete surfaces (Epoxy) (See Proposal Note)
-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	Lump	Special	51400100	Lump	Lump	Field painting of existing steel, surface preparation, System OZEU (See Proposal Note)
-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	Lump	Special	51400200	Lump	Lump	Field painting of existing steel, prime coat, System OZEU (See Proposal Note)
-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	Lump	Special	51400300	Lump	Lump	Field painting of existing steel, intermediate coat, System OZEU (See Proposal Note)
-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	Lump	Special	51400400	Lump	Lump	Field painting of existing steel, finish coat, System OZEU (See Proposal Note)
-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	Lump	Special	51426000	Lump	Lump	Contain, collect, store and evaluate abrasives and paint chips (See Proposal Note)
-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	Lump	Special	51426010	Lump	Lump	Shipment and disposal of non-hazardous waste (See Proposal Note)
-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	Lump	Special	51426020	Lump	Lump	Shipment and disposal of hazardous waste (See Proposal Note)
-	-	-	-	-	-	-	*	-	-	Lump	Lump	Lump	-	-	-	Lump	Special	10000300	Lump	Lump	*Premium on railroad's protective public Liability And Property Damage Liability Insurance.
-	-	-	-	-	-	-	758	758	523	523		690	-	-	-	-	Special	22000	3252	Sq.Yd.	Micro-Silica modified concrete overlay (1 1/4" thick) (See Proposal Note)
-	-	-	-	-	-	-	6	3	2	1		6	-	-	-	-	Special	22100	18	Cu.Yd.	Micro-Silica modified concrete overlay (Variable thickness) (See Proposal Note)
-	-	-	-	-	-	-	Lump	Lump	Lump	Lump		Lump	-	-	-	-	Special	22300	Lump	Lump	Test slab (See Proposal Note)

* 50% Federal Participation

*This item carried to incidentals.

REVISED 1-3-91

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BUREAU OF MAINTENANCE

BRIDGE SUMMARY

HAS-22-1664
HAS-22-1717 L/R
HAS-22-1725
HAS-22-1738 L/R
HAS-22-1738F
HAS-22-1749 L/R

HAS-22-1753 L/R
HAS-22-2126
HAS-22-2188
HAS-22-2362 L/R
HAS-22-2460 L

DESIGNED
JAS

CADD
JAS

CHECKED
WRG

REVIEWED

DATE

REVISED

BRIDGE NOTES

FHWA REGION	STATE	PROJECT	
5	OHIO		

94
115

HAS-22-15.03

PROPOSED WORK FOR BRIDGE NO. HAS-22-2460 L

1. Remove existing reinforced concrete deck and integral portion of abutment, wingwalls and approach slabs.
2. Clean and paint all structural steel.
3. Construct new reinforced concrete deck with integral abutments, new wingwalls and new approach slabs.

CONTINGENCY QUANTITIES

Specific locations and usage of the estimated quantities set up on this plan to be used "As directed by the Engineer" shall be made a matter of record by incorporation into the final change order governing completion of this project. Estimated quantities of materials shall not be ordered for delivery to the project unless authorized by the Engineer.

EXISTING STRUCTURE VERIFICATION

Details and dimensions on these plans pertaining to the existing structure have been obtained from plans of the existing structure and/or from field observations and measurements. Consequently, they are indicative of the existing structure and the proposed work but they shall be considered tentative and approximate. The Contractor is referred to CMS sections 102.05, 105.02 and 513.02. Contract bid prices shall be based upon a prebid examination of the existing structure by the Contractor. However, all project work shall be based upon actual details and dimensions which have been verified by the Contractor in the field.

ITEM 845 - LATEX MODIFIED CONCRETE OVERLAY (PATCHING), AS PER PLAN

This work shall include repair of the existing overlayed concrete bridge deck as per Supplemental Specification 845 with the following changes. The existing concrete overlay will not be removed where it is found to be sound. The removal of the top 1/4 " is not required. Areas that are found to be unsound shall be removed by first making a vertical diamond saw cut, to a depth of two (2) inches, around the unsound area. The unsound areas of the overlay shall then be removed. After initial removal of the unsound areas and all obviously loose and disintegrated concrete, the Contractor shall sound the deck and remove other areas as per 845.05. The use of a power scarifier will not be permitted. After placing, the LMC shall be finished with a power screed or hand finished as directed by the Engineer. All other requirements of 845 shall be met. The price bid for this item shall include the cost of removal, furnishing, placing, texturing and curing of the LMC patches and all other material, labor and equipment required to complete the work. Payment will be made at the contract bid price for Item 845, cubic yard, Latex modified concrete overlay (patching), as per plan.

ITEM 518 - SCUPPER LENGTHENING, AS PER PLAN

The Contractor shall remove a minimum of 6" of the bottom of each scupper downspout, unless otherwise directed by the Engineer. The contractor shall then weld an extension to the existing scupper downspout. The downspout extension shall be in accordance with 518 and shall extend a minimum of 8" below the bottom flange of the adjacent beam. The material and the size of the extension shall be the same as that of the existing scupper downspout. The Contractor shall also clean and paint the entire scupper downspout including the extension as per 514.06. Cost for all material, labor and incidental for the above work shall be included under Item 518 - Scupper lengthening, as per plan.

ITEM SPECIAL - SEALING CONCRETE SURFACES

An epoxy concrete sealer shall be applied to the surfaces as shown on the Typical Sections for the full length of the bridge including wingwalls. Sealer shall also be applied to all exposed surfaces of the piers excluding the pier cap tops for the following bridges: HAS-22-1664, HAS-22-1725, HAS-22-1749 L/R, and HAS-22-2188. See Proposal Note for the surface preparation requirements, application rates, material requirements and application procedures.

DESIGN DATA

Design Loading- HS20-44 Case II and the Alternate Military Loading
Concrete Class C - Unit Stress 1333 p.s.i. (Substructure)
Concrete Class S - Unit Stress 1500 p.s.i. (Superstructure)
Reinforcing Steel - ASTM A615, A616, A617 - Unit Stress 24000 p.s.i.
Deck Protection Method: Epoxy Coated Reinforcing Steel both mats
Monolithic Wearing Surface is assumed for design purposes to be 1" thick.

ITEM 509 - REPLACEMENT OF EXISTING REINFORCING STEEL

Any existing reinforcing bars which are to be incorporated into the new work and which are made unusable by the Contractor's concrete removal operations shall be replaced with new steel at his cost. Any existing reinforcing bars deemed by the Engineer to be unusable because of corrosion shall be replaced with new steel. An allowance of 100 lbs. is included in Item 509, Epoxy coated reinforcing steel for this purpose.

COOPERATION WITH RAILROADS

The Contractor shall cooperate at all times with the local officials of the railroad company. He shall use all reasonable care and diligence in the work in order to avoid accidents, damage or interference with the trains or other property of the railroad. The Contractor shall notify the local officials of the railroad prior to starting work that may affect railroad property or facilities and shall pay the railroad company the cost of flagmen furnished by the railroad company and made necessary because of any of the Contractor's operations over or adjacent to the tracks. No scaffold, planks or other equipment shall be suspended or erected above or within 10 feet of a rail over which trains are operating without prior written approval of the Chief Engineer, or his authorized representative of the railroad company. Failure to notify the railroad company as noted above shall be cause for stopping work until all provisions for protecting railroad property have been provided.

RAILROAD PROTECTIVE PUBLIC LIABILITY INSURANCE

The Contractor shall furnish evidence to the highway department that, with respect to the operators he or any of his subcontractors perform, he has provided for and in behalf of the Railroad Company a Railroad Protective Liability policy of insurance providing a combined single limit for damages arising out of bodily injuries to or death of one or more persons and out of injury to or destruction of property including such property in the care, custody and control of the Railroad Company in the amount of \$2,000,000.00 per occurrence and subject to that limit per occurrence, an aggregate limit in the amount of \$6,000,000.00 for each annual period.

The above railroad protective policy of insurance shall conform to the Railroad Liability requirements prescribed by the Federal Highway Administration in FHPM: 6-6-2-2 as amended.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED

The Contractor shall remove the existing deck and parapets, integral backwalls to the beam seats, wingwalls to El. 1180.92 on the north side and El. 1181.20 on the south side of the rear abutment; El. 1185.24 on the south side and El. 1184.87 on the north side of the forward abutment of Bridge No. HAS-22-2460L.

ITEM 202 - WEARING COURSE REMOVED

The Contractor shall remove the existing latex modified concrete overlay on Bridge No's HAS-22-1749 L/R, HAS-22-1753 L/R and HAS-22-2126.

DATE PAINTED

~~The completion date of the finish coat of paint (Month and Year) (i.e. 9-87) shall be stenciled on the structure, as directed by the Engineer, in a contrasting color. Payment shall be included in the price bid for Item Special, Field painting of existing steel, finish coat, System OZEU (See Proposal Note).~~

PROTECTION OF PERSONS AND PROPERTY

The Contractor shall collect, remove and dispose of all buckets, rags, or other discarded materials and he shall leave the job site in a clean condition.

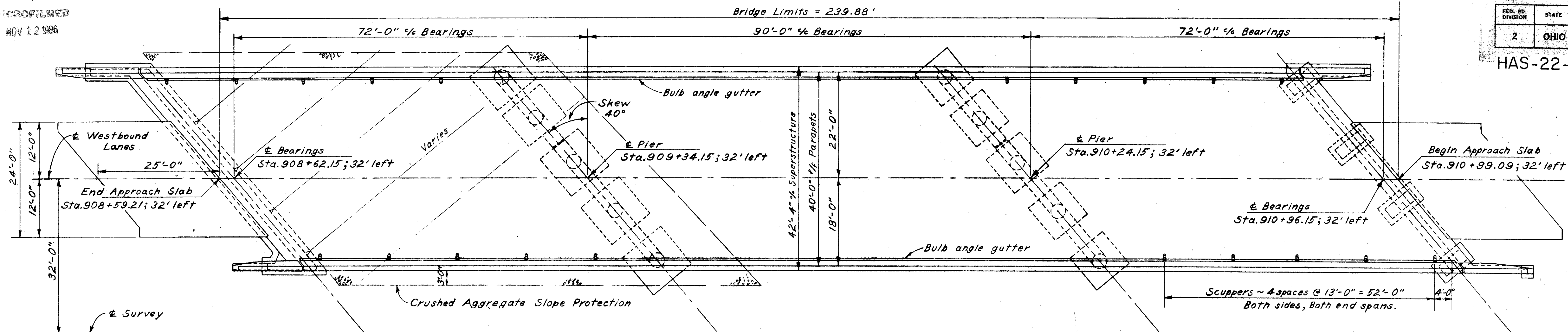
The Contractor shall protect all portions of the structure which are not to be painted, against damage or disfigurement by splashes, spatters, and smirches of paint.

When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or in consequence of the nonexecution thereof by the Contractor, he shall restore, at his own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, rebuilding or otherwise restoring as may be directed, or he shall make good such damage or injury in an acceptable manner.

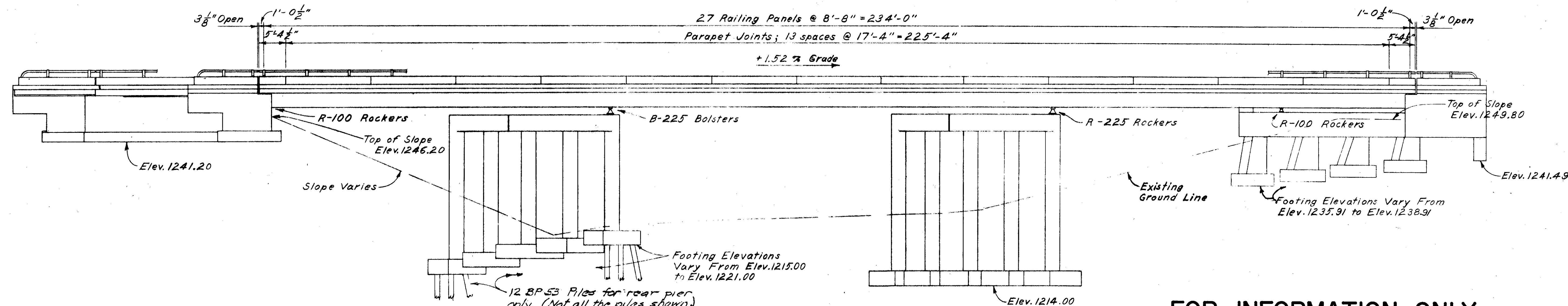
PAINT

~~Final coat of field painting of existing Structural Steel shall be gray.~~

REVISED 1-3-91					
STATE OF OHIO DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS BUREAU OF MAINTENANCE					
2 / 23					
BRIDGE NOTES					
HAS-22-1664			HAS-22-1753 L/R		
HAS-22-1717 L/R					
HAS-22-1725			HAS-22-2126		
HAS-22-1738 L/R			HAS-22-2188		
HAS-22-1738F			HAS-22-2362 L/R		
HAS-22-1749 L/R			HAS-22-2460 L		
DESIGNED	CADD	CHECKED	REVIEWED	DATE	REVISED
JAS	JAS	WRG			



GENERAL PLAN



GENERAL ELEVATION

GENERAL NOTES

REFERENCE shall be made to Standard Drawing RB-1-55 revised 2-2-59.

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57 together with current revisions thereof.

EXCAVATION QUANTITY for the forward abutment, in addition to that outlined in Sec. E-209, includes the removal of material bounded by the proposed bench, by the front vertical plane described in Sec. E-209 and by the existing ground surface.

EXCAVATION QUANTITY for the rear abutment includes the removal of fill material required for construction of the abutment.

BACKFILL behind both abutments shall be made with material meeting the requirements of Sec. I-22 and shall be compacted in accordance with the requirements for embankment compaction. The payment for this I-22 backfill shall be considered as included in the payment for E-2, Unclassified Excavation.

EXCAVATION QUANTITY for the rear pier includes the removal of fill material required for construction of the pier.

PILES shall be driven to firm contact with shale. If the length of penetration is approximately equal to the depth to shale according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. S-18.05 is not less than the following value for a pile hammer of the indicated energy rating: For the forward abutment wing piles: 44 tons per pile using a 7000 ft. lb. hammer, 37 tons per pile using a 11000 ft. lb. hammer, and 35 tons per pile using a 15000 ft. lb. or greater hammer.

For the rear pier piles: 44 tons per pile using a 7000 ft. lb. hammer, 37 tons per pile using a 11000 ft. lb. hammer, 35 tons per pile using a 15000 ft. lb. or greater hammer.

If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 25 tons per pile for the abutment piles and 25 tons per pile for the pier piles.

FOOTINGS for forward pier and forward abutment (except north wingwall) shall extend a minimum of 3" into solid rock or to the elevation shown, whichever is lower.

FOUNDATION BEARING PRESSURE: Rear abutment footings are designed for a maximum bearing pressure of 2 1/2 tons per sq. ft. Forward pier and forward abutment footings are designed for a maximum bearing pressure of 4 tons per sq. ft.

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.

WELDING of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may, at the option of the contractor, be made in the shop.

UTILITY LINES: All labor and expense involved in relocating the affected utility lines shall be borne by the owner. The Contractor and Owner are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

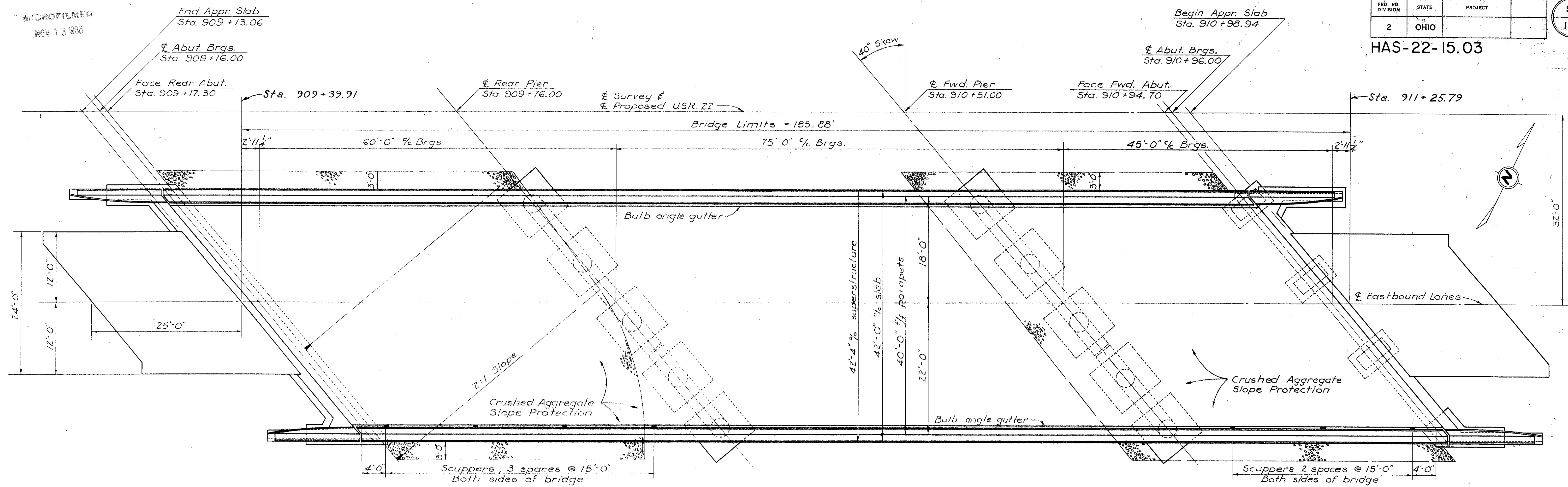
FOR INFORMATION ONLY

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES		4/23
GENERAL PLAN & ELEVATION & GENERAL NOTES Bridge No. HAS-22-1717 L Westbound over existing U.S.R. 250 HARRISON COUNTY Sta. 908+59.21, 32' left Sta. 910+99.09, 32' left		
DESIGNED J.E.	DRAWN J.E.	TRACES DGM
CHECKED DGM	REVIEWED DGM	DATE 7-16-59

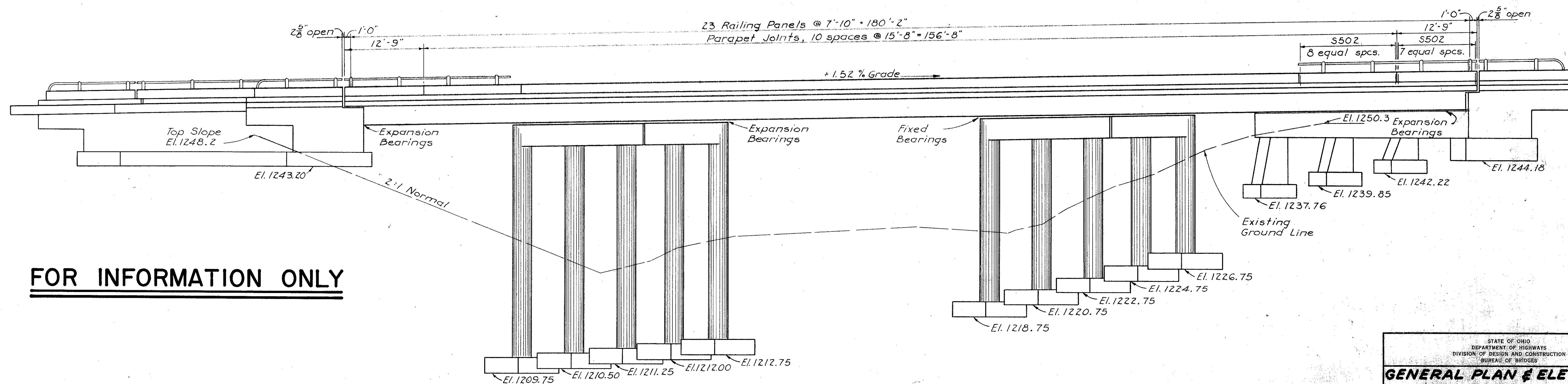
MICROFILMED
NOV 13 1966

FED. RD. DIVISION	STATE	PROJECT	97
2	OHIO		115

HAS-22-15.03



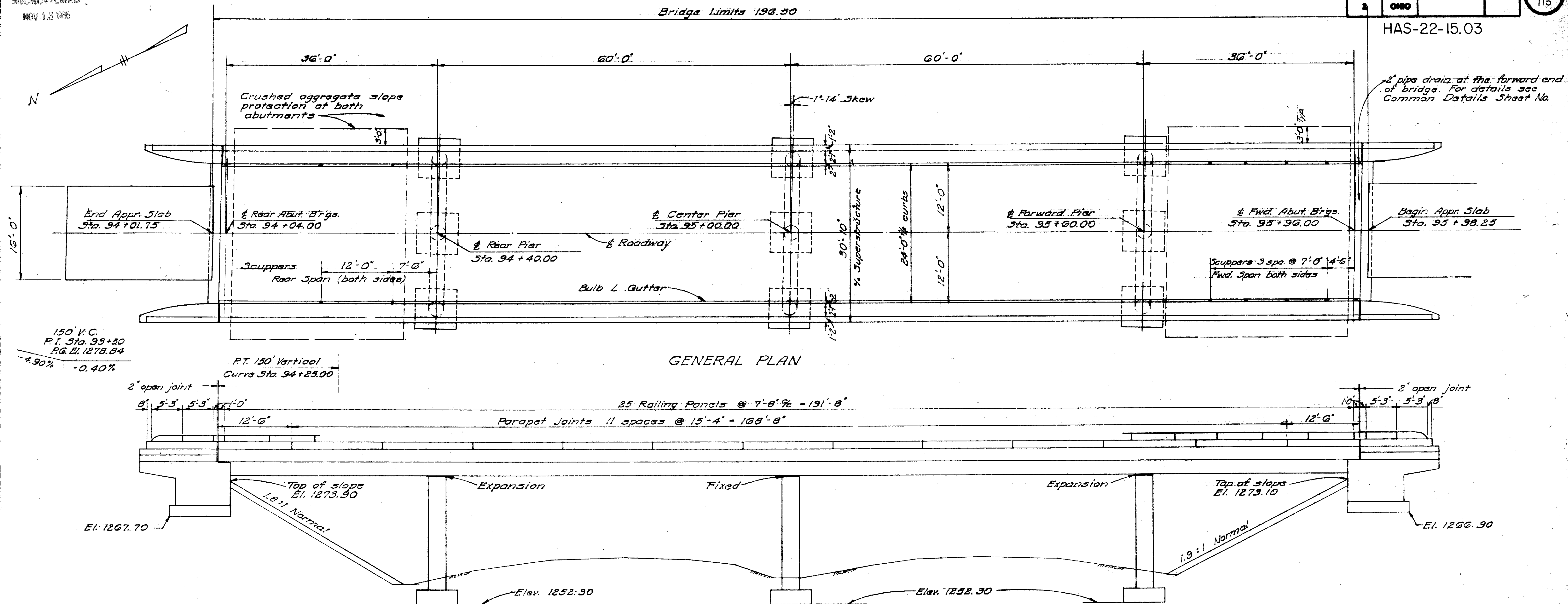
GENERAL PLAN
(Northeast wing piles not shown)



FOR INFORMATION ONLY

ELEVATION
(Northeast wing piles not shown)

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES				5/23
GENERAL PLAN & ELEVATION EAST BOUND BRIDGE				
BRIDGE NO. HAS-22-1717 R OVER EXISTING U.S.R. 250				
HARRISON COUNTY			STA. 909+13.06 910+98.94	
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED
NAC	NAC	JGW	BFG	APR 3-31-59



ELEVATION

GENERAL NOTES

DESIGN SPECIFICATIONS: This structure conforms to the requirements of 'Design Specifications for Highway Structures' of the State of Ohio, Department of Highways, dated 9-1-57 together with current revisions thereof.

FOOTINGS shall extend a minimum of 3' into solid rock or shale or to the elevation shown, whichever is lower.

FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 5.5 tons per sq. ft. and abutment footings for 2.5 tons per sq. ft.

CONCRETE DECK PLACING: In order to facilitate water curing of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections, between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.

WELDING of structural steel shall be Class 'A' except as otherwise shown. Welds shown as field welds may, at the option of the Contractor, be made in the shop.

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Abut	Piers	Supers	Grhls
E-2	16	Cu. Yd.	Unclassified excavation	16			
E-2	162	Cu. Yd.	Rock excavation	80	82		
S-1	185	Cu. Yd.	Class 'C' concrete, superstructure			185	
S-1	71	Cu. Yd.	Class 'C' concrete, pier caps and columns		71		
S-1	41	Cu. Yd.	Class 'E' concrete, pier footings		41		
S-1	106	Cu. Yd.	Class 'E' concrete, abutments	106			
S-4	65,701	Lb.	Reinforcing steel	6,440	16,195	43,066	
S-7	129,300	Lb.	Structural steel			129,300	
S-8	129,300	Lb.	Field painting of structural steel, as per plan			129,300	
S-14	436.67	Lin. Ft.	Railing (Aluminum rail and supports, and concrete parapet)	48.67		388	
S-29	20	Cu. Yd.	Porous backfill	26			
I-10	310	Sq. Yd.	Crushed aggregate slope protection				310

FOR INFORMATION ONLY

STATE OF OHIO DIVISION OF HIGHWAYS BUREAU OF BRIDGES				6/23
GENERAL PLAN & ELEVATION, NOTES & ESTIMATED QUANTITIES				
BRIDGE NO. HAS-22-1725 UNDER TWP. RD. NO. 243				
HARRISON COUNTY STA. 94+01.15 STA. 95+98.25				
DESIGNED JDI	DRAWN JDI	CHECKED NJE	APPROVED SFC	DATE 9/1/86

GENERAL NOTES

REFERENCE shall be made to Standard Drawing CS-2-54, revised 2-2-59.

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57 together with the current revisions thereof.

EXCAVATION QUANTITY includes the removal of fill material required for construction of the abutments.

PILES shall be driven with a hammer of not less than 11,000 ft. lb. per blow to firm contact with rock. If the length of penetration is approximately equal to the depth to rock according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. 5-18.05 is not less than the following value for a pile hammer of the indicated energy rating:

43 tons per pile using a 11,000 ft. lb. hammer
39 tons per pile using a 15,000 ft. lb. or greater hammer

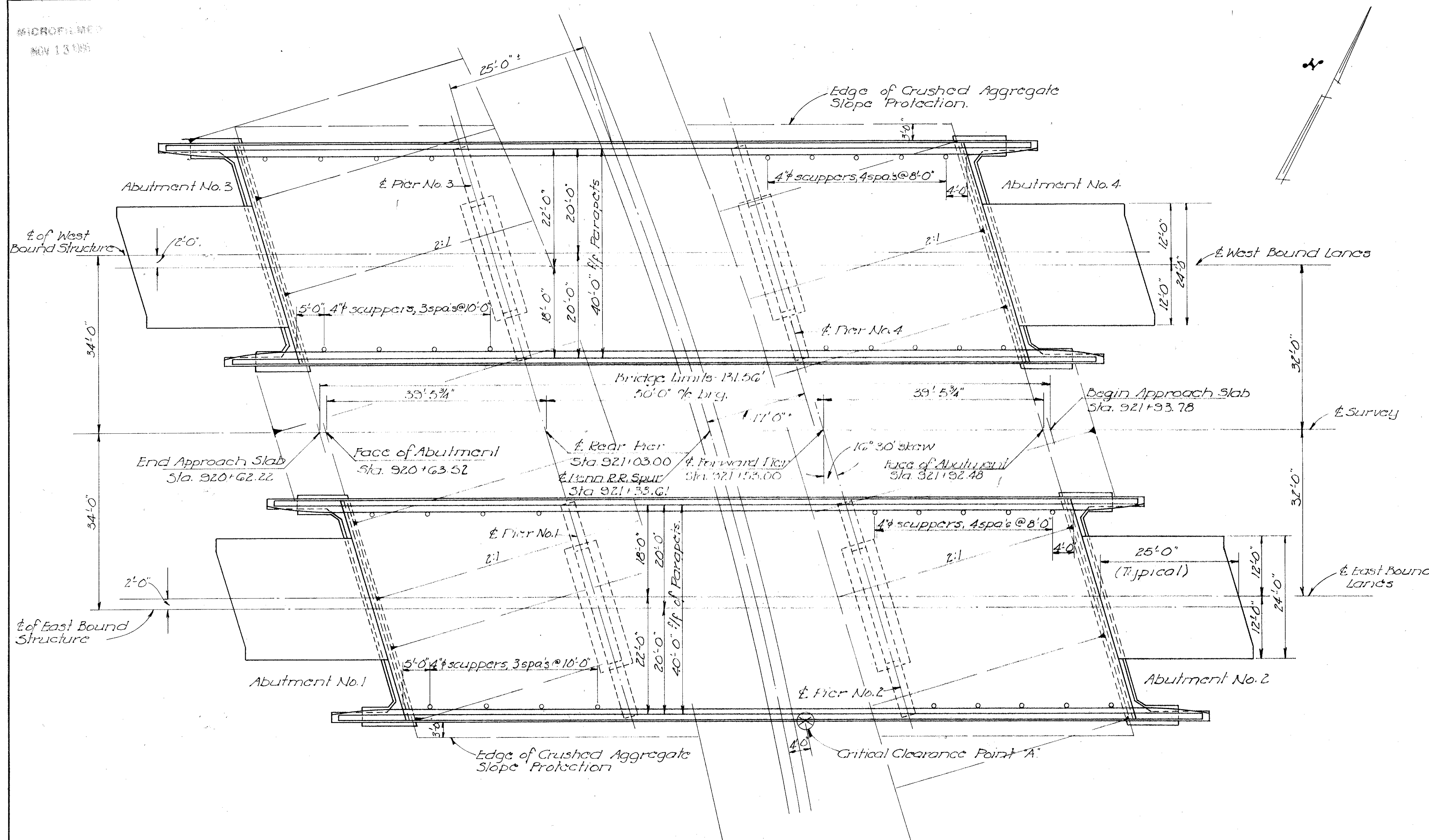
If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 30 tons per pile.

PIER FOOTINGS shall extend a minimum of 3" into rock or to the elevation shown, whichever is lower.

FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 5 tons per sq. ft.

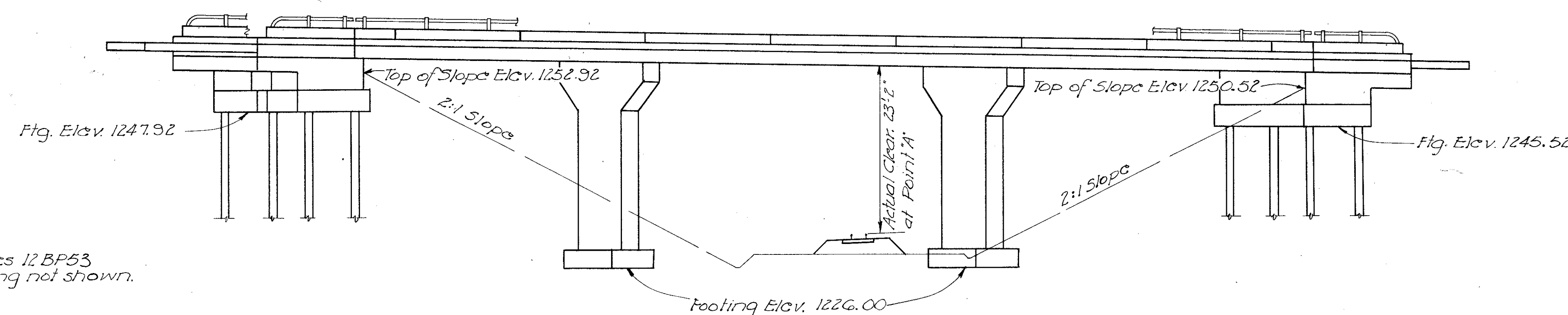
CONSTRUCTION CLEARANCE of 20 ft. vertically above the top of railroad rails and 8 ft. horizontally from the center of tracks shall be maintained at all times.

ALIGNING RAILROAD TRACKS: After the Contractor has completed all excavation and backfill adjacent to the railroad tracks in compliance with Sections E-2.04 and E-2.08 of the Construction and Material Specifications, subject to the supervision of the Railroad Company, nothing in Sections E-2.04, E-2.08 or E-2.07 of the Specifications shall be construed to hold the Contractor liable for aligning and re-surfacing the railroad tracks.



GENERAL PLAN

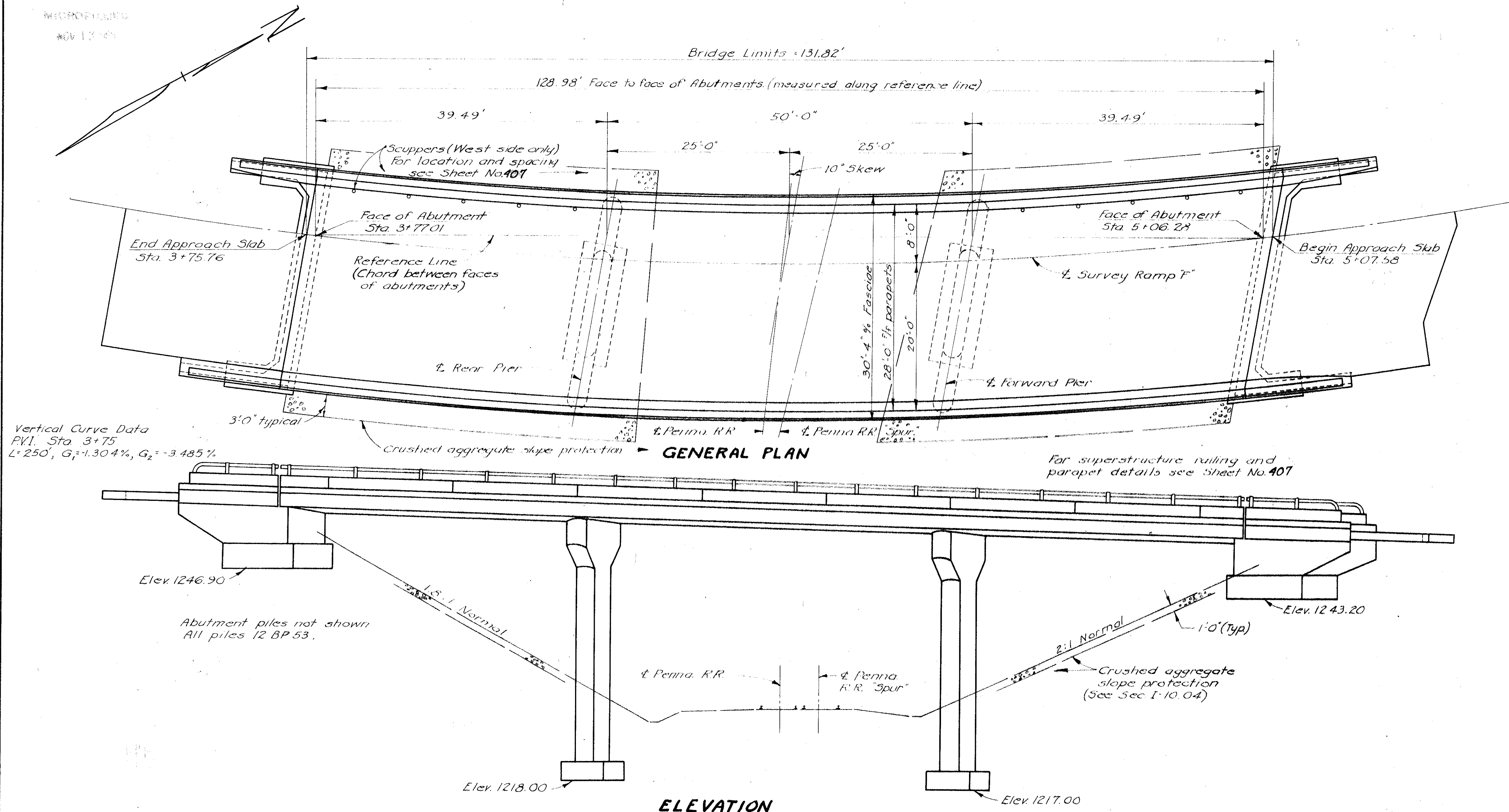
FOR INFORMATION ONLY



ELEVATION

All piles 12 BP53
All piling not shown.

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
7/23						
GENERAL PLAN, ELEVATION & NOTES BRIDGE No. HAS-22-1738L OVER SPUR OF PENN. R.R. HARRISON COUNTY STA. 920+62.22 STA. 921+93.78						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Q.M.	Q.M.	R.C.	CPD	BFG	3-27-59	



GENERAL NOTES

REFERENCE shall be made to Standard Drawing AR-157 revised 2-2-59.

DESIGN SPECIFICATIONS: This structure conforms to the requirements of Design Specifications for Highway Structures of the State of Ohio, Department of Highways, dated 9-1-57 together with current revisions thereof.

EXCAVATION QUANTITY includes the removal of fill material required for construction of the abutments and the piers.

PILES shall be driven to firm contact with shale. If the length of penetration is approximately equal to the depth to shale according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. 518.05 is not less than the following value for a pile hammer of the indicated energy rating:

48 tons per pile using a 11,000 ft. lb. hammer
40 tons per pile using a 15,000 ft. lb. hammer or greater

If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 27 tons per pile.

PIER FOOTINGS shall extend a minimum of 3" into solid shale or to the elevation shown, whichever is lower.

FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 5 tons per square foot.

CONSTRUCTION CLEARANCE of 20'-0" vertically above the top of the railroad rails and 8'-0" horizontally from the center of the tracks shall be maintained at all times.

SHEETING AND BRACING: Before construction is started, eight sets of prints showing details of the sheeting and bracing to be used for excavation adjacent to the railroad tracks shall be submitted to the Director for approval by the Department of Highways and by the Railroad Company.

ALIGNING RAILROAD TRACKS: After the Contractor has completed all excavation and backfill adjacent to the railroad tracks in compliance with Sec. E-2.04 and E-2.08 of the Construction and Material Specifications, subject to the supervision of the Railroad Company, nothing in Sec. E-2.04, E-2.08 or G-8.01 of the Specifications shall be construed to hold the Contractor liable for aligning and resurfacing the railroad tracks.

FOR INFORMATION ONLY

ESTIMATED QUANTITIES							
Item	Total	Unit	Description	Super.	Abut.	Piers	Gen'l
E-2	Lump	Sum	Cofferdams, cribs, and sheeting				Lump
E-2	255	Cu. Yd.	Unclassified excavation		125	130	
E-2	14	Cu. Yd.	Shale excavation			14	
S-1	287	Cu. Yd.	Class "C" concrete, superstructure	287			
S-1	81	Cu. Yd.	Class "E" concrete, abutments		81		
S-1	22	Cu. Yd.	Class "E" concrete, pier footings			22	
S-1	96	Cu. Yd.	Class "E" concrete, pier walls			96	
S-4	81,771	Lb.	Reinforcing Steel	66,035	6,940	8,796	
S-14	311.58	Lin. Ft.	Railing (aluminum rail and supports, and concrete parapets)	263.65	47.93		
S-16	Lump	Sum	First test pile				Lump
S-18	460	Lin. Ft.	Steel Piles (12 BP 53)		460		
S-29	26	Cu. Yds.	Barious backfill		26		
S-29	10	Each	Scuppers, 4" diameter cast iron or wrought iron pipe	10			
I-10	420	Sq. Yds.	Crushed aggregate slope protection		420		

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES				8/23
GENERAL PLAN, ELEVATION, NOTES & ESTIMATED QUANTITIES				
BRIDGE NO. HAS-22-17.3B "F" OVER PENNA. R.R. SPUR HARRISON COUNTY STA. 3+75.76 5+07.58				
DESIGNED NJB	DRAWN NJB	TRACED ERB	CHECKED WCK	REVIEWED BFG DATE 11-12-59

MICROFILMED
NOV 13 1960

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

101
115

HAS-22-15.03

GENERAL NOTES

REFERENCE shall be made to Standard Drawing RB-1-55 revised 2-2-59.

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereof.

FOOTINGS shall extend a minimum of 3" into underlying layers of shale and/or sandstone or to the elevation shown, whichever is lower.

FOUNDATION BEARING PRESSURE: All footings are designed for a maximum bearing pressure of 4.0 tons per sq. ft.

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections, between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.

WELDING shall be Class "A" except as shown. Any welds shown as field welds may, at the option of the Contractor, be made in the shop. Class "B" welds are shown thus:

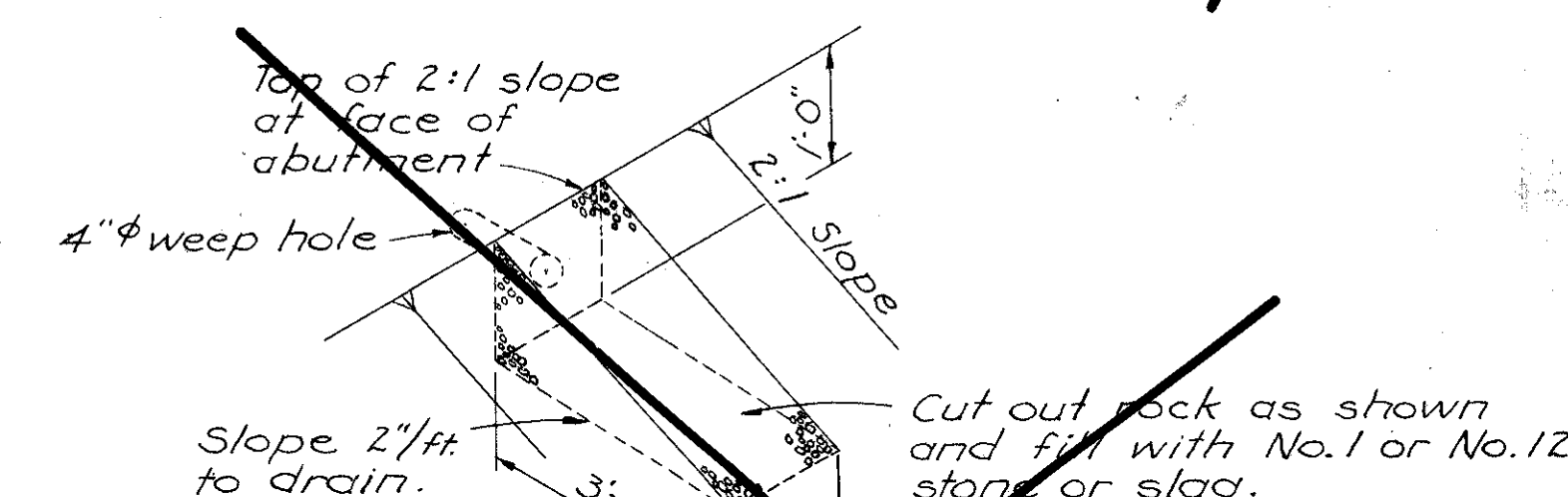
EXCAVATION QUANTITY includes the removal of fill material required for construction of abutment 2E.

CRUSHED AGGREGATE SLOPE PROTECTION shall be placed in accordance with Item I-10.04 except that the lower limit of such aggregate protection shall be the top of shale and/or rock outcrop.

DRAINS FOR ABUTMENT WEEPHOLES: Where shale and/or rock extends above a horizontal plane located 18' below the elevation of the top of slope at the face of abutment, drains for abutment weep holes shall be provided as shown on the plans. Payment for these drains shall be included with Item I-10, Crushed Aggregate Slope Protection.

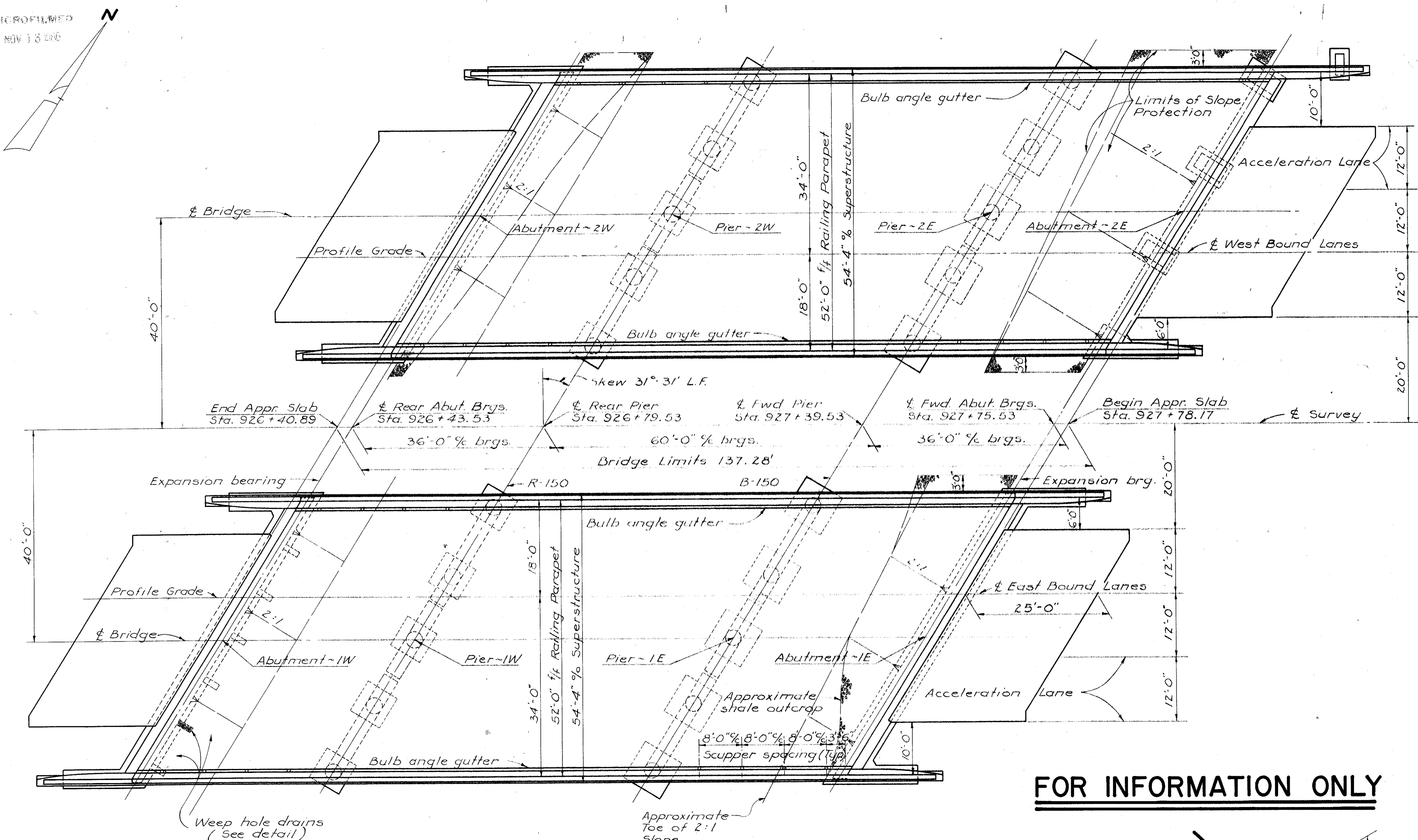
MAINTENANCE AND PROTECTION OF TRAFFIC: Two lanes of traffic with a horizontal width of 25'-0" shall be maintained on S.R. 9 at all times. The Contractor shall safeguard the traveling public by providing platforms, nets or other suitable protection above the travelled lanes. A minimum vertical clearance of 12'-9" shall be provided at all times. The above conditions shall apply only if the proposed structure over S.R. 9 is not completed until after reconstructed S.R. 9 is completed and opened to traffic.

FOR INFORMATION ONLY

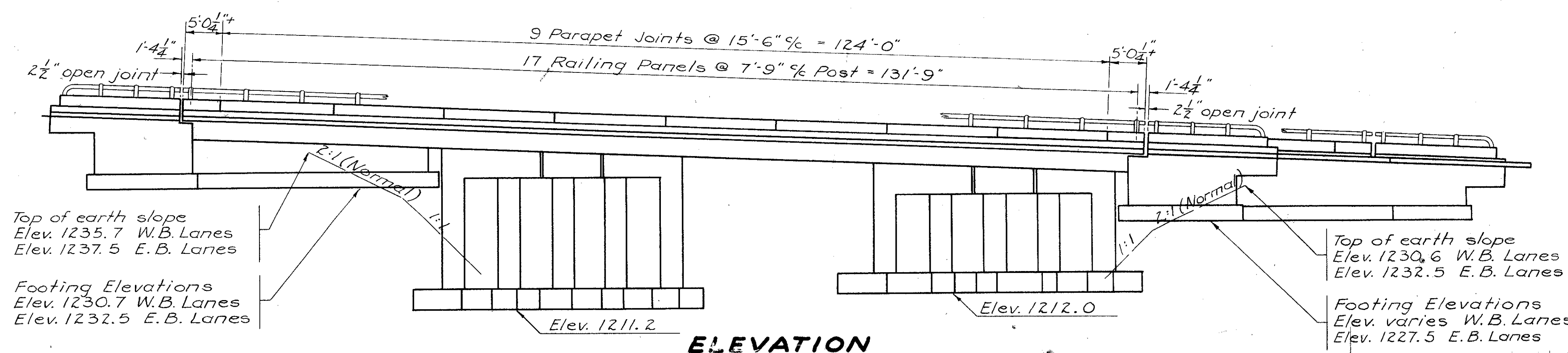


DETAIL OF DRAINS FOR ABUTMENT WEEPHOLES

To be used if rock occurs in front of abutment weepholes. See note entitled "Drains for Abutment Weepholes."



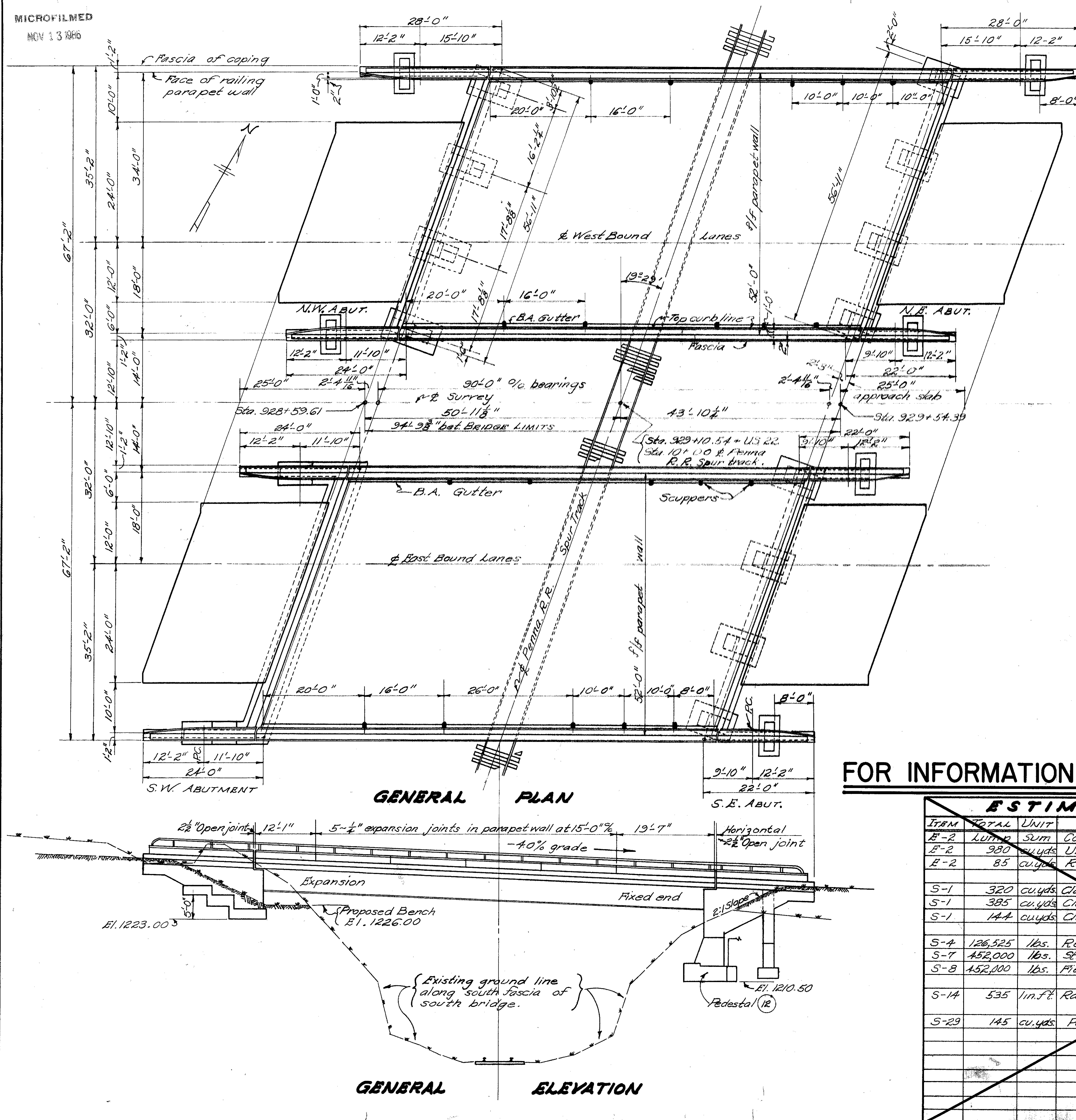
PLAN



ELEVATION

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
E.B.L.	E.B.L.	J.G.W.	11/11/59	5/6	9/17	5-4-59

HAS-22-15.03



GENERAL NOTES

REFERENCE shall be made to Standard Drawing No. RB-1-55, revised 2-2-59, for rocker and bolster details.

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57 together with the current revisions thereof.

EXCAVATION QUANTITY, in addition to that outlined in Sec. E-2.03, includes the removal of material bounded by the proposed bench, by the existing ground line if above bench elevation, and by the vertical planes described in Sec. E-2.03.

EXCAVATION INSPECTION: All excavations for footings shall be inspected in the field by a soils engineer or geologist provided by the State. This inspection is to insure that all footings will be extended into a firm rock foundation.

CONSTRUCTION CLEARANCE of 20'-0" vertically above top of the railroad rails and 8'-0" horizontally from the center of the tracks shall be maintained at all times.

FOOTINGS shall extend a minimum of 3" into solid rock, or to the elevation shown, whichever is lower.

FOUNDATION BEARING PRESSURE: Footings are designed for a maximum bearing pressure of four (4.0) tons per sq. ft.

BACKFILL: Backfill behind the abutments shall be made with materials meeting the requirements of Sec. I-22 and shall be compacted in accordance with the requirements for embankment compaction. The payment for this I-22 backfill shall be considered as included with the payment for E-2, Unclassified Excavation.

FABRICATION OF GIRDERS: The plates that comprise each flange and those that comprise each web of shop welded girder segments shall be completely welded into a single plate before these flanges and webs are welded together to form each girder segment.

WELDING of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may, at the option of the Contractor, be made in the shop. Class "B" welds are shown thus:

The shop plans of the girders submitted for approval shall show in detail the procedure to be used for each type of weld. Welds that connect the girder flanges to the webs shall be made by the submerged arc automatic weld process.

CONCRETE DECK PLACING: In order to facilitate water curing of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections, with a transverse construction joint which is normal to the centerline of the bridge and is located near the center of the span.

PAINT: One additional field coat of paint of the same kind as the shop coat shall be applied to the structural steel before the application of the aluminum paint except to those surfaces which are in contact with concrete.

GENERAL NOTES continued on Sheet No. 419.

FOR INFORMATION ONLY

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER. ABUTS.	GEN'L.
E-2	Lump	Sum	Cofferdams, cribs, and sheeting		Lump
E-2	980	cu.yds	Unclassified excavation	980	
E-2	85	cu.yds	Rock excavation	85	
S-1	320	cu.yds	Class "C" concrete, superstructure	320	
S-1	385	cu.yds	Class "C" concrete, abut. above footings	385	
S-1	144	cu.yds	Class "E" concrete, footings	144	
S-4	126,525	lbs.	Reinforcing steel	84,700	41,825
S-7	452,000	lbs.	Structural steel	452,000	
S-8	452,000	lbs.	Field painting of structural steel (3 coats)	452,000	
S-14	535	lin.ft.	Railing (Aluminum rail and supports, and concrete parapets)	369	166
S-29	145	cu.yds	Porous backfill		145

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

10/23

GENERAL PLAN & ELEVATION, NOTES & ESTIMATED QUANTITIES

BRIDGE NO. HAS-22-1753 L&R
OVER PENNA. R.R. (SPUR)
HARRISON County STA. 928+59.61
to 929+54.39

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KED	KED	CM	WCK	BFG	8-28-59	

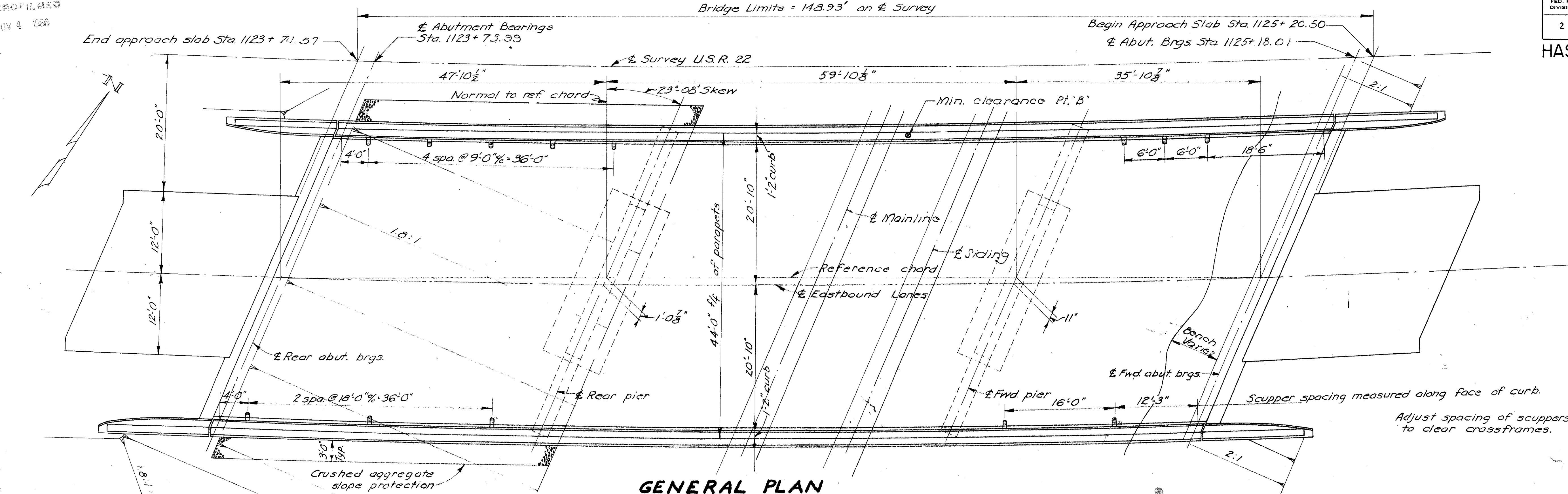
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NOV 4 1986

Bridge Limits = 148.93' on & Survey

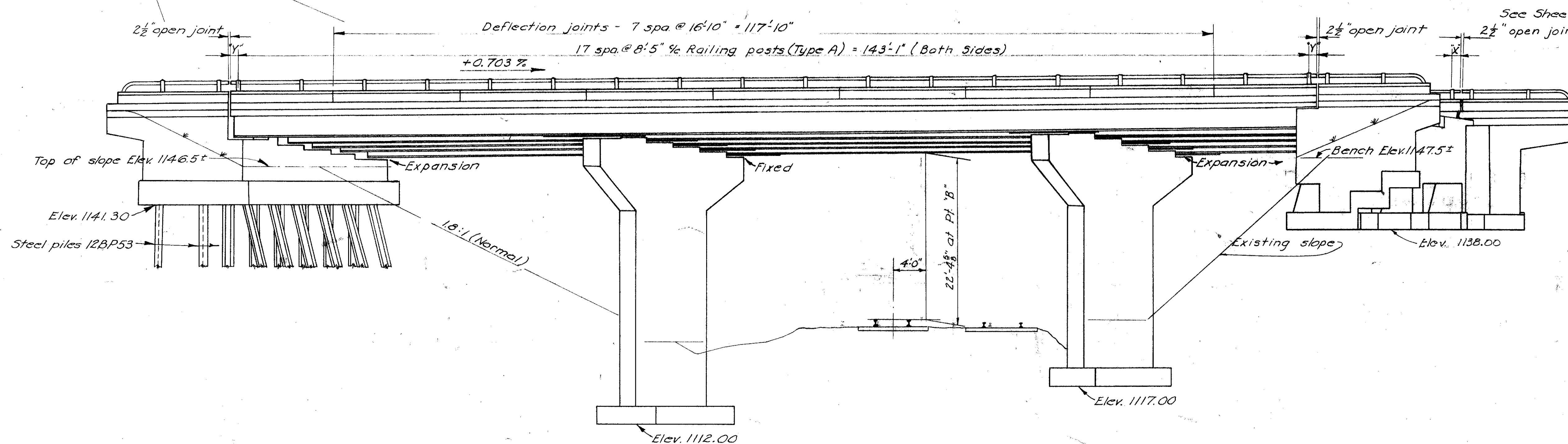
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

104
115

HAS-22-15.03



GENERAL PLAN



ELEVATION

FOR INFORMATION ONLY

See Sheet 399 for railing dimensions "X" and "Y."
Where shale and/or rock exists in foot of weepholes, drains shall be provided as shown. Payment of these drains shall be included with Item 1-10 Crushed Aggregate Slope Protection.

DETAIL OF DRAINS FOR ABUTMENT WEEPHOLES
(Forward abutment only)

See Sheet 395 for General Notes and Estimated Quantities.

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES		12 / 23
GENERAL PLAN & ELEVATION		
BRIDGE NO. HAS-22-2126 E.B. OVER N.Y.C. & S.I.L. R.R. STA. 1123+71.57 HARRISON COUNTY 1125+20.50		
DESIGNED	DRAWN	TRACED
WJG	WJG	PPB
CHECKED	REVIEWED	DATE
JMHES	BFG	MAY 4-13-60

HAS-22-15.03

GENERAL NOTES

REFERENCE shall be made to Standard Drawings AR-1-57 and RB-1-55, both revised 2-2-59, and to Common Details sheets 438 & 439, and to Supplemental Specification S-101 dated 12-2-59.

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereto.

PROCEDURE: The embankment of the abutments and Pier 3 shall be placed and compacted up to the finished spill-thru slope and to the level of the sub-grade for a distance of 200 feet back of the abutments, after which excavation shall be made for the abutments and the pier. The embankment shall be in place a minimum of 60 days before excavation is begun for the forward abutment.

ABUTMENT BACKFILL: Backfill behind the abutments shall be made with material meeting the requirements of Sec. 1-22 and shall be compacted in accordance with the requirements for embankment compaction. The payment for this 1-22 backfill shall be considered as included in the payment for E-2, Unclassified Excavation.

EXCAVATION QUANTITY includes the removal of fill material required for construction of both abutments and Pier 3.

PILES shall be driven with a hammer of not less than 11,000 ft. lbs. per blow, to firm contact with shale. If the length of penetration is approximately equal to the depth to shale according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. 5-18.05 is not less than the following value for a pile hammer of the indicated energy rating:

For the rear abutment piles:
33 tons per pile using an 11,000 ft. lb. hammer
31 tons per pile using a 15,000 ft. lb. hammer

For Pier 1:
52 tons per pile using an 11,000 ft. lb. hammer
45 tons per pile using a 15,000 ft. lb. hammer

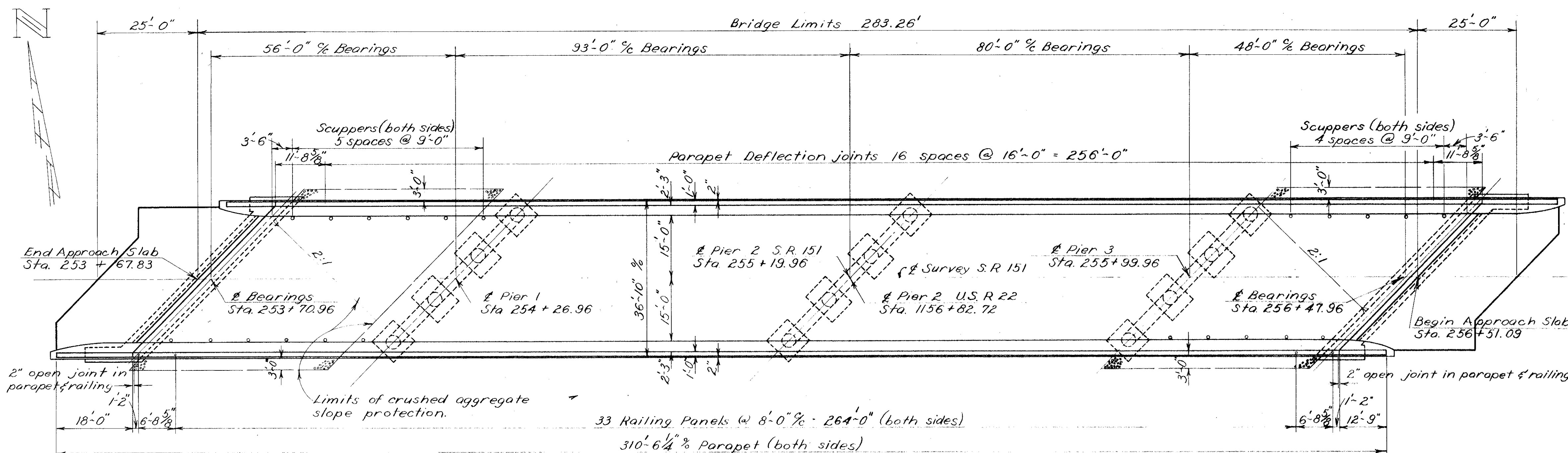
For Pier 2:
48 tons per pile using an 11,000 ft. lb. hammer
42 tons per pile using a 15,000 ft. lb. hammer

For Pier 3:
42 tons per pile using an 11,000 ft. lb. hammer
38 tons per pile using a 15,000 ft. lb. hammer

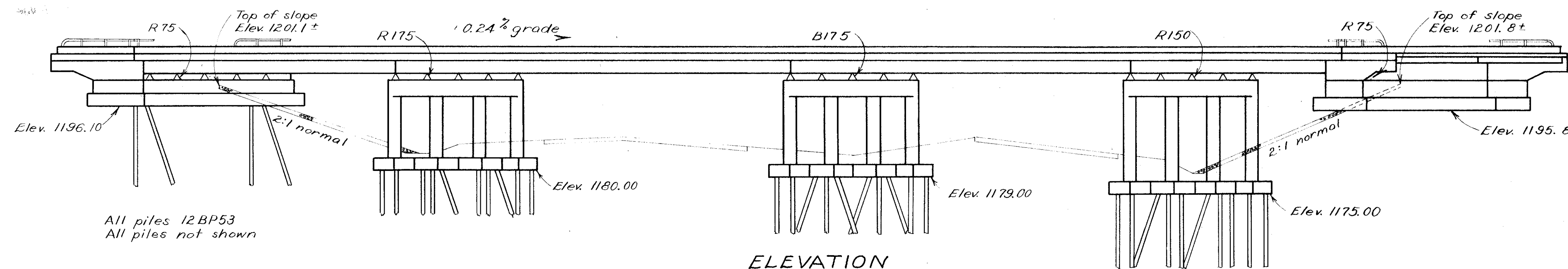
If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 28 tons per pile for the abutment piles and 30 tons per pile for the pier piles.

STEEL: See Proposal regarding A-373 steel.

MACHINE FINISH: The concrete bridge deck shall be finished as specified in the Proposal Note, "Machine Finishing of Bridge Deck Slabs."



GENERAL PLAN



ELEVATION

GENERAL NOTES (cont'd)

FOUNDATION BEARING PRESSURE: The Forward Abutment footing is designed for a maximum bearing pressure of 1.6 tons per sq. ft.

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress upward. The slab may be placed in sections, between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.

WELDING of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may, at the option of the Contractor, be made in the shop. Class "B" welds are shown thus: B

PAINTING: After erection and after the shop coat has been cleaned and where necessary repainted in accordance with Sec. 8.04, an additional coat of the same paint as used in the shop shall be applied over the outside face of the outside steel beams and to all surfaces of the bottom flange of the outside beams.

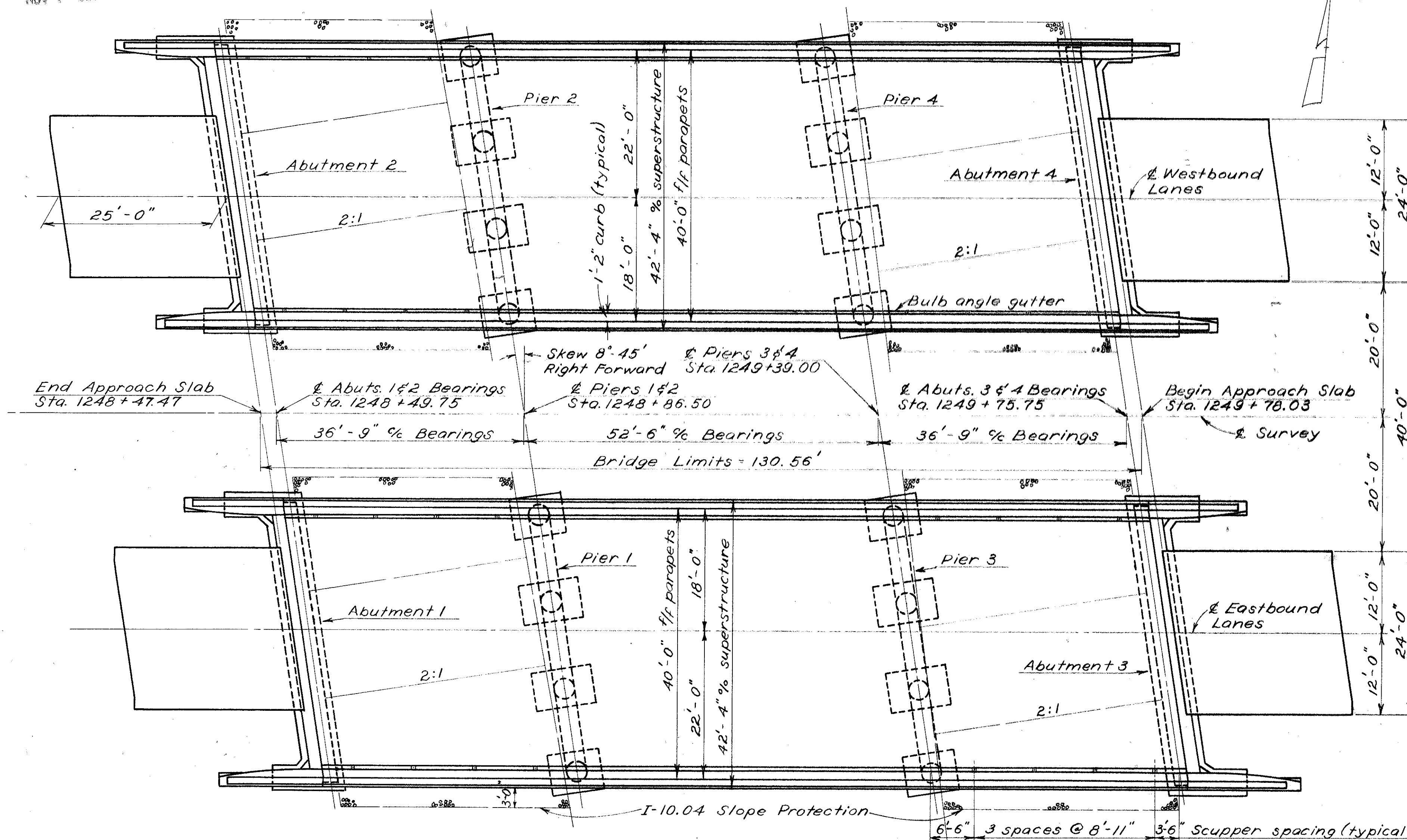
BURIED PIPE under Rear Abutment is to be relocated or abandoned.

ESTIMATED QUANTITIES

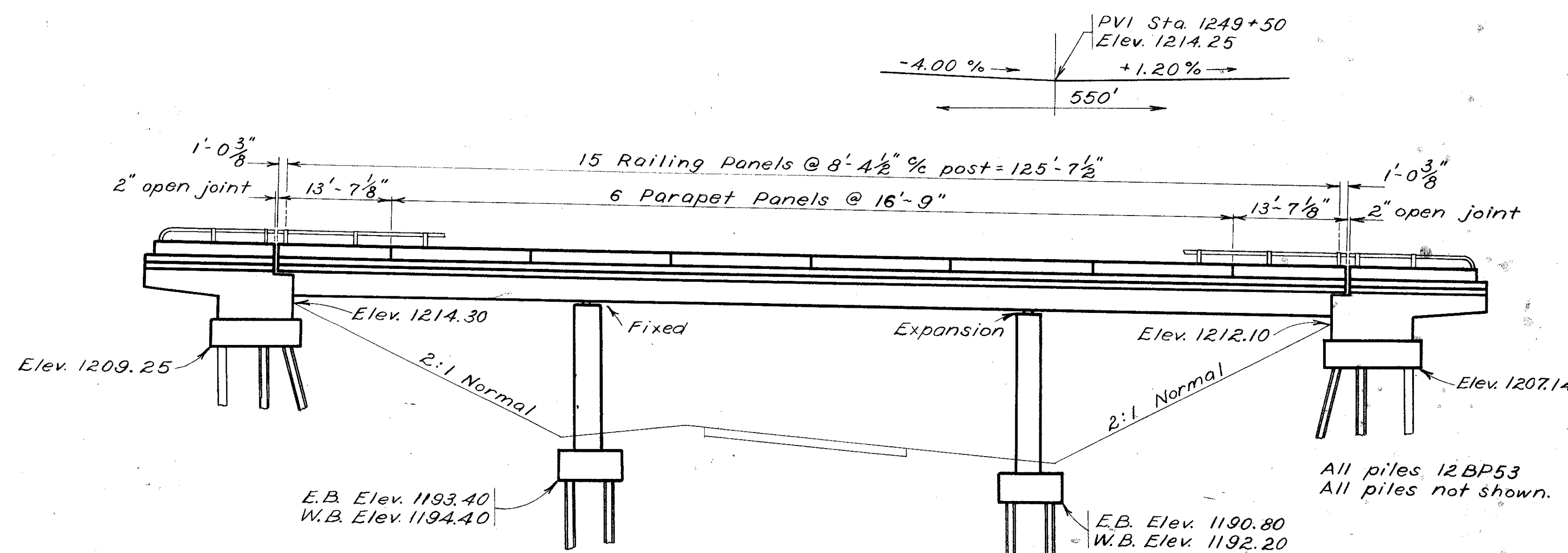
ITEM	TOTAL	UNIT	DESCRIPTION	ABUTS	PIERS	SUPER	GEN'L
E-2	410	Cu. Yd.	Unclassified excavation	250	160		
S-1	300	Cu. Yd.	Class "C" concrete, superstructure			300	
S-1	114	Cu. Yd.	Class "C" concrete, pier caps and columns		114		
S-1	178	Cu. Yd.	Class "E" concrete, abutments	178			
S-1	75	Cu. Yd.	Class "E" concrete, pier footings		75		
S-4	111,936	Lb.	Reinforcing steel	10,378	25,786	75,772	
S-7	311,100	Lb.	Structural steel			311,100	
S-8	311,100	Lb.	Field painting of structural steel, as per plan			311,100	
S-14	621.06	Lin. Ft.	Railing (aluminum rail and supports and concrete parapet)	61.50		559.56	
S-16	Lump	Sum	First test pile				Lump
S-18	1250	Lin. Ft.	Steel piles, 12BP53	450	800		
S-29	42	Cu. Yd.	Porous backfill	42			
I-10	563	Sq. Yd.	Crushed aggregate slope protection				563

FOR INFORMATION ONLY

HAS-22-15.03



GENERAL PLAN



ELEVATION

ESTIMATED QUANTITIES									
Item	Total	Unit	Description	Super.	Abuts.	Piers	Gen'l.		
E-2	627	Cu. Yds.	Unclassified Excavation		407	220			
S-1	348	Cu. Yds.	Class "C" concrete, superstructure	348					
S-1	128	Cu. Yds.	Class "C" concrete, pier caps & columns			128			
S-1	106	Cu. Yds.	Class "E" concrete, pier footings			106			
S-1	290	Cu. Yds.	Class "E" concrete, abutments		290				
S-4	148,770	Lbs.	Reinforcing steel	97,066	18,051	33,653			
S-7	239,500	Lbs.	Structural steel	239,500					
S-8	239,500	Lbs.	Field painting of structural steel, as per plan	239,500					
S-14	617.75	Lin. Ft.	Railroad (aluminum rail and supports, and concrete parapet)	512.08	105.67				
S-16	Lump	Sum	First test pile						Lump
S-18	2900	Lin. Ft.	Steel piles, 12 BP53		1620	1280			
S-29	58	Cu. Yds.	Porous backfill		58				
I-10	790	Sq. Yds.	Crushed aggregate slope protection						790

GENERAL NOTES

REFERENCE shall be made to Supplemental Spec. No. S-101, dated 12-2-59.

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereof.

EXCAVATION AND BACKFILL: Excavation quantity includes the removal of fill material between the surface of proposed embankment and the bottom of abutment and pier footings. Backfill behind the abutments shall be made with material meeting the requirements of Sec. I-22 and shall be compacted in accordance with the requirements for embankment compaction. The payment for this I-22 backfill shall be considered as included in the payment for E-2, Unclassified Excavation.

STEEL: See Proposal regarding A-313 steel.

MACHINE FINISH: The concrete bridge deck shall be finished as specified in the Proposal Note, "Machine Finishing of Bridge Deck Slabs."

PILES shall be driven with a hammer of not less than 11000 ft. lb. per blow to firm contact with rock. If the length of penetration is approximately equal to the depth to rock according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. S18.05 is not less than the following value for a pile hammer of the indicated energy rating:

For the abutment piles:

45 tons per pile using a 11000 ft. lb. hammer
40 tons per pile using a 15000 ft. lb. or greater hammer

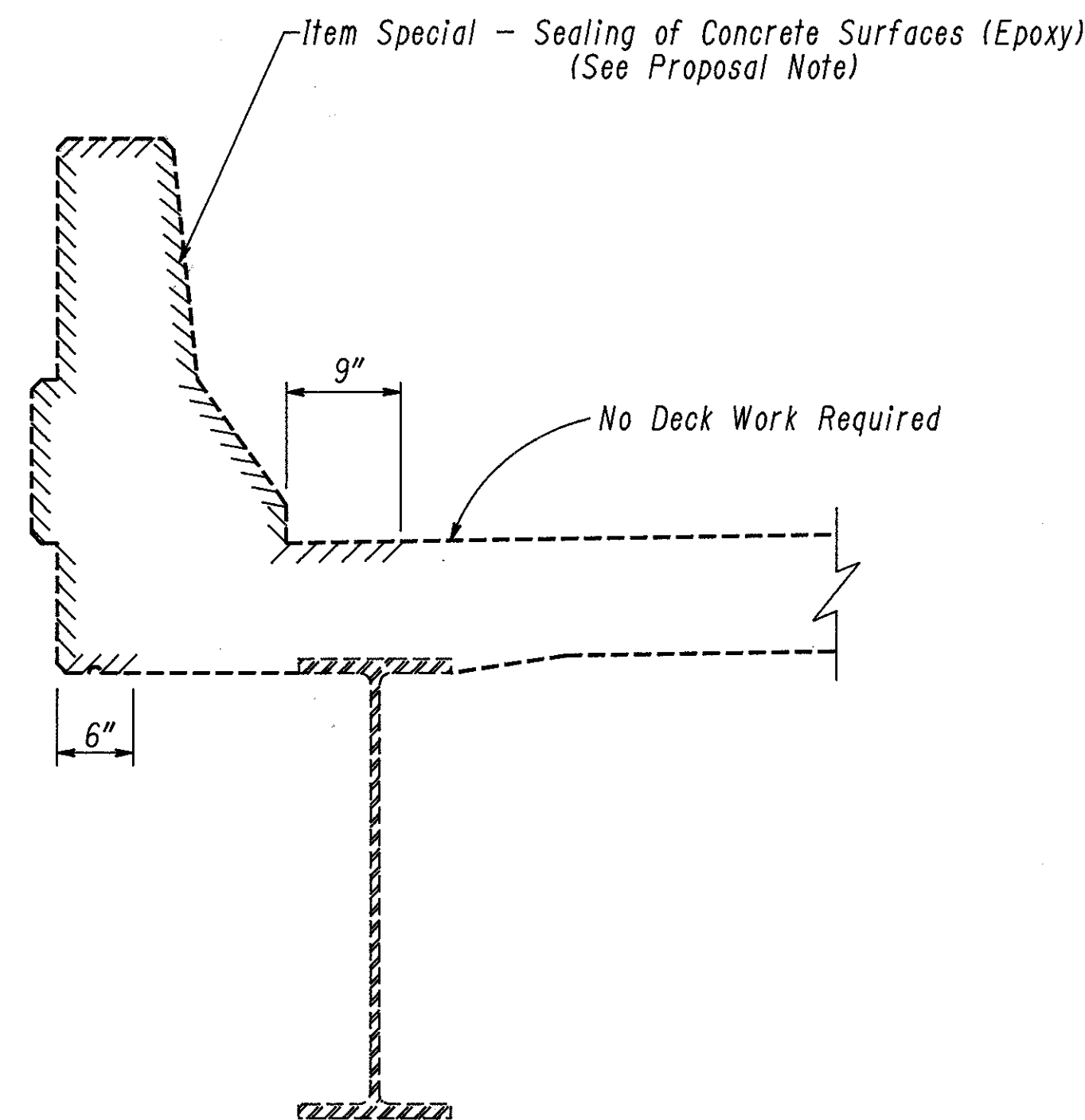
For the pier piles:

37 tons per pile using a 11000 ft. lb. hammer
33 tons per pile using a 15000 ft. lb. or greater hammer

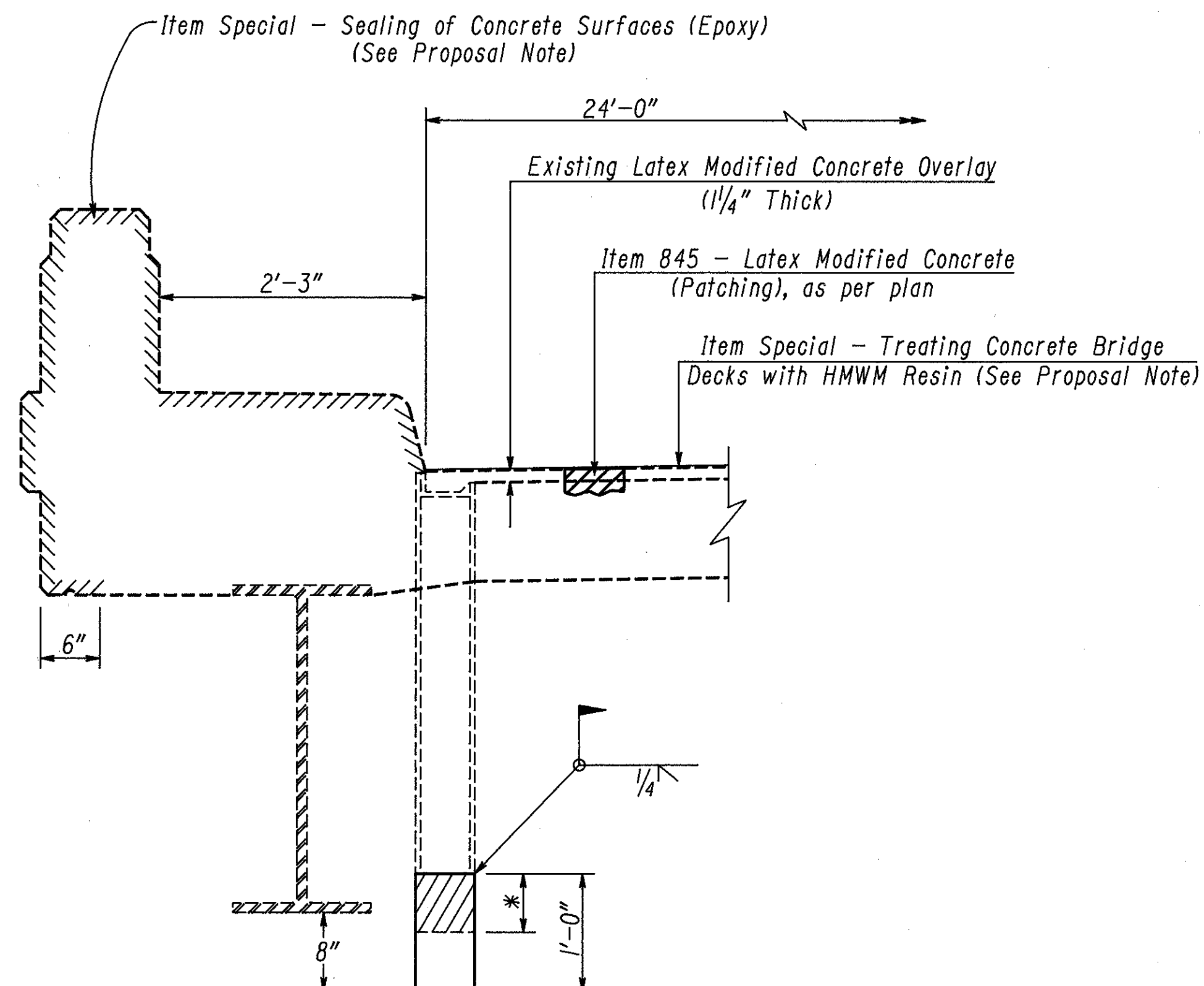
If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 35 tons per pile for the abutment piles and 25 tons per pile for the pier piles.

FOR INFORMATION ONLY

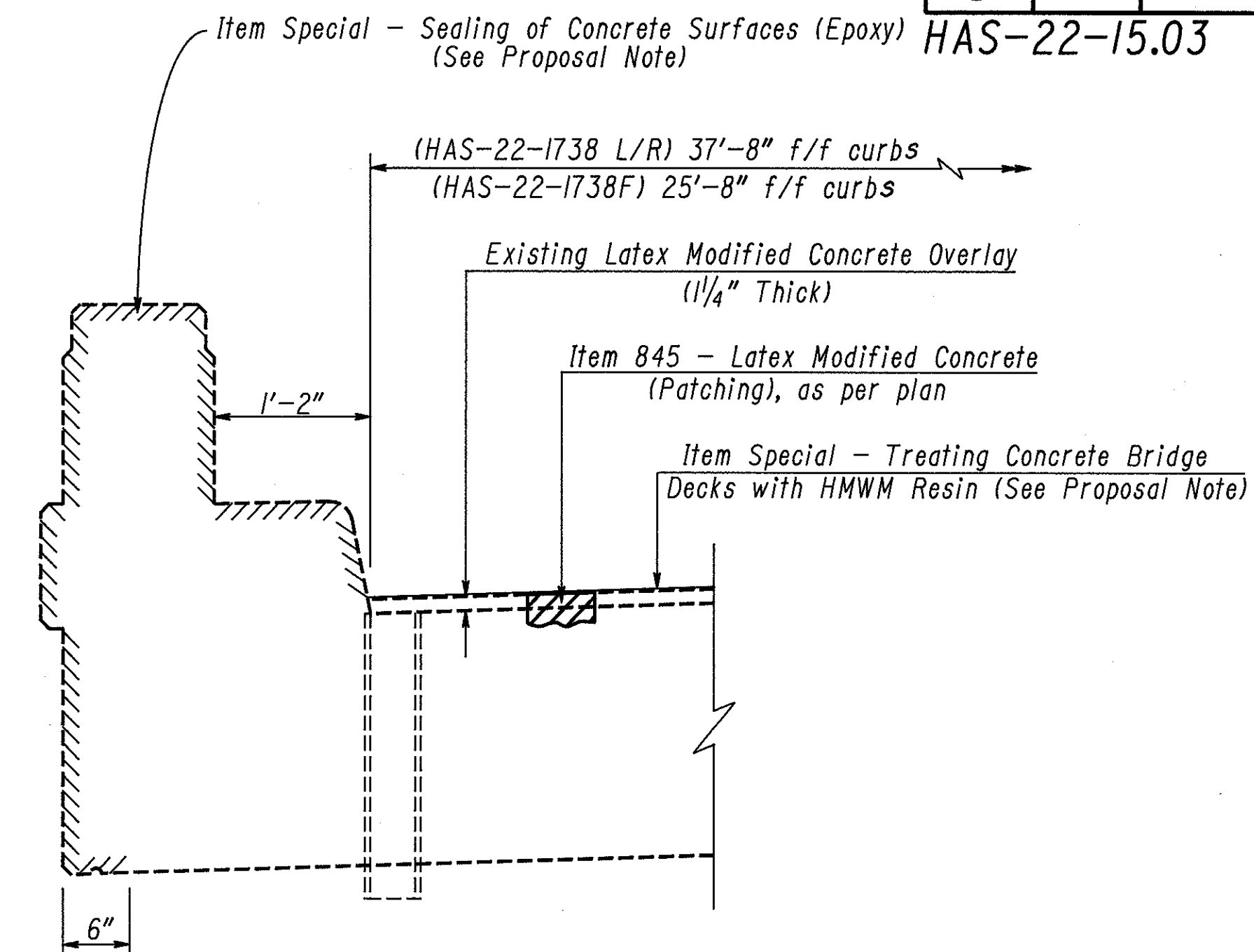
STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES									
14/23									
GENERAL PLAN & ELEVATION NOTES & ESTIMATED QUANTITIES BRIDGE NO. HAS-22-2362 LTR OVER C.R. 4 HARRISON COUNTY STA. 1248+47.47 1249+78.03									
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION			
E.B.L.	E.B.L.	R.L.J.	NEV	AKH	12-2-59				



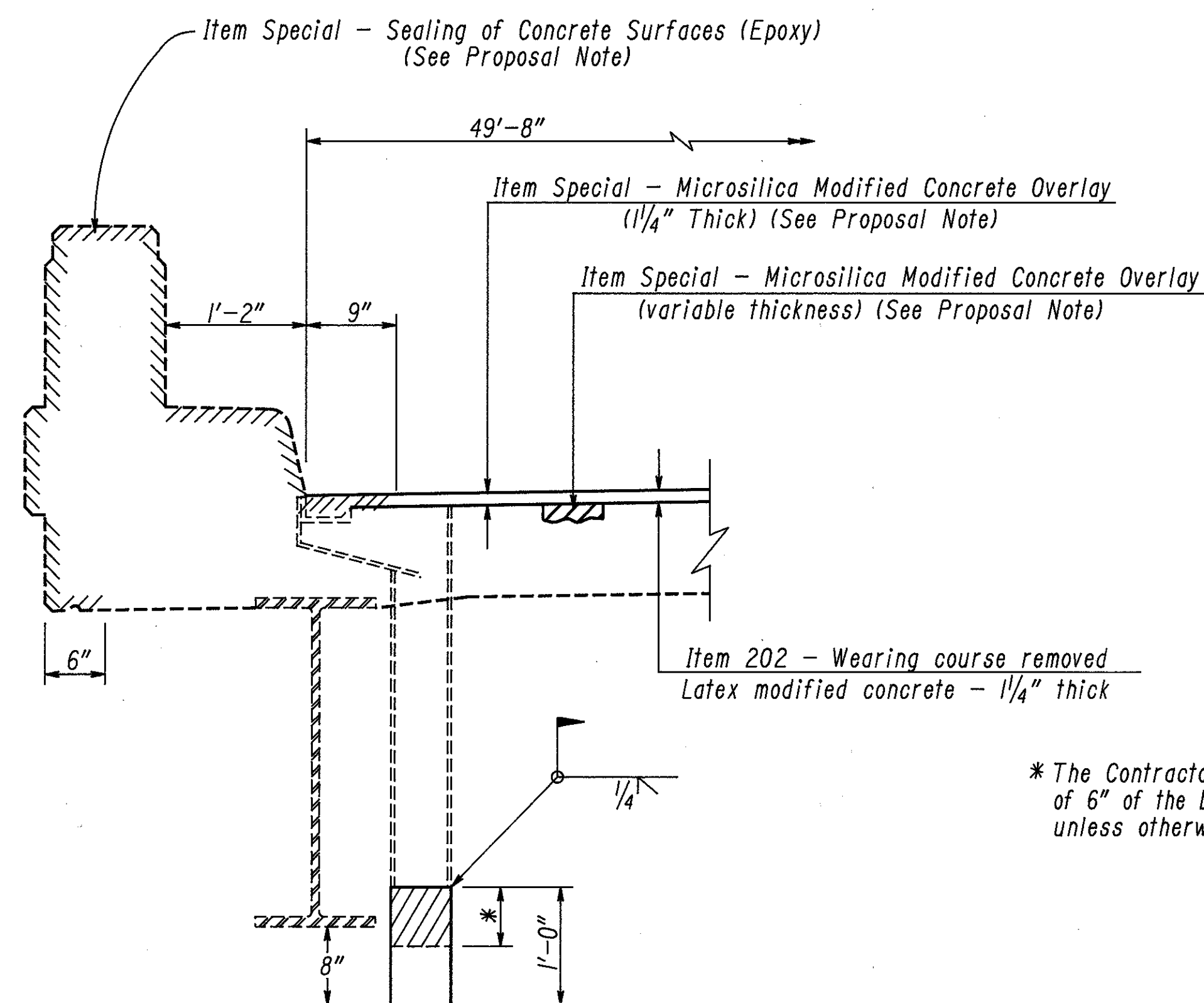
PARTIAL TYPICAL SECTION
(Bridge No. HAS-22-1717 L/R)



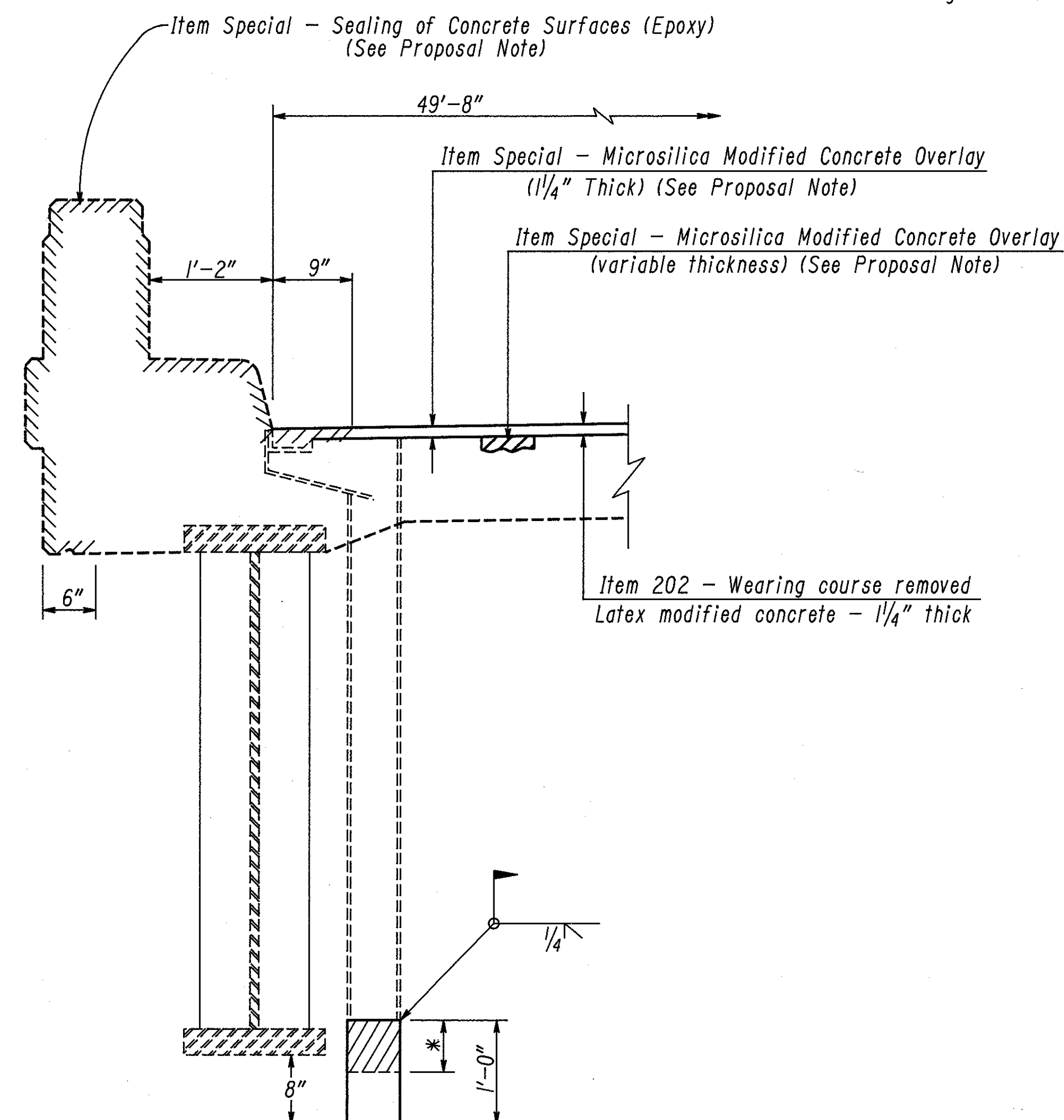
PARTIAL TYPICAL SECTION
(Bridge No. HAS-22-1725)



PARTIAL TYPICAL SECTION
(Bridge No. HAS-22-1738 L/R)
(Bridge No. HAS-22-1738F)



PARTIAL TYPICAL SECTION
(Bridge No. HAS-22-1749 L/R)



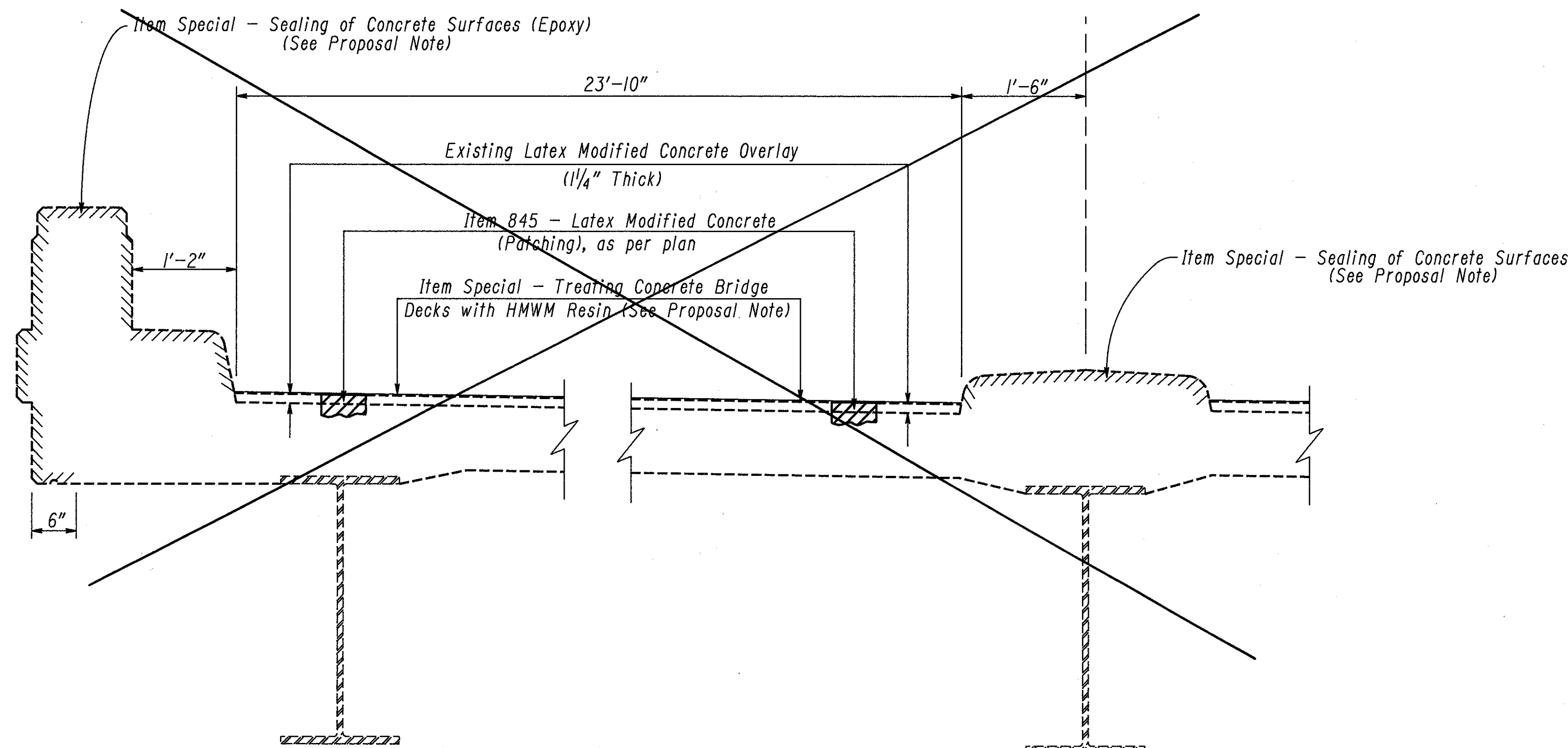
PARTIAL TYPICAL SECTION
(Bridge No. HAS-22-1753 L/R)

NOTE: For Bridge No's. HAS-22-1749 L/R and HAS-22-1753 L/R, scarification of the deck is not required following the removal of the existing latex modified concrete overlay.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS BUREAU OF MAINTENANCE					
BRIDGE DETAILS					
HAS-22-1717 L/R			HAS-22-1738F		
HAS-22-1725			HAS-22-1749 L/R		
HAS-22-1738 L/R			HAS-22-1753 L/R		
DESIGNED	CADD	CHECKED	REVIEWED	DATE	REVISED
JAS	JAS	WRG			

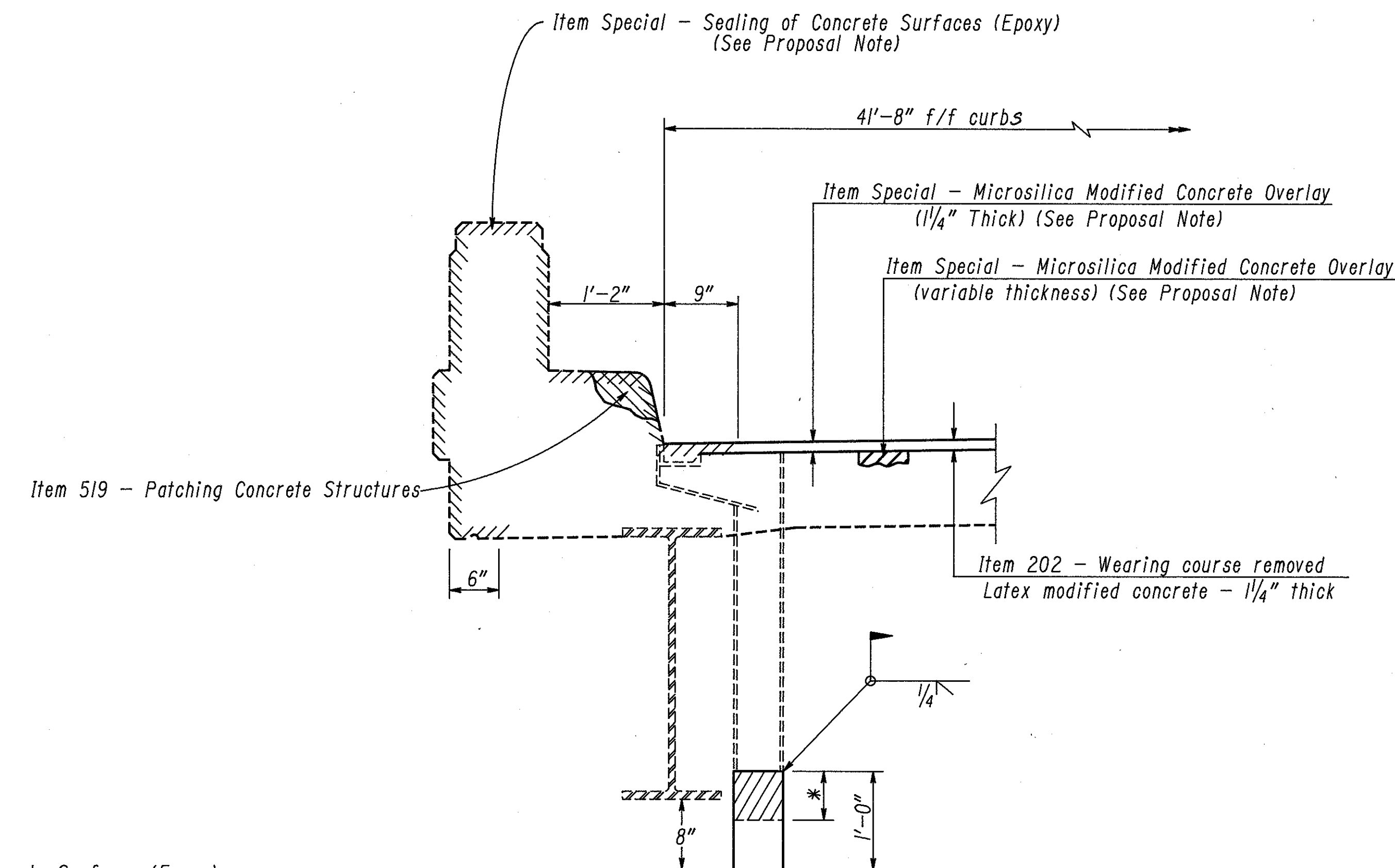
* The Contractor shall remove a minimum of 6" of the bottom of each scupper downspout, unless otherwise directed by the Engineer.

HAS-22-15.03



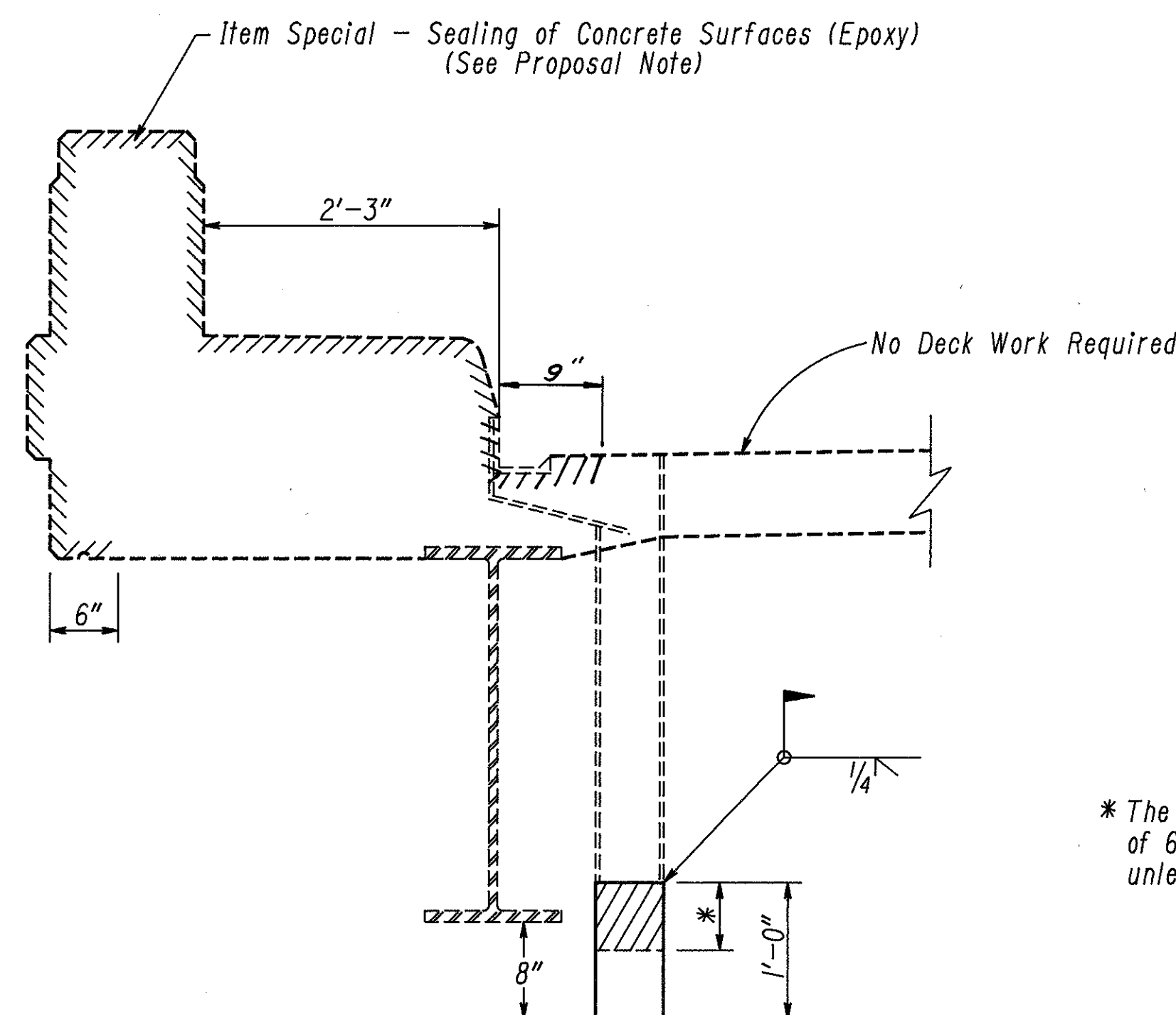
PARTIAL TYPICAL SECTION

(Bridge No. HAS-250-19121)



PARTIAL TYPICAL SECTION

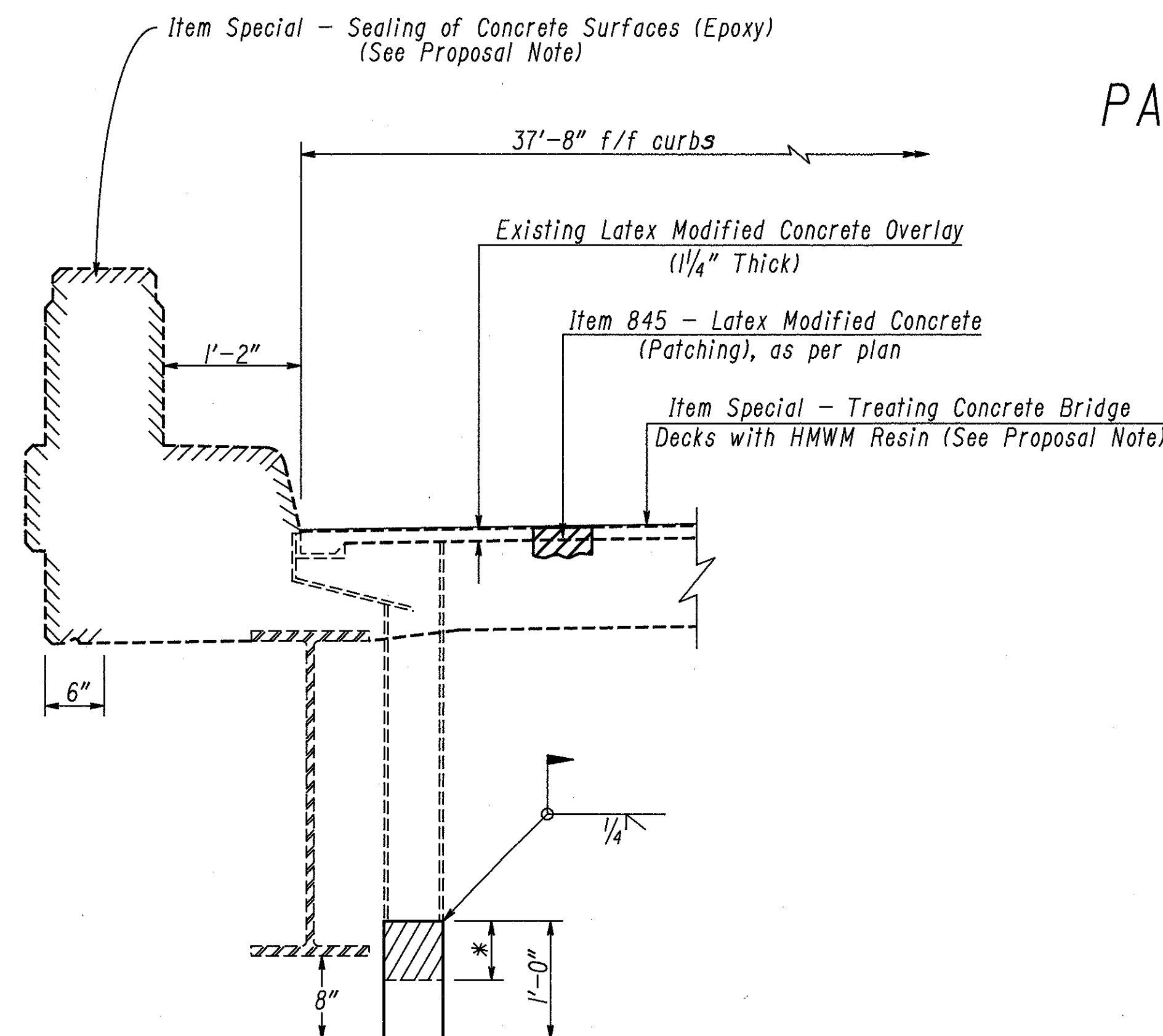
(Bridge No. HAS-22-2126)



PARTIAL TYPICAL SECTION

(Bridge No. HAS-22-2188)

* The Contractor shall remove a minimum of 6" of the bottom of each scupper downspout, unless otherwise directed by the Engineer.



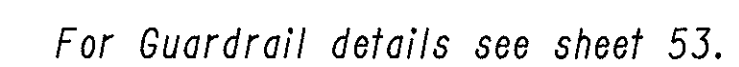
PARTIAL TYPICAL SECTION

(Bridge No. HAS-22-2362 L/R)

NOTE: For Bridge No. HAS-22-2126 scarification of the deck is not required following the removal of the existing latex modified concrete overlay.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS BUREAU OF MAINTENANCE					
BRIDGE DETAILS					
HAS-22-2126 HAS-22-2188 HAS-22-2362 L/R					
DESIGNED	CADD	CHECKED	REVIEWED	DATE	REVISED
JAS	JAS	WRG			

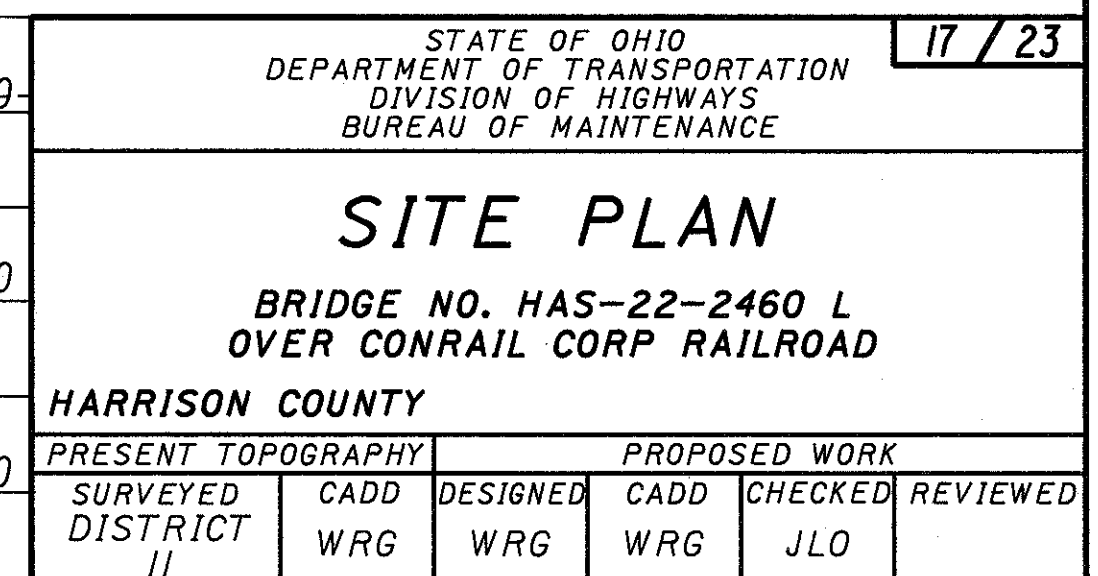
FHWA REGION	STATE	PROJECT	
5	OHIO		

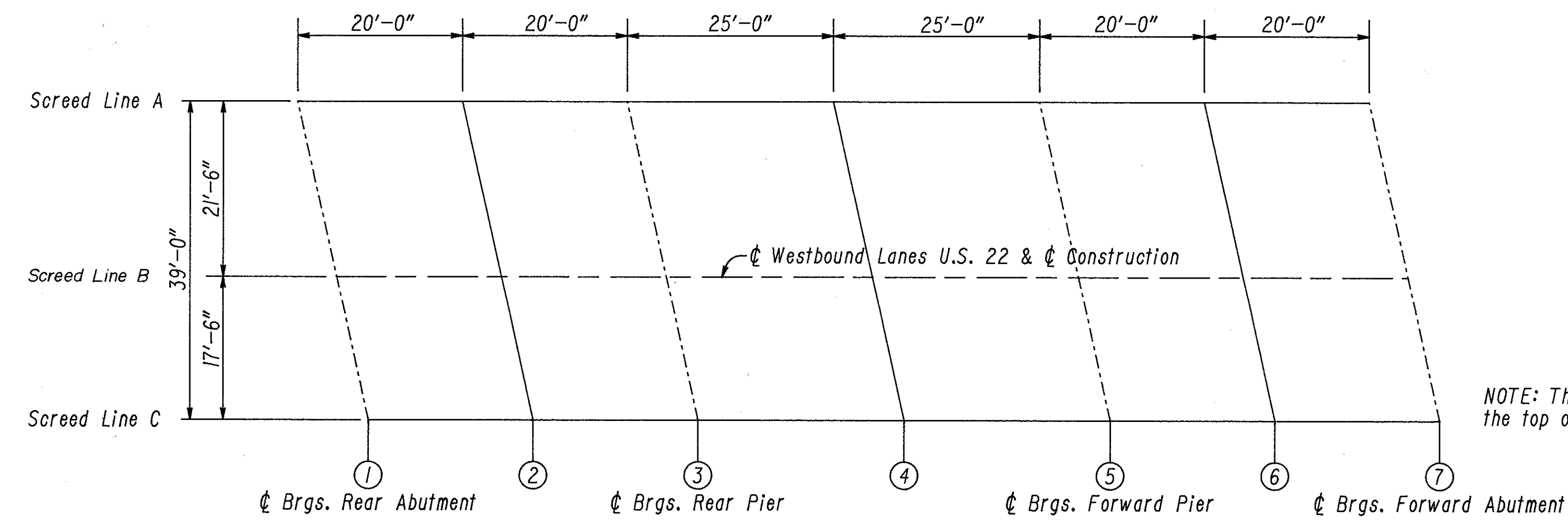
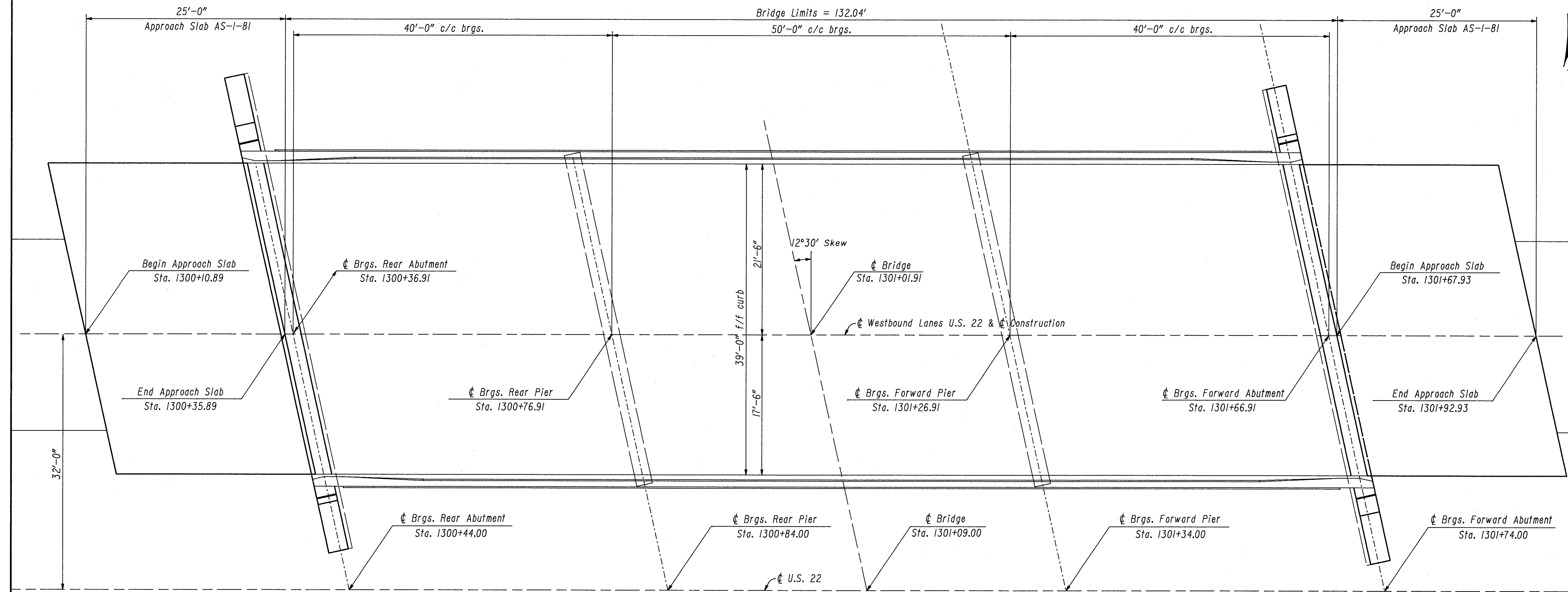


TYPE : Cont. Steel Beam with reinforced concrete
deck and piers with integral abutments
SPAN LENGTH : 40.00' - 50.00' - 40.00' c/c brgs.
ROADWAY WIDTH : 38'-6" f/f curbs
LOADING : HS-20-44
ALIGNMENT : Tan SKREW : 12°30' R.F
WEARING SURFACE : Latex modified concrete

TYPE : Cont. Steel Beam with reinforced concrete
deck and piers with integral abutments
SPAN LENGTH : 40.00' - 50.00' - 40.00' c/c brgs.
ROADWAY WIDTH : 39'-6" f/f curb
LOADING : HS-20-44 and Alternate Military Loading
ALIGNMENT : Tan SKEW : 12°30' R.F
WEARING SURFACE : 1" Monolithic concrete with epoxy
coated reinforcing
APPROACH SLABS: AS-1 (26' Long)
S.F.N. - 3401413

P.V.I. Sta. 1298+50.66 - El. 1176.24
Begin Grade = -2.61%
End Grade 3.993%





DECK SCREED ELEVATIONS			
NO.	LINE A	LINE B	LINE C
1	1184.47	1184.93	1184.78
2	1184.99	1185.46	1185.32
3	1185.51	1185.99	1185.85
4	1186.26	1186.74	1186.62
5	1187.02	1187.52	1187.41
6	1187.72	1188.22	1188.12
7	1188.40	1188.92	1188.83

NOTE: The deck screed elevations shown at the respective edges of the top of the concrete deck are those required before the concrete is placed.

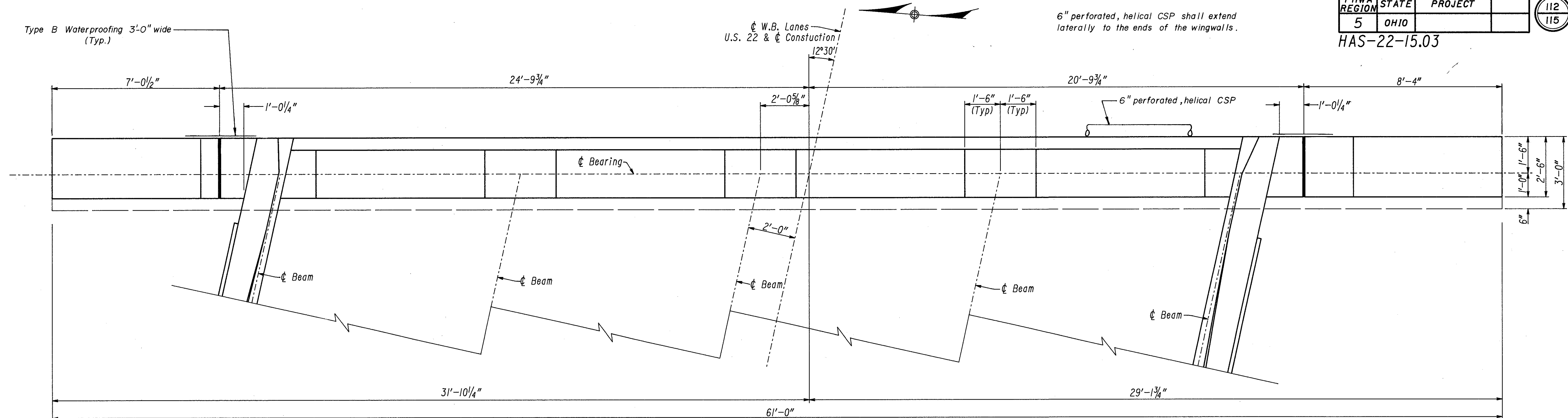
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BUREAU OF MAINTENANCE

18 / 23

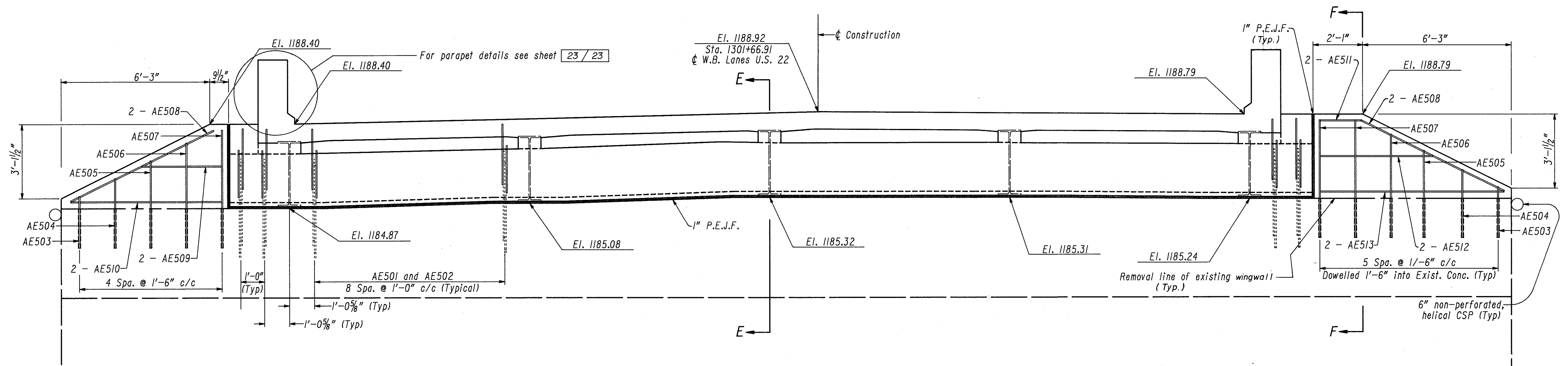
GENERAL PLAN & DECK
SCREED ELEVATIONS

BRIDGE NO. HAS-22-2460 L
OVER CONRAIL CORP RAILROAD

DESIGNED	CADD	CHECKED	REVIEWED	DATE	REVISED
WRG	WRG	JLO			



FORWARD ABUTMENT PLAN



ELEVATION

Sections E-E & F-F are on sheet 21 / 23

STATE OF OHIO DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS BUREAU OF MAINTENANCE					
FORWARD ABUTMENT DETAILS					
BRIDGE No. HAS-22-2460 L OVER CONRAIL CORP RAILROAD					
DESIGNED WRG	CADD WRG	CHECKED JLO	REVIEWED	DATE	REVISED

DESIGNED	CADD	CHECKED	REVIEWED	DATE	REVISED
WRG	WRG	JLO			

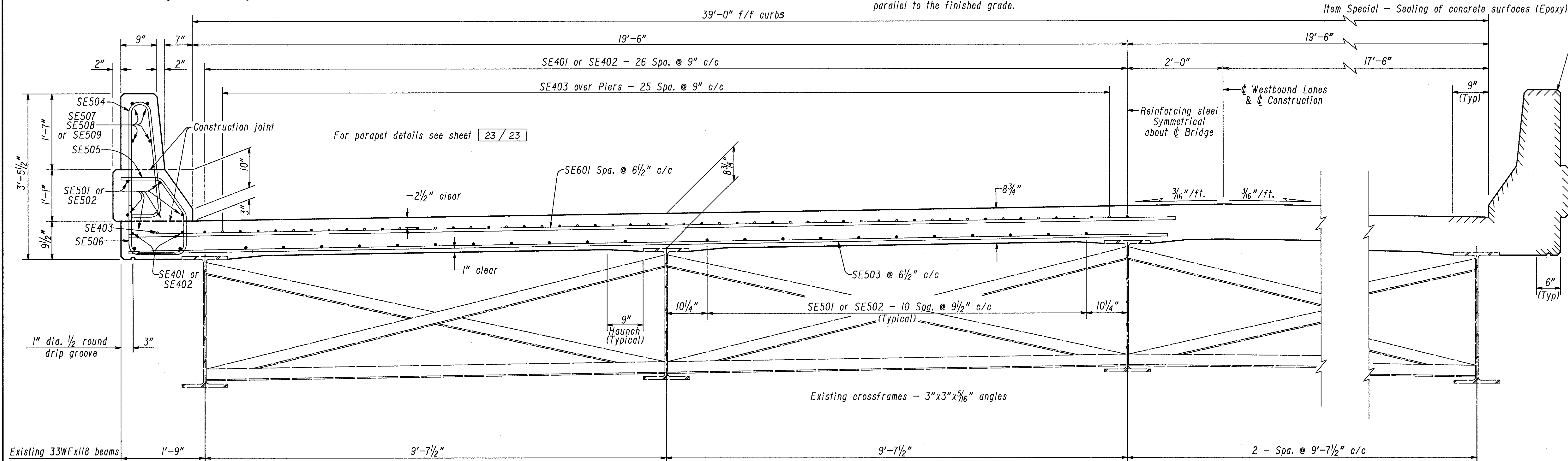
Each longitudinal line of reinforcing steel shall consist of :
 4 - SE401 and 1 - SE402 with a 1'-4" min. lap splice in the top of the slab,
 4 - SE501 and 1 - SE502 with a 1'-8" min. lap splice in the bottom of the slab.
 SE402 and SE502 shall be used in place of the SE401 and SE501 respectively to
 finish out the total length of reinforcing in the deck.

DECK SLAB DEPTH
 The distance shown from top of deck slab to top of steel beam is a design
 dimension. The quantity of deck concrete in the haunches shall be based on this
 dimension, even though deviation from it may be necessary because the top flange
 of the beams may not have the exact camber or conformation required to place it
 parallel to the finished grade.

FHWA REGION	STATE	PROJECT	
5	OHIO		

HAS-22-15.03

114
115



TYPICAL DECK SECTION

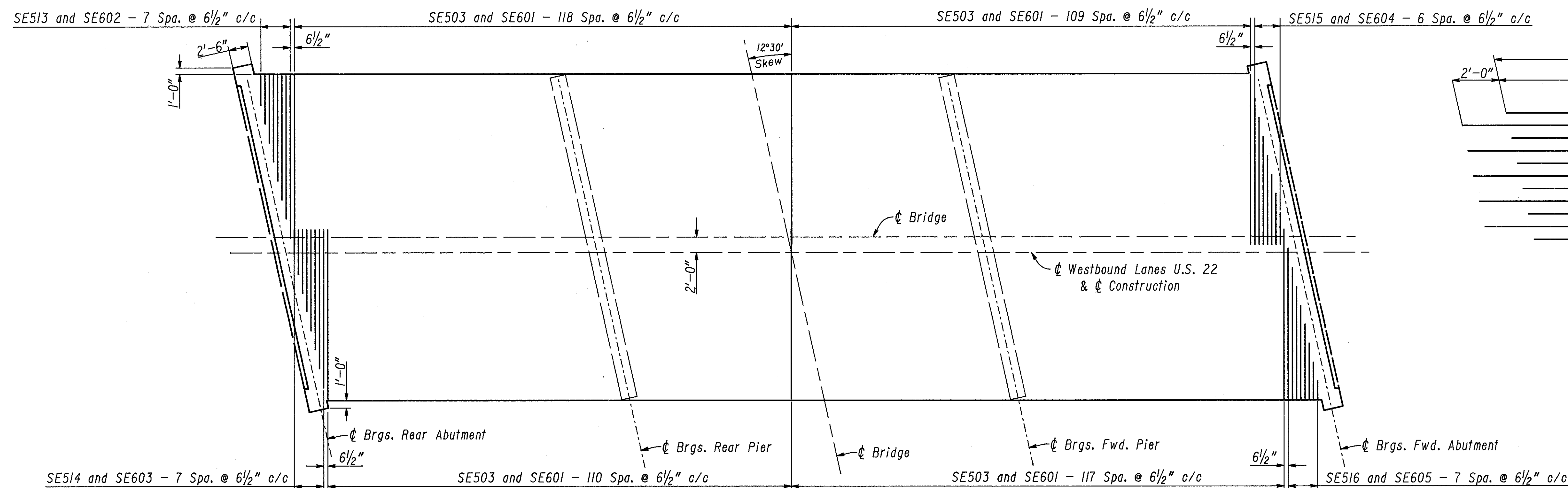
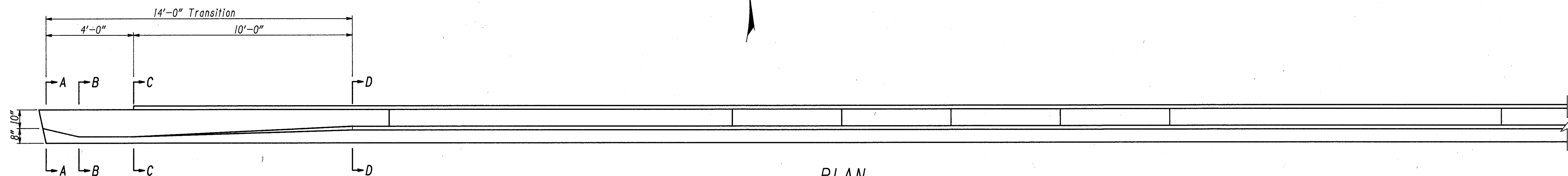


DIAGRAM SHOWING STAGGER OF SE403 BARS OVER PIERS

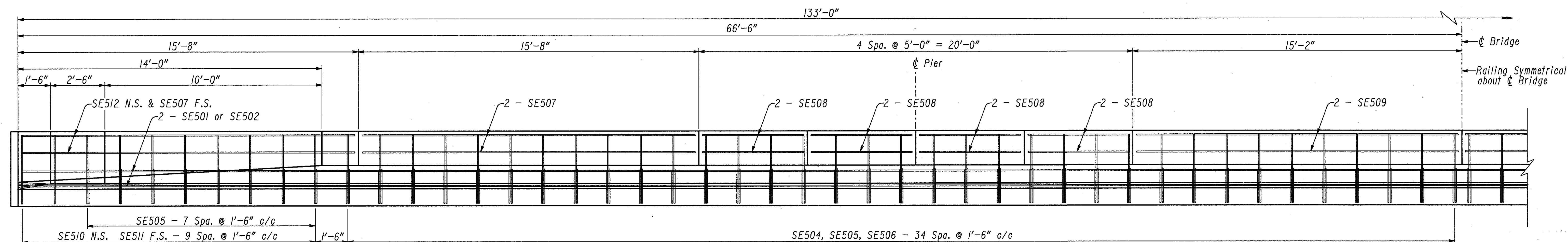
TRANSVERSE REINFORCING STEEL LAYOUT

STATE OF OHIO DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS BUREAU OF MAINTENANCE					
SUPERSTRUCTURE DETAILS					
BRIDGE NO. HAS-22-2460 L OVER CONRAIL CORP RAILROAD					
DESIGNED WRG	CADD WRG	CHECKED JLO	REVIEWED	DATE	REVISED

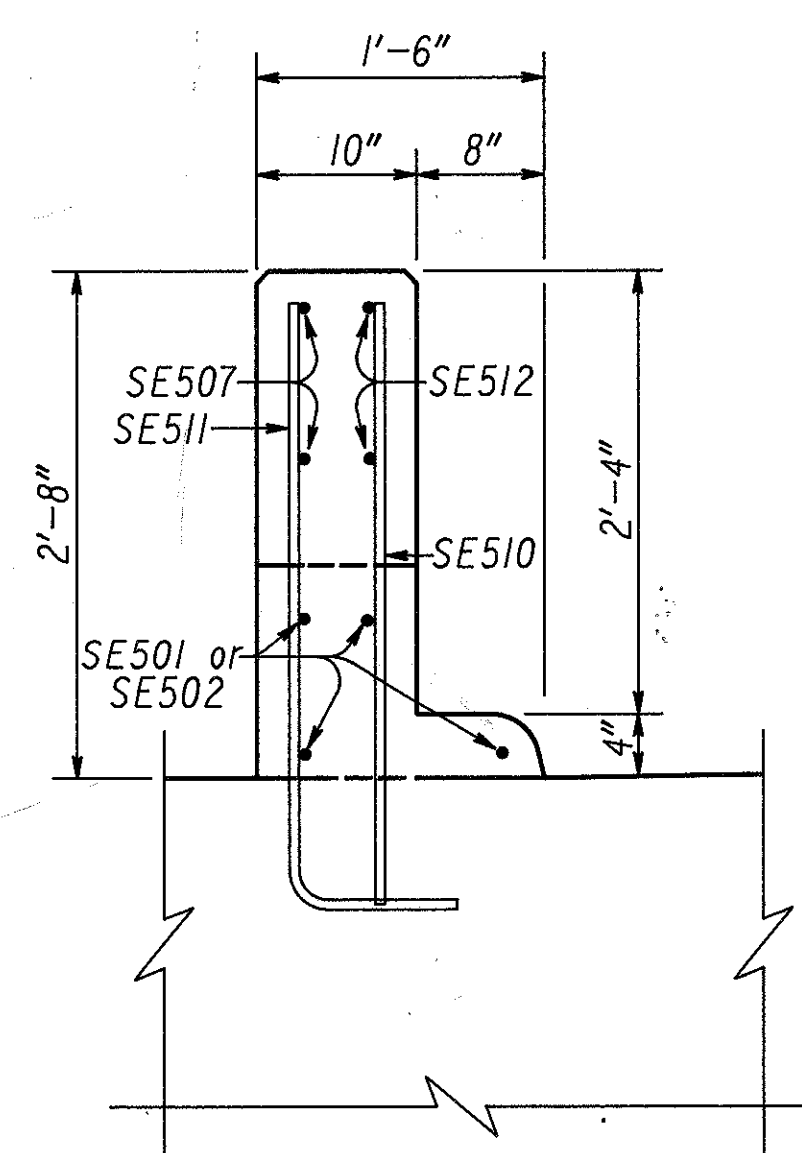


PLAN

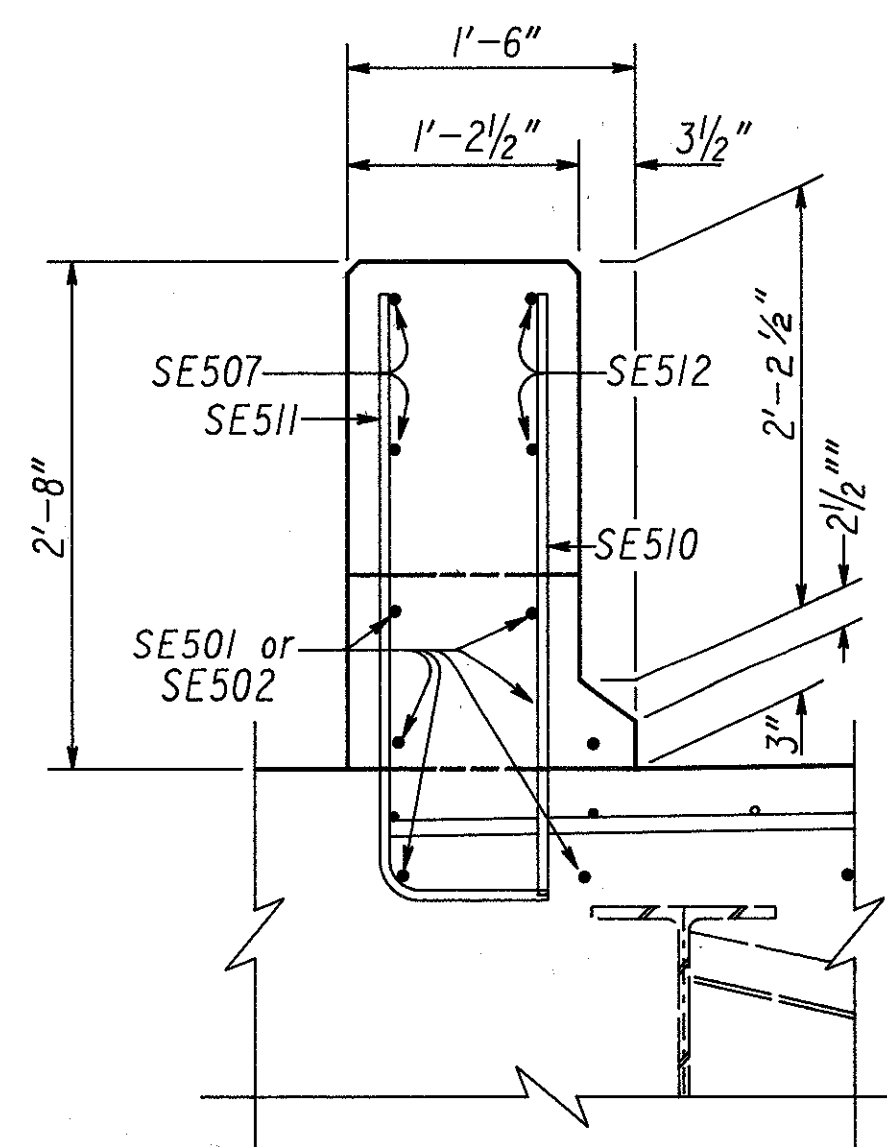
Parapet details shown on the North side
of the Bridge - South side similar by rotation.



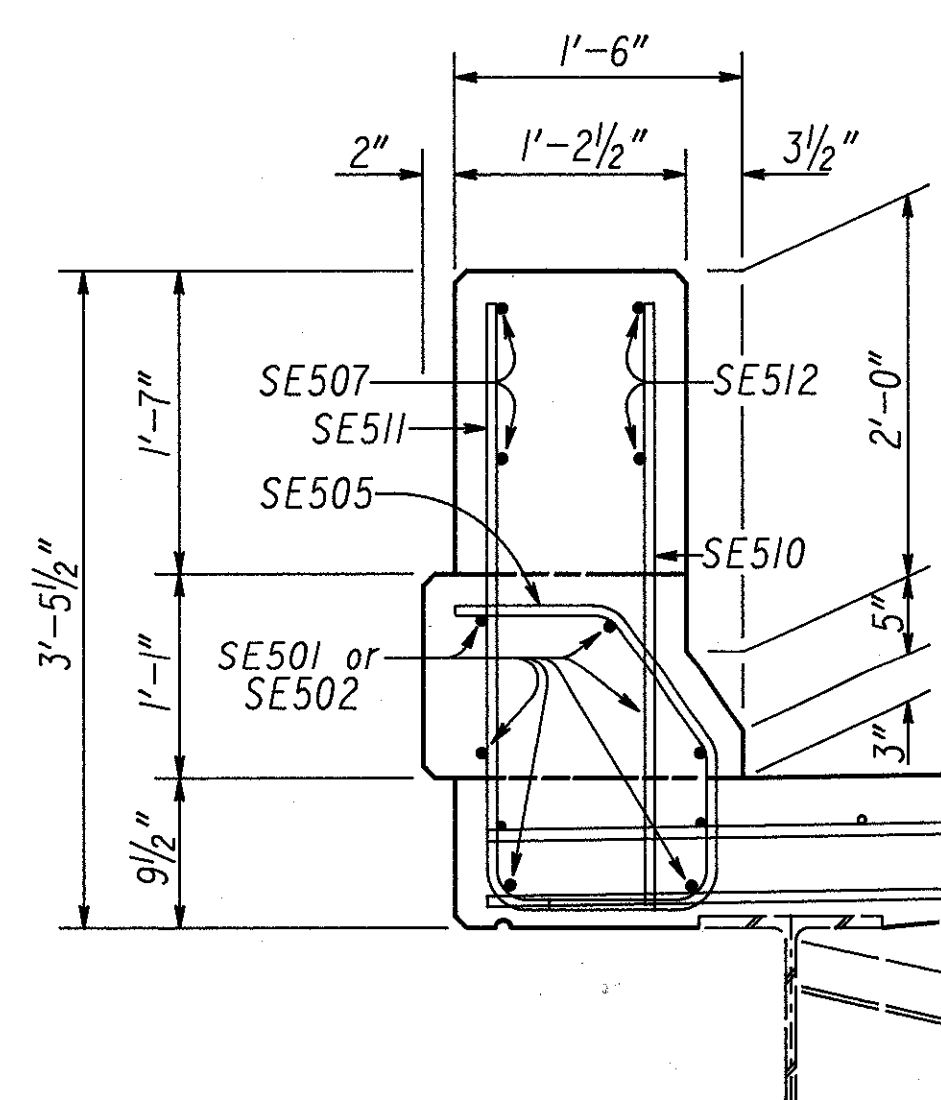
ELEVATION



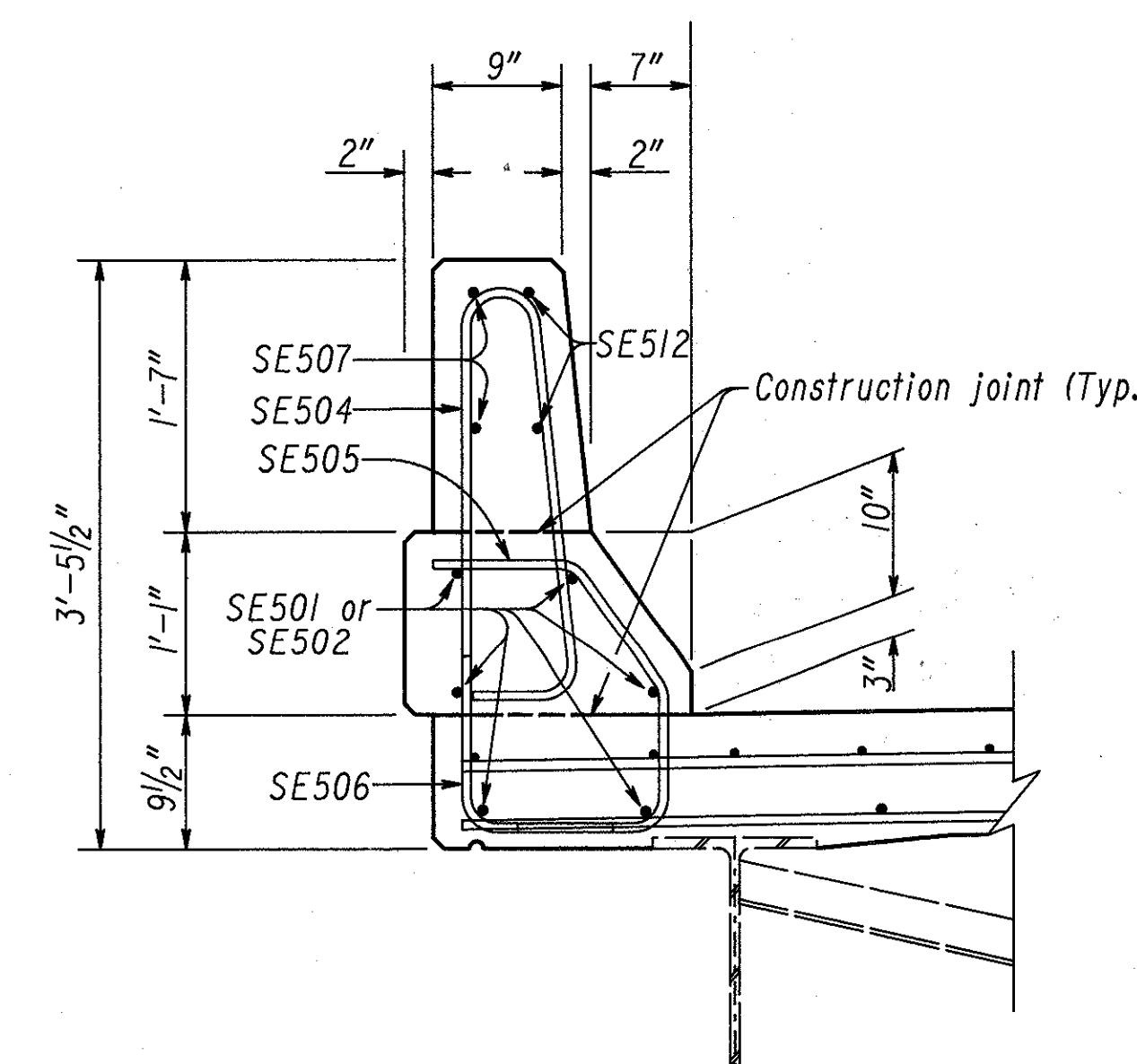
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D